MICHIGAN
DRILL & CUTTING TOOLS

MANUFACTURER OF QUALITY MADE IN USA TOOLS

DIGITAL CATALOG EDITION NO. MDC224

FEATURING PRODUCTS MANUFACTURED BY THESE REPUBLIC GROUP COMPANIES:

apt USA Approved Performance Tooling

L&I LAVALLEE & IDE

CUSHMAN CHUCKS SINCE 1862

CUSTANITE Precision



over
100,000
STYLES & SIZES
OF TOOLS IN STOCK



Hy Ash - *President & Founder*

From all of us at Michigan Drill & Cutting Tools, we send our sincere thank you to the thousands of customers who have continued to support us.

Our 50th year anniversary is being celebrated with the introduction of this unique catalog. It is the summation of our long-standing vision to build a company that maintains a large stocked selection of hard-to-find items, in addition to marketplace standard sizes.

This is the first catalog in our history that encapsulates all of our brands under one cover. It also expands our product offering and includes additional sizes that were not previously offered.
We believe this book to be one of the most comprehensive selections of industrial cutting tools in the marketplace today.

MANUFACTURING IN THE U.S.A.
Since 1967



Twist Drills, Taps, Reamers, Indexable Tooling, & Machine Accessories





OUR PORTFOLIO OF BRANDS:

MICHIGAN DRILL & CUTTING TOOLS
Drills, Taps, End Mills

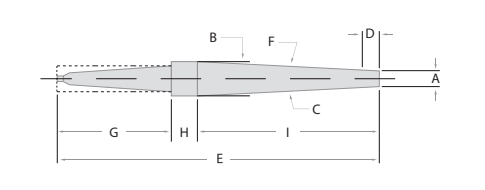
apt USA Approved Performance Tooling
Indexable Tooling

L&I LAVALLEE & IDE
World Renowned Reamers

CUSHMAN CHUCKS SINCE 1862
Work Holding

CUSTANITE Precision
Precision Tools

SPECIALS MADE-TO-PRINT



CUTTING TOOL ALTERATIONS



With 6 stocking locations, we are able to ship from one of the largest inventories of cutting tools worldwide



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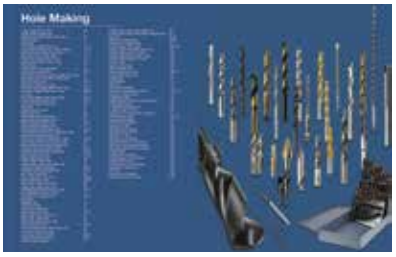

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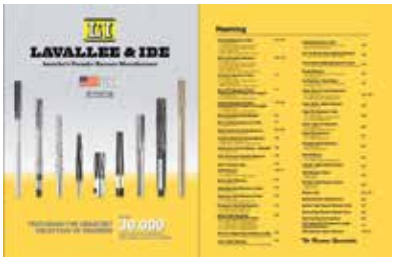

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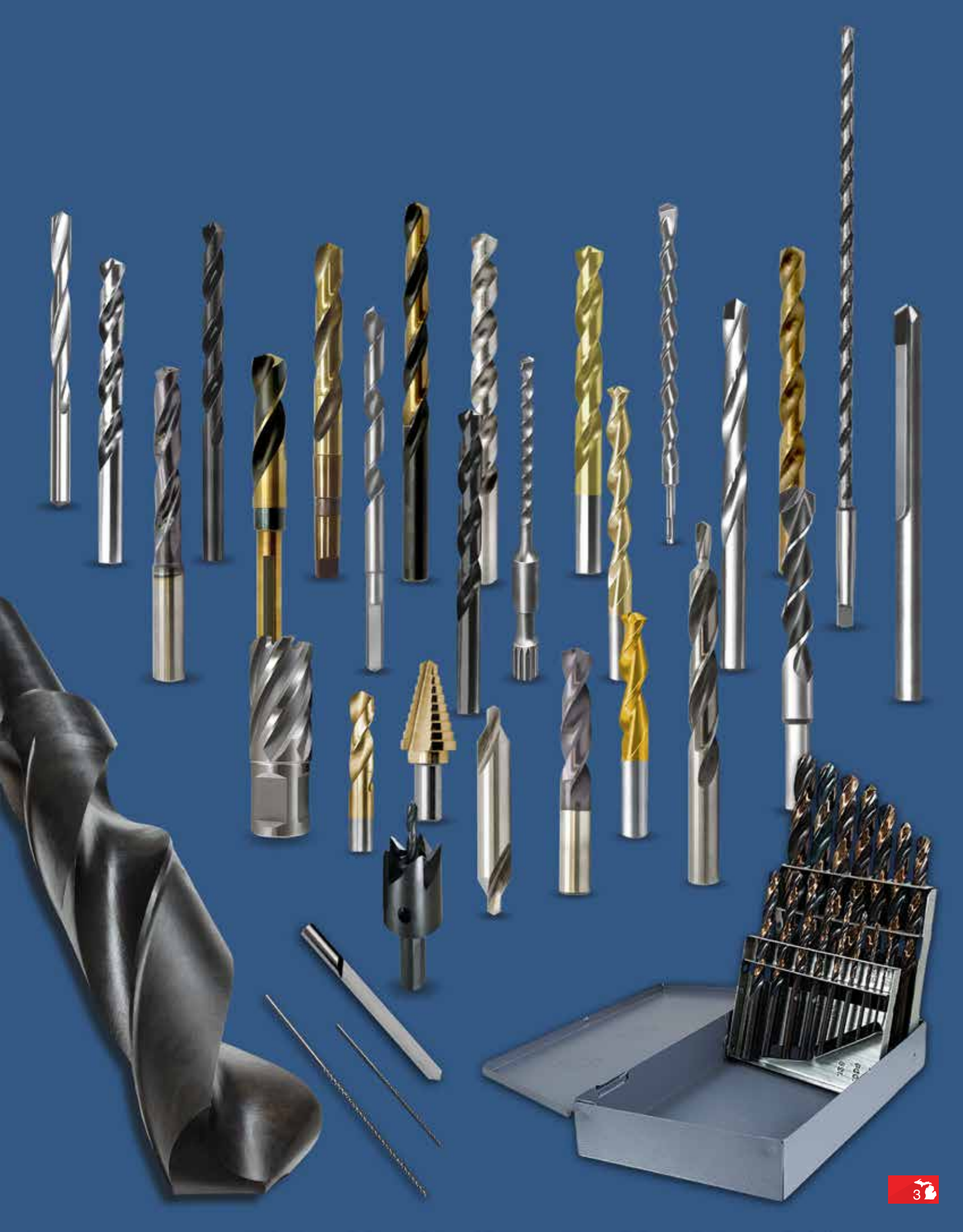


Jobber Length Drills

High Speed Steel – General Purpose, 118° Point



List No. **300** – Oxide Finish

Creates a porous layer that holds cutting oil which provides abrasion resistance and improved chip flow.

List No. **300A** – Bright Finish

Better chip ejection in low carbon, non-ferrous materials.

List No. **300T** – Titanium Nitride Coated

For added wear resistance and better lubricity of tool surface which increases tool life and productivity.

High Speed

MADE IN USA

MICHIGAN DRILL & CUTTING TOOLS

Fractional Sizes

Size	Dec. Equiv.	Flute Length	Overall Length	Pkg. Qty.	Price Each Oxide **300**	Bright **300A**	TiN **300T**
1/64	.0156	3/16	3/4	12	2.08	2.08	4.03
1/32	.0312	1/2	1-3/8	12	1.16	1.16	4.03
3/64	.0469	3/4	1-3/4	12	1.00	1.00	4.03
1/16	.0625	7/8	1-7/8	12	1.04	1.04	2.59
5/64	.0781	1	2	12	1.04	1.04	2.59
3/32	.0938	1-1/4	2-1/4	12	1.04	1.04	2.59
7/64	.1094	1-1/2	2-5/8	12	1.08	1.08	2.63
1/8	.1250	1-5/8	2-3/4	12	1.02	1.02	3.27
9/64	.1406	1-3/4	2-7/8	12	1.19	1.19	3.56
5/32	.1562	2	3-1/8	12	1.21	1.21	3.56
11/64	.1719	2-1/8	3-1/4	12	1.31	1.31	3.70
3/16	.1875	2-5/16	3-1/2	12	1.47	1.47	4.15
13/64	.2031	2-7/16	3-5/8	12	1.61	1.61	4.37
7/32	.2188	2-1/2	3-3/4	12	1.80	1.80	4.58
15/64	.2344	2-5/8	3-7/8	12	1.95	1.95	4.77
1/4	.2500	2-3/4	4	12	1.97	1.97	4.81
17/64	.2656	2-7/8	4-1/8	12	2.48	2.48	7.52
9/32	.2812	2-15/16	4-1/4	6	2.56	2.56	7.66
19/64	.2969	3-1/16	4-3/8	6	2.96	2.96	7.85
5/16	.3125	3-3/16	4-1/2	6	3.17	3.17	8.18
21/64	.3281	3-5/16	4-5/8	6	3.63	3.63	10.36
11/32	.3438	3-7/16	4-3/4	6	4.05	4.05	10.86
23/64	.3594	3-1/2	4-7/8	6	4.56	4.56	11.47
3/8	.3750	3-5/8	5	6	4.54	4.54	11.95

Size	Dec. Equiv.	Flute Length	Overall Length	Pkg. Qty.	Price Each Oxide **300**	Bright **300A**	TiN **300T**
25/64	.3906	3-3/4	5-1/8	6	5.34	5.34	14.39
13/32	.4062	3-7/8	5-1/4	6	5.48	5.48	14.59
27/64	.4219	3-15/16	5-3/8	6	6.09	6.09	14.67
7/16	.4375	4-1/16	5-1/2	6	6.33	6.33	15.46
29/64	.4531	4-3/16	5-5/8	6	7.08	7.08	16.23
15/32	.4688	4-5/16	5-3/4	6	7.52	7.52	16.75
31/64	.4844	4-3/8	5-7/8	6	8.20	8.20	17.38
1/2	.5000	4-1/2	6	6	8.20	8.20	17.38
33/64	.5156	4-13/16	6-5/8	1	14.32	14.32	31.45
17/32	.5312	4-13/16	6-5/8	1	14.74	14.74	32.41
35/64	.5469	4-13/16	6-5/8	1	16.25	16.25	35.77
9/16	.5625	4-13/16	6-5/8	1	16.68	16.68	36.71
37/64	.5781	4-13/16	6-5/8	1	17.07	17.07	37.55
19/32	.5938	5-3/16	7-1/8	1	17.52	17.52	38.61
39/64	.6094	5-3/16	7-1/8	1	18.77	18.77	41.30
5/8	.6250	5-3/16	7-1/8	1	18.43	18.43	40.52
41/64	.6406	5-3/16	7-1/8	1	20.11	20.11	41.58
21/32	.6562	5-3/16	7-1/8	1	21.08	21.08	45.54
43/64	.6719	5-5/8	7-5/8	1	22.79	22.79	47.52
11/16	.6875	5-5/8	7-5/8	1	22.79	22.79	47.52
23/32	.7188	5-5/8	7-5/8	1	29.03	29.03	52.14
47/64	.7344	5-5/8	7-5/8	1	29.94	29.94	56.10
3/4	.7500	5-5/8	7-5/8	1	29.94	29.94	56.10

Fractional Sets

Size	Finish	Pieces	**Set No.**	Price
1/16 – 1/4 by 64^{ths}	Oxide	13	**307G**	21.71
1/16 – 1/4 by 64^{ths}	Bright	13	**307GB**	21.71
1/16 – 1/4 by 64^{ths}	TiN	13	**307TG**	55.29
1/16 – 1/2 by 32^{nds}	Oxide	15	**307R**	56.73
1/16 – 1/2 by 32^{nds}	Bright	15	**307RB**	56.73
1/16 – 1/2 by 32^{nds}	TiN	15	**307TR**	143.98
1/16 – 3/8 by 64^{ths}	Oxide	21	**307S**	51.15
1/16 – 3/8 by 64^{ths}	Bright	21	**307SY**	51.15
1/16 – 3/8 by 64^{ths}	TiN	21	**307TS**	138.95
1/16 – 1/2 by 64^{ths}	Oxide	29	**307F**	105.60
1/16 – 1/2 by 64^{ths}	Bright	29	**307FB**	105.60
1/16 – 1/2 by 64^{ths}	TiN	29	**307TF**	265.82

All sets are supplied in Huot metal index



Wire Gauge Sets

Sizes	Finish	Pieces	**Set No.**	Price
1 – 60	Oxide	60	**307W**	87.17
1 – 60	Bright	60	**307WB**	87.17
1 – 60	TiN	60	**307TW**	226.22
61 – 80	Oxide	20	**307V**	38.17
61 – 80	Bright	20	**307VB**	38.17

All sets are supplied in Huot metal index



Jobber Length Drills

High Speed Steel – General Purpose, 118° Point



List No. **300** – Oxide Finish

Creates a porous layer that holds cutting oil which provides abrasion resistance and improved chip flow.

List No. **300A** – Bright Finish

Better chip ejection in low carbon, non-ferrous materials.

List No. **300T** – Titanium Nitride Coated

For added wear resistance and better lubricity of tool surface which increases tool life and productivity.

High Speed

MADE IN USA

MICHIGAN DRILL & CUTTING TOOLS

Wire Gauge Sizes

Package Quantity: 12 drills

Size	Dec. Equiv.	Flute Length	Overall Length	Price Each Oxide 300	Bright 300A	TiN 300T
1	.2280	2-5/8	3-7/8	2.16	2.16	5.05
2	.2210	2-5/8	3-7/8	2.18	2.18	5.05
3	.2130	2-1/2	3-3/4	2.03	2.03	4.80
4	.2090	2-1/2	3-3/4	1.99	1.99	4.80
5	.2055	2-1/2	3-3/4	1.99	1.99	4.80
6	.2040	2-1/2	3-3/4	1.99	1.99	4.80
7	.2010	2-7/16	3-5/8	1.74	1.74	4.51
8	.1990	2-7/16	3-5/8	1.76	1.76	4.51
9	.1960	2-7/16	3-5/8	1.76	1.76	4.51
10	.1935	2-7/16	3-5/8	1.64	1.64	4.51
11	.1910	2-5/16	3-1/2	1.61	1.61	4.37
12	.1890	2-5/16	3-1/2	1.62	1.62	4.37
13	.1850	2-5/16	3-1/2	1.59	1.59	4.33
14	.1820	2-3/16	3-3/8	1.59	1.59	4.33
15	.1800	2-3/16	3-3/8	1.59	1.59	4.33
16	.1770	2-3/16	3-3/8	1.59	1.59	4.33
17	.1730	2-3/16	3-3/8	1.59	1.59	4.33
18	.1695	2-1/8	3-1/4	1.32	1.32	3.99
19	.1660	2-1/8	3-1/4	1.31	1.31	3.99
20	.1610	2-1/8	3-1/4	1.18	1.18	3.99
21	.1590	2-1/8	3-1/4	1.21	1.21	3.87
22	.1570	2	3-1/8	1.22	1.22	3.87
23	.1540	2	3-1/8	1.20	1.20	3.85
24	.1520	2	3-1/8	1.20	1.20	3.85
25	.1495	1-7/8	3	1.15	1.15	3.78
26	.1470	1-7/8	3	1.16	1.16	3.78
27	.1440	1-7/8	3	1.16	1.16	3.78
28	.1405	1-3/4	2-7/8	1.06	1.06	3.68
29	.1360	1-3/4	2-7/8	1.06	1.06	3.68
30	.1285	1-5/8	2-3/4	1.05	1.05	3.68
31	.1200	1-5/8	2-3/4	1.05	1.05	2.99
32	.1160	1-5/8	2-3/4	1.05	1.05	2.99
33	.1130	1-1/2	2-5/8	1.05	1.05	2.99
34	.1110	1-1/2	2-5/8	1.05	1.05	2.99
35	.1100	1-1/2	2-5/8	1.05	1.05	2.99
36	.1065	1-7/16	2-1/2	1.05	1.05	2.99
37	.1040	1-7/16	2-1/2	1.05	1.05	2.99
38	.1015	1-7/16	2-1/2	1.05	1.05	2.99
39	.0995	1-3/8	2-3/8	1.05	1.05	2.99
40	.0980	1-3/8	2-3/8	1.05	1.05	2.99
41	.0960	1-3/8	2-3/8	1.05	1.05	2.84
42	.0935	1-1/4	2-1/4	1.05	1.05	2.84
43	.0890	1-1/4	2-1/4	1.05	1.05	2.84
44	.0860	1-1/8	2-1/8	1.05	1.05	2.84
45	.0820	1-1/8	2-1/8	1.05	1.05	2.84
46	.0810	1-1/8	2-1/8	1.05	1.05	2.84
47	.0785	1	2	1.05	1.05	2.84
48	.0760	1	2	1.05	1.05	2.84
49	.0730	1	2	1.05	1.05	2.84

Package Quantity: 12 drills

Size	Dec. Equiv.	Flute Length	Overall Length	Price Each Oxide 300	Bright 300A	TiN 300T
50	.0700	1	2	1.05	1.05	2.84
51	.0670	1	2	1.05	1.05	2.84
52	.0635	7/8	1-7/8	1.05	1.05	2.84
53	.0595	7/8	1-7/8	1.05	1.05	2.84
54	.0550	7/8	1-7/8	1.05	1.05	2.84
55	.0520	7/8	1-7/8	1.05	1.05	2.84
56	.0465	3/4	1-3/4	1.05	1.05	2.84
57	.0430	3/4	1-3/4	1.05	1.05	2.84
58	.0420	11/16	1-5/8	1.08	1.08	2.84
59	.0410	11/16	1-5/8	1.08	1.08	2.84
60	.0400	11/16	1-5/8	1.08	1.08	2.84
61	.0390	11/16	1-5/8	1.22	1.22	2.90
62	.0380	5/8	1-1/2	1.22	1.22	2.90
63	.0370	5/8	1-1/2	1.22	1.22	2.90
64	.0360	5/8	1-1/2	1.22	1.22	2.90
65	.0350	5/8	1-1/2	1.22	1.22	2.90
66	.0330	1/2	1-3/8	1.22	1.22	2.90
67	.0320	1/2	1-3/8	1.22	1.22	2.90
68	.0310	1/2	1-3/8	1.22	1.22	2.90
69	.0292	1/2	1-3/8	1.25	1.25	2.97
70	.0280	3/8	1-1/4	1.25	1.25	2.97
71	.0260	3/8	1-1/4	1.56	1.56	3.76
72	.0250	5/16	1-1/8	1.56	1.56	3.76
73	.0240	5/16	1-1/8	1.56	1.56	3.76
74	.0225	1/4	1	1.56	1.56	3.76
75	.0210	1/4	1	1.77	1.77	3.76
76	.0200	3/16	7/8	1.77	1.77	3.76
77	.0180	3/16	7/8	2.05	2.05	3.76
78	.0160	3/16	7/8	2.05	2.05	3.76
79	.0145	1/8	3/4	2.44	2.44	3.98
80	.0135	1/8	3/4	2.44	2.44	3.98
81	.0130	3/32	3/4	—	4.36	—
82	.0125	3/32	3/4	—	4.36	—
83	.0120	3/32	3/4	—	4.80	—
84	.0115	3/32	3/4	—	4.80	—
85	.0110	5/64	3/4	—	4.80	—
86	.0105	5/64	3/4	—	5.15	—
87	.0100	5/64	3/4	—	5.15	—
88	.0095	5/64	3/4	—	7.23	—
89	.0091	1/16	3/4	—	7.23	—
90	.0087	1/16	3/4	—	7.23	—
91	.0083	1/16	3/4	—	7.23	—
92	.0079	1/16	3/4	—	7.23	—
93	.0075	1/16	3/4	—	7.23	—
94	.0071	1/16	3/4	—	9.83	—
95	.0067	1/16	3/4	—	9.83	—
96	.0063	3/64	3/4	—	9.83	—
97	.0059	3/64	3/4	—	10.89	—

Pin Chuck Set

Set No. **PV30**



Designed for holding small drills. One Pin Chuck with 3 interchangeable collets.

Interchangeable Collets	Price
0 - 1/32, 1/32 - 1/16, 1/16 - 3/32	9.69

Micro Chuck

Set No. **PV10**



Description	Price
Suitable for 61-80 drills. Can be held in any 1/8 or 3/16 collet or larger adjustable drill chuck.	7.67

Jobber Length Drills

High Speed Steel – General Purpose, 118° Point



List No. **300** – Oxide Finish

Creates a porous layer that holds cutting oil which provides abrasion resistance and improved chip flow.

List No. **300A** – Bright Finish

Better chip ejection in low carbon, non-ferrous materials.

List No. **300T** – Titanium Nitride Coated

For added wear resistance and better lubricity of tool surface which increases tool life and productivity.

High Speed

MADE IN USA

MICHIGAN DRILL & CUTTING TOOLS

Letter Sizes

Size	Dec. Equiv.	Flute Length	Overall Length	Pkg. Qty.	Price Each Oxide **300**	Bright **300A**	TiN **300T**
A	.2340	2-5/8	3-7/8	12	2.47	2.47	5.15
B	.2380	2-3/4	4	12	2.47	2.47	5.15
C	.2420	2-3/4	4	12	2.47	2.47	5.15
D	.2460	2-3/4	4	12	2.47	2.47	5.15
E	.2500	2-3/4	4	12	1.97	1.97	4.81
F	.2570	2-7/8	4-1/8	12	2.62	2.62	7.52
G	.2610	2-7/8	4-1/8	12	2.95	2.95	7.52
H	.2660	2-7/8	4-1/8	12	2.95	2.95	7.52
I	.2720	2-7/8	4-1/8	6	2.95	2.95	7.52
J	.2770	2-7/8	4-1/8	6	3.17	3.17	7.52
K	.2810	2-15/16	4-1/4	6	3.50	3.50	7.52
L	.2900	2-15/16	4-1/4	6	3.50	3.50	7.52
M	.2950	3-1/16	4-3/8	6	3.70	3.70	7.87
N	.3020	3-1/16	4-3/8	6	3.70	3.70	8.20
O	.3160	3-3/16	4-1/2	6	3.74	3.74	8.20
P	.3230	3-5/16	4-5/8	6	4.22	4.22	9.24
Q	.3320	3-7/16	4-3/4	6	4.22	4.22	9.24
R	.3390	3-7/16	4-3/4	6	4.51	4.51	9.24
S	.3480	3-1/2	4-7/8	6	4.78	4.78	9.24
T	.3580	3-1/2	4-7/8	6	5.44	5.44	11.95
U	.3680	3-5/8	5	6	5.44	5.44	11.95
V	.3770	3-5/8	5	6	5.59	5.59	13.76
W	.3860	3-3/4	5-1/8	6	5.78	5.78	14.42
X	.3970	3-3/4	5-1/8	6	7.00	7.00	14.55
Y	.4040	3-7/8	5-1/4	6	7.87	7.87	14.85
Z	.4130	3-7/8	5-1/4	6	8.38	8.38	15.64

Letter Sets

Sizes	Finish	Pieces	**Set No.**	Price
A – Z Letter Sizes	Oxide	26	**307L**	121.86
A – Z Letter Sizes	Bright	26	**307LB**	121.86
A – Z Letter Sizes	TiN Coated	26	**307TL**	250.40

All sets are supplied in Huot metal index



Combination Sets

Sizes	Finish	Pieces	**Set No.**	Price
1/16 – 1/2 by 64ths, A – Z Letter, and 1 – 60 Wire Gauge	Oxide	115	**307X**	329.52
1/16 – 1/2 by 64ths, A – Z Letter, and 1 – 60 Wire Gauge	Bright	115	**307XB**	329.52
1/16 – 1/2 by 64ths, A – Z Letter, and 1 – 60 Wire Gauge	TiN	115	**307TX**	745.49
1/16 – 1/2 by 64ths, A – Z Letter, and 1 – 80 Wire Gauge	Oxide	135	**307Y**	372.09
1/16 – 1/2 by 64ths, A – Z Letter, and 1 – 80 Wire Gauge	Bright	135	**307YB**	372.09

All sets are supplied in Huot metal index



Tool Crib Sets

Sizes	Finish	Pieces	**Set No.**	Price
1/16, 5/64, 3/32, 1/8, #29, #25, 5/32, #21, 3/16, #7, 7/32, 1/4, F, 5/16, U, 3/8, 27/64, 7/16,1/2	Oxide	19	**307J**	58.01
1/16, 5/64, 3/32, 1/8, #29, #25, 5/32, #21, 3/16, #7, 7/32, 1/4, F, 5/16, U, 3/8, 27/64, 7/16,1/2	Bright	19	**307JB**	58.01

All sets are supplied in Huot metal index



Tanged Jobber Length Drills

Automotive Series – High Speed



List No. **350** – Oxide Finish, 118° Point

High Speed

MADE IN USA

MICHIGAN DRILL & CUTTING TOOLS

Fractional & Metric Sizes

Size	Decimal Equivalent	Flute Length	Overall Length	Pkg. Qty.	Price Each
1/8	.1250	1-5/8	2-3/4	12	1.30
3.20mm	.1260	1-5/8	2-3/4	12	1.32
3.30mm	.1299	3	5-3/8	12	3.30
3.50mm	.1378	1-3/4	2-7/8	12	1.32
9/64	.1406	1-3/4	2-7/8	12	1.39
5/32	.1562	2	3-1/8	12	1.53
11/64	.1719	2-1/8	3-1/4	12	1.76
3/16	.1875	2-5/16	3-1/2	12	1.95
13/64	.2031	2-7/16	3-5/8	12	2.20
7/32	.2188	2-1/2	3-3/4	12	2.44
15/64	.2344	2-5/8	3-7/8	12	2.71
6.10mm	.2402	2-3/4	4	12	3.10
1/4	.2500	2-3/4	4	12	2.77
17/64	.2656	2-7/8	4-1/8	12	3.37
9/32	.2812	2-15/16	4-1/4	6	3.67
7.25mm	.2854	2-15/16	4-1/4	6	4.39
19/64	.2969	3-1/16	4-3/8	6	4.01
5/16	.3125	3-3/16	4-1/2	6	4.25
21/64	.3281	3-5/16	4-5/8	6	4.82
11/32	.3438	3-7/16	4-3/4	6	4.90
9.00mm	.3543	3-1/2	4-7/8	6	7.39
23/64	.3594	3-1/2	4-7/8	6	5.70

Size	Decimal Equivalent	Flute Length	Overall Length	Pkg. Qty.	Price Each
3/8	.3750	3-5/8	5	6	5.84
25/64	.3906	3-3/4	5-1/8	6	6.58
13/32	.4062	3-7/8	5-1/4	6	6.63
27/64	.4219	3-15/16	5-3/8	6	7.73
11.00mm	.4331	4-1/16	5-1/2	6	8.25
7/16	.4375	4-1/16	5-1/2	6	7.77
29/64	.4531	4-3/16	5-5/8	6	9.30
15/32	.4688	4-5/16	5-3/4	6	9.52
31/64	.4844	4-3/8	5-7/8	6	10.34
1/2	.5000	4-1/2	6	6	9.99
33/64	.5156	4-13/16	6-5/8	1	17.83
17/32	.5312	4-13/16	6-5/8	1	18.81
35/64	.5469	4-13/16	6-5/8	1	20.53
9/16	.5625	4-13/16	6-5/8	1	21.01
37/64	.5781	4-13/16	6-5/8	1	22.06
19/32	.5938	5-3/16	7-1/8	1	21.93
39/64	.6094	5-3/16	7-1/8	1	23.98
5/8	.6250	5-3/16	7-1/8	1	23.76
41/64	.6406	5-3/16	7-1/8	1	25.31
21/32	.6562	5-3/16	7-1/8	1	25.08
43/64	.6719	5-5/8	7-5/8	1	29.19
11/16	.6875	5-5/8	7-5/8	1	28.88

For use in split sleeve drill drivers (see page 58)

Wire Gauge Sizes

Size	Decimal Equivalent	Flute Length	Overall Length	Pkg. Qty.	Price Each
1	.2280	2-5/8	3-7/8	12	2.81
2	.2210	2-5/8	3-7/8	12	2.81
3	.2130	2-1/2	3-3/4	12	2.51
4	.2090	2-1/2	3-3/4	12	2.51
5	.2055	2-1/2	3-3/4	12	2.51
6	.2040	2-1/2	3-3/4	12	2.51
7	.2010	2-7/16	3-5/8	12	2.24
8	.1990	2-7/16	3-5/8	12	2.24
9	.1960	2-7/16	3-5/8	12	2.24
10	.1935	2-7/16	3-5/8	12	2.24
11	.1910	2-5/16	3-1/2	12	2.11
12	.1890	2-5/16	3-1/2	12	2.11
13	.1850	2-5/16	3-1/2	12	2.11
14	.1820	2-3/16	3-3/8	12	2.11
15	.1800	2-3/16	3-3/8	12	2.11
16	.1770	2-3/16	3-3/8	12	2.11
17	.1730	2-3/16	3-3/8	12	2.11
18	.1695	2-1/8	3-1/4	12	1.83

Size	Decimal Equivalent	Flute Length	Overall Length	Pkg. Qty.	Price Each
19	.1660	2-1/8	3-1/4	12	1.83
20	.1610	2-1/8	3-1/4	12	1.83
21	.1590	2-1/8	3-1/4	12	1.83
22	.1570	2	3-1/8	12	1.83
23	.1540	2	3-1/8	12	1.83
24	.1520	2	3-1/8	12	1.67
25	.1495	1-7/8	3	12	1.67
26	.1470	1-7/8	3	12	1.58
27	.1440	1-7/8	3	12	1.58
28	.1405	1-3/4	2-7/8	12	1.43
29	.1360	1-3/4	2-7/8	12	1.39
30	.1285	1-5/8	2-3/4	12	1.31
32	.1160	1-5/8	2-3/4	12	1.31
37	.1040	1-7/16	2-1/2	12	1.31
43	.0890	1-1/4	2-1/4	12	1.31
46	.0810	1-1/8	2-1/8	12	1.31
48	.0760	1	2	12	1.31
50	.0700	1	2	12	1.31

Letter Sizes

Size	Decimal Equivalent	Flute Length	Overall Length	Pkg. Qty.	Price Each
A	.2340	2-5/8	3-7/8	12	3.14
B	.2380	2-3/4	4	12	3.14
C	.2420	2-3/4	4	12	3.14
D	.2460	2-3/4	4	12	3.14
E	.2500	2-3/4	4	12	2.77
F	.2570	2-7/8	4-1/8	12	3.37
G	.2610	2-7/8	4-1/8	12	3.83
H	.2660	2-7/8	4-1/8	12	3.83
I	.2720	2-7/8	4-1/8	6	3.83
J	.2770	2-7/8	4-1/8	6	3.96
K	.2810	2-15/16	4-1/4	6	3.96
L	.2900	2-15/16	4-1/4	6	4.82
M	.2950	3-1/16	4-3/8	6	4.82

We can tang any other style of straight shank drill at a moderate cost.

Size	Decimal Equivalent	Flute Length	Overall Length	Pkg. Qty.	Price Each
N	.3020	3-1/16	4-3/8	6	4.82
O	.3160	3-3/16	4-1/2	6	4.82
P	.3230	3-5/16	4-5/8	6	5.12
Q	.3320	3-7/16	4-3/4	6	5.12
R	.3390	3-7/16	4-3/4	6	5.12
S	.3480	3-1/2	4-7/8	6	6.17
T	.3580	3-1/2	4-7/8	6	6.73
U	.3680	3-5/8	5	6	6.73
V	.3770	3-5/8	5	6	7.23
W	.3860	3-3/4	5-1/8	6	7.23
X	.3970	3-3/4	5-1/8	6	8.75
Y	.4040	3-7/8	5-1/4	6	8.75
Z	.4130	3-7/8	5-1/4	6	9.57

BRONCO BIT®
Black & Gold Jobber Length Drills

High Speed Steel



List No. **315** – 135° Split Point, Heavy Duty

- Improved lubricity of the drill, due to a special oxide and gold finish.
- Centers quickly with 135° split point.
- Heavy duty construction allows for hand held jobs or shop production.

Fractional Sizes

Size	Dec. Equiv.	Flute Length	Overall Length	Pkg. Qty.	Price Each
3/64	.0156	3/16	3/4	12	1.31
1/16	.0625	7/8	1-7/8	12	1.10
5/64	.0781	1	2	12	1.10
3/32	.0938	1-1/4	2-1/4	12	1.10
7/64	.1094	1-1/2	2-5/8	12	1.23
1/8	.1250	1-5/8	2-3/4	12	1.23
9/64	.1406	1-3/4	2-7/8	12	1.34
5/32	.1562	2	3-1/8	12	1.36
11/64	.1719	2-1/8	3-1/4	12	1.45
3/16	.1875	2-5/16	3-1/2	12	1.61
13/64	.2031	2-7/16	3-5/8	12	1.78
7/32	.2188	2-1/2	3-3/4	12	2.02
15/64	.2344	2-5/8	3-7/8	12	2.18
1/4	.2500	2-3/4	4	12	2.27
17/64	.2656	2-7/8	4-1/8	12	2.86

Size	Dec. Equiv.	Flute Length	Overall Length	Pkg. Qty.	Price Each
9/32	.2812	2-15/16	4-1/4	6	3.15
19/64	.2969	3-1/16	4-3/8	6	3.41
5/16	.3125	3-3/16	4-1/2	6	3.59
21/64	.3281	3-5/16	4-5/8	6	4.92
11/32	.3438	3-7/16	4-3/4	6	4.36
23/64	.3594	3-1/2	4-7/8	6	5.08
3/8	.3750	3-5/8	5	6	5.04
25/64	.3906	3-3/4	5-1/8	6	6.03
13/32	.4062	3-7/8	5-1/4	6	6.05
27/64	.4219	3-15/16	5-3/8	6	7.04
7/16	.4375	4-1/16	5-1/2	6	6.78
29/64	.4531	4-3/16	5-5/8	6	7.77
15/32	.4688	4-5/16	5-3/4	6	8.23
31/64	.4844	4-3/8	5-7/8	6	8.72
1/2	.5000	4-1/2	6	6	8.72

Wire Gauge Sizes

Size	Dec. Equiv.	Flute Length	Overall Length	Price Each
1	.2280	2-5/8	3-7/8	2.37
2	.2210	2-5/8	3-7/8	2.37
3	.2130	2-1/2	3-3/4	2.16
4	.2090	2-1/2	3-3/4	2.16
5	.2055	2-1/2	3-3/4	2.16
6	.2040	2-1/2	3-3/4	2.16
7	.2010	2-7/16	3-5/8	1.98
8	.1990	2-7/16	3-5/8	1.85
9	.1960	2-7/16	3-5/8	1.85
10	.1935	2-7/16	3-5/8	1.85
11	.1910	2-5/16	3-1/2	1.78
12	.1890	2-5/16	3-1/2	1.78
13	.1850	2-5/16	3-1/2	1.69
14	.1820	2-3/16	3-3/8	1.69
15	.1800	2-3/16	3-3/8	1.69
16	.1770	2-3/16	3-3/8	1.69
17	.1730	2-3/16	3-3/8	1.69
18	.1695	2-1/8	3-1/4	1.40
19	.1660	2-1/8	3-1/4	1.40
20	.1610	2-1/8	3-1/4	1.40
21	.1590	2-1/8	3-1/4	1.40
22	.1570	2	3-1/8	1.40
23	.1540	2	3-1/8	1.40
24	.1520	2	3-1/8	1.40
25	.1495	1-7/8	3	1.40
26	.1470	1-7/8	3	1.40
27	.1440	1-7/8	3	1.40
28	.1405	1-3/4	2-7/8	1.25
29	.1360	1-3/4	2-7/8	1.25
30	.1285	1-5/8	2-3/4	1.16

Size	Dec. Equiv.	Flute Length	Overall Length	Price Each
31	.1200	1-5/8	2-3/4	1.25
32	.1160	1-5/8	2-3/4	1.25
33	.1130	1-1/2	2-5/8	1.25
34	.1110	1-1/2	2-5/8	1.25
35	.1100	1-1/2	2-5/8	1.25
36	.1065	1-7/16	2-1/2	1.25
37	.1040	1-7/16	2-1/2	1.25
38	.1015	1-7/16	2-1/2	1.25
39	.0995	1-3/8	2-3/8	1.25
40	.0980	1-3/8	2-3/8	1.25
41	.0960	1-3/8	2-3/8	1.25
42	.0935	1-1/4	2-1/4	1.25
43	.0890	1-1/4	2-1/4	1.25
44	.0860	1-1/8	2-1/8	1.25
45	.0820	1-1/8	2-1/8	1.25
46	.0810	1-1/8	2-1/8	1.25
47	.0785	1	2	1.25
48	.0760	1	2	1.25
49	.0730	1	2	1.25
50	.0700	1	2	1.25
51	.0670	1	2	1.25
52	.0635	7/8	1-7/8	1.25
53	.0595	7/8	1-7/8	1.25
54	.0550	7/8	1-7/8	1.25
55	.0520	7/8	1-7/8	1.25
56	.0465	3/4	1-3/4	1.25
57	.0430	3/4	1-3/4	1.25
58	.0420	11/16	1-5/8	1.25
59	.0410	11/16	1-5/8	1.25
60	.0400	11/16	1-5/8	1.25

** Sizes with decimal equivalent smaller than .0625 are not split point.*

Sets

Size	Pcs.	Description	Set No.	Price
1/16 - 1/2 by 64ths	29	Fractional Set	**315F**	123.82
1 - 60	60	Wire Gauge Set	**315W**	100.08

All sets are supplied in Huot metal index



BLIZZARD BIT™

Premium Proprietary High Speed Steel

STAYS COOLER, LASTS LONGER!



PREMIUM PROPRIETARY STEEL

MADE IN USA

MICHIGAN DRILL & CUTTING TOOLS

List No. **300Q** – **HD** Jobber Length, 135º Split Point

- Out performs all other high speed steel 135º split point heavy duty drills.
- Made of proprietary steel that keeps the drill cooler than all other high speed steels.
- Runs at higher feeds and speeds than other high speed steel drills.
- Priced at high speed but performs similarly to cobalt.
- Improved lubricity of the drill, due to a special oxide and gold finish.
- Heavy duty construction allows for hand held jobs or shop production.

Size	Decimal Equivalent	Flute Length	Overall Length	Package Quantity	Price Each
1/16	.0625	7/8	1-7/8	12	1.58
5/64	.0781	1	2	12	1.76
3/32	.0938	1-1/4	2-1/4	12	1.76
7/64	.1094	1-1/2	2-5/8	12	1.76
1/8	.1250	1-5/8	2-3/4	12	2.03
9/64	.1406	1-3/4	2-7/8	12	2.03
5/32	.1562	2	3-1/8	12	2.30
11/64	.1719	2-1/8	3-1/4	12	2.35
3/16	.1875	2-5/16	3-1/2	12	2.75
13/64	.2031	2-7/16	3-5/8	12	3.07
7/32	.2188	2-1/2	3-3/4	12	3.38
15/64	.2344	2-5/8	3-7/8	12	3.57
1/4	.2500	2-3/4	4	12	3.84
17/64	.2656	2-7/8	4-1/8	12	4.69
9/32	.2812	2-15/16	4-1/4	6	5.65

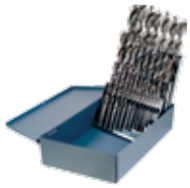
Size	Decimal Equivalent	Flute Length	Overall Length	Package Quantity	Price Each
19/64	.2969	3-1/16	4-3/8	6	6.10
5/16	.3125	3-3/16	4-1/2	6	6.29
21/64	.3281	3-5/16	4-5/8	6	6.92
11/32	.3438	3-7/16	4-3/4	6	7.70
23/64	.3594	3-1/2	4-7/8	6	8.60
3/8	.3750	3-5/8	5	6	8.68
25/64	.3906	3-3/4	5-1/8	6	10.17
13/32	.4062	3-7/8	5-1/4	6	10.49
27/64	.4219	3-15/16	5-3/8	6	11.57
7/16	.4375	4-1/16	5-1/2	6	12.48
29/64	.4531	4-3/16	5-5/8	6	14.28
15/32	.4688	4-5/16	5-3/4	6	14.64
31/64	.4844	4-3/8	5-7/8	6	14.64
1/2	.5000	4-1/2	6	6	15.33

Sets

Sizes	Pcs.	Set No.	Price Each
1/16 — 1/4 by 64ths	13	**307GQ**	38.43
1/16 — 3/8 by 64ths	21	**307SQ**	99.06

Sizes	Pcs.	Set No.	Price Each
1/16 — 1/2 by 64ths	29	**307FQ**	202.66
1/16 — 1/2 by 32nds	15	**307RQ**	111.15

All sets are supplied in Huot metal index



ProductionMax™

Jobber Length, Double Margin Drill



High Speed

MADE IN USA

MICHIGAN DRILL & CUTTING TOOLS

List No. **314** – **Black & Gold** finish, 118º Split Point

List No. **314T** – TiN Coated, 118º Split Point

- For drilling close tolerance holes
- Eliminates reaming in some applications.
- Precision hole drilling
- 118º split point for reduced thrust, quick centering.
- Produces straighter, rounder holes with up to 300% tighter hole tolerances.
- Not recommended for hand held drilling.

Size	Dec. Equiv.	Flute Length	Overall Length	Pkg. Qty.	Price Each B & G 314	Price Each TiN 314T
1/16*	.0625	7/8	1-7/8	12	1.76	3.88
5/64*	.0781	1	2	12	1.76	3.88
3/32*	.0938	1-1/4	2-1/4	12	1.76	3.88
7/64*	.1094	1-1/2	2-5/8	12	1.84	4.04
1/8*	.1250	1-5/8	2-3/4	12	2.02	4.44
9/64*	.1406	1-3/4	2-7/8	12	2.23	4.91
5/32*	.1562	2	3-1/8	12	2.32	5.11
11/64*	.1719	2-1/8	3-1/4	12	2.49	5.48
3/16	.1875	2-5/16	3-1/2	12	2.67	5.88
13/64	.2031	2-7/16	3-5/8	12	3.14	6.91
7/32	.2188	2-1/2	3-3/4	12	3.30	7.26
15/64	.2344	2-5/8	3-7/8	12	3.55	7.80
1/4	.2500	2-3/4	4	12	3.68	8.10
17/64	.2656	2-7/8	4-1/8	12	4.70	10.33
9/32	.2812	2-15/16	4-1/4	6	5.05	11.11

Size	Dec. Equiv.	Flute Length	Overall Length	Pkg. Qty.	Price Each B & G 314	Price Each TiN 314T
19/64	.2969	3-1/16	4-3/8	6	5.64	12.41
5/16	.3125	3-3/16	4-1/2	6	5.91	13.01
21/64	.3281	3-5/16	4-5/8	6	6.54	14.39
11/32	.3438	3-7/16	4-3/4	6	7.25	15.94
23/64	.3594	3-1/2	4-7/8	6	8.06	17.74
3/8	.3750	3-5/8	5	6	8.56	18.83
25/64	.3906	3-3/4	5-1/8	6	9.46	20.81
13/32	.4062	3-7/8	5-1/4	6	9.85	21.66
27/64	.4219	3-15/16	5-3/8	6	10.82	23.80
7/16	.4375	4-1/16	5-1/2	6	11.41	25.11
29/64	.4531	4-3/16	5-5/8	6	12.66	27.86
15/32	.4688	4-5/16	5-3/4	6	13.68	30.10
31/64	.4844	4-3/8	5-7/8	6	14.21	31.27
1/2	.5000	4-1/2	6	6	14.51	31.91

* Not double margin.

Sets

Sizes	Pcs.	Set No.	Price Each
1/16 — 1/4 by 64ths	13	**314S13**	38.77
1/16 — 3/8 by 64ths	21	**314S21**	96.48

Sizes	Pcs.	Set No.	Price Each
1/16 — 1/2 by 64ths	29	**314S29**	199.14
1/16 — 1/2 by 32nds	15	**314S15**	96.48

All sets are supplied in Huot metal index



MDX® SUPERIOR IMPORT Jobber Length Drills

High Speed Steel & Titanium Nitride Coated (TiN)

These drills are used for general purpose applications at a lower cost.

List No. **X300** – 118° Point, H.S. Oxide Finish
List No. **X300A** – 118° Point, H.S. Bright Finish
List No. **X300T** – 118° Point, TiN Coated

High Speed



Fractional Sizes

Size	Flute Length	Overall Length	Pkg. Qty.	Price Each Oxide X300	Bright X300A	TiN X300T
1/64	3/16	3/4	12	.98	.98	—
1/32	1/2	1-3/8	12	.60	.60	1.74
3/64	3/4	1-3/4	12	.57	.57	1.40
1/16	7/8	1-7/8	12	.59	.59	1.39
5/64	1	2	12	.59	.59	1.39
3/32	1-1/4	2-1/4	12	.59	.59	1.39
7/64	1-1/2	2-5/8	12	.61	.61	1.42
1/8	1-5/8	2-3/4	12	.61	.61	1.44
9/64	1-3/4	2-7/8	12	.68	.68	1.78
5/32	2	3-1/8	12	.69	.69	1.80
11/64	2-1/8	3-1/4	12	.75	.75	2.06
3/16	2-5/16	3-1/2	12	.84	.84	2.37
13/64	2-7/16	3-5/8	12	.92	.92	2.49
7/32	2-1/2	3-3/4	12	1.02	1.02	2.61
15/64	2-5/8	3-7/8	12	1.11	1.11	2.72
1/4	2-3/4	4	12	1.12	1.12	2.75
17/64	2-7/8	4-1/8	12	1.41	1.41	3.97
9/32	2-15/16	4-1/4	6	1.46	1.46	4.02
19/64	3-1/16	4-3/8	6	1.68	1.68	4.31
5/16	3-3/16	4-1/2	6	1.87	1.87	4.53
21/64	3-5/16	4-5/8	6	2.07	2.07	5.90
11/32	3-7/16	4-3/4	6	2.31	2.31	6.19
23/64	3-1/2	4-7/8	6	2.60	2.60	6.54
3/8	3-5/8	5	6	2.66	2.66	6.65

Size	Flute Length	Overall Length	Pkg. Qty.	Price Each Oxide X300	Bright X300A	TiN X300T
25/64	3-3/4	5-1/8	6	3.04	3.04	7.83
13/32	3-7/8	5-1/4	6	3.13	3.13	7.96
27/64	3-15/16	5-3/8	6	3.47	3.47	8.36
7/16	4-1/16	5-1/2	6	3.61	3.61	8.51
29/64	4-3/16	5-5/8	6	4.03	4.03	9.25
15/32	4-5/16	5-3/4	6	4.28	4.28	9.55
31/64	4-3/8	5-7/8	6	4.50	4.50	9.79
1/2	4-1/2	6	6	4.53	4.53	9.91
33/64	4-13/16	6-5/8	1	8.16	8.16	—
17/32	4-13/16	6-5/8	1	8.40	8.40	—
35/64	4-13/16	6-5/8	1	9.26	9.26	—
9/16	4-13/16	6-5/8	1	9.51	9.51	—
37/64	4-13/16	6-5/8	1	9.73	9.73	—
19/32	5-3/16	7-1/8	1	9.99	9.99	—
39/64	5-3/16	7-1/8	1	10.70	10.70	—
5/8	5-3/16	7-1/8	1	10.50	10.50	—
41/64	5-3/16	7-1/8	1	11.46	11.46	—
21/32	5-3/16	7-1/8	1	12.02	12.02	—
43/64	5-5/8	7-5/8	1	12.99	12.99	—
11/16	5-5/8	7-5/8	1	12.99	12.99	—
45/64	5-5/8	7-5/8	1	17.50	—	—
47/64	5-5/8	7-5/8	1	17.50	17.50	—
3/4	5-5/8	7-5/8	1	17.50	—	—
49/64	5-5/8	7-5/8	1	22.75	—	—

Wire Gauge Sizes

Package Quantity: 12 drills

Size	Flute Length	Overall Length	Price Each Oxide X300	Bright X300A	TiN X300T
1	2-5/8	3-7/8	1.23	1.23	3.01
2	2-5/8	3-7/8	1.25	1.25	3.06
3	2-1/2	3-3/4	1.12	1.12	2.73
4	2-1/2	3-3/4	1.14	1.14	2.78
5	2-1/2	3-3/4	1.14	1.14	2.78
6	2-1/2	3-3/4	1.14	1.14	2.78
7	2-7/16	3-5/8	.99	.99	2.43
8	2-7/16	3-5/8	1.00	1.00	2.46
9	2-7/16	3-5/8	1.00	1.00	2.46
10	2-7/16	3-5/8	.99	.99	2.40
11	2-5/16	3-1/2	.92	.92	2.30
12	2-5/16	3-1/2	.92	.92	2.30
13	2-5/16	3-1/2	.90	.90	2.22
14	2-3/16	3-3/8	.90	.90	2.22
15	2-3/16	3-3/8	.90	.90	2.22
16	2-3/16	3-3/8	.90	.90	2.22
17	2-3/16	3-3/8	.90	.90	2.22
18	2-1/8	3-1/4	.75	.75	1.70
19	2-1/8	3-1/4	.75	.75	1.83
20	2-1/8	3-1/4	.75	.75	1.83
21	2-1/8	3-1/4	.69	.69	1.90
22	2	3-1/8	.69	.69	1.70
23	2	3-1/8	.69	.69	1.68
24	2	3-1/8	.69	.69	1.68
25	1-7/8	3	.65	.65	1.62
26	1-7/8	3	.66	.66	1.62
27	1-7/8	3	.66	.66	1.62
28	1-3/4	2-7/8	.61	.61	1.47
29	1-3/4	2-7/8	.60	.60	1.47
30	1-5/8	2-3/4	.60	.60	1.47

Size	Flute Length	Overall Length	Price Each Oxide X300	Bright X300A	TiN X300T
31	1-5/8	2-3/4	.60	.60	1.47
32	1-5/8	2-3/4	.60	.60	1.47
33	1-1/2	2-5/8	.60	.60	1.47
34	1-1/2	2-5/8	.60	.60	1.47
35	1-1/2	2-5/8	.60	.60	1.47
36	1-7/16	2-1/2	.59	.59	1.47
37	1-7/16	2-1/2	.60	.60	1.47
38	1-7/16	2-1/2	.60	.60	1.47
39	1-3/8	2-3/8	.60	.60	1.47
40	1-3/8	2-3/8	.60	.60	1.47
41	1-3/8	2-3/8	.58	.58	1.47
42	1-1/4	2-1/4	.60	.60	1.47
43	1-1/4	2-1/4	.58	.58	1.43
44	1-1/8	2-1/8	.58	.58	1.43
45	1-1/8	2-1/8	.60	.60	1.47
46	1-1/8	2-1/8	.60	.60	1.47
47	1	2	.60	.60	1.47
48	1	2	.60	.60	1.47
49	1	2	.60	.60	1.47
50	1	2	.60	.60	1.47
51	1	2	.60	.60	1.47
52	7/8	1-7/8	.60	.60	1.47
53	7/8	1-7/8	.60	.60	1.47
54	7/8	1-7/8	.51	.51	1.47
55	7/8	1-7/8	.60	.60	1.47
56	3/4	1-3/4	.60	.60	1.47
57	3/4	1-3/4	.60	.60	1.47
58	11/16	1-5/8	.61	.61	1.47
59	11/16	1-5/8	.61	.61	1.47
60	11/16	1-5/8	.61	.61	1.47

Continued on Next Page ▶

MDX® SUPERIOR IMPORT Jobber Length Drills

High Speed Steel & Titanium Nitride Coated (TiN)

These drills are used for general purpose applications at a lower cost.

List No. **X300** – 118° Point, H.S. Oxide Finish
List No. **X300A** – 118° Point, H.S. Bright Finish
List No. **X300T** – 118° Point, TiN Coated

High Speed



Wire Gauge Sizes

Package Quantity: 12 drills

Size	Flute Length	Overall Length	Price Each Oxide X300	Price Each Bright X300A
61	11/16	1-5/8	.65	.65
62	5/8	1-1/2	.65	.65
63	5/8	1-1/2	.65	.65
64	5/8	1-1/2	.65	.65
65	5/8	1-1/2	.65	.65
66	1/2	1-3/8	.65	.65
67	1/2	1-3/8	.65	.65
68	1/2	1-3/8	.65	.65
69	1/2	1-3/8	.71	.71
70	3/8	1-1/4	.71	.71

Size	Flute Length	Overall Length	Price Each Oxide X300	Price Each Bright X300A
71	3/8	1-1/4	.89	.89
72	5/16	1-1/8	.89	.89
73	5/16	1-1/8	.89	.89
74	1/4	1	.89	.89
75	1/4	1	.89	.89
76	3/16	7/8	.89	.89
77	3/16	7/8	.89	.89
78	3/16	7/8	.89	.89
79	1/8	3/4	1.06	1.06
80	1/8	3/4	1.06	1.06

Letter Sizes

Size	Flute Length	Overall Length	Package Quantity	Price Each Oxide X300	Price Each Bright X300A	Price Each TiN X300T
A	2-5/8	3-7/8	12	1.41	1.41	3.20
B	2-3/4	4	12	1.41	1.41	3.20
C	2-3/4	4	12	1.41	1.41	3.20
D	2-3/4	4	12	1.41	1.41	3.20
E	2-3/4	4	12	1.12	1.12	2.75
F	2-7/8	4-1/8	12	1.49	1.49	4.15
G	2-7/8	4-1/8	12	1.68	1.68	4.40
H	2-7/8	4-1/8	12	1.68	1.68	4.40
I	2-7/8	4-1/8	6	1.68	1.68	4.40
J	2-7/8	4-1/8	6	1.81	1.81	4.70
K	2-15/16	4-1/4	6	1.99	1.99	4.80
L	2-15/16	4-1/4	6	1.99	1.99	4.80
M	3-1/16	4-3/8	6	2.11	2.11	5.10

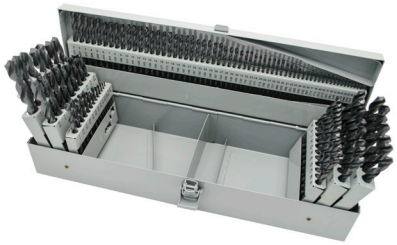
Size	Flute Length	Overall Length	Package Quantity	Price Each Oxide X300	Price Each Bright X300A	Price Each TiN X300T
N	3-1/16	4-3/8	6	2.11	2.11	5.10
O	3-3/16	4-1/2	6	2.13	2.13	5.10
P	3-5/16	4-5/8	6	2.40	2.40	5.90
Q	3-7/16	4-3/4	6	2.40	2.40	5.90
R	3-7/16	4-3/4	6	2.57	2.57	6.30
S	3-1/2	4-7/8	6	2.73	2.73	6.50
T	3-1/2	4-7/8	6	3.10	3.10	6.80
U	3-5/8	5	6	3.10	3.10	6.80
V	3-5/8	5	6	3.19	3.19	6.85
W	3-3/4	5-1/8	6	3.29	3.29	8.10
X	3-3/4	5-1/8	6	3.99	—	8.60
Y	3-7/8	5-1/4	6	4.48	4.48	9.00
Z	3-7/8	5-1/4	6	4.77	4.77	9.70

Sets

Sizes	Description	Finish	Pcs.	Set No.	Price
1/16 — 1/2 by 64ths	H.S. Fractional	Oxide	29	**X307F**	72.70
1/16 — 1/2 by 64ths	H.S. Fractional	Bright	29	**X307FB**	72.70
1/16 — 1/2 by 64ths	H.S. Fractional	TiN Coated	29	**X307TF**	154.81
1/16 — 3/8 by 64ths	H.S. Fractional	Oxide	21	**X307S**	41.78
1/16 — 3/8 by 64ths	H.S. Fractional	Bright	21	**X307SB**	41.78
1/16 — 3/8 by 64ths	H.S. Fractional	TiN Coated	21	**X307TS**	72.72
1/16 — 1/4 by 64ths	H.S. Fractional	Oxide	13	**X307G**	18.25
1/16 — 1/4 by 64ths	H.S. Fractional	Bright	13	**X307GB**	18.25
No. 1 — 60	H.S. Wire Gauge	Oxide	60	**X307W**	59.60
No. 1 — 60	H.S. Wire Gauge	Bright	60	**X307WB**	59.60
No. 1 — 60	H.S. Wire Gauge	TiN Coated	60	**X307TW**	123.80
No. 61 — 80	H.S. Wire Gauge	Oxide	20	**X307V**	19.86
No. 61 — 80	H.S. Wire Gauge	Bright	20	**X307VB**	19.86
A — Z	H.S. Letter	Oxide	26	**X307L**	79.65
A — Z	H.S. Letter	Bright	26	**X307LB**	79.65
1/16 — 1/2 by 64ths A — Z, & No. 1 — 60	H.S. Combination	Oxide	115	**X307X**	220.72
1/16 — 1/2 by 64ths A — Z, & No. 1 — 60	H.S. Combination	Bright	115	**X307XB**	220.72
1/16 — 1/2 by 64ths A — Z, & No. 1 — 60	H.S. Combination	TiN Coated	115	**X307TX**	428.82

All sets are supplied in metal index





Aircraft Jobber Length Drills

High Speed Steel – Oxide Finish

MADE IN USA

MICHIGAN DRILL & CUTTING TOOLS



List No. **300SA** – Type "A", 118° Split Point,
Standard Web Construction

Type "A" drills are made with 118° split points and a standard web construction which allows easier penetration than Type "B".

List No. **300SB** – Type "B", 135° Split Point
Heavy Duty Web Construction

Type "B" drills are made with a heavy web construction and may be used with heavier feeds in harder materials. Because of torsional strength and a 135° split point, this drill is popular in hand held drilling applications to reduce breakage and eliminate skidding or walking.

High Speed

A.I.A. NAS907

Fractional Sizes

Size	Dec. Equiv.	Flute Length	Overall Length	Pkg. Qty.	Price Each Type A 300SA	Price Each Type B 300SB
1/64	.0156	3/16	3/4	12	—	1.49
1/32	.0312	1/2	1-3/8	12	—	1.49
3/64	.0469	3/4	1-3/4	12	1.31	1.31
1/16	.0625	7/8	1-7/8	12	1.16	1.16
5/64	.0781	1	2	12	1.17	1.17
3/32	.0938	1-1/4	2-1/4	12	1.25	1.25
7/64	.1094	1-1/2	2-5/8	12	1.29	1.29
1/8	.1250	1-5/8	2-3/4	12	1.31	1.31
9/64	.1406	1-3/4	2-7/8	12	1.45	1.45
5/32	.1562	2	3-1/8	12	1.55	1.55
11/64	.1719	2-1/8	3-1/4	12	1.64	1.64
3/16	.1875	2-5/16	3-1/2	12	1.88	1.88
13/64	.2031	2-7/16	3-5/8	12	1.97	1.97
7/32	.2188	2-1/2	3-3/4	12	2.08	2.08
15/64	.2344	2-5/8	3-7/8	12	2.34	2.34
1/4	.2500	2-3/4	4	12	2.44	2.44
17/64	.2656	2-7/8	4-1/8	12	2.90	2.90
9/32	.2812	2-15/16	4-1/4	6	3.07	3.07
19/64	.2969	3-1/16	4-3/8	6	3.56	3.56
5/16	.3125	3-3/16	4-1/2	6	3.86	3.86
21/64	.3281	3-5/16	4-5/8	6	4.29	4.29
11/32	.3438	3-7/16	4-3/4	6	4.61	4.61
23/64	.3594	3-1/2	4-7/8	6	5.35	5.35
3/8	.3750	3-5/8	5	6	5.61	5.61
25/64	.3906	3-3/4	5-1/8	6	6.27	6.27
13/32	.4062	3-7/8	5-1/4	6	6.40	6.40
27/64	.4219	3-15/16	5-3/8	6	7.33	7.33
7/16	.4375	4-1/16	5-1/2	6	7.50	7.50
29/64	.4531	4-3/16	5-5/8	6	8.57	8.57
15/32	.4688	4-5/16	5-3/4	6	8.98	8.98
31/64	.4844	4-3/8	5-7/8	6	9.42	9.42
1/2	.5000	4-1/2	6	6	9.74	9.74

Sizes with decimal equivalent smaller than .0625 are not split point.

Wire Gauge Sizes

Package Quantity: 12 drills

Size	Dec. Equiv.	Flute Length	Overall Length	Price Each Type A 300SA	Price Each Type B 300SB
1	.2280	2-5/8	3-7/8	2.44	2.44
2	.2210	2-5/8	3-7/8	2.44	2.44
3	.2130	2-1/2	3-3/4	2.31	2.31
4	.2090	2-1/2	3-3/4	2.31	2.31
5	.2055	2-1/2	3-3/4	2.31	2.31
6	.2040	2-1/2	3-3/4	2.31	2.31
7	.2010	2-7/16	3-5/8	1.98	1.98
8	.1990	2-7/16	3-5/8	2.05	2.05
9	.1960	2-7/16	3-5/8	2.05	2.05
10	.1935	2-7/16	3-5/8	2.05	2.05
11	.1910	2-5/16	3-1/2	1.93	1.93
12	.1890	2-5/16	3-1/2	1.93	1.93
13	.1850	2-5/16	3-1/2	1.88	1.88
14	.1820	2-3/16	3-3/8	1.88	1.88
15	.1800	2-3/16	3-3/8	1.88	1.88
16	.1770	2-3/16	3-3/8	1.88	1.88
17	.1730	2-3/16	3-3/8	1.88	1.88
18	.1695	2-1/8	3-1/4	1.55	1.55
19	.1660	2-1/8	3-1/4	1.55	1.55
20	.1610	2-1/8	3-1/4	1.51	1.51
21	.1590	2-1/8	3-1/4	1.51	1.51
22	.1570	2	3-1/8	1.51	1.51
23	.1540	2	3-1/8	1.51	1.51
24	.1520	2	3-1/8	1.51	1.51
25	.1495	1-7/8	3	1.51	1.51
26	.1470	1-7/8	3	1.51	1.51
27	.1440	1-7/8	3	1.41	1.41
28	.1405	1-3/4	2-7/8	1.33	1.33
29	.1360	1-3/4	2-7/8	1.33	1.33
30	.1285	1-5/8	2-3/4	1.24	1.24
31	.1200	1-5/8	2-3/4	1.33	1.33
32	.1160	1-5/8	2-3/4	1.33	1.33
33	.1130	1-1/2	2-5/8	1.33	1.33
34	.1110	1-1/2	2-5/8	1.33	1.33
35	.1100	1-1/2	2-5/8	1.33	1.33
36	.1065	1-7/16	2-1/2	1.33	1.33
37	.1040	1-7/16	2-1/2	1.33	1.33
38	.1015	1-7/16	2-1/2	1.33	1.33
39	.0995	1-3/8	2-3/8	1.33	1.33
40	.0980	1-3/8	2-3/8	1.29	1.29
41	.0960	1-3/8	2-3/8	1.33	1.33
42	.0935	1-1/4	2-1/4	1.33	1.33
43	.0890	1-1/4	2-1/4	1.33	1.33
44	.0860	1-1/8	2-1/8	1.33	1.33
45	.0820	1-1/8	2-1/8	1.33	1.33
46	.0810	1-1/8	2-1/8	1.33	1.33
47	.0785	1	2	1.33	1.33
48	.0760	1	2	1.33	1.33
49	.0730	1	2	1.33	1.33
50	.0700	1	2	1.33	1.33
51	.0670	1	2	1.33	1.33
52	.0635	7/8	1-7/8	1.33	1.33
53	.0595	7/8	1-7/8	1.33	1.33
54	.0550	7/8	1-7/8	1.33	1.33
55	.0520	7/8	1-7/8	—	1.33
56	.0465	3/4	1-3/4	1.33	1.33
57	.0430	3/4	1-3/4	1.33	1.33
58	.0420	11/16	1-5/8	—	1.33
59	.0410	11/16	1-5/8	1.33	1.33
60	.0400	11/16	1-5/8	—	1.33

Sizes with decimal equivalent smaller than .0625 are not split point.

Aircraft Jobber Length Drills

High Speed Steel – Oxide Finish



List No. **300SA** – Type “A”, 118° Split Point,
Standard Web Construction

List No. **300SB** – Type “B”, 135° Split Point
Heavy Duty Web Construction

Letter Sizes

Size	Dec. Equiv.	Flute Length	Overall Length	Pkg. Qty.	Price Each Type A 300SA	Price Each Type B 300SB
A	.2340	2-5/8	3-7/8	12	2.90	2.90
B	.2380	2-3/4	4	12	2.90	2.90
C	.2420	2-3/4	4	12	2.90	2.90
D	.2460	2-3/4	4	12	2.90	2.90
E	.2500	2-3/4	4	12	2.44	2.44
F	.2570	2-7/8	4-1/8	12	2.97	2.97
G	.2610	2-7/8	4-1/8	12	3.44	3.44
H	.2660	2-7/8	4-1/8	12	3.63	3.63
I	.2720	2-7/8	4-1/8	6	3.63	3.63
J	.2770	2-7/8	4-1/8	6	3.83	3.83
K	.2810	2-15/16	4-1/4	6	4.09	4.09
L	.2900	2-15/16	4-1/4	6	4.22	4.22
M	.2950	3-1/16	4-3/8	6	4.22	4.22
N	.3020	3-1/16	4-3/8	6	4.22	4.22
O	.3160	3-3/16	4-1/2	6	4.22	4.22
P	.3230	3-5/16	4-5/8	6	4.88	4.88
Q	.3320	3-7/16	4-3/4	6	5.02	5.02
R	.3390	3-7/16	4-3/4	6	5.37	5.37
S	.3480	3-1/2	4-7/8	6	5.91	5.91
T	.3580	3-1/2	4-7/8	6	6.27	6.27
U	.3680	3-5/8	5	6	6.27	6.27
V	.3770	3-5/8	5	6	6.44	6.44
W	.3860	3-3/4	5-1/8	6	6.78	6.78
X	.3970	3-3/4	5-1/8	6	8.03	8.03
Y	.4040	3-7/8	5-1/4	6	9.82	9.82
Z	.4130	3-7/8	5-1/4	6	9.82	9.82

Sets

Size	Point Angle	Pieces	Set No.	Price
1/16 – 1/4 by 64ths	Type “B” 135°	13	**307GH**	27.78
1/16 – 1/2 by 32nds	Type “B” 135°	15	**307RH**	77.04
1/16 – 3/8 by 64ths	Type “B” 135°	21	**307SH**	67.03
1/16 – 1/2 by 64ths	Type “B” 135°	29	**307FH**	131.24
1/16 – 1/2 by 64ths	Type “A” 118°	29	**307FHA**	131.24
1 – 60	Type “B” 135°	60	**307WH**	106.39
A – Z Letter Sizes	Type “B” 135°	26	**307LD**	141.12
1/16 – 1/2 by 64ths, A – Z Letter, & 1 – 60 Wire	Type “B” 135°	115	**307XH**	385.50

All sets are supplied in a Huot metal index



TiCN Coated Aircraft Jobber Length Drills

High Speed Steel



List No. **300SBTN** – Titanium Carbonitride Coated
Type “B”, 135° Split Point, **Heavy Duty** Web Construction

Size	Flute Length	Overall Length	Price Each
1/16	7/8	1-7/8	2.94
5/64	1	2	2.94
3/32	1-1/4	2-1/4	2.94
7/64	1-1/2	2-5/8	3.14
1/8	1-5/8	2-3/4	3.19
9/64	1-3/4	2-7/8	3.65
5/32	2	3-1/8	4.09
11/64	2-1/8	3-1/4	4.24
3/16	2-5/16	3-1/2	4.50
13/64	2-7/16	3-5/8	5.48
7/32	2-1/2	3-3/4	5.86
15/64	2-5/8	3-7/8	6.25
1/4	2-3/4	4	6.37
17/64	2-7/8	4-1/8	9.24
9/32	2-15/16	4-1/4	9.17
19/64	3-1/16	4-3/8	10.22
5/16	3-3/16	4-1/2	10.51
21/64	3-5/16	4-5/8	11.38
11/32	3-7/16	4-3/4	11.98
23/64	3-1/2	4-7/8	13.06
3/8	3-5/8	5	12.92
25/64	3-3/4	5-1/8	17.00
13/32	3-7/8	5-1/4	16.73
27/64	3-15/16	5-3/8	18.46
7/16	4-1/16	5-1/2	18.55
29/64	4-3/16	5-5/8	20.24
15/32	4-5/16	5-3/4	20.64
31/64	4-3/8	5-7/8	21.66
1/2	4-1/2	6	21.39
35/64	4-13/16	6-5/8	43.00

MDX® SUPERIOR IMPORT Heavy Duty Jobber Length Drills

High Speed Oxide Finish & Cobalt

List No. **X300SB** – 135° Split Point, H.D. Web Construction

These drills are made with a heavy web construction and may be used with heavier feeds in harder materials, because of torsional strength and a 135° split point, this drill is popular in hand held drilling applications to reduce breakage and eliminate skidding or walking.

List No. **X300C** – Cobalt, 135° Split Point, H.D.

Cobalt drills are used in drilling tough, high tensile strength materials like Stainless Steels, Titanium, and Inconel.



High Speed · Cobalt · A.I.A. NAS907

Fractional Sizes

Size	Dec. Equiv.	Flute Length	Overall Length	Pkg. Qty.	Price Each H.S. X300SB	Price Each Cobalt X300C
3/64	.0469	3/4	1-3/4	12	.76	1.20
1/16	.0625	7/8	1-7/8	12	.83	1.16
5/64	.0781	1	2	12	.83	1.14
3/32	.0938	1-1/4	2-1/4	12	.83	1.14
7/64	.1094	1-1/2	2-5/8	12	.86	1.20
1/8	.1250	1-5/8	2-3/4	12	.87	1.39
9/64	.1406	1-3/4	2-7/8	12	.92	1.43
5/32	.1562	2	3-1/8	12	.94	1.63
11/64	.1719	2-1/8	3-1/4	12	.97	1.74
3/16	.1875	2-5/16	3-1/2	12	1.14	1.97
13/64	.2031	2-7/16	3-5/8	12	1.29	2.26
7/32	.2188	2-1/2	3-3/4	12	1.41	2.46
15/64	.2344	2-5/8	3-7/8	12	1.51	2.63
1/4	.2500	2-3/4	4	12	1.53	2.74
17/64	.2656	2-7/8	4-1/8	12	1.95	3.29
9/32	.2812	2-15/16	4-1/4	6	2.12	3.43
19/64	.2969	3-1/16	4-3/8	6	2.34	4.07
5/16	.3125	3-3/16	4-1/2	6	2.46	4.38
21/64	.3281	3-5/16	4-5/8	6	2.71	4.87
11/32	.3438	3-7/16	4-3/4	6	3.04	5.23
23/64	.3594	3-1/2	4-7/8	6	3.35	6.23
3/8	.3750	3-5/8	5	6	3.54	6.11
25/64	.3906	3-3/4	5-1/8	6	3.96	6.84
13/32	.4062	3-7/8	5-1/4	6	4.13	7.20
27/64	.4219	3-15/16	5-3/8	6	4.59	7.91
7/16	.4375	4-1/16	5-1/2	6	4.76	8.10
29/64	.4531	4-3/16	5-5/8	6	5.33	9.83
15/32	.4688	4-5/16	5-3/4	6	5.64	9.94
31/64	.4844	4-3/8	5-7/8	6	5.97	10.83
1/2	.5000	4-1/2	6	6	6.04	11.09
35/64	.5468	4-3/16	6-5/8	1	—	28.00
19/32	.5938	5-3/16	7-1/8	1	—	34.45
39/64	.6094	5-3/16	7-1/8	1	—	36.55
5/8	.6250	5-3/16	7-1/8	1	—	36.88
43/64	.6719	5-5/8	7-5/8	1	—	43.80

Sizes with decimal equivalent smaller than .0625 are not split point.

Wire Gauge Sizes

Size	Dec. Equiv.	Flute Length	Overall Length	Price Each H.S. X300SB	Price Each Cobalt X300C
1	.2280	2-5/8	3-7/8	1.59	3.19
2	.2210	2-5/8	3-7/8	1.59	3.19
3	.2130	2-1/2	3-3/4	1.50	3.00
4	.2090	2-1/2	3-3/4	1.50	3.00
5	.2055	2-1/2	3-3/4	1.50	3.00
6	.2040	2-1/2	3-3/4	1.50	3.00
7	.2010	2-7/16	3-5/8	1.29	2.56
8	.1990	2-7/16	3-5/8	1.33	2.56
9	.1960	2-7/16	3-5/8	1.33	2.56
10	.1935	2-7/16	3-5/8	1.33	2.56
11	.1910	2-5/16	3-1/2	1.25	2.56
12	.1890	2-5/16	3-1/2	1.25	2.49
13	.1850	2-5/16	3-1/2	1.22	2.30
14	.1820	2-3/16	3-3/8	1.22	2.30
15	.1800	2-3/16	3-3/8	1.22	2.30
16	.1770	2-3/16	3-3/8	1.22	2.24
17	.1730	2-3/16	3-3/8	1.22	2.24
18	.1695	2-1/8	3-1/4	1.01	2.09
19	.1660	2-1/8	3-1/4	1.01	2.03
20	.1610	2-1/8	3-1/4	.98	2.03
21	.1590	2-1/8	3-1/4	.98	2.03
22	.1570	2	3-1/8	.98	2.03
23	.1540	2	3-1/8	.98	2.03
24	.1520	2	3-1/8	.98	2.03
25	.1495	1-7/8	3	—	1.80
26	.1470	1-7/8	3	.98	1.80
27	.1440	1-7/8	3	.92	1.80
28	.1405	1-3/4	2-7/8	.86	1.80
29	.1360	1-3/4	2-7/8	—	1.80
30	.1285	1-5/8	2-3/4	.81	1.52
31	.1200	1-5/8	2-3/4	.86	1.52
32	.1160	1-5/8	2-3/4	.86	1.52
33	.1130	1-1/2	2-5/8	.86	1.41
34	.1110	1-1/2	2-5/8	—	1.41
35	.1100	1-1/2	2-5/8	.86	1.41
36	.1065	1-7/16	2-1/2	.86	1.41
37	.1040	1-7/16	2-1/2	.86	1.41
38	.1015	1-7/16	2-1/2	.86	1.32
39	.0995	1-3/8	2-3/8	.86	1.32
40	.0980	1-3/8	2-3/8	.84	1.32
41	.0960	1-3/8	2-3/8	.86	1.32
42	.0935	1-1/4	2-1/4	—	1.32
43	.0890	1-1/4	2-1/4	—	1.32
44	.0860	1-1/8	2-1/8	—	1.32
45	.0820	1-1/8	2-1/8	.86	1.32
46	.0810	1-1/8	2-1/8	—	1.32
47	.0785	1	2	—	1.32
48	.0760	1	2	—	1.32
49	.0730	1	2	—	1.32
50	.0700	1	2	—	1.32
51	.0670	1	2	—	1.32
52	.0635	7/8	1-7/8	—	1.32
53	.0595	7/8	1-7/8	—	1.32
54	.0550	7/8	1-7/8	—	1.32
55	.0520	7/8	1-7/8	—	1.32
56	.0465	3/4	1-3/4	—	1.38
57	.0430	3/4	1-3/4	—	1.38
58	.0420	11/16	1-5/8	—	1.38
59	.0410	11/16	1-5/8	—	1.38
60	.0400	11/16	1-5/8	—	1.33

Sizes with decimal equivalent smaller than .0625 are not split point.

MDX® SUPERIOR IMPORT Heavy Duty Jobber Length Drills

High Speed Oxide Finish & Cobalt



List No. **X300SB** – 135° Split Point, H.D. Web Construction

These drills are made with a heavy web construction and may be used with heavier feeds in harder materials, because of torsional strength and a 135° split point, this drill is popular in hand held drilling applications to reduce breakage and eliminate skidding or walking.

List No. **X300C** – Cobalt, 135° Split Point, H.D.

Cobalt drills are used in drilling tough, high tensile strength materials like Stainless Steels, Titanium, and Inconel.

High Speed | Cobalt | A.I.A. NAS907

Letter Sizes

Size	Dec. Equiv.	Flute Length	Overall Length	Pkg. Qty.	Price Each H.S. X300SB	Price Each Cobalt X300C
A	.234	2-5/8	3-7/8	12	—	3.22
B	.238	2-3/4	4	12	—	3.35
C	.242	2-3/4	4	12	1.89	3.60
D	.246	2-3/4	4	12	—	3.77
E	.250	2-3/4	4	12	1.53	2.77
F	.257	2-7/8	4-1/8	12	1.93	3.32
G	.261	2-7/8	4-1/8	12	2.24	3.35
H	.266	2-7/8	4-1/8	12	—	4.04
I	.272	2-7/8	4-1/8	6	2.36	3.53
J	.277	2-7/8	4-1/8	6	—	3.77
K	.281	2-15/16	4-1/4	6	2.66	3.77
L	.290	2-15/16	4-1/4	6	2.96	4.28
M	.295	3-1/16	4-3/8	6	3.05	4.55

Size	Dec. Equiv.	Flute Length	Overall Length	Pkg. Qty.	Price Each H.S. X300SB	Price Each Cobalt X300C
N	.302	3-1/16	4-3/8	6	3.05	4.55
O	.316	3-3/16	4-1/2	6	3.27	5.38
P	.323	3-5/16	4-5/8	6	—	5.33
Q	.332	3-7/16	4-3/4	6	3.39	5.52
R	.339	3-7/16	4-3/4	6	3.49	5.52
S	.348	3-1/2	4-7/8	6	3.84	6.77
T	.358	3-1/2	4-7/8	6	4.08	6.77
U	.368	3-5/8	5	6	4.08	6.77
V	.377	3-5/8	5	6	—	8.02
W	.386	3-3/4	5-1/8	6	—	7.47
X	.397	3-3/4	5-1/8	6	—	7.47
Y	.404	3-7/8	5-1/4	6	5.21	7.91
Z	.413	3-7/8	5-1/4	6	6.85	9.24

Sets

Size	Description	Pieces	Set No.	Price
1/16 – 1/2 by 64ths	High Speed	29	X307FH	87.98
1/16 – 1/2 by 64ths	Cobalt	29	X307CF	144.54
A – Z	Cobalt	26	X307CL	144.28
No. 1 – 60	Cobalt	60	X307CW	121.34
1/16 – 1/2 by 64ths, A – Z, No. 1 – 60	Cobalt	115	X307CX	413.94

All sets are supplied in Huot metal index



Hex Shank Quick Change Drills



High Speed Steel

Watch our instructional videos on www.MichiganDrill.com/videos

High Speed | MADE IN USA | MICHIGAN DRILL & CUTTING TOOLS

List No. **300QR** – 135° Split Point, Jobber Length

Specially designed for hand held drill and impact tools. Recommended for use in hard metal drilling application and stainless steel.

Size	Dec. Equiv.	Flute Length	Overall Length	Pkg. Qty.	Price Each
1/16	.0625	7/8	1-7/8	12	4.00
3/32	.0938	1-1/4	2-1/4	12	4.00
7/64	.1094	1-1/2	2-5/8	12	3.69
1/8	.1250	1-5/8	2-3/4	12	3.69
5/32	.1562	2	3-1/8	12	4.10
3/16	.1875	2-5/16	3-1/2	12	4.62
7/32	.2188	2-1/2	3-3/4	12	5.85
1/4	.2500	2-3/4	4	12	5.85

Size	Dec. Equiv.	Flute Length	Overall Length	Pkg. Qty.	Price Each
9/32	.2812	2-15/16	4-1/4	6	6.00
5/16	.3125	3-3/16	4-1/2	6	6.80
11/32	.3438	3-7/16	4-3/4	6	6.60
3/8	.3750	3-5/8	5	6	7.10
13/32	.4062	3-7/8	5-1/4	6	8.30
7/16	.4375	4-1/16	5-1/2	6	9.75
15/32	.4688	4-5/16	5-3/4	6	10.25
1/2	.5000	4-1/2	6	6	10.95

Quick Release Adapter

Fast adapter quick change chuck 1/4"



MADE IN USA

Tool No. **QC300R**

Price: 19.95

CUSHMAN CHUCKS SINCE 1882

Cobalt Jobber Length Drills

Cobalt Heavy Duty – 135° Split Point - Type J



List No. **300C** – Super Cobalt

Cobalt drills display higher red hardness and are especially effective in drilling tough, high tensile strength materials like stainless steels, titanium, and inconel.

Cobalt

MADE IN USA

MICHIGAN DRILL & CUTTING TOOLS

Fractional Sizes

Size	Decimal Equivalent	Flute Length	Overall Length	Package Quantity	Price Each
1/64	.0156	3/16	3/4	12	2.78
1/32	.0312	1/2	1-3/8	12	2.40
3/64	.0469	3/4	1-3/4	12	1.91
1/16	.0625	7/8	1-7/8	12	1.75
5/64	.0781	1	2	12	1.78
3/32	.0938	1-1/4	2-1/4	12	1.82
7/64	.1094	1-1/2	2-5/8	12	1.97
1/8	.1250	1-5/8	2-3/4	12	2.24
9/64	.1406	1-3/4	2-7/8	12	2.38
5/32	.1562	2	3-1/8	12	2.63
11/64	.1719	2-1/8	3-1/4	12	2.83
3/16	.1875	2-5/16	3-1/2	12	3.14
13/64	.2031	2-7/16	3-5/8	12	3.63
7/32	.2188	2-1/2	3-3/4	12	3.93
15/64	.2344	2-5/8	3-7/8	12	4.16
1/4	.2500	2-3/4	4	12	4.29
17/64	.2656	2-7/8	4-1/8	12	5.18
9/32	.2812	2-15/16	4-1/4	6	5.61
19/64	.2969	3-1/16	4-3/8	6	6.73
5/16	.3125	3-3/16	4-1/2	6	7.19
21/64	.3281	3-5/16	4-5/8	6	8.12
11/32	.3438	3-7/16	4-3/4	6	8.84

Size	Decimal Equivalent	Flute Length	Overall Length	Package Quantity	Price Each
23/64	.3594	3-1/2	4-7/8	6	10.00
3/8	.3750	3-5/8	5	6	10.69
25/64	.3906	3-3/4	5-1/8	6	11.78
13/32	.4062	3-7/8	5-1/4	6	12.34
27/64	.4219	3-15/16	5-3/8	6	13.53
7/16	.4375	4-1/16	5-1/2	6	13.86
29/64	.4531	4-3/16	5-5/8	6	16.40
15/32	.4688	4-5/16	5-3/4	6	17.62
31/64	.4844	4-3/8	5-7/8	6	18.35
1/2	.5000	4-1/2	6	6	18.48
33/64	.5156	4-13/16	6-5/8	1	39.40
17/32	.5312	4-13/16	6-5/8	1	44.88
35/64	.5469	4-13/16	6-5/8	1	47.52
9/16	.5625	4-13/16	6-5/8	1	51.15
37/64	.5781	4-13/16	6-5/8	1	52.73
19/32	.5938	5-3/16	7-1/8	1	53.06
39/64	.6094	5-3/16	7-1/8	1	56.23
5/8	.6250	5-3/16	7-1/8	1	56.73
41/64	.6406	5-3/16	7-1/8	1	59.33
21/32	.6562	5-3/16	7-1/8	1	62.70
43/64	.6719	5-5/8	7-5/8	1	67.39
11/16	.6875	5-5/8	7-5/8	1	68.64

Sizes with decimal equivalent smaller than .0625 are not split point.

Letter Sizes

Size	Decimal Equivalent	Flute Length	Overall Length	Package Quantity	Price Each
A	.2340	2-5/8	3-7/8	12	4.82
B	.2380	2-3/4	4	12	5.13
C	.2420	2-3/4	4	12	5.13
D	.2460	2-3/4	4	12	5.39
E	.2500	2-3/4	4	12	4.29
F	.2570	2-7/8	4-1/8	12	5.29
G	.2610	2-7/8	4-1/8	12	5.64
H	.2660	2-7/8	4-1/8	12	5.85
I	.2720	2-7/8	4-1/8	6	5.95
J	.2770	2-7/8	4-1/8	6	6.40
K	.2810	2-15/16	4-1/4	6	6.50
L	.2900	2-15/16	4-1/4	6	7.16
M	.2950	3-1/16	4-3/8	6	7.77

Size	Decimal Equivalent	Flute Length	Overall Length	Package Quantity	Price Each
N	.3020	3-1/16	4-3/8	6	7.91
O	.3160	3-3/16	4-1/2	6	8.57
P	.3230	3-5/16	4-5/8	6	9.03
Q	.3320	3-7/16	4-3/4	6	9.04
R	.3390	3-7/16	4-3/4	6	9.04
S	.3480	3-1/2	4-7/8	6	10.92
T	.3580	3-1/2	4-7/8	6	11.13
U	.3680	3-5/8	5	6	11.45
V	.3770	3-5/8	5	6	11.95
W	.3860	3-3/4	5-1/8	6	11.95
X	.3970	3-3/4	5-1/8	6	12.84
Y	.4040	3-7/8	5-1/4	6	13.19
Z	.4130	3-7/8	5-1/4	6	13.84

Fractional & Letter Sets

Size	Material	Pieces	Set No.	Price
1/16 – 1/4 by 64ths	Cobalt	13	**307CG**	42.80
1/16 – 1/2 by 32nds	Cobalt	15	**307CR**	129.43
1/16 – 3/8 by 64ths	Cobalt	21	**307CS**	111.16
1/16 – 1/2 by 64ths	Cobalt	29	**307CF**	233.57
A – Z Letter Sizes	Cobalt	26	**307CL**	230.18

All sets are supplied in Huot metal index



Cobalt Jobber Length Drills

Cobalt Heavy Duty – 135° Split Point - Type J



List No. **300C** – Super Cobalt

Cobalt drills display higher red hardness and are especially effective in drilling tough, high tensile strength materials like stainless steels, titanium, and inconel.

Cobalt

MADE IN USA

MICHIGAN DRILL & CUTTING TOOLS

Wire Gauge Sizes

Package Quantity: 12 drills

Size	Decimal Equivalent	Flute Length	Overall Length	Price Each
1	.2280	2-5/8	3-7/8	4.55
2	.2210	2-5/8	3-7/8	4.55
3	.2130	2-1/2	3-3/4	4.29
4	.2090	2-1/2	3-3/4	4.29
5	.2055	2-1/2	3-3/4	4.29
6	.2040	2-1/2	3-3/4	4.29
7	.2010	2-7/16	3-5/8	3.66
8	.1990	2-7/16	3-5/8	3.66
9	.1960	2-7/16	3-5/8	3.66
10	.1935	2-7/16	3-5/8	3.66
11	.1910	2-5/16	3-1/2	3.66
12	.1890	2-5/16	3-1/2	3.56
13	.1850	2-5/16	3-1/2	3.29
14	.1820	2-3/16	3-3/8	3.29
15	.1800	2-3/16	3-3/8	3.29
16	.1770	2-3/16	3-3/8	3.21
17	.1730	2-3/16	3-3/8	3.21
18	.1695	2-1/8	3-1/4	2.99
19	.1660	2-1/8	3-1/4	2.89
20	.1610	2-1/8	3-1/4	2.89
21	.1590	2-1/8	3-1/4	2.89
22	.1570	2	3-1/8	2.89
23	.1540	2	3-1/8	2.89
24	.1520	2	3-1/8	2.89
25	.1495	1-7/8	3	2.56
26	.1470	1-7/8	3	2.56
27	.1440	1-7/8	3	2.56
28	.1405	1-3/4	2-7/8	2.56
29	.1360	1-3/4	2-7/8	2.56
30	.1285	1-5/8	2-3/4	2.18
31	.1200	1-5/8	2-3/4	2.18
32	.1160	1-5/8	2-3/4	2.18
33	.1130	1-1/2	2-5/8	2.01
34	.1110	1-1/2	2-5/8	2.01
35	.1100	1-1/2	2-5/8	2.01
36	.1065	1-7/16	2-1/2	2.01
37	.1040	1-7/16	2-1/2	2.01
38	.1015	1-7/16	2-1/2	1.88
39	.0995	1-3/8	2-3/8	1.88
40	.0980	1-3/8	2-3/8	1.88

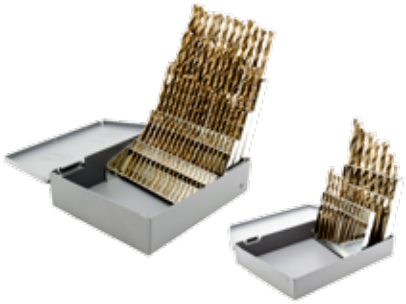
Size	Decimal Equivalent	Flute Length	Overall Length	Price Each
41	.0960	1-3/8	2-3/8	1.88
42	.0935	1-1/4	2-1/4	1.88
43	.0890	1-1/4	2-1/4	1.88
44	.0860	1-1/8	2-1/8	1.88
45	.0820	1-1/8	2-1/8	1.88
46	.0810	1-1/8	2-1/8	1.88
47	.0785	1	2	1.88
48	.0760	1	2	1.88
49	.0730	1	2	1.88
50	.0700	1	2	1.88
51	.0670	1	2	1.88
52	.0635	7/8	1-7/8	1.88
53	.0595	7/8	1-7/8	1.88
54	.0550	7/8	1-7/8	1.88
55	.0520	7/8	1-7/8	1.88
56	.0465	3/4	1-3/4	1.98
57	.0430	3/4	1-3/4	1.98
58	.0420	11/16	1-5/8	1.98
59	.0410	11/16	1-5/8	1.98
60	.0400	11/16	1-5/8	1.98
61	.0390	11/16	1-5/8	2.19
62	.0380	5/8	1-1/2	2.19
63	.0370	5/8	1-1/2	2.19
64	.0360	5/8	1-1/2	2.19
65	.0350	5/8	1-1/2	2.19
66	.0330	1/2	1-3/8	2.33
67	.0320	1/2	1-3/8	2.33
68	.0310	1/2	1-3/8	2.33
69	.0292	1/2	1-3/8	2.62
70	.0280	3/8	1-1/4	2.62
71	.0260	3/8	1-1/4	2.62
72	.0250	5/16	1-1/8	2.77
73	.0240	5/16	1-1/8	2.77
74	.0225	1/4	1	2.77
75	.0210	1/4	1	3.46
76	.0200	3/16	7/8	3.46
77	.0180	3/16	7/8	4.49
78	.0160	3/16	7/8	4.49
79	.0145	1/8	3/4	4.49
80	.0135	1/8	3/4	4.49

Sizes with decimal equivalent smaller than .0625 are not split point.

Wire Gauge & Combination Sets

Sizes	Material	Pieces	Set No.	Price
1 – 60 Wire Gauge	Cobalt	60	**307CW**	169.87
61 – 80 Wire Gauge	Cobalt	20	**307CV**	68.29
1/16 – 1/2 by 64ths, A – Z Letter, and 1 – 60 Wire Gauge	Cobalt	115	**307CX**	638.57
1/16, 5/64, 3/32, 1/8, #29, #25, 5/32, #21,3/16, #7, 7/32, 1/4, F, 5/16, U, 3/8, 27/64, 7/16,1/2	Cobalt	19	**307CJ**	118.80

All sets are supplied in Huot metal index



Cobalt Aircraft Type "D" Drills

Jobber Length – Short Flute

MADE IN USA | MICHIGAN DRILL & CUTTING TOOLS

List No. **319C** – 135° Split Point

Designed for handling the higher thrust loads when drilling tough high tensile and heat resistant alloy steels like stainless steels, titanium, and inconel. Due to its heavy web 135° split point, short flute and jobber length construction, it provides for a more rigid tool, eliminating vibration, and flexing.

NAS 965 | Cobalt



Fractional Sizes

Size	Decimal Equivalent	Flute Length	Overall Length	Price Each
3/64	.0469	3/4	1-3/4	2.80
1/16	.0625	5/8	1-7/8	2.80
5/64	.0781	11/16	2	2.91
3/32	.0938	3/4	2-1/4	2.95
7/64	.1094	13/16	2-5/8	3.23
1/8	.1250	7/8	2-3/4	3.66
5/32	.1562	1	3-1/8	4.64
11/64	.1719	1-1/16	3-1/4	4.78
3/16	.1875	1-1/8	3-1/2	5.07
7/32	.2188	1-1/4	3-3/4	6.69
15/64	.2344	2-5/8	3-7/8	7.10
1/4	.2500	1-3/8	4	7.44
9/32	.2812	1-1/2	4-1/4	9.40
19/64	.2969	1-9/16	4-3/8	10.76
5/16	.3125	1-5/8	4-1/2	12.09
11/32	.3438	1-11/32	4-3/4	14.03
21/64	.3281	1-11/16	4-5/8	14.80
3/8	.3750	1-13/16	5	16.95
7/16	.4375	2-1/16	5-1/2	23.54
15/32	.4688	2-1/8	5-3/4	28.72
31/64	.4844	2-3/16	5-7/8	31.31
1/2	.5000	2-1/4	6	28.83

Letter Sizes

Size	Decimal Equivalent	Flute Length	Overall Length	Price Each
A	.2340	1-5/16	3-7/8	8.49
D	.2460	1-3/8	4	9.20
F	.2570	1-7/16	4-1/8	9.70
G	.2610	1-7/16	4-1/8	10.40
J	.2770	1-1/2	4-1/8	11.02
L	.2900	1-9/16	4-1/4	12.51
O	.3160	1-11/16	4-1/2	13.99
P	.3230	1-11/16	4-5/8	14.80
V	.3770	1-7/8	5	21.82
X	.3970	1-15/16	5-1/8	21.82

Wire Gauge Sizes

Size	Decimal Equivalent	Flute Length	Overall Length	Price Each
1	.2280	1-5/16	3-7/8	8.42
2	.2210	1-5/16	3-7/8	8.42
3	.2130	1-1/4	3-3/4	7.66
4	.2100	1-1/4	3-3/4	7.66
5	.2055	1-1/4	3-3/4	7.66
8	.1990	1-3/16	3-5/8	5.93
9	.1960	1-3/16	3-5/8	5.93
10	.1935	1-3/16	3-5/8	5.93
11	.1910	1-3/16	3-1/2	5.93
13	.1850	1-1/8	3-1/2	5.72
17	.1730	1-1/8	3-3/8	5.04
18	.1695	1-1/16	3-1/4	4.56
19	.1660	1-1/16	3-1/4	4.75
20	.1610	1-1/16	3-1/4	4.53
21	.1590	1-1/16	3-1/4	4.53
23	.1540	1	3-1/8	4.53
24	.1520	1	3-1/8	4.53
25	.1495	1	3	4.53
26	.1470	1	3	4.53
27	.1440	1	3	4.10
29	.1360	15/16	2-7/8	4.10
30	.1285	15/16	2-3/4	3.45
31	.1200	7/8	2-3/4	3.45
34	.1110	7/8	2-5/8	3.45
35	.1100	7/8	2-5/8	3.23
36	.1065	13/16	2-1/2	3.23
37	.1040	13/16	2-1/2	3.23
38	.1010	13/16	2-1/2	3.23
39	.0995	13/16	2-3/8	3.02
40	.0980	13/16	2-3/8	2.80
43	.0890	3/4	2-1/4	3.12
46	.0810	3/4	2-1/8	3.12
47	.0785	3/4	2	3.12
48	.0760	11/16	2	3.12
49	.0730	11/16	2	3.12
50	.0700	11/16	2	2.91
51	.0670	11/16	2	2.91
54	.0550	5/8	1-7/8	2.91
55	.0520	5/8	1-7/8	2.91
57	.0430	1/2	1-3/4	2.91
58	.0420	1/2	1-3/4	2.91

Sizes with decimal equivalent smaller than .0625 are not split point.

Sets

Size	Length of Cut	Price Each
319CF	1/16-1/2	32.00

Aircraft Routers

High Speed | MADE IN USA | MICHIGAN DRILL & CUTTING TOOLS

Straight Aircraft Router

List No. **606** – Left Hand Helix, Right Hand Cut



Used for cutting, trimming and routing around openings in fuselage, windows, door sills, and plexi-glass. Capable of cutting without the need for drilling first. Fast chip ejection and high stock removal.

Size	Length of Cut	Overall Length	Price Each
1/4	9/16	2-3/8	2.70
5/16	9/16	2-3/8	5.75

Tapered Aircraft Router

List No. **608** – Right Hand Helix, Right Hand Cut



Used for profiling and routing in aluminum, hard rubber, and plastic. High rake design for better cutting performance.

Size	Small End	Large End	Length of Cut	Overall Length	Price Each
1	.0810	.0980	13/16	2"	3.00
2	.1100	.1280	7/8	2-1/4	3.00
3	.1650	.1875	1-1/16	2-1/2	3.50
4	.2240	.2500	1-1/4	2-3/4	5.00

Coated Heavy Duty Jobber Drills

High Speed Steel & Cobalt



High Speed · Cobalt · MADE IN USA · MICHIGAN DRILL & CUTTING TOOLS

Heavy Duty, 135° Split Point
List No. **300SBT** – TiN Coated
List No. **300SBTA** – TiAlN Coated

Cobalt, 135° Split Point
List No. **300CT** – TiN Coated
List No. **300CTA** – TiAlN Coated

Fractional Sizes

Size	Flute Length	Overall Length	Price Each			
			Heavy Duty		Cobalt	
			TiN 300SBT	TiAlN 300SBTA	TiN 300CT	TiAlN 300CTA
1/64	3/16	3/4	2.94	3.60	5.20	3.50
1/32	1/2	1-3/8	2.94	3.60	3.90	4.40
3/64	3/4	1-3/4	2.94	3.30	3.50	3.90
1/16	7/8	1-7/8	2.56	2.94	3.12	3.59
5/64	1	2	2.56	2.94	3.12	3.59
3/32	1-1/4	2-1/4	2.56	2.94	3.12	3.59
7/64	1-1/2	2-5/8	2.73	3.14	3.25	3.73
1/8	1-5/8	2-3/4	2.78	3.19	3.71	4.27
9/64	1-3/4	2-7/8	3.18	3.65	3.78	4.34
5/32	2	3-1/8	3.56	4.09	4.08	4.69
11/64	2-1/8	3-1/4	3.69	4.24	4.26	4.90
3/16	2-5/16	3-1/2	3.92	4.50	5.31	6.11
13/64	2-7/16	3-5/8	4.77	5.48	6.66	7.65
7/32	2-1/2	3-3/4	5.10	5.86	7.03	8.07
15/64	2-5/8	3-7/8	5.44	6.25	7.35	8.45
1/4	2-3/4	4	5.54	6.37	7.63	8.77
17/64	2-7/8	4-1/8	8.05	9.24	10.28	11.82
9/32	2-15/16	4-1/4	7.98	9.17	10.59	12.18

Size	Flute Length	Overall Length	Price Each			
			Heavy Duty		Cobalt	
			TiN 300SBT	TiAlN 300SBTA	TiN 300CT	TiAlN 300CTA
19/64	3-1/16	4-3/8	8.89	10.22	11.98	13.77
5/16	3-3/16	4-1/2	9.15	10.51	12.49	14.35
21/64	3-5/16	4-5/8	9.90	11.38	13.34	15.33
11/32	3-7/16	4-3/4	10.42	11.98	14.21	16.34
23/64	3-1/2	4-7/8	11.36	13.06	16.27	18.71
3/8	3-5/8	5	11.24	12.92	15.62	17.95
25/64	3-3/4	5-1/8	14.79	17.00	19.69	22.64
13/32	3-7/8	5-1/4	14.91	16.73	20.26	23.29
27/64	3-15/16	5-3/8	16.06	18.46	21.69	24.93
7/16	4-1/16	5-1/2	16.13	18.55	22.02	25.33
29/64	4-3/16	5-5/8	17.60	20.24	25.12	28.88
15/32	4-5/16	5-3/4	17.95	20.64	25.46	29.27
31/64	4-3/8	5-7/8	18.84	21.66	26.02	29.91
1/2	4-1/2	6	18.60	21.39	25.83	29.69
33/64	4-13/16	6-5/8	—	35.75	64.00	69.00
17/32	4-13/16	6-5/8	—	—	—	69.00
35/64	4-13/16	6-5/8	—	39.00	—	69.00
5/8	5- 3/16	7-1/8	—	—	—	77.50

Wire Gauge Sizes

Size	Flute Length	Overall Length	Price Each			
			Heavy Duty		Cobalt	
			TiN 300SBT	TiAlN 300SBTA	TiN 300CT	TiAlN 300CTA
1	2-5/8	3-7/8	5.28	6.07	7.73	8.88
2	2-5/8	3-7/8	5.28	6.07	7.73	8.88
3	2-1/2	3-3/4	5.09	5.84	7.50	7.71
4	2-1/2	3-3/4	5.15	5.92	7.50	7.71
5	2-1/2	3-3/4	5.15	5.92	7.50	7.71
6	2-1/2	3-3/4	4.84	5.56	7.50	7.71
7	2-7/16	3-5/8	4.84	5.56	5.71	6.57
8	2-7/16	3-5/8	4.84	5.56	5.71	6.57
9	2-7/16	3-5/8	4.84	5.56	5.71	6.57
10	2-7/16	3-5/8	4.84	5.56	5.71	6.57
11	2-5/16	3-1/2	4.66	5.35	5.71	6.57
12	2-5/16	3-1/2	4.66	5.35	5.71	6.57
13	2-5/16	3-1/2	4.61	5.31	5.46	6.28
14	2-3/16	3-3/8	4.61	5.31	5.46	6.28
15	2-3/16	3-3/8	4.60	5.29	5.46	6.28
16	2-3/16	3-3/8	4.61	5.31	5.46	6.28
17	2-3/16	3-3/8	4.61	5.31	5.46	6.28
18	2-1/8	3-1/4	4.18	4.80	5.42	6.23
19	2-1/8	3-1/4	4.14	4.76	5.42	6.23
20	2-1/8	3-1/4	4.14	4.76	5.42	6.23
21	2-1/8	3-1/4	3.96	4.55	5.41	6.22
22	2	3-1/8	3.99	4.58	5.41	6.22
23	2	3-1/8	3.96	4.55	5.41	6.22
24	2	3-1/8	3.96	4.55	5.41	6.22
25	1-7/8	3	3.63	4.17	5.11	5.88
26	1-7/8	3	3.63	4.17	5.09	5.84

Size	Flute Length	Overall Length	Price Each			
			Heavy Duty		Cobalt	
			TiN 300SBT	TiAlN 300SBTA	TiN 300CT	TiAlN 300CTA
27	1-7/8	3	3.62	4.16	5.09	5.84
28	1-3/4	2-7/8	3.44	3.95	4.54	5.18
29	1-3/4	2-7/8	3.44	3.95	4.54	5.11
30	1-5/8	2-3/4	3.44	3.95	4.50	4.90
31	1-5/8	2-3/4	3.44	3.95	4.45	4.86
32	1-5/8	2-3/4	3.44	3.95	4.27	4.75
33	1-1/2	2-5/8	3.44	3.95	4.23	4.75
34	1-1/2	2-5/8	3.44	3.95	4.13	4.75
35	1-1/2	2-5/8	3.44	3.95	4.13	4.70
36	1-7/16	2-1/2	3.44	3.95	4.10	4.70
37	1-7/16	2-1/2	3.44	3.95	4.10	4.54
38	1-7/16	2-1/2	3.44	3.95	3.95	4.54
39	1-3/8	2-3/8	3.44	3.95	3.95	4.54
40	1-3/8	2-3/8	3.44	3.95	3.95	4.54
41	1-3/8	2-3/8	3.44	3.95	3.95	4.54
42	1-1/4	2-1/4	3.44	3.95	3.95	4.54
43	1-1/4	2-1/4	3.44	3.95	3.95	4.54
44	1-1/8	2-1/8	3.44	3.95	3.95	4.54
45	1-1/8	2-1/8	3.44	3.95	3.95	4.54
46	1-1/8	2-1/8	3.44	3.95	3.95	4.54
47	1	2	3.44	3.95	3.95	4.54
48	1	2	3.44	3.95	3.95	4.54
49	1	2	3.44	3.95	3.95	4.54
50	1	2	3.44	3.95	3.95	4.54
51	1	2	3.44	3.95	3.95	4.54
52	7/8	1-7/8	3.44	3.95	3.95	4.54

Sets

Size	Point Angle	Pieces	Set No.	Price
1/16 – 1/2 by 64ths	TiN Coated Type "B" 135°	29	307THF	276.19
1 – 60	TiN Coated Type "B" 135°	60	307THW	182.04

All sets are supplied in a Huot metal index



Metric Jobber Length Drills



High Speed & Cobalt

List No. **301** – H.S. Oxide Finish, 118° Point
Creates a porous layer that holds cutting oil which provides abrasion resistance and improved chip flow.

List No. **301A** – H.S. Bright Finish, 118° Point
Better chip ejection in low carbon, non-ferrous materials.

List No. **301C** – Super Cobalt, HD 135° Split Point
Cobalt drills are used in drilling tough, high tensile strength materials like stainless steels, titanium, and inconel.

High Speed

Cobalt

MADE IN USA

MICHIGAN DRILL & CUTTING TOOLS

Size mm	Dec. Equiv.	Flute Length	Overall Length	Pkg. Qty.	Price Each Oxide Finish 301	Bright Finish 301A	Super Cobalt 301C
.15	.0059	3/64	3/4	12	8.08	8.08	—
.16	.0063	3/64	3/4	12	—	8.08	—
.17	.0067	1/16	3/4	12	—	7.31	—
.18	.0071	1/16	3/4	12	—	7.31	—
.19	.0075	1/16	3/4	12	5.81	5.81	—
.20	.0079	1/16	3/4	12	—	5.81	—
.21	.0083	3/32	3/4	12	—	5.81	—
.22	.0087	1/16	3/4	12	—	5.81	—
.23	.0091	3/32	3/4	12	5.81	5.81	—
.24	.0094	3/32	3/4	12	—	5.81	—
.25	.0098	5/64	3/4	12	—	4.59	—
.26	.0102	5/64	3/4	12	—	4.59	—
.27	.0106	5/64	3/4	12	—	4.15	—
.28	.0110	5/64	3/4	12	—	4.15	—
.29	.0114	5/64	3/4	12	4.15	4.15	—
.30	.0118	3/32	3/4	12	—	4.15	—
.32	.0126	3/32	3/4	12	4.15	4.15	—
.34	.0134	5/32	3/4	12	—	4.15	—
.35	.0138	1/8	3/4	12	—	4.15	—
.36	.0142	5/32	3/4	12	—	4.15	—
.38	.0150	3/16	3/4	12	—	4.15	—
.40	.0158	3/16	7/8	12	—	4.15	—
.42	.0165	3/16	7/8	12	—	4.15	—
.44	.0173	3/16	7/8	12	—	4.15	—
.45	.0177	3/16	7/8	12	—	4.15	—
.46	.0181	3/16	7/8	12	—	4.15	—
.48	.0189	3/16	7/8	12	4.15	4.15	—
.50	.0197	3/16	7/8	12	4.15	4.15	—
.55	.0217	1/4	1	12	2.52	2.52	—
.60	.0236	5/16	1-1/8	12	2.52	2.52	—
.65	.0256	3/8	1-1/4	12	2.52	2.52	—
.70	.0276	3/8	1-1/4	12	2.01	2.01	—
.75	.0295	1/2	1-3/8	12	1.80	1.80	—
.80	.0315	1/2	1-3/8	12	1.80	1.80	—
.85	.0335	5/8	1-1/2	12	1.80	1.80	—
.90	.0355	5/8	1-1/2	12	1.80	1.80	—
.95	.0374	5/8	1-1/2	12	1.80	1.80	—
1.00	.0394	11/16	1-5/8	12	1.80	1.80	3.02
1.05	.0413	11/16	1-5/8	12	1.80	1.80	3.15
1.10	.0433	3/4	1-3/4	12	1.89	1.29	3.15
1.15	.0453	3/4	1-3/4	12	1.89	—	3.15
1.20	.0472	7/8	1-7/8	12	1.89	1.89	3.15
1.25	.0492	7/8	1-7/8	12	1.89	1.89	3.15
1.30	.0512	7/8	1-7/8	12	1.89	1.89	3.15
1.35	.0531	7/8	1-7/8	12	1.89	1.89	—
1.40	.0551	7/8	1-7/8	12	1.89	1.89	3.15
1.45	.0571	7/8	1-7/8	12	1.89	1.89	3.15
1.50	.0591	7/8	1-7/8	12	1.89	1.89	3.15
1.55	.0610	7/8	1-7/8	12	1.89	1.89	3.15
1.60	.0630	7/8	1-7/8	12	1.89	1.89	3.15
1.65	.0650	1	2	12	1.89	1.89	3.15
1.70	.0669	1	2	12	1.89	1.89	3.15
1.75	.0689	1	2	12	1.89	1.89	3.15
1.80	.0709	1	2	12	1.89	1.89	3.15
1.85	.0728	1	2	12	2.08	—	3.15
1.90	.0748	1	2	12	2.08	2.08	3.15
1.95	.0768	1	2	12	2.08	2.08	3.15
2.00	.0787	1-1/8	2-1/8	12	1.58	1.58	2.84
2.05	.0807	1-1/8	2-1/8	12	2.25	2.25	3.15
2.10	.0827	1-1/8	2-1/8	12	1.89	1.89	3.15
2.15	.0846	1-1/8	2-1/8	12	1.89	1.89	3.15
2.20	.0866	1-1/4	2-1/4	12	1.89	1.89	3.15
2.25	.0886	1-1/4	2-1/4	12	1.89	1.89	3.15
2.30	.0906	1-1/4	2-1/4	12	1.89	1.89	3.15
2.35	.0925	1-1/4	2-1/4	12	1.89	1.89	3.15
2.40	.0945	1-3/8	2-3/8	12	1.89	1.89	3.15
2.45	.0965	1-3/8	2-3/8	12	2.25	2.25	3.15
2.50	.0984	1-3/8	2-3/8	12	1.89	1.89	2.88
2.60	.1024	1-7/16	2-1/2	12	1.89	1.89	3.15
2.70	.1063	1-7/16	2-1/2	12	1.89	1.89	3.15
2.75	.1083	1-1/2	2-5/8	12	2.25	—	3.96
2.80	.1102	1-1/2	2-5/8	12	2.25	2.25	3.51
2.90	.1142	1-5/8	2-3/4	12	2.25	2.25	3.51
3.00	.1181	1-5/8	2-3/4	12	1.76	1.76	3.33
3.10	.1220	1-5/8	2-3/4	12	2.25	2.25	3.51
3.20	.1260	1-5/8	2-3/4	12	1.98	1.98	3.51
3.25	.1280	1-5/8	2-3/4	12	2.25	2.25	3.51
3.30	.1299	1-3/4	2-7/8	12	1.98	1.98	3.51
3.40	.1339	1-3/4	2-7/8	12	2.07	2.07	3.51
3.50	.1378	1-3/4	2-7/8	12	1.79	1.79	3.51
3.60	.1417	1-7/8	3	12	2.25	2.25	4.23
3.70	.1457	1-7/8	3	12	2.25	2.25	4.23
3.75	.1476	1-7/8	3	12	2.39	2.39	4.23
3.80	.1496	1-7/8	3	12	2.39	—	4.23
3.90	.1535	2	3-1/8	12	2.81	2.81	4.23
4.00	.1575	2-1/8	3-1/4	12	1.98	1.98	4.23
4.10	.1614	2-1/8	3-1/4	12	2.39	2.39	4.23
4.20	.1654	2-1/8	3-1/4	12	2.39	2.39	4.23
4.25	.1673	2-1/8	3-1/4	12	2.57	2.57	4.23
4.30	.1693	2-1/8	3-1/4	12	2.61	2.61	4.23
4.40	.1732	2-3/16	3-3/8	12	2.79	2.79	4.77
4.50	.1772	2-3/16	3-3/8	12	2.39	2.39	4.23
4.60	.1811	2-3/16	3-3/8	12	2.79	2.79	4.77
4.70	.1850	2-5/16	3-1/2	12	2.97	2.97	4.77
4.75	.1870	2-5/16	3-1/2	12	2.97	2.97	5.22
4.80	.1890	2-5/16	3-1/2	12	2.97	2.97	5.49
4.90	.1929	2-7/16	3-5/8	12	2.97	2.97	5.49
5.00	.1969	2-7/16	3-5/8	12	2.61	2.61	5.49
5.10	.2008	2-7/16	3-5/8	12	3.33	3.33	6.12
5.20	.2047	2-1/2	3-3/4	12	3.33	3.33	6.48
5.25	.2067	2-1/2	3-3/4	12	3.33	3.33	6.75
5.30	.2087	2-1/2	3-3/4	12	3.33	3.33	6.75
5.40	.2126	2-1/2	3-3/4	12	3.33	3.33	6.75
5.50	.2165	2-1/2	3-3/4	12	3.33	3.33	5.67
5.55	.2185	2-1/2	3-3/4	12	4.10	—	—
5.60	.2205	2-5/8	3-7/8	12	3.42	3.42	6.75
5.70	.2244	2-5/8	3-7/8	12	3.42	3.42	6.75
5.75	.2264	2-5/8	3-7/8	12	3.48	3.48	7.47
5.80	.2283	2-5/8	3-7/8	12	3.48	3.48	6.75
5.90	.2323	2-5/8	3-7/8	12	3.48	3.48	6.75
5.95	.2343	2-5/8	3-7/8	12	4.23	—	—
6.00	.2362	2-3/4	4	12	3.11	3.11	6.12
6.10	.2402	2-3/4	4	12	3.69	—	7.65
6.20	.2441	2-3/4	4	12	3.69	3.69	7.65

Cobalt sizes with decimal equivalent smaller than .0625 are not split point.

Metric Jobber Length Drills



High Speed & Cobalt

List No. **301** – H.S. Oxide Finish, 118° Point
Creates a porous layer that holds cutting oil which provides abrasion resistance and improved chip flow.

List No. **301A** – H.S. Bright Finish, 118° Point
Better chip ejection in low carbon, non-ferrous materials.

List No. **301C** – Super Cobalt, HD 135° Split Point
Cobalt drills are used in drilling tough, high tensile strength materials like Stainless Steels, Titanium, and Inconel.

High Speed

Cobalt

MADE IN USA

MICHIGAN DRILL & CUTTING TOOLS

Size mm	Dec. Equiv.	Flute Length	Overall Length	Pkg. Qty.	Price Each Oxide Finish 301	Bright Finish 301A	Super Cobalt 301C
6.25	.2461	2-3/4	4	12	4.05	4.05	7.65
6.30	.2480	2-3/4	4	12	4.05	4.05	7.65
6.40	.2520	2-7/8	4-1/8	12	4.05	4.05	7.65
6.50	.2559	2-7/8	4-1/8	12	3.69	3.69	7.65
6.60	.2598	2-7/8	4-1/8	12	4.05	4.05	7.65
6.70	.2638	2-7/8	4-1/8	12	4.05	4.05	7.65
6.75	.2657	2-7/8	4-1/8	12	4.25	—	8.64
6.80	.2677	2-7/8	4-1/8	12	4.25	4.25	7.65
6.90	.2717	2-7/8	4-1/8	12	4.86	4.86	8.91
7.00	.2756	2-7/8	4-1/8	12	4.05	4.05	7.65
7.10	.2795	2-15/16	4-1/4	12	4.86	4.86	9.18
7.20	.2835	2-15/16	4-1/4	12	4.86	4.86	10.26
7.25	.2854	2-15/16	4-1/4	12	5.22	5.22	11.25
7.30	.2874	2-15/16	4-1/4	12	5.22	—	11.25
7.40	.2913	3-1/16	4-3/8	12	5.22	5.22	11.25
7.50	.2953	3-1/16	4-3/8	6	5.04	5.04	9.09
7.60	.2992	3-1/16	4-3/8	6	5.85	5.85	12.06
7.65	.3012	3-1/16	4-3/8	6	9.65	—	—
7.70	.3031	3-3/16	4-1/2	6	5.85	—	12.06
7.75	.3051	3-3/16	4-1/2	6	5.85	—	12.06
7.80	.3071	3-3/16	4-1/2	6	5.85	5.85	12.06
7.85	.3091	3-3/16	4-1/2	6	6.21	6.21	12.06
7.90	.3110	3-3/16	4-1/2	6	5.85	5.85	12.06
8.00	.3150	3-3/16	4-1/2	6	5.70	5.70	9.77
8.10	.3189	3-5/16	4-5/8	6	6.39	6.39	—
8.20	.3228	3-5/16	4-5/8	6	6.39	6.39	12.78
8.25	.3248	3-5/16	4-5/8	6	7.29	7.29	12.78
8.30	.3268	3-5/16	4-5/8	6	7.29	7.29	12.78
8.40	.3307	3-7/16	4-3/4	6	7.38	7.38	13.86
8.50	.3346	3-7/16	4-3/4	6	6.39	6.39	11.52
8.60	.3386	3-7/16	4-3/4	6	7.38	—	13.86
8.70	.3425	3-7/16	4-3/4	6	7.38	7.38	13.86
8.75	.3445	3-1/2	4-7/8	6	8.91	—	13.86
8.80	.3465	3-1/2	4-7/8	6	7.65	—	16.79
8.90	.3504	3-1/2	4-7/8	6	7.65	7.65	16.79
9.00	.3543	3-1/2	4-7/8	6	7.65	7.65	12.78
9.10	.3583	3-1/2	4-7/8	6	8.10	8.10	16.65
9.20	.3622	3-5/8	5	6	8.10	8.10	16.65
9.25	.3642	3-5/8	5	6	8.37	8.37	16.65
9.30	.3661	3-5/8	5	6	8.37	8.37	16.65
9.40	.3701	3-5/8	5	6	8.37	—	16.65
9.50	.3740	3-5/8	5	6	7.64	7.64	13.86
9.60	.3780	3-3/4	5-1/8	6	9.18	9.18	19.26
9.70	.3819	3-3/4	5-1/8	6	9.18	9.18	—
9.75	.3839	3-3/4	5-1/8	6	9.18	9.18	19.26
9.80	.3858	3-3/4	5-1/8	6	9.18	—	19.26
9.90	.3898	3-3/4	5-1/8	6	9.23	—	19.26
10.00	.3937	3-3/4	5-1/8	6	9.45	9.45	16.02

Size mm	Dec. Equiv.	Flute Length	Overall Length	Pkg. Qty.	Price Each Oxide Finish 301	Bright Finish 301A	Super Cobalt 301C
10.10	.3976	3-3/4	5-1/4	6	11.25	—	—
10.20	.4016	3-7/8	5-1/4	6	9.63	9.63	17.91
10.30	.4055	3-7/8	5-1/4	6	12.06	12.06	—
10.40	.4094	3-7/8	5-1/4	6	12.06	12.06	—
10.50	.4134	3-15/16	5-3/8	6	9.41	9.41	18.54
10.60	.4173	3-15/16	5-3/8	6	11.62	—	—
10.70	.4213	3-15/16	5-3/8	6	12.06	12.06	—
10.80	.4252	4-1/16	5-1/2	6	12.06	12.06	19.35
10.90	.4291	4-1/16	5-1/2	6	12.06	—	—
11.00	.4331	4-1/16	5-1/2	6	10.08	10.08	19.35
11.10	.4370	4-1/16	5-1/2	6	14.31	14.31	—
11.20	.4409	4-3/16	5-5/8	6	12.51	—	22.28
11.25	.4429	4-3/16	5-5/8	6	14.31	14.31	23.94
11.30	.4449	4-3/16	5-5/8	6	14.31	14.31	—
11.40	.4488	4-3/16	5-5/8	6	14.31	—	—
11.50	.4528	4-3/16	5-5/8	6	11.25	11.25	23.94
11.60	.4567	4-3/16	5-5/8	6	16.65	—	—
11.70	.4606	4-3/16	5-5/8	6	16.65	16.65	—
11.80	.4646	4-3/16	5-5/8	6	13.28	—	24.75
11.90	.4685	4-3/16	5-5/8	6	16.65	16.65	—
12.00	.4724	4-3/8	5-7/8	6	12.51	12.51	24.75
12.10	.4764	4-3/8	5-7/8	6	16.65	16.65	—
12.20	.4803	4-3/8	5-7/8	6	13.46	13.46	25.65
12.25	.4823	4-3/8	5-7/8	6	16.65	—	—
12.30	.4843	4-3/8	5-7/8	6	16.65	16.65	—
12.40	.4882	4-3/8	5-7/8	6	16.65	—	—
12.50	.4921	4-1/2	6	6	13.32	13.32	25.65
12.60	.4961	4-1/2	6	1	25.38	25.38	—
12.70	.5000	4-1/2	6	1	25.38	—	—
12.75	.5020	4-1/2	6	1	25.38	25.38	—
12.80	.5039	4-1/2	6	1	23.31	23.31	—
12.90	.5079	4-1/2	6	1	25.38	25.38	—
13.00	.5118	4-1/2	6	1	23.36	23.36	33.82
13.50	.5315	4-13/16	6-5/8	1	27.09	—	36.00
13.80	.5433	4-13/16	6-5/8	1	28.08	—	—
14.00	.5512	4-13/16	6-5/8	1	28.08	—	38.65
14.50	.5709	4-13/16	6-5/8	1	29.97	—	39.50
15.00	.5906	5-3/16	7-1/8	1	29.88	—	39.50
15.25	.6004	5-3/16	7-1/8	1	33.03	—	—
15.50	.6102	5-3/16	7-1/8	1	35.28	—	46.00
16.00	.6299	5-3/16	7-1/8	1	37.44	—	52.00
16.50	.6496	5-3/16	7-1/8	1	42.12	42.12	59.00
17.00	.6693	5-5/8	7-5/8	1	43.47	43.47	69.00
17.50	.6890	5-5/8	7-5/8	1	44.91	44.91	69.75
18.00	.7087	5-5/8	7-5/8	1	50.00	50.00	—
19.00	.7480	5-5/8	7-5/8	1	54.72	—	—
19.50	.7677	5-5/8	7-5/8	1	57.38	—	—
20.00	.7874	5-5/8	7-5/8	1	61.80	—	—

Metric Sets

Description	Pcs.	Oxide Finish Set No.	Oxide Finish Price	Bright Finish Set No.	Bright Finish Price	Cobalt Set No.	Cobalt Price
1.00mm – 6.00 by .5mm	11	**307MA**	33.88	**307MAB**	33.88	**307CMA**	54.22
1.00mm – 10.00 by .5mm	19	**307MB**	85.60	**307MBB**	85.60	**307CMB**	146.60
1.00mm – 13.00 by .5mm	25	**307MD**	169.67	**307MDB**	169.67	**307CMD**	294.86

All sets are supplied in Huot metal index



Metric Heavy Duty Jobber Length Drill

High Speed Steel – Oxide Finish



High Speed | MADE IN USA | MICHIGAN DRILL & CUTTING TOOLS

List No. **301SB** – Type "B", 135° Split Point, Heavy Duty Web Construction

Type "B" drills are made with a heavy web construction and may be used with heavier feeds in harder materials. Because of torsional strength and a 135° split point, this drill is popular in hand held drilling applications to reduce breakage and eliminate skidding or walking.

Size	Decimal Equivalent	Flute Length	Overall Length	Pkg. Qty.	Price Each
1.00	.0394	11/16	1-5/8	12	2.10
1.05	.0413	11/16	1-5/8	12	2.10
1.10	.0433	3/4	1-3/4	12	2.10
1.15	.0453	3/4	1-3/4	12	2.10
1.20	.0472	7/8	1-7/8	12	2.10
1.25	.0492	7/8	1-7/8	12	2.10
1.30	.0512	7/8	1-7/8	12	2.10
1.35	.0531	7/8	1-7/8	12	2.10
1.40	.0551	7/8	1-7/8	12	2.10
1.45	.0571	7/8	1-7/8	12	2.10
1.50	.0591	7/8	1-7/8	12	2.10
1.55	.0610	7/8	1-7/8	12	2.10
1.60	.0630	7/8	1-7/8	12	2.10
1.65	.0650	1	2	12	2.10
1.70	.0669	1	2	12	2.10
1.75	.0689	1	2	12	2.18
1.80	.0709	1	2	12	2.18
1.85	.0728	1	2	12	2.18
1.90	.0748	1	2	12	2.18
1.95	.0768	1	2	12	2.18
2.00	.0787	1-1/8	2-1/8	12	2.18
2.05	.0807	1-1/8	2-1/8	12	2.18
2.15	.0846	1-1/8	2-1/8	12	2.18
2.20	.0866	1-1/4	2-1/4	12	2.18
2.30	.0906	1-1/4	2-1/4	12	2.18
2.35	.0925	1-1/4	2-1/4	12	2.18
2.40	.0945	1-3/8	2-3/8	12	2.35
2.45	.0965	1-3/8	2-3/8	12	2.35
2.50	.0984	1-3/8	2-3/8	12	2.35
2.70	.1063	1-7/16	2-1/2	12	2.35
2.80	.1102	1-7/16	2-1/2	12	2.35
2.90	.1142	1-5/8	2-3/4	12	2.35
3.00	.1181	1-5/8	2-3/4	12	2.35
3.10	.1220	1-5/8	2-3/4	12	2.60
3.20	.1260	1-5/8	2-3/4	12	2.60
3.25	.1280	1-3/4	2-7/8	12	2.60
3.30	.1299	1-3/4	2-7/8	12	2.60
3.40	.1339	1-3/4	2-7/8	12	2.60
3.50	.1378	1-3/4	2-7/8	12	2.60
3.60	.1417	1-7/8	3	12	2.60
3.70	.1457	1-7/8	3	12	2.60
3.75	.1477	1-7/8	3	12	2.75
3.80	.1496	1-7/8	3	12	2.75
3.90	.1535	2	3-1/8	12	3.00
4.00	.1575	2-1/8	3-1/4	12	3.00
4.10	.1614	2-1/8	3-1/4	12	3.00
4.20	.1654	2-1/8	3-1/4	12	3.00
4.30	.1693	2-1/8	3-1/4	12	3.00
4.40	.1732	2-3/16	3-3/8	12	3.12
4.50	.1772	2-3/16	3-3/8	12	3.12
4.60	.1811	2-3/16	3-3/8	12	3.12
4.70	.1850	2-5/16	3-1/2	12	3.12
5.00	.1969	2-7/16	3-5/8	12	3.12
5.10	.2008	2-7/16	3-5/8	12	3.66
5.20	.2047	2-1/2	3-3/4	12	3.66

Sizes with decimal equivalent smaller than .0625 are not split point.

Size mm	Decimal Equivalent	Flute Length	Overall Length	Pkg. Qty.	Price Each
5.40	.2126	2-1/2	3-3/4	12	3.66
5.50	.2165	2-1/2	3-3/4	12	3.66
5.60	.2205	2-5/8	3-7/8	12	3.98
5.80	.2283	2-5/8	3-7/8	12	3.98
5.90	.2323	2-5/8	3-7/8	12	3.98
6.00	.2362	2-3/4	4	12	3.98
6.20	.2441	2-3/4	4	12	4.46
6.30	.2480	2-3/4	4	12	4.46
6.40	.2520	2-7/8	4-1/8	12	4.46
6.50	.2559	2-7/8	4-1/8	12	4.55
6.60	.2598	2-7/8	4-1/8	12	4.65
6.80	.2677	2-7/8	4-1/8	12	4.81
6.90	.2717	2-7/8	4-1/8	12	5.35
7.00	.2756	2-7/8	4-1/8	12	5.35
7.10	.2795	2-15/16	4-1/4	12	5.35
7.20	.2835	2-15/16	4-1/4	12	5.35
7.25	.2855	2-15/16	4-1/4	12	6.19
7.30	.2874	2-15/16	4-1/4	12	6.19
7.40	.2913	3-1/16	4-3/8	12	6.19
7.50	.2953	3-1/16	4-3/8	6	6.34
7.60	.2992	3-1/16	4-3/8	6	6.34
7.70	.3031	3-3/16	4-1/2	6	6.34
7.80	.3071	3-3/16	4-1/2	6	6.44
7.90	.3110	3-3/16	4-1/2	6	6.73
8.00	.3150	3-3/16	4-1/2	6	6.73
8.10	.3189	3-5/16	4-5/8	6	6.93
8.20	.3228	3-5/16	4-5/8	6	6.93
8.30	.3268	3-5/16	4-5/8	6	7.82
8.40	.3307	3-7/16	4-3/4	6	7.82
8.50	.3346	3-7/16	4-3/4	6	7.82
8.60	.3386	3-7/16	4-3/4	6	7.82
8.70	.3425	3-7/16	4-3/4	6	8.67
8.80	.3465	3-1/2	4-7/8	6	8.67
8.90	.3504	3-1/2	4-7/8	6	8.77
9.00	.3543	3-1/2	4-7/8	6	8.77
9.10	.3583	3-1/2	4-7/8	6	9.16
9.20	.3622	3-5/8	5	6	9.16
9.30	.3661	3-5/8	5	6	9.31
9.40	.3701	3-5/8	5	6	9.31
9.50	.3740	3-5/8	5	6	9.31
9.60	.3780	3-3/4	5-1/8	6	10.40
9.70	.3819	3-3/4	5-1/8	6	10.49
9.80	.3858	3-3/4	5-1/8	6	10.59
9.90	.3898	3-3/4	5-1/8	6	10.69
10.00	.3937	3-3/4	5-1/8	6	10.69
10.20	.4016	3-7/8	5-1/4	6	10.79
10.50	.4134	3-15/16	5-3/8	6	10.85
10.80	.4252	4-1/16	5-1/2	6	13.25
11.00	.4331	4-1/16	5-1/2	6	13.25
11.50	.4528	4-1/16	5-1/2	6	13.25
12.00	.4724	4-3/8	5-7/8	6	13.82
12.20	.4803	4-3/8	5-7/8	6	15.74
12.50	.4921	4-1/2	6	6	16.04
13.00	.5118	4-1/2	6	1	26.60

Metric Left Hand Jobber Length Drill



High Speed Steel

List No. **X301LH** – 118° Point

- Can be used as screw extractor for drilling out broken studs or fasteners.
- For use in left hand spindle rotation on screw machines and drill heads.

High Speed MDX® SUPERIOR IMPORT

Size	Decimal Equivalent	Flute Length	Overall Length	Pkg. Qty.	Price Each
.50	.0197	3/16	7/8	12	5.27
.60	.0236	5/16	1-1/8	12	5.27
.70	.0276	3/8	1-1/4	12	5.63
.80	.0315	1/2	1-3/8	12	5.63
1.00	.0394	11/16	1-5/8	12	6.12
1.10	.0433	3/4	1-3/4	12	8.61
1.15	.0453	3/4	1-3/4	12	8.42
1.30	.0512	7/8	1-7/8	12	7.72
1.40	.0551	7/8	1-7/8	12	7.38
1.50	.0591	7/8	1-7/8	12	4.75
1.60	.0630	7/8	1-7/8	12	6.84
1.70	.0669	1	2	12	6.66
1.80	.0709	1	2	12	6.50
1.90	.0748	1	2	12	6.40
2.00	.0787	1-1/8	2-1/8	12	4.90
2.10	.0827	1-1/8	2-1/8	12	6.12
2.20	.0866	1-1/4	2-1/4	12	6.12
2.30	.0906	1-1/4	2-1/4	12	6.12
2.35	.0925	1-1/4	2-1/4	12	6.12
2.40	.0945	1-3/8	2-3/8	12	6.12
2.50	.0984	1-3/8	2-3/8	12	4.90
2.60	.1024	1-7/16	2-1/2	12	6.24
2.70	.1063	1-7/16	2-1/2	12	6.24
2.80	.1102	1-1/2	2-5/8	12	6.40
2.90	.1142	1-5/8	2-3/4	12	6.40
3.00	.1181	1-5/8	2-3/4	12	5.10
3.40	.1339	1-3/4	2-7/8	12	6.76
3.50	.1378	1-5/8	2-7/8	12	5.50
3.60	.1417	1-7/8	3	12	6.66
3.70	.1457	1-7/8	3	12	6.66
3.80	.1496	1-7/8	3	12	7.55
4.00	.1575	2-1/8	3-1/4	12	6.00
4.10	.1614	2-1/8	3-1/4	12	7.38
4.30	.1693	2-1/8	3-1/4	12	8.61
4.40	.1732	2-3/16	3-3/8	12	8.61
4.50	.1772	2-3/16	3-3/8	12	8.85
4.60	.1811	2-3/16	3-3/8	12	9.11
4.70	.1850	2-5/16	3-1/2	12	9.46
4.80	.1890	2-5/16	3-1/2	12	9.65
4.90	.1929	2-7/16	3-5/8	12	9.65
5.00	.1969	2-7/16	3-5/8	12	10.27
5.10	.2008	2-7/16	3-5/8	12	10.35
5.30	.2087	2-1/2	3-3/4	12	10.54
5.40	.2126	2-1/2	3-3/4	12	10.54
5.50	.2165	2-1/2	3-3/4	12	11.48
5.60	.2205	2-5/8	3-7/8	12	10.88
5.70	.2244	2-5/8	3-7/8	12	10.88
5.80	.2283	2-5/8	3-7/8	12	11.22
5.90	.2323	2-5/8	3-7/8	12	11.22
6.00	.2362	2-3/4	4	12	12.29
6.10	.2402	2-3/4	4	12	12.29
6.20	.2441	2-3/4	4	12	12.62

Size	Decimal Equivalent	Flute Length	Overall Length	Pkg. Qty.	Price Each
6.30	.2480	2-3/4	4	12	14.04
6.40	.2520	2-7/8	4-1/8	12	14.04
6.50	.2559	2-7/8	4-1/8	12	15.00
6.60	.2598	2-7/8	4-1/8	12	15.72
6.70	.2638	2-7/8	4-1/8	12	15.72
6.80	.2677	2-7/8	4-1/8	12	17.54
6.90	.2717	2-7/8	4-1/8	12	17.54
7.00	.2756	2-7/8	4-1/8	12	14.50
7.10	.2795	2-15/16	4-1/4	12	18.95
7.20	.2835	2-15/16	4-1/4	12	18.95
7.30	.2874	2-15/16	4-1/4	12	19.31
7.40	.2913	3-1/16	4-3/8	12	19.31
7.50	.2953	3-1/16	4-3/8	6	21.40
7.60	.2992	3-1/16	4-3/8	6	21.40
7.70	.3031	3-3/16	4-1/2	6	21.40
7.80	.3071	3-3/16	4-1/2	6	21.94
7.90	.3110	3-3/16	4-1/2	6	21.94
8.00	.3150	3-3/16	4-1/2	6	14.66
8.10	.3189	3-5/16	4-5/8	6	22.83
8.20	.3228	3-5/16	4-5/8	6	22.83
8.30	.3268	3-5/16	4-5/8	6	23.86
8.40	.3307	3-7/16	4-3/4	6	23.86
8.50	.3346	3-7/16	4-3/4	6	25.01
8.60	.3386	3-7/16	4-3/4	6	25.45
8.70	.3425	3-7/16	4-3/4	6	25.45
8.80	.3465	3-1/2	4-7/8	6	25.97
8.90	.3504	3-1/2	4-7/8	6	25.97
9.00	.3543	3-1/2	4-7/8	6	18.88
9.10	.3583	3-1/2	4-7/8	6	26.31
9.20	.3622	3-5/8	5	6	26.49
9.30	.3661	3-5/8	5	6	26.85
9.40	.3701	3-5/8	5	6	27.20
9.50	.3740	3-5/8	5	6	28.08
9.60	.3780	3-3/4	5-1/8	6	28.54
9.70	.3819	3-3/4	5-1/8	6	28.95
9.80	.3858	3-3/4	5-1/8	6	29.82
10.00	.3937	3-3/4	5-1/8	6	30.29
10.50	.4134	3-15/16	5-3/8	6	31.59
11.00	.4331	4-1/16	5-1/2	6	29.22
11.50	.4528	4-3/16	5-5/8	6	33.33
12.00	.4724	4-3/8	5-7/8	6	35.98
12.50	.4921	4-1/2	6	6	39.49
13.00	.5118	4-1/2	6	1	43.88
13.50	.5315	4-13/16	6-5/8	1	43.88
14.00	.5512	4-13/16	6-5/8	1	44.75
15.00	.5906	5-3/16	7-1/8	1	46.50
15.50	.6102	5-3/16	7-1/8	1	47.37
16.00	.6299	5-3/16	7-1/8	1	48.26
17.50	.6890	5-5/8	7-5/8	1	50.88
18.00	.7087	5-5/8	7-5/8	1	52.65
19.00	.7480	5-5/8	7-5/8	1	54.41

Left Hand Drills

Jobber Length – High Speed Steel



List No. **300LH** – 118° Point

- Can be used as screw extractor for drilling out broken studs or fasteners.
- For use in left hand spindle rotation on screw machines and drill heads.

High Speed

MADE IN USA

MICHIGAN DRILL & CUTTING TOOLS

Fractional Sizes

Size	Decimal Equivalent	Flute Length	Overall Length	Package Quantity	Price Each
1/64	.0156	3/16	3/4	12	7.25
1/32	.0312	1/2	1-3/8	12	5.45
3/64	.0469	3/4	1-3/4	12	3.42
1/16	.0625	7/8	1-7/8	12	3.42
5/64	.0781	1	2	12	3.62
3/32	.0938	1-1/4	2-1/4	12	3.62
7/64	.1094	1-1/2	2-5/8	12	3.62
1/8	.1250	1-5/8	2-3/4	12	3.62
9/64	.1406	1-3/4	2-7/8	12	3.63
5/32	.1562	2	3-1/8	12	3.89
11/64	.1719	2-1/8	3-1/4	12	4.22
3/16	.1875	2-5/16	3-1/2	12	4.29
13/64	.2031	2-7/16	3-5/8	12	4.68
7/32	.2188	2-1/2	3-3/4	12	4.95
15/64	.2344	2-5/8	3-7/8	12	6.48
1/4	.2500	2-3/4	4	12	6.24

Size	Decimal Equivalent	Flute Length	Overall Length	Package Quantity	Price Each
17/64	.2656	2-7/8	4-1/8	12	6.93
9/32	.2812	2-15/16	4-1/4	6	7.13
19/64	.2969	3-1/16	4-3/8	6	7.92
5/16	.3125	3-3/16	4-1/2	6	8.58
21/64	.3281	3-5/16	4-5/8	6	9.24
11/32	.3438	3-7/16	4-3/4	6	9.81
23/64	.3594	3-1/2	4-7/8	6	11.85
3/8	.3750	3-5/8	5	6	12.00
25/64	.3906	3-3/4	5-1/8	6	13.63
13/32	.4062	3-7/8	5-1/4	6	14.72
27/64	.4219	3-15/16	5-3/8	6	15.97
7/16	.4375	4-1/16	5-1/2	6	16.10
29/64	.4531	4-3/16	5-5/8	6	19.04
15/32	.4688	4-5/16	5-3/4	6	19.52
31/64	.4844	4-3/8	5-7/8	6	21.38
1/2	.5000	4-1/2	6	6	21.77

Wire Gauge Sizes

Size	Decimal Equivalent	Flute Length	Overall Length	Package Quantity	Price Each
1	.2280	2-5/8	3-7/8	12	7.25
2	.2210	2-5/8	3-7/8	12	7.25
3	.2130	2-1/2	3-3/4	12	6.53
4	.2090	2-1/2	3-3/4	12	6.53
5	.2055	2-1/2	3-3/4	12	6.53
6	.2040	2-1/2	3-3/4	12	6.53
7	.2010	2-7/16	3-5/8	12	6.07
8	.1990	2-7/16	3-5/8	12	6.07
9	.1960	2-7/16	3-5/8	12	6.07
10	.1935	2-7/16	3-5/8	12	6.07
11	.1910	2-5/16	3-1/2	12	6.07
12	.1890	2-5/16	3-1/2	12	6.07
13	.1850	2-5/16	3-1/2	12	5.87
14	.1820	2-3/16	3-3/8	12	5.87
15	.1800	2-3/16	3-3/8	12	5.87
16	.1770	2-3/16	3-3/8	12	5.87
17	.1730	2-3/16	3-3/8	12	5.87
18	.1695	2-1/8	3-1/4	12	5.54
19	.1660	2-1/8	3-1/4	12	5.54
20	.1610	2-1/8	3-1/4	12	4.98
21	.1590	2-1/8	3-1/4	12	4.98
22	.1570	2	3-1/8	12	4.98
23	.1540	2	3-1/8	12	4.98
24	.1520	2	3-1/8	12	4.98
25	.1495	1-7/8	3	12	4.29
26	.1470	1-7/8	3	12	4.29
27	.1440	1-7/8	3	12	4.29
28	.1405	1-3/4	2-7/8	12	4.29
29	.1360	1-3/4	2-7/8	12	4.29
30	.1285	1-5/8	2-3/4	12	4.29
31	.1200	1-5/8	2-3/4	12	4.29
32	.1160	1-5/8	2-3/4	12	4.29
33	.1130	1-1/2	2-5/8	12	4.29
34	.1110	1-1/2	2-5/8	12	4.29
35	.1100	1-1/2	2-5/8	12	4.29
36	.1065	1-7/16	2-1/2	12	4.09
37	.1040	1-7/16	2-1/2	12	4.09
38	.1015	1-7/16	2-1/2	12	4.09
39	.0995	1-3/8	2-3/8	12	4.09
40	.0980	1-3/8	2-3/8	12	4.09

Size	Decimal Equivalent	Flute Length	Overall Length	Package Quantity	Price Each
41	.0960	1-3/8	2-3/8	12	4.09
42	.0935	1-1/4	2-1/4	12	4.09
43	.0890	1-1/4	2-1/4	12	4.09
44	.0860	1-1/8	2-1/8	12	4.09
45	.0820	1-1/8	2-1/8	12	4.09
46	.0810	1-1/8	2-1/8	12	4.09
47	.0785	1	2	12	4.09
48	.0760	1	2	12	4.09
49	.0730	1	2	12	4.09
50	.0700	1	2	12	4.09
51	.0670	1	2	12	4.09
52	.0635	7/8	1-7/8	12	4.09
53	.0595	7/8	1-7/8	12	4.29
54	.0550	7/8	1-7/8	12	4.29
55	.0520	7/8	1-7/8	12	4.29
56	.0465	3/4	1-3/4	12	4.29
57	.0430	3/4	1-3/4	12	4.29
58	.0420	11/16	1-5/8	12	4.29
59	.0410	11/16	1-5/8	12	4.29
60	.0400	11/16	1-5/8	12	4.29
61	.0390	11/16	1-5/8	12	4.79
62	.0380	5/8	1-1/2	12	6.61
63	.0370	5/8	1-1/2	12	6.61
64	.0360	5/8	1-1/2	12	6.61
65	.0350	5/8	1-1/2	12	6.61
66	.0330	1/2	1-3/8	12	6.61
67	.0320	1/2	1-3/8	12	6.61
68	.0310	1/2	1-3/8	12	6.61
69	.0292	1/2	1-3/8	12	7.46
70	.0280	3/8	1-1/4	12	7.46
71	.0260	3/8	1-1/4	12	7.46
72	.0250	5/16	1-1/8	12	7.46
73	.0240	5/16	1-1/8	12	7.46
74	.0225	1/4	1	12	7.46
75	.0210	1/4	1	12	7.46
76	.0200	3/16	7/8	12	7.46
77	.0180	3/16	7/8	12	7.46
78	.0160	3/16	7/8	12	7.46
79	.0145	1/8	3/4	12	8.55
80	.0135	1/8	3/4	12	8.55

Left Hand Drills

Jobber Length – High Speed Steel



List No. **300LH** – 118° Point

- Can be used as screw extractor for drilling out broken studs or fasteners.
- For use in left hand spindle rotation on screw machines and drill heads.

High Speed | MADE IN USA | MICHIGAN DRILL & CUTTING TOOLS

Letter Sizes

Size	Decimal Equivalent	Flute Length	Overall Length	Package Quantity	Price Each
A	.2340	2-5/8	3-7/8	12	8.71
B	.2380	2-3/4	4	12	8.71
C	.2420	2-3/4	4	12	8.71
D	.2460	2-3/4	4	12	8.71
E	.2500	2-3/4	4	12	6.24
F	.2570	2-7/8	4-1/8	12	9.64
G	.2610	2-7/8	4-1/8	12	9.64
H	.2660	2-7/8	4-1/8	12	9.64
I	.2720	2-7/8	4-1/8	6	9.64
J	.2770	2-7/8	4-1/8	6	9.64
K	.2810	2-15/16	4-1/4	6	9.64
L	.2900	2-15/16	4-1/4	6	10.92
M	.2950	3-1/16	4-3/8	6	10.92

Size	Decimal Equivalent	Flute Length	Overall Length	Package Quantity	Price Each
N	.3020	3-1/16	4-3/8	6	10.92
O	.3160	3-3/16	4-1/2	6	12.54
P	.3230	3-5/16	4-5/8	6	13.86
Q	.3320	3-7/16	4-3/4	6	13.86
R	.3390	3-7/16	4-3/4	6	13.86
S	.3480	3-1/2	4-7/8	6	16.83
T	.3580	3-1/2	4-7/8	6	16.83
U	.3680	3-5/8	5	6	16.83
V	.3770	3-5/8	5	6	18.41
W	.3860	3-3/4	5-1/8	6	18.41
X	.3970	3-3/4	5-1/8	6	18.41
Y	.4040	3-7/8	5-1/4	6	19.60
Z	.4130	3-7/8	5-1/4	6	21.65

Sets

Left Hand Drill Sets

Sizes	Description	Pcs.	Set No.	Price
1/16" – 1/4" by 64ths	Fractional	13	**307GL**	61.81
1/16" – 1/2" by 32nds	Fractional	15	**307RL**	151.78
1/16" – 3/8" by 64ths	Fractional	21	**307SL**	141.27
1/16" – 1/2" by 64ths	Fractional	29	**307FL**	283.27
A – Z	Letter	26	**307LL**	346.77
1 – 60	Wire Gauge	60	**307WL**	305.41

All sets are supplied in metal index



Mechanics Length Drills

High Speed Steel



List No. **316** – 135° Split Point, **Black & Gold**

Supplied in black & gold high speed steel with 135° split point. Drill Sizes 3/16 to 1/2 have three equal flats on shank.

High Speed | MADE IN USA | MICHIGAN DRILL & CUTTING TOOLS

Size	Decimal Equivalent	Flute Length	Overall Length	Package Quantity	Price Each
1/16	.0625	7/8	1-7/8	12	1.05
5/64	.0781	1	2	12	1.05
3/32	.0938	1-1/4	2-1/4	12	1.11
7/64	.1094	1-5/16	2-3/8	12	1.20
1/8	.1250	1-7/16	2-1/2	12	1.29
9/64	.1406	1-9/16	2-5/8	12	1.41
5/32	.1562	1-11/16	2-3/4	12	1.62
11/64	.1719	1-13/16	2-7/8	12	1.74
3/16	.1875	1-7/8	3	12	2.01
13/64	.2031	1-15/16	3-1/8	12	2.13
7/32	.2188	2	3-1/4	12	2.31
15/64	.2344	2-1/16	3-3/8	12	2.49
1/4	.2500	2	3-1/2	12	2.55
17/64	.2656	2-1/8	3-5/8	12	2.70
9/32	.2812	2-1/4	3-3/4	6	3.33

Size	Decimal Equivalent	Flute Length	Overall Length	Package Quantity	Price Each
19/64	.2969	2-3/8	3-7/8	6	3.87
5/16	.3125	2-1/2	4	6	3.90
21/64	.3281	2-9/16	4-1/16	6	4.41
11/32	.3438	2-5/8	4-1/8	6	4.80
23/64	.3594	2-11/16	4-3/16	6	5.07
3/8	.3750	2-11/16	4-1/4	6	5.31
25/64	.3906	2-3/4	4-5/16	6	6.03
13/32	.4062	2-13/16	4-3/8	6	6.54
27/64	.4219	2-7/8	4-7/16	6	6.69
7/16	.4375	2-15/16	4-1/2	6	7.35
29/64	.4531	3	4-5/8	6	7.68
15/32	.4688	3-1/8	4-3/4	6	9.15
31/64	.4844	3-1/4	4-7/8	6	9.42
1/2	.5000	3-3/8	5	6	9.57

Sizes with decimal equivalent smaller than .0625 are not split point.

Sets

Size	Pcs.	Description	Set No.	Price
1/16 - 1/2 by 64ths	29	Fractional Set	**316F**	134.28

Supplied in Huot Bit Buddy.



Case No. **CZ316**
Bit Buddy Case only: $16.50

Parabolic Flute Jobber Length Drills



High Speed Steel

Parabolic drills are for deep hole drilling at higher feed rates in aluminum alloys and other low to medium tensile strength materials.

List No. **300PF** – High Speed Steel, 135° Split Point
List No. **300PFT** – TiN Coated, 135° Split Point

Fractional Size

Size	Dec. Equiv.	Flute Length	Overall Length	Pkg. Qty.	Price Each H.S. 300PF	Price Each TiN 300PFT
1/16	.0625	7/8	1-7/8	12	1.78	3.06
5/64	.0781	1	2	12	1.81	3.09
3/32	.0938	1-1/4	2-1/4	12	1.81	3.09
7/64	.1094	1-1/2	2-5/8	12	1.97	3.25
1/8	.1250	1-5/8	2-3/4	12	2.00	3.28
9/64	.1406	1-3/4	2-7/8	12	2.06	3.34
5/32	.1562	2	3-1/8	12	2.11	3.39
11/64	.1719	2-1/8	3-1/4	12	2.46	3.74
3/16	.1875	2-5/16	3-1/2	12	2.55	3.83
13/64	.2031	2-7/16	3-5/8	12	2.97	5.53
7/32	.2188	2-1/2	3-3/4	12	3.21	5.77
15/64	.2344	2-5/8	3-7/8	12	3.60	5.88
1/4	.2500	2-3/4	4	12	3.72	8.61
17/64	.2656	2-7/8	4-1/8	12	4.42	9.08
9/32	.2812	2-15/16	4-1/4	6	4.42	9.12
19/64	.2969	3-1/16	4-3/8	6	5.34	10.01
5/16	.3125	3-3/16	4-1/2	6	5.70	10.14
21/64	.3281	3-5/16	4-5/8	6	6.50	10.67
11/32	.3438	3-7/16	4-3/4	6	7.12	11.06
23/64	.3594	3-1/2	4-7/8	6	8.26	13.28
3/8	.3750	3-5/8	5	6	8.12	13.74

Size	Dec. Equiv.	Flute Length	Overall Length	Pkg. Qty.	Price Each H.S. 300PF	Price Each TiN 300PFT
25/64	.3906	3-3/4	5-1/8	6	9.50	16.52
13/32	.4062	3-7/8	5-1/4	6	9.50	16.98
27/64	.4219	3-15/16	5-3/8	6	10.86	17.51
7/16	.4375	4-1/16	5-1/2	6	10.90	18.04
29/64	.4531	4-3/16	5-5/8	6	12.80	19.23
15/32	.4688	4-5/16	5-3/4	6	13.14	19.75
31/64	.4844	4-3/8	5-7/8	6	14.26	20.12
1/2	.5000	4-1/2	6	6	13.82	20.40
33/64	.5156	4-13/16	6-5/8	1	26.93	43.58
17/32	.5312	4-13/16	6-5/8	1	27.80	44.45
35/64	.5469	4-13/16	6-5/8	1	28.05	44.70
9/16	.5625	4-13/16	6-5/8	1	28.91	45.56
37/64	.5781	4-13/16	6-5/8	1	29.19	45.84
19/32	.5938	5-3/16	7-1/8	1	29.85	46.50
39/64	.6094	5-3/16	7-1/8	1	31.15	47.80
5/8	.6250	5-3/16	7-1/8	1	32.21	48.86
41/64	.6406	5-3/16	7-1/8	1	32.47	54.97
21/32	.6562	5-3/16	7-1/8	1	33.73	56.23
43/64	.6719	5-5/8	7-5/8	1	35.44	57.94
11/16	.6875	5-5/8	7-5/8	1	36.40	58.90

Wire Gauge Sizes

Package Quantity: 12 drills

Size	Dec. Equiv.	Flute Length	Overall Length	Price Each H.S. 300PF	Price Each TiN 300PFT
1	.2280	2-5/8	3-7/8	3.89	6.45
2	.2210	2-5/8	3-7/8	3.89	6.45
3	.2130	2-1/2	3-3/4	3.52	6.08
4	.2090	2-1/2	3-3/4	3.52	6.08
5	.2055	2-1/2	3-3/4	3.52	6.08
6	.2040	2-1/2	3-3/4	3.52	6.08
7	.2010	2-7/16	3-5/8	3.14	4.82
8	.1990	2-7/16	3-5/8	3.14	4.82
9	.1960	2-7/16	3-5/8	3.14	4.82
10	.1935	2-7/16	3-5/8	3.14	4.82
11	.1910	2-5/16	3-1/2	3.00	4.68
12	.1890	2-5/16	3-1/2	3.00	4.68
13	.1850	2-5/16	3-1/2	3.00	4.68
14	.1820	2-3/16	3-3/8	3.00	4.68
15	.1800	2-3/16	3-3/8	3.00	4.68
16	.1770	2-3/16	3-3/8	3.00	4.68
17	.1730	2-3/16	3-3/8	3.00	4.68
18	.1695	2-1/8	3-1/4	2.44	4.12
19	.1660	2-1/8	3-1/4	2.44	4.12
20	.1610	2-1/8	3-1/4	2.44	4.12
21	.1590	2-1/8	3-1/4	2.28	3.96
22	.1570	2	3-1/8	2.28	3.96
23	.1540	2	3-1/8	2.18	3.86
24	.1520	2	3-1/8	2.18	3.86
25	.1495	1-7/8	3	2.18	3.86
26	.1470	1-7/8	3	2.18	3.86

Size	Dec. Equiv.	Flute Length	Overall Length	Price Each H.S. 300PF	Price Each TiN 300PFT
27	.1440	1-7/8	3	2.18	3.86
28	.1405	1-3/4	2-7/8	2.01	3.69
29	.1360	1-3/4	2-7/8	2.01	3.69
30	.1285	1-5/8	2-3/4	2.01	3.69
31	.1200	1-5/8	2-3/4	2.01	3.69
32	.1160	1-5/8	2-3/4	2.01	3.69
33	.1130	1-1/2	2-5/8	2.01	3.69
34	.1110	1-1/2	2-5/8	2.01	3.69
35	.1100	1-1/2	2-5/8	2.01	3.69
36	.1065	1-7/16	2-1/2	2.01	3.69
37	.1040	1-7/16	2-1/2	2.01	3.69
38	.1015	1-7/16	2-1/2	2.01	3.69
39	.0995	1-3/8	2-3/8	2.01	3.69
40	.0980	1-3/8	2-3/8	2.01	3.69
41	.0960	1-3/8	2-3/8	2.01	3.69
42	.0935	1-1/4	2-1/4	2.01	3.69
43	.0890	1-1/4	2-1/4	2.01	3.69
44	.0860	1-1/8	2-1/8	2.01	3.69
45	.0820	1-1/8	2-1/8	2.01	3.69
46	.0810	1-1/8	2-1/8	2.01	3.69
47	.0785	1	2	2.01	3.69
48	.0760	1	2	2.01	3.69
49	.0730	1	2	2.01	3.69
50	.0700	1	2	2.01	3.69
51	.0670	1	2	2.01	3.69
52	.0635	7/8	1-7/8	2.01	3.69

Parabolic Flute Jobber Length Drills

High Speed Steel

Parabolic drills are for deep hole drilling at higher feed rates in aluminum alloys and other low to medium tensile strength materials.

List No. **300PF** – High Speed Steel, 135° Split Point
List No. **300PFT** – TiN Coated, 135° Split Point



High Speed

MADE IN USA

MICHIGAN DRILL & CUTTING TOOLS

Letter Sizes

Size	Dec. Equiv.	Flute Length	Overall Length	Pkg. Qty.	Price Each H.S. 300PF	Price Each TiN 300PFT
A	.2340	2-5/8	3-7/8	12	4.15	9.47
B	.2380	2-3/4	4	12	4.79	10.11
C	.2420	2-3/4	4	12	4.79	10.11
D	.2460	2-3/4	4	12	5.39	10.71
E	.2500	2-3/4	4	12	3.29	8.61
F	.2570	2-7/8	4-1/8	12	4.75	10.07
G	.2610	2-7/8	4-1/8	12	4.79	10.11
H	.2660	2-7/8	4-1/8	12	5.39	10.64
I	.2720	2-7/8	4-1/8	6	5.04	10.36
J	.2770	2-7/8	4-1/8	6	5.39	10.64
K	.2810	2-15/16	4-1/4	6	5.39	10.64
L	.2900	2-15/16	4-1/4	6	6.12	11.44
M	.2950	3-1/16	4-3/8	6	6.49	11.81
N	.3020	3-1/16	4-3/8	6	6.49	11.81
O	.3160	3-3/16	4-1/2	6	7.17	12.49
P	.3230	3-5/16	4-5/8	6	7.62	12.94
Q	.3320	3-7/16	4-3/4	6	7.89	13.21
R	.3390	3-7/16	4-3/4	6	7.89	13.21
S	.3480	3-1/2	4-7/8	6	9.67	16.15
T	.3580	3-1/2	4-7/8	6	9.67	16.15
U	.3680	3-5/8	5	6	9.67	18.27
V	.3770	3-5/8	5	6	10.68	19.28
W	.3860	3-3/4	5-1/8	6	10.68	19.28
X	.3970	3-3/4	5-1/8	6	10.68	19.28
Y	.4040	3-7/8	5-1/4	6	11.30	19.90
Z	.4130	3-7/8	5-1/4	6	12.30	20.90

Metric Sizes

Size	Dec. Equiv.	Flute Length	Overall Length	Pkg. Qty.	Price Each H.S. 300PF	Price Each TiN 300PFT
1.50	.0591	7/8	1-7/8	12	2.59	3.85
1.90	.0748	1	2	12	2.59	3.85
2.00	.0787	1	2-1/8	12	2.59	3.85
2.15	.0846	1-1/8	2-1/8	12	2.70	3.96
2.30	.0906	1-1/4	2-1/4	12	2.59	3.85
2.40	.0945	1-3/8	2-3/8	12	2.59	3.85
2.45	.0965	1-3/8	2-3/8	12	2.59	3.85
2.50	.0984	1-3/8	2-3/8	12	2.59	4.28
2.70	.1063	1-7/16	2-1/2	12	2.70	4.39
3.00	.1181	1-5/8	2-3/4	12	2.59	4.28
3.20	.1260	1-5/8	2-3/4	12	2.85	4.54
3.50	.1378	1-3/4	2-7/8	12	2.85	5.28
3.90	.1535	2	3-1/8	12	3.01	5.44
4.00	.1575	2-1/8	3-1/4	12	3.01	5.44
4.20	.1654	2-1/8	3-1/4	12	3.20	5.63
4.50	.1772	2-3/16	3-3/8	12	3.40	5.83
5.00	.1968	2-7/16	3-5/8	12	3.83	7.92
5.10	.2008	2-7/16	3-5/8	12	4.29	8.38
5.20	.2047	2-1/2	3-3/4	12	4.03	8.12
5.40	.2126	2-1/2	3-3/4	12	4.29	8.38
5.50	.2165	2-1/2	3-3/4	12	4.29	8.38
5.60	.2205	2-5/8	3-7/8	12	4.55	8.64
6.00	.2362	2-3/4	4	12	4.92	9.01
6.50	.2559	2-78	4-1/8	12	5.27	9.36
6.70	.2638	2-7/8	4-1/8	12	5.54	9.63
6.80	.2677	2-7/8	4-1/8	12	5.54	11.71
6.90	.2717	3-3/4	5-1/8	12	6.05	12.22
7.00	.2756	2-7/8	4-1/8	12	6.05	12.22
7.10	.2795	2-15/16	4-1/4	6	6.30	13.70
7.50	.2953	2-7/8	4-3/8	6	6.30	13.70
8.00	.3150	3-1/16	4-1/2	6	6.57	13.97
8.10	.3189	3-5/16	4-5/8	6	7.11	14.51
8.20	.3228	3-3/16	4-5/8	6	7.11	14.51
8.50	.3346	3-5/16	4-3/4	6	7.59	14.99
8.60	.3386	3-7/16	4-3/4	6	8.14	15.54
8.70	.3425	3-7/16	4-3/4	6	8.25	15.65
9.00	.3543	3-7/16	4-7/8	6	8.25	15.65
9.20	.3622	3-5/8	5	6	8.48	15.88
9.50	.3740	3-1/2	5	6	8.48	15.88
10.00	.3937	3-5/8	5-1/8	6	10.08	20.03
10.50	.4134	3-3/4	5-3/8	6	12.08	23.65
11.00	.4331	3-15/16	5-1/2	6	12.44	24.01
11.50	.4528	4-1/16	5-5/8	6	12.87	24.44
12.00	.4724	4-3/8	5-7/8	6	13.85	25.42
12.50	.4921	4-1/2	6	6	14.24	25.81
13.00	.5118	4-1/2	6	1	22.37	33.94
13.50	.5315	4-13/16	6-5/8	1	27.86	41.05
14.00	.5512	4-13/16	6-5/8	1	27.86	41.05
15.50	.6102	5-3/16	7-1/8	1	30.76	47.36
16.00	.6299	5-3/16	7-1/8	1	33.66	50.26

Sizes with decimal equivalent smaller than .0625 are not split point.

Sets

Size	Pcs.	Description	Set No.	Price
1/16 – 1/2 by 64ths	29	H.S.	**307FP**	182.73
1/16 – 1/2 by 64ths	29	TiN Coated	**307FPT**	303.76

All sets are supplied in Huot metal index



Fast Spiral Jobber Length Drills

High Speed Steel



List No. **300F** – Bright Finish, 118° Point

These drills are designed primarily for drilling in nonferrous materials such as aluminum, zinc die cast, and some plastics. They are successfully used in mild steel deep holes where chip packing occurs with standard helix drills.

High Speed

MADE IN USA

MICHIGAN DRILL & CUTTING TOOLS

Fractional Sizes

Size	Decimal Equivalent	Flute Length	Overall Length	Package Quantity	Price Each
1/64	.0156	3/16	3/4	12	2.31
1/32	.0312	1/2	1-3/8	12	1.85
3/64	.0469	3/4	1-3/4	12	1.49
1/16	.0625	7/8	1-7/8	12	1.51
5/64	.0781	1	2	12	1.51
3/32	.0938	1-1/4	2-1/4	12	1.51
7/64	.1094	1-1/2	2-5/8	12	1.55
1/8	.1250	1-5/8	2-3/4	12	1.44
9/64	.1406	1-3/4	2-7/8	12	1.58
5/32	.1562	2	3-1/8	12	1.49
11/64	.1719	2-1/8	3-1/4	12	1.95
3/16	.1875	2-5/16	3-1/2	12	2.18
13/64	.2031	2-7/16	3-5/8	12	2.41
7/32	.2188	2-1/2	3-3/4	12	2.71
15/64	.2344	2-5/8	3-7/8	12	2.90
1/4	.2500	2-3/4	4	12	2.97

Size	Decimal Equivalent	Flute Length	Overall Length	Package Quantity	Price Each
17/64	.2656	2-7/8	4-1/8	12	3.72
9/32	.2812	2-15/16	4-1/4	6	4.02
19/64	.2969	3-1/16	4-3/8	6	4.23
5/16	.3125	3-3/16	4-1/2	6	4.47
21/64	.3281	3-5/16	4-5/8	6	5.54
11/32	.3438	3-7/16	4-3/4	6	6.06
23/64	.3594	3-1/2	4-7/8	6	7.26
3/8	.3750	3-5/8	5	6	7.26
25/64	.3906	3-3/4	5-1/8	6	8.45
13/32	.4062	3-7/8	5-1/4	6	8.45
27/64	.4219	3-15/16	5-3/8	6	9.09
7/16	.4375	4-1/16	5-1/2	6	9.42
29/64	.4531	4-3/16	5-5/8	6	9.82
15/32	.4688	4-5/16	5-3/4	6	10.56
31/64	.4844	4-3/8	5-7/8	6	11.09
1/2	.5000	4-1/2	6	6	11.35

Wire Gauge Sizes

Package Quantity: 12 drills

Size	Decimal Equivalent	Flute Length	Overall Length	Price Each
1	.2280	2-5/8	3-7/8	3.17
2	.2210	2-5/8	3-7/8	3.17
3	.2130	2-1/2	3-3/4	2.97
4	.2090	2-1/2	3-3/4	2.97
5	.2055	2-1/2	3-3/4	2.97
6	.2040	2-1/2	3-3/4	2.97
7	.2010	2-7/16	3-5/8	2.44
8	.1990	2-7/16	3-5/8	2.44
9	.1960	2-7/16	3-5/8	2.44
10	.1935	2-7/16	3-5/8	2.44
11	.1910	2-5/16	3-1/2	2.44
12	.1890	2-5/16	3-1/2	2.44
13	.1850	2-5/16	3-1/2	2.30
14	.1820	2-3/16	3-3/8	2.30
15	.1800	2-3/16	3-3/8	2.30
16	.1770	2-3/16	3-3/8	2.30
17	.1730	2-3/16	3-3/8	2.30
18	.1695	2-1/8	3-1/4	1.97
19	.1660	2-1/8	3-1/4	1.97
20	.1610	2-1/8	3-1/4	1.97
21	.1590	2-1/8	3-1/4	1.82
22	.1570	2	3-1/8	1.82
23	.1540	2	3-1/8	1.69
24	.1520	2	3-1/8	1.69
25	.1495	1-7/8	3	1.69
26	.1470	1-7/8	3	1.69
27	.1440	1-7/8	3	1.69
28	.1405	1-3/4	2-7/8	1.58
29	.1360	1-3/4	2-7/8	1.58
30	.1285	1-5/8	2-3/4	1.58
31	.1200	1-5/8	2-3/4	1.58
32	.1160	1-5/8	2-3/4	1.58
33	.1130	1-1/2	2-5/8	1.58
34	.1110	1-1/2	2-5/8	1.58
35	.1100	1-1/2	2-5/8	1.58
36	.1065	1-7/16	2-1/2	1.58
37	.1040	1-7/16	2-1/2	1.58
38	.1015	1-7/16	2-1/2	1.58
39	.0995	1-3/8	2-3/8	1.58
40	.0980	1-3/8	2-3/8	1.51

Size	Decimal Equivalent	Flute Length	Overall Length	Price Each
41	.0960	1-3/8	2-3/8	1.44
42	.0935	1-1/4	2-1/4	1.44
43	.0890	1-1/4	2-1/4	1.44
44	.0860	1-1/8	2-1/8	1.52
45	.0820	1-1/8	2-1/8	1.52
46	.0810	1-1/8	2-1/8	1.52
47	.0785	1	2	1.52
48	.0760	1	2	1.52
49	.0730	1	2	1.52
50	.0700	1	2	1.52
51	.0670	1	2	1.52
52	.0635	7/8	1-7/8	1.52
53	.0595	7/8	1-7/8	1.45
54	.0550	7/8	1-7/8	1.45
55	.0520	7/8	1-7/8	1.45
56	.0465	3/4	1-3/4	1.45
57	.0430	3/4	1-3/4	1.45
58	.0420	11/16	1-5/8	1.45
59	.0410	11/16	1-5/8	1.45
60	.0400	11/16	1-5/8	1.45
61	.0390	11/16	1-5/8	1.83
62	.0380	5/8	1-1/2	1.83
63	.0370	5/8	1-1/2	1.83
64	.0360	5/8	1-1/2	1.83
65	.0350	5/8	1-1/2	1.83
66	.0330	1/2	1-3/8	1.83
67	.0320	1/2	1-3/8	1.83
68	.0310	1/2	1-3/8	1.83
69	.0292	1/2	1-3/8	1.83
70	.0280	3/8	1-1/4	1.83
71	.0260	3/8	1-1/4	2.25
72	.0250	5/16	1-1/8	2.13
73	.0240	5/16	1-1/8	2.13
74	.0225	1/4	1	2.13
75	.0210	1/4	1	2.31
76	.0200	3/16	7/8	2.31
77	.0180	3/16	7/8	2.51
78	.0160	3/16	7/8	2.51
79	.0145	1/8	3/4	2.81
80	.0135	1/8	3/4	2.81

Fast Spiral Jobber Length Drills

High Speed Steel



List No. **300F** – Bright Finish, 118° Point

These drills are designed primarily for drilling in nonferrous materials such as aluminum, zinc die cast, and some plastics. They are successfully used in mild steel deep holes where chip packing occurs with standard helix drills.

High Speed | MADE IN USA | MICHIGAN DRILL & CUTTING TOOLS

Letter Sizes

Size	Decimal Equivalent	Flute Length	Overall Length	Package Quantity	Price Each
A	.2340	2-5/8	3-7/8	12	3.66
B	.2380	2-3/4	4	12	3.66
C	.2420	2-3/4	4	12	3.66
D	.2460	2-3/4	4	12	3.66
E	.2500	2-3/4	4	12	2.97
F	.2570	2-7/8	4-1/8	12	3.76
G	.2610	2-7/8	4-1/8	12	4.29
H	.2660	2-7/8	4-1/8	12	4.29
I	.2720	2-7/8	4-1/8	6	4.29
J	.2770	2-7/8	4-1/8	6	4.60
K	.2810	2-15/16	4-1/4	6	5.15
L	.2900	2-15/16	4-1/4	6	5.15
M	.2950	3-1/16	4-3/8	6	5.58

Size	Decimal Equivalent	Flute Length	Overall Length	Package Quantity	Price Each
N	.3020	3-1/16	4-3/8	6	5.58
O	.3160	3-3/16	4-1/2	6	5.58
P	.3230	3-5/16	4-5/8	6	6.11
Q	.3320	3-7/16	4-3/4	6	6.33
R	.3390	3-7/16	4-3/4	6	6.47
S	.3480	3-1/2	4-7/8	6	7.06
T	.3580	3-1/2	4-7/8	6	7.56
U	.3680	3-5/8	5	6	7.56
V	.3770	3-5/8	5	6	7.91
W	.3860	3-3/4	5-1/8	6	7.91
X	.3970	3-3/4	5-1/8	6	8.95
Y	.4040	3-7/8	5-1/4	6	9.61
Z	.4130	3-7/8	5-1/4	6	10.27

Sets

Size	Pcs.	Set No.	Price
1/16 – 1/2 by 64ths	29	**307FF**	154.44

All sets are supplied in Huot metal index



Vent Drills

High Speed – Fast Spiral



List No. **380** – Bright Finish, 118° Point

To drill vent holes in tire molds and to clean the vent holes after tire production.

High Speed | MADE IN USA | MICHIGAN DRILL & CUTTING TOOLS

Size	Dec. Equiv.	Flute Length	Overall Length	Price Each
77	.0180	1	2	5.20
74	.0225	1	2	5.33
74	.0225	1	3	5.70
73	.0240	5/8	1-1/2	5.20
.7mm	.0276	1-3/8	2-3/4	5.50
69	.0292	5/8	3	6.00
69	.0292	2	3	6.00
68	.0320	2	6	9.00
61	.0390	3/8	1-3/8	5.20
61	.0390	3	4-1/2	7.00
60	.0400	1-1/2	2-1/2	5.00
60	.0400	5/8	3	5.60
60	.0400	3	4	6.50
60	.0400	4	6	9.50
59	.0410	5/8	3	5.60
59	.0410	1	3-1/2	6.00
59	.0410	2	5	9.00
58	.0420	2	3	5.60
58	.0420	3	4	6.50
57	.0430	2	3	5.60
57	.0430	2-1/2	3-1/2	6.10
57	.0430	3	4	6.50

Size	Dec. Equiv.	Flute Length	Overall Length	Price Each
57	.0430	4	6	9.50
56	.0465	3/8	1-3/4	4.90
3/64	.0469	2	3	5.70
55	.0520	5/8	3	5.60
55	.0520	1-3/4	3	5.70
55	.0520	2-1/4	3	5.90
55	.0520	1	3-1/2	6.00
55	.0520	3	4	6.75
55	.0520	1-1/2	4-1/4	7.00
55	.0520	2-1/2	4-1/2	7.50
55	.0520	3	5	9.00
55	.0520	3-1/2	5	9.50
55	.0520	3-1/2	6-1/4	10.00
55	.0520	4-1/2	7	11.80
54	.0550	5/8	3	5.60
54	.0550	4	6	9.50
1.5mm	.0591	2	6	9.50
1.5mm	.0591	4	6	9.50
1/16	.0625	2-1/2	3-1/2	6.20
1/16	.0625	3	4	6.75
1/16	.0625	3	4-1/2	8.00
1/16	.0625	3-1/2	5	8.50

Size	Dec. Equiv.	Flute Length	Overall Length	Price Each
1/16	.0625	4	6	9.90
1/16	.0625	5	7	11.80
1/16	.0625	4	8	14.00
52	.0635	4	5	8.50
52	.0635	4	6	10.25
51	.0670	2	3	6.20
51	.0670	4	6	10.25
50	.0700	3	4	7.20
50	.0700	2-1/2	4-1/2	8.10
50	.0700	3	5	9.00
50	.0700	4	6	10.25
49	.0730	4	6	10.25
45	.0820	2	3	7.20
45	.0820	3	4	7.90
45	.0820	4	6	10.25
45	.0820	6	8	14.00
3/32	.0938	2	3-1/4	5.90
3/32	.0938	3	4	8.50
3/32	.0938	4	6	10.50
3/32	.0938	6	8	14.00

Slow Spiral Jobber Length Drills

High Speed Steel

List No. **300L** – Bright Finish, 118° Point

Slow spiral drills are designed for applications in brass, fiberglass, hard rubber and plastics.
The open flute design allows the greatest volume of chip removal with high feed rates. They are also successfully used in shallow hole drilling of aluminum and magnesium alloys and die cast parts.



High Speed

MADE IN USA

MICHIGAN DRILL & CUTTING TOOLS

Fractional Sizes

Size	Decimal Equivalent	Flute Length	Overall Length	Pkg. Qty.	Price Each
1/64	.0156	3/16	3/4	12	3.56
1/32	.0312	1/2	1-3/8	12	2.29
3/64	.0469	3/4	1-3/4	12	2.24
1/16	.0625	7/8	1-7/8	12	2.11
5/64	.0781	1	2	12	2.15
3/32	.0938	1-1/4	2-1/4	12	1.91
7/64	.1094	1-1/2	2-5/8	12	1.95
1/8	.1250	1-5/8	2-3/4	12	1.95
9/64	.1406	1-3/4	2-7/8	12	2.31
5/32	.1562	2	3-1/8	12	2.47
11/64	.1719	2-1/8	3-1/4	12	2.64
3/16	.1875	2-5/16	3-1/2	12	2.81
13/64	.2031	2-7/16	3-5/8	12	3.63
7/32	.2188	2-1/2	3-3/4	12	3.76
15/64	.2344	2-5/8	3-7/8	12	4.29
1/4	.2500	2-3/4	4	12	3.63

Size	Decimal Equivalent	Flute Length	Overall Length	Pkg. Qty.	Price Each
17/64	.2656	2-7/8	4-1/8	12	5.74
9/32	.2812	2-15/16	4-1/4	6	5.87
19/64	.2969	3-1/16	4-3/8	6	6.27
5/16	.3125	3-3/16	4-1/2	6	6.27
21/64	.3281	3-5/16	4-5/8	6	7.92
11/32	.3438	3-7/16	4-3/4	6	7.92
23/64	.3594	3-1/2	4-7/8	6	10.89
3/8	.3750	3-5/8	5	6	8.35
25/64	.3906	3-3/4	5-1/8	6	9.83
13/32	.4062	3-7/8	5-1/4	6	9.93
27/64	.4219	3-15/16	5-3/8	6	11.22
7/16	.4375	4-1/16	5-1/2	6	11.45
29/64	.4531	4-3/16	5-5/8	6	12.24
15/32	.4688	4-5/16	5-3/4	6	13.18
31/64	.4844	4-3/8	5-7/8	6	16.42
1/2	.5000	4-1/2	6	6	13.53

Fractional Sets

Size	Pcs.	Set No.	Price
1/16 – 1/2 by 64^{ths}	29	**307SFL**	204.89

All sets are supplied in Huot metal index



Letter Sizes

Size	Decimal Equivalent	Flute Length	Overall Length	Pkg. Qty.	Price Each
A	.2340	2-5/8	3-7/8	12	4.44
B	.2380	2-3/4	4	12	4.44
C	.2420	2-3/4	4	12	4.44
D	.2460	2-3/4	4	12	4.44
E	.2500	2-3/4	4	12	3.63
F	.2570	2-7/8	4-1/8	12	6.23
G	.2610	2-7/8	4-1/8	12	6.52
H	.2660	2-7/8	4-1/8	12	6.73
I	.2720	2-7/8	4-1/8	6	7.79
J	.2770	2-7/8	4-1/8	6	7.79
K	.2810	2-15/16	4-1/4	6	7.79
L	.2900	2-15/16	4-1/4	6	8.18
M	.2950	3-1/16	4-3/8	6	8.18

Size	Decimal Equivalent	Flute Length	Overall Length	Pkg. Qty.	Price Each
N	.3020	3-1/16	4-3/8	6	8.48
O	.3160	3-3/16	4-1/2	6	9.23
P	.3230	3-5/16	4-5/8	6	9.23
Q	.3320	3-7/16	4-3/4	6	9.23
R	.3390	3-7/16	4-3/4	6	9.57
S	.3480	3-1/2	4-7/8	6	10.53
T	.3580	3-1/2	4-7/8	6	10.53
U	.3680	3-5/8	5	6	10.53
V	.3770	3-5/8	5	6	11.10
W	.3860	3-3/4	5-1/8	6	12.54
X	.3970	3-3/4	5-1/8	6	12.54
Y	.4040	3-7/8	5-1/4	6	14.15
Z	.4130	3-7/8	5-1/4	6	14.15

Electronic Digital Calipers

Rugged construction of stainless steel with no rack, no pinion, and no glass scale.

- 5 Digit high contrast display
- Inch / Metric switch
- Floating "Zero" reference point
- Resolution ± .0005" / 0.01mm
- Accuracy .001"
- SPC Output
- Four way measurement
- Includes: fitted case / battery



Tool No. **PR7251006** - 6" Caliper Price: **$68.00**

See precision tool section for more

Slow Spiral Jobber Length Drills

High Speed Steel

List No. **300L** – Bright Finish, 118° Point

Slow spiral drills are designed for applications in brass, fiberglass, hard rubber and plastics. The open flute design allows the greatest volume of chip removal with high feed rates. They are also successfully used in shallow hole drilling of aluminum and magnesium alloys and die cast parts.



High Speed

MADE IN USA

MICHIGAN DRILL & CUTTING TOOLS

Wire Gauge Sizes

Package Quantity: 12 drills

Size	Decimal Equivalent	Flute Length	Overall Length	Price Each
1	.2280	2-5/8	3-7/8	4.49
2	.2210	2-5/8	3-7/8	4.49
3	.2130	2-1/2	3-3/4	4.49
4	.2090	2-1/2	3-3/4	4.36
5	.2055	2-1/2	3-3/4	4.36
6	.2040	2-1/2	3-3/4	4.36
7	.2010	2-7/16	3-5/8	3.95
8	.1990	2-7/16	3-5/8	3.95
9	.1960	2-7/16	3-5/8	3.95
10	.1935	2-7/16	3-5/8	3.95
11	.1910	2-5/16	3-1/2	3.95
12	.1890	2-5/16	3-1/2	3.95
13	.1850	2-5/16	3-1/2	3.56
14	.1820	2-3/16	3-3/8	3.56
15	.1800	2-3/16	3-3/8	3.56
16	.1770	2-3/16	3-3/8	3.56
17	.1730	2-3/16	3-3/8	3.56
18	.1695	2-1/8	3-1/4	3.56
19	.1660	2-1/8	3-1/4	2.94
20	.1610	2-1/8	3-1/4	2.94
21	.1590	2-1/8	3-1/4	2.94
22	.1570	2	3-1/8	2.94
23	.1540	2	3-1/8	2.77
24	.1520	2	3-1/8	2.77
25	.1495	1-7/8	3	2.77
26	.1470	1-7/8	3	2.77
27	.1440	1-7/8	3	2.77
28	.1405	1-3/4	2-7/8	2.31
29	.1360	1-3/4	2-7/8	2.14
30	.1285	1-5/8	2-3/4	2.14
31	.1200	1-5/8	2-3/4	2.14
32	.1160	1-5/8	2-3/4	2.14
33	.1130	1-1/2	2-5/8	2.14
34	.1110	1-1/2	2-5/8	2.14
35	.1100	1-1/2	2-5/8	2.14
36	.1065	1-7/16	2-1/2	2.14
37	.1040	1-7/16	2-1/2	2.14
38	.1015	1-7/16	2-1/2	2.14
39	.0995	1-3/8	2-3/8	2.14
40	.0980	1-3/8	2-3/8	2.14

Size	Decimal Equivalent	Flute Length	Overall Length	Price Each
41	.0960	1-3/8	2-3/8	2.14
42	.0935	1-1/4	2-1/4	2.14
43	.0890	1-1/4	2-1/4	2.14
44	.0860	1-1/8	2-1/8	2.14
45	.0820	1-1/8	2-1/8	2.14
46	.0810	1-1/8	2-1/8	2.14
47	.0785	1	2	2.14
48	.0760	1	2	2.14
49	.0730	1	2	2.14
50	.0700	1	2	2.14
51	.0670	1	2	2.14
52	.0635	7/8	1-7/8	2.14
53	.0595	7/8	1-7/8	2.14
54	.0550	7/8	1-7/8	2.14
55	.0520	7/8	1-7/8	2.14
56	.0465	3/4	1-3/4	2.26
57	.0430	3/4	1-3/4	2.26
58	.0420	11/16	1-5/8	2.26
59	.0410	11/16	1-5/8	2.26
60	.0400	11/16	1-5/8	2.26
61	.0390	11/16	1-5/8	2.81
62	.0380	5/8	1-1/2	2.81
63	.0370	5/8	1-1/2	2.81
64	.0360	5/8	1-1/2	2.81
65	.0350	5/8	1-1/2	2.81
66	.0330	1/2	1-3/8	2.81
67	.0320	1/2	1-3/8	2.81
68	.0310	1/2	1-3/8	2.81
69	.0292	1/2	1-3/8	2.96
70	.0280	3/8	1-1/4	2.96
71	.0260	3/8	1-1/4	3.63
72	.0250	5/16	1-1/8	3.63
73	.0240	5/16	1-1/8	3.63
74	.0225	1/4	1	3.63
75	.0210	1/4	1	3.63
76	.0200	3/16	7/8	3.63
77	.0180	3/16	7/8	3.63
78	.0160	3/16	7/8	3.63
79	.0145	1/8	3/4	4.22
80	.0135	1/8	3/4	4.22

Drill Gauge



- Made of heavy gage carbon steel.
- Hole sizes and decimal equivalents permanently etched.

Tool No.	For Drill Sizes	Price
CZG26	A – Z	8.50
CZG60	1 – 60	12.00
CZG29	1/16 – 1/2 by 64ths	8.50
CZGSET	Set of above 3	29.00
CZG30	1/2 – 1" by 64ths	22.00
CZGM25	1 mm - 13mm	8.50

Wire Gauge





- Popular gage for iron wire, hot and cold rolled sheet steel.
- Made from bright finished and polished hardened stainless steel.
- Gauge have a convenient decimal equivalent of each number.
- Clear permanently etched graduations in USA Standard.

Order No.	Description	Price
PR1660400	Rectangular	20.80
PR1660300	Round	20.80

Drill and Reamer Blanks

M2 – High Speed Steel



Made from hardened (Rc 63-65) M2 grade High Speed Steel and ground, these drill and reamer blanks can be used as punches, gauges, pins or ground for special tools.

List No. **950D** – Drill Blanks
up to 1/2" + .0000/ – .0003, over 1/2" + .0000/ – .0005

List No. **950R** – Reamer Blanks
+.0002/ -.0000, up to 1/2" - over 1/2" +.0005/-.0000

High Speed

MADE IN USA

MICHIGAN DRILL & CUTTING TOOLS

Fractional Sizes

Size	Decimal Equivalent	Overall Length	Pkg. Qty	Price Each Drill Blank 950D	Price Each Reamer Blank 950R
1/64	.0156	3/4	12	1.74	2.37
1/32	.0312	1-3/8	12	1.74	2.37
3/64	.0469	1-3/4	12	1.89	2.58
1/16	.0625	1-7/8	12	1.83	2.50
5/64	.0781	2	12	1.95	2.66
3/32	.0938	2-1/4	12	1.89	2.58
7/64	.1094	2-5/8	12	1.95	2.66
1/8	.1250	2-3/4	12	1.85	2.52
9/64	.1406	2-7/8	12	1.95	2.66
5/32	.1562	3-1/8	12	2.14	2.92
11/64	.1719	3-1/4	12	2.14	2.92
3/16	.1875	3-1/2	12	2.40	3.27
13/64	.2031	3-5/8	12	3.13	4.27
7/32	.2188	3-3/4	12	3.15	4.30
15/64	.2344	3-7/8	12	—	4.83
1/4	.2500	4	12	3.66	4.99
17/64	.2656	4-1/8	12	4.15	5.66
9/32	.2812	4-1/4	6	4.48	6.11
19/64	.2969	4-3/8	6	4.98	6.79
5/16	.3125	4-1/2	6	4.88	6.65
21/64	.3281	4-5/8	6	5.64	7.69
11/32	.3438	4-3/4	6	6.05	8.25
23/64	.3594	4-7/8	6	6.80	9.27
3/8	.3750	5	6	7.13	9.72
25/64	.3906	5-1/8	6	7.77	10.60
13/32	.4062	5-1/4	6	8.42	11.48
27/64	.4219	5-3/8	6	9.43	12.86
7/16	.4375	5-1/2	6	10.38	14.15
29/64	.4531	5-5/8	6	10.94	14.92
15/32	.4688	5-3/4	6	11.12	15.16
31/64	.4844	5-7/8	6	12.61	17.20
1/2	.5000	6	6	12.71	17.33

Size	Decimal Equivalent	Overall Length	Pkg. Qty	Price Each Drill Blank 950D	Price Each Reamer Blank 950R
33/64	.5156	6	1	22.24	—
17/32	.5312	6	1	23.32	34.07
35/64	.5469	6	1	22.24	—
9/16	.5625	6	1	24.29	35.49
37/64	.5781	6	1	27.85	—
19/32	.5938	6	1	27.85	40.69
39/64	.6094	6	1	27.34	—
5/8	.6250	6	1	27.34	39.94
41/64	.6406	6	1	32.21	—
21/32	.6562	6	1	32.21	47.06
43/64	.6719	6	1	35.30	—
11/16	.6875	6	1	35.30	51.57
45/64	.7031	6	1	35.30	—
23/32	.7188	6	1	35.30	51.57
47/64	.7344	6	1	36.58	—
3/4	.7500	6	1	36.58	53.44
49/64	.7656	6	1	39.92	—
25/32	.7812	6	1	39.92	—
51/64	.7969	6	1	42.52	—
13/16	.8125	6	1	42.52	62.12
53/64	.8281	6	1	47.18	—
27/32	.8438	6	1	47.18	—
55/64	.8594	6	1	50.07	—
7/8	.8750	6	1	50.07	73.15
57/64	.8906	6	1	54.48	—
29/32	.9062	6	1	54.48	—
59/64	.9219	6	1	57.82	—
15/16	.9375	6	1	57.82	84.48
61/64	.9531	6	1	60.13	—
31/32	.9688	6	1	60.13	—
63/64	.9844	6	1	63.36	92.57
1	1.0000	6	1	63.36	92.57

Letter Sizes

Size	Decimal Equivalent	Overall Length	Pkg. Qty	Price Each Drill Blank 950D	Price Each Reamer Blank 950R
A	.2340	3-7/8	12	3.70	5.05
B	.2380	4	12	3.70	5.05
C	.2420	4	12	3.70	5.05
D	.2460	4	12	3.70	5.05
E	.2500	4	12	3.66	4.99
F	.2570	4-1/8	12	4.12	5.62
G	.2610	4-1/8	12	4.12	5.62
H	.2660	4-1/8	12	4.12	5.62
I	.2720	4-1/8	6	4.44	6.05
J	.2770	4-1/8	6	4.44	6.05
K	.2810	4-1/4	6	4.59	6.26
L	.2900	4-1/4	6	4.59	6.26
M	.2950	4-3/8	6	5.12	6.98

Size	Decimal Equivalent	Overall Length	Pkg. Qty	Price Each Drill Blank 950D	Price Each Reamer Blank 950R
N	.3020	4-3/8	6	5.12	6.98
O	.3160	4-1/2	6	5.06	6.90
P	.3230	4-5/8	6	5.45	7.43
Q	.3320	4-3/4	6	5.45	7.43
R	.3390	4-3/4	6	6.17	8.41
S	.3480	4-7/8	6	7.03	9.59
T	.3580	4-7/8	6	7.03	9.59
U	.3680	5	6	7.46	10.17
V	.3770	5	6	7.46	10.17
W	.3860	5-1/8	6	8.09	11.03
X	.3970	5-1/8	6	8.09	11.03
Y	.4040	5-1/4	6	8.75	11.93
Z	.4130	5-1/4	6	8.75	11.93

Drill and Reamer Blanks

M2 – High Speed Steel



Made from hardened (Rc 63-65) M2 grade High Speed Steel and ground, these drill and reamer blanks can be used as punches, gauges, pins or ground for special tools.

List No. **950D** – Drill Blanks
up to 1/2" + .0000/ – .0003, over 1/2" + .0000/ – .0005

List No. **950R** – Reamer Blanks
+.0002/ -.0000, up to 1/2" - over 1/2" +.0005/-.0000

High Speed

MADE IN USA

MICHIGAN DRILL & CUTTING TOOLS

Wire Gauge Sizes

Size	Decimal Equivalent	Overall Length	Pkg. Qty	Price Each Drill Blank 950D	Price Each Reamer Blank 950R
1	.2280	3-7/8	12	3.02	4.12
2	.2210	3-7/8	12	3.02	4.12
3	.2130	3-3/4	12	3.02	4.12
4	.2090	3-3/4	12	3.02	4.12
5	.2055	3-3/4	12	3.02	4.12
6	.2040	3-3/4	12	2.90	3.95
7	.2010	3-5/8	12	2.90	3.95
8	.1990	3-5/8	12	2.90	3.95
9	.1960	3-5/8	12	2.90	3.95
10	.1935	3-5/8	12	2.90	3.95
11	.1910	3-1/2	12	2.30	3.14
12	.1890	3-1/2	12	2.30	3.14
13	.1850	3-1/2	12	2.30	3.14
14	.1820	3-3/8	12	2.30	3.14
15	.1800	3-3/8	12	2.30	3.14
16	.1770	3-3/8	12	2.04	2.78
17	.1730	3-3/8	12	2.04	2.78
18	.1695	3-1/4	12	2.04	2.78
19	.1660	3-1/4	12	2.04	2.78
20	.1610	3-1/4	12	2.04	2.78
21	.1590	3-1/4	12	2.04	2.78
22	.1570	3-1/8	12	2.04	2.78
23	.1540	3-1/8	12	2.04	2.78
24	.1520	3-1/8	12	2.04	2.78
25	.1495	3	12	2.04	2.78
26	.1470	3	12	1.82	2.48
27	.1440	3	12	1.82	2.48
28	.1405	2-7/8	12	1.82	2.48
29	.1360	2-7/8	12	1.82	2.48
30	.1285	2-3/4	12	1.82	2.48
31	.1200	2-3/4	12	1.82	2.48
32	.1160	2-3/4	12	1.82	2.48
33	.1130	2-5/8	12	1.82	2.48
34	.1110	2-5/8	12	1.82	2.48
35	.1100	2-5/8	12	1.82	2.48
36	.1065	2-1/2	12	1.82	2.48
37	.1040	2-1/2	12	1.82	2.48
38	.1015	2-1/2	12	1.82	2.48
39	.0995	2-3/8	12	1.82	2.48
40	.0980	2-3/8	12	1.82	2.48
41	.0960	2-3/8	12	2.31	3.15
42	.0935	2-1/4	12	2.31	3.15
43	.0890	2-1/4	12	2.31	3.15
44	.0860	2-1/8	12	2.31	3.15
45	.0820	2-1/8	12	2.31	3.15
46	.0810	2-1/8	12	2.31	3.15
47	.0785	2	12	2.31	3.15
48	.0760	2	12	2.31	3.15
49	.0730	2	12	2.31	3.15
50	.0700	2	12	2.31	3.15
51	.0670	2	12	2.31	3.15
52	.0635	1-7/8	12	2.31	3.15
53	.0595	1-7/8	12	2.31	3.15
54	.0550	1-7/8	12	2.31	3.15
55	.0520	1-7/8	12	2.31	3.15
56	.0465	1-3/4	12	2.31	3.15
57	.0430	1-3/4	12	2.31	3.15
58	.0420	1-5/8	12	2.31	3.15
59	.0410	1-5/8	12	2.31	3.15
60	.0400	1-5/8	12	2.31	3.15
61	.0390	1-5/8	12	2.31	3.15
62	.0380	1-1/2	12	2.31	3.15
63	.0370	1-1/2	12	2.31	3.15
64	.0360	1-1/2	12	2.31	3.15
65	.0350	1-1/2	12	2.31	3.15
66	.0330	1-3/8	12	2.31	3.15
67	.0320	1-3/8	12	2.31	3.15
68	.0310	1-3/8	12	2.31	3.15
69	.0292	1-3/8	12	2.31	3.15
70	.0280	1-1/4	12	2.31	3.15
71	.0260	1-1/4	12	2.31	3.15
72	.0250	1-1/8	12	2.31	3.15
73	.0240	1-1/8	12	2.31	3.15
74	.0225	1	12	2.31	3.15
75	.0210	1	12	2.31	3.15
76	.0200	7/8	12	2.31	3.15
77	.0180	7/8	12	2.31	3.15
78	.0160	7/8	12	2.31	3.15
79	.0145	3/4	12	2.31	3.15
80	.0135	3/4	12	2.31	3.15
81	.0130	3/4	12	2.60	—
82	.0125	3/4	12	2.60	—
83	.0120	3/4	12	2.60	—
84	.0115	3/4	12	2.60	—
85	.0110	3/4	12	2.60	—
86	.0105	3/4	12	2.60	—
87	.0100	3/4	12	2.60	—
90	.0087	3/4	12	2.60	—
92	.0079	3/4	12	2.60	—
95	.0067	3/4	12	2.60	—
97	.0059	3/4	12	2.60	—

Sets

Size	Description	Pieces	Set No.	Price
1/16 – 1/2 by 64ths	Drill Blank Set	29	**950SF**	175.00
1/16 – 1/2 by 64ths	Reamer Blank Set	29	**950SR**	235.00
A – Z	Drill Blank Set	26	**950SL**	162.11
1 – 60	Drill Blank Set	60	**950SW**	150.60
61 – 80	Drill Blank Set	20	**950ST**	55.50
1/16 – 1/2 by 64ths, A – Z, 1 – 60	Drill Blank Set	115	**950SX**	496.48

All sets are supplied in Huot metal index



Metric Drill Blanks

M2 – High Speed Steel



Made from hardened (Rc 63-65) M2 grade High Speed Steel and ground, these drill blanks can be used as punches, gauges, pins or ground for special tools.

High Speed

MADE IN USA

MICHIGAN DRILL & CUTTING TOOLS

List No. **950D** – Drill Blanks

up to 12.70mm + .0000/ – .0003", over 12.70mm + .0000/ – .0005"

Size	Dec. Equiv.	Overall Length	Pkg. Qty.	Price Each
.60	.0236	1-1/8	12	4.18
.75	.0295	1-3/8	12	4.18
1.00	.0394	1-5/8	12	3.37
1.05	.0413	1-5/8	12	3.37
1.10	.0433	1-3/4	12	3.37
1.15	.0453	1-3/4	12	3.37
1.20	.0472	1-7/8	12	3.37
1.25	.0492	1-7/8	12	3.37
1.30	.0512	1-7/8	12	3.37
1.40	.0551	1-7/8	12	3.37
1.45	.0571	1-7/8	12	3.37
1.50	.0590	1-7/8	12	3.37
1.55	.0610	1-7/8	12	3.37
1.60	.0630	1-7/8	12	3.37
1.65	.0650	2	12	3.56
1.70	.0669	2	12	3.56
1.75	.0689	2	12	3.56
1.80	.0709	2	12	3.56
1.85	.0728	2	12	3.56
1.90	.0748	2	12	3.56
1.95	.0768	2	12	3.56
2.00	.0787	2-1/8	12	3.56
2.05	.0807	2-1/8	12	3.56
2.10	.0827	2-1/8	12	3.56
2.15	.0846	2-1/8	12	3.56
2.20	.0866	2-1/4	12	3.56
2.25	.0886	2-1/4	12	3.56
2.30	.0905	2-1/4	12	3.56
2.35	.0925	2-1/4	12	3.56
2.40	.0945	2-3/8	12	3.56
2.45	.0964	2-3/8	12	3.56
2.50	.0984	2-3/8	12	3.56
2.60	.1024	2-1/2	12	3.56
2.70	.1063	2-1/2	12	3.56
2.75	.1083	2-5/8	12	3.56
2.80	.1102	2-5/8	12	3.56
2.90	.1142	2-3/4	12	3.56
3.00	.1181	2-3/4	12	3.56
3.10	.1220	2-3/4	12	3.56
3.20	.1260	2-3/4	12	3.56
3.25	.1279	2-3/4	12	3.72
3.30	.1299	2-7/8	12	3.72
3.40	.1338	2-7/8	12	3.72
3.50	.1378	2-7/8	12	3.72
3.60	.1417	3	12	3.72
3.70	.1457	3	12	4.16
3.75	.1476	3	12	4.16
3.80	.1496	3-1/8	12	4.16
3.90	.1535	3-1/8	12	4.16
4.00	.1575	3-1/4	12	4.16
4.10	.1614	3-1/4	12	4.16
4.20	.1653	3-1/4	12	4.16
4.25	.1673	3-1/4	12	4.16
4.30	.1693	3-1/4	12	4.16
4.40	.1732	3-3/8	12	4.27
4.50	.1772	3-3/8	12	4.27
4.60	.1811	3-3/8	12	4.27

Size	Dec. Equiv.	Overall Length	Pkg. Qty.	Price Each
4.70	.1850	3-1/2	12	4.27
4.75	.1870	3-1/2	12	4.27
4.80	.1890	3-1/2	12	4.27
4.90	.1929	3-5/8	12	5.25
5.00	.1969	3-5/8	12	5.25
5.10	.2008	3-5/8	12	5.25
5.20	.2047	3-3/4	12	5.25
5.25	.2067	3-3/4	12	5.25
5.30	.2087	3-3/4	12	5.25
5.40	.2126	3-3/4	12	5.25
5.50	.2165	3-7/8	12	5.85
5.60	.2205	3-7/8	12	5.85
5.70	.2244	3-7/8	12	5.85
5.75	.2264	3-7/8	12	5.85
5.80	.2283	3-7/8	12	5.85
5.90	.2323	3-7/8	12	5.85
6.00	.2362	4	12	6.23
6.10	.2401	4	12	6.23
6.20	.2441	4	12	6.23
6.25	.2461	4	12	6.23
6.30	.2480	4	12	6.23
6.40	.2520	4-1/8	12	6.53
6.50	.2559	4-1/8	12	6.53
6.60	.2598	4-1/8	12	6.53
6.70	.2638	4-1/8	12	6.53
6.80	.2677	4-1/8	12	6.53
6.90	.2716	4-1/8	12	6.53
7.00	.2756	4-1/8	12	6.53
7.10	.2795	4-1/4	12	6.83
7.20	.2835	4-1/4	12	6.83
7.30	.2874	4-1/4	12	6.83
7.40	.2913	4-3/8	12	6.83
7.50	.2953	4-3/8	6	7.80
7.60	.2992	4-3/8	6	7.80
7.70	.3031	4-1/2	6	7.80
7.80	.3071	4-1/2	6	7.80
7.90	.3110	4-1/2	6	7.80
8.00	.3150	4-1/2	6	7.80
8.10	.3189	4-5/8	6	8.48
8.20	.3228	4-5/8	6	8.48
8.30	.3268	4-5/8	6	8.48
8.40	.3307	4-3/4	6	9.45
8.50	.3346	4-3/4	6	9.45
8.60	.3386	4-3/4	6	9.45
8.70	.3425	4-3/4	6	9.45
8.80	.3464	4-7/8	6	10.43
8.90	.3504	4-7/8	6	10.43
9.00	.3543	4-7/8	6	10.43
9.10	.3583	4-7/8	6	10.43
9.20	.3655	5	6	11.40
9.30	.3661	5	6	11.40
9.40	.3701	5	6	11.40
9.50	.3740	5	6	11.40
9.60	.3779	5-1/8	6	12.00
9.70	.3819	5-1/8	6	12.00
9.80	.3858	5-1/8	6	12.00
9.90	.3898	5-1/8	6	12.00

Size	Dec. Equiv.	Overall Length	Pkg. Qty.	Price Each
10.00	.3937	5-1/8	6	12.00
10.10	.3976	5-1/4	6	12.98
10.20	.4016	5-1/4	6	12.98
10.30	.4055	5-1/4	6	12.98
10.40	.4094	5-1/4	6	12.98
10.50	.4134	5-3/8	6	14.33
10.60	.4173	5-3/8	6	14.33
10.70	.4212	5-3/8	6	14.33
10.80	.4252	5-1/2	6	16.28
10.90	.4291	5-1/2	6	16.28
11.00	.4331	5-1/2	6	16.28
11.10	.4370	5-1/2	6	16.28
11.20	.4409	5-5/8	6	16.88
11.30	.4449	5-5/8	6	16.88
11.40	.4488	5-5/8	6	16.88
11.50	.4527	5-5/8	6	16.88
11.60	.4567	5-3/4	6	17.25
11.70	4606	5-3/4	6	17.25
11.80	.4646	5-3/4	6	17.25
11.90	.4685	5-3/4	6	17.25
12.00	.4724	5-7/8	6	19.50
12.10	.4764	5-7/8	6	19.50
12.20	.4803	5-7/8	6	19.50
12.30	.4842	5-7/8	6	19.50
12.40	.4882	5-7/8	6	19.50
12.50	.4921	6	6	20.78
12.60	.4961	6	1	20.78
12.70	.5000	6	1	20.78
12.80	.5039	6	1	24.38
12.90	.5079	6	1	26.33
13.00	.5118	6	1	28.89
13.50	.5315	6	1	31.20
14.00	.5512	6	1	31.80
14.50	.5709	6	1	34.73
15.00	.5906	6	1	35.10
15.50	.6102	6	1	38.63
16.00	.6299	6	1	39.60
16.50	.6496	6	1	42.23
17.00	.6693	6	1	45.75
17.50	.6890	6	1	46.73
18.00	.7087	6	1	49.35
18.50	.7283	6	1	51.30
19.00	.7480	6	1	51.30
19.50	.7677	6	1	55.20
20.00	.7874	6	1	56.18
20.50	.8071	6	1	57.15
21.00	.8268	6	1	61.05
21.50	.8465	6	1	62.33
22.00	.8661	6	1	64.28
22.50	.8858	6	1	68.85
23.00	.9055	6	1	71.55
23.50	.9252	6	1	72.08
24.00	.9449	6	1	75.66
24.50	.9646	6	1	77.25
25.00	.9843	6	1	81.83

Sets

Size	Description	Pieces	Set No.	Price
1.00 – 10.00 by .50mm	Drill Blank Set	19	**950SB**	131.34
1.00 – 13.00 by .50mm	Drill Blank Set	25	**950SD**	256.30

All sets are supplied in Huot metal index



Half Round Jobber Drills



High Speed Steel

List No. **300HR** – 118° Point

These drills allow greater chip clearance and have less tendency to run out in deep hole drilling operations. As a result, hole sizes are more accurate. They can be used in drilling brass, copper, hard rubber, fiberglass and other materials.

High Speed

MADE IN USA

MICHIGAN DRILL & CUTTING TOOLS

The open flute design allows the greatest volume of chip removal with high feed rates. They are also successfully used in shallow hole drilling of aluminum and magnesium alloys and die cast parts.

Fractional & Letter Sizes

Size	Decimal Equivalent	Flute Length	Overall Length	Price Each
3/64	.0469	3/4	1-3/4	7.20
1/16	.0625	7/8	1-7/8	7.65
5/64	.0781	1	2	7.65
3/32	.0938	1-1/4	2-1/4	7.65
7/64	.1094	1-1/2	2-5/8	8.15
1/8	.1250	1-5/8	2-3/4	8.67
9/64	.1406	1-3/4	2-7/8	9.70
5/32	.1562	2	3-1/8	10.60
11/64	.1719	2-1/8	3-1/4	10.90
3/16	.1875	2-5/16	3-1/2	12.10
13/64	.2031	2-7/16	3-5/8	13.80
7/32	.2188	2-1/2	3-3/4	15.50
15/64	.2344	2-5/8	3-7/8	16.50
B	.2380	2-3/4	4	22.00
1/4	.2500	2-3/4	4	19.50
G	.2610	2-7/8	4	34.00
17/64	.2656	2-7/8	4-1/8	27.00
I	.2720	2-7/8	4-1/8	37.00
9/32	.2812	2-15/16	4-1/4	29.70

Size	Decimal Equivalent	Flute Length	Overall Length	Price Each
L	.2900	2-15/16	4-1/4	39.50
M	.2950	3-1/16	4-3/8	41.00
19/64	.2969	3-1/16	4-3/8	31.50
5/16	.3125	3-3/16	4-1/2	36.00
O	.3160	3-1/16	4-1/2	47.00
21/64	.3281	3-5/16	4-5/8	40.50
Q	.3320	3-7/16	4-3/4	52.00
11/32	.3438	3-7/16	4-3/4	45.00
T	.3580	3-1/2	4-7/8	57.70
23/64	.3594	3-1/2	4-7/8	49.50
3/8	.3750	3-5/8	5	53.10
25/64	.3906	3-3/4	5-1/8	56.70
13/32	.4062	3-7/8	5-1/4	61.20
27/64	.4219	3-15/16	5-3/8	68.40
7/16	.4375	4-1/16	5-1/2	71.10
29/64	.4531	4-3/16	5-5/8	76.50
15/32	.4688	4-5/16	5-3/4	80.10
31/64	.4844	4-3/8	5-7/8	88.20
1/2	.5000	4-1/2	6	91.80

Wire Gauge Sizes

Size	Decimal Equivalent	Flute Length	Overall Length	Price Each
1	.2280	2-5/8	3-7/8	13.50
2	.2210	2-5/8	3-7/8	13.50
3	.2130	2-1/2	3-3/4	12.60
4	.2090	2-1/2	3-3/4	12.60
5	.2055	2-1/2	3-3/4	12.60
6	.2040	2-1/2	3-3/4	12.60
7	.2010	2-7/16	3-5/8	11.70
8	.1990	2-7/16	3-5/8	11.70
9	.1960	2-7/16	3-5/8	11.70
10	.1935	2-7/16	3-5/8	11.70
11	.1910	2-5/16	3-1/2	11.70
12	.1890	2-5/16	3-1/2	11.70
13	.1850	2-5/16	3-1/2	9.90
14	.1820	2-3/16	3-3/8	9.90
15	.1800	2-3/16	3-3/8	9.90
16	.1770	2-3/16	3-3/8	9.90
17	.1730	2-3/16	3-3/8	9.90
18	.1695	2-1/8	3-1/4	9.39
19	.1660	2-1/8	3-1/4	9.39
20	.1610	2-1/8	3-1/4	9.39
21	.1590	2-1/8	3-1/4	9.39
22	.1570	2	3-1/8	9.39
23	.1540	2	3-1/8	9.00
24	.1520	2	3-1/8	9.00
25	.1495	1-7/8	3	9.00
26	.1470	1-7/8	3	9.00
27	.1440	1-7/8	3	9.00
28	.1405	1-3/4	2-7/8	9.00
29	.1360	1-3/4	2-7/8	9.00
30	.1285	1-5/8	2-3/4	9.00
31	.1200	1-5/8	2-3/4	8.10
32	.1160	1-5/8	2-3/4	8.10
33	.1130	1-1/2	2-5/8	8.10
34	.1110	1-1/2	2-5/8	8.10

Size	Decimal Equivalent	Flute Length	Overall Length	Price Each
35	.1100	1-1/2	2-5/8	8.10
36	.1065	1-7/16	2-1/2	7.65
37	.1040	1-7/16	2-1/2	7.65
38	.1015	1-7/16	2-1/2	7.65
39	.0995	1-3/8	2-3/8	7.65
40	.0980	1-3/8	2-3/8	7.65
41	.0960	1-3/8	2-3/8	7.65
42	.0935	1-1/4	2-1/4	7.65
43	.0890	1-1/4	2-1/4	7.65
44	.0860	1-1/8	2-1/8	7.65
45	.0820	1-1/8	2-1/8	7.65
46	.0810	1-1/8	2-1/8	7.65
47	.0785	1	2	7.65
48	.0760	1	2	7.65
49	.0730	1	2	7.65
50	.0700	1	2	7.20
51	.0670	1	2	7.20
52	.0635	7/8	1-7/8	7.20
53	.0595	7/8	1-7/8	7.20
54	.0550	7/8	1-7/8	7.20
55	.0520	7/8	1-7/8	7.20
56	.0465	3/4	1-3/8	7.20
57	.0430	3/4	1-3/8	7.20
58	.0420	11/16	1-5/8	7.20
59	.0410	11/16	1-5/8	7.20
60	.0400	11/16	1-5/8	7.20
64	.0360	5/8	1-1/2	9.00
70	.0280	3/8	1-1/4	9.00
72	.0250	5/16	1-1/8	9.00
73	.0240	5/16	1-1/8	9.00
74	.0225	1/4	1	9.00
75	.0210	1/4	1	9.00
77	.0180	3/16	7/8	9.00
78	.0160	3/16	7/8	9.00

Sets

Size	Pcs.	Set No.	Price
1/16 – 1/2 by 64^{ths}	29	**307FHR**	1066.92

All sets are supplied in Huot metal index



Standard Step Drills

High Speed Steel

An essential tool for every tool room. One tool does two jobs in a single pass. They can be sharpened repeatedly and are easily modified for any special length-of-step.

Special Step Drills available.
Please inquire.

For Drilling and Counterboring Cap Screw Clearance Holes

List No. **371** – Jobber Length
List No. **471** – Taper Length



Screw Size	Minor Diameter	Major Diameter	Step Length	Jobber Length 371 Flute Length	Jobber Length 371 Overall Length	Jobber Length 371 Price Each	Taper Length 471 Flute Length	Taper Length 471 Overall Length	Taper Length 471 Price Each
No. 4	.136	7/32	3/8	2-1/2	3-3/4	15.38	—	—	—
No. 5	.141	.228	3/8	2-5/8	3-7/8	16.17	—	—	—
No. 6	.150	1/4	1/2	2-3/4	4	17.12	3-3/4	6-1/8	23.96
No. 8	.178	"L"	1/2	2-15/16	4-1/4	19.60	4	6-3/8	35.18
No. 10	.204	"Q"	5/8	3-7/16	4-3/4	21.45	4-1/8	6-1/2	36.30
1/4	9/32	13/32	11/16	3-7/8	5-1/4	24.75	4-3/8	7	40.26
5/16	11/32	1/2	3/4	4-1/2	6	32.87	4-3/4	7-3/4	45.54
3/8	13/32	19/32	7/8	5-3/16	7-1/8	52.54	4-7/8	8-3/4	63.82
7/16	15/32	11/16	1	5-5/8	7-5/8	62.70	—	—	—
1/2	17/32	25/32	1	3-1/4	5-1/8*	86.46	6	9-7/8	95.30
5/8	21/32	31/32	1	3-7/8	5-7/8*	115.50	6-3/8	11	127.78

**Shorter than Jobber Length.*

For Drilling and Countersinking 82° Flat Head Machine Screw Clearance Holes

List No. **372** – Jobber Length



Screw Size	Minor Diameter	Major Diameter	Step Length	Flute Length	Overall Length	Price Each
No. 4	.116	15/64	3/8	2-5/8	3-7/8	16.58
No. 5	.128	F	3/8	2-7/8	4-1/8	17.34
No. 6	.142	9/32	1/2	2-15/16	4-1/4	18.15
No. 8	.169	Q	1/2	3-7/16	4-3/4	21.44
No. 10	.196	W	5/8	3-3/4	5-1/8	23.41

Screw Size	Minor Diameter	Major Diameter	Step Length	Flute Length	Overall Length	Price Each
1/4	.257	1/2	11/16	4-1/2	6	28.97
5/16	.320	5/8	3/4	5-3/16	7-1/8	45.42
3/8	.383	3/4	7/8	3-1/8	5*	62.93
7/16	.446	13/16	1	3-3/8	5-1/4*	81.97
1/2	.510	7/8	1	3-1/2	5-1/2*	90.45

**Shorter than Jobber Length.*

For Drilling 45° Chamfered Holes To-Be-Tapped (To produce approx. 70% thread)

List No. **370** – Jobber Length
List No. **470** – Taper Length



Screw Size	Minor Diameter	Major Diameter	Step Length	Jobber Length 370 Flute Length	Jobber Length 370 Overall Length	Jobber Length 370 Price Each	Taper Length 470 Flute Length	Taper Length 470 Overall Length	Taper Length 470 Price Each
4-40	.089	.1285	3/8	1-5/8	2-3/4	14.55	3	5-3/8	21.82
5-40	.101	9/64	1/2	1-3/4	2-7/8	15.31	3	5-3/8	22.90
6-32	.109	5/32	1/2	2	3-1/8	15.50	3	5-3/8	23.41
8-32	.136	3/16	1/2	2-5/16	3-1/2	15.88	3-3/8	5-3/4	23.60
8-36	.136	3/16	1/2	2-5/16	3-1/2	16.13	3-3/8	5-3/4	24.04
10-24	.152	1/4	5/8	2-3/4	4	16.89	3-3/4	6-1/8	26.50
10-32	.161	1/4	5/8	2-3/4	4	16.89	3-3/4	6-1/8	26.50
12-24	.179	9/32	11/16	2-15/16	4-1/4	19.61	—	—	—
1/4-20	.204	21/64	13/16	3-5/16	4-5/8	20.81	4-1/8	6-1/2	30.02
1/4-28	.218	21/64	13/16	3-5/16	4-5/8	21.19	4-1/8	6-1/2	30.68
5/16-18	.261	13/32	15/16	3-7/8	5-1/4	23.72	4-3/8	7	33.65
5/16-24	.272	13/32	15/16	3-7/8	5-1/4	24.04	4-3/8	7	34.47
3/8-16	.316	31/64	1	4-3/8	5-7/8	31.37	4-3/4	7-3/4	48.71
3/8-24	.339	31/64	1	4-3/8	5-7/8	31.94	4-3/4	7-3/4	48.71
7/16-14	.375	17/32	1-1/16	4-13/16	6-5/8	54.68	4-3/4	8	59.84
7/16-20	.390	17/32	1-1/16	4-13/16	6-5/8	54.68	4-3/4	8	59.84
1/2-13	.437	5/8	1-1/16	5-3/16	7-1/8	63.13	4-7/8	8-3/4	72.74
1/2-20	.452	5/8	1-1/16	5-3/16	7-1/8	63.89	4-7/8	8-3/4	72.74
5/8-11	.531	3/4	1-1/16	5-5/8	7-5/8	79.57	—	—	—

Cobalt Standard Step Drills

An essential tool for every tool room. One tool does two jobs in a single pass. They can be sharpened repeatedly and are easily modified for any special length-of-step.

Cobalt | MADE IN USA | MICHIGAN DRILL & CUTTING TOOLS

For Drilling and Counterboring Cap Screw Clearance Holes

List No. **371C** – Jobber Length



Screw Size	Minor Diameter	Major Diameter	Step Length	Flute Length	Overall Length	Price Each
No. 6	.150	1/4	1/2	2-3/4	4	30.82
No. 8	.178	L	1/2	2-15/16	4-1/4	35.29
No. 10	.204	Q	5/8	3-7/16	4-3/4	38.61
1/4	9/32	13/32	11/16	3-7/8	5-1/4	44.55
5/16	11/32	1/2	3/4	4-1/2	6	59.16
3/8	13/32	19/32	7/8	5-3/16	7-1/8	94.57
7/16	15/32	11/16	1	5-5/8	7-5/8	112.86
1/2	17/32	25/32	1	3-1/4	5-1/8*	155.63

**Shorter than Jobber Length.*

For Drilling and Countersinking 82° Flat Head Machine Screw Clearance Holes

List No. **372C** – Jobber Length



Screw Size	Minor Diameter	Major Diameter	Step Length	Flute Length	Overall Length	Price Each
No. 6	.142	9/32	1/2	2-15/16	4-1/4	32.67
No. 8	.169	Q	1/2	3-7/16	4-3/4	38.60
No. 10	.196	W	5/8	3-3/4	5-1/8	42.13
1/4	.257	1/2	11/16	4-1/2	6	52.14
5/16	.320	5/8	3/4	5-3/16	7-1/8	81.74
3/8	.383	3/4	7/8	3-1/8	5*	113.28
7/16	.446	13/16	1	3-3/8	5-1/4*	147.55
1/2	.510	7/8	1	3-1/2	5-1/2*	162.81

**Shorter than Jobber Length.*

For Drilling 45° Chamfered Holes To-Be-Tapped (To produce approx. 70% thread)

List No. **370C** – Jobber Length



Screw Size	Minor Diameter	Major Diameter	Step Length	Flute Length	Overall Length	Price Each
6-32	.1096	5/32	1/2	2	3-1/8	27.90
8-32	.1356	3/16	1/2	2-5/16	3-1/2	28.60
10-24	.1521	1/4	5/8	2-3/4	4	30.39
10-32	.1616	1/4	5/8	2-3/4	4	30.39
12-24	.1781	9/32	11/16	2-15/16	4-1/4	35.30
1/4-20	.2045	21/64	13/16	3-5/16	4-5/8	37.46
5/16-18	.2619	13/32	15/16	3-7/8	5-1/4	42.69
3/8-16	.3181	31/64	1	4-3/8	5-7/8	56.47

Sets

Size	Pcs.	Description	High Speed Set No.	High Speed Price	Cobalt Set No.	Cobalt Price
No. 6 – 3/8 NC screw sizes	6	Cap Screw, Jobber Length	**371S**	172.45	**371CS**	307.12
No. 6 – 3/8 NC screw sizes	6	Cap Screw, Taper Length	**471S**	249.18	—	—
No. 6 – 3/8 NC screw sizes	6	Flat Head Screw, Jobber Length	**372S**	204.44	**372CS**	364.68
6-32, 8-32, 10-24, 1/4-20, 5/16-18, 3/8-16	6	Tap Drill, Jobber Length	**370S**	128.29	**370CS**	227.63
6-32, 8-32, 10-24, 1/4-20, 5/16-18, 3/8-16	6	Tap Drill, Taper Length	**470S**	191.01	—	—
3mm – 10mm Screw Sizes	6	Metric Cap Screw, Jobber Length	**371MS**	196.76	—	—
3mm – 10mm Tap Sizes	6	Metric Tap Drill, Jobber Length	**370MS**	135.84	—	—

All sets are supplied in wood block



Metric Standard Step Drills

High Speed Steel

MADE IN USA — MICHIGAN DRILL & CUTTING TOOLS

For Drilling and Counterboring Cap Screw Clearance Holes

List No. **371M** – Jobber Length



Screw Size	Minor Diameter	Major Diameter	Step Length	Flute Length	Overall Length	Price Each
3.00	.146	1/4	3/8	2-3/4	4	18.41
4.00	.189	5/16	1/2	3-3/16	4-1/2	23.62
5.00	.228	3/8	5/8	3-5/8	5	26.73
6.00	.268	7/16	5/8	4-1/16	5-1/2	29.37
8.00	.346	9/16	3/4	4-13/16	6-5/8	37.29
10.00	.425	11/16	7/8	5-5/8	7-5/8	57.22
12.00	.504	3/4	1	5-5/8	7-5/8	69.16
14.00	.581	7/8	1	3-1/2	5-1/2*	93.60
16.00	.659	1	1	4	6*	128.37

**Shorter than Jobber Length.*

For Drilling 45° Chamfered Holes To-Be-Tapped (To produce approx. 70% thread)

List No. **370M** – Jobber Length



Screw Size	Minor Diameter	Major Diameter	Step Length	Flute Length	Overall Length	Price Each
3x0.50	.098	5/32	1/2	2	3-1/8	16.38
4x0.70	.130	13/64	1/2	2-7/16	3-5/8	17.64
5x0.80	.165	1/4	5/8	2-3/4	4	18.07
6x1.00	.197	19/64	11/16	3-1/16	4-3/8	20.86
8x1.25	.266	13/32	15/16	3-7/8	5-1/4	25.23
10x1.50	.335	1/2	1	4-1/2	6	33.54
12x1.75	.406	19/32	1-1/16	5-3/16	7-1/8	66.43
14x2.00	.472	11/16	1-1/16	5-5/8	7-5/8	75.83
16x2.00	.551	3/4	1-1/16	5-5/8	7-5/8	84.69

Self Starting Step Drills





High Speed Steel & Titanium Nitride Coated

This drill has an exclusive single radial concave flute that allows drilling of round holes in thin materials. For use in drilling copper, brass, aluminum, thin steels, plastic, laminates, and drilling hard or abrasive materials.

- Multiple diameters in one tool
- Can be used to deburr holes
- Can be used to enlarge holes

MDX® SUPERIOR IMPORT

Fractional Sizes

Size Range	Step Increments	No. of Steps	Shank Size	High Speed Tool No.	High Speed Price	TiN Coated Tool No.	TiN Coated Price
1/8-1/2	32nds	13	1/4	**SSD1**	14.85	**SSD1T**	19.80
3/16-1/2	16ths	6	1/4	**SSD2**	14.85	**SSD2T**	19.80
1/4-3/4	16ths	9	3/8	**SSD3**	26.91	**SSD3T**	35.78
3/16-7/8	16ths	12	3/8	**SSD4**	31.50	**SSD4T**	42.75
1/4-1-3/8	8ths	10	1/2	**SSD5**	56.48	**SSD5T**	75.38

Metric Sizes

Size Range	Step Increments	No. of Steps	Shank Size	H.S. Tool No.	Price	Tin Coated Tool No.	Price
4mm - 12mm	1mm	9	1/4	**SSDM1**	14.85	**SSDM1T**	20.07
4mm - 12mm	2mm	5	1/4	**SSDM2**	14.90	**SSDM2T**	20.07
6mm - 18mm	2mm	7	3/8	**SSDM3**	26.91	**SSDM3T**	35.78
4mm - 22mm	2mm	10	3/8	**SSDM4**	31.50	**SSDM4T**	42.75

Sets

Sizes	Description	Pcs.	Set No.	Price
SSD1, SSD2, SSD3	Fractional High Speed Steel Set	3	**SSDS**	56.70
SSD1T, SSD2T, SSD3T	Fractional Tin Coated Set	3	**SSDST**	75.60
SSDM1, SSDM2, SSDM3	Metric High Speed Steel Set	3	**SSDMS**	56.70
SSDM1T, SSDM2T, SSDM3T	Metric Tin Coated Set	3	**SSDMST**	75.60

All sets are supplied in wood block



Special Step Drill Quotation Form

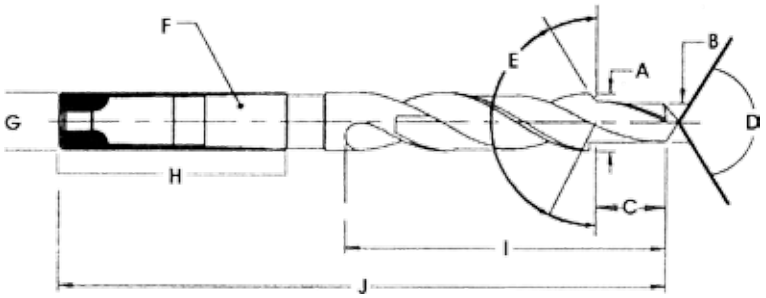
We maintain a special facility that is equipped with machines specifically designed for drill and reamer modification. We are also equipped with specialized machinery to manufacture non-standard drills or reamers to print. By maintaining a large inventory of high speed and cobalt steels, we are able to reduce overall delivery time.

Drill Modifications

☐ **Tanging**	No minimum quantities required
☐ **Flats**	3-Equal, whistle notches, use-em-up, keeper, driving
☐ **Grinding**	Form relief, O.D., Centerless
☐ **Step drills and step reamers**	
☐ **Pointing**	Split point, brad and spur, fishtail, radion, notched, four facet, and other popular point geometries
☐ **Titanium nitride coating and ferrous oxide surface treating**	

Requesting a quote for special step drills is as easy as 1, 2, 3

1. Make a copy of this form.
2. Fill in the specifications.
3. Fax or email to your Distributor.



A- _____ Major diameter

B- _____ Minor diameter (+000 - .002)
Unless otherwise specified

C- _____ Step length (+/-.015)
Unless otherwise specified

D- _____ Point angle

E- _____ Included angle

F- _____ Morse Taper Number
(If requested as Taper Shank)

G- _____ Shank Diameter
(If different from A)

H- _____ Length of shank if reduced

I- _____ Flute Length

J- _____ Overall Length

Finish:
Bright: _____ Oxide: _____ Coated: _____ Other: _____

Helix:
Standard: _____ Fast: _____ Slow: _____ Other: _____

Tool Material:
High Speed: _____ Cobalt: _____ Other: _____

Quantity: _____

Right Hand Cut ☐ **Left Hand Cut** ☐

Other dimensions not given to be per manufacturer's standards

NC/CNC Spotting Drills

High Speed Steel, Cobalt, & TiN Coated

These drills are used for perfect alignment of the follow-on tool.

Cobalt drills are used in drilling tough, high tensile strength materials like Stainless Steels, Titanium, and Inconel.

High Speed

Cobalt

MADE IN USA

MICHIGAN DRILL & CUTTING TOOLS

Standard Length



82° Point
List No. **311** – High Speed
List No. **311C** – Cobalt
List No. **311T** – TiN Coated

90° Point
List No. **309** – High Speed
List No. **309C** – Cobalt
List No. **309T** – TiN Coated

120° Point
List No. **310**– High Speed
List No. **310C** – Cobalt
List No. **310T** – TiN Coated

Size	Decimal Equivalent	Overall Length	Flute Length	Price Each								
				82° Point			90° Point			120° Point		
				H.S. **311**	Cobalt **311C**	TiN Coated **311T**	H.S. **309**	Cobalt **309C**	TiN Coated **309T**	H.S. **310**	Cobalt **310C**	TiN Coated **310T**
1/8	.1250	1-7/8	1/2	14.92	40.66	31.56	14.48	37.53	28.60	14.92	40.61	31.56
5/32	.1562	2-1/16	9/16	16.52	45.06	34.83	16.08	41.70	31.78	16.92	39.35	34.93
3/16	.1875	2-3/16	9/16	17.42	46.10	36.81	16.32	44.91	33.80	17.42	40.26	36.81
1/4	.2500	2-1/2	3/4	17.52	47.16	37.05	17.32	43.60	34.25	17.52	41.18	37.05
3/8	.3750	3-1/8	1-1/8	18.86	50.76	38.89	18.64	47.00	36.85	18.86	44.33	39.89
1/2	.5000	3-3/4	1-3/8	24.16	65.08	51.09	23.86	60.22	47.15	24.16	56.84	51.09
5/8	.6250	4-3/8	1-5/8	31.30	84.40	62.36	31.56	79.61	62.36	31.30	73.71	66.19
3/4	.7500	5	1-7/8	40.24	108.56	85.01	39.82	100.40	78.72	40.24	94.82	85.08
1	1.0000	6	2-1/4	67.97	183.26	143.73	67.22	169.52	132.90	67.94	160.07	143.73

Long Length



90° Point
List No. **309L** – High Speed
List No. **309LT** – TiN Coated

120° Point
List No. **310L** – High Speed
List No. **310LT** – TiN Coated

Size	Decimal Equivalent	Overall Length	Flute Length	Price Each			
				90° Point		120° Point	
				H.S. **309L**	TiN Coated **309LT**	H.S. **310L**	TiN Coated **310LT**
1/4	.2500	4	3/4	25.32	50.03	25.84	51.08
3/8	.3750	5	1-1/8	26.56	52.50	27.16	53.69
1/2	.5000	6	1-3/8	33.16	65.53	33.94	67.09
5/8	.6250	7	1-5/8	42.42	83.85	43.56	86.11
3/4	.7500	8	1-7/8	56.96	112.61	58.10	114.86
1	1.0000	8	2-1/4	72.54	143.40	74.00	146.30

Extra Long Length



90° Point
List No. **309XL** – High Speed
List No. **309XLT** – TiN Coated

120° Point
List No. **310XL** – High Speed
List No. **310XLT** – TiN Coated

Size	Decimal Equivalent	Overall Length	Flute Length	Price Each			
				90° Point		120° Point	
				H.S. **309XL**	TiN Coated **309XLT**	H.S. **310XL**	TiN Coated **310XLT**
1/4	.2500	6	3/4	35.18	69.44	36.14	71.42
3/8	.3750	7	1-1/8	37.00	73.15	37.62	74.35
1/2	.5000	8	1-3/8	44.92	88.79	45.70	90.34
5/8	.6250	9	1-5/8	58.78	116.23	58.74	118.10
3/4	.7500	10	1-7/8	76.56	151.36	77.76	153.73
1	1.0000	10	2-1/4	93.74	185.32	95.48	188.78

NC/CNC Spotting Drills

High Speed Steel, Cobalt, & TiN Coated

These drills are used for perfect alignment of the follow-on tool.

High Speed

Cobalt

MADE IN USA

MICHIGAN DRILL & CUTTING TOOLS

Metric Sizes — Standard Length

90° Point
List No. **309** – High Speed
List No. **309C** – Cobalt
List No. **309T** – TiN Coated

120° Point
List No. **310** – High Speed
List No. **310C** – Cobalt
List No. **310T** – TiN Coated



Size	Decimal Equivalent	Overall Length	Flute Length	Price Each					
				90° Point			120° Point		
				H.S. **309**	Cobalt **309C**	TiN Coated **309T**	H.S. **310**	Cobalt **310C**	TiN Coated **310T**
4.00	.1575	2-1/16	15/32	18.90	36.10	27.42	19.66	37.18	28.50
5.00	.1969	2-3/8	19/32	—	37.70	—	—	38.81	—
6.00	.2362	2-19/32	5/8	20.07	38.76	30.02	21.54	39.92	31.22
8.00	.3150	3-1/8	13/16	22.50	40.56	32.64	23.40	44.76	33.94
10.00	.3937	3-1/2	1	27.90	53.24	40.46	29.02	54.84	42.08
12.00	.4724	4	1-3/16	31.50	54.86	45.68	32.76	56.52	47.52
14.00	.5512	4-1/2	1-3/8	35.10	69.26	50.90	36.52	71.34	52.94
16.00	.6299	4-1/2	1-3/8	40.50	77.46	58.74	42.12	79.78	61.08
18.00	.7087	5-1/8	1-1/2	46.80	110.09	67.86	48.68	94.50	70.58

Sets

Sizes	Pcs.	Description	Length	Set No.	Price
1/4, 3/8, 1/2, 5/8, 3/4, 1	6	High Speed – 82° Point	Standard Length	**311S**	200.00
1/4, 3/8, 1/2, 5/8, 3/4, 1	6	Cobalt – 82° Point	Standard Length	**311CS**	539.22
1/4, 3/8, 1/2, 5/8, 3/4, 1	6	High Speed – 90° Point	Standard Length	**309S**	198.42
1/4, 3/8, 1/2, 5/8, 3/4, 1	6	Cobalt – 90° Point	Standard Length	**309CS**	500.35
1/4, 3/8, 1/2, 5/8, 3/4, 1	6	High Speed – 120° Point	Standard Length	**310S**	200.00
1/4, 3/8, 1/2, 5/8, 3/4, 1	6	Cobalt – 120° Point	Standard Length	**310CS**	470.95
1/4, 3/8, 1/2, 5/8, 3/4, 1	6	High Speed – 90° Point	Long Length	**309LS**	256.96
1/4, 3/8, 1/2, 5/8, 3/4, 1	6	High Speed – 120° Point	Long Length	**310LS**	262.60
1/4, 3/8, 1/2, 5/8, 3/4, 1	6	High Speed – 90° Point	Extra Long Length	**309XLS**	346.18
1/4, 3/8, 1/2, 5/8, 3/4, 1	6	High Speed – 120° Point	Extra Long Length	**310XLS**	351.44
6, 8, 10, 12, 14, 16 mm	6	High Speed – 90° Point	Standard Length	**309SM**	177.57
6, 8, 10, 12, 14, 16 mm	6	Cobalt – 90° Point	Standard Length	**309CSM**	334.14
6, 8, 10, 12, 14, 16 mm	6	High Speed – 120° Point	Standard Length	**310SM**	185.36
6, 8, 10, 12, 14, 16 mm	6	Cobalt – 120° Point	Standard Length	**310CSM**	347.16



All sets are supplied in wood block

Solid Carbide NC Spotting Drills



Designed for fast and accurate spotting on NC machines.
These drills are very rigid allowing higher speeds and feeds

List No. **C809** – 90° Point
List No. **C810** – 120° Point

Solid Carbide

MADE IN USA

MICHIGAN DRILL & CUTTING TOOLS

Size	Decimal Equivalent	Flute Length	Overall Length	Price Each	
				90° **C809**	120° **C810**
1/8	.1250	9/16	1-1/2	17.06	17.06
3/16	.1875	3/4	2	22.05	22.05
1/4	.2500	1	2-1/2	29.25	29.25

Size	Decimal Equivalent	Flute Length	Overall Length	Price Each	
				90° **C809**	120° **C810**
3/8	.3750	1	2-1/2	53.10	53.10
1/2	.5000	1-1/6	3	80.01	80.01
3/4	.7500	1-1/2	4	212.04	212.04

Screw Machine Length Drills



High Speed Steel

Screw machine drills are popular in the automotive and construction industries. Their short flute and overall length provide maximum rigidity. They are often used in a screw machine set-up where spindle clearance is limited.

High Speed

MADE IN USA

MICHIGAN DRILL & CUTTING TOOLS

List No. **600** – Bright Finish, 118° Point
List No. **600A** – Oxide Finish, 135° Split Point (NAS 907 Type C)
List No. **600J** – Oxide Finish, 118° Point

Drill Size	Shank Diameter
Up to 1" inclusive	Same as Drill Diameter
Over 1 to 1-1/4 inclusive	1"
Over 1-1/4 to 1-1/2 inclusive	1-1/4
Over 1-1/2 to 2-1/2 inclusive	1-1/2

Fractional Sizes

Size	Dec. Equiv.	Flute Length	Overall Length	Pkg. Qty.	Price Each 118° Bright **600**	Price Each 135° Oxide **600A**	Price Each 118° Oxide **600J**
3/64	.0469	1/2	1-3/8	12	1.14	1.32*	1.14
1/16	.0625	5/8	1-5/8	12	1.06	1.18	1.06
5/64	.0781	11/16	1-11/16	12	1.06	1.18	1.06
3/32	.0938	3/4	1-3/4	12	1.06	1.18	1.06
7/64	.1094	13/16	1-13/16	12	1.06	1.18	1.06
1/8	.1250	7/8	1-7/8	12	1.06	1.18	1.06
9/64	.1406	15/16	1-15/16	12	1.06	1.18	1.06
5/32	.1562	1	2-1/16	12	1.21	1.27	1.21
11/64	.1719	1-1/16	2-1/8	12	1.30	1.52	1.30
3/16	.1875	1-1/8	2-3/16	12	1.33	1.52	1.33
13/64	.2031	1-3/16	2-1/4	12	1.49	1.58	1.49
7/32	.2188	1-1/4	2-3/8	12	1.73	1.95	1.73
15/64	.2344	1-5/16	2-7/16	12	1.80	1.98	1.80
1/4	.2500	1-3/8	2-1/2	12	2.01	2.10	2.01
17/64	.2656	1-7/16	2-5/8	12	2.19	2.44	2.19
9/32	.2812	1-1/2	2-11/16	6	2.32	2.74	2.32
19/64	.2969	1-9/16	2-3/4	6	2.54	2.90	2.54
5/16	.3125	1-5/8	2-13/16	6	2.74	3.30	2.74
21/64	.3281	1-11/16	2-15/16	6	3.03	3.35	3.03
11/32	.3438	1-11/16	3	6	3.40	3.76	3.40
23/64	.3594	1-3/4	3-1/16	6	3.97	4.35	3.97
3/8	.3750	1-13/16	3-1/8	6	4.13	4.53	4.13
25/64	.3906	1-7/8	3-1/4	6	4.59	5.13	4.59
13/32	.4062	1-15/16	3-5/16	6	4.80	5.51	4.80
27/64	.4219	2	3-3/8	6	5.27	5.94	5.27
7/16	.4375	2-1/16	3-7/16	6	5.35	6.20	5.35
29/64	.4531	2-1/8	3-9/16	6	6.43	7.26	6.43
15/32	.4688	2-1/8	3-5/8	6	6.71	7.55	6.71
31/64	.4844	2-3/16	3-11/16	6	7.05	8.42	7.05
1/2	.5000	2-1/4	3-3/4	6	6.92	8.42	6.92
33/64	.5156	2-3/8	3-7/8	1	15.50	—	15.50
17/32	.5312	2-3/8	3-7/8	1	15.93	19.01	15.93
35/64	.5469	2-1/2	4	1	16.91	—	16.91
9/16	.5625	2-1/2	4	1	16.60	19.73	16.60
37/64	.5781	2-5/8	4-1/8	1	19.37	—	19.37
19/32	.5938	2-5/8	4-1/8	1	19.00	22.51	19.00
39/64	.6094	2-3/4	4-1/4	1	19.52	—	19.52
5/8	.6250	2-3/4	4-1/4	1	19.18	23.69	19.18
41/64	.6406	2-7/8	4-1/2	1	22.43	—	22.43
21/32	.6562	2-7/8	4-1/2	1	22.02	29.01	22.02
43/64	.6719	2-7/8	4-5/8	1	24.88	—	24.88
11/16	.6875	2-7/8	4-5/8	1	24.42	29.01	24.42
45/64	.7031	3	4-3/4	1	27.74	—	27.74
23/32	.7188	3	4-3/4	1	26.75	29.70	26.75
47/64	.7344	3-1/8	5	1	29.28	—	29.28
3/4	.7500	3-1/8	5	1	28.23	32.93	28.23
49/64	.7656	3-1/4	5-1/8	1	32.24	—	32.24
25/32	.7812	3-1/4	5-1/8	1	31.08	—	31.08
51/64	.7969	3-3/8	5-1/4	1	33.93	—	33.93
13/16	.8125	3-3/8	5-1/4	1	32.72	—	32.72
53/64	.8281	3-1/2	5-3/8	1	35.93	—	35.93
27/32	.8438	3-1/2	5-3/8	1	34.64	—	34.64
55/64	.8594	3-1/2	5-1/2	1	37.21	46.51	37.21
7/8	.8750	3-1/2	5-1/2	1	35.88	—	35.88
57/64	.8906	3-5/8	5-5/8	1	38.64	—	38.64
29/32	.9062	3-5/8	5-5/8	1	37.26	—	37.26
59/64	.9219	3-3/4	5-3/4	1	42.59	—	42.59
15/16	.9375	3-3/4	5-3/4	1	41.07	—	41.07
61/64	.9531	3-7/8	5-7/8	1	46.32	—	46.32

** 3/64 furnished with 135° point — NOT split.*

Size	Dec. Equiv.	Flute Length	Overall Length	Price Each 118° Bright **600**	Price Each 118° Oxide **600J**
31/32	.9688	3-7/8	5-7/8	44.66	44.66
63/64	.9844	4	6	48.06	48.06
1	1.0000	4	6	46.34	46.34
1-1/64	1.0156	4	6-1/4	79.20	79.20
1-1/32	1.0312	4	6-1/4	79.20	79.20
1-3/64	1.0469	4	6-1/4	86.13	86.13
1-1/16	1.0625	4	6-1/4	57.81	57.81
1-5/64	1.0781	4	6-3/8	95.70	95.70
1-3/32	1.0938	4	6-3/8	95.70	95.70
1-7/64	1.1094	4	6-3/8	97.68	97.68
1-1/8	1.1250	4	6-3/8	65.50	65.50
1-9/64	1.1406	4	6-5/8	99.66	99.66
1-5/32	1.1562	4-1/4	6-5/8	105.47	105.47
1-11/64	1.1719	4-1/4	6-5/8	108.50	108.50
1-3/16	1.1875	4-1/4	6-5/8	75.90	75.90
1-13/64	1.2031	4-3/8	6-3/4	116.64	116.64
1-7/32	1.2188	4-3/8	6-3/4	116.64	116.64
1-15/64	1.2344	4-3/8	6-3/4	122.10	122.10
1-1/4	1.2500	4-3/8	6-3/4	83.09	83.09
1-17/64	1.2656	4-3/8	7	132.76	132.76
1-9/32	1.2812	4-3/8	7	132.76	132.76
1-19/64	1.2969	4-3/8	7	141.90	141.90
1-5/16	1.3125	4-3/8	7	118.80	118.80
1-21/64	1.3281	4-1/2	7-1/8	158.40	158.40
1-11/32	1.3438	4-1/2	7-1/8	162.76	162.76
1-23/64	1.3594	4-1/2	7-1/8	168.30	168.30
1-3/8	1.3750	4-1/2	7-1/8	126.03	126.03
1-25/64	1.3906	4-3/4	7-3/8	174.24	174.24
1-13/32	1.4062	4-3/4	7-3/8	174.24	174.24
1-27/64	1.4219	4-3/4	7-3/8	244.20	244.20
1-7/16	1.4375	4-3/4	7-3/8	135.81	135.81
1-29/64	1.4531	4-7/8	7-1/2	180.84	180.84
1-15/32	1.4688	4-7/8	7-1/2	180.84	180.84
1-31/64	1.4844	4-7/8	7-1/2	184.80	184.80
1-1/2	1.5000	4-7/8	7-1/2	140.25	140.25
1-17/32	1.5312	4-7/8	7-3/4	191.40	191.40
1-9/16	1.5625	4-7/8	7-3/4	158.40	158.40
1-19/32	1.5938	4-7/8	7-3/4	241.36	241.36
1-5/8	1.6250	4-7/8	7-3/4	178.53	178.53
1-21/32	1.6562	5-1/8	8	257.40	257.40
1-11/16	1.6875	5-1/8	8	205.00	205.00
1-23/32	1.7188	5-1/8	8	270.60	270.60
1-3/4	1.7500	5-1/8	8	211.20	211.20
1-25/32	1.7812	5-3/8	8-1/4	290.40	290.40
1-13/16	1.8125	5-3/8	8-1/4	231.00	231.00
1-27/32	1.8438	5-3/8	8-1/4	313.61	313.61
1-7/8	1.8750	5-3/8	8-1/4	237.93	237.93
1-29/32	1.9062	5-5/8	8-1/2	317.13	317.13
1-15/16	1.9375	5-5/8	8-1/2	254.10	254.10
1-31/32	1.9688	5-5/8	8-1/2	323.40	323.40
2	2.0000	5-5/8	8-1/2	263.67	263.67
2-1/16	2.0625	5-5/8	8-1/2	316.80	316.80
2-1/8	2.1250	5-5/8	8-1/2	326.70	326.70
2-3/16	2.1875	5-5/8	8-1/2	348.48	348.48
2-1/4	2.2500	5-5/8	8-1/2	376.20	376.20
2-5/16	2.3125	5-5/8	8-1/2	402.60	402.60
2-3/8	2.3750	5-5/8	8-1/2	408.54	408.54
2-7/16	2.4375	5-5/8	8-1/2	495.00	495.00
2-1/2	2.5000	5-5/8	8-1/2	537.24	537.24

Screw Machine Length Drills

High Speed Steel

List No. **600** – Bright Finish, 118° Point
List No. **600A** – Oxide Finish, 135° Split Point (NAS 907 Type C)
List No. **600J** – Oxide Finish, 118° Point



High Speed

MADE IN USA

MICHIGAN DRILL & CUTTING TOOLS

Wire Gauge Sizes

12 drills per package

Size	Dec. Equiv.	Flute Length	Overall Length	Price Each 118° Bright 600	135° Oxide 600A	118° Oxide 600J
1	.2280	1-5/16	2-7/16	2.05	2.18	2.05
2	.2210	1-5/16	2-7/16	2.05	2.18	2.05
3	.2130	1-1/4	2-3/8	1.88	2.18	1.88
4	.2090	1-1/4	2-3/8	1.88	2.18	1.88
5	.2055	1-1/4	2-3/8	1.88	2.18	1.88
6	.2040	1-1/4	2-3/8	1.88	2.18	1.88
7	.2010	1-3/16	2-1/4	1.65	1.74	1.65
8	.1990	1-3/16	2-1/4	1.65	1.74	1.65
9	.1960	1-3/16	2-1/4	1.65	1.74	1.65
10	.1935	1-3/16	2-1/4	1.65	1.74	1.65
11	.1910	1-3/16	2-1/4	1.65	1.74	1.65
12	.1890	1-3/16	2-1/4	1.65	1.74	1.65
13	.1850	1-1/8	2-3/16	1.65	1.74	1.65
14	.1820	1-1/8	2-3/16	1.65	1.74	1.65
15	.1800	1-1/8	2-3/16	1.65	1.74	1.65
16	.1770	1-1/8	2-3/16	1.65	1.74	1.65
17	.1730	1-1/8	2-3/16	1.65	1.74	1.65
18	.1695	1-1/16	2-1/8	1.65	1.74	1.65
19	.1660	1-1/16	2-1/8	1.65	1.74	1.65
20	.1610	1-1/16	2-1/8	1.65	1.74	1.65
21	.1590	1-1/16	2-1/8	1.65	1.74	1.65
22	.1570	1-1/16	2-1/8	1.65	1.74	1.65
23	.1540	1	2-1/16	1.65	1.74	1.65
24	.1520	1	2-1/16	1.65	1.74	1.65
25	.1495	1	2-1/16	1.39	1.50	1.39
26	.1470	1	2-1/16	1.39	1.50	1.39
27	.1440	1	2-1/16	1.39	1.50	1.39
28	.1405	15/16	1-15/16	1.27	1.31	1.27
29	.1360	15/16	1-15/16	1.27	1.31	1.27
30	.1285	15/16	1-15/16	1.27	1.31	1.27
31	.1200	7/8	1-7/8	1.27	1.31	1.27
32	.1160	7/8	1-7/8	1.27	1.31	1.27
33	.1130	7/8	1-7/8	1.27	1.31	1.27
34	.1110	7/8	1-7/8	1.27	1.31	1.27
35	.1100	7/8	1-7/8	1.27	1.31	1.27
36	.1065	13/16	1-13/16	1.27	1.31	1.27
37	.1040	13/16	1-13/16	1.27	1.31	1.27
38	.1015	13/16	1-13/16	1.27	1.31	1.27
39	.0995	13/16	1-13/16	1.27	1.31	1.27
40	.0980	13/16	1-13/16	1.27	1.31	1.27
41	.0960	13/16	1-13/16	1.29	1.31	1.29
42	.0935	3/4	1-3/4	1.29	1.31	1.29
43	.0890	3/4	1-3/4	1.29	1.31	1.29
44	.0860	3/4	1-3/4	1.29	1.31	1.29
45	.0820	3/4	1-3/4	1.29	1.31	1.29
46	.0810	3/4	1-3/4	1.29	1.31	1.29
47	.0785	3/4	1-3/4	1.29	1.31	1.29
48	.0760	11/16	1-11/16	1.29	1.31	1.29
49	.0730	11/16	1-11/16	1.29	1.31	1.29
50	.0700	11/16	1-11/16	1.29	1.31	1.29
51	.0670	11/16	1-11/16	1.29	1.31	1.29
52	.0635	11/16	1-11/16	1.29	1.31	1.29
53	.0595	5/8	1-5/8	1.29	1.31*	1.29
54	.0550	5/8	1-5/8	1.29	1.31*	1.29
55	.0520	5/8	1-5/8	1.29	1.31*	1.29
56	.0465	1/2	1-3/8	1.29	1.31*	1.29
57	.0430	1/2	1-3/8	1.29	1.31*	1.29
58	.0420	1/2	1-3/8	1.29	1.31*	1.29
59	.0410	1/2	1-3/8	1.29	1.31*	1.29
60	.0400	1/2	1-3/8	1.29	1.31*	1.29
61	.0390	1/2	1-1/4	1.75	—	1.75

** Sizes with decimal equivalent smaller than .0625 are not split point.*

Letter Sizes

Size	Dec. Equiv.	Flute Length	Overall Length	Pkg. Qty.	Price Each 118° Bright 600	135° Oxide 600A	118° Oxide 600J
A	.2340	1-5/16	2-7/16	12	2.41	2.77	2.41
B	.2380	1-3/8	2-1/2	12	2.41	2.77	2.41
C	.2420	1-3/8	2-1/2	12	2.41	2.77	2.41
D	.2460	1-3/8	2-1/2	12	2.41	2.77	2.41
E	.2500	1-3/8	2-1/2	12	2.01	2.01	2.01
F	.2570	1-7/16	2-5/8	12	2.55	2.61	2.55
G	.2610	1-7/16	2-5/8	12	2.77	3.10	2.77
H	.2660	1-1/2	2-11/16	12	2.77	3.10	2.77
I	.2720	1-1/2	2-11/16	6	2.77	3.27	2.77
J	.2770	1-1/2	2-11/16	6	3.04	3.56	3.04
K	.2810	1-1/2	2-11/16	6	3.20	3.81	3.20
L	.2900	1-9/16	2-3/4	6	3.20	3.81	3.20
M	.2950	1-9/16	2-3/4	6	3.50	4.06	3.50
N	.3020	1-5/8	2-13/16	6	3.50	4.06	3.50
O	.3160	1-11/16	2-15/16	6	3.50	4.29	3.50
P	.3230	1-11/16	2-15/16	6	3.89	4.55	3.89
Q	.3320	1-11/16	3	6	3.89	4.55	3.89
R	.3390	1-11/16	3	6	3.89	4.55	3.89
S	.3480	1-3/4	3-1/16	6	4.54	5.28	4.54
T	.3580	1-3/4	3-1/16	6	5.20	6.07	5.20
U	.3680	1-13/16	3-1/8	6	5.20	6.07	5.20
V	.3770	1-7/8	3-1/4	6	5.61	6.07	5.61
W	.3860	1-7/8	3-1/4	6	5.79	6.32	5.79
X	.3970	1-15/16	3-5/16	6	6.67	7.82	6.67
Y	.4040	1-15/16	3-5/16	6	7.99	9.24	7.99
Z	.4130	2	3-3/8	6	8.75	9.57	8.75

Sets

Sizes	Pieces	118° Bright Finish Set No.	118° Bright Finish Price	135° Oxide Finish Set No.	135° Oxide Finish Price
1/16 – 1/4 x 64ths	13	**607GB**	23.48	**607G**	29.00
1/16 – 3/8 x 64ths	21	**607SB**	56.05	**607S**	62.30
1/16 – 1/2 x 64ths	29	**607FB***	107.17	**607F**	119.30
Wire Sizes 1 – 60	60	**607WB**	105.80	**607W**	110.13
A – Z	26	**607LB**	128.87	**607L**	137.94
1/16 – 1/2 x 64ths, 1 – 60, & A – Z	115	**607XB**	336.34	**607X**	367.87

*Available in 118°: **607FJ** (1/16 – 1/2 x 64ths, 29 pcs. $107.17

All sets are supplied in Huot metal index



MDX® SUPERIOR IMPORT Screw Machine Length Drills

High Speed

High Speed Steel

List No. **X600**

Drill Size	Shank Diameter
Up to 1" inclusive	Same as Drill Diameter
Over 1 to 1-1/4 inclusive	1"
Over 1-1/4 to 1-1/2 inclusive	1-1/4
Over 1-1/2 to 2" inclusive	1-1/2



Fractional Sizes

Size	Decimal Equivalent	Flute Length	Overall Length	Pkg. Qty.	Price Each
3/64	.0469	1/2	1-3/8	12	.74
1/16	.0625	5/8	1-5/8	12	.69
5/64	.0781	11/16	1-11/16	12	.69
3/32	.0938	3/4	1-3/4	12	.69
7/64	.1094	13/16	1-13/16	12	.69
1/8	.1250	7/8	1-7/8	12	.69
9/64	.1406	15/16	1-15/16	12	.69
5/32	.1563	1	2-1/16	12	.79
11/64	.1719	1-1/16	2-1/8	12	.84
3/16	.1875	1-1/8	2-3/16	12	.86
13/64	.2031	1-3/16	2-1/4	12	.96
7/32	.2188	1-1/4	2-3/8	12	1.12
15/64	.2344	1-5/16	2-7/16	12	1.17
1/4	.2500	1-3/8	2-1/2	12	1.31
17/64	.2656	1-7/16	2-5/8	12	1.43
9/32	.2813	1-1/2	2-11/16	6	1.51
19/64	.2969	1-9/16	2-3/4	6	1.65
5/16	.3125	1-5/8	2-13/16	6	1.78
21/64	.3281	1-11/16	2-15/16	6	1.97
11/32	.3438	1-11/16	3	6	2.21
23/64	.3594	1-3/4	3-1/16	6	2.58
3/8	.3750	1-13/16	3-1/8	6	2.68
25/64	.3906	1-7/8	3-1/4	6	2.98
13/32	.4063	1-15/16	3-5/16	6	3.12
27/64	.4219	2	3-3/8	6	3.43
7/16	.4375	2-1/16	3-7/16	6	3.48
29/64	.4531	2-1/8	3-9/16	6	4.18
15/32	.4688	2-1/8	3-5/8	6	4.36
31/64	.4844	2-3/16	3-11/16	6	4.58
1/2	.5000	2-1/4	3-3/4	6	4.50
33/64	.5156	2-3/8	3-7/8	1	10.08
17/32	.5313	2-3/8	3-7/8	1	10.36
35/64	.5469	2-1/2	4	1	10.99
9/16	.5625	2-1/2	4	1	10.79
37/64	.5781	2-5/8	4-1/8	1	12.59
19/32	.5938	2-5/8	4-1/8	1	12.35
39/64	.6094	2-3/4	4-1/4	1	12.69
5/8	.6250	2-3/4	4-1/4	1	12.47
41/64	.6406	2-7/8	4-1/2	1	14.58
21/32	.6563	2-7/8	4-1/2	1	14.32
43/64	.6719	2-7/8	4-5/8	1	16.17
11/16	.6875	2-7/8	4-5/8	1	15.87
45/64	.7031	3	4-3/4	1	18.03
23/32	.7188	3	4-3/4	1	17.38
47/64	.7344	3-1/8	5	1	19.03
3/4	.7500	3-1/8	5	1	18.35
49/64	.7656	3-1/4	5-1/8	1	20.96
25/32	.7813	3-1/4	5-1/8	1	20.20
51/64	.7969	3-3/8	5-1/4	1	22.06
13/16	.8125	3-3/8	5-1/4	1	21.27
53/64	.8281	3-1/2	5-3/8	1	23.36
27/32	.8438	3-1/2	5-3/8	1	22.52
55/64	.8594	3-1/2	5-1/2	1	24.19
7/8	.8750	3-1/2	5-1/2	1	23.32
57/64	.8906	3-5/8	5-5/8	1	25.11
29/32	.9063	3-5/8	5-5/8	1	24.22
59/64	.9219	3-3/4	5-3/4	1	27.68
15/16	.9375	3-3/4	5-3/4	1	26.69
61/64	.9531	3-7/8	5-7/8	1	30.11

Size	Decimal Equivalent	Flute Length	Overall Length	Pkg. Qty.	Price Each
31/32	.9688	3-7/8	5-7/8	1	29.03
63/64	.9844	4	6	1	31.24
1	1.0000	4	6	1	30.12
1-1/64	1.0156	4	6-1/4	1	46.00
1-1/32	1.0313	4	6-1/4	1	46.00
1-3/64	1.0469	4	6-1/4	1	46.00
1-1/16	1.0625	4	6-1/4	1	37.57
1-3/32	1.0938	4	6-3/8	1	46.00
1-7/64	1.1094	4	6-3/8	1	59.07
1-1/8	1.1250	4	6-3/8	1	42.58
1-9/64	1.1406	4-1/4	6-5/8	1	62.70
1-5/32	1.1563	4-1/4	6-5/8	1	44.16
1-3/16	1.1875	4-1/4	6-5/8	1	49.39
1-1/4	1.2500	4-3/8	6-3/4	1	65.89
1-17/64	1.2656	4-3/8	6-3/4	1	82.01
1-9/32	1.2812	4-3/8	7	1	84.50
1-19/64	1.2969	4-3/8	7	1	86.00
1-5/16	1.3125	4-3/8	7	1	70.24
1-21/64	1.3281	4-3/8	7	1	86.00
1-23/64	1.3594	4-1/2	7-1/8	1	90.00
1-3/8	1.3750	4-1/2	7-1/8	1	75.31
1-25/64	1.3906	4-1/2	7-1/8	1	98.66
1-13/32	1.4063	4-3/4	7-3/8	1	85.76
1-27/64	1.4219	4-3/4	7-3/8	1	98.66
1-7/16	1.4375	4-3/4	7-3/8	1	85.76
1-29/64	1.4531	4-3/4	7-3/8	1	98.66
1-15/32	1.4688	4-3/4	7-1/2	1	98.75
1-31/64	1.4844	4-3/4	7-1/2	1	102.48
1-1/2	1.5000	4-7/8	7-1/2	1	79.40
1-33/64	1.5156	4-7/8	7-1/2	1	109.21
1-17/32	1.5313	4-7/8	7-3/4	1	102.48
1-35/64	1.5469	4-7/8	7-3/4	1	119.52
1-9/16	1.5625	4-7/8	7-3/4	1	89.71
1-37/64	1.5781	4-7/8	7-3/4	1	130.46
1-39/64	1.6094	4-7/8	7-3/4	1	130.46
1-5/8	1.6250	4-7/8	7-3/4	1	100.65
1-41/64	1.6406	4-7/8	7-3/4	1	151.75
1-43/64	1.6719	4-7/8	7-3/4	1	151.75
1-11/16	1.6875	5-1/8	8	1	115.08
1-45/64	1.7031	5-1/8	8	1	195.09
1-23/32	1.7188	5-1/8	8	1	195.09
1-47/64	1.7344	5-1/8	8	1	204.60
1-3/4	1.7500	5-1/8	8	1	119.22
1-49/64	1.7656	5-1/8	8	1	224.66
1-25/32	1.7813	5-3/8	8-1/4	1	224.66
1-51/64	1.7969	5-3/8	8-1/4	1	231.26
1-13/16	1.8125	5-3/8	8-1/4	1	130.81
1-53/64	1.8281	5-3/8	8-1/4	1	242.68
1-27/32	1.8438	5-3/8	8-1/4	1	242.68
1-55/64	1.8594	5-3/8	8-1/4	1	250.98
1-7/8	1.8750	5-3/8	8-1/4	1	134.53
1-57/64	1.8906	5-3/8	8-1/4	1	261.23
1-29/32	1.9063	5-5/8	8-1/2	1	261.23
1-59/64	1.9219	5-5/8	8-1/2	1	261.23
1-15/16	1.9375	5-5/8	8-1/2	1	142.71
1-61/64	1.9531	5-5/8	8-1/2	1	266.46
1-31/32	1.9688	5-5/8	8-1/2	1	261.14
1-63/64	1.9844	5-5/8	8-1/2	1	271.78
2	2.0000	5-5/8	8-1/2	1	149.95

MDX® SUPERIOR IMPORT Screw Machine Length Drills

High Speed Steel

High Speed

List No. **X600**



Wire Gauge Sizes

Size	Decimal Equivalent	Flute Length	Overall Length	Pkg. Qty.	Price Each
1	.2280	1-5/16	2-7/16	12	1.21
2	.2210	1-5/16	2-7/16	12	1.21
3	.2130	1-1/4	2-3/8	12	1.15
4	.2090	1-1/4	2-3/8	12	1.15
5	.2055	1-1/4	2-3/8	12	1.15
6	.2040	1-1/4	2-3/8	12	1.15
7	.2010	1-3/16	2-1/4	12	.95
8	.1990	1-3/16	2-1/4	12	.95
9	.1960	1-3/16	2-1/4	12	.95
10	.1935	1-3/16	2-1/4	12	.95
11	.1910	1-3/16	2-1/4	12	.95
12	.1890	1-3/16	2-1/4	12	.95
13	.1850	1-1/8	2-3/16	12	.95
14	.1820	1-1/8	2-3/16	12	.95
15	.1800	1-1/8	2-3/16	12	.95
16	.1770	1-1/8	2-3/16	12	.95
17	.1730	1-1/8	2-3/16	12	.95
18	.1695	1-1/16	2-1/8	12	.82
19	.1660	1-1/16	2-1/8	12	.82
20	.1610	1-1/16	2-1/8	12	.82
21	.1590	1-1/16	2-1/8	12	.79
22	.1570	1-1/16	2-1/8	12	.79
23	.1540	1	2-1/16	12	.79
24	.1520	1	2-1/16	12	.79
25	.1495	1	2-1/16	12	.77
26	.1470	1	2-1/16	12	.77
27	.1440	1	2-1/16	12	.67
28	.1405	15/16	1-15/16	12	.67
29	.1360	15/16	1-15/16	12	.67
30	.1285	15/16	1-15/16	12	.67

Size	Decimal Equivalent	Flute Length	Overall Length	Pkg. Qty.	Price Each
31	.1200	7/8	1-7/8	12	.67
32	.1160	7/8	1-7/8	12	.67
33	.1130	7/8	1-7/8	12	.67
34	.1110	7/8	1-7/8	12	.67
35	.1100	7/8	1-7/8	12	.67
36	.1065	13/16	1-13/16	12	.67
37	.1040	13/16	1-13/16	12	.67
38	.1015	13/16	1-13/16	12	.67
39	.0995	13/16	1-13/16	12	.67
40	.0980	13/16	1-13/16	12	.67
41	.0960	13/16	1-13/16	12	.67
42	.0935	3/4	1-3/4	12	.67
43	.0890	3/4	1-3/4	12	.67
44	.0860	3/4	1-3/4	12	.67
45	.0820	3/4	1-3/4	12	.67
46	.0810	3/4	1-3/4	12	.67
47	.0785	3/4	1-3/4	12	.67
48	.0760	11/16	1-11/16	12	.67
49	.0730	11/16	1-11/16	12	.67
50	.0700	11/16	1-11/16	12	.67
51	.0670	11/16	1-11/16	12	.67
52	.0635	11/16	1-11/16	12	.67
53	.0595	5/8	1-5/8	12	.67
54	.0550	5/8	1-5/8	12	.67
55	.0520	5/8	1-5/8	12	.67
56	.0465	1/2	1-3/8	12	.67
57	.0430	1/2	1-3/8	12	.67
58	.0420	1/2	1-3/8	12	.67
59	.0410	1/2	1-3/8	12	.67
60	.0400	1/2	1-3/8	12	.67

Letter Sizes

Size	Decimal Equivalent	Flute Length	Overall Length	Pkg. Qty.	Price Each
A	.2340	1-5/16	2-7/16	12	1.45
B	.2380	1-3/8	2-1/2	12	1.45
C	.2420	1-3/8	2-1/2	12	1.45
D	.2460	1-3/8	2-1/2	12	1.45
E	.2500	1-3/8	2-1/2	12	1.31
F	.2570	1-7/16	2-5/8	12	1.59
G	.2610	1-7/16	2-5/8	12	1.68
H	.2660	1-1/2	2-11/16	12	1.68
I	.2720	1-1/2	2-11/16	6	1.68
J	.2770	1-1/2	2-11/16	6	1.83
K	.2810	1-1/2	2-11/16	6	1.95
L	.2900	1-9/16	2-3/4	6	1.95
M	.2950	1-9/16	2-3/4	6	2.13

Size	Decimal Equivalent	Flute Length	Overall Length	Pkg. Qty.	Price Each
N	.3020	1-5/8	2-13/16	6	2.13
O	.3160	1-11/16	2-15/16	6	2.19
P	.3230	1-11/16	2-15/16	6	2.41
Q	.3320	1-11/16	3	6	2.41
R	.3390	1-11/16	3	6	2.41
S	.3480	1-3/4	3-1/16	6	2.81
T	.3580	1-3/4	3-1/16	6	3.24
U	.3680	1-13/16	3-1/8	6	3.24
V	.3770	1-7/8	3-1/4	6	3.41
W	.3860	1-7/8	3-1/4	6	3.58
X	.3970	1-15/16	3-5/16	6	4.17
Y	.4040	1-15/16	3-5/16	6	4.95
Z	.4130	2	3-3/8	6	4.95

Sets

Size	Pieces	Set No.	Price
1/16 – 1/2 by 64ths	29	**X607F**	62.70
1 – 60	60	**X607W**	48.91
A – Z	26	**X607L**	63.50

All sets are supplied in metal index



TiN Coated Screw Machine Length Drills



High Speed Steel

List No. **600T** – Titanium Nitride Coated, 118° Point

MADE IN USA

MICHIGAN DRILL & CUTTING TOOLS

Fractional Sizes

Size	Dec. Equiv.	Flute Length	Overall Length	Pkg. Qty.	Price Each
3/64	.0469	1/2	1-3/8	12	2.54
1/16	.0625	5/8	1-5/8	12	2.51
5/64	.0781	11/16	1-11/16	12	2.51
3/32	.0938	3/4	1-3/4	12	2.51
7/64	.1094	13/16	1-13/16	12	2.51
1/8	.1250	7/8	1-7/8	12	2.51
9/64	.1406	15/16	1-15/16	12	3.76
5/32	.1562	1	2-1/16	12	3.95
11/64	.1719	1-1/16	2-1/8	12	4.07
3/16	.1875	1-1/8	2-3/16	12	4.12
13/64	.2031	1-3/16	2-1/4	12	4.28
7/32	.2188	1-1/4	2-3/8	12	4.57
15/64	.2344	1-5/16	2-7/16	12	4.72
1/4	.2500	1-3/8	2-1/2	12	4.77
17/64	.2656	1-7/16	2-5/8	12	6.83

Size	Dec. Equiv.	Flute Length	Overall Length	Pkg. Qty.	Price Each
9/32	.2812	1-1/2	2-11/16	6	6.90
19/64	.2969	1-9/16	2-3/4	6	7.26
5/16	.3125	1-5/8	2-13/16	6	7.43
21/64	.3281	1-11/16	2-15/16	6	9.95
11/32	.3438	1-11/16	3	6	10.26
23/64	.3594	1-3/4	3-1/16	6	11.09
3/8	.3750	1-13/16	3-1/8	6	11.17
25/64	.3906	1-7/8	3-1/4	6	13.25
13/32	.4062	1-15/16	3-5/16	6	13.36
27/64	.4219	2	3-3/8	6	14.12
7/16	.4375	2-1/16	3-7/16	6	14.03
29/64	.4531	2-1/8	3-9/16	6	15.85
15/32	.4688	2-1/8	3-5/8	6	16.08
31/64	.4844	2-3/16	3-11/16	6	16.65
1/2	.5000	2-1/4	3-3/4	6	16.34

Wire Gauge Sizes

12 drills per package

Size	Dec. Equiv.	Flute Length	Overall Length	Price Each
1	.2280	1-5/16	2-7/16	4.76
2	.2210	1-5/16	2-7/16	4.76
3	.2130	1-1/4	2-3/8	4.63
4	.2090	1-1/4	2-3/8	4.63
5	.2055	1-1/4	2-3/8	4.63
6	.2040	1-1/4	2-3/8	4.63
7	.2010	1-3/16	2-1/4	4.26
8	.1990	1-3/16	2-1/4	4.26
9	.1960	1-3/16	2-1/4	4.26
10	.1935	1-3/16	2-1/4	4.26
11	.1910	1-3/16	2-1/4	4.26
12	.1890	1-3/16	2-1/4	4.26
13	.1850	1-1/8	2-3/16	4.26
14	.1820	1-1/8	2-3/16	4.26
15	.1800	1-1/8	2-3/16	4.26
16	.1770	1-1/8	2-3/16	4.26
17	.1730	1-1/8	2-3/16	4.26
18	.1695	1-1/16	2-1/8	4.02
19	.1660	1-1/16	2-1/8	4.02
20	.1610	1-1/16	2-1/8	4.02
21	.1590	1-1/16	2-1/8	3.95

Size	Dec. Equiv.	Flute Length	Overall Length	Price Each
22	.1570	1-1/16	2-1/8	3.95
23	.1540	1	2-1/16	3.95
24	.1520	1	2-1/16	3.95
25	.1495	1	2-1/16	3.89
26	.1470	1	2-1/16	3.89
27	.1440	1	2-1/16	3.89
28	.1405	15/16	1-15/16	3.75
29	.1360	15/16	1-15/16	3.75
30	.1285	15/16	1-15/16	3.75
31	.1200	7/8	1-7/8	2.49
32	.1160	7/8	1-7/8	2.49
33	.1130	7/8	1-7/8	2.49
34	.1110	7/8	1-7/8	2.49
35	.1100	7/8	1-7/8	2.49
36	.1065	13/16	1-13/16	2.49
37	.1040	13/16	1-13/16	2.49
38	.1015	13/16	1-13/16	2.49
39	.0995	13/16	1-13/16	2.49
40	.0980	13/16	1-13/16	2.49
41	.0960	13/16	1-13/16	2.49
42	.0935	3/4	1-3/4	2.49

Size	Dec. Equiv.	Flute Length	Overall Length	Price Each
43	.0890	3/4	1-3/4	2.49
44	.0860	3/4	1-3/4	2.49
45	.0820	3/4	1-3/4	2.49
46	.0810	3/4	1-3/4	2.49
47	.0785	3/4	1-3/4	2.49
48	.0760	11/16	1-11/16	2.49
49	.0730	11/16	1-11/16	2.49
50	.0700	11/16	1-11/16	2.49
51	.0670	11/16	1-11/16	2.49
52	.0635	11/16	1-11/16	2.49
53	.0595	5/8	1-5/8	2.49
54	.0550	5/8	1-5/8	2.49
55	.0520	5/8	1-5/8	2.49
56	.0465	1/2	1-3/8	2.49
57	.0430	1/2	1-3/8	2.49
58	.0420	1/2	1-3/8	2.49
59	.0410	1/2	1-3/8	2.49
60	.0400	1/2	1-3/8	2.49
61	.0390	1/2	1-1/4	2.59

Letter Sizes

Size	Dec. Equiv.	Flute Length	Overall Length	Pkg. Qty.	Price Each
A	.2340	1-5/16	2-7/16	12	4.98
B	.2380	1-3/8	2-1/2	12	4.98
C	.2420	1-3/8	2-1/2	12	4.98
D	.2460	1-3/8	2-1/2	12	4.98
E	.2500	1-3/8	2-1/2	12	4.77
F	.2570	1-7/16	2-5/8	12	5.50
G	.2610	1-7/16	2-5/8	12	5.90
H	.2660	1-1/2	2-11/16	12	5.90
I	.2720	1-1/2	2-11/16	6	6.15

Size	Dec. Equiv.	Flute Length	Overall Length	Pkg. Qty.	Price Each
J	.2770	1-1/2	2-11/16	6	6.30
K	.2810	1-1/2	2-11/16	6	6.30
L	.2900	1-9/16	2-3/4	6	6.30
M	.2950	1-9/16	2-3/4	6	6.70
N	.3020	1-5/8	2-13/16	6	6.70
O	.3160	1-11/16	2-15/16	6	6.70
P	.3230	1-11/16	2-15/16	6	7.15
Q	.3320	1-11/16	3	6	7.15
R	.3390	1-11/16	3	6	7.15

Size	Dec. Equiv.	Flute Length	Overall Length	Pkg. Qty.	Price Each
S	.3480	1-3/4	3-1/16	6	7.88
T	.3580	1-3/4	3-1/16	6	8.16
U	.3680	1-13/16	3-1/8	6	8.16
V	.3770	1-7/8	3-1/4	6	8.55
W	.3860	1-7/8	3-1/4	6	8.90
X	.3970	1-15/16	3-5/16	6	9.45
Y	.4040	1-15/16	3-5/16	6	10.95
Z	.4130	2	3-3/8	6	12.70

Sets

Sizes	Pieces	Description	Set No.	Price
1/16 – 1/2 x 64ths	29	TiN Coated, 118° Point	**607TF**	255.86

All sets are supplied in Huot metal index



Metric Screw Machine Length Drill



High Speed Steel

List No. **600M** – 118° Point Right Hand
List No. **X600MLH** – 118° Point Left Hand MDX SUPERIOR IMPORT

Size mm	Decimal Equivalent	Flute Length	Overall Length	Price Each 600M	Price Each X600MLH
1.00	.0394	1/2	1-3/8	2.03	—
1.05	.0413	1/2	1-3/8	2.03	—
1.20	.0472	5/8	1-5/8	2.03	3.30
1.25	.0492	5/8	1-5/8	2.03	—
1.30	.0512	5/8	1-5/8	2.03	3.30
1.40	.0551	5/8	1-5/8	2.03	—
1.45	.0571	5/8	1-5/8	2.03	—
1.50	.0591	5/8	1-5/8	2.03	3.30
1.55	.0610	11/16	1-11/16	2.03	—
1.60	.0630	11/16	1-11/16	2.03	3.30
1.65	.0650	11/16	1-11/16	2.03	3.30
1.70	.0669	11/16	1-11/16	2.03	3.30
1.75	.0689	11/16	1-11/16	2.03	—
1.80	.0709	11/16	1-11/16	2.03	3.30
1.90	.0748	11/16	1-11/16	2.03	3.30
1.95	.0768	11/16	1-11/16	2.03	—
2.00	.0787	3/4	1-3/4	2.03	—
2.05	.0807	3/4	1-3/4	2.03	—
2.10	.0827	3/4	1-3/4	2.03	3.30
2.15	.0846	3/4	1-3/4	2.07	—
2.40	.0945	13/16	1-13/16	2.07	—
2.50	.0984	13/16	1-13/16	2.07	—
2.60	.1024	13/16	1-13/16	2.07	3.70
2.70	.1063	13/16	1-13/16	2.12	—
2.80	.1102	13/16	1-13/16	2.12	3.95
2.90	.1142	7/8	1-7/8	2.12	3.95
3.00	.1181	7/8	1-7/8	2.12	3.95
3.20	.1260	7/8	1-1/8	2.12	3.95
3.25	.1280	7/8	1-1/8	2.12	—
3.30	.1299	15/16	1-15/16	2.12	3.95
3.40	.1339	15/16	1-15/16	2.12	—
3.50	.1378	15/16	1-15/16	2.12	—
3.60	.1417	1	2-1/16	2.12	3.95
3.70	.1457	1	2-1/16	2.12	3.95
3.80	.1496	1	2-1/16	2.12	3.95
3.90	.1535	1	2-1/16	2.12	3.95
4.00	.1575	1	2-1/16	2.12	3.95
4.10	.1614	1-1/16	2-1/8	2.43	4.20
4.15	.1624	1-1/16	2-1/8	2.80	—
4.20	.1654	1-1/16	2-1/8	2.43	4.20
4.25	.1673	1-1/16	2-1/8	2.43	—
4.30	.1693	1-1/16	2-1/8	2.43	4.20
4.40	.1732	1-1/8	2-3/16	2.48	4.20
4.50	.1772	1-1/8	2-3/16	2.48	—
4.60	.1811	1-1/8	2-3/16	2.66	4.90
4.70	.1850	1-1/8	2-3/16	2.66	—
4.80	.1890	1-1/8	2-3/16	2.70	5.00
4.90	.1929	1-1/8	2-3/16	2.70	5.00
5.00	.1969	1-3/16	2-1/4	2.70	5.00
5.10	.2008	1-3/16	2-1/4	2.75	—
5.30	.2087	1-1/4	2-3/8	3.29	5.90
5.40	.2126	1-1/4	2-3/8	3.29	5.90
5.50	.2165	1-1/4	2-3/8	3.38	6.00
5.60	.2205	1-5/16	2-7/16	3.38	—
5.80	.2283	1-5/16	2-7/16	3.38	6.00
5.90	.2323	1-5/16	2-7/16	3.38	—
6.00	.2362	1-5/16	2-7/16	3.38	6.00
6.10	.2402	1-5/16	2-7/16	3.51	6.20
6.40	.2520	1-3/8	2-1/2	3.51	6.20
6.50	.2559	1-7/16	2-5/8	3.51	6.20
6.60	.2598	1-7/16	2-5/8	—	6.32
6.75	.2657	1-7/16	2-5/8	3.87	6.32
6.90	.2717	1-7/16	2-5/8	3.87	6.32
7.00	.2756	1-7/16	2-5/8	3.87	6.32
7.10	.2795	1-1/2	2-11/16	4.41	6.00
7.30	.2874	1-1/2	2-11/16	4.86	7.20
7.40	.2913	1-9/16	2-3/4	4.86	7.20
7.50	.2953	1-9/16	2-3/4	4.86	7.20
7.60	.2992	1-9/16	2-3/4	5.40	9.80
7.70	.3031	1-5/8	2-13/16	5.40	9.80
7.90	.3110	1-5/8	2-13/16	5.40	9.80
8.00	.3150	1-11/16	2-15/16	5.40	9.80
8.10	.3189	1-11/16	2-15/16	5.85	10.10
8.20	.3228	1-11/16	2-15/16	5.85	10.10
8.30	.3268	1-11/16	2-15/16	5.85	10.10
8.40	.3307	1-11/16	2-15/16	5.85	—
8.50	.3346	1-11/16	3	5.85	10.10
8.60	.3386	1-11/16	3	7.38	13.15
8.70	.3425	1-11/16	3	7.38	13.15
8.80	.3465	1-3/4	3-1/16	8.55	15.85
8.90	.3504	1-3/4	3-1/16	8.55	15.85
9.00	.3543	1-3/4	3-1/16	8.55	15.85
9.10	.3583	1-13/16	3-1/8	8.55	15.85
9.30	.3661	1-13/16	3-1/8	8.55	15.85
9.40	.3701	1-13/16	3-1/8	8.55	15.85
9.50	.3740	1-13/16	3-1/8	8.55	15.85
9.60	.3780	1-7/8	3-1/4	8.55	15.85
9.80	.3858	1-7/8	3-1/4	8.64	15.93
9.90	.3898	1-7/8	3-1/4	8.64	15.93
10.00	.3937	1-7/8	3-1/4	8.64	—
10.25	.4035	2	3-3/8	9.40	—
10.50	.4134	2	3-3/8	9.40	16.40
11.50	.4528	2-1/8	3-9/16	11.34	—
11.80	.4646	2-1/8	3-9/16	12.15	—
12.20	.4803	2-3/16	3-11/16	12.47	—
12.50	.4921	2-1/4	3-3/4	12.47	—
14.00	.5512	2-1/2	4	—	84.00
15.50	.6102	2-9/32	4-1/2	48.00	—
17.00	.6693	2-1/2	5-3/4	59.00	—
17.50	.6890	2-1/2	5-3/4	65.00	—
18.50	.7283	2-1/2	5-3/4	69.50	—
20.00	.7874	2-1/2	5-3/4	74.00	—
24.00	.9449	4	6	72.00	—
33.00	1.2992	3-1/2	7	211.00	—

Sizes with decimal equivalent smaller than .0625 are not split point.

List No. **X600M** – 118° Point Right Hand

Size mm	Flute Length	Overall Length	Price Each
13.50	2-1/8	4-3/16	29.00
14.20	2-1/8	4-3/16	31.20
15.75	2-3/16	4-1/2	32.17
16.00	2-3/16	4-1/2	32.17
16.25	2-3/16	4-1/2	33.15
16.75	2-1/4	4-1/2	33.15
17.25	2-1/2	4-13/16	35.42
17.75	2-1/2	1-13/16	39.90
19.50	2-1/2	5-1/8	42.00
20.00	2-1/2	5-1/8	45.00
20.25	2-1/2	5-1/8	46.00
20.75	2-3/4	5-1/8	46.50
21.25	2-3/4	5-1/8	46.50
21.75	2-3/4	5-1/2	47.00
22.00	2-3/4	5-1/2	47.00
22.25	2-3/4	5-1/2	47.00
24.00	2-3/4	5-1/2	48.60
24.25	2-3/4	5-1/2	48.60
25.25	3	6-1/8	49.07
25.50	3	6-1/8	87.42
26.00	3	6-1/8	87.42
27.50	3-1/8	6-3/8	102.00
28.50	3-1/4	6-1/8	105.30
29.00	3-1/4	6-5/8	125.00
29.25	3-1/4	6-5/8	138.50
31.00	3-5/16	6-13/16	144.00
31.50	3-5/16	6-13/16	147.87
33.00	3-1/2	7	152.00
34.00	3-1/2	7	158.00
35.00	3-1/2	7	162.50
37.50	3-15/16	7-3/16	169.95
38.00	3-15/16	7-3/16	177.12
39.00	3-15/16	7-3/16	189.75

Cobalt Screw Machine Length Drills

List No. **600C** – Heavy Duty, 135° Split Point

The short flute length and overall length provides maximum rigidity drilling in stainless steels and other tough alloys, castings and forgings.



Cobalt

MADE IN USA

MICHIGAN DRILL & CUTTING TOOLS

Fractional Sizes

Size	Decimal Equivalent	Flute Length	Overall Length	Pkg. Qty.	Price Each
3/64	.0469	1/2	1-3/8	12	3.38
1/16	.0625	5/8	1-5/8	12	2.21
5/64	.0781	11/16	1-11/16	12	2.21
3/32	.0938	3/4	1-3/4	12	2.25
7/64	.1094	13/16	1-13/16	12	2.48
1/8	.1250	7/8	1-7/8	12	2.66
9/64	.1406	15/16	1-15/16	12	2.88
5/32	.1562	1	2-1/16	12	3.11
11/64	.1719	1-1/16	2-1/8	12	3.42
3/16	.1875	1-1/8	2-3/16	12	4.05
13/64	.2031	1-3/16	2-1/4	12	4.46
7/32	.2188	1-1/4	2-3/8	12	4.68
15/64	.2344	1-5/16	2-7/16	12	5.13
1/4	.2500	1-3/8	2-1/2	12	5.49
17/64	.2656	1-7/16	2-5/8	12	6.21
9/32	.2812	1-1/2	2-11/16	6	6.75
19/64	.2969	1-9/16	2-3/4	6	7.92
5/16	.3125	1-5/8	2-13/16	6	8.32
21/64	.3281	1-11/16	2-15/16	6	9.60
11/32	.3438	1-11/16	3	6	9.99
23/64	.3594	1-3/4	3-1/16	6	11.57
3/8	.3750	1/2	3-1/8	6	11.57
25/64	.3906	5/8	3-1/4	6	12.92
13/32	.4062	11/16	3-5/16	6	13.46
27/64	.4219	3/4	3-3/8	6	15.27
7/16	.4375	13/16	3-7/16	6	15.49
29/64	.4531	7/8	3-9/16	6	18.36
15/32	.4688	15/16	3-5/8	6	18.36
31/64	.4844	1	3-11/16	6	18.92
1/2	.5000	1-1/16	3-3/4	6	19.26
33/64	.5156	1-1/8	3-7/8	1	49.32
17/32	.5312	1-3/16	3-7/8	1	49.32

Sizes with decimal equivalent smaller than .0625 are not split point.

Size	Decimal Equivalent	Flute Length	Overall Length	Pkg. Qty.	Price Each
35/64	.5469	1-1/4	4	1	50.58
9/16	.5625	1-5/16	4	1	58.03
37/64	.5781	1-3/8	4-1/8	1	68.91
19/32	.5938	1-7/16	4-1/8	1	66.46
39/64	.6094	1-1/2	4-1/4	1	69.62
5/8	.6250	1-9/16	4-1/4	1	67.16
41/64	.6406	1-5/8	4-1/2	1	79.97
21/32	.6562	1-11/16	4-1/2	1	77.10
43/64	.6719	1-11/16	4-5/8	1	88.57
11/16	.6875	1-3/4	4-5/8	1	85.41
45/64	.7031	3	4-3/4	1	96.17
23/32	.7188	3	4-3/4	1	92.73
47/64	.7344	3-1/8	5	1	101.50
3/4	.7500	3-1/8	5	1	97.88
49/64	.7656	3-1/4	5-1/8	1	108.11
25/32	.7812	3-1/4	5-1/8	1	108.11
51/64	.7969	3-3/8	5-1/4	1	114.66
13/16	.8125	3-3/8	5-1/4	1	114.66
53/64	.8281	3-1/2	5-3/8	1	122.85
27/32	.8438	3-1/2	5-3/8	1	122.85
55/64	.8594	3-1/2	5-1/2	1	125.63
7/8	.8750	3-1/2	5-1/2	1	125.63
57/64	.8906	3-5/8	5-5/8	1	130.64
29/32	.9062	3-5/8	5-5/8	1	130.64
59/64	.9219	3-3/4	5-3/4	1	143.98
15/16	.9375	3-3/4	5-3/4	1	143.98
61/64	.9531	3-7/8	5-7/8	1	156.43
31/32	.9688	3-7/8	5-7/8	1	156.43
63/64	.9844	4	6	1	163.64
1	1.0000	4	6	1	163.64
1-5/16	1.3125	4-3/8	7	1	295.00
1-3/8	1.3750	4-1/2	7-1/8	1	312.50

3/4" and larger are furnished with notched point.

Letter Sizes

Size	Decimal Equivalent	Flute Length	Overall Length	Pkg. Qty.	Price Each
A	.2340	1-5/16	2-7/16	12	6.21
B	.2380	1-3/8	2-1/2	12	6.47
C	.2420	1-3/8	2-1/2	12	6.47
D	.2460	1-3/8	2-1/2	12	6.47
E	.2500	1-3/8	2-1/2	12	5.49
F	.2570	1-7/16	2-5/8	12	6.84
G	.2610	1-7/16	2-5/8	12	6.84
H	.2660	1-1/2	2-11/16	12	7.34
I	.2720	1-1/2	2-11/16	6	7.34
J	.2770	1-1/2	2-11/16	6	7.34
K	.2810	1-1/2	2-11/16	6	7.47
L	.2900	1-9/16	2-3/4	6	8.55
M	.2950	1-9/16	2-3/4	6	8.55

Size	Decimal Equivalent	Flute Length	Overall Length	Pkg. Qty.	Price Each
N	.3020	1-5/8	2-13/16	6	9.45
O	.3160	1-11/16	2-15/16	6	10.35
P	.3230	1-11/16	2-15/16	6	10.35
Q	.3320	1-11/16	3	6	11.25
R	.3390	1-11/16	3	6	11.25
S	.3480	1-3/4	3-1/16	6	13.77
T	.3580	1-3/4	3-1/16	6	13.77
U	.3680	1-13/16	3-1/8	6	13.77
V	.3770	1-7/8	3-1/4	6	15.26
W	.3860	1-7/8	3-1/4	6	15.71
X	.3970	1-15/16	3-5/16	6	16.11
Y	.4040	1-15/16	3-5/16	6	16.11
Z	.4130	2	3-3/8	6	17.96

Sets

Sizes	Pieces	Set No.	Price
1/16 – 1/4 x 64^{ths}	13	**607CG**	44.10
1/16 – 1/2 x 64^{ths}	29	**607CF**	268.76
A – Z	26	**607CL**	256.50
1 – 60	60	**607CW**	216.77
1/16 – 1/2 x 64^{ths}, A – Z, 1 – 60	115	**607CX**	666.90

All sets are supplied in Huot metal index



Cobalt Screw Machine Length Drills

List No. **600C** – Heavy Duty, 135° Split Point

The short flute length and overall length provides maximum rigidity drilling in stainless steels and other tough alloys, castings and forgings.



Cobalt MADE IN USA MICHIGAN DRILL & CUTTING TOOLS

Wire Gauge Sizes

12 drills per package

Size	Decimal Equivalent	Flute Length	Overall Length	Price Each
1	.2280	1-5/16	2-7/16	5.85
2	.2210	1-5/16	2-7/16	5.85
3	.2130	1-1/4	2-3/8	5.85
4	.2090	1-1/4	2-3/8	5.31
5	.2055	1-1/4	2-3/8	5.31
6	.2040	1-1/4	2-3/8	5.31
7	.2010	1-3/16	2-1/4	4.41
8	.1990	1-3/16	2-1/4	4.41
9	.1960	1-3/16	2-1/4	4.41
10	.1935	1-3/16	2-1/4	4.41
11	.1910	1-3/16	2-1/4	4.41
12	.1890	1-3/16	2-1/4	4.41
13	.1850	1-1/8	2-3/16	4.28
14	.1820	1-1/8	2-3/16	4.28
15	.1800	1-1/8	2-3/16	4.28
16	.1770	1-1/8	2-3/16	4.28
17	.1730	1-1/8	2-3/16	4.28
18	.1695	1-1/16	2-1/8	3.51
19	.1660	1-1/16	2-1/8	3.51
20	.1610	1-1/16	2-1/8	3.51
21	.1590	1-1/16	2-1/8	3.51
22	.1570	1-1/16	2-1/8	3.51
23	.1540	1	2-1/16	3.51
24	.1520	1	2-1/16	3.51
25	.1495	1	2-1/16	3.24
26	.1470	1	2-1/16	3.24
27	.1440	1	2-1/16	3.24
28	.1405	15/16	1-15/16	3.24
29	.1360	15/16	1-15/16	3.24
30	.1285	15/16	1-15/16	2.61

Size	Decimal Equivalent	Flute Length	Overall Length	Price Each
31	.1200	7/8	1-7/8	2.61
32	.1160	7/8	1-7/8	2.61
33	.1130	7/8	1-7/8	2.61
34	.1110	7/8	1-7/8	2.61
35	.1100	7/8	1-7/8	2.61
36	.1065	13/16	1-13/16	2.61
37	.1040	13/16	1-13/16	2.61
38	.1015	13/16	1-13/16	2.38
39	.0995	13/16	1-13/16	2.38
40	.0980	13/16	1-13/16	2.38
41	.0960	13/16	1-13/16	2.38
42	.0935	3/4	1-3/4	2.38
43	.0890	3/4	1-3/4	2.38
44	.0860	3/4	1-3/4	2.38
45	.0820	3/4	1-3/4	2.38
46	.0810	3/4	1-3/4	2.38
47	.0785	3/4	1-3/4	2.38
48	.0760	11/16	1-11/16	2.38
49	.0730	11/16	1-11/16	2.38
50	.0700	11/16	1-11/16	2.38
51	.0670	11/16	1-11/16	2.38
52	.0635	11/16	1-11/16	2.38
53	.0595	5/8	1-5/8	2.38
54	.0550	5/8	1-5/8	2.38
55	.0520	5/8	1-5/8	2.38
56	.0465	1/2	1-3/8	2.38
57	.0430	1/2	1-3/8	2.59
58	.0420	1/2	1-3/8	2.59
59	.0410	1/2	1-3/8	2.59
60	.0400	1/2	1-3/8	2.59

Sizes with decimal equivalent smaller than .0625 are not split point.

TiAlN Coated Cobalt Screw Machine Drills



Cobalt MADE IN USA MICHIGAN DRILL & CUTTING TOOLS

List No. **600CTA** – TiAlN Coated Cobalt, 135° Split Point

Size	Decimal Equivalent	Flute Length	Overall Length	Pkg. Qty.	Price Each
1/16	.0625	5/8	1-5/8	12	3.09
5/64	.0781	11/16	1-11/16	12	3.09
3/32	.0938	3/4	1-3/4	12	3.15
7/64	.1094	13/16	1-13/16	12	3.47
1/8	.1250	7/8	1-7/8	12	3.72
9/64	.1406	15/16	1-15/16	12	4.03
5/32	.1562	1	2-1/16	12	4.35
11/64	.1719	1-1/16	2-1/8	12	4.79
3/16	.1875	1-1/8	2-3/16	12	5.67
13/64	.2031	1-3/16	2-1/4	12	6.24
7/32	.2188	1-1/4	2-3/8	12	6.55
15/64	.2344	1-5/16	2-7/16	12	7.18
1/4	.2500	1-3/8	2-1/2	12	7.69

Size	Decimal Equivalent	Flute Length	Overall Length	Pkg. Qty.	Price Each
9/32	.2812	1-1/2	2-11/16	6	9.45
5/16	.3125	1-5/8	2-13/16	6	11.65
T	.3580	1-3/4	3-1/16	6	14.90
3/8	.3750	1-13/16	3-1/8	6	16.20
7/16	.4375	2-1/16	3-7/16	6	21.69
1/2	.5000	2-1/4	3-3/4	6	26.96
33/64	.5156	2-3/8	3-7/8	1	69.05
17/32	.5312	2-3/8	3-7/8	1	69.05
9/16	.5625	2-1/2	4	1	81.24
5/8	.6250	2-3/4	4-1/4	1	94.02
21/32	.6562	2-7/8	4-1/2	1	107.94
43/64	.6719	2-7/8	4-5/8	1	124.00
3/4	.7500	3-1/8	5	1	137.03

Metric Cobalt Screw Machine Length Drills



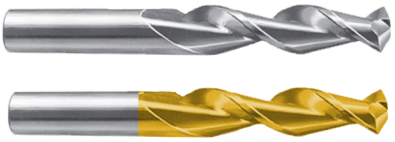
List No. **600MC** – Heavy Duty, 135° Split Point

The short flute length and overall length provides maximum rigidity drilling in Stainless Steels and other tough alloys, castings and forgings.

Size	Decimal Equivalent	Flute Length	Overall Length	Pkg. Qty.	Price Each
1.00	.0394	1/2	1-3/8	12	4.55
1.40	.0551	1/2	1-5/8	12	4.55
1.50	.0591	1/2	1-5/8	12	4.55
1.70	.0669	7/16	1-11/16	12	4.55
1.75	.0589	7/16	1-11/16	12	4.55
2.00	.0787	15/32	1-3/4	12	4.55
2.05	.0807	15/32	1-3/4	12	4.55
2.50	.0984	1/2	1-13/16	12	4.66
2.70	.1063	5/8	1-13/16	12	4.76
2.80	.1102	5/8	1-13/16	12	4.76
3.00	.1181	5/8	1-7/8	12	4.76
3.20	.1260	23/32	1-1/8	12	4.76
3.40	.1339	25/32	1-15/16	12	4.76
3.50	.1378	25/32	1-15/16	12	4.76
3.80	.1496	7/8	2-1/16	12	4.76
4.00	.1575	7/8	2-1/16	12	4.76
4.10	.1614	7/8	2-1/8	12	5.47
4.20	.1654	7/8	2-1/8	12	5.47
4.30	.1693	15/16	2-1/8	12	5.47
4.40	.1732	15/16	2-3/16	12	5.57
4.50	.1772	15/16	2-3/16	12	5.57
5.00	.1969	1-1/32	2-1/4	12	6.08
5.40	.2126	1-3/32	2-3/8	12	7.39
5.50	.2165	1-3/32	2-3/8	12	7.60
5.80	.2283	1-3/32	2-7/16	12	7.60
6.00	.2362	1-3/32	2-7/16	12	7.60
6.50	.2559	1-7/32	2-5/8	12	7.90
6.80	.2677	1-11/32	2-5/8	12	8.71
7.00	.2756	1-11/32	2-5/8	12	8.71
7.10	.2795	1-11/32	2-11/16	12	9.93
7.40	.2913	1-11/32	2-3/4	12	10.94
7.50	.2953	1-11/32	2-3/4	6	10.94
7.60	.2992	1-15/32	2-3/4	6	12.15
7.90	.3110	1-15/32	2-13/16	6	12.15
8.00	.3150	1-15/32	2-15/16	6	12.15
8.10	.3189	1-15/32	2-15/16	6	13.17
8.20	.3228	1-15/32	2-15/16	6	13.17
8.40	.3307	1-15/32	2-15/16	6	13.17
8.50	.3346	1-15/32	3	6	13.17
8.60	.3386	1-15/32	3	6	14.62
8.70	.3425	1-9/16	3	6	16.61
9.00	.3543	1-9/16	3-1/16	6	19.24
9.10	.3583	1-9/16	3-1/8	6	19.24
9.90	.3898	1-11/16	3-1/4	6	19.44
10.00	.3937	1-11/16	3-1/4	6	19.44
10.50	.4134	1-11/16	3-3/8	6	21.14
11.50	.4528	1-7/8	3-9/16	6	25.52
11.80	.4646	1-7/8	3-9/16	6	27.34
12.20	.4803	2-1/64	3-11/16	6	28.04
12.50	.4921	2-1/64	3-3/4	6	28.04
14.00	.5512	2-1/2	4	6	69.00

Sizes with decimal equivalent smaller than .0625 are not split point.

Parabolic Flute Screw Machine Drills



High Speed Steel & Titanium Nitride Coated

List No. **600PF** – H.S. 135° Split Point

List No. **600PFT** – TiN Coated 135° Split Point

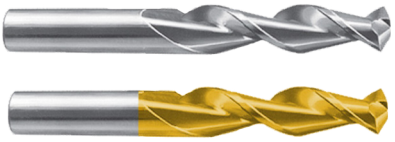
Parabolic drills are for hole drilling at higher feed rates in aluminum alloys and other low to medium tensile strength materials.

Fractional Sizes

Size	Dec. Equiv.	Flute Length	Overall Length	Pkg. Qty.	Price Each H.S. **600PF**	Price Each TiN Coated **600PFT**
1/16	.0625	5/8	1-5/8	12	3.42	4.70
5/64	.0781	11/16	1-11/16	12	3.10	4.38
3/32	.0938	3/4	1-3/4	12	3.42	4.70
7/64	.1094	13/16	1-13/16	12	3.42	4.70
1/8	.1250	7/8	1-7/8	12	3.74	5.02
9/64	.1406	15/16	1-15/16	12	4.10	5.38
5/32	.1562	1	2-1/16	12	4.10	5.38
11/64	.1719	1-1/16	2-1/8	12	5.31	6.59
3/16	.1875	1-1/8	2-3/16	12	5.05	6.33
13/64	.2031	1-3/16	2-1/4	12	5.58	8.14
7/32	.2188	1-1/4	2-3/8	12	6.53	9.09
15/64	.2344	1-5/16	2-7/16	12	6.79	9.35
1/4	.2500	1-3/8	2-1/2	12	7.69	10.25
17/64	.2656	1-7/16	2-5/8	12	8.32	12.88
9/32	.2812	1-1/2	2-11/16	6	9.52	14.08
19/64	.2969	1-9/16	2-3/4	6	10.73	15.29
5/16	.3125	1-5/8	2-13/16	6	10.73	15.29
21/64	.3281	1-11/16	2-15/16	6	11.78	16.34
11/32	.3438	1-11/16	3	6	11.78	16.34
23/64	.3594	1-3/4	3-1/16	6	14.82	19.42
3/8	.3750	1-13/16	3-1/8	6	12.46	17.06
25/64	.3906	1-7/8	3-1/4	6	16.67	24.95
13/32	.4062	1-15/16	3-5/16	6	19.30	27.58
27/64	.4219	2	3-3/8	6	23.45	31.73
7/16	.4375	2-1/16	3-7/16	6	23.45	31.73
29/64	.4531	2-1/8	3-9/16	6	24.61	32.89
15/32	.4688	2-1/8	3-5/8	6	23.45	31.73
31/64	.4844	2-3/16	3-11/16	6	23.45	31.73
1/2	.5000	2-1/4	3-3/4	6	25.56	33.84
23/32	.3594	2-1/4	3-3/4	1	79.00	102.00

Parabolic Flute Screw Machine Drills

High Speed Steel & Titanium Nitride Coated



List No. **600PF** – H.S. 135° Split Point
List No. **600PFT** – TiN Coated 135° Split Point

Parabolic drills are for hole drilling at higher feed rates in aluminum alloys and other low to medium tensile strength materials.

MADE IN USA — MICHIGAN DRILL & CUTTING TOOLS

Wire Gauge Sizes

Size	Dec. Equiv.	Flute Length	Overall Length	Price Each H.S. 600PF	Price Each TiN Coated 600PFT
1	.2280	1-5/16	2-7/16	—	9.35
2	.2210	1-5/16	2-7/16	7.54	9.35
3	.2130	1-1/4	2-3/8	6.90	8.77
4	.2090	1-1/4	2-3/8	6.90	8.77
5	.2055	1-1/4	2-3/8	6.20	8.14
6	.2040	1-1/4	2-3/8	6.20	8.14
7	.2010	1-3/16	2-1/4	6.20	8.14
8	.1990	1-3/16	2-1/4	6.20	8.14
9	.1960	1-3/16	2-1/4	5.61	6.59
10	.1935	1-3/16	2-1/4	5.61	6.59
11	.1910	1-3/16	2-1/4	5.61	6.59
12	.1890	1-3/16	2-1/4	5.61	6.59
13	.1850	1-1/8	2-3/16	5.61	6.59
14	.1820	1-1/8	2-3/16	5.90	6.95
15	.1800	1-1/8	2-3/16	5.90	6.95
16	.1770	1-1/8	2-3/16	5.61	6.59
17	.1730	1-1/8	2-3/16	5.61	6.59
18	.1695	1-1/16	2-1/8	5.14	5.91
19	.1660	1-1/16	2-1/8	5.14	5.91
20	.1610	1-1/16	2-1/8	4.56	5.38
21	.1590	1-1/16	2-1/8	4.56	5.38
22	.1570	1-1/16	2-1/8	4.56	5.38
23	.1540	1	2-1/16	4.56	5.38
24	.1520	1	2-1/16	4.15	5.02
25	.1495	1	2-1/16	4.15	5.02
26	.1470	1	2-1/16	4.26	5.11
27	.1440	1	2-1/16	4.26	5.11
28	.1405	15/16	1-15/16	4.56	5.38
29	.1360	15/16	1-15/16	4.38	5.22
30	.1285	15/16	1-15/16	4.15	5.02
31	.1200	7/8	1-7/8	4.15	5.02
32	.1160	7/8	1-7/8	3.80	4.70
33	.1130	7/8	1-7/8	3.80	4.70
34	.1110	7/8	1-7/8	3.80	4.70
35	.1100	7/8	1-7/8	3.80	4.70
36	.1065	13/16	1-13/16	3.80	4.70
37	.1040	13/16	1-13/16	3.44	4.38
38	.1015	13/16	1-13/16	3.44	4.38
39	.0995	13/16	1-13/16	3.44	4.38
40	.0980	13/16	1-13/16	3.44	4.38
41	.0960	13/16	1-13/16	3.44	4.38
42	.0935	3/4	1-3/4	3.44	4.38
43	.0890	3/4	1-3/4	3.44	4.38
44	.0860	3/4	1-3/4	3.44	4.38
45	.0820	3/4	1-3/4	3.44	4.38
46	.0810	3/4	1-3/4	3.44	4.38
47	.0785	3/4	1-3/4	3.44	4.38
48	.0760	11/16	1-11/16	3.44	4.38
49	.0730	11/16	1-11/16	—	4.38
50	.0700	11/16	1-11/16	3.33	4.28
51	.0670	11/16	1-11/16	3.33	4.28
52	.0635	11/16	1-11/16	3.44	4.38

Letter Sizes

Size	Dec. Equiv.	Flute Length	Overall Length	Pkg. Qty.	Price Each H.S. 600PF	Price Each TiN Coated 600PFT
A	.2340	1-5/16	2-7/16	12	—	9.66
B	.2380	1-3/8	2-1/2	12	7.89	9.66
C	.2420	1-3/8	2-1/2	12	8.54	10.25
D	.2460	1-3/8	2-1/2	12	9.24	10.88
E	.2500	1-3/8	2-1/2	12	7.69	10.25
F	.2570	1-7/16	2-5/8	12	8.89	12.56
G	.2610	1-7/16	2-5/8	12	9.24	12.88
H	.2660	1-1/2	2-11/16	12	9.24	12.88
I	.2720	1-1/2	2-11/16	6	8.89	12.56
J	.2770	1-1/2	2-11/16	6	10.16	13.70
K	.2810	1-1/2	2-11/16	6	10.16	13.70
L	.2900	1-9/16	2-3/4	6	11.50	14.91
M	.2950	1-9/16	2-3/4	6	10.80	14.28
N	.3020	1-5/8	2-13/16	6	12.49	15.80
O	.3160	1-11/16	2-15/16	6	12.49	15.80
P	.3230	1-11/16	2-15/16	6	—	15.80
Q	.3320	1-11/16	2-15/16	6	13.09	16.34
R	.3390	1-11/16	2-15/16	6	14.43	17.55
S	.3480	1-3/4	3-1/16	6	15.77	18.75
T	.3580	1-3/4	3-1/16	6	17.05	19.95
U	.3680	1-13/16	3-1/8	6	17.05	19.95
V	.3770	1-7/8	3-1/4	6	18.47	23.10
W	.3860	1-7/8	3-1/4	6	18.47	23.10
X	.3970	1-15/16	3-5/16	6	20.80	27.00
Y	.4040	1-15/16	3-5/16	6	21.44	27.58
Z	.4130	2	3-3/8	6	21.44	—

Left Hand Screw Machine Length Drills



High Speed Steel

List No. **600LH** – 118° Point

For use in left hand spindle rotation on screw machines and drill heads.
Can use as screw extractor for drilling out broken studs or fasteners.
The shorter, rigid drills minimize deflection when heavy feed rates are used.

Drill Size	Shank Diameter
Up to 1" inclusive	Same as Drill Diameter
Over 1 to 1-1/4 inclusive	1"
Over 1-1/4 to 1-1/2 inclusive	1-1/4
Over 1-1/2 to 2-1/2 inclusive	1-1/2

Fractional Sizes

Size	Decimal Equivalent	Flute Length	Overall Length	Pkg. Qty.	Price Each
1/32	.0312	1/8	1	12	6.50
3/64	.0469	1/2	1-3/8	12	3.15
1/16	.0625	5/8	1-5/8	12	2.88
5/64	.0781	11/16	1-11/16	12	2.93
3/32	.0938	3/4	1-3/4	12	2.94
7/64	.1094	13/16	1-13/16	12	3.00
1/8	.1250	7/8	1-7/8	12	3.06
9/64	.1406	15/16	1-15/16	12	3.17
5/32	.1562	1	2-1/16	12	3.42
11/64	.1719	1-1/16	2-1/8	12	3.64
3/16	.1875	1-1/8	2-3/16	12	3.70
13/64	.2031	1-3/16	2-1/4	12	4.67
7/32	.2188	1-1/4	2-3/8	12	4.80
15/64	.2344	1-5/16	2-7/16	12	5.32
1/4	.2500	1-3/8	2-1/2	12	5.38
17/64	.2656	1-7/16	2-5/8	12	6.69
9/32	.2812	1-1/2	2-11/16	6	6.79
19/64	.2969	1-9/16	2-3/4	6	7.42
5/16	.3125	1-5/8	2-13/16	6	7.47
21/64	.3281	1-11/16	2-15/16	6	8.88
11/32	.3438	1-11/16	3	6	10.33
23/64	.3594	1-3/4	3-1/16	6	12.11
3/8	.3750	1-13/16	3-1/8	6	12.58
25/64	.3906	1-7/8	3-1/4	6	14.23
13/32	.4062	1-15/16	3-5/16	6	14.51
27/64	.4219	2	3-3/8	6	16.07
7/16	.4375	2-1/16	3-7/16	6	16.29
29/64	.4531	2-1/8	3-9/16	6	17.77
15/32	.4688	2-1/8	3-5/8	6	19.51
31/64	.4844	2-3/16	3-11/16	6	20.04
1/2	.5000	2-1/4	3-3/4	6	20.04
33/64	.5156	2-3/8	3-7/8	1	39.16
17/32	.5312	2-3/8	3-7/8	1	39.16
35/64	.5469	2-1/2	4	1	39.16
9/16	.5625	2-1/2	4	1	39.16
37/64	.5781	2-5/8	4-1/8	1	46.76
19/32	.5938	2-5/8	4-1/8	1	46.76
39/64	.6094	2-3/4	4-1/4	1	49.18
5/8	.6250	2-3/4	4-1/4	1	49.18
41/64	.6406	2-7/8	4-1/2	1	49.62
21/32	.6562	2-7/8	4-1/2	1	49.62
43/64	.6719	2-7/8	4-5/8	1	57.64
11/16	.6875	2-7/8	4-5/8	1	57.64
45/64	.7031	3	4-3/4	1	64.65
23/32	.7188	3	4-3/4	1	69.20
47/64	.7344	3-1/8	5	1	69.20
3/4	.7500	3-1/8	5	1	83.60
49/64	.7656	3-1/4	5-1/8	1	83.60
25/32	.7812	3-1/4	5-1/8	1	86.80
51/64	.7969	3-3/8	5-1/4	1	86.80
13/16	.8125	3-3/8	5-1/4	1	89.88
53/64	.8281	3-1/2	5-3/8	1	89.88
27/32	.8438	3-1/2	5-3/8	1	91.70
55/64	.8594	3-1/2	5-1/2	1	91.70
7/8	.8750	3-1/2	5-1/2	1	94.06
57/64	.8906	3-5/8	5-5/8	1	94.06
29/32	.9062	3-5/8	5-5/8	1	95.26
59/64	.9219	3-3/4	5-3/4	1	95.26
15/16	.9375	3-3/4	5-3/4	1	101.42
61/64	.9531	3-7/8	5-7/8	1	101.42
31/32	.9688	3-7/8	5-7/8	1	103.84
63/64	.9844	4	6	1	103.84
1	1.0000	4	6	1	100.98
1-1/64	1.0156	4	6-1/4	1	138.60
1-1/32	1.0312	4	6-1/4	1	125.40
1-3/64	1.0469	4	6-1/4	1	141.90
1-1/16	1.0625	4	6-1/4	1	133.32
1-5/64	1.0781	4	6-3/8	1	155.10
1-3/32	1.0938	4	6-3/8	1	155.10
1-7/64	1.1094	4	6-3/8	1	163.02
1-1/8	1.1250	4	6-3/8	1	145.10
1-9/64	1.1406	4-1/4	6-5/8	1	165.00
1-5/32	1.1562	4-1/4	6-5/8	1	151.80
1-11/64	1.1719	4-1/4	6-5/8	1	182.82
1-3/16	1.1875	4-1/4	6-5/8	1	147.84
1-13/64	1.2031	4-3/8	6-3/4	1	191.40
1-7/32	1.2188	4-3/8	6-3/4	1	198.10
1-15/64	1.2344	4-3/8	6-3/4	1	198.10
1-1/4	1.2500	4-3/8	6-3/4	1	189.10
1-17/64	1.2656	4-3/8	6-3/4	1	217.80
1-9/32	1.2812	4-3/8	7	1	211.79
1-19/64	1.2969	4-3/8	7	1	222.39
1-5/16	1.3125	4-3/8	7	1	222.39
1-21/64	1.3281	4-3/8	7	1	231.00
1-11/32	1.3438	4-1/2	7-1/8	1	222.39
1-23/64	1.3594	4-1/2	7-1/8	1	231.00
1-3/8	1.3750	4-1/2	7-1/8	1	231.00
1-25/64	1.3906	4-1/2	7-1/8	1	250.80
1-13/32	1.4062	4-3/4	7-3/8	1	250.80
1-27/64	1.4219	4-3/4	7-3/8	1	262.02
1-7/16	1.4375	4-3/4	7-3/8	1	254.10
1-29/64	1.4531	4-3/4	7-3/8	1	271.26
1-15/32	1.4688	4-7/8	7-1/2	1	273.90
1-31/64	1.4844	4-7/8	7-1/2	1	280.50
1-1/2	1.5000	4-7/8	7-1/2	1	269.94
1-33/64	1.5156	4-7/8	7-1/2	1	297.00
1-17/32	1.5312	4-7/8	7-3/4	1	315.48
1-35/64	1.5469	4-7/8	7-3/4	1	258.06
1-9/16	1.5625	4-7/8	7-3/4	1	307.56
1-37/64	1.5781	4-7/8	7-3/4	1	325.25
1-19/32	1.5938	4-7/8	7-3/4	1	331.32
1-39/64	1.6094	4-7/8	7-3/4	1	335.94
1-5/8	1.6250	4-7/8	7-3/4	1	320.10
1-41/64	1.6406	4-7/8	7-3/4	1	341.22
1-21/32	1.6562	5-1/8	8	1	347.01
1-43/64	1.6719	5-1/8	8	1	363.00
1-11/16	1.6875	5-1/8	8	1	346.50
1-45/64	1.7031	5-1/8	8	1	379.50
1-23/32	1.7188	5-1/8	8	1	379.50
1-47/64	1.7344	5-1/8	8	1	392.70
1-3/4	1.7500	5-1/8	8	1	370.92
1-49/64	1.7656	5-1/8	8	1	395.34
1-25/32	1.7812	5-3/8	8-1/4	1	395.34
1-51/64	1.7969	5-3/8	8-1/4	1	402.60
1-13/16	1.8125	5-3/8	8-1/4	1	397.32
1-53/64	1.8281	5-3/8	8-1/4	1	435.60
1-27/32	1.8438	5-3/8	8-1/4	1	435.60
1-55/64	1.8594	5-3/8	8-1/4	1	448.80

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Left Hand Screw Machine Length Drills



High Speed Steel

List No. **600LH** – 118° Point

For use in left hand spindle rotation on screw machines and drill heads.
Can use as screw extractor for drilling out broken studs or fasteners.
The shorter, rigid drills minimize deflection when heavy feed rates are used.

Drill Size	Shank Diameter
Up to 1" inclusive	Same as Drill Diameter
Over 1 to 1-1/4 inclusive	1"
Over 1-1/4 to 1-1/2 inclusive	1-1/4
Over 1-1/2 to 2-1/2 inclusive	1-1/2

Fractional Sizes *Continued*

Size	Decimal Equivalent	Flute Length	Overall Length	Pkg. Qty.	Price Each
1-7/8	1.8750	5-3/8	8-1/4	1	425.04
1-57/64	1.8906	5-3/8	8-1/4	1	446.81
1-29/32	1.9062	5-5/8	8-1/2	1	446.81
1-59/64	1.9219	5-5/8	8-1/2	1	447.81
1-15/16	1.9375	5-5/8	8-1/2	1	436.32
1-61/64	1.9531	5-5/8	8-1/2	1	449.53
1-31/32	1.9688	5-5/8	8-1/2	1	445.90
1-63/64	1.9844	5-5/8	8-1/2	1	451.36
2	2.0000	5-5/8	8-1/2	1	451.36

Letter Sizes

Size	Decimal Equivalent	Flute Length	Overall Length	Pkg. Qty.	Price Each
A	.2340	1-5/16	2-7/16	12	7.01
B	.2380	1-3/8	2-1/2	12	7.01
C	.2420	1-3/8	2-1/2	12	7.01
D	.2460	1-3/8	2-1/2	12	7.01
E	.2500	1-3/8	2-1/2	12	5.38
F	.2570	1-7/16	2-5/8	12	7.89
G	.2610	1-7/16	2-5/8	12	8.59
H	.2660	1-1/2	2-11/16	12	8.66
I	.2720	1-1/2	2-11/16	6	8.66
J	.2770	1-1/2	2-11/16	6	9.24
K	.2810	1-1/2	2-11/16	6	9.71
L	.2900	1-9/16	2-3/4	6	9.71
M	.2950	1-9/16	2-3/4	6	10.56
N	.3020	1-5/8	2-13/16	6	10.56
O	.3160	1-11/16	2-15/16	6	10.56
P	.3230	1-11/16	2-15/16	6	12.17
Q	.3320	1-11/16	3	6	12.17
R	.3390	1-11/16	3	6	12.17
S	.3480	1-3/4	3-1/16	6	13.99
T	.3580	1-3/4	3-1/16	6	16.48
U	.3680	1-13/16	3-1/8	6	16.48
V	.3770	1-7/8	3-1/4	6	18.37
W	.3860	1-7/8	3-1/4	6	18.37
X	.3970	1-15/16	3-5/16	6	21.53
Y	.4040	1-15/16	3-5/16	6	24.96
Z	.4130	2	3-3/8	6	24.96

Wire Gauge Sizes

Size	Decimal Equivalent	Flute Length	Overall Length	Pkg. Qty.	Price Each
1	.2280	1-5/16	2-7/16	12	5.93
2	.2210	1-5/16	2-7/16	12	5.93
3	.2130	1-1/4	2-3/8	12	5.62
4	.2090	1-1/4	2-3/8	12	5.62
5	.2055	1-1/4	2-3/8	12	5.62
6	.2040	1-1/4	2-3/8	12	5.62
7	.2010	1-3/16	2-1/4	12	4.80
8	.1990	1-3/16	2-1/4	12	4.83
9	.1960	1-3/16	2-1/4	12	4.83
10	.1935	1-3/16	2-1/4	12	4.83
11	.1910	1-3/16	2-1/4	12	4.67
12	.1890	1-3/16	2-1/4	12	4.67
13	.1850	1-1/8	2-3/16	12	4.42
14	.1820	1-1/8	2-3/16	12	4.42
15	.1800	1-1/8	2-3/16	12	4.42
16	.1770	1-1/8	2-3/16	12	4.42
17	.1730	1-1/8	2-3/16	12	4.42
18	.1695	1-1/16	2-1/8	12	3.95
19	.1660	1-1/16	2-1/8	12	3.95
20	.1610	1-1/16	2-1/8	12	3.95
21	.1590	1-1/16	2-1/8	12	3.76
22	.1570	1-1/16	2-1/8	12	3.76
23	.1540	1	2-1/16	12	3.76
24	.1520	1	2-1/16	12	3.76
25	.1495	1	2-1/16	12	3.48
26	.1470	1	2-1/16	12	3.48
27	.1440	1	2-1/16	12	3.48
28	.1405	15/16	1-15/16	12	3.35
29	.1360	15/16	1-15/16	12	3.35
30	.1285	15/16	1-15/16	12	3.35
31	.1200	7/8	1-7/8	12	3.35
32	.1160	7/8	1-7/8	12	3.35
33	.1130	7/8	1-7/8	12	3.35
34	.1110	7/8	1-7/8	12	3.35
35	.1100	7/8	1-7/8	12	3.35
36	.1065	13/16	1-13/16	12	3.35
37	.1040	13/16	1-13/16	12	3.35
38	.1015	13/16	1-13/16	12	3.35
39	.0995	13/16	1-13/16	12	3.35
40	.0980	13/16	1-13/16	12	3.35
41	.0960	13/16	1-13/16	12	3.35
42	.0935	3/4	1-3/4	12	3.35
43	.0890	3/4	1-3/4	12	3.35
44	.0860	3/4	1-3/4	12	3.35
45	.0820	3/4	1-3/4	12	3.35
46	.0810	3/4	1-3/4	12	3.35
47	.0785	3/4	1-3/4	12	3.35
48	.0760	11/16	1-11/16	12	3.35
49	.0730	11/16	1-11/16	12	3.35
50	.0700	11/16	1-11/16	12	3.35
51	.0670	11/16	1-11/16	12	3.53
52	.0635	11/16	1-11/16	12	3.53
53	.0595	5/8	1-5/8	12	3.53
54	.0550	5/8	1-5/8	12	3.53
55	.0520	5/8	1-5/8	12	3.53
56	.0465	1/2	1-3/8	12	3.53
57	.0430	1/2	1-3/8	12	3.53
58	.0420	1/2	1-3/8	12	3.53
59	.0410	1/2	1-3/8	12	3.53
60	.0400	1/2	1-3/8	12	3.53

Taper Length Drills

High Speed, Cobalt & TiAlN Coated

Used in production drilling, these drills have the same flute length as taper shank drills.

List No. **400** – High Speed Steel, 118° Point.
List No. **410C** – Super Cobalt, HD, 135° Split Point
List No. **410CTA** – TiAlN Coated Cobalt, HD, 135° Split Point



MADE IN USA

MICHIGAN DRILL & CUTTING TOOLS

Fractional Sizes

Cobalt sizes under 1/16" furnished with 135° point, NOT Split
Cobalt sizes over 1/2" furnished with notched point.

Size	Dec. Equiv.	Flute Length	Overall Length	Pkg. Qty.	Price Each H.S. 400	Price Each Cobalt 410C	Price Each TiAlN 410CTA
1/64	.0156	5/16	1-1/2	12	6.26	16.11	—
1/32	.0312	3/4	2	12	4.57	12.42	—
3/64	.0469	1-1/8	2-1/4	12	3.50	7.16	—
1/16	.0625	1-3/4	3	12	3.47	6.29	10.24
5/64	.0781	2	3-3/4	12	3.56	8.15	12.07
3/32	.0938	2-1/4	4-1/4	12	3.80	8.53	15.46
7/64	.1094	2-1/2	4-5/8	12	3.97	10.95	17.88
1/8	.1250	2-3/4	5-1/8	12	4.16	10.83	17.76
9/64	.1406	3	5-3/8	12	4.89	13.29	20.22
5/32	.1562	3	5-3/8	12	4.89	14.40	21.33
11/64	.1719	3-3/8	5-3/4	12	5.35	14.40	21.33
3/16	.1875	3-3/8	5-3/4	12	5.35	14.40	21.33
13/64	.2031	3-5/8	6	12	5.76	16.65	23.56
7/32	.2188	3-5/8	6	12	6.37	16.65	28.05
15/64	.2344	3-3/4	6-1/8	12	6.49	17.37	29.13
1/4	.2500	3-3/4	6-1/8	12	5.71	16.47	27.87
17/64	.2656	3-7/8	6-1/4	12	7.04	21.51	37.95
9/32	.2812	3-7/8	6-1/4	6	6.98	20.34	36.78
19/64	.2969	4	6-3/8	6	7.33	21.51	37.59
5/16	.3125	4	6-3/8	6	7.39	20.34	36.78
21/64	.3281	4-1/8	6-1/2	6	8.18	24.75	41.19
11/32	.3438	4-1/8	6-1/2	6	8.18	23.85	40.29
23/64	.3594	4-1/4	6-3/4	6	9.62	29.25	45.69
3/8	.3750	4-1/4	6-3/4	6	9.62	27.00	43.44
25/64	.3906	4-3/8	7	6	10.05	30.33	54.52
13/32	.4062	4-3/8	7	6	10.05	28.30	52.49
27/64	.4219	4-5/8	7-1/4	6	10.84	32.85	57.04
7/16	.4375	4-5/8	7-1/4	6	10.95	30.70	54.89
29/64	.4531	4-3/4	7-1/2	6	12.26	37.26	61.45
15/32	.4688	4-3/4	7-1/2	6	12.90	37.35	61.45
31/64	.4844	4-3/4	7-3/4	6	14.26	41.18	65.34
1/2	.5000	4-3/4	7-3/4	6	14.77	38.49	62.68
33/64	.5156	4-3/4	8	1	19.25	65.55	83.37
17/32	.5312	4-3/4	8	1	19.06	63.22	81.04
35/64	.5469	4-7/8	8-1/4	1	20.24	70.84	—
9/16	.5625	4-7/8	8-1/4	1	20.04	68.30	97.10
37/64	.5781	4-7/8	8-3/4	1	23.65	82.33	—
19/32	.5938	4-7/8	8-3/4	1	23.65	79.85	—
39/64	.6094	4-7/8	8-3/4	1	24.48	82.33	111.13
5/8	.6250	4-7/8	8-3/4	1	24.24	79.85	108.65
41/64	.6406	5-1/8	9	1	29.50	93.41	—
21/32	.6562	5-1/8	9	1	28.16	96.30	125.82
43/64	.6719	5-3/8	9-1/4	1	34.65	106.76	—
11/16	.6875	5-3/8	9-1/4	1	33.51	107.10	—
45/64	.7031	5-5/8	9-1/2	1	36.48	117.35	—
23/32	.7188	5-5/8	9-1/2	1	34.83	121.50	151.02
47/64	.7344	5-7/8	9-3/4	1	39.24	123.54	153.06
3/4	.7500	5-7/8	9-3/4	1	36.74	128.70	158.22
49/64	.7656	6	9-7/8	1	43.08	134.10	—
25/32	.7812	6	9-7/8	1	41.14	140.27	—
51/64	.7969	6-1/8	10	1	46.34	—	—
13/16	.8125	6-1/8	10	1	43.82	142.20	—
53/64	.8281	6-1/8	10	1	50.13	153.45	—
27/32	.8438	6-1/8	10	1	46.56	155.72	—
55/64	.8594	6-1/8	10	1	52.65	158.28	—
7/8	.8750	6-1/8	10	1	48.92	158.28	—
57/64	.8906	6-1/8	10	1	54.87	162.00	—
29/32	.9062	6-1/8	10	1	50.96	171.24	—
59/64	.9219	6-1/8	10-3/4	1	59.70	179.10	
15/16	.9375	6-1/8	10-3/4	1	55.45	179.10	
61/64	.9531	6-3/8	11	1	65.86	198.00	
31/32	.9688	6-3/8	11	1	61.17	198.00	
63/64	.9844	6-3/8	11	1	68.66	201.60	
1	1.0000	6-3/8	11	1	63.76	201.60	
1-1/64	1.0156	6-1/2	11-1/8	1	90.49	—	
1-1/32	1.0312	6-1/2	11-1/8	1	83.27	—	
1-3/64	1.0469	6-5/8	11-1/4	1	93.59	—	
1-1/16	1.0625	6-5/8	11-1/4	1	89.40	—	
1-5/64	1.0781	6-7/8	11-1/2	1	100.41	—	
1-3/32	1.0938	6-7/8	11-1/2	1	92.35	—	
1-7/64	1.1094	7-1/8	11-3/4	1	104.21	—	
1-1/8	1.1250	7-1/8	11-3/4	1	95.82	—	
1-9/64	1.1406	7-1/4	11-7/8	1	104.89	—	
1-5/32	1.1562	7-1/4	11-7/8	1	104.89	—	
1-11/64	1.1719	7-3/8	12	1	112.93	—	
1-3/16	1.1875	7-3/8	12	1	112.39	—	
1-13/64	1.2031	7-1/2	12-1/8	1	117.38	—	
1-7/32	1.2188	7-1/2	12-1/8	1	117.38	—	
1-15/64	1.2344	7-7/8	12-1/2	1	121.95	—	
1-1/4	1.2500	7-7/8	12-1/2	1	121.95	—	
1-17/64	1.2656	8-1/2	14-1/8	1	148.50	—	
1-9/32	1.2812	8-1/2	14-1/8	1	139.10	—	
1-19/64	1.2969	8-5/8	14-1/4	1	155.00	—	
1-5/16	1.3125	8-5/8	14-1/4	1	144.21	—	
1-21/64	1.3281	8-3/4	14-3/8	1	161.70	—	
1-11/32	1.3438	8-3/4	14-3/8	1	149.62	—	
1-23/64	1.3594	8-7/8	14-1/2	1	165.00	—	
1-3/8	1.3750	8-7/8	14-1/2	1	155.26	—	
1-25/64	1.3906	9	14-5/8	1	175.56	—	
1-13/32	1.4062	9	14-5/8	1	164.02	—	
1-27/64	1.4219	9-1/8	14-3/4	1	181.50	—	
1-7/16	1.4375	9-1/8	14-3/4	1	169.09	410.00	
1-29/64	1.4531	9-1/4	14-7/8	1	197.34	—	
1-15/32	1.4688	9-1/4	14-7/8	1	183.55	—	
1-1/2	1.5000	9-3/8	15	1	189.57	—	
1-35/64	1.5469	9-5/8	16-5/8	1	229.68	—	
1-9/16	1.5625	9-5/8	15-1/4	1	212.32	—	
1-19/32	1.5938	9-7/8	15-5/8	1	254.10	—	
1-5/8	1.6250	9-7/8	15-5/8	1	239.94	—	
1-11/16	1.6875	10-1/8	16	1	293.70	—	
1-23/32	1.7188	10-1/8	16-1/4	1	300.30	—	
1-47/64	1.7344	10-1/8	16-1/4	1	320.00	—	
1-3/4	1.7500	10-1/2	16-1/4	1	288.86	—	
1-49/64	1.7656	10-1/2	16-1/4	1	330.00	—	
1-25/32	1.7813	10-1/2	16-1/4	1	343.20	—	
1-13/16	1.8125	10-1/2	16-1/4	1	356.40	—	
1-55/64	1.8594	10-3/8	16-1/4	1	372.90	—	
1-7/8	1.8700	10-5/8	16-1/4	1	393.03	—	
1-59/64	1.9219	10-3/8	16-5/8	1	440.00	—	
1-15/16	1.9375	10-3/4	16-5/8	1	409.07	—	
1-31/32	1.9688	10-3/8	17-1/4	1	422.40	—	
1-63/64	1.9844	10-3/8	17-1/4	1	442.20	—	
2	2.0000	10-3/4	17-1/4	1	446.95	—	
2-1/8	2.1250	10-1/4	17-3/8	1	475.20	—	
2-9/64	2.1406	10-1/4	17-3/8	1	488.40	—	
2-1/4	2.2500	10-1/8	17-3/8	1	495.00	—	

Sizes with decimal equivalent smaller than .0625 are not split point.

Taper Length Drills

High Speed, Cobalt & TiAlN Coated



Used in production drilling, these drills have the same flute length as Taper Shank drills.

List No. **400** – High Speed Steel, 118° Point.
List No. **410C** – Super Cobalt, HD, 135° Split Point
List No. **410CTA** – TiAlN Coated Cobalt, HD, 135° Split Point

MADE IN USA

MICHIGAN DRILL & CUTTING TOOLS

Wire Gauge Sizes

Package Quantity: 12 drills

Size	Dec. Equiv.	Flute Length	Overall Length	Price Each H.S. 400	Price Each Cobalt 410C	Price Each TiAlN 410CTA
1	.2280	3-3/4	6-1/8	9.17	21.38	30.84
2	.2210	3-3/4	6-1/8	9.17	21.38	30.84
3	.2130	3-5/8	6	9.17	21.38	30.84
4	.2090	3-5/8	6	9.17	21.38	30.84
5	.2055	3-5/8	6	9.17	21.38	30.84
6	.2040	3-5/8	6	9.17	21.38	30.84
7	.2010	3-5/8	6	8.71	19.98	29.20
8	.1990	3-5/8	6	8.71	19.62	28.78
9	.1960	3-5/8	6	8.71	19.62	28.78
10	.1935	3-5/8	6	8.71	19.62	28.78
11	.1910	3-5/8	6	8.71	19.62	28.78
12	.1890	3-5/8	6	8.71	—	25.90
13	.1850	3-3/8	5-3/4	8.25	19.62	25.90
14	.1820	3-3/8	5-3/4	8.25	19.62	25.90
15	.1800	3-3/8	5-3/4	8.25	19.62	25.90
16	.1770	3-3/8	5-3/4	8.25	18.36	24.43
17	.1730	3-3/8	5-3/4	8.25	18.36	24.43
18	.1695	3-3/8	5-3/4	8.25	18.36	24.43
19	.1660	3-3/8	5-3/4	8.25	18.36	24.43
20	.1610	3-3/8	5-3/4	8.25	18.36	24.43
21	.1590	3-3/8	5-3/4	8.25	18.36	24.43
22	.1570	3-3/8	5-3/4	8.25	18.36	24.43
23	.1540	3	5-3/8	8.25	18.36	24.43
24	.1520	3	5-3/8	8.25	18.36	24.43
25	.1495	3	5-3/8	7.82	18.36	24.43
26	.1470	3	5-3/8	7.82	18.36	24.43
27	.1440	3	5-3/8	7.82	18.36	24.43
28	.1405	3	5-3/8	7.82	17.55	23.48
29	.1360	3	5-3/8	7.82	17.55	23.48
30	.1285	3	5-3/8	7.89	17.55	23.48
31	.1200	2-3/4	5-1/8	7.89	17.55	23.48
32	.1160	2-3/4	5-1/8	7.89	17.55	23.48
33	.1130	2-3/4	5-1/8	7.89	17.55	23.48
34	.1110	2-3/4	5-1/8	7.89	17.55	23.48
35	.1100	2-3/4	5-1/8	7.89	17.55	23.48
36	.1065	2-1/2	4-5/8	6.34	16.07	21.75
37	.1040	2-1/2	4-5/8	6.34	16.07	21.75
38	.1015	2-1/2	4-5/8	6.34	16.07	21.75
39	.0995	2-1/2	4-5/8	6.34	16.07	21.75
40	.0980	2-1/2	4-5/8	6.34	15.03	19.31
41	.0960	2-1/2	4-5/8	6.34	15.03	19.31
42	.0935	2-1/4	4-1/4	4.95	15.03	19.31
43	.0890	2-1/4	4-1/4	4.95	15.03	19.31
44	.0860	2-1/4	4-1/4	4.95	15.03	19.31
45	.0820	2-1/4	4-1/4	4.95	15.03	19.31
46	.0810	2-1/4	4-1/4	4.95	15.03	19.31
47	.0785	2-1/4	4-1/4	4.95	15.03	19.31
48	.0760	2	3-3/4	5.40	13.35	18.10
49	.0730	2	3-3/4	5.40	13.35	18.10
50	.0700	2	3-3/4	5.40	13.35	18.10
51	.0670	2	3-3/4	5.40	13.35	18.10
52	.0635	2	3-3/4	5.40	13.35	18.10
53	.0595	1-3/4	3	5.40	13.35	18.10
54	.0550	1-3/4	3	5.40	13.35	18.10
55	.0520	1-3/4	3	5.40	13.35	18.10
56	.0465	1-1/8	2-1/4	5.40	13.35	18.10
57	.0430	1-1/8	2-1/4	5.40	13.35	18.10
58	.0420	1-1/8	2-1/4	5.40	13.35	18.10
59	.0410	1-1/8	2-1/4	5.40	13.35	18.10
60	.0400	1-1/8	2-1/4	5.40	—	18.10
61	.0390	1-1/8	2-1/4	5.40	—	—
62	.0380	3/4	2	5.40	—	—
63	.0370	3/4	2	5.40	—	—
64	.0360	3/4	2	5.40	—	—
65	.0350	3/4	2	5.40	—	—
66	.0330	3/4	2	5.40	—	—
67	.0320	3/4	2	5.40	—	—
68	.0310	3/4	2	5.40	—	—
69	.0292	3/4	2	5.40	—	—
70	.0280	3/4	2	5.40	—	—
71	.0260	3/4	2	5.40	—	—
72	.0250	5/16	1-1/2	5.40	—	—
73	.0240	5/16	1-1/2	5.40	—	—
74	.0225	5/16	1-1/2	5.40	—	—
75	.0210	5/16	1-1/2	5.40	—	—
76	.0200	5/16	1-1/2	5.61	—	—
77	.0180	5/16	1-1/2	5.61	—	—
78	.0160	5/16	1-1/2	5.61	15.48	—
79	.0145	5/16	1-1/2	5.61	15.48	—
80	.0135	5/16	1-1/2	5.61	15.48	—

Sizes with decimal equivalent smaller than .0625 are not split point.

Sets

Sizes	Description	Pcs.	Set No.	Price
1/16 – 1/2 by 64ths	Fractional H.S.	29	**407F**	252.20
1/16 – 1/2 by 64ths	Fractional Cobalt	29	**407CF**	661.39
33/64 – 3/4 by 64ths	Fractional H.S.	16	**407B**	546.92
49/64 – 1 by 64ths	Fractional H.S.	16	**407C**	978.07
A – Z	Letter H.S.	26	**407L**	361.90
1 – 60	Wire Gauge H.S.	60	**407W**	461.82

All sets are supplied in Huot metal index



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Taper Length Drills

High Speed, Cobalt & TiAlN Coated

Used in production drilling, these drills have the same flute length as Taper Shank drills.

List No. **400** – High Speed Steel, 118° Point.
List No. **410C** – Super Cobalt, HD, 135° Split Point
List No. **410CTA** – TiAlN Coated Cobalt, HD, 135° Split Point



MADE IN USA — MICHIGAN DRILL & CUTTING TOOLS

Letter Sizes

Size	Dec. Equiv.	Flute Length	Overall Length	Price Each H.S. 400	Price Each Cobalt 410C	Price Each TiAlN Cobalt 410CTA
A	.2340	3-3/4	6-1/8	10.23	24.75	36.16
B	.2380	3-3/4	6-1/8	10.23	24.75	36.16
C	.2420	3-3/4	6-1/8	10.23	25.92	37.33
D	.2460	3-3/4	6-1/8	10.23	25.92	37.33
E	.2500	3-3/4	6-1/8	5.71	16.47	27.88
F	.2570	3-7/8	6-1/4	10.82	31.05	47.08
G	.2610	3-7/8	6-1/4	11.87	31.05	47.08
H	.2660	3-7/8	6-1/4	11.87	31.05	47.08
I	.2720	3-7/8	6-1/4	11.87	32.40	48.43
J	.2770	3-7/8	6-1/4	11.87	32.40	48.43
K	.2810	3-7/8	6-1/4	11.87	32.40	48.43
L	.2900	4	6-3/8	11.87	34.02	50.05
M	.2950	4	6-3/8	11.99	34.02	50.05

Size	Dec. Equiv.	Flute Length	Overall Length	Price Each H.S. 400	Price Each Cobalt 410C	Price Each TiAlN Cobalt 410CTA
N	.3020	4	6-3/8	11.99	34.74	50.77
O	.3160	4-1/8	6-1/2	11.99	34.74	50.77
P	.3230	4-1/8	6-1/2	11.99	35.91	51.94
Q	.3320	4-1/8	6-1/2	11.99	35.91	51.94
R	.3390	4-1/8	6-1/2	13.00	36.90	52.93
S	.3480	4-1/4	6-3/4	14.78	40.50	56.53
T	.3580	4-1/4	6-3/4	14.78	43.20	59.23
U	.3680	4-1/4	6-3/4	15.95	45.45	61.48
V	.3770	4-3/8	7	15.95	45.45	61.48
W	.3860	4-3/8	7	16.59	45.45	61.48
X	.3970	4-3/8	7	16.59	45.45	61.48
Y	.4040	4-3/8	7	17.75	49.50	71.05
Z	.4130	4-5/8	7-1/4	19.17	49.50	71.05

Metric Taper Length Drills



High Speed Steel

List No. **401** – General Purpose, 118° Point
Taper length drills have longer flute and overall length than Jobber length drills.

MADE IN USA — MICHIGAN DRILL & CUTTING TOOLS

Tanged sizes available. Please Inquire

Size	Dec. Equiv.	Flute Length	Overall Length	Pkg. Qty.	Price Each
1.00	.0394	1-1/8	2-1/4	12	4.86
1.05	.0413	1-1/8	2-1/4	12	6.75
1.10	.0433	1-1/8	2-1/4	12	6.75
1.15	.0453	1-1/8	2-1/4	12	6.75
1.20	.0472	1-3/4	3	12	5.58
1.25	.0492	1-3/4	3	12	5.58
1.30	.0512	1-3/4	3	12	5.58
1.35	.0531	1-3/4	3	12	6.75
1.40	.0551	1-3/4	3	12	5.58
1.45	.0571	1-3/4	3	12	7.65
1.50	.0591	1-3/4	3	12	5.58
1.55	.0610	1-3/4	3	12	7.65
1.60	.0630	2	3-3/4	12	6.75
1.65	.0650	2	3-3/4	12	7.65
1.70	.0669	2	3-3/4	12	6.75
1.75	.0689	2	3-3/4	12	7.65
1.80	.0709	2	3-3/4	12	6.75
1.85	.0728	2	3-3/4	12	7.65
1.90	.0748	2	3-3/4	12	6.75
1.95	.0768	2	3-3/4	12	7.65
2.00	.0787	2-1/4	4-1/4	12	7.11
2.05	.0807	2-1/4	4-1/4	12	9.00
2.10	.0827	2-1/4	4-1/4	12	7.65
2.15	.0846	2-1/4	4-1/4	12	8.55
2.20	.0866	2-1/4	4-1/4	12	7.65
2.25	.0886	2-1/4	4-1/4	12	9.00
2.30	.0906	2-1/4	4-1/4	12	7.65
2.35	.0925	2-1/4	4-1/4	12	10.62
2.40	.0945	2-1/2	4-5/8	12	9.81
2.45	.0965	2-1/2	4-5/8	12	10.62
2.50	.0984	2-1/2	4-5/8	12	9.81
2.60	.1024	2-1/2	4-5/8	12	10.80

Size	Dec. Equiv.	Flute Length	Overall Length	Pkg. Qty.	Price Each
2.70	.1063	2-1/2	4-5/8	12	10.80
2.80	.1102	2-3/4	5-1/8	12	10.80
2.90	.1142	2-3/4	5-1/8	12	10.80
3.00	.1181	2-3/4	5-1/8	12	9.09
3.10	.1220	2-3/4	5-1/8	12	10.08
3.20	.1260	3	5-3/8	12	11.21
3.30	.1299	3	5-3/8	12	11.21
3.40	.1339	3	5-3/8	12	12.06
3.50	.1378	3	5-3/8	12	11.21
3.60	.1417	3	5-3/8	12	12.51
3.70	.1457	3	5-3/8	12	12.51
3.80	.1496	3	5-3/8	12	12.51
3.90	.1535	3	5-3/8	12	13.05
4.00	.1575	3-3/8	5-3/4	12	11.21
4.10	.1614	3-3/8	5-3/4	12	13.05
4.20	.1654	3-3/8	5-3/4	12	11.21
4.30	.1693	3-3/8	5-3/4	12	13.05
4.40	.1732	3-3/8	5-3/4	12	13.05
4.50	.1772	3-3/8	5-3/4	12	11.21
4.60	.1811	3-3/8	5-3/4	12	12.60
4.70	.1850	3-3/8	5-3/4	12	16.20
4.80	.1890	3-5/8	6	12	14.04
4.90	.1929	3-5/8	6	12	14.04
5.00	.1969	3-5/8	6	12	13.05
5.10	.2008	3-5/8	6	12	16.20
5.20	.2047	3-5/8	6	12	16.20
5.25	.2067	3-5/8	6	12	16.20
5.30	.2087	3-5/8	6	12	16.20
5.40	.2126	3-5/8	6	12	16.20
5.50	.2165	3-5/8	6	12	13.05
5.60	.2205	3-3/4	6-1/8	12	14.81
5.70	.2244	3-3/4	6-1/8	12	14.81

Continued on Next Page ▶

Metric Taper Length Drills



High Speed Steel

List No. **401** – General Purpose, 118° Point *Continued*

Taper length drills have longer flute and overall length than Jobber length drills.

Size	Dec. Equiv.	Flute Length	Overall Length	Pkg. Qty.	Price Each
5.80	.2283	3-3/4	6-1/8	12	16.20
5.90	.2323	3-3/4	6-1/8	12	16.20
6.00	.2362	3-3/4	6-1/8	12	13.05
6.10	.2402	3-3/4	6-1/8	12	19.80
6.20	.2441	3-3/4	6-1/8	12	19.80
6.30	.2480	3-3/4	6-1/8	12	19.80
6.40	.2520	3-7/8	6-1/4	12	16.20
6.50	.2559	3-7/8	6-1/4	12	16.20
6.80	.2677	3-7/8	6-1/4	12	17.10
7.00	.2756	3-7/8	6-1/4	12	17.10
7.20	.2835	4	6-3/8	6	17.46
7.50	.2953	4	6-3/8	6	17.46
7.80	.3071	4	6-3/8	6	18.90
8.00	.3150	4-1/8	6-1/2	6	19.58
8.20	.3228	4-1/8	6-1/2	6	21.24
8.50	.3346	4-1/8	6-1/2	6	21.24
8.80	.3465	4-1/4	6-3/4	6	25.36
9.00	.3543	4-1/4	6-3/4	6	22.50
9.20	.3622	4-1/4	6-3/4	6	24.75
9.40	.3701	4-1/4	6-3/4	6	28.60
9.50	.3740	4-1/4	6-3/4	6	24.75
9.80	.3858	4-3/8	7	6	26.10
10.00	.3937	4-3/8	7	6	24.75
10.20	.4016	4-3/8	7	6	26.10
10.50	.4134	4-5/8	7-1/4	6	26.10
10.80	.4252	4-5/8	7-1/4	6	30.15
11.00	.4331	4-5/8	7-1/4	6	26.10
11.20	.4409	4-3/4	7-1/2	6	26.10
11.25	.4429	4-3/4	7-1/2	6	30.15
11.50	.4528	4-3/4	7-1/2	6	30.15
11.80	.4646	4-3/4	7-1/2	6	35.96
12.00	.4724	4-3/4	7-3/4	6	31.50
12.20	.4803	4-3/4	7-3/4	6	36.90
12.50	.4921	4-3/4	7-3/4	6	31.50
12.80	.5039	4-3/4	8	1	47.70
13.00	.5118	4-3/4	8	1	44.10
13.20	.5197	4-3/4	8	1	61.20
13.50	.5315	4-3/4	8	1	51.30
13.80	.5433	4-7/8	8-1/4	1	61.20
14.00	.5512	4-7/8	8-1/4	1	51.30
14.25	.5610	4-7/8	8-1/4	1	67.50
14.50	.5709	4-7/8	8-3/4	1	61.20
14.75	.5807	4-7/8	8-3/4	1	67.50
15.00	.5906	4-7/8	8-3/4	1	62.10
15.25	.6004	4-7/8	8-3/4	1	73.80
15.50	.6102	4-7/8	8-3/4	1	63.90
15.75	.6201	4-7/8	8-3/4	1	73.80
16.00	.6299	5-1/8	9	1	71.55

Size	Dec. Equiv.	Flute Length	Overall Length	Pkg. Qty.	Price Each
16.25	.6398	5-1/8	9	1	80.10
16.50	.6496	5-1/8	9	1	73.80
16.75	.6594	5-3/8	9-1/4	1	89.10
17.00	.6693	5-3/8	9-1/4	1	84.60
17.25	.6791	5-3/8	9-1/4	1	92.70
17.50	.6890	5-5/8	9-1/2	1	89.10
17.75	.6988	5-5/8	9-1/2	1	103.50
18.00	.7087	5-5/8	9-1/2	1	92.70
18.50	.7283	5-7/8	9-3/4	1	103.50
19.00	.7480	5-7/8	9-3/4	1	105.30
19.50	.7677	6	9-7/8	1	109.80
20.00	.7874	6-1/8	10	1	116.10
20.50	.8071	6-1/8	10	1	121.50
21.00	.8268	6-1/8	10	1	124.20
21.50	.8465	6-1/8	10	1	130.50
22.00	.8661	6-1/8	10	1	130.50
22.50	.8858	6-1/8	10	1	134.10
23.00	.9055	6-1/8	10	1	136.80
23.50	.9252	6-1/8	10-3/4	1	148.50
24.00	.9449	6-3/8	11	1	162.00
24.50	.9646	6-3/8	11	1	171.00
25.00	.9843	6-3/8	11	1	171.00
25.50	1.0039	6-1/2	11-1/8	1	199.80
26.00	1.0236	6-1/2	11-1/8	1	207.00
26.50	1.0433	6-5/8	11-1/4	1	216.00
27.00	1.0630	6-5/8	11-1/4	1	225.00
27.50	1.0827	6-7/8	11-1/2	1	234.00
28.00	1.1024	7-1/8	11-3/4	1	243.00
28.50	1.1220	7-1/8	11-3/4	1	247.50
29.00	1.1417	7-1/4	11-7/8	1	261.00
29.50	1.1614	7-3/8	12	1	269.10
30.00	1.1811	7-3/8	12	1	279.00
30.50	1.2008	7-1/2	12-1/8	1	288.00
31.00	1.2205	7-7/8	12-1/2	1	295.20
31.50	1.2402	7-7/8	12-1/2	1	324.00
32.00	1.2598	8-1/2	14-1/8	1	351.00
32.50	1.2795	8-1/2	14-1/8	1	360.00
33.00	1.2992	8-5/8	14-1/4	1	373.50
34.50	1.3583	8-7/8	14-1/2	1	399.60
35.00	1.3780	9	14-5/8	1	405.00
35.50	1.3976	9	14-5/8	1	414.00
36.00	1.4173	9-1/8	14-3/4	1	432.00
36.50	1.4370	9-1/8	14-3/4	1	445.50
37.00	1.4567	9-1/4	14-7/8	1	459.90
37.50	1.4764	9-3/8	15	1	490.50
38.00	1.4961	9-3/8	15	1	512.10

List No. **X401** – General Purpose, 118° Point

Size	Price Each	Size	Price Each	Size	Price Each	Size	Price Each	Size	Price Each
1.60	3.99	**2.45**	6.37	**3.30**	6.72	**4.40**	7.80	**5.40**	9.72
1.75	4.59	**2.50**	6.37	**3.40**	6.72	**4.50**	7.80	**5.50**	9.72
1.85	4.59	**2.60**	6.37	**3.50**	6.72	**4.60**	7.80	**5.60**	9.72
2.00	4.59	**2.70**	6.37	**3.60**	7.50	**4.70**	9.72	**6.00**	9.72
2.05	5.40	**2.80**	6.37	**3.70**	7.50	**4.80**	9.72	**7.00**	10.20
2.10	5.40	**2.90**	6.37	**4.00**	7.50	**4.90**	9.72	**7.75**	14.00
2.15	5.40	**3.00**	6.37	**4.10**	7.80	**5.00**	9.72	**7.90**	15.00
2.30	5.40	**3.10**	6.37	**4.20**	7.80	**5.10**	9.72	**9.40**	16.80
2.40	5.40	**3.20**	6.37	**4.30**	7.80	**5.20**	9.72	**9.60**	19.00

Dimensions and package quantities same as List No. 401

Tanged Taper Length Drills

We feature the only complete range of tanged Taper Length Drills

Automotive Long Series – High Speed Steel



List No. **450** – Oxide Finish, 118° Point

These long series drills are used in applications where extended drill length is needed to produce deeper holes. The tanged shanks are for use in positive drive split sleeve drill drivers.

Size	Dec. Equiv.	Flute Length	Overall Length	Package Quantity	Price Each
1/8	.1250	2-3/4	5-1/8	12	6.53
30	.1285	3	5-3/8	12	10.08
29	.1360	3	5-3/8	12	10.08
28	.1405	3	5-3/8	12	10.08
9/64	.1406	3	5-3/8	12	8.10
27	.1440	3	5-3/8	12	10.08
26	.1470	3	5-3/8	12	10.08
25	.1495	3	5-3/8	12	10.08
24	.1520	3	5-3/8	12	10.08
23	.1540	3	5-3/8	12	10.08
5/32	.1562	3	5-3/8	12	8.10
22	.1570	3-3/8	5-3/4	12	10.08
21	.1590	3-3/8	5-3/4	12	10.08
20	.1610	3-3/8	5-3/4	12	10.08
19	.1660	3-3/8	5-3/4	12	10.08
18	.1695	3-3/8	5-3/4	12	10.08
11/64	.1719	3-3/8	5-3/4	12	8.10
17	.1730	3-3/8	5-3/4	12	10.08
16	.1770	3-3/8	5-3/4	12	10.08
15	.1800	3-3/8	5-3/4	12	10.08
14	.1820	3-3/8	5-3/4	12	10.08
13	.1850	3-3/8	5-3/4	12	10.08
3/16	.1875	3-3/8	5-3/4	12	8.10
12	.1890	3-5/8	6	12	11.07
11	.1910	3-5/8	6	12	11.07
10	.1935	3-5/8	6	12	11.07
9	.1960	3-5/8	6	12	11.07
8	.1990	3-5/8	6	12	11.07
7	.2010	3-5/8	6	12	11.07
13/64	.2031	3-5/8	6	12	9.27
6	.2040	3-5/8	6	12	11.43
5	.2055	3-5/8	6	12	11.43
4	.2090	3-5/8	6	12	11.43
3	.2130	3-5/8	6	12	11.43
7/32	.2188	3-5/8	6	12	9.27
2	.2210	3-3/4	6-1/8	12	11.43
1	.2280	3-3/4	6-1/8	12	11.43
A	.2340	3-3/4	6-1/8	12	14.40
15/64	.2344	3-3/4	6-1/8	12	9.27
B	.2380	3-3/4	6-1/8	12	14.40
C	.2420	3-3/4	6-1/8	12	14.40
D	.2460	3-3/4	6-1/8	12	14.40
1/4	.2500	3-3/4	6-1/8	12	9.36
F	.2570	3-7/8	6-1/4	12	13.95
G	.2610	3-7/8	6-1/4	12	15.75
17/64	.2656	3-7/8	6-1/4	12	11.70
H	.2660	3-7/8	6-1/4	12	16.11
I	.2720	3-7/8	6-1/4	6	16.11
J	.2770	3-7/8	6-1/4	6	16.11

Size	Dec. Equiv.	Flute Length	Overall Length	Package Quantity	Price Each
K	.2810	3-7/8	6-1/4	6	16.11
9/32	.2812	3-7/8	6-1/4	6	11.43
L	.2900	4	6-3/8	6	17.24
M	.2950	4	6-3/8	6	17.24
19/64	.2969	4	6-3/8	6	11.03
N	.3020	4	6-3/8	6	17.55
5/16	.3125	4	6-3/8	6	11.25
O	.3160	4-1/8	6-1/2	6	17.55
P	.3230	4-1/8	6-1/2	6	17.55
21/64	.3281	4-1/8	6-1/2	6	14.04
Q	.3320	4-1/8	6-1/2	6	17.55
R	.3390	4-1/8	6-1/2	6	17.55
11/32	.3438	4-1/8	6-1/2	6	14.04
S	.3480	4-1/4	6-3/4	6	17.55
T	.3580	4-1/4	6-3/4	6	17.55
23/64	.3594	4-1/4	6-3/4	6	14.91
U	.3680	4-1/4	6-3/4	6	19.13
3/8	.3750	4-1/4	6-3/4	6	14.39
V	.3770	4-3/8	7	6	19.13
W	.3860	4-3/8	7	6	19.13
25/64	.3906	4-3/8	7	6	16.11
X	.3970	4-3/8	7	6	19.58
Y	.4040	4-3/8	7	6	19.58
13/32	.4062	4-3/8	7	6	15.57
Z	.4130	4-5/8	7-1/4	6	19.58
27/64	.4219	4-5/8	7-1/4	6	16.81
7/16	.4375	4-5/8	7-1/4	6	16.11
29/64	.4531	4-3/4	7-1/2	6	20.61
15/32	.4688	4-3/4	7-1/2	6	20.88
31/64	.4844	4-3/4	7-3/4	6	21.60
1/2	.5000	4-3/4	7-3/4	6	20.88
33/64	.5156	4-3/4	8	1	31.95
17/32	.5312	4-3/4	8	1	30.78
35/64	.5469	4-7/8	8-1/4	1	33.75
9/16	.5625	4-7/8	8-1/4	1	32.40
37/64	.5781	4-7/8	8-3/4	1	41.22
19/32	.5938	4-7/8	8-3/4	1	39.78
39/64	.6094	4-7/8	8-3/4	1	40.95
5/8	.6250	4-7/8	8-3/4	1	40.95
41/64	.6406	5-1/8	9	1	52.20
21/32	.6562	5-1/8	9	1	46.80
43/64	.6719	5-3/8	9-1/4	1	52.20
11/16	.6875	5-3/8	9-1/4	1	50.40
45/64	.7031	5-5/8	9-1/2	1	53.64
23/32	.7188	5-5/8	9-1/2	1	55.71
3/4	.7500	5-7/8	9-3/4	1	53.78
15/16	.9375	6-1/8	10-3/4	1	83.21
31/32	.9688	6-3/8	11	1	87.75

1MT & 2MT Split Sleeve Drill Drivers

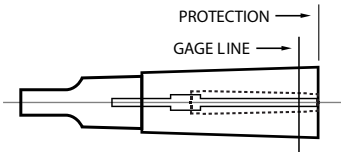
For Straight Shank Tools

List No. **SST1** – #1 Morse Taper

Sizes Available (Inside Diameter)	Price Each
1/16 – 3/8 by 64ths, 1 – 55 Wire Sizes, & A – U letter sizes	39.00

List No. **SST2** – #2 Morse Taper

Sizes Available (Inside Diameter)	Price Each
7/64 – 9/16 by 64ths, 1 – 42 Wire Sizes, & A – Z letter sizes	43.00



Tanged Taper Length Heavy Duty Drills

High Speed



Automotive Long Series – High Speed Steel

List No. **452** – Oxide Finish, Long Flute 118° Point

These drills are designed with a heavy duty web and are recommended for drilling steel forgings, tough alloy steels and other difficult to machine materials. The shanks are tanged and may be used in A.S.A. split sleeve drill drivers. The flute length is longer for deeper holes and more regrinds. Drill diameters over 1/2" have reduced shanks.

MADE IN USA

MICHIGAN DRILL & CUTTING TOOLS

Size	Decimal Equivalent	Overall Length	Flute Length	Shank Diameter	Sleeve Size	Package Quantity	Price Each
9/64	.1406	5-3/8	3-5/8	9/64	1	12	8.91
5/32	.1562	5-3/8	3-3/4	5/32	1	12	10.99
11/64	.1719	5-3/4	4-1/8	11/64	1	12	11.00
3/16	.1875	5-3/4	4-1/8	3/16	1	12	11.40
7/32	.2188	6	4-3/8	7/32	1	12	13.23
15/64	.2344	6-1/8	4-13/16	15/64	1	12	14.40
17/64	.2656	6-1/4	5	17/64	1	12	15.66
9/32	.2812	6-1/4	5	9/32	1	6	16.92
19/64	.2969	6-3/8	5-1/8	19/64	1	6	17.55
5/16	.3125	6-3/8	5-1/8	5/16	1	6	18.05
21/64	.3281	6-1/2	5-1/4	21/64	2	6	19.35
11/32	.3438	6-1/2	5-1/4	11/32	2	6	19.35
23/64	.3594	6-3/4	5-3/8	23/64	2	6	19.90
3/8	.3750	6-3/4	5-3/8	3/8	2	6	19.90
25/64	.3906	7	5-5/8	25/64	2	6	18.45
27/64	.4219	7-1/4	5-11/16	27/64	2	6	24.03
10.8mm	.4252	7-1/4	5-11/16	27/64	2	6	24.03
7/16	.4375	7-1/4	5-11/16	7/16	2	6	24.03
29/64	.4531	7-1/2	5-3/4	29/64	2	6	26.97
15/32	.4688	7-1/2	5-3/4	15/32	2	6	28.62
31/64	.4844	7-3/4	5-3/4	31/64	2	6	31.05
12.4mm	.4882	7-3/4	5-3/4	31/64	2	6	31.05
1/2	.5000	7-3/4	5-3/4	1/2	2	6	31.05
33/64	.5156	8	6	1/2	2	1	44.82
17/32	.5312	8	6	1/2	2	1	49.50
35/64	.5469	8-1/4	6-1/4	1/2	2	1	53.91
9/16	.5625	8-1/4	6-1/4	1/2	2	1	53.91
37/64	.5781	8-3/4	6-1/2	1/2	2	1	58.60
19/32	.5938	8-3/4	6-1/2	1/2	2	1	60.44
39/64	.6094	8-3/4	6-1/2	1/2	2	1	62.10
5/8	.6250	8-3/4	6-1/2	1/2	2	1	70.02
41/64	.6406	9	6-3/4	5/8	3	1	73.89
21/32	.6562	9	6-3/4	5/8	3	1	73.89
43/64	.6719	9-1/4	6-7/8	5/8	3	1	76.63
11/16	.6875	9-1/4	6-7/8	5/8	3	1	76.63
45/64	.7031	9-1/2	7	5/8	3	1	78.48
23/32	.7188	9-1/2	7-1/8	5/8	3	1	78.48
3/4	.7500	9-3/4	7-3/8	3/4	3	1	85.00
51/64	.7969	10	7-3/4	3/4	3	1	89.84
1-1/64	1.0156	11-1/8	8-1/8	15/16	4	1	126.00
1-3/32	1.0938	11-1/2	8-1/2	15/16	4	1	151.20

3MT & 4MT Split Sleeve Drill Drivers

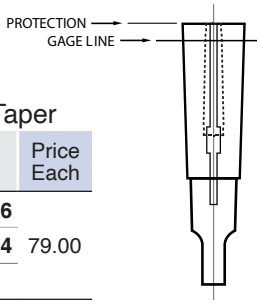
For Straight Shank Tools

List No. **SST3** – #3 Morse Taper

Size (Inside Diameter)								Price Each
25/64	**13/32**	**27/64**	**7/16**	**29/64**	**15/32**	**31/64**	**1/2**	
33/64	**17/32**	**35/64**	**9/16**	**37/64**	**19/32**	**39/64**	**5/8**	47.00
41/64	**21/32**	**11/16**	**45/64**	**23/32**	**3/4**			

List No. **SST4** – #4 Morse Taper

Size (Inside Diameter)					Price Each
1/2	**19/32**	**5/8**	**21/32**	**11/16**	
3/4	**25/32**	**13/16**	**27/32**	**55/64**	79.00
7/8	**15/16**	**1**			



Fast Spiral Taper Length Drills

High Speed Steel

List No. **400F** – Bright Finish, 118° Point

These drills have been especially designed for use through long bushings or where extra length is required. They are recommended for drilling deep holes in nonferrous materials such as aluminum, zinc die cast, magnesium, copper and some plastics.



High Speed

MADE IN USA

MICHIGAN DRILL & CUTTING TOOLS

Fractional Sizes

Size	Decimal Equivalent	Flute Length	Overall Length	Pkg. Qty.	Price Each
3/64	.0469	1-1/8	2-1/4	12	4.37
1/16	.0625	1-3/4	3	12	4.30
5/64	.0781	2	3-3/4	12	4.30
3/32	.0938	2-1/4	4-1/4	12	4.65
7/64	.1094	2-1/2	4-5/8	12	6.46
1/8	.1250	2-3/4	5-1/8	12	7.85
9/64	.1406	3	5-3/8	12	8.64
5/32	.1562	3	5-3/8	12	8.54
11/64	.1719	3-3/8	5-3/4	12	10.14
3/16	.1875	3-3/8	5-3/4	12	9.58
13/64	.2031	3-5/8	6	12	10.99
7/32	.2188	3-5/8	6	12	10.39
15/64	.2344	3-3/4	6-1/8	12	11.93
1/4	.2500	3-3/4	6-1/8	12	11.25
17/64	.2656	3-7/8	6-1/4	12	12.33
9/32	.2812	3-7/8	6-1/4	6	11.77
19/64	.2969	4	6-3/8	6	12.69

Size	Decimal Equivalent	Flute Length	Overall Length	Pkg. Qty.	Price Each
5/16	.3125	4	6-3/8	6	12.13
21/64	.3281	4-1/8	6-1/2	6	13.98
11/32	.3438	4-1/8	6-1/2	6	13.34
23/64	.3594	4-1/4	6-3/4	6	15.92
3/8	.3750	4-1/4	6-3/4	6	14.77
25/64	.3906	4-3/8	7	6	17.51
13/32	.4062	4-3/8	7	6	16.58
27/64	.4219	4-5/8	7-1/4	6	20.27
7/16	.4375	4-5/8	7-1/4	6	18.81
29/64	.4531	4-3/4	7-1/2	6	23.03
15/32	.4688	4-3/4	7-1/2	6	21.79
31/64	.4844	4-3/4	7-3/4	6	24.79
1/2	.5000	4-3/4	7-3/4	6	23.44
39/64	.6094	4-7/8	8-3/4	1	49.10
5/8	.6250	4-7/8	8-3/4	1	50.50
11/16	.6875	5-3/8	9-1/4	1	52.70
27/32	.8438	6-1/8	10	1	78.00

Wire Gauge Sizes

Size	Decimal Equivalent	Flute Length	Overall Length	Pkg. Qty.	Price Each
1	.2280	3-3/4	6-1/8	12	12.26
2	.2210	3-3/4	6-1/8	12	12.26
3	.2130	3-5/8	6	12	11.83
4	.2090	3-5/8	6	12	11.83
5	.2055	3-5/8	6	12	11.83
6	.2040	3-5/8	6	12	11.83
7	.2010	3-5/8	6	12	11.83
8	.1990	3-5/8	6	12	11.94
9	.1960	3-5/8	6	12	11.94
10	.1935	3-5/8	6	12	11.94
11	.1910	3-5/8	6	12	11.94
12	.1890	3-5/8	6	12	11.94
13	.1850	3-3/8	5-3/4	12	11.78
14	.1820	3-3/8	5-3/4	12	11.78
15	.1800	3-3/8	5-3/4	12	11.78
16	.1770	3-3/8	5-3/4	12	11.78
17	.1730	3-3/8	5-3/4	12	11.78
18	.1695	3-3/8	5-3/4	12	11.78
19	.1660	3-3/8	5-3/4	12	11.03
20	.1610	3-3/8	5-3/4	12	11.03
21	.1590	3-3/8	5-3/4	12	11.02
22	.1570	3-3/8	5-3/4	12	10.85
23	.1540	3	5-3/8	12	10.85
24	.1520	3	5-3/8	12	10.85
25	.1495	3	5-3/8	12	10.74
26	.1470	3	5-3/8	12	10.74
27	.1440	3	5-3/8	12	10.74
28	.1405	3	5-3/8	12	10.74
29	.1360	3	5-3/8	12	10.74
30	.1285	3	5-3/8	12	10.74

Size	Decimal Equivalent	Flute Length	Overall Length	Pkg. Qty.	Price Each
31	.1200	2-3/4	5-1/8	12	10.46
32	.1160	2-3/4	5-1/8	12	10.46
33	.1130	2-3/4	5-1/8	12	10.46
34	.1110	2-3/4	5-1/8	12	10.46
35	.1100	2-3/4	5-1/8	12	10.46
36	.1065	2-1/2	4-5/8	12	7.86
37	.1040	2-1/2	4-5/8	12	7.86
38	.1015	2-1/2	4-5/8	12	7.86
39	.0995	2-1/2	4-5/8	12	6.89
40	.0980	2-1/2	4-5/8	12	6.89
41	.0960	2-1/2	4-5/8	12	6.89
42	.0935	2-1/4	4-1/4	12	6.50
43	.0890	2-1/4	4-1/4	12	6.50
44	.0860	2-1/4	4-1/4	12	6.50
45	.0820	2-1/4	4-1/4	12	6.50
46	.0810	2-1/4	4-1/4	12	6.50
47	.0785	2-1/4	4-1/4	12	6.50
48	.0760	2	3-3/4	12	5.55
49	.0730	2	3-3/4	12	5.55
50	.0700	2	3-3/4	12	5.55
51	.0670	2	3-3/4	12	5.55
52	.0635	2	3-3/4	12	5.55
53	.0595	1-3/4	3	12	5.55
54	.0550	1-3/4	3	12	5.55
55	.0520	1-3/4	3	12	5.55
56	.0465	1-1/8	2-1/4	12	5.55
57	.0430	1-1/8	2-1/4	12	5.55
58	.0420	1-1/8	2-1/4	12	5.55
59	.0410	1-1/8	2-1/4	12	5.55
60	.0400	1-1/8	2-1/4	12	5.55

Fast Spiral Taper Length Drills

High Speed Steel

List No. **400F** – Bright Finish, 118° Point

These drills have been especially designed for use through long bushings or where extra length is required. They are recommended for drilling deep holes in nonferrous materials such as aluminum, zinc die cast, magnesium, copper and some plastics.



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Letter Sizes

Size	Decimal Equivalent	Flute Length	Overall Length	Pkg. Qty.	Price Each
A	.2340	3-3/4	6-1/8	12	17.66
B	.2380	3-3/4	6-1/8	12	17.66
C	.2420	3-3/4	6-1/8	12	17.66
D	.2460	3-3/4	6-1/8	12	17.66
E	.2500	3-3/4	6-1/8	12	11.25
F	.2570	3-7/8	6-1/4	12	17.84
G	.2610	3-7/8	6-1/4	12	17.84
H	.2660	3-7/8	6-1/4	12	18.47
I	.2720	3-7/8	6-1/4	6	17.84
J	.2770	3-7/8	6-1/4	6	17.84
K	.2810	3-7/8	6-1/4	6	19.23
L	.2900	4	6-3/8	6	19.26
M	.2950	4	6-3/8	6	19.26

Size	Decimal Equivalent	Flute Length	Overall Length	Pkg. Qty.	Price Each
N	.3020	4-1/8	6-1/2	6	20.53
O	.3160	4-1/8	6-1/2	6	20.53
P	.3230	4-1/8	6-1/2	6	20.53
Q	.3320	4-1/8	6-1/2	6	20.53
R	.3390	4-1/8	6-1/2	6	20.53
S	.3480	4-1/4	6-3/4	6	23.33
T	.3580	4-1/4	6-3/4	6	22.37
U	.3680	4-1/4	6-3/4	6	22.37
V	.3770	4-3/8	7	6	24.19
W	.3860	4-3/8	7	6	24.19
X	.3970	4-3/8	7	6	25.77
Y	.4040	4-3/8	7	6	25.77
Z	.4130	4-5/8	7-1/4	6	25.77

Parabolic Flute Taper Length Drills

High Speed Steel



List No. **400PF** – 135° Split Point

List No. **400PFT** – TiN Coated, 135° Split Point

Used for deep hole drilling at higher feed rates in aluminum alloys and other low to medium tensile strength materials

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Fractional Sizes

Size	Dec. Equiv.	Flute Length	Overall Length	Pkg. Qty.	Price Each H.S. **400PF**	Price Each TiN Coated **400PFT**
1/16	.0625	1-3/4	3	12	3.60	7.08
5/64	.0781	2	3-3/4	12	5.06	7.16
3/32	.0938	2-1/4	4-1/4	12	6.03	8.13
7/64	.1094	2-1/2	4-5/8	12	6.53	9.35
1/8	.1250	2-3/4	5-1/8	12	7.44	10.26
9/64	.1406	3	5-3/8	12	9.93	13.98
5/32	.1562	3	5-3/8	12	8.99	13.04
11/64	.1719	3-3/8	5-3/4	12	10.55	14.60
3/16	.1875	3-3/8	5-3/4	12	8.98	14.05
13/64	.2031	3-5/8	6	12	12.10	18.91
7/32	.2188	3-5/8	6	12	13.03	19.84
15/64	.2344	3-3/4	6-1/8	12	13.05	19.86
1/4	.2500	3-3/4	6-1/8	12	11.07	17.88
17/64	.2656	3-7/8	6-1/4	12	10.44	24.60
9/32	.2812	3-7/8	6-1/4	6	12.97	23.26
19/64	.2969	4	6-3/8	6	14.82	25.11
5/16	.3125	4	6-3/8	6	12.97	25.30
21/64	.3281	4-1/8	6-1/2	6	15.14	27.47
11/32	.3438	4-1/8	6-1/2	6	15.14	27.47

Size	Dec. Equiv.	Flute Length	Overall Length	Pkg. Qty.	Price Each H.S. **400PF**	Price Each TiN Coated **400PFT**
23/64	.3594	4-1/4	6-3/4	6	18.10	30.43
3/8	.3750	4-1/4	6-3/4	6	17.64	29.97
25/64	.3906	4-3/8	7	6	18.72	35.31
13/32	.4062	4-3/8	7	6	18.98	35.57
27/64	.4219	4-5/8	7-1/4	6	18.29	37.58
7/16	.4375	4-5/8	7-1/4	6	16.80	38.46
29/64	.4531	4-3/4	7-1/2	6	23.87	43.16
15/32	.4688	4-3/4	7-1/2	6	24.04	43.33
31/64	.4844	4-3/4	7-3/4	6	26.07	45.36
1/2	.5000	4-3/4	7-3/4	6	25.94	45.23
33/64	.5156	4-3/4	8	1	39.69	58.89
17/32	.5312	4-3/4	8	1	40.55	59.75
9/16	.5625	4-7/8	8-1/4	1	42.37	61.57
19/32	.5938	4-7/8	8-3/4	1	48.85	68.05
5/8	.6250	4-7/8	8-3/4	1	51.53	70.73
21/32	.6562	5-1/8	9	1	37.60	84.64
11/16	.6875	5-3/8	9-1/4	1	66.57	91.25
23/32	.7188	5-5/8	9-1/2	1	70.47	95.15
3/4	.7500	5-7/8	9-3/4	1	76.95	101.63

Parabolic Flute Taper Length Drills

High Speed Steel

List No. **400PF** – 135° Split Point
List No. **400PFT** – TiN Coated, 135° Split Point

Used for deep hole drilling at higher feed rates in aluminum alloys and other low to medium tensile strength materials



High Speed

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Wire Gauge Sizes

Size	Dec. Equiv.	Flute Length	Overall Length	Pkg. Qty.	Price Each H.S. 400PF	Price Each TiN Coated 400PFT
1	.2280	3-3/4	6-1/8	12	11.45	18.26
2	.2210	3-3/4	6-1/8	12	11.45	18.26
3	.2130	3-5/8	6	12	11.07	17.88
4	.2090	3-5/8	6	12	11.07	17.88
5	.2055	3-5/8	6	12	11.07	17.88
6	.2040	3-5/8	6	12	11.07	17.88
8	.1990	3-5/8	6	12	11.07	17.88
10	.1935	3-5/8	6	12	11.07	17.88
11	.1910	3-5/8	6	12	11.07	17.88
12	.1890	3-5/8	6	12	11.07	17.88
13	.1850	3-3/8	5-3/4	12	10.03	14.08
14	.1829	3-3/8	5-3/4	12	10.03	14.08
15	.1800	3-3/8	5-3/4	12	10.03	14.08
16	.1770	3-3/8	5-3/4	12	10.03	14.08
17	.1730	3-3/8	5-3/4	12	10.03	14.08
18	.1695	3-3/8	5-3/4	12	10.03	14.08
19	.1660	3-5/8	5-3/4	12	10.03	14.08
20	.1610	3-3/8	5-3/4	12	10.03	14.08
21	.1590	3-3/8	5-3/4	12	11.03	15.08
22	.1570	3-3/8	5-3/4	12	11.03	15.08
23	.1540	3	5-3/8	12	10.03	14.08
24	.1520	3	5-3/8	12	11.03	15.08

Size	Dec. Equiv.	Flute Length	Overall Length	Pkg. Qty.	Price Each H.S. 400PF	Price Each TiN Coated 400PFT
25	.1495	3	5-3/8	12	11.03	15.08
26	.1470	3	5-3/8	12	11.03	15.08
27	.1440	3	5-3/8	12	11.03	15.08
28	.1405	3	5-3/8	12	11.03	15.08
29	.1360	3	5-3/8	12	10.03	14.08
30	.1285	3	5-3/8	12	10.03	14.08
31	.1200	2-3/4	5-1/8	12	8.17	12.22
32	.1160	2-3/4	5-1/8	12	8.17	12.22
33	.1130	2-3/4	5-1/8	12	9.43	13.48
34	.1110	2-3/4	5-1/8	12	9.43	13.48
35	.1100	2-3/4	5-1/8	12	8.17	12.22
36	.1065	2-1/2	4-5/8	12	8.17	12.22
37	.1040	2-1/2	4-5/8	12	7.62	11.67
38	.1015	2-1/2	4-5/8	12	7.93	11.98
39	.0995	2-1/2	4-5/8	12	7.62	11.67
40	.0980	2-1/2	4-5/8	12	7.62	11.67
43	.0890	2-1/4	4-1/4	12	6.63	10.68
45	.0820	2-1/4	4-1/4	12	6.63	10.68
48	.0760	2	3-3/4	12	6.07	8.17
49	.0730	2	3-3/4	12	6.07	8.17
51	.0670	2	3-3/4	12	5.57	7.67
52	.0635	2	3-3/4	12	6.07	8.17

Letter Sizes

Size	Dec. Equiv.	Flute Length	Overall Length	Pkg. Qty.	Price Each H.S. 400PF	Price Each TiN Coated 400PFT
F	.2570	3-7/8	6-1/4	12	15.04	21.85
H	.2660	3-7/8	6-1/4	12	15.04	21.85
J	.2770	3-7/8	6-1/4	6	15.04	21.85
K	.2811	3-7/8	6-1/4	6	15.04	21.85
L	.2900	4	6-3/8	6	16.30	23.11

Size	Dec. Equiv.	Flute Length	Overall Length	Pkg. Qty.	Price Each H.S. 400PF	Price Each TiN Coated 400PFT
M	.2950	4	6-3/8	6	16.30	23.11
N	.3020	4-1/8	6-1/2	6	16.30	23.11
P	.3230	4-1/8	6-1/2	6	16.65	23.46
U	.3680	4-1/4	6-3/4	6	18.63	30.94
Z	.4130	4-5/8	7-1/4	6	20.12	36.71

Metric Sizes

Size	Dec. Equiv.	Flute Length	Overall Length	Pkg. Qty.	Price Each 400PF
2.20	.0866	2-1/4	4-1/4	12	7.84
2.80	.1102	2-3/4	5-1/8	12	8.98
3.00	.1181	2-3/4	5-1/8	12	8.98
3.20	.1260	3	5-3/8	12	10.33
4.00	.1575	3-3/8	5-3/4	12	12.66
4.20	.1654	3-3/8	5-3/4	12	12.66
4.30	.1693	3-3/8	5-3/4	12	13.50
5.20	.2047	3-5/8	6	12	14.52
6.20	.2441	3-3/4	6-1/8	12	16.40
6.60	.2548	3-7/8	6-1/4	12	16.40

Size	Dec. Equiv.	Flute Length	Overall Length	Pkg. Qty.	Price Each 400PF
6.80	.2677	3-7/8	6-1/4	12	16.40
6.90	.2717	3-7/8	6-1/4	12	15.56
7.00	.2756	3-7/8	6-1/4	12	15.56
7.20	.2835	4	6-3/8	6	17.78
7.30	.2874	4	6-3/8	6	17.78
8.00	.3150	4-1/8	6-1/2	6	18.17
8.50	.3346	4-1/8	6-1/2	6	16.40
9.50	.4740	4-1/4	6-3/4	6	21.00
9.60	.3780	4-3/8	7	6	22.46
12.00	.4724	4-3/4	7-3/4	6	27.70

MDX SUPERIOR IMPORT Taper Length Drills

High Speed Steel

List No. **X400**

Fractional Sizes



Size	Dec. Equiv.	Flute Length	Overall Length	Pkg. Qty.	Price Each
1/64	.0156	5/16	1-1/2	12	4.07
1/32	.0312	3/4	2	12	2.97
3/64	.0469	1-1/8	2-1/4	12	1.40
1/16	.0625	1-3/4	3	12	1.45
5/64	.0781	2	3-3/4	12	1.71
3/32	.0938	2-1/4	4-1/4	12	2.04
7/64	.1094	2-1/2	4-5/8	12	2.58
1/8	.1250	2-3/4	5-1/8	12	2.62
9/64	.1406	3	5-3/8	12	3.18
5/32	.1562	3	5-3/8	12	3.18
11/64	.1719	3-3/8	5-3/4	12	3.21
3/16	.1875	3-3/8	5-3/4	12	3.18
13/64	.2031	3-5/8	6	12	3.74
7/32	.2188	3-5/8	6	12	3.71
15/64	.2344	3-3/4	6-1/8	12	3.74
1/4	.2500	3-3/4	6-1/8	12	3.71
17/64	.2656	3-7/8	6-1/4	12	4.58
9/32	.2812	3-7/8	6-1/4	6	4.53
19/64	.2969	4	6-3/8	6	4.64
5/16	.3125	4	6-3/8	6	4.59
21/64	.3281	4-1/8	6-1/2	6	5.31
11/32	.3438	4-1/8	6-1/2	6	5.27
23/64	.3594	4-1/4	6-3/4	6	6.26
3/8	.3750	4-1/4	6-3/4	6	6.20
25/64	.3906	4-3/8	7	6	6.53
13/32	.4062	4-3/8	7	6	6.47
27/64	.4219	4-5/8	7-1/4	6	7.05
7/16	.4375	4-5/8	7-1/4	6	7.11
29/64	.4531	4-3/4	7-1/2	6	7.97
15/32	.4688	4-3/4	7-1/2	6	8.38
31/64	.4844	4-3/4	7-3/4	6	8.83
1/2	.5000	4-3/4	7-3/4	6	8.75
33/64	.5156	4-3/4	8	1	12.51
17/32	.5312	4-3/4	8	1	12.39
35/64	.5469	4-7/8	8-1/4	1	13.15
9/16	.5625	4-7/8	8-1/4	1	13.03
37/64	.5781	4-7/8	8-3/4	1	15.38
19/32	.5938	4-7/8	8-3/4	1	15.38
39/64	.6094	4-7/8	8-3/4	1	15.91
5/8	.6250	4-7/8	8-3/4	1	15.75
41/64	.6406	5-1/8	9	1	19.18
21/32	.6562	5-1/8	9	1	18.31
43/64	.6719	5-3/8	9-1/4	1	22.53
11/16	.6875	5-3/8	9-1/4	1	21.78
45/64	.7031	5-5/8	9-1/2	1	23.71
23/32	.7188	5-5/8	9-1/2	1	22.64
47/64	.7344	5-7/8	9-3/4	1	25.50
3/4	.7500	5-7/8	9-3/4	1	23.89
49/64	.7656	6	9-7/8	1	28.00
25/32	.7812	6	9-7/8	1	26.74
51/64	.7969	6-1/8	10	1	30.12
13/16	.8125	6-1/8	10	1	28.48
53/64	.8281	6-1/8	10	1	32.58
27/32	.8438	6-1/8	10	1	30.27
55/64	.8594	6-1/8	10	1	34.23
7/8	.8750	6-1/8	10	1	31.80
57/64	.8906	6-1/8	10	1	35.66
29/32	.9062	6-1/8	10	1	33.13
59/64	.9219	6-1/8	10-3/4	1	38.81
15/16	.9375	6-1/8	10-3/4	1	36.04
61/64	.9531	6-3/8	11	1	42.81
31/32	.9688	6-3/8	11	1	39.76
63/64	.9844	6-3/8	11	1	44.63
1	1.0000	6-3/8	11	1	41.45
1-1/64	1.0156	6-1/2	11-1/8	1	58.82
1-1/32	1.0312	6-1/2	11-1/8	1	51.99
1-3/64	1.0469	6-5/8	11-1/4	1	60.83
1-1/16	1.0625	6-5/8	11-1/4	1	53.76
1-5/64	1.0781	6-7/8	11-1/2	1	65.26
1-3/32	1.0938	6-7/8	11-1/2	1	57.68
1-7/64	1.1094	7-1/8	11-3/4	1	67.74
1-1/8	1.1250	7-1/8	11-3/4	1	57.15
1-9/64	1.1406	7-1/4	11-7/8	1	68.18
1-5/32	1.1562	7-1/4	11-7/8	1	65.16
1-11/64	1.1719	7-3/8	12	1	73.41
1-3/16	1.1875	7-3/8	12	1	66.97
1-13/64	1.2031	7-1/2	12-1/8	1	75.60
1-7/32	1.2188	7-1/2	12-1/8	1	68.96
1-15/64	1.2344	7-7/8	12-1/2	1	78.63
1-1/4	1.2500	7-7/8	12-1/2	1	71.74
1-9/32	1.2812	8-1/2	14-1/8	1	83.27
1-5/16	1.3125	8-5/8	14-1/4	1	89.66
1-11/32	1.3438	8-3/4	14-3/8	1	92.24
1-3/8	1.3750	8-7/8	14-1/2	1	96.17
1-13/32	1.4062	9	14-5/8	1	100.43
1-7/16	1.4375	9-1/8	14-3/4	1	104.79
1-15/32	1.4688	9-1/4	14-7/8	1	109.14
1-1/2	1.5000	9-3/8	15	1	117.47
1-35/64	1.5469	9-5/8	15	1	155.00
1-9/16	1.5625	9-5/8	15-1/4	1	131.45
1-37/64	1.5781	9-7/8	15-5/8	1	168.50
1-5/8	1.6250	9-7/8	15-5/8	1	148.42
1-11/16	1.6875	10-1/8	16	1	171.45
1-3/4	1.7500	10-1/2	16-1/4	1	178.85
1-13/16	1.8125	10-1/2	16-1/4	1	213.36
1-7/8	1.8700	10-5/8	16-1/4	1	238.21
1-15/16	1.9375	10-3/4	16-5/8	1	241.53
2	2.0000	10-3/4	17-1/4	1	246.25

Letter Sizes

Size	Dec. Equiv.	Flute Length	Overall Length	Pkg. Qty.	Price Each
A	.2340	3-3/4	6-1/8	12	6.53
B	.2380	3-3/4	6-1/8	12	6.53
C	.2420	3-3/4	6-1/8	12	6.53
G	.2610	3-7/8	6-1/4	12	7.46
H	.2660	3-7/8	6-1/4	12	7.46
I	.2720	3-7/8	6-1/4	6	7.46
J	.2770	3-7/8	6-1/4	6	7.46
K	.2810	3-7/8	6-1/4	6	7.46
L	.2900	4	6-3/8	6	7.99
M	.2950	4	6-3/8	6	7.99
P	.3230	4-1/8	6-1/2	6	8.14
Q	.3320	4-1/8	6-1/2	6	8.30
R	.3390	4-1/8	6-1/2	6	8.57
S	.3480	4-1/4	6-3/4	6	8.57
W	.3860	4-3/8	7	6	9.01
X	.3970	4-3/8	7	6	9.29
Y	.4040	4-3/8	7	6	9.29
Z	.4130	4-3/8	7-1/4	6	9.29

Aircraft Extension Drills

High Speed & Cobalt – Split Point



6" Overall Length

List No. **906** – High Speed Steel
List No. **906C** – Cobalt

12" Overall Length

List No. **912** – High Speed Steel
List No. **912C** – Cobalt

Cobalt drills are used in drilling tough, high tensile strength materials like Stainless Steels, Titanium, and Inconel.

Size	Dec. Equiv.	Flute Length	Price Each			
			High Speed		Cobalt	
			6" OAL **906**	12" OAL **912**	6" OAL **906C**	12" OAL **912C**
73	.0240	3/16	10.50	—	—	—
69	.0292	1/2	9.77	—	—	—
66	.0330	1/2	9.77	—	—	—
65	.0350	5/8	9.77	—	—	—
64	.0360	5/8	9.77	—	—	—
63	.0370	5/8	9.77	—	—	—
62	.0380	5/8	9.77	—	—	—
61	.0390	11/16	9.77	—	—	—
60	.0400	11/16	7.19	11.37	14.40	—
59	.0410	11/16	7.19	11.37	14.40	—
58	.0420	11/16	7.19	11.37	—	—
57	.0430	3/4	7.19	10.56	—	—
56	.0465	3/4	5.91	10.56	14.40	—
3/64	.0469	3/4	5.64	11.20	14.40	—
55	.0520	7/8	5.91	10.56	14.40	—
54	.0550	7/8	5.91	10.56	14.40	—
53	.0595	7/8	5.91	10.56	14.40	—
1/16	.0625	7/8	3.07	9.08	6.75	21.15
52	.0635	7/8	3.47	9.98	7.65	21.15
51	.0670	1	3.47	9.98	7.65	21.15
50	.0700	1	3.14	10.69	7.65	21.15
49	.0730	1	3.47	10.69	7.65	21.15
48	.0760	1	3.47	10.69	7.65	21.15
5/64	.0781	1	3.07	9.08	6.75	21.15
47	.0785	1	3.47	10.69	7.65	21.15
46	.0810	1-1/8	3.47	10.69	7.65	21.15
45	.0820	1-1/8	3.47	10.69	7.65	21.15
44	.0860	1-1/8	3.47	10.69	7.65	21.15
43	.0890	1-1/4	3.47	10.69	7.65	21.15
42	.0935	1-1/4	2.77	9.98	6.12	21.15
3/32	.0938	1-1/4	2.61	9.41	5.85	15.16
41	.0960	1-3/8	2.77	9.98	6.12	21.15
40	.0980	1-3/8	2.61	8.18	5.76	15.21
39	.0995	1-3/8	3.20	9.97	6.12	18.90
38	.1015	1-7/16	3.20	9.97	6.12	18.90
37	.1040	1-7/16	3.20	9.97	6.12	18.90
36	.1065	1-7/16	3.20	9.97	6.12	18.90
7/64	.1094	1-1/2	2.61	9.41	5.85	15.16
35	.1100	1-1/2	3.20	9.97	6.30	18.90
34	.1110	1-1/2	3.30	9.97	6.30	18.90
33	.1130	1-1/2	3.30	9.97	6.30	18.90
32	.1160	1-5/8	3.30	9.97	6.30	18.90
31	.1200	1-5/8	3.30	8.18	6.30	18.90
1/8	.1250	1-5/8	2.61	7.46	5.22	15.16
30	.1285	1-5/8	2.61	8.18	5.85	15.21
29	.1360	1-3/4	3.27	9.17	7.07	15.66
28	.1405	1-3/4	3.27	9.17	8.10	18.90
9/64	.1406	1-3/4	3.17	7.85	7.11	15.93
27	.1440	1-7/8	3.27	9.17	8.10	18.90
26	.1470	1-7/8	3.52	9.97	8.10	18.90
25	.1495	1-7/8	3.52	9.97	8.10	18.90
24	.1520	2	3.52	9.97	8.10	18.90
23	.1540	2	3.52	9.97	8.10	18.90
5/32	.1562	2	3.17	7.85	6.53	15.93

** Sizes with decimal equivalent smaller than .0625 are not split point.*

Size	Dec. Equiv.	Flute Length	Price Each			
			High Speed		Cobalt	
			6" OAL **906**	12" OAL **912**	6" OAL **906C**	12" OAL **912C**
22	.1570	2	3.52	9.97	8.10	18.90
21**	.1590	2-1/8	3.30	7.36	7.07	15.66
20	.1610	2-1/8	3.30	7.36	7.07	15.66
19	.1660	2-1/8	3.63	9.90	8.55	18.90
18	.1695	2-1/8	3.83	9.90	8.55	18.90
11/64	.1719	2-1/8	3.40	8.55	7.01	16.56
17	.1730	2-3/16	3.83	9.90	8.55	18.90
16	.1770	2-3/16	3.83	9.90	8.55	18.90
15	.1800	2-3/16	3.83	9.90	8.55	18.90
14	.1820	2-3/16	3.83	9.90	8.55	18.90
13	.1850	2-5/16	3.83	9.14	9.00	18.90
3/16	.1875	2-5/16	3.40	8.55	7.01	16.56
12	.1890	2-5/16	3.83	9.90	9.00	18.90
11	.1910	2-5/16	3.83	9.90	8.23	18.90
10	.1935	2-7/16	4.09	8.84	8.23	16.56
9	.1960	2-7/16	4.29	9.90	10.35	22.50
8	.1990	2-7/16	4.29	9.90	10.35	22.50
7	.2010	2-7/16	4.29	9.90	10.35	22.50
13/64	.2031	2-7/16	4.13	9.57	8.60	20.12
6	.2040	2-1/2	4.59	10.89	10.35	22.50
5	.2055	2-1/2	4.59	10.89	10.35	22.50
4	.2090	2-1/2	4.59	11.48	10.35	—
3	.2130	2-1/2	4.59	11.48	10.35	21.02
7/32	.2188	2-1/2	4.13	9.57	8.96	20.12
2	.2210	2-5/8	4.79	11.48	10.35	21.02
1	.2280	2-5/8	4.79	11.48	10.35	21.02
A	.2340	2-5/8	7.59	16.93	13.39	—
15/64	.2344	2-5/8	4.49	10.30	10.03	21.06
B	.2380	2-3/4	7.59	16.93	13.39	—
C	.2420	2-3/4	7.59	16.93	13.39	—
D	.2460	2-3/4	7.59	16.93	13.39	29.79
1/4	.2500	2-3/4	4.29	9.60	10.76	21.06
F	.2570	2-7/8	7.39	16.17	17.78	34.37
G	.2610	2-7/8	12.21	16.93	—	—
17/64	.2656	2-7/8	9.57	12.71	23.40	28.94
H	.2660	2-7/8	13.07	18.48	—	—
I	.2720	2-7/8	13.07	17.13	—	35.82
J	.2770	2-7/8	13.07	18.48	—	—
K	.2810	2-15/16	13.07	19.80	27.00	—
9/32	.2812	2-15/16	9.90	12.71	27.00	34.18
L	.2900	2-15/16	15.84	24.42	—	—
M	.2950	3-1/16	15.84	24.42	—	—
19/64	.2969	3-1/16	11.00	14.42	29.90	36.40
N	.3020	3-1/16	17.82	25.74	—	—
5/16	.3125	3-3/16	11.94	15.64	31.70	37.94
O	.3160	3-3/16	19.14	27.72	—	42.00
P	.3230	3-5/16	19.14	27.72	—	—
21/64	.3281	3-5/16	12.90	16.62	—	39.83
Q	.3320	3-7/16	19.14	29.04	—	46.80
R	.3390	3-7/16	21.12	30.03	37.80	—
11/32	.3438	3-7/16	12.82	16.62	33.75	39.70
S	.3480	3-1/2	22.44	31.68	41.40	—
T	.3580	3-1/2	22.44	31.68	—	—

***Fast spiral also available from stock.*

Aircraft Extension Drills

High Speed & Cobalt – Split Point





6" Overall Length

List No. **906** – High Speed Steel
List No. **906C** – Cobalt

12" Overall Length

List No. **912** – High Speed Steel
List No. **912C** – Cobalt

High Speed · Cobalt · A.I.A. NAS907 · MADE IN USA · MICHIGAN DRILL & CUTTING TOOLS

Size	Dec. Equiv.	Flute Length	Price Each			
			High Speed		Cobalt	
			6" OAL **906**	12" OAL **912**	6" OAL **906C**	12" OAL **912C**
23/64	.3594	3-1/2	14.40	18.48	35.32	47.85
U	.3680	3-5/8	22.44	31.68	43.20	57.33
3/8	.3750	3-5/8	14.66	19.14	35.55	47.85
V	.3770	3-5/8	24.42	33.66	—	—
W	.3860	3-3/4	24.42	33.66	—	—
25/64	.3906	3-3/4	17.25	21.00	—	51.48
X	.3970	3-3/4	24.42	34.98	—	—
Y	.4040	3-7/8	24.42	34.98	—	—

Size	Dec. Equiv.	Flute Length	Price Each			
			High Speed		Cobalt	
			6" OAL **906**	12" OAL **912**	6" OAL **906C**	12" OAL **912C**
13/32	.4062	3-7/8	17.25	21.62	—	51.48
Z	.4130	3-7/8	27.72	37.62	—	—
27/64	.4219	3-15/16	18.94	22.44	—	56.25
7/16	.4375	4-1/16	18.94	22.44	—	56.25
29/64	.4531	4-3/16	20.79	25.15	—	56.25
15/32	.4688	4-5/16	21.58	27.16	—	58.05
31/64	.4844	4-3/8	21.78	27.64	—	58.05
1/2	.5000	4-1/2	22.24	27.64	38.70	59.49

USA Sets

Sizes	Description	Pcs.	Set No.	Price
1/16 – 1/4 by 64ths	H.S. - 6" OAL	13	**906SF-2**	55.36
1/16 – 1/4 by 64ths	Cobalt - 6" OAL	13	**906CG**	107.74
1/16 – 1/4 by 64ths	H.S. - 12" OAL	13	**912SF-2**	127.99
1/16 – 3/8 by 64ths	H.S. - 6" OAL	21	**906SF**	156.90
1/16 – 1/2 by 64ths	H.S. - 6" OAL	29	**906SFA**	315.00
1/16 – 1/2 by 64ths	H.S. - 12" OAL	29	**912SF**	448.92
1/16 – 1/2 by 64ths	Cobalt - 12" OAL	29	**912CSF**	1006.32
A - Z	H.S. - 6" OAL	26	**906SL**	439.00
A - Z	H.S. - 12" OAL	26	**912SL**	654.55
1 - 60	H.S. - 6" OAL	60	**906SW**	239.71
1 - 60	H.S. - 12" OAL	60	**912SW**	613.31

All sets are supplied in Metal Stand



List No. **X906** – 6" Overall Length, H.S.
List No. **X912** – 12" Overall Length, H.S.

High Speed · MDX® SUPERIOR IMPORT

Size	Dec. Equiv.	Flute Length	Price Each	
			6" OAL **X906**	12" OAL **X912**
1/16	.0625	1	2.03	4.83
50	.0700	1	2.10	6.60
49	.0730	1	2.10	6.60
48	.0760	1	2.10	6.60
5/64	.0781	1	2.03	4.83
47	.0785	1	2.10	6.60
46	.0810	1-1/8	2.10	6.60
45	.0820	1-1/8	2.10	6.60
44	.0860	1-1/8	2.10	6.60
43	.0890	1-1/4	2.10	6.60
42	.0935	1-1/4	1.82	6.60
3/32	.0938	1-1/4	1.82	6.60
41	.0960	1-3/8	1.82	6.60
40	.0980	1-3/8	1.82	6.60
38	.1015	1-7/16	1.89	5.53
37	.1040	1-7/16	1.89	5.53
36	.1065	1-7/16	1.89	5.53
7/64	.1094	1-1/2	1.89	5.53
35	.1100	1-1/2	1.89	5.53
34	.1110	1-1/2	1.89	5.53
33	.1130	1-1/2	1.89	5.53
32	.1160	1-5/8	1.89	5.53
31	.1200	1-5/8	1.89	5.53

Size	Dec. Equiv.	Flute Length	Price Each	
			6" OAL **X906**	12" OAL **X912**
1/8	.1250	1-5/8	1.89	5.53
30	.1285	1-5/8	1.89	5.53
29	.1360	1-3/4	2.31	6.23
28	.1405	1-3/4	2.31	6.23
9/64	.1406	1-3/4	2.31	5.00
27	.1440	1-3/4	2.31	6.23
26	.1470	1-3/4	2.31	6.23
25	.1495	1-7/8	2.31	6.23
24	.1520	2	2.31	6.23
23	.1540	2	2.31	6.23
5/32	.1562	2	2.31	5.00
22	.1570	2	2.31	6.23
21**	.1590	2-1/8	2.31	5.00
20	.1610	2-1/8	2.31	5.00
19	.1660	2-1/8	2.59	6.65
18	.1695	2-1/8	2.59	6.65
11/64	.1719	2-1/8	2.59	6.65
17	.1730	2-3/16	2.59	6.65
16	.1770	2-3/16	2.59	6.65
15	.1800	2-3/16	2.59	6.65
14	.1820	2-3/16	2.59	6.65
13	.1850	2-5/16	2.59	6.65
3/16	.1875	2-5/16	2.59	6.65

Size	Dec. Equiv.	Flute Length	Price Each	
			6" OAL **X906**	12" OAL **X912**
12	.1890	2-5/16	2.59	6.65
11	.1910	2-5/16	2.59	6.65
10	.1935	2-7/16	2.80	7.63
9	.1960	2-7/16	2.94	7.63
5	.2055	2-1/2	3.01	7.63
4	.2090	2-1/2	3.01	7.63
3	.2130	2-1/2	3.01	7.63
7/32	.2188	2-1/2	3.01	6.65
2	.2210	2-5/8	3.36	7.91
15/64	.2344	2-5/8	3.22	7.14
1/4	.2500	2-3/4	3.22	7.14
9/32	.2812	2-15/16	5.90	8.61
19/64	.2969	3-1/16	6.60	9.44
5/16	.3125	3-3/16	7.20	10.15
11/32	.3438	3-7/16	7.63	11.13
23/64	.3594	3-1/2	7.80	11.88
3/8	.3750	3-5/8	8.05	12.25
25/64	.3906	3-3/4	9.55	14.15
13/32	.4062	3-7/8	10.20	14.77
7/16	.4375	4-1/16	10.95	15.54
29/64	.4531	4-3/16	12.29	17.41
31/64	.4844	4-3/8	13.30	18.69
1/2	.5000	4-1/2	13.30	18.69

***Fast spiral also available from stock.*

Extra Length Drills

High Speed Steel – 118° Point

These drills are utilized in deep hole or long reach drilling applications in many kinds of materials. For fixed spindle use.



High Speed | MADE IN USA | MICHIGAN DRILL & CUTTING TOOLS

Extensive Offering | Exclusively from Michigan Drill

The world's largest and most extensive inventory of **USA manufactured** extra long straight shank drills!

6" Overall Length

List No. **208A** – 4" Flute Length

Size	Decimal Equivalent	Price Each
1.5mm	.0591	8.50
1/16	.0625	7.82
50	.0700	8.50
5/64	.0781	7.82
3/32	.0938	7.82
38	.1015	9.38
37	.1040	9.38
7/64	.1094	7.82
34	.1110	9.38
33	.1130	9.38
1/8	.1250	7.82
9/64	.1406	8.25
27	.1440	9.90
26	.1470	9.90
25	.1495	9.90
23	.1540	9.90
5/32	.1562	8.25
4mm	.1575	10.30
11/64	.1719	8.58
3/16	.1875	8.58
7	.2010	10.30

8" Overall Length

List No. **208** – 5-1/2" Flute Length



Size	Decimal Equivalent	Price Each
1/16	.0625	14.82
45	.0820	17.78
3/32	.0938	14.82
37	.1040	17.78
7/64	.1094	14.82
3mm	.1181	17.78
1/8	.1250	13.15
30	.1285	15.65
9/64	.1406	14.32
27	.1440	18.50
5/32	.1562	14.88
21	.1590	21.50
11/64	.1719	15.65
4.5mm	.1772	21.50
13	.1850	21.50
3/16	.1875	16.14
12	.1890	21.50
5mm	.1969	21.50
7	.2010	21.50
13/64	.2031	16.14
4	.2090	21.50
7/32	.2188	16.14
15/64	.2344	16.14
6mm	.2362	21.50
1/4	.2500	16.14
6.50mm	.2559	23.00
F	.2570	19.07
17/64	.2656	16.14
9/32	.2812	16.14
19/64	.2969	19.07
5/16	.3125	17.16
21/64	.3281	19.17
11/32	.3438	18.04
S	.3480	25.75
23/64	.3594	20.12
3/8	.3750	18.70
25/64	.3906	21.38
13/32	.4062	21.38
27/64	.4219	25.74
7/16	.4375	22.11
29/64	.4531	25.74
15/32	.4688	25.74
12.00mm	.4724	34.50
31/64	.4844	30.16
1/2	.5000	26.07

9" Overall Length

List No. **209** – 6-1/2" Flute Length



Size	Decimal Equivalent	Price Each
19/64	.2969	24.65
5/16	.3125	20.54
8.20mm	.3228	26.75
11/32	.3438	24.65
23/64	.3594	22.10
U	.3680	29.90
9.40mm	.3701	29.90
25/64	.3906	23.03
27/64	.4219	28.12
7/16	.4375	28.12
29/64	.4531	29.04
15/32	.4688	29.04
31/64	.4844	31.02
1/2	.5000	31.02
17/32	.5312	38.94

10" Overall Length

List No. **208B** – 7-1/2" Flute Length



Size	Decimal Equivalent	Price Each
3mm	.1181	19.40
1/8	.1250	14.85
9/64	.1406	18.32
5/32	.1562	18.81
4mm	.1575	21.77
11/64	.1719	18.81
3/16	.1875	18.81
13/64	.2031	19.73
7/32	.2188	19.73
15/64	.2344	20.53
1/4	.2500	20.53
6.50mm	.2559	23.00
17/64	.2656	21.56
9/32	.2812	22.77
19/64	.2969	22.77
5/16	.3125	22.77
8mm	.3150	28.03
21/64	.3281	23.36
11/32	.3438	23.36
S	.3480	31.81
23/64	.3594	23.91
U	.3680	31.81
3/8	.3750	24.52
25/64	.3906	25.08
10mm	.3937	31.81
13/32	.4062	25.08
27/64	.4219	28.91
11mm	.4331	32.67
7/16	.4375	29.04
29/64	.4531	30.69
15/32	.4688	30.69
12.00mm	.4724	38.50
31/64	.4844	32.67
1/2	.5000	32.67
17/32	.5312	41.25
35/64	.5469	45.28
9/16	.5625	45.28
37/64	.5781	48.00
5/8	.6250	51.48

Extra Length Drills



High Speed Steel – 118° Point

These drills are utilized in deep hole or long reach drilling applications in many kinds of materials. For fixed spindle use.

High Speed

MADE IN USA

MICHIGAN DRILL & CUTTING TOOLS

Extensive Offering | Exclusively from Michigan Drill

The world's largest and most extensive inventory of **USA manufactured** extra long straight shank drills!

12" Overall Length

List No. **212** – 9" Flute Length

Size	Decimal Equivalent	Price Each
7/64	.1094	18.15
1/8	.1250	17.42
9/64	.1406	19.14
5/32	.1562	21.65
11/64	.1719	21.65
3/16	.1875	21.65
13/64	.2031	22.11
7/32	.2188	22.44
15/64	.2344	23.03
D	.2460	28.00
1/4	.2500	23.03
17/64	.2656	23.95
9/32	.2812	23.95
19/64	.2969	24.75
5/16	.3125	24.75
21/64	.3281	25.41
11/32	.3438	25.41
23/64	.3594	28.38
U	.3680	34.68
3/8	.3750	28.38
25/64	.3906	29.70
13/32	.4062	29.70
27/64	.4219	32.01
7/16	.4375	32.01
29/64	.4531	37.11
15/32	.4688	37.11
31/64	.4844	38.36
1/2	.5000	38.36
33/64	.5156	49.83
17/32	.5312	49.83
35/64	.5469	52.64
9/16	.5625	52.64
37/64	.5781	55.37
19/32	.5938	55.37
39/64	.6094	59.17
5/8	.6250	59.17
41/64	.6406	64.68
21/32	.6562	64.68
43/64	.6719	68.64
11/16	.6875	68.64
45/64	.7031	71.94
23/32	.7188	71.94
47/64	.7344	75.90
3/4	.7500	75.90
49/64	.7656	82.50
25/32	.7812	82.50
51/64	.7969	86.13
13/16	.8125	86.13
53/64	.8281	94.38
27/32	.8438	94.38
55/64	.8594	97.68
7/8	.8750	97.68
57/64	.8906	106.26
29/32	.9062	106.26
59/64	.9219	110.88
15/16	.9375	110.88
61/64	.9531	114.84
31/32	.9688	114.84
63/64	.9844	118.14
1	1.0000	118.14

15" Overall Length

List No. **215** – 11" Flute Length



Size	Decimal Equivalent	Price Each
3/16	.1875	42.75
7/32	.2188	42.75
15/64	.2344	44.10
1/4	.2500	44.10
9/32	.2812	49.50
5/16	.3125	52.02
11/32	.3438	53.73
3/8	.3750	56.12
13/32	.4062	58.75
11mm	.4331	66.42
7/16	.4375	61.20
29/64	.4531	66.60
15/32	.4688	66.60
1/2	.5000	71.69
17/32	.5312	79.92
9/16	.5625	82.91
19/32	.5938	85.68
5/8	.6250	88.00
21/32	.6562	99.86
11/16	.6875	110.66
23/32	.7188	121.86
3/4	.7500	134.10
25/32	.7812	139.64
51/64	.7969	157.16
13/16	.8125	169.31
7/8	.8750	169.31
1	1.0000	185.17

18" Overall Length

List No. **218** – 12" Flute Length



Size	Decimal Equivalent	Price Each
7/64	.1094	58.05
1/8	.1250	58.05
5/32	.1562	58.05
3/16	.1875	53.87
13/64	.2031	53.87
7/32	.2188	58.05
15/64	.2344	58.05
1/4	.2500	58.05
17/64	.2656	58.05
9/32	.2812	62.91
19/64	.2969	62.91
5/16	.3125	64.94
21/64	.3281	71.82
11/32	.3438	71.82
23/64	.3594	71.82
3/8	.3750	71.82
25/64	.3906	76.50
13/32	.4062	76.50
27/64	.4219	79.65
11 mm	.4331	85.00
7/16	.4375	79.65
29/64	.4531	85.50
15/32	.4688	85.50
31/64	.4844	89.10
1/2	.5000	89.10
33/64	.5156	109.44
17/32	.5312	109.44
35/64	.5469	111.60
9/16	.5625	111.60
37/64	.5781	114.21
19/32	.5938	114.21
39/64	.6094	115.88
5/8	.6250	115.88
41/64	.6406	130.50
21/32	.6562	130.50
43/64	.6719	138.60
11/16	.6875	138.60
45/64	.7031	151.20
23/32	.7188	151.20
47/64	.7344	160.02
3/4	.7500	160.02
49/64	.7656	175.50
25/32	.7812	175.50
51/64	.7969	184.50
13/16	.8125	184.50
53/64	.8281	196.20
27/32	.8438	196.20
55/64	.8594	202.50
7/8	.8750	202.50
57/64	.8906	208.80
29/32	.9062	208.80
59/64	.9219	216.00
15/16	.9375	216.00
61/64	.9531	225.00
31/32	.9688	225.00
63/64	.9844	234.00
1	1.0000	234.00
1-1/8	1.1250	259.20
1-3/16	1.1875	279.00
1-1/4	1.2500	324.00

Extra Length Drills



High Speed Steel – 118° Point

These drills are utilized in deep hole or long reach drilling applications in many kinds of materials. For fixed spindle use.

High Speed

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MICHIGAN DRILL & CUTTING TOOLS

24" Overall Length

List No. **224** – 18" Flute Length

Extensive Offering | Exclusively from Michigan Drill

The world's largest and most extensive inventory of **USA manufactured** extra long straight shank drills!

Size	Decimal Equivalent	Price Each
1/4	.2500	89.10
5/16	.3125	92.70
3/8	.3750	95.40
13/32	.4062	110.00
7/16	.4375	121.50
1/2	.5000	126.36
9/16	.5625	185.00
19/32	.5938	198.00
39/64	.6094	198.00
5/8	.6250	198.00
21/32	.6562	225.00
11/16	.6875	235.71
3/4	.7500	252.59
25/32	.7812	278.24
13/16	.8125	281.49
27/32	.8438	293.76
7/8	.8750	301.86
15/16	.9375	314.82
31/32	.9688	320.00
1	1.0000	324.23
1-1/16	1.0625	342.00
1-1/8	1.1250	349.43
1-3/16	1.1875	369.00
1-1/4	1.2500	450.45

48" Overall Length



List No. **248** – 5-1/2" Flute Length

Size	Decimal Equivalent	Price Each
1/4	.2500	74.70
5/16	.3125	80.10
3/8	.3750	89.10
7/16	.4375	100.80
1/2	.5000	111.60
9/16	.5625	148.50
5/8	.6250	158.40
11/16	.6875	179.10
3/4	.7500	216.00

Sizes 9/16" and larger come with 1/2" reduced shank.

1/2" Shank Extra Length Drills



List No. **212X** – 12" OAL, 9" FLT

List No. **218X** – 18" OAL, 12" FLT

Size	Decimal Equivalent	Price Each	
		12" OAL 212X	**18" OAL** 218X
33/64	.5156	74.16	117.90
17/32	.5312	74.16	117.90
35/64	.5469	78.75	120.60
9/16	.5625	78.75	120.60
37/64	.5781	82.35	124.65
19/32	.5938	82.35	124.65
39/64	.6094	89.10	126.00
5/8	.6250	89.10	126.00
41/64	.6406	99.00	141.30
21/32	.6562	99.00	141.30
43/64	.6719	103.50	148.50
11/16	.6875	103.50	148.50
45/64	.7031	108.90	162.90
23/32	.7188	108.90	162.90
47/64	.7344	116.10	170.10
3/4	.7500	116.10	170.10
49/64	.7656	121.50	186.30
25/32	.7812	121.50	186.30
51/64	.7969	130.95	196.20
13/16	.8125	130.95	196.20
53/64	.8281	144.00	—
27/32	.8438	144.00	206.10
55/64	.8594	146.70	214.20
7/8	.8750	146.70	214.20
57/64	.8906	157.50	220.50
29/32	.9062	157.50	220.50
59/64	.9219	162.00	229.50
15/16	.9375	162.00	238.50
61/64	.9531	171.00	243.00
31/32	.9688	171.00	243.00
63/64	.9844	175.50	243.00
1	1.0000	175.50	256.50
1-1/4	1.2500	228.15	—

Sets

Sizes	OAL	Description	Pcs.	Set No.	Price Each
1/8" to 3/8" by 64ths	8"	H.S. Straight Shank	17	**208ES**	293.24
3/16" to 1/2" by 64ths	10"	H.S. Straight Shank	21	**208BES**	529.18
1/8" to 1/2" by 64^{ths}	12"	H.S. Straight Shank	25	**212ES**	681.46
17/32" to 1" by 32^{nds}	12"	H.S. 1/2" Shank	16	**212XES**	1981.00
3/16" to 1/2" by 32^{nds}	18"	H.S. Straight Shank	11	**218ES**	782.21
17/32" to 1" by 32^{nds}	18"	H.S. 1/2" Shank	16	**218XES**	2893.25

All sets are supplied in Metal Stand



Metric Extra Length Drills

High Speed Steel – 118° Point



High Speed | MADE IN USA | MICHIGAN DRILL & CUTTING TOOLS

12" Overall Length

List No. **212M**– 9" Flute Length

Extensive Offering | Exclusively from Michigan Drill

The world's largest and most extensive inventory of **USA manufactured** extra long straight shank drills!

Size	Decimal Equivalent	Price Each
3.00	.1181	29.88
4.00	.1575	32.31
5.00	.1969	35.60
6.00	.2362	37.13
6.50	.2559	38.33
7.00	.2756	38.33
8.00	.3150	41.90
8.50	.3346	43.20
9.00	.3543	43.20
9.20	.3622	45.00
9.50	.3740	45.00
10.00	.3937	47.16
10.50	.4134	50.94
11.00	.4331	53.10
12.00	.4724	58.95
13.00	.5118	74.48
13.80	.5433	80.10
14.00	.5512	80.10
15.00	.5906	85.05
16.00	.6299	97.20
17.00	.6693	102.60
17.50	.6890	116.55
20.00	.7874	130.50
22.50	.8858	161.10

Sets

Sizes	OAL	Pcs.	Set No.	Price Each
3.00, 4.00, 5.00, 6.00, 7.00, 8.00, 9.00, 10.00, 11.00, 12.00	12"	10	**212MS**	420.00

All sets are supplied in Metal Stand



Cobalt Extra Length Drills

Straight Shank, 135° Split Point



List No. **208C** – 8" OAL, 5-1/2" FLT
List No. **212C** – 12" OAL, 9" FLT

Cobalt drills are used in drilling tough, high tensile strength materials like Stainless Steels, Titanium, and Inconel.

Cobalt | MADE IN USA | MICHIGAN DRILL & CUTTING TOOLS

Size	Decimal Equivalent	Price Each 8" OAL 208C	Price Each 12" OAL 212C
3/32	.0938	35.55	—
7/64	.1094	32.40	—
1/8	.1250	32.40	40.50
9/64	.1406	34.20	43.25
5/32	.1562	34.20	43.25
11/64	.1718	35.78	44.10
3/16	.1875	35.78	44.10
13/64	.2031	36.50	48.60
7/32	.2188	37.62	48.60
1/4	.2500	37.62	48.60
17/64	.2656	38.70	55.80
9/32	.2812	42.30	55.80
19/64	.2969	43.20	56.70
5/16	.3125	43.20	56.70
11/32	.3438	50.54	62.10
3/8	.3750	50.54	62.10
13/32	.4062	53.46	64.80
27/64*	.4219	58.50	69.30
7/16	.4375	58.50	69.30
1/2	.5000	65.00	80.10
17/32	.5312	—	103.50
9/16	.5625	—	108.00
5/8	.6250	—	121.50
43/64	.6719	—	142.20
11/16	.6875	—	142.20
3/4	.7500	—	155.70

* Available in 9" OAL. Price: $85.00

Sets

Sizes	OAL	Description	Pcs.	Set No.	Price Each
1/8" to 3/8" by 16^{ths}	8"	Cobalt Straight Shank	5	**208CS**	209.50
1/8" to 1/2" by 16^{ths}	12"	Cobalt Straight Shank	7	**212CS**	414.80

All sets are supplied with wood block



Reduced Shank Drills

High Speed Steel & Cobalt





1/2" Standard Shank - Silver & Deming

List No. **303** – High Speed Steel, 118° Point
List No. **303C** – Cobalt, 135° Notched Point
Heavy web permits use at higher speeds in hardened stainless, heat treated and high temperature alloys.

1/2" Flatted Shank - Silver & Deming

3-Equal flats for positive more rigid Holding in 3-jaw chucks
List No. **303F** – High Speed Steel, 118° Point
List No. **303CF** – Cobalt, 135° Notched Point

Fractional Sizes

6" Overall Length, 3" Flute Length

Size	Dec. Equiv.	Price Each			
		Standard Shank		Flatted Shank	
		H.S. 303	Cobalt 303C	H.S. 303F	Cobalt 303CF
5/16	.3125	16.17	—	—	—
3/8	.3750	16.17	—	—	—
29/64	.4531	16.17	—	—	—
15/32	.4688	16.17	—	—	—
1/2	.5000	18.81	33.93	25.66	39.33
33/64	.5156	18.81	41.94	26.77	47.34
17/32	.5312	19.64	41.94	27.45	46.98
35/64	.5469	19.86	43.38	28.46	48.78
9/16	.5625	19.86	43.38	27.68	48.78
37/64	.5781	21.33	46.44	30.57	51.84
19/32	.5938	21.33	46.44	29.74	51.84
39/64	.6094	22.35	49.37	30.35	54.77
5/8	.6250	22.35	49.37	30.35	54.77
41/64	.6406	23.85	55.40	31.85	60.80
21/32	.6562	23.85	55.40	31.85	60.80
43/64	.6719	24.78	58.46	32.87	63.86
11/16	.6875	24.78	58.46	32.87	63.86
45/64	.7031	25.11	62.51	33.11	67.91
23/32	.7188	25.11	62.51	33.11	67.91
47/64	.7344	27.34	62.51	35.34	67.91
3/4	.7500	27.34	62.51	35.34	67.91
49/64	.7656	29.18	70.65	37.18	76.10
25/32	.7812	29.18	70.65	37.18	76.05
51/64	.7969	34.21	73.98	42.21	79.38
13/16	.8125	31.67	73.98	39.67	79.38
53/64	.8281	35.41	80.55	43.41	85.95
27/32	.8438	32.84	80.55	40.84	85.95
55/64	.8594	36.76	80.55	46.37	85.95
7/8	.8750	32.84	79.61	40.84	85.01
57/64	.8906	38.37	84.83	46.37	90.23
29/32	.9062	36.66	84.83	44.66	90.23
59/64	.9219	41.06	84.83	49.06	90.23
15/16	.9375	41.06	84.83	49.06	90.23
61/64	.9531	43.40	94.68	51.40	100.08
31/32	.9688	39.06	94.68	49.06	100.08
63/64	.9844	43.48	102.92	51.48	108.32
1	1.0000	42.50	102.92	50.59	108.32
1-1/64	1.0156	57.92	—	65.92	—
1-1/32	1.0312	57.92	131.72	65.92	137.12
1-3/64	1.0469	57.92	—	65.92	—
1-1/16	1.0625	49.44	142.16	57.44	147.56
1-5/64	1.0781	57.92	—	65.92	—
1-3/32	1.0938	57.92	151.97	65.92	157.37
1-7/64	1.1094	61.65	—	69.65	—
1-1/8	1.1250	58.22	161.73	66.22	167.13
1-9/64	1.1406	61.60	179.10	69.65	203.40
1-5/32	1.1562	64.40	169.65	72.40	175.05
1-11/64	1.1719	69.34	—	77.34	—
1-3/16	1.1875	64.49	177.39	72.49	182.79
1-13/64	1.2031	70.86	—	78.86	—
1-7/32	1.2188	70.86	186.93	78.86	192.33
1-15/64	1.2344	82.16	—	90.16	—
1-1/4	1.2500	70.86	196.47	78.86	201.87
1-17/64	1.2656	98.00	—	106.00	—
1-9/32	1.2812	98.00	277.43	106.00	282.83
1-19/64	1.2969	106.00	—	114.00	—
1-5/16	1.3125	106.00	277.43	114.00	282.83
1-21/64	1.3281	106.00	—	114.00	—
1-11/32	1.3438	106.00	281.48	114.00	286.88
1-23/64	1.3594	107.50	—	115.50	—
1-3/8	1.3750	106.00	281.48	114.00	286.88
1-25/64	1.3906	116.24	—	124.24	—
1-13/32	1.4062	112.27	304.16	120.27	309.56
1-27/64	1.4219	119.83	—	127.83	—
1-7/16	1.4375	124.30	304.16	132.73	309.56
1-29/64	1.4531	124.30	—	132.73	—
1-15/32	1.4688	130.39	310.23	138.39	315.63
1-31/64	1.4844	130.39	—	138.39	—
1-1/2	1.5000	139.44	310.23	147.44	315.63
1-9/16	1.5265	208.43	—	218.43	—
1-5/8	1.6250	250.00	—	260.00	—
1-3/4	1.7500	280.00	—	290.00	—

** 3/4" and larger are furnished with notched point.*





Fractional Sets

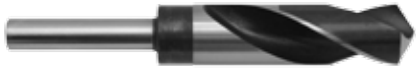
Sizes	Pcs.	Shank	Holder Type	High Speed Steel		Cobalt	
				Set No.	Price Each	Set No.	Price Each
9/16" – 1" by 16ths	8	Standard	Metal Index	303SA	278.43	303CA	591.06
9/16" – 1" by 16ths	8	Flatted	Metal Index	303FSA	342.40	303FCA	634.26
14.00, 15.00, 16.00, 17.00, 18.00, 20.00, 22.00, 24.00	8	Standard	Wood Block	303M8	366.76	—	—
1-1/16" – 1-1/2" by 16ths	8	Standard	Wood Block	303SB	728.70	303CB	1863.05
1-1/16" – 1-1/2" by 16ths	8	Flatted	Wood Block	303FSB	793.13	303FCB	1906.25
9/16" – 1" by 16ths, 1-1/8" and 1-1/4"	10	Standard	Wood Block	303SJ	385.48	303CS	927.26
9/16" – 1" by 16ths, 1-1/8" and 1-1/4"	10	Flatted	Wood Block	303FSJ	465.48	303FCS	1000.00
17/32" – 3/4" by 32nds, 13/16", 7/8", 15/16", 31/32" and 1"	13	Standard	Wood Block	303SD	385.39	303CD	870.03
17/32" – 3/4" by 32nds, 13/16", 7/8", 15/16", 31/32" and 1"	13	Flatted	Wood Block	303FSD	491.61	303FCD	994.00
33/64 – 1" by 64ths	32	Standard	Wood Block	303SE	978.58	303CE	2208.56
1/2" – 1" by 64ths	33	Standard	Metal Stand	303SG	1017.68	303CG	2262.49
1/2" – 1" by 64ths	33	Flatted	Metal Stand	303SF	1286.25	303FCG	2440.38

Silver & Deming Drills

High Speed Steel

Metric 1/2" Shank *6" overall with 3" flute length*

List No. **303M** – High Speed Steel, 118° Point



Size	Decimal Equivalent	Price Each
13.00	.5118	30.60
13.50	.5315	31.05
14.00	.5512	32.40
14.50	.5709	33.75
15.00	.5906	34.65
15.50	.6102	34.65
15.75	.6201	37.35
16.00	.6299	37.35
16.50	.6496	38.16
17.00	.6693	38.16
17.50	.6890	40.05
18.00	.7087	40.68
18.50	.7283	44.10
19.00	.7480	44.10
19.50	.7677	47.25

Size	Decimal Equivalent	Price Each
20.00	.7874	51.75
20.50	.8071	55.80
21.00	.8268	57.60
21.50	.8465	58.05
22.00	.8661	58.05
22.50	.8858	61.65
23.00	.9055	61.65
23.50	.9252	66.15
24.00	.9449	66.60
24.50	.9646	66.60
25.00	.9843	74.25
25.50	1.0039	89.10
26.00	1.0236	89.10
26.50	1.0433	90.90
27.00	1.0630	94.50

Size	Decimal Equivalent	Price Each
27.50	1.0827	94.50
28.00	1.1024	98.10
28.50	1.1220	98.10
29.00	1.1417	103.50
29.50	1.1614	107.10
30.00	1.1811	107.10
30.50	1.2007	111.60
31.00	1.2205	126.00
32.00	1.2598	152.55
33.00	1.2992	166.50
34.00	1.3386	172.80
35.00	1.3779	179.10
36.00	1.4173	193.50
37.00	1.4567	207.00
38.00	1.4961	213.30

Black & Gold 1/2" Shank *• 6" overall with 3" flute length • with 3 equal flats*

List No. **303B** – H.S., 135° Split Point up to 3/4"; Notched for larger sizes



Size	Decimal Equivalent	Price Each
17/32	.5312	29.48
35/64	.5469	30.51
9/16	.5625	29.73
19/32	.5938	31.76
5/8	.6250	32.39
21/32	.6562	33.90
11/16	.6875	34.89

Size	Decimal Equivalent	Price Each
23/32	.7188	35.16
3/4	.7500	37.39
25/32	.7813	39.23
13/16	.8125	41.72
27/32	.8438	42.89
7/8	.8750	42.89
29/32	.9063	46.71

Size	Decimal Equivalent	Price Each
15/16	.9375	51.09
31/32	.9688	51.09
1	1.0000	52.64
1-1/16	1.0625	59.49
1-1/8	1.1250	68.22
1-3/16	1.1875	74.54
1-1/4	1.2500	80.90

1/2" Standard Shank *6" overall with 3" flute length*

List No. **X303** – High Speed Steel, 118° Point

Size	Decimal Equivalent	Price Each
33/64	.5156	8.91
17/32	.5313	8.91
35/64	.5469	9.83
9/16	.5625	9.83
37/64	.5781	10.58
19/32	.5938	10.58
39/64	.6094	11.04
5/8	.6250	11.04
41/64	.6406	11.86
21/32	.6563	11.86
43/64	.6719	12.47
11/16	.6875	12.47
45/64	.7031	12.67
23/32	.7188	12.67
47/64	.7344	13.40
3/4	.7500	13.40
49/64	.7656	14.43
25/32	.7813	14.43
51/64	.7969	15.05
13/16	.8125	15.05
53/64	.8281	15.84
27/32	.8438	15.84

Size	Decimal Equivalent	Price Each
55/64	.8594	16.04
7/8	.8750	16.04
57/64	.8906	17.34
29/32	.9063	17.34
59/64	.9219	17.99
15/16	.9375	17.99
61/64	.9531	19.40
31/32	.9688	19.40
63/64	.9844	21.34
1	1.0000	21.34
1-1/64	1.0156	24.95
1-1/32	1.0312	25.52
1-3/64	1.0469	25.52
1-1/16	1.0625	25.52
1-5/64	1.0781	26.18
1-3/32	1.0938	27.30
1-7/64	1.1094	27.72
1-1/8	1.1250	28.69
1-9/64	1.1406	28.69
1-5/32	1.1562	28.69
1-11/64	1.1719	31.22
1-3/16	1.1875	31.50

Size	Decimal Equivalent	Price Each
1-13/64	1.2031	33.13
1-7/32	1.2188	34.23
1-15/64	1.2344	34.23
1-1/4	1.2500	34.23
1-17/64	1.2656	39.38
1-9/32	1.2812	39.38
1-19/64	1.2969	42.02
1-5/16	1.3125	42.02
1-21/64	1.3281	45.74
1-11/32	1.3438	45.74
1-23/64	1.3594	47.98
1-3/8	1.3750	47.98
1-25/64	1.3906	49.90
1-13/32	1.4062	49.90
1-27/64	1.4219	53.31
1-7/16	1.4375	53.31
1-29/64	1.4531	55.02
1-15/32	1.4686	55.02
1-31/64	1.4844	58.01
1-1/2	1.5000	58.01
1-15/16	1.9375	168.00

1/2" MDX Sets

Sizes	Pcs.	Set No.	Price
9/16 – 1" by 16ths	8	**X303SA**	123.35
1-1/16 – 1-1/2" by 16ths	8	**X303SB**	328.38
17/32 – 3/4" by 32nds, 13/16 – 1" by 16ths, & 31/32	13	**X303SD**	186.57
33/64 – 1" by 64ths	32	**X303SE**	467.65

All sets are supplied in wood stand



Reduced Shank Drills

High Speed Steel & Cobalt



1/4" Shank – Metal Working

List No. **304** – High Speed Steel, 118° Point
List No. **304P** – High Speed Steel, 135° Split Point

Size	Dec. Equiv.	Price Each 118° Point 304	Price Each 135° Split 304P
17/64	.2656	5.26	5.79
9/32	.2812	5.26	5.79
19/64	.2969	5.81	6.39
5/16	.3125	5.45	6.00
P	.3230	8.75	—
21/64	.3281	6.30	6.93

Size	Dec. Equiv.	Price Each 118° Point 304	Price Each 135° Split 304P
Q	.3320	9.40	—
11/32	.3438	6.24	6.86
23/64	.3594	7.59	8.35
3/8	.3750	6.99	7.69
25/64	.3906	8.91	9.80
13/32	.4062	8.13	8.94

Size	Dec. Equiv.	Price Each 118° Point 304	Price Each 135° Split 304P
27/64	.4219	9.57	10.53
7/16	.4375	9.11	10.02
29/64	.4531	12.67	13.94
15/32	.4688	10.40	11.44
31/64	.4844	12.87	14.16
1/2	.5000	10.80	11.88

Maintenance 1/4" Shank

List No. **X304** – High Speed Steel, 118° Point

Size	Decimal Equivalent	Price Each
17/64	.2656	3.63
9/32	.2812	4.13
19/64	.2969	4.13
5/16	.3125	4.13
21/64	.3281	4.43
11/32	.3438	4.90

Size	Decimal Equivalent	Price Each
23/64	.3594	5.22
3/8	.3750	5.26
25/64	.3906	6.24
13/32	.4062	5.69
27/64	.4219	6.70
7/16	.4375	6.38

Size	Decimal Equivalent	Price Each
29/64	.4531	7.95
15/32	.4688	7.28
31/64	.4844	8.09
1/2	.5000	7.56

3/8" Shank – Metal Working

List No. **308** – H.S., 118° Point
List No. **308B** – H.S., 118° Notched Point
List No. **308PF** – Parabolic Flute H.S., 135° Split Point
List No. **X308** – MDX SUPERIOR IMPORT H.S. Import
List No. **308T** – TiN Coated, 135° Split Point
List No. **308C** – Cobalt, 135° Notched Point



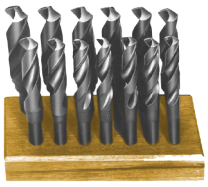
Size	Price Each H.S. 308	Notched 308B	Parabolic 308PF	H.S. X308	TiN 308T	Cobalt 308C
25/64	9.17	13.75	16.51	6.75	19.81	22.46
13/32	9.17	13.75	16.51	6.75	19.81	22.95
27/64	9.81	14.72	17.66	7.50	20.45	26.30
7/16	9.20	13.80	—	7.50	19.84	26.91
29/64	11.64	17.45	—	9.00	22.28	29.16
15/32	11.21	16.82	20.18	9.00	21.85	29.66
31/64	11.64	17.45	20.95	9.50	22.28	30.15
1/2	10.91	16.36	19.64	9.50	21.55	30.15
33/64	20.26	—	—	—	—	45.45
17/32	20.26	—	—	13.50	—	47.25
35/64	22.90	—	—	—	—	48.56
9/16	21.55	31.50	—	14.80	—	48.56

Size	Price Each H.S. 308	Notched 308B	H.S. X308	Cobalt 308C
37/64	24.75	—	—	48.56
19/32	22.77	—	16.70	50.64
39/64	27.85	—	—	52.60
5/8	25.59	32.00	18.00	52.60
41/64	28.02	—	19.95	—
21/32	28.02	—	19.95	56.80
43/64	29.05	—	—	—
11/16	29.05	37.00	21.00	58.73
45/64	29.56	—	—	61.30
23/32	29.56	—	21.00	61.30
47/64	31.89	—	—	62.77
3/4	33.20	39.00	23.50	62.77

3/8" Shank Sets

Sizes	Description	Pieces	Set No.	Price
1/16" – 3/8" and 25/64" – 1/2" by 64ths	H.S. 3/8" Shank	29	**308A**	164.60
3/8, 13/32, 7/16, 15/32, 1/2, 17/32, 9/16, 5/8	H.S. 3/8" Shank	8	**308D**	119.04
1/4" Reduced Shank	118° Point	29	**304A**	151.80

All sets are supplied in wood block



1/2" Shank – Hole Enlarging Core Drill

List No. **422R** – 2" Flute Length, 4 Flute 4" Overall Length

Size	Decimal Equivalent	Price Each
9/16	.5625	39.00
9/16*	.5625	49.00
5/8	.6250	49.00
11/16	.6875	59.00
23/32	.7188	65.00

Size	Decimal Equivalent	Price Each
3/4	.7500	70.00
13/16	.8125	78.00
7/8	.8750	82.00
15/16	.9375	89.00
1	1.0000	97.00

Size	Decimal Equivalent	Price Each
1-1/16	1.0625	100.00
1-1/8	1.1250	109.00
1-3/16	1.1875	112.00
1-1/4	1.2500	115.00
1-1/2	1.5000	230.00

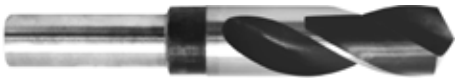


** 4-7/8 Overall Length*

3/4" Reduced Shank Drills

High Speed Steel & Cobalt

All Sizes 6" overall with 3" flute length



Boring Mill & Screw Machine

List No. **306** – High Speed Steel, 118° Point
List No. **306C** – Cobalt, 135° Notched Point

Size	Decimal Equivalent	Price Each H.S. 306	Price Each Cobalt 306C
25/32	.7812	50.74	74.25
13/16	.8125	53.17	77.13
53/64	.8281	62.92	—
27/32	.8438	57.20	81.63
55/64	.8594	65.13	—
7/8	.8750	59.21	84.96
57/64	.8906	67.23	—
29/32	.9062	61.12	92.88
59/64	.9219	72.06	—
15/16	.9375	65.51	99.45
61/64	.9531	74.83	—
31/32	.9688	68.03	105.03
63/64	.9844	76.41	—
1	1.0000	69.51	109.08
1-1/64	1.0156	91.48	—
1-1/32	1.0312	83.16	140.04
1-3/64	1.0469	91.48	—
1-1/16	1.0625	83.16	148.62
1-5/64	1.0781	97.53	—
1-3/32	1.0938	88.66	160.74
1-7/64	1.1094	102.02	—
1-1/8	1.1250	92.74	166.61
1-9/64	1.1406	103.97	—
1-5/32	1.1562	94.52	173.00
1-11/64	1.1719	114.14	—
1-3/16	1.1875	103.76	189.05
1-13/64	1.2031	123.40	—
1-7/32	1.2188	112.18	193.86
1-15/64	1.2344	125.84	—

Size	Decimal Equivalent	Price Each H.S. 306	Price Each Cobalt 306C
1-1/4	1.2500	114.40	202.68
1-17/64	1.2656	141.50	—
1-9/32	1.2812	128.64	281.03
1-19/64	1.2968	147.07	—
1-5/16	1.3125	133.70	281.03
1-11/32	1.3438	142.50	283.50
1-3/8	1.3750	148.03	283.50
1-13/32	1.4062	156.40	306.27
1-7/16	1.4375	164.96	306.27
1-15/32	1.4688	171.83	315.54
1-1/2	1.5000	194.39	315.54
1-17/32	1.5312	213.05	—
1-9/16	1.5625	208.43	346.50
1-19/32	1.5938	247.84	—
1-5/8	1.6250	231.75	387.00
1-21/32	1.6562	283.55	—
1-11/16	1.6875	265.84	394.34
1-23/32	1.7188	294.16	—
1-3/4	1.7500	268.72	449.91
1-25/32	1.7812	319.91	—
1-13/16	1.8125	301.16	494.82
1-27/32	1.8438	327.61	—
1-7/8	1.8750	307.65	517.29
1-29/32	1.9062	343.75	—
1-15/16	1.9375	323.30	539.72
1-31/32	1.9688	366.36	—
1-63/64	1.9844	366.36	—
2	2.0000	335.54	575.64
2-3/8	2.3750	375.00	—

3/4" Shank Sets

Sizes	Description	Pieces	Set No.	Price
1", 1-1/8, 1-1/4, 1-3/8, 1-1/2	H.S. 3/4" Shank	5	**306A**	562.50
1", 1-1/4, 1-1/2, 1-3/4, 2"	H.S. 3/4" Shank	5	**306B**	989.54
1", 1-1/8, 1-1/4, 1-3/8, 1-1/2	Cobalt 3/4" Shank	5	**306D**	1084.39
1", 1-1/4, 1-1/2, 1-3/4, 2"	Cobalt 3/4" Shank	5	**306E**	1665.81

All sets are supplied in wood block



Maintenance 3/4" Shank

All Sizes 6" overall with 3" flute length

List No. **X306** – High Speed Steel, 118° Point

Size	Decimal Equivalent	Price Each
25/32	.7812	19.53
13/16	.8125	21.14
27/32	.8438	21.14
7/8	.8750	23.52
29/32	.9062	23.87
15/16	.9375	26.25
31/32	.9688	27.55
1	1.0000	29.54
1-1/32	1.0312	36.05
1-1/16	1.0625	37.09
1-3/32	1.0938	38.99
1-7/64	1.1094	42.50
1-1/8	1.1250	39.22
1-5/32	1.1562	41.86
1-3/16	1.1875	41.86
1-13/64	1.2031	69.00

Size	Decimal Equivalent	Price Each
1-7/32	1.2188	45.55
1-1/4	1.2500	52.85
1-17/64	1.2656	65.00
1-9/32	1.2812	57.85
1-5/16	1.3125	58.73
1-11/32	1.3438	65.52
1-23/64	1.3594	79.00
1-3/8	1.3750	66.43
1-13/32	1.4062	72.80
1-7/16	1.4375	73.29
1-29/64	1.4531	92.00
1-15/32	1.4688	77.77
1-1/2	1.5000	80.07
1-17/32	1.5312	93.59
1-9/16	1.5625	95.57
1-19/32	1.5938	97.02

Size	Decimal Equivalent	Price Each
1-39/64	1.6094	115.00
1-5/8	1.6250	99.38
1-21/32	1.6562	108.50
1-43/64	1.6719	137.00
1-11/16	1.6875	110.00
1-45/64	1.7031	138.00
1-23/32	1.7188	116.69
1-3/4	1.7500	118.00
1-25/32	1.7812	124.32
1-13/16	1.8125	138.88
1-27/32	1.8438	129.43
1-7/8	1.8750	130.59
1-29/32	1.9062	140.07
1-15/16	1.9375	142.00
1-31/32	1.9688	145.53
2	2.0000	155.00

Threaded Shank Adapter Drills

MADE IN USA

MICHIGAN DRILL & CUTTING TOOLS

High Speed Steel & Cobalt

NAS 965 High Speed Cobalt

1/4-28 Threaded Shank – 135° Split Point

National Aerospace Standard (NAS965).
Generally used in portable angle drilling tools, or offset drills and allow access to space-restricted areas. Threading provides a secure fit in the tool holder.



Stub Series

List No. **602** – High Speed Steel
List No. **602C** – Cobalt

Size	Decimal Equivalent	Flute Length	Overall Length*	Price Each H.S. 602	Price Each Cobalt 602C
58	.0420	1/4	1/2	5.62	—
57	.0430	5/16	1/2	5.62	—
54	.0550	5/16	1/2	5.62	—
53	.0595	5/16	1/2	5.62	—
50	.0700	5/16	1/2	5.62	6.23
40	.0980	5/16	1/2	4.52	5.50
1/8	.1250	5/16	1/2	4.64	5.62
30	.1285	5/16	9/16	4.76	5.74
29	.1360	5/16	9/16	4.82	5.80
28	.1405	5/16	9/16	4.82	5.80
27	.1440	5/16	9/16	4.88	5.86
5/32	.1562	5/16	9/16	4.88	5.86
21	.1590	5/16	9/16	4.88	5.86
20	.1610	5/16	9/16	4.88	5.86
19	.1660	5/16	9/16	—	5.86
18	.1690	5/16	9/16	4.88	—
17	.1730	5/16	9/16	5.25	—
16	.1770	5/16	9/16	5.50	6.47
13	.1850	5/16	9/16	—	6.59
3/16	.1875	5/16	9/16	5.74	6.72
12	.1890	5/16	9/16	5.80	6.78
11	.1910	5/16	9/16	5.86	6.84
10	.1935	5/16	9/16	5.86	6.84
9	.1960	5/16	5/8	5.95	—
7	.2010	5/16	5/8	—	6.96
6	.2040	5/16	5/8	5.98	6.96
5	.2055	5/16	5/8	5.98	6.96
3	.2130	5/16	5/8	6.04	7.02
7/32	.2188	5/16	5/8	6.11	7.08
15/64	.2344	5/16	5/8	—	7.69
1/4	.2500	5/16	5/8	6.72	7.94
6.40mm	.2520	5/16	5/8	6.96	—
F	.2570	5/16	5/8	7.02	8.31
17/64	.2656	5/16	5/8	7.60	—
9/32	.2812	5/16	5/8	—	10.01
5/16	.3125	5/16	5/8	12.20	—
21/64	.3281	5/16	5/8	13.74	18.32
11/32	.3438	5/16	5/8	—	18.56

** O.A.L. Not including threads*

Short Series

List No. **603** – High Speed Steel
List No. **603C** – Cobalt



Size	Decimal Equivalent	Flute Length	Overall Length*	Price Each H.S. 603	Price Each Cobalt 603C
60	.0400	9/16	1	5.62	—
1/16	.0625	9/16	1	5.62	—
52	.0635	9/16	1	5.62	—
50	.0700	9/16	1	5.62	6.11
5/64	.0781	9/16	1	5.62	—
42	.0935	9/16	1	5.62	—
3/32	.0938	9/16	1	5.62	—
41	.0960	9/16	1	5.13	—
40	.0980	9/16	1	4.52	5.50
39	.0995	9/16	1	4.58	—
38	.1015	9/16	1	4.58	—
36	.1065	9/16	1	4.58	5.56
7/64	.1094	9/16	1	4.58	—
35	.1100	9/16	1	4.58	—
32	.1160	9/16	1	4.64	—
31	.1200	9/16	1	4.64	—
1/8	.1250	9/16	1	4.64	5.62
30	.1285	9/16	1-1/4	4.76	5.74
29	.1360	9/16	1-1/4	4.82	5.80
28	.1405	9/16	1-1/4	4.82	5.80
9/64	.1406	9/16	1-1/4	4.82	5.80
27	.1440	9/16	1-1/4	4.88	5.86
26	.1470	9/16	1-1/4	4.88	5.86
24	.1520	9/16	1-1/4	4.88	—
5/32	.1562	9/16	1-1/4	4.88	5.86
22	.1570	9/16	1-1/4	4.88	5.86
21	.1590	9/16	1-1/4	4.88	5.86
20	.1610	9/16	1-1/4	4.88	5.86
19	.1660	9/16	1-1/4	5.01	5.98
18	.1695	9/16	1-1/4	5.50	—
11/64	.1719	9/16	1-1/4	5.50	6.59
17	.1730	9/16	1-1/4	5.56	6.72
16	.1770	9/16	1-1/4	5.62	6.78
15	.1800	9/16	1-1/4	5.92	—
4.60mm	.1811	9/16	1-1/4	6.00	—
14	.1820	9/16	1-1/4	5.92	—
13	.1850	9/16	1-1/4	5.92	6.84
3/16	.1875	9/16	1-1/4	5.98	7.14
12	.1890	9/16	1-1/4	6.11	7.14
11	.1910	9/16	1-1/4	6.11	7.14
10	.1935	9/16	1-1/4	6.11	7.14
9	.1960	9/16	1-1/4	6.23	7.33
8	.1990	9/16	1-1/4	6.29	7.39
6	.2040	9/16	1-1/4	6.35	7.45
5	.2055	9/16	1-1/4	6.41	7.51
7/32	.2188	9/16	1-1/4	6.53	7.76
2	.2210	9/16	1-1/4	6.72	—
1	.2280	9/16	1-1/4	6.72	7.81
15/64	.2344	9/16	1-1/4	6.96	8.43
B	.2380	9/16	1-1/4	7.33	8.79
C	.2420	9/16	1-1/4	7.45	—
D	.2460	9/16	1-1/4	7.45	9.65
1/4	.2500	9/16	1-1/4	7.57	9.65
F	.2570	9/16	1-1/4	7.94	9.77
G	.2610	9/16	1-1/4	8.55	9.89
H	.2660	9/16	1-1/4	8.55	9.89
J	.2770	9/16	1-1/4	9.16	—
9/32	.2812	9/16	1-1/4	9.16	10.99
5/16	.3125	9/16	1-1/4	—	18.00
O	.3160	9/16	1-1/4	17.09	—
21/64	.3281	9/16	1-1/4	14.89	19.54
11/32	.3438	9/16	1-1/4	15.99	19.66
3/8	.3750	9/16	1-1/4	16.12	20.15

** O.A.L. Not including threads*

Threaded Shank Adapter Drills

High Speed Steel & Cobalt

1/4-28 Threaded Shank – 135° Split Point

MADE IN USA · MICHIGAN DRILL & CUTTING TOOLS · NAS 965 · High Speed · Cobalt

Long Series **2-1/8"** Overall Length*

List No. **604** – High Speed Steel
List No. **604C** – Cobalt



Size	Decimal Equivalent	Flute Length	Price Each H.S. 604	Price Each Cobalt 604C
1/16	.0625	7/8	6.47	7.39
50	.0700	7/8	6.47	7.39
49	.0730	7/8	6.47	—
48	.0760	7/8	6.47	—
5/64	.0781	7/8	6.47	7.39
46	.0810	7/8	6.86	—
45	.0820	7/8	6.86	—
43	.0890	7/8	6.86	—
42	.0935	7/8	6.86	—
3/32	.0938	7/8	6.86	—
41	.0960	7/8	6.86	—
40	.0980	7/8	4.95	6.07
39	.0995	7/8	5.15	—
38	.1015	7/8	5.15	6.20
7/64	.1094	7/8	5.15	6.20
35	.1100	7/8	5.15	—
34	.1110	7/8	5.21	—
33	.1130	7/8	5.28	—
32	.1160	7/8	5.28	—
31	.1200	7/8	5.41	—
1/8	.1250	7/8	5.41	6.47
30	.1285	7/8	5.54	6.47
29	.1360	1-1/8	5.61	6.53
28	.1405	1-1/8	5.61	6.53
9/64	.1406	1-1/8	5.61	6.53
27	.1440	1-1/8	5.68	6.60
26	.1470	1-1/8	5.74	—
25	.1495	1-1/8	5.81	—
24	.1520	1-1/8	—	6.93
23	.1540	1-1/8	5.94	6.93
5/32	.1562	1-1/8	5.94	6.93
21	.1590	1-1/8	5.94	6.93
20	.1610	1-1/8	5.94	6.93
19	.1660	1-1/8	6.07	7.13
18	.1695	1-1/8	6.14	7.26
11/64	.1719	1-1/8	6.20	7.52
17	.1730	1-1/8	6.40	7.66
16	.1770	1-1/8	6.47	7.79
15	.1800	1-1/8	6.53	7.85
14	.1820	1-1/8	6.73	—
13	.1850	1-1/8	6.86	8.18
3/16	.1875	1-1/8	7.00	8.32
12	.1890	1-1/8	7.13	8.38
11	.1910	1-1/8	7.39	8.58
10	.1935	1-1/8	7.46	8.65
8	.1990	1-1/8	7.52	8.71
13/64	.2031	1-1/8	7.59	—
5	.2055	1-1/8	7.59	8.91
4	.2090	1-1/8	7.66	—
3	.2130	1-1/8	7.66	9.11
7/32	.2188	1-1/8	7.79	9.90
2	.2210	1-1/8	7.85	10.56
15/64	.2340	1-1/8	—	10.60
C	.2420	1-1/8	7.92	10.69
D	.2460	1-1/8	8.45	10.82
1/4	.2500	1-1/8	8.51	10.82
6.40mm	.2520	1-1/8	9.00	—
H	.2660	1-1/8	9.24	—
F	.2570	1-1/8	9.24	—
I	.2720	1-1/8	9.24	—
J	.2770	1-1/8	9.37	—
K	.2811	1-1/8	9.37	—
9/32	.2812	1-1/8	9.37	—
M	.2950	1-1/8	9.90	—
5/16	.3125	1-1/8	13.20	13.86
O	.3160	1-1/8	14.52	17.16
21/64	.3281	1-1/8	18.48	—
R	.3390	1-1/8	19.14	22.44
11/32	.3438	1-1/8	19.80	—
3/8	.3750	1-1/8	20.13	25.74
W	.3860	1-1/8	21.12	—

** O.A.L. Not including threads*

Extra Long Series **3"** Overall Length*

List No. **605** – High Speed Steel



Size	Decimal Equivalent	Flute Length	Price Each
3/32	.0938	1-1/4	11.56
30	.1285	1-5/8	8.20
5/32	.1562	2	9.75
20	.1610	2	8.91
3/16	.1875	2-5/16	10.22
11	.1910	2-5/16	10.22
7/32	.2188	2-5/16	11.50
F	.2570	2-5/16	12.80
19/64	.2969	2-5/16	20.10
5/16	.3125	2-5/16	21.26

** O.A.L. Not including threads*

10-32 Threaded Shank – 135° Split Point

List No. **609** – High Speed Steel



Size	Decimal Equivalent	Flute Length	Overall Length*	Price Each
11	.1910	9/16	1-1/4	6.60
20	.1610	9/16	1-1/4	5.28
20	.1610	1-1/4	2	5.95
30	.1285	1/2	1	4.60
30	.1285	9/16	1-1/4	5.16
1/8	.1250	3/4	1	5.02
40	.0980	1-3/8	1-15/16	4.97

** O.A.L. Not including threads*

Body Drills

High Speed Steel & Cobalt

Body Drills are intended primarily for use in hand held, air, or electric drill motors, in sheet metal, thin wall tubing, or any other shallow hole drilling. Because of their short flute design and heavy web construction, they are considerably more rigid and durable than Jobber or Screw Machine lengths. Breakage is significantly reduced or eliminated and tool life is greatly increased.

MADE IN USA · MICHIGAN DRILL & CUTTING TOOLS · High Speed · Cobalt

Single End

List No. **650S** – Style S, 135° Split Point

Used in hand or machine drilling without guide bushings, and where burring is not a problem. This point centers quickly and may be used successfully in tougher, harder materials.

List No. **650F** – Style F, Fishtail Point

Used in hand drilling thin material or machine drilling where the ratio of hole size to material thickness is very large, and where burr free holes are desired. A guide bushing must be used to center the drill point.



Size	Dec. Equiv.	Price Each 2" OAL Style S	2" OAL Style F	2-1/2" OAL Style S	2-1/2" OAL Style F	3" OAL Style S	3" OAL Style F
3/64	.0469	1.20	2.07	1.35	2.22	—	—
47	.0785	1.40	2.27	—	—	—	—
44	.0860	1.47	2.34	—	—	—	—
3/32	.0938	1.47	2.34	—	—	1.65	2.55
40	.0980	—	—	1.50	2.40	—	—
36	.1065	1.49	2.36	1.56	2.43	—	—
7/64	.1094	—	—	—	—	1.75	2.62
32	.1160	—	—	—	—	1.75	2.62
31	.1200	1.72	2.59	—	—	—	—
1/8	.1250	1.72	2.59	1.76	2.64	1.84	2.71
3.25	.1280	1.75	2.62	—	—	—	—
30	.1285	1.72	2.59	1.76	2.64	1.84	2.71
3.30mm	.1299	—	—	—	—	2.01	2.88
29	.1360	1.75	2.62	—	—	2.01	2.89
28	.1405	1.75	2.62	1.94	2.81	2.01	2.89
9/64	.1406	1.75	2.62	1.94	2.81	2.01	2.89
27	.1440	1.85	2.72	—	—	—	—
26	.1470	1.97	2.84	—	—	2.20	3.08
25	.1495	1.97	2.84	2.22	3.10	2.30	3.17
24	.1520	—	—	2.30	3.18	—	—
5/32	.1562	1.97	2.84	2.30	3.18	2.33	3.20
23	.1540	—	—	—	—	2.33	3.20
22	.1570	—	—	—	—	2.33	3.20
21	.1590	2.15	3.02	—	—	2.43	3.30
20	.1610	2.15	3.02	—	—	2.43	3.30
18	.1695	2.15	—	2.33	3.20	2.55	3.42

Size	Dec. Equiv.	Price Each 2" OAL Style S	2" OAL Style F	2-1/2" OAL Style S	2-1/2" OAL Style F	3" OAL Style S	3" OAL Style F	4" OAL Style S	4" OAL Style F
11/64	.1719	—	—	—	—	2.55	3.42	—	—
16	.1770	2.15	3.02	—	—	—	—	—	—
13	.1850	2.15	3.02	—	—	—	—	—	—
3/16	.1875	2.15	3.02	2.37	3.24	2.55	3.42	—	—
11	.1910	2.30	3.18	—	—	—	—	—	—
8	.1990	2.30	3.18	—	—	—	—	—	—
13/64	.2031	—	—	2.71	3.58	—	—	—	—
7/32	.2188	—	—	2.84	3.72	3.08	3.95	—	—
15/64	.2344	2.86	3.74	2.93	3.81	—	—	—	—
6.00mm	.2362	2.86	3.74	—	—	—	—	—	—
6.20mm	.2441	3.00	4.15	—	—	—	—	—	—
1/4	.2500	2.86	4.03	2.84	4.01	3.32	4.49	3.56	4.73
F	.2570	—	—	—	4.40	3.65	4.82	—	—
6.70mm	.2638	3.00	4.15	—	—	—	—	—	—
17/64	.2656	—	—	—	—	3.83	5.00	—	—
7.00mm	.2795	—	—	3.50	4.67	—	—	5.00	5.85
7.10mm	.2795	3.40	4.25	—	—	—	—	—	—
9/32	.2812	3.40	4.25	—	—	4.39	5.56	—	—
5/16	.3125	—	—	3.50	4.65	4.39	5.56	—	—
11/32	.3438	3.20	4.30	—	4.95	5.54	6.71	—	—
3/8	.3750	—	—	—	—	6.62	7.79	—	—
10.00mm	.3937	—	—	—	—	6.00	7.17	—	—
13/32	.4062	—	—	—	—	7.66	9.23	8.50	9.67
27/64	.4219	—	—	—	—	8.10	9.27	8.80	9.97
7/16	.4375	6.50	7.65	—	—	8.24	9.81	—	—
12.40mm	.4881	6.75	7.90	—	—	—	—	—	—

Double End

List No. **655S** – High Speed Steel, 135° Split Point



Size	Dec. Equiv.	Price Each
1/16	.0625	1.81
5/64	.0781	1.81
3/32	.0938	1.81
7/64	.1094	1.81
31	.1200	1.81
1/8	.1250	1.91
3.30mm	.1260	1.91
30	.1285	1.91

Size	Dec. Equiv.	Price Each
9/64	.1406	1.98
26	.1470	2.08
25	.1495	2.15
5/32	.1562	2.15
4.00mm	.1575	2.48
21	.1590	2.48
20	.1610	2.48
4.10mm	.1614	2.48

Size	Dec. Equiv.	Price Each
4.20mm	.1654	2.48
11/64	.1719	2.48
3/16	.1875	2.60
4.90mm	.1929	2.60
5.00mm	.1969	2.88
5.10mm	.2008	2.97
7	.2010	2.97
7/32	.2188	3.35

Size	Dec. Equiv.	Price Each
D	.2460	4.50
1/4	.2500	3.99
17/64	.2656	4.95
9/32	.2812	5.21
19/64	.2969	5.94
5/16	.3125	6.27

List No. **655SC** – Cobalt, 135° Split Point
List No. **655T** – TiN Coated, 135° Split Point
List No. **X655S** – High Speed, Premium Import
List No. **X655ST** – TiN Coated, Premium Import

Size	Decimal Equivalent	Price Each Made in USA Cobalt 655SC	Made in USA TiN Coated 655T	Premium Import H.S. X655S	Premium Import TiN Coated X655ST
1/8	.1250	2.97	3.75	.99	1.35
30	.1285	2.97	3.75	.99	1.35

Sheeters Drills

High Speed Steel



List No. **670S** – 135° Long Sweep Split Point

These drills are commonly used in drilling automotive and truck bodies, metal building and other sheet metal applications. The 135° long sweep split point insures easy centering while the short overall length reduces breakage in hand held drilling operations.

High Speed | MADE IN USA | MICHIGAN DRILL & CUTTING TOOLS

Size	Overall Length	Price Each
5/32	4-1/2	4.37
#10	3-3/4	4.68
#10	4-1/8	4.91
#8	1-3/8	2.59
#8	3-5/8	4.26
#8	4-1/2	4.68

Size	Overall Length	Price Each
7/32	6	6.84
#1	2-1/4	3.03
#1	3	3.34
#1	3-5/8	4.19
#1	3-7/8	4.46
#1	4-1/2	5.13

Size	Overall Length	Price Each
#1	6	6.92
#1	7-1/4	8.52
.231	3	3.62
.231	4-1/2	5.38

Paddle/Spade Bits

Grooved Point



List No. **610** – 1/4" Hex Shank

Wood Spade Bits are designed for boring holes quickly through all types of hard and soft woods, including plywood. They perform best at high RPM speeds and are easy to resharpen. Fully polished and heat treated with six ground flats on 1/4" Shank. Wood spade bits are also known as paddle bits.

High Speed | MDX® SUPERIOR IMPORT

Size	Price Each
1/4	2.00
5/16	2.00
3/8	2.00
7/16	2.12
1/2	2.12

Size	Price Each
9/16	2.12
5/8	2.39
11/16	2.41
3/4	2.50
13/16	2.58

Size	Price Each
7/8	2.60
15/16	2.65
1	3.00
1-1/8	3.45
1-1/4	3.45

Size	Price Each
1-3/8	3.45
1-1/2	3.45

Brad & Spur Point Drills

High Speed Steel



List No. **317**

Brad and Spur Point Drills are used primarily in wood. The Brad Point tip ensures an easy and accurate start while the spurs cut a clean, smooth hole, especially at breakthrough.

High Speed | MADE IN USA

Size	Decimal Equivalent	Flute Length	Overall Length	Price Each
1/8	.1250	1-7/16	2-1/2	5.58
5/32	.1562	1-11/16	2-3/4	5.60
3/16	.1875	1-7/8	3	5.98
13/64	.2031	1-5/16	3-1/8	6.25
7/32	.2188	2	3-1/4	6.50
1/4	.2500	2	3-1/2	7.98
17/64	.2656	2-1/8	3-5/8	9.20
9/32	.2812	2-1/4	3-3/4	8.85

Size	Decimal Equivalent	Flute Length	Overall Length	Price Each
19/64	.2969	2-3/8	3-7/8	9.28
5/16	.3125	2-1/2	4	9.28
3/8	.3750	3-5/8	5	13.00
27/64	.4219	2-7/8	4-7/16	22.70
7/16	.4375	2-15/16	4-1/2	24.12
15/32	.4688	3-1/8	4-3/4	24.95
31/64	.4844	3-1/4	4-7/8	25.28
1/2	.5000	3-3/8	5	25.28

3/8" Reduced Shank

Size	Decimal Equivalent	Flute Length	Overall Length	Price Each
29/64	.4531	4-3/16	5-5/8	24.95
15/32	.4688	4-5/16	5-3/4	24.95
31/64	.4844	4-3/8	5-7/8	25.28
1/2	.5000	4-1/2	6	25.28

1/2" Reduced Shank

Size	Decimal Equivalent	Flute Length	Overall Length	Price Each
17/32	.5312	3	6	32.47
9/16	.5625	3	6	34.32
5/8	.6250	3	6	39.78
11/16	.6875	3	6	45.16
3/4	.7500	3	6	47.60

Taper Shank Drill

High Speed Steel – Oxide Finish

Made to fit American Standard (Morse) taper shank holders.

High Speed

MADE IN USA

MICHIGAN DRILL & CUTTING TOOLS

Featuring the largest and most extensive stock of USA made taper shank drills in the world



Standard Shank

List No. **200** – 118° Point

Size	Decimal Equivalent	Flute Length	Overall Length	Morse Taper No.	Price Each
1/16	.0625	1-1/4	4-5/8	1	16.50
5/64	.0781	1-3/8	4-3/4	1	16.50
3/32	.0938	1-3/8	4-3/4	1	16.50
7/64	.1094	1-5/8	4-7/8	1	16.50
1/8	.1250	1-7/8	5-1/8	1	14.14
9/64	.1406	2-1/8	5-3/8	1	14.14
5/32	.1562	2-1/8	5-3/8	1	14.14
11/64	.1719	2-1/2	5-3/4	1	14.14
3/16	.1875	2-1/2	5-3/4	1	14.14
13/64	.2031	2-3/4	6	1	14.14
7/32	.2188	2-3/4	6	1	14.14
15/64	.2344	2-7/8	6-1/8	1	14.14
1/4	.2500	2-7/8	6-1/8	1	14.14
17/64	.2656	3	6-1/4	1	14.57
9/32	.2812	3	6-1/4	1	14.57
19/64	.2969	3-1/8	6-3/8	1	14.57
5/16	.3125	3-1/8	6-3/8	1	14.57
21/64	.3281	3-1/4	6-1/2	1	19.42
11/32	.3438	3-1/4	6-1/2	1	19.42
23/64	.3594	3-1/2	6-3/4	1	19.42
3/8	.3750	3-1/2	6-3/4	1	19.42
25/64	.3906	3-5/8	7	1	20.51
13/32	.4062	3-5/8	7	1	20.63
27/64	.4219	3-7/8	7-1/4	1	21.24
7/16	.4375	3-7/8	7-1/4	1	21.24
29/64	.4531	4-1/8	7-1/2	1	25.07
15/32	.4688	4-1/8	7-1/2	1	25.07
31/64	.4844	4-3/8	8-1/4	2	25.07
1/2	.5000	4-3/8	8-1/4	2	22.32
33/64	.5156	4-5/8	8-1/2	2	25.73
17/32	.5312	4-5/8	8-1/2	2	25.73
35/64	.5469	4-7/8	8-3/4	2	27.58
9/16	.5625	4-7/8	8-3/4	2	25.73
37/64	.5781	4-7/8	8-3/4	2	29.46
19/32	.5938	4-7/8	8-3/4	2	28.94
39/64	.6094	4-7/8	8-3/4	2	28.94
5/8	.6250	4-7/8	8-3/4	2	28.94
41/64	.6406	5-1/8	9	2	31.88
21/32	.6562	5-1/8	9	2	31.88
43/64	.6719	5-3/8	9-1/4	2	34.21
11/16	.6875	5-3/8	9-1/4	2	32.27
45/64	.7031	5-5/8	9-1/2	2	35.63
23/32	.7188	5-5/8	9-1/2	2	35.63
47/64	.7344	5-7/8	9-3/4	2	37.84
3/4	.7500	5-7/8	9-3/4	2	36.04
49/64	.7656	6	9-7/8	2	45.49
25/32	.7812	6	9-7/8	2	47.25
51/64	.7969	6-1/8	10-3/4	3	49.81
13/16	.8125	6-1/8	10-3/4	3	48.33
53/64	.8281	6-1/8	10-3/4	3	53.71
27/32	.8438	6-1/8	10-3/4	3	53.71
55/64	.8594	6-1/8	10-3/4	3	55.85
7/8	.8750	6-1/8	10-3/4	3	52.60
57/64	.8906	6-1/8	10-3/4	3	57.23
29/32	.9062	6-1/8	10-3/4	3	56.57
59/64	.9219	6-1/8	10-3/4	3	58.19
15/16	.9375	6-1/8	10-3/4	3	58.19
61/64	.9531	6-3/8	11	3	62.65
31/32	.9688	6-3/8	11	3	62.65
63/64	.9844	6-3/8	11	3	63.99
1	1.0000	6-3/8	11	3	58.74

Size	Decimal Equivalent	Flute Length	Overall Length	Morse Taper No.	Price Each
1-1/64	1.0156	6-1/2	11-1/8	3	69.04
1-1/32	1.0312	6-1/2	11-1/8	3	71.51
1-3/64	1.0469	6-5/8	11-1/4	3	77.47
1-1/16	1.0625	6-5/8	11-1/4	3	73.00
1-5/64	1.0781	6-7/8	12-1/2	4	83.67
1-3/32	1.0938	6-7/8	12-1/2	4	83.67
1-7/64	1.1094	7-1/8	12-3/4	4	86.99
1-1/8	1.1250	7-1/8	12-3/4	4	85.44
1-9/64	1.1406	7-1/4	12-7/8	4	92.20
1-5/32	1.1562	7-1/4	12-7/8	4	92.20
1-11/64	1.1719	7-3/8	13	4	93.23
1-3/16	1.1875	7-3/8	13	4	93.23
1-13/64	1.2031	7-1/2	13-1/8	4	99.77
1-7/32	1.2188	7-1/2	13-1/8	4	99.77
1-15/64	1.2344	7-7/8	13-1/2	4	108.81
1-1/4	1.2500	7-7/8	13-1/2	4	105.50
1-17/64	1.2656	8-1/2	14-1/8	4	125.45
1-9/32	1.2812	8-1/2	14-1/8	4	128.70
1-19/64	1.2969	8-5/8	14-1/4	4	133.56
1-5/16	1.3125	8-5/8	14-1/4	4	128.70
1-21/64	1.3281	8-3/4	14-3/8	4	138.09
1-11/32	1.3438	8-3/4	14-3/8	4	138.09
1-23/64	1.3594	8-7/8	14-1/2	4	141.08
1-3/8	1.3750	8-7/8	14-1/2	4	141.08
1-25/64	1.3906	9	14-5/8	4	144.96
1-13/32	1.4062	9	14-5/8	4	144.96
1-27/64	1.4219	9-1/8	14-3/4	4	150.12
1-7/16	1.4375	9-1/8	14-3/4	4	150.12
1-29/64	1.4531	9-1/4	14-7/8	4	157.23
1-15/32	1.4688	9-1/4	14-7/8	4	157.23
1-31/64	1.4844	9-3/8	15	4	162.03
1-1/2	1.5000	9-3/8	15	4	162.03
1-33/64	1.5156	9-3/8	16-3/8	5	262.88
1-17/32	1.5312	9-3/8	16-3/8	5	208.56
1-35/64	1.5469	9-5/8	16-5/8	5	276.46
1-9/16	1.5625	9-5/8	16-5/8	5	208.56
1-37/64	1.5781	9-7/8	16-7/8	5	276.46
1-19/32	1.5938	9-7/8	16-7/8	5	208.56
1-39/64	1.6094	10	17	5	283.80
1-5/8	1.6250	10	17	5	214.50
1-41/64	1.6406	10-1/8	17-1/8	5	297.20
1-21/32	1.6562	10-1/8	17-1/8	5	227.70
1-43/64	1.6719	10-1/8	17-1/8	5	323.57
1-11/16	1.6875	10-1/8	17-1/8	5	234.30
1-45/64	1.7031	10-1/8	17-1/8	5	323.57
1-23/32	1.7188	10-1/8	17-1/8	5	247.50
1-47/64	1.7344	10-1/8	17-1/8	5	337.00
1-3/4	1.7500	10-1/8	17-1/8	5	247.50
1-49/64	1.7656	10-1/8	17-1/8	5	343.70
1-25/32	1.7812	10-1/8	17-1/8	5	260.70
1-51/64	1.7969	10-1/8	17-1/8	5	353.43
1-13/16	1.8125	10-1/8	17-1/8	5	276.67
1-53/64	1.8281	10-1/8	17-1/8	5	373.30
1-27/32	1.8438	10-1/8	17-1/8	5	276.67
1-55/64	1.8594	10-3/8	17-3/8	5	386.36
1-7/8	1.8750	10-3/8	17-3/8	5	276.67
1-57/64	1.8906	10-3/8	17-3/8	5	389.40
1-29/32	1.9062	10-3/8	17-3/8	5	287.10
1-59/64	1.9219	10-3/8	17-3/8	5	405.68
1-15/16	1.9375	10-3/8	17-3/8	5	297.00
1-61/64	1.9531	10-3/8	17-3/8	5	435.92

Taper Shank Drill

High Speed Steel – Oxide Finish

Made to fit American Standard (Morse) taper shank holders.

High Speed

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MICHIGAN DRILL & CUTTING TOOLS

Featuring the largest and most extensive stock of USA made taper shank drills in the world

Standard Shank *Continued*

List No. **200** – 118° Point



Size	Dec. Equiv.	Flute Length	Overall Length	Morse Taper No.	Price Each
1-31/32	1.9688	10-3/8	17-3/8	5	307.56
1-63/64	1.9844	10-3/8	17-3/8	5	455.52
2	2.0000	10-3/8	17-3/8	5	307.56
2-1/64	2.0156	10-3/8	17-3/8	5	518.23
2-1/32	2.0312	10-3/8	17-3/8	5	487.22
2-3/64	2.0469	10-1/4	17-3/8	5	523.22
2-1/16	2.0625	10-1/4	17-3/8	5	459.36
2-3/32	2.0938	10-1/4	17-3/8	5	523.22
2-1/8	2.1250	10-1/4	17-3/8	5	468.70
2-5/32	2.1562	10-1/4	17-3/8	5	534.60
2-3/16	2.1875	10-1/4	17-3/8	5	480.80
2-7/32	2.2188	10-1/8	17-3/8	5	534.60
2-1/4	2.2500	10-1/8	17-3/8	5	494.56
2-17/64	2.6560	10-1/8	17-3/8	5	587.80
2-9/32	2.2812	10-1/8	17-3/8	5	587.80
2-19/64	2.2969	10-1/8	17-3/8	5	610.00
2-5/16	2.3125	10-1/8	17-3/8	5	561.30
2-21/64	2.3281	10-1/8	17-3/8	5	693.08
2-11/32	2.3438	10-1/8	17-3/8	5	693.08
2-3/8	2.3750	10-1/8	17-3/8	5	607.73
2-25/64	2.3906	11-1/4	18-3/4	5	726.40
2-13/32	2.4062	11-1/4	18-3/4	5	726.40
2-7/16	2.4375	11-1/4	18-3/4	5	653.65
2-15/32	2.4688	11-1/4	18-3/4	5	726.40
2-1/2	2.5000	11-1/4	18-3/4	5	653.65
2-17/32	2.5312	11-7/8	19-1/2	5	810.57
2-9/16	2.5625	11-7/8	19-1/2	5	779.20
2-37/64	2.5781	11-7/8	19-1/2	5	876.56
2-19/32	2.5938	11-7/8	19-1/2	5	858.07
2-5/8	2.6250	11-7/8	19-1/2	5	779.30
2-21/32	2.6562	12-3/4	20-3/8	5	1050.32
2-11/16	2.6875	12-3/4	20-3/8	5	858.07
2-23/32	2.7188	12-3/4	20-3/8	5	938.85
2-3/4	2.7500	12-3/4	20-3/8	5	891.00
2-25/32	2.7812	13-3/8	21-1/8	5	1047.82
2-51/64	2.7969	13-3/8	21-1/8	5	1180.00
2-13/16	2.8125	13-3/8	21-1/8	5	938.85
2-27/32	2.8438	13-3/8	21-1/8	5	1110.29
2-55/64	2.8594	13-3/8	21-1/8	5	1138.08
2-7/8	2.8750	13-3/8	21-1/8	5	1047.82
2-29/32	2.9062	13-3/8	21-1/8	5	1148.47
2-15/16	2.9375	14	21-3/4	5	1110.29
2-31/32	2.9688	14	21-3/4	5	1432.86
3	3.0000	14	21-3/4	5	1148.47
3-1/16	3.0625	14-5/8	24-1/2	6	1432.86
3-1/8	3.1250	14-5/8	24-1/2	6	1518.00
3-3/16	3.1875	14-5/8	24-1/2	6	1634.16
3-1/4	3.2500	15-1/2	25-1/2	6	1634.16
3-5/16	3.3125	15-1/2	25-1/2	6	1806.75
3-3/8	3.3750	15-1/2	25-1/2	6	1931.82
3-7/16	3.4375	15-1/2	25-1/2	6	2430.45
3-1/2	3.5000	16-3/8	26-1/2	6	2430.45
3-5/8	3.6250	16-3/8	26-1/2	6	2517.90
3-3/4	3.7500	16-3/8	26-1/2	6	3085.50
3-7/8	3.8750	16-3/8	26-1/2	6	3557.40
3-15/16	3.9375	16-3/8	26-1/2	6	3887.40
4	4.0000	17-1/2	27-1/2	6	3887.40

Sets

Sizes	No. of Pcs.	Description	Set No.	Price
33/64 — 3/4 by 64ths	16	H.S. Standard Shank	**200A**	569.70
49/64 — 1 by 64ths	16	H.S. Standard Shank	**200B**	1003.96

All sets are supplied in metal index



Shank Larger than Standard

List No. **202** – 118° Point



Size	Decimal Equivalent	Flute Length	Overall Length	Morse Taper No.	Price Each
21/64	.3281	3-1/2	7-3/8	2	29.05
23/64	.3594	3-1/2	7-3/8	2	29.05
3/8	.3750	3-1/2	7-3/8	2	25.74
25/64	.3906	3-5/8	7-1/2	2	26.60
13/32	.4062	3-5/8	7-1/2	2	26.60
27/64	.4219	3-7/8	7-3/4	2	27.46
7/16	.4375	3-7/8	7-3/4	2	27.46
29/64	.4531	4-1/8	8	2	32.93
15/32	.4688	4-1/8	8	2	32.93
17/32	.5313	4-5/8	8-1/2	3	32.93
19/32	.5938	5-1/8	9-3/4	3	43.62
41/64	.6406	5-1/8	9-3/4	3	43.62
21/32	.6562	5-1/8	9-3/4	3	43.62
43/64	.6719	5-3/8	10	3	46.81
11/16	.6875	5-3/8	10	3	45.84
45/64	.7031	5-5/8	10-1/4	3	50.66
23/32	.7188	5-5/8	10-1/4	3	50.66
47/64	.7344	5-7/8	10-1/2	3	54.83
3/4	.7500	5-7/8	10-1/2	3	51.47
49/64	.7656	6	10-5/8	3	60.96
25/32	.7812	6	10-5/8	3	61.81
1	1.0000	6-3/8	12	4	82.44
1-1/32	1.0312	6-1/2	12-1/8	4	92.91
1-3/64	1.0469	6-1/2	12-1/8	4	100.66
1-1/16	1.0625	6-5/8	12-1/4	4	97.09

Taper Shank Drill

High Speed Steel – Oxide Finish

Made to fit American Standard (Morse) taper shank holders.



Featuring the largest and most extensive stock of USA made taper shank drills in the world

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Shank Smaller than Standard

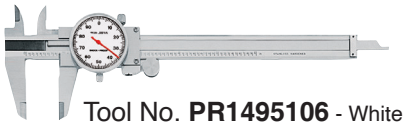
List No. **203** – 118° Point

Size	Decimal Equivalent	Flute Length	Overall Length	Morse Taper No.	Price Each
31/64	.4844	4-3/8	7-3/4	1	26.16
1/2	.5000	4-3/8	7-3/4	1	22.84
33/64	.5156	4-5/8	8	1	28.70
17/32	.5312	4-5/8	8	1	28.70
35/64	.5469	4-7/8	8-1/4	1	30.66
9/16	.5625	4-7/8	8-1/4	1	28.77
37/64	.5781	4-7/8	8-1/4	1	32.51
19/32	.5938	4-7/8	8-1/4	1	42.90
39/64	.6094	4-7/8	8-1/4	1	48.00
5/8	.6250	4-7/8	8-1/4	1	48.00
21/32	.6562	5-1/8	8-1/2	1	43.23
51/64	.7969	6-1/8	10	2	61.26
13/16	.8125	6-1/8	10	2	56.74
53/64	.8281	6-1/8	10	2	65.67
27/32	.8438	6-1/8	10	2	65.67
55/64	.8594	6-1/8	10	2	69.30
7/8	.8750	6-1/8	10	2	69.30
57/64	.8906	6-1/8	10	2	74.26
29/32	.9062	6-1/8	10	2	74.26
1	1.0000	6-1/4	10-1/8	2	80.52
1-5/64	1.0781	6-7/8	11-1/2	3	108.90
1-3/32	1.0938	6-7/8	11-1/2	3	108.90
1-7/64	1.1094	7-1/8	11-3/4	3	112.20
1-1/8	1.1250	7-1/8	11-3/4	3	111.57
1-9/64	1.1406	7-1/4	11-7/8	3	124.74
1-5/32	1.1562	7-1/4	11-7/8	3	124.74
1-11/64	1.1719	7-3/8	12	3	121.44
1-3/16	1.1875	7-3/8	12	3	121.44
1-13/64	1.2031	7-1/2	12-1/8	3	137.81
1-7/32	1.2188	7-1/2	12-1/8	3	137.81
1-15/64	1.2344	7-7/8	12-1/2	3	137.81
1-1/4	1.2500	7-7/8	12-1/2	3	131.34
1-9/32	1.2812	8-1/2	13-1/8	3	174.90
1-5/16	1.3125	8-5/8	13-1/4	3	181.83
1-11/32	1.3438	8-3/4	13-3/8	3	185.06
1-3/8	1.3750	8-7/8	13-1/2	3	195.16
1-25/64	1.3906	9	13-5/8	3	220.00
1-13/32	1.4062	9	13-5/8	3	203.65
1-7/16	1.4375	9-1/8	13-3/4	3	203.65
1-15/32	1.4688	9-1/4	13-7/8	3	222.02
1-1/2	1.5000	9-3/8	14	3	222.02
1-33/64	1.5156	9-3/8	15	4	262.88
1-17/32	1.5312	9-3/8	15	4	239.58
1-35/64	1.5469	9-5/8	15-1/4	4	276.46
1-9/16	1.5625	9-5/8	15-1/4	4	239.58
1-37/64	1.5781	9-7/8	15-1/2	4	276.46
1-19/32	1.5938	9-7/8	15-1/2	4	241.98
1-39/64	1.6094	10	15-5/8	4	283.80
1-5/8	1.6250	10	15-5/8	4	250.18
1-41/64	1.6406	10-1/8	15-3/4	4	297.20
1-21/32	1.6562	10-1/8	15-3/4	4	271.00
1-43/64	1.6719	10-1/8	15-3/4	4	323.57
1-11/16	1.6875	10-1/8	15-3/4	4	274.96
1-45/64	1.7031	10-1/8	15-3/4	4	323.57

Size	Decimal Equivalent	Flute Length	Overall Length	Morse Taper No.	Price Each
1-23/32	1.7188	10-1/8	16-1/4	4	303.18
1-47/64	1.7344	10-3/8	16-1/4	4	337.00
1-3/4	1.7500	10-3/8	16-1/4	4	306.90
1-49/64	1.7656	10-3/8	16-1/4	4	343.70
1-25/32	1.7812	10-3/8	16-1/4	4	309.54
1-51/64	1.7969	10-3/8	16-1/4	4	353.43
1-13/16	1.8125	10-3/8	16-1/4	4	328.68
1-53/64	1.8281	10-3/8	16-1/4	4	373.30
1-27/32	1.8438	10-3/8	16-1/4	4	349.84
1-55/64	1.8594	10-1/2	16-1/2	4	386.36
1-7/8	1.8750	10-1/2	16-1/2	4	349.84
1-57/64	1.8906	10-1/2	16-1/2	4	389.40
1-29/32	1.9062	10-1/2	16-1/2	4	360.00
1-59/64	1.9219	10-5/8	16-5/8	4	405.68
1-15/16	1.9375	10-5/8	16-5/8	4	382.47
1-61/64	1.9531	10-5/8	16-5/8	4	435.92
1-31/32	1.9688	10-5/8	16-5/8	4	446.82
2	2.0000	10-5/8	16-5/8	4	374.66
2-1/64	2.0156	10-5/8	16-5/8	4	550.00
2-1/32	2.0312	10-3/8	16-1/4	4	487.22
2-1/16	2.0625	10-1/4	16-1/4	4	487.22
2-5/64	2.0781	10-1/4	16-1/4	4	590.00
2-3/32	2.0938	10-1/4	16-1/4	4	523.22
2-1/8	2.1250	10-1/4	16-1/4	4	523.22
2-9/64	2.1406	10-1/4	16-1/4	4	680.00
2-5/32	2.1562	10-1/4	16-1/4	4	534.60
2-11/64	2.1719	10-1/4	16-1/4	4	720.00
2-3/16	2.1875	10-1/4	16-1/4	4	534.60
2-7/32	2.2188	10-1/8	16-1/8	4	534.60
2-15/64	2.2344	10-1/8	16-1/8	4	740.00
2-1/4	2.2500	10-1/8	16-1/8	4	534.60
2-9/32	2.2812	10-1/8	16-1/8	4	587.80
2-5/16	2.3125	10-1/8	16-1/8	4	587.80
2-11/32	2.3438	10-1/8	16-1/8	4	693.08
2-3/8	2.3750	10-1/8	16-1/8	4	693.08
2-13/32	2.4062	11-1/4	17-1/4	4	726.40
2-7/16	2.4375	11-1/4	17-1/4	4	726.40
2-15/32	2.4688	11-1/4	17-1/4	4	726.40
2-31/64	2.4844	11-1/4	17-1/4	4	850.00
2-1/2	2.5000	11-1/4	17-1/4	4	726.40
2-5/8	2.6250	11-7/8	18	4	779.20
2-3/4	2.7500	12-3/4	19-1/8	4	917.52
3-1/16	3.0625	14-1/4	22	5	1432.86
3-1/8	3.1250	14-1/4	22	5	1518.00
3-3/16	3.1875	14-1/4	22	5	1634.16
3-1/4	3.2500	15-1/4	23	5	1634.16
3-5/16	3.3125	15-1/4	23	5	1806.75
3-3/8	3.3750	15-1/4	23	5	1931.82
3-7/16	3.4375	15-1/4	23	5	2430.45
3-1/2	3.5000	16-1/4	24	5	2430.45
3-5/8	3.6250	16-1/4	24	5	2517.90
3-3/4	3.7500	16-1/4	24	5	3085.50
3-7/8	3.8750	16-1/4	24	5	3557.40
4	4.0000	16-1/2	24-1/4	5	3887.40

6" Dial Caliper

Of stainless steel, hardened throughout with satin-chrome finish. Suitable for outside, inside, depth and step measurement. Thumb roll. Direct reading in .001" or .02mm with adjustable dial setting and locknut. Covered rack for longer life. Fitted case. .100" or 2mm per revolution.



Tool No. **PR1495106** - White face dial Price: **$36.00**

Tool No. **PR1495206** - Black face dial Price: **$36.00**

See precision tool section for more

Stub Length Taper Shank Drills

High Speed Steel – Oxide Finish

List No. **200ST** – 118° Point List No. **X200ST** – 118° Point

Because of their short overall and flute length, stub length taper shank drills are recommended for use in boring mills, screw machines and lathes or where short projection is required.



High Speed

MICHIGAN DRILL & CUTTING TOOLS

Fractional Sizes

MADE IN USA MDX SUPERIOR IMPORT

Size	Decimal Equivalent	Approx. OAL	Morse Taper No.	Price Each 200ST	Price Each X200ST
2	2.0000	11	4	300.36	155.93
2	2.0000	12	5	309.36	155.93
2-1/16	2.0625	11	4	329.18	181.64
2-1/16	2.0625	12	5	339.05	181.64
2-1/8	2.1250	11	4	357.01	192.75
2-1/8	2.1250	12	5	367.68	198.55
2-3/16	2.1875	11	4	385.15	207.98
2-3/16	2.1875	12	5	396.69	214.24
2-1/4	2.2500	11	4	399.42	215.69
2-1/4	2.2500	12	5	411.40	222.16
2-5/16	2.3125	11	4	412.49	222.74
2-5/16	2.3125	12	5	424.05	228.99
2-3/8	2.3750	11	4	427.01	230.59
2-3/8	2.3750	12	5	439.84	237.51
2-7/16	2.4375	12	4	468.69	253.09
2-7/16	2.4375	12	5	468.69	253.09
2-1/2	2.5000	11	4	481.12	259.80
2-1/2	2.5000	12	5	497.87	366.20

5" approximate flute length

MADE IN USA MDX SUPERIOR IMPORT

Size	Decimal Equivalent	Approx. OAL	Morse Taper No.	Price Each 200ST	Price Each X200ST
2-9/16	2.5625	12	4	533.92	395.10
2-9/16	2.5625	12	5	533.92	395.10
2-5/8	2.6250	12	4	533.92	395.10
2-5/8	2.6250	12	5	533.92	395.10
2-11/16	2.6875	12	4	606.06	448.48
2-3/4	2.7500	12	4	606.06	448.48
2-3/4	2.7500	12	5	606.06	448.48
2-13/16	2.8125	12	4	701.94	519.44
2-7/8	2.8750	12	5	701.94	519.44
2-15/16	2.9375	12	4	785.27	581.10
3	3.0000	12	5	785.27	581.10
3-1/8	3.1250	12	5	1320.00	976.80
3-1/4	3.2500	12	5	1485.00	1098.90
3-3/8	3.3750	12	5	2057.00	1522.18
3-1/2	3.5000	12	5	2310.00	1709.40
3-3/4	3.7500	12	5	2543.20	1880.00
4	4.0100	12	5	—	2162.00

Taper Shank Drills

High Speed Steel – Oxide Finish

List No. **200** – 118° Point, #1 Morse Taper



High Speed MADE IN USA MICHIGAN DRILL & CUTTING TOOLS

Letter Sizes

Size	Decimal Equivalent	Flute Length	Overall Length	Price Each
A	.2340	2-7/8	6-1/8	18.07
B	.2380	2-7/8	6-1/8	18.07
C	.2420	2-7/8	6-1/8	18.07
D	.2460	2-7/8	6-1/8	16.03
E	.2500	2-7/8	6-1/8	14.14
F	.2570	3	6-1/4	15.89
G	.2610	3	6-1/4	18.94
H	.2660	3	6-1/4	18.94
I	.2720	3	6-1/4	18.94
J	.2770	3	6-1/4	17.48
K	.2810	3	6-1/4	19.88
L	.2900	3-1/8	6-3/8	19.88
M	.2950	3-1/8	6-3/8	19.88

Size	Decimal Equivalent	Flute Length	Overall Length	Price Each
N	.3020	3-1/8	6-3/8	19.88
O	.3160	3-1/4	6-1/2	23.58
P	.3230	3-1/4	6-1/2	23.58
Q	.3320	3-1/4	6-1/2	24.74
R	.3390	3-1/4	6-1/2	27.21
S	.3480	3-1/2	6-3/4	28.51
T	.3580	3-1/2	6-3/4	28.51
U	.3680	3-1/2	6-3/4	28.51
V	.3770	3-5/8	7	30.05
W*	.3860	3-5/8	7	30.05
X	.3970	3-5/8	7	30.98
Y	.4040	3-5/8	7	30.98
Z	.4130	3-7/8	7-1/4	32.37

**Available in #1 & #2 Morse Taper. Please specify when ordering.*

Wire Gauge Sizes

Flute length and overall length are approximately the same as corresponding decimal size.

Size	Decimal Equivalent	Price Each
1	.2280	17.42
2	.2210	17.42
3	.2130	17.42
4	.2090	17.42
5	.2055	17.42
6	.2040	17.42
7	.2010	16.63
8	.1990	16.63
9	.1960	16.63
10	.1935	16.63

Size	Decimal Equivalent	Price Each
11	.1910	16.63
12	.1890	16.63
13	.1850	16.63
14	.1820	16.63
15	.1800	16.63
16	.1770	16.63
17	.1730	16.63
18	.1695	16.63
19	.1660	16.63
20	.1610	15.61

Size	Decimal Equivalent	Price Each
21	.1590	15.61
22	.1570	15.61
23	.1540	15.61
24	.1520	15.61
25	.1495	15.61
26	.1470	15.61
27	.1440	15.61
28	.1405	15.61
29	.1360	15.61
30	.1285	15.61

Size	Decimal Equivalent	Price Each
31	.1200	15.61
35	.1100	15.61
37	.1040	15.61
39	.0995	15.61
40	.0980	15.61
44	.0860	15.61
46	.0810	15.61
47	.0785	15.61
50	.0700	15.61

Metric Taper Shank Drills



High Speed Steel – Oxide Finish

List No. **200M** – 118° Point

Made to fit American Standard (Morse) taper shank holders.

High Speed

MADE IN USA

MICHIGAN DRILL & CUTTING TOOLS

Size mm	Decimal Equivalent	Morse Taper No.	Flute Length	Overall Length	Price Each
3.00	.1181	1	1-7/8	5-1/8	14.85
3.20	.1260	1	1-7/8	5-1/8	15.51
3.50	.1378	1	2-1/8	5-3/8	15.51
3.80	.1496	1	2-1/8	5-3/8	15.51
4.00	.1575	1	2-1/8	5-3/8	15.51
4.20	.1654	1	2-1/2	5-3/4	15.51
4.50	.1772	1	2-1/2	5-3/4	13.14
4.80	.1890	1	2-1/2	5-3/4	13.14
5.00	.1969	1	2-3/4	6	13.14
5.20	.2047	1	2-3/4	6	13.14
5.50	.2165	1	2-3/4	6	13.14
5.80	.2283	1	2-7/8	6-1/8	13.14
6.00	.2362	1	2-7/8	6-1/8	13.14
6.20	.2441	1	2-7/8	6-1/8	13.14
6.50	.2559	1	3	6-1/4	13.14
6.80	.2677	1	3	6-1/4	14.85
7.00	.2756	1	3	6-1/4	14.85
7.20	.2835	1	3-1/8	6-3/8	15.89
7.40	.2913	1	3-1/8	6-3/8	19.80
7.50	.2953	1	3-1/8	6-3/8	15.89
7.80	.3071	1	3-1/8	6-3/8	18.07
8.00	.3150	1	3-1/4	6-1/2	21.44
8.20	.3228	1	3-1/4	6-1/2	22.70
8.50	.3346	1	3-1/4	6-1/2	22.70
8.80	.3465	1	3-1/2	6-3/4	25.92
9.00	.3543	1	3-1/2	6-3/4	25.92
9.20	.3622	1	3-1/2	6-3/4	25.92
9.50	.3740	1	3-1/2	6-3/4	27.57
9.70	.3819	1	3-5/8	7	27.57
9.80	.3858	1	3-5/8	7	27.57
10.00	.3937	1	3-5/8	7	28.17
10.20	.4016	1	3-5/8	7	28.17
10.25	.4075	1	3-5/8	7	32.00
10.50	.4134	1	3-7/8	7-1/4	29.37
10.80	.4252	1	3-7/8	7-1/4	29.37
11.00	.4331	1	3-7/8	7-1/4	29.37
11.20	.4409	1	4-1/8	7-1/2	31.35
11.50	.4528	1	4-1/8	7-1/2	31.35
11.80	.4646	1	4-1/8	7-1/2	31.35
12.00	.4724	2	4-3/8	8-1/4	31.35
12.20	.4803	2	4-3/8	8-1/4	37.69
12.50	.4921	2	4-3/8	8-1/4	37.69
12.80	.5039	2	4-5/8	8-1/2	37.69
13.00	.5118	2	4-5/8	8-1/2	37.69
13.20	.5197	2	4-5/8	8-1/2	42.24
13.50	.5315	2	4-5/8	8-1/2	42.24
13.80	.5433	2	4-7/8	8-3/4	42.24
14.00	.5512	2	4-7/8	8-3/4	42.24
14.25	.5610	2	4-7/8	8-3/4	45.87
14.50	.5709	2	4-7/8	8-3/4	45.87
14.75	.5807	2	4-7/8	8-3/4	45.87
15.00	.5906	2	4-7/8	8-3/4	45.87
15.25	.6004	2	4-7/8	8-3/4	48.05
15.50	.6102	2	4-7/8	8-3/4	48.05
15.75	.6201	2	4-7/8	8-3/4	50.16
16.00	.6299	2	5-1/8	9	50.16
16.25	.6398	2	5-1/8	9	50.16
16.50	.6496	2	5-1/8	9	51.74
16.75	.6594	2	5-3/8	9-1/4	51.74
17.00	.6693	2	5-3/8	9-1/4	51.74
17.25	.6791	2	5-3/8	9-1/4	56.10
17.50	.6890	2	5-5/8	9-1/2	56.48
18.00	.7087	2	5-5/8	9-1/2	56.48
18.50	.7283	2	5-5/8	9-1/2	60.14
19.00	.7480	2	5-7/8	9-3/4	60.14
19.50	.7677	2	6	9-7/8	75.37

Size mm	Decimal Equivalent	Morse Taper No.	Flute Length	Overall Length	Price Each
20.00	.7874	3	6-1/8	10-3/4	75.37
20.50	.8071	3	6-1/8	10-3/4	81.41
21.00	.8268	3	6-1/8	10-3/4	81.41
21.50	.8465	3	6-1/8	10-3/4	87.48
22.00	.8661	3	6-1/8	10-3/4	87.48
22.50	.8858	3	6-1/8	10-3/4	90.51
23.00	.9055	3	6-1/8	10-3/4	90.51
23.50	.9252	3	6-1/8	10-3/4	93.08
24.00	.9449	2	6-3/8	10-3/4	93.08
24.00	.9449	3	6-3/8	11	93.08
24.50	.9646	3	6-3/8	11	97.15
25.00	.9843	3	6-3/8	11	97.15
25.50	1.0039	3	6-1/2	11-1/8	102.33
26.00	1.0236	3	6-1/2	11-1/8	102.33
26.50	1.0433	3	6-5/8	11-1/4	124.19
27.00	1.0630	3	6-5/8	11-1/4	124.19
27.50	1.0827	4	6-7/8	12-1/2	128.76
28.00	1.1024	4	7-1/8	12-3/4	128.76
28.50	1.1220	4	7-1/8	12-3/4	138.75
29.00	1.1417	4	7-1/4	12-7/8	142.38
29.50	1.1614	4	7-3/8	13	145.58
30.00	1.1811	4	7-3/8	13	145.58
30.50	1.2008	4	7-1/2	13-1/8	158.43
31.00	1.2205	4	7-7/8	13-1/2	158.43
31.50	1.2402	4	7-7/8	13-1/2	181.61
32.00	1.2598	4	8-1/2	14-1/8	181.61
32.50	1.2795	4	8-1/2	14-1/8	205.08
33.00	1.2992	4	8-5/8	14-1/4	208.40
33.50	1.3189	4	8-3/4	14-3/8	214.20
34.00	1.3386	4	8-3/4	14-3/8	214.20
34.50	1.3583	4	8-7/8	14-1/2	231.05
35.00	1.3780	4	9	14-5/8	231.05
35.50	1.3976	4	9	14-5/8	244.28
36.00	1.4173	4	9-1/8	14-3/4	244.28
36.50	1.4370	4	9-1/8	14-3/4	260.98
37.00	1.4567	4	9-1/4	14-7/8	260.98
37.50	1.4764	4	9-3/8	15	270.97
38.00	1.4961	4	9-3/8	15	270.97
38.50	1.5157	5	9-5/8	16-5/8	363.09
39.00	1.5354	5	9-5/8	16-5/8	339.99
39.50	1.5551	5	9-7/8	16-7/8	363.09
40.00	1.5748	5	9-7/8	16-7/8	339.99
41.00	1.6142	5	10	17	363.09
41.50	1.6338	5	10-1/8	17-1/8	409.48
42.00	1.6535	5	10-1/8	17-1/8	389.81
42.50	1.6732	5	10-1/8	17-1/8	455.74
43.00	1.6929	5	10-1/8	17-1/8	389.81
43.50	1.7125	5	10-1/8	17-1/8	455.74
44.00	1.7323	5	10-1/8	17-1/8	455.74
44.50	1.7519	5	10-1/8	17-1/8	455.74
45.00	1.7717	5	10-1/8	17-1/8	455.74
46.00	1.8110	5	10-1/8	17-1/8	521.41
47.00	1.8504	5	10-3/8	17-3/8	495.09
48.00	1.8898	5	10-3/8	17-3/8	508.66
49.00	1.9291	5	10-3/8	17-3/8	508.66
50.00	1.9685	5	10-3/8	17-3/8	508.66
51.00	2.0079	5	10-3/8	17-3/8	593.99
55.00	2.1653	5	10-3/8	17-3/8	718.74
57.00	2.2441	5	10-3/8	17-3/8	751.41
59.00	2.3228	5	10-3/8	17-3/8	806.95
60.00	2.3622	5	11-7/8	19-1/2	1143.45
65.00	2.5591	5	11-7/8	19-1/2	1143.45
66.00	2.5984	5	11-7/8	19-1/2	1196.94
69.00	2.7165	5	12-3/4	20-3/8	1437.70
70.00	2.7559	5	13-3/8	21-1/8	1519.23
72.00	2.8346	5	13-3/8	21-1/8	1578.23

Cobalt Taper Shank Drills



Super Cobalt – Heavy Duty

List No. **210C** – 135° Notched Point

These premium cobalt drills exhibit greater toughness, abrasion resistance, and higher red hardness than the standard high speed drills.

Cobalt drills are used in drilling tough, high tensile strength materials like Stainless Steels, Titanium, and Inconel.

Cobalt MADE IN USA MICHIGAN DRILL & CUTTING TOOLS

Size	Dec. Equiv.	Flute Length	Overall Length	Morse Taper No.	Price Each
1/4	.2500	2-7/8	6-1/8	1	26.10
17/64	.2656	3	6-1/4	1	34.83
9/32	.2812	3	6-1/4	1	30.60
19/64	.2969	3-1/8	6-3/8	1	34.83
5/16	.3125	3-1/8	6-3/8	1	30.60
21/64	.3281	3-1/4	6-1/2	1	36.90
11/32	.3438	3-1/4	6-1/2	1	35.10
23/64	.3594	3-1/2	6-3/4	1	46.80
23/64	.3594	3-1/2	7-3/8	2	46.80
3/8	.3750	3-1/2	6-3/4	1	43.20
3/8	.3750	3-1/2	7-3/8	2	43.20
25/64	.3906	3-5/8	7-1/2	2	49.50
13/32	.4062	3-5/8	7-1/2	2	46.80
10.50mm	.4134	3-7/8	7-3/4	2	66.50
27/64	.4219	3-7/8	7-3/4	2	52.20
7/16	.4375	3-7/8	7-3/4	2	52.20
29/64	.4531	4-1/8	8	2	55.80
15/32	.4688	4-1/8	8	2	55.80
31/64	.4844	4-3/8	8-1/4	2	61.20
1/2	.5000	4-3/8	8-1/4	2	58.50
33/64	.5156	4-5/8	8-1/2	2	67.50
17/32	.5312	4-5/8	8-1/2	2	67.50
35/64	.5469	4-7/8	8-3/4	2	71.10
9/16	.5625	4-7/8	8-3/4	2	67.50
37/64	.5781	4-7/8	8-3/4	2	72.90
19/32	.5938	4-7/8	8-3/4	2	71.10
39/64	.6094	4-7/8	8-3/4	2	82.80
5/8	.6250	4-7/8	10	2	99.22
41/64	.6406	5-1/8	9-3/4	3	94.50
21/32	.6562	5-1/8	9-3/4	3	87.30
43/64	.6719	5-3/8	10	3	99.00
11/16	.6875	5-3/8	10	3	94.50
45/64	.7031	5-5/8	10-1/4	3	106.20
23/32	.7188	5-5/8	10-1/4	3	99.00
47/64	.7344	5-7/8	10-1/2	3	109.80
3/4	.7500	5-7/8	10	2	113.09
3/4	.7500	5-7/8	10-1/2	3	109.80
49/64	.7656	6	9-7/8	2	121.50
49/64	.7656	6	10-5/8	3	117.00
25/32	.7812	6	9-7/8	2	121.50
25/32	.7812	6	10-5/8	3	117.00
51/64	.7969	6-1/8	10-3/4	3	124.20
13/16	.8125	6-1/8	10	2	130.50
13/16	.8125	6-1/8	10-3/4	3	124.20
53/64	.8281	6-1/8	10-3/4	3	152.10
27/32	.8438	6-1/8	10-3/4	3	142.20
55/64	.8594	6-1/8	10-3/4	3	152.10
7/8	.8750	6-1/8	10-3/4	3	142.20
22.50mm	.8858	6-1/8	10	2	185.00
57/64	.8906	6-1/8	10-3/4	3	169.20

Size	Dec. Equiv.	Flute Length	Overall Length	Morse Taper No.	Price Each
29/32	.9062	6-1/8	10-3/4	3	169.20
59/64	.9219	6-1/8	10-3/4	3	175.50
15/16	.9375	6-1/8	10-3/4	3	148.41
24.00mm	.9448	6-1/8	10-3/4	2	193.19
61/64	.9531	6-3/8	11	3	167.99
31/32	.9688	6-3/8	11	3	167.99
63/64	.9844	6-3/8	11	3	167.99
1	1.0000	6-3/8	11	3	167.99
1-1/64	1.0156	6-1/2	12-1/8	4	220.87
1-1/32	1.0312	6-1/2	12-1/8	4	220.87
1-3/64	1.0469	6-5/8	12-1/4	4	200.80
1-1/16	1.0625	6-5/8	12-1/4	4	200.80
1-5/64	1.0781	6-7/8	12-1/2	4	222.60
1-3/32	1.0938	6-7/8	12-1/2	4	222.60
1-7/64	1.1094	7-1/8	12-3/4	4	235.13
1-1/8	1.1250	7-1/8	12-3/4	4	235.13
1-9/64	1.1406	7-1/4	12-7/8	4	274.06
1-5/32	1.1562	7-1/4	12-7/8	4	274.06
1-11/64	1.1719	7-3/8	13	4	274.08
1-3/16	1.1875	7-3/8	12	3	274.08
1-3/16	1.1875	7-3/8	13	4	274.08
1-13/64	1.2031	7-1/2	13-1/8	4	287.84
1-7/32	1.2188	7-1/2	13-1/8	4	287.84
1-15/64	1.2344	7-7/8	13-1/2	4	312.30
1-1/4	1.2500	7-7/8	13-1/2	4	312.30
1-17/64	1.2656	8-1/2	14-1/8	4	335.70
1-9/32	1.2812	8-1/2	14-1/8	4	335.70
1-19/64	1.2969	8-5/8	14-1/4	4	365.88
1-5/16	1.3125	8-5/8	14-1/4	4	365.88
1-5/16	1.3125	8-5/8	15-7/8	5	365.88
1-21/64	1.3281	8-3/4	14-3/8	4	360.90
1-11/32	1.3438	8-3/4	14-3/8	4	360.90
1-23/64	1.3594	8-7/8	14-1/2	4	392.49
1-3/8	1.3750	8-7/8	14-1/2	4	392.49
1-3/8	1.3750	8-7/8	15-7/8	5	392.49
1-25/64	1.3906	9	14-5/8	4	388.80
1-13/32	1.4062	9	14-5/8	4	462.85
1-27/64	1.4219	9-1/8	14-3/4	4	462.85
1-7/16	1.4375	9-1/8	14-3/4	4	462.85
1-7/16	1.4375	9-1/8	16-1/8	5	462.85
1-29/64	1.4531	9-1/4	14-7/8	4	467.10
1-15/32	1.4688	9-1/4	14-7/8	4	467.10
1-31/64	1.4844	9-3/8	15	4	496.98
1-1/2	1.5000	9-3/8	15	4	458.10
1-1/2	1.5000	9-3/8	16-3/8	5	458.10
1-5/8	1.6250	10	17	5	594.00
1-3/4	1.7500	10-1/8	17-1/8	5	738.00
1-13/16	1.8125	10-1/8	17-1/8	5	823.50
2	2.0000	10-3/8	17-3/8	5	895.50
2-3/4	2.7500	12-3/4	20-3/8	5	1440.00

Sets

Sizes	No. of Pcs.	Set No.	Price
33/64 — 3/4 by 64ths	16	**210CA**	1508.40
49/64 — 1 by 64ths	16	**210CB**	2532.20

All sets are supplied in Huot metal index



MDX® SUPERIOR IMPORT Taper Shank Drill

High Speed Steel – Oxide Finish

High Speed

Made to fit American Standard (Morse) taper shank holders.



Standard Shank

List No. **X200** – 118° Point

Size	Flute Length	Overall Length	Morse Taper No.	Price Each
1/8	1-7/8	5-1/8	1	7.06
9/64	2-1/8	5-3/8	1	7.42
5/32	2-1/8	5-3/8	1	7.13
11/64	2-1/2	5-3/4	1	7.42
3/16	2-1/2	5-3/4	1	7.42
13/64	2-3/4	6	1	7.42
7/32	2-3/4	6	1	7.42
15/64	2-7/8	6-1/8	1	7.80
1/4	2-7/8	6-1/8	1	7.80
17/64	3	6-1/4	1	8.10
9/32	3	6-1/4	1	8.10
19/64	3-1/8	6-3/8	1	8.28
5/16	3-1/8	6-3/8	1	8.28
21/64	3-1/4	6-1/2	1	8.28
11/32	3-1/4	6-1/2	1	8.66
23/64	3-1/2	6-3/4	1	9.59
3/8	3-1/2	6-3/4	1	9.13
25/64	3-5/8	7	1	9.93
13/32	3-5/8	7	1	9.22
27/64	3-7/8	7-1/4	1	10.59
7/16	3-7/8	7-1/4	1	10.03
29/64	4-1/8	7-1/2	1	11.66
15/32	4-1/8	7-1/2	1	11.72
31/64	4-3/8	8-1/4	2	13.17
1/2	4-3/8	8-1/4	2	11.98
33/64	4-5/8	8-1/2	2	14.36
17/32	4-5/8	8-1/2	2	13.40
35/64	4-7/8	8-3/4	2	15.63
9/16	4-7/8	8-3/4	2	14.61
37/64	4-7/8	8-3/4	2	16.60
19/32	4-7/8	8-3/4	2	15.71
39/64	4-7/8	8-3/4	2	17.36
5/8	4-7/8	8-3/4	2	15.96
41/64	5-1/8	9	2	19.13
21/32	5-1/8	9	2	17.81
43/64	5-3/8	9-1/4	2	20.53
11/16	5-3/8	9-1/4	2	18.54
45/64	5-5/8	9-1/2	2	21.38
23/32	5-5/8	9-1/2	2	19.85
47/64	5-7/8	9-3/4	2	22.70
3/4	5-7/8	9-3/4	2	21.63
49/64	6	9-7/8	2	27.29
25/32	6	9-7/8	2	26.09
51/64	6-1/8	10-3/4	3	29.88
13/16	6-1/8	10-3/4	3	26.75
53/64	6-1/8	10-3/4	3	31.18
27/32	6-1/8	10-3/4	3	29.02
55/64	6-1/8	10-3/4	3	32.26
7/8	6-1/8	10-3/4	3	29.69
57/64	6-1/8	10-3/4	3	32.97
29/32	6-1/8	10-3/4	3	31.71
59/64	6-1/8	10-3/4	3	33.38
15/16	6-1/8	10-3/4	3	29.82
61/64	6-3/8	11	3	34.29
31/32	6-3/8	11	3	32.74
63/64	6-3/8	11	3	36.41
1	6-3/8	11	3	33.31
1-1/64	6-1/2	11-1/8	3	41.42
1-1/32	6-1/2	11-1/8	3	36.62
1-3/64	6-5/8	11-1/4	3	43.53
1-1/16	6-5/8	11-1/4	3	38.25
1-5/64	6-7/8	12-1/2	4	50.21
1-3/32	6-7/8	12-1/2	4	45.23

Size	Flute Length	Overall Length	Morse Taper No.	Price Each
1-7/64	7-1/8	12-3/4	4	52.20
1-1/8	7-1/8	12-3/4	4	47.02
1-9/64	7-1/4	12-7/8	4	55.32
1-5/32	7-1/4	12-7/8	4	49.20
1-11/64	7-3/8	13	4	55.94
1-3/16	7-3/8	13	4	51.23
1-13/64	7-1/2	13-1/8	4	59.86
1-7/32	7-1/2	13-1/8	4	55.13
1-15/64	7-7/8	13-1/2	4	65.29
1-1/4	7-7/8	13-1/2	4	57.64
1-17/64	8-1/2	14-1/8	4	75.27
1-9/32	8-1/2	14-1/8	4	71.88
1-19/64	8-5/8	14-1/4	4	80.14
1-5/16	8-5/8	14-1/4	4	72.34
1-21/64	8-3/4	14-3/8	4	82.86
1-11/32	8-3/4	14-3/8	4	77.17
1-23/64	8-7/8	14-1/2	4	84.65
1-3/8	8-7/8	14-1/2	4	77.59
1-25/64	9	14-5/8	4	86.97
1-13/32	9	14-5/8	4	83.83
1-27/64	9-1/8	14-3/4	4	90.08
1-7/16	9-1/8	14-3/4	4	83.87
1-29/64	9-1/4	14-7/8	4	94.73
1-15/32	9-1/4	14-7/8	4	90.31
1-31/64	9-3/8	15	4	97.22
1-1/2	9-3/8	15	4	89.19
1-33/64	9-3/8	16-3/8	5	125.14
1-17/32	9-3/8	16-3/8	5	104.07
1-35/64	9-5/8	16-5/8	5	133.06
1-9/16	9-5/8	16-5/8	5	108.00
1-37/64	9-7/8	16-7/8	5	141.77
1-19/32	9-7/8	16-7/8	5	117.78
1-39/64	10	17	5	148.50
1-5/8	10	17	5	116.66
1-41/64	10-1/8	17-1/8	5	158.20
1-21/32	10-1/8	17-1/8	5	126.67
1-43/64	10-1/8	17-1/8	5	164.34
1-11/16	10-1/8	17-1/8	5	128.59
1-45/64	10-1/8	17-1/8	5	169.69
1-23/32	10-1/8	17-1/8	5	136.26
1-47/64	10-1/8	17-1/8	5	163.35
1-3/4	10-1/8	17-1/8	5	137.71
1-25/32	10-1/8	17-1/8	5	144.45
1-51/64	10-1/8	17-1/8	5	191.00
1-13/16	10-1/8	17-1/8	5	146.78
1-53/64	10-1/8	17-1/8	5	217.80
1-27/32	10-1/8	17-1/8	5	154.75
1-55/64	10-1/8	17-1/8	5	217.80
1-7/8	10-3/8	17-3/8	5	153.59
1-57/64	10-3/8	17-3/8	5	217.80
1-29/32	10-3/8	17-3/8	5	161.83
1-59/64	10-5/8	17-3/8	5	173.49
1-15/16	10-3/8	17-3/8	5	217.80
1-61/64	10-3/8	17-3/8	5	161.83
1-31/32	10-3/8	17-3/8	5	178.22
1-63/64	10-3/8	17-3/8	5	227.04
2	10-3/8	17-3/8	5	171.61
2-1/64	10-3/8	17-3/8	5	197.87
2-1/32	10-3/8	17-3/8	5	197.87
2-3/64	10-1/4	17-3/8	5	197.87
2-1/16	10-1/4	17-3/8	5	181.61
2-5/64	10-1/4	17-3/8	5	227.04
2-3/32	10-1/4	17-3/8	5	228.29

MDX® SUPERIOR IMPORT Taper Shank Drill

High Speed Steel

High Speed

Standard Shank

List No. **X200** – 118° Point



Size	Flute Length	Overall Length	Morse Taper No.	Price Each
2-7/64	10-1/4	17-3/8	5	256.08
2-1/8	10-1/4	17-3/8	5	244.49
2-9/64	10-1/4	17-3/8	5	261.21
2-5/32	10-1/4	17-3/8	5	244.49
2-11/64	10-1/4	17-3/8	5	277.20
2-3/16	10-1/4	17-3/8	5	257.86
2-13/64	10-1/4	17-3/8	5	310.00
2-7/32	10-1/8	17-3/8	5	257.86
2-1/4	10-1/8	17-3/8	5	270.93
2-17/64	10-1/8	17-3/8	5	315.00
2-9/32	10-1/8	17-3/8	5	270.93
2-19/64	10-1/8	17-3/8	5	315.00
2-5/16	10-1/8	17-3/8	5	270.93
2-21/64	10-1/8	17-3/8	5	315.00
2-11/32	10-1/8	17-3/8	5	270.93
2-3/8	10-1/8	17-3/8	5	257.93
2-13/32	11-1/4	18-3/4	5	322.41
2-27/64	11-1/4	18-3/4	5	387.00
2-7/16	11-1/4	18-3/4	5	315.81
2-15/32	11-1/4	18-3/4	5	345.03
2-31/64	11-1/4	18-3/4	5	426.00
2-1/2	11-1/4	18-3/4	5	388.59
2-17/32	11-7/8	19-1/2	5	430.00
2-9/16	11-7/8	19-1/2	5	403.20
2-19/32	12	19-1/2	5	446.78

Size	Flute Length	Overall Length	Morse Taper No.	Price Each
2-5/8	11-7/8	19-1/2	5	425.50
2-21/32	12-3/4	20-3/8	5	457.68
2-11/16	12-3/4	20-3/8	5	435.89
2-45/64	12-3/4	20-3/8	5	519.00
2-23/32	12-3/4	20-3/8	5	492.03
2-3/4	12-3/4	20-3/8	5	468.60
2-25/32	13-5/8	21-1/8	5	536.72
2-13/16	13-3/8	21-1/8	5	514.95
2-27/32	13-5/8	21-1/8	5	554.58
2-55/64	13-5/8	21-1/8	5	595.00
2-7/8	13-3/8	21-1/8	5	534.73
2-29/32	14-1/8	21-3/4	5	561.38
2-15/16	14-1/8	21-3/4	5	554.58
2-31/32	14-1/8	21-3/4	5	675.00
3	14-1/8	21-3/4	5	594.92
3-1/16	14-5/8	24-1/2	6	671.22
3-1/8	14-5/8	24-1/2	6	710.00
3-3/16	14-5/8	24-1/2	6	799.00
3-1/4	15-1/2	25-1/2	6	818.40
3-5/16	15-1/2	25-1/2	6	924.00
3-3/8	15-1/2	25-1/2	6	1056.00
3-7/16	15-1/2	25-1/2	6	1240.80
3-1/2	16-3/8	26-1/2	6	1313.40
3-3/4	16-3/8	26-1/2	6	1960.20
4	17-1/2	27-1/2	6	2903.27

Shank Larger than Standard

List No. **X202** – 118° Point



Size	Flute Length	Overall Length	Morse Taper No.	Price Each
3/8	3-1/2	7-3/8	2	13.50
25/64	3-5/8	7-1/2	2	14.86
13/32	3-5/8	7-1/2	2	14.06
27/64	3-7/8	7-3/4	2	14.88
7/16	3-7/8	7-3/4	2	16.16
29/64	4-1/8	8	2	16.17
15/32	4-1/8	8	2	16.08
41/64	5-1/8	9-3/4	3	28.35
21/32	5-1/8	9-3/4	3	27.17
43/64	5-3/8	10	3	30.43
11/16	5-3/8	10	3	29.79

Size	Flute Length	Overall Length	Morse Taper No.	Price Each
45/64	5-5/8	10-1/4	3	32.93
23/32	5-5/8	10-1/4	3	31.95
47/64	5-7/8	10-1/2	3	35.64
3/4	5-7/8	10-1/2	3	33.46
49/64	6	10-5/8	3	39.63
25/32	6	10-5/8	3	36.78
1	6-3/8	12	4	53.59
1-1/64	6-1/2	12-1/8	4	58.61
1-1/32	6-1/2	12-1/8	4	60.40
1-3/64	6-5/8	12-1/4	4	66.00
1-1/16	6-5/8	12-1/4	4	63.11

Metric Standard Shank

List No. **X200M**– 118° Point



Size	Morse Taper No.	Price Each
5.00	1	10.50
5.30	1	10.50
5.60	1	10.50
6.00	1	10.50
6.20	1	11.80
6.75	1	11.80
6.80	1	11.80
7.00	1	12.20
7.20	1	12.20
7.50	1	12.20
7.75	1	14.50
7.80	1	14.50
8.00	1	17.00
8.20	1	18.16
8.25	1	18.16
8.50	1	18.04
8.80	1	18.90

Size	Morse Taper No.	Price Each
9.00	1	16.50
9.50	1	18.50
10.00	1	19.00
10.50	1	19.00
11.00	1	19.00
11.50	1	21.20
12.00	1	25.50
12.20	1	26.38
12.50	1	26.38
12.75	1	30.00
12.80	1	30.00
13.00	1	30.00
13.20	1	30.00
13.50	1	30.00
13.80	1	30.00
14.25	2	32.00
14.50	2	32.00

Size	Morse Taper No.	Price Each
14.75	2	32.00
15.00	2	34.00
15.25	2	36.00
15.40	2	38.00
15.50	2	38.00
15.75	2	39.50
16.00	2	40.00
16.25	2	40.00
17.00	2	43.00
17.75	2	59.00
18.00	2	59.00
19.00	2	59.00
19.25	2	59.00
19.40	2	59.00
19.50	2	59.00
20.00	2	59.00
20.75	2	59.00

Size	Morse Taper No.	Price Each
21.00	2	59.00
21.25	2	61.00
21.50	2	61.00
22.00	2	61.00
23.25	3	74.50
23.90	3	74.50
25.25	3	81.85
25.50	3	82.50
29.00	3	99.00
29.50	3	102.00
30.50	3	110.90
31.00	3	110.90
31.50	3	127.00
45.25	4	327.00
46.00	4	365.00
49.00	4	356.00
49.50	4	356.00

MDX® SUPERIOR IMPORT Taper Shank Drill

High Speed Steel

High Speed

Made to fit American Standard (Morse) taper shank holders.



Shank Smaller than Standard

List No. **X203** – 118° Point

Size	Flute Length	Overall Length	Morse Taper No.	Price Each
31/64	4-3/8	7-3/4	1	17.01
1/2	4-3/8	7-3/4	1	14.85
33/64	4-5/8	8	1	18.65
17/32	4-5/8	8	1	17.13
35/64	4-7/8	8-1/4	1	19.93
9/16	4-7/8	8-1/4	1	18.70
37/64	4-7/8	8-1/4	1	21.13
5/8	4-7/8	8-1/4	1	24.00
51/64	6-1/8	10	2	36.48
13/16	6-1/8	10	2	33.34
53/64	6-1/8	10	2	38.83
27/32	6-1/8	10	2	35.66
55/64	6-1/8	10	2	40.50
7/8	6-1/8	10	2	36.64
57/64	6-1/8	10	2	41.76
29/32	6-1/8	10	2	38.35
15/16	6-1/8	10	2	39.40
61/64	6-3/8	10-1/4	2	40.89
31/32	6-3/8	10-1/4	2	39.34
63/64	6-3/8	10-1/4	2	43.01
1	6-3/8	10-1/4	2	49.61
1-5/64	6-7/8	11-1/2	3	64.63
1-3/32	6-7/8	11-1/2	3	58.25
1-7/64	7-1/8	11-3/4	3	74.14
1-1/8	7-1/8	11-3/4	3	60.51
1-9/64	7-1/4	11-7/8	3	69.70
1-5/32	7-1/4	11-7/8	3	65.91
1-11/64	7-3/8	12	3	71.97
1-3/16	7-3/8	12	3	67.25
1-13/64	7-1/2	12-1/8	3	77.23
1-7/32	7-1/2	12-1/2	3	72.22
1-15/64	7-7/8	12-1/2	3	84.18
1-1/4	7-7/8	12-1/2	3	79.27
1-17/64	8-1/2	13-1/8	3	85.77
1-9/32	8-1/2	13-1/8	3	85.77
1-19/64	8-5/8	13-1/4	3	87.56
1-5/16	8-5/8	13-1/4	3	95.50
1-21/64	8-3/4	13-3/8	3	91.41
1-23/64	8-7/8	13-1/2	3	97.34
1-3/8	8-7/8	13-1/2	3	103.34
1-25/64	9	13-5/8	3	105.40
1-13/32	9	13-5/8	3	105.40
1-27/64	9-1/8	13-3/4	3	111.38
1-7/16	9-1/8	13-3/4	3	113.98
1-29/64	9-1/4	13-7/8	3	124.37
1-15/32	9-1/4	13-7/8	3	124.37
1-31/64	9-3/8	14	3	120.00
1-1/2	9-3/8	14	3	120.00
1-33/64	9-3/8	15	4	135.60
1-17/32	9-3/8	15	4	126.77
1-35/64	9-5/8	15-1/4	4	144.27
1-9/16	9-5/8	15-1/4	4	135.66
1-37/64	9-7/8	15-1/2	4	153.31
1-19/32	9-7/8	15-1/2	4	145.00
1-39/64	10	15-5/8	4	159.21
1-5/8	10	15-5/8	4	148.28
1-41/64	10-1/8	15-3/4	4	171.63
1-21/32	10-1/8	15-3/4	4	166.12
1-43/64	10-1/8	15-3/4	4	178.15
1-11/16	10-1/8	15-3/4	4	166.24
1-45/64	10-1/8	15-3/4	4	183.49
1-23/32	10-1/8	15-3/4	4	170.06
1-47/64	10-3/8	16-1/4	4	183.49

Size	Flute Length	Overall Length	Morse Taper No.	Price Each
1-3/4	10-3/8	16-1/4	4	161.33
1-25/32	10-3/8	16-1/4	4	177.90
1-51/64	10-3/8	16-1/4	4	197.93
1-13/16	10-3/8	16-1/4	4	177.90
1-53/64	10-3/8	16-1/4	4	212.78
1-27/32	10-3/8	16-1/4	4	189.55
1-55/64	10-1/2	16-1/2	4	231.13
1-7/8	10-1/2	16-1/2	4	189.55
1-57/64	10-1/2	16-1/2	4	231.13
1-29/32	10-1/2	16-1/2	4	203.77
1-59/64	10-1/2	16-1/2	4	244.49
1-15/16	10-5/8	16-5/8	4	203.77
1-61/64	10-5/8	16-5/8	4	257.48
1-31/32	10-5/8	16-5/8	4	207.31
1-63/64	10-5/8	16-5/8	4	257.48
2	10-5/8	16-5/8	4	201.98
2-1/32	10-5/8	16-5/8	4	244.49
2-1/16	10-5/8	16-5/8	4	244.49
2-3/32	10-5/8	16-5/8	4	244.49
2-7/64	10-5/8	16-5/8	4	277.25
2-1/8	10-5/8	16-5/8	4	244.49
2-5/32	10-5/8	16-5/8	4	268.93
2-3/16	10-5/8	16-5/8	4	257.86
2-1/4	10-5/8	16-5/8	4	270.93
2-9/32	10-5/8	16-5/8	4	299.90
2-5/16	10-5/8	16-5/8	4	298.02
2-21/64	10-5/8	16-5/8	4	366.68
2-11/32	10-5/8	16-5/8	4	327.36
2-3/8	10-5/8	16-5/8	4	379.68
2-25/64	10-5/8	16-5/8	4	440.15
2-13/32	11-1/4	18	4	391.18
2-7/16	11-1/4	18	4	391.18
2-15/32	11-1/4	18	4	420.00
2-1/2	11-1/4	18	4	430.00
2-17/32	12	18-3/4	4	455.00
2-9/16	12	18-3/4	4	455.00
2-19/32	12	18-3/4	4	475.20
2-21/32	12-7/8	19-3/8	4	530.64
2-11/16	12-7/8	19-3/8	4	530.64
2-23/32	12-7/8	19-3/8	4	557.04
2-25/32	12-7/8	19-3/8	4	591.70
2-13/16	13-5/8	20-1/8	4	601.26
2-27/32	13-5/8	20-1/8	4	627.40
2-29/32	13-5/8	20-1/8	4	659.34
2-15/16	14-1/8	20-3/4	4	686.40
2-31/32	14-1/8	20-3/4	4	718.41
3	14-1/8	20-3/4	4	760.00
3-5/32	15-1/4	23	5	937.20
3-7/32	15-1/4	23	5	982.08
3-9/32	15-1/4	23	5	1040.82
3-5/16	16-1/4	24	5	1040.82
3-11/32	16-1/4	24	5	1118.04
3-3/8	16-1/4	24	5	1267.20
3-13/32	16-1/4	24	5	1148.40
3-7/16	16-1/4	24	5	1364.88
3-15/32	17-1/4	25	5	1364.88
3-11/16	17-1/2	26	5	1650.00
3-3/4	17-1/2	26	5	1782.00
3-13/16	17-1/2	26	5	1914.00
3-7/8	17-1/2	26	5	2145.00
3-15/16	17-1/2	26	5	2376.00
4	17-1/2	26	5	2633.40

Titanium Nitride Coated Taper Shank Drills



High Speed Steel

List No. **200T** – 118° Point

Size	Dec. Equiv.	Flute Length	Overall Length	Morse Taper No.	Price Each
7/32	.2188	2-3/4	6	1	24.55
5/16	.3125	3-1/8	6-3/8	1	35.63
21/64	.3281	3-1/4	6-1/2	1	37.22
11/32	.3438	3-1/4	6-1/2	1	37.22
3/8	.3750	3-1/2	6-3/4	1	37.22
13/32	.4062	3-5/8	7	1	41.00
27/64	.4219	3-7/8	7-1/4	1	42.33
7/16	.4375	3-7/8	7-1/4	1	40.59
29/64	.4531	4-1/8	7-1/2	1	45.54
15/32	.4688	4-1/8	7-1/2	1	46.90
1/2	.5000	4-3/8	8-1/4	2	47.92
33/64	.5156	4-5/8	8-1/2	2	57.22
17/32	.5313	4-5/8	8-1/2	2	53.06
35/64	.5469	4-7/8	8-3/4	2	61.02
9/16	.5625	4-7/8	8-3/4	2	58.81
19/32	.5938	4-7/8	8-3/4	2	63.32
5/8	.6250	4-7/8	8-3/4	2	64.15
41/64	.6406	5-1/8	9	2	73.92
21/32	.6563	5-1/8	9	2	71.28
43/64	.6719	5-3/8	9-1/4	2	73.66
11/16	.6875	5-3/8	9-1/4	2	73.66
23/32	.7188	5-5/8	9-1/2	2	79.20
3/4	.7500	5-7/8	9-3/4	2	86.33

Size	Dec. Equiv.	Flute Length	Overall Length	Morse Taper No.	Price Each
25/32	.7813	6	9-7/8	2	102.96
51/64	.7969	6-1/8	10-3/4	3	106.44
13/16	.8125	6-1/8	10-3/4	3	107.71
53/64	.8281	6-1/8	10-3/4	3	123.87
27/32	.8438	6-1/8	10-3/4	3	115.63
7/8	.8750	6-1/8	10-3/4	3	118.80
29/32	.9063	6-1/8	10-3/4	3	126.72
59/64	.9219	6-1/8	10-3/4	3	130.33
15/16	.9375	6-1/8	10-3/4	3	120.38
31/32	.9688	6-3/8	11	3	130.68
63/64	.9844	6-3/8	11	3	144.14
1	1.0000	6-3/8	11	3	133.06
1-1/32	1.0313	6-1/2	11-1/8	3	146.52
1-1/16	1.0625	6-5/8	11-1/4	3	152.06
1-3/32	1.0938	6-7/8	12-1/2	4	180.58
1-1/8	1.1250	7-1/8	12-3/4	4	187.70
1-3/16	1.1875	7-3/8	13	4	205.92
1-1/4	1.2500	7-7/8	13-1/2	4	229.68
1-9/32	1.2813	8-1/2	13-1/8	3	240.00
1-5/16	1.3125	8-5/8	14-1/4	4	289.87
1-3/8	1.3750	8-7/8	14-1/2	4	308.88
1-1/2	1.5000	9-3/8	15	4	356.40

Other sizes available, Please inquire.

Fast Spiral Taper Shank Drills



High Speed Steel

List No. **200F**

Size	Decimal Equivalent	Flute Length	Overall Length	Morse Taper No.	Price Each
1/8	.1250	1-7/8	5-1/8	1	24.75
9/64	.1406	2-1/8	5-3/8	1	24.75
5/32	.1562	2-1/8	5-3/8	1	24.75
18	.1695	2-1/2	5-3/4	1	29.10
11/64	.1719	2-1/2	5-3/4	1	24.75
3/16	.1875	2-1/2	5-3/4	1	24.75
9	.1960	2-3/4	6	1	29.10
13/64	.2031	2-3/4	6	1	24.75
7/32	.2188	2-3/4	6	1	24.75
1	.2280	2-3/4	6	1	30.49
15/64	.2344	2-7/8	6-1/8	1	24.75
C	.2420	2-7/8	6-1/8	1	27.80
1/4	.2500	2-7/8	6-1/8	1	24.75
F	.2570	3	6-1/4	1	27.81
G	.2610	3	6-1/4	1	33.15
17/64	.2656	3	6-1/4	1	25.50
I	.2720	3	6-1/4	1	33.15
19/64	.2969	3-1/8	6-3/8	1	25.50
N	.3020	3-1/8	6-3/8	1	34.79
5/16	.3125	3-1/8	6-3/8	1	33.99
21/64	.3281	3-1/4	6-1/2	1	33.99

Size	Decimal Equivalent	Flute Length	Overall Length	Morse Taper No.	Price Each
R	.3390	3-1/4	6-1/2	1	47.62
11/32	.3438	3-1/4	6-1/2	1	33.99
S	.3480	3-1/2	6-3/4	1	49.89
23/64	.3594	3-1/2	6-3/4	1	33.99
3/8	.3750	3-1/2	6-3/4	1	33.99
25/64	.3906	3-5/8	7	1	35.89
Y	.4040	3-7/8	7-1/4	1	54.20
27/64	.4219	3-7/8	7-1/4	1	37.17
29/64	.4531	4-1/8	7-1/2	1	43.87
31/64	.4844	4-3/8	8-1/4	2	43.87
1/2	.5000	4-3/8	8-1/4	2	43.87
19/32	.5938	4-7/8	8-3/4	2	50.65
5/8	.6250	4-7/8	8-3/4	2	50.65
23/32	.7188	5-5/8	9-1/2	2	62.35
47/64	.7344	5-7/8	9-3/4	2	76.00
25/32	.7812	6	9-7/8	2	82.69
51/64	.7969	6-1/8	10-3/4	3	87.17
7/8	.8750	6-1/8	10-3/4	3	92.54
57/64	.8906	6-1/8	10-3/4	3	100.15
59/64	.9219	6-1/8	10-3/4	3	101.83

Extra Long Taper Shank Drills



High Speed

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High Speed Steel – 118° Point

These drills are utilized in deep hole or long reach drilling applications in many kinds of materials. For fixed spindle use.

Extensive Offering

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The world's largest and most extensive inventory of **USA manufactured** extra long taper shank drills!

8" Overall Length List No. **108**

Size	Decimal Equivalent	Morse Taper No.	Flute Length	Price Each
1/8	.1250	1	5	47.96
9/64	.1406	1	5	50.29
5/32	.1562	1	5	50.29
#20	.1610	1	5	56.10
11/64	.1719	1	5	50.29
3/16	.1875	1	5	50.29
13/64	.2031	1	5	50.29
#3	.2130	1	5	56.10
7/32	.2188	1	5	50.29
15/64	.2344	1	5	50.29
A	.2340	1	5	58.50
1/4	.2500	1	5	50.29
F	.2570	1	5	61.38
17/64	.2656	1	5	54.48
9/32	.2812	1	5	54.48
L	.2900	1	5	61.38
19/64	.2969	1	5	54.45
N	.3020	1	5	61.38
5/16	.3125	1	5	54.45
5/16	.3125	2	4	54.45
21/64	.3281	1	5	61.22
11/32	.3438	1	5	61.22
23/64	.3594	1	5	62.96
3/8	.3750	1	5	62.96
13/32	.4062	1	5	66.64
7/16	.4375	1	5	66.64
29/64	.4531	1	5	69.30
15/32	.4688	1	5	69.30

10" Overall Length List No. **110**

Size	Decimal Equivalent	Morse Taper No.	Flute Length	Price Each
5/32	.1562	1	7	57.82
11/64	.1719	1	7	59.00
3/16	.1875	1	7	60.94
13/64	.2031	1	7	60.94
7/32	.2188	1	7	60.94
15/64	.2344	1	7	60.94
1/4	.2500	1	7	60.94
F	.2570	1	7	76.56
9/32	.2812	1	7	66.49
19/64	.2969	1	7	66.49
21/64	.3281	1	7	72.03
T	.3580	1	7	76.56
23/64	.3594	1	7	74.05
3/8	.3750	1	7	74.05
13/32	.4062	1	7	76.56
27/64	.4219	1	7	78.87
7/16	.4375	1	7	78.87
29/64	.4531	1	7	86.61
15/32	.4688	1	7	83.48
15/32	.4688	2	6	86.00
31/64	.4844	2	6	95.59
1/2	.5000	1	7	92.23
1/2	.5000	2	6	92.23
33/64	.5156	2	6	95.59
17/32	.5312	2	6	92.23
35/64	.5469	1	7	93.54
35/64	.5469	2	6	93.54
9/16	.5625	2	6	93.54
37/64	.5781	2	6	98.21
19/32	.5938	2	6	94.76
39/64	.6093	2	6	100.98
5/8	.6250	2	6	100.98

12" Overall Length List No. **112**

Size	Decimal Equivalent	Morse Taper No.	Flute Length	Price Each
1/8	.1250	1	9	68.51
9/64	.1406	1	9	69.50
5/32	.1562	1	9	69.50
11/64	.1719	1	9	69.50
3/16	.1875	1	9	69.50
13/64	.2031	1	9	71.08
7/32	.2188	1	9	71.08
A	.2340	1	9	79.20
15/64	.2344	1	9	71.08
1/4	.2500	1	9	71.08
F	.2570	1	9	82.50
17/64	.2656	1	9	77.81
9/32	.2812	1	9	77.81
19/64	.2969	1	9	77.81
5/16	.3125	1	9	77.81
21/64	.3281	1	9	84.74
11/32	.3438	1	9	84.74
23/64	.3594	1	9	87.12
3/8	.3750	1	9	87.12
25/64	.3906	1	9	91.48
13/32	.4062	1	9	91.48
27/64	.4219	1	9	94.64
7/16	.4375	1	9	94.64
29/64	.4531	1	9	101.89
15/32	.4688	1	9	98.21
31/64	.4844	2	8	112.46
1/2	.5000	2	8	108.50
33/64	.5156	2	8	112.46
17/32	.5312	2	8	108.90
35/64	.5469	2	8	114.05
9/16	.5625	2	8	110.05
37/64	.5781	2	8	115.59
19/32	.5938	2	8	111.47
39/64	.6094	2	8	123.27
5/8	.6250	2	8	118.79
5/8	.6250	3	7	122.10
41/64	.6406	2	8	127.12
21/32	.6562	2	8	127.12
43/64	.6719	2	8	138.60
11/16	.6875	2	8	138.60

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Extra Long Taper Shank Drills



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These drills are utilized in deep hole or long reach drilling applications in many kinds of materials. For fixed spindle use.

Extensive Offering

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The world's largest and most extensive inventory of **USA manufactured** extra long taper shank drills!

12" Overall Length List No. **112**

▶ *Continued*

Size	Decimal Equivalent	Morse Taper No.	Flute Length	Price Each
45/64	.7031	2	8	147.71
23/32	.7188	2	8	147.71
47/64	.7344	2	8	153.61
3/4	.7500	2	8	153.61
49/64	.7656	2	8	162.20
49/64	.7656	3	7	162.20
25/32	.7812	2	8	162.20
25/32	.7812	3	7	162.20
51/64	.7969	3	7	171.19
13/16	.8125	3	7	171.19

Size	Decimal Equivalent	Morse Taper No.	Flute Length	Price Each
53/64	.8281	3	7	171.19
27/32	.8438	3	7	171.19
55/64	.8594	3	7	171.19
7/8	.8750	3	7	171.19
57/64	.8906	3	7	188.18
29/32	.9062	3	7	188.18
59/64	.9219	3	7	194.36
15/16	.9375	3	7	194.36
31/32	.9688	3	7	203.62
1	1.0000	3	7	205.13

14" Overall Length List No. **114**

Size	Decimal Equivalent	Morse Taper No.	Flute Length	Price Each
3/16	.1875	1	11	82.00
1/4	.2500	1	11	82.00
5/16	.3125	2	10	99.00
25/64	.3906	1	11	110.48
25/64	.3906	2	10	110.48
7/16	.4375	1	11	110.48
29/64	.4531	1	11	110.48
15/32	.4688	1	11	110.48
15/32	.4688	2	10	110.48
31/64	.4844	2	10	112.15
1/2	.5000	2	10	112.15
33/64	.5156	1	11	113.26
33/64	.5156	2	10	113.26
17/32	.5312	2	10	117.93
35/64	.5469	1	11	123.16
9/16	.5625	2	10	123.16
37/64	.5781	2	10	123.16
19/32	.5938	2	10	123.16
39/64	.6094	2	10	129.89
5/8	.6250	2	10	129.89
41/64	.6406	2	10	139.19
21/32	.6562	2	10	139.19

Size	Decimal Equivalent	Morse Taper No.	Flute Length	Price Each
43/64	.6719	2	10	150.28
11/16	.6875	2	10	150.28
45/64	.7031	2	10	152.46
23/32	.7188	2	10	152.46
47/64	.7344	2	10	165.53
3/4	.7500	2	10	165.53
49/64	.7656	2	10	173.45
25/32	.7812	2	10	173.45
20.50mm	.8071	3	9	188.77
27/32	.8438	3	9	179.78
7/8	.8750	3	9	199.58
22.50mm	.8858	3	9	225.00
57/64	.8906	3	9	199.58
29/32	.9062	3	9	204.00
61/64	.9531	3	9	210.00
31/32	.9688	3	9	217.01
63/64	.9844	3	9	217.01
1	1.0000	3	9	221.00
1-3/32	1.0938	3	10	226.00
1-5/32	1.1562	3	10	230.05
1-11/64	1.1719	3	10	235.00
1-3/16	1.1875	3	9	234.30

15" Overall Length List No. **115**

Size	Decimal Equivalent	Morse Taper No.	Flute Length	Price Each
3/16	.1875	1	12	92.66
13/64	.2031	1	12	92.66
7/32	.2188	1	12	92.66
15/64	.2344	1	12	92.66
1/4	.2500	1	12	92.66
17/64	.2656	1	12	97.81
9/32	.2812	1	12	97.81
19/64	.2969	1	12	102.96
5/16	.3125	1	12	102.96
21/64	.3281	1	12	108.11
11/32	.3438	1	12	108.11
23/64	.3594	1	12	120.46
3/8	.3750	1	12	120.46
25/64	.3906	1	12	120.46
13/32	.4062	1	12	120.46
27/64	.4219	1	12	120.46
7/16	.4375	1	12	120.46
29/64	.4531	1	12	123.55

Size	Decimal Equivalent	Morse Taper No.	Flute Length	Price Each
15/32	.4688	1	12	123.55
15/32	.4688	2	11	125.33
31/64	.4844	2	11	125.33
1/2	.5000	2	11	125.33
33/64	.5156	1	12	130.68
33/64	.5156	2	11	125.33
17/32	.5312	2	11	125.33
35/64	.5469	1	12	127.12
35/64	.5469	2	11	127.12
9/16	.5625	2	11	127.12
37/64	.5781	2	11	128.90
19/32	.5938	2	11	128.90
39/64	.6094	2	11	137.57
5/8	.6250	2	11	137.57
41/64	.6406	2	11	147.31
21/32	.6562	2	11	147.31
43/64	.6719	2	11	161.41
11/16	.6875	2	11	161.41

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Extra Long Taper Shank Drills



High Speed Steel – 118° Point

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MICHIGAN DRILL & CUTTING TOOLS

Extensive Offering

Exclusively from Michigan Drill

The world's largest and most extensive inventory of **USA manufactured** extra long taper shank drills!

15" Overall Length List No. **115**

▶ *Continued*

Size	Decimal Equivalent	Morse Taper No.	Flute Length	Price Each
45/64	.7031	2	11	166.91
23/32	.7188	2	11	166.91
47/64	.7344	2	11	178.87
3/4	.7500	2	11	178.87
49/64	.7656	2	11	188.69
25/32	.7812	2	11	188.69
51/64	.7969	3	10	188.69
13/16	.8125	3	10	188.69
53/64	.8281	3	10	188.69
27/32	.8438	3	10	188.69
55/64	.8594	3	10	188.69
7/8	.8750	3	10	188.69
57/64	.8906	3	10	212.45
29/32	.9062	3	10	212.45
59/64	.9219	3	10	212.45
15/16	.9375	3	10	223.34
61/64	.9531	3	10	226.63
31/32	.9688	3	10	226.63
63/64	.9844	3	10	229.48

Size	Decimal Equivalent	Morse Taper No.	Flute Length	Price Each
1	1.0000	3	10	229.48
1-1/64	1.0156	3	10	230.59
1-1/32	1.0312	3	10	230.59
1-3/64	1.0469	3	10	234.83
1-1/16	1.0625	3	10	230.59
1-5/64	1.0781	4	9	247.10
1-3/32	1.0938	4	9	247.10
1-7/64	1.1094	4	9	247.10
1-1/8	1.1250	4	9	247.10
1-9/64	1.1406	4	9	252.05
1-5/32	1.1562	3	10	252.05
1-5/32	1.1562	4	9	252.05
1-11/64	1.1719	4	9	254.83
1-3/16	1.1875	3	10	254.83
1-3/16	1.1875	4	9	254.83
1-7/32	1.2188	4	9	270.27
1-15/64	1.2344	4	9	270.27
1-1/4	1.2500	4	9	270.27
1-13/32	1.4062	4	9	360.60

18" Overall Length List No. **118**

Size	Decimal Equivalent	Morse Taper No.	Flute Length	Price Each
1/4	.2500	1	15	120.78
17/64	.2656	1	15	122.76
9/32	.2812	1	15	122.76
19/64	.2969	1	15	125.93
5/16	.3125	1	15	125.93
21/64	.3281	1	15	130.68
11/32	.3438	1	15	130.68
23/64	.3594	1	15	136.62
3/8	.3750	1	15	136.62
25/64	.3906	1	15	136.62
13/32	.4062	1	15	136.62
27/64	.4219	1	15	136.62
7/16	.4375	1	15	136.62
29/64	.4531	1	15	136.62
15/32	.4688	1	15	136.62
31/64	.4844	2	14	136.62
1/2	.5000	2	14	136.62
33/64	.5156	2	14	136.62
17/32	.5312	2	14	136.62
35/64	.5469	2	14	138.60
9/16	.5625	2	14	138.60
37/64	.5781	2	14	140.18
19/32	.5938	2	14	140.18
39/64	.6094	2	14	150.28
5/8	.6250	2	14	150.28
41/64	.6406	2	14	161.37
21/32	.6562	2	14	161.37
43/64	.6719	2	14	176.89
11/16	.6875	2	14	176.89
45/64	.7031	2	14	190.36
23/32	.7188	2	14	190.36
47/64	.7344	2	14	196.38
3/4	.7500	2	14	196.38
49/64	.7656	2	14	206.95
25/32	.7812	2	14	206.95

Size	Decimal Equivalent	Morse Taper No.	Flute Length	Price Each
51/64	.7969	2	14	206.95
51/64	.7969	3	13	206.95
13/16	.8125	3	13	206.95
53/64	.8281	3	13	216.02
27/32	.8438	3	13	216.02
55/64	.8594	3	13	223.74
7/8	.8750	3	13	223.74
57/64	.8906	3	13	231.58
29/32	.9062	3	13	231.58
59/64	.9219	3	13	235.46
15/16	.9375	3	13	235.46
61/64	.9531	3	13	239.34
31/32	.9688	3	13	239.34
63/64	.9844	3	13	252.94
1	1.0000	3	13	252.94
1-1/64	1.0156	3	13	252.94
1-1/32	1.0312	3	13	274.35
1-3/64	1.0469	3	13	274.35
1-1/16	1.0625	3	13	274.35
1-5/64	1.0781	4	12	277.20
1-3/32	1.0938	4	12	277.20
1-7/64	1.1094	4	12	277.20
1-1/8	1.1250	4	12	277.20
1-9/64	1.1406	4	12	308.29
1-5/32	1.1562	4	12	308.29
1-11/64	1.1719	4	12	308.88
1-3/16	1.1875	4	12	308.88
1-13/64	1.2031	4	12	324.32
1-7/32	1.2188	4	12	324.32
1-15/64	1.2344	4	12	324.32
1-1/4	1.2500	4	12	324.32
1-17/64	1.2656	4	12	380.16
1-9/32	1.2813	4	12	367.09
1-5/16	1.3125	4	12	367.09
1-11/32	1.3438	4	12	411.25

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Extra Long Taper Shank Drills



High Speed Steel – 118° Point

These drills are utilized in deep hole or long reach drilling applications in many kinds of materials. For fixed spindle use.

High Speed

MADE IN USA

MICHIGAN DRILL & CUTTING TOOLS

Extensive Offering

Exclusively from Michigan Drill

The world's largest and most extensive inventory of **USA manufactured** extra long taper shank drills!

18" Overall Length List No. **118**

▶ *Continued*

Size	Decimal Equivalent	Morse Taper No.	Flute Length	Price Each
1-23/64	1.3594	4	12	411.25
1-3/8	1.3750	4	12	411.25
1-13/32	1.4062	4	12	423.72
1-27/64	1.4219	4	12	423.72
1-7/16	1.4375	4	12	423.72
1-15/32	1.4688	4	12	459.36
1-1/2	1.5000	4	12	459.36
1-17/32	1.5312	5	10	511.63
1-9/16	1.5625	5	10	511.63
1-19/32	1.5938	5	10	537.21
1-5/8	1.6250	5	10	545.69
1-11/16	1.6875	5	10	582.12
1-3/4	1.7500	5	10	653.40
1-13/16	1.8125	5	10	720.72
1-7/8	1.8750	5	10	790.02
1-29/32	1.9062	5	10	790.02

20" Overall Length List No. **120**

Size	Decimal Equivalent	Morse Taper No.	Flute Length	Price Each
25/64	.3906	1	14-1/2	170.00
13/32	.4062	1	14-1/2	170.00
31/64	.4843	2	16	170.00
33/64	.5156	2	16	174.24
17/32	.5312	2	16	174.24
35/64	.5469	3	15	178.20
9/16	.5625	2	16	178.20
19/32	.5938	2	16	178.20
5/8	.6250	2	16	193.45
21/32	.6562	2	16	213.05
13/16	.8125	3	15	228.89
27/32	.8438	3	15	236.81
7/8	.8750	3	15	253.44
15/16	.9375	3	15	257.40
31/32	.9688	3	15	276.41
1-1/64	1.0156	3	15	290.00
1-1/16	1.0625	3	15	300.17
1-3/32	1.0938	4	14	316.01
1-1/8	1.1250	4	14	316.01
1-5/32	1.1562	4	14	368.28
1-3/16	1.1875	4	14	368.28
1-13/64	1.2031	4	14	368.28
1-7/32	1.2188	4	14	368.28
1-1/4	1.2500	4	14	368.28
1-9/32	1.2812	4	14	429.83
1-21/64	1.3281	3	15	464.90
1-11/32	1.3438	4	14	464.90
1-3/8	1.3750	4	14	464.90
1-13/32	1.4062	4	14	495.00
1-7/16	1.4375	4	14	495.00
1-15/32	1.4688	4	14	514.80
1-3/4	1.7500	5	13	720.72
2-3/16	2.1875	4	14	1280.00

24" Overall Length List No. **124**

Size	Decimal Equivalent	Morse Taper No.	Flute Length	Price Each
3/8	.3750	1	21	191.66
25/64	.3906	1	21	191.66
13/32	.4062	1	21	191.66
27/64	.4219	1	21	191.66
7/16	.4375	1	21	191.66
29/64	.4531	1	21	191.66
15/32	.4688	1	21	191.66
31/64	.4844	2	20	191.66
1/2	.5000	2	20	191.66
33/64	.5156	2	20	199.15
17/32	.5312	2	20	199.15
35/64	.5469	2	20	199.15
9/16	.5625	2	20	199.15
37/64	.5781	2	20	199.15
19/32	.5938	2	20	199.15
39/64	.6094	2	20	199.15
5/8	.6250	2	20	199.15
41/64	.6406	2	20	199.15
21/32	.6562	2	20	199.15
43/64	.6719	2	20	210.51
11/16	.6875	2	20	210.51
45/64	.7031	2	20	217.56
23/32	.7188	2	20	217.56
47/64	.7344	2	20	229.86
3/4	.7500	2	20	229.86
49/64	.7656	2	20	237.20
25/32	.7812	2	20	237.20
51/64	.7969	3	19	249.76
13/16	.8125	3	19	249.76
53/64	.8281	3	19	287.45
27/32	.8438	3	19	287.45
55/64	.8594	3	19	300.54
7/8	.8750	3	19	300.54
57/64	.8906	3	19	300.54
29/32	.9062	3	19	300.54
59/64	.9219	3	19	313.02
15/16	.9375	3	19	313.02
61/64	.9531	3	19	344.97
31/32	.9688	3	19	344.97
63/64	.9844	3	19	351.32
1	1.0000	3	19	351.32
1-1/64	1.0156	3	19	360.33
1-1/32	1.0312	3	19	360.33
1-3/64	1.0469	3	19	360.33
1-1/16	1.0625	3	19	360.33
1-5/64	1.0781	4	18	395.95
1-3/32	1.0938	4	18	395.95
1-1/8	1.1250	4	18	395.95
1-9/64	1.1406	4	18	426.02
1-5/32	1.1562	4	18	426.02
1-11/64	1.1719	4	18	442.02
1-3/16	1.1875	4	18	442.02

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Extra Long Taper Shank Drills



High Speed Steel – 118° Point

The world's largest and most extensive inventory of USA manufactured extra long taper shank drills!

24" Overall Length List No. 124

▶ *Continued*

Size	Decimal Equivalent	Morse Taper No.	Flute Length	Price Each
1-13/64	1.2031	4	18	447.13
1-7/32	1.2188	3	19	447.13
1-7/32	1.2188	4	18	447.13
1-15/64	1.2344	4	18	447.13
1-1/4	1.2500	4	18	447.13
1-17/64	1.2656	4	18	506.29
1-9/32	1.2812	3	19	530.00
1-9/32	1.2812	4	18	506.29
1-5/16	1.3125	4	18	506.29
1-11/32	1.3438	4	18	566.28
1-23/64	1.3594	4	18	566.28
1-3/8	1.3750	4	18	566.28
1-25/64	1.3906	4	18	585.45
1-13/32	1.4062	4	18	585.45
1-7/16	1.4375	4	18	585.45
1-15/32	1.4688	4	18	634.67
1-1/2	1.5000	4	18	634.67
1-17/32	1.5312	4	18	695.00
1-9/16	1.5625	4	18	705.24
1-9/16	1.5625	5	17	705.24
1-19/32	1.5938	4	18	705.24
1-5/8	1.6250	4	18	705.24
1-5/8	1.6250	5	17	705.24
1-21/32	1.6562	4	18	803.25
1-11/16	1.6875	4	18	803.25
1-11/16	1.6875	5	17	803.25
1-23/32	1.7188	4	18	898.21
1-3/4	1.7500	4	18	898.21
1-3/4	1.7500	5	17	898.21
1-25/32	1.7812	4	18	993.17
1-25/32	1.7812	5	17	993.17
1-13/16	1.8125	4	18	993.17
1-13/16	1.8125	5	17	993.17
1-27/32	1.8438	4	18	1102.94
1-7/8	1.8750	4	18	1102.94
1-7/8	1.8750	5	17	1102.94
1-29/32	1.9062	4	18	1211.84
1-15/16	1.9375	4	18	1211.84
1-15/16	1.9375	5	17	1211.84
1-31/32	1.9688	4	18	1313.77
2	2.0000	4	18	1313.77
2	2.0000	5	17	1313.77
2-1/16	2.0625	5	17	1415.70
2-3/32	2.0938	5	17	1415.70
2-1/8	2.1250	5	17	1415.70
2-3/16	2.1875	5	17	1555.96
2-7/32	2.2188	5	17	1694.88
2-1/4	2.2500	5	17	1555.96
2-5/16	2.3125	5	17	1696.23
2-3/8	2.3750	5	17	1696.23
2-7/16	2.4375	5	17	1810.35
2-1/2	2.5000	5	17	1810.35
2-9/16	2.5625	5	17	1924.48
2-5/8	2.6250	5	17	1924.48
2-11/16	2.6875	5	17	2083.91
2-3/4	2.7500	5	17	2083.91
2-13/16	2.8125	5	17	2243.34
2-7/8	2.8750	5	17	2243.34
2-15/16	2.9375	5	17	2563.07
3	3.0000	5	17	2563.07

30" Overall Length List No. 130

Size	Decimal Equivalent	Morse Taper No.	Flute Length	Price Each
3/4	.7500	2	26	316.01
13/16	.8125	3	25	372.24
7/8	.8750	3	25	426.89
15/16	.9375	3	25	461.74
1	1.0000	3	25	508.46
1-1/32	1.0312	3	25	508.46
1-1/16	1.0625	3	25	508.46
1-3/32	1.0937	4	24	580.54
1-1/8	1.1250	4	24	580.54
1-3/16	1.1875	4	24	632.81
1-13/64	1.2031	4	24	685.08
1-1/4	1.2500	4	24	685.08
1-5/16	1.3125	4	24	777.74
1-11/32	1.3438	4	24	812.20
1-3/8	1.3750	4	24	846.65
1-7/16	1.4375	4	24	871.20
1-1/2	1.5000	4	24	949.61
1-9/16	1.5625	5	23	1060.49
1-5/8	1.6250	5	23	1060.49
1-11/16	1.6875	5	23	1172.16
1-3/4	1.7500	5	23	1172.16
1-13/16	1.8125	5	23	1312.34
1-13/16	1.8125	4	24	1312.34
1-7/8	1.8750	5	23	1312.34
1-15/16	1.9375	4	24	1451.74
1-15/16	1.9375	5	23	1451.74
2	2.0000	5	23	1492.92
2-1/16	2.0625	5	23	1647.36
2-1/8	2.1250	5	23	1647.36
2-3/16	2.1875	5	23	1767.74
2-1/4	2.2500	5	23	1767.74
2-5/16	2.3125	5	23	1928.52
2-3/8	2.3750	5	23	1928.52
2-7/16	2.4375	5	23	2058.41
2-1/2	2.5000	5	23	2058.41
2-5/8	2.6250	5	23	2185.13
2-3/4	2.7500	5	23	2367.29
2-7/8	2.8750	5	23	2501.93
3	3.0000	5	23	2914.56
3-1/8	3.1250	5	23	3310.56
3-3/8	3.3750	5	23	5358.67
3-1/2	3.5000	5	23	6842.88

36" Overall Length List No. 136

Size	Decimal Equivalent	Morse Taper No.	Flute Length	Price Each
1-1/2	1.5000	4	30	1167.41
1-3/4	1.7500	5	29	1440.65
2	2.0000	5	29	1928.52
2-1/8	2.1250	5	29	2251.66
2-3/8	2.3750	5	29	2699.14
2-1/2	2.5000	5	29	2699.14
2-5/8	2.6250	5	29	3060.29
2-3/4	2.7500	5	29	3569.54
3	3.0000	5	29	4359.96
3-1/8	3.1250	5	29	4359.96

Oil Hole Straight Shank Drills

High Speed Steel – 118° Notched Point

MADE IN USA

MICHIGAN DRILL & CUTTING TOOLS

Regular Length

List No. **499** – Standard Spiral
List No. **499SL** – Slow Spiral



Specials can be made to print. Please inquire.

Size	Dec. Equiv.	Approx. Flute Length	Overall Length	Price Each Spiral 499	Price Each Slow Spiral 499SL
1/8	.1250	2-1/2	4-7/8	265.86	—
9/64	.1406	3	5-1/8	265.86	—
11/64	.1719	3-3/8	5-3/4	265.86	—
3/16	.1875	3-3/8	5-3/4	265.86	—
15/64	.2344	3-3/8	5-3/4	265.86	265.86
1/4*	.2500	1-3/4	4-5/16	265.86	265.86
17/64	.2656	3-7/8	6-1/4	265.86	—
9/32	.2812	4	6-3/8	265.86	265.86
19/64	.2969	4	6-3/8	265.86	265.86
5/16	.3125	4	6-3/8	265.86	265.86
21/64	.3281	4-1/8	6-1/2	265.86	—
11/32	.3438	4-1/8	6-1/2	265.86	—
23/64	.3594	4-1/4	6-3/4	265.86	—
3/8	.3750	4-1/4	6-3/4	264.64	264.64
25/64	.3906	4-3/8	7	269.58	269.58
13/32	.4062	4-3/8	7	269.58	269.58
27/64	.4219	4-5/8	7-1/4	279.44	279.44
7/16	.4375	4-5/8	7-1/4	279.44	279.44
29/64	.4531	4-7/8	7-1/2	285.32	285.32
15/32	.4688	4-7/8	7-1/2	285.32	285.32
31/64	.4844	5	7-3/4	288.95	288.95
1/2	.5000	5	7-3/4	288.95	288.95
33/64	.5156	5-1/4	8	293.20	293.20
17/32	.5312	5-1/4	8	293.20	293.20
35/64	.5469	5-3/8	8-1/4	300.08	300.08
14mm	.5512	5-3/8	8-1/4	315.00	—
9/16	.5625	5-3/8	8-1/4	300.08	300.08
37/64	.5781	5-5/8	8-1/2	303.44	303.44
19/32	.5938	5-5/8	8-1/2	303.44	303.44
39/64	.6094	5-3/4	8-3/4	318.11	—
5/8	.6250	5-3/4	8-3/4	318.11	318.11
41/64	.6406	5-7/8	9	318.11	318.11
21/32	.6562	5-7/8	9	318.11	318.11
43/64	.6719	6	9-1/4	325.32	325.32
11/16	.6875	6	9-1/4	325.32	325.32
45/64	.7031	6-3/16	9-1/2	333.79	333.79
23/32	.7188	6-3/16	9-1/2	333.79	333.79
47/64	.7344	6-3/8	9-3/4	356.89	356.89
3/4	.7500	6-3/8	9-3/4	356.89	356.89
49/64	.7656	6-1/2	9-7/8	363.01	363.01
25/32	.7812	6-1/2	9-7/8	363.01	363.01
51/64	.7969	6-5/8	10	371.51	371.51
13/16	.8125	6-5/8	10	371.51	371.51
53/64	.8281	6-3/4	10-1/4	378.86	378.86
27/32	.8438	6-3/4	10-1/4	378.86	378.86
55/64	.8594	7	10-1/2	410.15	410.15
7/8	.8750	7	10-1/2	410.15	410.15
57/64	.8906	7	10-5/8	439.43	439.43
29/32	.9062	7	10-5/8	439.43	439.43
59/64	.9219	7	10-3/4	469.81	469.81
15/16	.9375	7	10-3/4	469.81	469.81
61/64	.9531	7-1/8	10-7/8	492.77	492.77
31/32	.9688	7-1/8	10-7/8	492.77	492.77
63/64	.9844	7-3/16	11	517.21	517.21
1	1.0000	7-3/16	11	517.21	517.21
1-1/64	1.0156	7-5/16	11-1/8	546.17	—
1-1/32	1.0312	7-5/16	11-1/8	546.17	—
1-3/64	1.0469	7-3/8	11-1/4	568.27	568.27
1-1/16	1.0625	7-3/8	11-1/4	568.27	568.27
1-5/64	1.0781	7-5/8	11-1/2	591.22	—
1-3/32	1.0938	7-5/8	11-1/2	591.22	591.22
1-7/64	1.1094	7-7/8	11-3/4	621.43	—
1-1/8	1.1250	7-7/8	11-3/4	621.43	621.43
1-9/64	1.1406	8	11-7/8	651.92	—
1-5/32	1.1562	8	11-7/8	651.92	651.92
1-11/64	1.1719	8-1/8	12	682.29	—
1-3/16	1.1875	8-1/8	12	682.29	682.29
1-13/64	1.2031	8-1/8	12-1/8	712.54	—
1-7/32	1.2188	8-1/8	12-1/8	712.54	—
1-15/64	1.2344	8-1/2	12-1/2	741.75	—
1-1/4	1.2500	8-1/2	12-1/2	741.75	741.75
1-17/64	1.2656	9-1/4	14-1/8	789.50	—
1-9/32	1.2812	9-1/4	14-1/8	789.50	—
1-19/64	1.2969	9-1/4	14-1/4	823.01	—
1-5/16	1.3125	9-1/4	14-1/4	823.01	823.01
1-21/64	1.3281	9-1/2	14-3/8	876.03	—
1-11/32	1.3438	9-1/2	14-3/8	876.03	—
1-23/64	1.3594	9-1/2	14-1/2	923.92	—
1-3/8	1.3750	9-1/2	14-1/2	923.92	923.92
1-13/32	1.4062	9-1/2	14-5/8	1034.29	—
1-7/16	1.4375	9-1/8	14-3/4	1034.29	1034.29
1-29/64	1.4531	9-1/8	14-3/4	1119.12	—
1-15/32	1.4688	9-1/8	14-7/8	1119.12	—
1-1/2	1.5000	9-5/8	15	1119.12	1119.12
1-9/16	1.5625	9-5/8	15-1/4	1240.58	—
1-5/8	1.6250	9-7/8	15-5/8	1342.70	—
1-11/16	1.6875	10	15-3/4	1525.25	—
1-3/4	1.7500	10-1/2	16-1/4	1611.23	—
1-13/16	1.8125	10-1/2	16-1/4	1624.40	—
1-27/32	1.8438	10-3/4	16-5/8	2014.88	—
1-7/8	1.8750	10-3/4	16-1/2	1786.37	—
1-55/64	1.8938	10-3/4	17-3/8	1918.51	—
1-15/16	1.9375	10-3/4	16-5/8	1918.51	—
1-31/32	1.9688	10-3/4	16-5/8	2014.88	—
2	2.0000	10-3/4	16-5/8	2014.88	—
2-5/8	2.6250	11	19-1/2	2880.00	—

** TiN Coated*

Extra Length

List No. **499X**



Size	Decimal Equivalent	Approx Flute Length	Overall Length	Price Each
13/64	.2031	4-3/4	7-1/8	392.04
15/64	.2344	5-1/8	7-1/2	260.79
9/32	.2812	5-1/2	7-7/8	481.85
19/64	.2969	5-7/8	8-1/4	481.85
21/64	.3281	6-1/4	8-5/8	491.83
23/64	.3594	6-3/8	8-7/8	491.83
3/8	.3750	6-3/8	8-7/8	303.66
11mm	.4331	7-1/2	10	510.00
31/64	.4844	7-1/2	10-1/4	525.10
1/2	.5000	7-1/2	10-1/4	331.50
9/16	.5625	8-1/2	12	610.00
3/4	.7500	8-1/2	12	656.38
20mm	.7874	7-1/2	12	680.00
1-1/16	1.0625	9	13	740.00

Oil Hole Taper Shank Drills

High Speed Steel



List No. **299** – 118° Notched Point

Oil Hole Drills feature coolant passages throughout the length of the body. These allow a coolant (air, oil, or vapor mist) to reach the cutting edges. The resulting flow cools and lubricates the cutting edges and also aids in the extraction of chips.

High Speed

MADE IN USA

MICHIGAN DRILL & CUTTING TOOLS

Standard Length

Specials can be made to print. Please inquire.

Size	Decimal Equivalent	Flute Length	Overall Length	Morse Taper No.	Price Each
1/4	.2500	2-7/8	7	2	425.33
17/64	.2656	3	7-1/8	2	425.33
19/64	.2986	3-1/8	7-1/4	2	425.33
5/16	.3125	3-1/8	7-1/4	2	425.33
21/64	.3281	3-1/2	7-5/8	2	425.33
23/64	.3594	3-1/2	7-5/8	2	425.33
3/8	.3750	3-1/2	7-5/8	2	425.33
25/64	.3906	3-5/8	8	2	425.33
13/32	.4062	3-5/8	8	2	425.33
27/64	.4219	3-7/8	8-1/8	2	425.33
7/16	.4375	3-7/8	8-3/8	2	425.33
7/16	.4375	3-7/8	8-1/2	3	425.33
29/64	.4531	4-1/8	8-3/4	2	425.33
15/32	.4688	4-1/8	8-3/4	3	398.67
31/64	.4844	4-3/8	9	3	398.67
1/2	.5000	4-3/8	9	3	398.67
33/64	.5156	4-5/8	9-1/4	3	398.67
17/32	.5312	4-5/8	9-1/4	3	398.67
35/64	.5469	4-7/8	9-1/2	3	398.67
9/16	.5625	4-7/8	9-1/2	3	356.74
37/64	.5781	4-7/8	9-1/2	3	398.67
19/32	.5938	4-7/8	9-1/2	3	356.74
39/64	.6094	4-7/8	9-1/2	3	356.74
5/8	.6250	4-7/8	9-1/2	3	356.74
41/64	.6406	5-1/8	9-3/4	3	356.74
21/32	.6562	5-1/8	9-3/4	3	357.32
43/64	.6719	5-3/8	10	3	362.30
11/16	.6875	5-3/8	10	3	362.30
45/64	.7031	5-5/8	10-1/4	3	367.29
23/32	.7188	5-5/8	10-1/4	3	367.29
47/64	.7344	5-7/8	10-1/2	3	367.29
3/4	.7500	5-7/8	10	2	367.29
3/4	.7500	5-7/8	10-1/2	3	367.29
49/64	.7656	6	10-5/8	3	370.88
25/32	.7812	6	10-5/8	3	370.88
51/64	.7969	6-1/8	10-3/4	3	370.88
13/16	.8125	6-1/8	10-3/4	3	370.88
53/64	.8281	6-1/8	10-3/4	3	403.60
27/32	.8438	6-1/8	10-3/4	3	403.60
55/64	.8594	6-1/8	10-3/4	3	403.60
7/8	.8750	6-1/8	10-3/4	3	403.60
57/64	.8906	6-1/8	10-3/4	3	404.81
29/32	.9062	6-1/8	10-3/4	3	404.81
59/64	.9219	6-1/8	10-3/4	3	404.81

Size	Decimal Equivalent	Flute Length	Overall Length	Morse Taper No.	Price Each
15/16	.9375	6-1/8	10-3/4	3	404.81
61/64	.9531	6-3/8	11	3	477.32
31/32	.9688	6-3/8	11	3	477.32
63/64	.9844	6-3/8	11	3	477.32
1	1.0000	6-3/8	11	3	477.32
1-1/64	1.0156	6-1/2	11-1/8	3	517.07
1-1/32	1.0312	6-1/2	11-1/8	3	517.07
1-3/64	1.0469	6-5/8	11-1/4	3	517.07
1-1/16	1.0625	6-5/8	11-1/4	3	517.07
1-1/16	1.0625	6-5/8	12-1/4	4*	517.07
1-5/64	1.0781	6-7/8	12-1/2	4	610.78
1-3/32	1.0938	6-7/8	12-1/2	4	610.78
1-7/64	1.1094	7-1/8	12-3/4	4	668.05
1-1/8	1.1250	7-1/8	12-3/4	4	668.05
1-9/64	1.1406	7-1/4	12-7/8	4	668.05
1-5/32	1.1562	7-1/4	12-7/8	4	668.05
1-11/64	1.1719	7-3/8	13	4	672.17
1-3/16	1.1875	7-3/8	13	4	672.17
1-13/64	1.2031	7-1/2	13-1/8	4	764.89
1-7/32	1.2188	7-1/2	13-1/8	4	764.89
1-15/64	1.2344	7-7/8	13-1/2	4	764.89
1-1/4	1.2500	7-7/8	13-1/2	4	764.89
1-17/64	1.2656	8-1/2	14-1/8	4	929.77
1-9/32	1.2812	8-1/2	14-1/8	4	929.77
1-19/64	1.2969	8-5/8	14-1/4	4	1000.33
1-5/16	1.3125	8-5/8	14-1/4	4	1000.33
1-21/64	1.3281	8-3/4	14-3/8	4	1000.33
1-11/32	1.3438	8-3/4	14-3/8	4	1000.33
1-23/64	1.3594	8-7/8	14-1/2	4	1107.28
1-3/8	1.3750	8-7/8	14-1/2	4	1107.28
1-25/64	1.3906	9	14-5/8	4	1107.28
1-13/32	1.4062	9	14-5/8	4	1107.28
1-27/64	1.4219	9-1/8	14-3/4	4	1107.28
1-7/16	1.4375	9-1/8	14-3/4	4	1107.28
1-15/32	1.4688	9-1/4	14-7/8	4	1155.86
1-1/2	1.5000	9-3/8	15	4	1155.86
1-9/16	1.5625	9-5/8	15-1/4	4	1210.83
1-5/8	1.6250	10	15-5/8	4	1302.24
1-11/16	1.6875	10-1/8	15-3/4	4	1530.71
1-3/4	1.7500	10-1/8	16	4	1576.40
1-13/16	1.8125	10-1/8	17-1/8	5	1644.90
1-7/8	1.8750	10-3/8	17-3/8	5	1736.33
1-15/16	1.9375	10-3/8	17-3/8	5	1839.11
2	2.0000	10-3/8	17-3/8	5	1884.81

**Shank larger than standard.*

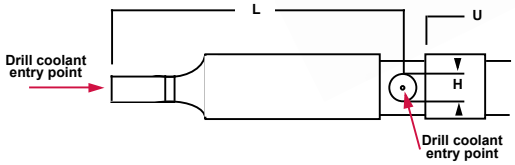
Coolant Inducer Sockets



List No. **299H** – Taper Shank

For use with taper shank Oil Hole Drills.
Thses sockets have a free spinning collar where an oil line can be connected to feed the drill with coolant while rotating.

Morse Taper Hole & Shank Size	Overall Length	Price
2	6-7/8	188.76
3	8-1/2	230.75
4	10-1/2	513.11
5	13-3/4	987.87



Taper	L	H	U
#2 M.T.S.	2-3/16	5/32	3/8
#3 M.T.S.	2-27/32	5/32	1/2
#4 M.T.S.	3-5/8	7/32	5/8
#5 M.T.S.	4-3/4	9/32	3/4

Oil Hole Taper Shank Extra Length Drills



High Speed Steel – 118° Notched Point

List No. **295** – 10-1/2" Overall Length, 6" Flute Length
List No. **296** – 12-1/2" Overall Length, 8" Flute Length
List No. **297** – 14-1/2" Overall Length, 10" Flute Length

High Speed

MADE IN USA

MICHIGAN DRILL & CUTTING TOOLS

Size	Dec. Equiv.	Morse Taper No.	Price Each 10-1/2" OAL 6" Flute **295**	Price Each 12-1/2" OAL 8" Flute **296**	Price Each 14-1/2" OAL 10" Flute **297**
7/16	.4375	3	437.59	—	—
31/64	.4844	3	437.59	—	—
1/2	.5000	3	437.59	475.70	—
33/64	.5156	3	437.59	475.70	565.98
17/32	.5312	3	437.59	475.70	565.98
9/16	.5625	3	—	475.70	565.98
19/32	.5938	2	—	—	565.98
19/32	.5938	3	—	475.70	565.98
5/8	.6250	3	—	475.70	565.98
41/64	.6406	3	—	475.70	565.98
21/32	.6562	3	—	475.70	565.98
11/16	.6875	3	—	475.70	565.98
23/32	.7188	2	—	—	565.98
23/32	.7188	3	—	475.70	565.98
47/64	.7344	3	—	475.70	565.98
3/4	.7500	3	—	475.70	565.98
49/64	.7656	3	—	499.41	588.29
25/32	.7812	3	—	499.51	587.35

Size	Dec. Equiv.	Morse Taper No.	Price Each 12-1/2" OAL 8" Flute **296**	Price Each 14-1/2" OAL 10" Flute **297**
13/16	.8125	3	499.51	587.35
27/32	.8438	3	512.24	604.17
7/8	.8750	3	518.78	604.17
57/64	.8906	3	540.00	—
29/32	.9062	3	518.78	615.43
15/16	.9375	3	518.78	615.43
31/32	.9688	3	546.35	638.71
63/64	.9844	3	593.93	691.64
1	1.0000	3	593.93	691.64
1-1/64	1.0156	3	602.00	703.37
1-1/32	1.0312	3	615.58	715.14
1-1/16	1.0625	3	—	715.14
1-5/64	1.0781	3	—	715.14
1-3/32	1.0938	3	615.58	715.14
1-1/8*	1.1250	4	—	896.99
1-3/16*	1.1875	4	—	962.22
1-1/4*	1.2500	4	—	1067.19
1-5/16*	1.3125	4	—	1150.00

**15-1/2 Overall*

Oil Hole Solid Carbide TiAlN Coated Straight Shank

MADE IN USA

MICHIGAN DRILL & CUTTING TOOLS

Solid Carbide



Regular Length

List No. **C499** – 140° Point

Size	Dec. Equiv.	Flute Length	OAL	Price Each
3.00mm	.1181	24	63	84.70
3.30mm	.1299	32	69	84.70
4.20mm	.1654	38	80	92.55
5.00mm	.1969	38	80	99.64
5.50mm	.2165	40	82	99.64
6.50mm	.2559	48	91	104.57
17/64	.2656	48	91	116.69
6.80mm	.2677	48	91	117.48
7.00mm	.2756	48	91	117.48
9/32	.2812	50	95	117.48
19/64	.2696	50	95	117.48
5/16	.3125	50	95	117.48
8.00mm	.3150	48	91	117.48
21/64	.3281	51	101	138.42
11/32	.3438	51	101	138.42
8.80mm	.3465	51	101	146.43

Size	Dec. Equiv.	Flute Length	OAL	Price Each
9.00mm	.3543	51	101	138.42
3/8	.3750	51	101	146.43
25/64	.3906	51	101	180.75
10.00mm	.3937	55	103	180.75
13/32	.4062	63	121	184.80
10.50mm	.4134	60	120	192.19
27/64	.4219	60	120	192.19
10.80mm	.4252	60	120	192.19
7/16	.4375	63	121	192.19
29/64	.4531	63	121	198.95
15/32	.4688	63	121	198.95
12.00mm	.4724	66	120	198.95
31/64	.4844	76	127	272.27
12.50mm	.4921	72	126	272.27
1/2	.5000	75	127	272.27
13.00mm	.5118	72	126	272.27

Size	Dec. Equiv.	Flute Length	OAL	Price Each
33/64	.5156	75	127	330.62
17/32	.5313	75	127	330.62
35/64	.5469	75	127	330.62
23/64	.3594	75	127	330.62
9/16	.5625	75	127	330.62
14.50	.5709	80	140	366.08
37/64	.5781	80	140	366.08
19/32	.5938	80	140	391.25
39/64	.6094	80	140	391.25
5/8	.6250	80	140	391.25
21/32	.6563	90	150	486.20
43/64	.6719	90	150	486.20
11/16	6875	90	150	486.20
45/64	.7031	100	160	486.20
23/32	.7188	100	160	565.14
3/4	.7500	100	160	565.14

Long Length Length

List No. **C499L** – 140° Point

Size	Dec. Equiv.	Flute Length	OAL	Price Each
3.50mm	.1378	34	72	113.08
3.80mm	.1496	43	81	113.08
4.20mm	.1654	43	81	124.20
4.50mm	.1772	43	81	124.20
4.80mm	.1890	57	95	135.00
5.00mm	.1890	57	95	135.00
5.50mm	.2165	57	95	135.00
6.00mm	.2362	57	95	135.00

Size	Dec. Equiv.	Flute Length	OAL	Price Each
6.50mm	.2559	76	114	140.00
6.80mm	.2677	76	114	140.00
7.00mm	.2677	76	114	140.00
7.50mm	.2953	76	114	140.00
8.50mm	.3346	95	142	197.00
8.80mm	.3465	95	142	197.00
9.00mm	.3543	95	142	197.00
9.50mm	.3740	95	142	197.00

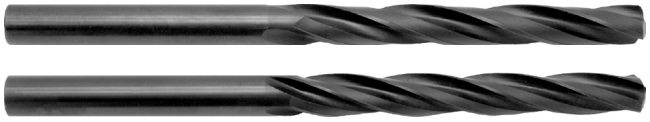
Size	Dec. Equiv.	Flute Length	OAL	Price Each
10.00mm	.3937	95	142	197.00
10.20mm	.4016	114	162	259.00
10.50mm	.4134	114	162	259.00
10.80mm	.4252	114	162	259.00
11.00mm	.4331	114	162	259.00
11.50mm	.4528	114	162	267.00
12.00mm	.4724	114	162	267.00
12.50mm	.4921	133	178	367.00

Core Drills

High Speed Steel – Oxide Finish

Used to enlarge and straighten cored or drilled holes. Because of their ridigity, these tools generate closer tolerance holes and a better finish than standard drills.They may be used to enlarge holes as small as 70-80% of the tool diameter.

Additional 64th sizes available on request



Straight Shank – 45° Chamfer End

List No. **421** – Three Flute
List No. **422** – Four Flute

Size	Dec. Equiv.	Flute Length	Overall Length	Price Each 3 - Flute **421**	Price Each 4 - Flute **422**
#10	.1935	3-5/8	6	—	29.50
7/32	.2188	3-5/8	6	24.50	—
15/64	.2344	3-3/4	6-1/8	—	24.50
1/4	.2500	3-3/4	6-1/8	26.50	24.50
17/64	.2656	3-7/8	6-1/4	28.46	26.00
9/32	.2812	3-7/8	6-1/4	29.00	26.50
19/64	.2969	4	6-3/8	30.40	27.00
5/16	.3125	4	6-3/8	30.40	27.00
21/64	.3281	4-1/8	6-1/2	—	28.80
11/32	.3438	4-1/8	6-1/2	32.00	29.97
23/64	.3594	4-1/4	6-3/4	33.90	30.36
3/8	.3750	4-1/4	6-3/4	35.17	31.00
10mm	.3937	4-3/8	7	63.90	—
13/32	.4062	4-3/8	7	36.44	32.40
27/64	.4219	4-5/8	7-1/4	39.20	33.50
10.75mm	.4232	4-5/8	7-1/4	58.00	—
7/16	.4375	4-5/8	7-1/4	41.00	34.60
11.75mm	.4626	4-3/4	7-1/2	66.15	—
29/64	.4531	4-3/4	7-1/2	—	36.30
15/32	.4688	4-3/4	7-1/2	44.10	36.65
31/64	.4844	4-3/4	7-3/4	46.20	37.40
1/2	.5000	4-3/4	7-3/4	46.20	39.92
33/64	.5156	4-3/4	8	—	51.50
17/32	.5312	4-3/4	8	49.65	46.00
9/16*	.5625	4-7/8	8-1/4	52.60	49.00
19/32	.5938	4-7/8	8-3/4	57.78	55.00
39/64	.6094	4-7/8	8-3/4	—	80.40
15.75mm	.6201	4-7/8	8-3/4	81.50	—
5/8	.6250	4-7/8	8-3/4	69.36	62.80
21/32	.6562	5-1/8	9	72.00	68.00
43/64	.6719	5-3/8	9-1/4	—	84.00
11/16	.6875	5-3/8	9-1/4	76.45	72.00
23/32	.7188	5-5/8	9-1/2	79.99	77.60
47/64	.7344	5-7/8	9-3/4	—	98.75
3/4	.7500	5-7/8	9-3/4	89.68	83.50
49/64	.7656	6	9-7/8	—	98.75
25/32	.7812	6	9-7/8	117.14	101.00
51/64	.7969	6-1/8	10	126.68	—
13/16	.8125	6-1/8	10	126.68	117.75
53/64	.8281	6-1/8	10	—	155.00
27/32	.8438	6-1/8	10	144.78	122.87
7/8	.8750	6-1/8	10	119.64	117.75
57/64	.8906	6-1/8	10	157.87	130.40
29/32	.9062	6-1/8	10	130.41	125.00
15/16	.9375	6-1/8	10-3/4	149.60	138.00
61/64	.9531	6-3/8	11	—	163.28
31/32	.9688	6-3/8	11	179.55	155.50
1	1.0000	6-3/8	11	169.00	148.60
1-1/32	1.0312	6-1/2	11-1/8	202.41	202.41
1-1/16	1.0625	6-5/8	11-1/4	222.16	216.45
1-3/32	1.0938	6-7/8	11-1/2	—	225.40
1-1/8	1.1250	7-1/8	11-3/4	259.92	234.54
1-5/32	1.1562	7-1/4	11-7/8	261.00	239.13
1-3/16	1.1875	7-3/8	12	239.13	239.13
1-7/32	1.2188	7-1/2	12-1/2	252.40	252.40
1-1/4	1.2500	7-7/8	12-1/2	372.00	277.50
1-9/32	1.2812	8-1/4	14-1/8	342.68	315.36
1-19/64	1.2969	8-5/8	14-1/4	—	350.00
1-5/16	1.3125	8-5/8	14-1/4	324.54	324.54
1-11/32	1.3438	8-3/4	14-3/8	369.90	350.00
1-3/8	1.3750	8-7/8	14-1/2	379.10	360.22
1-13/32	1.4062	9-1/8	14-5/8	—	368.50
1-7/16	1.4375	9-1/8	14-3/4	425.15	384.00
1-15/32	1.4688	9-1/4	14-7/8	428.04	399.00
1-1/2	1.5000	9-3/8	15	441.45	420.50
1-5/8	1.6250	9-7/8	15-5/8	—	549.00
1-21/32	1.6562	9-7/8	15-5/8	675.00	—
1-11/16	1.6875	10-1/8	16	—	630.00
1-3/4	1.7500	10-1/2	16-1/4	—	660.11
1-49/64	1.7656	10-1/2	16-1/4	—	730.00
1-27/32	1.8438	10-5/8	16-1/4	855.00	—
1-7/8	1.8750	10-5/8	16-1/4	—	715.45

*9/16 with 1/2" Shank in stock $56.50 each

Carbide Tipped Taper Shank

List No. **CT522** – Four Flute



Size	Dec. Equiv.	Length of Carbide	Flute Length	Overall Length	Morse Taper No.	Price Each
1/2	.5000	3/4	4-3/8	8-1/4	2	118.86
17/32	.5312	3/4	4-3/8	8-1/4	2	119.63
9/16	.5625	3/4	4-3/8	8-1/4	2	119.63
19/32	.5938	3/4	4-3/8	8-1/4	2	125.28
5/8	.6250	3/4	4-3/8	8-1/4	2	125.28
21/32	.6562	3/4	4-3/8	8-1/4	2	126.88
11/16	.6875	7/8	4-3/8	8-1/4	2	128.08
3/4	.7500	7/8	4-3/8	8-1/4	2	128.08
25/32	.7812	7/8	4-3/8	8-1/4	2	131.85
13/16	.8125	7/8	4-7/8	9-1/2	3	134.06
27/32	.8438	7/8	4-7/8	9-1/2	3	141.75
7/8	.8750	7/8	4-7/8	9-1/2	3	141.75
15/16	.9375	7/8	4-7/8	9-1/2	3	142.72
31/32	.9688	7/8	4-7/8	9-1/2	3	146.60
1	1.0000	7/8	4-7/8	9-1/2	3	146.60
1-1/32	1.0312	7/8	4-7/8	9-1/2	3	152.12
1-1/16	1.0625	7/8	4-7/8	9-1/2	3	154.11
1-3/32	1.0938	1	4-7/8	10-1/2	4	179.93
1-1/8	1.1250	1	4-7/8	10-1/2	4	189.71
1-5/32	1.1562	1	4-7/8	10-1/2	4	195.20
1-3/16	1.1875	1	4-7/8	10-1/2	4	201.53
1-1/4	1.2500	1	4-7/8	10-1/2	4	202.82
1-9/32	1.2812	1	4-7/8	10-1/2	4	217.91
1-5/16	1.3125	1	4-7/8	10-1/2	4	223.35
1-3/8	1.3750	1	4-7/8	10-1/2	4	233.70
1-7/16	1.4375	1	4-7/8	10-1/2	4	245.69
1-15/32	1.4688	1	4-7/8	10-1/2	4	258.27
1-1/2	1.5000	1	4-7/8	10-1/2	4	258.27

Hole Enlarging Core Drill - 1/2" Shank on Page 72

Core Drills

High Speed Steel – Oxide Finish

Taper Shank – 45° Chamfer End

List No. **521** – Three Flute
List No. **522** – Four Flute



Size	Dec. Equiv.	Flute Length	Overall Length	Morse Taper No.	Price Each 3 - Flute **521**	Price Each 4 - Flute **522**
7/32	.2188	2-3/4	6	1	38.64	—
1/4	.2500	2-7/8	6-1/8	1	38.64	36.30
9/32	.2812	3	6-1/4	1	45.64	43.69
19/64	.2969	3-1/8	6-3/8	1	52.07	52.07
5/16	.3125	3-1/8	6-3/8	1	45.54	—
21/64	.3281	3-1/4	6-1/2	1	53.46	53.46
R	.3390	3-1/4	6-1/2	1	69.14	—
11/32	.3438	3-1/4	6-1/2	1	47.39	—
23/64	.3594	3-1/2	6-3/4	1	53.33	51.16
3/8	.3750	3-1/2	6-3/4	1	47.62	45.92
25/64	.3906	3-5/8	7	1	59.90	58.70
13/32	.4062	3-5/8	7	1	54.19	52.36
27/64	.4219	3-7/8	7-1/4	1	61.71	59.80
7/16	.4375	3-7/8	7-1/4	1	59.50	54.47
29/64	.4531	4-1/8	7-1/2	1	66.00	64.90
15/32	.4688	4-1/8	7-1/2	1	60.80	55.52
31/64	.4844	4-3/8	8-1/4	2	67.46	65.93
1/2	.5000	4-3/8	8-1/4	2	56.73	46.20
33/64	.5156	4-5/8	8-1/2	2	—	71.28
17/32	.5312	4-5/8	8-1/2	2	64.83	58.61
35/64	.5469	4-7/8	8-3/4	2	85.00	80.85
9/16	.5625	4-7/8	8-3/4	2	69.50	65.67
37/64	.5781	4-7/8	8-3/4	2	89.10	85.14
19/32	.5938	4-7/8	8-3/4	2	79.75	72.21
39/64	.6094	4-7/8	8-3/4	2	89.10	85.14
5/8	.6250	4-7/8	8-3/4	2	82.72	76.45
41/64	.6406	5-1/8	9	2	89.87	86.04
21/32	.6562	5-1/8	9	2	86.04	78.78
43/64	.6719	5-3/8	9-1/4	2	96.00	—
11/16	.6875	5-3/8	9-1/4	2	87.38	82.10
45/64	.7031	5-5/8	9-1/2	2	98.60	92.40
23/32	.7188	5-5/8	9-1/2	2	92.12	87.81
47/64	.7344	5-5/8	9-3/4	2	110.00	99.13
3/4	.7500	5-7/8	9-3/4	2	96.19	91.74
49/64	.7656	6	9-7/8	2	—	104.94
25/32	.7812	6	9-7/8	2	106.21	98.95
51/64	.7969	6-1/8	10-3/4	3	—	110.88
13/16	.8125	6-1/8	10-3/4	3	110.96	105.40
53/64	.8281	6-1/8	10-3/4	3	118.98	115.50
27/32	.8438	6-1/8	10	2	129.00	—
27/32	.8438	6-1/8	10-3/4	3	115.36	111.40
55/64	.8594	6-1/8	10-3/4	3	122.10	116.82
7/8	.8750	6-1/8	10-3/4	3	120.00	116.00
57/64	.8906	6-1/8	10-3/4	3	145.00	117.48
29/32	.9062	6-1/8	10-3/4	3	122.17	117.43
59/64	.9219	6-1/8	10-3/4	3	135.00	131.34
15/16	.9375	6-1/8	10-3/4	3	124.28	117.92
61/64	.9531	6-3/8	11	3	145.00	132.00
31/32	.9688	6-3/8	11	3	137.46	131.52
63/64	.9844	6-3/8	11	3	—	148.50
1	1.0000	6-3/8	11	3	138.93	132.46
1-1/64	1.0156	6-1/2	11-1/8	3	175.00	165.00
1-1/32	1.0312	6-1/2	11-1/8	3	153.95	148.67
1-3/64	1.0469	6-5/8	11-1/4	3	—	182.16
1-1/16	1.0625	6-5/8	11-1/4	3	171.60	165.04
1-5/64	1.0781	6-7/8	11-1/2	3	196.00	184.80
1-3/32	1.0938	6-7/8	11-1/2	3	—	182.16
1-3/32	1.0938	6-7/8	12-1/2	4	185.65	177.69
1-1/8	1.1250	7-1/8	12-3/4	4	190.74	184.29
1-9/64	1.1406	7-1/4	12-7/8	4	—	202.72
1-5/32	1.1562	7-1/4	12-7/8	4	194.70	184.90
1-3/16	1.1875	7-3/8	12	3	197.34	—
1-3/16	1.1875	7-3/8	13	4	197.34	184.90
1-13/64	1.2031	7-1/2	13-1/8	4	217.80	209.88
1-7/32	1.2188	7-1/2	13-1/8	4	208.23	197.45
1-15/64	1.2344	7-7/8	13-1/2	4	245.00	234.30
1-1/4	1.2500	7-7/8	13-1/2	4	227.70	223.48
1-17/64	1.2656	8-1/2	14-1/8	4	260.70	250.41
1-9/32	1.2812	8-1/2	14-1/8	4	254.36	238.15
1-5/16	1.3125	8-5/8	14-1/4	4	—	254.43
1-11/32	1.3438	8-3/4	13 3/8	3	—	285.00
1-11/32	1.3438	8-3/4	14-3/8	4	271.85	263.63
1-23/64	1.3594	8-7/8	14-1/2	4	299.04	289.99
1-3/8	1.3750	8-7/8	14-1/2	4	290.99	278.12
1-25/64	1.3906	9	14-5/8	4	349.00	—
1-13/32	1.4062	9	14-5/8	4	303.80	291.05
1-7/16	1.4375	9-1/8	14-3/4	4	313.90	303.14
1-29/64	1.4531	9-1/4	14-7/8	4	—	333.45
1-15/32	1.4688	9-1/4	14-7/8	4	329.48	314.03
1-1/2	1.5000	9-3/8	15	4	343.91	329.84
1-33/64	1.5156	9-3/8	16-3/8	5	—	419.10
1-17/32	1.5312	9-3/8	16-3/8	5	392.70	379.76
1-35/64	1.5469	9-5/8	16-5/8	5	425.70	419.10
1-9/16	1.5625	9-5/8	16-5/8	5	409.20	393.16
1-37/64	1.5781	9-7/8	16-7/8	5	—	463.98
1-19/32	1.5938	9-7/8	16-7/8	5	449.20	429.45
1-39/64	1.6094	10	17	5	482.00	475.86
1-5/8	1.6250	10	17	5	475.86	443.06
1-21/32	1.6562	10-1/8	17-1/8	5	485.10	470.25
1-43/64	1.6719	10-1/8	17-1/8	5	514.80	—
1-11/16	1.6875	10-1/8	17-1/8	5	501.71	487.85
1-45/64	1.7031	10-1/8	17-1/8	5	545.00	536.64
1-23/32	1.7188	10-1/8	17-1/8	5	505.69	489.19
1-3/4	1.7500	10-1/8	17-1/8	5	530.00	518.68
1-49/64	1.7656	10-1/8	17-1/8	5	—	585.00
1-25/32	1.7812	10-1/8	17-1/8	5	570.00	540.62
1-13/16	1.8125	10-1/8	17-1/8	5	580.00	555.98
1-27/32	1.8438	10-1/8	17-1/8	5	—	600.60
1-7/8	1.8750	10-3/8	17-3/8	5	676.50	653.40
1-29/32	1.9062	10-3/8	17-3/8	5	742.50	693.00
1-15/16	1.9375	10-3/8	17-3/8	5	750.00	—
1-31/32	1.9688	10-3/8	17-3/8	5	759.00	726.00
2	2.0000	10-3/8	17-3/8	5	670.00	627.00
2-1/32	2.0312	10-3/8	17-3/8	5	—	759.00
2-1/16	2.0625	10-1/4	17-3/8	5	780.63	775.50
2-3/32	2.0938	10-1/4	17-3/8	5	—	812.00
2-1/8	2.1250	10-1/4	17-3/8	5	—	759.00
2-5/32	2.1562	10-1/4	17-3/8	5	—	825.00
2-3/16	2.1875	10-1/4	17-3/8	5	—	970.20
2-1/4	2.2500	10-1/8	17-3/8	5	—	957.00
2-9/32	2.2812	10-1/8	17-3/8	5	—	1052.70
2-5/16	2.3125	10-1/8	17-3/8	5	1195.00	1089.00
2-11/32	2.3437	10-1/8	17-3/8	5	1300.00	1197.90
2-3/8	2.3750	10-1/8	17-3/8	5	—	1056.00
2-13/32	2.4062	11-1/4	18-3/4	5	—	1498.00
2-7/16	2.4375	11-1/4	18-3/4	5	—	1254.00
2-1/2	2.5000	11-1/4	18-3/4	5	—	1221.00
2-17/32	2.5312	11-7/8	19-1/2	5	—	1608.00
2-9/16	2.5625	11-7/8	19-1/2	5	—	1303.50
2-5/8	2.6250	11-7/8	19-1/2	5	—	1320.00
2-11/16	2.6875	12-3/4	20-3/8	5	—	1336.50
2-3/4	2.7500	12-3/4	20-3/8	5	—	1643.40
2-13/16	2.8125	13-3/8	21-1/8	5	—	1630.20
2-7/8	2.8750	13-3/8	21-1/8	5	—	1640.10
2-15/16	2.9375	14	21-3/4	5	—	1914.00
3	3.0000	14	21-3/4	5	1979.34	1979.34

Machine Tool Accessories

MDX SUPERIOR IMPORT

Morse Taper Sleeves

For adapting Morse Taper shank tools to machine spindles having large Morse Taper holes. Available with hardened tang or hardened and ground throughout.

Morse Taper Extension Sockets

Used to increase or decrease the Morse Taper spindle capacity or to increase Morse Taper spindle projection.



Morse Taper Sleeves							Morse Taper Extension Socket		
Morse Taper No.		Overall Length	Hard Tang Only		Hardened & Ground		Overall Length	Tool No.	Price Each
Internal	External		Tool No.	Price Each	Tool No.	Price Each			
0	1	3-3/8	—	—	**TSH01**	17.50	—	—	—
0	2	3-1/2	**TS02**	12.70	**TSH02**	17.50	—	—	—
1	1	—	—	—	—	—	6-1/4	**ES11**	15.60
1	2	3-9/16	**TS12**	8.10	**TSH12**	13.19	6-1/4	**ES12**	15.60
1	3	3-15/16	**TS13**	12.70	**TSH13**	17.32	6-7/8	**ES13**	19.00
1	4	4-7/8	**TS14**	19.65	**TSH14**	27.90	7-1/2	**ES14**	22.74
1	5	6-1/8	**TS15**	24.75	**TSH15**	42.53	9-1/16	**ES15**	33.08
2	1	—	—	—	—	—	6-1/4	**ES21**	18.16
2	2	—	—	—	—	—	6-7/8	**ES22**	18.20
2	3	4-7/16	**TS23**	9.17	**TSH23**	17.63	7-5/8	**ES23**	18.20
2	4	4-7/8	**TS24**	17.00	**TSH24**	30.02	8-1/2	**ES24**	26.12
2	5	6-1/8	**TS25**	34.30	**TSH25**	42.53	9-3/4	**ES25**	33.08
3	1	—	—	—	—	—	7-1/4	**ES31**	22.61
3	2	—	—	—	—	—	7-3/4	**ES32**	22.62
3	3	—	—	—	—	—	8-1/2	**ES33**	22.62
3	4	5-3/8	**TS34**	14.31	**TSH34**	30.04	9-1/2	**ES34**	22.62
3	5	6-1/8	**TS35**	24.75	**TSH35**	42.50	10-1/2	**ES35**	35.37
3	6	8-1/2	**TS36**	67.41	—	—	—	—	—
4	2	—	—	—	—	—	8-1/2	**ES42**	34.64
4	3	—	—	—	—	—	9-1/2	**ES43**	34.64
4	4	—	—	—	—	—	10-1/2	**ES44**	34.64
4	5	6-5/8	**TS45**	32.63	**TSH45**	42.50	11-7/8	**ES45**	43.25
4	6	8-5/8	**TS46**	62.18	**TSH46**	121.59	14	**ES46**	98.63
4	7	11-1/2	**TS47**	390.00	**TSH47**	470.00	—	—	—
5	3	—	—	—	—	—	10-1/2	**ES53**	77.27
5	4	—	—	—	—	—	11-3/8	**ES54**	77.27
5	5	—	—	—	—	—	13-3/4	**ES55**	80.93
5	6	8-5/8	**TS56**	67.41	**TSH56**	131.90	15-3/8	**ES56**	98.63
6	4	—	—	—	—	—	14-1/2	**ES64**	264.84
6	5	—	—	—	—	—	16	**ES65**	355.30
6	6	—	—	—	—	—	17	**ES66**	395.00
6	7	11-1/2	**TS67**	398.00	**TSH67**	620.00	—	—	—

Solid & Hardened Sockets with Morse Taper Holes

Ground Throughout. For adapting tools with Morse Taper shanks to machines with straight holes.



Size	Morse Taper No.	Outside Diameter	Solid Sockets		Hardened Sockets	
			Tool No.	Price Each	Tool No.	Price Each
1	1	1	**SS11S**	15.69	**SS11**	18.83
2	1	1-1/4	**SS21S**	19.24	**SS21**	23.09
3	1	1-1/2	**SS31S**	17.99	**SS31**	21.58
4	2	1	—	—	**SS42**	21.58
5	2	1-1/4	**SS52S**	19.72	**SS52**	23.66
6	2	1-1/2	**SS62S**	20.94	**SS62**	25.13
7	2	1-3/4	**SS72S**	22.89	**SS72**	27.47
8	2	2	**SS82S**	24.04	**SS82**	28.85
9	3	1-1/4	**SS93S**	24.04	**SS93**	28.85
10	3	1-1/2	**SS103S**	25.94	**SS103**	31.12
11	3	1-3/4	**SS113S**	28.35	**SS113**	34.02
12	3	2	**SS123S**	30.90	**SS123**	37.08
13	4	1-1/2	**SS134S**	30.90	**SS134**	37.08
14	4	1-3/4	**SS144S**	33.65	**SS144**	40.38
15	4	2*	**SS154S**	35.81	**SS154**	42.97
15A	4	2-1/2	—	—	**SS154A**	49.00
16	5	2-1/4	**SS165S**	62.57	**SS165**	75.09
17	5	2-1/2	**SS175S**	62.57	**SS175**	75.09
18	6	3-1/4	—	—	**SS186**	119.95
19	6	3-1/2	—	—	**SS196**	119.95

Drill Drifts or Center Key Drop Forged and Hardened.

Taper No.	Tool No.	Price
1	**DD1**	4.10
2	**DD2**	4.96
3	**DD3**	5.48
4, 5, 6	**DD4**	8.48

Sets

Sizes	No. of Pcs.	Set No.	Price
1, 2, 3, 4	4	**DD14**	22.46



Used for removing taper shank tools from sleeves or spindles.

NMTB Quick Change Tooling

Hardened and Ground Throughout

MADE IN USA

Fits Erickson Style Holders

These quick change adapters are designed to interchange with Erickson style holders and all No. 30 and No. 40 standard milling machine tapers.

This tooling will also fit holders and spindles commonly used on the Bridgeport® Series I and Series II CNC milling machines and other similar milling machines.

Morse Taper Adapters

Morse Taper I.D.	No. 30 Taper		No. 40 Taper	
	Tool No.	Price Each	Tool No.	Price Each
1	**QCM3-1**	94.38	—	—
2	**QCM3-2**	122.98	**QCM4-2**	125.84
3	**QCM3-3**	122.98	**QCM4-3**	125.84
4	**QCM3-4**	134.42	**QCM4-4**	138.71
5	—	—	**QCM4-5**	177.32



Machine Tool Accessories

High Precision – Heat Treated

MDX® SUPERIOR IMPORT

Brown & Sharpe Taper Sleeves

Tanged Style "A"

Threaded for Draw Bar Style "B"

For adapting tools with either Brown and Sharpe or Morse taper shanks to machines having Brown and Sharpe or Morse taper spindles

Tanged Style "A"



Threaded for Draw Bar Style "B"



Inside Taper	Outside Taper	Tanged "A" Tool No.	Tanged "A" Price Each	Threaded "B" Tool No.	Threaded "B" Price Each
Brown & Sharpe –> Brown & Sharpe					
4	7	**TSB47**	133.36	—	—
5	7	**TSB57**	133.36	**TSB57B**	133.36
5	9	**TSB59**	133.36	**TSB59B**	133.36
5	10	**TSB510**	145.87	—	—
7	9	**TSB79**	133.36	**TSB79B**	133.36
7	10	**TSB710**	158.44	**TSB710B**	158.44
7	11	**TSB711**	200.57	**TSB711B**	200.57
9	10	**TSB910**	162.46	**TSB910B**	162.46
9	11	**TSB911**	216.63	**TSB911B**	216.63
10	11	**TSB1011**	216.63	**TSB1011B**	216.63
10	12	**TSB1012**	326.99	**TSB1012B**	326.99
11	12	**TSB1112**	332.97	**TSB1112B**	332.97
Morse Taper –> Brown & Sharpe					
1	9	**TSMB19**	102.37	—	—
1	10	**TSMB110**	110.26	—	—
2	9	**TSMB29**	113.31	**TSMB29B**	113.31
2	10	**TSMB210**	118.13	—	—
3	9	**TSMB39**	122.33	**TSMB39B**	122.33
3	10	**TSMB310**	130.41	**TSMB310B**	130.41
3	11	**TSMB311**	168.43	**TSMB311B**	168.43
4	9	—	—	**TSMB49B**	136.40
4	10	**TSMB410**	140.39	**TSMB410B**	140.39
4	11	**TSMB411**	**168.43**	**TSMB411B**	168.43
4	12	—	—	**TSMB412B**	292.50
5	12	**TSMB512**	292.50	**TSMB512B**	**292.50**
Brown & Sharpe –> Morse Taper					
5	3	**TSBM53**	126.00	—	—
7	3	**TSBM73**	148.47	**TSBM73B**	148.47
7	4	**TSBM74**	158.44	**TSBM74B**	158.44
9	4	**TSBM94**	160.44	**TSBM94B**	160.44
9	5	**TSBM95**	165.00	—	—
10	5	**TSBM105**	316.90	**TSBM105B**	316.90

Threads for Draw Bar - Style B				
#7	B&S	3/8" – 16		
#9	B&S	1/2" – 13	#3 Morse	3/8" – 16
#10	B&S	5/8" – 11	#4 Morse	1/2" – 13
#11	B&S	5/8" – 11	#5 Morse	5/8" – 11
#12	B&S	3/4" – 10		



R-8 Morse Taper and Brown & Sharp Adapters

Inside Taper	Tool No.	Price Each
#1 Morse	**R8M1**	64.35
#2 Morse	**R8M2**	64.35
#3 Morse	**R8M3**	73.45
#7 B&S	**R8BS7**	116.00



Nylon Drill Sleeves – Morse Taper

Tool No.	Inside Taper	Outside Taper	Price Each
TSN12	1	2	2.48
TSN23	2	3	3.16
TSN34	3	4	3.74
TSN45	4	5	6.63

Carbide Tipped Drills

High Speed Steel Body

Jobber Length

List No. **CT830** – 118° Point

These Carbide Tipped Drills are designed for drilling abrasive and nonferrous materials such as castings, hard rubber and copper alloys. They are NOT recommended for drilling steel or other ferrous materials.

MADE IN USA

MICHIGAN DRILL & CUTTING TOOLS



Fractional Sizes

Size	Decimal Equivalent	Flute Length	Overall Length	Price Each
1/8	.1250	1-5/8	2-3/4	13.62
9/64	.1406	1-3/4	2-7/8	14.41
5/32	.1562	2	3-1/8	14.41
11/64	.1719	2-1/8	3-1/4	15.38
3/16	.1875	2-5/16	3-1/2	15.38
13/64	.2031	2-7/16	3-5/8	16.78
7/32	.2188	2-1/2	3-3/4	16.78
15/64	.2344	2-5/8	3-7/8	18.48
1/4	.2500	2-3/4	4	18.12
17/64	.2656	2-7/8	4-1/8	21.76
9/32	.2812	2-15/16	4-1/4	21.35
19/64	.2969	3-1/16	4-3/8	23.51
5/16	.3125	3-3/16	4-1/2	23.09
21/64	.3281	3-5/16	4-5/8	24.99
11/32	.3438	3-7/16	4-3/4	24.52
23/64	.3594	3-1/2	4-7/8	26.57
3/8	.3750	3-5/8	5	26.06
25/64	.3906	3-3/4	5-1/8	28.91
13/32	.4062	3-7/8	5-1/4	28.41

Size	Decimal Equivalent	Flute Length	Overall Length	Price Each
27/64	.4219	3-15/16	5-3/8	31.35
7/16	.4375	4-1/16	5-1/2	30.78
29/64	.4531	4-3/16	5-5/8	35.24
15/32	.4688	4-5/16	5-3/4	34.62
31/64	.4844	4-3/8	5-7/8	39.44
1/2	.5000	4-1/2	6	38.70
33/64	.5156	4-13/16	6-5/8	59.40
17/32	.5312	4-13/16	6-5/8	59.40
35/64	.5469	4-13/16	6-5/8	60.05
9/16	.5625	4-13/16	6-5/8	60.05
37/64	.5781	4-13/16	6-5/8	66.26
19/32	.5938	5-3/16	7-1/8	64.31
39/64	.6094	5-3/16	7-1/8	76.08
5/8	.6250	5-3/16	7-1/8	72.83
41/64	.6406	5-3/16	7-1/8	84.05
21/32	.6562	5-3/16	7-1/8	74.04
43/64	.6719	5-5/8	7-5/8	96.47
11/16	.6875	5-5/8	7-5/8	75.52
3/4	.7500	5-5/8	7-5/8	96.47

Letter Sizes

Size	Decimal Equivalent	Flute Length	Overall Length	Price Each
A	.2340	2-5/8	3-7/8	19.73
B	.2380	2-3/4	4	19.73
C	.2420	2-3/4	4	19.73
D	.2460	2-3/4	4	19.73
E	.2500	2-3/4	4	18.84
F	.2570	2-7/8	4-1/8	22.31
G	.2610	2-7/8	4-1/8	22.64
H	.2660	2-7/8	4-1/8	22.64
I	.2720	2-7/8	4-1/8	22.64
J	.2770	2-7/8	4-1/8	22.33
K	.2810	2-15/16	4-1/4	22.33
L	.2900	2-15/16	4-1/4	22.33
M	.2950	3-1/16	4-3/8	23.59

Size	Decimal Equivalent	Flute Length	Overall Length	Price Each
N	.3020	3-1/16	4-3/8	23.59
O	.3160	3-3/16	4-1/2	23.59
P	.3230	3-5/16	4-5/8	25.13
Q	.3320	3-7/16	4-3/4	25.13
R	.3390	3-7/16	4-3/4	26.13
S	.3480	3-1/2	4-7/8	26.67
T	.3580	3-1/2	4-7/8	26.67
U	.3680	3-5/8	5	26.67
V	.3770	3-5/8	5	27.23
W	.3860	3-3/4	5-1/8	29.68
X	.3970	3-3/4	5-1/8	29.68
Y	.4040	3-7/8	5-1/4	29.68
Z	.4130	3-7/8	5-1/4	34.18

Wire Gauge Sizes

Size	Decimal Equivalent	Flute Length	Overall Length	Price Each
1	.2280	2-5/8	3-7/8	17.16
2	.2210	2-5/8	3-7/8	17.16
3	.2130	2-1/2	3-3/4	16.28
4	.2090	2-1/2	3-3/4	16.28
5	.2055	2-1/2	3-3/4	16.28
6	.2040	2-1/2	3-3/4	16.28
7	.2010	2-7/16	3-5/8	16.28
8	.1990	2-7/16	3-5/8	16.28
9	.1960	2-7/16	3-5/8	16.28
10	.1935	2-7/16	3-5/8	16.28
11	.1910	2-5/16	3-1/2	16.28
12	.1890	2-5/16	3-1/2	16.28
13	.1850	2-5/16	3-1/2	15.38
14	.1820	2-3/16	3-3/8	15.38
15	.1800	2-3/16	3-3/8	15.38
16	.1770	2-3/16	3-3/8	15.38
17	.1730	2-3/16	3-3/8	15.38

Size	Decimal Equivalent	Flute Length	Overall Length	Price Each
18	.1695	2-1/8	3-1/4	15.38
19	.1660	2-1/8	3-1/4	15.38
20	.1610	2-1/8	3-1/4	15.38
21	.1590	2-1/8	3-1/4	15.38
22	.1570	2	3-1/8	15.38
23	.1540	2	3-1/8	14.55
24	.1520	2	3-1/8	14.55
25	.1495	1-7/8	3	14.55
26	.1470	1-7/8	3	14.55
27	.1440	1-7/8	3	14.55
28	.1405	1-3/4	2-7/8	14.55
29	.1360	1-3/4	2-7/8	14.28
30	.1285	1-5/8	2-3/4	13.85
31	.1200	1-5/8	2-3/4	13.85
32	.1160	1-5/8	2-3/4	13.85
33	.1130	1-5/8	2-3/4	13.85

Carbide Tipped Drills

High Speed Steel Body

Jobber Length

List No. **CT830** – 118° Point

These Carbide Tipped Drills are designed for drilling abrasive and nonferrous materials such as castings, hard rubber and copper alloys. They are NOT recommended for drilling steel or other ferrous materials.

MADE IN USA

MICHIGAN DRILL & CUTTING TOOLS



Metric Sizes

Size	Decimal Equivalent	Flute Length	Overall Length	Price
3.00	.1181	1-5/8	2-3/4	21.79
3.10	.1220	1-5/8	2-3/4	23.20
3.20	.1260	1-5/8	2-3/4	23.20
3.30	.1299	1-3/4	2-7/8	23.20
3.50	.1378	1-3/4	2-7/8	23.20
4.00	.1575	2-1/8	3-1/4	24.61
4.50	.1772	2-3/16	3-3/8	24.61
5.00	.1969	2-7/16	3-5/8	25.62
5.50	.2165	2-1/2	3-3/4	25.92
6.00	.2362	2-3/4	4	26.62
6.40	.2520	2-7/8	4-1/8	28.06
6.50	.2559	2-7/8	4-1/8	28.06
7.00	.2756	2-7/8	4-1/8	29.13

Size	Decimal Equivalent	Flute Length	Overall Length	Price
7.50	.2953	3-1/16	4-3/8	30.37
8.00	.3150	3-3/16	4-1/2	32.13
8.50	.3346	3-7/16	4-3/4	33.19
9.00	.3543	3-1/2	4-7/8	34.31
9.50	.3740	3-5/8	5	35.13
10.00	.3937	3-3/4	5-1/8	37.31
10.50	.4134	3-15/16	5-3/8	40.44
11.00	.4331	4-1/16	5-1/2	42.72
11.50	.4528	4-3/16	5-5/8	42.72
12.00	.4724	4-3/8	5-7/8	52.16
12.50	.4921	4-1/2	6	60.13
13.00	.5118	4-1/2	6	66.90

Taper Shank

List No. **CT820** – 118° Point

Provides excellent wear resistance when cutting aluminum castings, bronze, cast and ductile irons, fiberglass, hard plastics and other non ferrous materials. NOT recommended for steel applications.



Size	Dec. Equiv.	Flute Length	Overall Length	Morse Taper	Price Each
1/8	.1250	1-7/8	5-1/8	1	38.04
9/64	.1406	2-1/8	5-3/8	1	38.04
5/32	.1563	2-1/8	5-3/8	1	40.08
11/64	.1719	2-1/2	5-3/4	1	40.79
3/16	.1875	2-1/2	5-3/4	1	40.79
13/64	.2031	2-3/4	6	1	43.12
7/32	.2188	2-3/4	6	1	43.12
1/4	.2500	2-7/8	6-1/8	1	47.50
17/64	.2656	3	6-1/4	1	49.38
9/32	.2813	3	6-1/4	1	48.48
19/64	.2969	3-1/8	6-3/8	1	49.38
5/16	.3125	3-1/8	6-3/8	1	48.48
21/64	.3281	3-1/4	6-1/2	1	62.75
11/32	.3438	3-1/4	6-1/2	1	61.61
23/64	.3594	3-1/2	6-3/4	1	62.75
3/8	.3750	3-1/2	6-3/4	1	61.61
25/64	.3906	3-5/8	7	1	72.84
13/32	.4063	3-5/8	7	1	71.50
7/16	.4375	3-7/8	7-1/4	1	71.50
29/64	.4531	4-1/8	7-1/2	1	88.07
15/32	.4688	4-1/8	7-1/2	1	86.47
31/64	.4844	4-3/8	8-1/4	2	88.07
1/2	.5000	4-3/8	8-1/4	2	90.79
33/64	.5156	4-5/8	8-1/2	2	98.59
17/32	.5313	4-5/8	8-1/2	2	95.07
35/64	.5469	4-7/8	8-3/4	2	99.93
9/16	.5625	4-7/8	8-3/4	2	96.36
37/64	.5781	4-7/8	8-3/4	2	104.59
19/32	.5938	4-7/8	8-3/4	2	100.87
39/64	.6094	4-7/8	8-3/4	2	119.03
5/8	.6250	4-7/8	8-3/4	2	114.77
41/64	.6406	5-1/8	9	2	126.20
21/32	.6563	5-1/8	9	2	121.69
43/64	.6719	5-3/8	9-1/4	2	122.27

Size	Dec. Equiv.	Flute Length	Overall Length	Morse Taper	Price Each
11/16	.6875	5-3/8	9-1/4	2	117.90
45/64	.7031	5-5/8	9-1/2	2	125.57
23/32	.7188	5-5/8	9-1/2	2	121.10
47/64	.7344	5-7/8	9-3/4	2	128.17
3/4	.7500	5-7/8	9-3/4	2	123.60
49/64	.7656	6	9-7/8	2	133.94
25/32	.7813	6-1/8	9-7/8	2	135.26
51/64	.7969	6-1/8	10-3/4	3	138.34
13/16	.8125	6-1/8	10-3/4	3	146.77
53/64	.8281	6-1/8	10-3/4	3	157.93
27/32	.8438	6-1/8	10-3/4	3	157.21
55/64	.8594	6-1/8	10-3/4	3	148.86
7/8	.8750	6-1/8	10-3/4	3	148.86
57/64	.8906	6-1/8	10-3/4	3	152.75
29/32	.9063	6-1/8	10-3/4	3	152.75
59/64	.9219	6-1/8	10-3/4	3	159.46
15/16	.9375	6-1/8	10-3/4	3	159.46
61/64	.9531	6-3/8	11	3	171.13
31/32	.9688	6-3/8	11	3	168.70
63/64	.9844	6-3/8	11	3	171.13
1	1.0000	6-3/8	11	3	165.99
1-1/32	1.0313	6-1/2	11-1/8	3	205.20
1-3/64	1.0469	6-5/8	11-1/4	3	215.00
1-1/16	1.0625	6-5/8	11-1/4	4	207.90
1-3/32	1.0938	6-7/8	12-1/2	4	225.00
1-1/8	1.1250	7-1/8	12-3/4	4	230.58
1-9/64	1.1406	7-1/4	12-7/8	4	266.22
1-5/32	1.1563	7-1/4	12-7/8	4	261.00
1-11/64	1.1719	7-3/8	13	4	268.97
1-3/16	1.1875	7-3/8	13	4	263.70
1-13/64	1.2031	7-1/2	13-1/8	4	284.67
1-15/64	1.2344	7-7/8	13-1/2	4	288.25
1-1/4	1.2500	7-7/8	13-1/2	4	282.60

Carbide Tipped Drills

High Speed Steel Body

MADE IN USA

MICHIGAN DRILL & CUTTING TOOLS

Taper Length

List No. **CT840** – 118° Point

Provides excellent wear resistance when cutting aluminum castings, bronze, cast and ductile irons, fiberglass, hard plastics and other non ferrous materials. NOT recommended for steel applications.



Size	Decimal Equivalent	Flute Length	Overall Length	Price Each
3/32	.0938	2-5/8	5-1/8	24.34
1/8	.1250	2-3/4	5-1/8	25.52
9/64	.1406	3	5-3/8	25.52
5/32	.1563	3	5-3/8	26.89
11/64	.1719	3-3/8	5-3/4	27.36
3/16	.1875	3-3/8	5-3/4	27.36
#10	.1935	3-5/8	6	28.93
13/64	.2031	3-5/8	6	28.93
7/32	.2188	3-5/8	6	28.93
15/64	.2344	3-3/4	6-1/8	33.27
C	.2420	3-3/4	6-1/8	33.46
1/4	.2500	3-3/4	6-1/8	32.67
F	.2570	3-7/8	6-1/4	34.34
17/64	.2656	3-7/8	6-1/4	37.34
9/32	.2813	3-7/8	6-1/4	36.65
L	.2900	4	6-3/8	49.00
19/64	.2969	4	6-3/8	40.30
5/16	.3125	4	6-3/8	39.56
21/64	.3281	4-1/8	6-1/2	44.37
11/32	.3438	4-1/8	6-1/2	43.58
23/64	.3594	4-1/4	6-3/4	48.69
3/8	.3750	4-1/4	6-3/4	47.80
25/64	.3906	4-3/8	7	53.62
13/32	.4063	4-3/8	7	52.64
27/64	.4219	4-5/8	7-1/4	61.72
7/16	.4375	4-5/8	7-1/4	60.60
29/64	.4531	4-3/4	7-1/2	65.56
15/32	.4688	4-3/4	7-1/2	64.36
31/64	.4844	4-3/4	7-3/4	71.40
1/2	.5000	4-3/4	7-3/4	70.11

Size	Decimal Equivalent	Flute Length	Overall Length	Price Each
33/64	.5156	4-3/4	8	92.00
17/32	.5313	4-3/4	8	90.76
35/64	.5469	4-7/8	8-1/4	95.05
9/16	.5625	4-7/8	8-1/4	91.65
37/64	.5781	4-7/8	8-1/4	100.31
19/32	.5938	4-7/8	8-3/4	98.55
39/64	.6094	4-7/8	8-3/4	115.56
5/8	.6250	4-7/8	8-3/4	111.44
41/64	.6406	5-1/8	8-3/4	119.88
21/32	.6563	5-1/8	9	115.60
43/64	.6719	5-3/8	9	121.94
11/16	.6875	5-3/8	9-1/4	117.59
45/64	.7031	5-5/8	9-1/4	123.29
23/32	.7188	5-5/8	9-1/2	120.14
3/4	.7500	5-7/8	9-3/4	122.79
49/64	.7656	6	9-3/4	138.09
25/32	.7813	6	9-7/8	132.93
13/16	.8125	6-1/8	10	133.57
53/64	.8281	6-1/8	10	138.68
27/32	.8438	6-1/8	10	133.57
55/64	.8594	6-1/8	10	146.47
7/8	.8750	6-1/8	10	147.50
57/64	.8906	6-1/8	10	152.75
29/32	.9062	6-1/8	10	170.31
59/64	.9219	6-1/8	10-3/4	152.64
15/16	.9375	6-1/8	10-3/4	155.30
61/64	.9531	6-3/8	11	160.25
31/32	.9687	6-3/8	11	181.02
63/64	.9844	6-3/8	11	164.28
1	1.0000	6-3/8	11	167.58

Metric Sizes

Size	Decimal Equivalent	Flute Length	Overall Length	Price Each
5.00	.1969	3-5/8	6	29.07
5.50	.2165	3-5/8	6	32.35
6.00	.2362	3-3/4	6-1/8	34.67
6.30	.2480	3-3/4	6-1/8	36.70
6.50	.2559	3-7/8	6-1/4	38.52
7.00	.2756	3-7/8	6-1/4	40.06
7.50	.2953	4	6-3/8	43.14
8.00	.3150	4-1/8	6-1/2	44.68

Size	Decimal Equivalent	Flute Length	Overall Length	Price Each
8.50	.3346	4-1/8	6-1/2	46.22
9.00	.3543	4-1/4	6-3/4	46.99
9.40	.3701	4	6-3/4	47.87
9.50	.3740	4-1/4	6-3/4	55.47
12.00	.4724	5-1/2	7-1/4	70.43
12.50	.4921	4-3/4	7-3/4	76.26
14.00	.5512	4-7/8	8-1/4	100.15
15.00	.5906	4-7/8	8-3/4	114.01

Sets

Description	Sizes	Pcs.	Set No.	Price
Jobber Length	1/8" to 1/2" by 32nds	13	**CT830SR**	413.53
Jobber Length	1/8" to 1/2" by 64ths	25	**CT830SF**	799.16

All sets are supplied in metal index



Carbide Tipped Drills

High Speed Steel Body

MADE IN USA

MICHIGAN DRILL & CUTTING TOOLS

Die Drills

List No. **CT850**



- Designed specifically for drilling hardened ferrous materials in the range of 45 to 65 Rockwell C.

Size	Decimal Equivalent	Flute Length	Overall Length	Price Each
1/16*	0.0625	5/8	1-5/8	17.10
5/64*	0.0781	11/64	1-11/16	17.10
3/32*	0.0938	3/4	1-3/4	19.35
7/64*	0.1094	13/16	1-13/16	19.35
1/8*	0.1250	7/8	1-7/8	19.35
9/64*	0.1406	15/16	1-15/16	20.66
5/32*	0.1563	1	2-1/16	23.85
11/64	0.1719	1-1/2	3-1/2	35.98
3/16	0.1875	1-1/2	3-1/2	35.98
13/64	0.2031	1-3/4	3-3/4	37.11
7/32	0.2188	1-3/4	3-3/4	37.11
15/64	0.2344	2	4	38.45
1/4	0.2500	2	4	38.45
17/64	0.2656	2-1/4	4-1/4	40.62
9/32	0.2813	2-1/4	4-1/4	40.62
19/64	0.2969	2-1/2	4-1/2	42.47
5/16	0.3125	2-1/2	4-1/2	42.47
21/64	0.3281	2-3/4	4-3/4	45.76
11/32	0.3438	2-3/4	4-3/4	45.76
23/64	0.3594	3	5	48.72
3/8	0.3750	3	5	48.72
25/64	0.3906	3	5-1/4	56.82
13/32	0.4063	3	5-1/4	56.84
27/64	0.4219	3	5-1/2	66.02
7/16	0.4375	3	5-1/2	66.02
29/64	0.4531	3-1/4	5-3/4	72.58
15/32	0.4688	3-1/4	5-3/4	72.58
31/64	0.4844	3-1/2	6	85.08
1/2	0.5000	3-1/2	6	85.08
17/32	0.5313	3-1/2	6	102.73
9/16	0.5625	3-1/2	6	102.73
19/32	0.5938	4	7	112.09
5/8	0.6250	4	7	112.09
21/32	0.6563	4-1/2	7-1/2	118.07
11/16	0.6875	4-1/2	7-1/2	121.38
23/32	0.7188	4-3/4	8	129.60
3/4	0.7500	4-3/4	8	130.73
13/16	0.8125	4-3/4	8	225.00
7/8	0.8750	4-3/4	8	234.00
15/16	0.9375	4-3/4	8	259.20
1	1.0000	4-3/4	8	269.10

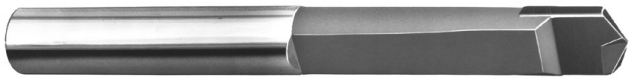
** Solid Carbide*

Straight Flute Drills

Rockwell Hardness RC 65 For Drilling Hardened Steel

List No. **CT860**

For drilling and center drilling hardened heat treated steel up to 65 RC. The special point design provides a free cutting action that minimizes heat and produces a smooth hole finish.



Excellent choice for machinists, locksmiths, mechanics, and automotive applications.

Size	Decimal Equivalent	Flute Length	Overall Length	Approx. RPM	Price Each
5/32	0.1563	1/2	3	1800	56.75
3/16	0.1875	3/4	3-1/4	1600	49.19
13/64	0.2031	3/4	3	1600	52.20
7/32	0.2188	1-1/4	3-1/4	1400	50.18
15/64	0.2344	1-3/8	3-1/2	1300	51.50
1/4	0.2500	1-1/2	3-1/2	1200	52.51
17/64	0.2656	1-3/4	3-3/4	1200	56.00
19/64	0.2969	1-3/4	3-3/4	1200	60.20
5/16	0.3125	1-3/4	3-3/4	1000	55.31
21/64	0.3281	2	4	1000	57.00
11/32	0.3438	2	4	1000	57.00
23/64	0.3594	1-7/8	3-7/8	900	57.00
3/8	0.3750	2	4	800	59.62
13/32	0.4063	2	4	800	71.30
27/64	0.4219	2	4	800	84.00
7/16	0.4375	2-1/4	4-1/2	800	79.79
29/64	0.4531	2-1/4	4-1/2	700	85.93
31/64	0.4844	2-1/2	4-1/2	700	96.49
1/2	0.5000	2-1/2	5	700	96.49
5/8	0.6250	2-1/2	5	700	121.13

Use of cutting fluid is recommended.

Screw Machine Length

List No. **CT600** – 118° Point



Size	Decimal Equivalent	Flute Length	Overall Length	Price Each
1/8	0.1250	7/8	1-7/8	22.05
9/64	0.1406	15/16	1-15/16	23.85
5/32	0.1563	1	2-1/16	24.98
11/64	0.1719	1-1/16	2-1/8	26.78
3/16	0.1875	1-1/8	2-3/16	26.78
13/64	0.2031	1-3/16	2-1/4	26.96
7/32	0.2188	1-1/4	2-3/8	26.96
15/64	0.2344	1-5/16	2-7/16	28.80
1/4	0.2500	1-3/8	2-1/2	28.80
17/64	0.2656	1-7/16	2-5/8	34.65
9/32	0.2813	1-1/2	2-11/16	34.65
19/64	0.2969	1-9/16	2--3/4	36.40
5/16	0.3125	1-5/8	2-13/16	38.25
21/64	0.3281	1-11/16	2-15/16	40.80
11/32	0.3438	1-11/16	3	40.80
23/64	0.3594	1-3/4	3-1/16	41.90
3/8	0.3750	1-13/16	3-1/8	42.53
25/64	0.3906	1-7/8	3-1/4	44.66
13/32	0.4063	1-15/16	3-5/16	44.66
27/64	0.4219	2	3-3/8	49.95
7/16	0.4375	2-1/16	3-7/16	49.95
29/64	0.4531	2-1/8	3-9/16	57.80
15/32	0.4688	2-1/8	3-5/8	57.80
31/64	0.4844	2-3/16	3-11/16	62.96
1/2	0.5000	2-1/4	3-3/4	62.96
9/16	0.5625	2-1/2	4	95.00
37/64	0.5781	2-5/8	4-1/8	107.00

Carbide Tipped Composite Drills



Ideal for drilling bowling balls, plastic composites, plasters, and other similiar non-metalic materials.

MADE IN USA

MICHIGAN DRILL & CUTTING TOOLS

Silver and Deming

List No. **CT810**

1/2" Straight Shank, 3-7/8" Flute, 6-1/4 Overall Length



Size	Decimal Equivalent	Price Each
7/16	.4375	33.97
1/2	.5000	33.97
9/16	.5625	33.97
5/8	.6250	35.42
21/32	.6562	35.42
11/16	.6875	35.42
23/32	.7188	35.42
3/4	.7500	35.42

Size	Decimal Equivalent	Price Each
25/32	.7812	35.42
13/16	.8125	36.05
27/32	.8438	36.69
7/8	.8750	37.64
29/32	.9062	39.85
15/16	.9375	41.75
61/64	.9531	43.01
31/32	.9688	44.28

Size	Decimal Equivalent	Price Each
63/64	.9844	46.17
1	1.0000	47.76
1-1/64	1.0156	49.97
1-1/32	1.0312	51.87
1-1/16	1.0625	53.13
1-3/32	1.0938	55.66
1-1/8	1.1250	57.56
1-1/4	1.2500	60.72

Taper Shank

List No. **CT811**

#2 Morse Taper Shank, 4-1/8" Flute, 7-1/2" Overall Length



Size	Decimal Equivalent	Price Each
5/8	.6250	39.60
21/32	.6562	50.50
11/16	.6875	51.29
23/32	.7188	44.88
3/4	.7500	58.34
25/32	.7812	59.40

Size	Decimal Equivalent	Price Each
13/16	.8125	50.60
27/32	.8438	62.04
7/8	.8750	63.36
61/64	.9531	55.84
31/32	.9688	73.92
63/64	.9844	75.90

Size	Decimal Equivalent	Price Each
1	1.0000	64.90
1-1/32	1.0312	92.40
1-1/16	1.0625	78.10
1-3/32	1.0938	95.04
1-1/4	1.2500	93.50

Sets

Sizes	Pcs.	Shank	Set No.	Price
5/8" to 1-1/8" by 32nds	17	1/2" Shank	**CT810S**	594.00
5/8" to 1-1/4" by 32nds (Except 29/32,15/16, & 1-1/8)	15	#2 Morse Taper	**CT811S**	1292.56
7/16" to 1-1/8" by 32nds, & 61/64", 63/64", & 1-1/64"	23	1/2" Shank	**CT810L**	966.41

All sets are supplied in wood block



Carbide Tipped Glass & Tile Drills



List No. **CT898**

For drilling glass, tiles, ceramics and other hard, fragile materials without chipping or cracking the material. Liquid coolant recommended.

MADE IN USA

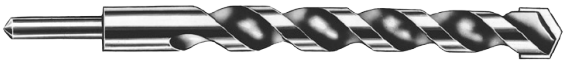
MICHIGAN DRILL & CUTTING TOOLS

Size	Overall Length	Price Each
1/8	2-1/2	7.92
5/32	2-1/2	8.42
3/16	2-1/2	9.08
1/4	2-1/2	9.90
5/16	2-1/2	11.12

Size	Overall Length	Price Each
3/8	3	16.17
7/16	3-1/2	17.50
1/2	3	18.81
9/16	4	24.50
5/8	4	31.00

Carbide Tipped Masonry Drills

Straight Shank



List No. **CT890** – 4" OAL, Regular Helix
List No. **CT891** – 6" OAL, Regular Helix
List No. **CT892** – 12" OAL, Regular Helix
List No. **CT893** – 18" OAL, Regular Helix
List No. **CT890F** – 4" OAL, Fast Helix
List No. **CT891F** – 6" OAL, Fast Helix
List No. **CT892F** – 12" OAL, Fast Helix

For drilling brick, stone, slate, marble, cement, concrete, carbon, asphalt, plaster and wallboard. These drills may be used in portable electric drills, drill presses, or other fixed spindle machine tools.

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MICHIGAN DRILL & CUTTING TOOLS

Size	Shank Size	Price Each 4" OAL CT890	4" OAL CT890F	6" OAL CT891	6" OAL CT891F	12" OAL CT892	12" OAL CT892F	18" OAL CT893
1/8	1/8	3.29*	3.29*	3.47	—	8.18	—	—
5/32	5/32	3.47*	—	—	—	—	—	—
11/64	11/64	3.47*	—	—	—	—	—	—
4.50mm	4.50mm	3.53	—	—	—	—	—	—
3/16	3/16	3.53	3.53	3.56	3.56	8.42	—	13.90
7/32	7/32	3.63	—	3.70	—	—	—	—
5.50mm	5.50mm	3.53	—	—	—	—	—	—
15/64	15/64	—	3.70*	—	—	—	—	—
1/4	1/4	3.70	3.70	3.70	3.70	8.55	8.55	13.17
9/32	1/4	3.80	—	4.13	—	—	—	—
5/16	1/4	3.86	3.86	4.29	4.29	9.08	9.08	14.85
3/8	1/4	4.16	4.16	4.42	4.42	10.23	10.23	—
3/8	5/16	—	—	—	—	—	—	15.84
3/8	3/8	—	4.16	4.42	—	10.23	—	15.84
7/16	1/4	4.75	4.75	4.72	4.72	12.21	—	—
7/16	3/8	—	—	4.72	4.72	12.21	12.21	19.01
15/32	1/4	—	—	5.12	—	—	—	—
1/2	1/4	4.82	4.82	5.12	5.12	12.47	—	—
1/2	3/8	—	—	5.12	5.12	12.47	12.47	19.47
9/16	3/8	—	—	7.10	7.10	—	—	—
9/16	1/2	—	—	7.10	7.10	14.19	—	22.44
5/8	1/4	6.80	—	—	—	—	—	—
5/8	3/8	6.80	—	8.25	—	15.68	15.68	23.76
5/8	1/2	—	—	—	—	15.68	—	23.76
11/16	1/2	—	—	9.01	9.01	18.41	—	27.72
3/4	1/2	—	—	9.74	9.74	18.81	18.81**	28.38
7/8	1/2	—	—	12.38	12.38	22.37	—	34.32
31/32	1/2	—	—	15.18	—	—	—	—
1	1/2	—	—	15.18	15.18	25.74	25.74	38.94
1-1/8	1/2	—	—	21.78	—	32.34	—	55.44
1-1/4	1/2	—	—	28.38	—	—	—	58.74
1-3/8	1/2	—	—	38.28	—	51.48	—	82.50
1-1/2	1/2	—	—	39.27	—	—	—	75.90

*** 3/8" Shank * 3" Overall Length*

Sets

Sizes	Description	Container	Pcs.	Set No.	Price
1/4, 5/16, 3/8, 1/2	Regular Helix – 4" OAL	Polytube	4	**CT890S**	16.50
3/16, 1/4, 5/16, 3/8, 1/2, 5/8*	Regular Helix – 4" OAL	Polytube	6	**CT890S-6**	28.32
1/8, 3/16, 1/4, 5/16, 3/8, 7/16, 1/2	Regular Helix – 6" OAL	Polytube	7	**CT891S-7**	29.28
1/4, 5/16, 3/8, 1/2, 5/8, 3/4	Regular Helix – 6" OAL	Polytube	6	**CT891S-6**	35.52
1/4, 5/16, 3/8, 7/16, 1/2	Contains one of each size drill in H.S. 1/4 shank & Carbide Tipped Masonry	Wood Block	10	**304B**	60.08

**5/8 by 6" O.A.L.*

Carbide Tipped Masonry Drills MDX SUPERIOR IMPORT

Size	Price Each 4" OAL XCT890	6" OAL XCT891
1/4	1.80	2.10
5/16	1.90	2.25
3/8	2.10	2.45

Carbide Tipped Standard "A" Drills

MADE IN USA

Taper Shank

List No. **CT884**

Use in rotary hammer drills with "A" taper chucks or adapters.



Size	Price Each 4-1/2" OAL	6" OAL	9" OAL	12" OAL
3/16	—	8.10	—	—
1/4	8.82**	9.18	—	14.32
5/16	9.24	10.14	—	—
3/8	9.68	11.26	12.38	16.02
7/16	10.80	12.78	—	—

*** 1/4 – 4" OAL*

Size	Price Each 6" OAL	9" OAL	12" OAL
1/2	13.06	15.12	19.80
9/16	—	16.08	—
5/8	15.54	20.26	26.10
3/4	19.80	24.76	31.06
7/8	—	34.98	—

Hammer Drills

Carbide Tipped



SDS - Max Masonry

List No. **CT886MX** – 5 Slot Shank

Extra heavy duty Slot Drive System to maximize performance.

SDS Max

MADE IN USA

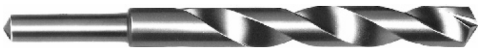
MICHIGAN DRILL & CUTTING TOOLS

Size	Approximate Flute Length	Approximate Overall Length	Price Each
3/8	7	13	58.46
1/2	7	13	59.40
1/2	16	21	73.72
9/16	7	13	67.32
9/16	16	21	89.55
5/8	7	13	71.55
5/8	12	18	85.73
5/8	16	21	91.35
5/8	18	23-1/2	99.93
5/8	24	30	149.75
5/8	30	36	152.10
5/8	42	48	266.18
11/16	18	23-1/2	105.63
3/4	7	13	71.78
3/4	12	18	91.45
3/4	16	21	92.70
3/4	18	23-1/2	82.32
3/4	24	30	144.50
3/4	30	36	170.55
3/4	42	48	298.46
13/16	18	23-1/2	125.99
27/32	7	13	83.25
27/32	18	23-1/2	139.99
7/8	7	13	83.25
7/8	12	18	87.83
7/8	16	21	114.76
7/8	18	23-1/2	139.99

Size	Approximate Flute Length	Approximate Overall Length	Price Each
7/8	30	36	268.38
1	7	13	89.10
1	12	18	93.37
1	16	21	108.90
1	18	23-1/2	136.74
1	30	36	195.75
1	42	48	332.14
1-1/16	18	23-1/2	157.25
1-1/8	7	13	89.75
1-1/8	12	18	119.27
1-1/8	16	21	127.98
1-1/8	18	23-1/2	165.24
1-1/4	9	15	140.36
1-1/4	16	21	152.10
1-1/4	18	23-1/2	175.44
1-1/4	30	36	249.79
1-3/8	12	18	179.53
1-3/8	18	23-1/2	201.64
1-1/2	9	15	185.22
1-1/2	16	21	217.80
1-1/2	18	23-1/2	222.21
1-1/2	30	36	416.52
1-1/2	42	48	515.16
1-9/16	18	23-1/2	267.23
1-5/8	18	23-1/2	263.39
1-3/4	18	23-1/2	272.03
2	18	23-1/2	290.84

Impact Hammer Drills

Carbide Tipped



MADE IN USA

MICHIGAN DRILL & CUTTING TOOLS

List No. **CT880** – Percussion Type

For use in hammer drills equipped with 3-Jawed Jacobs Type Chuck.

Size	Shank Diameter	Flute Length	Overall Length	Price Each
1/8	1/8	1-1/2	3	3.40
1/8	1/8	4-1/2	6	4.78
5/32	9/64	1-1/2	3	4.78
11/64	9/64	1-1/2	3	4.78
3/16	3/16	1-1/2	3	3.40
3/16	3/16	4	6	3.78
3/16	3/16	6	8	5.36
7/32	7/32	2-1/2	4	3.78
1/4	1/4	2-1/2	4	3.54
1/4	1/4	2-1/2	6	4.46
1/4	1/4	12	13	11.26
1/4	1/4	16-1/2	18	13.06
9/32	1/4	2-1/2	4	4.46
5/16	1/4	2-1/2	4	4.16
5/16	1/4	4	6	4.96
5/16	1/4	12	13	10.36
3/8	1/4	2-1/2	4	5.20
3/8	1/4	4-1/2	6	5.76
3/8	3/8	12	13	10.80
3/8	3/8	18-1/2	20	14.18
3/8	3/8	22-1/2	24	19.80

Size	Shank Diameter	Flute Length	Overall Length	Price Each
7/16	3/8	4-1/2	6	6.76
1/2	3/8	4-1/2	6	7.02
1/2	3/8	12	13-1/2	13.06
9/16	1/2	4-1/2	6	8.46
9/16	3/8	12	13-1/2	15.12
5/8	1/2	4	6	9.46
5/8	1/2	12	13-1/2	16.08
5/8	1/2	16-1/2	18	19.80
11/16	1/2	4-1/2	6	11.70
3/4	1/2	4-1/2	6	12.60
3/4	1/2	12	13-1/2	18.90
7/8	1/2	4-1/2	6	15.62
7/8	1/2	12	13-1/2	20.80
7/8	1/2	16-1/2	18	27.42
1	1/2	4-1/2	6	18.90
1	1/2	12	13-1/2	25.66
1	1/2	6-1/2	18	34.66
1-1/8	1/2	12	13-1/2	28.36
1-1/4	1/2	4-1/2	6	29.26
1-1/2	1/2	4-1/2	6	37.80

Rotary Hammer Drills

Carbide Tipped

MADE IN USA

MICHIGAN DRILL & CUTTING TOOLS

SDS - Plus Masonry

List No. **CT886** – 4 Slot Shank

The versatile Slot Drive System fits all rotary hammer drills that specify an SDS - PLUS shank. Positive drive slots will deliver maximum drilling torque and hammering energy for faster drilling.

SDS Plus



Size	Approximate Flute Length	Approximate Overall Length	Price Each
5/32	2	4-5/8	6.76
5/32	4	6-5/8	7.38
5/32	6	8-5/8	11.96
3/16	2	4-5/8	7.59
3/16	4	6-5/8	7.78
3/16	6	8-5/8	10.40
3/16	8	10-5/8	14.20
3/16	12	14-5/8	21.79
3/16	14	16-5/8	50.35
7/32	2-1/2	4-3/4	7.10
7/32	4	6-5/8	8.75
7/32	6	8-5/8	11.74
7/32	8	10-1/4	14.91
7/32	12	14-5/8	24.85
7/32	14	16-5/8	30.74
6mm	6	8-1/4	10.80
1/4	2	4-5/8	7.92
1/4	4	6-5/8	8.62
1/4	6	8-5/8	10.80
1/4	9	11-5/8	14.41
1/4	9-5/8	12-1/4	15.23
1/4	12	14-5/8	20.52
1/4	14	16-5/8	21.62
1/4	18	20-5/8	44.44
9/32	6	8-5/8	12.81
5/16	4	6-5/8	11.25
5/16	7-1/2	9-3/4	14.38
5/16	10	12-5/8	20.25
8mm	3-1/2	6-1/4	11.25
3/8	4	6-5/8	10.53
3/8	8	10-5/8	15.22
3/8	10	12-5/8	20.25
3/8	18	20-5/8	31.50
3/8	22	24	38.34
3/8	34	36	68.44
10mm	5-1/2	8	15.53
7/16	4	6-5/8	14.85
7/16	10	12-5/8	20.52
7/16	16	18-5/8	29.70
1/2	4	6-5/8	12.96
1/2	8	10-5/8	15.53

Size	Approximate Flute Length	Approximate Overall Length	Price Each
1/2	10	12-5/8	24.75
1/2	14	16-5/8	26.76
1/2	16	18-5/8	28.80
1/2	22	24	35.92
1/2	36	38	88.72
13mm	3	6-1/4	19.35
9/16	4	6-3/4	19.35
9/16	7-7/8	10-1/8	23.54
9/16	10	12-3/4	26.10
9/16	16	18-3/4	35.10
5/8	4	6-3/4	21.60
5/8	7	9-3/4	23.04
5/8	10	12-3/4	32.40
5/8	15	18-3/4	44.10
5/8	22	24	65.07
5/8	34	36	127.18
11/16	4	6-3/4	30.60
11/16	10	12-3/4	43.18
11/16	16	18-3/4	65.30
3/4	4	6-3/4	28.80
3/4	7	9-3/4	36.72
3/4	10	12-3/4	42.12
3/4	16	18-3/4	52.20
3/4	22	24	86.95
3/4	34	36	140.78
13/16	10	12-3/4	53.24
27/32	6	8-3/4	56.78
7/8	4	6-3/4	30.60
7/8	7	9-3/4	53.10
7/8	10	12-3/4	59.74
7/8	14	16-3/4	62.10
7/8	16	18-3/4	73.23
1	8	10-3/4	63.38
1	10-1/4	13-1/8	68.47
1	16	18-3/4	77.74
1	22	25	105.82
1	28	30	143.00
1-1/8	10	12-3/4	85.36
1-1/8	16	18-3/4	94.52
1-1/4	10	12-3/4	113.80

Spline Shank Bits

List No. **CT887**

Heavy duty spline shanks to fit popular hammer drills.

Spline Shank



Size	Price Each		
	12" OAL 6" Flute Length	18" OAL 12" Flute Length	23-1/2" OAL 18" Flute Length
3/8	35.92	42.76	—
7/16	43.16	—	—
1/2	38.26	43.88	51.98
9/16	40.28	46.14	54.16
5/8	42.30	48.16	55.08
3/4	46.80	51.12	28.24

Size	Price Each		
	12" OAL 6" Flute Length	18" OAL 12" Flute Length	23-1/2" OAL 18" Flute Length
7/8	49.50	55.14	61.20
1	56.26	63.00	70.88
1-1/8	—	71.11	82.80
1-1/4	—	84.38	91.68
1-3/8	—	104.96	111.72
1-1/2	—	110.26	122.86

Solid Carbide Drills



Standard Length

List No. **C800** – 118° Point

Solid Carbide Drills are designed for drilling abrasive materials when drilling accuracy must be maintained. They are also used in high temperature drilling applications. Solid Carbide Drills are used for drilling cast iron, aluminum, copper, plastics, bronze and other similar materials. Solid Carbide drills are NOT recommended for drilling steel.

Fractional Sizes

Size	Decimal Equivalent	Flute Length	Overall Length	Price Each
1/64	.0156	1/4	1-1/4	16.88
1/32	.0312	5/16	1-1/4	13.73
3/64	.0469	3/4	1-1/2	11.90
1/16	.0625	3/4	1-1/2	11.90
5/64	.0781	7/8	1-3/4	12.64
3/32	.0938	1	2	13.90
7/64	.1094	1-1/4	2-1/4	15.47
1/8	.1250	1-1/4	2-1/4	16.03
9/64	.1406	1-3/8	2-1/2	17.99
5/32	.1562	1-3/8	2-1/2	20.18
11/64	.1719	1-5/8	2-3/4	22.51
3/16	.1875	1-5/8	2-3/4	23.94
13/64	.2031	1-3/4	3	27.20
7/32	.2188	1-3/4	3	29.91
15/64	.2344	2	3-1/4	33.53
1/4	.2500	2	3-1/4	35.96
17/64	.2656	2-1/8	3-1/2	39.57
9/32	.2812	2-1/8	3-1/2	41.44

Size	Decimal Equivalent	Flute Length	Overall Length	Price Each
19/64	.2969	2-3/8	3-3/4	45.99
5/16	.3125	2-3/8	3-3/4	48.66
21/64	.3281	2-1/2	4	53.96
11/32	.3438	2-1/2	4	58.47
23/64	.3594	2-3/4	4-1/4	66.62
3/8	.3750	2-3/4	4-1/4	70.25
25/64	.3906	2-7/8	4-1/2	82.80
13/32	.4062	2-7/8	4-1/2	90.05
27/64	.4219	2-7/8	4-1/2	95.43
7/16	.4375	2-7/8	4-1/2	103.50
29/64	.4531	3	4-3/4	115.29
15/32	.4688	3	4-3/4	124.22
31/64	.4844	3	4-3/4	127.80
1/2	.5000	3	4-3/4	127.80
17/32	.5312	4	6	175.50
9/16	.5625	4	6	216.00
5/8	.6250	4	6	256.50
3/4	.7500	4	6	333.00

Letter Sizes

Size	Decimal Equivalent	Flute Length	Overall Length	Price Each
A	.2340	2	3-1/4	32.94
B	.2380	2	3-1/4	35.64
C	.2420	2	3-1/4	35.64
D	.2460	2	3-1/4	35.64
E	.2500	2	3-1/4	35.96
F	.2570	2	3-1/4	42.12
G	.2610	2-1/8	3-1/2	42.89
H	.2660	2-1/8	3-1/2	43.42
I	.2720	2-1/8	3-1/2	43.01
J	.2770	2-1/8	3-1/2	44.08
K	.2810	2-1/8	3-1/2	44.55
L	.2900	2-1/8	3-1/2	44.85
M	.2950	2-3/8	3-3/4	47.02

Size	Decimal Equivalent	Flute Length	Overall Length	Price Each
N	.3020	2-3/8	3-3/4	50.00
O	.3160	2-3/8	3-3/4	55.76
P	.3230	2-3/8	3-3/4	55.76
Q	.3320	2-1/2	4	59.05
R	.3390	2-1/2	4	60.88
S	.3480	2-1/2	4	63.24
T	.3580	2-3/4	4-1/4	67.50
U	.3680	2-3/4	4-1/4	77.40
V	.3770	2-3/4	4-1/4	82.89
W	.3860	2-7/8	4-1/2	82.89
X	.3970	2-7/8	4-1/2	89.41
Y	.4040	2-7/8	4-1/2	92.92
Z	.4130	2-7/8	4-1/2	101.70

Metric Sizes

Size	Decimal Equivalent	Flute Length	Overall Length	Price Each
1.50	.0591	3/4	1-1/2	14.85
2.00	.0787	7/8	1-3/4	15.13
2.50	.0984	1	2	17.99
3.00	.1181	1-1/4	2-1/4	19.47
3.50	.1378	1-3/8	2-1/2	21.45
4.00	.1575	1-3/8	2-1/2	25.28
4.50	.1772	1-5/8	2-3/4	28.11
5.00	.1969	1-3/4	3	31.79
5.50	.2165	1-3/4	3	35.68
6.00	.2362	2	3-1/4	43.44
6.50	.2559	2	3-1/4	50.82

Size	Decimal Equivalent	Flute Length	Overall Length	Price Each
7.00	.2756	2-1/8	3-1/2	52.57
7.50	.2953	2-3/8	3-3/4	56.21
8.00	.3150	2-3/8	3-3/4	68.16
8.50	.3346	2-1/2	4	74.40
9.00	.3543	2-1/2	4	82.50
9.50	.3740	2-3/4	4-1/4	94.49
10.00	.3937	2-7/8	4-1/2	109.27
10.50	.4134	2-7/8	4-1/2	116.61
11.00	.4331	2-7/8	4-1/2	126.47
11.50	.4528	3	4-3/4	140.91
12.00	.4724	3	4-3/4	156.10

Solid Carbide Drills



Standard Length

List No. **C800** – 118° Point

Solid Carbide Drills are designed for drilling abrasive materials when drilling accuracy must be maintained. They are also used in high temperature drilling applications. Solid Carbide Drills are used for drilling cast iron, aluminum, copper, plastics, bronze and other similar materials. Solid Carbide drills are NOT recommended for drilling steel.

Wire Gauge Sizes

Size	Decimal Equivalent	Flute Length	Overall Length	Price Each
1	.2280	1-3/4	3	31.84
2	.2210	1-3/4	3	31.34
3	.2130	1-3/4	3	29.36
4	.2090	1-3/4	3	28.65
5	.2055	1-3/4	3	27.89
6	.2040	1-3/4	3	27.54
7	.2010	1-3/4	3	26.48
8	.1990	1-3/4	3	26.08
9	.1960	1-3/4	3	25.58
10	.1935	1-5/8	2-3/4	24.85
11	.1910	1-5/8	2-3/4	24.47
12	.1890	1-5/8	2-3/4	24.09
13	.1850	1-5/8	2-3/4	23.75
14	.1820	1-5/8	2-3/4	24.09
15	.1800	1-5/8	2-3/4	23.90
16	.1770	1-5/8	2-3/4	23.00
17	.1730	1-5/8	2-3/4	22.62
18	.1695	1-5/8	2-3/4	22.05
19	.1660	1-5/8	2-3/4	22.52
20	.1610	1-3/8	2-1/2	21.25
21	.1590	1-3/8	2-1/2	21.33
22	.1570	1-3/8	2-1/2	20.68
23	.1540	1-3/8	2-1/2	20.33
24	.1520	1-3/8	2-1/2	19.62
25	.1495	1-3/8	2-1/2	18.56
26	.1470	1-3/8	2-1/2	18.35
27	.1440	1-3/8	2-1/2	17.98
28	.1405	1-3/8	2-1/2	17.80
29	.1360	1-3/8	2-1/2	17.42
30	.1285	1-1/4	2-1/4	16.76
31	.1200	1-1/4	2-1/4	16.56
32	.1160	1-1/4	2-1/4	16.37
33	.1130	1-1/4	2-1/4	16.05
34	.1110	1-1/4	2-1/4	16.05
35	.1100	1-1/4	2-1/4	15.50
36	.1065	1-1/4	2-1/4	14.99
37	.1040	1-1/4	2-1/4	14.99
38	.1015	1-1/4	2-1/4	14.99
39	.0995	1-1/4	2-1/4	14.72
40	.0980	1	2	14.21

Size	Decimal Equivalent	Flute Length	Overall Length	Price Each
41	.0960	1	2	14.21
42	.0935	1	2	13.70
43	.0890	1	2	13.70
44	.0860	1	2	13.70
45	.0820	7/8	1-3/4	13.15
46	.0810	7/8	1-3/4	13.15
47	.0785	7/8	1-3/4	12.58
48	.0760	7/8	1-3/4	12.58
49	.0730	7/8	1-3/4	12.58
50	.0700	7/8	1-3/4	12.58
51	.0670	3/4	1-1/2	11.86
52	.0635	3/4	1-1/2	11.86
53	.0595	3/4	1-1/2	11.86
54	.0550	3/4	1-1/2	12.08
55	.0520	3/4	1-1/2	12.08
56	.0465	3/4	1-1/2	12.08
57	.0430	3/4	1-1/2	12.08
58	.0420	3/4	1-1/2	12.08
59	.0410	3/4	1-1/2	12.08
60	.0400	3/4	1-1/2	12.08
61	.0390	5/8	1-1/2	13.01
62	.0380	5/8	1-1/2	13.01
63	.0370	5/8	1-1/2	13.01
64	.0360	5/8	1-1/2	13.01
65	.0350	5/8	1-1/2	13.01
66	.0330	5/16	1-1/4	13.82
67	.0320	5/16	1-1/4	13.82
68	.0310	5/16	1-1/4	13.82
69	.0292	5/16	1-1/4	13.82
70	.0280	5/16	1-1/4	13.82
71	.0260	5/16	1-1/4	13.82
72	.0250	5/16	1-1/4	13.82
73	.0240	1/4	1-1/4	16.20
74	.0225	1/4	1-1/4	16.20
75	.0210	1/4	1-1/4	16.20
76	.0200	1/4	1-1/4	16.20
77	.0180	1/4	1-1/4	17.10
78	.0160	1/4	1-1/4	17.10
79	.0145	1/4	1-1/4	17.10
80	.0135	1/4	1-1/4	17.10

Sets

Sizes	Pcs.	Description	Set No.	Price
1/8" to 1/4" by 64^{ths}	9	Standard Length	**C800SC**	233.50
1/16" to 1/4" by 64^{ths}	13	Standard Length	**C800SG**	287.41
1/16" to 1/2" by 32^{nds}	15	Standard Length	**C800SR**	828.46
1/16" to 1/2" by 64^{ths}	29	Standard Length	**C800SF**	1584.90

All sets are supplied in metal case



Solid Carbide Drills

Screw Machine Length

List No. **C600** – 118° Point

Solid Carbide Drills are designed for drilling abrasive materials when drilling accuracy must be maintained. They are also used in high temperature drilling applications. Solid Carbide Drills are used for drilling cast iron, aluminum, copper, plastics, bronze and other similar materials. Solid Carbide drills are NOT recommended for drilling steel.



Fractional Sizes

Size	Decimal Equivalent	Flute Length	Overall Length	Price Each
1/32	.0312	3/8	1-1/8	12.85
3/64	.0469	1/2	1-1/2	12.85
1/16	.0625	5/8	1-5/8	12.85
5/64	.0781	11/16	1-11/16	12.85
3/32	.0938	3/4	1-3/4	12.85
7/64	.1094	13/16	1-13/16	12.85
1/8	.1250	7/8	1-7/8	11.61
9/64	.1406	15/16	1-15/16	13.77
5/32	.1562	1	2-1/16	15.39
11/64	.1719	1-1/16	2-1/8	19.44
3/16	.1875	1-1/8	2-3/16	20.36
13/64	.2031	1-3/16	2-1/4	22.03
7/32	.2188	1-1/4	2-3/8	22.03
15/64	.2344	1-5/16	2-7/16	29.97
1/4	.2500	1-3/8	2-1/2	29.97
17/64	.2656	1-7/16	2-5/8	32.35
9/32	.2812	1-1/2	2-11/16	34.45
19/64	.2969	1-9/16	2-3/4	37.48

Size	Decimal Equivalent	Flute Length	Overall Length	Price Each
5/16	.3125	1-5/8	2-13/16	37.48
21/64	.3281	1-11/16	2-15/16	42.66
11/32	.3438	1-11/16	3	46.12
23/64	.3594	1-3/4	3-1/16	50.33
3/8	.3750	1-13/16	3-1/8	50.33
25/64	.3906	1-7/8	3-1/4	58.75
13/32	.4062	1-15/16	3-5/16	65.12
27/64	.4219	2	3-3/8	72.68
7/16	.4375	2-1/16	3-7/16	72.68
29/64	.4531	2-1/8	3-9/16	87.16
15/32	.4688	2-1/8	3-5/8	91.53
31/64	.4844	2-3/16	3-11/16	91.53
1/2	.5000	2-1/4	3-3/4	91.53
9/16	.5625	2-1/2	4	107.41
5/8	.6250	2-3/4	4-1/4	141.22
11/16	.6875	2-7/8	4-5/8	160.29
3/4	.7500	3-1/8	5	192.47

Wire Gauge Sizes

Size	Decimal Equivalent	Flute Length	Overall Length	Price Each
1	.2280	1-5/16	2-7/16	31.65
2	.2210	1-5/16	2-7/16	30.98
3	.2130	1-1/4	2-3/8	29.97
4	.2090	1-1/4	2-3/8	31.79
5	.2055	1-1/4	2-3/8	28.56
6	.2040	1-1/4	2-3/8	28.56
7	.2010	1-3/16	2-1/4	27.32
8	.1990	1-3/16	2-1/4	26.58
9	.1960	1-3/16	2-1/4	25.23
10	.1935	1-3/16	2-1/4	25.23
11	.1910	1-3/16	2-1/4	25.23
12	.1890	1-3/16	2-1/4	23.96
13	.1850	1-1/8	2-3/16	24.49
14	.1820	1-1/8	2-3/16	24.06
15	.1800	1-1/8	2-3/16	23.96
16	.1770	1-1/8	2-3/16	23.79
17	.1730	1-1/8	2-3/16	23.52
18	.1695	1-1/16	2-1/8	22.98
19	.1660	1-1/16	2-1/8	21.91
20	.1610	1-1/16	2-1/8	21.54
21	.1590	1-1/16	2-1/8	20.70
22	.1570	1	2-1/16	20.03
23	.1540	1	2-1/16	20.03
24	.1520	1	2-1/16	19.49
25	.1495	1	2-1/16	18.82
26	.1470	1	2-1/16	18.55
27	.1440	1	2-1/16	18.28
28	.1405	15/16	1-15/16	18.11
29	.1360	15/16	1-15/16	17.20
30	.1285	15/16	1-15/16	17.04

Size	Decimal Equivalent	Flute Length	Overall Length	Price Each
31	.1200	7/8	1-7/8	15.15
32	.1160	7/8	1-7/8	15.15
33	.1130	7/8	1-7/8	14.88
34	.1110	7/8	1-7/8	14.88
35	.1100	7/8	1-7/8	14.48
36	.1065	13/16	1-13/16	14.21
37	.1040	13/16	1-13/16	14.08
38	.1015	13/16	1-13/16	13.94
39	.0995	13/16	1-13/16	13.68
40	.0980	13/16	1-13/16	13.68
41	.0960	13/16	1-13/16	12.97
42	.0935	3/4	1-3/4	12.87
43	.0890	3/4	1-3/4	12.60
44	.0860	3/4	1-3/4	12.43
45	.0820	3/4	1-3/4	12.33
46	.0810	3/4	1-3/4	11.89
47	.0785	3/4	1-3/4	11.89
48	.0760	11/16	1-11/16	11.89
49	.0730	11/16	1-11/16	11.59
50	.0700	11/16	1-11/16	11.52
51	.0670	11/16	1-11/16	11.36
52	.0635	11/16	1-11/16	11.36
53	.0595	1/2	1-1/2	11.09
54	.0550	1/2	1-1/2	11.09
55	.0520	1/2	1-1/2	10.99
56	.0465	1/2	1-1/2	10.99
57	.0430	1/2	1-1/2	10.99
58	.0420	1/2	1-1/2	10.99
59	.0410	1/2	1-1/2	10.99
60	.0400	1/2	1-1/2	10.99

Solid Carbide Drills

Screw Machine Length

List No. **C600** – 118° Point



Letter Sizes

Size	Decimal Equivalent	Flute Length	Overall Length	Price Each
A	.2340	1-5/16	2-7/16	33.00
B	.2380	1-3/8	2-1/2	34.61
C	.2420	1-3/8	2-1/2	34.88
D	.2460	1-3/8	2-1/2	34.88
E	.2500	1-3/8	2-1/2	29.97
F	.2570	1-7/16	2-5/8	40.72
G	.2610	1-7/16	2-5/8	42.74
H	.2660	1-1/2	2-11/16	43.81
I	.2720	1-1/2	2-11/16	43.81
J	.2770	1-1/2	2-11/16	44.52
K	.2810	1-1/2	2-11/16	49.39
L	.2900	1-9/16	2-3/4	51.11
M	.2950	1-9/16	2-3/4	52.21

Size	Decimal Equivalent	Flute Length	Overall Length	Price Each
N	.3020	1-5/8	2-13/16	53.02
O	.3160	1-11/16	2-15/16	54.63
P	.3230	1-11/16	2-15/16	55.17
Q	.3320	1-11/16	3	57.22
R	.3390	1-11/16	3	58.83
S	.3480	1-3/4	3-1/16	61.92
T	.3580	1-3/4	3-1/16	68.17
U	.3680	1-13/16	3-1/8	71.13
V	.3770	1-7/8	3-1/4	72.21
W	.3860	1-15/16	3-1/4	73.99
X	.3970	1-15/16	3-5/16	80.47
Y	.4040	1-15/16	3-5/16	88.44
Z	.4130	2	3-3/8	90.89

Straight Flute

List No. **C801** – 140° Split Point

Designed for drilling hardened, treated and abrasive materials.
These drills penetrate most work pieces easily with minimal deflection.



Fractional Sizes

Size	Decimal Equivalent	Flute Length	Overall Length	Price Each
3/64	.0469	1/2	1-1/2	9.36
1/16	.0625	5/8	1-5/8	10.80
5/64	.0781	11/16	1-11/16	10.80
3/32	.0938	3/4	1-3/4	11.56
7/64	.1094	13/16	1-13/16	12.06
1/8	.1250	7/8	1-7/8	12.38
9/64	.1406	15/16	1-15/16	14.30
5/32	.1562	1	2-1/16	15.40
11/64	.1719	1-1/16	2-1/8	19.36
3/16	.1875	1-1/8	2-3/16	20.12
13/64	.2031	1-3/16	2-1/4	21.76
7/32	.2188	1-1/4	2-3/8	21.76
15/64	.2344	1-5/16	2-7/16	29.48
1/4	.2500	1-3/8	2-1/2	24.86
17/64	.2656	1-7/16	2-5/8	35.20

Size	Decimal Equivalent	Flute Length	Overall Length	Price Each
9/32	.2812	1-1/2	2-11/16	37.84
19/64	.2969	1-9/16	2-3/4	41.90
5/16	.3125	1-5/8	2-13/16	37.84
21/64	.3281	1-11/16	2-15/16	46.30
11/32	.3438	1-11/16	3	51.46
23/64	.3594	1-3/4	3-1/16	57.60
3/8	.3750	1-13/16	3-1/8	47.26
25/64	.3906	1-7/8	3-1/4	65.98
13/32	.4062	1-15/16	3-5/16	72.88
27/64	.4219	2	3-3/8	80.26
7/16	.4375	2-1/16	3-7/16	75.54
29/64	.4531	2-1/8	3-9/16	97.08
15/32	.4688	2-1/8	3-5/8	101.88
31/64	.4844	2-3/16	3-11/16	101.88
1/2	.5000	2-1/4	3-3/4	92.70

Letter Sizes

Size	Decimal Equivalent	Flute Length	Overall Length	Price Each
A	.2340	1-5/16	2-7/16	27.55
B	.2380	1-3/8	2-1/2	29.46
C	.2420	1-3/8	2-1/2	29.57
D	.2461	1-3/8	2-1/2	29.90
E	.2500	1-3/8	2-1/2	24.86
F	.2570	1-7/16	2-5/8	38.86
G	.2610	1-7/16	2-5/8	39.42
H	.2660	1-1/2	2-11/16	41.89
I	.2720	1-1/2	2-11/16	41.89
J	.2770	1-1/2	2-11/16	41.89
K	.2810	1-1/2	2-11/16	41.89
L	.2900	1-9/16	2-3/4	43.34
M	.2950	1-9/16	2-3/4	43.34

Size	Decimal Equivalent	Flute Length	Overall Length	Price Each
N	.3020	1-5/8	2-13/16	43.34
O	.3160	1-11/16	2-15/16	47.82
P	.3230	1-11/16	2-15/16	47.82
Q	.3320	1-11/16	3	49.28
R	.3390	1-11/16	3	52.30
S	.3480	1-3/4	3-1/16	54.10
T	.3580	1-3/4	3-1/16	57.57
U	.3680	1-3/4	3-1/16	59.81
V	.3770	1-7/8	3-1/4	64.29
W	.3860	1-7/8	3-1/4	65.74
X	.3970	1-15/16	3-5/16	77.28
Y	.4040	1-15/16	3-5/16	77.50
Z	.4130	2	3-3/8	78.40

Continued on Next Page ▶

Solid Carbide Drills

Straight Flute ▶ *Continued*

List No. **C801** – 140° Split Point

Designed for drilling hardened, treated and abrasive materials.
These drills penetrate most work pieces easily with minimal deflection.



Wire Gauge Sizes

Size	Decimal Equivalent	Flute Length	Overall Length	Price Each
1	.2280	1-5/16	2-7/16	24.42
2	.2210	1-5/16	2-7/16	24.08
3	.2130	1-1/4	2-3/8	23.07
4	.2090	1-1/4	2-3/8	22.62
5	.2055	1-1/4	2-3/8	21.50
6	.2040	1-1/4	2-3/8	21.28
7	.2010	1-3/16	2-1/4	20.94
8	.1990	1-3/16	2-1/4	21.73
9	.1960	1-3/16	2-1/4	21.28
10	.1935	1-3/16	2-1/4	21.28
11	.1910	1-3/16	2-1/4	19.49
12	.1890	1-3/16	2-1/4	19.15
13	.1850	1-1/8	2-3/16	18.70
14	.1820	1-1/8	2-3/16	18.59
15	.1800	1-1/8	2-3/16	18.37
16	.1770	1-1/8	2-3/16	18.14
17	.1730	1-1/8	2-3/16	17.92
18	.1695	1-1/16	2-1/8	16.91
19	.1660	1-1/16	2-1/8	16.91
20	.1610	1-1/16	2-1/8	16.80
21	.1590	1-1/16	2-1/8	16.58
22	.1570	1-1/16	2-1/8	16.35
23	.1540	1	2-1/16	15.57
24	.1520	1	2-1/16	15.01
25	.1495	1	2-1/16	15.01
26	.1470	1	2-1/16	15.01
27	.1440	1	2-1/16	14.78
28	.1405	15/16	1-15/16	14.78
29	.1360	15/16	1-15/16	14.11
30	.1285	15/16	1-15/16	12.99

Size	Decimal Equivalent	Flute Length	Overall Length	Price Each
31	.1200	7/8	1-7/8	14.45
32	.1160	7/8	1-7/8	14.45
33	.1130	7/8	1-7/8	14.45
34	.1110	7/8	1-7/8	14.45
35	.1100	7/8	1-7/8	14.00
36	.1065	13/16	1-13/16	14.00
37	.1040	13/16	1-13/16	14.56
38	.1015	13/16	1-13/16	14.22
39	.0995	13/16	1-13/16	14.22
40	.0980	13/16	1-13/16	13.33
41	.0960	13/16	1-13/16	13.33
42	.0935	3/4	1-3/4	12.88
43	.0890	3/4	1-3/4	12.88
44	.0860	3/4	1-3/4	12.88
45	.0820	3/4	1-3/4	12.21
46	.0810	3/4	1-3/4	12.21
47	.0785	3/4	1-3/4	12.21
48	.0760	11/16	1-11/16	12.21
49	.0730	11/16	1-11/16	11.76
50	.0700	11/16	1-11/16	11.76
51	.0670	11/16	1-11/16	11.76
52	.0635	11/16	1-11/16	11.76
53	.0595	1/2	1-1/2	12.21
54	.0550	1/2	1-1/2	12.21
55	.0520	1/2	1-1/2	12.21
56	.0465	1/2	1-1/2	12.21
57	.0430	1/2	1-1/2	11.42
58	.0420	1/2	1-1/2	11.42
59	.0410	1/2	1-1/2	11.42
60	.0400	1/2	1-1/2	11.42

Metric Sizes

Size	Decimal Equivalent	Flute Length	Overall Length	Price Each
1.50	.0591	13	38	10.43
2.00	.0787	19	44	11.10
2.50	.0984	21	46	12.53
3.00	.1181	22	48	14.48
3.50	.1378	24	49	13.88
4.00	.1575	27	54	16.73
4.50	.1772	29	56	18.53
5.00	.1968	30	57	20.85
5.50	.2165	32	60	24.15
6.00	.2362	33	62	25.50
6.50	.2559	35	64	33.45

Size	Decimal Equivalent	Flute Length	Overall Length	Price Each
7.00	.2756	38	68	35.10
7.50	.2953	40	70	36.83
8.00	.3150	41	71	38.18
8.50	.3346	43	76	45.45
9.00	.3543	44	78	49.73
9.50	.3740	46	79	55.20
10.00	.3937	48	83	60.98
10.50	.4134	51	86	74.03
11.00	.4331	52	87	76.28
11.50	.4528	54	90	80.33
12.00	.4724	54	92	84.30

Spade Drills

List No. **C802** – 118° Point

Designed for thin sheet metal and shallow hole drilling.



Size	Decimal Equivalent	Flute Length	Overall Length	Price Each
1/32	.0312	3/16	1-1/2	19.20
3/64	.0469	7/32	1-1/2	22.08
55	.0520	7/32	1-1/2	22.05
1/16	.0625	5/16	1-1/2	9.64
5/64	.0781	5/16	1-1/2	10.90
3/32	.0938	3/8	1-1/2	9.64
7/64	.1094	7/16	1-1/2	13.28
1/8	.1250	7/16	1-1/2	8.26
9/64	.1406	1/2	2	15.74
5/32	.1562	15/32	2	15.30
11/64	.1719	9/16	2	21.30

Size	Decimal Equivalent	Flute Length	Overall Length	Price Each
3/16	.1875	9/16	2	15.30
7/32	.2188	19/32	2	23.94
1/4	.2500	11/16	2	15.30
9/32	.2812	3/4	2-1/2	20.46
5/16	.3125	7/8	2-1/2	20.46
11/32	.3438	15/16	2-1/2	25.06
3/8	.3750	1	2-1/2	25.06
13/32	.4062	1	2-1/2	34.88
7/16	.4375	1-1/16	2-1/2	34.88
15/32	.4688	1-3/32	2-1/2	37.40
1/2	.5000	1-1/8	3	38.47

3-Flute Solid Carbide Drills

Jobber Length - 150° Point



List No. **C803**

- 150º point for better penetration in heavy-duty applications.
- Solid carbide drills allow for higher feed rates than H.S. & Cobalt.
- 3-Flute design for smoother finish.

Solid Carbide

MADE IN USA

MICHIGAN DRILL & CUTTING TOOLS

Fractional Size

Cutter Diameter	Flute Length	Overall Length	Price Each
1/16	3/4	1-1/2	19.55
5/64	7/8	1-3/4	20.65
3/32	1	2	23.40
7/64	1-1/4	2-1/4	25.69
1/8	1-1/4	2-1/4	26.42
9/64	1-3/8	2-1/2	31.67
5/32	1-3/8	2-1/2	33.29
11/64	1-5/8	2-3/4	39.01
3/16	1-5/8	2-3/4	39.01
13/64	1-3/4	3	47.53
7/32	1-3/4	3	48.46
15/64	2	3-1/4	57.83
1/4	2	3-1/4	57.16
17/64	2-1/8	3-1/2	61.48
9/32	2-1/8	3-1/2	65.54
19/64	2-3/8	3-3/4	72.76

Cutter Diameter	Flute Length	Overall Length	Price Each
5/16	2-3/8	3-3/4	76.62
21/64	2-1/2	4	85.14
11/32	2-1/2	4	94.05
23/64	2-3/4	4-1/4	102.40
3/8	2-3/4	4-1/4	109.48
25/64	2-7/8	4-1/2	126.64
13/32	2-7/8	4-1/2	140.85
27/64	2-7/8	4-1/2	153.96
7/16	2-7/8	4-1/2	166.81
29/64	3	4-3/4	181.05
15/32	3	4-3/4	194.79
31/64	3	4-3/4	200.77
1/2	3	4-3/4	207.38
9/16	3-1/4	5	381.64
5/8	4-1/4	6	447.33
3/4	4-1/4	6	587.98

Letter Size

Cutter Diameter	Flute Length	Overall Length	Price Each
A	2	3-1/4	72.82
B	2	3-1/4	74.94
C	2	3-1/4	75.37
D	2	3-1/4	77.34
E	2	3-1/4	57.16
F	2	3-1/4	81.81
G	2-1/8	3-1/2	84.77
H	2-1/8	3-1/2	85.35
I	2-1/8	3-1/2	86.80
J	2-1/8	3-1/2	89.15
K	2-1/8	3-1/2	90.28
L	2-1/8	3-1/2	93.93
M	2-3/8	3-3/4	97.41

Cutter Diameter	Flute Length	Overall Length	Price Each
N	2-3/8	3-3/4	103.18
O	2-3/8	3-3/4	109.21
P	2-3/8	3-3/4	112.93
Q	2-1/2	4	120.29
R	2-1/2	4	123.74
S	2-1/2	4	131.95
T	2-3/4	4-1/4	136.68
U	2-3/4	4-1/4	143.55
V	2-3/4	4-1/4	155.15
W	2-7/8	4-1/2	163.01
X	2-7/8	4-1/2	177.83
Y	2-7/8	4-1/2	183.98
Z	2-7/8	4-1/2	228.23

Wire Size

Cutter Diameter	Flute Length	Overall Length	Price Each
1	1-3/4	3	66.99
2	1-3/4	3	59.91
3	1-3/4	3	57.51
4	1-3/4	3	54.87
5	1-3/4	3	54.87
6	1-3/4	3	54.14
7	1-3/4	3	52.26
8	1-3/4	3	52.26
9	1-3/4	3	52.26
10	1-5/8	2-3/4	49.10
11	1-5/8	2-3/4	48.31
12	1-5/8	2-3/4	47.53
13	1-5/8	2-3/4	46.40
14	1-5/8	2-3/4	45.88
15	1-5/8	2-3/4	45.88
16	1-5/8	2-3/4	44.83
17	1-5/8	2-3/4	43.59
18	1-5/8	2-3/4	41.50
19	1-5/8	2-3/4	41.50
20	1-3/8	2-1/2	39.85

Cutter Diameter	Flute Length	Overall Length	Price Each
21	1-3/8	2-1/2	39.85
22	1-3/8	2-1/2	39.06
23	1-3/8	2-1/2	37.50
24	1-3/8	2-1/2	36.74
25	1-3/8	2-1/2	36.71
26	1-3/8	2-1/2	36.71
27	1-3/8	2-1/2	34.28
28	1-3/8	2-1/2	34.28
29	1-3/8	2-1/2	34.28
30	1-1/4	2-1/4	31.64
31	1-1/4	2-1/4	30.36
32	1-1/4	2-1/4	30.10
33	1-1/4	2-1/4	29.58
34	1-1/4	2-1/4	29.58
35	1-1/4	2-1/4	28.51
36	1-1/4	2-1/4	28.25
37	1-1/4	2-1/4	28.25
38	1-1/4	2-1/4	28.25
39	1-1/4	2-1/4	27.20
40	1	2	26.68

Cutter Diameter	Flute Length	Overall Length	Price Each
41	1	2	26.16
42	1	2	25.84
43	1	2	25.32
44	1	2	25.32
45	7/8	1-3/4	24.27
46	7/8	1-3/4	23.75
47	7/8	1-3/4	23.75
48	7/8	1-3/4	23.75
49	7/8	1-3/4	23.03
50	7/8	1-3/4	22.62
51	3/4	1-1/2	22.42
52	3/4	1-1/2	22.42
53	3/4	1-1/2	22.42
54	3/4	1-1/2	22.42
55	3/4	1-1/2	22.50
56	3/4	1-1/2	23.03
57	3/4	1-1/2	24.07
58	3/4	1-1/2	24.07
59	3/4	1-1/2	24.07
60	3/4	1-1/2	24.07

Bonding Bits

RAILWORX®

High Speed Steel & Cobalt

Recommended for tough alloyed rails

MADE IN USA · MICHIGAN DRILL & CUTTING TOOLS

High Speed · Cobalt

Cobalt/Nitride Coated – 145° Notched Point

List No. **366** – Cobalt, Flatted Shank
List No. **366R** – Cobalt, Round Shank
List No. **366N** – Nitride Coated Cobalt, Flatted Shank
List No. **366RN** – Nitride Coated Cobalt, Round Shank



Diameter	Flute Length	Overall Length	Price Each			
			Cobalt		N. Coated Cobalt	
			Flatted	Round	Flatted **366N**	Round **366RN**
3/8	1-3/4	3	15.59	13.76	17.15	14.63

H.S. Rail Web Type – 135° Split Point

List No. **363** – Flatted Shank
List No. **363R** – Round Shank



Diameter	Flute Length	Overall Length	Price Each	
			Flatted **363**	Round **363R**
3/8	1-1/2	3	7.61	6.25

H.S. Rail Head Type – 118° Point

List No. **364** – Flatted Shank
List No. **364R** – Round Shank



Diameter	Flute Length	Overall Length	Price Each	
			Flatted **364**	Round **364R**
3/8	1"	3	7.61	6.25

H.S. Universal Type – 118° Point

List No. **365** – Flatted Shank
List No. **365R** – Round Shank



Diameter	Flute Length	Overall Length	Price Each	
			Flatted **365**	Round **365R**
3/8	1-3/4	3	7.61	6.25

Tie Boring Bits

High Speed Steel

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Single Flute

List No. **380F** – 90° Point, Flatted Shank
List No. **380R** – 90° Point, Round Shank

Diameter	Flute Length	Overall Length	Price Each	
			Flatted **380F**	Round **380R**
9/16	6-3/8	9-3/8	39.80	36.83
5/8	6-3/8	9-3/8	49.77	46.79



The single flute design can be used successfully in hand-held drill motor applications with less operator fatigue. The tool acts in a screw-like movement, feeding itself into the material while removing maximum chip volume.

Two Flute

List No. **370F** – 70° Point, Flatted Shank
List No. **370R** – 70° Point, Round Shank
List No. **390F** – 90° Point, Flatted Shank
List No. **390R** – 90° Point, Round Shank
List No. **390SS** – 90° Point, Set Screw



These tools are specifically designed for drilling spike holes in wooden ties.They combine ease of penetration with rapid chip removal in deep hole, hardwood drilling.

Diameter	Flute Length	Overall Length	Price Each				
			70° Point		90° Point		
			Flatted **370F**	Round **370R**	Flatted **390F**	Round **390R**	Set Screw **390SS**
9/16	6-3/8	9-3/8	38.93	36.83	41.26	38.49	41.27
5/8	6-3/8	9-3/8	51.82	48.51	51.82	48.51	—
3/4	6-3/8	9-3/8	—	—	74.21	72.14	—

Track Bits

High Speed Steel & Nitride

RAILWORX

High Speed

MADE IN USA

MICHIGAN DRILL & CUTTING TOOLS

The flat beaded track bit is the leading tool for rail drilling in America, offered in single end or in cost savings double end style. Both are standard, off-the-shelf items for immediate delivery.

Nitride Coating creates a surface super-hardness which results in increased tool life when drilling alloyed hard rail. Tool life is reported to be 300% or more depending on rail material and site cutting conditions.

Track Bit Tip Protector

For sizes over 1"

Tool No. **330** Price: **27.20**



Single End

List No. **332** – High Speed Steel

List No. **332N** – Nitride Coated



Diameter	Overall Length	Price Each High Speed 332	Price Each Nitride Coated 332N
5/8	6-1/4	38.38	46.26
11/16	6-1/4	38.38	46.26
13/16	6-1/4	39.33	46.26
1	6-1/4	46.14	52.94
1-1/16	6-1/4	47.30	55.36
1-1/8	6-1/4	48.43	56.56
1-3/16	6-1/4	52.69	59.49

Diameter	Overall Length	Price Each High Speed 332	Price Each Nitride Coated 332N
1-1/4	6-1/4	53.58	62.82
1-5/16	6-1/4	56.13	65.63
1-3/8	6-1/4	56.83	66.30
1-7/16	6-1/4	65.20	73.94
1-1/2	6-1/4	63.81	74.34
1-9/16	6-1/4	71.84	83.18

Double End

List No. **333** – High Speed Steel

List No. **333N** – Nitride Coated



Diameter	Overall Length	Price Each High Speed 333	Price Each Nitride Coated 333N
13/16	6-1/4	51.07	57.26
15/16	6-1/4	53.94	61.18
1	6-1/4	56.29	67.74
1-1/16	6-1/4	58.45	69.02
1-1/8	6-1/4	58.94	70.22
1-3/16	6-1/4	64.45	73.87

Diameter	Overall Length	Price Each High Speed 333	Price Each Nitride Coated 333N
1-1/4	6-1/4	65.42	75.39
1-5/16	6-1/4	68.54	78.72
1-3/8	6-1/4	71.65	82.11
1-7/16	6-1/4	77.34	88.03
1-1/2	6-1/4	80.77	92.42

Rail Drills

List No. **334** – Cobalt Heavy Duty Slow Spiral Oxide Finish 130° Point



Diameter	Flute	Overall Length	Price Each
1/16	9/16	1-7/8	2.90
50	3/4	2	2.90
40	1-7/8	6	6.50
30	3/4	2-3/4	3.70
27	1-1/4	3	3.90
26	1-1/4	3	3.90
3/16	1-5/8	3-1/2	4.24
12	1-1/2	3-1/2	6.40

Diameter	Flute	Overall Length	Price Each
10	2	3-1/2	6.70
13/64	1-1/2	3-5/8	6.90
1/4	1-1/4	4	6.22
1/4	2	6	9.40
19/64	2	4-3/8	10.70
27/64	2-1/2	5-1/2	18.92
29/64	2-1/2	5-3/4	24.00
15/32	2-1/8	5-3/4	25.50

Dual Auger (Stud) Bits

Premium Tool Steel

List No. **618** – 5" Flute Length, 7-7/8" Overall Length

1/4" Hex Shank
Fast Screw Point
Self-Feeding Point



MDX SUPERIOR IMPORT



Dual Auger Stud Bits are designed for use in a hand bit brace or a 3/8" or larger electric power drill and are used for fast and accurate boring in soft or hard woods. Single flute design with single cutter, an outlining spur, and a self-feeding fast pitch screw point.

Size	Price Each
1/4	8.89
5/16	8.89
3/8	8.89
7/16	9.45
1/2	9.45
9/16	11.79

Size	Price Each
5/8	11.79
11/16	13.76
3/4	13.76
13/16	15.82
7/8	15.82
15/16	19.61

Size	Price Each
1	19.61
1-1/8	21.97
1-1/4	28.71
1-3/8	32.97
1-1/2	35.85

SET Sizes
1/4, 3/8, 1/2, 5/8, 3/4, 1
Description
6pc Set
Set No. 618S
Price: **59.00**

Combined Drills & Countersinks



High Speed Steel, TiN Coated, Cobalt, & Solid Carbide

Combined drills and countersinks are used when locating an accurate center hole is required to assure the precision and quality of subsequent machining operations.

High Speed | Cobalt | Solid Carbide | MADE IN USA | MICHIGAN DRILL & CUTTING TOOLS

Plain Type – 118° Point

List No. **585U** – H.S. 60° Countersink Angle
List No. **585UTC** – TiN Coated 60° Countersink Angle
List No. **585CU** – Cobalt 60° Countersink Angle
List No. **585SC** – Solid Carbide 60° Countersink Angle
List No. **582SC** – Solid Carbide 82° Countersink Angle
List No. **590SC** – Solid Carbide 90° Countersink Angle

		Countersink Angle			Price Each					
					60°				82°	90°
Size	Body Diameter	Drill Diameter and Length	Overall Length	Pkg.* Qty	High Speed **585U**	TiN Coated **585UTC**	Cobalt **585CU**	Solid Carbide **585SC**	Solid Carbide **582SC**	Solid Carbide **590SC**
000	1/8	.020	1-1/4	12	9.47	53.28	—	—	—	—
00	1/8	.025	1-1/4	12	9.47	13.28	—	22.06	23.16	23.16
0	1/8	1/32	1-1/4	12	9.47	13.28	—	22.06	23.16	—
1	1/8	3/64	1-1/4	12	6.60	10.41	15.94	18.90	19.85	19.85
2	3/16	5/64	1-7/8	12	6.92	10.73	16.20	29.60	31.08	31.08
3	1/4	7/64	2	12	7.19	14.84	17.00	35.28	37.04	37.04
4	5/16	1/8	2-1/8	12	7.41	15.06	17.44	48.42	50.84	50.84
4-1/2	3/8	9/64	2-1/2	6	10.22	17.87	24.20	—	—	—
5	7/16	3/16	2-3/4	6	11.74	21.40	32.54	73.44	77.11	77.11
6	1/2	7/32	3	6	17.69	27.35	43.64	106.24	111.55	111.55
7	5/8	1/4	3-1/4	1	25.58	41.96	64.40	123.12	—	—
8	3/4	5/16	3-1/2	1	35.30	62.39	80.50	174.96	—	—
9	7/8	11/32	3-5/8	1	66.84	98.97	—	—	—	—
10	1	3/8	3-3/4	1	87.73	119.86	—	—	—	—

*1 piece per package for all solid carbide sizes.

List No. **585** – H.S. 60° Angle
List No. **585LH** – H.S. Left Hand 60° Angle
List No. **585TC** – TiN Coated 60° Angle
List No. **585C** – Cobalt 60° Angle
List No. **582** – H.S. 82° Angle
List No. **590** – H.S. 90° Angle

MDX® SUPERIOR IMPORT

		Countersink Angle			Price Each					
					60°				82°	90°
Size	Body Diameter	Drill Diameter and Length	Overall Length	Pkg. Qty	High Speed **585**	H.S. Left Hand **585LH**	TiN Coated **585TC**	Cobalt **585C**	High Speed **582**	High Speed **590**
000	1/8	.020	1-1/4	12	4.42	—	8.23	—	—	—
00	1/8	.025	1-1/4	12	4.42	—	8.23	—	—	—
0	1/8	1/32	1-1/4	12	4.42	—	8.23	—	—	—
1	1/8	3/64	1-1/4	12	3.70	4.65	7.51	13.50	9.18	9.18
2	3/16	5/64	1-7/8	12	3.70	4.65	7.51	13.77	9.41	9.41
3	1/4	7/64	2	12	3.74	4.70	11.39	14.44	9.72	9.72
4	5/16	1/8	2-1/8	12	3.85	4.83	11.50	14.81	10.13	10.13
4-1/2	3/8	9/64	2-1/2	6	5.08	—	12.73	22.46	—	—
5	7/16	3/16	2-3/4	6	5.74	7.18	15.40	27.57	15.44	15.44
6	1/2	7/32	3	6	8.62	10.77	18.28	37.08	23.31	23.31
7	5/8	1/4	3-1/4	1	12.50	15.65	28.78	47.93	31.95	31.95
8	3/4	5/16	3-1/2	1	17.40	21.77	44.49	68.40	45.23	45.23
9	7/8	11/32	3-5/8	1	32.67	—	64.80	—	—	—
10	1	3/8	3-3/4	1	42.70	—	74.83	—	—	—

Sets

Sizes	Pcs.	Description	Set No.	Price
No. 1 – 5	5	H.S. Made in USA – 60°	**585UP5**	46.27
No. 1 – 5	5	H.S. Premium Import – 60°	**585P5**	27.14
No. 1 – 8	8	H.S. Made in USA – 60°	**585UP8**	118.43
No. 1 – 8	8	H.S. Premium Import – 60°	**585P8**	56.55
No. 1 – 5	5	TiN Coated, Made in USA – 60°	**585PTIN**	45.05
No. 1 – 5	5	Cobalt, Made in USA – 60°	**585CUP**	105.53
No. 1 – 5	5	Cobalt, Premium Import – 60°	**585CP**	90.50
No. 1 – 5	5	Solid Carbide, Made in USA – 60°	**585SC5**	212.05
No. 1 – 5	5	Solid Carbide, Made in USA – 82°	**582SC5**	222.23
No. 1 – 5	5	Solid Carbide, Made in USA – 90°	**590SC5**	222.23



Combined Drills & Countersinks

High Speed Steel & Solid Carbide

Combined drills and countersinks are used when locating an accurate center hole is required to assure the precision and quality of subsequent machining operations.

Long Series

Long Combined Drills and Countersinks are used for producing center holes where the extra length is required to access difficult to reach areas.



List No. **589U** – High Speed Steel, 60° Countersink Angle
List No. **589SC** – Solid Carbide, 60° Countersink Angle

Size	Body Diameter	Drill Diameter	Overall Length	Price Each High Speed **589U**	Price Each Solid Carbide **589SC**
00	1/8	.025	5	—	36.20
1	1/8	3/64	3	11.70	—
1	1/8	3/64	4	14.96	—
1	1/8	3/64	5	20.80	43.73
1	1/8	3/64	6	27.25	—
2	3/16	5/64	4	16.40	—
2	3/16	5/64	5	21.10	46.24
2	3/16	5/64	6	27.35	—
3	1/4	7/64	4	17.30	—
3	1/4	7/64	5	22.75	48.02
3	1/4	7/64	6	27.60	—
4	5/16	1/8	4	19.20	—
4	5/16	1/8	5	24.60	50.50

Size	Body Diameter	Drill Diameter	Overall Length	Price Each High Speed **589U**
4	5/16	1/8	6	28.30
4-1/2	3/8	9/64	4	21.55
4-1/2	3/8	9/64	5	25.50
4-1/2	3/8	9/64	6	37.70
5	7/16	3/16	4	25.20
5	7/16	3/16	5	29.20
5	7/16	3/16	6	32.80
6	1/2	7/32	5	31.60
6	1/2	7/32	6	39.90
6	1/2	7/32	7	49.25
7	5/8	1/4	6	70.50
8	3/4	5/16	6	76.00

List No. **589** – 60° Countersink Angle, Premium Import

Size	Body Diameter	Drill Diameter	Overall Length	Price Each
1	1/8	3/64	3	9.00
1	1/8	3/64	4	10.30
1	1/8	3/64	5	15.50
1	1/8	3/64	6	20.50
2	3/16	5/64	3	11.60
2	3/16	5/64	4	12.30
2	3/16	5/64	5	15.83
2	3/16	5/64	6	20.52
3	1/4	7/64	4	12.98
3	1/4	7/64	5	17.07
3	1/4	7/64	6	20.70
4	5/16	1/8	4	14.40
4	5/16	1/8	5	18.45
4	5/16	1/8	6	21.23

Size	Body Diameter	Drill Diameter	Overall Length	Price Each
4-1/2	3/8	9/64	4	16.17
4-1/2	3/8	9/64	5	19.13
4-1/2	3/8	9/64	6	28.28
5	7/16	3/16	4	18.90
5	7/16	3/16	5	21.90
5	7/16	3/16	6	24.60
6	1/2	7/32	4	22.80
6	1/2	7/32	5	23.70
6	1/2	7/32	6	29.90
6	1/2	7/32	7	36.84
7	5/8	1/4	5	51.00
7	5/8	1/4	6	52.88
8	3/4	5/16	6	57.00

Bell Type

Bell Type reduces the risk of damaging the 60° center hole.



List No. **587** – 60° Countersink Angle

Size	Body Dia.	Drill Dia. and Length	Overall Length	Bell Dia.	Pkg. Qty.	Price Each
11	1/8	3/64	1-1/4	.1000	12	5.61
12	3/16	1/16	1-7/8	.1500	12	5.61
13	1/4	3/32	2	.2000	12	5.87
14	5/16	7/64	2-1/8	.2500	12	5.87
15	7/16	5/32	2-3/4	.3500	12	9.57

Size	Body Dia.	Drill Dia. and Length	Overall Length	Bell Dia.	Pkg. Qty.	Price Each
16	1/2	3/16	3	.4000	6	12.87
17	5/8	7/32	3-1/4	.5000	1	18.15
18	3/4	1/4	3-1/2	.6000	1	25.08
20	1	3/8	3-3/4	.8000	1	48.18

Sets

Sizes	Pcs.	Description	Set No.	Price
No. 11 – 15	5	High Speed Steel, Bell Type	**587B**	28.04



All sets are supplied in wood block

Combined Drills & Countersinks

High Speed Steel

Metric Plain Type



List No. **585M** – 60° Countersink Angle

Size	Body Diameter	Drill Diameter and Length	Overall Length	Price Each
.80	.1240	.0315	1	9.00
1.00	.1240	.0394	1-1/4	9.00
1.25	.1240	.0492	1-1/4	9.00
1.60	.1575	.0630	1-5/16	8.55
2.00	.1969	.0787	1-9/16	9.54
2.50	.2480	.0984	1-3/4	10.80
3.15	.3150	.1240	2	13.23
4.00	.3937	.1575	2-1/4	22.59
5.00	.4921	.1969	2-1/2	31.23
6.30	.6299	.2480	2-3/4	45.72
8.00	.7874	.3150	3-1/8	71.10
10.00	.9843	.3937	4	82.75

Carbide Tipped



These drills are used for center drilling hardened high speed steel in the range up to 65R.

List No. **CT870** – 60° Countersink Angle, 120° Point

Size	Body Diameter	Drill Diameter	Overall Length	Price Each
4-1	5/16	3/32	2-1/8	66.02
4-2	5/16	1/8	2-1/8	66.02
6-1	1/2	7/32	3	84.33
6-2	1/2	9/32	3	84.33

Spotting & Centering Drills

High Speed Steel

These drills are used for starting and centering screw machine operations. Their short flute and overall length increase rigidity while minimizing runout. To provide greater rigidity, these drills are made with short overall and flute lengths.

Spotting & Centering



List No. **302** – Right Hand, 118° Point
List No. **302LH** – Left Hand, 118° Point

Size	Decimal Equivalent	Flute Length	Overall Length	Price Each Right Hand **302**	Price Each Left Hand **302LH**
3/8	.3750	1	2	8.82	13.06
7/16	.4375	1	2	17.28	17.74
1/2	.5000	1	2	15.48	19.04
9/16	.5625	1-1/8	2-1/4	24.57	—
5/8	.6250	1-1/8	2-1/4	24.57	29.70
3/4	.7500	1-1/8	2-1/4	35.01	41.40
7/8	.8750	1-1/4	2-1/2	50.31	58.50
1	1.0000	1-1/4	2-1/2	56.52	62.78
1-1/4	1.2500	2	4	112.50	138.40
1-1/2	1.5000	2-1/2	5	175.50	189.00
1-3/4	1.7500	2-3/4	5-1/2	265.50	289.80
2	2.0000	3-3/4	6	315.00	—

Center Drills



List No. **580** – 118° Point

Size	Decimal Equivalent	Flute Length	Overall Length	Price Each
#56	.0465	3/8	1-3/16	1.78
#54	.0550	9/16	1-1/4	1.78
#53	.0595	9/16	1-1/4	1.78
1/16*	.0625	3/8	1-3/16	1.78
5/64	.0781	3/4	1-1/4	1.78
3/32	.0938	3/4	1-1/4	1.95
#40	.0980	3/4	1-1/4	1.95
7/64	.1094	3/4	1-1/4	1.95
1/8	.1250	3/4	1-1/4	1.65
#30	.1285	3/4	1-1/4	1.72
#28	.1405	1	1-1/2	2.57
9/64	.1406	3/4	1-1/4	2.57
5/32	.1562	1	1-1/2	2.87
#21	.1590	1	1-1/2	2.87
#20	.1610	1	1-1/2	2.87
11/64	.1719	1	1-1/2	2.87
3/16	.1875	1	1-1/2	2.87
13/64	.2031	1	1-1/2	2.87
#5	.2055	1	1-1/2	2.87
7/32	.2188	1	1-1/2	2.87
15/64	.2344	1	1-1/2	3.50
1/4	.2500	1	1-1/2	3.20
9/32	.2812	1	1-1/2	4.46
5/16	.3125	1	1-1/2	5.28

**This size is available in Cobalt, Price Each $4.86*

Huot® Metal Cases

MADE IN USA



Jobber Length Indexes

Description		Pieces Per Set	Case No.	Price Each
Fractional	1/16 — 1/2 by 64ths	29	**CZ29**	12.30
Fractional	Import 1/16 — 1/2 by 64ths	29	**XCZ29**	5.95
Fractional	1/16 — 1/4 by 64ths	13	**CZ13**	6.49
Fractional	1/16 — 3/8 by 64ths	21	**CZ21**	10.25
Fractional	1/64 — 1/4 by 64ths	16	**CZ16**	18.50
Fractional	1/16 — 1/2 by 32nds	15	**CZ15**	9.25
Fractional	1/16 — 1/4 by 64ths and 9/32 1/2 by 32nds	21	**CZ21A**	12.00
Letter	A — Z	26	**CZ26**	12.30
Wire Gauge	1 — 60	60	**CZ60**	10.60
Wire Gauge	1 — 80	80	**CZ80**	36.45
Wire Gauge	61 — 80	20	**CZ20**	7.15
Metric	1.0mm — 5.9 mm by .1mm	50	**CZM50**	13.90
Metric	1.0mm — 6.0 mm by .5mm	11	**CZM11**	8.95
Metric	1.0mm — 7.0 mm by .5mm	13	**CZM13**	9.25
Metric	1.0mm — 10.0 mm by .5mm	19	**CZM19**	12.50
Metric	1.0mm — 13.0 mm by .5mm	25	**CZM25**	12.50
Metric	6.0mm — 10.0 mm by .1mm	41	**CZM41**	42.53

Screw Machine Length Indexes

Description		Pcs.	Case No.	Price Each
Fractional	1/16 — 1/2 by 64ths	29	**CZ29S**	19.76
Fractional	1/16 — 3/8 by 64ths	21	**CZ21S**	16.50
Fractional	1/16 — 1/4 by 64ths	13	**CZ13S**	9.83
Letter	A — Z	26	**CZ26S**	22.50
Wire Gauge	1 — 60	60	**CZ60S**	18.20
Metric	1.0mm — 13.0 mm by .5mm	25	**CZM25S**	23.80

1/2" Shank - Silver and Deming indexes

Description	Pcs.	Case No.	Price Each
1/2" Shank — S&D 9/16 — 1" by 16ths	8	**CZ303**	36.00

Reamer Indexes

Description		Pcs.	Case No.	Price Each
Fractional	1/16 — 1/2 by 64ths	29	**CZ129**	32.50
Letter	A — Z	26	**CZ126**	32.50
Wire Gauge	1 — 60	60	**CZ160**	38.50
Over and Under	.1240 — .5010	14	**CZ112**	32.50
Dowel Pin	.1230 — .4995	14	**CZ114**	32.50
Metric	1.0mm — 13.0 mm by .5mm	25	**CZ125**	44.00

Screw Extractor Index

Description	Pcs.	Case No.	Price Each
1-5 Screw Extractor and Matching Drill	10	**CZ10**	8.07



Taper Length Indexes

Size	Description	Pieces Per Set	Case No.	Price Each
Fractional	1/16 — 1/2 by 64ths	29	**CZT29**	36.50
Letter	A — Z	26	**CZT26**	36.50
Wire Gauge	1 — 60	60	**CZT60**	47.12

Taper Length / Taper Shank Indexes

Size	Description	Pieces Per Set	Case No.	Price Each
Fractional	33/64 — 3/4 by 64ths	16	**CZA16**	113.40
Fractional	49/64 —1" by 64ths	16	**CZB16**	122.85

Combination Indexes

Description	Length	Pcs.	Case No.	Price Each
1/16—1/2 by 64ths, A—Z, 1—60	Jobber	115	**CZ115**	49.14
1/16—1/2 by 64ths, A—Z, 1—80	Jobber	135	**CZ135**	56.00
Import 1/16—1/2 by 64ths, A—Z, 1—60	Jobber	115	**XCZ115**	24.50
1/16—1/2 by 64ths, 1—80, 1mm – 13mm by .5mm	Jobber	134	**CZ134**	56.00
(1to 2.5 by .05), (2.6 to 10 by .1), 10.2, 10.5, 10.8, 11, 11.2, 11.5, 11.8, 12, 12.2, 12.5, 12.8, 13	Metric Jobber	118	**CZM118**	171.45
1/16 — 1/2 by 64ths, A—Z, 1—60	Screw Machine	115	**CZ115S**	56.95

Tap Indexes

Description	Pcs.	Case No.	Price Each
NC and NF 1/4-20 To 1/2-20	10	**CZTD10**	16.74
10 Taps 0-80 to 12-28, 9 Taps 1/64 to 12-24	19	**CZTD19**	16.74
NC 4-40 to 5/8-11	10	**CZT10**	21.00



Tap and Drill Indexes

Description		Pieces Per Set	Case No.	Price Each
NC	6-32 to 1/2-13 Taps, #36 to 27/64 Drills Holds 9 Drills and 9 Taps	18	**CZTD18**	14.00
NF	6-40 to 1/2-20 Taps, #33 to 1/2 Drills Holds 9 Drills and 9 Taps	18	**CZTD99**	14.00
Combination of both models above in case; holds 18 Drills and 18 Taps		36	**CZTD36**	54.60
2.5mmX.45 to 12.0mmX1.75 Taps, 2.05mm to 10.2 Drills. Holds 9 Drills and 9 Taps		18	**CZTD99M**	15.02

Huot® Dispenser Cabinets and Drill Displays

MADE IN USA



Jobber Length Cabinets

Size	Description	Part No.	Price Each
Fractional	1/16— 1/2 by 64ths Jobber	**CZD1**	105.00
Wire Gauge	1 — 60 Jobber	**CZD2**	127.50
Letter	A — Z Jobber	**CZD3**	109.00
Metric	1.0mm — 13.0mm by .5mm Jobber	**CZD4**	121.50
Metric	1.0mm — 6.9mm by .1mm Jobber	**CZD5**	154.00
Combination	1/16 — 1/2 by 64ths, A—Z, 1—60	**CZD6**	610.40
Taper Lng/Shk	1/8 — 1" by 64ths	**CZD57**	630.00
Fractional	1/16-1/2 — by 64ths Stubs	**CZD15**	117.60
Wire Gauge	1 — 60 Stubs	**CZD16**	138.60
Silver and Deming	33/64 — 1-1/2	**CZD303**	920.00



Tap Dispenser Cabinets - All Steel

Size	Description	Part No.	Price Each
Metric	3mm — 24.00mm	**CZD7**	129.50
Fractional	1/4-20 — 1"-14 by 64ths	**CZD8**	117.60
Machine Screw	2-56 — 12-28	**CZD9**	154.00
Combination NC & NF taps 1/4 to 1-1/2, 2-56 to 12-28, 2.5mm—30mm		**CZD19**	630.00
Combination 1/4-20 to 1-14 (T, B, P) 2-56—12-28 (T, B, P) & spiral point		**CZD21**	630.00
Tap/Drill Comb. 6-32 to 1/2-20, #36 to 29/64 Taps and Corresponding Drills		**CZD20**	126.00

End Mill Dispenser Cabinets - All Steel

Size	Description	Part No.	Price Each
Two Flute	Single and Double End 1/16 to 1"	**CZD10**	529.00
Four Flute	Single and Double End 1/16 to 1"	**CZD11**	529.00
Two and Four Flute	Single and Double End 1/8 to 1"	**CZD12**	129.00



Reamer Dispenser - All Steel

Description		Part No.	Price Each
Fractional	1/16— 1/2 by 64ths	**CZD410**	134.40
Wire Gauge	1 — 60	**CZD420**	138.60
Letter	A — Z	**CZD425**	126.00
Over & Under, Dowel .124 - .501, .123 - .4995		**CZD430**	126.00



Master Carbide Insert Dispenser Cabinets All Steel

Description	Part No.	Price Each
Triangle, Square, Diamond, and Round	**CZD14**	659.00





Carbide Bur Stand & Dispenser - All steel

Description	Part No.	Price Each
Bur Stand Holds 24 pcs. 1/4 Shank	**CZB24**	15.25
Cylindrical, Ball, Cone, Tree/Pointed, Oval, Cone/Flat end, Tree/Rad	**CZD132**	126.00



Point of Purchase Drill and Tap Display

Countertop Displays

Size	Description	Part No.	Price Each
Fractional	1/16— 1/2 by 64ths	**CZD60**	232.00
Letter	A — Z	**CZD70**	245.00
Wire Gauge	1 — 60	**CZD80**	336.00
Tap and Die	4 - 40 — 3/4, 1/8 Pipe	**CZD90**	277.00

Huot® Metal Stands

MADE IN USA







Drill Stands

Description		Pieces Per Stand	Part No.	Price Each
Standard Shank Stand				
Fractional	1/16 — 1/2 by 64ths	29	CZ829	11.21
Fractional	1/2 — 1" by 64ths	33	CZ833	55.60
Letter	A — Z	26	CZ826	11.21
1/2" Shank - Silver and Deming				
Frac. 1/2 — 1" by 64ths for 1/2" Shanks		33	CZ833S	50.70

Collet Stands - Heavy Duty Steel

Description		Pieces Per Stand	Part No.	Price Each
5C Collet Stands	Wood Stand Holds18 5C Collets	18	BLK5C	51.76
5C Collet Stands	Metal Stand Holds30 5C Collets	30	CZ5C	50.40
R8 Collet Stands	Wood Stand Holds14 R8 Collets	14	BLKR8	47.40
R-8 Collet Stands	Metal Stand Holds16 R-8 Collets	16	CZR8	50.40

CUSTANITE Precision

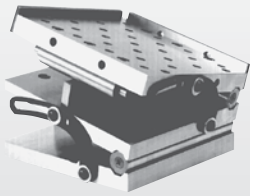
5" SIMPLE SINE PLATES



All parts made of hardened tool steel and ground to highest accuracy. Squareness and parallelism are within .0002" per 5". Many ¼"-20 holes to facilitate clamping. Two end rails included on 1715205, one end rail on 1715105. .200" step built into gage block roll so that gage blocks over .200" can be used to set very small angles. 5" distance between center rolls is accurate within .0002". All models have an offset hinge for added stability. 1715205 has 2 T-Slots in top plate for ¼" T-bolts.

Dimensions	Order No.	Price
3¼ x 6 x 1⅞	PR1715105	$250.00
5 x 6 x 2⁷⁄₁₆	PR1715205	$290.00

5" COMPOUND SINE PLATE



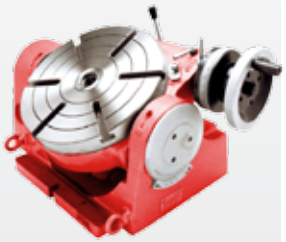
Similar to simple sine plates above but with two offset hinges for added stability.

6 x 12 plate, 1715555 has 3/8"-16 tapped holes, 5" and 10" distance between center rolls accurate within .0002", and weighs 75 lbs.

Dimensions	Order No.	Price
6 x 6 x 3	PR1715505	$970.00
6 x 12 x 4³⁄₁₆	PR1715555	$1500.00

PRECISION TILTING ROTARY TABLES

- Accuracy: 45 seconds
- 10 second vernier reading
- Gear ratio 90:1
- Extra deep coolant channel.
- Dual positive action locks
- Low table profile
- Satin chrome dials
- Gear drive immersed in oil
- Optional dividing plates and tailstock



Maximum Variation Specifications	(inches/second)
Clamping surface flatness (concave)	.0006"
Cylindrical center bore concentricity	.0008"
Taper center bore concentricity	.0008"
Surface to base parellism	.0008"
Surface to angle face parallelism	.0004"
Surface to center slot squareness	.0008"

Dimensions	Order No.	Price
10" Tilting Rotary Table	J3500010	$1755.00
12" Tilting Rotary Table	J3500012	$2020.00
Dividing Plates (10",12")	J3500013	$162.00
Adjustable Tailstock 10"	J3500110	$190.00
Adjustable Tailstock 12"	J3500112	$231.00

Table Outer Dia.	Table Height	Center Height	Base	Taper Hole	Weight	Order No.
9.81	8.07	5.51	10x12	MT-3	172	J3500010
12.6	10.04	6.89	13x15	MT-4	293	J3500012

The apt USA Multi-Tool™ System

MADE IN USA

A simple and easy to use system for producing accurate holes at an economical cost!

- Produces accurate holes in a wide variety of machine tools from fixed or portable, light duty, low horsepower equipment to heavy duty applications in CNC lathes and machining centers
- For drilling, boring, spotfacing, counterboring, and back counterboring applications from 13/32" to 4" in diameter
- May replace costly larger diameter drills
- A wide range of shank styles allows for easy adaptability throughout any shop
- Blades are available in high speed steel, cobalt, carbide indexable & titanium nitride coating for machining a wide range of material
- Blades can be modified for machining special step diameters or special diameters
- Standard sets available from stock
- A preferred choice for most machine shop, maintenance department, and light production hole-making applications



Watch our instructional videos on www.MichiganDrill.com/videos



Sets

Sets are available in both the 3/4" Pilot "D" Series for general purpose applications and the 1" Pilot "E" Series for those heavy duty job requirements.





The apt USA Multi-Tool™ System

Select the same cutting speeds and feed rates for Multi -Tool Blades as you would for drills of the same size.

MADE IN USA

High Speed Standard Blade*
**May be TiN Coated for extended life*



For General Purpose Applications on Ferrous and Non-Ferrous Materials
Available in Standard "D" Series and Heavy Duty "E" Series

High Speed Combination Blade*
**May be TiN Coated for extended life*



Requires a reverse spindle

For Forward and Backward Counterbore and Spotface Applications
Available in Standard "D" Series and Heavy Duty "E" Series

S-Type Blade



For Large Diameter Holes (3-3/4" to 6-1/4")
Heavy Duty "E" Series Only

Cobalt Standard Blade



For General Purpose Applications on Abrasive & Difficult-to-Machine Materials
Heavy Duty "E" Series Only

Cobalt Combination Blade



Requires a reverse spindle

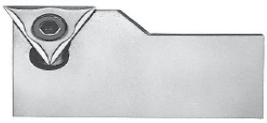
For Forward and Backward Counterbore & Spotface Applications on Abrasive & Difficult-to-Machine Materials
Heavy Duty "E" Series Only

Special Order Chamfering Blade



For Holes up to 4"
Available in Standard "D" Series and Heavy Duty "E" Series

Adjustable Diameter Carbide Indexable Blade



For Use as a Single Point Cutting Tool or Boring Bar
Heavy Duty "E" Series Only

Fixed Diameter Carbide Indexable Blade



For Higher Surface Speeds in Boring and Counterboring
Heavy Duty "E" Series Only

Special Order Multi-Diameter Blade



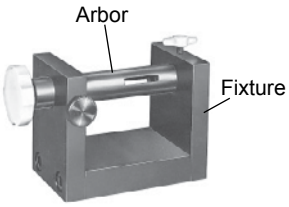
For Multi-Diameter Geometries in a Single Pass
Available in Standard "D" Series and Heavy Duty "E" Series

Blade Grinding Fixtures

Blade Grinding Fixtures make regrinding and blade modification simple while maintaining accuracy!

Resizing Fixture

Tool No.	Price Each
BRF2	116.99



This fixture is designed for resizing blades up to 3" in diameter while maintaining concentricity. Standard blades can be modified to special diameters. The correct back taper is built into the fixture. Made with two index stops, the blade O.D. is relieved on the same set up after grinding the O.D. to desired size on any surface grinder.

Resharpening Fixture

Tool No.	Price Each
BRF1	29.25



The Resharpening Fixture accommodates all blade diameters and thicknesses. The correct end tooth relief angle is built into the fixture making resharpening simple, accurate, and inexpensive on any surface grinder.

Arbors

Description	Tool No.	Price Each
Arbor for "D" Series Blades	**BRF2D**	52.00
Arbor for "E" Series Blades	**BRF2E**	52.00

Replacement Parts

Description	Tool No.	Price Each
Sets Screw for BRF1	**Part SS1032-516**	.46

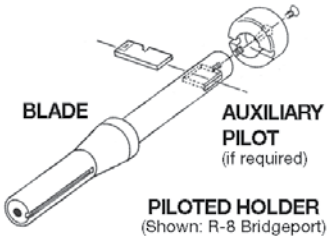
Replacement parts for Resizing Fixture and arbors are available. Please inquire

The Multi-Tool™ System "D"

Exclusively By apt USA Approved Performance Tooling

MADE IN USA

Watch our instructional videos on www.MichiganDrill.com/videos



"D" Piloted Holders

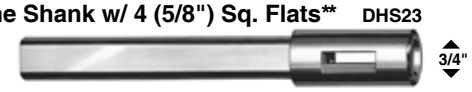
1/2" Reduced Shank w/ 3 Equal Flats DH1



5/8" Diameter Shank* - 21/32" Pilot DH20



3/4" Lathe Shank w/ 4 (5/8") Sq. Flats** DHS23



3/4" Straight Shank DH23



3/4" Diameter Shank* - 13/16" Pilot DH24

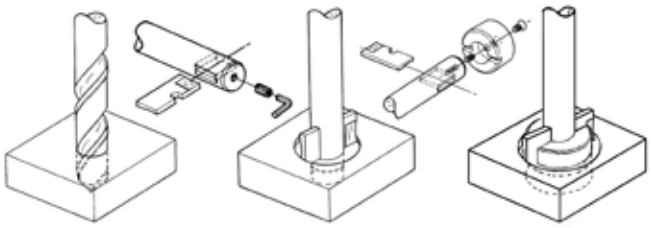


No. 2 Morse Taper Shank DH2T



R-8 Bridgeport Shank DHR8





Drill Pilot Hole With Pilot Drill or Conventional Twist Drill

Insert Blade For Drilling Without Auxiliary Pilot

Insert Blade & Attach Auxiliary Pilot For Larger Diameter Hole

With the use of auxiliary pilots, holes may be drilled up to 2-1/2" diameters in steel while maintaining optimum rigidity with low horsepower.

Step 1 Drill first pilot hole with a conventional 3/4" twist drill or the 3/4" Multi-Tool threaded pilot drill.

Step 2 **For Finish Hole 1-1/2" or Less**
Insert finish size blade into piloted holder and drill hole to size.

For Finish Hole Over 1-1/2" to 2"
Insert 1-1/2" blade in piloted holder and enlarge hole to 1-1/2". Next, insert finish size blade into holder, attach 1-1/2" auxiliary pilot and drill hole to size.

For Finish Hole Over 2"
Insert 1-1/2" blade in piloted holder and enlarge hole to 1-1/2". Next, insert 2" blade in piloted holder, attach 1-1/2" auxiliary pilot, and enlarge hole to 2". Finally, insert finish size blade into holder, attach 2" auxiliary pilot and drill hole to size.

Note: When drilling certain ***non-ferrous*** metals, it may be possible to drill up to a 2-1/2" hole in one pass without the use of one or both auxiliary pilots.
Cutting fluids are always required when machining metals *(except for cast iron)* **for safe operation and longer tool life. Select the appropriate fluid for the material to be machined.**

Select the same cutting speeds and feed rates as you would for drills of same size.

Shank Style	Pilot Diameter	Overall Length	Depth of Cut	Tool No.	Price Each
1/2" Reduced Shank – with 3 Equal Flats	3/4	6	4	**DH1**	84.24
5/8" Diameter Shank*	21/32	7-1/2	5-1/4	**DH20**	73.07
3/4" Lathe Shank – with 4 (5/8") Sq. flats**	3/4	7-1/2	5-1/4	**DHS23**	102.38
3/4" Straight Shank	3/4	7-1/2	5-1/4	**DH23**	82.52
3/4" Shank*	13/16	7-1/2	5-1/4	**DH24**	102.38
#2 Morse Taper Shank	3/4	7-1/2	4-3/8	**DH2T**	90.51
R-8 Bridgeport Shank	3/4	8-1/4	4	**DHR8**	146.13

* DH20 and DH24 are not offered in 3/4" pilot diameter and cannot be used with pilot drill or auxiliary pilot.
** DHS23 is designed for use in tool post with power feed

Auxiliary Pilots

D Series Standard Duty

For Producing Holes in Steel Larger than 1-1/2" in Diameter



Diameter	Blade Dia. Range	Tool No.	Price Each
1-1/2"	1-17/32" – 2"	**DX15**	31.40
2"	2-1/32" – 2-1/2"	**DX20**	34.37

Holder & Auxiliary Screws

Description	Tool No.	Price Each
Set Screw for "D" Series Holders	**Part SS51624-38**	0.75
Auxiliary Pilot Screw for "D" Series	**Part CF51624-58**	0.75

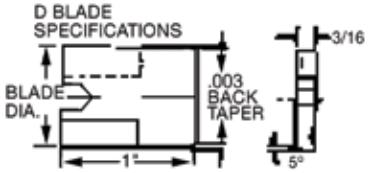
The Multi-Tool™ "D" Blades

Exclusively By apt USA Approved Performance Tooling

MADE IN USA

Standard H.S. Blades

D Series – 3/16" Thick



From 1-17/32" – 1-1/2" Auxiliary Pilot DX15 Required
From 2-1/32" – 2" Auxiliary Pilot DX20 Required

Blade Diameter	Tool No.	Price Each
7/8	**DB28**	25.53
29/32	**DB29**	25.79
15/16	**DB30**	25.79
31/32	**DB31**	27.08
63/64	**DB315**	27.08
1	**DB32**	27.08
1-1/64	**DB325**	27.85
1-1/32	**DB33**	27.85
1-3/64	**DB335**	27.85
1-1/16	**DB34**	27.85
1-3/32	**DB35**	28.38
1-7/64	**DB355**	28.38
1-1/8	**DB36**	28.38
1-9/64	**DB365**	29.07
1-5/32	**DB37**	29.07
1-3/16	**DB38**	29.07
1-7/32	**DB39**	29.67
1-1/4	**DB40**	29.67
1-9/32	**DB41**	30.50

Blade Diameter	Tool No.	Price Each
1-5/16	**DB42**	30.50
1-11/32	**DB43**	30.86
1-3/8	**DB44**	30.86
1-13/32	**DB45**	31.38
1-7/16	**DB46**	31.38
1-15/32	**DB47**	31.99
1-31/64	**DB475**	31.99
1-1/2	**DB48**	31.99
1-17/32	**DB49**	32.59
1-9/16	**DB50**	32.59
1-19/32	**DB51**	33.32
1-5/8	**DB52**	33.32
1-21/32	**DB53**	33.94
1-11/16	**DB54**	33.94
1-23/32	**DB55**	34.32
1-47/64	**DB555**	34.32
1-3/4	**DB56**	34.32
1-25/32	**DB57**	34.72
1-13/16	**DB58**	34.72

Blade Diameter	Tool No.	Price Each
1-27/32	**DB59**	35.89
1-7/8	**DB60**	35.89
1-29/32	**DB61**	36.97
1-15/16	**DB62**	36.97
1-31/32	**DB63**	37.48
2	**DB64**	37.48
2-1/32	**DB65**	39.25
2-1/16	**DB66**	39.25
2-3/32	**DB67**	41.09
2-1/8	**DB68**	41.09
2-5/32	**DB69**	42.39
2-3/16	**DB70**	42.39
2-7/32	**DB71**	42.94
2-1/4	**DB72**	42.94
2-5/16	**DB74**	43.85
2-3/8	**DB76**	45.05
2-7/16	**DB78**	46.42
2-1/2	**DB80**	47.63

Multi-Tool™ "D" Sets



MADE IN USA

Standard Duty "D" Series

Set Type	Pieces	H.S. D Series Blades	Set No.	Price Each
1/2" Reduced Shank	• DH1 - 3/4" Piloted Holder, 1/2" Shank* • 3/4" H.S. Silver and Deming 1/2" Shank Drill* • #6 Combination Drill and Countersink* • 5/32" Hex Wrench *These tools are 6" overall for quick single set up	15/16", 1", 1-1/16", 1-1/8", 1-3/16", 1-1/4", 1-5/16", 1-3/8", 1-7/16", 1-1/2"	**DS1**	506.81
Straight Shank	• DH23 - 3/4" Piloted Holder, Straight Shank • 3/4" H.S. Twist Drill Straight Shank • DX15 – 1-1/2" Auxiliary Pilot • DX20 – 2" Auxiliary Pilot • 5/32" and 3/16 Hex Wrenches	1-1/4", 1-5/16", 1-3/8", 1-1/2", 1-5/8", 1-3/4", 1-7/8" 2", 2-1/8", 2-1/4", 2-3/8", 2-1/2"	**DS2**	626.41
Taper Shank	• DH2T - 3/4" Piloted Holder, #2 M.T. Shank • 3/4" High Speed Twist Drill, #2 M.T. Shank • DX15 – 1-1/2" Auxiliary Pilot • DX20 – 2" Auxiliary Pilot • 5/32" and 3/16" Hex Wrenches	1-1/4", 1-5/16", 1-3/8", 1-1/2", 1-5/8", 1-3/4", 1-7/8", 2", 2-1/8", 2-1/4", 2-3/8", 2-1/2"	**DS3**	641.36

H.S. Pilot Drills

Threaded Shank, 118° Point

Flute Length	OAL.	Dia.	Thread	Tool No.	Price Each
2"	2-3/4	3/4	5/16-24	**DBP34**	77.36



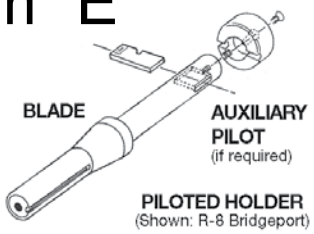
This drill was specially designed for the Multi-Tool piloted holder. It allows single-positioning, one pass operations. Two flats on drill barrel for easy removal.

The Multi-Tool™ System "E"

Exclusively By apt USA Approved Performance Tooling

MADE IN USA

Watch our instructional videos on www.MichiganDrill.com/videos



"E" Piloted Holders

1/2" Reduced Shank w/ 3 Equal Flats — EH1



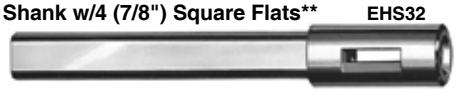
3/4" Reduced Shank* 15/16" Pilot — EH30



3/4" Reduced Shank* 1-1/16" Pilot — EH34



1" Lathe Shank w/4 (7/8") Square Flats** — EHS32



1" Straight Shank — EH32, EH32L, EH32XL
10"–22" O.A.L.

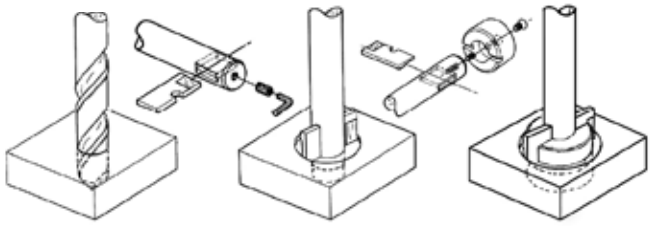


#3 & #4 Morse Taper Shank — EH3T, EH3TL, EH3TXL, EH4T, EH4TL, EH4TXL
10"–23" O.A.L.



R-8 Bridgeport Shank — EHR8





Drill Pilot Hole With Pilot Drill or Conventional Twist Drill | **Insert Blade For Drilling Without Auxiliary Pilot** | **Insert Blade & Attach Auxiliary Pilot For Larger Diameter Hole**

With the use of auxiliary pilots, holes may be drilled up to 3" diameters in steel and up to 4" diameters in non-ferrous material while maintaining optimum rigidity with low horsepower.

Step 1 Drill first pilot hole with a conventional 1" twist drill or the 1" Multi-Tool threaded pilot drill.

Step 2 **For Finish Hole 2" or Less**
Insert finish size blade into piloted holder and drill hole to size.

For Finish Hole Over 2" to 2-1/2"
Insert 2" blade in piloted holder and enlarge hole to 2".
Next, insert 2-1/2" blade in piloted holder, attach 2" auxiliary pilot, and enlarge hole to 2-1/2". Finally, insert finish size blade into holder, attach 2-1/2" auxiliary pilot and drill hole to size.

Note: When drilling certain ***non-ferrous*** metals, it may be possible to drill up to a 4" hole in one pass without the use of one or both auxiliary pilots.
Cutting fluids are always required when machining metals *(except for cast iron)* **for safe operation and longer tool life. Select the appropriate fluid for the material to be machined.**

* EH30 and EH34 are not offered in 1" Pilot Diameter and cannot be used with pilot drill or auxiliary pilot.
** EHS32 is designed for use in tool post with power feed.

Shank Style	Pilot Diameter	Overall Length	Depth of Cut	Tool No.	Price Each
1/2" Reduced Shank – with 3 Equal Flats	1	6	4	**EH1**	124.24
3/4" Diameter Reduced Shank*	15/16	8	5-3/4	**EH30**	124.57
3/4" Diameter Reduced Shank*	1-1/16	8	5-3/4	**EH34**	132.82
1" Lathe Shank – with 4 (7/8") Sq. flats**	1	10	7-3/4	**EHS32**	124.57
1" Straight Shank – Regular	1	10	7-3/4	**EH32**	101.33
1" Straight Shank – Long	1	16	12	**EH32L**	173.90
1" Straight Shank – Extra Long	1	22	18	**EH32XL**	298.14
#3 Morse Taper Shank – Regular	1	10	6	**EH3T**	106.42
#3 Morse Taper Shank – Long	1	16	12	**EH3TL**	186.49
#3 Morse Taper Shank – Extra Long	1	22	18	**EH3TXL**	318.64
#4 Morse Taper Shank – Regular	1	11	6	**EH4T**	152.69
#4 Morse Taper Shank – Long	1	17	12	**EH4TL**	218.22
#4 Morse Taper Shank – Extra Long	1	23	18	**EH4TXL**	360.07
R-8 Bridgeport Shank	1	9-1/4	5	**EHR8**	144.91

Auxiliary Pilots

E Series Heavy Duty

For Producing Holes in Steel Larger than 2" in Diameter



Diameter	Blade Dia. Range	Tool No.	Price Each
2"	2-1/16 – 2-1/2	**EX20**	32.89
2-1/2"	2-9/16 – 3	**EX25**	35.78
3"	3-1/16 – 4	**EX30**	59.80

Holder & Auxiliary Screws

Description	Tool No.	Price Each
Set Screw for "E" Series Holders	**Part SS1220-12**	1.35
Auxiliary Pilot Screw for "E" Series	**Part CF1220-34**	1.35

The Multi-Tool™ "E" Blades

Exclusively By apt USA Approved Performance Tooling

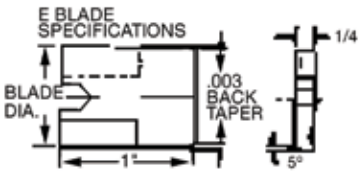
MADE IN USA

High Speed Cobalt

Heavy Duty Blades

E Series – 1/4" Thick

From 2-1/16" – 2-1/2" Auxiliary Pilot EX20 Required
From 2-9/16" – 3" Auxiliary Pilot EX25 Required
From 3-1/16" – 4" Auxiliary Pilot EX30 Required



Blade Diameter	High Speed Steel Tool No.	High Speed Steel Price Each	Cobalt Tool No.	Cobalt Price Each
1-1/8	**EB36**	29.22	**CEB36**	43.85
1-5/32	**EB37**	30.78	–	–
1-3/16	**EB38**	30.78	**CEB38**	45.73
1-7/32	**EB39**	31.81	–	–
1-1/4	**EB40**	31.81	**CEB40**	46.03
1-5/16	**EB42**	32.85	**CEB42**	46.85
1-3/8	**EB44**	33.70	**CEB44**	47.28
1-7/16	**EB46**	34.18	**CEB46**	47.71
1-1/2	**EB48**	35.41	**CEB48**	48.11
1-9/16	**EB50**	36.40	**CEB50**	49.52
1-5/8	**EB52**	37.25	**CEB52**	51.19
1-11/16	**EB54**	37.74	**CEB54**	52.88
1-3/4	**EB56**	38.30	**CEB56**	54.68
1-13/16	**EB58**	39.30	**CEB58**	56.72
1-7/8	**EB60**	40.24	**CEB60**	58.80
1-15/16	**EB62**	40.92	**CEB62**	61.04
2	**EB64**	41.86	**CEB64**	63.18
2-1/16	**EB66**	51.16	**CEB66**	64.48
2-1/8	**EB68**	43.42	**CEB68**	65.90
2-3/16	**EB70**	45.57	**CEB70**	67.48
2-1/4	**EB72**	46.33	**CEB72**	68.60

Blade Diameter	High Speed Steel Tool No.	High Speed Steel Price Each	Cobalt Tool No.	Cobalt Price Each
2-5/16	**EB74**	47.36	**CEB74**	70.84
2-3/8	**EB76**	48.57	**CEB76**	73.20
2-7/16	**EB78**	49.86	–	–
2-1/2	**EB80**	51.14	**CEB80**	76.86
2-9/16	**EB82**	51.82	**CEB82**	78.22
2-5/8	**EB84**	52.52	**CEB84**	79.53
2-11/16	**EB86**	53.57	–	–
2-3/4	**EB88**	54.76	**CEB88**	82.86
2-13/16	**EB90**	55.50	–	–
2-7/8	**EB92**	56.71	**CEB92**	85.80
2-15/16	**EB94**	58.11	–	–
3	**EB96**	59.40	**CEB96**	89.58
3-1/16	**EB98**	61.72	–	–
3-1/8	**EB100**	59.20	–	–
3-1/4	**EB104**	64.48	–	–
3-3/8	**EB106**	66.70	–	–
3-1/2	**EB112**	59.74	**CEB112**	90.46
3-5/8	**EB116**	71.44	–	–
3-3/4	**EB120**	73.54	–	–
3-7/8	**EB124**	74.83	–	–
4	**EB128**	77.12	**CEB128**	101.30

Multi-Tool™ "E" Sets



MADE IN USA

apt USA

Heavy Duty "E" Series

Set Type	Pieces	E Series Blades	High Speed Steel Set No.	High Speed Steel Price	Cobalt Set No.	Cobalt Price
Straight Shank	• EH32 – 1" Piloted Holder, Straight Shank • 1" High Speed Twist Drill, Straight Shank • EX20 – 2" Auxiliary Pilot • EX25 – 2-1/2" Auxiliary Pilot • 1/4" and 5/16" Hex Wrenches	1-1/4", 1-3/8", 1-1/2", 1-5/8",1-3/4", 2", 2-1/4", 2-1/2", 2-3/4", 3"	**ES4**	662.87	**ESC4**	862.13
Taper Shank	• EH3T – 1" Piloted Holder, #3 M.T. Shank • 1" High Speed Twist Drill, #3 M.T. Shank • EX20 – 2" Auxiliary Pilot • EX25 – 2-1/2" Auxiliary Pilot • 1/4" and 5/16" Hex Wrenches	1-1/4", 1-3/8", 1-1/2", 1-5/8", 1-3/4", 2", 2-1/4", 2-1/2", 2-3/4", 3"	**ES5**	662.94	**ESC5**	862.20
R-8 Shank	• EHR8 – 1" Piloted Holder, R-8 Shank • 1" High Speed Twist Drill, Straight Shank • EX20 – 2" Auxiliary Pilot • EX25 – 2-1/2" Auxiliary Pilot • 1/4" and 5/16" Hex Wrenches	1-1/4", 1-3/8", 1-1/2", 1-5/8", 1-3/4", 2", 2-1/4", 2-1/2", 2-3/4", 3"	**ES9**	706.45	**ESC9**	905.71

H.S. Pilot Drills Threaded Shank, 118° Point

Flute Length	OAL.	Dia.	Thread	Tool No.	Price Each
2-1/4"	3	1	1/2-20	**EBP10**	85.70



This drill was specially designed for the Multi-Tool piloted holder. It allows single-positioning, one pass operations. Two flats on drill barrel for easy removal.

Double Notched Multi-Tool™ Blades

For Forward & Backward Cutting – Patented

- Available in High Speed and Cobalt Steel
- For Standard Cap Screws
- Allows more chip clearance
- For use in confined areas
- Can be modified for special configurations
- With the same piloted holder you can forward counterbore, back counterbore and spotface

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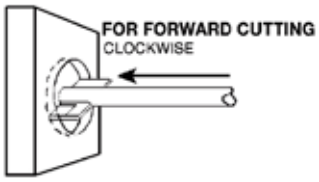

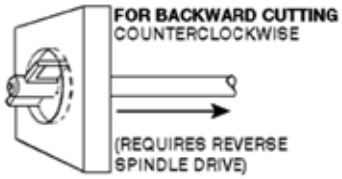



Double Notched Standard "D" Series

High Speed Steel

Select the same cutting speeds and feed rates as you would for drills of the same size.

Blade Diameter	Tool No.	Price Each
7/8	DB28DN	36.53
29/32	DB29DN	36.79
15/16	DB30DN	36.79
31/32	DB31DN	38.08
63/64	DB315DN	38.08
1	DB32DN	38.08
1-1/64	DB325DN	38.85
1-1/32	DB33DN	38.85
1-3/64	DB335DN	38.85
1-1/16	DB34DN	38.85
1-3/32	DB35DN	39.38
1-7/64	DB355DN	39.38
1-1/8	DB36DN	39.38
1-9/64	DB365DN	40.07

Blade Diameter	Tool No.	Price Each
1-5/32	DB37DN	40.07
1-3/16	DB38DN	40.07
1-7/32	DB39DN	40.67
1-1/4	DB40DN	40.67
1-9/32	DB41DN	41.50
1-5/16	DB42DN	41.50
1-11/32	DB43DN	41.86
1-3/8	DB44DN	41.86
1-13/32	DB45DN	42.38
1-7/16	DB46DN	42.38
1-15/32	DB47DN	42.99
1-31/64	DB475DN	42.99
1-1/2	DB48DN	42.99
1-17/32	DB49DN	43.59

Blade Diameter	Tool No.	Price Each
1-9/16	DB50DN	43.59
1-19/32	DB51DN	44.32
1-5/8	DB52DN	44.32
1-21/32	DB53DN	44.94
1-11/16	DB54DN	44.94
1-23/32	DB55DN	45.32
1-47/64	DB555DN	45.32
1-3/4	DB56DN	45.32
1-25/32	DB57DN	45.72
1-13/16	DB58DN	45.72
1-27/32	DB59DN	46.89
1-7/8	DB60DN	46.89
1-29/32	DB61DN	47.97
1-15/16	DB62DN	47.97

Blade Diameter	Tool No.	Price Each
1-31/32	DB63DN	48.48
2	DB64DN	48.48
2-1/32	DB65DN	50.25
2-1/16	DB66DN	50.25
2-3/32	DB67DN	52.09
2-1/8	DB68DN	52.09
2-5/32	DB69DN	53.39
2-3/16	DB70DN	53.39
2-7/32	DB71DN	53.94
2-1/4	DB72DN	53.94
2-5/16	DB74DN	54.85
2-3/8	DB76DN	56.05
2-7/16	DB78DN	57.42
2-1/2	DB80DN	58.63

Double Notched Heavy Duty "E" Series

High Speed Steel & Cobalt

	High Speed Steel		Cobalt	
Blade Diameter	Tool No.	Price Each	Tool No.	Price Each
1-1/8	EB36DN	42.22	CEB36DN	56.85
1-5/32	EB37DN	43.78	–	–
1-3/16	EB38DN	43.78	CEB38DN	58.73
1-7/32	EB39DN	44.81	–	–
1-1/4	EB40DN	44.81	CEB40DN	59.03
1-5/16	EB42DN	45.85	CEB42DN	59.85
1-3/8	EB44DN	45.85	CEB44DN	60.28
1-7/16	EB46DN	47.18	CEB46DN	60.71
1-1/2	EB48DN	48.41	CEB48DN	61.11
1-9/16	EB50DN	49.40	CEB50DN	62.52
1-5/8	EB52DN	50.25	CEB52DN	64.19
1-11/16	EB54DN	50.74	CEB54DN	65.88
1-3/4	EB56DN	51.30	CEB56DN	67.68
1-13/16	EB58DN	52.30	CEB58DN	69.72
1-7/8	EB60DN	53.24	CEB60DN	71.80
1-15/16	EB62DN	53.92	CEB62DN	74.04
2	EB64DN	54.86	CEB64DN	76.18
2-1/16	EB66DN	64.16	CEB66DN	77.48
2-1/8	EB68DN	56.42	CEB68DN	78.90
2-3/16	EB70DN	58.57	CEB70DN	80.48
2-1/4	EB72DN	59.33	CEB72DN	81.60

	High Speed Steel		Cobalt	
Blade Diameter	Tool No.	Price Each	Tool No.	Price Each
2-5/16	EB74DN	60.36	CEB74DN	83.84
2-3/8	EB76DN	61.57	CEB76DN	86.20
2-7/16	EB78DN	62.86	–	–
2-1/2	EB80DN	64.14	CEB80DN	89.86
2-9/16	EB82DN	64.82	CEB82DN	91.22
2-5/8	EB84DN	65.52	CEB84DN	92.53
2-11/16	EB86DN	66.57	–	–
2-3/4	EB88DN	67.76	CEB88DN	95.86
2-13/16	EB90DN	68.50	–	–
2-7/8	EB92DN	69.71	CEB92DN	98.80
2-15/16	EB94DN	71.11	–	–
3	EB96DN	72.40	CEB96DN	102.58
3-1/16	EB98DN	74.72	–	–
3-1/8	EB100DN	72.20	–	–
3-1/4	EB104DN	77.48	–	–
3-3/8	EB106DN	79.70	–	–
3-1/2	EB112DN	72.74	CEB112DN	113.78
3-5/8	EB116DN	84.44	–	–
3-3/4	EB120DN	86.54	–	–
3-7/8	EB124DN	87.83	–	–
4	EB128DN	90.12	CEB128DN	125.71

Multi-Tool™ Cap Screw Counterbores

For Forward & Backward Application – Patented

- Designed to counterbore holes for standard cap screws.
- Using the same piloted holder, you can forward or back counterbore and spotface.
- Uses the same simple design of the multi-tool system.
- Just choose the appropriate blade for your application.

MADE IN USA

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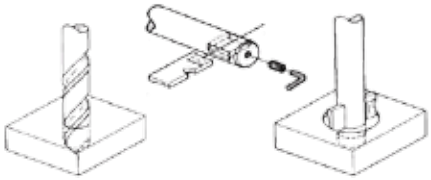

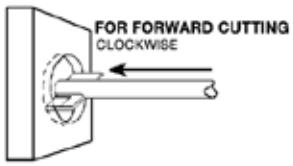

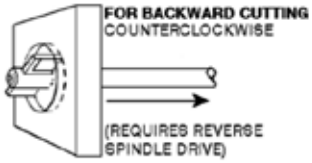

STEP 1
Select the appropriate piloted holder and blade for the screw size needed.

STEP 2
Insert the blade into the piloted holder and tighten the set screw.

For FORWARD counterboring: Use in a clockwise direction

For BACKWARD counterboring:
Use in a reverse spindle, in a counter-clockwise direction.

Piloted Holders

Screw Size	Pilot Diameter	Shank Diameter	Overall Length	Tool No.	Price Each
10	13/64	1/4	4	**AH8**	30.78
1/4	9/32	9/32	4	**AH9**	33.53
5/16	11/32	11/32	4-3/8	**BH11**	36.10
3/8	13/32	13/32	5	**BH13**	37.83
7/16	15/32	15/32	5-3/4	**BH15**	40.74

Screw Size	Pilot Diameter	Shank Diameter	Overall Length	Tool No.	Price Each
1/2	17/32	1/2	5-3/4	**BH16**	42.98
5/8	21/32	5/8	7-1/2	**DH20**	73.07
3/4	13/16	3/4	7-1/2	**DH24**	102.38
7/8	15/16	3/4	8	**EH30**	132.64
1	1-1/16	3/4	8	**EH34**	141.41

Compatible Blades

NOTE: Select the same cutting speeds and feed rates as you would for drills of same size.

- Forward or back counterbore and spotface
- Worn blades can be ground to smaller diameters and reused
- Resharpen and modify blades to special diameters and unusual hole configurations

Forward Blades

Screw Size	Cutting Diameter	Blade Thickness	Tool No.	Price Each
No.10	21/64	1/16	**AB216**	16.76
1/4	13/32	1/16	**AB13**	17.11
5/16	1/2	3/32	**BB16**	21.50
3/8	19/32	3/32	**BB19**	23.73
7/16	11/16	3/32	**BB22**	25.53
1/2	25/32	3/32	**BB25**	26.65
5/8	1	3/16	**DB32**	27.08
3/4	1-3/16	3/16	**DB38**	29.07
7/8	1-3/8	1/4	**EB44**	33.70
1	1-9/16	1/4	**EB50**	36.40

Backward Blades

Screw Size	Cutting Diameter	Blade Thickness	Tool No.	Price Each
1/4	13/32	1/16	**ABZ13**	20.37
5/16	1/2	3/32	**BBZ16**	25.62
3/8	19/32	3/32	**BBZ19**	30.10
7/16	11/16	3/32	**BBZ22**	30.78
1/2	25/32	3/32	**BBZ25**	31.81
5/8	1	3/16	**DB32DN**	38.08
3/4	1-3/16	3/16	**DB38DN**	40.07
7/8	1-3/8	1/4	**EB44DN**	45.85
1	1-9/16	1/4	**EB50DN**	49.40

Replacement Parts

Description	Tool No.	Price Each
Set Screw for AH8 and 9	**Part SS540-14**	.75
Set Screw for BH11, 13, 15, and 16	**Part SS832-516**	.75
Set Screw for DH20 and 24	**Part SS51624-38**	.75
Set Screw for EH30 and 34	**Part SS1220-12**	1.35

Sets

NOTE: Blades of similar thickness may be used in any piloted holder which accommodates that thickness.

Set Type	Description	Set No.	Price
Forward Set	10 piece set contains a Blade and a Piloted Holder for each of the following screw sizes: No.10, 1/4, 5/16, 3/8, 1/2	**AB1**	282.56
Forward & Backward Set	10 piece set contains a Blade and a Piloted Holder for each of the following screw sizes: 1/4, 5/16, 3/8, 7/16, 1/2 (reverse spindle required)	**AB2**	321.43



Sets supplied in wood block

Indexable Carbide Multi-Tool™ Blades

The Multi-Tool System offers you these indexable carbide blades for heavy duty applications where higher surface speeds are needed and longer tool life is desired.

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Fixed Diameter Blades



- Fixed diameter blades are primarily for use in 1" lathe shank with four square flats. (EHS32)
- May be run at higher surface speeds than high speed steel blades.
- When the cutting edge becomes dull, a new cutting edge can be indexed without removing the blade from the holder.

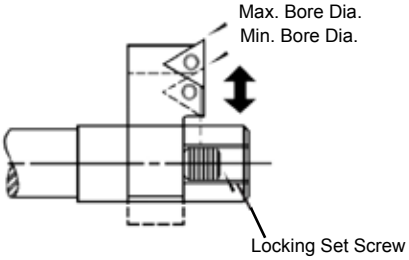
Hole Diameter				
Using TPGH-321 (1/64" insert)	Using TPGH-322 (1/32" insert)	Auxiliary Pilot Required	**Tool No.**	Price Each
1-7/8	1-27/32	—	**EBC60**	41.12
2	1-31/32	—	**EBC64**	44.08
2-1/8	2-3/32	EX20	**EBC68**	45.23
2-1/4	2-7/32	EX20	**EBC72**	47.70
2-3/8	2-11/32	EX20	**EBC76**	49.18

Hole Diameter				
Using TPGH-321 (1/64" insert)	Using TPGH-322 (1/32" insert)	Auxiliary Pilot Required	**Tool No.**	Price Each
2-1/2	2-15/32	EX20	**EBC80**	52.95
2-5/8	2-19/32	EX25	**EBC84**	53.90
2-3/4	2-23/32	EX25	**EBC88**	56.74
2-7/8	2-27/32	EX25	**EBC92**	58.96
3	2-31/32	EX25	**EBC96**	62.34

Adjustable Diameter Blades



- Adjustable diameter blades are primarily for use in 1" lathe shank with four square flats. (EHS32)
- By positioning the blade to the cutting diameter required, you can transform the Multi-Tool into an adjustable single point cutting tool or boring bar. Simply loosen the locking screw in the piloted holder, then adjust the blade to desired diameter from 2" to 3-1/4". Once the size has been set using an indicator or micrometer gauge, the inserts can be easily indexed or changed without losing size.



Blade Cutting Range	Auxiliary Pilot Required	**Tool No.**	Price Each
2 — 2-3/4	EX20	**EBC200**	56.73
2 -1/2 — 3-1/4	EX25	**EBC250**	72.22

Compatible Carbide Inserts



TPGH – Triangle, Positive Rake
Ground all over with chip groove on one side

				Price Each		
Insert Number	Radius	I.C.	Thick-ness	**C-2**	**C-6**	**TiN Coated***
TPGH-321	1/64	3/8	1/8	7.42	7.42	9.04
TPGH-322	1/32	3/8	1/8	7.42	7.42	9.04

**C-6 Grade TiN Coated*

Replacement Parts

Description	**Tool No.**	Price Each
Torx® Drive Flat Head Screw	**Part TF832-285**	2.61
Torx® Wrench	**Part CTW-10**	3.67

S-Type Blades

High Speed

MADE IN USA

For 3-3/4" to 6-1/4" Diameter Holes



- Can be used on low horsepower portable magnetic or fixed machine drilling
- Effective in steel up to 1/2" Thick (up to 1" if cut from both sides)
- Adjust to uneven work surfaces and small misalignments

The S-Type Blade is held with a special spring loaded set screw, producing a floating action which adjusts to uneven work surfaces or small misalignments between spindle and workpiece.

If depth of cut is greater than 1/2", advance piloted holder through the pilot hole and insert blade in an upward orientation. Reverse spindle and feed in upward cutting direction to maximum blade depth.

Remove blade, withdraw piloted holder and reinsert blade in downward cutting position with right hand rotation and complete cut to break through.

Not recommended for use in flatted lathe piloted holders.

Blade Diameter	**Blade No.**	Price
3-3/4	**EBS120**	88.02
4	**EBS128**	109.60
4-1/2	**EBS144**	127.24
5-3/4	**EBS184**	170.00
6-1/4	**EBS200**	192.56

Set Screw



Description	**Tool No.**	Price
Screw for S-Type Blade	**Part SS1**	13.16

Profiling Multi-Tool™ Blade

45° Chamfering Blades

These blades are used to chamfer holes from 1" to 4-3/8" in diameter. When used in the same set up and holder which produced the hole, close concentricity can be achieved. Please inquire

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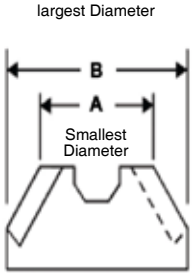
D-Series Chamfering Range

Range of Hole Diameter (from A to B)	Blade No.	Price Each
3/4 – 1-1/8	**DBA36**	29.86
1-1/8 – 1-3/8	**DBA44**	32.85
1-3/8 – 1-3/4	**DBA56**	36.11
1-3/4 – 2-1/8	**DBA68**	39.74
2-1/8 – 2-1/2	**DBA80**	43.69
2-1/2 – 2-7/8	**DBA92**	48.07





E-Series Chamfering Range

Range of Hole Diameter (from A to B)	Blade No.	Price Each
1 – 1-3/8	**EBA44**	38.47
1-3/8 – 1-3/4	**EBA56**	40.39
1-3/4 – 2-1/8	**EBA68**	42.95
2-1/8 – 2-1/2	**EBA80**	49.39
2-1/2 – 2-7/8	**EBA92**	56.81
2-7/8 – 3-1/4	**EBA104**	65.34
3-1/4 – 3-5/8	**EBA116**	71.86
3-5/8 – 4	**EBA128**	79.05
4 – 4-3/8	**EBA140**	86.94

Special order multi-diameter and chamfering blades



Do you have a job with unique specifications? Counterbore profiles may be special ordered to your print. Please inquire.

Carbide Tipped Annular Cutters



MDX® SUPERIOR IMPORT

List No. **CT251** – 1" Depth of Cut
List No. **CT252** – 2" Depth of Cut

All cutters come with 3/4" shank diameter with two flats. The MDX Annular Cutter is made of sturdy M-2 Steel construction, which enables you to cut a burr free hole. MDX's Annular Cutter penetrates rapidly, cutting only the periphery of the hole thus allowing the pilot pin to eject the center plug of steel.

	Price Each	
Diameter of Cut	1" Depth Of Cut **CT251**	2" Depth Of Cut **CT252**
9/16	42.93	45.68
5/8	42.93	45.68
11/16	42.93	45.68
3/4	42.93	45.68
13/16	42.93	46.66
7/8	42.93	46.66
15/16	44.15	47.91
1	44.15	47.91
1-1/16	48.60	52.53
1-1/8	48.60	52.53
1-3/16	48.60	52.53
1-1/4	56.78	63.26
1-5/16	56.78	63.26

	Price Each	
Diameter of Cut	1" Depth Of Cut **CT251**	2" Depth Of Cut **CT252**
1-3/8	56.78	63.26
1-7/16	62.90	71.12
1-1/2	62.90	71.12
1-9/16	62.90	71.12
1-5/8	75.61	84.77
1-11/16	75.61	84.77
1-3/4	75.61	84.77
1-13/16	86.39	97.61
1-7/8	86.39	97.61
1-15/16	86.39	97.61
2	97.77	110.52
2-1/16	97.77	110.52

Please see page 132 for our other anular cutters.

Annular Cutters

High Speed Steel, Cobalt, & TiN Coated

The MDX Annular Cutter is made of sturdy M-2 Steel construction, which enables you to cut a burr free hole. MDX's Annular Cutter penetrates rapidly, cutting only the periphery of the hole thus allowing the pilot pin to eject the center plug of steel.



1" Depth Of Cut
List No. **251** – High Speed Steel
List No. **251C** – Cobalt
List No. **251T** – TiN Coated

2" Depth Of Cut
List No. **252** – High Speed Steel
List No. **252C** – Cobalt
List No. **252T** – TiN Coated

3" Depth Of Cut
List No. **253** – High Speed Steel
List No. **253T** – TiN Coated

MDX® SUPERIOR IMPORT

Fractional Sizes

All cutters come with 3/4" shank diameter with two flats.

	Price Each							
	1" Depth Of Cut			2" Depth Of Cut			3" Depth Of Cut	
Diameter of Cut	H.S. **251**	Cobalt **251C**	H.S. TiN Coated **251T**	H.S. **252**	Cobalt **252C**	H.S. TiN Coated **252T**	H.S. **253**	H.S. TiN Coated **253T**
7/16	26.69	34.24	39.03	36.95	51.96	52.77	—	—
1/2	27.02	36.36	40.24	38.12	53.84	54.39	—	—
9/16	28.16	43.64	41.38	39.34	56.76	55.61	—	—
5/8	30.45	45.84	43.67	43.72	66.20	59.99	—	—
11/16	30.82	45.84	44.03	45.16	66.20	61.43	—	—
3/4	33.50	48.76	46.71	49.53	67.92	65.80	—	—
13/16	34.72	51.64	47.94	50.68	69.16	66.95	—	—
7/8	38.83	51.64	52.05	57.92	71.96	74.18	79.90	116.60
15/16	40.36	54.60	53.57	59.82	75.00	76.09	81.50	118.18
1	44.94	61.84	58.16	65.52	80.72	81.80	89.25	129.40
1-1/16	45.03	65.04	58.24	65.52	83.68	81.77	89.25	129.40
1-1/8	49.53	71.28	62.75	74.69	93.12	90.96	101.77	147.57
1-3/16	51.05	78.60	70.02	77.75	103.40	101.73	105.98	153.67
1-1/4	59.43	85.92	78.40	85.37	113.56	109.36	116.29	168.62
1-5/16	73.92	93.96	92.89	92.99	123.80	116.98	126.69	183.70
1-3/8	81.55	97.52	100.52	96.81	129.52	120.79	131.92	191.28
1-7/16	87.89	105.40	106.86	103.39	134.60	127.37	140.86	204.25
1-1/2	89.17	109.84	108.13	106.72	142.64	130.70	145.42	210.86
1-9/16	95.29	113.56	132.49	122.75	150.32	169.24	167.29	242.57
1-5/8	99.61	117.84	136.81	127.08	158.60	173.58	173.18	251.10
1-11/16	108.64	126.64	145.84	134.38	171.00	180.88	183.10	265.49
1-3/4	118.15	136.76	155.36	153.60	183.28	200.09	209.25	303.42
1-13/16	121.54	145.52	158.74	159.40	196.40	205.90	—	—
1-7/8	128.59	149.84	165.79	176.15	204.76	222.65	242.24	351.25
1-15/16	135.70	155.00	172.89	181.01	211.04	227.50	246.62	357.59
2	149.32	165.84	186.52	183.73	223.92	230.23	250.38	363.05
2-1/16	171.78	195.00	240.42	210.06	—	278.71	—	—
2-1/8	188.10	215.00	—	262.00	—	—	—	—
2-3/16	192.59	228.00	—	—	—	—	—	—
2-1/4	195.92	235.00	—	—	—	—	—	—
2-5/16	205.00	249.00	—	—	—	—	—	—

Please see page 131 for our other anular cutters.

Metric Sizes

List No. **251M** – H.S. 1" Depth Of Cut

	Price Each	
Size	1" Depth of Cut **251M**	2" Depth of Cut **252M**
14mm	30.71	42.88
16mm	33.20	47.67
18mm	35.70	52.73
20mm	38.19	55.24

List No. **252M** – H.S. 2" Depth Of Cut

	Price Each	
Size	1" Depth of Cut **251M**	2" Depth of Cut **252M**
22mm	42.34	63.14
24mm	45.67	67.31
25mm	47.52	69.30
26mm	48.99	71.44

	Price Each	
Size	1" Depth of Cut **251M**	2" Depth of Cut **252M**
28mm	52.34	78.10
30mm	55.66	84.76
32mm	64.80	93.07
36mm	—	110.00

TIN Coating available upon request. Please inquire.

Sets



Sizes	Description	Pcs.	Set No.	Price
9/16, 11/16, 13/16, 15/16, 1", 1-1/16, 2"	1" Cut	7	**251SA**	373.75
9/16, 11/16, 13/16, 15/16, 1", 1-1/16, 2"	2" Cut	7	**252SB**	509.77

All sets are supplied in wood block

Ejector - Pilot

List No. **251EP**



Size	Description	Price
1/4 x 3	Ejector - Pilot, Short	8.42
1/4 x 4	Ejector - Pilot, Long	12.55
1/4 x 5	Ejector - Pilot, X-Long	16.35

Holex® Adjustable Hole Cutters

THE SIZE-ABLE HOLE CUTTER

MADE IN USA

CUSTANITE Precision

- Synchronized lead screw feed simultaneously adjusts both cutters to precise hole size on full turn changes whole diameter .0625.
- 11 Interchangeable arbors to fit any machine.
- Cuts stainless, cold rolled, titanium, aluminum, bronze steel, ceramics and high density plastics.
- Note: Cutting Depth on all sets is 1-1/2".

Watch our instructional videos on www.MichiganDrill.com/videos





Holex® Cutting Blades

All cutters come in pairs (leader and follower)
Other coatings available upon request

Carbide Tipped

Tool No.	Cutter Range	Cutting Depth	Uncoated Price	TiN Price
HLX130CS	1" to 3"	1-1/8"	299.20	323.80
HLX130C2	1" to 3"	2"	404.80	429.40
HLX365CL	3" to 6-1/2"	1-1/2"	325.60	350.20
HLX312CL	3" to 12"	1-1/2"	325.60	350.20
HLX365C2	3" to 6-1/2"	2"	404.80	429.40
HLX312C2	3" to 12"	2"	404.80	429.40

High Speed Steel

Tool No.	Cutter Range	Cutting Depth	Uncoated Price	TiN Price
HLX130HS	1" to 3"	1-1/8"	224.64	249.24
HLX130H2	1" to 3"	2"	285.12	309.72
HLX365HL	3" to 6-1/2"	1-1/2"	224.64	249.24
HLX312HL	3" to 12"	1-1/2"	224.64	249.24
HLX365H2	3" to 6-1/2"	2"	285.12	309.72
HLX312H2	3" to 12"	2"	285.12	309.72
HLX112FC	1" to 12"	Fly Cutter	293.76	318.36

Holex® Complete System

Supplied in metal case.

1" to 6-1/2" Capacity Sets

Contains the following: Holex body, Carbide tipped (1" to 3") & (3" to 6-1/2") cutters, 3 hex keys, spanner wrench, spring-loaded pilot arbor, screws and nuts for cutter mounting.

Set No.	Arbor Shank Type	Price
HLX0651	1-1/4" SS	2542.32
HLX0652	1-1/2" SS	2559.44
HLX0653	2" SS	2576.56
HLX0654	R8	2593.68
HLX0655	#3MT	2593.68
HLX0656	#4MT	2610.80
HLX0657	#5MT	2679.28
HLX0658	NMTB #40	2816.24
HLX0658C	CAT 40	2833.36
HLX0659	NMTB #50	2936.08
HLX0659C	CAT 50	2953.20



1" to 12" Capacity Sets

Contains the following: Holex body, carbide tipped (1" to 3") and (3" to 12") cutters, 3 hex keys, spanner wrench, spring-loaded pilot arbor, screws and nuts for cutter mounting.

Set No.	Arbor Shank Type	Price
HLX1202	1-1/2" SS	3346.96
HLX1203	2" SS	3364.08
HLX1206	#4 MT	3364.08
HLX1207	#5 MT	3466.80
HLX1208	NMTB #40	3723.60
HLX1208C	CAT 40	3620.88
HLX1209	NMTB 50	3723.60
HLX1209C	CAT 50	3740.72



Additional Blocks

Tool No.	Size Range	Price
HLX0650	1" to 6-1/2"	1,440.00
HLX1200	1" to 12"	2,160.00



Arbor (Shank Type)

Tool No.	Arbor	Price
HLX165A1	1-1/4" SS	128.00
HLX165A2	1-1/2" SS	136.00
HLX165A3	2" SS	144.00
HLX165A4	R8	152.00
HLX165A5	#3MT	152.00
HLX165A6	#4MT	160.00
HLX165A7	#5MT	160.00
HLX165A8	NMTB #40	192.00
HLX165C8	CAT 40	256.00
HLX165A9	NMTB #50	312.00
HLX165C9	CAT 50	264.00

Replacement Parts

Tool No.	Description	Price
PART P100-3	Pilot assembly with pilot, spring & bushings	38.75
PART P100	Pilot only	29.05
PART PS101	Spring only	4.50
PART PB102	Bushing only	5.30
PART HK18	1/8 Hex Key	.73
PART HK532	5/32 Hex Key	.73
PART HK316	3/16 Hex Key	.73
PART CS1032-114	10-32 1-1/4 Cap Screw	.50
PART IT1032	10-32 Internal Thread Fastener	1.00
PART LS-6	6' Holex Adjustment Screw	14.48
PART LS-12	12' Holex Adjustment Screw	22.40
PART HLXRAS	Right Screw Brace	15.00
PART HLXLAS	Left Screw Brace	15.00
PART HLXRB	Holex Right Block	100.74
PART HLXLB	Holex Left Block	100.74

Hole Cutters – Heavy Duty

High Speed Steel

List No. **HC690** – Pilot drill furnished with each cutter

These Hole Cutters are recommended for use in hand held air or electric drill motors as well as light drill press applications in sheet metal, thin wall tubing, steel plate, or any other larger diameter shallow hole cutting.

This tool centers quickly and is held securely in position after the pilot drill has entered the work piece. The cutter body then cuts a clean, burr-free hole faster than conventional twist drills or hole saws.

With normal care, tool life is significantly longer than other hole cutting tools. Inexpensive resharpening will allow repeated use.



A versatile and highly useful tool!

Size	Shank	Pilot	Number of Flutes	Price Each
1/2	3/8	3/16	4	45.53
1/2	1/2	1/4	4	45.53
9/16	3/8	3/16	4	58.31
9/16	1/2	1/4	4	58.31
5/8	3/8	3/16	4	61.98
5/8	1/2	1/4	4	61.98
11/16	1/2	1/4	4	65.56
3/4	1/2	1/4	4	67.43
13/16	1/2	1/4	4	69.89
7/8	1/2	1/4	4	72.88
29/32	1/2	1/4	4	73.18
15/16	1/2	1/4	5	74.53

Size	Shank	Pilot	Number of Flutes	Price Each
1	1/2	1/4	5	76.62
1-1/16	1/2	1/4	5	80.65
1-1/8	1/2	1/4	5	84.10
1-3/16	1/2	1/4	5	88.21
1-1/4	1/2	1/4	5	91.72
1-5/16	1/2	1/4	5	99.49
1-3/8	1/2	1/4	5	105.33
1-1/2	1/2	1/4	5	111.01
1-5/8	1/2	1/4	5	139.71
1-3/4	1/2	1/4	5	150.62
1-7/8	1/2	1/4	5	161.46
2	1/2	1/4	5	169.75

32nd, 64th and Metric Sizes available at a nominal extra charge.

Sets

Sizes	Description	Pcs.	Set No.	Price
1/2, 5/8, 3/4, 1	1/2" Shank & 1/4" Pilot	4	**HC690S**	255.82

All sets are supplied in wood block



Pilot Drills

High Speed Steel

Pilot Drill with Single Flat

List No. **673** – 135° Split Point

For use with Hole Cutters above.



Sizes	Price
3/16 Diameter	2.39
1/4 Diameter	3.29

Pilot Drill with Two Whistle Notches

List No. **671** – Split Point

For use with Hole Saws, Hole Cutters, and other pilot tools.



Sizes	Flute Length	Overall Length	Price
1/4 Diameter	1-1/4	4	3.60

Other sizes available by special order

Pilot Drill with Two Flats

List No. **674** – 118° Point

For use with Hole Cutters, and other pilot tools.



Sizes	Flute Length	Overall Length	Price
1/4 Diameter	1-5/16	3-1/4	3.60

Pilot Drill with Three Equal Flats

List No. **675** – 135° Split Point

For use with Hole Cutters, and other pilot tools.



Sizes	Flute Length	Overall Length	Price
1/4 Diameter	1-1/2	4	3.60

Hole Saws & Accessories

High Speed Steel

Hole Saws

List No. **HC695**



For cutting holes 1-1/8" deep.
A high speed steel cutting edge is electron-beam welded to a tough alloy back.
Cuts clean holes in any machinable material.
Knockout holes for easy removal of cores.

Diameter	Price
9/16	8.16
5/8	8.16
11/16	8.16
3/4	8.16
13/16	8.16
7/8	8.50
15/16	8.50
1	8.50
1-1/16	8.50
1-1/8	8.50
1-3/16	8.50
1-1/4	8.50
1-5/16	9.18

Diameter	Price
1-3/8	9.18
1-7/16	9.18
1-1/2	9.18
1-9/16	9.18
1-5/8	9.18
1-11/16	11.39
1-3/4	11.39
1-13/16	11.39
1-7/8	11.39
2	11.39
2-1/16	14.11
2-1/8	14.11
2-1/4	14.11

Diameter	Price
2-5/16	14.11
2-3/8	14.11
2-1/2	15.21
2-9/16	15.21
2-5/8	15.21
2-3/4	15.21
2-7/8	15.21
3	15.55
3-1/8	15.55
3-1/4	15.55
3-3/8	15.55
3-1/2	15.55
3-5/8	18.53

Diameter	Price
3-3/4	21.59
3-7/8	22.61
4	23.71
4-1/8	25.92
4-1/4	33.83
4-3/8	40.12
4-1/2	46.66
4-3/4	51.93
5	57.54
5-1/2	68.76
5-3/4	74.71
6	80.49

Sets

Description	Includes	Set No.	Price
7 Pc. Handyman Set	7/8", 1", 1-1/8", 1-1/4", 1-1/2" plus 1/4" mandrel & (1) mandrel adapter	**HC695H**	50.64
12 Pc. Journeyman Set	3/4", 7/8", 1-1/8", 1-3/8", 1-1/2", 1-3/4", 2", 2-1/4", 2-1/2" plus (2) arbors, & (1) adapter	**HC695J**	110.98
9 Pc. Plumber's Set	3/4", 7/8", 1-1/8", 1-1/2", 1-3/4", 2-1/4" plus (2) arbors & (1) mandrel adapter	**HC695P**	82.50
9 Pc. Electrician's Set	7/8", 1-1/8", 1-3/8", 1-3/4", 2, 2-1/2" plus (2) arbors & (1) mandrel adapter	**HC695E**	86.49

All sets come with a fitted case

Hole Saw Mandrels with Pilot Drills

Shank Size	Fits Hole Saws	Description	Set No.	Price
3/8" Hex	9/16" to 1-3/16"	Fits 3/8" & 1/2" drills	**HCM1**	11.05
3/8" Hex	1-1/4" to 6"	Quick change w/ pin drive	**HCM2**	19.55
7/16" Hex	9/16" to 1-3/16"	Fits 1/2" Drills	**HCM3**	13.00
7/16" Hex	1-1/4" to 6"	Quick change w/ pin drive	**HCM4**	23.92

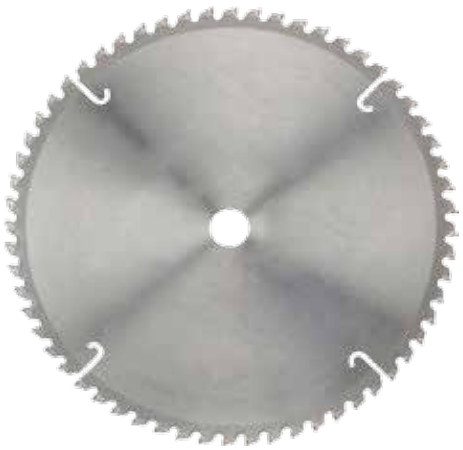


Industrial Circular Saw Blades

Carbide Tipped

List No. **CT726**

- Blades are designed to resist heat build-up and warping.
- J-shaped expansion slots control heat around perimeter while reducing noise.
- Clear anti-friction coating minimizes binding and pitch build-up.
- Thin kerf design provides minimal weight and blade resistance.
- Extra hard titanium carbide teeth last 5X longer than standard carbide.
- Teeth sharpened with 600 grit diamond wheel for extra smooth precision cuts.



Diameter	No. of Teeth	Arbor	Price Each
***7-1/4**	24	5/8	5.99
7-1/4	40	5/8	8.95
8-1/4	24	5/8	13.50
10"	40	5/8	14.95
10"	60	5/8	17.50
12"	40	1"	28.00

*Thin Kerf

Countersinking & Counterboring

Zero-Flute Countersinks & Sets	138
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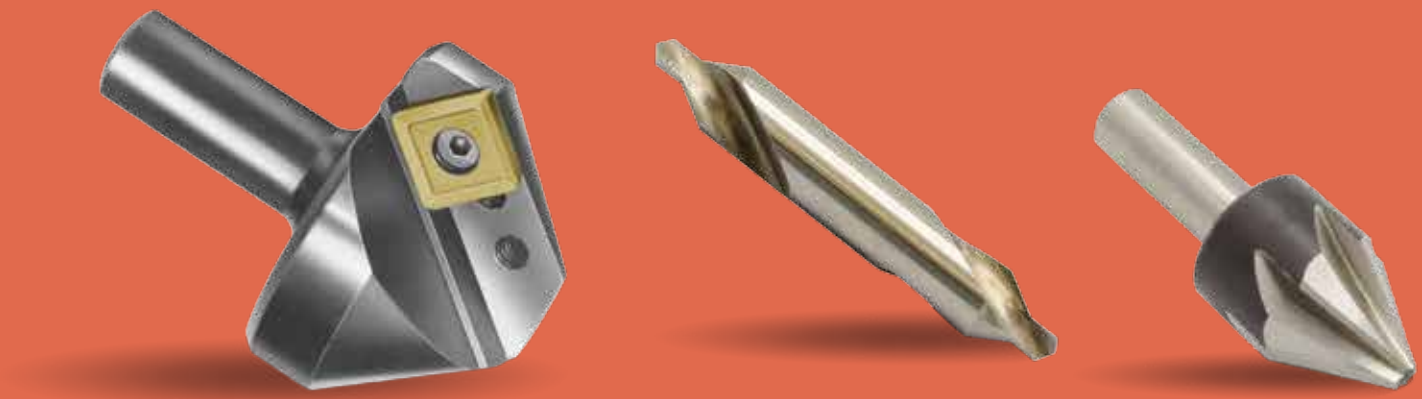




Zero-Flute Countersinks

High Speed Steel & Cobalt

The action of a single cutting edge provides faster stock removal and prevents chatter. These tools are recommended for deburring steel and other ferrous materials. They can easily be resharpened by using an axial relieving fixture or by using a small mounted grinding wheel and inserting it in the hole.

MADE IN USA

MICHIGAN DRILL & CUTTING TOOLS

High Speed



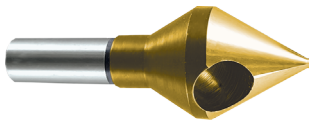
Pilotless – High Speed Steel – 60°, 82°, 90°, and 100°

List No. **543** – 60° H.S.
List No. **544** – 82° H.S.
List No. **545** – 90° H.S.
List No. **546** – 100° H.S.
List No. **547** – 120° H.S.

Size	Single or Double End	Cut Diameter Range	Shank Diameter	H. S. 60° **543**	H. S. 82° **544**	H. S. 90° **545**	H. S. 100° **546**	H. S. 120° **547**
0	Double	3/32-11/64	3/16	10.25	10.25	10.25	10.25	10.25
0	Double	1/8-15/64	1/4	10.25	10.25	10.25	10.25	10.25
1	Single	3/16-13/32	1/4	10.25	10.25	10.25	10.25	10.25
2	Single	5/16-17/32	1/4	12.84	12.84	12.84	12.84	12.84
3	Single	7/16-25/32	1/2	22.26	22.26	22.26	22.26	22.26
3A	Single	7/16-25/32	1/4	22.26	22.26	22.26	22.26	22.26
3B	Single	7/16-7/8	1/2	37.83	37.83	37.83	37.83	37.83
4	Single	9/16-1-1/16	1/2	37.68	37.68	37.68	37.68	37.68
5	Single	5/8-1-15/32	1/2	85.40	85.40	85.40	85.40	85.40
6	Single	3/4-1-3/4	5/8	124.30	124.30	124.30	124.30	124.30
7	Single	1-2	5/8	152.30	152.30	152.30	152.30	152.30
8	Single	1-1/4-2-1/2	3/4	165.85	165.85	165.85	165.85	165.85

Pilotless – Cobalt – 82° and 90°

Cobalt



List No. **543C** – 82° Cobalt
List No. **544C** – 90° Cobalt

Size	Single or Double End	Cut Diameter Range	Shank Diameter	Cobalt 82° **543C**	Cobalt 90° **544C**
0	Double	1/8-15/64	1/4	18.46	18.46
1	Single	3/16-13/32	1/4	18.46	18.46
2	Single	5/16-17/32	1/4	23.11	23.11
3	Single	7/16-25/32	1/2	40.07	40.07
3A	Single	7/16-25/32	1/4	40.07	40.07
4	Single	9/16-1-1/16	1/2	67.82	67.82
5	Single	5/8-1-15/32	1/2	153.73	153.73

Piloted – 82°



List No. **544P** – 82° H.S.

Size	Screw Size	Cut Diameter Range	Pilot Length	Shank Diameter	Price Each
11	1/4	1/4 – 33/64	5/32	3/8	17.49
12	1/4	17/64 – 33/64	5/32	3/8	17.49
13	5/16	5/16 – 41/64	5/32	3/8	20.85
14	5/16	21/64 – 41/64	5/32	3/8	20.85
15	3/8	3/8 – 49/64	5/32	1/2	28.05

Size	Screw Size	Cut Diameter Range	Pilot Length	Shank Diameter	Price Each
16	3/8	25/64 – 49/64	5/32	1/2	28.05
17	7/16	7/16 – 53/64	7/32	1/2	34.21
18	7/16	29/64 – 53/64	7/32	1/2	34.21
19	1/2	1/2 – 15/16	1/4	1/2	39.05
20	1/2	33/64 – 15/16	1/4	1/2	39.05

Sets

Sizes	Description	Pieces	60° Set No.	60° Price	82° Set No.	82° Price	90° Set No.	90° Price	100° Set No.	100° Price
0, 1, 2, 3, 4	High Speed – Pilotless	5	**543S**	100.26	**544S**	96.93	**546S**	96.93	**547S**	102.02
0, 1, 2, 3, 4	Cobalt – Pilotless	5	—	—	**544CS**	171.67	**546CS**	171.57	—	—
11, 13, 15, 17, 19	High Speed – Piloted	5	—	—	**544PS**	143.30	—	—	—	—
0, 1, 2, 3, 4, 5, 6, 7	High Speed – Pilotless	8	—	—	**544T**	461.68	—	—	—	—

All sets are supplied in wood block

Single-Flute Countersinks

High Speed Steel & Cobalt





For use in chamfering, deburring, countersinking and enlarging holes in sheet metal while providing a smooth surface finish. They will countersink holes much smaller than other styles and should be operated at comparatively high speeds.

List No. **490** – 60° H.S.
List No. **491** – 82° H.S.
List No. **492** – 90° H.S.
List No. **493** – 100° H.S.
List No. **489*** – 120° H.S.
List No. **491C** – 82° Cobalt

MICHIGAN DRILL & CUTTING TOOLS

MADE IN USA

Size	Shank Diameter	OAL	H. S. 60° **490**	H. S. 82° **491**	H. S. 90° **492**	H. S. 100° **493**	H. S. 120° **489**	Cobalt 82° **491C**
1/8	1/8	1-1/4	7.21	7.21	7.21	7.21	7.21	17.70
3/16	3/16	1-1/2	7.89	7.89	7.89	7.89	7.89	19.83
1/4	1/4	1-1/2	9.57	9.57	9.57	9.57	9.57	24.12
5/16	1/4	1-1/2	10.23	10.23	10.23	10.23	10.23	25.12
3/8	1/4	1-5/8	10.89	10.89	10.89	10.89	10.89	26.74
1/2	1/4	2	13.99	13.99	13.99	13.99	13.99	34.96
5/8	3/8	2-1/4	19.24	19.24	19.24	19.24	19.24	47.68
3/4	1/2	2-5/8	25.87	25.87	25.87	25.87	25.87	63.52
7/8	1/2	2-3/4	34.98	34.98	34.98	34.98	34.98	85.86
1	1/2	2-3/4	44.22	44.22	44.22	44.22	44.22	108.54
1-1/4	1/2	2-3/4	77.60	77.60	77.60	77.60	77.60	181.40
1-1/2	3/4	2-7/8	110.57	110.57	110.57	110.57	110.57	226.18
1-3/4	3/4	3	139.48	139.48	139.48	139.48	139.48	319.96
2	3/4	3-1/4	187.41	187.41	187.41	187.41	187.41	368.02

U.S.A. Sets

Sizes	Pieces	H.S. 60° Set No.	H.S. 82° Set No.	H.S. 90° Set No.	H.S. 100° Set No.	H.S. Price	Cobalt 82° Set No.	Cobalt Price
1/4, 3/8, 1/2, 5/8, 3/4	5	**490S5**	**491S5**	**492S5**	**493S5**	83.21	**491CS5**	200.07
1/4, 3/8, 1/2, 5/8, 3/4, 1, 1-1/4, 1-1/2, 2	9	**490S9**	**491S9**	**492S9**	**493S9**	507.46	**491CS9**	1088.66
3/16, 1/4, 5/16, 3/8, 1/2, 5/8, 3/4, 7/8, 1, 1-1/4, 1-1/2, 2	12	**490S12**	**491S12**	**492S12**	**493S12**	560.19	**491CS12**	1219.47



All sets are supplied in wood block

List No. **X490** – 60° H.S.
List No. **X491** – 82° H.S.
List No. **X492** – 90° H.S.
List No. **X493** – 100° H.S.
List No. **X494** – 110° H.S.

MDX® SUPERIOR IMPORT

Size	Shank Diameter	OAL	H. S. 60° **X490**	H. S. 82° **X491**	H. S. 90° **X492**	H. S. 100° **X493**	H. S. 120° **X494**
3/16	3/16	1-1/2	4.03	4.03	4.03	4.03	4.03
1/4	3/16	1-1/2	4.03	4.03	4.03	4.03	4.03
1/4	1/4	1-1/2	4.03	4.03	4.03	4.03	4.03
5/16	1/4	1-3/4	5.68	5.68	5.68	5.68	5.68
3/8	1/4	1-3/4	5.68	5.68	5.68	5.68	5.68
1/2	1/4	2	6.29	6.29	6.29	6.29	6.29
1/2	3/8	2	6.29	6.29	6.29	6.29	6.29
5/8	3/8	2-1/4	11.29	11.29	11.29	11.29	11.29
5/8	1/2	2-1/4	11.29	11.29	11.29	11.29	11.29
3/4	3/8	2-1/4	14.57	14.57	14.57	14.57	14.57
3/4	1/2	2-1/2	14.57	14.57	14.57	14.57	14.57
7/8	1/2	2-1/2	17.10	17.10	17.10	17.10	17.10
1	1/2	2-3/4	19.70	19.70	19.70	19.70	19.70
1-1/4	1/2	3-3/8	29.25	29.25	29.25	29.25	29.25
1-1/4	3/4	3-3/8	29.25	29.25	29.25	29.25	29.25
1-1/2	1/2	3-1/2	39.33	39.33	39.33	39.33	39.33
1-1/2	3/4	3-1/2	39.33	39.33	39.33	39.33	39.33
2	1/2	4	71.61	71.61	71.61	71.61	71.61
2	3/4	4	71.61	71.61	71.61	71.61	71.61

Import Sets

Sizes				
1/4 x 1/4, **3/8** x 1/4, **1/2** x 1/4, **5/8** x 3/8, **3/4** x 3/8				
Pcs.	H.S. 60° Set No.	H.S. 82° Set No.	H.S. 90° Set No.	Price
5	**X490S**	**X491S**	**X492S**	46.86

Single-Flute Double End Countersinks

List No. **491D** – 82° H.S. **High Speed Steel**

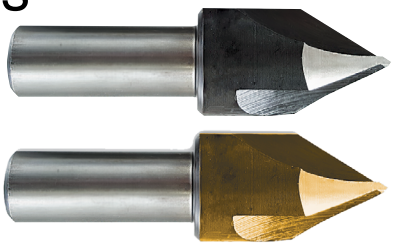
Size	Shank Diameter	Overall Length	Price Each
1/4	1/4	1-1/2	14.50
5/16	5/16	1-5/8	15.88
3/8	3/8	1-3/4	18.78
1/2	1/2	2	21.24



3-Flute Countersinks Center Reamers

High Speed Steel & Cobalt

Engineered to give chatter-free performance.They are comparatively free-cutting and should be operated at low speeds.



List No. **480** – 60° H.S.
List No. **481** – 82° H.S.
List No. **482** – 90° H.S.
List No. **483** – 100° H.S.
List No. **484** – 120° H.S.
List No. **481C** – 82° Cobalt

MICHIGAN DRILL & CUTTING TOOLS

MADE IN USA

	Shank Diameter	OAL	60° H.S. **480**	82° H.S. **481**	90° H.S. **482**	100° H.S. **483**	120° H.S. **484**	82° Cobalt **481C**
1/4	1/8	1-1/4	7.62	7.62	7.62	7.62	7.62	17.82
1/4	1/4	1-1/2	7.82	7.82	7.82	7.82	7.82	-
3/8	1/4	1-5/8	9.30	9.30	9.30	9.30	9.30	21.24
1/2	1/4	2	12.21	12.21	12.21	12.21	12.21	26.74
5/8	1/4	2	17.16	17.16	17.16	17.16	17.16	39.70
3/4	3/8	2-1/4	25.87	25.87	25.87	25.87	25.87	52.02
7/8	1/2	2-5/8	32.34	32.34	32.34	32.34	32.34	-
7/8	1/2	2-5/8	32.34	32.34	32.34	32.34	32.34	-
1	1/2	2-3/4	36.30	36.30	36.30	36.30	36.30	83.72
1-1/4	1/2	2-3/4	75.90	75.90	75.90	75.90	75.90	140.38
1-1/2	1/2	2-3/4	112.20	112.20	112.20	112.20	112.20	181.12
2	1/2	2-3/4	184.80	184.80	184.80	-	-	320.12

U.S.A. Sets



Sizes	Pcs.	**H.S. 60°** Set No.	**H.S. 82°** Set No.	**H.S. 90°** Set No.	Price	**Cobalt 82°** Set No.	**Cobalt** Price
1/4, 3/8, 1/2, 5/8, 3/4	5	**480S5**	**481S5**	**482S5**	75.81	**481CS5**	161.17
1/4, 3/8, 1/2, 5/8, 3/4, 1, 1-1/4, 1-1/2, 2	9	**480S9**	**481S9**	**482S9**	489.46	**481CS9**	890.96

All sets are supplied in wood block

List No. **X480** – 60° H.S.
List No. **X481** – 82° H.S.
List No. **X482** – 90° H.S.
List No. **X483** – 100° H.S.
List No. **X485** – 110° H.S.

MDX® SUPERIOR IMPORT

Size	Shank Dia.	OAL	60° H.S. **480X**	82° H.S. **481X**	90° H.S. **482X**	100° H.S. **483X**	110° H.S. **485X**
1/4	3/16	1-1/2	4.03	4.03	4.03	4.03	4.03
5/16	1/4	1-3/4	5.68	5.68	5.68	5.68	5.68
3/8	1/4	1-3/4	5.68	5.68	5.68	5.68	5.68
1/2	1/4	2	6.29	6.29	6.29	6.29	6.29
1/2	3/8	2	6.29	6.29	6.29	6.29	6.29
5/8	3/8	2-1/4	11.29	11.29	11.29	11.29	11.29
3/4	3/8	2-1/4	15.40	15.40	15.40	15.40	15.40
3/4	1/2	2-1/2	15.40	15.40	15.40	15.40	15.40
7/8	1/2	2-1/2	18.00	18.00	18.00	18.00	18.00
1	1/2	2-3/4	19.70	19.70	19.70	19.70	19.70
1-1/4	1/2	3-3/8	31.50	31.50	31.50	31.50	31.50
1-1/4	3/4	3-3/8	31.50	31.50	31.50	31.50	31.50
1-1/2	1/2	3-1/2	39.00	39.00	39.00	39.00	39.00
1-1/2	3/4	3-1/2	39.00	39.00	39.00	39.00	39.00
2	1/2	4	74.00	74.00	74.00	74.00	74.00
2	3/4	4	74.00	74.00	74.00	74.00	74.00

Import Sets



Sizes	Pieces	**H.S. 60°** Set No.	**H.S. 82°** Set No.	**H.S. 90°** Set No.	Price
1/4 x 3/16, **3/8** x 1/4, **1/2** x 3/8, **5/8** x 3/8, **3/4** x 1/2	5	**X480S**	**X481S**	**X482S**	46.86

4-Flute Machine Countersinks



High Speed Steel

Four flute countersinks allow for greater chip removal.

List No. **486** – 60° H.S. List No. **487** – 82° H.S.
List No. **488** – 90° H.S.

Size	Shank Diameter	OAL	60° H.S. **486**	82° H.S. **487**	90° H.S. **488**
3/8	3/8	3-1/2	23.59	23.59	23.59
1/2	1/2	3-7/8	25.78	25.78	25.78
5/8	1/2	4	29.96	29.96	29.96
3/4	1/2	4-1/8	38.35	38.35	38.35

Size	Shank Diameter	OAL	60° H.S. **486**	82° H.S. **487**	90° H.S. **488**
7/8	1/2	4-1/4	42.33	42.33	42.33
1	1/2	4-1/4	46.84	46.84	46.84
1-1/4	1/2	4-3/8	62.15	62.15	62.15
1-1/2	1/2	4-1/2	82.59	82.59	82.59



U.S.A. Sets

All sets are supplied in wood block

Sizes	Pieces	60° Set No.	82° Set No.	90° Set No.	Price
1/2, 5/8, 3/4, 7/8, 1	5	**486S5**	**487S5**	**488S5**	234.00

6-Flute Chatterless Countersinks



High Speed Steel

Designed for fast shearing cut.

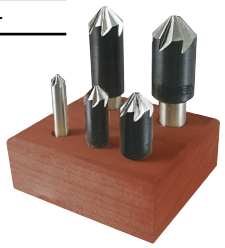
List No. **495** – 60° H.S.
List No. **496** – 82° H.S.
List No. **497** – 90° H.S.
List No. **498** – 100° H.S

List No. **495D** – 60° H.S. Double End
List No. **496D** – 82° H.S. Double End
List No. **497D** – 90° H.S. Double End

Size	Shank Diameter	OAL	60° H.S. **495**	82° H.S. **496**	90° H.S. **497**	100° H.S. **497**	60° Double End **495D**	82° Double End **496D**	90° Double End° **497D**
1/8	1/8	1-1/2	-	-	-	-	13.56	13.56	13.56
3/16	3/16	2	-	-	-	-	13.92	13.92	13.92
1/4	1/4	2	8.55	8.55	8.55	8.55	-	-	-
1/4	1/4	2	-	-	-	-	14.50	14.50	14.50
5/16	5/16	2	10.14	10.14	10.14	10.14	-	-	-
5/16	5/16	2-1/2	-	-	-	-	15.88	15.88	15.88
3/8	3/8	2	11.56	11.56	11.56	11.56	-	-	-
3/8	3/8	2-1/2	-	-	-	-	18.78	18.78	18.78
1/2	1/2	2	14.44	14.44	14.44	14.44	-	-	-
1/2	1/2	3	-	-	-	-	22.22	22.22	22.22
5/8	5/8	2-3/4	20.98	20.98	20.98	20.98	-	-	-
5/8	5/8	3-1/2	-	-	-	-	32.27	32.27	32.27
3/4	1/2	2-3/4	29.91	29.91	29.91	29.91	-	-	-
7/8	1/2	2-3/4	36.10	36.10	36.10	36.10	-	-	-
1	1/2	2-3/4	43.46	43.46	43.46	43.46	-	-	-
1-1/4	3/4	3-3/8	70.79	70.79	70.79	70.79	-	-	-
1-1/2	3/4	3-1/2	104.85	104.85	104.85	104.85	-	-	-
1-3/4	1	4-1/4	131.50	131.50	131.50	131.50	-	-	-
2	1	4-3/8	157.63	157.63	157.63	157.63	-	-	-
2-1/2	1	5	189.15	189.15	189.15	189.15	-	-	-
3	1	5-1/4	226.96	226.96	226.96	226.96	-	-	-

U.S.A. Sets

All sets are supplied in wood block



Sizes	Pieces	60° Set No.	82° Set No.	90° Set No.	100° Set No.	Price
1/4, 3/8, 1/2, 5/8, 3/4	5	**495S5**	**496S5**	**497S5**	**498S5**	89.43
1/4, 5/16, 3/8, 1/2, 5/8, 3/4, 7/8, 1	8	**495S8**	**496S8**	**497S8**	**498S8**	175.14
1/4 to 1" Import	8	**X495S5**	**X496S5**	**X497S5**	—	87.14
1/4 to 1-1/2 Import	10	**X495S10**	**X496S10**	**X497S10**	—	159.13

List No. **X495** – 60° H.S. List No. **X496** – 82° H.S. List No. **X497** – 90° H.S.

MDX® SUPERIOR IMPORT

Size	Shank Diameter	OAL	60° H.S. **X495**	82° H.S. **X496**	90° H.S. **X497**
3/16	3/16	1-1/2	3.98	3.98	3.98
1/4	1/4	1-1/2	4.18	4.18	4.18
5/16	1/4	1-3/4	5.81	5.81	5.81
3/8	1/4	1-3/4	6.08	6.08	6.08
1/2	1/4	2	6.50	6.50	6.50
5/8	1/2	2-1/4	11.63	11.63	11.63
3/4	1/2	2-1/4	14.98	14.98	14.98

Size	Shank Diameter	OAL	60° H.S. **X495**	82° H.S. **X496**	90° H.S. **X497**
7/8	½	2-1/2	17.65	17.65	17.65
1	½	2-3/4	20.31	20.31	20.31
1-1/4	¾	3-3/8	29.00	29.00	29.00
1-1/4	¾	3-1/2	38.09	38.09	38.09
1-3/4	1	4-1/4	62.82	62.82	62.82
2	1	4-3/8	73.74	73.74	73.74

Solid Carbide Countersinks

Single Flute

Excellent for countersinking mild steels, not recommended for hardened steel.

List No. **C490** – 60° Point Angle
List No. **C491** – 82° Point Angle
List No. **C492** – 90° Point Angle



Size	Shank Diameter	Overall Length	Price Each
3/16	3/16	2	21.96
1/4	1/4	2	27.45
3/8	1/4	2	30.03
1/2	1/4	2	56.34

Size	Shank Diameter	Overall Length	Price Each
5/8	1/2	2-3/4	77.22
3/4	1/2	2-3/4	116.82
1	1/2	3	161.82
1-1/4	3/4	3-1/4	233.28

Sets

Sizes	Pieces	60° Set No.	82° Set No.	90° Set No.	Price
1/4, 3/8, 1/2, 3/4, 1	5	**C490S**	**C491S**	**C492S**	392.46

All sets are supplied in wood block



Three Flutes

For a chatterless and clean finish chamfer

List No. **C480** – 60° Point Angle
List No. **C481** – 82° Point Angle
List No. **C482** – 90° Point Angle



Size	Shank Diameter	Overall Length	Price Each
1/8	1/8	1-1/2	18.97
3/16	3/16	2	24.80
1/4	1/4	2	28.19
5/16	1/4	2-1/2	33.23
3/8	1/4	2-1/2	36.36
1/2	1/4	2-1/2	55.50

Size	Shank Diameter	Overall Length	Price Each
5/8	1/2	2-5/8	91.35
3/4	1/2	2-3/4	106.67
7/8	1/2	3	154.34
1	1/2	3	160.78
1-1/4	3/4	3-1/4	272.31
1-1/2	3/4	3-1/2	390.55

Sets

Sizes	Pieces	60° Set No.	82° Set No.	90° Set No.	Price
1/4", 3/8", 1/2", 3/4", 1"	5	**C480S**	**C481S**	**C482S**	422.30

All sets are supplied in wood block



Chatterless Six Flutes

Chatterless countersink for Hardened Steel & other tough Alloys.

List No. **C495** – 60° Point Angle
List No. **C496** – 82° Point Angle
List No. **C497** – 90° Point Angle



Size	Shank Diameter	Overall Length	Price Each
1/8	1/8	1-1/2	19.62
3/16	3/16	2	25.65
1/4	1/4	2	29.16
3/8	1/4	2-1/2	37.62
1/2	1/4	2-1/2	57.42

Size	Shank Diameter	Overall Length	Price Each
5/8	1/2	2-5/8	94.90
3/4	1/2	2-3/4	110.34
1	1/2	3	166.32
1-1/4	3/4	3-1/4	281.88
1-1/2	3/4	3-1/2	404.01

Sets

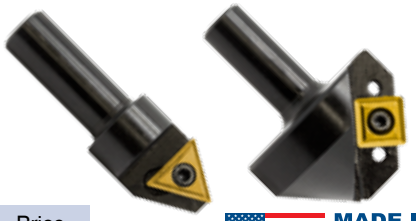
Sizes	Pieces	60° Set No.	82° Set No.	90° Set No.	Price
1/4, 3/8, 1/2, 5/8, 3/4	5	**C495S**	**C496S**	**C497S**	400.86

All sets are supplied in wood block



Indexable Countersink & Chamfering Tool

Positive Rake



MADE IN USA

apt USA

- C-6 Carbide insert and Torx® wrench included with each tool.

Cutter Body Min	Cutter Body Max	Shank Size	Use Insert No.	60° Tool No.	82° Tool No.	90° Tool No.	100° Tool No.	Price Each
1/8	1/2	3/8	TPGH21.51	**CC060**	**CC082**	**CC090**	**CC000**	98.67
1/4	3/4	1/2	TPGH321	**CC160**	**CC182**	**CC190**	**CC100**	125.84
1/2	1-3/4	1/2	SPGH433	**CC260**	**CC282**	**CC290**	**CC200**	184.47
1-1/4	2-1/2	3/4	SPGH433	**CC360**	**CC382**	**CC390**	**CC300**	241.67

- Positive rake for smooth cutting without chatter
- Carbide indexable, No tool resharpening needed
- Uses standard triangle and square inserts

Inserts

Insert Style	Insert Number	Radius	I.C.	Thickness	Price Each C–2	Price Each C–6	Price Each Tin Coated*
Triangle	**TPGH21.51**	1/64	1/4	3/32	6.80	6.80	7.96
Triangle	**TPGH321**	1/64	3/8	1/8	7.42	7.42	9.04
Square	**SPGH433**	3/64	1/2	3/16	12.94	12.94	15.54

*C-6 Grade TiN Coated

Replacement Parts

Part No.	Description	Price
PART TF832-285	Torx® drive flat head screw for 1/2, 3/8 I.C.	2.51
PART TF440-195	Torx® drive flat head screw for 1/4 I.C.	1.63
PART CTW-10	Torx® wrench for 1/2, 3/8 I.C. T-10	3.19
PART CTW-6	Torx® wrench — T6	2.54

Sets

Inserts and Torx® wrench included

Sizes	Pcs.	Set No. 60°	Set No. 82°	Set No. 90°	Set No. 100°	Price
1/4, 1/2 and 1-1/4 (Min.)	3	**CCS60**	**CCS82**	**CCS90**	**CCS100**	559.98

All sets are supplied in wood block



DYNA-Sink™ Countersink & Deburring Tool

High Speed Steel & Carbide-Inserted



apt USA

MADE IN USA

Watch our instructional videos on www.MichiganDrill.com/videos

Size	Cut Diameter Range	Shank Diameter	82° Tool No.	90° Tool No.	Price Each
4	9/16 – 1-1/16	1/2	**548-48**	**548-49**	39.10
5	1 – 1-1/2	3/4	**548-58**	**548-59**	56.50
7	1-1/2 – 2	3/4	**548-78**	**548-79**	81.50

Inserts sold separately

Inserts

H.S. Insert No.	Price Each	Carbide Insert No.	Price Each
548-HA4	37.00	**548-CA4**	40.96
548-HA5	37.00	**548-CA5**	40.96
548-HA7	37.00	**548-CA7**	40.96

Include Inserts

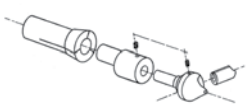
- Deburr and Countersink large diameter holes
- Use at high surface speeds
- Better finishes
- Quick and inexpensive
- Inserts need only be replaced after a large number of regrinds
- Regrind is quick and accurate

Sets

Sizes	Description	Pieces	82° Set No.	82° Price	90° Set No.	90° Price
No. 4, 5, 7	Sets with High Speed Inserts	3	**548SH8**	282.10	**548SC8**	304.88
No. 4, 5, 7	Sets with Carbide Inserts	3	**548SH9**	282.10	**548SC9**	304.88

All sets are supplied in wood block and includes Insert







Dyna-Sink Resharpening Fixture

Description	Part No.	Price Each
For use in spin fixture	**548R**	48.53

Replacement Parts

Description	Part No.	Price Each
Dyna-Sink Set Screw	**PART SS1420-38**	.75
Resharpening Fixture Set Screw	**PART SS51618-38**	.60

Cap Screw Counterbores

High Speed

MDX SUPERIOR IMPORT



Solid Pilot – High Speed Steel

List No. **508** – Straight Shank
List No. **509** – Taper Shank

Screw Size	Pilot Diameter	Cutting Diameter	Shank Diameter	Overall Length	Price Each Straight Shank **508**	Morse Taper Number	Price Each Taper Shank **509**
No.5	.141	.221	3/16	3	17.55	—	—
No.6	.150	.242	7/32	3	17.55	—	—
No.8	11/64	19/64	1/4	3	17.55	—	—
No.10	13/64	21/64	5/16	3-1/2	18.90	—	—
1/4	9/32	13/32	3/8	5	21.15	2	22.05
5/16	11/32	1/2	7/16	5	23.09	2	24.21
3/8	13/32	19/32	1/2	6	26.37	2	28.80
7/16	15/32	11/16	1/2	7	31.52	2	34.11
1/2	17/32	25/32	1/2	7-1/2	35.91	2	37.80
1/2	17/32	25/32	3/4	7-1/2	35.91	—	—
1/2	9/16	13/16	3/4	7-1/2	35.91	—	—
5/8	21/32	31/32	3/4	7-1/2	51.63	2	53.55
5/8	11/16	1	3/4	7-1/2	51.63	2	53.55
3/4	13/16	1-3/16	1	8	73.10	3	76.50
7/8	15/16	1-3/8	1	8	109.90	3	115.20
1	1-1/16	1-9/16	1	10	142.62	3	145.80

Metric Sizes

List No. **508M** – Three Flute, Straight Shank
List No. **509M** – Three Flute, #2 Morse Taper Shank

Screw Size (mm)	Pilot Diameter (mm)	Cutting Diameter (mm)	Shank Diameter	Overall Length	Price Each Straight Shank **508M**	Morse Taper Number	Price Each Taper Shank **509M**
3.00	3.40	6.00	7/32	3	17.55	—	—
4.00	4.50	8.00	5/16	3-1/2	17.55	—	—
5.00	5.50	10.00	5/16	4-1/2	18.58	—	—
6.00	6.60	11.00	1/2	5	21.15	—	—
8.00	9.00	15.00	1/2	6	23.09	—	—
10.00	11.00	18.00	1/2	7	26.37	—	—
12.00	14.00	20.00	5/8	7-1/2	31.52	—	—
14.00	15.00	24.00	3/4	8	35.91	2	39.90
16.00	17.00	26.00	1	9	51.63	2	51.63
20.00	21.00	33.00	1	10	73.10	2	73.10

Sets

Sizes	Description	Pcs.	Set No.	Price
No.8, No.10, 1/4, 3/8	Straight Shank	4	**508S4**	87.77
No.6, No.8, No.10, 1/4, 5/16, 3/8, 1/2	Straight Shank	7	**508S7**	160.52
1/4, 5/16, 3/8, 1/2, 5/8, 3/4	Straight Shank	6	**508S6**	231.25
1/4, 5/16, 3/8, 1/2, 5/8, 3/4	Taper Shank	6	**509S6**	242.91
3mm, 4mm, 5mm, 6mm, 8mm, 10mm, 12mm	Metric, Straight Shank	7	**508S7M**	155.81

All sets are supplied in wood block



Counterbores for Fillister Head Machine Screws

High Speed

MDX SUPERIOR IMPORT



High Speed Steel

List No. **502** – Two Flute, Straight Shank

Screw Size	Pilot Diameter	Cutting Diameter	Shank Diameter	Overall Length	Price Each
No.0	.059	.110	.109	2-1/2	11.43
No.1	.072	.133	.109	2-1/2	11.43
No.2	.085	.155	3/16	2-1/2	10.07
No.3	.098	.176	3/16	2-1/2	10.07
No.4	.111	.198	1/4	2-5/8	10.07
No.5	.124	.220	1/4	2-5/8	10.98
No.6	.137	.241	1/4	2-5/8	11.43
No.8	.163	.285	5/16	2-3/4	12.15

Screw Size	Pilot Diameter	Cutting Diameter	Shank Diameter	Overall Length	Price Each
No.10	.189	.328	3/8	2-7/8	13.05
No.12	.215	.372	3/8	3	14.58
1/4	1/4	13/32	5/16	3-5/8	21.06
5/16	5/16	15/32	3/8	4	21.96
3/8	3/8	19/32	7/16	4-3/8	25.11
7/16	7/16	21/32	1/2	4-3/4	28.35
1/2	1/2	25/32	9/16	5-1/4	30.78
5/8	5/8	.882	5/8	5-1/2	45.00

Sets

Sizes	Description	Pieces	Set No.	Price
No.2, No.4, No.6, No.8, No.10	Number Set	5	**502SA**	56.74
1/4, 5/16, 3/8, 1/2	Fractional Set	4	**502SB**	98.91

All sets are supplied in wood block



Carbide Inserted Socket Head Cap Screw Counterbores



- Increased cutting speeds over H.S.
- Unique design allowing no clamps to impede chip flow.

Screw Size	Pilot Dia.	Outer Dia.	Shank Dia.	Overall Length	No. of Flutes	Tool No.	Price Each
3/8	13/32	19/32	1/2	4-3/8	1	**CB375**	92.59
7/16	15/32	11/16	1/2	4-7/16	1	**CB437**	97.19
1/2	17/32	25/32	5/8	4-1/2	1	**CB500**	108.65
5/8	21/32	31/32	5/8	4-5/8	2	**CB625**	147.81
3/4	13/16	1-3/16	3/4	4-3/4	3	**CB750**	182.99
7/8	15/16	1-3/8	3/4	4-7/8	3	**CB875**	225.42
1	1-1/16	1-9/16	3/4	5	3	**CB1000**	245.47

C6 carbide insert and Torx® wrench included with each tool.



Sets

Size	Pcs.	Set No.	Price
3/8, 7/16, 1/2, 5/8	4	**CBS1**	446.24
3/4, 7/8, 1"	3	**CBS2**	659.64

TPGH Carbide Inserts



Triangle - Positive rake - Ground all over with chip groove on one side

Insert Number	I.C.	Thickness	Radius	Price Each C-2	Price Each C-6	Price Each TiN Coated*
TPGH21.50	1/4	3/32	0	6.80	6.80	7.96
TPGH21.51	1/4	3/32	1/64	6.80	6.80	7.96
TPGH21.52	1/4	3/32	1/32	6.80	6.80	7.96
TPGH321	3/8	1/8	1/64	7.42	7.42	9.04
TPGH322	3/8	1/8	1/32	7.42	7.42	9.04

**C-6 Grade TiN Coated*

Replacement Parts

Part No.	Description	Price
PART TF832-285	Torx® drive flat head screw for 3/8" I.C.	2.50
PART TF440-195	Torx® drive flat head screw for 1/4" I.C.	1.79
PART CTW-10	Torx® wrench for 3/8" I.C. T-10	3.50
PART CTW-6	Torx® wrench for 1/4" I.C. T-6	2.79
PART MSTLA625	Micro-range screw for use with 5/8 dia. holder	12.16
PART MSTLA750	Micro-range screw for use with 3/4 dia. holder	12.87
PART MSTLA1000	Micro-range screw for use with 1" dia. holder	14.30
PART MSTLA1250	Micro-range screw for use with 1-1/4" dia. holder	15.02

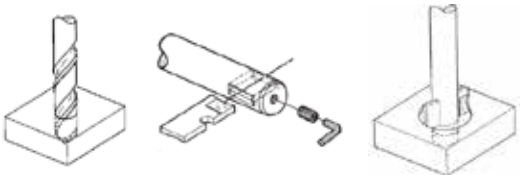
Multi-Tool Cap Screw Counterbores

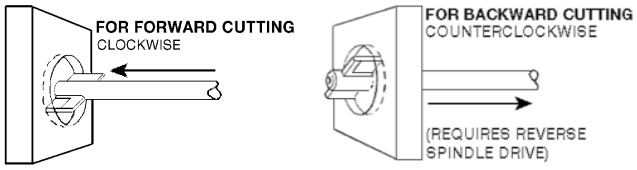
For Forward & Backward Application – Patented

Designed to counterbore holes for standard cap screws. Using the same Piloted holder, you can forward counterbore, back counterbore, and spotface.

Uses the same simple design of the multi-tool system. Just choose the appropriate blade for your application.

Watch our instructional videos on www.MichiganDrill.com/videos





STEP 1 Select the appropriate piloted holder and blade for the screw size needed.

STEP 2 Insert the blade into the piloted holder and tighten the set screw.
For FORWARD counterboring: Use in a clockwise direction
For BACKWARD counterboring: Use in a reverse spindle, counter-clockwise direction.

Piloted Holders

Screw Size	Pilot Diameter	Shank Diameter	Overall Length	Tool No.	Price Each
10	13/64	1/4	4	**AH8**	30.78
1/4	9/32	9/32	4	**AH9**	33.53
5/16	11/32	11/32	4-3/8	**BH11**	36.10
3/8	13/32	13/32	5	**BH13**	37.83
7/16	15/32	15/32	5-3/4	**BH15**	40.74

Screw Size	Pilot Diameter	Shank Diameter	Overall Length	Tool No.	Price Each
1/2	17/32	1/2	5-3/4	**BH16**	42.98
5/8	21/32	5/8	7-1/2	**DH20**	73.07
3/4	13/16	3/4	7-1/2	**DH24**	102.38
7/8	15/16	3/4	8	**EH30**	132.64
1	1-1/16	3/4	8	**EH34**	141.41

Compatible Blades

- Forward or Back Counterbore
- Spotface
- Resharpen and modify blades to special diameters and unusual hole configurations
- Worn blades can be ground to smaller diameters and reused

NOTE: Select the same cutting speeds and feed rates as you would for drills of same size.

Screw Size	Cutting Dia.	Blade Thickness	Forward Blades Blade No.	Forward Blades Price Each	Backward Blades Blade No.	Backward Blades Price Each
No.10	21/64	1/16	**AB216**	16.76	—	—
1/4	13/32	1/16	**AB13**	17.11	**ABZ13**	20.37
5/16	1/2	3/32	**BB16**	21.50	**BBZ16**	25.62
3/8	19/32	3/32	**BB19**	23.73	**BBZ19**	30.10
7/16	11/16	3/32	**BB22**	25.53	**BBZ22**	30.78

Screw Size	Cutting Dia.	Blade Thickness	Forward Blades Blade No.	Forward Blades Price Each	Backward Blades Blade No.	Backward Blades Price Each
1/2	25/32	3/32	**BB25**	26.65	**BBZ25**	31.81
5/8	1	3/16	**DB32**	27.08	**DB32DN**	38.08
3/4	1-3/16	3/16	**DB38**	29.07	**DB38DN**	40.07
7/8	1-3/8	1/4	**EB44**	33.70	**EB44DN**	45.85
1	1-9/16	1/4	**EB50**	36.40	**EB50DN**	49.40

Interchangeable Pilot Counterbores

High Speed Steel



Short Series

For use with interchangeable Pilots

Used to enlarge the openings of a hole to allow room for the head of a screw. Also for general purpose counterboring and spot facing.

List No. **500** – Straight Shank
List No. **501** – Taper Shank

Size	Pilot Hole Size	Range of Pilot Sizes	Number of Flute	Overall Length	Straight Shank 500 Shank Diameter	Straight Shank 500 Price Each	Taper Shank 501 Morse Taper No.	Taper Shank 501 Price Each
11/64	3/32	3/32 - 1/2	3	3	11/64	28.80	—	—
3/16	3/32	3/32 - 1/2	3	3	15/64	28.80	1	32.58
13/64	3/32	3/32 - 1/2	3	3	15/64	28.80	1	23.58
7/32	3/32	3/32 - 1/2	3	3	15/64	28.80	1	32.58
15/64	3/32	3/32 - 1/2	3	3-13/16	15/64	31.10	—	—
1/4	3/32	3/32 - 1/2	3	3-13/16	15/64	30.15	1	32.58
17/64	3/32	3/32 - 1/2	3	3-13/16	17/64	31.10	—	—
9/32	3/32	3/32 - 1/2	3	3-13/16	17/64	30.15	1	33.48
19/64	3/32	3/32 - 1/2	3	3-13/16	17/64	31.97	—	—
5/16	3/32	3/32 - 1/2	3	3-13/16	19/64	30.96	1	33.48
21/64	3/32	3/32 - 1/2	3	3-13/16	19/64	31.68	—	—
11/32	3/32	3/32 - 1/2	3	3-13/16	5/16	31.68	1	33.48
23/64	3/32	3/32 - 1/2	3	3-13/16	5/16	31.68	—	—
3/8	5/32	9/64 - 17/36	3	4-1/16	5/16	31.68	1	33.48
25/64	5/32	9/64 - 17/36	3	4-1/16	3/8	32.63	—	—
13/32	5/32	9/64 - 17/36	3	4-1/16	3/8	33.70	1	35.55
27/64	5/32	9/64 - 17/36	3	4-1/16	3/8	33.70	—	—
7/16	5/32	9/64 - 17/36	3	4-1/16	3/8	33.70	1	35.55
29/64	5/32	9/64 - 17/36	3	4-1/16	3/8	37.80	—	—
15/32	3/16	3/16 - 1-1/8	3	4-5/16	7/16	35.37	1	37.26
31/64	3/16	3/16 - 1-1/8	3	4-5/16	7/16	35.37	—	—
1/2	3/16	3/16 - 1-1/8	3	4-5/16	7/16	35.37	1	37.26
33/64	3/16	3/16 - 1-1/8	3	4-5/16	1/2	41.63	—	—
17/32	3/16	3/16 - 1-1/8	3	4-5/16	1/2	39.33	1	41.63
35/64	3/16	3/16 - 1-1/8	3	4-5/16	1/2	41.18	—	—
9/16	3/16	3/16 - 1-1/8	3	4-5/16	1/2	39.33	1	41.63
37/64	3/16	3/16 - 1-1/8	3	5-1/8	1/2	43.42	—	—
19/32	3/16	3/16 - 1-1/8	3	5-1/8	1/2	42.08	2	44.91
39/64	3/16	3/16 - 1-1/8	3	5-1/8	1/2	44.10	—	—
5/8	3/16	3/16 - 1-1/8	3	5-1/8	1/2	42.08	2	44.91
41/64	3/16	3/16 - 1-1/8	3	5-1/8	1/2	46.98	—	—
21/32	3/16	3/16 - 1-1/8	3	5-1/8	1/2	46.44	2	48.51
43/64	3/16	3/16 - 1-1/8	3	5-1/8	1/2	49.32	—	—
11/16	3/16	3/16 - 1-1/8	3	5-1/8	1/2	46.44	2	48.51
45/64	1/4	1/4 - 1-3/8	3	5-3/8	1/2	50.40	—	—
23/32	1/4	1/4 - 1-3/8	3	5-3/8	1/2	48.33	2	50.27
47/64	1/4	1/4 - 1-3/8	3	5-3/8	1/2	52.20	—	—
3/4	1/4	1/4 - 1-3/8	3	5-3/8	1/2	48.33	2	50.27
49/64	1/4	1/4 - 1-3/8	3	5-3/8	5/8	51.08	—	—
25/32	1/4	1/4 - 1-3/8	3	5-3/8	5/8	51.08	2	53.42
51/64	1/4	1/4 - 1-3/8	3	5-3/8	5/8	54.81	—	—
13/16	1/4	1/4 - 1-3/8	3	5-3/8	5/8	49.41	2	53.42
53/64	1/4	1/4 - 1-3/8	3	5-3/8	5/8	55.80	2	64.60
27/32	1/4	1/4 - 1-3/8	3	5-3/8	3/4	54.23	2	55.48
55/64	1/4	1/4 - 1-3/8	3	5-3/8	3/4	59.40	—	—
7/8	1/4	1/4 - 1-3/8	3	5-3/8	3/4	51.84	2	55.48
57/64	1/4	1/4 - 1-3/8	3	5-3/8	3/4	61.20	—	—
29/32	1/4	1/4 - 1-3/8	3	6-1/8	3/4	54.45	3	58.62
59/64	1/4	1/4 - 1-3/8	3	6-1/8	3/4	64.80	—	—
15/16	1/4	1/4 - 1-3/8	3	6-1/8	3/4	54.45	3	58.62
61/64	5/16	5/16 - 1-3/8	3	6-3/8	3/4	67.50	—	—
31/32	5/16	5/16 - 1-3/8	3	6-3/8	3/4	64.89	3	66.99
63/64	5/16	5/16 - 1-3/8	3	6-3/8	3/4	75.15	—	—
1	5/16	5/16 - 1-3/8	3	6-3/8	3/4	64.89	3	66.99
1-1/32	5/16	5/16 - 1-3/8	3	6-3/8	3/4	76.23	3	75.37
1-1/16	5/16	5/16 - 1-3/8	3	6-3/8	3/4	73.26	3	75.37
1-3/32	5/16	5/16 - 1-3/8	3	6-3/8	1	73.26	3	79.55

Continued on Next Page ▶

Interchangeable Pilot Counterbores

High Speed Steel



Short Series ▶ *Continued*

For use with interchangeable Pilots

Used to enlarge the openings of a hole to allow room for the head of a screw. Also for general purpose counterboring and spot facing.

List No. **500** – Straight Shank
List No. **501** – Taper Shank

Size	Pilot Hole Size	Range of Pilot Sizes	Number of Flutes	Overall Length	Straight Shank 500 Shank Diameter	Straight Shank 500 Price Each	Taper Shank 501 Morse Taper No.	Taper Shank 501 Price Each
1-1/8	5/16	5/16 - 1-3/8	3	6-3/8	1	73.26	3	79.55
1-5/32	5/16	5/16 - 1-3/8	3	6-3/8	1	85.95	3	85.95
1-3/16	5/16	5/16 - 1-3/8	3	6-3/8	1	79.38	3	81.65
1-7/32	5/16	5/16 - 1-3/8	3	6-3/8	1	99.00	3	96.30
1-1/4	3/8	1/4 - 1-7/16	5	6-5/8	1	92.12	3	96.30
1-9/32	3/8	1/4 - 1-7/16	5	6-5/8	1	98.00	—	—
1-5/16	3/8	1/4 - 1-7/16	5	6-5/8	1	106.38	3	106.77
1-11/32	3/8	1/4 - 1-7/16	5	6-5/8	1	106.38	3	106.77
1-3/8	3/8	1/4 - 1-7/16	5	6-5/8	1	106.38	3	106.77
1-13/32	3/8	1/4 - 1-7/16	5	6-5/8	1	110.26	—	—
1-7/16	3/8	1/4 - 1-7/16	5	7-7/8	1-1/4	110.26	4	113.85
1-15/32	3/8	1/4 - 1-7/16	5	7-7/8	1-1/4	119.26	—	—
1-1/2	3/8	1/4 - 1-7/16	5	7-7/8	1-1/4	119.26	4	119.60
1-9/16	7/16	15/32 - 1-7/8	5	8-1/8	1-1/4	145.28	4	145.28
1-5/8	7/16	15/32 - 1-7/8	5	8-1/8	1-1/4	161.38	4	163.26
1-11/16	7/16	15/32 - 1-7/8	5	8-1/8	1-1/4	171.18	4	172.53
1-3/4	7/16	15/32 - 1-7/8	5	8-1/8	1-1/4	173.88	4	175.95
1-13/16	7/16	15/32 - 1-7/8	5	8-1/8	1-1/2	182.34	4	192.69
1-7/8	7/16	15/32 - 1-7/8	5	8-1/8	1-1/2	190.52	4	192.69
1-15/16	7/16	15/32 - 1-7/8	5	8-1/8	1-1/2	208.00	4	210.00
2	1/2	17/32 - 3	5	8-3/8	1-1/2	215.64	4	217.62
2-1/16	1/2	17/32 - 3	5	9-7/8	—	—	5	272.16
2-1/8	1/2	17/32 - 3	5	9-7/8	1-1/2	272.16	5	272.16
2-3/16	1/2	17/32 - 3	5	9-7/8	—	—	5	288.90
2-1/4	1/2	17/32 - 3	5	9-7/8	1-1/2	284.40	5	288.90
2-5/16	1/2	17/32 - 3	5	9-7/8	1-1/2	—	5	314.10
2-3/8	1/2	17/32 - 3	5	9-7/8	1-1/2	304.20	5	314.10
2-7/16	1/2	17/32 - 3	5	9-7/8	—	—	5	333.00
2-1/2	1/2	17/32 - 3	5	9-7/8	1-1/2	315.00	5	333.00
2-9/16	1/2	17/32 - 3	5	9-7/8	—	—	5	413.10
2-5/8	1/2	17/32 - 3	5	9-7/8	1-3/4	396.90	5	436.50
2-3/4	1/2	17/32 - 3	5	9-7/8	1-3/4	469.00	5	487.80
2-7/8	1/2	17/32 - 3	5	9-7/8	1-3/4	488.00	5	532.80
3	1/2	17/32 - 3	5	9-7/8	1-3/4	505.00	5	532.80

Sets

Description	13 Counterbores	26 Pilots	Pcs.	Set No.	Price
Straight Shank	1/4, 5/16, 3/8, 7/16, 1/2, 9/16, 5/8,11/16, 3/4, 13/16, 7/8, 15/16, 1	1/8, 5/32, 3/16, 1/4 with 3/32 shank 3/16, 7/32, 1/4, 9/32, 5/16 with 5/32 shank 1/4, 5/16, 3/8, 7/16, 1/2 with 3/16 shank 5/16, 3/8, 7/16, 1/2, 9/16, 5/8 with 1/4 shank 3/8, 7/16, 1/2, 9/16, 5/8, 3/4 with 5/16 shank	39	**500SA**	825.03
Taper Shank	1/4, 5/16, 3/8, 7/16, 1/2, 9/16, 5/8,11/16, 3/4, 13/16, 7/8, 15/16, 1	1/8, 5/32, 3/16, 1/4 with 3/32 shank 3/16, 7/32, 1/4, 9/32, 5/16 with 5/32 shank 1/4, 5/16, 3/8, 7/16, 1/2 with 3/16 shank 5/16, 3/8, 7/16, 1/2, 9/16, 5/8 with 1/4 shank 3/8, 7/16, 1/2, 9/16, 5/8, 3/4 with 5/16 shank	39	**501S**	855.20



Interchangeable Pilot Counterbores

High Speed Steel

For use with interchangeable Pilots

Used to enlarge the openings of a hole to allow room for the head of a screw. Also for general purpose counterboring and spot facing.

4-Flute Aircraft Short Series



List No. **503** – 1/4" straight shank

Size	Pilot Hole	Overall Length	Price Each
1/4	3/32	2-3/8	35.72
9/32	3/32	2-3/8	35.72
5/16	3/32	2-3/8	35.72
11/32	3/32	2-3/8	36.49
3/8	3/32	2-3/8	36.49
13/32	1/8	2-13/16	39.11
7/16	1/8	2-13/16	39.11
15/32	1/8	2-13/16	40.17
1/2	1/8	2-13/16	40.66
17/32	1/8	2-13/16	41.18
9/16	1/8	2-13/16	41.71
19/32	1/8	2-13/16	48.23
5/8	1/8	2-13/16	48.23
21/32	3/16	3-1/8	50.84
11/16	3/16	3-1/8	53.44
23/32	3/16	3-1/8	56.25
3/4	3/16	3-1/8	56.25
25/32	3/16	3-1/8	62.38
13/16	3/16	3-1/8	62.38
27/32	3/16	3-1/8	66.33
7/8	3/16	3-1/8	66.33
29/32	3/16	3-1/8	70.34
15/16	3/16	3-1/8	70.34
31/32	3/16	3-1/8	73.72
1	3/16	3-1/8	73.72

4-Flute Aircraft Long Series



List No. **504** – 1/2" or smaller straight shank

Size	Shank Diameter	Pilot Hole	Overall Length	Price Each
1/4	15/64	3/32	4	39.08
9/32	17/64	3/32	4	39.06
5/16	19/64	3/32	4	41.71
11/32	5/16	3/32	4	43.70
3/8	5/16	3/32	4	44.22
13/32	3/8	1/8	4	45.04
7/16	3/8	1/8	4	46.82
15/32	7/16	1/8	4-1/4	46.82
1/2	7/16	1/8	4-1/4	49.78
17/32	1/2	1/8	4-1/4	49.78
9/16	1/2	1/8	4-1/4	52.13
19/32	1/2	1/8	4-1/4	54.75
5/8	1/2	1/8	4-1/4	55.47
21/32	1/2	3/16	5-3/8	58.08
11/16	1/2	3/16	5-3/8	59.24
23/32	1/2	3/16	5-3/8	66.43
3/4	1/2	3/16	5-3/8	68.64
25/32	1/2	3/16	5-3/8	72.17
13/16	1/2	3/16	5-3/8	72.17
27/32	1/2	3/16	5-3/8	85.00
7/8	1/2	3/16	5-3/8	79.36
29/32	1/2	3/16	5-3/8	102.00
15/16	1/2	3/16	5-3/8	94.67
31/32	1/2	3/16	5-3/8	102.00
1	1/2	3/16	5-3/8	94.67
1-1/16	1/2	3/16	5-1/2	111.96
1-1/8	1/2	3/16	5-1/2	113.69
1-3/16	1/2	3/16	5-1/2	126.57
1-1/4	1/2	1/4	5-1/2	136.10
1-5/16	1/2	1/4	5-1/2	153.80
1-3/8	1/2	1/4	5-1/2	158.64
1-7/16	1/2	1/4	5-1/2	163.18
1-1/2	1/2	1/4	5-1/2	163.18
1-3/4	1/2	1/4	5-1/2	215.00

Carbide Tipped



List No. **CT500** – Straight Shank

List No. **CT501** – Taper Shank

Size	Minimum Cut	Pilot Hole	Shank Diameter	No. of Flutes	Overall Length	Price Each Straight Shank **CT500**	Morse Taper No.	Price Each Taper Shank **CT501**
1/4	.1140	3/32	15/64	3	3-13/16	102.87	1	102.87
5/16	.1140	3/32	19/64	3	3-13/16	112.52	1	112.52
3/8	.1820	5/32	5/16	3	4-1/16	116.11	1	116.11
7/16	.1820	5/32	3/8	3	4-1/16	119.30	1	119.30
1/2	.2280	3/16	7/16	3	4-5/16	131.66	1	131.66
9/16	.2280	3/16	1/2	3	4-5/16	134.13	1	134.13
5/8	.2280	3/16	1/2	3	5-1/8	137.72	2	137.72
11/16	.2280	3/16	1/2	3	5-1/8	145.30	2	145.30
3/4	.2900	1/4	1/2	3	5-3/8	147.77	2	147.77
13/16	.2900	1/4	5/8	3	5-3/8	150.40	2	150.40
7/8	.2900	1/4	3/4	3	5-3/8	158.06	2	158.06
15/16	.2900	1/4	3/4	3	6-1/8	162.37	3	162.37
1	.3530	5/16	3/4	3	6-3/8	166.11	2	169.89
1	.3530	5/16	3/4	3	6-3/8	—	3	169.89
1-1/16	.3530	5/16	3/4	3	6-3/8	168.27	3	174.65
1-1/8	.3530	5/16	1	3	6-3/8	173.61	3	180.15

Continued on Next Page ▶

Interchangeable Pilot Counterbores

High Speed Steel

MDX® SUPERIOR IMPORT

Carbide Tipped

▶ Continued



List No. **CT500** – Straight Shank
List No. **CT501** – Taper Shank

Size	Minimum Cut	Pilot Hole	Shank Diameter	No. of Flutes	Overall Length	Price Each Straight Shank **CT500**	Morse Taper No.	Price Each Taper Shank **CT501**
1-3/16	.3530	5/16	1	3	6-3/8	179.51	3	186.29
1-1/4	.4260	3/8	1	4	6-5/8	199.61	4	207.11
1-5/16	.4260	3/8	1	4	6-5/8	213.96	4	222.02
1-3/8	.4260	3/8	1	4	6-5/8	224.17	4	232.63
1-7/16	.4260	3/8	1-1/4	4	7-7/8	249.37	4	258.78
1-1/2	.4260	3/8	1-1/4	4	7-7/8	276.49	4	286.94
1-9/16	.4890	7/16	1-1/4	4	8-1/8	283.59	4	294.35
1-5/8	.4890	7/16	1-1/4	4	8-1/8	288.69	4	299.62
1-11/16	.4890	7/16	1-1/4	4	8-1/8	345.39	4	358.47
1-3/4	.4890	7/16	1-1/4	4	8-1/8	345.39	4	358.47
1-13/16	.4890	7/16	1-1/2	4	8-1/8	408.79	4	424.27
1-7/8	.4890	7/16	1-1/2	4	8-1/8	408.79	3	424.27
1-7/8	.4890	7/16	1-1/2	4	8-1/8	—	4	424.27
1-15/16	.4890	7/16	1-1/2	4	8-1/8	446.68	4	463.50
2	.5000	1/2	1-1/2	4	8-1/8	446.68	4	463.50

Interchangeable Counterbore Pilots

List No. **512**

Pilots of different diameters can be used with each counterbore. The shank diameter ordered must be the same as the pilot hole size in the counterbore to be used.

MDX® SUPERIOR IMPORT



Sizes	Shank Diameters Available	Price
3/32	3/32	7.02
#40	3/32	7.02
1/8	3/32, 1/8	7.02
9/64	3/32, 5/32	7.02
5/32	3/32, 1/8, 5/32	7.02
#21	5/32	7.20
#20	1/8	7.20
#19	1/8	7.20
3/16	3/32, 1/8, 5/32, 3/16	7.20
7/32	3/32, 1/8, 5/32, 3/16	8.10
1/4	3/32, 1/8, 5/32, 3/16, 1/4, 3/8	8.10
F	3/32, 3/16	8.64
17/64	1/8	8.64
9/32	3/32, 1/8, 5/32, 3/16,1/4	8.64
5/16	3/32, 1/8, 5/32, 3/16,1/4, 5/16	8.64
11/32	3/32, 1/8, 5/32, 3/16,1/4, 5/16	8.64
3/8	3/32, 1/8, 5/32, 3/16,1/4, 5/16, 3/8	9.54
13/32	3/32, 1/8, 5/32, 3/16,1/4, 5/16, 3/8	9.54
7/16	3/32, 1/8, 5/32, 3/16,1/4, 5/16, 3/8	9.72
15/32	1/8, 5/32, 3/16,1/4, 5/16, 3/8, 7/16	10.26
1/2	3/32, 1/8, 5/32, 3/16,1/4, 5/16, 3/8, 7/16	11.16
17/32	1/8, 5/32, 3/16,1/4, 5/16, 3/8, 7/16, 1/2	12.96
35/64	1/4, 5/16	15.30
9/16	1/8, 3/16,1/4, 5/16, 3/8, 7/16, 1/2	14.58
19/32	1/8, 3/16,1/4, 5/16, 3/8, 7/16, 1/2	15.30
5/8	1/8, 3/16,1/4, 5/16, 3/8, 7/16, 1/2	16.02
21/32	3/16,1/4, 5/16, 3/8, 7/16, 1/2	16.20
11/16	3/16,1/4, 5/16, 3/8, 7/16, 1/2	16.38
23/32	3/16,1/4, 5/16, 3/8, 7/16, 1/2	18.54
3/4	3/32, 3/16,1/4, 5/16, 3/8, 7/16, 1/2	18.54
25/32	3/16, 1/4, 5/16, 3/8, 7/16, 1/2	19.80
13/16	3/16, 1/4, 5/16, 3/8, 7/16, 1/2	20.88
27/32	3/16, 1/4, 5/16, 3/8, 7/16, 1/2	21.60
7/8	3/16,1/4, 5/16, 3/8, 7/16, 1/2	23.04
29/32	1/4, 5/16, 3/8, 7/16, 1/2	23.40
15/16	3/16, 1/4, 5/16, 3/8, 7/16, 1/2	24.30

Sizes	Shank Diameters Available	Price
31/32	3/16, 5/16, 3/8, 7/16, 1/2	25.65
1	3/16,1/4, 5/16, 3/8, 7/16, 1/2	25.65
1-1/16	5/16, 3/8, 7/16, 1/2	26.10
1-3/32	5/16	26.10
1-1/8	3/16, 5/16, 3/8, 7/16, 1/2	31.50
1-3/16	1/4, 5/16, 3/8, 7/16, 1/2	32.40
1-1/4	3/8, 7/16, 1/2	34.20
1-5/16	5/16, 3/8, 7/16, 1/2	36.00
1-3/8	5/16, 3/8, 7/16, 1/2	37.80
1-7/16	3/8, 7/16, 1/2	39.60
1-15/32	3/8	41.40
1-1/2	3/8, 7/16, 1/2	41.40
1-9/16	7/16, 1/2	43.20
1-5/8	7/16, 1/2	44.10
1-11/16	7/16, 1/2	49.50
1-3/4	7/16, 1/2	54.00
1-13/16	7/16, 1/2	59.40
1-7/8	7/16, 1/2	67.50
1-15/16	1/2	70.20
2	1/2	73.80
2-1/16	1/2	99.00
2-1/8	1/2	100.80
2-3/16	1/2	106.20
2-1/4	1/2	112.50
2-5/16	1/2	144.00
2-3/8	1/2	151.20
2-7/16	1/2	157.50
2-1/2	1/2	162.00
2-9/16	1/2	175.50
2-5/8	1/2	189.00
2-11/16	1/2	193.50
2-3/4	1/2	202.50
2-13/16	1/2	211.50
2-7/8	1/2	220.50
2-15/16	1/2	234.00
3	1/2	247.50

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FEATURING THE GREATEST SELECTION OF REAMERS

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H.S. Right Hand Spiral, Right Hand Cut
H.S. Left Hand Spiral, Right Hand Cut
Cobalt, Straight Flute
Cobalt, Right Hand Spiral, Right Hand Cut

Decimal Chucking Reamers 159-176
H.S. Straight Flute
H.S. Right Hand Spiral, Right Hand Cut
H.S. Left Hand Spiral, Right Hand Cut
Cobalt, Straight Flute
Cobalt, Right Hand Spiral, Right Hand Cut

Dowel Pin Reamers & Sets 177
H.S. Straight Flute
H.S. Right Hand Spiral, Right Hand Cut
Cobalt, Straight Flute
Cobalt, Right Hand Spiral, Right Hand Cut

Dowel Pin Reamers & Sets Production/CNC/Jobber Drill Length 177
H.S. Straight Flute
H.S. Right Hand Spiral, Right Hand Cut

Chucking Reamers & Sets Production/CNC/Jobber Drill Length 178-180
H.S. Straight Flute
H.S. Right Hand Spiral, Right Hand Cut

Extra Long Chucking Reamers 181
H.S. Straight Flute

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H.S. Straight Flute

Solid Carbide Chucking Reamers 182-188
Straight Shank, Straight Flute

Carbide Tipped Chucking Reamers 188
Straight Shank, Straight Flute
Straight Shank, Spiral Flute, Right Hand Cut

Combination Drill & Reamer - DROLER® 189
H.S. Jobber Length

CNC Stub Screw Machine Reamers 189
H.S. Left Hand Spiral, Right Hand Cut

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H.S. Straight Flute
H.S. Left Hand Spiral, Right Hand Cut

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H.S. Straight Flute

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High Speed Steel

Expansion Hand Reamers & Sets 193
H.S. Straight Flute
H.S. Left Hand Spiral, Right Hand Cut

Expansion Chucking Reamers 194
H.S. Straight Shank, Straight Flute
H.S. Taper Shank, Straight Flute

Morse Taper Roughing and Finishing Reamers & Sets 195
H.S. Straight Shank - Finishing Reamers
H.S. Taper Shank - Finishing Reamers
H.S. Straight Shank - Roughing Reamers
H.S. Taper Shank - Roughing Reamers

Brown & Sharpe Taper Reamers & Sets 195
H.S. Straight Shank, Straight Flute - Finishing Reamers

Jarno Taper Reamers 195
H.S. Straight Shank, Straight Flute - Finishing Reamers

Aligning Reamers & Sets 196
H.S. Left Hand Spiral Flute, Right Hand Cut
Cobalt Left Hand Spiral Flute

Hex Nut Shank Style Aligning Reamers 196
H.S. Left Hand Spiral Flute, Right Hand Cut

Construction Aligning Reamers & Sets 196
H.S. Left Hand Spiral Flute, Right Hand Cut with stop collar

Bridge Reamers 197
H.S. Left Hand Spiral Flute, Right Hand Cut
H.S. Straight Flute

Car Reamers - Short Body 197
H.S. Left Hand Spiral Flute, Right Hand Cut
H.S. Straight Flute

Taper Shank Chucking Reamers 198-199
H.S. Straight Flute
H.S. Right Hand Spiral, Right Hand Cut
H.S. Left Hand Spiral, Right Hand Cut

Taper Shank Jobber Reamers 199
H.S. Straight Flute

Taper Pin Reamers & Sets 200
H.S. Straight Flute
H.S. Left Hand Spiral, Right Hand Cut
H.S. Left Hand Helical Flute

Metric Taper Pin Reamers 200
H.S. Straight Flute
Left Hand Spiral, Right Hand Cut

Taper Pipe Reamers 201
H.S. Straight Flute
H.S. Left Hand Spiral Flute

Threaded Shank Reamers 201
H.S. High Speed
Piloted Threaded Shank

Shell Reamers 202
H.S. Straight Flute
H.S. Left Hand Spiral, Right Hand Cut

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Chucking Reamers - Straight Shank
High Speed Steel & Cobalt



List No. **LV533**: High Speed, Straight Flute
List No. **LV535**: High Speed, Right Hand Spiral, Right Hand Cut
List No. **LV535L**: High Speed, Left Hand Spiral, Right Hand Cut
List No. **1533**: Cobalt, Straight Flute
List No. **1535**: Cobalt, Right Hand Spiral, Right Hand Cut

These high-quality tools are designed for most standard reaming needs.



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Specifications					Price Each				
Diameter	Decimal Equivalent	Flute Length	Overall Length	Shank Diameter	**LV533 Straight Flute**	**LV535 RH Spiral**	**LV535L LH Spiral RH Cut**	**1533 Cobalt Str. Flt.**	**1535 Cobalt RH Spiral**
# 80	.0135	3/8	3/4	.0135	17.90	22.00	—	23.00	—
# 79	.0145	3/8	3/4	.0145	17.90	22.00	—	23.00	—
1/64	.0156	3/8	3/4	.0156	17.90	—	—	23.00	—
# 78	.0160	3/8	7/8	.0160	17.90	22.00	—	23.00	—
# 77	.0180	3/8	7/8	.0180	17.90	22.00	—	23.00	—
# 76	.0200	3/8	7/8	.0200	17.90	22.00	—	23.00	—
# 75	.0210	1/2	1	.0210	17.90	—	—	23.00	—
# 74	.0225	1/2	1	.0225	17.90	22.00	—	23.00	—
# 73	.0240	1/2	1 1/8	.0240	17.90	22.00	—	23.00	—
# 72	.0250	1/2	1 1/8	.0250	17.90	22.00	—	23.00	—
# 71	.0260	1/2	1 1/4	.0260	17.90	—	—	23.00	—
# 70	.0280	1/2	1 1/4	.0280	17.90	22.00	—	23.00	—
# 69	.0292	1/2	1 3/8	.0292	17.90	—	—	23.00	—
# 68	.0310	1/2	1 3/8	.0310	17.90	—	—	23.00	—
1/32	.0312	1/2	1 3/8	.0312	14.95	—	—	23.00	—
# 67	.0320	1/2	1 3/8	.0320	15.25	—	—	23.00	—
# 66	.0330	1/2	1 3/8	.0330	15.25	—	—	23.00	—
# 65	.0350	1/2	1 1/2	.0350	15.25	—	—	23.00	—
# 64	.0360	1/2	1 1/2	.0360	15.25	22.00	—	23.00	—
# 63	.0370	1/2	1 1/2	.0370	15.25	16.90	—	23.00	—
# 62	.0380	1/2	1 1/2	.0380	15.25	—	—	23.00	—
# 61	.0390	1/2	1 5/8	.0390	15.25	—	—	23.00	—
1mm	.0394	1/2	2 1/2	.0394	15.25	17.50	—	23.00	—
# 60	.0400	1/2	2 1/2	.0390	15.25	17.50	19.50	21.00	22.00
# 59	.0410	1/2	2 1/2	.0390	15.25	17.50	19.50	21.00	22.00
# 58	.0420	1/2	2 1/2	.0390	15.25	17.50	19.50	21.00	22.00
# 57	.0430	1/2	2 1/2	.0390	15.25	17.50	19.50	21.00	22.00
# 56	.0465	1/2	2 1/2	.0455	15.25	17.50	19.50	21.00	22.00
3/64	.0469	1/2	2 1/2	.0455	15.25	17.50	19.50	21.00	22.00
# 55	.0520	1/2	2 1/2	.0510	15.25	17.50	19.50	21.00	22.00
# 54	.0550	1/2	2 1/2	.0510	15.25	17.50	19.50	21.00	22.00
1.5mm	.0591	1/2	2 1/2	.0510	15.25	17.50	19.50	21.00	22.00
# 53	.0595	1/2	2 1/2	.0585	15.25	17.50	19.50	21.00	22.00
1/16	.0625	1/2	2 1/2	.0585	13.60	17.50	19.50	21.00	22.00
# 52	.0635	1/2	2 1/2	.0585	13.60	17.50	19.50	21.00	22.00
# 51	.0670	3/4	3	.0660	12.25	14.20	15.90	17.00	18.00
# 50	.0700	3/4	3	.0660	12.25	14.20	15.90	17.00	18.00
# 49	.0730	3/4	3	.0660	12.25	14.20	15.90	17.00	18.00
# 48	.0760	3/4	3	.0720	12.25	14.20	15.90	17.00	18.00
1.95mm	.0768	3/4	3	.0720	15.25	—	—	—	—
5/64	.0781	3/4	3	.0720	12.25	14.20	15.90	17.00	18.00
# 47	.0785	3/4	3	.0720	12.25	14.20	15.90	17.00	18.00
2mm	.0787	3/4	3	.0771	12.25	14.20	15.90	17.00	18.00
Over 2mm	.0791	3/4	3	.0771	18.70	—	—	—	—
# 46	.0810	3/4	3	.0771	12.25	14.20	15.90	17.00	18.00
# 45	.0820	3/4	3	.0771	12.25	14.20	15.90	17.00	18.00
2.10 mm	.0827	3/4	3	.0810	18.70	—	—	—	—
# 44	.0860	3/4	3	.0810	12.25	14.20	15.90	17.00	18.00
# 43	.0890	3/4	3	.0810	12.25	14.20	15.90	17.00	18.00
# 42	.0935	3/4	3	.0880	12.25	14.20	15.90	17.00	18.00
3/32	.0938	3/4	3	.0880	10.97	14.20	15.90	17.00	18.00
# 41	.0960	7/8	3 1/2	.0928	12.55	14.20	15.90	17.00	18.00
# 40	.0980	7/8	3 1/2	.0928	12.55	14.20	15.90	17.00	18.00
2.5mm	.0984	7/8	3 1/2	.0928	12.55	14.20	15.90	17.00	18.00
# 39	.0995	7/8	3 1/2	.0928	12.55	14.20	15.90	17.00	18.00
# 38	.1015	7/8	3 1/2	.0950	12.55	14.20	15.90	17.00	18.00

Diameter Tolerance:	up to & including .2500"	+.0001″/ +.0004″	.2501″ up to & including 1.000″	+.0001″/ +.0005″	1.0001″ and over	+.0002″/ +.0006″

Chucking Reamers - Straight Shank
High Speed Steel & Cobalt





List No. **LV533**: High Speed, Straight Flute
List No. **LV535**: High Speed, Right Hand Spiral, Right Hand Cut
List No. **LV535L**: High Speed, Left Hand Spiral, Right Hand Cut
List No. **1533**: Cobalt, Straight Flute
List No. **1535**: Cobalt, Right Hand Spiral, Right Hand Cut

These high-quality tools are designed for most standard reaming needs.

MADE IN USA

Specifications					Price Each				
Diameter	Decimal Equivalent	Flute Length	Overall Length	Shank Diameter	**LV533 Straight Flute**	**LV535 RH Spiral**	**LV535L LH Spiral RH Cut**	**1533 Cobalt Str. Flt.**	**1535 Cobalt RH Spiral**
# 37	.1040	7/8	3 1/2	.0950	15.69	17.75	19.88	17.00	19.80
2.70mm	.1063	7/8	3 1/2	.1030	18.69	—	—	—	—
# 36	.1065	7/8	3 1/2	.1030	15.69	17.75	19.88	17.00	19.80
2.75 mm	.1083	7/8	3 1/2	.1030	18.69	—	—	—	—
7/64	.1094	7/8	3 1/2	.1030	16.13	18.50	20.25	18.00	20.90
# 35	.1100	7/8	3 1/2	.1030	16.13	18.50	20.25	18.00	20.90
# 34	.1110	7/8	3 1/2	.1030	16.13	18.50	20.25	18.00	20.90
# 33	.1130	7/8	3 1/2	.1055	16.13	18.50	20.25	18.00	20.90
# 32	.1160	7/8	3 1/2	.1120	16.13	18.50	20.25	18.00	20.90
Under 3mm	.1171	7/8	3 1/2	.1120	19.94	—	—	—	—
3mm	.1181	7/8	3 1/2	.1120	16.13	18.50	20.25	18.00	20.90
Over 3mm	.1191	7/8	3 1/2	.1120	19.94	—	—	—	—
# 31	.1200	7/8	3 1/2	.1120	16.13	18.50	20.25	18.00	20.90
Under 1/8	.1240	7/8	3 1/2	.1190	16.13	18.50	20.25	18.00	20.90
1/8	.1250	7/8	3 1/2	.1190	16.13	16.50	18.75	15.50	18.26
Over 1/8	.1260	7/8	3 1/2	.1190	16.13	18.50	20.25	18.00	20.90
# 30	.1285	7/8	3 1/2	.1190	16.13	18.50	20.25	18.00	20.90
3.4mm	.1339	1	4	.1275	16.13	18.50	—	—	32.73
# 29	.1360	1	4	.1275	19.06	21.88	25.00	21.00	24.42
3.5mm	.1378	1	4	.1350	19.06	21.88	25.00	21.00	24.42
Under 9/64	.1396	1	4	.1350	41.25	—	—	—	—
# 28	.1405	1	4	.1350	19.06	21.88	25.00	21.00	24.42
9/64	.1406	1	4	.1350	19.06	21.88	25.00	21.00	24.42
Over 9/64	.1416	1	4	.1350	41.25	—	—	—	—
3.6mm	.1417	1	4	.1350	19.06	31.00	—	28.00	—
# 27	.1440	1	4	.1350	19.06	21.88	25.00	21.00	24.42
# 26	.1470	1	4	.1430	19.06	21.88	25.00	21.00	24.42
# 25	.1495	1	4	.1430	19.06	21.88	25.00	21.00	24.42
# 24	.1520	1	4	.1460	19.06	21.88	25.00	21.00	24.42
# 23	.1540	1	4	.1460	19.06	21.88	25.00	21.00	24.42
Under 5/32	.1552	1	4	.1510	23.63	—	—	—	—
5/32	.1562	1	4	.1510	19.06	21.88	25.00	21.00	24.42
# 22	.1570	1	4	.1510	19.06	21.88	25.00	21.00	24.42
Over 5/32	.1572	1	4	.1510	41.25	32.50	—	28.00	—
4mm	.1575	1 1/8	4 1/2	.1530	19.06	21.88	25.00	21.00	24.42
# 21	.1590	1 1/8	4 1/2	.1530	20.38	23.50	26.88	22.00	25.85
# 20	.1610	1 1/8	4 1/2	.1530	20.38	23.50	26.88	22.00	25.85
4.1mm	.1614	1 1/8	4 1/2	.1530	20.38	32.50	—	—	—
# 19	.1660	1 1/8	4 1/2	.1595	20.38	23.50	26.88	22.00	25.85
# 18	.1695	1 1/8	4 1/2	.1595	20.38	23.50	26.88	22.00	25.85
11/64	.1719	1 1/8	4 1/2	.1645	20.38	23.50	26.88	22.00	25.85
# 17	.1730	1 1/8	4 1/2	.1645	20.38	23.50	26.88	22.00	25.85
# 16	.1770	1 1/8	4 1/2	.1704	20.38	23.50	26.88	22.00	25.85
4.5mm	.1772	1 1/8	4 1/2	.1755	20.38	23.50	26.88	22.00	25.85
# 15	.1800	1 1/8	4 1/2	.1755	20.38	23.50	26.88	22.00	25.85
4.6mm	.1811	1 1/8	4 1/2	.1755	23.63	—	—	—	—
# 14	.1820	1 1/8	4 1/2	.1755	20.38	23.50	26.88	22.00	25.85
# 13	.1850	1 1/8	4 1/2	.1805	20.38	23.50	26.88	22.00	25.85
Under 3/16	.1865	1 1/8	4 1/2	.1805	20.38	23.50	26.88	22.00	25.85
3/16	.1875	1 1/8	4 1/2	.1805	20.38	23.50	26.88	22.00	25.85
Over 3/16	.1885	1 1/8	4 1/2	.1805	20.38	23.50	26.88	22.00	25.85
# 12	.1890	1 1/8	4 1/2	.1805	20.38	23.50	26.88	22.00	25.85
# 11	.1910	1 1/4	5	.1860	23.00	26.25	30.00	25.50	29.15
# 10	.1935	1 1/4	5	.1860	23.00	26.25	30.00	25.50	29.15
# 9	.1960	1 1/4	5	.1895	23.00	26.25	30.00	25.50	29.15
5 mm	.1969	1 1/4	5	.1895	23.00	26.25	30.00	25.50	29.15

Diameter Tolerance:	up to & including .2500"	+.0001"/ +.0004"	.2501" up to & including 1.000"	+.0001"/ +.0005"	1.0001" and over	+.0002"/ +.0006"

Chucking Reamers - Straight Shank
High Speed Steel & Cobalt



List No. **LV533**: High Speed, Straight Flute
List No. **LV535**: High Speed, Right Hand Spiral, Right Hand Cut
List No. **LV535L**: High Speed, Left Hand Spiral, Right Hand Cut
List No. **1533**: Cobalt, Straight Flute
List No. **1535**: Cobalt, Right Hand Spiral, Right Hand Cut

These high-quality tools are designed for most standard reaming needs.



MADE IN USA

Specifications					Price Each				
Diameter	Decimal Equivalent	Flute Length	Overall Length	Shank Diameter	**LV533 Straight Flute**	**LV535 RH Spiral**	**LV535L LH Spiral RH Cut**	**1533 Cobalt Str. Flt.**	**1535 Cobalt RH Spiral**
# 8	.1990	1 1/4	5	.1895	23.00	26.25	30.00	25.50	29.15
5.1mm	.2008	1 1/4	5	.1945	27.50	34.25	—	—	—
# 7	.2010	1 1/4	5	.1945	23.00	26.25	30.00	25.50	29.15
13/64	.2031	1 1/4	5	.1945	23.00	26.25	30.00	25.50	29.15
# 6	.2040	1 1/4	5	.1945	18.40	26.25	30.00	25.50	29.15
# 5	.2055	1 1/4	5	.2016	18.40	26.25	30.00	25.50	29.15
# 4	.2090	1 1/4	5	.2016	23.00	26.25	30.00	25.50	29.15
# 3	.2130	1 1/4	5	.2075	23.00	26.25	30.00	25.50	29.15
5.5mm	.2165	1 1/4	5	.2075	23.00	26.25	30.00	25.50	29.15
Under 7/32	.2178	1 1/4	5	.2075	27.50	—	—	—	—
7/32	.2188	1 1/4	5	.2075	23.00	26.25	30.00	25.50	29.15
Over 7/32	.2198	1 1/4	5	.2075	27.50	—	—	—	—
# 2	.2210	1 1/2	6	.2173	23.63	27.13	31.00	26.00	30.14
# 1	.2280	1 1/2	6	.2173	23.63	27.13	31.00	26.00	30.14
A	.2340	1 1/2	6	.2265	23.63	27.13	31.00	26.00	30.14
15/64	.2344	1 1/2	6	.2265	23.63	27.13	31.00	26.00	30.14
6mm	.2362	1 1/2	6	.2265	24.75	27.13	31.00	26.00	30.14
B	.2380	1 1/2	6	.2329	24.75	27.13	31.00	26.00	30.14
6.1mm	.2402	1 1/2	6	.2329	28.75	—	—	—	—
C	.2420	1 1/2	6	.2329	24.75	27.13	31.00	26.00	30.14
6.2mm	.2441	1 1/2	6	.2329	28.75	—	—	—	—
D	.2460	1 1/2	6	.2329	24.75	27.13	31.00	26.00	30.14
Under 1/4	.2490	1 1/2	6	.2405	22.13	27.13	32.50	26.00	30.14
E 1/4	.2500	1 1/2	6	.2405	20.31	27.13	42.19	22.50	26.95
Over 1/4	.2510	1 1/2	6	.2405	22.13	27.13	32.50	22.50	30.14
6.5mm	.2559	1 1/2	6	.2485	24.75	27.13	32.50	28.00	31.90
F	.2570	1 1/2	6	.2485	24.75	27.13	32.50	28.00	31.90
6.6mm	.2598	1 1/2	6	.2485	28.75	—	—	—	—
G	.2610	1 1/2	6	.2485	24.75	27.13	32.50	28.00	31.90
17/64	.2656	1 1/2	6	.2485	27.44	30.50	33.75	34.00	39.24
H	.2660	1 1/2	6	.2485	27.44	30.50	33.75	34.00	39.24
I	.2720	1 1/2	6	.2485	27.44	30.50	33.75	34.00	39.24
7mm	.2756	1 1/2	6	.2485	27.44	30.50	33.75	34.00	39.24
J	.2770	1 1/2	6	.2485	27.44	30.50	33.75	34.00	39.24
K	.2810	1 1/2	6	.2485	27.44	30.50	33.75	34.00	39.24
9/32	.2812	1 1/2	6	.2485	27.44	30.50	33.75	34.00	39.24
7.3mm	.2874	1 1/2	6	.2792	32.50	—	—	—	—
L	.2900	1 1/2	6	.2792	27.75	30.50	33.75	34.00	39.24
7.4mm	.2913	1 1/2	6	.2792	32.50	—	—	—	—
M	.2950	1 1/2	6	.2792	27.75	30.50	33.75	34.00	39.24
7.5mm	.2953	1 1/2	6	.2792	27.75	30.50	33.75	34.00	39.24
19/64	.2969	1 1/2	6	.2792	27.75	30.50	33.75	34.00	39.24
N	.3020	1 1/2	6	.2792	27.75	30.50	33.75	34.00	39.24
7.8mm	.3071	1 1/2	6	.2792	32.50	—	—	—	—
Under 5/16	.3115	1 1/2	6	.2792	26.25	28.69	33.75	34.00	39.05
5/16	.3125	1 1/2	6	.2792	26.25	27.48	31.25	34.00	39.05
Over 5/16	.3135	1 1/2	6	.2792	26.25	28.69	33.75	34.00	39.05
8mm	.3150	1 1/2	6	.2792	27.75	30.56	35.00	34.00	39.05
O	.3160	1 1/2	6	.2792	27.75	30.56	35.00	34.00	39.05
P	.3230	1 1/2	6	.2792	29.69	32.50	36.75	37.00	42.48
Under 21/64	.3271	1 1/2	6	.2792	58.75	—	—	—	—
21/64	.3281	1 1/2	6	.2792	29.69	32.50	36.75	37.00	42.48
8.4mm	.3307	1 1/2	6	.2792	34.38	—	—	—	—
Q	.3320	1 1/2	6	.2792	34.38	32.50	36.75	37.00	42.48
8.5mm	.3346	1 1/2	6	.2792	34.38	32.50	36.75	37.00	42.48
R	.3390	1 1/2	6	.2792	34.38	32.50	36.75	37.00	42.48

Diameter Tolerance:	up to & including .2500"	+.0001″/ +.0004″	.2501″ up to & including 1.000″	+.0001″/ +.0005″	1.0001″ and over	+.0002″/ +.0006″

Chucking Reamers - Straight Shank
High Speed Steel & Cobalt





List No. **LV533**: High Speed, Straight Flute
List No. **LV535**: High Speed, Right Hand Spiral, Right Hand Cut
List No. **LV535L**: High Speed, Left Hand Spiral, Right Hand Cut
List No. **1533**: Cobalt, Straight Flute
List No. **1535**: Cobalt, Right Hand Spiral, Right Hand Cut

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MADE IN USA

Specifications					Price Each				
Diameter	Decimal Equivalent	Flute Length	Overall Length	Shank Diameter	**LV533 Straight Flute**	**LV535 RH Spiral**	**LV535L LH Spiral RH Cut**	**1533 Cobalt Str. Flt.**	**1535 Cobalt RH Spiral**
11/32	.3438	1 1/2	6	.2792	29.69	32.50	36.75	37.00	42.48
S	.3480	1 3/4	7	.3105	29.69	32.50	36.75	37.00	42.48
9mm	.3543	1 3/4	7	.3105	29.69	32.50	36.75	37.00	42.48
T	.3580	1 3/4	7	.3105	29.69	32.50	36.75	37.00	42.48
23/64	.3594	1 3/4	7	.3105	29.69	32.50	36.75	37.00	42.48
U	.3680	1 3/4	7	.3105	29.69	32.50	36.75	37.00	42.48
9.4mm	.3701	1 3/4	7	.3105	34.38	—	—	—	—
9.5mm	.3740	1 3/4	7	.3105	28.38	32.50	35.63	38.00	42.90
Under 3/8	.3740	1 3/4	7	.3105	28.38	32.50	35.63	38.00	42.90
3/8	.3750	1 3/4	7	.3105	26.75	29.69	33.75	34.00	38.72
Over 3/8	.3760	1 3/4	7	.3105	28.38	32.50	35.63	38.00	38.72
V	.3770	1 3/4	7	.3105	32.38	35.63	40.00	48.00	54.45
W	.3860	1 3/4	7	.3105	32.38	35.63	40.00	48.00	54.45
25/64	.3906	1 3/4	7	.3105	32.38	35.63	40.00	48.00	54.45
10mm	.3937	1 3/4	7	.3105	32.38	35.63	40.00	48.00	54.45
Over 10mm	.3947	1 3/4	7	.3105	58.75	—	—	—	—
X	.3970	1 3/4	7	.3105	32.38	35.63	40.00	48.00	54.45
Y	.4040	1 3/4	7	.3105	33.69	37.13	42.50	48.00	54.45
13/32	.4062	1 3/4	7	.3105	31.58	37.13	42.50	48.00	54.45
Z	.4130	1 3/4	7	.3730	33.69	37.13	42.50	48.00	54.45
10.5mm	.4134	1 3/4	7	.3730	33.69	37.13	42.50	48.00	54.45
27/64	.4219	1 3/4	7	.3730	33.69	37.13	42.50	48.00	54.45
11mm	.4331	1 3/4	7	.3730	33.69	37.13	42.50	48.00	54.45
Under 7/16	.4365	1 3/4	7	.3730	33.69	33.38	42.50	48.00	54.45
7/16	.4375	1 3/4	7	.3730	31.25	35.00	40.00	48.00	54.45
Over 7/16	.4385	1 3/4	7	.3730	33.69	37.13	42.50	48.00	54.45
11.5mm	.4528	1 3/4	7	.3730	36.88	40.38	46.00	54.50	61.60
29/64	.4531	1 3/4	7	.3730	36.88	40.38	46.00	54.50	61.60
15/32	.4688	1 3/4	7	.3730	36.88	40.38	46.00	54.50	61.60
12mm	.4724	2	8	.4355	36.88	40.38	46.00	54.50	—
31/64	.4844	2	8	.4355	36.88	40.38	46.00	54.50	61.60
12.5mm	.4921	2	8	.4355	36.88	40.38	46.00	54.50	61.60
Under 1/2	.4990	2	8	.4355	34.75	40.38	46.00	54.50	61.60
1/2	.5000	2	8	.4355	34.75	40.38	43.13	49.50	57.20
Over 1/2	.5010	2	8	.4355	34.75	40.38	46.00	62.68	61.60
13mm	.5118	2	8	.4355	45.00	55.00	—	74.75	—
33/64	.5156	2	8	.4355	45.00	55.00	60.00	78.20	—
17/32	.5312	2	8	.4355	45.00	47.93	52.50	71.30	69.63
13.5mm	.5315	2	8	.4355	45.00	55.00	58.75	—	—
35/64	.5469	2	8	.4355	45.00	57.50	61.25	83.24	—
14mm	.5512	2	8	.4355	45.00	61.25	—	83.24	—
Under 9/16	.5615	2	8	.4355	45.00	55.00	61.25	83.24	84.70
9/16	.5625	2	8	.4355	45.00	48.75	52.19	63.25	67.10
Over 9/16	.5635	2	8	.4355	45.00	88.00	94.13	90.85	98.58
14.5mm	.5709	2	8	.4355	45.00	47.24	—	—	—
37/64	.5781	2	8	.4355	45.00	56.25	65.00	91.89	—
15mm	.5906	2	8	.4355	45.00	56.25	—	—	—
19/32	.5938	2	8	.4355	45.00	50.00	52.50	63.25	67.10
39/64	.6094	2	8	.5620	51.25	67.50	75.00	94.30	98.45
15.5mm	.6102	2	8	.5620	51.25	67.50	76.88	—	—
Under 5/8	.6240	2 1/4	9	.5620	51.25	67.50	76.88	94.30	98.45
5/8	.6250	2 1/4	9	.5620	51.25	56.25	58.13	71.30	77.00
Over 5/8	.6260	2 1/4	9	.5620	51.25	67.50	76.88	94.30	98.45
16mm	.6299	2 1/4	9	.5620	51.25	69.38	78.44	97.75	—
41/64	.6406	2 1/4	9	.5620	51.25	69.38	78.44	101.20	—
16.5mm	.6496	2 1/4	9	.5620	51.25	69.38	—	—	—

Diameter Tolerance:	up to & including .2500"	+.0001"/ +.0004"	.2501" up to & including 1.000"	+.0001"/ +.0005"	1.0001" and over	+.0002"/ +.0006"

Chucking Reamers - Straight Shank
High Speed Steel & Cobalt



List No. **LV533**: High Speed, Straight Flute
List No. **LV535**: High Speed, Right Hand Spiral, Right Hand Cut
List No. **LV535L**: High Speed, Left Hand Spiral, Right Hand Cut
List No. **1533**: Cobalt, Straight Flute
List No. **1535**: Cobalt, Right Hand Spiral, Right Hand Cut



MADE IN USA

These high-quality tools are designed for most standard reaming needs.

Specifications					Price Each				
Diameter	Decimal Equivalent	Flute Length	Overall Length	Shank Diameter	**LV533 Straight Flute**	**LV535 RH Spiral**	**LV535L LH Spiral RH Cut**	**1533 Cobalt Str. Flt.**	**1535 Cobalt RH Spiral**
21/32	.6562	2 1/4	9	.5620	55.00	60.00	64.88	88.55	88.00
17mm	.6693	2 1/4	9	.5620	58.13	76.25	81.25	101.20	—
43/64	.6719	2 1/4	9	.5620	58.13	76.25	—	—	—
Under 11/16	.6865	2 1/4	9	.5620	101.25	107.50	105.00	113.85	129.80
11/16	.6875	2 1/4	9	.5620	58.13	63.75	68.75	88.55	88.00
Over 11/16	.6885	2 1/4	9	.5620	101.25	107.50	112.50	117.30	103.40
17.5mm	.6890	2 1/4	9	.5620	61.94	107.50	112.50	—	—
45/64	.7031	2 1/4	9	.5620	61.94	80.00	—	106.95	—
18mm	.7087	2 1/4	9	.5620	61.94	80.00	88.75	106.95	—
23/32	.7188	2 1/4	9	.5620	61.94	71.25	61.50	104.65	103.40
18.5mm	.7283	2 1/4	9	.5620	71.88	88.75	—	—	—
47/64	.7344	2 1/4	9	.5620	71.88	85.00	93.75	103.50	111.10
19mm	.7480	2 1/2	9 1/2	.6245	71.88	90.63	—	103.50	—
Under 3/4	.7490	2 1/2	9 1/2	.6245	71.88	90.63	98.75	103.50	101.00
3/4	.7500	2 1/2	9 1/2	.6245	71.88	71.25	76.88	91.43	97.90
Over 3/4	.7510	2 1/2	9 1/2	.6245	71.88	90.63	98.75	103.50	111.10
49/64	.7656	2 1/2	9 1/2	.6245	71.88	90.63	102.19	113.85	—
19.5mm	.7677	2 1/2	9 1/2	.6245	71.88	90.63	—	—	—
25/32	.7812	2 1/2	9 1/2	.6245	71.88	77.50	84.63	97.18	105.60
20mm	.7874	2 1/2	9 1/2	.6245	74.88	95.63	102.19	—	—
51/64	.7969	2 1/2	9 1/2	.6245	74.88	95.63	102.19	117.30	126.50
20.5mm	.8071	2 1/2	9 1/2	.6245	74.88	95.63	—	—	—
Under 13/16	.8115	2 1/2	9 1/2	.6245	74.88	95.63	98.75	117.30	126.50
13/16	.8125	2 1/2	9 1/2	.6245	74.88	78.75	84.63	101.20	105.60
Over 13/16	.8135	2 1/2	9 1/2	.6245	74.88	95.63	98.75	117.30	126.50
21mm	.8268	2 1/2	9 1/2	.6245	74.88	98.56	—	—	—
53/64	.8281	2 1/2	9 1/2	.6245	74.88	98.56	107.50	—	—
27/32	.8438	2 1/2	9 1/2	.6245	86.25	92.50	98.75	117.30	125.40
21.5mm	.8465	2 1/2	9 1/2	.7495	86.25	112.50	121.25	—	—
55/64	.8594	2 1/2	9 1/2	.7495	86.25	121.25	121.25	143.75	—
22mm	.8661	2 1/2	9 1/2	.7495	86.25	112.50	—	—	—
Under 7/8	.8740	2 5/8	10	.7495	86.25	112.50	123.75	143.75	146.30
7/8	.8750	2 5/8	10	.7495	86.25	95.63	107.50	118.45	126.50
Over 7/8	.8760	2 5/8	10	.7495	86.25	112.50	123.75	143.75	146.30
22.5mm	.8858	2 5/8	10	.7495	88.75	114.38	—	—	—
57/64	.8906	2 5/8	10	.7495	88.75	114.38	123.75	161.00	—
23mm	.9055	2 5/8	10	.7495	88.75	114.38	—	—	—
29/32	.9062	2 5/8	10	.7495	95.63	105.00	111.75	128.80	137.50
59/64	.9219	2 5/8	10	.7495	95.63	123.75	137.50	161.00	—
23.5mm	.9252	2 5/8	10	.7495	95.63	123.75	—	—	—
Under 15/16	.9365	2 5/8	10	.7495	112.38	140.00	—	161.00	176.00
15/16	.9375	2 5/8	10	.7495	95.63	105.00	111.75	129.95	137.50
Over 15/16	.9385	2 5/8	10	.7495	140.00	151.25	156.25	181.70	187.00
24mm	.9449	2 5/8	10	.7495	95.63	123.75	137.50	—	—
61/64	.9531	2 5/8	10	.7495	95.63	123.75	137.50	171.35	—
24.5mm	.9646	2 5/8	10	.7495	95.63	123.75	—	—	—
31/32	.9688	2 5/8	10	.7495	101.25	115.00	123.75	147.20	154.00
25mm	.9843	2 3/4	10 1/2	.8745	101.25	130.50	—	—	—
63/64	.9844	2 3/4	10 1/2	.8745	101.25	130.50	148.75	170.20	176.00
Under 1	.9990	2 3/4	10 1/2	.8745	101.25	130.00	—	128.00	176.00
1	1.0000	2 3/4	10 1/2	.8745	101.25	115.00	123.75	128.00	157.30
Over 1	1.0010	2 3/4	10 1/2	.8745	107.19	130.50	161.25	148.00	176.00
25.5mm	1.0039	2 3/4	10 1/2	.8745	107.19	145.00	160.00	—	—
1 1/64	1.0156	2 3/4	10 1/2	.8745	160.00	—	—	—	—
1 1/32	1.0312	2 3/4	10 1/2	.8745	143.75	155.00	—	—	—
1 1/16	1.0625	2 3/4	10 1/2	.8745	112.50	129.69	110.00	139.00	—

Diameter Tolerance:	up to & including .2500"	+.0001"/ +.0004"	.2501" up to & including 1.000"	+.0001"/ +.0005"	1.0001" and over	+.0002"/ +.0006"

Chucking Reamers - Straight Shank
High Speed Steel & Cobalt


LV533

List No. **LV533**: High Speed, Straight Flute
List No. **LV535**: High Speed, Right Hand Spiral, Right Hand Cut
List No. **LV535L**: High Speed, Left Hand Spiral, Right Hand Cut
List No. **1533**: Cobalt, Straight Flute
List No. **1535**: Cobalt, Right Hand Spiral, Right Hand Cut

These high-quality tools are designed for most standard reaming needs.



MADE IN USA

Specifications					Price Each			
Diameter	Decimal Equivalent	Flute Length	Overall Length	Shank Diameter	**LV533 Straight Flute**	**LV535 RH Spiral**	**LV535L LH Spiral RH Cut**	**1533 Cobalt Str. Flt.**
27mm	1.0630	2 7/8	11	.8745	135.00	—	—	—
1 3/32	1.0938	2 7/8	11	.8745	119.00	140.00	150.00	—
28.5mm	1.1220	2 7/8	11	.8745	148.00	—	—	—
1 1/8	1.1250	2 7/8	11	.8745	95.00	108.00	117.50	153.00
29mm	1.1417	2 7/8	11	.8745	170.00	—	—	—
1 5/32	1.1562	2 7/8	11	.9995	142.00	155.00	—	—
30mm	1.1811	2 7/8	11	.9995	142.00	—	—	—
1 3/16	1.1875	2 7/8	11	.9995	115.00	126.00	137.00	176.00
1 7/32	1.2188	2 7/8	11 1/2	.9995	144.00	160.00	172.00	—
31mm	1.2205	2 7/8	11 1/2	.9995	162.90	—	—	—
1 1/4	1.2500	3	11 1/2	.9995	119.70	136.00	146.00	188.00
1 9/32	1.2812	3	11 1/2	.9995	162.90	175.00	—	—
1 5/16	1.3125	3	11 1/2	.9995	140.00	160.00	170.00	220.00
1 11/32	1.3438	3 1/4	12	.9995	155.00	172.00	188.00	—
Under 1 3/8	1.3740	3 1/4	12	.9995	180.00	—	—	—
1 3/8	1.3750	3 1/4	12	.9995	146.70	169.00	179.00	230.00
1 13/32	1.4062	3 1/4	12	1.2495	180.00	197.00	—	—
1 7/16	1.4375	3 1/4	12	1.2495	157.00	180.00	196.36	249.00
1 15/32	1.4688	3 1/2	12 1/2	1.2495	191.00	208.00	—	—
1 1/2	1.5000	3 1/2	12 1/2	1.2495	170.00	195.00	206.00	269.00
1 9/16	1.5625	3 1/2	12 1/2	1.2495	240.00	280.00	295.00	—
1 5/8	1.6250	3 5/8	13	1.2495	245.00	285.00	295.00	—
1 11/16	1.6875	3 5/8	13	1.2495	277.00	315.00	—	—
1 3/4	1.7500	4	13 1/2	1.2495	277.00	—	—	—
1 7/8	1.8750	4	14	1.4995	318.00	—	—	—
1 15/16	1.9375	4	14	1.4995	—	—	449.00	—
2	2.0000	4	14	1.4995	370.00	—	453.00	—

Diameter Tolerance:	1″ Through 2″	+.0002″ +.005m/m +.0006″ +.015m/m

Chucking Reamer Sets

Fractional Sets These sets provide a method of maintaining a complete stock of reamers in ranges to suit your requirements. A set on a machinist's workbench saves many trips to the tool crib.

Description	Sizes	Pieces	Case Type	**Set No.**	Price
H.S. Straight Flute	1/16 – 1/4 by 64^{ths}	13	Wood	**LV533-6W**	330.84
H.S. Straight Flute	1/16 – 1/4 by 64^{ths}	13	Plastic	**LV533-6P**	259.59
H.S. Straight Flute	1/16 – 1/2 by 32^{nds}	15	Plastic	**LV533-42P**	387.40
H.S. Straight Flute	1/16 – 3/8 by 64^{ths}	21	Plastic	**LV533-40P**	485.28
H.S. Straight Flute	1/16 – 1/2 by 64^{ths}	29	Wood	**LV533-8W**	830.90
H.S. Straight Flute	1/16 – 1/2 by 64^{ths}	29	Plastic	**LV533-8P**	759.65
H.S. Straight Flute	1/16 – 1/2 by 64^{ths}	29	Metal	**LV533-8M**	787.78
H.S. RH Spiral	1/16 – 1/4 by 64^{ths}	13	Wood	**LV535-1W**	373.63
H.S. RH Spiral	1/16 – 1/4 by 64^{ths}	13	Plastic	**LV535-1P**	302.38
H.S. RH Spiral	1/16 – 1/2 by 32^{nds}	15	Plastic	**LV535-43P**	440.41
H.S. RH Spiral	1/16 – 3/8 by 64^{ths}	21	Plastic	**LV535-41P**	548.54
H.S. RH Spiral	1/16 – 1/2 by 64^{ths}	29	Wood	**LV535-3W**	926.16
H.S. RH Spiral	1/16 – 1/2 by 64^{ths}	29	Metal	**LV535-3M**	883.04
H.S. RH Spiral	1/16 – 1/2 by 64^{ths}	29	Plastic	**LV535-3P**	854.91
H.S. LH Spiral	1/16 – 1/2 by 64^{ths}	29	Wood	**LV535L-4W**	1026.75
H.S. LH Spiral	1/16 – 1/2 by 64^{ths}	29	Plastic	**LV535L-4P**	955.50
Cobalt Straight Flute	1/16 – 1/2 by 64^{ths}	29	Wood	**1533-C8W**	1027.00
Cobalt Straight Flute	1/16 – 1/2 by 64^{ths}	29	Metal	**1533-C8M**	992.50
Cobalt Straight Flute	1/16 – 1/2 by 64^{ths}	29	Plastic	**1533-C8P**	970.00
Cobalt RH Spiral	1/16 – 1/2 by 64^{ths}	29	Wood	**1535-C3W**	1175.32
Cobalt RH Spiral	1/16 – 1/2 by 64^{ths}	29	Metal	**1535-C3M**	1137.37


LV533-6W


LV533-42P


LV533-8M

Chucking Reamer Sets

These sets provide a method of maintaining a complete stock of reamers in ranges to suit your requirements. A set on a machinist's workbench saves many trips to the tool crib.


LV533-6W


LV533-8M


LV533-32P

Wire Gauge Sets

Description	Sizes	Pieces	Case Type	Set No.	Price
H.S. Straight Flute	#1 – #60	60	Wood	**LV533-13W**	987.00
H.S. Straight Flute	#1 – #60	60	Metal	**LV533-13M**	945.00
H.S. Straight Flute	#1 – #60	60	Plastic	**LV533-13P**	931.57
H.S. Straight Flute	#61 – #80	20	Metal	**LV533-15M**	348.75
H.S. RH Spiral	#1 – #60	60	Wood	**LV535-10W**	1113.90
H.S. RH Spiral	#1 – #60	60	Metal	**LV535-10M**	1084.60
H.S. RH Spiral	#1 – #60	60	Plastic	**LV535-10P**	1059.47
H.S. LH Spiral	#1 – #60	60	Wood	**LV535L-11W**	1247.70
H.S. LH Spiral	#1 – #60	60	Plastic	**LV535L-11P**	1192.27
Cobalt Straight Flute	#1 – #60	60	Wood	**1533-C13W**	1319.50
Cobalt Straight Flute	#1 – #60	60	Metal	**1533-C13M**	1227.50
Cobalt Straight Flute	#1 – #60	60	Plastic	**1533-C13P**	1264.07

Letter Sets

Description	Sizes	Pieces	Case Type	Set No.	Price
H.S. Straight Flute	A – Z	26	Wood	**LV533-23W**	814.81
H.S. Straight Flute	A – Z	26	Metal	**LV533-23M**	771.69
H.S. Straight Flute	A – Z	26	Plastic	**LV533-23P**	743.56
H.S. Right Hand Spiral	A – Z	26	Metal	**LV535-20M**	822.56
Cobalt Straight Flute	A – Z	26	Wood	**1533-C23W**	983.50
Cobalt Straight Flute	A – Z	26	Metal	**1533-C23M**	949.00
Cobalt Straight Flute	A – Z	26	Plastic	**1533-C23P**	926.50

Metric Sets

Description	Sizes	Pieces	Case Type	Set No.	Price
H.S. Straight Flute	1mm – 7mm by .5	13	Wood	**LV533-16W**	298.25
H.S. Straight Flute	1mm – 7mm by .5	13	Plastic	**LV533-16P**	227.00
H.S. Straight Flute	1mm – 13mm by .5	25	Plastic	**LV533-17P**	677.81

Over & Under Sets

Description	Sizes	Pieces	Case Type	Set No.	Price
H.S. Straight Flute	.1240 – .5010	14	Wood	**LV533-32W**	447.13
H.S. Straight Flute	.1240 – .5010	14	Metal	**LV533-32M**	404.00
H.S. Straight Flute	.1240 – .5010	14	Plastic	**LV533-32P**	375.88
H.S. RH Spiral	.1240 – .5010	14	Wood	**LV535-30W**	499.38
H.S. RH Spiral	.1240 – .5010	14	Plastic	**LV535-30P**	428.13
H.S. LH Spiral	.1240 – .5010	14	Wood	**LV535L-31W**	558.75
H.S. LH Spiral	.1240 – .5010	14	Plastic	**LV535L-31P**	487.50
Cobalt Straight Flute	.1240 – .5010	14	Wood	**1533-C32W**	544.50
Cobalt Straight Flute	.1240 – .5010	14	Plastic	**1533-C32P**	487.50
Cobalt RH Spiral	.1240 – .5010	14	Wood	**1535-C32W**	623.48
Cobalt RH Spiral	.1240 – .5010	14	Plastic	**1535-C32P**	509.80

Diameter Tolerance:	up to & including .2500"	+.0001"/ +.0004"	.2501" up to & including 1.000"	+.0001"/ +.0005"

Chucking Reamers - Straight Shank - H.S. & Cobalt

Intermediate Decimal Sizes

List No. **LV533**: High Speed, Straight Flute
List No. **LV535**: High Speed, Right Hand Spiral, Right Hand Cut
List No. **LV535L**: High Speed, Left Hand Spiral, Right Hand Cut
List No. **1533**: Cobalt, Straight Flute
List No. **1535**: Cobalt, Right Hand Spiral, Right Hand Cut



MADE IN USA

Size	Price Each				
	LV533 Straight Flute	LV535 RH Spiral	LV535L LH Sp. RH Cut	1533 Cobalt Str. Flt.	1535 Cobalt RH Sp.
.0355	35.00	----	----	----	----
.0405	31.00	33.75	37.50	----	----
.0415	31.00	33.75	37.50	----	----
.0425	31.00	33.75	37.50	----	----
.0435	31.00	33.75	37.50	----	----
.0440	31.00	33.75	37.50	----	----
.0445	31.00	33.75	37.50	----	----
.0450	31.00	33.75	37.50	----	----
.0455	31.00	33.75	37.50	----	----
.0460	31.00	33.75	37.50	----	----
.0470	31.00	33.75	37.50	38.00	----
.0475	31.00	33.75	37.50	----	----
.0480	31.00	33.75	37.50	----	----
.0485	31.00	33.75	37.50	----	----
.0490	31.00	33.75	37.50	38.00	----
.0495	31.00	33.75	37.50	----	----
.0500	31.00	33.75	37.50	----	----
.0505	31.00	33.75	37.50	38.00	----
.0510	31.00	33.75	37.50	----	----
.0512	35.00	----	----	57.00	
.0514	35.00	----	----	----	----
.0515	31.00	33.75	37.50	38.00	----
.0525	31.00	33.75	37.50	----	----
.0530	31.00	33.75	37.50	----	----
.0535	31.00	33.75	37.50	----	----
.0540	31.00	33.75	37.50	----	----
.0545	31.00	33.75	37.50	----	----
.0555	31.00	33.75	37.50	----	----
.0560	31.00	33.75	37.50	----	----
.0565	31.00	33.75	37.50	----	----
.0570	31.00	33.75	37.50	----	----
.0575	31.00	33.75	37.50	----	----
.0580	31.00	33.75	37.50	----	----
.0585	31.00	33.75	37.50	----	----
.0590	31.00	33.75	37.50	----	----
.0600	31.00	33.75	37.50	----	----
.0605	31.00	33.75	37.50	----	----
.0610	31.00	33.75	37.50	51.94	62.84
.0615	31.00	33.75	37.50	----	----
.0620	31.00	33.75	37.50	51.94	----
.0623	35.00	33.00	----	----	----
.0628	35.00	----	----	57.00	----
.0630	31.00	33.75	37.50	51.94	62.84
.0637	35.00	----	----	----	----
.0640	31.00	33.75	37.50	51.94	62.84
.0645	31.00	33.75	37.50	51.94	62.84
.0650	31.00	33.75	37.50	51.94	62.84
.0655	31.00	33.75	37.50	51.94	62.84
.0660	31.00	33.75	37.50	51.94	62.84
.0665	31.00	33.75	37.50	51.94	62.84
.0675	31.00	33.75	37.50	51.94	62.84
.0680	31.00	33.75	37.50	51.94	62.84
.0685	31.00	33.75	37.50	51.94	62.84
.0690	31.00	33.75	37.50	51.94	62.84
.0695	31.00	33.75	37.50	51.94	62.84
.0702	35.00	----	----	----	----
.0705	31.00	33.75	37.50	51.94	62.84
.0710	31.00	33.75	37.50	51.94	62.84
.0715	31.00	33.75	37.50	51.94	62.84

Size	Price Each				
	LV533 Straight Flute	LV535 RH Spiral	LV535L LH Sp. RH Cut	1533 Cobalt Str. Flt.	1535 Cobalt RH Sp.
.0720	31.00	33.75	37.50	51.94	62.84
.0725	31.00	33.75	37.50	51.94	62.84
.0727	35.00	----	----	----	----
.0735	31.00	33.75	37.50	51.94	62.84
.0740	31.00	33.75	37.50	51.94	62.84
.0745	31.00	33.75	37.50	51.94	62.84
.0750	31.00	33.75	37.50	51.94	62.84
.0755	31.00	33.75	37.50	51.94	62.84
.0763	35.00	----	----	----	----
.0764	35.00	----	----	----	----
.0765	31.00	33.75	37.50	51.94	62.84
.0766	35.00	----	----	----	----
.0769	35.00	----	----	----	----
.0770	31.00	33.75	37.50	51.94	62.84
.0775	31.00	33.75	37.50	51.94	62.84
.0780	31.00	33.75	37.50	51.94	62.84
.0790	31.00	33.75	37.50	51.94	62.84
.0791	23.38	----	----	----	----
.0795	31.00	33.75	37.50	51.94	62.84
.0798	35.00	----	----	----	----
.0799	35.00	----	----	----	----
.0800	31.00	33.75	37.50	51.94	62.84
.0801	35.00	----	----	----	----
.0803	35.00	----	----	----	----
.0805	31.00	33.75	37.50	51.94	62.84
.0815	31.00	33.75	37.50	51.94	62.84
.0825	31.00	33.75	37.50	51.94	62.84
.0830	31.00	33.75	37.50	51.94	62.84
.0835	31.00	33.75	37.50	51.94	62.84
.0840	31.00	33.75	37.50	51.94	62.84
.0845	31.00	33.75	37.50	51.94	62.84
.0850	31.00	33.75	37.50	51.94	62.84
.0855	31.00	33.75	37.50	51.94	62.84
.0865	31.00	33.75	37.50	51.94	62.84
.0870	31.00	33.75	37.50	51.94	62.84
.0875	31.00	33.75	37.50	51.94	62.84
.0880	31.00	33.75	37.50	51.94	62.84
.0882	35.00	----	----	----	----
.0885	31.00	33.75	37.50	51.94	62.84
.0895	31.00	33.75	37.50	51.94	62.84
.0897	74.45	----	----	----	----
.0900	31.00	33.75	37.50	51.94	62.84
.0905	31.00	33.75	37.50	51.94	62.84
.0910	31.00	33.75	37.50	51.94	62.84
.0915	31.00	33.75	37.50	51.94	62.84
.0917	35.00	----	----	----	----
.0918	35.00	----	----	----	----
.0920	31.00	33.75	37.50	51.94	62.84
.0923	35.00	----	----	----	----
.0925	31.00	33.75	37.50	51.94	62.84
.0927	35.00	41.25	----	----	----
.0928	35.00	----	----	57.00	----
.0929	35.00	----	----	----	----
.0930	31.00	33.75	37.50	51.94	62.84
.0931	35.00	----	----	----	----
.0932	35.00	----	----	57.00	----
.0933	35.00	41.25	----	57.00	----
.0937	35.00	----	----	57.00	----
.0940	31.00	33.75	37.50	51.94	62.84

Note: **Tolerance**, **Flute Length**, **Overall Length**, and **Shank Diameter** are comparable to the closest standard size. See pages 4-9.

Chucking Reamers - Straight Shank - H.S. & Cobalt

Intermediate Decimal Sizes

List No. **LV533**: High Speed, Straight Flute
List No. **LV535**: High Speed, Right Hand Spiral, Right Hand Cut
List No. **LV535L**: High Speed, Left Hand Spiral, Right Hand Cut
List No. **1533**: Cobalt, Straight Flute
List No. **1535**: Cobalt, Right Hand Spiral, Right Hand Cut



MADE IN USA

Size	Price Each				
	LV533 Straight Flute	LV535 RH Spiral	LV535L LH Sp. RH Cut	1533 Cobalt Str. Flt.	1535 Cobalt RH Sp.
.0942	35.00	41.25	----	57.00	----
.0943	35.00	----	----	57.00	----
.0944	35.00	----	----	----	----
.0945	31.00	33.75	37.50	51.94	62.84
.0947	35.00	41.25	----	----	----
.0950	31.00	33.75	37.50	51.94	62.84
.0953	35.00	----	----	----	----
.0955	31.00	33.75	37.50	51.94	62.84
.0965	31.00	33.75	37.50	51.94	62.84
.0967	35.00	----	----	----	----
.0968	35.00	----	----	----	----
.0969	35.00	----	----	----	----
.0970	31.00	33.75	37.50	51.94	62.84
.0971	35.00	----	----	----	----
.0972	35.00	----	----	----	----
.0975	31.00	33.75	37.50	51.94	62.84
.0976	35.00	----	----	----	----
.0977	35.00	----	----	57.00	----
.0985	31.00	33.75	37.50	51.94	62.84
.0988	35.00	----	----	57.00	----
.0990	31.00	33.75	37.50	51.94	62.84
.1000	31.00	33.75	37.50	51.94	62.84
.1002	35.00	----	----	----	----
.1004	35.00	----	----	----	----
.1005	31.00	33.75	37.50	51.94	62.84
.1008	35.00	----	----	----	----
.1010	31.00	33.75	37.50	51.94	62.84
.1011	35.00	----	----	----	----
.1020	31.00	33.75	37.50	51.94	62.84
.1023	35.00	----	----	----	----
.1025	31.00	33.75	37.50	51.94	62.84
.1027	35.00	----	----	----	----
.1030	31.00	33.75	37.50	51.94	62.84
.1035	31.00	33.75	37.50	51.94	62.84
.1045	31.00	33.75	37.50	51.94	62.84
.1048	35.00	----	----	----	----
.1050	31.00	33.75	37.50	51.94	62.84
.1055	31.00	33.75	37.50	51.94	62.84
.1057	35.00	----	----	----	----
.1060	31.00	33.75	37.50	51.94	62.84
.1062	35.00	----	----	----	----
.1070	31.00	33.75	37.50	51.94	62.84
.1075	31.00	33.75	37.50	51.94	62.84
.1078	35.00	----	----	----	----
.1080	31.00	33.75	37.50	51.94	62.84
.1082	35.00	----	----	----	----
.1085	31.00	33.75	37.50	51.94	62.84
.1087	35.00	----	----	----	----
.1090	31.00	33.75	37.50	51.94	62.84
.1092	35.00	----	----	----	----
.1095	26.75	30.63	35.00	51.94	62.84
.1105	26.75	30.63	35.00	51.94	62.84
.1115	26.75	30.63	35.00	51.94	62.84
.1120	26.75	30.63	35.00	51.94	62.84
.1122	35.00	----	----	----	----
.1125	26.75	30.63	35.00	51.94	62.84
.1135	26.75	30.63	35.00	51.94	62.84
.1140	26.75	30.63	35.00	51.94	62.84
.1145	26.75	30.63	35.00	51.94	62.84

Size	Price Each				
	LV533 Straight Flute	LV535 RH Spiral	LV535L LH Sp. RH Cut	1533 Cobalt Str. Flt.	1535 Cobalt RH Sp.
.1150	26.75	24.50	35.00	51.94	62.84
.1155	26.75	24.50	35.00	51.94	62.84
.1157	73.45	----	----	----	----
.1165	26.75	24.50	35.00	51.94	62.84
.1169	73.45	33.00	----	----	----
.1170	26.75	24.50	35.00	51.94	62.84
.1171	19.94	----	----	----	----
.1173	35.00	----	----	----	----
.1175	26.75	24.50	35.00	51.94	62.84
.1177	35.00	----	----	----	----
.1178	35.00	----	----	57.00	----
.1180	26.75	24.50	35.00	51.94	62.84
.1185	26.75	24.50	35.00	51.94	62.84
.1190	26.75	24.50	35.00	51.94	62.84
.1191	19.94	----	----	----	----
.1192	35.00	----	----	----	----
.1193	35.00	----	----	----	----
.1195	26.75	24.50	35.00	51.94	62.84
.1197	35.00	----	----	----	----
.1198	35.00	----	----	----	----
.1201	35.00	----	----	----	----
.1202	35.00	----	----	----	----
.1204	35.00	----	----	----	----
.1205	26.75	24.50	35.00	51.94	62.84
.1208	35.00	----	----	----	----
.1210	26.75	24.50	35.00	51.94	62.84
.1213	35.00	----	----	----	----
.1215	26.75	24.50	35.00	51.94	62.84
.1220	26.75	24.50	35.00	51.94	62.84
.1223	35.00	----	----	----	----
.1224	35.00	----	----	----	----
.1225	26.75	24.50	35.00	51.94	62.84
.1227	35.00	----	----	----	----
.1228	35.00	----	----	----	----
.1230	26.75	24.50	35.00	51.94	62.84
.1235	26.75	24.50	35.00	51.94	62.84
.1237	35.00	----	----	57.00	----
.1238	35.00	----	----	----	----
.1239	35.00	----	----	----	----
.1240	16.13	14.80	20.25	18.00	20.90
.1243	35.00	33.00	----	----	----
.1245	26.75	24.50	35.00	51.94	62.84
.1246	35.00	----	----	----	----
.1247	41.25	38.00	----	57.00	68.75
.1248	35.00	----	----	----	----
.1249	35.00	----	----	57.00	----
.1251	41.25	----	----	57.00	----
.1252	41.25	----	----	57.00	----
.1253	41.25	----	----	57.00	----
.1254	41.25	38.00	----	57.00	----
.1255	32.13	29.50	33.75	53.56	64.80
.1257	41.25	----	----	57.00	----
.1258	41.25	----	----	----	----
.1260	16.13	14.80	20.25	18.00	20.90
.1261	41.25	----	----	----	----
.1262	41.25	----	----	----	----
.1264	41.25	----	----	----	----
.1265	32.13	29.50	42.19	53.56	64.80
.1267	41.25	----	----	----	----

Note: **Tolerance**, **Flute Length**, **Overall Length**, and **Shank Diameter** are comparable to the closest standard size. See pages 4-9.

Chucking Reamers - Straight Shank - H.S. & Cobalt

Intermediate Decimal Sizes

List No. **LV533**: High Speed, Straight Flute
List No. **LV535**: High Speed, Right Hand Spiral, Right Hand Cut
List No. **LV535L**: High Speed, Left Hand Spiral, Right Hand Cut
List No. **1533**: Cobalt, Straight Flute
List No. **1535**: Cobalt, Right Hand Spiral, Right Hand Cut



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Size	Price Each				
	LV533 Straight Flute	LV535 RH Spiral	LV535L LH Sp. RH Cut	1533 Cobalt Str. Flt.	1535 Cobalt RH Sp.
.1270	25.70	29.50	33.75	53.56	58.91
.1272	33.00	—	—	—	—
.1273	33.00	—	—	—	—
.1274	33.00	—	—	—	—
.1275	25.70	29.50	33.75	53.56	58.91
.1280	25.70	29.50	33.75	53.56	58.91
.1287	33.00	—	—	—	—
.1290	25.70	29.50	33.75	53.56	58.91
.1291	33.00	—	—	—	—
.1295	25.70	29.50	33.75	53.56	58.91
.1297	33.00	—	—	—	—
.1300	25.70	29.50	33.75	53.56	58.91
.1305	25.70	29.50	33.75	53.56	58.91
.1307	33.00	—	—	—	—
.1310	25.70	29.50	33.75	53.56	58.91
.1315	25.70	29.50	33.75	53.56	58.91
.1320	25.70	29.50	33.75	53.56	58.91
.1322	33.00	—	—	—	—
.1325	25.70	29.50	33.75	53.56	58.91
.1330	25.70	29.50	33.75	53.56	58.91
.1335	25.70	29.50	33.75	53.56	58.91
.1340	25.70	29.50	33.75	53.56	58.91
.1345	25.70	29.50	33.75	53.56	58.91
.1350	25.70	29.50	33.75	53.56	58.91
.1354	33.00	—	—	—	—
.1355	25.70	29.50	33.75	53.56	58.91
.1364	33.00	—	—	—	—
.1365	25.70	29.50	33.75	53.56	58.91
.1370	25.70	29.50	33.75	53.56	58.91
.1374	33.00	—	—	—	—
.1375	25.70	29.50	33.75	53.56	58.91
.1376	33.00	—	—	—	—
.1377	33.00	—	—	—	—
.1380	25.70	29.50	33.75	53.56	58.91
.1382	33.00	—	—	—	—
.1383	33.00	—	—	—	—
.1385	25.70	29.50	33.75	53.56	58.91
.1386	33.00	38.00	—	—	—
.1390	25.70	29.50	33.75	53.56	58.91
.1392	33.00	—	—	—	—
.1393	33.00	—	—	—	—
.1395	25.70	29.50	33.75	53.56	58.91
.1396	33.00	—	—	—	—
.1397	33.00	—	—	—	—
.1398	33.00	—	—	—	—
.1399	33.00	—	—	—	—
.1400	25.70	29.50	33.75	53.56	58.91
.1402	33.00	—	—	—	—
.1407	33.00	—	—	—	—
.1408	33.00	—	—	—	—
.1409	33.00	—	—	—	—
.1410	25.70	29.50	33.75	53.56	58.91
.1411	33.00	—	—	—	—
.1414	33.00	—	—	—	—
.1415	25.70	29.50	33.75	53.56	58.91
.1416	33.00	—	—	—	—
.1420	25.70	29.50	33.75	53.56	58.91
.1424	33.00	—	—	—	—
.1425	25.70	29.50	33.75	53.56	58.91

Size	Price Each				
	LV533 Straight Flute	LV535 RH Spiral	LV535L LH Sp. RH Cut	1533 Cobalt Str. Flt.	1535 Cobalt RH Sp.
.1427	33.00	—	—	—	—
.1430	25.70	29.50	33.75	53.56	58.91
.1432	33.00	—	—	—	—
.1435	25.70	29.50	33.75	53.56	58.91
.1438	33.00	—	—	—	—
.1442	33.00	—	—	—	—
.1443	33.00	—	—	—	—
.1445	25.70	29.50	33.75	53.56	58.91
.1448	33.00	—	—	—	—
.1449	33.00	—	—	—	—
.1450	25.70	29.50	33.75	53.56	58.91
.1452	33.00	—	—	—	—
.1455	25.70	29.50	33.75	53.56	58.91
.1456	33.00	—	—	—	—
.1457	33.00	—	—	—	—
.1460	25.70	29.50	33.75	53.56	58.91
.1462	33.00	—	—	—	—
.1465	25.70	29.50	33.75	53.56	58.91
.1472	33.00	—	—	—	—
.1475	25.70	29.50	33.75	53.56	58.91
.1480	25.70	29.50	33.75	53.56	58.91
.1485	25.70	29.50	33.75	53.56	58.91
.1490	25.70	29.50	33.75	53.56	58.91
.1497	33.00	—	—	—	—
.1498	33.00	—	—	—	—
.1500	25.70	29.50	33.75	53.56	58.91
.1502	33.00	—	—	—	—
.1503	33.00	—	—	—	—
.1504	33.00	—	—	—	—
.1505	25.70	29.50	33.75	53.56	58.91
.1506	33.00	—	—	—	—
.1510	25.70	29.50	33.75	53.56	58.91
.1512	33.00	38.00	—	—	—
.1515	25.70	29.50	33.75	53.56	58.91
.1516	33.00	—	—	—	—
.1525	25.70	29.50	33.75	53.56	58.91
.1530	25.70	29.50	33.75	53.56	58.91
.1532	33.00	—	—	—	—
.1535	25.70	29.50	33.75	53.56	58.91
.1542	33.00	—	—	—	—
.1543	33.00	—	—	—	—
.1545	25.70	29.50	33.75	53.56	58.91
.1550	25.70	29.50	33.75	53.56	58.91
.1552	18.90	—	—	—	—
.1553	33.00	—	—	—	—
.1555	25.70	29.50	33.75	53.56	58.91
.1556	33.00	—	—	—	—
.1560	25.70	29.50	33.75	53.56	58.91
.1565	25.70	29.50	33.75	53.56	58.91
.1566	33.00	—	—	—	—
.1567	33.00	—	—	—	—
.1572	33.00	—	—	53.56	—
.1579	33.00	—	—	—	—
.1580	25.70	29.50	33.75	53.56	58.91
.1585	25.70	29.50	33.75	53.56	58.91
.1591	33.00	—	—	—	—
.1595	25.70	29.50	33.75	53.56	58.91
.1596	33.00	—	—	—	—
.1598	33.00	—	—	—	—

Note: **Tolerance**, **Flute Length**, **Overall Length**, and **Shank Diameter** are comparable to the closest standard size. See pages 152-157.

Chucking Reamers - Straight Shank - H.S. & Cobalt

Intermediate Decimal Sizes

List No. **LV533**: High Speed, Straight Flute
List No. **LV535**: High Speed, Right Hand Spiral, Right Hand Cut
List No. **LV535L**: High Speed, Left Hand Spiral, Right Hand Cut
List No. **1533**: Cobalt, Straight Flute
List No. **1535**: Cobalt, Right Hand Spiral, Right Hand Cut



MADE IN USA

Size	Price Each				
	LV533 Straight Flute	LV535 RH Spiral	LV535L LH Sp. RH Cut	1533 Cobalt Str. Flt.	1535 Cobalt RH Sp.
.1600	32.13	36.88	42.19	53.56	64.80
.1605	32.13	36.88	42.19	53.56	64.80
.1615	32.13	36.88	42.19	53.56	64.80
.1617	41.25	----	----	----	----
.1620	32.13	36.88	42.19	53.56	64.80
.1625	32.13	36.88	42.19	53.56	64.80
.1630	32.13	36.88	42.19	53.56	64.80
.1635	32.13	36.88	42.19	53.56	64.80
.1640	32.13	36.88	42.19	53.56	64.80
.1645	32.13	36.88	42.19	53.56	64.80
.1647	41.25	----	----	64.00	----
.1650	32.13	36.88	42.19	53.56	64.80
.1655	32.13	36.88	42.19	53.56	64.80
.1665	32.13	36.88	42.19	53.56	64.80
.1670	32.13	36.88	42.19	53.56	64.80
.1675	32.13	36.88	42.19	53.56	64.80
.1680	32.13	36.88	42.19	53.56	64.80
.1685	32.13	36.88	42.19	53.56	64.80
.1690	32.13	36.88	42.19	53.56	64.80
.1700	32.13	36.88	42.19	53.56	64.80
.1701	41.25	----	----	----	----
.1705	32.13	36.88	42.19	53.56	64.80
.1710	32.13	36.88	42.19	53.56	64.80
.1715	32.13	36.88	42.19	53.56	64.80
.1720	32.13	36.88	42.19	53.56	64.80
.1725	32.13	36.88	42.19	53.56	64.80
.1734	41.25	----	----	----	----
.1735	32.13	36.88	42.19	53.56	64.80
.1740	32.13	36.88	42.19	53.56	64.80
.1745	32.13	36.88	42.19	53.56	64.80
.1750	32.13	36.88	42.19	53.56	64.80
.1755	32.13	36.88	42.19	53.56	64.80
.1760	32.13	36.88	42.19	53.56	64.80
.1765	32.13	36.88	42.19	53.56	64.80
.1775	32.13	36.88	42.19	53.56	64.80
.1780	32.13	36.88	42.19	53.56	64.80
.1785	32.13	36.88	42.19	53.56	64.80
.1786	41.25	----	----	----	----
.1790	32.13	36.88	42.19	53.56	64.80
.1795	32.13	36.88	42.19	53.56	64.80
.1802	41.25	----	----	59.00	----
.1805	32.13	36.88	42.19	53.56	64.80
.1806	41.25	----	----	----	----
.1810	32.13	36.88	42.19	53.56	64.80
.1813	41.25	----	----	----	----
.1815	32.13	36.88	42.19	53.56	64.80
.1818	41.25	----	----	----	----
.1822	41.25	----	----	----	----
.1825	32.13	36.88	42.19	53.56	64.80
.1830	32.13	36.88	42.19	53.56	64.80
.1835	32.13	36.88	42.19	53.56	64.80
.1840	32.13	36.88	42.19	53.56	64.80
.1845	32.13	36.88	42.19	53.56	64.80
.1855	32.13	36.88	42.19	53.56	64.80
.1856	41.25	----	----	----	----
.1857	41.25	----	----	----	----
.1860	32.13	36.88	42.19	53.56	64.80
.1865	20.38	23.50	26.88	22.00	25.85
.1866	41.25	----	----	----	----

Size	Price Each				
	LV533 Straight Flute	LV535 RH Spiral	LV535L LH Sp. RH Cut	1533 Cobalt Str. Flt.	1535 Cobalt RH Sp.
.1867	41.25	----	----	----	----
.1868	41.25	----	----	----	----
.1870	32.13	36.88	42.19	56.48	68.33
.1872	41.25	----	----	59.00	68.33
.1873	41.25	----	----	----	----
.1877	41.25	----	----	59.00	68.33
.1880	32.13	36.88	42.19	56.48	68.33
.1882	41.25	47.50	----	----	----
.1883	41.25	----	----	----	----
.1885	20.38	23.50	26.88	22.00	25.85
.1887	41.25	----	----	----	----
.1895	32.13	36.88	42.19	56.48	68.33
.1897	41.25	----	----	----	----
.1900	32.13	36.88	42.19	56.48	68.33
.1905	32.13	36.88	42.19	56.48	68.33
.1915	32.13	36.88	42.19	56.48	68.33
.1920	32.13	36.88	42.19	56.48	68.33
.1925	32.13	36.88	42.19	56.48	68.33
.1930	32.13	36.88	42.19	56.48	68.33
.1940	32.13	36.88	42.19	56.48	68.33
.1945	32.13	36.88	42.19	56.48	68.33
.1950	32.13	36.88	42.19	56.48	68.33
.1952	41.25	----	----	----	----
.1954	41.25	----	----	----	----
.1955	32.13	36.88	42.19	56.48	68.33
.1958	41.25	----	----	----	----
.1959	41.25	----	----	----	----
.1965	32.13	36.88	42.19	56.48	68.33
.1966	41.25	----	----	----	----
.1970	32.13	36.88	42.19	56.48	68.33
.1972	41.25	----	----	----	----
.1974	41.25	----	----	----	----
.1975	32.13	36.88	42.19	56.48	68.33
.1979	41.25	----	----	----	----
.1980	32.13	36.88	42.19	56.48	68.33
.1982	41.25	----	----	----	----
.1985	32.13	36.88	42.19	56.48	68.33
.1995	32.13	36.88	42.19	56.48	68.33
.2000	32.13	36.88	42.19	56.48	68.33
.2005	32.13	36.88	42.19	56.48	68.33
.2015	32.13	36.88	42.19	56.48	68.33
.2016	41.25	----	----	----	----
.2018	41.25	----	----	----	----
.2020	32.13	36.88	42.19	56.48	68.33
.2025	32.13	36.88	42.19	56.48	68.33
.2030	32.13	36.88	42.19	56.48	68.33
.2035	32.13	36.88	42.19	56.48	68.33
.2045	32.13	36.88	42.19	56.48	68.33
.2050	32.13	36.88	42.19	56.48	68.33
.2060	32.13	36.88	42.19	56.48	68.33
.2065	32.13	36.88	42.19	56.48	68.33
.2070	32.13	36.88	42.19	56.48	68.33
.2075	32.13	36.88	42.19	56.48	68.33
.2080	32.13	36.88	42.19	56.48	68.33
.2085	32.13	36.88	42.19	56.48	68.33
.2095	32.13	36.88	42.19	56.48	68.33
.2100	32.13	36.88	42.19	56.48	68.33
.2105	32.13	36.88	42.19	56.48	68.33
.2110	32.13	36.88	42.19	56.48	68.33

Note: **Tolerance**, **Flute Length**, **Overall Length**, and **Shank Diameter** are comparable to the closest standard size. See pages 4-9.

Chucking Reamers - Straight Shank - H.S. & Cobalt

Intermediate Decimal Sizes

List No. **LV533**: High Speed, Straight Flute
List No. **LV535**: High Speed, Right Hand Spiral, Right Hand Cut
List No. **LV535L**: High Speed, Left Hand Spiral, Right Hand Cut
List No. **1533**: Cobalt, Straight Flute
List No. **1535**: Cobalt, Right Hand Spiral, Right Hand Cut



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Size	Price Each				
	LV533 Straight Flute	LV535 RH Spiral	LV535L LH Sp. RH Cut	1533 Cobalt Str. Flt.	1535 Cobalt RH Sp.
.2115	32.13	36.88	42.19	56.48	68.33
.2120	32.13	36.88	42.19	56.48	68.33
.2125	32.13	36.88	42.19	56.48	68.33
.2135	32.13	36.88	42.19	56.48	68.33
.2137	41.25	----	----	----	----
.2140	32.13	36.88	42.19	56.48	68.33
.2145	32.13	36.88	42.19	56.48	68.33
.2147	41.25	----	----	----	----
.2150	32.13	36.88	42.19	56.48	68.33
.2155	32.13	36.88	42.19	56.48	68.33
.2158	41.25	----	----	----	----
.2160	32.13	36.88	42.19	56.48	68.33
.2165	23.00	26.25	30.00	25.50	29.15
.2166	41.25	----	----	----	----
.2167	41.25	----	----	----	----
.2170	32.13	36.88	42.19	56.48	68.33
.2175	32.13	36.88	42.19	56.48	68.33
.2178	27.50	----	----	----	----
.2180	32.13	36.88	42.19	56.48	68.33
.2183	41.25	----	----	----	----
.2185	32.13	36.88	42.19	56.48	68.33
.2190	32.13	36.88	42.19	56.48	68.33
.2192	41.25	----	----	----	----
.2195	32.13	36.88	42.19	56.48	68.33
.2197	41.25	----	----	----	----
.2198	27.50	----	----	----	----
.2200	32.13	36.88	42.19	56.48	68.33
.2205	32.13	36.88	42.19	56.48	68.33
.2215	32.13	36.88	42.19	56.48	68.33
.2220	32.13	36.88	42.19	56.48	68.33
.2225	32.13	36.88	42.19	56.48	68.33
.2230	32.13	36.88	42.19	56.48	68.33
.2232	41.25	----	----	----	----
.2235	32.13	36.88	42.19	56.48	68.33
.2240	32.13	36.88	42.19	56.48	68.33
.2244	41.25	----	----	----	----
.2245	32.13	36.88	42.19	56.48	68.33
.2250	32.13	36.88	42.19	56.48	68.33
.2255	32.13	36.88	42.19	56.48	68.33
.2258	41.25	----	----	----	----
.2260	32.13	36.88	42.19	56.48	68.33
.2265	32.13	36.88	42.19	56.48	68.33
.2270	32.13	36.88	42.19	56.48	68.33
.2275	32.13	36.88	42.19	56.48	68.33
.2285	32.13	36.88	42.19	56.48	68.33
.2290	32.13	36.88	42.19	56.48	68.33
.2295	32.13	36.88	42.19	56.48	68.33
.2300	32.13	36.88	42.19	56.48	68.33
.2305	32.13	36.88	42.19	56.48	68.33
.2310	32.13	36.88	42.19	56.48	68.33
.2312	41.25	----	----	----	----
.2315	32.13	36.88	42.19	56.48	68.33
.2320	32.13	36.88	42.19	56.48	68.33
.2325	32.13	36.88	42.19	56.48	68.33
.2330	32.13	36.88	42.19	56.48	68.33
.2335	32.13	36.88	42.19	56.48	68.33
.2345	32.13	36.88	42.19	56.48	68.33
.2346	41.25	----	----	----	----
.2350	32.13	36.88	42.19	56.48	68.33

Size	Price Each				
	LV533 Straight Flute	LV535 RH Spiral	LV535L LH Sp. RH Cut	1533 Cobalt Str. Flt.	1535 Cobalt RH Sp.
.2355	32.13	36.88	42.19	56.48	68.33
.2360	32.13	36.88	42.19	56.48	68.33
.2365	32.13	36.88	42.19	56.48	68.33
.2367	41.25	----	----	----	----
.2370	32.13	36.88	42.19	56.48	68.33
.2375	32.13	36.88	42.19	56.48	68.33
.2385	32.13	36.88	42.19	56.48	68.33
.2390	32.13	36.88	42.19	56.48	68.33
.2395	32.13	36.88	42.19	56.48	68.33
.2400	32.13	36.88	42.19	56.48	68.33
.2405	32.13	36.88	42.19	56.48	68.33
.2410	32.13	36.88	42.19	56.48	68.33
.2415	32.13	36.88	42.19	56.48	68.33
.2425	32.13	36.88	42.19	56.48	68.33
.2426	41.25	----	----	----	----
.2429	41.25	----	----	----	----
.2430	32.13	36.88	42.19	56.48	68.33
.2435	32.13	36.88	42.19	56.48	68.33
.2437	41.25	----	----	----	----
.2438	41.25	----	----	----	----
.2440	32.13	36.88	42.19	56.48	68.33
.2445	32.13	36.88	42.19	56.48	68.33
.2450	32.13	36.88	42.19	56.48	68.33
.2455	32.13	36.88	42.19	56.48	68.33
.2458	41.25	----	----	----	----
.2462	41.25	----	----	----	----
.2465	32.13	36.88	42.19	56.48	68.33
.2469	41.25	----	----	----	----
.2470	32.13	36.88	42.19	56.48	68.33
.2472	41.25	----	----	----	----
.2475	32.13	36.88	42.19	56.48	68.33
.2480	32.13	36.88	42.19	56.48	68.33
.2485	32.13	36.88	42.19	56.48	68.33
.2490	22.13	27.13	32.50	26.00	30.14
.2495	32.13	36.88	42.19	56.48	68.33
.2497	41.25	----	----	----	----
.2498	41.25	----	----	----	----
.2504	41.25	----	----	----	----
.2505	40.25	45.75	49.88	63.60	76.96
.2510	22.13	27.13	32.50	22.50	30.14
.2515	40.25	45.75	49.88	63.60	76.96
.2520	40.25	45.75	49.88	63.60	76.96
.2524	48.75	----	----	----	----
.2525	40.25	45.75	49.88	63.60	76.96
.2530	40.25	45.75	49.88	63.60	76.96
.2535	40.25	45.75	49.88	63.60	76.96
.2540	40.25	45.75	49.88	63.60	76.96
.2545	40.25	45.75	49.88	63.60	76.96
.2546	48.75	----	----	----	----
.2550	40.25	45.75	49.88	63.60	76.96
.2555	40.25	45.75	49.88	63.60	76.96
.2560	40.25	45.75	49.88	63.60	76.96
.2565	40.25	45.75	49.88	63.60	76.96
.2575	40.25	45.75	49.88	63.60	76.96
.2580	40.25	45.75	49.88	63.60	76.96
.2585	40.25	45.75	49.88	63.60	76.96
.2590	40.25	45.75	49.88	63.60	76.96
.2595	40.25	45.75	49.88	63.60	76.96
.2600	40.25	45.75	49.88	63.60	76.96

Note: **Tolerance**, **Flute Length**, **Overall Length**, and **Shank Diameter** are comparable to the closest standard size. See pages 4-9.

Chucking Reamers - Straight Shank - H.S. & Cobalt

Intermediate Decimal Sizes

List No. **LV533**: High Speed, Straight Flute
List No. **LV535**: High Speed, Right Hand Spiral, Right Hand Cut
List No. **LV535L**: High Speed, Left Hand Spiral, Right Hand Cut
List No. **1533**: Cobalt, Straight Flute
List No. **1535**: Cobalt, Right Hand Spiral, Right Hand Cut



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Size	Price Each				
	LV533 Straight Flute	LV535 RH Spiral	LV535L LH Sp. RH Cut	1533 Cobalt Str. Flt.	1535 Cobalt RH Sp.
.2605	40.25	45.75	49.88	63.60	76.96
.2615	40.25	45.75	49.88	63.60	76.96
.2620	40.25	45.75	49.88	63.60	76.96
.2621	48.75	----	----	----	----
.2625	40.25	45.75	49.88	63.60	76.96
.2630	40.25	45.75	49.88	63.60	76.96
.2635	40.25	45.75	49.88	63.60	76.96
.2640	40.25	45.75	49.88	63.60	76.96
.2645	40.25	45.75	49.88	63.60	76.96
.2650	40.25	45.75	49.88	63.60	76.96
.2655	40.25	45.75	49.88	63.60	76.96
.2665	40.25	45.75	49.88	65.08	79.53
.2670	40.25	45.75	49.88	65.08	79.53
.2675	40.25	45.75	49.88	65.08	79.53
.2680	40.25	45.75	49.88	65.08	79.53
.2685	40.25	45.75	49.88	65.08	79.53
.2690	40.25	45.75	49.88	65.08	79.53
.2695	40.25	45.75	49.88	65.08	79.53
.2700	40.25	45.75	49.88	65.08	79.53
.2705	40.25	45.75	49.88	65.08	79.53
.2710	40.25	45.75	49.88	65.08	79.53
.2715	40.25	45.75	49.88	65.08	79.53
.2725	40.25	45.75	49.88	65.08	79.53
.2730	40.25	45.75	49.88	65.08	79.53
.2735	40.25	45.75	49.88	65.08	79.53
.2740	40.25	45.75	49.88	65.08	79.53
.2745	40.25	45.75	49.88	65.08	79.53
.2750	40.25	45.75	49.88	65.08	79.53
.2751	48.75	----	----	----	----
.2755	40.25	45.75	49.88	65.08	79.53
.2760	40.25	45.75	49.88	65.08	79.53
.2761	48.75	----	----	----	----
.2765	40.25	45.75	49.88	65.08	79.53
.2775	40.25	45.75	49.88	65.08	79.53
.2780	40.25	45.75	49.88	65.08	79.53
.2785	40.25	45.75	49.88	65.08	79.53
.2790	40.25	45.75	49.88	65.08	79.53
.2795	40.25	45.75	49.88	65.08	79.53
.2800	40.25	45.75	49.88	65.08	79.53
.2805	40.25	45.75	49.88	65.08	79.53
.2815	40.25	45.75	49.88	66.24	80.15
.2820	40.25	45.75	49.88	66.24	80.15
.2822	48.75	----	----	----	----
.2825	40.25	45.75	49.88	66.24	80.15
.2827	48.75	----	----	----	----
.2830	40.25	45.75	49.88	66.24	80.15
.2834	48.75	----	----	----	----
.2835	40.25	45.75	49.88	66.24	80.15
.2840	40.25	45.75	49.88	66.24	80.15
.2841	48.75	----	----	----	----
.2842	48.75	----	----	----	----
.2845	40.25	45.75	49.88	66.24	80.15
.2850	40.25	45.75	49.88	66.24	80.15
.2855	40.25	45.75	49.88	66.24	80.15
.2860	40.25	45.75	49.88	66.24	80.15
.2862	48.75	----	----	----	----
.2865	40.25	45.75	49.88	66.24	80.15
.2870	40.25	45.75	49.88	66.24	80.15
.2875	40.25	45.75	49.88	66.24	80.15

Size	Price Each				
	LV533 Straight Flute	LV535 RH Spiral	LV535L LH Sp. RH Cut	1533 Cobalt Str. Flt.	1535 Cobalt RH Sp.
.2880	40.25	45.75	49.88	66.24	80.15
.2885	40.25	45.75	49.88	66.24	80.15
.2890	40.25	45.75	49.88	66.24	80.15
.2895	40.25	45.75	49.88	66.24	80.15
.2905	40.25	45.75	49.88	66.24	80.15
.2910	40.25	45.75	49.88	66.24	80.15
.2911	48.75	----	----	----	----
.2915	40.25	45.75	49.88	66.24	80.15
.2916	48.75	----	----	----	----
.2920	40.25	45.75	49.88	66.24	80.15
.2925	40.25	45.75	49.88	66.24	80.15
.2930	40.25	45.75	49.88	66.24	80.15
.2935	40.25	45.75	49.88	66.24	80.15
.2939	48.75	----	----	----	----
.2940	40.25	45.75	49.88	66.24	80.15
.2945	40.25	45.75	49.88	66.24	80.15
.2955	40.25	45.75	49.88	66.24	80.15
.2960	40.25	45.75	49.88	66.24	80.15
.2964	48.75	----	----	----	----
.2965	40.25	45.75	49.88	66.24	80.15
.2970	40.25	45.75	49.88	66.24	80.15
.2975	40.25	45.75	49.88	66.24	80.15
.2977	48.75	----	----	----	----
.2980	40.25	45.75	49.88	66.24	80.15
.2985	40.25	45.75	49.88	66.24	80.15
.2990	40.25	45.75	49.88	66.24	80.15
.2995	40.25	45.75	49.88	66.24	80.15
.3000	40.25	45.75	49.88	66.24	80.15
.3005	40.25	45.75	49.88	66.24	80.15
.3010	40.25	45.75	49.88	66.24	80.15
.3015	40.25	45.75	49.88	66.24	80.15
.3025	40.25	45.75	49.88	66.24	80.15
.3030	40.25	45.75	49.88	66.24	80.15
.3035	40.25	45.75	49.88	66.24	80.15
.3040	40.25	45.75	49.88	66.24	80.15
.3041	48.75	----	----	----	----
.3045	40.25	45.75	49.88	66.24	80.15
.3050	40.25	45.75	49.88	66.24	80.15
.3055	40.25	45.75	49.88	66.24	80.15
.3060	40.25	45.75	49.88	66.24	80.15
.3063	48.75	----	----	----	----
.3065	40.25	45.75	49.88	66.24	80.15
.3070	40.25	45.75	49.88	66.24	80.15
.3073	48.75	----	----	----	----
.3075	40.25	45.75	49.88	66.24	80.15
.3080	40.25	45.75	49.88	66.24	80.15
.3085	40.25	45.75	49.88	66.24	80.15
.3090	40.25	45.75	49.88	66.24	80.15
.3095	40.25	45.75	49.88	66.24	80.15
.3100	40.25	45.75	49.88	66.24	80.15
.3105	40.25	45.75	49.88	66.24	80.15
.3110	40.25	45.75	49.88	66.24	80.15
.3112	48.75	----	----	----	----
.3115	26.25	28.69	33.75	34.00	39.05
.3117	48.75	----	----	----	----
.3120	40.25	45.75	49.88	67.98	82.25
.3122	48.75	55.00	----	----	----
.3123	48.75	----	----	----	----
.3127	58.75	----	----	----	----

Note: **Tolerance**, **Flute Length**, **Overall Length**, and **Shank Diameter** are comparable to the closest standard size. See pages 4-9.

Chucking Reamers - Straight Shank - H.S. & Cobalt

Intermediate Decimal Sizes

List No. **LV533**: High Speed, Straight Flute
List No. **LV535**: High Speed, Right Hand Spiral, Right Hand Cut
List No. **LV535L**: High Speed, Left Hand Spiral, Right Hand Cut
List No. **1533**: Cobalt, Straight Flute
List No. **1535**: Cobalt, Right Hand Spiral, Right Hand Cut



MADE IN USA

Size	Price Each				
	LV533 Straight Flute	LV535 RH Spiral	LV535L LH Sp. RH Cut	1533 Cobalt Str. Flt.	1535 Cobalt RH Sp.
.3130	47.25	52.50	56.25	67.98	82.25
.3133	58.75	----	----	----	----
.3135	21.00	28.69	33.75	34.00	39.05
.3140	47.25	52.50	56.25	67.98	82.25
.3145	47.25	52.50	56.25	67.98	82.25
.3146	58.75	----	----	----	----
.3154	58.75	----	----	----	----
.3155	47.25	52.50	56.25	67.98	82.25
.3161	58.75	----	----	----	----
.3165	47.25	52.50	56.25	67.98	82.25
.3170	47.25	52.50	56.25	67.98	82.25
.3175	47.25	52.50	56.25	67.98	82.25
.3180	47.25	52.50	56.25	67.98	82.25
.3185	47.25	52.50	56.25	67.98	82.25
.3188	58.75	----	----	----	----
.3190	47.25	52.50	56.25	67.98	82.25
.3195	47.25	52.50	56.25	67.98	82.25
.3200	47.25	52.50	56.25	67.98	82.25
.3205	47.25	52.50	56.25	67.98	82.25
.3210	47.25	52.50	56.25	67.98	82.25
.3215	47.25	52.50	56.25	67.98	82.25
.3220	47.25	52.50	56.25	67.98	82.25
.3225	47.25	52.50	56.25	67.98	82.25
.3235	47.25	52.50	56.25	67.98	82.25
.3240	47.25	52.50	56.25	67.98	82.25
.3245	47.25	52.50	56.25	67.98	82.25
.3250	47.25	52.50	56.25	67.98	82.25
.3255	47.25	52.50	56.25	67.98	82.25
.3260	47.25	52.50	56.25	67.98	82.25
.3265	47.25	52.50	56.25	67.98	82.25
.3270	47.25	52.50	56.25	67.98	82.25
.3271	58.75	----	----	----	----
.3275	47.25	52.50	56.25	67.98	82.25
.3280	47.25	52.50	56.25	67.98	82.25
.3285	47.25	52.50	56.25	67.98	82.25
.3290	47.25	52.50	56.25	67.98	82.25
.3293	58.75	----	----	----	----
.3295	47.25	52.50	56.25	67.98	82.25
.3300	47.25	52.50	56.25	67.98	82.25
.3305	47.25	52.50	56.25	67.98	82.25
.3310	47.25	52.50	56.25	67.98	82.25
.3315	47.25	52.50	56.25	67.98	82.25
.3325	47.25	52.50	56.25	67.98	82.25
.3330	47.25	52.50	56.25	67.98	82.25
.3335	47.25	52.50	56.25	67.98	82.25
.3340	47.25	52.50	56.25	67.98	82.25
.3345	47.25	52.50	56.25	67.98	82.25
.3350	47.25	52.50	56.25	67.98	82.25
.3355	47.25	52.50	56.25	67.98	82.25
.3360	47.25	52.50	56.25	67.98	82.25
.3364	58.75	----	----	----	----
.3365	47.25	52.50	56.25	67.98	82.25
.3370	47.25	52.50	56.25	67.98	82.25
.3375	47.25	52.50	56.25	67.98	82.25
.3380	47.25	52.50	56.25	67.98	82.25
.3385	47.25	52.50	56.25	67.98	82.25
.3395	47.25	52.50	56.25	67.98	82.25
.3400	47.25	52.50	56.25	67.98	82.25
.3405	47.25	52.50	56.25	67.98	82.25

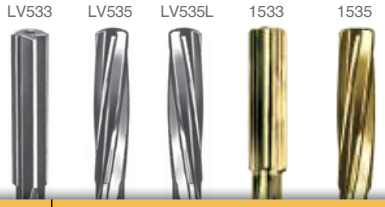
Size	Price Each				
	LV533 Straight Flute	LV535 RH Spiral	LV535L LH Sp. RH Cut	1533 Cobalt Str. Flt.	1535 Cobalt RH Sp.
.3410	47.25	52.50	56.25	67.98	82.25
.3415	47.25	52.50	56.25	67.98	82.25
.3420	47.25	52.50	56.25	67.98	82.25
.3425	47.25	52.50	56.25	67.98	82.25
.3426	58.75	----	----	----	----
.3430	47.25	52.50	56.25	67.98	82.25
.3435	47.25	52.50	56.25	67.98	82.25
.3439	58.75	----	----	----	----
.3440	47.25	52.50	56.25	67.98	82.25
.3441	58.75	----	----	----	----
.3445	47.25	52.50	56.25	67.98	82.25
.3450	47.25	52.50	56.25	67.98	82.25
.3453	58.75	----	----	----	----
.3455	47.25	52.50	56.25	67.98	82.25
.3460	47.25	52.50	56.25	67.98	82.25
.3465	47.25	52.50	56.25	67.98	82.25
.3470	47.25	52.50	56.25	67.98	82.25
.3475	47.25	52.50	56.25	67.98	82.25
.3476	58.75	----	----	----	----
.3485	47.25	52.50	56.25	67.98	82.25
.3490	47.25	52.50	56.25	67.98	82.25
.3494	58.75	----	----	----	----
.3495	47.25	52.50	56.25	67.98	82.25
.3500	47.25	52.50	56.25	67.98	82.25
.3505	47.25	52.50	56.25	67.98	82.25
.3510	47.25	52.50	56.25	67.98	82.25
.3515	47.25	52.50	56.25	67.98	82.25
.3520	47.25	52.50	56.25	67.98	82.25
.3525	47.25	52.50	56.25	67.98	82.25
.3530	47.25	52.50	56.25	67.98	82.25
.3535	47.25	52.50	56.25	67.98	82.25
.3540	47.25	52.50	56.25	67.98	82.25
.3545	47.25	52.50	56.25	67.98	82.25
.3550	47.25	52.50	56.25	67.98	82.25
.3555	47.25	52.50	56.25	67.98	82.25
.3560	47.25	52.50	56.25	67.98	82.25
.3565	47.25	52.50	56.25	67.98	82.25
.3570	47.25	52.50	56.25	67.98	82.25
.3575	47.25	52.50	56.25	67.98	82.25
.3585	47.25	52.50	56.25	67.98	82.25
.3590	47.25	52.50	56.25	67.98	82.25
.3595	47.25	52.50	56.25	67.98	82.25
.3600	47.25	52.50	56.25	67.98	82.25
.3605	47.25	52.50	56.25	67.98	82.25
.3610	47.25	52.50	56.25	67.98	82.25
.3615	47.25	52.50	56.25	67.98	82.25
.3620	47.25	52.50	56.25	67.98	82.25
.3625	47.25	52.50	56.25	67.98	82.25
.3630	47.25	52.50	56.25	67.98	82.25
.3635	47.25	52.50	56.25	67.98	82.25
.3640	47.25	52.50	56.25	67.98	82.25
.3645	47.25	52.50	56.25	67.98	82.25
.3650	47.25	52.50	56.25	67.98	82.25
.3655	47.25	52.50	56.25	67.98	82.25
.3660	47.25	52.50	56.25	67.98	82.25
.3665	47.25	52.50	56.25	67.98	82.25
.3670	47.25	52.50	56.25	67.98	82.25
.3675	47.25	52.50	56.25	67.98	82.25
.3685	47.25	52.50	56.25	67.98	82.25

Note: **Tolerance**, **Flute Length**, **Overall Length**, and **Shank Diameter** are comparable to the closest standard size. See pages 4-9.

Chucking Reamers - Straight Shank - H.S. & Cobalt

Intermediate Decimal Sizes

List No. **LV533**: High Speed, Straight Flute
List No. **LV535**: High Speed, Right Hand Spiral, Right Hand Cut
List No. **LV535L**: High Speed, Left Hand Spiral, Right Hand Cut
List No. **1533**: Cobalt, Straight Flute
List No. **1535**: Cobalt, Right Hand Spiral, Right Hand Cut



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Size	Price Each				
	LV533 Straight Flute	LV535 RH Spiral	LV535L LH Sp. RH Cut	1533 Cobalt Str. Flt.	1535 Cobalt RH Sp.
.3690	37.80	42.00	45.00	67.98	74.77
.3695	37.80	42.00	45.00	67.98	74.77
.3700	37.80	42.00	45.00	67.98	74.77
.3705	37.80	42.00	45.00	67.98	74.77
.3709	47.00	—	—	—	—
.3710	37.80	42.00	45.00	67.98	74.77
.3715	37.80	42.00	45.00	67.98	74.77
.3720	37.80	42.00	45.00	67.98	74.77
.3725	37.80	42.00	45.00	67.98	74.77
.3730	37.80	42.00	45.00	67.98	74.77
.3735	37.80	42.00	45.00	67.98	74.77
.3738	47.00	—	—	—	—
.3740	22.70	26.00	28.50	38.00	39.00
.3745	37.80	42.00	45.00	67.98	74.77
.3747	47.00	—	—	—	—
.3753	47.00	—	—	—	—
.3755	37.80	42.00	45.00	69.94	76.93
.3760	22.70	26.00	28.50	38.00	39.00
.3765	37.80	42.00	45.00	69.94	76.93
.3775	37.80	42.00	45.00	69.94	76.93
.3780	37.80	42.00	45.00	69.94	76.93
.3785	37.80	42.00	45.00	69.94	76.93
.3790	37.80	42.00	45.00	69.94	76.93
.3795	37.80	42.00	45.00	69.94	76.93
.3800	37.80	42.00	45.00	69.94	76.93
.3805	37.80	42.00	45.00	69.94	76.93
.3810	37.80	42.00	45.00	69.94	76.93
.3815	37.80	42.00	45.00	69.94	76.93
.3820	37.80	42.00	45.00	69.94	76.93
.3825	37.80	42.00	45.00	69.94	76.93
.3830	37.80	42.00	45.00	69.94	76.93
.3835	37.80	42.00	45.00	69.94	76.93
.3840	37.80	42.00	45.00	69.94	76.93
.3845	37.80	42.00	45.00	69.94	76.93
.3850	37.80	42.00	45.00	69.94	76.93
.3855	37.80	42.00	45.00	69.94	76.93
.3865	37.80	42.00	45.00	69.94	76.93
.3870	37.80	42.00	45.00	69.94	76.93
.3875	37.80	42.00	45.00	69.94	76.93
.3880	37.80	42.00	45.00	69.94	76.93
.3885	37.80	42.00	45.00	69.94	76.93
.3890	37.80	42.00	45.00	69.94	76.93
.3895	37.80	42.00	45.00	69.94	76.93
.3900	37.80	42.00	45.00	69.94	76.93
.3905	37.80	42.00	45.00	69.94	76.93
.3910	38.70	41.50	45.00	69.94	76.93
.3915	38.70	41.50	45.00	69.94	76.93
.3920	38.70	41.50	45.00	69.94	76.93
.3925	38.70	41.50	45.00	69.94	76.93
.3930	38.70	41.50	45.00	69.94	76.93
.3935	38.70	41.50	45.00	69.94	76.93
.3940	38.70	41.50	45.00	69.94	76.93
.3945	38.70	41.50	45.00	69.94	76.93
.3947	47.00	52.00	—	—	—
.3950	38.70	41.50	45.00	69.94	76.93
.3955	38.70	41.50	45.00	69.94	76.93
.3960	38.70	41.50	45.00	69.94	76.93
.3965	38.70	41.50	45.00	69.94	76.93
.3975	38.70	41.50	45.00	69.94	76.93

Size	Price Each				
	LV533 Straight Flute	LV535 RH Spiral	LV535L LH Sp. RH Cut	1533 Cobalt Str. Flt.	1535 Cobalt RH Sp.
.3980	38.70	41.50	45.00	69.94	76.93
.3985	38.70	41.50	45.00	69.94	76.93
.3990	38.70	41.50	45.00	69.94	76.93
.3995	38.70	41.50	45.00	69.94	76.93
.4000	38.70	41.50	45.00	69.94	76.93
.4005	38.70	41.50	45.00	69.94	76.93
.4010	38.70	41.50	45.00	69.94	76.93
.4015	38.70	41.50	45.00	69.94	76.93
.4020	38.70	41.50	45.00	69.94	76.93
.4025	38.70	41.50	45.00	69.94	76.93
.4030	38.70	41.50	45.00	69.94	76.93
.4035	38.70	41.50	45.00	69.94	76.93
.4045	38.70	41.50	45.00	69.94	76.93
.4050	38.70	41.50	45.00	69.94	76.93
.4055	38.70	41.50	45.00	69.94	76.93
.4060	38.70	41.50	45.00	69.94	76.93
.4065	38.70	41.50	45.00	69.94	76.93
.4070	38.70	41.50	45.00	69.94	76.93
.4075	38.70	41.50	45.00	69.94	76.93
.4080	38.70	41.50	45.00	69.94	76.93
.4085	38.70	41.50	45.00	69.94	76.93
.4090	38.70	41.50	45.00	69.94	76.93
.4095	38.70	41.50	45.00	69.94	76.93
.4100	38.70	41.50	45.00	69.94	76.93
.4105	38.70	41.50	45.00	69.94	76.93
.4110	38.70	41.50	45.00	69.94	76.93
.4115	38.70	41.50	45.00	69.94	76.93
.4120	38.70	41.50	45.00	69.94	76.93
.4125	38.70	41.50	45.00	69.94	76.93
.4135	38.70	41.50	45.00	69.94	76.93
.4140	38.70	41.50	45.00	69.94	76.93
.4145	38.70	41.50	45.00	69.94	76.93
.4150	38.70	41.50	45.00	69.94	76.93
.4155	38.70	41.50	45.00	69.94	76.93
.4160	38.70	41.50	45.00	69.94	76.93
.4165	38.70	41.50	45.00	69.94	76.93
.4170	38.70	41.50	45.00	69.94	76.93
.4175	38.70	41.50	45.00	69.94	76.93
.4180	38.70	41.50	45.00	69.94	76.93
.4185	38.70	41.50	45.00	69.94	76.93
.4190	38.70	41.50	45.00	69.94	76.93
.4195	38.70	41.50	45.00	69.94	76.93
.4200	38.70	41.50	45.00	69.94	76.93
.4205	38.70	41.50	45.00	69.94	76.93
.4210	38.70	41.50	45.00	69.94	76.93
.4215	38.70	41.50	45.00	69.94	76.93
.4220	38.70	41.50	45.00	69.94	76.93
.4225	38.70	41.50	45.00	69.94	76.93
.4230	38.70	41.50	45.00	69.94	76.93
.4232	49.00	—	—	—	76.93
.4235	38.70	41.50	45.00	69.94	76.93
.4240	38.70	41.50	45.00	69.94	76.93
.4245	38.70	41.50	45.00	69.94	76.93
.4250	38.70	41.50	45.00	69.94	76.93
.4255	38.70	41.50	45.00	69.94	76.93
.4260	38.70	41.50	45.00	69.94	76.93
.4265	38.70	41.50	45.00	69.94	76.93
.4270	38.70	41.50	45.00	69.94	76.93
.4275	38.70	41.50	45.00	69.94	76.93

Note: **Tolerance**, **Flute Length**, **Overall Length**, and **Shank Diameter** are comparable to the closest standard size. See pages 152-157.

Chucking Reamers - Straight Shank - H. S. & Cobalt

Intermediate Decimal Sizes

List No. **LV533**: High Speed, Straight Flute
List No. **LV535**: High Speed, Right Hand Spiral, Right Hand Cut
List No. **LV535L**: High Speed, Left Hand Spiral, Right Hand Cut
List No. **1533**: Cobalt, Straight Flute
List No. **1535**: Cobalt, Right Hand Spiral, Right Hand Cut



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Size	Price Each				
	LV533 Straight Flute	LV535 RH Spiral	LV535L LH Sp. RH Cut	1533 Cobalt Str. Flt.	1535 Cobalt RH Sp.
.4280	48.38	51.88	56.25	69.94	84.62
.4285	48.38	51.88	56.25	69.94	84.62
.4290	48.38	51.88	56.25	69.94	84.62
.4295	48.38	51.88	56.25	69.94	84.62
.4300	48.38	51.88	56.25	69.94	84.62
.4305	48.38	51.88	56.25	69.94	84.62
.4310	48.38	51.88	56.25	69.94	84.62
.4315	48.38	51.88	56.25	69.94	84.62
.4320	48.38	51.88	56.25	69.94	84.62
.4325	48.38	51.88	56.25	69.94	84.62
.4330	48.38	51.88	56.25	69.94	84.62
.4335	48.38	51.88	56.25	69.94	84.62
.4336	61.25	----	----	----	----
.4340	48.38	51.88	56.25	69.94	84.62
.4345	48.38	51.88	56.25	69.94	84.62
.4350	48.38	51.88	56.25	69.94	84.62
.4355	48.38	51.88	56.25	69.94	84.62
.4357	61.25	----	----	----	----
.4360	48.38	51.88	56.25	69.94	84.62
.4365	33.69	33.38	42.50	48.00	54.45
.4370	48.38	51.88	56.25	78.75	95.28
.4378	61.25	----	----	----	----
.4380	51.25	56.25	60.00	78.75	95.28
.4385	33.69	37.13	42.50	48.00	54.45
.4390	51.25	56.25	60.00	78.75	95.28
.4395	51.25	56.25	60.00	78.75	95.50
.4400	51.25	56.25	60.00	78.75	95.28
.4405	51.25	56.25	60.00	78.75	95.28
.4410	51.25	56.25	60.00	78.75	95.28
.4415	51.25	56.25	60.00	78.75	95.28
.4420	51.25	56.25	60.00	78.75	95.28
.4425	51.25	56.25	60.00	78.75	95.28
.4430	51.25	56.25	60.00	78.75	95.28
.4435	51.25	56.25	60.00	78.75	95.28
.4440	51.25	56.25	60.00	78.75	95.28
.4445	51.25	56.25	60.00	78.75	95.28
.4450	51.25	56.25	60.00	78.75	95.50
.4455	51.25	56.25	60.00	78.75	95.28
.4460	51.25	56.25	60.00	78.75	95.28
.4465	51.25	56.25	60.00	78.75	95.28
.4470	51.25	56.25	60.00	78.75	95.28
.4475	51.25	56.25	60.00	78.75	95.28
.4478	68.75	----	----	----	----
.4480	51.25	56.25	60.00	78.75	95.28
.4485	51.25	56.25	60.00	78.75	95.28
.4490	51.25	56.25	60.00	78.75	95.28
.4495	51.25	56.25	60.00	78.75	95.28
.4500	51.25	56.25	60.00	78.75	95.28
.4505	51.25	56.25	60.00	78.75	95.50
.4510	51.25	56.25	60.00	78.75	95.28
.4515	51.25	56.25	60.00	78.75	95.28
.4520	51.25	56.25	60.00	78.75	95.28
.4525	51.25	56.25	60.00	78.75	95.28
.4526	68.75	----	----	----	----
.4530	51.25	56.25	60.00	78.75	95.28
.4535	51.25	56.25	60.00	78.75	95.28
.4540	51.25	56.25	60.00	78.75	95.28
.4545	51.25	56.25	60.00	78.75	95.28
.4550	51.25	56.25	60.00	78.75	95.28

Size	Price Each				
	LV533 Straight Flute	LV535 RH Spiral	LV535L LH Sp. RH Cut	1533 Cobalt Str. Flt.	1535 Cobalt RH Sp.
.4555	51.25	56.25	60.00	78.75	95.28
.4560	51.25	56.25	60.00	78.75	95.28
.4565	51.25	56.25	60.00	78.75	95.28
.4570	51.25	56.25	60.00	78.75	95.28
.4575	51.25	56.25	60.00	78.75	95.28
.4580	51.25	56.25	60.00	78.75	95.28
.4585	51.25	56.25	60.00	78.75	95.28
.4590	51.25	56.25	60.00	78.75	95.28
.4595	51.25	56.25	60.00	78.75	95.28
.4600	51.25	56.25	60.00	78.75	95.28
.4605	51.25	56.25	60.00	78.75	95.28
.4610	51.25	56.25	60.00	78.75	95.28
.4615	51.25	56.25	60.00	78.75	95.28
.4620	51.25	56.25	60.00	78.75	95.28
.4625	51.25	56.25	60.00	78.75	95.28
.4630	51.25	56.25	60.00	78.75	86.82
.4635	51.25	56.25	60.00	78.75	95.28
.4640	51.25	56.25	60.00	78.75	95.28
.4645	51.25	56.25	60.00	78.75	95.28
.4650	51.25	56.25	60.00	78.75	95.28
.4655	51.25	56.25	60.00	78.75	95.28
.4660	51.25	56.25	60.00	78.75	95.28
.4665	51.25	56.25	60.00	78.75	95.28
.4670	51.25	56.25	60.00	78.75	95.28
.4675	51.25	56.25	60.00	78.75	95.28
.4680	51.25	56.25	60.00	78.75	95.28
.4685	51.25	56.25	60.00	78.75	95.28
.4690	51.25	56.25	60.00	78.75	95.28
.4695	51.25	56.25	60.00	78.75	86.82
.4700	51.25	56.25	60.00	78.75	95.28
.4705	51.25	56.25	60.00	78.75	95.28
.4710	51.25	56.25	60.00	78.75	95.28
.4714	68.75	----	----	----	----
.4715	51.25	56.25	60.00	78.75	95.28
.4719	68.75	----	----	----	----
.4720	51.25	56.25	60.00	78.75	95.28
.4725	51.25	56.25	60.00	78.75	95.28
.4730	51.25	56.25	60.00	78.75	95.28
.4735	51.25	56.25	60.00	78.75	95.28
.4740	51.25	56.25	60.00	78.75	95.28
.4745	51.25	56.25	60.00	78.75	95.28
.4750	51.25	56.25	60.00	78.75	95.28
.4755	51.25	56.25	60.00	78.75	95.28
.4760	51.25	56.25	60.00	78.75	86.82
.4765	51.25	56.25	60.00	78.75	95.28
.4770	51.25	56.25	60.00	78.75	95.28
.4775	51.25	56.25	60.00	78.75	95.28
.4780	51.25	56.25	60.00	78.75	95.28
.4785	51.25	56.25	60.00	78.75	95.28
.4790	51.25	56.25	60.00	78.75	95.28
.4795	51.25	56.25	60.00	78.75	95.28
.4800	51.25	56.25	60.00	78.75	95.28
.4805	51.25	56.25	60.00	78.75	95.28
.4810	51.25	56.25	60.00	78.75	95.28
.4815	51.25	56.25	60.00	78.75	95.28
.4820	51.25	56.25	60.00	78.75	95.28
.4825	51.25	56.25	60.00	78.75	95.50
.4830	51.25	56.25	60.00	78.75	95.28
.4835	51.25	56.25	60.00	78.75	95.28

Note: **Tolerance**, **Flute Length**, **Overall Length**, and **Shank Diameter** are comparable to the closest standard size. See pages 4-9.

Chucking Reamers - Straight Shank - H. S. & Cobalt

Intermediate Decimal Sizes

List No. **LV533**: High Speed, Straight Flute
List No. **LV535**: High Speed, Right Hand Spiral, Right Hand Cut
List No. **LV535L**: High Speed, Left Hand Spiral, Right Hand Cut
List No. **1533**: Cobalt, Straight Flute
List No. **1535**: Cobalt, Right Hand Spiral, Right Hand Cut



MADE IN USA

Size	Price Each				
	LV533 Straight Flute	LV535 RH Spiral	LV535L LH Sp. RH Cut	1533 Cobalt Str. Flt.	1535 Cobalt RH Sp.
.4840	51.25	56.25	60.00	78.75	95.28
.4845	51.25	56.25	60.00	78.75	95.28
.4850	51.25	56.25	60.00	78.75	95.28
.4855	51.25	56.25	60.00	78.75	95.28
.4860	51.25	56.25	60.00	78.75	95.28
.4865	51.25	56.25	60.00	78.75	95.28
.4870	51.25	56.25	60.00	78.75	95.28
.4875	51.25	56.25	60.00	78.75	95.28
.4880	51.25	56.25	60.00	78.75	95.28
.4885	51.25	56.25	60.00	78.75	95.28
.4890	51.25	56.25	60.00	78.75	95.28
.4895	51.25	56.25	60.00	78.75	95.28
.4900	51.25	56.25	60.00	78.75	95.28
.4905	51.25	56.25	60.00	78.75	95.28
.4910	51.25	56.25	60.00	78.75	95.28
.4915	51.25	56.25	60.00	78.75	95.28
.4920	51.25	56.25	60.00	78.75	95.28
.4922	68.75	----	----	----	----
.4925	51.25	56.25	60.00	78.75	95.28
.4930	51.25	56.25	60.00	78.75	95.28
.4935	51.25	56.25	60.00	78.75	95.28
.4937	68.75	----	----	----	----
.4940	51.25	56.25	60.00	78.75	95.28
.4945	51.25	56.25	60.00	78.75	95.28
.4950	51.25	56.25	60.00	78.75	95.28
.4955	51.25	56.25	60.00	78.75	95.28
.4960	51.25	56.25	60.00	78.75	95.28
.4965	51.25	56.25	60.00	78.75	95.28
.4970	51.25	56.25	60.00	78.75	95.28
.4975	51.25	56.25	60.00	78.75	95.28
.4980	51.25	56.25	60.00	78.75	95.28
.4985	51.25	56.25	60.00	78.75	95.28
.4990	34.75	40.38	46.00	54.50	61.60
.4995	51.25	56.25	60.00	78.75	95.28
.4997	68.75	----	----	----	----
.5005	80.00	88.00	94.13	90.85	95.28
.5010	34.75	40.38	46.00	62.68	61.60
.5015	80.00	88.00	94.13	90.85	98.58
.5020	80.00	88.00	94.13	90.85	98.58
.5025	80.00	88.00	94.13	90.85	98.58
.5030	80.00	88.00	94.13	90.85	98.58
.5035	80.00	88.00	94.13	90.85	98.58
.5040	80.00	88.00	94.13	90.85	98.58
.5045	80.00	88.00	94.13	90.85	98.58
.5050	80.00	88.00	94.13	90.85	98.58
.5055	80.00	88.00	94.13	90.85	98.58
.5060	80.00	88.00	94.13	90.85	98.58
.5065	80.00	88.00	94.13	90.85	98.58
.5070	80.00	88.00	94.13	90.85	98.58
.5075	80.00	88.00	94.13	90.85	98.58
.5080	80.00	88.00	94.13	90.85	98.58
.5085	80.00	88.00	94.13	90.85	98.58
.5090	80.00	88.00	94.13	90.85	98.58
.5095	80.00	88.00	94.13	90.85	98.58
.5100	80.00	88.00	94.13	90.85	98.58
.5105	80.00	88.00	94.13	90.85	98.58
.5110	80.00	88.00	94.13	90.85	98.58
.5115	80.00	88.00	94.13	90.85	98.58
.5120	80.00	88.00	94.13	90.85	98.58

Size	Price Each				
	LV533 Straight Flute	LV535 RH Spiral	LV535L LH Sp. RH Cut	1533 Cobalt Str. Flt.	1535 Cobalt RH Sp.
.5125	80.00	88.00	94.13	90.85	98.58
.5130	80.00	88.00	94.13	90.85	98.58
.5135	80.00	88.00	94.13	90.85	98.58
.5140	80.00	88.00	94.13	90.85	98.58
.5145	80.00	88.00	94.13	90.85	98.58
.5150	80.00	88.00	94.13	90.85	98.58
.5155	80.00	88.00	94.13	90.85	98.58
.5160	80.00	88.00	94.13	90.85	98.58
.5165	80.00	88.00	94.13	90.85	98.58
.5170	80.00	88.00	94.13	90.85	98.58
.5175	80.00	88.00	94.13	90.85	98.58
.5180	80.00	88.00	94.13	90.85	98.58
.5185	80.00	88.00	94.13	90.85	98.58
.5190	80.00	88.00	94.13	90.85	98.58
.5195	80.00	88.00	94.13	90.85	98.58
.5198	130.00	----	----	----	----
.5200	80.00	88.00	94.13	90.85	98.58
.5205	80.00	88.00	94.13	90.85	98.58
.5210	80.00	88.00	94.13	90.85	98.58
.5215	80.00	88.00	94.13	90.85	98.58
.5220	80.00	88.00	94.13	90.85	98.58
.5225	80.00	88.00	94.13	90.85	98.58
.5230	80.00	88.00	94.13	90.85	98.58
.5235	80.00	88.00	94.13	90.85	98.58
.5240	80.00	88.00	94.13	90.85	98.58
.5245	80.00	88.00	94.13	90.85	98.58
.5250	80.00	88.00	94.13	90.85	98.58
.5255	80.00	88.00	94.13	90.85	98.58
.5260	80.00	88.00	94.13	90.85	98.58
.5265	80.00	88.00	94.13	90.85	98.58
.5270	80.00	88.00	94.13	90.85	98.58
.5275	80.00	88.00	94.13	90.85	98.58
.5280	80.00	88.00	94.13	90.85	98.58
.5285	80.00	88.00	94.13	90.85	98.58
.5290	80.00	88.00	94.13	90.85	98.58
.5295	80.00	88.00	94.13	90.85	98.58
.5300	80.00	88.00	94.13	90.85	98.58
.5305	80.00	88.00	94.13	90.85	98.58
.5310	80.00	88.00	94.13	90.85	98.58
.5315	45.00	55.00	58.75	----	----
.5320	80.00	88.00	94.13	90.85	98.58
.5325	80.00	88.00	94.13	90.85	98.58
.5330	80.00	88.00	94.13	90.85	98.58
.5335	80.00	88.00	94.13	90.85	98.58
.5340	80.00	88.00	94.13	90.85	98.58
.5345	80.00	88.00	94.13	90.85	98.58
.5350	80.00	88.00	94.13	90.85	98.58
.5355	80.00	88.00	94.13	90.85	98.58
.5360	80.00	88.00	94.13	90.85	98.58
.5365	80.00	88.00	94.13	90.85	98.58
.5370	80.00	88.00	94.13	90.85	98.58
.5375	80.00	88.00	94.13	90.85	98.58
.5380	80.00	88.00	94.13	90.85	98.58
.5385	80.00	88.00	94.13	90.85	98.58
.5390	80.00	88.00	94.13	90.85	98.58
.5395	80.00	88.00	94.13	90.85	98.58
.5400	80.00	88.00	94.13	90.85	98.58
.5405	80.00	88.00	94.13	90.85	98.58
.5410	80.00	88.00	94.13	90.85	98.58

Note: **Tolerance**, **Flute Length**, **Overall Length**, and **Shank Diameter** are comparable to the closest standard size. See pages 4-9.

Chucking Reamers - Straight Shank - H.S. & Cobalt

Intermediate Decimal Sizes

List No. **LV533**: High Speed, Straight Flute
List No. **LV535**: High Speed, Right Hand Spiral, Right Hand Cut
List No. **LV535L**: High Speed, Left Hand Spiral, Right Hand Cut
List No. **1533**: Cobalt, Straight Flute
List No. **1535**: Cobalt, Right Hand Spiral, Right Hand Cut



MADE IN USA

Size	Price Each				
	LV533 Straight Flute	LV535 RH Spiral	LV535L LH Sp. RH Cut	1533 Cobalt Str. Flt.	1535 Cobalt RH Sp.
.5415	80.00	88.00	94.13	90.85	98.58
.5420	80.00	88.00	94.13	90.85	98.58
.5425	80.00	88.00	94.13	90.85	98.58
.5430	80.00	88.00	94.13	90.85	98.58
.5435	80.00	88.00	94.13	90.85	98.58
.5440	80.00	88.00	94.13	90.85	98.58
.5445	80.00	88.00	94.13	90.85	98.58
.5448	69.00	----	----	----	----
.5450	80.00	88.00	94.13	90.85	98.58
.5455	80.00	88.00	94.13	90.85	98.58
.5460	80.00	88.00	94.13	90.85	98.58
.5465	80.00	88.00	94.13	90.85	98.58
.5470	80.00	88.00	94.13	90.85	98.58
.5475	80.00	88.00	94.13	90.85	98.58
.5480	80.00	88.00	94.13	90.85	98.58
.5485	80.00	88.00	94.13	90.85	98.58
.5490	80.00	88.00	94.13	90.85	98.58
.5495	80.00	88.00	94.13	90.85	98.58
.5500	80.00	88.00	94.13	90.85	98.58
.5505	80.00	88.00	94.13	90.85	98.58
.5510	80.00	88.00	94.13	90.85	98.58
.5515	80.00	88.00	94.13	90.85	98.58
.5520	80.00	88.00	94.13	90.85	98.58
.5525	80.00	88.00	94.13	90.85	98.58
.5530	80.00	88.00	94.13	90.85	98.58
.5535	80.00	88.00	94.13	90.85	98.58
.5540	80.00	88.00	94.13	90.85	98.58
.5545	80.00	88.00	94.13	90.85	98.58
.5550	80.00	88.00	94.13	90.85	98.58
.5555	80.00	88.00	94.13	90.85	98.58
.5560	80.00	88.00	94.13	90.85	98.58
.5565	80.00	88.00	94.13	90.85	98.58
.5570	80.00	88.00	94.13	90.85	98.58
.5575	80.00	88.00	94.13	90.85	98.58
.5580	80.00	88.00	94.13	90.85	98.58
.5585	80.00	88.00	94.13	90.85	98.58
.5590	80.00	88.00	94.13	90.85	98.58
.5595	80.00	88.00	94.13	90.85	98.58
.5600	80.00	88.00	94.13	90.85	98.58
.5605	80.00	88.00	94.13	90.85	98.58
.5610	80.00	88.00	94.13	90.85	98.58
.5615	36.00	44.00	61.25	72.38	84.70
.5620	80.00	88.00	94.13	90.85	98.58
.5630	80.00	88.00	94.13	90.85	98.58
.5635	36.00	44.00	61.25	72.38	84.70
.5640	80.00	88.00	94.13	90.85	98.58
.5645	80.00	88.00	94.13	90.85	98.58
.5650	80.00	88.00	94.13	90.85	98.58
.5655	80.00	88.00	94.13	90.85	98.58
.5660	80.00	88.00	94.13	90.85	98.58
.5665	80.00	88.00	94.13	90.85	98.58
.5670	80.00	88.00	94.13	90.85	98.58
.5675	80.00	88.00	94.13	90.85	98.58
.5680	80.00	88.00	94.13	90.85	98.58
.5685	80.00	88.00	94.13	90.85	98.58
.5690	80.00	88.00	94.13	90.85	98.58
.5695	80.00	88.00	94.13	90.85	98.58
.5700	80.00	88.00	94.13	90.85	98.58
.5705	80.00	88.00	94.13	90.85	98.58

Size	Price Each				
	LV533 Straight Flute	LV535 RH Spiral	LV535L LH Sp. RH Cut	1533 Cobalt Str. Flt.	1535 Cobalt RH Sp.
.5710	80.00	88.00	94.13	90.85	98.58
.5715	80.00	88.00	94.13	90.85	98.58
.5720	80.00	88.00	94.13	90.85	98.58
.5725	80.00	88.00	94.13	90.85	98.58
.5730	80.00	88.00	94.13	90.85	98.58
.5735	80.00	88.00	94.13	90.85	98.58
.5740	80.00	88.00	94.13	90.85	98.58
.5745	80.00	88.00	94.13	90.85	98.58
.5750	80.00	88.00	94.13	90.85	98.58
.5755	80.00	88.00	94.13	90.85	98.58
.5760	80.00	88.00	94.13	90.85	98.58
.5765	80.00	88.00	94.13	90.85	98.58
.5770	80.00	88.00	94.13	90.85	98.58
.5775	80.00	88.00	94.13	90.85	98.58
.5780	80.00	88.00	94.13	90.85	98.58
.5785	80.00	88.00	94.13	90.85	98.58
.5790	80.00	88.00	94.13	90.85	98.58
.5795	80.00	88.00	94.13	90.85	98.58
.5800	80.00	88.00	94.13	90.85	98.58
.5805	80.00	88.00	94.13	90.85	98.58
.5810	80.00	88.00	94.13	90.85	98.58
.5815	80.00	88.00	94.13	90.85	98.58
.5820	80.00	88.00	94.13	90.85	98.58
.5825	80.00	88.00	94.13	90.85	98.58
.5830	80.00	88.00	94.13	90.85	98.58
.5835	80.00	88.00	94.13	90.85	98.58
.5840	80.00	88.00	94.13	90.85	98.58
.5845	80.00	88.00	94.13	90.85	98.58
.5850	80.00	88.00	94.13	90.85	98.58
.5855	80.00	88.00	94.13	90.85	98.58
.5860	80.00	88.00	94.13	90.85	98.58
.5865	80.00	88.00	94.13	90.85	98.58
.5870	80.00	88.00	94.13	90.85	98.58
.5875	80.00	88.00	94.13	90.85	98.58
.5880	80.00	88.00	94.13	90.85	98.58
.5885	80.00	88.00	94.13	90.85	98.58
.5890	80.00	88.00	94.13	90.85	98.58
.5895	80.00	88.00	94.13	90.85	98.58
.5900	80.00	88.00	94.13	90.85	98.58
.5905	80.00	88.00	94.13	90.85	98.58
.5910	80.00	88.00	94.13	90.85	98.58
.5915	80.00	88.00	94.13	90.85	98.58
.5920	80.00	88.00	94.13	90.85	98.58
.5925	80.00	88.00	94.13	90.85	98.58
.5930	80.00	88.00	94.13	90.85	98.58
.5935	80.00	88.00	94.13	90.85	98.58
.5940	80.00	88.00	94.13	90.85	98.58
.5945	80.00	88.00	94.13	90.85	98.58
.5950	80.00	88.00	94.13	90.85	98.58
.5955	80.00	88.00	94.13	90.85	98.58
.5960	80.00	88.00	94.13	90.85	98.58
.5965	80.00	88.00	94.13	90.85	98.58
.5970	80.00	88.00	94.13	90.85	98.58
.5975	80.00	88.00	94.13	90.85	98.58
.5980	80.00	88.00	94.13	90.85	98.58
.5985	80.00	88.00	94.13	90.85	98.58
.5990	80.00	88.00	94.13	90.85	98.58
.5995	80.00	88.00	94.13	90.85	98.58
.6000	80.00	88.00	94.13	90.85	98.58

Note: **Tolerance**, **Flute Length**, **Overall Length**, and **Shank Diameter** are comparable to the closest standard size. See pages 4-9.

Chucking Reamers - Straight Shank - H.S. & Cobalt

Intermediate Decimal Sizes

List No. **LV533**: High Speed, Straight Flute
List No. **LV535**: High Speed, Right Hand Spiral, Right Hand Cut
List No. **LV535L**: High Speed, Left Hand Spiral, Right Hand Cut
List No. **1533**: Cobalt, Straight Flute
List No. **1535**: Cobalt, Right Hand Spiral, Right Hand Cut



MADE IN USA

Size	Price Each				
	LV533 Straight Flute	LV535 RH Spiral	LV535L LH Sp. RH Cut	1533 Cobalt Str. Flt.	1535 Cobalt RH Sp.
.6005	80.00	88.00	94.13	90.85	98.58
.6010	80.00	88.00	94.13	90.85	98.58
.6015	80.00	88.00	94.13	90.85	98.58
.6020	80.00	88.00	94.13	90.85	98.58
.6025	80.00	88.00	94.13	90.85	98.58
.6030	80.00	88.00	94.13	90.85	98.58
.6035	80.00	88.00	94.13	90.85	98.58
.6040	80.00	88.00	94.13	90.85	98.58
.6045	80.00	88.00	94.13	90.85	98.58
.6050	80.00	88.00	94.13	90.85	98.58
.6055	80.00	88.00	94.13	90.85	98.58
.6060	80.00	88.00	94.13	90.85	98.58
.6065	80.00	88.00	94.13	90.85	98.58
.6070	80.00	88.00	94.13	90.85	98.58
.6075	80.00	88.00	94.13	90.85	98.58
.6080	80.00	88.00	94.13	90.85	98.58
.6085	80.00	88.00	94.13	90.85	98.58
.6090	80.00	88.00	94.13	90.85	98.58
.6095	80.00	88.00	94.13	90.85	98.58
.6100	80.00	88.00	94.13	90.85	98.58
.6105	80.00	88.00	94.13	90.85	98.58
.6110	80.00	88.00	94.13	90.85	98.58
.6115	80.00	88.00	94.13	90.85	98.58
.6120	80.00	88.00	94.13	90.85	98.58
.6125	80.00	88.00	94.13	90.85	98.58
.6130	80.00	88.00	94.13	90.85	98.58
.6135	80.00	88.00	94.13	90.85	98.58
.6140	80.00	88.00	94.13	90.85	98.58
.6145	80.00	88.00	94.13	90.85	98.58
.6150	80.00	88.00	94.13	90.85	98.58
.6155	80.00	88.00	94.13	90.85	98.58
.6160	80.00	88.00	94.13	90.85	98.58
.6165	80.00	88.00	94.13	90.85	98.58
.6170	80.00	88.00	94.13	90.85	98.58
.6175	80.00	88.00	94.13	90.85	98.58
.6180	80.00	88.00	94.13	90.85	98.58
.6185	80.00	88.00	94.13	90.85	98.58
.6190	80.00	88.00	94.13	90.85	98.58
.6195	80.00	88.00	94.13	90.85	98.58
.6200	80.00	88.00	94.13	90.85	98.58
.6205	80.00	88.00	94.13	90.85	98.58
.6210	80.00	88.00	94.13	90.85	98.58
.6215	80.00	88.00	94.13	90.85	98.58
.6220	80.00	88.00	94.13	90.85	98.58
.6225	80.00	88.00	94.13	90.85	98.58
.6230	80.00	88.00	94.13	90.85	98.58
.6235	80.00	88.00	94.13	90.85	98.58
.6240	51.25	67.50	76.88	94.30	98.45
.6245	80.00	88.00	94.13	90.85	98.58
.6255	80.00	88.00	94.13	90.85	98.58
.6260	51.25	67.50	76.88	94.30	98.45
.6265	80.00	88.00	92.00	97.75	98.58
.6270	92.50	99.00	105.00	97.75	105.04
.6275	92.50	99.00	105.00	97.75	105.04
.6280	92.50	99.00	105.00	97.75	105.04
.6285	92.50	99.00	105.00	97.75	105.04
.6290	92.50	99.00	105.00	97.75	105.04
.6295	92.50	99.00	105.00	97.75	105.04
.6300	92.50	99.00	105.00	97.75	105.04

Size	Price Each				
	LV533 Straight Flute	LV535 RH Spiral	LV535L LH Sp. RH Cut	1533 Cobalt Str. Flt.	1535 Cobalt RH Sp.
.6304	96.25	----	----	----	----
.6305	92.50	113.85	105.00	97.75	105.04
.6310	92.50	113.85	105.00	97.75	105.04
.6315	92.50	113.85	105.00	97.75	105.04
.6320	92.50	113.85	105.00	97.75	105.04
.6325	92.50	113.85	105.00	97.75	105.04
.6330	92.50	113.85	105.00	97.75	105.04
.6335	92.50	113.85	105.00	97.75	105.04
.6340	92.50	113.85	105.00	97.75	105.04
.6345	92.50	113.85	105.00	113.85	121.00
.6350	92.50	113.85	105.00	113.85	121.00
.6355	92.50	113.85	105.00	113.85	121.00
.6360	92.50	113.85	105.00	113.85	121.00
.6365	92.50	113.85	105.00	113.85	121.00
.6370	92.50	113.85	105.00	113.85	121.00
.6375	92.50	113.85	105.00	113.85	121.00
.6380	92.50	113.85	105.00	113.85	121.00
.6385	92.50	113.85	105.00	113.85	121.00
.6390	92.50	113.85	105.00	113.85	121.00
.6395	92.50	113.85	105.00	113.85	121.00
.6400	92.50	113.85	105.00	113.85	121.00
.6405	92.50	113.85	105.00	113.85	121.00
.6410	92.50	113.85	105.00	113.85	121.00
.6415	92.50	113.85	105.00	113.85	121.00
.6420	92.50	113.85	105.00	113.85	121.00
.6425	92.50	113.85	105.00	113.85	121.00
.6430	92.50	113.85	105.00	113.85	121.00
.6435	92.50	113.85	105.00	113.85	121.00
.6440	92.50	113.85	105.00	113.85	121.00
.6445	92.50	113.85	105.00	113.85	121.00
.6450	92.50	113.85	105.00	113.85	121.00
.6455	92.50	113.85	105.00	113.85	121.00
.6460	92.50	113.85	105.00	113.85	121.00
.6465	92.50	113.85	105.00	113.85	121.00
.6470	92.50	113.85	105.00	113.85	121.00
.6475	92.50	113.85	105.00	113.85	121.00
.6480	92.50	113.85	105.00	113.85	121.00
.6485	92.50	113.85	105.00	113.85	121.00
.6490	92.50	113.85	105.00	113.85	121.00
.6495	92.50	113.85	105.00	113.85	121.00
.6500	92.50	113.85	105.00	113.85	121.00
.6505	92.50	113.85	105.00	113.85	121.00
.6510	92.50	113.85	105.00	113.85	121.00
.6515	92.50	113.85	105.00	113.85	121.00
.6520	92.50	113.85	105.00	113.85	121.00
.6525	92.50	113.85	105.00	113.85	121.00
.6530	92.50	113.85	105.00	113.85	121.00
.6535	92.50	113.85	105.00	113.85	121.00
.6540	92.50	113.85	105.00	113.85	121.00
.6545	92.50	113.85	105.00	113.85	121.00
.6550	92.50	113.85	105.00	113.85	121.00
.6555	92.50	113.85	105.00	113.85	121.00
.6560	92.50	113.85	105.00	113.85	121.00
.6565	92.50	113.85	105.00	113.85	121.00
.6570	92.50	113.85	105.00	113.85	121.00
.6575	92.50	113.85	105.00	113.85	121.00
.6580	92.50	113.85	105.00	113.85	121.00
.6585	92.50	113.85	105.00	113.85	121.00
.6590	92.50	113.85	105.00	113.85	121.00

Note: **Tolerance**, **Flute Length**, **Overall Length**, and **Shank Diameter** are comparable to the closest standard size. See pages 4-9.

Chucking Reamers - Straight Shank - H.S. & Cobalt

Intermediate Decimal Sizes

List No. **LV533**: High Speed, Straight Flute
List No. **LV535**: High Speed, Right Hand Spiral, Right Hand Cut
List No. **LV535L**: High Speed, Left Hand Spiral, Right Hand Cut
List No. **1533**: Cobalt, Straight Flute
List No. **1535**: Cobalt, Right Hand Spiral, Right Hand Cut



MADE IN USA

Size	Price Each				
	LV533 Straight Flute	LV535 RH Spiral	LV535L LH Sp. RH Cut	1533 Cobalt Str. Flt.	1535 Cobalt RH Sp.
.6595	92.50	99.000	105.00	113.85	121.00
.6600	92.50	99.000	105.00	113.85	121.00
.6605	92.50	99.000	105.00	113.85	121.00
.6610	92.50	99.000	105.00	113.85	121.00
.6615	92.50	99.000	105.00	113.85	121.00
.6620	92.50	99.000	105.00	113.85	121.00
.6625	92.50	99.000	105.00	113.85	121.00
.6630	92.50	99.000	105.00	113.85	121.00
.6635	92.50	99.000	105.00	113.85	121.00
.6640	92.50	99.000	105.00	113.85	121.00
.6645	92.50	99.000	105.00	113.85	121.00
.6650	92.50	99.000	105.00	113.85	121.00
.6655	92.50	99.000	105.00	113.85	121.00
.6660	92.50	99.000	105.00	113.85	121.00
.6665	92.50	99.000	105.00	113.85	121.00
.6670	92.50	99.000	105.00	113.85	121.00
.6675	92.50	99.000	105.00	113.85	121.00
.6680	92.50	99.000	105.00	113.85	121.00
.6685	92.50	99.000	105.00	113.85	121.00
.6690	92.50	99.000	105.00	113.85	121.00
.6695	92.50	99.000	105.00	113.85	121.00
.6700	92.50	99.000	105.00	113.85	121.00
.6705	92.50	99.000	105.00	113.85	121.00
.6710	92.50	99.000	105.00	113.85	121.00
.6715	92.50	99.000	105.00	113.85	121.00
.6720	92.50	99.000	105.00	113.85	121.00
.6725	92.50	99.000	105.00	113.85	121.00
.6730	92.50	99.000	105.00	113.85	121.00
.6735	92.50	99.000	105.00	113.85	121.00
.6740	92.50	99.000	105.00	113.85	121.00
.6745	92.50	99.000	105.00	113.85	121.00
.6750	92.50	99.000	105.00	113.85	121.00
.6755	92.50	99.000	105.00	113.85	121.00
.6760	92.50	99.000	105.00	113.85	121.00
.6765	92.50	99.000	105.00	113.85	121.00
.6770	92.50	99.000	105.00	113.85	121.00
.6775	92.50	99.000	105.00	113.85	121.00
.6780	92.50	99.000	105.00	113.85	121.00
.6785	92.50	99.000	105.00	113.85	121.00
.6790	92.50	99.000	105.00	113.85	121.00
.6795	92.50	99.000	105.00	113.85	121.00
.6800	92.50	99.000	105.00	113.85	121.00
.6805	92.50	99.000	105.00	113.85	121.00
.6810	92.50	99.000	105.00	113.85	121.00
.6815	92.50	99.000	105.00	113.85	121.00
.6820	92.50	99.000	105.00	113.85	121.00
.6825	92.50	99.000	105.00	113.85	121.00
.6830	92.50	99.000	105.00	113.85	121.00
.6835	92.50	99.000	105.00	113.85	121.00
.6840	92.50	99.000	105.00	113.85	121.00
.6845	92.50	99.000	105.00	113.85	121.00
.6850	92.50	99.000	105.00	113.85	121.00
.6855	92.50	99.000	105.00	113.85	121.00
.6860	92.50	99.000	105.00	113.85	121.00
.6865	101.25	107.50	112.50	113.85	129.80
.6870	101.25	107.50	112.50	113.85	121.00
.6880	101.25	104.38	112.50	117.30	129.80
.6885	101.25	107.50	112.50	117.30	103.40
.6890	61.94	107.50	112.50	----	----

Size	Price Each				
	LV533 Straight Flute	LV535 RH Spiral	LV535L LH Sp. RH Cut	1533 Cobalt Str. Flt.	1535 Cobalt RH Sp.
.6895	101.25	107.50	112.50	117.30	129.80
.6900	101.25	107.50	112.50	117.30	129.80
.6905	101.25	107.50	112.50	117.30	129.80
.6910	101.25	107.50	112.50	117.30	129.80
.6915	101.25	107.50	112.50	117.30	129.80
.6920	101.25	107.50	112.50	117.30	129.80
.6925	101.25	107.50	112.50	117.30	129.80
.6930	101.25	107.50	112.50	117.30	129.80
.6935	101.25	107.50	112.50	117.30	129.80
.6940	101.25	107.50	112.50	117.30	129.80
.6945	101.25	107.50	112.50	117.30	129.80
.6950	101.25	107.50	112.50	117.30	129.80
.6955	101.25	107.50	112.50	117.30	129.80
.6960	101.25	107.50	112.50	117.30	129.80
.6965	101.25	107.50	112.50	117.30	129.80
.6970	101.25	107.50	112.50	117.30	129.80
.6975	101.25	107.50	112.50	117.30	129.80
.6980	101.25	107.50	112.50	117.30	129.80
.6985	101.25	107.50	112.50	117.30	129.80
.6990	101.25	107.50	112.50	117.30	129.80
.6995	101.25	107.50	112.50	117.30	129.80
.7000	101.25	107.50	112.50	117.30	129.80
.7005	101.25	107.50	112.50	117.30	129.80
.7010	101.25	107.50	112.50	117.30	129.80
.7015	101.25	107.50	112.50	117.30	129.80
.7020	101.25	107.50	112.50	117.30	129.80
.7025	101.25	107.50	112.50	117.30	129.80
.7030	101.25	107.50	112.50	117.30	129.80
.7035	101.25	107.50	112.50	117.30	129.80
.7040	101.25	107.50	112.50	117.30	129.80
.7045	101.25	107.50	112.50	117.30	129.80
.7050	101.25	107.50	112.50	117.30	129.80
.7055	101.25	107.50	112.50	117.30	129.80
.7060	101.25	107.50	112.50	117.30	129.80
.7065	101.25	107.50	112.50	117.30	129.80
.7070	101.25	107.50	112.50	117.30	129.80
.7075	101.25	107.50	112.50	117.30	129.80
.7080	101.25	107.50	112.50	117.30	129.80
.7085	101.25	107.50	112.50	117.30	129.80
.7090	101.25	107.50	112.50	117.30	129.80
.7095	101.25	107.50	112.50	117.30	129.80
.7100	101.25	107.50	112.50	117.30	129.80
.7105	101.25	107.50	112.50	117.30	129.80
.7110	101.25	107.50	112.50	117.30	129.80
.7115	101.25	107.50	112.50	117.30	129.80
.7120	101.25	107.50	112.50	117.30	129.80
.7125	101.25	107.50	112.50	117.30	129.80
.7130	101.25	107.50	112.50	117.30	129.80
.7135	101.25	107.50	112.50	117.30	129.80
.7140	101.25	107.50	112.50	117.30	129.80
.7145	101.25	107.50	112.50	117.30	129.80
.7150	101.25	107.50	112.50	117.30	129.80
.7155	101.25	107.50	112.50	117.30	129.80
.7160	101.25	107.50	112.50	117.30	129.80
.7165	101.25	107.50	112.50	117.30	129.80
.7170	101.25	107.50	112.50	117.30	129.80
.7175	101.25	107.50	112.50	117.30	129.80
.7180	101.25	107.50	112.50	117.30	129.80
.7185	103.75	107.50	117.50	111.55	129.80

Note: **Tolerance**, **Flute Length**, **Overall Length**, and **Shank Diameter** are comparable to the closest standard size. See pages 4-9.

Chucking Reamers - Straight Shank - H.S. & Cobalt

Intermediate Decimal Sizes

List No. **LV533**: High Speed, Straight Flute
List No. **LV535**: High Speed, Right Hand Spiral, Right Hand Cut
List No. **LV535L**: High Speed, Left Hand Spiral, Right Hand Cut
List No. **1533**: Cobalt, Straight Flute
List No. **1535**: Cobalt, Right Hand Spiral, Right Hand Cut



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Size	Price Each				
	LV533 Straight Flute	LV535 RH Spiral	LV535L LH Sp. RH Cut	1533 Cobalt Str. Flt.	1535 Cobalt RH Sp.
.7190	103.75	111.25	117.50	117.30	133.10
.7195	103.75	111.25	117.50	117.30	133.10
.7200	103.75	111.25	117.50	117.30	133.10
.7205	103.75	111.25	117.50	117.30	133.10
.7210	103.75	111.25	117.50	117.30	133.10
.7215	103.75	111.25	117.50	117.30	133.10
.7220	103.75	111.25	117.50	117.30	133.10
.7225	103.75	111.25	117.50	117.30	133.10
.7230	103.75	111.25	117.50	117.30	133.10
.7235	103.75	111.25	117.50	117.30	133.10
.7240	103.75	111.25	117.50	117.30	133.10
.7245	103.75	111.25	117.50	117.30	133.10
.7250	103.75	111.25	117.50	117.30	133.10
.7255	103.75	111.25	117.50	117.30	133.10
.7260	103.75	111.25	117.50	117.30	133.10
.7265	103.75	111.25	117.50	117.30	133.10
.7270	103.75	111.25	117.50	117.30	133.10
.7275	103.75	111.25	117.50	117.30	133.10
.7280	103.75	111.25	117.50	117.30	133.10
.7285	103.75	111.25	117.50	117.30	133.10
.7290	103.75	111.25	117.50	117.30	133.10
.7295	103.75	111.25	117.50	117.30	133.10
.7300	103.75	111.25	117.50	117.30	133.10
.7305	103.75	111.25	117.50	117.30	133.10
.7310	103.75	111.25	117.50	117.30	133.10
.7315	103.75	111.25	117.50	117.30	133.10
.7320	103.75	111.25	117.50	117.30	133.10
.7325	103.75	111.25	117.50	117.30	133.10
.7330	103.75	111.25	117.50	117.30	133.10
.7335	103.75	111.25	117.50	117.30	133.10
.7340	103.75	111.25	117.50	117.30	133.10
.7345	103.75	111.25	117.50	117.30	133.10
.7350	103.75	111.25	117.50	117.30	133.10
.7355	103.75	111.25	117.50	117.30	133.10
.7360	103.75	111.25	117.50	117.30	133.10
.7365	103.75	111.25	117.50	117.30	133.10
.7370	103.75	111.25	117.50	117.30	133.10
.7375	103.75	111.25	117.50	117.30	133.10
.7380	103.75	111.25	117.50	117.30	133.10
.7385	103.75	111.25	117.50	117.30	133.10
.7390	103.75	111.25	117.50	117.30	133.10
.7395	103.75	111.25	117.50	117.30	133.10
.7400	103.75	111.25	117.50	117.30	133.10
.7405	103.75	111.25	117.50	117.30	133.10
.7410	103.75	111.25	117.50	117.30	133.10
.7415	103.75	111.25	117.50	117.30	133.10
.7420	103.75	111.25	117.50	117.30	133.10
.7425	103.75	111.25	117.50	117.30	133.10
.7430	103.75	111.25	117.50	117.30	133.10
.7435	103.75	111.25	117.50	117.30	133.10
.7440	103.75	111.25	117.50	117.30	133.10
.7445	103.75	111.25	117.50	117.30	133.10
.7450	103.75	111.25	117.50	117.30	133.10
.7455	103.75	111.25	117.50	117.30	133.10
.7460	103.75	111.25	117.50	117.30	133.10
.7465	103.75	111.25	117.50	117.30	133.10
.7470	103.75	111.25	117.50	117.30	133.10
.7475	103.75	111.25	117.50	117.30	133.10
.7485	103.75	111.25	117.50	117.30	133.10

Size	Price Each				
	LV533 Straight Flute	LV535 RH Spiral	LV535L LH Sp. RH Cut	1533 Cobalt Str. Flt.	1535 Cobalt RH Sp.
.7490	71.88	90.63	98.75	103.50	111.00
.7495	103.75	111.25	117.50	117.30	133.10
.7505	111.25	118.75	118.75	126.50	143.00
.7510	71.88	90.63	98.75	90.00	111.00
.7515	111.25	118.75	124.38	126.50	143.00
.7520	111.25	118.75	124.38	126.50	143.00
.7525	111.25	118.75	124.38	126.50	143.00
.7530	111.25	118.75	124.38	126.50	143.00
.7535	111.25	118.75	124.38	126.50	143.00
.7540	111.25	118.75	124.38	126.50	143.00
.7545	111.25	118.75	124.38	126.50	143.00
.7550	111.25	118.75	124.38	126.50	143.00
.7555	111.25	118.75	124.38	126.50	143.00
.7560	111.25	118.75	124.38	126.50	143.00
.7565	111.25	118.75	124.38	126.50	143.00
.7570	111.25	118.75	124.38	126.50	143.00
.7575	111.25	118.75	124.38	126.50	143.00
.7580	111.25	118.75	124.38	126.50	143.00
.7585	111.25	118.75	124.38	126.50	143.00
.7590	111.25	118.75	124.38	126.50	143.00
.7595	111.25	118.75	124.38	126.50	143.00
.7600	111.25	118.75	124.38	126.50	143.00
.7605	111.25	118.75	124.38	126.50	143.00
.7610	111.25	118.75	124.38	126.50	143.00
.7615	111.25	118.75	124.38	126.50	143.00
.7620	111.25	118.75	124.38	126.50	143.00
.7625	111.25	118.75	124.38	126.50	143.00
.7630	111.25	118.75	124.38	126.50	143.00
.7635	111.25	118.75	124.38	126.50	143.00
.7640	111.25	118.75	124.38	126.50	143.00
.7645	111.25	118.75	124.38	126.50	143.00
.7650	111.25	118.75	124.38	126.50	143.00
.7655	111.25	118.75	124.38	126.50	143.00
.7660	111.25	118.75	124.38	126.50	143.00
.7665	111.25	118.75	124.38	126.50	143.00
.7670	111.25	118.75	124.38	126.50	143.00
.7675	111.25	118.75	124.38	126.50	143.00
.7680	111.25	118.75	124.38	126.50	143.00
.7685	111.25	118.75	124.38	126.50	143.00
.7690	111.25	118.75	124.38	126.50	143.00
.7695	111.25	118.75	124.38	126.50	143.00
.7700	111.25	118.75	124.38	126.50	143.00
.7705	111.25	118.75	124.38	126.50	143.00
.7710	111.25	118.75	124.38	126.50	143.00
.7715	111.25	118.75	124.38	126.50	143.00
.7720	111.25	118.75	124.38	126.50	143.00
.7725	111.25	118.75	124.38	126.50	143.00
.7730	111.25	118.75	124.38	126.50	143.00
.7735	111.25	118.75	124.38	126.50	143.00
.7740	111.25	118.75	124.38	126.50	143.00
.7745	111.25	118.75	124.38	126.50	143.00
.7750	111.25	118.75	124.38	126.50	143.00
.7755	111.25	118.75	124.38	126.50	143.00
.7760	111.25	118.75	124.38	126.50	143.00
.7765	111.25	118.75	124.38	126.50	143.00
.7770	111.25	118.75	124.38	126.50	143.00
.7775	111.25	118.75	124.38	126.50	143.00
.7780	111.25	118.75	124.38	126.50	143.00
.7785	111.25	118.75	124.38	126.50	143.00

Note: **Tolerance**, **Flute Length**, **Overall Length**, and **Shank Diameter** are comparable to the closest standard size. See pages 152-157.

Chucking Reamers - Straight Shank - H.S. & Cobalt

Intermediate Decimal Sizes

List No. **LV533**: High Speed, Straight Flute
List No. **LV535**: High Speed, Right Hand Spiral, Right Hand Cut
List No. **LV535L**: High Speed, Left Hand Spiral, Right Hand Cut
List No. **1533**: Cobalt, Straight Flute
List No. **1535**: Cobalt, Right Hand Spiral, Right Hand Cut



MADE IN USA

Size	Price Each				
	LV533 Straight Flute	LV535 RH Spiral	LV535L LH Sp. RH Cut	1533 Cobalt Str. Flt.	1535 Cobalt RH Sp.
.7790	111.25	118.75	124.38	126.50	143.00
.7795	111.25	118.75	124.38	126.50	143.00
.7800	111.25	118.75	124.38	126.50	143.00
.7805	111.25	118.75	124.38	126.50	143.00
.7810	111.25	118.75	124.38	126.50	143.00
.7815	111.25	118.75	124.38	126.50	143.00
.7820	111.25	118.75	124.38	126.50	143.00
.7825	111.25	118.75	124.38	126.50	143.00
.7830	111.25	118.75	124.38	126.50	143.00
.7835	111.25	118.75	124.38	126.50	143.00
.7840	111.25	118.75	124.38	126.50	143.00
.7845	111.25	118.75	124.38	126.50	143.00
.7850	111.25	118.75	124.38	126.50	143.00
.7855	111.25	118.75	124.38	126.50	143.00
.7860	111.25	118.75	124.38	126.50	143.00
.7865	111.25	118.75	124.38	126.50	143.00
.7870	111.25	118.75	124.38	126.50	143.00
.7875	111.25	118.75	124.38	126.50	143.00
.7880	111.25	118.75	124.38	126.50	143.00
.7885	111.25	118.75	124.38	126.50	143.00
.7890	111.25	118.75	124.38	126.50	143.00
.7895	111.25	118.75	124.38	126.50	143.00
.7900	111.25	118.75	124.38	126.50	143.00
.7905	111.25	118.75	124.38	126.50	143.00
.7910	111.25	118.75	124.38	126.50	143.00
.7915	111.25	118.75	124.38	126.50	143.00
.7920	111.25	118.75	124.38	126.50	143.00
.7925	111.25	118.75	124.38	126.50	143.00
.7930	111.25	118.75	124.38	126.50	143.00
.7935	111.25	118.75	124.38	126.50	143.00
.7940	111.25	118.75	124.38	126.50	143.00
.7945	111.25	118.75	124.38	126.50	143.00
.7950	111.25	118.75	124.38	126.50	143.00
.7955	111.25	118.75	124.38	126.50	143.00
.7960	111.25	118.75	124.38	126.50	143.00
.7965	111.25	118.75	124.38	126.50	143.00
.7970	111.25	118.75	124.38	126.50	143.00
.7975	111.25	118.75	124.38	126.50	143.00
.7980	111.25	118.75	124.38	126.50	143.00
.7985	111.25	118.75	124.38	126.50	143.00
.7990	111.25	118.75	124.38	126.50	143.00
.7995	111.25	118.75	124.38	126.50	143.00
.8000	111.25	118.75	124.38	126.50	143.00
.8005	111.25	118.75	124.38	126.50	143.00
.8010	111.25	118.75	124.38	126.50	143.00
.8015	111.25	118.75	124.38	126.50	143.00
.8020	111.25	118.75	124.38	126.50	143.00
.8025	111.25	118.75	124.38	126.50	143.00
.8030	111.25	118.75	124.38	126.50	143.00
.8035	111.25	118.75	124.38	126.50	143.00
.8040	111.25	118.75	124.38	126.50	143.00
.8045	111.25	118.75	124.38	126.50	143.00
.8050	111.25	118.75	124.38	126.50	143.00
.8055	111.25	118.75	124.38	126.50	143.00
.8060	111.25	118.75	124.38	126.50	143.00
.8065	111.25	118.75	124.38	126.50	143.00
.8070	111.25	118.75	124.38	126.50	143.00
.8075	111.25	118.75	124.38	126.50	143.00
.8080	111.25	118.75	124.38	126.50	143.00

Size	Price Each				
	LV533 Straight Flute	LV535 RH Spiral	LV535L LH Sp. RH Cut	1533 Cobalt Str. Flt.	1535 Cobalt RH Sp.
.8085	111.25	118.75	124.38	126.50	143.00
.8090	111.25	118.75	124.38	126.50	143.00
.8095	111.25	118.75	124.38	126.50	143.00
.8100	111.25	118.75	124.38	126.50	143.00
.8105	111.25	118.75	124.38	126.50	143.00
.8110	111.25	118.75	124.38	126.50	143.00
.8115	73.75	95.63	98.75	117.30	115.00
.8120	111.25	118.75	124.38	117.30	143.00
.8130	116.25	123.75	130.00	144.33	152.90
.8135	73.75	95.63	98.75	117.30	115.00
.8140	116.25	123.75	130.00	144.33	152.90
.8145	116.25	123.75	130.00	144.33	152.90
.8150	116.25	123.75	130.00	144.33	152.90
.8155	116.25	123.75	130.00	144.33	152.90
.8160	116.25	123.75	130.00	144.33	152.90
.8165	116.25	123.75	130.00	144.33	152.90
.8170	119.38	123.75	130.00	144.33	152.90
.8175	119.38	123.75	130.00	144.33	152.90
.8180	119.38	123.75	130.00	144.33	152.90
.8185	119.38	123.75	130.00	144.33	152.90
.8190	119.38	123.75	130.00	144.33	152.90
.8195	119.38	123.75	130.00	144.33	152.90
.8200	119.38	123.75	130.00	144.33	152.90
.8205	119.38	123.75	130.00	144.33	152.90
.8210	119.38	123.75	130.00	144.33	152.90
.8215	119.38	123.75	130.00	144.33	152.90
.8220	119.38	123.75	130.00	144.33	152.90
.8225	119.38	123.75	130.00	144.33	152.90
.8230	119.38	123.75	130.00	144.33	152.90
.8235	119.38	123.75	130.00	144.33	152.90
.8240	119.38	123.75	130.00	144.33	152.90
.8245	119.38	123.75	130.00	144.33	152.90
.8250	119.38	123.75	130.00	144.33	152.90
.8255	119.38	123.75	130.00	144.33	152.90
.8260	119.38	123.75	130.00	144.33	152.90
.8265	119.38	123.75	130.00	144.33	152.90
.8270	119.38	123.75	130.00	144.33	152.90
.8275	119.38	123.75	130.00	144.33	152.90
.8280	119.38	123.75	130.00	144.33	152.90
.8285	119.38	123.75	130.00	144.33	152.90
.8290	119.38	123.75	130.00	144.33	152.90
.8295	119.38	123.75	130.00	144.33	152.90
.8300	119.38	123.75	130.00	144.33	152.90
.8305	119.38	123.75	130.00	144.33	152.90
.8310	119.38	123.75	130.00	144.33	152.90
.8315	119.38	123.75	130.00	144.33	152.90
.8320	119.38	123.75	130.00	144.33	152.90
.8325	119.38	123.75	130.00	144.33	152.90
.8330	119.38	123.75	130.00	144.33	152.90
.8335	119.38	123.75	130.00	144.33	152.90
.8340	119.38	123.75	130.00	144.33	152.90
.8345	119.38	123.75	130.00	144.33	152.90
.8350	119.38	123.75	130.00	144.33	152.90
.8355	119.38	123.75	130.00	144.33	152.90
.8360	119.38	123.75	130.00	144.33	152.90
.8365	119.38	123.75	130.00	144.33	152.90
.8370	119.38	123.75	130.00	144.33	152.90
.8375	119.38	123.75	130.00	144.33	152.90
.8380	119.38	123.75	130.00	144.33	152.90

Note: **Tolerance**, **Flute Length**, **Overall Length**, and **Shank Diameter** are comparable to the closest standard size. See pages 4-9.

Chucking Reamers - Straight Shank - H.S. & Cobalt

Intermediate Decimal Sizes

List No. **LV533**: High Speed, Straight Flute
List No. **LV535**: High Speed, Right Hand Spiral, Right Hand Cut
List No. **LV535L**: High Speed, Left Hand Spiral, Right Hand Cut
List No. **1533**: Cobalt, Straight Flute
List No. **1535**: Cobalt, Right Hand Spiral, Right Hand Cut



MADE IN USA

Size	Price Each				
	LV533 Straight Flute	LV535 RH Spiral	LV535L LH Sp. RH Cut	1533 Cobalt Str. Flt.	1535 Cobalt RH Sp.
.8385	119.38	123.75	130.00	144.33	152.90
.8390	119.38	123.75	130.00	144.33	152.90
.8395	119.38	123.75	130.00	144.33	152.90
.8400	119.38	123.75	130.00	144.33	152.90
.8405	119.38	123.75	130.00	144.33	152.90
.8410	119.38	123.75	130.00	144.33	152.90
.8415	119.38	123.75	130.00	144.33	152.90
.8420	119.38	123.75	130.00	144.33	152.90
.8425	119.38	123.75	130.00	144.33	152.90
.8430	119.38	123.75	130.00	144.33	152.90
.8435	119.38	123.75	130.00	144.33	152.90
.8440	121.25	127.50	133.75	131.19	152.90
.8445	121.25	127.50	133.75	131.19	152.90
.8450	121.25	127.50	133.75	131.19	152.90
.8455	121.25	127.50	133.75	131.19	152.90
.8460	121.25	127.50	133.75	131.19	152.90
.8470	121.25	127.50	133.75	131.19	152.90
.8475	121.25	127.50	133.75	131.19	152.90
.8480	121.25	127.50	133.75	131.19	152.90
.8485	121.25	127.50	133.75	131.19	152.90
.8490	121.25	127.50	133.75	131.19	152.90
.8495	121.25	127.50	133.75	131.19	152.90
.8500	121.25	127.50	133.75	131.19	152.90
.8505	121.25	127.50	133.75	131.19	152.90
.8510	121.25	127.50	133.75	131.19	152.90
.8515	121.25	127.50	133.75	131.19	152.90
.8520	121.25	127.50	133.75	131.19	152.90
.8525	121.25	127.50	133.75	131.19	152.90
.8530	121.25	127.50	133.75	131.19	152.90
.8535	121.25	127.50	133.75	131.19	152.90
.8540	121.25	127.50	133.75	131.19	152.90
.8545	121.25	127.50	133.75	131.19	152.90
.8550	121.25	127.50	133.75	131.19	152.90
.8555	121.25	127.50	133.75	131.19	152.90
.8560	121.25	127.50	133.75	131.19	152.90
.8565	121.25	127.50	133.75	131.19	152.90
.8570	121.25	127.50	133.75	131.19	152.90
.8575	121.25	127.50	133.75	131.19	152.90
.8580	121.25	127.50	133.75	131.19	152.90
.8585	121.25	127.50	133.75	131.19	152.90
.8590	121.25	127.50	133.75	131.19	152.90
.8595	121.25	127.50	133.75	131.19	152.90
.8600	121.25	127.50	133.75	131.19	152.90
.8605	121.25	127.50	133.75	131.19	152.90
.8610	121.25	127.50	133.75	131.19	152.90
.8615	121.25	127.50	133.75	131.19	152.90
.8620	121.25	127.50	133.75	131.19	152.90
.8625	121.25	127.50	133.75	131.19	152.90
.8630	121.25	127.50	133.75	131.19	152.90
.8635	121.25	127.50	133.75	131.19	152.90
.8640	121.25	127.50	133.75	131.19	152.90
.8645	121.25	127.50	133.75	131.19	152.90
.8650	121.25	127.50	133.75	131.19	152.90
.8655	121.25	127.50	133.75	131.19	152.90
.8660	121.25	127.50	133.75	131.19	152.90
.8665	121.25	127.50	133.75	131.19	152.90
.8670	121.25	127.50	133.75	131.19	152.90
.8675	121.25	127.50	133.75	131.19	152.90
.8680	121.25	127.50	133.75	131.19	152.90

Size	Price Each				
	LV533 Straight Flute	LV535 RH Spiral	LV535L LH Sp. RH Cut	1533 Cobalt Str. Flt.	1535 Cobalt RH Sp.
.8685	121.25	127.50	133.75	131.19	152.90
.8690	121.25	127.50	133.75	131.19	152.90
.8695	121.25	127.50	133.75	131.19	152.90
.8700	121.25	127.50	133.75	131.19	152.90
.8705	121.25	127.50	133.75	131.19	152.90
.8710	121.25	127.50	133.75	131.19	152.90
.8715	121.25	127.50	133.75	131.19	152.90
.8720	121.25	127.50	133.75	131.19	152.90
.8725	121.25	127.50	133.75	131.19	152.90
.8730	121.25	127.50	133.75	131.19	152.90
.8735	121.25	127.50	133.75	131.19	152.90
.8740	86.25	112.50	123.75	143.75	146.30
.8745	121.25	127.50	133.75	132.25	149.60
.8755	127.50	136.25	141.59	161.00	176.00
.8760	86.25	112.50	123.75	143.75	146.30
.8765	127.50	136.25	141.59	161.00	176.00
.8770	127.50	136.25	141.59	161.00	176.00
.8775	127.50	136.25	141.59	161.00	176.00
.8780	127.50	136.25	141.59	161.00	176.00
.8785	127.50	136.25	141.59	161.00	176.00
.8790	127.50	136.25	141.59	161.00	176.00
.8795	127.50	136.25	141.59	161.00	176.00
.8800	127.50	136.25	141.59	161.00	176.00
.8805	127.50	136.25	141.59	161.00	176.00
.8810	127.50	136.25	141.59	161.00	176.00
.8815	127.50	136.25	141.59	161.00	176.00
.8820	127.50	136.25	141.59	161.00	176.00
.8825	127.50	136.25	141.59	161.00	176.00
.8830	127.50	136.25	141.59	161.00	176.00
.8835	127.50	136.25	141.59	161.00	176.00
.8840	127.50	136.25	141.59	161.00	176.00
.8845	127.50	136.25	141.59	161.00	176.00
.8850	127.50	136.25	141.59	161.00	176.00
.8855	127.50	136.25	141.59	161.00	176.00
.8860	127.50	136.25	141.59	161.00	176.00
.8865	127.50	136.25	141.59	161.00	176.00
.8870	127.50	136.25	141.59	161.00	176.00
.8875	127.50	136.25	141.59	161.00	176.00
.8880	127.50	136.25	141.59	161.00	176.00
.8885	127.50	136.25	141.59	161.00	176.00
.8890	127.50	136.25	141.59	161.00	176.00
.8895	127.50	136.25	141.59	161.00	176.00
.8900	130.00	137.50	145.00	161.00	176.00
.8905	130.00	137.50	145.00	161.00	176.00
.8910	130.00	137.50	145.00	161.00	176.00
.8915	130.00	137.50	145.00	161.00	176.00
.8920	130.00	137.50	145.00	161.00	176.00
.8925	130.00	137.50	145.00	161.00	176.00
.8930	130.00	137.50	145.00	161.00	176.00
.8935	130.00	137.50	145.00	161.00	176.00
.8940	130.00	137.50	145.00	161.00	176.00
.8945	130.00	137.50	145.00	161.00	176.00
.8950	130.00	137.50	145.00	161.00	176.00
.8955	130.00	137.50	145.00	161.00	176.00
.8960	130.00	137.50	145.00	161.00	176.00
.8965	130.00	137.50	145.00	161.00	176.00
.8970	130.00	137.50	145.00	161.00	176.00
.8975	130.00	137.50	145.00	161.00	176.00
.8980	130.00	137.50	145.00	161.00	176.00

Note: **Tolerance**, **Flute Length**, **Overall Length**, and **Shank Diameter** are comparable to the closest standard size. See pages 4-9.

Chucking Reamers - Straight Shank - H.S. & Cobalt

Intermediate Decimal Sizes

List No. **LV533**: High Speed, Straight Flute
List No. **LV535**: High Speed, Right Hand Spiral, Right Hand Cut
List No. **LV535L**: High Speed, Left Hand Spiral, Right Hand Cut
List No. **1533**: Cobalt, Straight Flute
List No. **1535**: Cobalt, Right Hand Spiral, Right Hand Cut



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Size	Price Each				
	LV533 Straight Flute	LV535 RH Spiral	LV535L LH Sp. RH Cut	1533 Cobalt Str. Flt.	1535 Cobalt RH Sp.
.8985	130.00	137.50	145.00	161.00	176.00
.8990	130.00	137.50	145.00	161.00	176.00
.8995	130.00	137.50	145.00	161.00	176.00
.9000	130.00	137.50	145.00	161.00	176.00
.9005	130.00	137.50	145.00	161.00	176.00
.9010	130.00	137.50	145.00	161.00	176.00
.9015	130.00	137.50	145.00	161.00	176.00
.9020	130.00	137.50	145.00	161.00	176.00
.9025	130.00	137.50	145.00	161.00	176.00
.9030	130.00	137.50	145.00	161.00	176.00
.9035	130.00	137.50	145.00	161.00	176.00
.9040	130.00	137.50	145.00	161.00	176.00
.9045	130.00	137.50	145.00	161.00	176.00
.9050	130.00	137.50	145.00	161.00	176.00
.9060	130.00	137.50	145.00	161.00	176.00
.9065	130.00	137.50	145.00	161.00	176.00
.9070	130.00	137.50	145.00	161.00	176.00
.9075	130.00	137.50	145.00	161.00	176.00
.9080	131.25	138.75	145.00	161.00	176.00
.9085	131.25	138.75	145.00	161.00	176.00
.9090	131.25	138.75	145.00	161.00	176.00
.9095	131.25	138.75	145.00	161.00	176.00
.9100	131.25	138.75	145.00	161.00	176.00
.9105	131.25	138.75	145.00	161.00	176.00
.9110	131.25	138.75	145.00	161.00	176.00
.9115	131.25	138.75	145.00	161.00	176.00
.9120	131.25	138.75	145.00	161.00	176.00
.9125	131.25	138.75	145.00	161.00	176.00
.9130	131.25	138.75	145.00	161.00	176.00
.9135	131.25	138.75	145.00	161.00	176.00
.9140	131.25	138.75	145.00	161.00	176.00
.9145	131.25	138.75	145.00	161.00	176.00
.9150	131.25	138.75	145.00	161.00	176.00
.9155	131.25	138.75	145.00	161.00	176.00
.9160	131.25	138.75	145.00	161.00	176.00
.9165	131.25	138.75	145.00	161.00	176.00
.9170	131.25	138.75	145.00	161.00	176.00
.9175	131.25	138.75	145.00	161.00	176.00
.9180	131.25	138.75	145.00	161.00	176.00
.9185	131.25	138.75	145.00	161.00	176.00
.9190	131.25	138.75	145.00	161.00	176.00
.9195	131.25	138.75	145.00	161.00	176.00
.9200	131.25	138.75	145.00	161.00	176.00
.9205	132.50	140.00	146.25	161.00	176.00
.9210	132.50	140.00	146.25	161.00	176.00
.9215	132.50	140.00	146.25	161.00	176.00
.9220	132.50	140.00	146.25	161.00	176.00
.9225	132.50	140.00	146.25	161.00	176.00
.9230	132.50	140.00	146.25	161.00	176.00
.9235	132.50	140.00	146.25	161.00	176.00
.9240	132.50	140.00	146.25	161.00	176.00
.9245	132.50	140.00	146.25	161.00	176.00
.9250	132.50	140.00	146.25	161.00	176.00
.9255	132.50	140.00	146.25	161.00	176.00
.9260	132.50	140.00	146.25	161.00	176.00
.9265	132.50	140.00	146.25	161.00	176.00
.9270	132.50	140.00	146.25	161.00	176.00
.9275	132.50	140.00	146.25	161.00	176.00
.9280	132.50	140.00	146.25	161.00	176.00

Size	Price Each				
	LV533 Straight Flute	LV535 RH Spiral	LV535L LH Sp. RH Cut	1533 Cobalt Str. Flt.	1535 Cobalt RH Sp.
.9285	132.50	161.00	146.25	161.00	176.00
.9290	132.50	161.00	146.25	161.00	176.00
.9295	132.50	161.00	146.25	161.00	176.00
.9300	132.50	161.00	146.25	161.00	176.00
.9305	132.50	161.00	146.25	161.00	176.00
.9310	132.50	161.00	146.25	161.00	176.00
.9315	132.50	161.00	146.25	161.00	176.00
.9320	132.50	161.00	146.25	161.00	176.00
.9325	132.50	161.00	146.25	161.00	176.00
.9330	132.50	161.00	146.25	161.00	176.00
.9335	132.50	161.00	146.25	161.00	176.00
.9340	132.50	161.00	146.25	161.00	176.00
.9345	132.50	161.00	146.25	161.00	176.00
.9350	132.50	161.00	146.25	161.00	176.00
.9355	132.50	161.00	146.25	161.00	176.00
.9360	132.50	161.00	146.25	161.00	176.00
.9365	112.38	161.00	----	161.00	176.00
.9370	132.50	161.00	146.25	161.00	176.00
.9380	140.00	151.25	156.25	181.70	187.00
.9385	112.38	151.25	156.25	161.00	187.00
.9390	140.00	151.25	156.25	181.70	187.00
.9395	140.00	151.25	156.25	181.70	187.00
.9400	140.00	151.25	156.25	181.70	187.00
.9405	140.00	151.25	156.25	181.70	187.00
.9410	140.00	151.25	156.25	181.70	187.00
.9415	140.00	151.25	156.25	181.70	187.00
.9420	140.00	151.25	156.25	181.70	187.00
.9425	140.00	151.25	156.25	181.70	187.00
.9430	140.00	151.25	156.25	181.70	187.00
.9435	140.00	151.25	156.25	181.70	187.00
.9440	140.00	151.25	156.25	181.70	187.00
.9445	140.00	151.25	156.25	181.70	187.00
.9450	140.00	151.25	156.25	181.70	187.00
.9455	140.00	151.25	156.25	181.70	187.00
.9460	140.00	151.25	156.25	181.70	187.00
.9465	140.00	151.25	156.25	181.70	187.00
.9470	140.00	151.25	156.25	181.70	187.00
.9475	140.00	151.25	156.25	181.70	187.00
.9480	140.00	151.25	156.25	181.70	187.00
.9485	140.00	151.25	156.25	181.70	187.00
.9490	140.00	151.25	156.25	181.70	187.00
.9495	142.50	152.50	156.25	181.70	187.00
.9500	142.50	152.50	156.25	181.70	187.00
.9505	142.50	152.50	156.25	181.70	187.00
.9510	142.50	152.50	156.25	181.70	187.00
.9515	142.50	152.50	156.25	181.70	187.00
.9520	142.50	152.50	156.25	181.70	187.00
.9525	142.50	152.50	156.25	181.70	187.00
.9530	142.50	152.50	156.25	181.70	187.00
.9535	142.50	152.50	156.25	181.70	187.00
.9540	142.50	152.50	156.25	181.70	187.00
.9545	142.50	152.50	156.25	181.70	187.00
.9550	142.50	152.50	156.25	181.70	187.00
.9555	142.50	152.50	156.25	181.70	187.00
.9560	142.50	152.50	156.25	181.70	187.00
.9565	142.50	152.50	156.25	181.70	187.00
.9570	142.50	152.50	156.25	181.70	187.00
.9575	142.50	152.50	156.25	181.70	187.00
.9580	142.50	152.50	156.25	181.70	187.00

Note: **Tolerance**, **Flute Length**, **Overall Length**, and **Shank Diameter** are comparable to the closest standard size. See pages 4-9.

Chucking Reamers - Straight Shank - H.S. & Cobalt

Intermediate Decimal Sizes

List No. **LV533**: High Speed, Straight Flute
List No. **LV535**: High Speed, Right Hand Spiral, Right Hand Cut
List No. **LV535L**: High Speed, Left Hand Spiral, Right Hand Cut
List No. **1533**: Cobalt, Straight Flute
List No. **1535**: Cobalt, Right Hand Spiral, Right Hand Cut



MADE IN USA

Size	Price Each				
	LV533 Straight Flute	LV535 RH Spiral	LV535L LH Sp. RH Cut	1533 Cobalt Str. Flt.	1535 Cobalt RH Sp.
.9585	142.50	152.50	156.25	181.70	187.00
.9590	142.50	152.50	156.25	181.70	187.00
.9595	142.50	152.50	156.25	181.70	187.00
.9600	142.50	152.50	156.25	181.70	187.00
.9605	115.00	153.75	156.25	181.70	187.00
.9610	115.00	153.75	156.25	181.70	187.00
.9615	115.00	153.75	156.25	181.70	187.00
.9620	115.00	153.75	156.25	181.70	187.00
.9625	115.00	153.75	156.25	181.70	187.00
.9630	115.00	153.75	156.25	181.70	187.00
.9635	115.00	153.75	156.25	181.70	187.00
.9640	115.00	153.75	156.25	181.70	187.00
.9645	115.00	153.75	156.25	181.70	187.00
.9650	115.00	153.75	156.25	181.70	187.00
.9655	115.00	153.75	156.25	181.70	187.00
.9660	115.00	153.75	156.25	181.70	187.00
.9665	115.00	153.75	156.25	181.70	187.00
.9670	115.00	153.75	156.25	181.70	187.00
.9675	115.00	153.75	156.25	181.70	187.00
.9680	115.00	153.75	156.25	181.70	187.00
.9685	115.00	153.75	158.75	194.35	200.20
.9690	115.00	153.75	158.75	194.35	200.20
.9695	115.00	153.75	158.75	194.35	200.20
.9700	115.00	153.75	158.75	194.35	200.20
.9705	115.00	153.75	158.75	194.35	200.20
.9710	115.00	153.75	158.75	194.35	200.20
.9715	115.00	153.75	158.75	194.35	200.20
.9720	115.00	153.75	158.75	194.35	200.20
.9725	115.00	153.75	158.75	194.35	200.20
.9730	115.00	153.75	158.75	194.35	200.20
.9735	115.00	153.75	158.75	194.35	200.20
.9740	115.00	153.75	158.75	194.35	200.20
.9745	115.00	153.75	158.75	194.35	200.20
.9750	115.00	153.75	158.75	194.35	200.20
.9755	115.00	153.75	158.75	194.35	200.20
.9760	115.00	153.75	158.75	194.35	200.20
.9765	115.00	153.75	158.75	194.35	200.20
.9770	115.00	153.75	158.75	194.35	200.20
.9775	115.00	153.75	158.75	194.35	200.20
.9780	115.00	153.75	158.75	194.35	200.20
.9785	115.00	153.75	158.75	194.35	200.20
.9790	115.00	153.75	158.75	194.35	200.20
.9795	115.00	153.75	158.75	194.35	200.20
.9800	115.00	153.75	158.75	194.35	200.20
.9805	115.00	153.75	158.75	194.35	200.20
.9810	115.00	153.75	158.75	194.35	200.20
.9815	115.00	153.75	158.75	194.35	200.20
.9820	115.00	153.75	158.75	194.35	200.20
.9825	115.00	153.75	158.75	194.35	200.20
.9830	115.00	153.75	158.75	194.35	200.20
.9835	115.00	153.75	158.75	194.35	200.20
.9840	115.00	153.75	158.75	194.35	200.20
.9845	115.00	153.75	158.75	194.35	200.20
.9850	115.00	153.75	158.75	194.35	200.20

Size	Price Each				
	LV533 Straight Flute	LV535 RH Spiral	LV535L LH Sp. RH Cut	1533 Cobalt Str. Flt.	1535 Cobalt RH Sp.
.9855	145.00	155.00	161.25	194.35	200.20
.9860	145.00	155.00	161.25	194.35	200.20
.9865	145.00	155.00	161.25	194.35	200.20
.9870	145.00	155.00	161.25	194.35	200.20
.9875	145.00	155.00	161.25	194.35	200.20
.9880	145.00	155.00	161.25	194.35	200.20
.9885	145.00	155.00	161.25	194.35	200.20
.9890	145.00	155.00	161.25	194.35	200.20
.9895	145.00	155.00	161.25	194.35	200.20
.9900	145.00	155.00	161.25	194.35	200.20
.9905	145.00	155.00	161.25	194.35	200.20
.9910	145.00	155.00	161.25	194.35	200.20
.9915	145.00	155.00	161.25	194.35	200.20
.9920	145.00	155.00	161.25	194.35	200.20
.9925	145.00	155.00	161.25	194.35	200.20
.9930	145.00	155.00	161.25	194.35	200.20
.9935	145.00	155.00	161.25	194.35	200.20
.9940	145.00	155.00	161.25	194.35	200.20
.9945	145.00	155.00	161.25	194.35	200.20
.9950	145.00	155.00	161.25	194.35	200.20
.9955	145.00	155.00	161.25	194.35	200.20
.9960	145.00	155.00	161.25	194.35	200.20
.9965	145.00	155.00	161.25	194.35	200.20
.9970	145.00	155.00	161.25	194.35	200.20
.9975	145.00	155.00	161.25	194.35	200.20
.9980	145.00	155.00	161.25	194.35	200.20
.9985	145.00	155.00	161.25	194.35	200.20
.9990	101.25	130.00	----	148.00	160.00
.9995	145.00	155.00	161.25	194.35	200.20
1.0005	193.75	----	----	----	209.00
1.0010	107.19	130.00	137.50	148.00	176.00
1.0015	193.75	----	----	----	----
1.0020	193.75	----	----	----	----
1.0030	193.75	----	----	----	----
1.0050	193.75	----	----	----	----
1.0100	200.00	----	----	----	----
1.0790	237.50	----	----	----	----
1.1024	237.50	----	----	----	----
1.1255	237.50	----	----	----	----
1.1270	237.50	----	----	----	----
1.1690	237.50	----	----	----	----
1.1800	237.50	----	----	----	----
1.1821	237.50	----	----	----	----
1.1920	237.50	----	----	----	----
1.2010	237.50	----	----	----	----
1.2196	262.50	----	----	----	----
1.2205	203.63	----	----	----	----
1.2460	281.25	----	----	----	----
1.3390	312.50	----	----	----	----
1.3740	225.00	----	----	----	----
1.4380	----	----	343.75	----	----
1.4660	312.50	----	----	----	----
1.4805	350.00	----	----	----	----
1.5005	422.60	440.00	----	----	----

Note: **Tolerance**, **Flute Length**, **Overall Length**, and **Shank Diameter** are comparable to the closest standard size. See pages 4-9.

Dowel Pin Reamers - Standard Length
High Speed Steel & Cobalt

Diameter Tolerance:	Through 1/2″	+.0001″ −.0005″

List No. **LV570DP**: High Speed, Straight Flute
List No. **LV575DP**: High Speed, Right Hand Spiral, Right Hand Cut
List No. **1570DP**: Cobalt, Straight Flute
List No. **1575DP**: Cobalt, Right Hand Spiral, Right Hand Cut

Dowel pin reamers are made to a minus tolerance, while all other reamers are made to a plus tolerance. They are designed to prepare perfect size holes for dowel pin insertion.



Specifications				Price Each			
Diameter	Flute Length	Overall Length	Shank Diameter	**LV570DP Straight Flute**	**LV575DP RH Spiral**	**1570DP Cobalt Str. Flt.**	**1575DP Cobalt RH Sp.**
.1230	7/8	3 1/2	.1190	16.88	20.00	17.60	19.25
.1240	7/8	3 1/2	.1190	16.88	----	----	----
.1247	7/8	3 1/2	.1190	16.88	20.00	14.85	19.25
.1280	7/8	3 1/2	.1190	16.88	----	----	----
.1855	1 1/8	4 1/2	.1805	21.88	24.38	21.45	24.20
.1870	1 1/8	4 1/2	.1805	21.88	24.38	21.45	24.20
.2480	1 1/2	6	.2405	23.38	26.25	23.65	26.95
.2495	1 1/2	6	.2405	23.38	26.25	23.65	26.95
.3105	1 1/2	6	.2792	28.00	30.94	33.55	35.75
.3120	1 1/2	6	.2792	28.00	30.94	33.55	35.75
.3730	1 3/4	7	.3105	31.25	35.00	36.85	38.17
.3745	1 3/4	7	.3105	31.25	35.00	36.85	38.17
.4355	1 3/4	7	.3730	34.06	41.13	46.20	49.50
.4370	1 3/4	7	.3730	34.06	41.13	46.20	49.50
.4980	2	8	.4355	37.38	44.38	53.90	57.20
.4995	2	8	.4355	37.38	44.38	53.90	57.20

Dowel Pin Reamers - Production/CNC/Jobber Length
High Speed Steel

List No **DL570DP**: Straight Flute - Drill Length
List No **DL575DP**: Right Hand Spiral, Right Hand Cut - Drill Length



This series is made identical in length with the jobber series drill. This allows for interchangeability of tools and eliminates costly setups. Shorter length provides extra rigidity and strength in tough materials.

Specifications				Price Each	
Diameter	Flute Length	Overall Length	Shank Diameter	**DL570DP Str. Shank Str. Flute**	**DL575DP Str. Shank RH Sp/Cut**
.1230	7/8	2 3/4	.1230	12.29	14.70
.1247	7/8	2 3/4	.1247	12.29	14.70
.1855	1 1/8	3 1/2	.1855	16.00	20.00
.1870	1 1/8	3 1/2	.1870	16.00	20.00
.2480	1 1/2	4	.2480	18.50	21.00
.2495	1 1/2	4	.2495	18.50	21.00
.3105	1 1/2	4 1/2	.3105	21.11	22.12
.3120	1 1/2	4 1/2	.3120	21.11	22.12
.3730	1 3/4	5	.3730	22.68	26.86
.3745	1 3/4	5	.3745	22.68	26.86
.4355	1 3/4	5 1/2	.4355	26.90	29.37
.4370	1 3/4	5 1/2	.4370	26.90	29.37
.4980	2	5 7/8	.4980	30.20	33.50
.4995	2	6	.4995	30.20	33.50

Sets - Dowel Pin Reamers **14 piece sets, sizes .1230 to .4995**

Description	Flute Type	Case Type	**Set No.**	Price
H.S. Standard Length	Straight	Wood	**LV570-70W**	446.88
H.S. Standard Length	Straight	Plastic	**LV570-70P**	398.13
Cobalt Standard Length	Straight	Wood	**1570DP-W**	540.10
Cobalt Standard Length	Straight	Plastic	**1570DP-P**	477.40
H.S. Standard Length	RH Spiral	Wood	**LV575-71W**	527.88
H.S. Standard Length	RH Spiral	Plastic	**LV575-71P**	456.63
Cobalt Standard Length	RH Spiral	Wood	**1575DP-W**	575.74
Cobalt Standard Length	RH Spiral	Plastic	**1575DP-P**	513.04
H.S. Jobber Length	Straight	Plastic	**LVDL570-73P**	305.36
H.S. Jobber Length	RH Spiral	Plastic	**LVDL575-74P**	345.10


1570DP-W

* Drills are 1/64 smaller than Reamers

Chucking Reamers - Production/CNC/Jobber Length

High Speed Steel Shank diameter is same as cutting diameter - Drill Length

List No. **DL533**: High Speed, Straight Flute
List No. **DL535**: High Speed, Right Hand Spiral, Right Hand Cut



MADE IN USA

This series is made identical in length with the jobber series drill. This allows for interchangeability of tools and eliminates costly setup. Shorter length provides extra rigidity and strength in tough materials. In addition, this series provides cost savings.

Specifications					Price Each	
Diameter	Decimal Equivalent	Flute Length	Overall Length	Shank Diameter	**DL533 Str. Shank Str. Flute**	**DL535 Str. Shank RH Sp/Cut**
# 60	.0400	1/2	1 5/8	.0400	14.77	17.60
# 59	.0410	1/2	1 5/8	.0410	14.77	17.60
# 58	.0420	1/2	1 5/8	.0420	14.77	17.60
# 57	.0430	1/2	1 3/4	.0430	14.77	17.60
# 56	.0465	1/2	1 3/4	.0465	14.77	17.60
3/64	.0469	1/2	1 3/4	.0469	14.77	17.60
# 55	.0520	1/2	1 7/8	.0520	14.77	17.60
# 54	.0550	1/2	1 7/8	.0550	14.77	17.60
1.50mm	.0591	1/2	1 7/8	.0591	14.77	----
# 53	.0595	1/2	1 7/8	.0595	14.77	17.60
.0600	.0600	1/2	1 7/8	.0600	16.50	----
.0615	.0615	1/2	1 7/8	.0615	16.50	----
Under 1/16	.0620	1/2	1 7/8	.0620	16.50	----
1/16	.0625	1/2	1 7/8	.0625	16.50	17.60
# 52	.0635	1/2	1 7/8	.0635	16.50	17.60
.0660	.0660	3/4	2	.0660	16.50	----
# 51	.0670	3/4	2	.0670	12.55	14.30
# 50	.0700	3/4	2	.0700	12.55	14.30
.0705	.0705	3/4	2	.0705	12.55	----
# 49	.0730	3/4	2	.0730	12.55	14.30
# 48	.0760	3/4	2	.0760	12.55	14.30
5/64	.0781	3/4	2	.0781	12.55	14.30
# 47	.0785	3/4	2	.0785	12.55	14.30
# 46	.0810	3/4	2 1/8	.0810	12.55	14.30
# 45	.0820	3/4	2 1/8	.0820	12.55	14.30
# 44	.0860	3/4	2 1/8	.0860	12.55	14.30
# 43	.0890	3/4	2 1/4	.0890	12.55	14.30
# 42	.0935	3/4	2 1/4	.0935	12.55	14.30
3/32	.0938	3/4	2 1/4	.0938	12.55	14.30
# 41	.0960	7/8	2 3/8	.0960	12.55	14.30
# 40	.0980	7/8	2 3/8	.0980	12.55	14.30
# 39	.0995	7/8	2 3/8	.0995	12.55	14.30
# 38	.1015	7/8	2 1/2	.1015	12.55	14.30
# 37	.1040	7/8	2 1/2	.1040	12.55	14.30
# 36	.1065	7/8	2 1/2	.1065	12.55	14.30
7/64	.1094	7/8	2 5/8	.1094	12.55	14.30
# 35	.1100	7/8	2 5/8	.1100	12.55	14.30
# 34	.1110	7/8	2 5/8	.1110	12.55	14.30
# 33	.1130	7/8	2 5/8	.1130	12.55	14.30
# 32	.1160	7/8	2 3/4	.1160	12.55	14.30
# 31	.1200	7/8	2 3/4	.1200	12.55	14.30
Under 1/8	.1240	7/8	2 3/4	.1240	12.55	14.30
1/8	.1250	7/8	2 3/4	.1250	12.55	14.30
Over 1/8	.1260	7/8	2 3/4	.1260	12.55	14.30
# 30	.1285	7/8	2 3/4	.1285	12.55	14.30
# 29	.1360	1	2 7/8	.1360	17.16	17.99
# 28	.1405	1	2 7/8	.1405	17.16	17.99
9/64	.1406	1	2 7/8	.1406	17.16	17.99
# 27	.1440	1	3	.1440	17.16	17.99
# 26	.1470	1	3	.1470	17.16	17.99
# 25	.1495	1	3	.1495	17.16	17.99
# 24	.1520	1	3 1/8	.1520	17.16	17.99
# 23	.1540	1	3 1/8	.1540	17.16	17.99
5/32	.1562	1	3 1/8	.1562	17.16	17.99
# 22	.1570	1	3 1/8	.1570	17.16	17.99

Diameter Tolerance:	up to & including .2500"	+.0001"/ +.0004"	.2501" up to & including 1.000"	+.0001"/ +.0005"	1.0001" and over	+.0002"/ +.0006"

Chucking Reamers - Production/CNC/Jobber Length

High Speed Steel Shank diameter is same as cutting diameter - Drill Length

List No. **DL533**: High Speed, Straight Flute
List No. **DL535**: High Speed, Right Hand Spiral, Right Hand Cut



MADE IN USA

This series is made identical in length with the jobber series drill. This allows for interchangeability of tools and eliminates costly setup. Shorter length provides extra rigidity and strength in tough materials. In addition, this series provides cost savings.

Specifications					Price Each	
Diameter	Decimal Equivalent	Flute Length	Overall Length	Shank Diameter	**DL533 Str. Shank Str. Flute**	**DL535 Str. Shank RH Sp/Cut**
# 21	.1590	1 1/8	3 1/4	.1590	17.16	17.99
# 20	.1610	1 1/8	3 1/4	.1610	17.16	17.99
# 19	.1660	1 1/8	3 1/4	.1660	17.16	17.99
# 18	.1695	1 1/8	3 1/4	.1695	17.16	17.99
11/64	.1719	1 1/8	3 1/4	.1719	17.16	17.99
# 17	.1730	1 1/8	3 3/8	.1730	17.16	17.99
# 16	.1770	1 1/8	3 3/8	.1770	17.16	17.99
# 15	.1800	1 1/8	3 3/8	.1800	17.99	20.00
# 14	.1820	1 1/8	3 3/8	.1820	17.99	20.00
# 13	.1850	1 1/8	3 1/2	.1850	17.99	20.00
Under 3/16	.1865	1 1/8	3 1/2	.1865	17.99	20.00
4.75mm	.1870	1 1/8	3 1/2	.1870	21.80	----
3/16	.1875	1 1/8	3 1/2	.1875	17.99	20.00
Over 3/16	.1885	1 1/8	3 1/2	.1885	17.99	20.00
# 12	.1890	1 1/8	3 1/2	.1890	17.99	20.00
# 11	.1910	1 1/4	3 1/2	.1910	19.90	21.80
# 10	.1935	1 1/4	3 5/8	.1935	19.90	21.80
# 9	.1960	1 1/4	3 5/8	.1960	19.90	21.80
# 8	.1990	1 1/4	3 5/8	.1990	19.90	21.80
# 7	.2010	1 1/4	3 5/8	.2010	19.90	21.80
13/64	.2031	1 1/4	3 5/8	.2031	19.90	21.80
# 6	.2040	1 1/4	3 3/4	.2040	19.90	21.80
# 5	.2055	1 1/4	3 3/4	.2055	19.90	21.80
# 4	.2090	1 1/4	3 3/4	.2090	19.90	21.80
# 3	.2130	1 1/4	3 3/4	.2130	19.90	21.80
7/32	.2188	1 1/4	3 3/4	.2188	19.90	21.80
# 2	.2210	1 1/4	3 7/8	.2210	19.90	21.80
# 1	.2280	1 1/2	3 7/8	.2280	19.90	21.80
A	.2340	1 1/2	3 7/8	.2340	19.90	21.80
15/64	.2344	1 1/2	3 7/8	.2344	19.90	21.80
B	.2380	1 1/2	4	.2380	21.50	21.80
C	.2420	1 1/2	4	.2420	21.50	21.80
D	.2460	1 1/2	4	.2460	21.50	21.80
Under 1/4	.2490	1 1/2	4	.2490	21.50	21.80
1/4 (E)	.2500	1 1/2	4	.2500	21.50	22.50
Over 1/4	.2510	1 1/2	4	.2510	21.50	22.50
F	.2570	1 1/2	4 1/8	.2570	21.50	22.50
G	.2610	1 1/2	4 1/8	.2610	21.50	24.15
17/64	.2656	1 1/2	4 1/8	.2656	21.50	24.15
H	.2660	1 1/2	4 1/8	.2660	22.00	24.15
I	.2720	1 1/2	4 1/8	.2720	22.00	24.15
J	.2770	1 1/2	4 1/8	.2770	22.00	24.15
K	.2810	1 1/2	4 1/8	.2810	22.00	24.15
9/32	.2812	1 1/2	4 1/4	.2812	22.00	24.15
7.20mm	.2835	1 1/2	4 1/4	.2835	22.00	----
L	.2900	1 1/2	4 1/4	.2900	22.00	24.15
M	.2950	1 1/2	4 1/4	.2950	22.00	24.15
19/64	.2969	1 1/2	4 3/8	.2969	22.00	24.15
N	.3020	1 1/2	4 3/8	.3020	22.00	24.15
Under 5/16	.3115	1 1/2	4 1/2	.3115	22.00	24.15
5/16	.3125	1 1/2	4 1/2	.3125	22.00	24.15
Over 5/16	.3135	1 1/2	4 1/2	.3135	22.00	24.15
O	.3160	1 1/2	4 1/2	.3160	22.00	25.85
P	.3230	1 1/2	4 5/8	.3230	22.00	25.85
21/64	.3281	1 1/2	4 5/8	.3281	22.00	25.85

Diameter Tolerance:	up to & including .2500"	+.0001″/ +.0004″	.2501″ up to & including 1.000″	+.0001″/ +.0005″	1.0001″ and over	+.0002″/ +.0006″

Chucking Reamers - Production/CNC/Jobber Length

High Speed Steel Shank diameter is same as cutting diameter - Drill Length

List No. **DL533**: High Speed, Straight Flute
List No. **DL535**: High Speed, Right Hand Spiral, Right Hand Cut



MADE IN USA

This series is made identical in length with the jobber series drill. This allows for interchangeability of tools and eliminates costly setup. Shorter length provides extra rigidity and strength in tough materials. In addition, this series provides cost savings.

Specifications					Price Each	
Diameter	Decimal Equivalent	Flute Length	Overall Length	Shank Diameter	**DL533 Str. Shank Str. Flute**	**DL535 Str. Shank RH Sp/Cut**
Q	.3320	1 1/2	4 3/4	.3320	21.59	23.50
R	.3390	1 1/2	4 3/4	.3390	21.59	23.50
11/32	.3438	1 1/2	4 3/4	.3438	21.59	23.50
S	.3480	1 3/4	4 7/8	.3480	21.59	23.50
T	.3580	1 3/4	4 7/8	.3580	21.59	23.50
23/64	.3594	1 3/4	4 7/8	.3594	21.59	23.50
U	.3680	1 3/4	5	.3680	21.59	23.50
Under 3/8	.3740	1 3/4	5	.3740	21.59	23.50
3/8	.3750	1 3/4	5	.3750	19.20	23.50
Over 3/8	.3760	1 3/4	5	.3760	21.59	23.50
V	.3770	1 3/4	5	.3770	24.13	26.50
W	.3860	1 3/4	5 1/8	.3860	24.13	26.50
25/64	.3906	1 3/4	5 1/8	.3906	24.13	26.50
X	.3970	1 3/4	5 1/8	.3970	24.13	26.50
Y	.4040	1 3/4	5 1/4	.4040	25.05	26.50
13/32	.4062	1 3/4	5 1/4	.4062	25.05	26.50
Z	.4130	1 3/4	5 1/4	.4130	25.05	26.50
27/64	.4219	1 3/4	5 3/8	.4219	25.05	26.50
Under 7/16	.4365	1 3/4	5 1/2	.4365	25.05	26.50
7/16	.4375	1 3/4	5 1/2	.4375	23.73	26.50
Over 7/16	.4385	1 3/4	5 1/2	.4385	25.05	26.50
29/64	.4531	1 3/4	5 5/8	.4531	27.26	29.50
15/32	.4688	1 3/4	5 3/4	.4688	27.26	29.50
31/64	.4844	2	5 7/8	.4844	27.26	29.50
Under 1/2	.4990	2	5 7/8	.4990	27.26	29.50
1/2	.5000	2	6	.5000	25.05	29.50
Over 1/2	.5010	2	6	.5010	27.26	29.50

Diameter Tolerance:	up to & including .2500"	+.0001"/ +.0004"	.2501" up to & including 1.000"	+.0001"/ +.0005"	1.0001" and over	+.0002"/ +.0006"

Sets - Production/CNC/Jobber Length Reamers

These sets provide a method of maintaining a complete stock of reamers in ranges to suit your requirements. A stock on a machinist's workbench saves many trips to the tool crib.

Description	Sizes	Pieces	Case Type	**Set No.**	Price
H.S. Straight Flute	1/16 – 1/4 by 64^{ths}	13	Metal	**LVDL533-5M**	223.86
H.S. Straight Flute	1/16 – 1/2 by 32^{nds}	15	Metal	**LVDL533-46M**	334.00
H.S. Straight Flute	1/16 – 1/2 by 64^{ths}	29	Metal	**LVDL533-7M**	635.37
H.S. RH Spiral	1/16 – 1/2 by 32^{nds}	15	Metal	**LVDL535-47M**	363.24
H.S. Straight Flute	#1 – #60	60	Metal	**LVDL533-12M**	956.10
H.S. RH Spiral	#1 – #60	60	Metal	**LVDL535-14M**	1066.56
H.S. Straight Flute	A – Z	26	Metal	**LVDL533-22M**	614.27
H.S. RH Spiral	A – Z	26	Metal	**LVDL535-24M**	670.25
H.S. Straight Flute	.1240 – .5010	14	Plastic	**LVDL533-33P**	325.68
H.S. RH Spiral	.1240 – .5010	14	Plastic	**LVDL535-34P**	354.10
H.S. Straight Flute	#1 – #60, A – Z, 1/16 –1/2 by 64^{ths}	115	Metal	**LVDL533-50M**	2227.68
H.S. RH Spiral	#1 – #60, A – Z, 1/16 –1/2 by 64^{ths}	115	Metal	**LVDL535-51M**	2424.92



LVDL533-7M



LVDL533-33P

Diameter Tolerance:	up to & including .2500"	+.0001"/ +.0004"	.2501" up to & including 1.000"	+.0001"/ +.0005"	1.0001" and over	+.0002"/ +.0006"

Extra Long Chucking Reamers
Straight Shank - High Speed Steel

List No. **LV533XL:** High Speed, Straight Flute



Specifications					Price Each
Diameter	Decimal Equivalent	Flute Length	Overall Length	Shank Diameter	**LV533XL** Str. Shank Str. Flute
1/8	.1250	7/8	6	.1190	16.28
1/8	.1250	7/8	8	.1190	17.93
1/8	.1250	7/8	12	.1190	36.85
5/32	.1562	1	6	.1510	23.10
5/32	.1562	1	8	.1510	25.25
5/32	.1562	1	12	.1510	39.60
3/16	.1875	1 1/8	6	.1805	23.10
3/16	.1875	1 1/8	8	.1805	25.25
3/16	.1875	1 1/8	12	.1805	39.60
7/32	.2188	1 1/4	8	.2075	32.73
7/32	.2188	1 1/4	12	.2075	41.03
1/4	.2500	1 1/2	8	.2405	27.17
1/4	.2500	1 1/2	12	.2405	41.03
5/16	.3125	1 1/2	12	.2792	43.95
3/8	.3750	1 3/4	12	.3105	47.19
7/16	.4375	1 3/4	12	.3730	54.62
1/2	.5000	2	12	.4355	59.95
9/16	.5625	2	12	.4355	69.85
5/8	.6250	2 1/4	12	.5620	81.35
11/16	.6875	2 1/4	12	.5620	92.40

Silver & Deming Reamers - High Speed Steel

6" Overall Length – 1/2" X 2" Long Shank



List No. **LV5303**: Straight Flute

The shorter length provides extra rigidity and strength in tough materials.
They are ideal for Bridgeport, and hand-held applications.

Diameter	Decimal Equivalent	Flute Length	Price Each
17/32	.5312	2	37.52
9/16	.5625	2	42.21
5/8	.6250	2 1/4	46.90
21/32	.6562	2 1/4	51.58
11/16	.6875	2 1/4	52.95
3/4	.7500	2 1/2	57.93
13/16	.8125	2 1/2	67.78

Diameter	Decimal Equivalent	Flute Length	Price Each
7/8	.8750	2 5/8	74.70
15/16	.9375	2-5/8	88.36
1	1.0000	2 3/4	92.76
1 1/8	1.1250	2 7/8	113.71
1 1/4	1.2500	3	140.82
1 3/8	1.3750	3 1/4	168.78
1 1/2	1.5000	3 1/2	198.12

Diameter Tolerance

1/2" Through 5/8":	−.0000" −.000m/m +.0003" +.008m/m	21/32" Through 1":	+.0001" +.0025m/m +.0005" +.012m/m	1-1/8" Through 1-1/2":	+.0002" −.000m/m +.0006" +.016m/m

Sets - Silver & Deming Reamers

Sizes	Description	No. of Pieces	Set No.	Price
5/8, 11/16, 3/4, 13/16, 7/8, 1	1/2" Shank Reamer Set	6	**LV75**	400.14
5/8, 11/16, 3/4, 13/16, 7/8, 1 (Reamers) 39/64, 43/64, 47/64, 51/64, 55/64, 63/64 (Drills)	1/2" Shank Reamer & Drill Set	12	**LV77**	589.64
5/8, 11/16, 3/4, 13/16, 7/8 1, 1 1/8, 1 1/4, 1 3/8, 1 1/2	1/2" Shank Reamer Set	10	**LV76**	1022.56

Supplied in wood block



LV75



LV77

Solid Carbide Chucking Reamers

List No. **C805**: Straight Shank, Straight Flute
Shank diameter same as cutting diameter



- 4 flutes on sizes up to .255" diameter
- 6 flutes on sizes .255" diameter and above
- Cutting flutes are precision ground
- Close tolerances and consistent tool accuracy.

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Fractional Sizes

Size	Decimal Equivalent	Flute Length	Overall Length	Price Each
1/32	.0312	1/4	1 1/8	22.55
3/64	.0469	3/8	1 1/2	23.90
1/16	.0625	3/8	1 1/2	22.55
5/64	.0781	1/2	1 3/4	24.71
3/32	.0938	1/2	2	23.45
7/64	.1094	5/8	2 1/4	27.27
1/8	.1250	5/8	2 1/4	25.97
9/64	.1406	3/4	2 1/4	29.48
5/32	.1562	3/4	2 1/4	30.51
11/64	.1719	7/8	2 3/4	35.87
3/16	.1875	7/8	2 3/4	36.18
13/64	.2031	1	3	43.43
7/32	.2188	1	3	39.65
15/64	.2344	1	3	50.90
1/4	.2500	1	3	47.21
17/64	.2656	1 1/8	3 1/4	57.15
9/32	.2812	1 1/8	3 1/4	56.66
19/64	.2969	1 1/8	3 1/4	67.05

Size	Decimal Equivalent	Flute Length	Overall Length	Price Each
5/16	.3125	1 1/8	3 1/4	63.81
21/64	.3281	1 1/4	3 1/2	85.01
11/32	.3438	1 1/4	3 1/2	85.01
23/64	.3594	1 1/4	3 1/2	86.13
3/8	.3750	1 1/4	3 1/2	80.33
25/64	.3906	1 1/4	3 1/2	88.83
13/32	.4062	1 1/4	3 1/2	88.83
27/64	.4219	1 3/8	4	95.09
7/16	.4375	1 3/8	4	89.10
29/64	.4531	1 1/2	4	121.50
15/32	.4688	1 1/2	4	121.50
31/64	.4844	1 1/2	4	127.80
1/2	.5000	1 1/2	4	127.80
9/16	.5625	1 1/2	4	186.30
39/64	.6094	1 1/2	4	186.30
5/8	.6250	1 1/2	4	186.30
3/4	.7500	1 3/4	4	248.40

Letter Sizes

Size	Decimal Equivalent	Flute Length	Overall Length	Price Each
A	.2340	1	3	50.90
B	.2380	1	3	51.93
C	.2420	1	3	51.93
D	.2460	1	3	51.93
E	.2500	1	3	47.21
F	.2570	1 1/8	3 1/4	57.15
G	.2610	1 1/8	3 1/4	57.15
H	.2660	1 1/8	3 1/4	57.15
I	.2720	1 1/8	3 1/4	57.15
J	.2770	1 1/8	3 1/4	57.15
K	.2810	1 1/8	3 1/4	61.92
L	.2900	1 1/8	3 1/4	67.01
M	.2950	1 1/8	3 1/4	67.01

Size	Decimal Equivalent	Flute Length	Overall Length	Price Each
N	.3020	1 1/8	3 1/4	69.89
O	.3160	1 1/8	3 1/4	73.35
P	.3230	1 1/4	3 1/2	74.30
Q	.3320	1 1/4	3 1/2	85.01
R	.3390	1 1/4	3 1/2	85.01
S	.3480	1 1/4	3 1/2	85.37
T	.3580	1 1/4	3 1/2	85.73
U	.3680	1 1/4	3 1/2	87.26
V	.3770	1 1/4	3 1/2	89.91
W	.3860	1 1/4	3 1/2	98.60
X	.3970	1 1/4	3 1/2	100.08
Y	.4040	1 1/4	3 1/2	102.29
Z	.4130	1 1/4	3 1/2	106.20

Number Sizes

Size	Decimal Equivalent	Flute Length	Overall Length	Price Each
1	.2280	1	3	50.90
2	.2210	1	3	48.47
3	.2130	1	3	43.43
4	.2090	1	3	45.68
5	.2055	1	3	43.43
6	.2040	1	3	43.43
7	.2010	1	3	43.43
8	.1990	1	3	42.08
9	.1960	1	3	41.90
10	.1935	1	3	40.46
11	.1910	7/8	2 3/4	40.19
12	.1890	7/8	2 3/4	39.74
13	.1850	7/8	2 3/4	37.67
14	.1820	7/8	2 3/4	37.44
15	.1800	7/8	2 3/4	36.90
16	.1770	7/8	2 3/4	36.72
17	.1730	7/8	2 3/4	35.87
18	.1695	7/8	2 3/4	35.24
19	.1660	7/8	2 3/4	34.79
20	.1610	7/8	2 3/4	34.65
21	.1590	3/4	2 1/2	34.16
22	.1570	3/4	2 1/2	33.35
23	.1540	3/4	2 1/2	32.27

Size	Decimal Equivalent	Flute Length	Overall Length	Price Each
24	.1520	3/4	2 1/2	30.96
25	.1495	3/4	2 1/2	30.92
26	.1470	3/4	2 1/2	30.74
27	.1440	3/4	2 1/2	29.93
28	.1405	3/4	2 1/2	28.62
29	.1360	3/4	2 1/2	28.22
30	.1285	3/4	2 1/2	28.22
31	.1200	5/8	2 1/4	28.17
32	.1160	5/8	2 1/4	28.04
33	.1130	5/8	2 1/4	28.04
34	.1110	5/8	2 1/4	27.68
35	.1100	5/8	2 1/4	27.27
36	.1065	5/8	2 1/4	26.42
37	.1040	5/8	2 1/4	27.77
38	.1015	5/8	2 1/4	26.15
39	.0995	5/8	2 1/4	26.15
40	.0980	5/8	2 1/4	25.97
41	.0960	1/2	2	25.97
42	.0935	1/2	2	25.43
43	.0890	1/2	2	25.34
44	.0860	1/2	2	24.89
45	.0820	1/2	2	24.89
46	.0810	1/2	1 3/4	24.75

Solid Carbide Chucking Reamers

List No. **C805**: Straight Shank, Straight Flute
Shank diameter same as cutting diameter



- 4 flutes on sizes up to .255" diameter
- 6 flutes on sizes .255" diameter and above
- Cutting flutes are precision ground
- Close tolerances and consitent tool accuracy.

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Number Sizes *Continued*

Size	Decimal Equivalent	Flute Length	Overall Length	Price Each
47	.0785	1/2	1 3/4	24.71
48	.0760	1/2	1 3/4	24.71
49	.0730	1/2	1 3/4	24.71
50	.0700	1/2	1 3/4	24.71
51	.0670	1/2	1 3/4	24.71
52	.0635	3/8	1 1/2	24.42
53	.0595	3/8	1 1/2	23.90
54	.0550	3/8	1 1/2	23.90
55	.0520	3/8	1 1/2	23.90
56	.0465	3/8	1 1/2	23.90
57	.0430	3/8	1 1/2	23.67
58	.0420	3/8	1 1/2	23.67
59	.0410	3/8	1 1/2	23.67
60	.0400	1/4	1 1/2	23.67
61	.0390	1/4	1 1/2	23.67
62	.0380	1/4	1 1/2	23.67
63	.0370	1/4	1 1/2	23.67
64	.0360	1/4	1 1/2	23.67
65	.0350	1/4	1 1/2	23.67
66	.0330	1/4	1 1/2	24.44
67	.0320	1/4	1 1/2	24.44
68	.0310	1/4	1 1/2	25.00
69	.0292	1/4	1 1/2	25.00
70	.0280	1/4	1 1/2	25.00

Metric Sizes

Size	Decimal Equivalent	Flute Length	Overall Length	Price Each
1.00mm	.0394	1/4	1 1/2	21.56
1.25mm	.0492	3/8	1 1/2	25.16
1.50mm	.0591	3/8	1 1/2	21.87
1.60mm	.0630	3/8	1 1/2	25.79
1.65mm	.0650	3/8	1 1/2	25.97
2.00mm	.0787	1/2	1 3/4	22.82
2.40mm	.0945	1/2	2	26.91
2.50mm	.0984	5/8	2 1/4	23.67
3.00mm	.1181	5/8	2 1/4	25.97
3.50mm	.1378	3/4	2 1/2	26.28
4.00mm	.1575	3/4	2 1/2	30.51
4.50mm	.1772	7/8	2 3/4	33.35
5.00mm	.1969	1	3	38.25
5.50mm	.2165	1	3	39.74
6.00mm	.2362	1	3	47.21
6.50mm	.2559	1-1/8	3 1/4	57.15
7.00mm	.2756	1 1/8	3 1/4	52.16
7.50mm	.2953	1 1/8	3 1/4	67.01
8.00mm	.3150	1 1/8	3 1/4	63.81
8.50mm	.3346	1 1/4	3 1/2	85.01
9.00mm	.3543	1 1/4	3 1/2	78.44
9.50mm	.3740	1 1/4	3 1/2	87.75
10.00mm	.3937	1 1/4	3 1/2	100.08
10.50mm	.4134	1 1/4	3 1/2	100.08
11.00mm	.4331	1 3/8	4	112.68
11.50mm	.4528	1 3/8	4	112.68
12.00mm	.4724	1 3/8	4	121.50
12.50mm	.4921	1 1/2	4	121.50
13.00mm	.5118	1 1/2	4	165.00
14.00mm	.5512	1 1/2	4	186.00
15.00mm	.5906	1 1/2	4	186.00
16.00mm	.6299	1 1/2	4	186.00

Decimal Sizes

Diameter	Flute Length	Overall Length	Price Each
.0300	1/4	1 1/2	25.79
.0315	1/4	1 1/2	25.79
.0325	1/4	1 1/2	25.79
.0335	1/4	1 1/2	25.79
.0340	1/4	1 1/2	24.89
.0345	1/4	1 1/2	24.89
.0355	1/4	1 1/2	24.89
.0365	1/4	1 1/2	24.89
.0375	1/4	1 1/2	24.89
.0385	1/4	1 1/2	24.89
.0395	1/4	1 1/2	24.89
.0405	1/4	1 1/2	24.89
.0415	1/4	1 1/2	24.89
.0425	3/8	1 1/2	24.89
.0435	3/8	1 1/2	25.16
.0440	3/8	1 1/2	25.16
.0445	3/8	1 1/2	25.16
.0450	3/8	1 1/2	25.16
.0455	3/8	1 1/2	25.16
.0460	3/8	1 1/2	25.16
.0470	3/8	1 1/2	25.16
.0475	3/8	1 1/2	25.16
.0480	3/8	1 1/2	25.16
.0485	3/8	1 1/2	25.16
.0490	3/8	1 1/2	25.16
.0495	3/8	1 1/2	25.16
.0500	3/8	1 1/2	25.16
.0505	3/8	1 1/2	25.16
.0510	3/8	1 1/2	25.16
.0515	3/8	1 1/2	25.16
.0525	3/8	1 1/2	25.16
.0530	3/8	1 1/2	25.16
.0535	3/8	1 1/2	25.16
.0540	3/8	1 1/2	25.16
.0545	3/8	1 1/2	25.16
.0555	3/8	1 1/2	25.16
.0560	3/8	1 1/2	25.16
.0565	3/8	1 1/2	25.16
.0570	3/8	1 1/2	25.16
.0575	3/8	1 1/2	25.16
.0580	3/8	1 1/2	25.16
.0585	3/8	1 1/2	25.16
.0590	3/8	1 1/2	25.16
.0600	3/8	1 1/2	25.79
.0605	3/8	1 1/2	25.79
.0610	3/8	1 1/2	25.79
.0615	3/8	1 1/2	25.79
.0620	3/8	1 1/2	25.79
.0630	3/8	1 1/2	25.79
.0640	3/8	1 1/2	25.79
.0645	3/8	1 1/2	25.79
.0650	3/8	1 1/2	25.79

Solid Carbide Chucking Reamers

List No. **C805**: Straight Shank, Straight Flute
Shank diameter same as cutting diameter



- 4 flutes on sizes up to .255" diameter
- 6 flutes on sizes .255" diameter and above
- Cutting flutes are precision ground
- Close tolerances and consistent tool accuracy.

L&I LAVALLEE & IDE MADE IN USA

Decimal Sizes *Continued*

Diameter	Flute Length	Overall Length	Price Each
.0655	1/2	1 3/4	25.97
.0660	1/2	1 3/4	25.97
.0665	1/2	1 3/4	25.97
.0675	1/2	1 3/4	25.97
.0680	1/2	1 3/4	25.97
.0685	1/2	1 3/4	25.97
.0690	1/2	1 3/4	25.97
.0695	1/2	1 3/4	25.97
.0705	1/2	1 3/4	25.97
.0710	1/2	1 3/4	25.97
.0715	1/2	1 3/4	25.97
.0720	1/2	1 3/4	25.97
.0725	1/2	1 3/4	25.97
.0735	1/2	1 3/4	25.97
.0740	1/2	1 3/4	25.97
.0745	1/2	1 3/4	25.97
.0750	1/2	1 3/4	25.97
.0755	1/2	1 3/4	25.97
.0765	1/2	1 3/4	25.97
.0770	1/2	1 3/4	25.97
.0775	1/2	1 3/4	25.97
.0780	1/2	1 3/4	25.97
.0790	1/2	1 3/4	25.97
.0795	1/2	1 3/4	26.15
.0800	1/2	1 3/4	26.15
.0805	1/2	1 3/4	26.15
.0815	1/2	2	26.15
.0825	1/2	2	26.15
.0830	1/2	2	26.15
.0835	1/2	2	26.15
.0840	1/2	2	26.15
.0845	1/2	2	26.15
.0850	1/2	2	26.15
.0855	1/2	2	26.15
.0865	1/2	2	26.15
.0870	1/2	2	26.15
.0875	1/2	2	26.15
.0880	1/2	2	26.15
.0885	1/2	2	26.15
.0895	1/2	2	26.91
.0900	1/2	2	26.91
.0905	1/2	2	26.91
.0910	1/2	2	26.91
.0915	1/2	2	26.91
.0920	1/2	2	26.91
.0925	1/2	2	26.91
.0930	1/2	2	26.91
.0940	1/2	2	26.91
.0945	1/2	2	26.91
.0950	1/2	2	27.27
.0955	1/2	2	27.27
.0965	1/2	2	27.27
.0970	5/8	2 1/4	27.27
.0975	5/8	2 1/4	27.27
.0985	5/8	2 1/4	27.45
.0990	5/8	2 1/4	27.45
.1000	5/8	2 1/4	27.45
.1005	5/8	2 1/4	27.45
.1010	5/8	2 1/4	27.45
.1020	5/8	2 1/4	27.77
.1025	5/8	2 1/4	27.77
.1030	5/8	2 1/4	27.77
.1035	5/8	2 1/4	27.77
.1045	5/8	2 1/4	27.77
.1050	5/8	2 1/4	27.77
.1055	5/8	2 1/4	27.77

Diameter	Flute Length	Overall Length	Price Each
.1060	5/8	2 1/4	27.77
.1070	5/8	2 1/4	28.22
.1075	5/8	2 1/4	28.22
.1080	5/8	2 1/4	28.22
.1085	5/8	2 1/4	28.62
.1090	5/8	2 1/4	28.62
.1095	5/8	2 1/4	28.62
.1105	5/8	2 1/4	28.62
.1115	5/8	2 1/4	29.48
.1120	5/8	2 1/4	29.48
.1125	5/8	2 1/4	29.48
.1135	5/8	2 1/4	29.48
.1140	5/8	2 1/4	29.48
.1145	5/8	2 1/4	29.48
.1150	5/8	2 1/4	29.48
.1155	5/8	2 1/4	29.48
.1165	5/8	2 1/4	29.48
.1170	5/8	2 1/4	29.48
.1175	5/8	2 1/4	29.48
.1180	5/8	2 1/4	29.48
.1185	5/8	2 1/4	29.61
.1190	5/8	2 1/4	29.61
.1195	5/8	2 1/4	29.61
.1205	5/8	2 1/4	29.61
.1210	5/8	2 1/4	29.61
.1215	5/8	2 1/4	29.61
.1220	5/8	2 1/4	29.61
.1225	5/8	2 1/4	29.61
.1230	5/8	2 1/4	29.61
.1235	5/8	2 1/4	29.61
.1240	5/8	2 1/4	29.61
.1245	5/8	2 1/4	29.61
.1247	5/8	2 1/4	29.61
.1255	5/8	2 1/4	29.61
.1260	5/8	2 1/4	29.61
.1265	5/8	2 1/4	29.61
.1270	5/8	2 1/4	29.75
.1275	5/8	2 1/4	29.75
.1280	5/8	2 1/4	29.75
.1290	5/8	2 1/4	29.75
.1295	5/8	2 1/4	29.75
.1300	5/8	2 1/4	29.75
.1305	3/4	2 1/2	29.75
.1310	3/4	2 1/2	29.75
.1315	3/4	2 1/2	29.75
.1320	3/4	2 1/2	29.75
.1325	3/4	2 1/2	29.75
.1330	3/4	2 1/2	29.75
.1335	3/4	2 1/2	29.75
.1340	3/4	2 1/2	29.75
.1345	3/4	2 1/2	29.75
.1350	3/4	2 1/2	29.75
.1355	3/4	2 1/2	29.75
.1365	3/4	2 1/2	29.75
.1370	3/4	2 1/2	29.75
.1375	3/4	2 1/2	29.75
.1380	3/4	2 1/2	30.24
.1385	3/4	2 1/2	30.24
.1390	3/4	2 1/2	30.24
.1395	3/4	2 1/2	30.24
.1400	3/4	2 1/2	30.24
.1410	3/4	2 1/2	31.37
.1415	3/4	2 1/2	31.37
.1420	3/4	2 1/2	31.37
.1425	3/4	2 1/2	31.37
.1430	3/4	2 1/2	31.37

Solid Carbide Chucking Reamers

List No. **C805**: Straight Shank, Straight Flute
Shank diameter same as cutting diameter



- 4 flutes on sizes up to .255" diameter
- 6 flutes on sizes .255" diameter and above
- Cutting flutes are precision ground
- Close tolerances and consistent tool accuracy.

L&I LAVALLEE & IDE MADE IN USA

Decimal Sizes *Continued*

Diameter	Flute Length	Overall Length	Price Each
.1435	3/4	2 1/2	31.37
.1445	3/4	2 1/2	31.55
.1450	3/4	2 1/2	31.55
.1455	3/4	2 1/2	31.55
.1460	3/4	2 1/2	32.45
.1465	3/4	2 1/2	31.55
.1475	3/4	2 1/2	31.55
.1480	3/4	2 1/2	32.49
.1485	3/4	2 1/2	32.49
.1490	3/4	2 1/2	32.49
.1500	3/4	2 1/2	32.49
.1505	3/4	2 1/2	32.49
.1507	3/4	2 1/2	32.49
.1510	3/4	2 1/2	32.49
.1515	3/4	2 1/2	32.49
.1525	3/4	2 1/2	33.89
.1530	3/4	2 1/2	33.89
.1535	3/4	2 1/2	33.89
.1541	3/4	2 1/2	33.89
.1545	3/4	2 1/2	33.89
.1550	3/4	2 1/2	33.89
.1555	3/4	2 1/2	33.89
.1560	3/4	2 1/2	33.89
.1565	3/4	2 1/2	35.15
.1580	3/4	2 1/2	35.15
.1585	3/4	2 1/2	35.15
.1595	3/4	2 1/2	36.50
.1600	3/4	2 1/2	36.50
.1605	3/4	2 1/2	36.50
.1615	7/8	2 3/4	36.50
.1620	7/8	2 3/4	36.50
.1625	7/8	2 3/4	36.50
.1630	7/8	2 3/4	36.50
.1635	7/8	2 3/4	36.50
.1640	7/8	2 3/4	36.50
.1645	7/8	2 3/4	36.50
.1650	7/8	2 3/4	36.50
.1655	7/8	2 3/4	36.50
.1665	7/8	2 3/4	36.90
.1670	7/8	2 3/4	36.90
.1675	7/8	2 3/4	36.90
.1680	7/8	2 3/4	36.90
.1685	7/8	2 3/4	36.90
.1690	7/8	2 3/4	36.90
.1700	7/8	2 3/4	37.67
.1705	7/8	2 3/4	37.67
.1710	7/8	2 3/4	37.67
.1715	7/8	2 3/4	37.67
.1720	7/8	2 3/4	37.67
.1725	7/8	2 3/4	37.67
.1735	7/8	2 3/4	38.25
.1740	7/8	2 3/4	38.25
.1745	7/8	2 3/4	38.25
.1750	7/8	2 3/4	38.25
.1755	7/8	2 3/4	38.25
.1760	7/8	2 3/4	38.25
.1765	7/8	2 3/4	38.25
.1775	7/8	2 3/4	38.70
.1780	7/8	2 3/4	38.70
.1785	7/8	2 3/4	38.70
.1790	7/8	2 3/4	38.70
.1795	7/8	2 3/4	38.70
.1805	7/8	2 3/4	38.70
.1810	7/8	2 3/4	38.70
.1814	7/8	2 3/4	38.70
.1815	7/8	2 3/4	38.70

Diameter	Flute Length	Overall Length	Price Each
.1825	7/8	2 3/4	38.70
.1830	7/8	2 3/4	38.70
.1835	7/8	2 3/4	39.65
.1840	7/8	2 3/4	39.65
.1845	7/8	2 3/4	39.65
.1855	7/8	2 3/4	41.72
.1860	7/8	2 3/4	41.72
.1865	7/8	2 3/4	41.72
.1870	7/8	2 3/4	41.72
.1872	7/8	2 3/4	41.72
.1880	7/8	2 3/4	41.72
.1885	7/8	2 3/4	41.72
.1895	7/8	2 3/4	41.72
.1900	7/8	2 3/4	41.72
.1905	7/8	2 3/4	41.72
.1915	7/8	2 3/4	42.35
.1920	1	3	42.35
.1925	1	3	42.35
.1930	1	3	42.35
.1940	1	3	42.35
.1945	1	3	42.35
.1950	1	3	43.92
.1955	1	3	43.92
.1965	1	3	43.92
.1970	1	3	43.92
.1975	1	3	43.92
.1980	1	3	43.92
.1985	1	3	43.92
.1995	1	3	45.68
.2000	1	3	45.68
.2005	1	3	45.68
.2015	1	3	45.68
.2020	1	3	45.68
.2025	1	3	45.68
.2030	1	3	45.68
.2035	1	3	45.68
.2045	1	3	45.68
.2050	1	3	45.68
.2060	1	3	45.68
.2065	1	3	45.68
.2070	1	3	45.68
.2075	1	3	45.68
.2080	1	3	45.68
.2085	1	3	45.68
.2095	1	3	45.68
.2100	1	3	45.68
.2105	1	3	45.68
.2110	1	3	45.68
.2115	1	3	45.68
.2120	1	3	45.68
.2125	1	3	45.68
.2135	1	3	45.68
.2140	1	3	45.68
.2145	1	3	45.68
.2150	1	3	45.68
.2155	1	3	45.68
.2160	1	3	45.68
.2170	1	3	45.68
.2175	1	3	45.68
.2177	1	3	45.68
.2180	1	3	51.08
.2185	1	3	51.08
.2190	1	3	51.08
.2195	1	3	51.08
.2200	1	3	51.08
.2205	1	3	51.08

Solid Carbide Chucking Reamers

List No. **C805**: Straight Shank, Straight Flute
Shank diameter same as cutting diameter



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L&I LAVALLEE & IDE MADE IN USA

Decimal Sizes *Continued*

Diameter	Flute Length	Overall Length	Price Each
.2215	1	3	53.06
.2220	1	3	53.06
.2225	1	3	53.06
.2230	1	3	53.06
.2235	1	3	53.06
.2240	1	3	53.06
.2245	1	3	53.06
.2250	1	3	53.06
.2255	1	3	53.06
.2260	1	3	53.06
.2265	1	3	53.60
.2270	1	3	53.60
.2275	1	3	53.60
.2285	1	3	53.60
.2290	1	3	53.60
.2295	1	3	53.60
.2300	1	3	53.60
.2305	1	3	53.60
.2310	1	3	53.60
.2315	1	3	53.60
.2320	1	3	53.60
.2325	1	3	53.60
.2330	1	3	53.60
.2335	1	3	53.60
.2345	1	3	53.60
.2350	1	3	53.60
.2355	1	3	53.60
.2360	1	3	53.60
.2365	1	3	54.50
.2370	1	3	54.50
.2375	1	3	54.50
.2385	1	3	54.50
.2390	1	3	54.50
.2395	1	3	54.50
.2400	1	3	54.50
.2405	1	3	54.50
.2410	1	3	54.50
.2415	1	3	54.50
.2425	1	3	54.50
.2430	1	3	54.50
.2435	1	3	54.50
.2440	1	3	54.50
.2445	1	3	54.50
.2450	1	3	54.50
.2455	1	3	54.50
.2465	1	3	54.50
.2470	1	3	54.50
.2475	1	3	54.50
.2480	1	3	54.50
.2485	1	3	54.50
.2490	1	3	54.50
.2495	1	3	54.50
.2505	1	3	54.50
.2510	1	3	54.50
.2515	1	3	54.50
.2520	1	3	54.50
.2525	1	3	54.50
.2530	1	3	54.50
.2535	1	3	60.21
.2540	1	3	60.21
.2545	1	3	60.21
.2550	1	3	60.21
.2560	1 1/8	3 1/4	60.21
.2565	1 1/8	3 1/4	60.21
.2575	1 1/8	3 1/4	60.21
.2580	1 1/8	3 1/4	60.21
.2590	1 1/8	3 1/4	60.21
.2600	1 1/8	3 1/4	60.21
.2620	1 1/8	3 1/4	60.21
.2630	1 1/8	3 1/4	60.21
.2635	1 1/8	3 1/4	60.21
.2640	1 1/8	3 1/4	60.21
.2650	1 1/8	3 1/4	60.21
.2670	1 1/8	3 1/4	60.21
.2680	1 1/8	3 1/4	60.21
.2690	1 1/8	3 1/4	60.21
.2700	1 1/8	3 1/4	60.21
.2710	1 1/8	3 1/4	60.21
.2730	1 1/8	3 1/4	60.21
.2740	1 1/8	3 1/4	60.21
.2750	1 1/8	3 1/4	60.21
.2760	1 1/8	3 1/4	60.21
.2780	1 1/8	3 1/4	65.16
.2790	1 1/8	3 1/4	65.16
.2800	1 1/8	3 1/4	65.16
.2818	1 1/8	3 1/4	65.16
.2820	1 1/8	3 1/4	70.52
.2830	1 1/8	3 1/4	70.52
.2840	1 1/8	3 1/4	70.52
.2850	1 1/8	3 1/4	70.52
.2860	1 1/8	3 1/4	70.52
.2870	1 1/8	3 1/4	70.52
.2880	1 1/8	3 1/4	70.52
.2890	1 1/8	3 1/4	70.52
.2910	1 1/8	3 1/4	70.52
.2920	1 1/8	3 1/4	70.52
.2930	1 1/8	3 1/4	70.52
.2940	1 1/8	3 1/4	70.52
.2960	1 1/8	3 1/4	70.52
.2970	1 1/8	3 1/4	73.35
.2980	1 1/8	3 1/4	73.35
.2990	1 1/8	3 1/4	73.35
.3000	1 1/8	3 1/4	73.35
.3010	1 1/8	3 1/4	73.35
.3030	1 1/8	3 1/4	73.35
.3040	1 1/8	3 1/4	73.35
.3050	1 1/8	3 1/4	73.35
.3060	1 1/8	3 1/4	73.35
.3070	1 1/8	3 1/4	73.35
.3080	1 1/8	3 1/4	73.35
.3090	1 1/8	3 1/4	73.35
.3100	1 1/8	3 1/4	73.35
.3105	1 1/8	3 1/4	73.35
.3110	1 1/8	3 1/4	73.35
.3115	1 1/8	3 1/4	73.35
.3120	1 1/8	3 1/4	73.35
.3130	1 1/8	3 1/4	73.35
.3135	1 1/8	3 1/4	73.35
.3140	1 1/8	3 1/4	73.35
.3170	1 1/4	3 1/2	78.12
.3180	1 1/4	3 1/2	78.12
.3190	1 1/4	3 1/2	78.12
.3200	1 1/4	3 1/2	78.12
.3210	1 1/4	3 1/2	78.12
.3220	1 1/4	3 1/2	78.12
.3240	1 1/4	3 1/2	89.46
.3250	1 1/4	3 1/2	89.46
.3260	1 1/4	3 1/2	89.46
.3270	1 1/4	3 1/2	89.46
.3280	1 1/4	3 1/2	89.46
.3290	1 1/4	3 1/2	89.46
.3300	1 1/4	3 1/2	89.46

Solid Carbide Chucking Reamers

List No. **C805**: Straight Shank, Straight Flute
Shank diameter same as cutting diameter



- 4 flutes on sizes up to .255" diameter
- 6 flutes on sizes .255" diameter and above
- Cutting flutes are precision ground
- Close tolerances and consistent tool accuracy.

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Decimal Sizes *Continued*

Diameter	Flute Length	Overall Length	Price Each
.3310	1 1/4	3 1/2	89.46
.3330	1 1/4	3 1/2	89.46
.3340	1 1/4	3 1/2	89.46
.3350	1 1/4	3 1/2	89.46
.3360	1 1/4	3 1/2	89.46
.3370	1 1/4	3 1/2	89.46
.3380	1 1/4	3 1/2	89.46
.3400	1 1/4	3 1/2	89.46
.3410	1 1/4	3 1/2	89.46
.3420	1 1/4	3 1/2	89.46
.3430	1 1/4	3 1/2	89.46
.3440	1 1/4	3 1/2	89.46
.3450	1 1/4	3 1/2	89.46
.3460	1 1/4	3 1/2	89.46
.3470	1 1/4	3 1/2	89.46
.3490	1 1/4	3 1/2	89.46
.3500	1 1/4	3 1/2	89.46
.3510	1 1/4	3 1/2	89.46
.3520	1 1/4	3 1/2	89.46
.3530	1 1/4	3 1/2	89.46
.3540	1 1/4	3 1/2	89.46
.3550	1 1/4	3 1/2	90.09
.3560	1 1/4	3 1/2	90.09
.3570	1 1/4	3 1/2	90.09
.3590	1 1/4	3 1/2	90.09
.3600	1 1/4	3 1/2	91.80
.3610	1 1/4	3 1/2	91.80
.3620	1 1/4	3 1/2	91.80
.3630	1 1/4	3 1/2	91.80
.3640	1 1/4	3 1/2	91.80
.3650	1 1/4	3 1/2	91.80
.3660	1 1/4	3 1/2	91.80
.3670	1 1/4	3 1/2	91.80
.3690	1 1/4	3 1/2	91.80
.3700	1 1/4	3 1/2	91.80
.3710	1 1/4	3 1/2	91.80
.3720	1 1/4	3 1/2	91.80
.3730	1 1/4	3 1/2	91.80
.3745	1 1/4	3 1/2	91.80
.3755	1 1/4	3 1/2	109.76
.3760	1 1/4	3 1/2	109.76
.3765	1 1/4	3 1/2	109.76
.3780	1 1/4	3 1/2	109.76
.3790	1 1/4	3 1/2	109.76
.3800	1 1/4	3 1/2	109.76
.3810	1 1/4	3 1/2	109.76
.3820	1 1/4	3 1/2	109.76
.3830	1 1/4	3 1/2	109.76
.3840	1 1/4	3 1/2	109.76
.3850	1 1/4	3 1/2	109.76
.3870	1 1/4	3 1/2	115.43
.3880	1 1/4	3 1/2	115.43
.3890	1 1/4	3 1/2	115.43
.3900	1 1/4	3 1/2	115.43
.3910	1 1/4	3 1/2	115.43
.3920	1 1/4	3 1/2	115.43
.3930	1 1/4	3 1/2	115.43
.3940	1 1/4	3 1/2	115.43
.3950	1 1/4	3 1/2	115.43
.3960	1 1/4	3 1/2	115.43
.3980	1 1/4	3 1/2	115.43
.3990	1 1/4	3 1/2	115.43
.4000	1 1/4	3 1/2	115.43
.4010	1 1/4	3 1/2	115.43
.4020	1 1/4	3 1/2	115.43
.4030	1 1/4	3 1/2	115.43

Diameter	Flute Length	Overall Length	Price Each
.4050	1 1/4	3 1/2	115.43
.4060	1 1/4	3 1/2	115.43
.4070	1 1/4	3 1/2	115.43
.4080	1 1/4	3 1/2	115.43
.4090	1 1/4	3 1/2	115.43
.4100	1 1/4	3 1/2	115.43
.4110	1 1/4	3 1/2	115.43
.4120	1 1/4	3 1/2	115.43
.4140	1 1/4	3 1/2	118.49
.4150	1 1/4	3 1/2	118.49
.4160	1 1/4	3 1/2	118.49
.4170	1 3/8	4	118.49
.4180	1 3/8	4	118.49
.4190	1 3/8	4	118.49
.4200	1 3/8	4	118.49
.4210	1 3/8	4	118.49
.4230	1 3/8	4	118.49
.4240	1 3/8	4	118.49
.4250	1 3/8	4	118.49
.4260	1 3/8	4	118.49
.4270	1 3/8	4	118.49
.4280	1 3/8	4	118.49
.4290	1 3/8	4	118.49
.4300	1 3/8	4	118.49
.4310	1 3/8	4	118.49
.4320	1 3/8	4	118.49
.4330	1 3/8	4	118.49
.4340	1 3/8	4	118.49
.4350	1 3/8	4	118.49
.4355	1 3/8	4	118.49
.4360	1 3/8	4	118.49
.4365	1 3/8	4	118.49
.4370	1 3/8	4	118.49
.4380	1 3/8	4	129.78
.4385	1 3/8	4	129.78
.4390	1 3/8	4	129.78
.4400	1 3/8	4	129.78
.4410	1 3/8	4	129.78
.4420	1 3/8	4	129.78
.4430	1 3/8	4	129.78
.4440	1 3/8	4	129.78
.4450	1 3/8	4	129.78
.4460	1 3/8	4	129.78
.4470	1 3/8	4	129.78
.4480	1 3/8	4	129.78
.4490	1 3/8	4	129.78
.4500	1 3/8	4	129.78
.4510	1 3/8	4	129.78
.4520	1 3/8	4	129.78
.4530	1 3/8	4	129.78
.4540	1 3/8	4	129.78
.4550	1 3/8	4	129.78
.4560	1 3/8	4	129.78
.4570	1 3/8	4	129.78
.4580	1 3/8	4	129.78
.4590	1 3/8	4	129.78
.4600	1 3/8	4	129.78
.4610	1 3/8	4	129.78
.4620	1 3/8	4	129.78
.4630	1 3/8	4	129.78
.4640	1 3/8	4	129.78
.4650	1 3/8	4	129.78
.4660	1 3/8	4	129.78
.4670	1 3/8	4	129.78
.4680	1 3/8	4	129.78
.4690	1 3/8	4	129.78

Solid Carbide Chucking Reamers



List No. **C805**: Straight Shank, Straight Flute

Shank diameter same as cutting diameter

- 4 flutes on sizes up to .255" diameter
- 6 flutes on sizes .255" diameter and above
- Cutting flutes are precision ground
- Close tolerances and consitent tool accuracy.

MADE IN USA

Decimal Sizes *Continued*

Diameter	Flute Length	Overall Length	Price Each
.4700	1 3/8	4	129.78
.4710	1 3/8	4	129.78
.4720	1 3/8	4	129.78
.4730	1 3/8	4	141.17
.4740	1 3/8	4	141.17
.4750	1 3/8	4	141.17
.4760	1 3/8	4	141.17
.4770	1 3/8	4	141.17
.4780	1 3/8	4	141.17
.4790	1 1/2	4	141.17
.4800	1 1/2	4	141.17
.4805	1 1/2	4	141.17
.4810	1 1/2	4	141.17
.4820	1 1/2	4	141.17
.4830	1 1/2	4	141.17
.4840	1 1/2	4	141.17
.4850	1 1/2	4	141.17
.4860	1 1/2	4	141.17
.4870	1 1/2	4	141.17

Diameter	Flute Length	Overall Length	Price Each
.4880	1 1/2	4	141.17
.4890	1 1/2	4	141.17
.4900	1 1/2	4	141.17
.4910	1 1/2	4	141.17
.4930	1 1/2	4	141.17
.4940	1 1/2	4	141.17
.4950	1 1/2	4	141.17
.4960	1 1/2	4	141.17
.4970	1 1/2	4	141.17
.4980	1 1/2	4	141.17
.4990	1 1/2	4	141.17
.4995	1 1/2	4	141.17
.5005	1 1/2	4	141.17
.5010	1 1/2	4	141.17
.5015	1 1/2	4	141.17
.5020	1 1/2	4	141.17
.5030	1 1/2	4	141.17
.5040	1 1/2	4	141.17
.5050	1 1/2	4	141.17

Carbide-Tipped Chucking Reamers



List No. **CT550**: Straight Shank, Straight Flute

List No. **CT551**: Straight Shank, Right Hand Spiral, Right Hand Cut

For hole reaming in cast iron, heat-treated steels and other hard metals; for shallow hole applications only.

Hole Diameter:	.1875" thru .3125"	.3126" thru .7188"	.7189" thru 1.0625"	1.0626" thru 1.5000"
Max. Shallow Hole Depth:	.500"	.625"	.750"	.875"

Specifications				Price Each	
Diameter	Decimal Equivalent	Flute Length	Overall Length	**CT550 Straight Flute**	**CT551 RH Spiral RH Cut**
3/16	.1875	1 1/8	4 1/2	55.58	62.50
13/64	.2031	1 1/4	5	55.58	—
7/32	.2188	1 1/4	5	55.58	62.50
15/64	.2344	1 1/2	6	55.58	62.50
1/4	.2500	1 1/2	6	55.58	62.50
17/64	.2656	1 1/2	6	56.90	—
9/32	.2812	1 1/2	6	56.90	62.50
19/64	.2969	1 1/2	6	56.90	—
5/16	.3125	1 1/2	6	56.90	62.50
21/64	.3281	1 1/2	6	58.89	—
11/32	.3438	1 1/2	6	58.89	67.00
23/64	.3594	1 3/4	7	58.95	—
3/8	.3750	1 3/4	7	58.95	67.00
25/64	.3906	1 3/4	7	61.65	—
13/32	.4062	1 3/4	7	61.65	69.00
27/64	.4219	1 3/4	7	65.72	—
7/16	.4375	1 3/4	7	65.72	69.00
29/64	.4531	1 3/4	7	66.95	—
15/32	.4688	1 3/4	7	66.95	74.80
31/64	.4844	2	8	72.25	—
1/2	.5000	2	8	72.36	79.90
17/32	.5312	2	8	74.25	82.00
35/64	.5469	2	8	76.50	—
9/16	.5625	2	8	74.34	83.00

Specifications				Price Each	
Diameter	Decimal Equivalent	Flute Length	Overall Length	**CT550 Straight Flute**	**CT551 RH Spiral RH Cut**
19/32	.5938	2	8	77.10	85.00
5/8	.6250	2 1/4	9	77.20	85.00
21/32	.6562	2 1/4	9	78.55	85.00
11/16	.6875	2 1/4	9	78.55	89.50
23/32	.7188	2 1/4	9	82.20	92.00
3/4	.7500	2 1/2	9 1/2	82.20	92.00
25/32	.7812	2 1/2	9 1/2	84.00	—
13/16	.8125	2 1/2	9 1/2	84.95	94.50
27/32	.8438	2 1/2	9 1/2	88.27	112.70
7/8	.8750	2 5/8	10	88.27	97.70
29/32	.9062	2 5/8	10	99.90	112.70
15/16	.9375	2 5/8	10	102.95	112.70
31/32	.9688	2 5/8	10	105.25	117.90
1	1.0000	2 3/4	10 1/2	107.94	114.00
1 1/16	1.0625	2 3/4	10 1/2	116.24	119.00
1 3/32	1.0938	2 7/8	11	123.77	—
1 1/8	1.1250	2 7/8	11	125.83	135.00
1 3/16	1.1875	2 7/8	11	132.25	140.00
1 1/4	1.2500	3	11 1/2	139.66	145.00
1 5/16	1.3125	3	11 1/2	147.18	153.00
1 3/8	1.3750	3 1/4	12	156.00	162.00
1 7/16	1.4375	3 1/4	12	177.00	—
1 1/2	1.5000	3 1/2	12 1/2	182.60	195.00

DROLER®

Combination Drill & Reamer
High Speed Steel

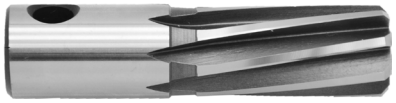


List No. **LV524**: Jobber Length

Drill and ream in one easy operation. Drill lengths are 2X the reaming diameter.

Size	Decimal Equivalent	Pilot Size	Flute Length	Overall Length	Price Each
1/8	.1250	.1153	2	3 1/8	54.98
5/32	.1562	.1457	2 1/2	3 3/4	57.46
3/16	.1875	.1764	2 1/2	3 3/4	56.02
7/32	.2188	.2071	2 3/4	4	60.53
1/4	.2500	.2379	2 15/16	4 1/8	60.97
9/32	.2812	.2687	3 3/16	4 1/2	65.62
5/16	.3125	.2997	3 7/16	4 3/4	67.39
11/32	.3438	.3305	3 5/8	5	78.54
3/8	.3750	.3615	3 7/8	5 1/4	85.20
7/16	.4375	.4235	4 1/2	6	96.67
1/2	.5000	.4856	4 3/16	6 5/8	116.52
9/16	.5625	.5477	4 13/16	6 5/8	133.80
5/8	.6250	.6098	5 3/16	7 1/8	179.88

CNC Stub Screw Machine Reamers
High Speed Steel



List No. **554U**: Left Hand Spiral, Right Hand Cut

These short machine reamers are designed particularly for use in screw machine work. They are finished with approximately 7° left hand spiral, right hand cut. Pin holes through the shank allows them to be used in pin drive floating holders.

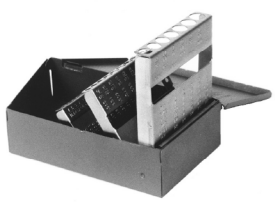
Please indicate decimal size when ordering.

Specifications							Price Each							
Series No.	Finished Dia. Range	Overall Length	Length of Flute	Shank Dia.	Hole Dia.	No. of Flutes	**1**	**2**	**3 – 5**	**6 – 11**	**12 – 23**	**24 – 35**	**36 – 40**	**41+**
3	.0961 - .1260	2	3/4	1/8	1/16	4	71.44	52.12	35.01	26.56	24.84	21.06	18.46	16.50
4	.1261 - .1580	2 1/4	1	1/4	3/32	4	71.44	52.12	35.01	26.56	24.84	21.06	18.46	16.50
5	.1581 - .1880	2 1/4	1	1/4	3/32	4	71.44	52.12	35.01	26.56	24.84	21.06	18.46	16.50
6	.1881 - .2190	2 1/4	1	1/4	3/32	6	71.44	52.12	35.01	26.56	24.84	21.06	18.46	16.50
7	.2191 - .2510	2 1/4	1	1/4	3/32	6	71.44	52.12	35.01	26.56	24.84	21.06	18.46	16.50
8	.2511 - .2820	2 1/4	1	3/8	1/8	6	74.59	54.41	37.21	28.15	26.79	22.91	20.31	18.36
9	.2821 - .3130	2 1/4	1	3/8	1/8	6	74.59	54.41	37.21	28.15	26.79	22.91	20.31	18.36
10	.3131 - .3440	2 1/2	1 1/4	3/8	1/8	6	74.59	54.41	37.21	28.15	26.79	22.91	20.31	18.36
11	.3441 - .3760	2 1/2	1 1/4	3/8	1/8	6	74.59	54.41	37.21	28.15	26.79	22.91	20.31	18.36
12	.3761 - .4070	2 1/2	1 1/4	1/2	3/16	6	78.79	57.47	40.31	30.81	29.37	25.65	23.05	21.00
13	.4071 - .4390	2 1/2	1 1/4	1/2	3/16	6	78.79	57.47	40.31	30.81	29.37	25.65	23.05	21.00
14	.4391 - .4700	2 1/2	1 1/4	1/2	3/16	6	78.79	57.47	40.31	30.81	29.37	25.65	23.05	21.00
15	.4701 - .5050	2 1/2	1 1/4	1/2	3/16	6	78.79	57.47	40.31	30.81	29.37	25.65	23.05	21.00
16	.5051 - .5670	3	1 1/2	5/8	1/4	6	81.08	59.15	44.11	34.66	33.68	29.09	26.49	24.34
17	.5671 - .6300	3	1 1/2	5/8	1/4	6	81.08	59.15	44.11	34.66	33.68	29.09	26.49	24.34
18	.6301 - .6920	3	1 1/2	5/8	1/4	6	84.47	61.62	48.13	38.52	34.79	33.87	31.27	27.76
19	.6921 - .7550	3	1 1/2	3/4	5/16	8	86.48	63.09	50.61	41.02	35.09	34.75	32.15	29.84
20	.7551 - .8170	3	1 1/2	3/4	5/16	8	90.54	66.05	55.20	45.42	41.20	38.77	36.17	33.85
21	.8171 - .8800	3	1 1/2	3/4	5/16	8	91.10	66.44	55.81	46.06	39.92	39.27	36.67	34.24
22	.8801 - .9420	3	1 1/2	3/4	5/16	8	96.78	70.62	60.40	50.54	44.21	43.33	40.73	38.10
23	.9421 - 1.0100	3	1 1/2	3/4	5/16	8	102.13	74.50	64.03	54.05	47.66	46.55	43.95	41.30

Other sizes are available upon request.

HUOT® Reamer Index

Description		Pieces Per Set	Case No.	Price Each
Fractional	1/16 — 1/2 by 64ths	29	**CZ129**	32.50
Letter	A — Z	26	**CZ126**	32.50
Wire Gauge	1 — 60	60	**CZ160**	39.00
Over and Under	.1240 — .5010	14	**CZ112**	32.50
Dowel Pin	.1230 — .4995	14	**CZ114**	32.50
Metric	1.0mm — 13.0 mm by .5mm	25	**CZ125**	43.68



Hand Reamers - Straight Shank High Speed Steel



List No. **564U**: Straight Flute
List No. **565U**: Left Hand Spiral, Right Hand Cut

These reamers are used for the final sizing of holes. The starting taper provides easy entry of the reamer into the holes. They are generally driven by a tap wrench or vise depending upon whether the work or the reamer is rotating.

Specifications				Price Each	
Diameter	Decimal Equivalent	Flute Length	Overall Length	**564U Straight Flute**	**565U LH. SP. RH. Cut**
1/16	.0625	1	2	48.75	54.13
5/64	.0781	1	2	48.75	54.13
3/32	.0938	1 1/4	2 1/2	48.75	54.13
7/64	.1094	1 1/4	2 1/2	48.75	54.13
1/8	.1250	1 1/2	3	43.01	49.88
9/64	.1406	1 5/8	3 1/4	43.01	49.88
5/32	.1562	1 5/8	3 1/4	45.25	52.63
#19	.1660	1 3/4	3 1/2	42.00	—
11/64	.1719	1 3/4	3 1/2	45.25	52.63
# 13	.1850	1 3/4	3 1/2	61.25	—
Under 3/16	.1865	1 3/4	3 1/2	43.84	—
3/16	.1875	1 3/4	3 1/2	45.25	50.49
# 8	.1990	1 3/4	3 1/2	63.00	73.75
13/64	.2031	1 7/8	3 3/4	45.25	55.63
7/32	.2188	1 7/8	3 3/4	49.38	55.63
15/64	.2344	2	4	49.38	55.63
1/4	.2500	2	4	49.38	55.63
17/64	.2656	2 1/8	4 1/4	49.38	57.50
9/32	.2812	2 1/8	4 1/4	53.88	62.25
19/64	.2969	2 1/4	4 1/2	53.88	62.25
5/16	.3125	2 1/4	4 1/2	53.88	62.25
21/64	.3281	2 3/8	4 3/4	60.00	66.25
11/32	.3438	2 3/8	4 3/4	60.00	70.00
S	.3480	2 1/2	5	72.50	—
T	.3580	2 1/2	5	72.50	—
23/64	.3594	2 1/2	5	61.25	72.50
Under 3/8	.3745	2 1/2	5	72.50	—
3/8	.3750	2 1/2	5	61.25	72.50
25/64	.3906	2 5/8	5 1/4	70.06	83.00
13/32	.4062	2 5/8	5 1/4	70.06	83.00
27/64	.4219	2 3/4	5 1/2	72.50	86.25
Under 7/16	.4365	2 3/4	5 1/2	—	90.00
7/16	.4375	2 3/4	5 1/2	72.50	83.00
29/64	.4531	2 7/8	5 3/4	77.36	86.25
15/32	.4688	2 7/8	5 3/4	77.36	86.25
31/64	.4844	3	6	78.25	86.25
Under 1/2	.4995	3	6	86.25	—
1/2	.5000	3	6	78.25	86.25
33/64	.5156	3 1/8	6 1/4	86.25	97.50
17/32	.5312	3 1/8	6 1/4	80.00	92.13
35/64	.5469	3 1/4	6 1/2	90.63	105.56
Under 9/16	.5615	3 1/4	6 1/2	—	105.56
9/16	.5625	3 1/4	6 1/2	82.50	92.74
37/64	.5781	3 3/8	6 3/4	102.13	114.58
19/32	.5938	3 3/8	6 3/4	90.38	105.56
39/64	.6094	3 1/2	7	111.25	114.58
Under 5/8	.6240	3 1/2	7	111.25	114.58
5/8	.6250	3 1/2	7	90.63	103.38
41/64	.6406	3 11/16	7 3/8	111.25	124.88
21/32	.6562	3 7/8	7 3/4	101.23	115.38
43/64	.6719	3 7/8	7 3/4	111.25	124.88
11/16	.6875	3 7/8	7 3/4	101.23	115.38
45/64	.7031	4 1/16	8 1/8	123.00	138.25
23/32	.7188	4 1/16	8 1/8	115.50	124.56
47/64	.7344	4 3/16	8 3/8	124.69	139.88
3/4	.7500	4 3/16	8 3/8	115.50	124.56
49/64	.7656	4 3/16	8 3/8	127.50	143.85
25/32	.7812	4 3/16	8 1/2	119.95	131.91

Hand Reamers - Straight Shank
High Speed Steel



List No. **564U**: Straight Flute
List No. **565U**: Left Hand Spiral, Right Hand Cut

These reamers are used for the final sizing of holes. The starting taper provides easy entry of the reamer into the holes. They are generally driven by a tap wrench or vise depending upon whether the work or the reamer is rotating.

Specifications				Price Each	
Diameter	Decimal Equivalent	Flute Length	Overall Length	**564U Straight Flute**	**565U LH. SP. RH. Cut**
51/64	.7969	4 3/8	8 3/4	107.45	159.49
13/16	.8125	4 9/16	9 1/8	122.83	131.91
53/64	.8281	4 9/16	9 1/8	144.06	159.49
27/32	.8438	4 7/8	9 3/8	127.63	143.20
55/64	.8594	4 7/8	9 3/8	142.81	159.49
7/8	.8750	4 7/8	9 3/4	127.63	143.20
57/64	.8906	4 7/8	10	149.00	170.49
29/32	.9062	4 7/8	10	131.18	159.75
59/64	.9219	5	10	150.44	170.49
15/16	.9375	5 1/8	10 1/4	131.18	159.75
61/64	.9531	5 5/16	10 5/8	—	185.21
31/32	.9688	5 5/16	10 5/8	150.38	170.28
63/64	.9844	5 7/16	10 7/8	—	187.69
1	1.0000	5 7/16	10 7/8	153.63	170.28
1 1/64	1.0156	5 7/16	10 7/8	—	225.00
1 1/32	1.0312	5 7/16	10 7/8	200.00	225.00
1 3/64	1.0469	5 7/16	10 7/8	212.50	237.50
1 1/16	1.0625	5 5/8	11 1/4	183.13	206.25
1 5/64	1.0781	5 5/8	11 1/4	230.00	243.75
1 3/32	1.0938	5 5/8	11 1/4	230.00	243.75
1 7/64	1.1094	5 5/8	11 1/4	—	262.50
1 1/8	1.1250	5 13/16	11 5/8	199.00	225.75
1 9/64	1.1406	5 13/16	11 5/8	268.75	308.75
1 5/32	1.1562	5 13/16	12	268.75	318.75
1 11/64	1.1719	5 13/16	12	—	330.00
1 3/16	1.1875	6	12	236.25	281.25
1 13/64	1.2031	6	12	295.00	336.88
1 7/32	1.2188	6	12	295.00	—
1 15/64	1.2344	6	12	—	336.88
1 1/4	1.2500	6 1/8	12 1/4	195.50	300.00
1 9/32	1.2812	6 1/4	12 1/2	325.00	375.00
1 5/16	1.3125	6 1/4	12 1/2	291.25	311.25
1 11/32	1.3438	6 5/16	12 5/8	333.75	390.00
1 3/8	1.3750	6 5/16	12 5/8	293.75	331.25
1 13/32	1.4062	6 7/16	12 7/8	350.00	—
1 7/16	1.4375	6 7/16	12 7/8	318.75	373.75
1 15/32	1.4688	6 1/2	13	268.75	462.50
1 1/2	1.5000	6 1/2	13	337.50	391.25
1 9/16	1.5625	6 1/2	13	425.00	437.50
1 11/16	1.6875	6 3/4	13 1/2	473.75	493.75
1 23/32	1.7188	6 3/4	13 1/2	747.50	—
1 3/4	1.7500	6 3/4	13 1/2	747.50	781.25
1 7/8	1.8750	7	14	900.00	—
1 15/16	1.9375	7	14	925.00	—
2 1/16	2.0625	7 1/2	14 7/8	1031.25	—
2 1/8	2.1250	7 1/4	14 1/2	1125.00	—
2 3/16	2.1875	7 1/2	15	1162.50	—
2 1/4	2.2500	7 1/2	15	1181.25	—
2 9/16	2.5625	7 7/8	15 1/2	1375.00	—
2 11/16	2.6875	8	16	1468.75	—
2 3/4	2.7500	8	16	1500.00	—
2 13/16	2.8125	8 1/4	16 5/8	1687.50	—

Metric Hand Reamers - Straight Shank High Speed Steel



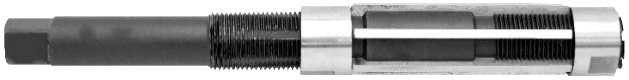
List No. **564MU**: Straight Flute

These reamers are used for the final sizing of holes. The starting taper provides easy entry of the reamer into the holes. They are generally driven by a tap wrench or vise depending upon whether the work or the reamer is rotating.

Diameter	Decimal Equivalent	Flute Length	Overall Length	Price Each
3.00	.1181	1 7/32	2 7/16	61.25
3.20	.1260	1 1/4	2 1/2	61.25
3.50	.1378	1 3/8	2 3/4	61.25
4.00	.1575	1 1/2	3	61.25
4.50	.1772	1 5/8	3 1/4	61.25
5.00	.1969	1 3/4	3 1/2	63.53
5.50	.2165	1 13/16	3 5/8	63.53
6.00	.2362	1 13/16	3 5/8	63.53
7.00	.2756	2 1/16	4 3/8	68.06
7.50	.2953	2 1/16	4 3/8	75.63
7.90	.3110	2 1/4	4 1/2	86.25
8.00	.3150	2 1/4	4 1/2	79.55
9.00	.3543	2 7/16	4 7/8	79.55
9.50	.3740	2 7/16	4 7/8	80.00

Diameter	Decimal Equivalent	Flute Length	Overall Length	Price Each
10.00	.3937	2 5/8	5 1/4	87.50
11.00	.4331	2 3/4	5 1/2	87.50
11.50	.4528	2 3/4	5 1/2	93.75
12.00	.4724	3	6	97.50
13.00	.5118	3	6	105.54
14.00	.5512	3 1/4	6 1/2	111.25
15.00	.5906	3 1/4	6 1/2	120.94
16.00	.6299	3 1/2	6 7/8	132.41
17.00	.6693	3 1/2	6 7/8	133.75
17.50	.6890	3 11/16	7 1/2	138.63
18.00	.7087	3 11/16	7 1/2	144.38
19.00	.7480	3 11/16	7 1/2	161.78
20.00	.7874	4	8	161.78

Adjustable Hand Reamers



List No. **570U**: High Speed Steel

Blades are adjusted by loosening one nut and tightening the other. Each reamer expands to the next size.

Size	Range of Adjustment	Blade Length	Overall Length	Price Each
8/A	1/4 - 9/32	1 11/32	3 1/4	81.01
7/A	9/32 - 5/16	1 11/32	3 1/2	81.01
6/A	5/16 - 11/32	1 1/2	4 1/8	81.01
5/A	11/32 - 3/8	1 1/2	4 3/8	81.01
4/A	3/8 - 13/32	1 1/2	4 3/4	83.74
3/A	13/32 - 7/16	1 1/2	5	92.68
2/A	7/16 - 15/32	1 5/8	5 1/4	92.68
A	15/32 - 17/32	1 5/8	5 1/2	98.23
B	17/32 - 19/32	1 13/16	5 3/4	98.23
C	19/32 - 21/32	2 1/16	6 1/2	102.20
D	21/32 - 23/32	2 3/16	6 3/4	106.99
E	23/32 - 25/32	2 1/2	7	112.64
F	25/32 - 27/32	2 5/8	7 3/8	116.26
G	27/32 - 15/16	3	8	122.05
H	15/16 - 1 1/16	3 1/4	9	128.75
I	1 1/16 - 1 3/16	3 3/8	10	157.24
J	1 3/16 - 1 11/32	3 7/8	11	186.18
K	1 11/32 - 1 1/2	4 1/4	12	241.84
L	1 1/2 - 1 13/16	4 7/16	14	294.80
M	1 13/16 - 2 7/32	5	16	374.24
N	2 7/32 - 2 3/4	5	18	659.15
O	2 3/4 - 3 11/32	5 3/16	20	906.40

Note: Can also be used for reaming pinions.

Sets - Adjustable Hand Reamers

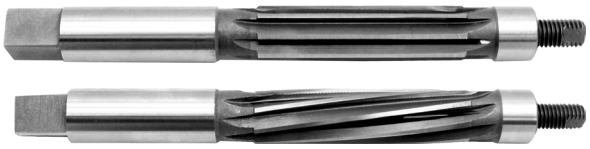
Sizes	No. of Pieces	Part No.	Price
8/A – 5/A	4	**570UB**	324.05
A – H	8	**570UA**	885.34
A – K	11	**570UC**	1470.59



Supplied in Wood Case

Expansion Hand Reamers
High Speed Steel

List No. **576U**: Straight Flute
List No. **577U**: Left Hand Spiral, Right Hand Cut



These reamers are used to enlarge holes by a few thousandths. The pilots and guides of these reamers are ground under size to allow smooth entrance.

Recommended Expansion Limits:			
Sizes 1/4 to 21/32	.010"	Sizes 1-1/16 to 1-1/2	.015"
Sizes 11/16 to 1	.013"	Sizes 1-9/16 to 2	.017"

Specifications				Price Each	
Diameter	Decimal Equivalent	Flute Length	Overall Length	**576U Straight Flute**	**577U LH. Sp. RH. Cut**
3/16	.1875	1 1/8	3 3/8	185.00	218.75
7/32	.2188	1 3/16	3 1/2	187.50	212.50
1/4	.2500	1 7/16	4 1/2	192.50	225.00
9/32	.2812	1 3/4	4	208.75	228.75
5/16	.3125	1 3/4	4 1/2	206.25	231.25
11/32	.3438	1 3/4	4 1/2	208.75	233.75
9mm	.3543	1 3/4	4 1/2	237.50	—
3/8	.3750	1 3/4	5	211.25	236.25
13/32	.4062	1 3/4	5	225.00	256.25
7/16	.4375	1 3/4	5	230.00	262.50
15/32	.4688	1 13/16	5 1/2	237.50	266.25
1/2	.5000	1 13/16	5 1/2	241.25	270.00
17/32	.5312	2 1/8	6	243.75	272.50
9/16	.5625	2 1/8	6	248.75	276.25
19/32	.5938	2 1/2	6	252.50	285.00
5/8	.6250	2 1/2	6 1/2	256.25	287.50
21/32	.6562	2 1/2	6 1/2	265.00	281.25
11/16	.6875	2 1/2	6 3/4	275.00	300.00
23/32	.7188	2 11/16	6 9/16	291.25	325.00
3/4	.7500	2 11/16	7 1/16	300.00	337.50
25/32	.7812	3 1/16	7 1/16	332.50	375.00
13/16	.8125	3 1/16	7 9/16	348.75	387.50
21mm	.8268	3 1/16	7 9/16	393.75	—
27/32	.8438	3 5/16	7 1/2	360.00	393.75
7/8	.8750	3 5/16	8	362.50	400.00
57/64	.8906	3 5/16	8	391.25	412.50
29/32	.9062	3 9/16	8 3/8	391.25	412.50
59/64	.9219	3 9/16	8 3/8	402.50	425.00
15/16	.9375	3 9/16	8 3/8	402.50	425.00
61/64	.9531	3 9/16	8 3/8	437.50	468.75
31/32	.9688	3 3/4	8 3/8	437.50	468.75
1	1.0000	3 3/4	8 7/8	450.00	481.25
1 1/32	1.0312	4	9 3/16	473.75	—
1 1/16	1.0625	4	9 3/16	485.00	506.25
1 3/32	1.0938	4 1/8	9	461.25	518.75
1 1/8	1.1250	4 1/8	9 1/2	500.00	531.25
29mm	1.1417	4 1/8	9 1/2	531.25	—
1 5/32	1.1562	4 1/4	9 3/8	522.50	543.75
1 3/16	1.1875	4 1/4	9 7/8	513.75	550.00
1 7/32	1.2188	4 3/8	10 1/4	525.00	562.50
31mm	1.2205	4 3/8	10 1/4	562.50	—
1 1/4	1.2500	4 3/8	10 1/4	531.25	575.00

Specifications				Price Each	
Diameter	Decimal Equivalent	Flute Length	Overall Length	**576U Straight Flute**	**577U LH. Sp. RH. Cut**
1 9/32	1.2812	4 1/2	10 1/4	548.75	587.50
33mm	1.2992	4 1/2	10 1/4	600.00	—
1 5/16	1.3125	4 1/2	10 5/8	550.00	593.75
1 11/32	1.3438	4 9/16	11	598.75	633.75
1 3/8	1.3750	4 9/16	11	612.50	662.50
1 13/32	1.4062	4 3/4	11 3/8	693.75	768.75
1 7/16	1.4375	4 3/4	11 3/8	712.50	787.50
37mm	1.4567	4 3/4	11 3/8	812.50	—
1 15/32	1.4688	4 13/16	11 5/8	781.25	825.00
1 1/2	1.5000	4 13/16	11 5/8	781.25	856.25
39mm	1.5354	4 13/16	11 5/8	850.00	—
1 9/16	1.5625	4 13/16	11 5/8	825.00	862.50
41mm	1.6142	4 7/8	11 5/8	887.50	—
1 5/8	1.6250	4 7/8	11 5/8	868.75	925.00
1 11/16	1.6875	5	11 5/8	911.25	987.50
43mm	1.6929	5	11 5/8	975.00	—
44mm	1.7323	5	11 5/8	975.00	—
1 3/4	1.7500	5	12 3/8	937.50	1031.25
46mm	1.8110	5	12 3/8	1012.50	—
1 13/16	1.8125	5	12 3/8	1068.75	1068.75
47mm	1.8504	5	12 3/8	1025.00	—
1 7/8	1.8750	5	12 3/4	1000.00	1112.50
49mm	1.9291	5	12 3/4	1187.50	—
1 15/16	1.9375	5	12 3/4	1161.25	1247.50
2	2.0000	5	13 1/16	1187.50	1375.00
2 1/16	2.0625	5 1/8	13 1/4	1375.00	—
2 1/8	2.1250	5 1/8	13 1/4	1500.00	1625.00
2 3/16	2.1875	5 1/8	13 1/2	1562.50	—
2 1/4	2.2500	5 1/4	14	1625.00	1775.00
2 5/16	2.3125	5 3/8	14 1/2	1687.50	—
2 3/8	2.3750	5 3/8	14 1/2	1750.00	1875.00
2 7/16	2.4375	5 3/8	14 1/2	1812.50	2000.00
2 1/2	2.5000	5 3/8	14 1/2	1875.00	—
2 9/16	2.5625	5 1/2	15	1937.50	—
2 5/8	2.6250	5 1/2	15	2000.00	—
2 11/16	2.6875	5 3/4	15 1/2	2062.50	—
2 3/4	2.7500	5 3/4	15 1/2	2125.00	—
2 13/16	2.8125	5 3/4	15 1/2	2187.50	—
2 7/8	2.8750	5 3/4	15 1/2	2250.00	—
2 15/16	2.9375	6	16 1/2	2343.75	—
3	3.0000	6	16 1/2	2468.75	—

Sets - Expansion Hand Reamers

Sizes	Description	No. of Pieces	Set No.	Price
1/4, 3/8, 1/2, 5/8, 3/4	Straight Flute	5	**576US**	1209.59
1/4, 3/8, 1/2, 5/8, 3/4	LH. Spiral/ RH. Cut	5	**577US**	1364.59

Supplied in Wood Block



Expansion Chucking Reamers
High Speed Steel

List No. **572U**: Straight Shank, Straight Flute
List No. **574U**: Taper Shank, Straight Flute



Available in 64th sizes. Please inquire.

L&I LAVALLEE & IDE MADE IN USA

This is an economical high-production reamer. The expansion feature permits this reamer to be resharpened many times to its original diameter, for cost and replacement purposes.
Maximum Expansion to 1/2 ≈ .006", to 1 ≈ .010", to 1 1/2 ≈ .012", 1-1/2 and over ≈ .015"

Specifications				572U Straight Shank	574U Taper Shank	
Diameter	Decimal Equivalent	Flute Length	Overall Length	Price Each	Morse Taper No.	Price Each
3/16	.1875	3/4	6 1/2	120.50	—	—
7/32	.2188	3/4	6 1/2	120.50	—	—
1/4	.2500	3/4	6 1/2	115.75	—	—
9/32	.2812	3/4	6 1/2	115.75	—	—
5/16	.3125	3/4	6 1/2	115.75	—	—
11/32	.3438	3/4	6 1/2	115.75	—	—
3/8	.3750	3/4	7	79.70	1	89.60
13/32	.4062	3/4	7	82.60	1	95.16
7/16	.4375	7/8	7	84.40	1	97.70
15/32	.4688	7/8	7	87.44	1	99.90
1/2	.5000	1	8	89.10	1	101.14
17/32	.5312	1	8	92.16	1	103.30
9/16	.5625	1 1/8	8	94.11	1	105.90
19/32	.5938	1 1/8	8	96.40	1	107.44
5/8	.6250	1 1/4	9	98.49	2	109.61
21/32	.6562	1 1/4	9	101.50	2	114.59
11/16	.6875	1 1/4	9	103.30	2	116.10
23/32	.7188	1 1/4	9	108.18	2	118.00
3/4	.7500	1 3/8	9 1/2	112.75	2	120.35
25/32	.7812	1 3/8	9 1/2	120.20	2	125.99
13/16	.8125	1 3/8	9 1/2	123.66	2	130.65
27/32	.8438	1 3/8	9 1/2	129.80	2	135.05
7/8	.8750	1 1/2	10	139.66	2	143.60
29/32	.9062	1 1/2	10	142.19	2	149.00
15/16	.9375	1 1/2	10	147.90	3	153.62
31/32	.9688	1 1/2	10	153.16	3	159.99
1	1.0000	1 5/8	10 1/2	159.75	3	166.66
1 1/32	1.0312	1 5/8	10 1/2	175.09	3	179.59
1 1/16	1.0625	1 5/8	10 1/2	180.80	3	185.19
1 3/32	1.0938	1 5/8	10 1/2	190.19	3	195.95
1 1/8	1.1250	1 3/4	11	201.55	3	209.90
1 5/32	1.1562	1 3/4	11	204.19	3	215.08
1 3/16	1.1875	1 3/4	11	210.10	3	225.00
1 13/64	1.2031	1 3/4	11	—	3	280.00
1 7/32	1.2188	1 3/4	11	220.59	3	260.00
1 1/4	1.2500	1 7/8	11 1/2	225.25	4	240.50
1 9/32	1.2812	1 7/8	11 1/2	265.50	—	—
1 5/16	1.3125	1 7/8	11 1/2	230.85	4	245.00
1 11/32	1.3438	1 7/8	11 1/2	275.70	—	—
1 3/8	1.3750	2	12	240.78	4	260.00
1 7/16	1.4375	2	12	250.38	4	272.00
1 1/2	1.5000	2 1/8	12 1/2	260.95	4	280.00
1 9/16	1.5625	2 1/8	12 1/2	325.00	4	355.00
1 5/8	1.6250	2 1/4	13	330.00	4	360.00
1 11/16	1.6875	2 1/4	13	350.00	4	380.00
1 3/4	1.7500	2 3/8	13 1/2	398.00	5	438.00
1 13/16	1.8125	2 3/8	13 1/2	425.00	5	470.00
1 7/8	1.8750	2 1/2	14	480.00	5	525.00
1 15/16	1.9375	2 1/2	14	495.00	5	540.00
2	2.0000	2 1/2	14	505.00	5	555.00
2 1/8	2.1250	2 3/4	14 1/2	600.00	5	665.00
2 3/16	2.1875	2 3/4	14 1/2	—	5	680.00
2 5/16	2.3125	2 3/4	14 1/2	—	5	695.00
2 3/8	2.3750	3	14 1/2	650.00	5	750.00
2 7/16	2.4375	3	15	—	5	775.00
2 1/2	2.5000	3	15	725.00	5	795.00
2 5/8	2.6250	3	16	—	5	995.00
2 11/16	2.6875	3	16	—	5	1095.00
2 13/16	2.8125	3	16	—	5	1295.00
2 7/8	2.8750	3	16	—	5	1395.00
2 15/16	2.9375	3	16	1450.00	5	1450.00
3	3.0000	3	16	—	5	1495.00

Morse Taper Roughing and Finishing Reamers High Speed Steel - Straight Flute



List No. **568U**: Straight Shank - Finishing Reamers
List No. **569U**: Taper Shank - Finishing Reamers
List No. **552U**: Straight Shank - Roughing Reamers
List No. **559U**: Taper Shank - Roughing Reamers

This tool is used for accurate reaming of Morse Taper holes in sockets, sleeves and spindles.

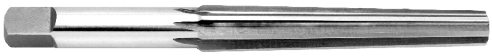
Specifications						Price Each			
Taper No.	Diameter		Flute Length	Shank Diameter	Morse Taper No.	**568U Straight Shank**	**569U Taper Shank**	**552U Straight Shank Roughing**	**559U Taper Shank Roughing**
	Small End	Large End							
0	.2503	.3674	2 1/4	5/16	0	72.50	110.00	65.00	99.00
1	.3674	.5170	3	7/16	1	92.50	122.50	82.00	115.00
2	.5696	.7444	3 1/2	5/8	2	111.25	143.75	99.00	130.00
3	.7748	.9881	4 1/4	7/8	3	161.25	200.00	145.00	180.00
4	1.0167	1.2893	5 1/4	1 1/8	4	236.25	312.50	208.00	270.00
5	1.4717	1.8005	6 1/4	1 1/2	5	425.00	650.00	370.00	549.00
6	2.1120	2.5550	8 1/2	2	6	1143.75	1187.50	960.00	1005.00

Sets - Morse Taper Reamers

Description	Sizes	Pieces	**Set No.**	Price
Straight Shank, Finishing Reamer	#1 – #5	5	**568US**	1026.25

Brown & Sharpe Taper Reamers - High Speed Steel

List No. **596U**: Straight Shank, Straight Flute - Finishing Reamers



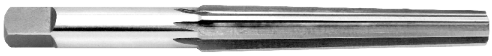
These reamers are used for final finishing of Brown & Sharpe standard taper holes, and also used for removing nicks or burrs in machine spindles.

Size	Diameter		Flute Length	Shank Diameter	Overall Length	Price Each
	Small End	Large End				
1	.1974	.3176	2 7/8	9/32	4 3/4	74.00
2	.2474	.3781	3 1/8	11/32	5 1/8	83.00
3	.3099	.4510	3 3/8	13/32	5 1/2	89.00
4	.3474	.5017	3 11/16	7/16	5 7/8	92.55
5	.4474	.6145	4	9/16	6 3/8	97.70
6	.4974	.6808	4 3/8	5/8	6 7/8	104.78
7	.5974	.8011	4 7/8	3/4	7 1/2	110.30
8	.7474	.9770	5 1/2	13/16	8 1/8	149.74
9	.8974	1.1530	6 1/8	1	8 7/8	195.00
11	1.2500	1.5680	7 5/8	1 5/16	10 5/8	485.00
12	1.5000	1.8440	8 1/4	1 5/8	11 3/8	599.00

Sets - Brown & Sharpe Taper Reamers

Sizes	No. of Reamers	**Set No.**	Price
#1 – #5	5	**596US**	436.25

Jarno Taper Reamers - High Speed Steel



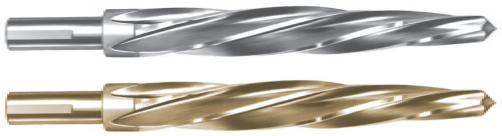
List No. **599U**: Straight Shank, Straight Flute - Finishing Reamers

Jarno Taper No.	Size		Overall Length	Price Each
	Small End	Large End		
4	.400	.531	4 3/8	85.00
5	.500	.652	5 1/8	93.00
6	.600	.787	5 7/8	105.00
7	.700	.916	6 5/8	120.00
8	.800	1.044	7 3/8	175.00
9	.900	1.169	8 1/8	199.00

Jarno Taper No.	Size		Overall Length	Price Each
	Small End	Large End		
10	1.000	1.297	8 7/8	210.00
11	1.100	1.422	9 1/2	300.00
12	1.200	1.550	10 1/8	450.00
13	1.300	1.675	10 3/4	510.00
14	1.400	1.800	11 3/8	595.00

Aligning Reamers - High Speed & Cobalt

1/2″ Straight Shank with 3 Equal Flats to fit 1/2″ Chucks



List No. **535R**: Left Hand Spiral, Right Hand Cut, High Speed
List No. **535RC**: Left Hand Spiral, Right Hand Cut, Cobalt

Used to align existing holes prior to rivet or bolt installation, the point is tapered to allow entry into overlapping holes. These reamers are also useful in portable reaming.

Specifications				Price Each	
Size	Flute Length	Overall Length	Shank Diameter	**535R High Speed**	**535RC Cobalt**
1/4*	2 1/2	4 3/8	1/4	58.39	75.90
5/16	2 3/4	4 5/8	5/16	58.39	75.90
3/8	2 3/4	4 5/8	3/8	58.39	75.90
7/16	3 1/2	5 3/8	7/16	60.50	78.65
1/2	4	5 7/8	1/2	60.50	78.65
9/16	4	5 7/8	1/2	67.38	87.59
5/8	4 1/2	6 3/8	1/2	70.13	91.16
11/16	4 1/2	6 3/8	1/2	78.04	101.44
3/4	5	6 7/8	1/2	93.44	121.46
13/16	5	6 7/8	1/2	94.19	122.44
7/8	5	6 7/8	1/2	91.88	131.38
15/16	5	6 7/8	1/2	105.74	137.45
1	5	6 7/8	1/2	123.61	160.69
1 1/16	5	6 7/8	1/2	144.38	187.69
1-1/8	5	6 7/8	1/2	168.75	—

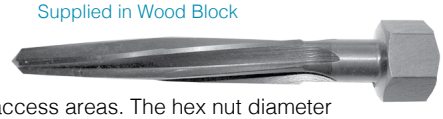
* No Flats on Shank

Sets - Aligning Reamers

Sizes	Description	No. of Pcs.	**Part No.**	Price
1/2, 9/16, 5/8, 3/4	High Speed Steel	4	**535RS**	296.75
1/2, 9/16, 5/8, 3/4	Cobalt	4	**535RCS**	378.86

Supplied in Wood Block

Hex Nut Shank Style



List No. **535H**: Left Hand Spiral Flute

For portable pneumatic tools, the short length permits use in limited-access areas. The hex nut diameter for each reamer matches socket size for the bolt which will be driven through the newly reamed hole.

Size	Flute Length	Overall Length	Hex Shank Diameter	Price Each
11/16	4 1/2	6 1/2	1 1/16	97.63
13/16	5	7	1 1/4	118.94
15/16	5	7	1 7/16	132.00
1 1/16	5	7	1 5/8	177.38
1 3/16	5	7	1 13/16	245.00

Construction Reamers - High Speed Steel

1/2″ Straight Shank with 3 Equal Flats to fit 1/2″ Chucks



List No. **583CR**: Left Hand Spiral Flute with stop collar

Used to align existing holes prior to rivet or bolt installation, the point is tapered to allow entry into overlapping holes. These reamers are also useful in portable reaming.

Size	Decimal Equivalent	Flute Length	Overall Length	Shank Diameter	Price Each
3/8*	.3750	3 5/8	5 1/4	.3750	45.40
7/16*	.4375	3 5/8	5 1/4	.4375	60.00
1/2	.5000	4 3/8	6	.5000	68.91
9/16	.5625	5	6 5/8	.5000	80.90
5/8	.6250	5	6 5/8	.5000	93.63
11/16	.6875	5 3/8	7	.5000	110.60
3/4	.7500	5 3/8	7	.5000	125.95
13/16	.8125	5 5/8	7 1/4	.5000	130.39
7/8	.8750	5 5/8	7 1/4	.5000	130.39
15/16	.9375	5 5/8	7 1/4	.5000	163.60
1	1.0000	5 5/8	7 1/4	.5000	163.60

* Shank diameter same as cutting diameter.

Sets - Construction Reamers

Sizes	Description	No. of Pcs.	**Part No.**	Price
1/2, 9/16, 5/8, 3/4	High Speed Steel	4	**583CRS**	374.70

Supplied in Wood Block

Bridge Reamers - Taper Shank Long Body, High Speed Steel



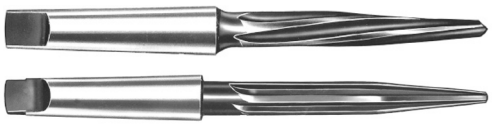
List No. **532**: Left Hand Spiral, Right Hand Cut
List No. **533**: Straight Flute

Structural reamers are used extensively in shipbuilding, bridge construction, and boiler manufacturing. These reamers are designed to ream rough and undersize holes that are previously punched or drilled in steel plates or shapes. They are used where it is necessary to ream holes in assemblies to obtain proper alignment and size to precisely fit rivets, bolts, etc.

Specifications					Price Each	
Size	Approx. Point Size	Flute Length	Overall Length	Morse Taper No.	**532 LH Spiral**	**533 Straight Flute**
9/32	5/32	4	7 1/4	1	69.00	78.00
5/16	7/32	4	7 1/4	2	69.00	78.00
11/32	7/32	4	7 1/4	2	73.50	78.00
3/8	1/4	4 1/2	8 1/4	2	73.50	78.00
13/32	1/4	4 1/2	8 1/4	2	73.50	78.00
7/16	1/4	4 1/2	8 1/4	2	57.45	78.00
15/32	1/4	5 1/8	9	2	75.78	102.00
1/2	9/32	5 1/8	9	2	75.78	95.40
33/64	9/32	5 1/8	9	2	76.98	95.40
17/32	9/32	5 1/8	9	2	81.00	95.40
9/16	11/32	5 1/8	9	2	87.00	95.40
37/64	3/8	5 1/8	9	2	104.40	118.80
5/8	3/8	6 1/8	10	2	114.00	118.80
11/16	25/64	7 1/8	11 3/4	3	108.75	137.50
3/4	7/16	7 3/8	12	3	136.61	145.20
25/32	1/2	7 3/8	12	3	136.61	145.20
13/16	1/2	7 3/8	12	3	150.00	156.25
7/8	9/16	7 3/8	12	3	134.40	145.20
29/32	5/8	7 3/8	12	3	153.60	167.40
15/16	5/8	7 3/8	12	3	170.40	173.75
31/32	5/8	7 3/8	12	3	186.25	----
1	11/16	7 3/8	12	3	168.90	210.00

Specifications					Price Each	
Size	Approx. Point Size	Flute Length	Overall Length	Morse Taper No.	**532 LH Spiral**	**533 Straight Flute**
1 1/16	3/4	7 3/8	12	3	186.00	190.00
1 1/8	13/16	7 3/8	12	3	198.00	206.25
1 5/32	7/8	7 3/8	12	3	210.00	213.60
1 3/16	7/8	7 3/8	12	3	193.75	210.63
1 7/32	15/16	7 3/8	13	4	236.25	256.80
1 1/4	15/16	7 3/8	13	4	218.75	225.00
1 9/32	1	7 3/8	13	4	291.25	282.00
1 5/16	1	7 3/8	13	4	278.75	268.75
1 11/32	1 1/8	7 3/8	13	4	303.60	318.00
1 3/8	1 1/8	7 3/8	13	4	312.00	318.75
1 13/32	1 3/16	7 3/8	13	4	318.00	333.60
1 7/16	1 3/16	7 3/8	13	4	356.40	372.00
1 1/2	1 1/4	7 3/8	13	4	400.00	477.60
1 17/32	1 3/8	7 3/8	13	4	468.00	477.60
1 9/16	1 3/8	7 3/8	13	4	487.50	493.75
1 5/8	1 3/8	7 3/8	13	4	510.00	512.50
1 3/4	1 11/16	7 3/8	13 3/4	5	562.50	----
1 7/8	1 11/16	7 3/8	13 3/4	5	593.75	600.00
1 15/16	1 11/16	7 3/8	13	5	618.75	----
1 31/32	1 11/16	7 3/8	13	4	623.75	637.50
2	1 11/16	7 3/8	13 3/4	5	623.75	----

Car Reamers - Taper Shank, Short Body, High Speed Steel



List No. **535**: Left Hand Spiral, Right Hand Cut
List No. **534**: Straight Flute

Car reamers are specially designed for reaming structural steel plates, commonly found in railroad cars, truck frames, bridge building/repair, and pressure vessel manufacturing. These reamers are used on previously formed holes in steel plates which are under size and rough, and where it is necessary to ream holes in assemblies to obtain proper alignment and size to precisely fit rivets, bolts, etc.

Specifications					Price Each	
Size	Approx. Point Size	Flute Length	Overall Length	Morse Taper No.	**535 LH Spiral**	**534 Straight Flute**
1/4	11/64	2 1/2	5 1/2	1	59.69	79.15
9/32	11/64	2 1/2	5 1/2	1	61.88	81.21
5/16	11/64	2 3/4	5 11/16	1	46.41	65.75
11/32	15/64	2 3/4	5 11/16	1	60.00	73.75
3/8	15/64	2 3/4	5 11/16	1	47.25	----
25/64	15/64	2 3/4	5 11/16	1	60.00	----
27/64	1/4	3 1/2	6 15/16	2	60.00	----
7/16	1/4	3 1/2	6 15/16	2	55.39	79.81
29/64	9/32	3 1/2	7 1/16	2	68.75	----
15/32	9/32	3 1/2	7 1/16	2	68.75	81.25
1/2	19/64	4	7 9/16	2	63.75	87.50

Specifications					Price Each	
Size	Approx. Point Size	Flute Length	Overall Length	Morse Taper No.	**535 LH Spiral**	**534 Straight Flute**
33/64	19/64	4	7 9/16	2	75.00	----
35/64	19/64	4	7 9/16	2	75.00	----
9/16	19/64	4	7 9/16	2	65.88	----
5/8	5/16	4 1/2	8 1/16	2	76.56	92.19
11/16	3/8	4 1/2	8 13/16	3	82.08	106.71
3/4	13/32	5	9 1/2	3	89.69	126.24
13/16	15/32	5	9 1/2	3	92.38	128.69
15/16	19/32	5	9 1/2	3	102.49	140.00
1 3/16	25/32	5	9 1/2	3	----	183.75
1 1/4	25/32	5	9 1/2	3	----	197.50

Taper Shank Chucking Reamers
High Speed Steel

List No. **530U**: Straight Flute
List No. **531U**: Right Hand Spiral, Right Hand Cut
List No. **537LU**: Left Hand Spiral, Right Hand Cut



MADE IN USA

These reamers are designed and applied similarly to straight shank reamers (L&I No. LV533 & LV535) except they are manufactured with Morse taper shanks.

Specifications						Price Each		
Diameter	Decimal Equivalent	Flute Length	Overall Length	Morse Taper No.	No. of Flutes	**530U Straight Flute**	**531U RH Spiral RH Cut**	**537LU LH Spiral RH Cut**
1/8	.1250	7/8	4 3/8	1	6	34.38	----	----
3/16	.1875	1 1/8	4 1/2	1	6	34.38	----	----
5mm	.1969	1 1/4	5	1	6	40.00	----	----
13/64	.2031	1 1/4	5	1	6	36.25	43.75	----
7/32	.2188	1 1/4	5	1	6	42.50	45.63	----
15/64	.2344	1 1/4	5	1	6	----	43.13	----
6mm	.2362	1 1/4	5	1	6	40.00	----	45.00
1/4	.2500	1 1/2	6	1	6	34.69	40.00	45.00
6.5mm	.2559	1 1/2	6	1	6	40.00	----	----
17/64	.2656	1 1/2	6	1	6	47.50	53.13	----
7mm	.2756	1 1/2	6	1	6	47.50	----	----
9/32	.2812	1 1/2	6	1	6	36.25	41.25	45.00
19/64	.2969	1 1/2	6	1	6	47.50	53.75	----
5/16	.3125	1 1/2	6	1	6	36.25	41.25	45.00
8mm	.3150	1 1/2	6	1	6	47.50	----	----
21/64	.3281	1 1/2	6	1	6	49.88	53.75	----
11/32	.3438	1 1/2	6	1	6	43.75	43.75	48.75
9mm	.3543	1 3/4	7	1	6	47.50	----	50.00
23/64	.3594	1 3/4	7	1	6	50.00	----	----
3/8	.3750	1 3/4	7	1	6	41.88	45.00	50.00
25/64	.3906	1 3/4	7	1	6	----	57.50	61.25
10mm	.3937	1 3/4	7	1	6	47.50	----	----
13/32	.4062	1 3/4	7	1	6	43.50	47.50	61.25
11mm	.4331	1 3/4	7	1	6	47.50	----	----
7/16	.4375	1 3/4	7	1	6	43.50	48.13	52.50
29/64	.4531	1 3/4	7	1	6	37.41	----	----
15/32	.4688	1 3/4	7	1	6	44.69	51.75	55.63
12mm	.4724	2	8	1	6	47.75	----	----
31/64	.4844	2	8	1	6	----	61.88	----
1/2	.5000	2	8	1	6	47.75	52.70	57.13
13mm	.5118	2	8	1	6	57.50	----	60.00
17/32	.5312	2	8	1	6	52.81	56.00	60.00
14mm	.5512	2	8	1	6	60.00	----	----
9/16	.5625	2	8	1	6	55.50	58.75	67.50
37/64	.5781	2	8	1	6	60.00	68.75	----
15mm	.5906	2	8	1	6	65.00	----	----
19/32	.5938	2	8	1	6	57.95	61.75	71.25
39/64	.6094	2 1/4	8	1	6	67.50	73.13	----
5/8	.6250	2 1/4	9	2	8	62.38	64.06	71.25
21/32	.6562	2 1/4	9	2	8	64.00	66.25	----
11/16	.6875	2 1/4	9	2	8	64.00	67.63	73.75
23/32	.7188	2 1/4	9	2	8	68.25	74.50	----
47/64	.7344	2 1/4	9	2	8	80.00	84.88	----
3/4	.7500	2 1/2	9 1/2	2	8	54.60	74.50	----
25/32	.7812	2 1/2	9 1/2	2	8	80.00	85.25	90.00
20mm	.7874	2 1/2	9 1/2	2	8	87.50	----	----
13/16	.8125	2 1/2	9 1/2	2	8	80.00	85.25	91.50
21mm	.8268	2 1/2	9 1/2	2	8	90.00	----	----
27/32	.8438	2 1/2	9 1/2	2	8	86.38	93.75	98.75
22mm	.8661	2 1/2	9 1/2	2	8	96.25	----	----
7/8	.8750	2 5/8	10	2	8	90.25	93.75	98.75
23mm	.9055	2 5/8	10	2	8	106.88	----	----
29/32	.9062	2 5/8	10	2	8	98.25	105.88	111.25
59/64	.9219	2 5/8	10	3	8	----	----	111.25
15/16	.9375	2 5/8	10	3	8	98.25	105.88	111.25
24mm	.9449	2 5/8	10	3	8	111.25	----	----
31/32	.9688	2 5/8	10	3	8	106.75	113.50	118.75
25mm	.9843	2 5/8	10	3	8	116.25	----	----
1	1.0000	2 3/4	10 1/2	3	8	109.63	113.50	----
26mm	1.0236	2 3/4	10 1/2	3	10	116.25	----	----
1 1/32	1.0312	2 3/4	10 1/2	3	10	147.50	156.25	----

Taper Shank Chucking Reamers
High Speed Steel



List No. **530U**: Straight Flute
List No. **531U**: Right Hand Spiral, Right Hand Cut
List No. **537LU**: Left Hand Spiral, Right Hand Cut

These reamers are designed and applied similarly to straight shank reamers (L&I No. LV533 & LV535) except they are manufactured with Morse taper shanks.

Specifications						Price Each		
Diameter	Decimal Equivalent	Flute Length	Overall Length	Morse Taper No.	No. of Flutes	**530U Straight Flute**	**531U RH Spiral RH Cut**	**537LU LH Spiral RH Cut**
1 1/16	1.0625	2 3/4	10 1/2	3	10	155.00	126.38	----
1 3/32	1.0938	2 7/8	11	3	10	155.00	162.50	----
1 1/8	1.1250	2 7/8	11	3	10	123.75	138.38	139.71
1 5/32	1.1562	2 7/8	11	3	10	180.00	191.00	----
1 3/16	1.1875	2 7/8	11	3	10	143.13	157.25	181.25
1 7/32	1.2188	3	11 1/2	4	10	187.50	200.00	----
1 1/4	1.2500	3	11 1/2	4	10	162.50	174.69	164.69
1 9/32	1.2812	3	11 1/2	4	10	156.25	200.00	----
33mm	1.2992	3	11 1/2	4	10	206.25	----	----
1 5/16	1.3125	3	11 1/2	4	10	175.00	187.13	179.09
1 11/32	1.3438	3 1/4	12	4	10	206.25	207.50	----
1 3/8	1.3750	3 1/4	12	4	12	185.00	198.88	192.88
1 13/32	1.4062	3 1/4	12	4	12	218.75	237.50	----
1 7/16	1.4375	3 1/4	12	4	12	198.75	224.50	208.96
1 15/32	1.4688	3 1/2	12 1/2	4	12	237.50	262.50	----
1 1/2	1.5000	3 1/2	12 1/2	4	12	212.50	238.44	242.50
1 9/16	1.5625	3 1/2	12 1/2	4	12	296.25	325.00	----
1 5/8	1.6250	4	13 1/2	4	12	306.25	340.00	343.75
1 11/16	1.6875	4	13 1/2	4	12	356.25	375.00	----
1 3/4	1.7500	4	13 1/2	4	12	406.31	426.25	----
1 13/16	1.8125	4	13 1/2	4	12	437.50	487.50	----
1 7/8	1.8750	4	14	4	12	468.75	507.19	----
1 15/16	1.9375	4	14	4	12	493.75	525.00	----
2	2.0000	4	14 1/2	4	12	505.31	531.25	----
2 3/16	2.1875	4 1/2	14 7/8	5	14	868.75	----	----
2 1/4	2.2500	4 1/2	14 7/8	5	14	937.50	----	----
2 5/16	2.3125	4 3/4	15 1/4	5	14	968.75	----	----
2 3/8	2.3750	5	16	5	16	993.75	----	----

Diameter Tolerance:	up to & including .2500"	+.0001"/ +.0004"	.2501" up to & including 1.000"	+.0001"/ +.0005"	1.0001" and over	+.0002"/ +.0006"

Taper Shank Jobber Reamers
High Speed Steel



List No. **578U**: Straight Flute. These reamers are designed for machine use in applications where long flutes are required.

Diameter	Dec. Equiv.	Flute Length	Overall Length	Morse Taper No.	No. of Flutes	Price Each
3/16	.1875	1 7/8	5 1/16	1	6	67.50
1/4	.2500	2	5 3/16	1	6	64.98
9/32	.2812	2	5 3/16	1	6	64.98
5/16	.3125	2 1/4	5 1/2	1	6	65.40
11/32	.3438	2 1/4	5 1/2	1	6	74.36
3/8	.3750	2 1/2	5 13/16	1	6	79.63
13/32	.4062	2 1/2	5 13/16	1	6	84.38
7/16	.4375	2 3/4	6 1/8	1	6	86.50
15/32	.4688	2 3/4	6 1/8	1	6	90.63
1/2	.5000	3	6 7/16	1	6	93.25
17/32	.5312	3	6 7/16	1	6	97.76
14mm	.5512	3 1/4	6 3/4	1	6	111.25
9/16	.5625	3 1/4	6 3/4	1	6	105.14
19/32	.5938	3 1/4	6 3/4	1	6	107.55
5/8	.6250	3 1/2	7 9/16	2	8	111.63
21/32	.6562	3 1/2	7 9/16	2	8	114.50
11/16	.6875	3 7/8	8	2	8	118.96
23/32	.7188	3 7/8	8	2	8	124.00

Diameter	Dec. Equiv.	Flute Length	Overall Length	Morse Taper No.	No. of Flutes	Price Each
3/4	.7500	4 3/16	8 3/8	2	8	130.50
25/32	.7812	4 3/8	8 3/4	2	8	150.00
13/16	.8125	4 9/16	8 13/16	2	8	142.70
27/32	.8438	4 7/8	9 3/16	2	8	175.00
7/8	.8750	4 7/8	9 3/16	2	8	157.13
29/32	.9062	4 7/8	9 3/16	2	8	185.88
15/16	.9375	5 1/8	10	3	8	174.88
31/32	.9688	5 7/16	10 3/8	3	8	217.50
1	1.0000	5 7/16	10 3/8	3	8	188.88
1 1/16	1.0625	5 5/8	10 5/8	3	10	217.50
1 1/8	1.1250	5 13/16	10 7/8	3	10	231.25
1 3/16	1.1875	6	11 1/8	3	10	244.75
1 1/4	1.2500	6 1/8	12 9/16	4	10	269.69
1 5/16	1.3125	6 1/4	12 11/16	4	10	373.75
1 3/8	1.3750	6 5/16	12 13/16	4	12	437.50
1 7/16	1.4375	6 7/16	13	4	12	512.50
1 1/2	1.5000	6 1/2	13 1/8	4	12	600.00
2	2.0000	7	14	4	12	718.75

Taper Pin Reamers - High Speed Steel - Straight Shank

List No. **556U**: Straight Flute
List No. **557U**: Left Hand Spiral, Right Hand Cut
List No. **558U**: Left Hand Helical Flute, Right Hand Cut

These are for machine reaming of holes for taper pins. Series 558U has a high helix flute design that eases chip ejection.



MADE IN USA

Size	Diameter		Flute Length	Overall Length	Shank Diameter	Price Each		
	Small End	Large End				556U Straight Flute	557U LH Spiral RH Cut	558U Helical Flute
7/0	.0497	.0666	13/16	1 13/16	5/64	48.13	49.69	49.69
6/0	.0611	.0806	15/16	1 15/16	3/32	48.13	49.69	49.69
5/0	.0719	.0966	1 3/16	2 3/16	7/64	45.31	48.74	49.69
4/0	.0869	.1142	1 5/16	2 5/16	1/8	45.31	48.74	49.69
3/0	.1029	.1302	1 5/16	2 5/16	9/64	45.31	48.74	49.69
2/0	.1137	.1462	1 9/16	2 9/16	5/32	45.31	48.74	49.69
0	.1287	.1638	1 11/16	2 15/16	11/64	38.75	41.25	42.86
1	.1447	.1798	1 11/16	2 15/16	3/16	36.88	41.25	42.86
2	.1605	.2008	1 15/16	3 3/16	13/64	36.88	41.25	45.50
3	.1813	.2294	2 5/16	3 11/16	15/64	36.88	41.25	41.25
4	.2071	.2604	2 9/16	4 1/16	17/64	40.94	44.56	55.29
5	.2409	.2994	2 13/16	4 5/16	5/16	45.09	47.94	60.00
6	.2773	.3540	3 11/16	5 7/16	23/64	53.13	58.98	72.94
7	.3297	.4220	4 7/16	6 5/16	13/32	69.75	74.94	74.94
8	.3971	.5050	5 3/16	7 3/16	7/16	90.00	98.75	103.74
9	.4805	.6066	6 1/16	8 5/16	9/16	103.75	114.94	111.88
10	.5799	.7216	6 13/16	9 5/16	5/8	114.38	128.13	163.44
11	.7060	.8780	8 1/4	11 1/4	11/16	132.25	141.50	247.79
12	.8420	1.0500	10	13 5/8	3/4	204.13	212.50	212.50
13	1.0090	1.2590	12	16	1 1/16	396.75	424.51	424.51
14	1.2500	1.5420	14	18 1/4	1 3/8	641.13	685.75	775.26

Note: 1/4 taper per foot

Sets - Taper Pin Reamers

Sizes	Description	No. of Pcs.	Part No.	Price
7/0, 6/0, 5/0, 4/0, 3/0, 2/0, 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10	Straight Flute	17	**556USA**	975.15
0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10	Straight Flute	11	**556USB**	698.89
7/0, 6/0, 5/0, 4/0, 3/0, 2/0, 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10	Left Hand Spiral	17	**557USA**	1056.94
0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10	Left Hand Spiral	11	**557USB**	764.48
7/0, 6/0, 5/0, 4/0, 3/0, 2/0, 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10	Left Hand Helical Flute	17	**558USA**	1143.93
0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10	Left Hand Helical Flute	11	**558USB**	843.95

Metric Taper Pin Reamers - High Speed Steel - Straight Shank

List No. **556MU**: Straight Flute
List No. **557MU**: Left Hand Spiral, Right Hand Cut



These are for machine reaming of holes for taper pins.

Size	Diameter		Flute Length	Overall Length	Price Each	
	Small End	Large End			556MU Straight Flute	557MU LH Spiral RH Cut
2.00	.0748	.1127	1 7/8	2 5/8	51.25	53.75
2.50	.0945	.1324	1 7/8	2 7/8	51.25	53.75
3.00	.1142	.1600	2 1/4	3 1/4	51.25	53.75
4.00	.1535	.2072	2 11/16	3 5/8	43.75	46.38
5.00	.1929	.2506	2 7/8	4	45.00	—
6.00	.2323	.3150	4 3/16	5 3/8	56.25	59.63
8.00	.3110	.4252	5 3/4	7	96.25	—
10.00	.3898	.5276	6 7/8	8 1/2	116.25	123.23
12.00	.4646	.6299	8 1/4	10	165.00	174.90
14.00	.5437	.7092	8 1/4	10	193.75	—
16.00	.6220	.8031	9	11	231.25	—
20.00	.7795	.9771	9 7/8	12 1/4	247.50	—

Note: Taper 1mm per 50mm

Taper Pipe Reamers
High Speed Steel



List No. **566U**: Straight Flute
List No. **567U**: Left Hand Spiral, Right Hand Cut

MADE IN USA

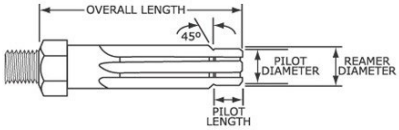
Taper Pipe Reamers are for reaming holes to be tapped with taper pipe taps. They are tapered 3/4" to the foot.

Size	Specifications					Price Each	
	Diameter		Flute Length	Shank Diameter	Overall Length	**566U Straight Flt.**	**567U LH Spiral**
	Small End	Large End					
1/16	.2450	.2910	3/4	.3125	2	60.00	65.00
1/8	.3160	.3620	3/4	.4375	2 1/8	60.00	65.00
1/4	.4060	.4720	1 1/16	.5625	2 7/16	67.38	72.50
3/8	.5400	.6060	1 1/16	.7000	2 9/16	72.50	80.00
1/2	.6650	.7510	1 3/8	.6875	3 1/8	91.25	98.75
3/4	.8760	.9620	1 3/8	.9063	3 1/4	131.25	140.00
1	1.1030	1.2120	1 3/4	1.1250	3 3/4	198.75	210.00
1 1/4	1.4440	1.5530	1 3/4	1.3125	4	311.25	327.50
1 1/2	1.6840	1.7930	1 3/4	1.5000	4 1/4	398.75	431.25
2	2.1590	2.2680	1 3/4	1.8750	4 1/2	525.00	568.75
2 1/2	2.5610	2.7220	2 5/8	2.2050	5 1/2	843.75	900.00
3	3.3020	3.3800	2 3/4	2.6250	6	1106.25	1168.75

Piloted Threaded Shank Reamers
High Speed Steel

List No. **601P**

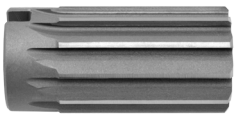


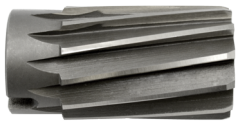


Size	Pilot Diameter	Pilot Length	Overall Length	Shank Thread	Price Each
.1850	.1600	5/16	2-1/2	1/4-28	52.05
.1875	.1600	5/16	2-1/2	1/4-28	53.02
.2031	.1875	5/16	2-1/2	1/4-28	53.62
.2188	.2031	5/16	2-1/2	1/4-28	53.02
.2344	.2180	3/8	2-1/2	1/4-28	54.00
.2500	.2344	3/8	2-1/2	1/4-28	56.00
.2656	.2500	3/8	2-1/2	1/4-28	63.00
.2969	.2812	1/2	2-1/2	1/4-28	66.00
.3125	.2969	3/8	2-1/2	1/4-28	67.00
.3438	.3281	1/2	2-1/2	1/4-28	67.00
.3750	.3494	1/2	2-1/2	1/4-28	80.00

Shell Reamers - High Speed Steel

List No. **560U**: Straight Flute
List No. **561U**: Left Hand Spiral, Right Hand Cut



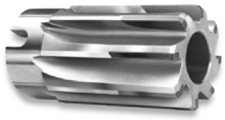


MADE IN USA

Shell reamers are machine reamers manufactured in high speed steel. Fluted almost their entire length, they have a tapered hole (1/8" taper per foot) which fits on a tapered arbor. The slots in the reamer engage lugs on the arbor, providing ample strength of drive. *Special sizes are available upon request.*

Specifications							Price Each	
Diameter	Decimal Equivalent	Flute Length	Overall Length	ID Hole Lg. End	Fitting Arbor No.	No. of Flutes	**560U Straight Flute**	**561U LH. Spiral RH. Cut**
21/32	.6562	1 1/2	2 1/4	3/8	4	10	93.75	—
3/4	.7500	1 1/2	2 1/4	3/8	4	10	88.31	107.89
13/16	.8125	1 3/4	2 1/2	1/2	5	10	73.14	109.31
27/32	.8438	1 3/4	2 1/2	1/2	5	10	—	99.38
7/8	.8750	1 3/4	2 1/2	1/2	5	10	98.09	112.08
15/16	.9375	1 3/4	2 1/2	1/2	5	10	82.15	114.81
1	1.0000	1 3/4	2 1/2	1/2	5	10	108.84	123.14
1 1/64	1.0156	2	2 3/4	5/8	6	10	—	147.50
1 3/64	1.0469	2	2 3/4	5/8	6	10	—	147.50
1 1/16	1.0625	2	2 3/4	5/8	6	10	94.40	133.75
1 5/64	1.0781	2	2 3/4	5/8	6	10	—	156.25
1 3/32	1.0938	2	2 3/4	5/8	6	10	—	156.25
1 1/8	1.1250	2	2 3/4	5/8	6	10	100.22	137.89
1 5/32	1.1562	2	2 3/4	5/8	6	12	—	162.50
1 3/16	1.1875	2	2 3/4	5/8	6	12	103.55	142.66
1 1/4	1.2500	2	2 3/4	5/8	6	12	105.07	148.88
1 5/16	1.3125	2 1/4	3	3/4	7	12	111.54	155.15
1 11/32	1.3438	2 1/4	3	3/4	7	12	128.00	175.00
1 3/8	1.3750	2 1/4	3	3/4	7	12	118.69	163.24
1 7/16	1.4375	2 1/4	3	3/4	7	12	163.10	180.09
1 1/2	1.5000	2 1/4	3	3/4	7	12	138.29	190.13
1 9/16	1.5625	2 1/4	3	3/4	7	12	194.48	213.11
1 5/8	1.6250	2 1/4	3	3/4	7	12	207.03	232.45
1 11/16	1.6875	2 1/2	3 1/2	1	8	12	182.11	254.48
1 3/4	1.7500	2 1/2	3 1/2	1	8	12	192.79	270.05
1 13/16	1.8125	2 1/2	3 1/2	1	8	12	205.77	289.38
1 53/64	1.8281	2 1/2	3 1/2	1	8	12	337.50	289.38
1 27/32	1.8438	2 1/2	3 1/2	1	8	12	240.00	316.25
1 7/8	1.8750	2 1/2	3 1/2	1	8	12	274.25	306.86
1 29/32	1.9062	2 1/2	3 1/2	1	8	12	260.00	343.75
1 15/16	1.9375	2 1/2	3 1/2	1	8	14	251.00	327.09
2	2.0000	2 1/2	3 1/2	1	8	14	302.13	336.15
2 1/16	2.0625	2 3/4	3 3/4	1 1/4	9	14	326.61	367.36
2 1/8	2.1250	2 3/4	3 3/4	1 1/4	9	14	342.86	384.95
2 3/16	2.1875	2 3/4	3 3/4	1 1/4	9	14	364.38	409.85
2 1/4	2.2500	2 3/4	3 3/4	1 1/4	9	14	377.00	422.68
2 5/16	2.3125	2 3/4	3 3/4	1 1/4	9	14	398.31	447.58
2 3/8	2.3750	2 3/4	3 3/4	1 1/4	9	14	414.85	465.88
2 7/16	2.4375	2 3/4	3 3/4	1 1/4	9	14	428.09	484.50
2 1/2	2.5000	2 3/4	3 3/4	1 1/4	9	14	443.45	497.83
2 9/16	2.5625	3	4	1 1/2	10	16	626.40	694.55
2 5/8	2.6250	3	4	1 1/2	10	16	667.00	720.35
2 11/16	2.6875	3	4	1 1/2	10	16	708.61	745.80
2 3/4	2.7500	3	4	1 1/2	10	16	743.85	808.38
2 13/16	2.8125	3	4	1 1/2	10	16	786.91	868.55
2 7/8	2.8750	3	4	1 1/2	10	16	831.94	898.41
2 15/16	2.9375	3	4	1 1/2	10	16	877.98	942.50
3	3.0000	3	4	1 1/2	10	16	921.98	994.40
3 1/16	3.0625	3 1/2	4 1/2	1 3/4	11	16	1168.63	1211.69
3 1/8	3.1250	3 1/2	4 1/2	1 3/4	11	16	1413.31	1476.00
3 3/16	3.1875	3 1/2	4 1/2	1 3/4	11	16	1460.15	1513.13
3 1/4	3.2500	3 1/2	4 1/2	1 3/4	11	16	1507.28	1582.50
3 5/16	3.3125	3 1/2	4 1/2	1 3/4	11	16	1558.75	1634.15
3 3/8	3.3750	3 1/2	4 1/2	1 3/4	11	16	1610.95	1693.24
3 7/16	3.4375	3 1/2	4 1/2	1 3/4	11	16	—	1740.00
3 1/2	3.5000	3 1/2	4 1/2	1 3/4	11	16	1702.30	1787.13
3 9/16	3.5625	4	5	2	12	18	—	1834.18
3 5/8	3.6250	4	5	2	12	18	—	1879.20
3 7/8	3.8750	4	5	2	12	20	2024.20	2062.50
3 15/16	3.9375	4	5	2	12	20	2085.10	2223.75
4	4.0000	4	5	2	12	20	2085.10	2257.65

Carbide Tipped Shell Reamers: Straight Flute



List No. **CT560**: Straight Flute

Shell reamers are machine reamers manufactured in high speed steel. Fluted almost their entire length, they have a tapered hole (1/8" taper per foot) which fits on a tapered arbor. The slots in the reamer engage lugs on the arbor, providing ample strength of drive.

Diameter	No. of Flutes	Flute Length	Overall Length	Hole Diameter	Price Each
3/4	6	1 7/16	2 1/4	3/8	256.96
13/16	6	1 11/16	2 1/2	1/2	261.97
7/8	6	1 11/16	2 1/2	1/2	292.74
15/16	8	1 11/16	2 1/2	1/2	292.74
1	8	1 11/16	2 1/2	1/2	308.47
1 1/16	8	1 13/16	2 3/4	5/8	308.47
1 1/8	8	1 13/16	2 3/4	5/8	313.65
1 3/16	8	1 13/16	2 3/4	5/8	319.01
1 1/4	8	1 13/16	2 3/4	5/8	339.83
1 5/16	8	2	3	3/4	344.93
1 3/8	8	2	3	3/4	355.39
1 7/16	8	2	3	3/4	365.93
1 1/2	8	2	3	3/4	381.65
1 9/16	8	2	3	3/4	381.65
1 5/8	8	2	3	3/4	463.59
1 11/16	10	2 11/32	3 1/2	1	501.84
1 3/4	10	2 11/32	3 1/2	1	501.84
1 13/16	10	2 11/32	3 1/2	1	539.92
1 7/8	10	2 11/32	3 1/2	1	539.92
2	10	2 11/32	3 1/2	1	578.26
2 1/16	12	2 7/16	3 3/4	1 1/4	621.78
2 1/8	12	2 7/16	3 3/4	1 1/4	676.35
2 3/16	12	2 7/16	3 3/4	1 1/4	676.35
2 1/4	12	2 7/16	3 3/4	1 1/4	676.35
2 5/16	12	2 7/16	3 3/4	1 1/4	714.51
2 3/8	12	2 7/16	3 3/4	1 1/4	752.85
2 7/16	12	2 7/16	3 3/4	1 1/4	752.85
2 1/2	12	2 7/16	3 3/4	1 1/4	752.85
2 9/16	14	2 11/16	4	1 1/2	826.37
2 5/8	14	2 11/16	4	1 1/2	854.36
2 11/16	14	2 11/16	4	1 1/2	890.29
2 3/4	14	2 11/16	4	1 1/2	921.15
2 13/16	14	2 11/16	4	1 1/2	953.53
2 7/8	14	2 11/16	4	1 1/2	991.78
2 15/16	14	2 11/16	4	1 1/2	1030.03
3	14	2 11/16	4	1 1/2	1068.28

Shell Reamer Arbors



Hardened & Ground

Used to hold shell reamers, the tapered body is machined at 1/8" per foot to accommodate standard shell reamers.

Specifications					Straight Shank			Taper Shank		
Size	Compatible Reamers		Arbor Diameter	Overall Length	Shank Size	**Tool No.**	Price Each	Morse Taper No.	**Tool No.**	Price Each
	Smallest	Largest								
4	21/32	25/32	3/8	9	1/2	**SR4S**	51.48	2	**SR4T**	61.38
5	13/16	1 1/32	1/2	9 1/2	5/8	**SR5S**	57.42	2	**SR5T**	73.26
6	1 1/16	1 9/32	5/8	10	3/4	**SR6S**	63.36	3	**SR6T**	79.20
7	1 5/16	1 5/8	3/4	11	7/8	**SR7S**	69.30	3	**SR7T**	87.12
8	1 21/32	2	1	12	1 1/8	**SR8S**	77.22	4	**SR8T**	97.02
9	2 1/16	2 1/2	1 1/4	13	1 3/8	**SR9S**	93.06	4	**SR9T**	108.90
10	2 9/16	3	1 1/2	14	1 5/8	**SR10S**	119.46	5	**SR10T**	124.74
11	3 1/16	3 1/2	1 3/4	15	2	**SR11S**	168.30	5	**SR11T**	174.90
12	3 9/16	4	2	16	2 1/8	**SR12S**	235.62	5	**SR12T**	243.54

E-Z Eject Shell Reamer Arbors



Hardened & Ground

Used to hold shell reamers, the tapered body is machined at 1/8" per foot to accommodate standard shell reamers.

Specifications							Straight Shank			Taper Shank		
Size	Compatible Reamers		Arbor Diameter	Approx. Length Taper	Overall Length	Wrench Size	Shank Size	**Tool No.**	Price Each	Morse Taper No.	**Tool No.**	Price Each
	Smallest	Largest										
4	21/32	25/32	3/8	2 1/4	9	19/32	1/2	**SRZ4S**	69.92	2	**SRZ4T**	84.56
5	13/16	1 1/32	1/2	2 1/2	9 1/2	25/32	5/8	**SRZ5S**	77.69	2	**SRZ5T**	90.93
6	1 1/16	1 9/32	5/8	2 3/4	10	7/8	3/4	**SRZ6S**	86.79	3	**SRZ6T**	102.49
7	1 5/16	1 5/8	3/4	3	11	1 1/16	7/8	**SRZ7S**	94.36	3	**SRZ7T**	109.42
8	1 21/32	2	1	3 1/2	12	1 7/16	1 1/8	**SRZ8S**	104.22	4	**SRZ8T**	123.95
9	2 1/16	2 1/2	1 1/4	3 3/4	13	1 13/16	1 3/8	**SRZ9S**	123.56	4	**SRZ9T**	146.70
10	2 9/16	3	1 1/2	4	14	2 3/16	1 5/8	**SRZ10S**	200.66	5	**SRZ10T**	216.84
11	3 1/16	3 1/2	1 3/4	4 1/2	15	2 9/16	2	**SRZ11S**	269.24	5	**SRZ11T**	281.30
12	3 9/16	4	2	5	16	3 1/8	2 1/8	**SRZ12S**	331.75	5	**SRZ12T**	345.45

Reamer Sets

These sets provide a method of maintaining a complete stock of reamers in ranges to suit your requirements. They have particular benefits in tool and die shops where they save time and energy. A set on a machinist's workbench saves many trips to the tool crib. They are available in handsome wooden cases, metal index boxes, and vinyl plastic in many styles and size ranges.

Chucking Reamer Sets

Description	Sizes	Pieces	Case Type	Set No.	Price
H.S. Straight Flute	1/16 – 1/4 by 64ths	13	Wood	**LV533-6W**	330.84
H.S. Straight Flute	1/16 – 1/4 by 64ths	13	Plastic	**LV533-6P**	259.59
H.S. Straight Flute	1/16 – 1/2 by 32nds	15	Plastic	**LV533-42P**	387.40
H.S. Straight Flute	1/16 – 3/8 by 64ths	21	Plastic	**LV533-40P**	485.28
H.S. Straight Flute	1/16 – 1/2 by 64ths	29	Wood	**LV533-8W**	830.90
H.S. Straight Flute	1/16 – 1/2 by 64ths	29	Plastic	**LV533-8P**	759.65
H.S. Straight Flute	1/16 – 1/2 by 64ths	29	Metal	**LV533-8M**	787.78
H.S. RH Spiral	1/16 – 1/4 by 64ths	13	Wood	**LV535-1W**	373.63
H.S. RH Spiral	1/16 – 1/4 by 64ths	13	Plastic	**LV535-1P**	302.38
H.S. RH Spiral	1/16 – 1/2 by 32nds	15	Plastic	**LV535-43P**	440.41
H.S. RH Spiral	1/16 – 3/8 by 64ths	21	Plastic	**LV535-41P**	548.54
H.S. RH Spiral	1/16 – 1/2 by 64ths	29	Wood	**LV535-3W**	926.16
H.S. RH Spiral	1/16 – 1/2 by 64ths	29	Metal	**LV535-3M**	883.04
H.S. RH Spiral	1/16 – 1/2 by 64ths	29	Plastic	**LV535-3P**	854.91
H.S. LH Spiral	1/16 – 1/2 by 64ths	29	Wood	**LV535L-4W**	1026.75
H.S. LH Spiral	1/16 – 1/2 by 64ths	29	Plastic	**LV535L-4P**	955.50
Cobalt Straight Flute	1/16 – 1/2 by 64ths	29	Wood	**1533-C8W**	1027.00
Cobalt Straight Flute	1/16 – 1/2 by 64ths	29	Metal	**1533-C8M**	992.50
Cobalt Straight Flute	1/16 – 1/2 by 64ths	29	Plastic	**1533-C8P**	970.00
Cobalt RH Spiral	1/16 – 1/2 by 64ths	29	Wood	**1535-C3W**	1068.47
Cobalt RH Spiral	1/16 – 1/2 by 64ths	29	Metal	**1535-C3M**	1033.97
H.S. Straight Flute	#1 – #60	60	Wood	**LV533-13W**	1233.95
H.S. Straight Flute	#1 – #60	60	Metal	**LV533-13M**	1181.25
H.S. Straight Flute	#1 – #60	60	Plastic	**LV533-13P**	1164.46
H.S. Straight Flute	#61 – #80	20	Metal	**LV533-15M**	435.94
H.S. RH Spiral	#1 – #60	60	Wood	**LV535-10W**	1392.38
H.S. RH Spiral	#1 – #60	60	Metal	**LV535-10M**	1355.75
H.S. RH Spiral	#1 – #60	60	Plastic	**LV535-10P**	1324.34
H.S. LH Spiral	#1 – #60	60	Wood	**LV535L-11W**	1559.63
H.S. LH Spiral	#1 – #60	60	Plastic	**LV535L-11P**	1490.34
Cobalt Straight Flute	#1 – #60	60	Wood	**1533-C13W**	1319.50
Cobalt Straight Flute	#1 – #60	60	Metal	**1533-C13M**	1227.50
Cobalt Straight Flute	#1 – #60	60	Plastic	**1533-C13P**	1264.07
H.S. Straight Flute	A – Z	26	Wood	**LV533-23W**	814.81
H.S. Straight Flute	A – Z	26	Metal	**LV533-23M**	771.69
H.S. Straight Flute	A – Z	26	Plastic	**LV533-23P**	743.56
H.S. Right Hand Spiral	A – Z	26	Metal	**LV535-20M**	822.56
Cobalt Straight Flute	A – Z	26	Wood	**1533-C23W**	983.50
Cobalt Straight Flute	A – Z	26	Metal	**1533-C23M**	949.00
Cobalt Straight Flute	A – Z	26	Plastic	**1533-C23P**	926.50
H.S. Straight Flute	1mm – 7mm by .5	13	Wood	**LV533-16W**	298.25
H.S. Straight Flute	1mm – 7mm by .5	13	Plastic	**LV533-16P**	227.00
H.S. Straight Flute	1mm – 13mm by .5	25	Plastic	**LV533-17P**	677.81
H.S. Straight Flute	.1240 – .5010	14	Wood	**LV533-32W**	447.13
H.S. Straight Flute	.1240 – .5010	14	Metal	**LV533-32M**	404.00
H.S. Straight Flute	.1240 – .5010	14	Plastic	**LV533-32P**	375.88
H.S. RH Spiral	.1240 – .5010	14	Wood	**LV535-30W**	499.38
H.S. RH Spiral	.1240 – .5010	14	Plastic	**LV535-30P**	428.13
H.S. LH Spiral	.1240 – .5010	14	Wood	**LV535L-31W**	558.75
H.S. LH Spiral	.1240 – .5010	14	Plastic	**LV535L-31P**	487.50
Cobalt Straight Flute	.1240 – .5010	14	Wood	**1533-C32W**	544.50
Cobalt Straight Flute	.1240 – .5010	14	Plastic	**1533-C32P**	487.50
Cobalt RH Spiral	.1240 – .5010	14	Wood	**1535-C32W**	566.80
Cobalt RH Spiral	.1240 – .5010	14	Plastic	**1535-C32P**	509.80



LV533-6W



LV533-8M



LV533-42P

Expansion Hand Reamer Sets

Sizes	Description	Pieces	Part No.	Price
1/4, 3/8, 1/2, 5/8, 3/4	Straight Flute	5	**576US**	1209.59
1/4, 3/8, 1/2, 5/8, 3/4	LH. Spiral/ RH. Cut	5	**577US**	1364.59

Supplied in Wood Block



Reamer Sets

Dowel Pin Reamer Sets

14 piece sets, sizes .1230 to .4995 * Drills are 1/64 smaller than Reamers

Description	Flute Type	Case Type	Set No.	Price
H.S. Standard Length	Straight	Wood	**LV570-70W**	446.88
H.S. Standard Length	Straight	Plastic	**LV570-70P**	398.13
Cobalt Standard Length	Straight	Wood	**1570DP-W**	540.10
Cobalt Standard Length	Straight	Plastic	**1570DP-P**	477.40
H.S. Standard Length	RH Spiral	Wood	**LV575-71W**	527.88
H.S. Standard Length	RH Spiral	Plastic	**LV575-71P**	456.63
Cobalt Standard Length	RH Spiral	Wood	**1575DP-W**	575.74
Cobalt Standard Length	RH Spiral	Plastic	**1575DP-P**	513.04
H.S. Jobber Length	Straight	Plastic	**LVDL570-73P**	353.10
H.S. Jobber Length	RH Spiral	Plastic	**LVDL575-74P**	386.26



1570DP-W

Production/CNC/Jobber Length Reamer Sets

Description	Sizes	Pieces	Case Type	Set No.	Price
H.S. Straight Flute	1/16 – 1/4 by 64^{ths}	13	Metal	**LVDL533-5M**	223.86
H.S. Straight Flute	1/16 – 1/2 by 32^{nds}	15	Metal	**LVDL533-46M**	334.00
H.S. Straight Flute	1/16 – 1/2 by 64^{ths}	29	Metal	**LVDL533-7M**	635.37
H.S. RH Spiral	1/16 – 1/2 by 32^{nds}	15	Metal	**LVDL535-47M**	363.24
H.S. RH Spiral	1/16 – 1/2 by 64^{ths}	29	Metal	**LVDL535-9M**	682.37
H.S. Straight Flute	#1 – #60	60	Metal	**LVDL533-12M**	956.10
H.S. RH Spiral	#1 – #60	60	Metal	**LVDL535-14M**	1066.56
H.S. Straight Flute	A – Z	26	Metal	**LVDL533-22M**	614.27
H.S. RH Spiral	A – Z	26	Metal	**LVDL535-24M**	670.25
H.S. Straight Flute	.1240 – .5010	14	Plastic	**LVDL533-33P**	325.68
H.S. RH Spiral	.1240 – .5010	14	Plastic	**LVDL535-34P**	354.10
H.S. Straight Flute	#1 – #60, A – Z, 1/16 –1/2 by 64^{ths}	115	Metal	**LVDL533-50M**	2227.68
H.S. RH Spiral	#1 – #60, A – Z, 1/16 –1/2 by 64^{ths}	115	Metal	**LVDL535-51M**	2424.92

Silver & Deming Reamer Sets

Sizes	Description	Pieces	Set No.	Price
5/8, 11/16, 3/4, 13/16, 7/8, 1	1/2" Shank Reamer Set	6	**LV75**	500.18
5/8, 11/16, 3/4, 13/16, 7/8, 1 (Reamers) 39/64, 43/64, 47/64, 51/64, 55/64, 63/64 (Drills)	1/2" Shank Reamer & Drill Set	12	**LV77**	737.05
5/8, 11/16, 3/4, 13/16, 7/8 1, 1 1/8, 1 1/4, 1 3/8, 1 1/2	1/2" Shank Reamer Set	10	**LV76**	1278.20

Supplied in Wood Block



LV75



LV77

Taper Pin Reamer Sets

Sizes	Description	Pieces	Part No.	Price
7/0, 6/0, 5/0, 4/0, 3/0, 2/0, 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10	Straight Flute	17	**556USA**	975.15
0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10	Straight Flute	11	**556USB**	698.89
7/0, 6/0, 5/0, 4/0, 3/0, 2/0, 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10	Left Hand Spiral	17	**557USA**	1056.94
0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10	Left Hand Spiral	11	**557USB**	764.48
7/0, 6/0, 5/0, 4/0, 3/0, 2/0, 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10	Left Hand Helical Flute	17	**558USA**	1143.93
0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10	Left Hand Helical Flute	11	**558USB**	843.95

Aligning, Construction, Morse Taper, and Brown & Sharpe Sets

Description	Sizes	Pieces	Part No.	Price
H.S. Aligning Reamers	1/2, 9/16, 5/8, 3/4	4	**535RS**	296.75
Cobalt Aligning Reamers	1/2, 9/16, 5/8, 3/4	4	**535RCS**	378.86
H.S. Construction Reamers	1/2, 9/16, 5/8, 3/4	4	**583CRS**	374.70
H.S. Morse Taper Reamers	#1 – #5	5	**568US**	1026.25
H.S. Brown & Sharpe Taper Reamers	#1 – #5	5	**596US**	436.25

LAVALLEE & IDE

The Reamer Specialists

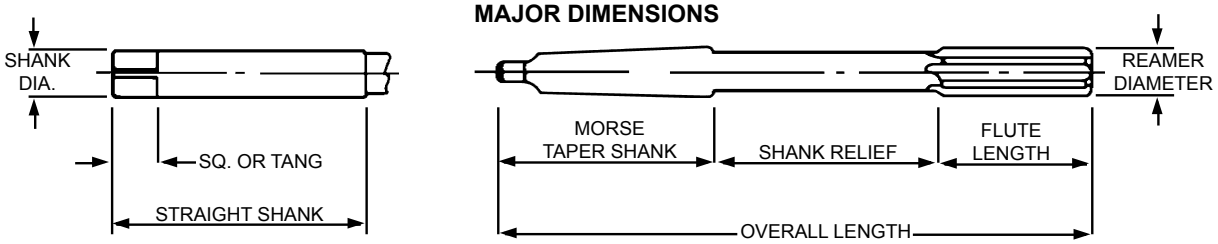
SPECIAL **REAMER** REQUEST FORM

Please fill out the following form for a quote on Special Reamers.

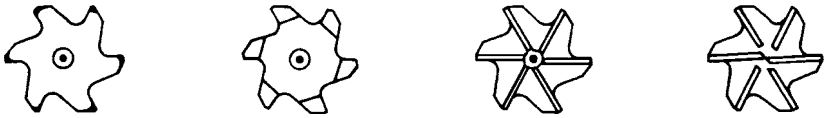
1. Make a copy of this form.
2. Fill in the specifications.
3. Fax or e-mail to your Lavallee & Ide Distributor.

MADE IN USA

MAJOR DIMENSIONS



TYPICAL END CUTS



All unspecified Dimensions & Tolerances to standard manufacturing specifications.

Quantity: _____

*Quantity is subject to 10% overage or shortage.
±1 piece for orders less than 10 pieces.

Material: H.S. ☐ Cobalt ☐ Solid Carbide ☐ Carbide Tipped ☐

Reamer Diameter: _____ Coating _____

Direction of Cut: Straight Flute Right Hand Cut ☐ Right Hand Spiral Right Hand Cut ☐ Left Hand Spiral Right Hand Cut ☐

Length of Flute: _____ Number of Flutes: _____ Overall Length: _____

Shank Diameter: Standard _____ Reduced Shank _____ Length of Reduced Shank _____

Shank: Straight _____ Tanged _____ Square _____ Morse Taper _____ Threaded Hex _____

Non-Cutting _____ Pilot Diameter (non-cutting) _____ Pilot Length _____

Cutting _____ Step Diameter (cutting) _____ Step Length _____

See Pages 207 & 208 for Taper Fluted Reamer & Step Reamer request forms

LAVALLEE & IDE

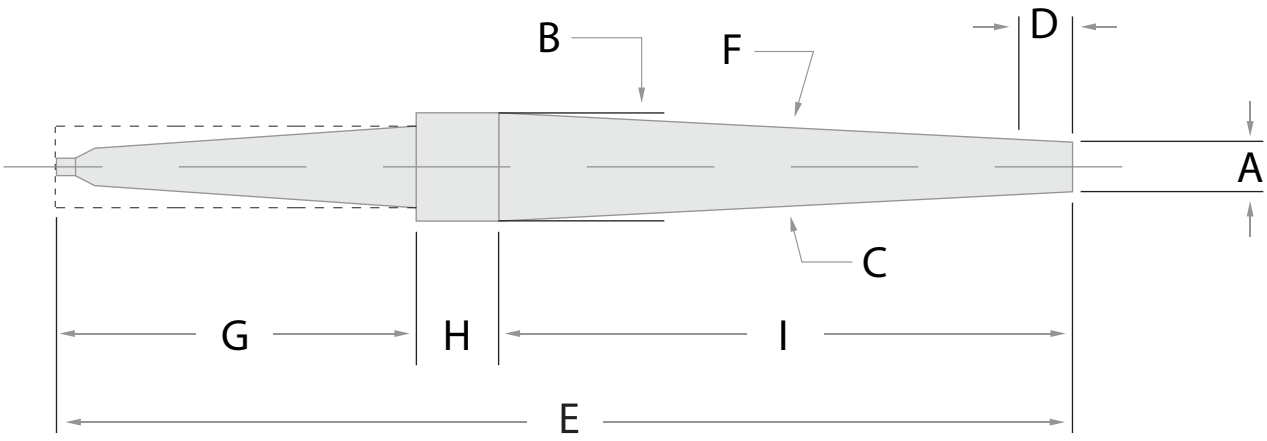
The Reamer Specialists

SPECIAL **TAPER FLUTED REAMER** REQUEST FORM

Please fill out the following form for a quote on Special Reamers.

1. Make a copy of this form.
2. Fill in the specifications.
3. Fax or e-mail to your Lavallee & Ide Distributor.

MADE IN USA



All unspecified Dimensions & Tolerances to standard manufacturing specifications.

Quantity*: _____

*Quantity is subject to 10% overage or shortage.
±1 piece for orders less than 10 pieces.

Material: H.S. ☐ Cobalt ☐ Carbide Tipped ☐ Coating: _____

"**F**" Flute Type: Straight Flute Right Hand Cut ☐ Right Hand Spiral Right Hand Cut ☐ Left Hand Spiral Right Hand Cut ☐

"**G**" Shank Type: Morse Taper #: _____ Round: _____ Square: _____ Other: _____

Letter	Description	Measurements
A	Diameter Small/Point End	_ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _
B	Diameter Large/Shank End	_ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _
C	Taper per Ft./Taper per Inch/Included Angle	_ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _
D	Length & Angle of Chamfer	_ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _
E	Overall Length	_ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _
H	Neck Length	_ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _
I	Flute Length	_ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _
	Number Of Flutes	_ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _

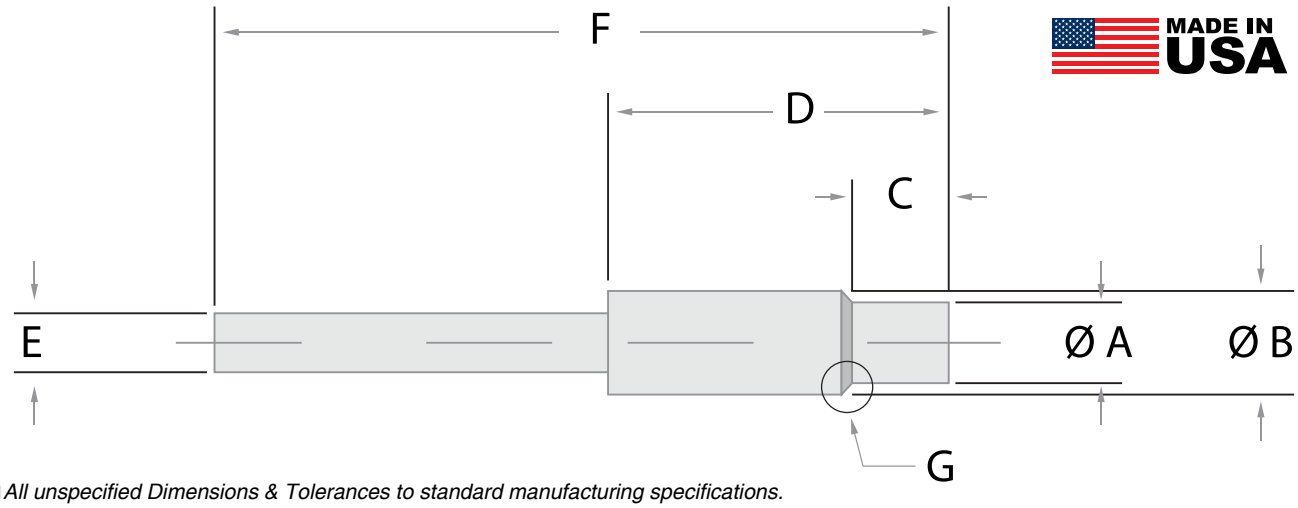
LAVALLEE & IDE

The Reamer Specialists

SPECIAL **STEP REAMER** REQUEST FORM

Please fill out the following form for a quote on Special Reamers.

1. Make a copy of this form.
2. Fill in the specifications.
3. Fax or e-mail to your Lavallee & Ide Distributor.



All unspecified Dimensions & Tolerances to standard manufacturing specifications.

Quantity*: _____

*Quantity is subject to 10% overage or shortage.
±1 piece for orders less than 10 pieces.

Material: H.S. ☐ Cobalt ☐ Carbide Tipped ☐ Coating: _____

Flute Type: Straight Flute Right Hand Cut ☐ Right Hand Spiral Right Hand Cut ☐ Left Hand Spiral Right Hand Cut ☐

"**A**": Minor Diameter: Pilot (Non-Cutting) ☐ Step (Cutting) ☐

Letter	Description	Measurements
A	Minor Diameter	_____
B	Cutting (Major) Diameter	_____
C	Pilot/Step Length	_____
D	Flute Length	_____
E	Shank Diameter/Morse Taper Size	_____
F	Overall Length	_____
G	Chamfer/Shoulder Angle	_____
	Number Of Flutes	_____

Reaming Recommendations

Work piece hardness and machinability must be considered when setting machine speed.

The feed rate plays an important part in the life expectancy of a tool and the hole finish which one is looking to attain. Improper feed rate can cause excessive tool wear as well as an inadequate hole finish.

Excessive tool wear and hole finish can be a result of all of the above.

To elminate chatter, slow cutting speed and increase feed appropriately.

Stock removal on roughing operations should not exceed 2% to 4% of tool diameter in most cases.

Stock removal recommendations on finishing operations are .002 to .004.

For best results with brass, cast iron and some plastics, use a left-hand spiral-fluted reamer with negative shear action. This type of reamer helps prevent chips from working back into spiral flutes and scoring the hole.

In all reaming operations, use constant-flow coolants. Soluble oil is effective for most metals; however, sulphur-based oils are recommended for stainless and certain alloy steels. Lard oil and kerosene improve the finish on aluminum.

Hole preparation may affect reamer performance due to work hardening.

Recommended Stock Removal

Reamer Diameter	Removal (Inches)
Up to 1/16 Incl.	.003 to .005
Over 1/16 to 1/8 Incl.	.004 to .008
Over 1/8 to 1/4 Incl.	.006 to .012
Over 1/4 to 3/8 Incl.	.008 to .014
Over 3/8 to 1/2 Incl.	.010 to .015
Over 1/2 to 3/4 Incl.	.012 to .018

Recommended Feeds

Material	Feed in Inches Per Revolution
Steels	
Rockwell C50 or Harder	.002 to .004
Rockwell C30 to 50	.004 to .008
Cast Iron & Malleable Iron	.005 to .012
Non-Ferrous Materials	.005 to .012

Recommended Speeds

Material	Speed in Surface Feet Per Minute
Steel (All Types)	
Rockwell C60 or Harder	8 - 12
Rockwell C50 to 60	15 - 30
Rockwell C40 to 50	20 - 40
Rockwell C30 to 40	35 - 65
Under Rockwell C30	60 - 90
Cast Iron and Malleable Iron	50 - 85
Non-Ferrous	
Aluminum, Brass, Bronze, Copper, Fiber, Plastic, Hard Rubber, etc.	90 - 175

Recommended Lubricants

Material	Lubricant
Steel harder than Rockwell C50	Light Oil
Steel softer than Rockwell C50	Light Oil For Good Finishes or Soluble Oil and Water
Cast Iron & Malleable Iron	Soluble Oil and Water
Non-Ferrous Materials	Soluble Oil and Water

All Dimensions in Inches

Chucking Reamers

High Speed Steel

List No. **550** – Straight Flute

For general purpose reaming to close tolerances.

List No. **551** – Right Hand Spiral Flute

Designed for use in materials where additional shear is necessary and to improve chip removal in blind holes.

High Speed MDX® SUPERIOR IMPORT



Fractional Sizes

Size	Dec. Equiv.	Flute Length	Overall Length	Price Each Straight 550	Price Each Spiral 551
1/32	.0312	1/2	2-1/2	10.90	12.77
3/64	.0469	1/2	2-1/2	11.83	12.77
1/16	.0625	1/2	2-1/2	10.76	12.78
5/64	.0781	3/4	3	9.90	10.25
3/32	.0938	3/4	3	8.51	10.25
7/64	.1094	7/8	3-1/2	9.90	10.25
1/8	.1250	7/8	3-1/2	7.64	9.73
9/64	.1406	1	4	11.83	12.78
5/32	.1562	1	4	10.74	12.78
11/64	.1719	1-1/8	4-1/2	11.83	12.78
3/16	.1875	1-1/8	4-1/2	10.76	12.78
13/64	.2031	1-1/4	5	14.28	14.75
7/32	.2188	1-1/4	5	13.86	14.42
15/64	.2344	1-1/2	6	14.28	14.75
1/4	.2500	1-1/2	6	12.21	13.86
17/64	.2656	1-1/2	6	15.93	16.43
9/32	.2812	1-1/2	6	15.93	16.43
19/64	.2969	1-1/2	6	16.82	17.74
5/16	.3125	1-1/2	6	14.84	15.38
21/64	.3281	1-1/2	6	18.19	18.40
11/32	.3438	1-1/2	6	18.19	18.40
23/64	.3594	1-3/4	7	18.19	18.40
3/8	.3750	1-3/4	7	15.93	18.06
25/64	.3906	1-3/4	7	18.84	20.63
13/32	.4062	1-3/4	7	19.52	20.63
27/64	.4219	1-3/4	7	20.65	21.30
7/16	.4375	1-3/4	7	18.84	20.30
29/64	.4531	1-3/4	7	22.92	23.15
15/32	.4688	1-3/4	7	22.33	23.15
31/64	.4844	2	8	23.03	23.15
1/2	.5000	2	8	20.65	20.87
33/64	.5156	2	8	24.58	26.49
17/32	.5312	2	8	24.58	26.52
35/64	.5469	2	8	24.09	27.05
9/16	.5625	2	8	24.05	27.09
37/64	.5781	2	8	28.05	29.96
19/32	.5938	2	8	28.04	29.96
39/64	.6094	2-1/4	9	28.05	28.64
5/8	.6250	2-1/4	9	28.04	28.64
41/64	.6406	2-1/4	9	32.14	33.66
21/32	.6562	2-1/4	9	32.14	33.64
43/64	.6719	2-1/4	9	36.03	39.44
11/16	.6875	2-1/4	9	31.87	33.64
45/64	.7031	2-1/4	9	37.01	39.44
23/32	.7188	2-1/4	9	36.94	38.14
47/64	.7344	2-1/2	9-1/2	36.93	38.73
3/4	.7500	2-1/2	9-1/2	35.44	37.45
49/64	.7656	2-1/2	9-1/2	41.42	44.67
25/32	.7812	2-1/2	9-1/2	41.43	43.00
51/64	.7969	2-1/2	9-1/2	41.42	44.67
13/16	.8125	2-1/2	9-1/2	41.43	43.00
53/64	.8281	2-1/2	9-1/2	47.00	51.53
27/32	.8438	2-1/2	9-1/2	46.98	48.24
55/64	.8594	2-5/8	10	45.87	51.53
7/8	.8750	2-5/8	10	45.88	51.53
57/64	.8906	2-5/8	10	51.71	56.45
29/32	.9062	2-5/8	10	51.71	53.56
59/64	.9219	2-5/8	10	51.71	56.45
15/16	.9375	2-5/8	10	51.71	53.56
61/64	.9531	2-5/8	10	58.14	64.02
31/32	.9688	2-5/8	10	58.16	60.45
63/64	.9844	2-3/4	10-1/2	58.14	64.02
1	1.0000	2-3/4	10-1/2	57.04	60.45
1-1/32	1.0313	2-3/4	10-1/2	65.47	71.23
1-1/16	1.0625	2-3/4	10-1/2	65.46	67.82
1-3/32	1.0938	2-7/8	11	69.93	78.57
1-1/8	1.1250	2-7/8	11	69.95	74.73
1-5/32	1.1562	2-7/8	11	78.87	89.26
1-3/16	1.1875	2-7/8	11	78.83	82.16
1-1/4	1.2500	3	11-1/2	86.64	91.17
1-5/16	1.3125	3	11-1/2	98.35	111.54
1-3/8	1.3750	3-1/4	12	100.33	114.17
1-7/16	1.4375	3-1/4	12	118.14	124.75
1-1/2	1.5000	3-1/2	12-1/2	121.88	127.27
1-9/16	1.5625	3-1/2	12-1/2	257.24	—
1-5/8	1.6250	3-5/8	13	257.24	—
1-11/16	1.6875	3-5/8	13	283.14	—
1-3/4	1.7500	4	13-1/2	283.14	—
1-7/8	1.8750	4	14	316.00	—
2	2.0000	4	14	316.00	—

Wire Gauge Sizes

Size	Dec. Equiv.	Flute Length	Overall Length	Price Each Straight 550	Price Each Spiral 551
1	.2280	1-1/2	6	14.16	15.58
2	.2210	1-1/2	6	14.16	15.58
3	.2130	1-1/4	5	14.16	15.58
4	.2090	1-1/4	5	14.16	15.58
5	.2055	1-1/4	5	14.16	15.58
6	.2040	1-1/4	5	14.16	15.58
7	.2010	1-1/4	5	14.16	15.58
8	.1990	1-1/4	5	14.16	15.58
9	.1960	1-1/4	5	14.16	15.58
10	.1935	1-1/4	5	14.16	15.58
11	.1910	1-1/4	5	13.81	15.18
12	.1890	1-1/8	4-1/2	13.81	14.56
13	.1850	1-1/8	4-1/2	13.23	14.56
14	.1820	1-1/8	4-1/2	13.23	14.56
15	.1800	1-1/8	4-1/2	13.23	14.56
16	.1770	1-1/8	4-1/2	12.07	13.29
17	.1730	1-1/8	4-1/2	12.07	13.29
18	.1695	1-1/8	4-1/2	11.21	12.33
19	.1660	1-1/8	4-1/2	11.21	12.33
20	.1610	1-1/8	4-1/2	11.21	12.33
21	.1590	1-1/8	4-1/2	11.21	12.33
22	.1570	1	4	11.21	12.33
23	.1540	1	4	11.21	12.33
24	.1520	1	4	11.21	12.33

Chucking Reamers

High Speed Steel

List No. **550** – Straight Flute
For general purpose reaming to close tolerances.

List No. **551** – Right Hand Spiral Flute
Designed for use in materials where additional shear is necessary and to improve chip removal in blind holes.



Wire Gauge Sizes *Continued*

Size	Dec. Equiv.	Flute Length	Overall Length	Price Each Straight 550	Price Each Spiral 551
25	.1495	1	4	11.21	12.33
26	.1470	1	4	11.21	12.33
27	.1440	1	4	11.21	12.33
28	.1405	1	4	11.21	12.33
29	.1360	1	4	11.21	12.33
30	.1285	7/8	3-1/2	9.36	10.29
31	.1200	7/8	3-1/2	9.36	10.29
32	.1160	7/8	3-1/2	9.36	10.29
33	.1130	7/8	3-1/2	9.36	10.29
34	.1110	7/8	3-1/2	9.36	10.29
35	.1100	7/8	3-1/2	9.36	10.29
36	.1065	7/8	3-1/2	9.36	10.29
37	.1040	7/8	3-1/2	9.36	10.29
38	.1015	7/8	3-1/2	9.36	10.29
39	.0995	7/8	3-1/2	9.36	10.29
40	.0980	7/8	3-1/2	9.36	10.29
41	.0960	7/8	3-1/2	9.36	10.29
42	.0935	3/4	3	9.36	10.29

Size	Dec. Equiv.	Flute Length	Overall Length	Price Each Straight 550	Price Each Spiral 551
43	.0890	3/4	3	9.36	10.29
44	.0860	3/4	3	9.36	10.29
45	.0820	3/4	3	9.36	10.29
46	.0810	3/4	3	9.36	10.29
47	.0785	3/4	3	9.36	10.29
48	.0760	3/4	3	9.36	10.29
49	.0730	3/4	3	11.21	12.33
50	.0700	3/4	3	11.21	12.33
51	.0670	3/4	3	11.21	12.33
52	.0635	1/2	2-1/2	11.21	12.33
53	.0595	1/2	2-1/2	11.21	12.33
54	.0550	1/2	2-1/2	11.21	12.33
55	.0520	1/2	2-1/2	11.21	12.33
56	.0465	1/2	2-1/2	11.21	12.33
57	.0430	1/2	2-1/2	11.21	12.33
58	.0420	1/2	2-1/2	11.21	12.33
59	.0410	1/2	2-1/2	11.21	12.33
60	.0400	1/2	2-1/2	11.21	12.33

Letter Sizes

Size	Dec. Equiv.	Flute Length	Overall Length	Price Each Straight 550	Price Each Spiral 551
A	.2340	1-1/2	6	15.25	17.49
B	.2380	1-1/2	6	15.25	17.49
C	.2420	1-1/2	6	15.25	17.49
D	.2460	1-1/2	6	15.25	17.49
E	.2500	1-1/2	6	12.21	13.86
F	.2570	1-1/2	6	15.25	17.49
G	.2610	1-1/2	6	16.21	18.65
H	.2660	1-1/2	6	17.13	19.70
I	.2720	1-1/2	6	17.13	19.70
J	.2770	1-1/2	6	17.13	19.70
K	.2810	1-1/2	6	17.13	19.70
L	.2900	1-1/2	6	17.13	19.70
M	.2950	1-1/2	6	17.13	19.70

Size	Dec. Equiv.	Flute Length	Overall Length	Price Each Straight 550	Price Each Spiral 551
N	.3020	1-1/2	6	17.13	19.70
O	.3160	1-1/2	6	17.72	20.38
P	.3230	1-1/2	6	18.22	20.96
Q	.3320	1-1/2	6	18.22	20.96
R	.3390	1-1/2	6	18.22	20.96
S	.3480	1-3/4	7	18.22	20.96
T	.3580	1-3/4	7	18.22	20.96
U	.3680	1-3/4	7	18.22	20.96
V	.3770	1-3/4	7	20.30	23.33
W	.3860	1-3/4	7	20.30	23.33
X	.3970	1-3/4	7	20.30	23.33
Y	.4040	1-3/4	7	20.85	23.98
Z	.4130	1-3/4	7	20.85	23.98

Sets

Set Description	Pcs.	Type of Holder	Set No.	Price
Straight Flute Fractional — 1/16" thru 1/2" by 64ths	29	Metal Index	**550SF**	447.56
Spiral Flute Fractional — 1/16" thru 1/2" by 64ths	29	Metal Index	**551SF**	510.06
Letter — A thru Z	26	Metal Index	**550SL**	455.12
Wire Gauge — #1 thru #60	60	Plastic Pouch	**550SW**	679.77



Universal Magnetic Base

- 45lbs Magnet Power
- Zinc die cast housing
- Size 4½" x 1" x 1¼"
- 5 different locations for mounting accessories

Tool No.	Price
PR2220000	12.95



Chucking Reamers

High Speed Steel

List No. **550** – Straight Flute
For general purpose reaming to close tolerances.

List No. **551** – Spiral Flute
Designed for use in materials where additional shear is necessary and to improve chip removal in blind holes.



Over & Under Sizes

Size	Flute Length	Overall Length	Price Each Straight 550	Price Each Spiral 551
.1240	7/8	3-1/2	9.57	10.53
.1260	7/8	3-1/2	9.34	10.53
.1865	1-1/8	4-1/2	13.37	14.70
.1885	1-1/8	4-1/2	13.37	14.70
.2490	1-1/2	6	13.86	15.61
.2510	1-1/2	6	14.19	15.61
.3115	1-1/2	6	15.94	17.54
.3135	1-1/2	6	15.94	17.54
.3740	1-3/4	7	17.62	18.88
.3760	1-3/4	7	17.62	18.88
.4365	1-3/4	7	19.47	21.42
.4385	1-3/4	7	19.47	21.42
.4990	2	8	21.78	23.96

Size	Flute Length	Overall Length	Price Each Straight 550	Price Each Spiral 551
.5010	2	8	21.78	23.96
.6230	2-1/4	9	41.91	—
.6240	2-1/4	9	41.91	—
.6245	2-1/4	9	41.91	—
.6260	2-1/4	9	41.91	—
.7480	2-1/2	9-1/2	53.59	—
.7490	2-1/2	9-1/2	48.51	—
.7510	2-1/2	9-1/2	48.51	—
.8740	2-5/8	10	62.44	65.84
.8760	2-5/8	10	62.44	—
.9980	2-3/4	10-1/2	78.05	—
.9990	2-3/4	10-1/2	78.05	—
1.0010	2-3/4	10-1/2	78.05	—

Dowel Pin Sizes

Size	Flute Length	Overall Length	Price Each Straight 550	Price Each Spiral 551
.1230	7/8	3-1/2	9.64	10.53
.1247	7/8	3-1/2	9.57	10.53
.1855	1-1/8	4-1/2	13.37	14.70
.1870	1-1/8	4-1/2	13.37	14.70
.2480	1-1/2	6	13.86	15.61
.2495	1-1/2	6	14.19	15.61
.3105	1-1/2	6	15.94	17.54

Size	Flute Length	Overall Length	Price Each Straight 550	Price Each Spiral 551
.3120	1-1/2	6	15.94	17.54
.3730	1-3/4	7	17.62	19.38
.3745	1-3/4	7	17.62	18.88
.4355	1-3/4	7	19.47	21.42
.4370	1-3/4	7	19.47	21.42
.4980	2	8	21.78	—
.4995	2	8	21.78	24.95

Metric Sizes

List No. **550M** – Straight Flute

Size	Decimal Equivalent	Price Each
1.00	.0394	9.00
1.50	.0591	9.00
2.00	.0787	9.37
2.50	.0984	9.37
3.00	.1181	9.37
3.50	.1378	11.19
4.00	.1575	11.19
4.50	.1772	13.20
5.00	.1969	14.19
5.50	.2165	14.19
6.00	.2362	15.51
6.50	.2559	15.51
7.00	.2756	17.13
7.50	.2953	17.13
8.00	.3150	17.72
8.50	.3346	18.22
9.00	.3543	18.22

Size	Decimal Equivalent	Price Each
9.50	.3740	17.62
10.00	.3937	20.30
10.50	.4134	19.14
11.00	.4331	19.64
11.50	.4528	22.94
12.00	.4724	23.76
12.50	.4921	24.42
13.00	.5118	25.08
13.50	.5315	25.08
14.00	.5512	25.08
14.50	.5709	28.05
15.00	.5906	28.05
15.50	.6102	32.18
16.00	.6299	32.18
16.50	.6496	32.18
17.00	.6693	32.18
17.50	.6890	36.96

Size	Decimal Equivalent	Price Each
18.00	.7087	36.96
18.50	.7283	36.96
19.00	.7480	36.96
19.50	.7677	41.42
20.00	.7874	41.42
20.50	.8071	41.42
21.00	.8268	47.19
21.50	.8465	47.19
22.00	.8661	47.19
22.50	.8858	51.98
23.00	.9055	51.98
23.50	.9252	51.98
24.00	.9449	58.58
24.50	.9646	58.58
25.00	.9843	58.58
26.00	1.0236	58.58

Sets

Set Description	Pcs.		Set No.	Price
1.00mm — 13.00mm	25	Wood Case	550MS	269.00
Over and Under — .1240 thru .5010	14	Metal Index	550SX	223.32
Dowel Pin — .1230 thru .4995	14	Metal Index	550SD	223.32



Special Decimal Chucking Reamers



High Speed Steel

List No. **550D** – Straight Shank, Straight Flute



Size	Price Each	Size	Price Each	Size	Price Each	Size	Price Each	Size	Price Each	Size	Price Each	Size	Price Each
.0340	19.71	.1095	17.46	.1615	19.80	.2155	21.95	.2815	24.84	.3570	26.19	.4520	29.57	.5500	37.49
.0355	19.71	.1112	15.30	.1620	19.80	.2160	21.95	.2820	24.84	.3590	26.19	.4540	29.57	.5510	37.49
.0360	19.71	.1115	15.30	.1630	19.80	.2170	21.95	.2830	24.84	.3600	26.19	.4550	29.57	.5520	37.49
.0365	19.71	.1120	15.30	.1640	19.80	.2175	21.95	.2840	24.84	.3610	26.19	.4560	29.57	.5550	41.75
.0370	19.71	.1125	15.30	.1645	19.80	.2180	21.95	.2855	24.84	.3615	26.19	.4580	29.57	.5560	41.75
.0380	19.71	.1135	15.30	.1650	19.80	.2195	21.95	.2860	24.84	.3620	26.19	.4590	29.57	.5580	41.75
.0385	19.71	.1145	15.30	.1655	19.80	.2200	21.95	.2865	24.84	.3630	26.19	.4595	29.57	.5600	41.75
.0390	19.71	.1155	15.30	.1665	19.80	.2205	21.95	.2870	24.84	.3640	26.19	.4600	29.57	.5610	41.75
.0435	19.71	.1165	15.30	.1670	19.80	.2215	21.95	.2880	24.84	.3650	26.19	.4620	29.57	.5615	41.75
.0440	19.71	.1175	15.30	.1680	19.80	.2220	21.95	.2890	24.84	.3690	26.19	.4630	29.57	.5620	41.75
.0455	19.71	.1180	15.30	.1685	19.80	.2225	21.95	.2910	24.84	.3700	27.50	.4650	29.57	.5635	41.93
.0460	19.71	.1185	15.30	.1690	19.80	.2235	21.95	.2920	24.84	.3710	27.50	.4660	29.57	.5640	41.93
.0470	19.71	.1190	15.30	.1700	19.80	.2240	21.95	.2930	24.84	.3720	26.19	.4665	29.57	.5650	41.93
.0485	19.71	.1195	15.30	.1705	19.80	.2250	21.95	.2940	24.84	.3725	26.19	.4670	29.57	.5660	41.93
.0495	19.71	.1210	15.30	.1710	19.80	.2265	21.95	.2960	24.84	.3735	26.19	.4675	29.57	.5670	41.93
.0500	19.71	.1215	15.30	.1715	19.80	.2270	21.95	.2970	24.84	.3748	26.19	.4690	29.57	.5680	41.93
.0505	19.71	.1225	15.30	.1720	19.80	.2295	21.95	.2980	24.84	.3755	27.50	.4700	29.57	.5690	41.93
.0510	19.71	.1235	15.30	.1735	19.80	.2300	21.95	.2990	24.84	.3780	27.50	.4710	29.57	.5700	41.93
.0535	19.71	.1245	15.30	.1740	19.80	.2310	21.95	.3000	24.84	.3790	27.50	.4720	29.57	.5760	41.93
.0540	19.71	.1249	15.30	.1750	19.80	.2320	21.95	.3030	24.84	.3800	27.50	.4730	29.57	.5770	41.93
.0555	18.99	.1253	15.30	.1755	19.80	.2330	20.47	.3040	24.84	.3810	27.50	.4740	29.57	.5800	41.93
.0565	18.99	.1258	20.52	.1760	19.80	.2335	20.47	.3060	24.84	.3820	27.50	.4760	29.57	.5810	41.93
.0575	18.99	.1265	20.52	.1765	19.80	.2340	20.47	.3070	24.84	.3830	27.50	.4770	29.57	.5820	41.93
.0600	18.99	.1270	20.52	.1775	19.80	.2350	20.47	.3075	24.84	.3850	27.50	.4780	29.57	.5830	41.93
.0613	18.99	.1275	20.52	.1785	19.80	.2355	20.47	.3080	24.84	.3870	27.50	.4790	29.57	.5840	41.93
.0632	17.37	.1280	20.52	.1790	19.80	.2360	20.47	.3090	24.84	.3880	27.50	.4800	29.57	.5870	41.93
.0650	17.37	.1290	20.52	.1795	19.80	.2365	20.47	.3100	24.84	.3890	27.50	.4810	29.57	.5880	41.93
.0667	17.37	.1295	20.52	.1810	19.80	.2370	20.47	.3110	24.84	.3910	27.50	.4820	29.57	.5890	41.93
.0680	17.42	.1300	20.52	.1815	19.80	.2375	20.47	.3112	25.16	.3920	28.40	.4840	29.57	.5900	41.93
.0685	17.42	.1305	20.52	.1825	19.80	.2390	20.47	.3122	25.16	.3930	28.40	.4870	29.57	.5910	41.93
.0695	17.42	.1310	20.52	.1830	19.80	.2395	20.47	.3130	25.16	.3940	28.40	.4880	29.57	.5920	41.93
.0705	17.42	.1315	20.52	.1835	19.80	.2400	20.47	.3133	25.16	.3950	28.40	.4890	29.57	.5940	41.93
.0710	17.42	.1320	20.52	.1840	19.80	.2410	20.47	.3140	25.16	.3960	28.40	.4900	29.57	.5950	41.93
.0715	17.42	.1325	20.52	.1845	19.80	.2415	20.47	.3145	25.16	.4030	28.40	.4910	29.57	.5960	41.93
.0720	17.42	.1335	20.52	.1860	19.80	.2425	20.47	.3155	25.16	.4070	28.40	.4920	29.57	.5980	41.93
.0735	17.42	.1340	20.52	.1863	22.33	.2430	20.47	.3165	25.16	.4080	28.40	.4930	29.57	.6000	41.93
.0745	17.42	.1350	20.52	.1880	22.33	.2435	20.47	.3170	25.16	.4090	28.40	.4940	29.57	.6005	41.93
.0750	17.42	.1355	19.80	.1885	22.33	.2440	20.47	.3180	25.16	.4100	28.40	.4950	29.57	.6010	41.93
.0755	17.42	.1365	20.52	.1897	22.33	.2442	20.47	.3190	25.16	.4110	28.40	.4960	37.49	.6020	41.93
.0765	17.42	.1370	20.52	.1905	22.33	.2445	20.47	.3195	25.16	.4120	28.40	.4975	37.49	.6030	41.93
.0790	17.46	.1375	20.52	.1915	22.33	.2447	20.47	.3200	25.16	.4140	28.40	.5005	37.49	.6050	41.93
.0795	17.46	.1385	20.52	.1920	22.33	.2450	20.47	.3210	25.16	.4160	28.40	.5015	37.49	.6120	42.87
.0800	17.46	.1397	20.52	.1925	22.33	.2455	20.47	.3220	25.16	.4180	28.40	.5020	37.49	.6130	42.87
.0802	17.46	.1400	20.52	.1930	22.33	.2470	20.47	.3240	25.16	.4210	28.40	.5025	37.49	.6140	42.87
.0805	17.46	.1410	18.90	.1937	22.33	.2475	20.47	.3250	25.16	.4220	28.40	.5030	37.49	.6150	42.87
.0815	17.46	.1415	18.90	.1940	22.33	.2485	20.47	.3260	25.16	.4230	28.40	.5040	37.49	.6160	42.87
.0835	17.46	.1425	18.90	.1950	22.33	.2492	24.85	.3270	25.16	.4240	28.40	.5050	37.49	.6170	42.87
.0840	17.46	.1430	18.90	.1965	22.33	.2499	24.85	.3280	25.16	.4250	28.40	.5060	37.49	.6180	42.87
.0845	17.46	.1435	18.90	.1975	22.33	.2505	24.85	.3290	25.16	.4270	28.40	.5070	37.49	.6190	42.87
.0850	17.46	.1445	18.90	.1980	22.33	.2515	24.85	.3300	25.16	.4290	28.40	.5080	37.49	.6200	42.87
.0855	17.46	.1450	18.90	.1995	22.33	.2520	24.84	.3310	25.16	.4300	28.40	.5090	37.49	.6220	42.87
.0865	17.46	.1460	18.90	.2015	22.33	.2530	24.84	.3350	25.16	.4305	28.40	.5100	37.49	.6230	42.87
.0875	17.46	.1465	18.90	.2020	22.33	.2540	24.84	.3360	25.16	.4310	28.40	.5110	37.49	.6240	42.87
.0895	17.46	.1485	18.90	.2025	22.33	.2550	24.84	.3370	25.16	.4320	28.40	.5120	37.49	.6245	42.87
.0900	17.46	.1490	18.90	.2030	22.33	.2560	24.84	.3380	26.19	.4330	28.40	.5130	37.49	.6255	42.87
.0915	17.46	.1500	18.90	.2045	21.95	.2580	24.84	.3400	26.19	.4340	28.40	.5140	37.49	.6750	54.81
.0920	17.46	.1505	18.90	.2050	21.95	.2590	24.84	.3410	26.19	.4350	28.40	.5150	37.49	.7470	54.81
.0930	17.46	.1510	18.90	.2060	21.95	.2600	24.84	.3420	26.19	.4360	28.40	.5170	37.49	.7480	54.81
.0950	17.46	.1515	18.90	.2070	21.95	.2605	24.84	.3430	26.19	.4380	29.57	.5200	37.49	.7495	54.81
.0955	17.46	.1525	18.90	.2080	21.95	.2620	24.84	.3440	26.19	.4390	29.57	.5210	37.49	.7505	54.81
.0965	17.46	.1530	18.90	.2085	21.95	.2630	24.84	.3450	26.19	.4400	29.57	.5230	37.49	.7520	54.81
.0970	17.46	.1535	18.90	.2095	21.95	.2670	24.84	.3460	26.19	.4410	29.57	.5250	37.49	.7530	54.81
.0985	17.46	.1545	18.90	.2100	21.95	.2680	24.84	.3475	26.19	.4420	29.57	.5290	37.49	.7540	54.95
.0990	17.46	.1550	18.90	.2105	21.95	.2690	24.84	.3485	26.19	.4430	29.57	.5300	37.49	.7550	54.95
.1005	17.46	.1552	18.90	.2110	21.95	.2700	24.84	.3490	26.19	.4440	29.57	.5320	37.49	.7580	54.95
.1020	17.46	.1555	18.90	.2115	21.95	.2710	24.84	.3500	26.19	.4450	29.57	.5340	37.49	.8745	71.96
.1025	17.46	.1557	18.90	.2120	21.95	.2730	24.84	.3510	26.19	.4460	29.57	.5350	37.49	.8780	71.96
.1035	17.46	.1565	18.90	.2125	21.95	.2740	24.84	.3520	26.19	.4465	29.57	.5370	37.49	.9700	79.82
.1045	17.46	.1580	18.90	.2135	21.95	.2750	24.84	.3530	26.19	.4470	29.57	.5400	37.49	.9970	79.82
.1055	17.46	.1585	19.80	.2140	21.95	.2780	24.84	.3540	26.19	.4480	29.57	.5440	37.49	.9980	79.82
.1070	17.46	.1600	19.80	.2145	21.95	.2795	24.84	.3550	26.19	.4490	29.57	.5450	37.49	.9995	79.82
.1075	17.46	.1605	19.80	.2150	21.95	.2800	24.84	.3560	26.19	.4510	29.57	.5480	37.49	1.002	79.82

Cobalt Chucking Reamers

Cobalt MDX SUPERIOR IMPORT

List No. **550C** – Straight Shank, Straight Flute
List No. **551C** – Straight Shank, Spiral Flute

For reaming high alloy steels, titanium, stainless and other difficult to machine materials.



Fractional Sizes

Size	Decimal Equivalent	Flute Length	Overall Length	Price Each Straight 550C	Price Each Spiral 551C
1/16	.0625	1/2	2-1/2	15.02	16.52
5/64	.0781	3/4	3	12.14	13.35
3/32	.0938	3/4	3	12.14	13.35
7/64	.1094	7/8	3-1/2	12.63	13.89
1/8	.1250	7/8	3-1/2	10.08	11.09
9/64	.1406	1	4	15.08	16.59
5/32	.1562	1	4	13.55	14.91
11/64	.1719	1-1/8	4-1/2	16.04	17.64
3/16	.1875	1-1/8	4-1/2	14.49	15.94
13/64	.2031	1-1/4	5	19.49	21.44
7/32	.2188	1-1/4	5	19.49	21.44
15/64	.2344	1-1/2	6	20.05	22.06
1/4	.2500	1-1/2	6	17.10	18.81
17/64	.2656	1-1/2	6	27.29	30.02
9/32	.2812	1-1/2	6	25.92	28.51
19/64	.2969	1-1/2	6	27.27	30.00
5/16	.3125	1-1/2	6	24.59	27.05
21/64	.3281	1-1/2	6	29.39	32.33
11/32	.3438	1-1/2	6	29.39	32.33
23/64	.3594	1-3/4	7	29.88	32.87
3/8	.3750	1-3/4	7	26.94	29.63

Size	Decimal Equivalent	Flute Length	Overall Length	Price Each Straight 550C	Price Each Spiral 551C
25/64	.3906	1-3/4	7	35.19	38.71
13/32	.4062	1-3/4	7	35.19	38.71
27/64	.4219	1-3/4	7	35.19	38.71
7/16	.4375	1-3/4	7	34.65	38.12
29/64	.4531	1-3/4	7	41.81	45.99
15/32	.4688	1-3/4	7	41.81	45.99
31/64	.4844	2	8	41.81	45.99
1/2	.5000	2	8	39.67	43.64
17/32	.5312	2	8	46.89	—
9/16	.5625	2	8	46.89	—
5/8	.6250	2-1/4	9	54.72	—
11/16	.6875	2-1/4	9	61.86	—
23/32	.7188	2-1/4	9	69.08	—
3/4	.7500	2-1/2	9-1/2	69.44	—
25/32	.7812	2-1/2	9-1/2	74.88	—
13/16	.8125	2-1/2	9-1/2	74.88	—
27/32	.8438	2-1/2	9-1/2	88.61	—
7/8	.8750	2-5/8	10	90.68	—
29/32	.9062	2-5/8	10	97.67	—
15/16	.9375	2-5/8	10	97.67	—
1	1.0000	2-3/4	10-1/2	110.50	—

Letter Sizes

Size	Decimal Equivalent	Flute Length	Overall Length	Price Each Straight 550C
A	.2340	1-1/2	6	22.06
B	.2380	1-1/2	6	22.06
C	.2420	1-1/2	6	22.06
D	.2460	1-1/2	6	22.06
E	.2500	1-1/2	6	17.10
F	.2570	1-1/2	6	22.06
G	.2610	1-1/2	6	22.06
H	.2660	1-1/2	6	22.06
I	.2720	1-1/2	6	22.06
J	.2770	1-1/2	6	22.06
K	.2810	1-1/2	6	22.06
L	.2900	1-1/2	6	22.06
M	.2950	1-1/2	6	22.06

Size	Decimal Equivalent	Flute Length	Overall Length	Price Each Straight 550C
N	.3020	1-1/2	6	29.39
O	.3160	1-1/2	6	29.39
P	.3230	1-1/2	6	29.39
Q	.3320	1-1/2	6	29.39
R	.3390	1-1/2	6	29.39
S	.3480	1-3/4	7	29.39
T	.3580	1-3/4	7	29.39
U	.3680	1-3/4	7	29.39
V	.3770	1-3/4	7	29.39
W	.3860	1-3/4	7	29.39
X	.3970	1-3/4	7	35.19
Y	.4040	1-3/4	7	35.19
Z	.4130	1-3/4	7	35.19

TiN Coated CNC Production Length Chucking Reamers

MADE IN USA

L&I LAVALLEE & IDE

High Speed Steel

List No. **DL535T** – Straight Shank, Spiral Flute



Diameter	Decimal Equivalent	Flute	Overall Length	Price Each
1/16	.0625	1/2	1-7/8	32.00
3/32	.0938	3/4	2-1/4	32.00
7/64	.1094	7/8	2-5/8	32.00
.1240	.1240	7/8	2-3/4	32.00
1/8	.1250	7/8	2-3/4	32.00
.1260	.1260	7/8	2-3/4	34.00
30	.1285	7/8	2-3/4	34.00
5/32	.1562	1	3-1/8	34.00
21	.1590	1-1/8	3-1/4	34.00
3/16	.1875	1-1/8	3-1/2	34.00
7/32	.2188	1-1/4	3-3/4	34.00
.2490	.2490	1-1/2	4	43.00

Diameter	Decimal Equivalent	Flute	Overall Length	Price Each
1/4	.2500	1-1/2	4	43.00
.2510	.2510	1-1/2	4	43.00
9/32	.2812	1-1/2	4-1/2	45.00
.3115	.3115	1-1/2	4-1/2	46.50
5/16	.3125	1-1/2	4-1/2	46.50
21/64	.3281	1-1/2	4-5/8	48.00
3/8	.3750	1-3/4	5	55.00
27/64	.4219	1-3/4	5-3/8	62.50
7/16	.4375	1-3/4	5-1/2	62.50
.4990	.4990	2	5-7/8	78.00
1/2	.5000	2	6	78.00
.5010	.5010	2	6	78.00

Shell Reamers

High Speed Steel

To be used with shell reamer arbors, listed below.
One size arbor fits a range of sizes.

List No. **560** – Straight Flute
List No. **561** – Left Hand Spiral Flute, Right Hand Cut



Size	Decimal Equivalent	Overall Length	Hole Diameter	Straight **560**	Spiral **561**
3/4	.7500	2-1/4	3/8	61.38	70.62
13/16	.8125	2-1/2	1/2	64.15	73.92
27/32	.8437	2-1/2	1/2	—	75.90
7/8	.8750	2-1/2	1/2	65.34	75.90
29/32	.9062	2-1/2	1/2	72.27	—
15/16	.9375	2-1/2	1/2	67.65	78.54
1	1.0000	2-1/2	1/2	69.30	80.75
1-1/16	1.0625	2-3/4	5/8	75.04	86.79
1-1/8	1.1250	2-3/4	5/8	79.58	90.42
1-3/16	1.1875	2-3/4	5/8	82.50	94.05
1-1/4	1.2500	2-3/4	5/8	83.82	97.65
1-9/32	1.2812	3	5/8	96.23	—
1-5/16	1.3125	3	3/4	88.84	101.84
1-11/32	1.3437	3	3/4	103.62	—
1-3/8	1.3750	3	3/4	94.55	107.98
1-13/32	1.4062	3	3/4	108.60	—
1-7/16	1.4375	3	3/4	103.82	114.18
1-15/32	1.4687	3	3/4	112.05	—
1-1/2	1.5000	3	3/4	105.27	120.71
1-17/32	1.5312	3	3/4	122.05	142.28
1-9/16	1.5625	3	3/4	116.24	135.30
1-19/32	1.5937	3	3/4	128.70	—
1-5/8	1.6250	3	3/4	124.31	147.61
1-11/16	1.6875	3-1/2	1	136.55	162.10
1-23/32	1.7188	3-1/2	1	152.11	180.08
1-3/4	1.7500	3-1/2	1	144.87	171.44
1-25/32	1.7812	3-1/2	1	168.30	—
1-13/16	1.8125	3-1/2	1	154.44	183.66
1-27/32	1.8437	3-1/2	1	178.20	—
1-7/8	1.8750	3-1/2	1	164.67	194.70
1-29/32	1.9062	3-1/2	1	194.70	—
1-15/16	1.9375	3-1/2	1	174.90	207.64
1-31/32	1.9687	3-1/2	1	190.58	—

Size	Decimal Equivalent	Overall Length	Hole Diameter	Straight **560**	Spiral **561**
2	2.0000	3-1/2	1	190.58	224.19
2-1/16	2.0625	3-3/4	1-1/4	202.08	244.77
2-1/8	2.1250	3-3/4	1-1/4	218.02	256.63
2-3/16	2.1875	3-3/4	1-1/4	229.22	273.11
2-1/4	2.2500	3-3/4	1-1/4	239.30	280.67
2-5/16	2.3125	3-3/4	1-1/4	246.02	304.92
2-3/8	2.3750	3-3/4	1-1/4	251.56	308.73
2-7/16	2.4375	3-3/4	1-1/4	281.60	330.56
2-1/2	2.5000	3-3/4	1-1/4	287.25	330.56
2-9/16	2.5625	4	1-1/2	299.38	331.95
2-5/8	2.6250	4	1-1/2	318.78	344.28
2-11/16	2.6875	4	1-1/2	338.67	356.44
2-3/4	2.7500	4	1-1/2	355.51	386.35
2-13/16	2.8125	4	1-1/2	376.09	415.11
2-7/8	2.8750	4	1-1/2	397.61	429.39
2-15/16	2.9375	4	1-1/2	419.61	450.45
3	3.0000	4	1-1/2	461.63	497.89
3-1/16	3.0625	4-1/2	1-3/4	585.12	606.68
3-1/8	3.1250	4-1/2	1-3/4	707.63	715.11
3-3/16	3.1875	4-1/2	1-3/4	731.08	752.86
3-1/4	3.2500	4-1/2	1-3/4	754.68	789.89
3-5/16	3.3125	4-1/2	1-3/4	780.45	818.20
3-3/8	3.3750	4-1/2	1-3/4	806.59	847.79
3-7/16	3.4375	4-1/2	1-3/4	830.18	871.20
3-1/2	3.5000	4-1/2	1-3/4	852.69	894.80
3-9/16	3.5625	5	2	875.56	918.36
3-5/8	3.6250	5	2	896.61	940.90
3-11/16	3.6875	5	2	919.12	965.40
3-3/4	3.7500	5	2	943.80	988.81
3-13/16	3.8125	5	2	980.10	1025.84
3-7/8	3.8750	5	2	1013.50	1063.59
3-15/16	3.9375	5	2	1043.99	1096.99
4	4.0000	5	2	1078.11	1130.38

Shell Reamer Arbors

Hardened & Ground



Size	Compatible Reamer Sizes		Arbor Diameter	Overall Length	Straight Shank			Taper Shank		
	Smallest	Largest			Shank Size	**Tool No.**	Price Each	Morse Taper No.	**Tool No.**	Price Each
4	21/32	25/32	3/8	9	1/2	**SR4S**	51.48	2	**SR4T**	61.38
5	13/16	1-1/32	1/2	9-1/2	5/8	**SR5S**	57.42	2	**SR5T**	73.26
6	1-1/16	1-9/32	5/8	10	3/4	**SR6S**	63.36	3	**SR6T**	79.20
7	1-5/16	1-5/8	3/4	11	7/8	**SR7S**	69.30	3	**SR7T**	87.12
8	1-21/32	2	1	12	1-1/8	**SR8S**	77.22	4	**SR8T**	97.02
9	2-1/16	2-1/2	1-1/4	13	1-3/8	**SR9S**	93.06	4	**SR9T**	108.90
10	2-9/16	3	1-1/2	14	1-5/8	**SR10S**	119.46	5	**SR10T**	124.74
11	3-1/16	3-1/2	1-3/4	15	2	**SR11S**	168.30	5	**SR11T**	174.90
12	3-9/16	4	2	16	2-1/8	**SR12S**	235.62	5	**SR12T**	243.54

Taper Shank Chucking Reamers

High Speed Steel

List No. **530** – Straight Flute
List No. **531** – Spiral Flute
List No. **CT530** – Carbide Tipped



Size	Dec. Equiv.	Flute Length	Overall Length	M.T.	Price Each Straight 530	Spiral 531	Carbide CT530
7/32	.2188	1-1/4	5	1	20.66	25.25	35.00
1/4	.2500	1-1/2	6	1	20.66	25.25	33.50
G	.2610	1-1/2	6	1	26.40	—	—
17/64	.2656	1-1/2	6	1	25.25	27.19	—
9/32	.2812	1-1/2	6	1	25.25	27.19	35.50
5/16	.3125	1-1/2	6	1	25.25	27.19	35.50
21/64	.3281	1-1/2	6	1	26.93	—	—
11/32	.3438	1-1/2	6	1	25.58	27.19	36.80
23/64	.3594	1-3/4	7	1	28.35	—	—
3/8	.3750	1-3/4	7	1	26.07	27.85	33.00
13/32	.4062	1-3/4	7	1	26.63	28.64	37.50
7/16	.4375	1-3/4	7	1	26.63	28.64	39.50
15/32	.4688	1-3/4	7	1	29.70	33.00	43.75
31/64	.4844	2	8	1	33.00	—	—
1/2	.5000	2	8	1	27.72	28.64	48.00
33/64	.5156	2	8	1	35.64	—	—
17/32	.5312	2	8	1	32.67	33.89	—
35/64	.5469	2	8	1	35.64	—	—
9/16	.5625	2	8	1	32.67	33.89	52.75
37/64	.5781	2	8	1	38.61	—	—
19/32	.5938	2	8	1	35.31	38.50	55.65
5/8	.6250	2-1/4	9	2	34.16	35.97	55.65
21/32	.6562	2-1/4	9	2	37.62	39.60	57.00
11/16	.6875	2-1/4	9	2	37.62	39.60	57.00
45/64	.7031	2-1/4	9	2	45.87	48.18	—
23/32	.7188	2-1/4	9	2	42.87	44.22	59.99
47/64	.7344	2-1/2	9-1/2	2	45.87	52.00	—
3/4	.7500	2-1/2	9-1/2	2	39.93	44.22	59.99
25/32	.7812	2-1/2	9-1/2	2	46.76	50.92	61.75
13/16	.8125	2-1/2	9-1/2	2	46.76	50.92	61.75

Size	Dec. Equiv.	Flute Length	Overall Length	M.T.	Price Each Straight 530	Spiral 531	Carbide CT530
27/32	.8438	2-1/2	9-1/2	2	55.44	58.37	64.85
7/8	.8750	2-5/8	10	2	52.47	58.37	67.65
29/32	.9062	2-5/8	10	2	60.39	63.82	62.90
15/16	.9375	2-5/8	10	3	58.05	63.82	79.00
31/32	.9688	2-5/8	10	3	65.34	70.95	81.00
1	1.0000	2-3/4	10-1/2	3	64.02	70.95	81.00
1-1/32	1.0312	2-3/4	10-1/2	3	78.41	86.79	—
1-1/16	1.0625	2-3/4	10-1/2	3	71.94	78.54	112.00
1-3/32	1.0938	2-3/4	10-1/2	3	81.84	105.34	—
1-1/8	1.1250	2-7/8	11	3	77.88	86.92	119.00
1-5/32	1.1562	2-7/8	11	3	95.04	111.38	—
1-3/16	1.1875	2-7/8	11	3	87.29	94.58	128.00
1-7/32	1.2188	3	11-1/2	4	103.96	119.43	—
1-1/4	1.2500	3	11-1/2	4	94.51	103.95	140.00
1-9/32	1.2812	3	11-1/2	4	116.34	138.73	—
1-5/16	1.3125	3	11-1/2	4	105.77	113.85	147.00
1-11/32	1.3438	3-1/4	12	4	138.00	151.00	—
1-3/8	1.3750	3-1/4	12	4	114.18	123.09	159.00
1-13/32	1.4062	3-1/4	12	4	140.00	155.70	—
1-7/16	1.4375	3-1/4	12	4	122.76	134.31	169.00
1-15/32	1.4688	3-1/2	12-1/2	4	145.20	158.70	—
1-1/2	1.5000	3-1/2	12-1/2	4	132.00	142.23	169.00
1-9/16	1.5625	3-1/2	12-1/2	4	187.00	217.80	—
1-5/8	1.6250	3-1/2	13	4	198.00	230.00	—
1-11/16	1.6875	4	13-1/2	4	201.00	247.50	—
1-3/4	1.7500	4	13-1/2	4	195.03	204.60	—
1-13/16	1.8125	4	13-1/2	4	204.53	273.90	—
1-7/8	1.8750	4	13-1/2	4	214.53	283.80	—
1-15/16	1.9375	4	14	4	242.55	283.80	—
2	2.0000	4	14-1/2	4	242.55	283.80	—

Metric Taper Shank Chucking Reamers

High Speed Steel

List No. **530M** – Straight Flute



Size	Dec. Equiv.	Flute Length	Overall Length	Morse Taper No.	Price Each
5.00	.1969	1-1/4	5	1	24.98
7.00	.2756	1-1/2	6	1	24.98
9.00	.3343	1-3/4	7	1	27.68
11.00	.4331	1-3/4	7	1	27.90
12.00	.4724	2	8	1	28.95
15.00	.5906	2	8	1	35.10
16.00	.6299	2-1/4	9	2	37.88
17.00	.6693	2-1/4	9	2	40.13
20.00	.7874	2-1/2	9-1/2	2	47.03
21.00	.8268	2-1/2	9-1/2	2	51.45
22.00	.8661	2-1/2	9-1/2	2	54.08
24.00	.9449	2-5/8	10	3	62.78
25.00	.9843	2-5/8	10	3	68.55

Size	Dec. Equiv.	Flute Length	Overall Length	Morse Taper No.	Price Each
26.00	1.0236	2-3/4	10-1/2	3	72.53
28.00	1.1023	2-7/8	11	3	83.63
29.00	1.1417	2-7/8	11	3	88.05
30.00	1.1811	2-7/8	11	3	94.35
32.00	1.2598	3	11-1/2	4	107.18
33.00	1.2992	3	11-1/2	4	129.08
34.00	1.3385	3-1/4	12	4	129.08
35.00	1.3779	3-1/4	12	4	135.00
36.00	1.4173	3-1/4	12	4	138.83
37.00	1.4566	3-1/2	12-1/2	4	152.18
38.00	1.4960	3-1/2	12-1/2	4	152.18
39.00	1.5354	3-1/2	12-1/2	4	169.50
40.00	1.5748	3-1/2	12-1/2	4	169.50

Taper Pin Reamers

High Speed Steel

List No. **556** – Straight Flute
For reaming in mild steel.

List No. **557** – Left Hand Spiral, Right Hand Cut
For reaming in lower ranges of Rockwell hardness.

List No. **558** – Helical Flute
For machine reaming of holes for taper pins.
High helix flute design eases chip ejection.



Size	Diameter		Flute Length	Overall Length	Shank Size	Price Each		
	Small End	Large End				Straight **556**	Spiral **557**	Helical **558**
7/0	.0497	.0666	13/16	1-13/16	5/64	25.74	26.93	26.93
6/0	.0611	.0806	15/16	1-15/16	3/32	25.74	26.93	26.93
5/0	.0719	.0966	1-3/16	2-3/16	7/64	23.61	25.74	26.93
4/0	.0869	.1142	1-5/16	2-5/16	1/8	23.61	25.74	26.93
3/0	.1029	.1302	1-5/16	2-5/16	9/64	23.61	25.74	26.93
2/0	.1137	.1462	1-9/16	2-9/16	5/32	21.12	22.44	22.00
0	.1287	.1638	1-11/16	2-15/16	11/64	20.20	21.78	22.00
1	.1447	.1798	1-11/16	2-15/16	3/16	19.80	21.91	22.18
2	.1605	.2008	1-15/16	3-3/16	13/64	19.80	22.11	25.21
3	.1813	.2294	2-5/16	3-11/16	15/64	19.80	22.11	26.04
4	.2071	.2604	2-9/16	4-1/16	17/64	21.91	23.86	31.68
5	.2409	.2994	2-13/16	4-5/16	5/16	23.60	25.74	33.81
6	.2773	.3540	3-11/16	5-7/16	23/64	28.48	31.52	39.77
7	.3297	.4220	4-7/16	6-5/16	13/32	36.50	39.73	47.76
8	.3971	.5050	5-3/16	7-3/16	7/16	46.86	51.35	55.44
9	.4805	.6066	6-1/16	8-5/16	9/16	57.02	62.04	62.04
10	.5799	.7216	6-13/16	9-5/16	5/8	62.70	68.79	79.20
11	.7060	.8780	8-1/4	11-1/4	11/16	134.64	157.08	174.90
12	.8420	1.0500	10	13-5/8	3/4	184.80	190.74	207.90
13	1.0090	1.2590	12	16	1-1/16	294.36	314.16	386.76
14	1.2500	1.5420	14	18-1/4	1-3/8	438.90	464.64	514.14

Sets

Tap Sizes	Description	Pcs.	Set No.	Price
0 – 6	Straight Flute	6	**556S**	125.11



Taper Pipe Reamers

High Speed Steel

For reaming holes to be tapped with taper pipe taps.
These reamers are tapered 3/4" to the foot.

List No. **566** – Straight Flute
List No. **567** – Spiral Flute





Size	Diameter		Flute Length	Overall Length	Shank Size	Price Each	
	Small End	Large End				Straight **566**	Spiral **567**
1/16	.2450	.2910	3/4	2	.3125	38.94	41.23
1/8	.3160	.3620	3/4	2-1/8	.4375	27.39	31.68
1/4	.4060	.4720	1-1/16	2-7/16	.5625	31.02	36.30
3/8	.5400	.6060	1-1/16	2-9/16	.7000	35.24	41.45
1/2	.6650	.7510	1-3/8	3-1/8	.6875	44.55	52.31
3/4	.8760	.9620	1-3/8	3-1/4	.9063	53.00	72.60
1	1.1030	1.2120	1-3/4	3-3/4	1.1250	88.08	103.52
1-1/4	1.4440	1.5530	1-3/4	4	1.3125	132.40	155.69
1-1/2	1.6840	1.7930	1-3/4	4-1/4	1.5000	167.18	196.68
2	2.1590	2.2680	1-3/4	4-1/2	1.8750	223.08	262.68
2-1/2	2.5610	2.7220	2-5/8	5-1/2	2.2050	400.95	445.50
3	3.2020	3.3800	2-3/4	6	2.6250	525.36	584.10

Hand Reamers

High Speed Steel

For finishing of holes by hand. Square end can be held in a hand wrench or tap wrench. Spiral flute style drives chips forward.



List No. **564**– Straight Flute
List No. **565** – Left Hand Spiral Flute, Right Hand Cut

Size	Decimal Equivalent	Flute Length	Overall Length	Straight 564	Spiral 565
3/64	.0469	1	2	27.69	—
1/16	.0625	1	2	27.69	30.35
5/64	.0781	1	2	27.69	30.35
3/32	.0938	1-1/4	2-1/2	27.69	30.35
7/64	.1094	1-1/4	2-1/2	27.69	30.35
1/8	.1250	1-1/2	3	25.41	30.49
9/64	.1406	1-5/8	3-1/4	28.84	30.49
5/32	.1562	1-5/8	3-1/4	28.84	30.49
11/64	.1719	1-3/4	3-1/2	28.84	33.00
3/16	.1875	1-3/4	3-1/2	27.20	31.79
13/64	.2031	1-7/8	3-3/4	30.49	33.00
7/32	.2188	1-7/8	3-3/4	30.49	33.00
15/64	.2344	2	4	30.49	33.00
1/4	.2500	2	4	28.94	33.00
17/64	.2656	2-1/8	4-1/4	32.67	38.45
9/32	.2812	2-1/8	4-1/4	32.67	38.45
19/64	.2969	2-1/4	4-1/2	32.67	38.45
5/16	.3125	2-1/4	4-1/2	31.65	36.30
21/64	.3281	2-3/8	4-3/4	40.92	42.54
11/32	.3438	2-3/8	4-3/4	38.18	43.20
23/64	.3594	2-1/2	5	38.18	43.20
3/8	.3750	2-1/2	5	36.30	40.92
25/64	.3906	2-5/8	5-1/4	41.45	42.90
13/32	.4062	2-5/8	5-1/4	41.45	47.36
27/64	.4219	2-3/4	5-1/2	41.45	47.36
7/16	.4375	2-3/4	5-1/2	41.45	45.44
29/64	.4531	2-7/8	5-3/4	45.87	51.28
15/32	.4688	2-7/8	5-3/4	45.87	51.28
31/64	.4844	3	6	45.87	51.28
1/2	.5000	3	6	44.22	48.77
33/64	.5156	3-1/8	6-1/4	50.66	57.19
17/32	.5312	3-1/8	6-1/4	50.66	57.19
35/64	.5469	3-1/4	6-1/2	50.66	57.32
9/16	.5625	3-1/4	6-1/2	50.66	57.19
37/64	.5781	3-3/8	6-3/4	58.05	63.69
19/32	.5938	3-3/8	6-3/4	58.05	63.69
39/64	.6094	3-1/2	7	58.05	63.69
5/8	.6250	3-1/2	7	54.71	61.05
41/64	.6406	3-11/16	7-3/8	63.56	69.96
21/32	.6562	3-11/16	7-3/8	63.56	69.96
43/64	.6719	3-7/8	7-3/4	63.56	69.96
11/16	.6875	3-7/8	7-3/4	63.56	69.96
45/64	.7031	4-1/16	8-1/8	67.45	72.60
23/32	.7188	4-1/16	8-1/8	67.45	69.73
47/64	.7344	4-3/16	8-3/8	69.90	75.90
3/4	.7500	4-3/16	8-3/8	67.45	70.62
49/64	.7656	4-3/16	8-3/8	—	75.90
25/32	.7812	4-3/8	8-3/4	67.45	70.62

Size	Decimal Equivalent	Flute Length	Overall Length	Straight 564	Spiral 565
51/64	.7969	4-9/16	9-1/8	78.97	83.49
13/16	.8125	4-9/16	9-1/8	77.65	83.49
53/64	.8281	4-9/16	9-1/8	77.65	83.49
27/32	.8438	4-11/16	9-3/8	77.65	83.49
55/64	.8594	4-7/8	9-3/4	—	83.49
7/8	.8750	4-7/8	9-3/4	77.65	83.49
57/64	.8906	5	10	77.65	83.49
29/32	.9062	5	10	87.78	93.69
59/64	.9219	5-1/8	10-1/4	87.78	93.69
15/16	.9375	5-1/8	10-1/4	87.78	93.69
61/64	.9531	5-5/16	10-5/8	105.00	108.90
31/32	.9688	5-5/16	10-5/8	89.10	93.69
63/64	.9844	5-7/16	10-5/8	—	96.36
1	1.0000	5-7/16	10-7/8	87.78	93.69
1-1/64	1.0156	5-7/16	10-7/8	—	118.80
1-1/32	1.0312	5-7/16	10-7/8	105.60	121.44
1-3/64	1.0469	5-7/16	10-7/8	—	130.68
1-1/16	1.0625	5-5/8	11-1/4	94.05	102.96
1-5/64	1.0781	5-5/8	11-1/4	—	138.60
1-3/32	1.0938	5-5/8	11-1/4	122.10	145.20
1-7/64	1.1094	5-5/8	11-1/4	—	155.10
1-1/8	1.1250	5-13/16	11-5/8	115.17	126.06
1-9/64	1.1406	5-13/16	11-5/8	—	155.10
1-5/32	1.1562	5-13/16	11-5/8	124.00	155.10
1-11/64	1.1719	5-13/16	11-5/8	—	155.10
1-3/16	1.1875	6	12	116.72	126.06
1-13/64	1.2031	6	12	—	165.00
1-7/32	1.2188	6	12	150.48	165.00
1-15/64	1.2344	6	12	—	171.60
1-1/4	1.2500	6-1/8	12-1/4	139.52	155.10
1-9/32	1.2812	6-1/4	12-1/2	158.40	171.60
1-5/16	1.3125	6-1/4	12-1/2	143.42	155.10
1-11/32	1.3438	6-5/16	12-5/8	171.60	184.80
1-3/8	1.3750	6-5/16	12-5/8	165.33	177.41
1-13/32	1.4062	6-7/16	12-7/8	184.80	198.00
1-7/16	1.4375	6-7/16	12-7/8	169.42	183.35
1-15/32	1.4688	6-1/2	13	204.60	—
1-1/2	1.5000	6-1/2	13	194.96	212.52
1-9/16	1.5625	6-1/2	13	216.48	—
1-19/32	1.5938	6-1/2	13	224.40	—
1-11/16	1.6875	6-3/4	13-1/2	237.60	—
1-23/32	1.7188	6-3/4	13-1/2	290.40	—
1-3/4	1.7500	6-3/4	13-1/2	329.34	—
1-13/16	1.8125	7	13-3/4	329.34	—
1-15/16	1.9375	7	14	329.34	—
2	2.0000	7	14	429.00	—
2-1/2	2.5000	7-1/2	15	544.50	—

Sets

Sizes	Description	Pcs.	Set No.	Price
1/4, 3/8, 1/2, 5/8, 3/4	Straight Flute Set	5	**564S**	231.62
1/4, 3/8, 1/2, 5/8, 3/4	Spiral Flute Set	5	**565S**	254.41

All sets are supplied in wood block



Repairman's Taper Reamer

Size	Range	Price Each
1	1/8 to 1/2	17.10
2	1/8 to 5/8	20.25

List No. 538 – Straight Flute

- Removes burrs from small holes.
- Enlarges and countersinks holes in soft material.



Metric Hand Reamers

High Speed Steel



List No. **564M** – Straight Flute

Size	Dec. Equiv.	Flute Length	Overall Length	Straight **564**
3.00	.1181	1-7/32	2-7/16	28.84
3.20	.1260	1-1/4	2-1/2	28.84
3.50	.1378	1-3/8	2-3/4	28.84
4.00	.1575	1-1/2	3	28.84
4.50	.1772	1-5/8	3-1/4	28.84
5.00	.1969	1-3/4	3-1/2	30.49
5.50	.2165	1-13/16	3-5/8	30.49
6.00	.2362	1-13/16	3-5/8	30.49
7.00	.2756	2-1/8	4-1/4	32.67
7.50	.2953	2-1/16	4-3/8	35.64
8.00	.3150	2-1/4	4-1/2	38.18
8.50	.3346	2-1/4	4-1/2	38.18
9.00	.3543	2-7/16	4-7/8	38.18
9.50	.3740	2-7/16	4-7/8	38.18
10.00	.3937	2-5/8	5-1/4	41.45
10.50	.4134	2-5/8	5-1/4	41.45
11.00	.4331	2-3/4	5-1/2	41.45
11.50	.4528	2-3/4	5-1/2	45.87
12.00	.4724	3	6	45.87
12.50	.4921	3	6	45.87
13.00	.5118	3	6	50.66
13.50	.5315	3-1/4	6-1/2	50.66
14.00	.5512	3-1/4	6-1/2	50.66
15.00	.5906	3-1/4	6-1/2	58.05
15.50	.6102	3-1/2	6-7/8	63.56
16.00	.6299	3-1/2	6-7/8	63.56
16.50	.6496	3-1/2	6-7/8	63.56
17.00	.6693	3-3/8	6-3/4	63.56
17.50	.6890	3-11/16	7-1/2	67.45
18.00	.7087	3-11/16	7-1/2	67.45
19.00	.7480	3-3/4	7-1/2	77.65
19.50	.7677	4	8	79.00
20.00	.7874	4	8	81.50
22.00	.8661	4-7/8	9-3/4	95.00

Adjustable Hand Reamers

High Speed Steel



List No. **570**

Blades are adjusted by loosening one nut and tightening the other. Each reamer expands to the next size.

Size	Range of Adjustment	Blade Length	Overall Length	Price Each
8/A	1/4 to 9/32	1-11/32	3-1/4	38.89
7/A	9/32 to 5/16	1-11/32	3-1/2	38.89
6/A	5/16 to 11/32	1-1/2	4-1/8	38.89
5/A	11/32 to 3/8	1-1/2	4-3/8	38.89
4/A	3/8 to 13/32	1-1/2	4-3/4	40.19
3/A	13/32 to 7/16	1-1/2	5	44.48
2/A	7/16 to 15/32	1-5/8	5-1/4	44.48
A	15/32 to 17/32	1-5/8	5-1/2	47.15
B	17/32 to 19/32	1-13/16	5-3/4	47.15
C	19/32 to 21/32	2-1/16	6-1/2	49.06
D	21/32 to 23/32	2-3/16	6-3/4	51.35
E	23/32 to 25/32	2-1/2	7	54.07
F	25/32 to 27/32	2-5/8	7-3/8	55.80
G	27/32 to 15/16	3	8	58.58
H	15/16 to 1-1/16	3-1/4	9	61.80
I	1-1/16 to 1-3/16	3-3/8	10	75.47
J	1-3/16 to 1-11/32	3-7/8	11	89.36
K	1-11/32 to 1-1/2	4-1/4	12	116.08
L	1-1/2 to 1-13/16	4-7/16	14	141.50
M	1-13/16 to 2-7/32	5	16	179.63
N	2-7/32 to 2-3/4	4-13/16	18	316.39
O	2-3/4 to 3-11/32	5-3/16	20	435.07
P	3-9/16 to 4-1/8	6	20	700.00

Sets

Sizes	Pcs.	Set No.	Price
A – H	8	**570A**	424.96
8A – 5A	4	**570B**	155.56
A – K	11	**570C**	705.37

All sets are supplied in wood case



Morse Taper Finishing Reamers

High Speed Steel



This tool is used for accurate reaming of Morse Taper holes in sockets, sleeves and spindles.

List No. **568** – Straight Shank
List No. **569** – Taper Shank*

Size	Diameter Large End	Diameter Small End	Flute Length	Straight Shank Size	Price Each S.S. **568**	Price Each T.S. **569**
0	.2503	.3674	2-1/4	5/16	39.94	61.38
1	.3674	.5170	3	7/16	52.14	65.34
2	.5696	.7444	3-1/2	5/8	62.70	81.52
3	.7748	.9881	4-1/4	7/8	91.42	113.52
4	1.0167	1.2893	5-1/4	1-1/4	135.30	177.54
5	1.4717	1.8005	6-1/4	1-1/2	257.40	351.62
6	2.1120	2.5550	8-1/2	2	547.80	561.00

*Morse Taper No. same as size

Hand Expansion Reamers

High Speed Steel

High Speed MDX SUPERIOR IMPORT

These reamers are used to enlarge holes by a few thousandths. The pilots and guides of these reamers are ground under size to allow smooth entrance. The spiral flute style is especially suited for use in holes where the cut is interrupted by a longitudinal slot or keyway.



Fractional Size

List No. **576** – Straight Flute
List No. **577** – Left Hand Spiral Flute, Right Hand Cut

Recommended Expansion Limits:

Sizes 1/4 to 21/32	.010	Sizes 1-9/16 to 2	.017
Sizes 11/16 to 1	.013	Sizes 2 to 3	.019
Sizes 1-1/16 to 1-1/2	.015		

Size	Dec. Equiv.	Flute Length	Overall Length	Price Each Straight 576	Price Each Spiral 577
3/16	.1875	1-1/8	3-3/8	56.10	58.91
7/32	.2188	1-3/16	3-1/2	56.10	58.91
1/4	.2500	1-7/16	3-7/8	56.10	58.91
9/32	.2813	1-3/4	4	57.42	60.71
5/16	.3125	1-3/4	4	57.42	60.71
11/32	.3438	1-3/4	4	65.67	66.61
3/8	.3750	1-3/4	5	65.67	68.61
13/32	.4062	1-3/4	5	67.52	70.88
7/16	.4375	1-3/4	5	68.61	72.04
15/32	.4688	1-13/16	5-1/2	69.60	73.08
1/2	.5000	1-13/16	5-1/2	68.90	72.35
13.00	.5118	1-13/16	5-1/2	90.00	—
17/32	.5312	2-1/8	6	73.06	76.72
9/16	.5625	2-1/8	6	75.24	79.00
19/32	.5938	2-1/2	6	79.90	84.00
5/8	.6250	2-1/2	6	81.51	85.24
21/32	.6563	2-1/2	6-1/4	89.00	95.00
11/16	.6875	2-1/2	6-1/4	93.06	97.71
23/32	.7188	2-11/16	6-9/16	101.20	106.00
3/4	.7500	2-11/16	7-1/16	102.96	108.11
25/32	.7813	3-1/16	7-1/16	115.83	121.62
13/16	.8125	3-1/16	7-1/16	115.83	121.62
27/32	.8438	3-5/16	7-1/2	124.74	130.98
7/8	.8750	3-5/16	7-1/2	124.74	130.98
29/32	.9063	3-9/16	7-7/8	142.56	149.69
15/16	.9375	3-9/16	8-3/8	142.56	149.69
31/32	.9688	3-3/4	8-3/8	151.80	159.39
1	1.0000	3-3/4	8-7/8	151.80	159.39
1-1/32	1.0313	4	8-11/16	158.40	166.32
1-1/16	1.0625	4	8-11/16	158.40	166.32
1-3/32	1.0938	4-1/8	9	171.60	180.18
1-1/8	1.1250	4-1/8	9	171.60	180.18
1-5/32	1.1563	4-1/4	9-3/8	180.00	183.65
1-3/16	1.1875	4-1/4	9-3/8	174.90	183.65

Size	Dec. Equiv.	Flute Length	Overall Length	Price Each Straight 576	Price Each Spiral 577
1-7/32	1.2188	4-3/8	9-3/4	185.00	195.00
1-1/4	1.2500	4-3/8	9-3/4	179.52	188.50
1-9/32	1.2813	4-1/2	10-1/8	210.00	220.00
1-5/16	1.3125	4-1/2	10-1/8	188.10	197.51
1-11/32	1.3438	4-9/16	10-1/2	210.00	220.00
1-3/8	1.3750	4-9/16	10-1/2	204.60	224.80
1-13/32	1.4062	4-3/4	10-7/8	235.00	250.00
1-7/16	1.4375	4-3/4	10-7/8	224.40	235.62
1-15/32	1.4688	4-13/16	11-1/8	257.40	261.00
1-1/2	1.5000	4-13/16	11-1/8	257.40	270.27
1-9/16	1.5625	4-13/16	11-1/4	271.26	290.00
1-5/8	1.6250	4-7/8	11-1/2	278.52	292.45
1-11/16	1.6875	4-7/8	11-5/8	320.76	333.30
1-3/4	1.7500	5	11-7/8	320.76	336.80
1-13/16	1.8125	5	12-1/16	349.80	367.29
1-7/8	1.8750	5	12-1/4	349.80	367.29
1-15/16	1.9375	5	12-3/8	409.20	429.66
2	2.0000	5	13-1/16	409.20	429.66
2-1/16	2.0625	5-1/8	13-1/4	998.00	—
2-1/8	2.1250	5-1/8	13-1/4	1050.00	1090.00
2-3/16	2.1875	5-1/8	13-1/2	1078.00	—
2-1/4	2.2500	5-1/8	13-1/2	1100.00	1144.00
2-5/16	2.3125	5-1/4	14	1125.00	—
2-3/8	2.3750	5-1/4	14	1150.00	1200.00
2-7/16	2.4375	5-3/8	14-1/2	1172.00	1220.00
2-1/2	2.5000	5-3/8	14-1/2	1190.00	1249.00
2-9/16	2.5625	5-1/2	15	1200.00	—
2-5/8	2.6250	5-1/2	15	1225.00	—
2-11/16	2.6875	5-3/4	15-1/2	1250.00	—
2-3/4	2.7500	5-3/4	15-1/2	1300.00	—
2-13/16	2.8125	5-3/4	15-1/2	1300.00	—
2-7/8	2.8750	5-3/4	15-1/2	1350.00	—
2-15/16	2.9375	6	16-1/2	1400.00	—
3	3.0000	6	16-1/2	1500.00	—

Metric Sizes

List No. **576M** – Straight Shank, Straight Flute

Size	Dec. Equiv.	Flute Length	Overall Length	Price Each
9.00	.3543	1-3/4	4	85.00
13.00	.5118	1-13/16	5-1/2	90.00
21.00	.8268	3-1/4	8-1/2	189.00
29.00	1.1417	4-1/2	9-3/4	196.00
31.00	1.2205	5-1/2	10-7/16	204.50
33.00	1.2992	5-9/16	1-13/16	210.00

Size	Dec. Equiv.	Flute Length	Overall Length	Price Each
37.00	1.4567	5-9/16	11-3/16	265.00
41.00	1.6142	6	12	288.00
43.00	1.6929	6	12	333.90
46.00	1.8110	6-7/16	12-13/16	365.93
47.00	1.8504	6-7/8	13-5/8	388.00
49.00	1.9291	6-7/8	13-5/8	414.00

Sets

Sizes	Description	Pcs.	Set No.	Price
1/4, 3/8, 1/2, 5/8, 3/4	Straight Flute Set	5	**576S**	381.81
1/4, 3/8, 1/2, 5/8, 3/4	Spiral Flute Set	5	**577S**	399.89

All sets are supplied in wood block



Expansion Chucking Reamers

High Speed Steel

Expansion reamers are designed to slightly enlarge holes for proper fit. The expansion feature allows the reamer to be sharpened repeatedly, then adjusted to maintain the original size.

List No. **572** – Straight Shank
List No. **574** – Taper Shank



Size	Dec. Equiv.	Flute Length	Overall Length	S.S. 572 Price	Morse Taper No.	T.S. 574 Price
3/16	.1875	3/4	6-1/2	53.46	—	—
7/32	.2188	3/4	6-1/2	53.46	—	—
1/4	.2500	3/4	6-1/2	53.46	—	—
9/32	.2813	3/4	6-1/2	53.46	—	—
5/16	.3125	3/4	6-1/2	53.46	—	—
11/32	.3438	3/4	6-3/4	53.46	—	—
3/8	.3750	3/4	7	52.77	1	58.32
13/32	.4062	3/4	7	53.50	1	60.71
7/16	.4375	7/8	7	54.85	1	63.07
15/32	.4688	7/8	7	56.86	1	65.45
1/2	.5000	1	8	58.92	1	67.76
17/32	.5312	1	8	60.96	1	70.09
9/16	.5625	1-1/8	8	63.03	1	72.49
19/32	.5938	1-1/8	8	65.07	1	74.84
5/8	.6250	1-1/4	9	67.10	2	77.23
21/32	.6562	1-1/4	9	69.01	2	79.20
11/16	.6875	1-1/4	9	70.94	2	81.58
23/32	.7188	1-1/4	9	72.86	2	81.64
3/4	.7500	1-3/8	9-1/2	74.78	2	86.04
25/32	.7812	1-3/8	9-1/2	77.55	2	89.19
13/16	.8125	1-3/8	9-1/2	80.21	2	92.25
27/32	.8438	1-3/8	9-1/2	82.98	2	95.44
7/8	.8750	1-1/2	10	85.67	2	98.52
29/32	.9062	1-1/2	10	88.47	2	101.77
15/16	.9375	1-1/2	10	91.19	3	104.92
31/32	.9688	1-1/2	10	92.43	3	107.73
1	1.0000	1-5/8	10-1/2	93.82	3	107.73
1-1/32	1.0312	1-5/8	10-1/2	104.78	3	120.45
1-1/16	1.0625	1-5/8	10-1/2	104.78	3	120.52
1-3/32	1.0938	1-3/4	10-1/2	111.54	3	131.34
1-1/8	1.1250	1-3/4	11	115.94	3	133.31
1-5/32	1.1562	1-3/4	11	126.85	3	145.86

Size	Dec. Equiv.	Flute Length	Overall Length	S.S. 572 Price	Morse Taper No.	T.S. 574 Price
1-3/16	1.1875	1-3/4	11	126.85	3	145.88
1-7/32	1.2188	1-3/4	11	141.90	4	161.70
1-1/4	1.2500	1-7/8	11-1/2	137.90	4	158.62
1-9/32	1.2813	1-7/8	11-1/2	147.78	—	—
1-5/16	1.3125	1-7/8	11-1/2	143.48	4	165.01
1-3/8	1.3750	2	12	148.50	4	171.41
1-7/16	1.4375	2	12	154.47	4	177.71
1-1/2	1.5000	2-1/8	12-1/2	160.04	4	184.10
1-9/16	1.5625	2-1/8	12-1/2	173.38	4	184.64
1-5/8	1.6250	2-1/4	13	180.18	4	186.65
1-11/16	1.6875	2-1/4	13	189.42	4	203.28
1-3/4	1.7500	2-3/8	13-1/2	197.34	5	213.51
1-13/16	1.8125	2-3/8	13-1/2	204.93	5	227.30
1-7/8	1.8750	2-1/2	14	216.15	5	236.61
1-15/16	1.9375	2-1/2	14	238.26	5	267.96
2	2.0000	2-1/2	14	243.54	5	281.82
2-1/16	2.0125	2-3/4	14-1/2	—	5	290.07
2-1/8	2.1250	2-3/4	14-1/2	350.00	5	350.00
2-3/16	2.1875	2-3/4	14-1/2	—	5	360.00
2-1/4	2.2500	2-3/4	14-1/2	—	5	360.00
2-5/16	2.3125	2-3/4	14-1/2	—	5	360.00
2-3/8	2.3750	3	15	450.00	5	450.00
2-7/16	2.4375	3	15	—	5	500.00
2-1/2	2.5000	3	15	600.00	5	600.00
2-9/16	2.5625	3	16	—	5	630.00
2-5/8	2.6250	3	16	650.00	5	650.00
2-11/16	2.6875	3	16	—	5	650.00
2-3/4	2.7500	3	16	—	5	685.00
2-13/16	2.8125	3	16	690.00	5	690.00
2-7/8	2.8750	3	16	—	5	710.00
2-15/16	2.9375	3	16	750.00	5	750.00
3	3.0000	3	16	—	5	800.00

Maximum expansion to 1/2" – approximately .006, to 1" – approximately .010, to 1-1/2" – approximately .012.

Jobbers Reamers

High Speed Steel

For use in all types of materials where a long flute is required.

List No. **578** – Straight Flute
List No. **579** – Spiral Flute



Size	Dec. Equiv.	Flute Length	Overall Length	Morse Taper No.	Price Each Straight 578	Price Each Spiral 579
1/4	.2500	2	5-3/16	1	36.00	41.40
9/32	.2812	2	5-3/16	1	37.92	—
5/16	.3125	2-1/4	5-1/2	1	37.49	43.11
11/32	.3438	2-1/4	5-1/2	1	39.88	—
3/8	.3750	2-1/2	5-13/16	1	43.37	—
13/32	.4062	2-1/2	5-13/16	1	45.26	—
7/16	.4375	2-3/4	6-1/8	1	48.97	56.32
15/32	.4688	2-3/4	6-1/8	1	45.75	—
1/2	.5000	3	6-7/16	1	48.97	—
17/32	.5312	3	6-7/16	1	50.56	—
9/16	.5625	3-1/4	6-3/4	1	55.44	—
19/32	.5938	3-1/4	6-3/4	1	56.69	—
5/8	.6250	3-1/2	7-9/16	2	57.76	—
21/32	.6562	3-1/2	7-9/16	2	61.37	—
11/16	.6875	3-7/8	8	2	67.32	77.42
23/32	.7188	3-7/8	8	2	55.70	—

Size	Dec. Equiv.	Flute Length	Overall Length	Morse Taper No.	Price Each Straight 578	Price Each Spiral 579
3/4	.7500	4-3/16	8-3/8	2	67.32	—
25/32	.7812	4-3/16	8-3/8	2	63.78	—
13/16	.8125	4-9/16	8-13/16	2	75.60	86.94
27/32	.8438	4-7/8	9-13/16	2	68.63	—
7/8	.8750	4-7/8	9-13/16	2	84.61	—
15/16	.9375	5-1/8	10	3	89.10	—
1	1.0000	5-7/16	10-3/8	3	96.76	117.45
1-1/16	1.0625	5-5/8	10-5/8	3	102.93	—
1-1/8	1.1250	5-13/16	10-7/8	3	115.57	—
1-3/16	1.1875	6	11-1/8	3	128.70	—
1-1/4	1.2500	6-1/8	12-9/16	4	132.00	—
1-5/16	1.3125	6-1/4	12-11/16	4	138.60	—
1-3/8	1.3750	6-5/16	12-13/16	4	148.50	—
1-7/16	1.4375	6-7/16	13	4	185.10	—
1-1/2	1.5000	6-1/2	13-1/8	4	163.68	—
1-3/4	1.7500	6-3/4	13-5/8	4	324.72	—

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Hand Taps

High Speed Steel – Ground Thread

Hand taps are the most commonly used general purpose taps. They are recommended for tapping free machining steels, stainless steels, aluminum, zinc and ductile steel. Hand taps are utilized in either through or blind hole tapping.



Standard Thread Limits & Flutes

List No. **770** – Standard

List No. **770SET** – 3 Piece Set (Plug, Bottoming, Taper)

List No. **770T** – TiN Coated

List No. **770ST** – Steam Oxide Coated

Steam Oxide Coating produces a thin iron oxide surface which reduces friction between the tool and the chips, acting as a lubrication media.

Plug
3-5 Thread Chamfer
Most versatile choice for through or blind holes.

Bottoming
1-2 Thread Chamfer
Designed for threading near the bottom of blind holes.

Taper
7-10 Thread Chamfer
Have longest standard chamfer for easier starts and less torque.

Please specify plug, bottoming, or taper chamfer when ordering.

Size	Threads Per Inch	Thread Limits	No. of Flutes	Chamfer Available	Price Each: Standard **770**	Price Each: (P,T,B) Set **770SET**	Price Each: TiN Coated **770T**	Price Each: Steam Oxide **770ST**
0	80	H1	2	P,T,B	11.30	33.90	15.12	12.00
1	64	H1	2	P,T,B	11.30	33.90	14.01	12.00
1	72	H2	2	P,T,B	11.30	33.90	14.01	12.00
2	56	H2	3	P,T,B	11.30	33.90	14.00	12.00
2	64	H2	3	P,T,B	11.30	33.90	14.00	12.00
3	48	H2	3	P,T,B	7.50	22.50	9.70	8.00
3	56	H2	3	P,T,B	9.00	27.00	11.03	9.85
4	36	H2	3	P,T,B	11.30	33.90	13.50	12.00
4	40	H2	3	P,T,B	7.00	21.00	8.91	7.75
4	48	H2	3	P,T,B	7.00	21.00	9.41	7.75
5	40	H2	3	P,T,B	7.00	21.00	8.91	7.75
5	44	H2	3	P,T,B	7.90	23.70	9.33	8.80
6	32	H3	3	P,T,B	5.80	17.40	7.70	6.70
6	40	H2	3	P,T,B	5.80	17.40	7.79	6.50
8	32	H3	4	P,T,B	5.80	17.40	7.70	6.50
8	36	H2	4	P,T,B	6.75	20.25	9.30	7.50
10	24	H3	4	P,T,B	6.75	20.25	9.30	7.50
10	32	H3	4	P,T,B	6.75	20.25	9.30	7.50
12	24	H3	4	P,T,B	6.75	20.25	9.30	7.50
12	28	H3	4	P,T,B	6.75	20.25	9.30	7.50
1/4	20	H3	4	P,T,B	6.75	20.25	9.30	7.50
1/4	28	H3	4	P,T,B	6.75	20.25	10.30	7.50
5/16	18	H3	4	P,T,B	7.50	22.50	10.00	8.00
5/16	24	H3	4	P,T,B	7.50	22.50	10.00	8.00
3/8	16	H3	4	P,T,B	8.90	26.70	13.70	9.60
3/8	24	H3	4	P,T,B	8.90	26.70	13.70	9.60
7/16	14	H3	4	P,T,B	13.20	39.60	20.92	14.00
7/16	20	H3	4	P,T,B	13.20	39.60	20.92	14.00
1/2	13	H3	4	P,T,B	14.50	43.50	21.73	15.00
1/2	20	H3	4	P,T,B	14.50	43.50	23.44	15.00
9/16	12	H3	4	P,T,B	23.20	69.60	37.96	24.00
9/16	18	H3	4	P,T,B	23.20	69.60	37.96	24.00
5/8	11	H3	4	P,T,B	27.50	82.50	42.66	28.20
5/8	18	H3	4	P,T,B	27.50	82.50	42.66	28.20
11/16	11	H3	4	P,T,B	34.60	103.80	49.68	35.70
11/16	16	H3	4	P,T,B	34.60	103.80	49.68	35.70
3/4	10	H3	4	P,T,B	36.38	109.14	54.90	35.70
3/4	16	H3	4	P,T,B	36.38	109.14	54.90	37.50
7/8	9	H4	4	P,T,B	49.50	148.50	72.28	50.50
7/8	14	H4	4	P,T,B	49.50	148.50	72.28	50.50
1"	8	H4	4	P,T,B	67.50	202.50	99.46	68.50
1"	12	H4	4	P,T,B	67.50	202.50	103.34	68.50
1"	14	H4	4	P,T,B	67.50	202.50	103.34	68.50
1-1/8	7	H4	4	P,T,B	110.00	330.00	137.61	112.00

Hand Taps

High Speed Steel – Ground Thread



Standard Thread Limits & Flutes

List No. **770** – Standard
List No. **770SET** – 3 Piece Set (Plug, Bottoming, Taper)
List No. **770T** – TiN Coated
List No. **770ST** – Steam Oxide Coated

Please specify plug, bottoming, or taper chamfer when ordering.

Size	Threads Per Inch	Thread Limits	No. of Flutes	Chamfer Available	Price Each Standard **770**	(P,T,B) Set **770SET**	TiN Coated **770T**	Steam Oxide **770ST**
1-1/8	12	H4	4	P,T,B	110.12	330.36	151.85	112.00
1-1/4	7	H4	4	P,T,B	138.65	415.95	208.03	140.07
1-1/4	12	H4	6	P,T,B	138.65	415.95	210.92	140.07
1-3/8	6	H4	4	P,T,B	198.00	594.00	322.92	204.00
1-3/8	12	H4	6	P,T,B	198.00	594.00	325.73	204.00
1-1/2	6	H4	4	P,T,B	220.00	660.00	350.60	230.00
1-1/2	12	H4	6	P,T,B	220.00	660.00	357.21	230.00

Sets

Description	Tap Sizes	Drill Sizes	Pcs.	Case	Set No.	Price
Plug Tap & Drill Set Features larger drill diameters to minimize tap breakage	6-32, 8-32, 10-24, 10-32, 1/4-20, 5/16-18, 3/8-16, 1/2-13	7/64, #29, #23, #20, 13/64, 17/64, P, 7/16	16	Handy Pouch	**770R**	82.50
Plug Tap & Drill Set Features smaller drill diameters to create more percentage of thread.	6-32, 8-32, 10-24, 10-32, 1/4-20, 5/16-18, 3/8-16, 7/16-14, 1/2-13	#36, #29, #25, #21, #7, F, 5/16, U, 27/64	18	Metal Index	Uncoated Plug Taps & Drills **770X**	113.50
					TiN Coated Plug Taps & Drills **770XT**	184.80
					Uncoated Spiral Pointed Taps & Drills **780X**	106.00
Plug Tap & Drill Set	6-40, 8-36, 10-24, 10-32, 1/4-28, 5/16-24, 3/8-24, 7/16-20, 1/2-20	#33, #29, #25, #21, #3, I, Q, 25/64, 29/64	18	Metal Index	**770XF**	116.00
Plug Tap & Drill Set TiN Coated	6-40, 8-36, 10-24, 10-32, 1/4-28, 5/16-24, 3/8- 24, 7/16-20, 1/2-20	#33, #29, #25, #21, #3, I, Q, 25/64, 29/64	18	Metal Index	**770XFT**	202.10
Hand Tap Set All sizes in Plug, Bottoming, and Taper chamfers.	4-40, 5-40, 6-32, 8-32, 10-24, 10-32 1/4-20, 5/16-18, 3/8-16, 7/16-14, 1/2-13,	——	33	Wood Stand	**770S**	284.00







Optional Thread Limits & Flutes

List No. **770H** – Optional Thread Limits
List No. **770F** – Optional Flutes
List No. **770HF** – Optional Thread Limits and Flutes

Please specify plug, bottoming, or taper chamfer when ordering.



Size	Threads Per Inch	Thread Limits	No. of Flutes	Chamfer Available	Price Each Opt. Thread **770H**	Opt. Flute **770F**	Opt. Thread & Flt. **770HF**
0	80	H2	2	P,T,B	12.00	—	—
1	64	H2	2	P,T,B	12.00	—	—
1	72	H1	2	P,T,B	12.00	—	—
2	56	H1	2	P,B	—	—	15.97
2	56	H1	3	P,T,B	12.78	—	—
2	56	H2	2	P,T,B	—	12.78	—
2	64	H1	3	P,T,B	12.78	—	—
2	64	H2	2	P,T,B	—	12.78	—
3	48	H1	3	P,T,B	10.08	—	—
3	48	H2	2	P,T,B	—	12.78	—
3	56	H1	3	P,T,B	10.08	—	—
4	40	H1	2	P,T	—	—	10.01
4	40	H1	3	P,T,B	8.01	—	—
4	40	H2	2	P,T,B	—	8.01	—
4	40	H4	3	P,T	8.01	—	—
4	48	H1	3	P,T,B	8.01	—	—
5	40	H1	3	P,T,B	8.01	—	—
5	40	H2	2	P,T,B	—	8.01	—

Continued on Next Page ▶

Hand Taps

High Speed Steel – Ground Thread

Hand taps are the most commonly used general purpose taps. They are recommended for tapping free machining steels, stainless steels, aluminum, zinc and ductile material. Hand taps are utilized in either through or blind hole tapping.

Optional Thread Limits & Flutes

▶ *Continued*

List No. **770H** – Optional Thread Limits

List No. **770F** – Optional Flutes

List No. **770HF** – Optional Thread Limits and Flutes



Please specify plug, bottoming, or taper chamfer when ordering.

Size	Threads Per Inch	Thread Limits	No. of Flutes	Chamfer Available	Price Each		
					Opt. Thread **770H**	Opt. Flute **770F**	Opt. Thread. & Flt. **770HF**
5	44	H1	3	P,T,B	8.01	—	—
5	44	H2	2	P	—	7.02	—
6	32	H1	2	P,T	—	—	7.02
6	32	H1	3	P,T,B	7.02	—	—
6	32	H2	2	B	—	—	7.02
6	32	H2	3	P,T,B	7.02	—	—
6	32	H3	2	P,T	—	6.39	—
6	40	H1	2	P,T	—	—	7.02
6	40	H1	3	P,T,B	7.02	—	—
6	40	H2	2	P	—	6.39	—
6	40	H3	2	P	—	—	7.02
8	32	H1	2	P,T	—	—	7.02
8	32	H1	3	P,T,B	—	—	7.02
8	32	H1	4	P,T,B	7.02	—	—
8	32	H2	2	P,T,B	—	—	7.02
8	32	H2	3	P,T	—	—	7.02
8	32	H2	4	P,T,B	7.02	—	—
8	32	H3	2	P,T,B	—	6.03	—
8	32	H3	3	P,T	—	6.03	—
8	32	H7	3	P	—	—	7.02
8	32	H7	4	P,T,B	7.02	—	—
8	36	H1	4	P,T,B	8.01	—	—
10	24	H1	2	P,T	—	—	7.02
10	24	H1	3	P	—	—	7.02
10	24	H1	4	P,T,B	7.95	—	—
10	24	H2	3	P,T	—	—	7.02
10	24	H2	4	P,T,B	7.95	—	—
10	24	H3	2	P,T,B	—	7.50	—
10	24	H3	3	P,T,B	—	7.50	—
10	24	H7	3	P,B	—	—	8.25
10	24	H7	4	P,B	8.25	—	—
10	32	H1	2	P,B	—	—	8.25
10	32	H1	4	P,T,B	7.95	—	—
10	32	H2	2	P,T,B	—	—	8.25
10	32	H2	3	P,T,B	—	—	8.25
10	32	H2	4	P,T,B	7.95	—	—
10	32	H3	2	P,T,B	—	7.50	—
10	32	H3	3	P,T,B	—	7.50	—
10	32	H4	2	P,T,B	—	—	8.25
10	32	H6	4	P,T,B	8.25	—	—
10	32	H7	3	P,T,B	—	—	8.25
10	32	H7	4	P,T,B	8.25	—	—
12	24	H1	4	P,T,B	7.95	—	—
12	24	H2	4	P,T,B	7.95	—	—
12	28	H1	4	P,T,B	7.95	—	—
12	28	H2	4	P,T,B	7.95	—	—
12	28	H3	2	P,T	—	7.50	—
1/4	20	H1	2	P	—	—	8.01
1/4	20	H1	3	P,T	—	—	8.01
1/4	20	H1	4	P,T,B	8.10	—	—
1/4	20	H2	2	P,T	—	—	8.01
1/4	20	H2	3	P,T,B	—	—	8.01
1/4	20	H2	4	P,T,B	8.10	—	—
1/4	20	H3	2	P,T,B	—	8.01	—
1/4	20	H3	3	P,T,B	—	8.01	—
1/4	20	H5	3	P,T,B	—	—	8.01

Hand Taps

High Speed Steel – Ground Thread

Hand taps are the most commonly used general purpose taps. They are recommended for tapping free machining steels, stainless steels, aluminum, zinc and ductile material. Hand taps are utilized in either through or blind hole tapping.

High Speed

MADE IN USA

MICHIGAN DRILL & CUTTING TOOLS

Optional Thread Limits & Flutes

List No. **770H** – Optional Thread Limits

List No. **770F** – Optional Flutes

List No. **770HF** – Optional Thread Limits and Flutes



Please specify plug, bottoming, or taper chamfer when ordering.

Size	Threads Per Inch	Thread Limits	No. of Flutes	Chamfer Available	Price Each		
					Opt. Thread **770H**	Opt. Flute **770F**	Opt. Thread. & Flt. **770HF**
1/4	20	H5	4	P,T,B	7.74	—	—
1/4	28	H1	3	P,T	—	—	8.01
1/4	28	H1	4	P,T,B	7.79	—	—
1/4	28	H2	3	P	—	—	8.01
1/4	28	H2	4	P,T,B	8.10	—	—
1/4	28	H3	2	P,T,B	—	8.10	—
1/4	28	H3	3	P,T,B	—	8.10	—
1/4	28	H4	3	P,T,B	—	—	8.01
1/4	28	H4	4	P,T,B	8.10	—	—
1/4	28	H5	4	P,T,B	8.10	—	—
5/16	18	H1	3	P,T,B	—	—	9.00
5/16	18	H1	4	P,T,B	9.14	—	—
5/16	18	H2	4	P,T,B	9.14	—	—
5/16	18	H3	2	P,T,B	—	10.17	—
5/16	18	H3	3	P,T,B	—	9.00	—
5/16	18	H4	4	P,T,B	9.00	—	—
5/16	18	H5	2	P,T,B	---	---	9.00
5/16	18	H5	3	P,T,B	---	---	9.00
5/16	18	H5	4	P,T,B	9.00	—	—
5/16	18	H7	4	P,T	9.00	—	—
5/16	18	H9	2	P,T,B	—	—	9.00
5/16	24	H1	4	P,T,B	9.00	—	—
5/16	24	H2	3	P,T,B	—	—	9.00
5/16	24	H2	4	P,T,B	9.00	—	—
5/16	24	H3	2	P,T,B	—	9.00	—
5/16	24	H3	3	P,T,B	—	9.00	—
5/16	24	H4	3	P,T	—	—	9.00
5/16	24	H4	4	P,T,B	9.00	—	—
5/16	24	H5	4	P	9.00	—	—
3/8	16	H1	3	P,T,B	—	—	11.70
3/8	16	H1	4	P,T,B	11.70	—	—
3/8	16	H2	3	P	—	—	11.70
3/8	16	H2	4	P,T,B	10.22	—	—
3/8	16	H3	3	P,T,B	—	10.17	—
3/8	16	H5	3	P,T,B	—	—	11.70
3/8	16	H5	4	P,T,B	10.22	—	—
3/8	16	H8	3	P,T	—	—	11.70
3/8	24	H1	4	P,T,B	11.70	—	—
3/8	24	H2	3	P,T,B	—	—	11.70
3/8	24	H2	4	P,T,B	10.71	—	—
3/8	24	H3	3	P,T,B	—	11.70	—
3/8	24	H4	3	P,T,B	—	—	11.70
3/8	24	H4	4	P,T,B	10.22	—	—
3/8	24	H5	4	P,T.B	10.22	—	—
3/8	24	H8	3	B	—	—	11.70
7/16	14	H1	4	P,T,B	17.01	—	—
7/16	14	H2	4	P,T,B	17.01	—	—
7/16	14	H3	3	P,T,B	—	17.01	—
7/16	14	H5	3	P,T,B	—	—	17.01
7/16	14	H5	4	P,T,B	17.01	—	—
7/16	20	H1	3	P,T,B	—	—	17.01
7/16	20	H1	4	P,T,B	17.01	—	—
7/16	20	H2	4	P,T,B	17.01	—	—
7/16	20	H3	3	P,T	—	17.01	—
7/16	20	H4	4	P,T,B	17.01	—	—

Continued on Next Page ▶

Hand Taps

High Speed Steel – Ground Thread

Hand taps are the most commonly used general purpose tap. They are recommended for tapping free machining steels, stainless steels, aluminum, zinc and ductile material. Hand taps are utilized in either through or blind hole tapping.

Optional Thread Limits & Flutes

▶ *Continued*

List No. **770H** – Optional Thread Limits

List No. **770F** – Optional Flutes

List No. **770HF** – Optional Thread Limits and Flutes



Please specify plug, bottoming, or taper chamfer when ordering.

Size	Threads Per Inch	Thread Limits	No. of Flutes	Chamfer Available	Price Each Opt. Thread. **770H**	Price Each Opt. Flt. **770F**	Price Each Opt. T&F **770HF**
7/16	20	H5	4	P,T,B	17.01	—	—
7/16	20	H6	4	P,T,B	17.01	—	—
7/16	20	H10	4	P,T	17.01	—	—
1/2	13	H1	4	P,T,B	19.98	—	—
1/2	13	H2	4	P,T,B	19.98	—	—
1/2	13	H3	3	P,T,B	—	20.25	—
1/2	13	H5	3	P,T,B	—	—	20.25
1/2	13	H5	4	P,T,B	19.98	—	—
1/2	13	H8	4	P,T	19.98	—	—
1/2	13	H10	4	P,T,B	19.98	—	—
1/2	20	H1	3	P,T,B	—	—	20.25
1/2	20	H1	4	P,T,B	19.98	—	—
1/2	20	H2	4	P,T,B	19.98	—	—
1/2	20	H3	3	P,T,B	—	20.25	—
1/2	20	H5	3	P,T	—	—	20.25
1/2	20	H5	4	P,T,B	19.98	—	—
9/16	12	H2	4	P,T,B	29.70	—	—
9/16	12	H5	4	P,T,B	29.70	—	—
9/16	18	H1	4	P,T	29.70	—	—
9/16	18	H2	4	P,T,B	29.70	—	—
9/16	18	H5	4	P,T,B	29.70	—	—
5/8	11	H1	4	P,T,B	37.71	—	—
5/8	11	H2	4	P,T,B	37.71	—	—
5/8	11	H5	4	P,T,B	37.71	—	—
5/8	11	H3	3	B	—	38.90	—
5/8	18	H1	4	P,T,B	37.71	—	—
5/8	18	H2	4	P,T,B	37.71	—	—
5/8	18	H4	4	P,T,B	37.71	—	—
5/8	18	H5	4	P,T,B	37.71	—	—
3/4	10	H1	4	P,T	49.50	—	—
3/4	10	H2	4	P,T	49.50	—	—
3/4	10	H3	3	P	—	51.75	—
3/4	10	H5	4	P,T,B	49.50	—	—
3/4	16	H1	4	P,T,B	49.50	—	—
3/4	16	H2	4	P,T	49.50	—	—
3/4	16	H5	4	P,T,B	49.50	—	—
7/8	9	H1	4	P,T,B	67.28	—	—
7/8	9	H3	4	P,T	67.28	—	—
7/8	9	H5	4	P,T	67.28	—	—
7/8	9	H6	4	P,T,B	67.28	—	—
7/8	14	H2	4	P,T	67.28	—	—
7/8	14	H3	4	T	67.28	—	—
7/8	14	H10	4	P,T	67.28	—	—
1"	8	H1	4	P,T,B	87.75	—	—
1"	8	H2	4	P,T	87.75	—	—
1"	8	H3	4	P,T	87.75	—	—
1"	8	H6	4	P,T	87.75	—	—
1"	12	H1	4	P,T,B	87.75	—	—
1"	14	H1	4	P,T,B	87.75	—	—
1"	14	H2	4	P,T,B	87.75	—	—
1"	14	H3	4	P,T,B	87.75	—	—
1"	14	H6	4	P	87.75	—	—
1-1/8	7	H8	4	P,T,B	139.50	—	—
1-1/8	12	H1	4	P,T,B	149.40	—	—
1-1/8	12	H3	4	P,T,B	148.50	—	—
1-1/8	12	H5	4	P,T,B	148.50	—	—
1-3/8	12	H8	6	P,T,B	190.00	—	—
1-1/2	12	H2	4	P,T,B	278.10	—	—

MDX® SUPERIOR IMPORT Hand Taps

High Speed Steel

These taps are made from quality high speed steel.
Intended for general maintenance applications,

Plug
3-5 Thread Chamfer
Most versatile choice for through or blind holes.

Bottoming
1-2 Thread Chamfer
Designed for threading near the bottom of blind holes.

Taper
7-10 Thread Chamfer
Have longest standard chamfer for easier starts and less torque.

High Speed

List No. **772** – Hand Taps

List No. **772SET** – 3 Piece Set (Plug, Bottoming, Taper)

Please specify plug, bottoming, or taper chamfer when ordering.



Size	Threads Per Inch	Price Each	
		Hand Taps **772**	3 Pc. Set **772SET**
0	80	8.45	25.34
1	64	8.25	24.75
1	72	8.25	24.75
2	56	6.86	20.59
2	64	6.86	20.59
3	48	5.41	16.24
3	56	5.41	16.24
4	36	3.89	11.68
4	40	3.89	11.68
4	48	3.89	11.68
5	40	4.06	12.18
5	44	4.06	12.18
6	32	3.23	9.70
6	40	3.23	9.70
8	32	3.23	9.70
8	36	3.23	9.70
10	24	3.23	9.70
10	32	3.23	9.70
12	24	3.43	10.30
12	28	3.43	10.30
1/4	20	3.23	9.70
1/4	28	3.23	9.70
5/16	18	4.16	12.47
5/16	24	4.16	12.47
3/8	16	4.69	14.06
3/8	24	4.69	14.06

Size	Threads Per Inch	Price Each	
		Hand Taps **772**	3 Pc. Set **772SET**
7/16	14	7.69	23.07
7/16	20	7.69	23.07
1/2	13	8.55	25.64
1/2	20	8.55	25.64
9/16	12	13.93	41.80
9/16	18	13.93	41.80
5/8	11	17.02	51.06
5/8	18	17.02	51.06
11/16	11	20.46	61.38
11/16	16	20.46	61.38
3/4	10	22.94	68.81
3/4	16	22.94	68.81
7/8	9	32.67	98.01
7/8	14	32.67	98.01
1"	8	42.90	128.70
1"	12	42.90	128.70
1"	14	42.90	128.70
1-1/8	7	68.05	204.14
1-1/8	12	68.05	204.14
1-1/4	7	88.90	266.71
1-1/4	12	88.90	266.71
1-3/8	6	111.87	335.61
1-3/8	12	111.87	335.61
1-1/2	6	130.02	390.06
1-1/2	12	130.02	390.06

MDX® SUPERIOR IMPORT Spiral Pointed Taps

High Speed Steel

High Speed



List No. **782** – Plug Chamfer

These taps perform well in light production runs.

Size	Threads Per Inch	Price Each
0	80	10.30
1	64	9.36
1	72	9.36
2	56	7.85
2	64	8.98
3	48	6.34
3	56	7.00
4	40	5.15
4	48	5.15
5	40	5.15
5	44	5.15
6	32	4.28
6	40	4.28
8	32	4.28

Size	Threads Per Inch	Price Each
8	36	4.28
10	24	4.28
10	32	4.28
12	24	4.28
12	28	4.28
1/4	20	3.93
1/4	28	3.93
5/16	18	4.29
5/16	24	4.29
3/8	16	3.93
3/8	24	3.93
7/16	14	8.25
7/16	20	8.25
1/2	13	9.08

Size	Threads Per Inch	Price Each
1/2	20	9.08
9/16	12	16.34
9/16	18	16.34
5/8	11	19.07
5/8	18	19.07
11/16	12	17.52
11/16	16	17.52
3/4	10	26.40
3/4	16	26.40
7/8	9	37.95
7/8	14	37.95
1"	8	50.56
1"	12	50.56
1"	14	50.56

Hand Taps - Carbon Steel

Please specify plug, bottoming, or taper chamfer when ordering.

List No. **772CB** – Hand Taps

List No. **772CB SET** – 3 Piece Set (P, T, B)



Size	Threads Per Inch	Price Each: Hand Taps 772CB	Price Each: 3 Pc. Set 772CB SET
0	80	3.35	10.04
1	64	3.12	9.37
1	72	3.12	9.37
2	56	2.99	8.96
2	64	2.99	8.96
3	48	2.16	6.48
3	56	2.16	6.48
4	36	2.16	6.48
4	40	2.16	6.48
4	48	2.16	6.48
5	40	1.79	5.37
5	44	1.79	5.37
6	32	1.79	5.37
6	36	2.48	7.44
6	40	1.79	5.37
8	32	1.79	5.37
8	36	1.79	5.37
10	24	1.93	5.78
10	32	1.97	5.91
12	24	2.24	6.72
12	28	2.24	6.72
14	20	2.24	6.72
1/16	64	1.75	5.24
3/32	50	1.75	5.24
1/8	40	1.75	5.24
5/32	32	1.75	5.24
5/32	36	1.75	5.24
3/16	24	1.93	5.78
3/16	32	1.93	5.78
7/32	24	2.25	6.75
7/32	32	2.25	6.75
1/4	20	2.25	6.75
1/4	24	2.93	8.79
1/4	28	2.25	6.75
5/16	18	2.75	8.26
5/16	24	2.75	8.26

Size	Threads Per Inch	Price Each: Hand Taps 772CB	Price Each: 3 Pc. Set 772CB SET
3/8	16	3.08	9.23
3/8	24	3.08	9.23
7/16	14	4.04	12.12
7/16	20	4.04	12.12
1/2	13	4.64	13.91
1/2	20	4.64	13.91
9/16	12	6.29	18.87
9/16	18	6.29	18.87
5/8	11	6.98	20.93
5/8	18	6.98	20.93
11/16	11	8.91	26.73
11/16	16	8.91	26.73
3/4	10	9.92	29.75
3/4	16	9.92	29.75
7/8	9	13.91	41.72
7/8	14	13.91	41.72
1"	8	17.31	51.92
1"	12	17.31	51.92
1"	14	17.31	51.92
1-1/8	7	34.52	103.55
1-1/8	12	34.52	103.55
1-1/4	7	39.75	119.26
1-1/4	12	39.75	119.26
1-3/8	6	45.77	137.30
1-3/8	12	45.77	137.30
1-1/2	6	53.94	161.81
1-1/2	12	53.94	161.81
1-3/4	5	76.50	229.50
1-7/8*	12	95.00	—
2"	4-1/2	98.10	294.30
2-1/8	12	106.00	318.00
2-1/4	4-1/2	117.00	351.00
2-1/2	4	175.00	525.00
2-7/8	12	288.00	864.00
3"*	12	315.00	—

**Plug Chamfer Only*

Sets

Sizes	Description	Pcs.	Set No.	Price
10-24, 1/4-20, 5/16-18, 3/8-16	NC Set	4	**772CBC**	9.50
10-32, 1/4-28, 5/16-24, 3/8-24	NF Set	4	**772CBF**	9.50



TiN-Coated Carbon Steel Hand Taps



List No. **772CBT** – Plug Chamfer

Size	Threads Per Inch	Price Each
4	40	5.02
6	32	4.65
8	32	5.57
10	24	7.05

Size	Threads Per Inch	Price Each
10	32	7.09
12	24	7.81
14	20	8.05
1/4	20	7.82

Size	Threads Per Inch	Price Each
1/4	28	7.37
5/16	18	10.51
5/16	24	10.51
3/8	24	10.85

Spiral Pointed Carbon Steel Taps



List No. **782CB** – Plug Chamfer

Size	Threads Per Inch	Price Each
4	40	2.54
5	40	2.54
6	32	2.54
6	40	2.54
8	32	2.54
10	24	2.54
10	32	2.54

Size	Threads Per Inch	Price Each
12	24	2.54
14	24	2.54
3/16	24	2.54
1/4	20	2.66
1/4	28	2.66
5/16	18	3.06
5/16	24	3.06

Size	Threads Per Inch	Price Each
3/8	16	3.56
3/8	24	3.56
7/16	14	4.95
7/16	20	4.95
1/2	13	6.12
1/2	20	6.12

Metric Carbon Steel Taps



Please specify plug, bottoming, or taper chamfer when ordering.

List No. **773MCB** – Hand Taps

List No. **773MCB SET** – 3 Piece Set (P, T, B)

Size mm	Pitch mm	Price Each: Hand Taps **773MCB**	Price Each: 3 Pc. Set **773MCB SET**
3.00	.50	2.48	7.43
3.00	.60	2.48	7.43
4.00	.70	2.25	6.75
4.00	.75	2.25	6.75
5.00	.75	2.25	6.75
5.00	.80	2.25	6.75
5.00	.90	2.48	7.43
6.00	.75	2.48	7.43
6.00	1.00	2.48	7.43
7.00	1.00	2.93	8.78
8.00	1.00	3.11	9.32
8.00	1.25	3.11	9.32
9.00	.75	3.51	10.53
9.00	1.00	3.51	10.53
9.00	1.25	4.19	12.56
10.00	1.00	4.19	12.56
10.00	1.25	4.19	12.56
10.00	1.50	4.19	12.56
11.00	1.00	4.50	13.50
11.00	1.50	4.50	13.50
12.00	1.25	4.86	14.58

Size mm	Pitch mm	Price Each: Hand Taps **773MCB**	Price Each: 3 Pc. Set **773MCB SET**
12.00	1.50	4.86	14.58
12.00	1.75	4.86	14.58
13.00	1.75	6.75	20.25
14.00	1.25	6.75	20.25
14.00	1.50	6.75	20.25
14.00	2.00	6.75	20.25
16.00	1.50	8.55	25.65
16.00	2.00	8.55	25.65
18.00	1.50	11.48	34.43
18.00	2.50	11.48	34.43
20.00	1.50	13.50	40.50
20.00	2.50	13.50	40.50
22.00	1.50	18.00	54.00
22.00	2.50	18.00	54.00
24.00	1.50	22.50	67.50
24.00	3.00	22.50	67.50
27.00	2.00	28.35	85.05
27.00	3.00	28.35	85.05
30.00	2.00	37.80	113.40
30.00	3.50	37.80	113.40

Tap Lubricants



Professional Tap Lubricant Biodegradable

For metal & metal cutting applications

Size	Tool No.	Price Each
4 ounce	**T0065**	4.90
16 ounce	**T0070**	15.68
1 Gallon	**T0075**	94.08
5 Gallon	**T0080**	343.40
35 Gallon	**T0085**	1836.80
55 Gallon	**T0090**	3241.00

Aluminum Formula Tap Lubricant

For Superior aluminum machining

Size	Tool No.	Price Each
4 ounce	**T0035**	4.90
16 ounce	**T0040**	15.68
1 Gallon	**T0045**	94.08
5 Gallon	**T0050**	343.40
35 Gallon	**T0055**	1836.80
55 Gallon	**T0060**	3241.00

Standard Tap Lubricant

For metal & metal cutting applications

Size	Tool No.	Price Each
4 ounce	**T0095**	4.90
16 ounce	**T0100**	15.68
1 Gallon	**T0105**	94.08
5 Gallon	**T0110**	343.40
35 Gallon	**T0115**	1836.80
55 Gallon	**T0120**	3241.00

Spiral Pointed Taps

High Speed Steel – Ground Thread



Spiral Pointed Taps are used to solve the problem of tap breakage in through hole tapping in a wide variety of materials. They shoot the chips ahead of the tap thereby reducing loading and clogging in the flutes.

MADE IN USA

MICHIGAN DRILL & CUTTING TOOLS

Standard

List No. **780** – Plug Chamfer

List No. **780B** – Bottoming

Size	Threads Per Inch	Thread Limits	No. of Flutes	Price Each Plug 780	Price Each Bottoming 780B
0	80	H1	2	13.34	14.67
1	64	H1	2	13.34	14.67
1	72	H2	2	13.34	—
2	56	H2	2	10.30	11.33
2	64	H2	2	13.34	14.67
3	48	H2	2	8.22	9.04
3	56	H2	2	8.92	9.81
4	36	H2	2	9.20	10.12
4	40	H2	2	6.64	7.30
4	48	H2	2	7.68	8.45
5	40	H2	2	6.95	7.65
5	44	H2	2	7.95	8.75
6	32	H3	2	5.52	6.07
6	40	H2	2	6.28	6.91
8	32	H3	2	5.52	6.07
8	36	H2	2	6.28	6.91
10	24	H3	2	5.52	6.07
10	32	H3	2	5.52	6.07
12	24	H3	2	6.28	6.91
12	28	H3	2	6.28	6.91
1/4	20	H3	2	5.26	5.78
1/4	28	H3	2	5.26	5.78
5/16	18	H3	2	7.65	8.41
5/16	24	H3	2	7.65	8.41
3/8	16	H3	3	7.69	8.46
3/8	24	H3	3	7.69	8.46
7/16	14	H3	3	12.60	—
7/16	20	H3	3	12.60	—
1/2	13	H3	3	13.08	16.40
1/2	20	H3	3	13.08	—
9/16	12	H3	3	25.48	—
9/16	18	H3	3	25.48	—
5/8	11	H3	3	27.50	—
5/8	18	H3	3	27.50	—
3/4	10	H3	3	38.80	—
3/4	16	H3	3	38.80	—
7/8	9	H4	3	65.00	—
7/8	14	H4	3	65.00	—
1"	8	H4	3	88.00	—
1"	12	H4	3	88.00	—
1"	14	H4	3	88.00	—

Optional Thread Limits

List No. **780H** – Plug Chamfer

Size	Threads Per Inch	Thread Limits	No. of Flutes	Price Each
0	80	H2	2	13.34
1	64	H2	2	13.34
1	72	H1	2	13.34
2	56	H1	2	13.34
2	56	H3	2	13.34
2	64	H1	2	13.34
3	48	H1	2	9.20
3	56	H1	2	9.20
4	40	H1	2	8.65
4	48	H1	2	8.65
5	40	H1	2	8.65
5	44	H1	2	10.50
6	32	H1	2	6.50
6	32	H2	2	6.50
6	32	H6	2	6.50
6	40	H1	2	8.50
8	32	H1	2	6.50
8	32	H2	2	6.50
8	32	H5	2	6.50
8	36	H1	2	7.50
8	36	H3	2	7.50
10	24	H1	2	6.50
10	24	H2	2	6.50
10	24	H5	2	6.50
10	32	H1	2	6.50
10	32	H2	2	6.50
10	32	H4	2	6.50
10	32	H5	2	6.50
12	24	H1	2	7.00
12	24	H2	2	7.00
12	28	H1	2	7.00
1/4	20	H1	2	6.50
1/4	20	H2	2	6.50
1/4	20	H5	2	6.50
1/4	28	H1	2	6.50
1/4	28	H2	2	6.50
1/4	28	H4	2	6.50
1/4	28	H5	3	6.50
5/16	18	H1	2	8.50
5/16	18	H2	2	8.50
5/16	18	H5	2	8.50
5/16	24	H1	2	8.50
5/16	24	H2	2	8.50
5/16	24	H4	2	8.50
5/16	24	H5	2	8.50
3/8	16	H1	3	9.24
3/8	16	H2	3	9.24
3/8	16	H5	3	9.24
3/8	24	H1	2	9.24
3/8	24	H2	3	9.24
3/8	24	H4	3	9.24
3/8	24	H7	3	9.24
7/16	14	H1	3	14.11
7/16	14	H2	3	14.11
7/16	14	H4	3	14.11
7/16	14	H5	3	14.11
7/16	20	H1	3	14.11
7/16	20	H2	3	14.11
7/16	20	H5	3	14.11
1/2	13	H1	3	16.87
1/2	13	H2	3	16.87
1/2	20	H1	3	16.87
1/2	20	H2	3	16.87
1/2	20	H5	3	16.87
9/16	12	H1	3	32.50
5/8	11	H5	3	33.40
3/4	10	H5	3	46.50
3/4	16	H5	3	46.50
7/8	9	H5	3	72.60
1"	8	H6	3	100.72

Coated Spiral Pointed Taps

High Speed Steel



List No. **780ST** – Surface Treated
Steam Oxide Coating produces a thin iron oxide surface which reduces friction between the tool and the chips, acting as a solid lubricant.

List No. **780T** – TiN Coated
Provides thin coating for wear and lubricity.
Also increases tool life and productivity.

High Speed

MADE IN USA

Size	Threads Per Inch	Thread Limits	No. of Flutes	Price Each Steam Oxide 780ST	Price Each TiN Coated 780T
0	80	H1	2	14.20	18.00
1	64	H1	2	14.20	18.00
1	72	H2	2	14.20	18.00
2	56	H2	2	11.20	15.00
2	64	H2	2	14.40	15.72
3	48	H2	2	9.21	11.50
3	56	H2	2	9.21	11.50
4	36	H2	2	9.45	11.43
4	40	H2	2	7.30	11.43
4	48	H2	2	8.25	11.43
5	40	H2	2	7.50	11.43
5	44	H2	2	8.50	11.43
6	32	H3	2	6.20	9.63
6	40	H2	2	6.83	9.63
8	32	H3	2	6.20	9.63
8	36	H2	2	6.83	9.63
10	24	H3	2	6.20	9.63
10	32	H3	2	6.20	9.63
12	24	H3	2	6.83	10.98
12	28	H3	2	6.83	10.98
1/4	20	H3	2	6.10	10.98

Size	Threads Per Inch	Thread Limits	No. of Flutes	Price Each Steam Oxide 780ST	Price Each TiN Coated 780T
1/4	28	H3	2	6.10	10.98
5/16	18	H3	2	8.25	10.36
5/16	24	H3	2	8.25	10.36
3/8	16	H3	3	8.82	13.24
3/8	24	H3	3	8.82	21.16
7/16	14	H3	3	13.50	21.16
7/16	20	H3	3	13.50	21.20
1/2	13	H3	3	14.50	21.20
1/2	20	H3	3	14.50	21.20
9/16	12	H3	3	26.80	31.72
9/16	18	H3	3	26.80	31.72
5/8	11	H3	3	29.00	41.00
5/8	18	H3	3	29.00	41.00
3/4	10	H3	3	40.59	55.00
3/4	16	H3	3	40.59	55.00
7/8	9	H4	3	68.00	88.20
7/8	14	H4	3	68.00	88.20
1"	8	H4	3	91.00	123.30
1"	12	H4	3	91.00	123.30
1"	14	H4	3	91.00	123.30

Metric Spiral Pointed Taps

High Speed Steel – Ground Thread

High Speed

MDX® SUPERIOR IMPORT



List No. **774M** – Plug Chamfer

Size mm	Pitch mm	No. of Flutes	Hand Tap 774M
1.40	.30	2	19.34
1.50	.30	2	19.34
1.50	.35	2	24.03
1.60	.35	2	19.34
1.70	.20	2	19.34
1.70	.35	2	19.34
1.80	.35	2	19.34
2.00	.25	2	17.82
2.00	.40	2	17.82
2.00	.45	2	17.82
2.20	.45	2	14.22
2.30	.40	2	14.22
2.50	.45	2	14.22
2.50	.50	2	13.75
2.60	.35	2	13.75
2.60	.45	2	14.22
2.80	.45	2	14.22
3.00	.35	2	10.23
3.00	.50	2	10.23
3.00	.60	2	10.23
3.50	.50	2	8.81
3.50	.60	2	8.81
4.00	.35	2	10.23
4.00	.50	2	8.81
4.00	.70	2	8.81
4.50	.50	2	10.23
4.50	.75	2	8.81
5.00	.50	2	8.81
5.00	.75	2	8.81
5.00	.80	2	8.81

Size mm	Pitch mm	No. of Flutes	Hand Tap 774M
5.00	.90	2	8.81
5.00	1.00	2	8.81
5.50	.90	2	8.81
6.00	.50	2	10.23
6.00	.75	2	8.81
6.00	.80	2	8.81
6.00	1.00	2	8.81
6.30	1.00	2	8.81
7.00	.50	2	10.23
7.00	.75	2	10.23
7.00	1.00	2	10.23
8.00	.50	2	10.23
8.00	.75	2	10.23
8.00	1.00	2	10.23
8.00	1.25	2	10.23
8.00	1.50	2	10.23
9.00	.50	2	10.23
9.00	1.00	2	10.23
9.00	1.25	2	10.23
10.00	.50	3	16.90
10.00	.75	3	16.90
10.00	1.00	3	16.90
10.00	1.25	3	16.90
10.00	1.50	3	16.90
11.00	.50	3	16.90
11.00	.75	3	16.90
11.00	1.00	3	16.90
11.00	1.50	3	16.90
12.00	.50	3	20.70
12.00	.75	3	20.70

Size mm	Pitch mm	No. of Flutes	Hand Tap 774M
12.00	.80	3	20.70
12.00	1.00	3	20.70
12.00	1.25	3	20.70
12.00	1.50	3	20.70
12.00	1.75	3	20.70
13.00	.50	3	25.88
13.00	1.00	3	25.88
13.00	1.25	3	25.88
13.00	1.50	3	25.88
13.00	2.00	3	25.88
14.00	.50	3	31.37
14.00	.75	3	31.37
14.00	1.25	3	31.37
14.00	1.50	3	31.37
14.00	2.00	3	31.37
16.00	1.00	3	36.57
16.00	1.50	3	36.57
16.00	2.00	3	36.57
18.00	1.00	3	45.78
18.00	1.50	3	45.78
18.00	2.00	3	45.78
18.00	2.50	3	45.78
20.00	1.00	3	66.48
20.00	1.50	3	66.48
20.00	2.00	3	66.48
20.00	2.50	3	66.48
22.00	1.50	3	88.16
22.00	2.50	3	88.16
24.00	2.00	3	106.69
24.00	3.00	3	106.69

Metric Hand Taps

High Speed Steel – Ground Thread



Please specify plug, bottoming or taper chamfer when ordering.

List No. **773M** – Hand Taps
List No. **773M SET** – 3 Piece Set (Plug, Bottoming, Taper)

MDX® SUPERIOR IMPORT

Size mm	Pitch mm	No. of Flutes	Price Each Hand Tap 773M	Price Each 3 Pc. Set 773MSET
1.00	.20	2	21.15	63.45
1.00	.25	2	21.15	63.45
1.10	.25	2	21.15	63.45
1.20	.20	2	21.15	63.45
1.20	.25	2	21.15	63.45
1.40	.20	2	21.15	63.45
1.40	.30	2	21.15	63.45
1.50	.30	2	21.15	63.45
1.50	.35	2	21.15	63.45
1.60	.35	2	18.14	54.43
1.70	.20	2	18.14	54.43
1.70	.35	2	18.14	54.43
1.80	.35	2	18.14	54.43
2.00	.25	3	17.28	51.84
2.00	.35	3	17.28	51.84
2.00	.40	3	17.28	51.84
2.00	.45	3	17.28	51.84
2.20	.40	3	14.80	44.40
2.20	.45	3	11.52	34.56
2.30	.40	3	11.52	34.56
2.50	.45	3	10.62	31.86
2.50	.50	3	10.62	31.86
2.50	.55	3	14.80	44.40
2.60	.35	3	10.62	31.86
2.60	.45	3	10.62	31.86
2.80	.45	3	10.62	31.86
3.00	.35	3	8.82	26.46
3.00	.50	3	8.82	26.46
3.00	.60	3	7.29	21.87
3.50	.35	3	7.29	21.87
3.50	.50	3	7.29	21.87
3.50	.60	3	7.29	21.87
4.00	.35	4	8.28	24.84
4.00	.50	4	7.56	22.68
4.00	.70	4	7.29	21.87
4.00	.75	4	7.56	22.68
4.50	.50	4	7.56	22.68
4.50	.75	4	7.29	21.87
5.00	.50	4	7.56	22.68
5.00	.70	4	7.56	22.68
5.00	.75	4	7.56	22.68
5.00	.80	4	7.29	21.87
5.00	.90	4	7.56	22.68
5.00	1.00	4	7.56	22.68
5.50	.70	4	7.56	22.68
5.50	.90	4	7.56	22.68
6.00	.50	4	7.74	23.22
6.00	.75	4	7.74	23.22
6.00	1.00	4	7.74	23.22
6.30	1.00	4	8.37	25.11
7.00	.50	4	8.37	25.11
7.00	.75	4	8.37	25.11
7.00	1.00	4	8.37	25.11
7.00	1.25	4	8.37	25.11
8.00	.50	4	8.28	24.84
8.00	.75	4	8.28	24.84
8.00	1.00	4	8.28	24.84
8.00	1.25	4	8.28	24.84
8.00	1.50	4	8.34	25.03
8.50	1.50	4	10.88	32.64
9.00	.50	4	10.88	32.64
9.00	.75	4	10.88	32.64
9.00	1.00	4	10.88	32.64
9.00	1.25	4	10.88	32.64
9.00	1.50	4	10.88	32.64
9.00	2.00	4	10.88	32.64
10.00	.50	4	11.79	35.37
10.00	.75	4	11.79	35.37
10.00	1.00	4	11.79	35.37
10.00	1.25	4	11.79	35.37
10.00	1.50	4	12.42	37.26
11.00	.50	4	15.83	47.49
11.00	.75	4	15.83	47.49
11.00	1.00	4	15.83	47.49
11.00	1.25	4	15.83	47.49
11.00	1.50	4	15.83	47.49
12.00	.50	4	18.90	56.70
12.00	.80	4	18.90	56.70
12.00	.75	4	18.90	56.70
12.00	1.00	4	18.90	56.70
12.00	1.25	4	18.90	56.70
12.00	1.50	4	18.90	56.70
12.00	1.75	4	18.90	56.70
13.00	.50	4	28.08	84.24
13.00	1.00	4	28.08	84.24
13.00	1.25	4	28.08	84.24
13.00	1.50	4	28.08	84.24
13.00	1.75	4	28.08	84.24
13.00	2.00	4	28.08	84.24
14.00	.50	4	28.08	84.24
14.00	.75	4	28.08	84.24
14.00	1.00	4	28.08	84.24
14.00	1.25	4	28.08	84.24
14.00	1.50	4	28.08	84.24
14.00	1.75	4	28.08	84.24
14.00	2.00	4	28.08	84.24
15.00	.50	4	34.44	103.33
15.00	1.00	4	34.44	103.33
15.00	1.25	4	34.44	103.33
15.00	1.50	4	34.44	103.33
15.00	2.00	4	34.44	103.33
16.00	.50	4	34.44	103.33
16.00	.75	4	34.44	103.33
16.00	1.00	4	34.44	103.33
16.00	1.25	4	34.44	103.33
16.00	1.50	4	34.44	103.33
16.00	1.75	4	34.44	103.33
16.00	2.00	4	34.44	103.33
16.00	2.50	4	34.44	103.33
17.00	.50	4	34.44	103.33
17.00	.75	4	46.26	138.78
17.00	1.00	4	46.26	138.78
17.00	1.50	4	46.26	138.78
17.00	2.00	4	46.26	138.78
18.00	.50	4	46.26	138.78
18.00	.75	4	46.26	138.78
18.00	1.00	4	46.26	138.78
18.00	1.25	4	46.26	138.78
18.00	1.50	4	46.26	138.78
18.00	1.75	4	46.26	138.78
18.00	2.00	4	46.26	138.78
18.00	2.50	4	46.26	138.78
19.00	.50	4	55.51	166.53
19.00	1.00	4	55.51	166.53
19.00	1.50	4	55.51	166.53
19.00	2.00	4	55.51	166.53
20.00	.75	4	62.90	188.70
20.00	1.00	4	62.90	188.70
20.00	1.25	4	62.90	188.70
20.00	1.50	4	62.90	188.70
20.00	2.00	4	62.90	188.70
20.00	2.50	4	62.90	188.70
21.00	.75	4	68.75	206.24
21.00	1.00	4	68.75	206.24
21.00	1.50	4	68.75	206.24
21.00	2.00	4	68.75	206.24
21.00	2.50	4	68.75	206.24
22.00	1.00	4	65.48	196.43
22.00	1.50	4	65.48	196.43
22.00	2.00	4	65.48	196.43
22.00	2.50	4	65.48	196.43
23.00	1.00	4	78.58	235.74
23.00	1.50	4	78.58	235.74
23.00	2.00	4	78.58	235.74
23.00	2.50	4	78.58	235.74
23.00	3.00	4	78.58	235.74
24.00	1.00	4	84.05	252.15
24.00	1.25	4	84.05	252.15
24.00	1.50	4	84.05	252.15
24.00	2.00	4	84.05	252.15
24.00	3.00	4	84.05	252.15
25.00	1.00	4	147.56	442.67
25.00	1.50	4	147.56	442.67
25.00	2.00	4	147.56	442.67
25.00	3.00	4	147.56	442.67
26.00	1.50	4	147.56	442.67
26.00	2.00	4	147.56	442.67
27.00	1.00	4	108.45	325.35
27.00	1.50	4	108.45	325.35
27.00	2.00	4	108.45	325.35
27.00	2.50	4	108.45	325.35
27.00	3.00	4	102.51	325.35
28.00	1.50	4	177.47	532.41
28.00	2.00	4	177.47	532.41
28.00	3.00	4	177.47	532.41
30.00	1.00	4	177.47	532.41
30.00	1.50	4	177.47	532.41
30.00	2.00	4	177.47	532.41
30.00	2.50	4	177.47	532.41
30.00	3.00	4	177.47	532.41
30.00	3.50	4	177.47	532.41
32.00	1.50	4	189.32	567.95
32.00	2.00	4	177.47	532.41
32.00	3.50	4	189.32	567.95
33.00	1.50	4	241.73	725.19
33.00	2.00	4	189.32	567.95
33.00	3.00	4	189.32	567.95
33.00	3.50	4	189.32	567.95
34.00	1.50	4	241.73	725.19
34.00	2.00	4	241.73	725.19
35.00	1.00	4	241.73	725.19
35.00	1.50	4	241.73	725.19
36.00	1.50	4	241.73	725.19
36.00	2.00	4	241.73	725.19
36.00	3.00	4	241.73	725.19
36.00	4.00	4	241.73	725.19
38.00	1.00	4	319.25	957.74
38.00	1.50	4	319.25	957.74
38.00	4.00	4	319.25	957.74
39.00	1.50	4	319.25	957.74
39.00	2.00	6	319.25	957.74

Metric Hand Taps

High Speed Steel – Ground Thread



Please specify plug, bottoming or taper chamfer when ordering.

List No. **773M** – Hand Taps
List No. **773M SET** – 3 Piece Set (Plug, Bottoming, Taper)

MDX SUPERIOR IMPORT

Size mm	Pitch mm	No. of Flutes	Price Each: Hand Tap 773M	Price Each: 3 Pc. Set 773MSET
39.00	4.00	6	319.25	957.74
40.00	1.50	6	410.40	1231.20
40.00	2.00	6	410.40	1231.20
40.00	4.00	6	410.40	1231.20
42.00	1.50	6	410.40	1231.20
42.00	2.00	6	410.40	1231.20
42.00	3.00	6	410.40	1231.20
42.00	4.50	6	410.40	1231.20
45.00	1.50	6	410.40	1231.20
45.00	2.00	6	410.40	1231.20
45.00	3.00	6	410.40	1231.20
45.00	4.00	6	410.40	1231.20
45.00	4.50	6	410.40	1231.20
48.00	1.50	6	436.50	1309.50
48.00	2.00	6	436.50	1309.50
48.00	3.00	6	436.50	1309.50
48.00	4.50	6	436.50	1309.50
48.00	5.00	6	436.50	1309.50
50.00	1.50	6	436.50	1309.50
50.00	3.00	6	436.50	1309.50
52.00	1.50	6	539.10	1617.30
52.00	2.50	6	539.10	1617.30
52.00	3.00	6	539.10	1617.30
52.00	5.00	6	539.10	1617.30
56.00	3.00	6	593.01	1779.03
56.00	3.50	6	593.01	1779.03
56.00	4.00	6	593.01	1779.03
56.00	5.00	6	593.01	1779.03
56.00	5.50	6	593.01	1779.03
64.00	1.50	6	895.00	2685.00
64.00	3.00	6	895.00	2685.00
64.00	6.00	6	895.00	2685.00
68.00	6.00	6	900.00	2700.00
72.00	3.00	6	1100.00	3300.00
72.00	6.00	6	1100.00	3300.00

List No. **773MU** – Hand Taps
List No. **773MUSET** – 3 Piece Set (Plug, Bottoming, Taper)

MADE IN USA

Size mm	Pitch mm	No. of Flutes	Price Each: Hand Tap 773MU	Price Each: 3 Pc. Set 773MUSET
1.60	.35	2	22.23	66.69
1.80	.35	2	22.23	66.69
2.00	.40	3	22.23	66.69
2.20	.45	2	24.50	73.50
2.50	.45	3	13.76	41.28
3.00	.50	3	13.28	39.84
3.50	.60	3	9.52	28.56
4.00	.70	3	9.52	28.56
4.50	.75	4	9.52	28.56
5.00	.80	4	10.00	30.00
6.00	1.00	4	10.00	30.00
6.30	1.00	4	10.89	32.67
7.00	1.00	4	10.89	32.67
8.00	1.00	4	10.89	32.67
8.00	1.25	4	10.89	32.67
10.00	1.25	4	20.38	61.14
10.00	1.50	4	20.38	61.14
12.00	1.25	4	24.40	73.20
12.00	1.75	4	24.40	73.20
14.00	1.50	4	36.21	108.63
14.00	2.00	4	36.21	108.63
16.00	1.50	4	44.36	133.08
16.00	2.00	4	44.36	133.08
18.00	1.50	4	59.64	178.92
18.00	2.50	4	59.64	178.92
20.00	1.50	4	81.02	243.06
20.00	2.50	4	81.02	243.06
22.00	1.50	4	84.33	252.99
22.00	2.50	4	84.33	252.99
24.00	2.00	4	108.25	324.75
24.00	3.00	4	108.25	324.75

Tap & Drill Metric Sets

High Speed Steel – Ground Thread



Metric Tap Sizes	Metric Drill Sizes	Pcs.	Description	Set No.	Price
3x0.5, 3.5x0.6, 4x0.7, 5x0.8, 6x1.0, 8x1.25, 10x1.5, 12x1.75	2.50, 2.90, 3.30, 4.20, 5.00, 6.75, 8.50, 10.25	16	U.S.A. in vinyl pouch	**773S**	139.00
2.5x.45, 3x.50, 3.5x.60, 4x.80, 5x80, 6x1.00, 8x1.25, 10x1.50, 12x1.75	2.05, 2.50, 2.90, 3.30, 4.20, 5.00, 6.70, 8.50, 10.20	18	U.S.A. TiN Coated in Huot Metal Case	**773MXT**	224.95
2x.4, 2.5x.45, 3x.5, 3.5x.6, 4x.7, 5x.8, 6x1, 7x1, 8x1.25, 10x1.5, 12x1.75	—	33	Import in wood stand (P, B,&T)	**773MA**	339.00



COLORMAX™ High Performance Taps

MADE IN USA

Material Specific Color Band Taps

High Performance Taps are designed and manufactured for successful threading in a variety of part materials for high and low volume applications. These materials include aluminum, stainless steels, nickel alloys, titanium alloys, mold steels, irons, brass, bronze and plastics. Special geometries, tap surface treatments and premium steels interact to offer the highest level of performance.
Special tool geometry creates less torque during tapping which allows better removal of chips so the tool can run cooler. CNC necked design taps increase the flow of coolant to the cutting teeth and reduces surface contact between the tool and the workpiece for more efficient threading.

Blue Band - For General Ductile Materials

- For general machine tapping of mild carbon steels such as 1018,1010, 1035, 1045, 1050 and 1065.
- Designed for high speed tapping applications.
- Developed to withstand high stress and high heat associated with high speed CNC production tapping.
- Up to 25HRc.



Yellow Band - For Tough Materials

- Superior performance hardened tool steels such as 4140, 4340, H13, D2 and a new variety of stainless steels.
- Designed for high speed tapping applications.
- Developed to withstand high stress and high heat associated with high speed CNC production tapping.
- Up to 35HRc.

Green Band - For All Types Of Aluminum

For all types of aluminum such as:
- Pure Aluminum,
- Aluminum Alloys
- Aluminum Alloy Castings
- Up to 38HRc

Red Band - For High Tensile Materials

- Powdered metal taps offer superior toughness, lubricity and are made of super hard powder high speed steel.
- Used in heat resistant materials, high strength stainless steel and titanium alloys as well as other high tensile steels and alloys including tool steel and nickel alloy.
- Up to 48 HRc.

Black Band - For Multi Purpose Use

For multiple uses in materials such as:
- Low Carbon Steel (>HRc16)
- Medium to High Carbon Steel (>HRc23)
- Free Machining Stainless Steel (>HRc23)
- and heat/corrosion stainless steel (>HRc24)
- Stainless Steel Castings (>38HRc)
- Aluminum, aluminum alloys, cast iron, copper and brass.

Blue Band Taps

3% Vanadium M35 Cobalt Steel

For Mild Steels up to 25HRc

For general machine tapping of mild carbon steels such as 1018,1010, 1035, 1045, 1050 and 1065. Designed for high speed tapping applications. Developed to withstand high stress and high heat associated with high speed CNC production tapping.



List No. **750PB** – Spiral Point Oxide
List No. **750APB**– Spiral Point Bright
List No. **750FB** – Spiral Flute Oxide
List No. **750AFB**– Spiral Flute Bright

Size	Thread Pitch	No. of Flutes	Thread Limit	Price Each 750PB 750APB	Price Each 750FB 750AFB
4	40	H2	2	7.07	13.91
6	32	H3	2	7.52	13.91
8	32	H3	3	7.52	17.25
10	24	H3	3	7.52	16.95
10	32	H3	3	7.52	16.95
1/4	20	H3	3	8.66	17.25
1/4	28	H3	3	8.66	17.25
5/16	18	H3	3	11.63	23.48
5/16	24	H3	3	11.63	23.48
3/8	16	H3	3	11.78	28.27
3/8	24	H3	3	11.78	28.27
7/16	14	H3	3	18.77	42.33
1/2	13	H3	3	21.20	46.21

Size	Thread Pitch	No. of Flutes	Thread Limit	Price Each 750PB 750APB	Price Each 750FB 750AFB
1/2	20	H3	3	21.20	46.21
5/8	11	H4	4	21.96	47.58
5/8	18	H4	4	21.96	47.58
3/4	16	H4	4	30.93	67.26
3/4	18	H4	4	30.93	67.26
7/8	9	H4	4	66.65	109.36
7/8	14	H4	4	66.65	109.36
1	8	H4	4	90.36	145.46
1	12	H4	4	90.36	145.46
1-1/8	7	H4	4	130.95	176.93
1-1/4	7	H4	4	140.60	189.92
1-3/8	6	H4	4	192.96	254.83
1-1/2	6	H4	4	254.45	290.85

COLORMAX™ High Performance Taps

MADE IN USA

Yellow Band Taps

3% Vanadium M35 Cobalt Steel

For Tool, Stainless Steels up to 35HRc

For superior performance hardened tool steels such as 4140, 4340, H13, D2 and a new variety of stainless steels. Designed for high speed tapping applications. Developed to withstand high stress and high heat associated with high speed CNC production tapping.



List No. **750PY** – Spiral Point Oxide
List No. **750APY**– Spiral Point Bright
List No. **750FY** – Spiral Flute Oxide
List No. **750AFY**– Spiral Flute Bright

Size	Thread Pitch	No. of Flutes	Thread Limit	Price Each 750PY 750APY	Price Each 750FY 750AFY
4	40	H2	2	10.26	15.81
6	32	H3	2	10.64	18.47
8	32	H3	3	10.64	18.47
10	24	H3	3	10.64	18.16
10	32	H3	3	10.64	18.16
1/4	20	H3	3	12.24	18.47
1/4	28	H3	3	12.24	18.47
5/16	18	H3	3	15.35	23.48
5/16	24	H3	3	15.35	23.48
3/8	16	H3	3	15.73	28.20
3/8	24	H3	3	15.73	28.20
7/16	14	H3	3	25.00	42.33
1/2	13	H3	3	28.20	46.21
1/2	20	H3	3	28.20	46.21
5/8	11	H4	4	29.11	50.62

Size	Thread Pitch	No. of Flutes	Thread Limit	Price Each 750PY 750APY	Price Each 750FY 750AFY
5/8	18	H4	4	29.11	50.62
3/4	16	H4	4	41.04	79.19
7/8	9	H4	4	88.84	116.51
7/8	14	H4	4	88.84	116.51
1	8	H4	4	120.46	155.27
1	12	H4	4	120.46	155.27
1-1/8	7	H4	4	174.50	235.83
1-1/8	12	H4	4	174.50	235.83
1-1/4	7	H4	4	187.42	253.16
1-1/4	12	H4	4	187.42	253.16
1-3/8	6	H4	4	257.34	339.72
1-3/8	12	H4	4	257.34	339.72
1-1/2	6	H4	4	339.19	387.68
1-1/2	12	H4	4	339.19	387.68

Red Band Taps

3% Vanadium Powdered Metal HSSV Steel

For Titanium, Inconel, Tool Steels up to 48 HRc

Powdered metal taps offer superior toughness, lubricity and are made of super hard powder high speed steel. Used in: Heat resistant materials, high strength stainless steel and titanium alloys as well as other high tensile steels and alloys including tool steel and nickel alloy.



List No. **750PR** – Spiral Point Oxide
List No. **750APR**– Spiral Point Bright
List No. **750FR** – Spiral Flute Oxide
List No. **750AFR**– Spiral Flute Bright

Size	Thread Pitch	No. of Flutes	Thread Limit	Price Each 750PR 750APR	Price Each 750FR 750AFR
4	40	H2	2	25.76	33.59
6	32	H3	2	21.66	30.48
8	32	H3	3	21.66	30.10
10	24	H3	3	21.66	30.10
10	32	H3	3	21.66	30.10
1/4	20	H3	3	25.61	33.59
1/4	28	H3	3	25.61	33.59
5/16	18	H3	3	28.58	36.78
5/16	24	H3	3	28.58	36.78

Size	Thread Pitch	No. of Flutes	Thread Limit	Price Each 750PR 750APR	Price Each 750FR 750AFR
3/8	16	H3	3	32.60	42.48
3/8	24	H3	3	32.60	42.48
7/16	14	H3	3	46.36	59.43
1/2	13	H3	3	51.07	65.66
1/2	20	H3	3	51.07	65.66
5/8	11	H4	4	117.50	148.35
5/8	18	H4	4	117.50	148.35
3/4	16	H4	4	151.77	190.30
3/4	18	H4	4	151.77	190.30

COLORMAX™ High Performance Taps

MADE IN USA

Material Specific Color Band Taps

High Performance Taps are designed and manufactured for successful threading in a variety of part materials for high and low volume applications. These materials include aluminum, stainless steels, nickel alloys, titanium alloys, mold steels, irons, brass, bronze and plastics. Special geometries, tap surface treatments and premium steels interact to offer the highest level of performance.
Special tool geometry creates less torque during tapping which allows better removal of chips so the tool can run cooler. CNC necked design taps increase the flow of coolant to the cutting teeth and reduces surface contact between the tool and the workpiece for more efficient threading.

Black Band Taps

3% Vanadium M35 Cobalt Steel

For multiple uses in materials
such as Low Carbon Steel
Medium to High Carbon Steel
Free Machining Stainless Steel
and heat/corrosion stainless steel
Stainless Steel Castings
Aluminum, aluminum alloys, cast iron, copper and brass

List No. **750APK**– Spiral Point Bright
List No. **750AFK**– Spiral Flute Bright



Size	Thread Pitch	Thread Limit	Price Each 750APK	Price Each 750AFK
4	40	H2	12.08	18.62
4	48	H2	12.08	18.62
5	40	H2	12.08	18.62
5	44	H2	12.08	18.62
6	32	H3	12.54	17.48
6	40	H3	11.86	17.48
8	32	H3	12.54	21.66
8	36	H3	12.54	21.66
10	24	H3	12.54	21.20
10	32	H3	12.54	21.20
12	24	H3	14.44	21.20
1/4	20	H4	14.44	21.66
1/4	28	H5	14.44	21.66
5/16	18	H4	18.01	27.51
5/16	24	H5	18.01	27.51
3/8	16	H5	18.47	33.14

Size	Thread Pitch	Thread Limit	Price Each 750APK	Price Each 750AFK
3/8	24	H4	18.47	33.14
7/16	14	H5	29.41	49.63
7/16	20	H5	29.41	49.63
1/2	13	H5	33.36	58.14
1/2	20	H5	33.36	58.14
9/16	12	H5	32.38	53.12
9/16	18	H5	32.38	53.12
5/8	11	H5	34.12	59.43
5/8	18	H5	34.12	59.43
3/4	10	H5	48.18	93.02
3/4	16	H5	48.18	93.02
7/8	9	H6	104.35	136.80
7/8	14	H6	104.35	136.80
1	8	H6	141.44	182.17
1	12	H6	141.44	182.17

Green Band Taps

High Vanadium Steel

For all types of aluminum up to 38HRc
such as pure aluminum, aluminum alloys & castings

List No. **750APG**– Spiral Point Bright
List No. **750AFG**– Spiral Flute Bright



Size	Thread Pitch	Thread Limit	Price Each 750APG	Price Each 750AFG
4	40	H2	14.90	22.88
6	32	H3	15.43	21.58
6	40	H3	14.59	21.58
8	32	H3	15.43	26.75
8	36	H3	15.43	26.75
10	24	H3	15.43	26.22
10	32	H3	15.43	26.22
12	24	H3	11.65	21.00
12	32	H3	11.65	21.00
1/4	20	H4	17.71	26.75
1/4	28	H5	17.71	26.75
5/16	18	H4	22.19	33.90
5/16	24	H5	22.19	33.90

Size	Thread Pitch	Thread Limit	Price Each 750APG	Price Each 750AFG
3/8	16	H5	22.72	40.81
3/8	24	H4	22.72	40.81
7/16	14	H5	36.18	56.00
7/16	20	H5	36.18	56.00
1/2	13	H5	40.81	66.88
1/2	20	H5	40.81	66.88
5/8	11	H5	42.03	73.19
5/8	18	H5	42.03	73.19
3/4	10	H5	59.36	114.53
3/4	16	H5	59.36	114.53
7/8	9	H6	128.52	168.49
7/8	14	H6	128.52	168.49
1	8	H6	174.19	224.43

COLORMAX™ High Performance Taps

MADE IN USA

Metric Blue Band Taps

3% Vanadium M35 Cobalt Steel

For Mild Steels up to 25HRc

For general machine tapping of mild carbon steels such as 1018,1010, 1035, 1045, 1050 and 1065. Designed for high speed tapping applications. Developed to withstand high stress and high heat associated with high speed CNC production tapping.

List No. **750PB** – Spiral Point Oxide
List No. **750APB**– Spiral Point Bright
List No. **750FB** – Spiral Flute Oxide
List No. **750AFB**– Spiral Flute Bright



Size	Thread Pitch	No. of Flutes	Thread Limit	Price Each 750PB 750APB	Price Each 750FB 750AFB
M2	.40	D3	2	17.56	17.56
M2.5	.50	D3	2	16.00	21.00
M3	.50	D3	2	11.86	19.84
M3.5	.60	D4	2	8.66	19.84
M4	.70	D4	3	8.66	19.84
M4.5	.75	D4	3	8.66	19.84
M5	.80	D4	3	9.96	19.84
M6	1.00	D5	3	9.96	19.84
M7	1.00	D5	3	13.60	32.60
M8	1.00	D5	3	13.60	32.60
M8	1.25	D5	3	13.60	32.60
M10	1.25	D5	3	21.43	48.64
M10	1.50	D6	3	21.43	48.64
M12	1.25	D5	3	24.55	53.28
M12	1.75	D6	3	24.55	53.28

Size	Thread Pitch	No. of Flutes	Thread Limit	Price Each 750PB 750APB	Price Each 750FB 750AFB
M14	1.50	D6	3	36.63	67.26
M15	2.00	D7	3	40.00	75.00
M16	1.50	D6	3	43.17	80.10
M16	2.00	D7	3	43.17	80.10
M18	1.50	D6	3	52.82	116.05
M18	2.50	D7	3	52.82	116.05
M20	1.50	D5	3	68.78	136.80
M20	2.50	D6	3	68.78	136.80
M22	1.50	D6	3	82.08	147.90
M22	2.50	D6	3	82.08	147.90
M24	1.50	D6	3	95.38	158.92
M24	3.00	D7	3	95.38	158.92
M27	1.50	D7	4	122.44	206.57
M27	3.00	D7	4	122.44	206.57
M30	3.50	D7	4	140.60	221.69

Metric Yellow Band Taps

3% Vanadium M35 Cobalt Steel

For Tool, Stainless Steels up to 35HRc

For superior performance hardened tool steels such as 4140, 4340, H13, D2 and a new variety of stainless steels. Designed for high speed tapping applications. Developed to withstand high stress and high heat associated with high speed CNC production tapping.

List No. **750PY** – Spiral Point Oxide
List No. **750APY**– Spiral Point Bright
List No. **750FY** – Spiral Flute Oxide
List No. **750AFY**– Spiral Flute Bright



Size	Thread Pitch	No. of Flutes	Thread Limit	Price Each 750PY 750APY	Price Each 750FY 750AFY
M2	.40	D3	2	25.00	11.50
M3	.50	D3	2	16.95	21.05
M3.5	.60	D4	2	12.24	21.05
M4	.70	D4	3	12.24	21.05
M4.5	.75	D4	3	12.24	21.05
M5	.80	D4	3	14.21	21.05
M6	1.00	D4	3	14.21	21.05
M7	1.00	D5	3	18.09	32.60
M8	1.00	D5	3	18.09	32.60
M8	1.25	D5	3	18.09	32.60
M10	1.25	D5	3	28.73	48.64
M10	1.50	D6	3	28.73	48.64
M12	1.25	D5	3	32.53	53.28

Size	Thread Pitch	No. of Flutes	Thread Limit	Price Each 750PY 750APY	Price Each 750FY 750AFY
M12	1.75	D6	3	32.53	53.28
M14	1.50	D6	3	48.64	67.26
M15	2.00	D7	3	43.00	75.00
M16	1.50	D6	3	57.38	85.50
M16	2.00	D7	3	57.38	85.50
M18	1.50	D6	3	70.45	123.80
M18	2.50	D7	3	70.45	123.80
M20	1.50	D5	3	91.66	145.77
M20	2.50	D6	3	91.66	145.77
M22	1.50	D6	3	109.44	157.78
M22	2.50	D6	3	109.44	157.78
M24	1.50	D6	3	127.00	169.63
M24	3.00	D7	3	127.00	169.63

COLORMAX™ High Performance Taps

MADE IN USA

Metric Red Band Taps

3% Vanadium Powdered Metal HSSV Steel
For Titanium, Inconel, Tool Steels up to 48 HRc
Used in: Heat resistant materials, high strength stainless steel and titanium alloys as well as other high tensile steels and alloys including tool steel and nickel alloy.

List No. **750PR** – Spiral Point Oxide
List No. **750APR**– Spiral Point Bright
List No. **750FR** – Spiral Flute Oxide
List No. **750AFR**– Spiral Flute Bright





Size	Thread Pitch	No. of Flutes	Thread Limit	Price Each 750PR 750APR	Price Each 750FR 750AFR
M3	.50	D3	2	17.48	28.73
M4	.70	D4	3	13.22	29.11
M5	.80	D4	3	15.73	29.64
M6	1.00	D5	3	16.87	31.01
M8	1.25	D5	3	22.27	47.58
M10	1.25	D5	3	35.80	71.90
M10	1.50	D6	3	35.80	71.90
M12	1.25	D5	3	43.55	81.85

Metric Black Band Taps

3% Vanadium M35 Cobalt Steel
For multiple uses in materials
such as Low Carbon Steel, Medium to High Carbon Steel, Free Machining Stainless Steel, and heat/corrosion stainless steel, Stainless Steel Castings, Aluminum, aluminum alloys, cast iron, copper and brass

List No. **750APK**– Spiral Point Bright
List No. **750AFK**– Spiral Flute Bright





Size	Thread Pitch	No. of Flutes	Thread Limit	Price Each 750APK	Price Each 750AFK
M3	.50	D3	2	19.91	24.78
M3.5	.60	D4	2	14.44	24.78
M4	.70	D4	3	14.44	24.78
M5	.80	D4	3	16.72	24.78
M6	1.00	D5	3	16.72	24.78
M7	1.00	D5	3	21.20	38.23
M8	1.00	D5	3	21.20	38.23
M8	1.25	D5	3	21.20	38.23
M10	1.25	D5	3	33.74	57.15
M10	1.50	D6	3	33.74	57.15
M12	1.25	D5	3	38.23	62.47
M12	1.75	D6	3	38.23	62.47

Size	Thread Pitch	No. of Flutes	Thread Limit	Price Each 750APK	Price Each 750AFK
M14	1.50	D6	3	57.15	78.96
M15	2.00	D7	3	62.00	92.00
M16	1.50	D6	3	67.41	100.40
M16	2.00	D7	3	67.41	100.40
M18	1.50	D6	3	82.69	145.24
M18	2.50	D7	3	82.69	145.24
M20	1.50	D5	3	107.62	171.15
M20	2.50	D6	3	107.62	171.15
M22	1.50	D6	3	128.44	185.21
M22	2.50	D6	3	128.44	185.21
M24	1.50	D6	3	135.00	190.00
M24	3.00	D7	3	149.04	199.04

Spiral Fluted Taps

High Speed

High Speed Steel

List No. **776** – Fast Spiral, 52° Helix Angle
List No. **776SL** – Slow Spiral, 30° Helix Angle

Size	Threads Per Inch	Thread Limits	No. of Flutes	Price Each Fast Spiral 776	Price Each Slow Spiral 776SL
2	64	H2	2	17.64	—
3	48	H2	2	17.64	19.60
3	56	H2	2	17.64	19.60*
4	40	H2	2	14.58	14.58
4	48	H2	2	14.58	14.58*
5	40	H2	2	14.58	14.58
5	44	H2	2	14.58	14.58*
6	32	H1	2	14.09	—
6	32	H3	2	11.93	11.93
6	40	H2	2	14.09	14.76
8	32	H3	3	11.93	11.93
8	36	H2	3	14.09	14.10
10	32	H2	3	14.09	—
10	24	H3	3	11.93	11.93
10	32	H3	3	11.93	11.93
12	24	H3	3	12.92	12.90
12	28	H3	3	12.92	12.90
M3.5	.60	D4	3	17.91	—
M4	.50	D4	3	17.91	—
M4	.70	D4	3	17.91	—
M5	.80	D4	3	17.91	—
M6	1.00	D5	3	17.91	18.00
M8	1.25	D5	3	17.91	—
M10	1.50	D6	3	24.12	—
M12	1.25	D6	3	33.75	—
M12	1.50	D6	3	—	34.00
M12	1.75	D6	3	37.50	—
1/4	20	H3	3	12.56	13.06

MDX® SUPERIOR IMPORT



Please specify plug or bottoming when ordering.

Size	Threads Per Inch	Thread Limits	No. of Flutes	Price Each Fast Spiral 776	Price Each Slow Spiral 776SL
1/4	20	H5	3	14.31	—
1/4	28	H1	3	14.31	—
1/4	28	H3	3	12.56	13.06
5/16	18	H3	3	15.98	18.42
5/16	18	H5	3	17.28	—
5/16	24	H3	3	15.98	19.14
3/8	16	H3	3	18.36	21.06
3/8	24	H3	3	18.36	19.36
7/16	14	H3	3	27.45	29.00
7/16	14	H5	3	29.00	—
7/16	20	H3	3	27.45	34.66
1/2	13	H3	3	33.08	34.66
1/2	13	H5	3	39.00	—
1/2	20	H3	3	33.08	34.66
1/2	20	H5	3	39.00	42.00
9/16	12	H3	4	41.16	—
9/16	12	H4	3	41.16	—
9/16	18	H3	3	41.16	—
9/16	18	H5	3	47.40	51.40
5/8	11	H3	3	49.23	51.00
5/8	18	H3	4	49.23	51.00
11/16	11	H3	4	49.23	—
11/16	16	H3	4	49.23	—
3/4	10	H3	4	58.72	68.64
3/4	16	H3	4	58.72	68.64*
7/8	14	H3	4	72.00	—
1"	8	H4	4	102.27*	—
1"	14	H4	4	102.27	—

** Available in Plug Chamfer Only*

Cobalt Spiral Pointed Taps

Ground Thread

List No. **780C** – Plug Chamfer

Size	Threads Per Inch	No. of Flutes	Price Each
2	56	2	25.20
2	64	2	28.80
3	48	2	25.20
3	56	2	28.80
4	40	2	18.00
5	40	2	18.00
5	44	2	25.20
6	32	2	12.56
6	40	2	18.00
8	32	2	12.56
8	36	2	18.00
10	24	2	12.56
10	32	2	12.56
12	24	2	18.00

Size	Threads Per Inch	No. of Flutes	Price Each
12	28	2	18.00
1/4	20	3	16.65
1/4	28	3	18.00
5/16	18	3	18.45
5/16	24	3	19.80
3/8	16	3	21.06
3/8	24	3	23.40
7/16	14	3	29.88
7/16	20	3	32.40
1/2	13	3	34.20
1/2	20	3	38.70
5/8	11	3	76.46
3/4	10	3	117.00



Solid Carbide Taps

Micro Grain – Ground Thread



List No. **CT770** – Hand Tap, Plug Chamfer
List No. **CT780** – Spiral Pointed, Plug Chamfer

Size	Threads Per Inch	Thread Limits	Price Each Hand Tap **CT770**	Price Each Spiral Pointed **CT780**
6	32	H3	154.00	162.42
8	32	H3	158.40	166.17
10	24	H3	161.92	168.85
10	32	H3	161.92	168.85
1/4	20	H3	183.32	207.43

Size	Threads Per Inch	Thread Limits	Price Each Hand Tap **CT770**	Price Each Spiral Pointed **CT780**
5/16	18	H3	209.00	231.00
3/8	16	H3	260.70	301.40
7/16	14	H3	423.50	—
1/2	13	H3	462.00	—
5/8	11	H3	667.15	—

Chipless Thread Forming Taps

High Speed Steel – Ground Thread



List No. **783**

Chipless tapping is a cold forming process accomplished without cutting. Threads produced are stronger than conventional cut threads because of the swaging and work hardening effect. This process helps reduce tap breakage and permits faster tapping speeds.

Please specify plug or bottoming chamfer.

Size	Threads Per Inch	Thread Limits	Price Each
0*	80	H1	17.37
1*	64	H1	17.37
1*	72	H2	17.37
2*	56	H2	17.26
2*	64	H2	17.26
3*	48	H2	17.26
3*	56	H2	17.26
4	40	H3	15.59
4	48	H3	15.59
5	40	H3	15.59
5	44	H3	15.59
6	32	H3	12.82
6	40	H3	12.82
6	48*	H3	12.82
8	32	H3	12.82
8	36	H3	12.82
10	24	H4	12.82
10	32	H4	12.82
12	24	H4	13.59

Size	Threads Per Inch	Thread Limits	Price Each
12	28	H4	13.59
1/4	20	H4	13.59
1/4	28	H4	13.59
5/16	18	H5	15.15
5/16	24	H5	15.15
9mm	1.00mm	H5	17.26
3/8	16	H5	17.26
3/8	24	H5	17.26
7/16	14	H5	23.85
7/16	20	H5	23.85
1/2	13	H5	29.48
1/2	20	H5	29.48
9/16	12	H5	33.75
9/16	18	H5	33.75
5/8	11	H5	42.03
5/8	18	H5	42.03
3/4	10	H5	54.69
3/4	16	H5	54.69

** Available in bottoming only.*

Oversize Hand Taps

High Speed Steel

Primarily used where a part will be plated or heat treated after tapping



+.0025 & +.0030

List No. **775R** – Plug Chamfer

Size	Threads Per Inch	+ Size	No. of Flutes	Price Each
0	80	.0025	2	25.18
1	64	.0025	2	24.05
1	72	.0025	2	24.05
2	56	.0030	3	23.36
2	64	.0030	3	23.36
3	48	.0030	3	23.36

Size	Threads Per Inch	+ Size	No. of Flutes	Price Each
3	56	.0030	3	23.36
4	36	.0030	3	17.12
4	40	.0030	3	17.12
4	48	.0030	3	17.12
5	40	.0030	3	15.55
5	44	.0030	3	15.55

+.0050

List No. **775** – Plug Chamfer

Size	Threads Per Inch	No. of Flutes	Price Each
2	56	3	8.10
4	40	3	8.10
5	40	3	8.10
6	32	3	7.52
6	40	3	7.52
8*	32	4	7.52
8	36	4	7.52
10*	24	4	7.52
10	32	4	7.52
12*	24	4	7.37
12	28	4	7.37
1/4*	20	4	7.37
1/4*	28	4	9.35
5/16	18	4	9.35

Size	Threads Per Inch	No. of Flutes	Price Each
5/16	24	4	9.35
3/8	16	4	10.70
3/8	24	4	10.70
7/16	14	4	16.10
7/16	20	4	16.10
1/2*	13	4	17.96
1/2	20	4	17.96
9/16	12	4	29.96
9/16	18	4	29.96
5/8	11	4	34.01
5/8	18	4	34.01
3/4	10	4	44.96
3/4	16	4	44.96
7/8	9	4	53.96

Size	Threads Per Inch	No. of Flutes	Price Each
7/8	14	4	53.96
1	8	4	62.44
1	12	4	62.44
1	14	4	62.44
1-1/8	12	4	67.43
1-1/4	7	4	71.03
1-1/4	12	4	71.03
4mm	.70	4	11.75
5mm	.80	4	11.75
6mm	1.00	4	11.75
8mm	1.25	4	13.64
10mm	1.50	4	22.54
12mm	1.75	4	27.60
16mm	2.00	4	48.76

**ALSO AVAILABLE BOTTOMING CHAMFER*

+.0100

List No. **775N** – Plug Chamfer

Size	Threads Per Inch	No. of Flutes	Price Each
6	32	3	8.66
6	40	3	8.66
8	32	4	8.66
8	36	4	8.66
10	24	4	9.06
10	32	4	9.06
12	24	4	9.78
12	28	4	9.78
1/4	20	4	8.66
1/4	28	4	10.44
5/16	18	4	12.36
5/16	24	4	12.36

Size	Threads Per Inch	No. of Flutes	Price Each
3/8	16	4	14.83
3/8	24	4	14.83
7/16	14	4	19.28
7/16	20	4	19.28
1/2	13	4	22.18
1/2	20	4	22.18
9/16	12	4	34.80
9/16	18	4	34.80
5/8	18	4	41.88
3/4	10	4	57.96
3/4	16	4	57.96
7/8	9	4	64.45

Size	Threads Per Inch	No. of Flutes	Price Each
7/8	14	4	64.45
1	8	4	85.89
1	12	4	86.89
1	14	4	86.89
1-1/8	7	4	101.14
1-1/8	12	4	101.14
1-1/4	7	4	130.96
1-1/4	12	4	130.96
1-3/8	6	4	158.62
1-3/8	12	6	158.62
1-1/2	6	4	184.26
1-1/2	12	6	184.26

+.0150

List No. **775W** – Plug Chamfer

Size	Threads Per Inch	No. of Flutes	Price Each
1-1/8	7	4	111.23
1-1/8	12	4	111.23
1-1/4	7	4	144.00

Size	Threads Per Inch	No. of Flutes	Price Each
1-1/4	12	6	144.00
1-3/8	6	4	174.50
1-3/8	12	6	174.50

Size	Threads Per Inch	No. of Flutes	Price Each
1-1/2	6	4	204.95
1-1/2	12	6	204.95

+.0050 Sets

Sizes	Description	Pcs.	Set No.	Price
NC 6-32 to 1/2-13 & 10-32 Excludes 7/16	Hand Tap Set	8	**775S**	82.98
NC 6-32 to 1/2-13 & 10-32 Excludes 7/16	Combination Hand & Spiral	16	**785A**	171.98

All sets are supplied in wood block



Spiral Pointed Oversize Taps

High Speed Steel

Primarily used where a part will be plated or heat treated after tapping



+.0025 & +.0030

List No. **784** – Plug Chamfer

Size	Threads Per Inch	+ Size	No. of Flutes	Price Each
0	80	.0025	2	21.44
1	64	.0025	2	20.59
1	72	.0025	2	20.59
2	56	.0030	2	19.60
2	64	.0030	2	19.60
3	48	.0030	2	16.76
3	56	.0030	2	16.76
4	36	.0030	2	14.54
4	40	.0030	2	14.54
4	48	.0030	2	14.54
5	40	.0030	2	13.12
5	44	.0030	2	13.12

+.0050

List No. **785** – Plug Chamfer

Size	Threads Per Inch	No. of Flutes	Price Each
2	56	2	10.16
4	40	2	10.16
4	48	2	10.16
5	40	2	10.16
6	32	2	9.89
6	40	2	9.89
8*	32	2	9.89
8	36	2	9.89
10*	24	2	9.89
10	32	2	9.89
12*	24	2	9.05
12	28	2	9.05
1/4*	20	2	8.53
1/4*	28	2	8.53
5/16	18	2	9.80
5/16	24	2	9.80
5/16	32	2	12.80
3/8	16	3	11.14
3/8	24	3	11.14
7/16	14	3	17.98
7/16	20	3	17.98
1/2*	13	3	19.97
1/2	20	3	19.97
9/16	12	3	30.94
9/16	18	3	30.94
5/8	11	3	34.10
5/8	18	3	34.10
3/4	10	3	44.96
3/4	16	3	44.96
7/8	9	3	56.23
7/8	14	3	56.23
1	8	3	62.99
1	12	3	62.99
1	14	3	62.99

**AVAILABLE BOTTOMING AT SAME PRICE AS PLUG.*

+.0100

List No. **786** – Plug Chamfer

Size	Threads Per Inch	No. of Flutes	Price Each
6	32	2	11.59
6	40	2	11.59
8	32	2	11.59
8	36	2	11.59
10	24	2	10.63
10	32	2	10.63
12	24	2	10.75
12	28	2	10.75
1/4	20	2	10.51
1/4	28	2	10.51
5/16	18	2	12.36
5/16	24	2	12.36
3/8	16	2	14.83
3/8	24	2	14.83
7/16	14	2	24.10
7/16	20	2	24.10
1/2	13	2	27.72
1/2	20	2	27.72

+.0050 Sets

Sizes	Description	Pcs.	Set No.	Price
NC 6-32 to 1/2-13 & 10-32 Excludes 7/16	Spiral Point Set	8	**785S**	96.52

All sets are supplied in wood block



Screw Thread Insert Taps

High Speed Steel

STI Taps are oversized to accommodate a helical coil wire screw thread insert, to accept a screw thread of nominal size and pitch.

List No. **770STI** – Hand Tap, Plug or Bottoming
List No. **780STI** – Spiral Pointed Tap, Plug Chamfer
List No. **766STI** – Fast Spiral Taps, Bottoming



		Hand Taps 770STI		Spiral Pointed 780STI		Fast Spiral 776STI	
Size	T.P.I.	No. of Flutes	Price Each	No. of Flutes	Price Each	No. of Flutes	Price Each
2	56	3	19.70	—	—	2	26.00
3	56	3	19.70	—	—	—	—
4	40	3	19.70	2	20.88	2	26.00
4	48	3	19.70	—	—	—	—
5	40	3	19.70	—	—	2	26.00
6	32	3	19.70	2	20.88	2	26.00
8	32	3	19.70	2	20.88	3	26.00
8	36	3	19.70	—	—	—	—
10	24	3	21.14	2	22.41	3	26.00
10	32	3	21.14	2	22.41	3	26.00
12	24	3	21.77	—	—	—	—
1/4	20	3	21.77	2	23.08	3	28.00
1/4	28	3	21.77	2	23.08	3	28.00
5/16	18	4	23.66	3	25.08	3	32.50
5/16	24	4	23.66	3	25.08	3	32.50
3/8	16	4	29.23	3	30.99	3	45.00
3/8	24	4	29.23	3	30.99	3	45.00
7/16	14	4	36.07	3	38.23	3	49.75
7/16	20	4	36.07	3	38.23	3	49.75
1/2	13	4	40.76	3	43.21	3	64.80
1/2	20	4	40.76	3	43.21	3	64.80
9/16	12	4	44.96	—	—	—	—
5/8	11	4	55.00	—	—	3	88.00
3/4	10	4	79.00	—	—	—	—
7/8	9	4	119.00	—	—	—	—
7/8	14	4	119.00	—	—	—	—
1	8	4	149.00	—	—	—	—
1	12	4	149.00	—	—	—	—
1-1/8	7	4	158.00	—	—	—	—
1-1/4	12	4	165.00	—	—	—	—

Please specify plug or bottoming chamfer when ordering.

Pulley Taps

High Speed Steel – Ground Thread

List No. **795** – Hand Taps, Plug Chamfer

Used for extended reach tapping applications.

Shank diameter same as nominal diameter



Size	Threads Per Inch	No. of Flutes	Price Each 6" OAL	8" OAL	10" OAL	12" OAL
2	64	4	32.00	—	—	—
3	48	4	32.00	—	—	—
3	56	4	32.00	—	—	—
4	36	4	32.00	—	—	—
4	40	4	32.00	—	—	—
4	48	4	32.00	—	—	—
5	40	4	32.00	—	—	—
5	44	4	32.00	—	—	—
5	48	4	39.50	—	—	—
6	32	4	30.02	39.38	—	—
6	40	4	30.02	—	—	—
8	32	4	30.02	39.38	—	—
8	36	4	30.02	—	—	—
10	24	4	30.02	39.38	—	—
10	32	4	30.02	39.38	—	—
12	24	4	34.20	—	—	—
12	28	4	34.20	—	—	—
1/4	20	4	34.20	41.76	52.20	70.80
1/4	28	4	*34.20	41.76	52.20	70.80
5/16	18	4	*35.87	42.93	55.80	70.80
5/16	24	4	*35.87	42.93	55.80	70.80
3/8	16	4	*40.37	47.97	60.08	80.96
3/8	24	4	40.37	47.97	60.08	80.96
3/8	32	4	44.85	—	—	—
7/16	14	4	*42.93	56.25	66.15	82.44
7/16	20	4	42.93	56.25	66.15	82.44
1/2	13	4	43.29	56.25	68.40	85.00
1/2	20	4	43.29	56.25	68.40	85.00
9/16	12	4	50.20	65.00	83.00	98.00
9/16	18	4	50.20	65.00	83.00	98.00
5/8	11	4	57.87	73.80	92.70	108.00
5/8	18	4	57.87	73.80	92.70	108.00
5/8	24		—	110.00	—	—
11/16	16	4	78.75	—	—	—
3/4	10	4	78.75	96.30	109.22	120.60
3/4	16	4	78.75	96.30	109.22	120.60
7/8	9	4	130.00	145.00	166.85	179.10
7/8	14	4	130.00	145.00	166.85	179.10
1	8	4	—	182.95	195.80	255.06
1	14	4	—	182.95	216.00	288.00
1-1/8	7	4	195.80	—	—	290.00
1-1/8	12	4	—	—	259.00	290.00
1-1/4	7	4	—	—	—	322.00
1-1/4	12	6	—	—	—	322.00
1-3/8	6	4	—	—	324.00	365.00
1-3/8	12	6	—	265.50	—	368.00
1-1/2	6	4	—	—	—	375.00
1-1/2	12	6	—	—	—	381.00

** Bottoming also available*

Metric Sizes

List No. **795M** – 6" Overall Length, Plug Chamfer

Size	Threads Per Inch	Price Each
4.00	0.70	37.80
5.00	0.80	37.80
6.00	1.00	40.50
7.00	1.00	42.30
8.00	1.25	44.10
10.00	1.50	49.50
12.00	1.75	55.80

Extension Pulley Taps

High Speed Steel – Ground Thread

Similar to a pulley taps but with a undercut shank diameter for deeper tapping applications.

List No. **795EX** – Hand Tap

List No. **796EX** – Spiral Point



Size	Threads Per Inch	Overall Length	Price Each Hand Tap **795EX**	Spiral Pointed **796EX**
4	40	4	—	31.02
5	40	4	—	31.02
6	32	4	—	31.02
6	32	6	—	34.22
6	40	4	—	31.94
8	32	4	—	31.94
8	32	6	—	34.22
8	36	4	—	31.94
10	24	4	—	31.94
10	24	6	33.30	34.22
10	32	4	—	31.94
10	32	6	33.30	34.22
12	24	6	—	36.72

6" OAL PLUG CHAMFER

Size	Threads Per Inch	Overall Length	Price Each Hand Tap **795EX**	Spiral Pointed **796EX**
1/4	20	6	32.54	36.72
1/4	28	6	32.54	36.72
5/16	18	6	33.84	38.16
5/16	24	6	—	38.16
3/8	16	6	38.25	43.09
3/8	24	4	—	39.00
3/8	24	6	—	43.09
7/16	14	6	—	46.17
7/16	20	6	—	46.17
1/2	13	6	40.50	46.17
1/2	13	12	—	63.56
1/2	20	5	—	41.20
1/2	20	6	—	46.17

Spiral Pointed Pulley Taps

MDX SUPERIOR IMPORT

High Speed Steel – Ground Thread

List No. **796** – Spiral Pointed, Plug Chamfer

Shank diameter same as nominal diameter



Size	Threads Per Inch	No. of Flutes	Overall Length	Price Each
2	56	2	6	28.97
2	64	2	6	28.97
3	48	2	4	26.50
3	48	2	6	28.97
3	56	2	6	28.97
4	36	2	6	28.97
4	40	2	4	26.50
4	40	2	6	30.00
4	48	2	6	30.00
5	40	2	4	26.50
5	40	2	6	30.00
5	44	2	6	30.00
5	48	2	6	38.00
6	32	2	4	26.50
6	32	2	6	34.22
6	32	2	8	41.40
6	40	2	6	34.22
8	32	2	4	26.50
8	32	2	6	34.22
8	32	2	8	41.40
8	36	2	6	34.22
10	24	2	4	26.50
10	24	2	6	34.22
10	32	2	4	26.50
10	32	2	6	34.22
12	28	2	6	34.22
1/4	20	2	6	36.72
1/4	20	2	8	46.50
1/4	20	2	12	51.45
1/4	28	2	6	36.72
1/4	28	2	8	46.50
1/4	28	2	12	51.45
5/16	18	2	6	38.16
5/16	18	2	8	49.85

Size	Threads Per Inch	No. of Flutes	Overall Length	Price Each
5/16	18	2	12	53.90
5/16	24	2	4	28.97
5/16	24	2	6	46.00
5/16	24	2	8	59.00
5/16	24	2	12	53.90
3/8	16	3	4	37.50
3/8	16	3	6	43.09
3/8	16	2	8	55.75
3/8	16	3	12	61.25
3/8	24	3	6	43.09
3/8	24	2	8	55.75
3/8	24	3	12	61.25
7/16	14	3	6	45.14
7/16	14	2	8	59.19
7/16	14	3	12	68.59
7/16	20	3	6	45.14
7/16	20	2	8	59.19
7/16	20	3	12	68.59
1/2	13	3	6	46.17
1/2	13	3	8	62.29
1/2	13	3	10	67.45
1/2	13	3	12	72.69
1/2	20	3	6	46.17
1/2	20	2	8	62.29
1/2	20	3	12	72.69
5/8	11	3	6	60.53
5/8	11	3	12	120.00
5/8	18	3	6	60.53
3/4	10	3	6	88.65
3/4	10	3	10	112.50
3/4	10	3	12	130.00
3/4	16	3	6	88.65
7/8	9	3	6	138.00
1	14	3	8	140.00

Nut Taps

MDX SUPERIOR IMPORT

High Speed Steel – Ground Thread

List No. **798** – Four Flute

Primarily used for threading nuts. Shank of tap is smaller than I.D. of nut allowing nuts to accumulate on the shank. Also used for long reach.



Size	Threads Per Inch	Overall Length	Price Each
1/4	20	5	64.67
1/4	28	5	64.67
5/16	18	5-1/2	73.91
5/16	24	5-1/2	73.91
3/8	16	6	90.08
3/8	24	6	90.08
7/16	14	6-1/2	102.23
7/16	20	6-1/2	102.23
1/2	13	7	110.87
1/2	20	7	110.87
9/16	12	7-3/4	113.52
9/16	18	7-3/4	113.52

Size	Threads Per Inch	Overall Length	Price Each
5/8	11	8-1/4	117.48
5/8	18	8-1/4	117.48
11/16	11	8-1/4	122.10
11/16	18	8-1/4	122.10
3/4	10	9	126.72
3/4	16	9	126.72
7/8	9	10	158.40
7/8	14	10	158.40
1	8	11	194.70
1	12	11	194.70
1	14	11	194.70
1-1/8	7	12	214.17

Metric Sizes

Size	Pitch mm	Overall Length mm	Price Each
M3.5	0.6	80	78.00
M6	1	110	82.00
M10	1.50	300	120.00
M12	1.75	360	150.25
M18	2.5	220	175.00
M20	2.5	250	190.00

Size	Pitch mm	Overall Length mm	Price Each
M22	2.5	280	199.00
M24	3	280	230.00
M30	3.5	280	270.00
M42	4.5	450	574.56
M48	5	500	667.17

Special Thread Hand Taps

High Speed Steel – Ground Thread

List No. **779**

List No. **779SET** – (Plug, Bottoming, Taper)

Please specify plug, bottoming, or taper chamfer when ordering.



Size	Threads Per Inch	Price Each	
		779	779SET
00	90	15.27	45.81
00	96	15.27	45.81
0	72	10.34	31.02
0	76	10.34	31.02
0	90	10.34	31.02
0	96	10.34	31.02
1	48	10.34	31.02
1	56	10.34	31.02
1	80	10.34	31.02
2	48	10.34	31.02
2	60	10.34	31.02
2	72	10.34	31.02
2	80	10.34	31.02
3	64	10.34	31.02
3	72	10.34	31.02
3	80	10.34	31.02
4	32	10.34	31.02
4	44	10.34	31.02
4	56	10.34	31.02
4	60	10.34	31.02
4	64	10.34	31.02
4	80	10.34	31.02
5	32	10.84	32.52
5	36	10.84	32.52
5	48	10.84	32.52
5	56	10.84	32.52
5	60	10.84	32.52
5	64	10.84	32.52
5	80	10.84	32.52
6	36	9.35	28.05
6	38	9.35	28.05
6	48	9.35	28.05
6	56	9.35	28.05
6	60	9.35	28.05
6	64	9.35	28.05
6	80	9.35	28.05
7	32	10.84	32.52
7	36	10.84	32.52
7	40	10.84	32.52
7	48	10.84	32.52
8	24	9.35	28.05
8	30	9.35	28.05
8	40	9.35	28.05
8	48	9.35	28.05
8	56	9.35	28.05
8	60	9.35	28.05
8	64	9.35	28.05
8	80	9.35	28.05
9	24	10.84	32.52
9	32	10.84	32.52
10	28	9.35	28.05
10	30	9.35	28.05
10	36	9.35	28.05
10	40	9.35	28.05
10	48	9.35	28.05
10	56	9.35	28.05
10	60	9.35	28.05
10	64	9.35	28.05
10	72	9.35	28.05
10	80	9.35	28.05
12	30	9.35	28.05
12	32	9.35	28.05
12	36	9.35	28.05
12	40	9.35	28.05
12	48	9.35	28.05
12	56	9.35	28.05
12	64	9.35	28.05

Size	Threads Per Inch	Price Each	
		779	779SET
14	20	10.84	32.52
14	24	10.84	32.52
14	28	10.84	32.52
1/16	72	10.34	31.02
3/32	48	10.34	31.02
3/32	50	10.34	31.02
1/8	40	10.34	31.02
1/8	44	10.34	31.02
1/8	48	10.34	31.02
5/32	32	9.35	28.05
5/32	36	9.35	28.05
5/32	40	9.35	28.05
3/16	16	9.35	28.05
3/16	18	9.35	28.05
3/16	24	9.35	28.05
3/16	32	9.35	28.05
7/32	24	9.35	28.05
7/32	28	9.35	28.05
7/32	32	9.35	28.05
7/32	40	9.35	28.05
1/4	16	9.35	28.05
1/4	18	9.35	28.05
1/4	22	9.35	28.05
1/4	24	9.35	28.05
1/4	26	9.35	28.05
1/4	27	9.35	28.05
1/4	30	9.35	28.05
1/4	32	9.35	28.05
1/4	36	9.35	28.05
1/4	38	9.35	28.05
1/4	40	9.35	28.05
1/4	42	9.35	28.05
1/4	48	9.35	28.05
1/4	56	9.35	28.05
1/4	60	9.35	28.05
1/4	64	9.35	28.05
1/4	72	9.35	28.05
1/4	80	9.35	28.05
9/32	20	9.35	28.05
9/32	24	9.32	28.05
9/32	32	9.35	28.05
9/32	40	9.35	28.05
5/16	13	9.35	28.05
5/16	16	9.35	28.05
5/16	20	9.35	28.05
5/16	22	9.35	28.05
5/16	26	9.35	28.05
5/16	27	9.35	28.05
5/16	28	9.35	28.05
5/16	30	9.35	28.05
5/16	32	9.35	28.05
5/16	36	9.35	28.05
5/16	40	9.35	28.05
5/16	48	9.35	28.05
5/16	56	9.35	28.05
5/16	60	9.35	28.05
5/16	64	9.35	28.05
5/16	72	9.35	28.05
5/16	80	9.35	28.05
11/32	20	9.95	29.85
11/32	32	9.95	29.85
3/8	13	9.52	28.56
3/8	14	9.52	28.56
3/8	18	9.52	28.56
3/8	20	9.52	28.56
3/8	22	9.52	28.56
3/8	26	9.52	28.56

Size	Threads Per Inch	Price Each	
		779	779SET
3/8	27	9.52	28.56
3/8	28	9.52	28.56
3/8	30	9.52	28.56
3/8	32	9.52	28.56
3/8	36	9.52	28.56
3/8	40	9.52	28.56
3/8	48	9.52	28.56
3/8	56	9.52	28.56
3/8	60	9.52	28.56
3/8	64	9.52	28.56
3/8	80	9.52	28.56
13/32	20	10.52	31.56
13/32	24	10.52	31.56
13/32	32	10.52	31.56
13/32	36	10.52	31.56
13/32	40	10.52	31.56
7/16	12	10.52	31.56
7/16	16	10.52	31.56
7/16	18	10.52	31.56
7/16	24	10.52	31.56
7/16	26	10.52	31.56
7/16	27	10.52	31.56
7/16	28	10.52	31.56
7/16	32	10.52	31.56
7/16	36	10.52	31.56
7/16	40	10.52	31.56
7/16	48	10.52	31.56
7/16	56	10.52	31.56
7/16	64	10.52	31.56
15/32	24	11.99	35.97
15/32	32	11.99	35.97
15/32	36	11.99	35.97
15/32	40	11.99	35.97
1/2	10	11.99	35.97
1/2	12	11.99	35.97
1/2	14	11.99	35.97
1/2	16	11.99	35.97
1/2	18	11.99	35.97
1/2	22	11.99	35.97
1/2	24	11.99	35.97
1/2	26	11.99	35.97
1/2	27	11.99	35.97
1/2	28	11.99	35.97
1/2	30	11.99	35.97
1/2	32	11.99	35.97
1/2	36	11.99	35.97
1/2	37	11.99	35.97
1/2	40	11.99	35.97
1/2	48	11.99	35.97
1/2	50	11.99	35.97
1/2	56	11.99	35.97
1/2	60	11.99	35.97
1/2	64	11.99	35.97
1/2	80	11.99	35.97
17/32	32	14.85	44.55
9/16	10	14.85	44.55
9/16	13	14.85	44.55
9/16	14	14.85	44.55
9/16	16	14.85	44.55
9/16	20	14.85	44.55
9/16	24	14.85	44.55
9/16	27	14.85	44.55
9/16	28	14.85	44.55
9/16	30	14.85	44.55
9/16	32	14.85	44.55
9/16	36	14.85	44.55
9/16	40	14.85	44.55

Special Thread Hand Taps

High Speed Steel – Ground Thread

List No. **779**

List No. **779SET** – (Plug, Bottoming, Taper)

Please specify plug, bottoming, or taper chamfer when ordering.



Size	Threads Per Inch	Price Each	
		779	779SET
9/16	48	14.85	44.55
9/16	74	14.85	44.55
5/8	10	18.39	55.17
5/8	12	18.39	55.17
5/8	14	18.39	55.17
5/8	16	18.39	55.17
5/8	20	18.39	55.17
5/8	24	18.39	55.17
5/8	26	18.39	55.17
5/8	27	18.39	55.17
5/8	28	18.39	55.17
5/8	30	18.39	55.17
5/8	32	18.39	55.17
5/8	36	18.39	55.17
5/8	40	18.39	55.17
5/8	48	18.39	55.17
5/8	56	18.39	55.17
5/8	64	18.39	55.17
11/16	12	21.18	63.54
11/16	14	21.18	63.54
11/16	18	21.18	63.54
11/16	20	21.18	63.54
11/16	24	21.18	63.54
11/16	27	21.18	63.54
11/16	28	21.18	63.54
11/16	30	21.18	63.54
11/16	32	21.18	63.54
11/16	36	21.18	63.54
11/16	40	21.18	63.54
11/16	48	21.18	63.54
3/4	8	22.75	68.25
3/4	11	22.75	68.25
3/4	11-1/2	22.75	68.25
3/4	12	22.75	68.25
3/4	14	22.75	68.25
3/4	18	22.75	68.25
3/4	20	22.75	68.25
3/4	22	22.75	68.25
3/4	24	22.75	68.25
3/4	26	22.75	68.25
3/4	27	22.75	68.25
3/4	28	22.75	68.25
3/4	30	22.75	68.25
3/4	32	22.75	68.25
3/4	36	22.75	68.25
3/4	40	22.75	68.25
3/4	48	22.75	68.25
3/4	50	22.75	68.25
3/4	56	22.75	68.25
3/4	64	22.75	68.25
13/16	10	27.71	83.13
13/16	12	27.71	83.13
13/16	14	27.71	83.13
13/16	16	27.71	83.13
13/16	18	27.71	83.13
13/16	20	27.71	83.13
13/16	24	27.71	83.13
13/16	26	27.71	83.13
13/16	27	27.71	83.13
13/16	28	27.71	83.13
13/16	32	27.71	83.13
13/16	36	27.71	83.13
13/16	40	27.71	83.13
13/16	48	27.71	83.13
7/8	8	29.28	87.84
7/8	10	29.28	87.84
7/8	11	29.28	87.84
7/8	12	29.28	87.84
7/8	16	29.28	87.84
7/8	18	29.28	87.84
7/8	20	29.28	87.84
7/8	24	29.28	87.84
7/8	26	29.28	87.84
7/8	27	29.28	87.84
7/8	28	29.28	87.84
7/8	30	29.28	87.84
7/8	32	29.28	87.84
7/8	36	29.28	87.84
7/8	40	29.28	87.84
7/8	48	29.28	87.84
15/16	9	34.80	104.40
15/16	10	34.80	104.40
15/16	12	34.80	104.40
15/16	14	34.80	104.40
15/16	16	34.80	104.40
15/16	18	34.80	104.40
15/16	20	34.80	104.40
15/16	24	34.80	104.40
15/16	27	34.80	104.40
15/16	28	34.80	104.40
15/16	32	34.80	104.40
15/16	40	34.80	104.40
1	10	39.69	119.07
1	16	39.69	119.07
1	18	39.69	119.07
1	20	39.69	119.07
1	24	39.69	119.07
1	26	39.69	119.07
1	27	39.69	119.07
1	28	39.69	119.07
1	30	39.69	119.07
1	32	39.69	119.07
1	36	39.69	119.07
1	40	39.69	119.07
1	48	39.69	119.07
1	50	39.69	119.07
1	56	39.69	119.07
1	64	39.69	119.07
1-1/16	8	57.48	---
1-1/16	10	57.48	---
1-1/16	12	57.48	---
1-1/16	14	57.48	---
1-1/16	16	57.48	---
1-1/16	18	57.48	---
1-1/16	20	57.48	---
1-1/16	24	57.48	---
1-1/16	27	57.48	---
1-1/16	28	57.48	---
1-1/16	32	57.48	---
1-1/16	40	57.48	---
1-1/8	8	60.10	---
1-1/8	10	60.10	---
1-1/8	14	60.10	---
1-1/8	16	60.10	---
1-1/8	18	60.10	---
1-1/8	20	60.10	---
1-1/8	24	60.10	---
1-1/8	27	60.10	---
1-1/8	28	60.10	---
1-1/8	32	60.10	---
1-1/8	40	60.10	---
1-5/32	14	75.50	
1-5/32	32	75.50	
1-3/16	8	75.50	
1-3/16	10	75.50	
1-3/16	12	75.50	
1-3/16	14	75.50	
1-3/16	16	75.50	
1-3/16	18	75.50	
1-3/16	20	75.50	
1-3/16	24	75.50	
1-3/16	27	75.50	
1-3/16	28	75.50	
1-3/16	32	75.50	
1-3/16	40	75.50	
1-15/64	24	77.31	
1-1/4	8	75.50	
1-1/4	10	75.50	
1-1/4	14	75.50	
1-1/4	16	75.50	
1-1/4	18	75.50	
1-1/4	20	75.50	
1-1/4	24	75.50	
1-1/4	26	75.50	
1-1/4	27	75.50	
1-1/4	28	75.50	
1-1/4	32	75.50	
1-1/4	40	75.50	
1-5/16	6	97.65	
1-5/16	8	97.65	
1-5/16	11	97.65	
1-5/16	12	97.65	
1-5/16	14	97.65	
1-5/16	16	97.65	
1-5/16	18	97.65	
1-5/16	20	97.65	
1-5/16	24	97.65	
1-5/16	27	97.65	
1-5/16	28	97.65	
1-5/16	32	97.65	
1-11/32	14	100.57	
1-3/8	5	97.65	
1-3/8	8	97.65	
1-3/8	10	97.65	
1-3/8	14	97.65	
1-3/8	16	97.65	
1-3/8	18	97.65	
1-3/8	20	97.65	
1-3/8	24	97.65	
1-3/8	27	97.65	
1-3/8	28	97.65	
1-13/32	14	101.55	
1-7/16	6	128.26	
1-7/16	8	128.26	
1-7/16	12	128.26	
1-7/16	14	128.26	
1-7/16	16	128.26	
1-7/16	18	128.26	
1-7/16	20	128.26	
1-7/16	24	128.26	
1-7/16	27	128.26	
1-15/32	24	129.71	
1-1/2	8	129.71	
1-1/2	10	129.71	
1-1/2	14	129.71	

Special Thread Hand Taps

High Speed Steel – Ground Thread

High Speed MDX® SUPERIOR IMPORT



List No. **779**

Please specify plug, bottoming, or taper chamfer when ordering.

Size	Threads Per Inch	Price Each 779
1-1/2	16	129.71
1-1/2	18	129.71
1-1/2	20	129.71
1-1/2	24	129.71
1-1/2	28	129.71
1-1/2	32	129.71
1-1/2	40	129.71
1-9/16	6	139.15
1-9/16	8	139.15
1-9/16	10	139.15
1-9/16	12	139.15
1-9/16	14	139.15
1-9/16	16	139.15
1-9/16	18	139.15
1-9/16	20	139.15
1-9/16	24	139.15
1-9/16	32	139.15
1-5/8	5-1/2	142.95
1-5/8	6	142.95
1-5/8	8	142.95
1-5/8	10	142.95
1-5/8	12	142.95
1-5/8	14	142.95
1-5/8	16	142.95
1-5/8	18	142.95
1-5/8	20	142.95
1-5/8	24	142.95
1-5/8	28	142.95
1-5/8	32	142.95
1-21/32	14	147.24
1-11/16	8	163.35
1-11/16	12	163.35
1-11/16	16	163.35
1-11/16	18	163.35
1-11/16	20	163.35
1-11/16	24	163.35
1-11/16	27	163.35
1-11/16	32	163.35
1-3/4	5	181.35
1-3/4	6	181.35
1-3/4	8	181.35
1-3/4	10	181.35
1-3/4	12	181.35
1-3/4	14	181.35
1-3/4	16	181.35
1-3/4	18	181.35
1-3/4	20	181.35
1-3/4	24	181.35
1-3/4	26	181.35
1-3/4	28	181.35
1-3/4	32	181.35
1-3/4	36	181.35
1-3/4	40	181.35
1-13/16	8	199.65
1-13/16	10	199.65
1-13/16	12	199.65
1-13/16	14	199.65
1-13/16	16	199.65
1-13/16	18	199.65
1-13/16	20	199.65
1-13/16	24	199.65
1-13/16	32	199.65
1-7/8	5	217.94
1-7/8	8	217.94
1-7/8	10	217.94
1-7/8	12	217.94
1-7/8	14	217.94
1-7/8	16	217.94
1-7/8	18	217.94
1-7/8	20	217.94
1-7/8	24	217.94
1-7/8	26	217.94
1-7/8	32	217.94
1-15/16	8	229.90
1-15/16	10	229.90
1-15/16	12	229.90
1-15/16	14	229.90
1-15/16	16	229.90
1-15/16	18	229.90
1-15/16	20	229.90
1-15/16	24	229.90
1-15/16	32	229.90
2	4-1/2	235.95
2	6	235.95
2	8	235.95
2	10	235.95
2	12	235.95
2	14	235.95
2	16	235.95
2	18	235.95
2	20	235.95
2	24	235.95
2	28	235.95
2	32	235.95
2-1/16	12	283.25
2-1/16	18	283.25
2-1/8	4-1/2	289.25
2-1/8	8	289.25
2-1/8	12	289.25
2-1/8	16	289.25
2-1/8	18	289.25
2-1/8	20	289.25
2-5/32	32	340.00
2-1/4	4	309.38
2-1/4	4-1/2	309.38
2-1/4	8	309.38
2-1/4	12	309.38
2-1/4	14	309.38
2-1/4	16	309.38
2-1/4	18	309.38
2-1/4	20	309.38
2-1/4	24	309.38
2-1/4	26	309.38
2-5/16	12	316.25
2-5/16	14	316.25
2-5/16	16	316.25
2-5/16	18	316.25
2-3/8	4	323.13
2-3/8	8	323.13
2-3/8	12	323.13
2-3/8	16	323.13
2-3/8	18	323.13
2-3/8	20	323.13
2-3/8	24	323.13
2-7/16	12	398.75
2-1/2	4	398.75
2-1/2	6	398.75
2-1/2	8	398.75
2-1/2	12	398.75
2-1/2	16	398.75
2-1/2	18	398.75
2-1/2	32	398.75
2-9/16	12	446.88
2-5/8	4	501.88
2-5/8	8	501.88
2-5/8	12	501.88
2-5/8	16	501.88
2-5/8	18	501.88
2-5/8	20	501.88
2-3/4	4	617.38
2-3/4	8	617.38
2-3/4	12	617.38
2-3/4	16	617.38
2-3/4	18	617.38
2-3/4	20	617.38
2-7/8	4	639.38
2-7/8	8	639.38
2-7/8	12	639.38
2-7/8	16	639.38
2-7/8	18	639.38
2-7/8	20	639.38
3	4	719.13
3	8	719.13
3	12	719.13
3	16	719.13
3	18	719.13
3	20	719.13
3-1/8	4	783.75
3-1/8	8	783.75
3-1/8	12	783.75
3-1/8	16	783.75
3-1/8	18	783.75
3-1/8	20	783.75
3-1/4	4	831.88
3-1/4	8	831.88
3-1/4	12	831.88
3-1/4	16	831.88
3-1/4	18	831.88
3-1/4	20	831.88
3-3/8	4	895.79
3-3/8	8	895.79
3-3/8	12	895.79
3-3/8	16	895.79
3-1/2	4	929.50
3-1/2	8	929.50
3-1/2	12	929.50
3-1/2	16	929.50
3-5/8	4	1007.16
3-5/8	8	1007.16
3-5/8	12	1007.16
3-5/8	16	1007.16
3-3/4	4	1084.88
3-3/4	8	1084.88
3-3/4	12	1084.88
3-3/4	16	1084.88
3-7/8	4	1152.93
3-7/8	8	1152.93
3-7/8	12	1152.93
3-7/8	16	1152.93
4	4	1221.00
4	8	1221.00
4	12	1221.00
4	16	1221.00
4-1/2	12	2281.13
4-3/4	8	4180.55
4-3/4	12	4180.55
5	8	5205.09
5	12	5205.09

Spiral Point Special Thread Taps

High Speed Steel



High Speed MDX® SUPERIOR IMPORT

List No. **779SP** – Plug Chamfer

Size	Threads Per Inch	Price Each
00	90	18.60
00	96	18.60
2	48	12.60
2	80	12.60
3	80	12.60
4	32	12.60
4	56	12.60
4	60	12.60
4	64	12.60
4	80	12.60
5	32	12.46
5	36	12.46
5	48	12.46
5	60	12.46
5	64	12.46
5	80	12.46
6	36	10.26
6	48	10.26
6	56	10.26
6	60	10.26
6	64	10.26
6	80	10.26
7	32	10.76
8	24	10.76
8	30	10.76
8	40	10.76
8	48	10.76
8	56	10.76
8	60	10.76
8	64	10.76
8	80	10.76
9	24	10.76
9	32	10.76
10	28	10.76
10	30	10.76
10	36	10.76
10	40	10.76
10	48	10.76
10	56	10.76
10	60	10.76
10	64	10.76
10	80	10.76
12	30	10.76
12	32	10.76
12	36	10.76
12	40	10.76
12	48	10.76
12	56	10.76
12	64	10.76
3/32	50	10.76
1/8	40	10.76
1/8	48	10.76
5/32	32	10.76
5/32	36	10.76
3/16	24	10.76
3/16	32	10.76
13/64	24	10.76
7/32	24	10.76
7/32	32	10.76
1/4	16	10.76
1/4	18	10.76
1/4	24	10.76
1/4	26	10.76
1/4	27	10.76
1/4	32	10.76
1/4	36	10.76
1/4	40	10.76
1/4	48	10.76
1/4	56	10.76
1/4	60	10.76
1/4	64	10.76
1/4	80	10.76
9/32	24	11.29
9/32	32	11.29
9/32	40	11.29
5/16	16	11.29
5/16	20	11.29
5/16	22	11.29
5/16	27	11.29
5/16	28	11.29
5/16	32	11.29
5/16	36	11.29
5/16	40	11.29
5/16	48	11.29
5/16	56	11.29
5/16	60	11.29
5/16	64	11.29
5/16	80	11.29
11/32	32	11.42
3/8	14	11.42
3/8	18	11.42
3/8	20	11.42
3/8	27	11.42
3/8	28	11.42
3/8	30	11.42
3/8	32	11.42
3/8	36	11.42
3/8	40	11.42
3/8	48	11.42
3/8	56	11.42
3/8	60	11.42
3/8	64	11.42
3/8	80	11.42
13/32	32	13.41
13/32	36	13.41
13/32	40	13.41
7/16	12	13.41
7/16	16	13.41
7/16	18	13.41
7/16	24	13.41
7/16	27	13.41
7/16	28	13.41
7/16	32	13.41
7/16	36	13.41
7/16	40	13.41
7/16	48	13.41
7/16	56	13.41
7/16	64	13.41
15/32	32	16.64
15/32	36	16.64
15/32	40	16.64
1/2	10	16.64
1/2	12	16.64
1/2	14	16.64
1/2	16	16.64
1/2	18	16.64
1/2	24	16.64
1/2	27	16.64
1/2	28	16.64
1/2	30	16.64
1/2	32	16.64
1/2	36	16.64
1/2	40	16.64
1/2	48	16.64
1/2	56	16.64
1/2	60	16.64
1/2	64	16.64
1/2	80	16.64
9/16	14	19.97
9/16	16	19.97
9/16	20	19.97
9/16	24	19.97
9/16	27	19.97
9/16	28	19.97
9/16	32	19.97
9/16	36	19.97
9/16	40	19.97
9/16	48	19.97
5/8	10	23.29
5/8	12	23.29
5/8	14	23.29
5/8	16	23.29
5/8	20	23.29
5/8	24	23.29
5/8	26	23.29
5/8	27	23.29
5/8	28	23.29
5/8	32	23.29
5/8	36	23.29
5/8	40	23.29
5/8	48	23.29
5/8	56	23.29
5/8	64	23.29
11/16	12	32.19
11/16	14	32.19
11/16	18	32.19
11/16	20	32.19
11/16	24	32.19
11/16	27	32.19
11/16	32	32.19
11/16	36	32.19
11/16	40	32.19
11/16	48	32.19
3/4	8	38.81
3/4	11-1/2	38.81
3/4	12	38.81
3/4	14	38.81
3/4	18	38.81
3/4	20	38.81
3/4	24	38.81
3/4	27	38.81
3/4	28	38.81
3/4	32	38.81
3/4	36	38.81
3/4	40	38.81
3/4	48	38.81
3/4	56	38.81
3/4	64	38.81
13/16	10	47.71
13/16	12	47.71
13/16	14	47.71
13/16	16	47.71
13/16	18	47.71
13/16	20	47.71
13/16	24	47.71
13/16	27	47.71
13/16	28	47.71
13/16	32	47.71
13/16	40	47.71
13/16	48	47.71
7/8	10	55.48
7/8	12	55.48
7/8	18	55.48
7/8	20	55.48
7/8	24	55.48
7/8	27	55.48
7/8	32	55.48
7/8	36	55.48
7/8	40	55.48
15/16	12	58.81
15/16	18	58.81
15/16	20	58.81
15/16	24	58.81
15/16	32	58.81
31/32	16	74.50
1	16	63.40
1	20	63.40
1	24	63.40
1	36	63.40
1	40	63.40
1	48	63.40
1	56	63.40
1	64	63.40
1-1/8	20	78.00
1-1/8	24	78.00

Eight Pitch Taps

High Speed Steel – Ground Thread

List No. **779** – Eight Threads per Inch
List No. **779SET** – (Plug, Bottoming, Taper)

Please specify plug, bottoming, or taper chamfer when ordering.



Size	Price Each 779	Price Each 779SET
3/4	22.75	68.25
7/8	29.28	87.84
1-1/16	57.48	172.44
1-1/8	60.10	180.30
1-3/16	75.50	226.50
1-1/4	75.50	226.50
1-5/16	97.65	292.95
1-3/8	97.65	292.95
1-7/16	128.26	384.78

Size	Price Each 779	Price Each 779SET
1-1/2	129.71	389.13
1-9/16	139.15	417.45
1-5/8	142.95	428.85
1-11/16	163.35	490.05
1-3/4	181.35	544.05
1-13/16	199.65	598.95
1-7/8	215.63	646.89
1-15/16	229.90	689.70
2	235.95	707.85

Size	Price 779
2-1/8	289.25
2-1/4	309.38
2-3/8	398.75
2-1/2	398.75
2-5/8	501.88
2-3/4	617.38
2-7/8	639.38
3	719.13
3-1/8	783.75

Size	Price 779
3-1/4	831.88
3-3/8	895.79
3-1/2	929.50
3-5/8	1007.16
3-3/4	1084.88
3-7/8	1152.93
4	1221.00
4-3/4	4180.55
5	5205.09

Acme Tandem Style Taps



High Speed Steel – Class 2G

Tandem style tap eliminates the excessive cost of producing Acme threads. It produces threads from a 10° to 30° included angle in a single pass without alead-screw. The last few threads on the roughing section function as a guide for the short finishing section, which corrects the angles and brings the threads to size.

List No. **787** – Right Hand
List No. **787L** – Left Hand

Size	Threads Per Inch	Thread Length	Overall Length	Price Each Right Hand 787	Price Each Left Hand 787L
3/8	12	2-1/8	4-1/16	96.75	129.80
7/16	12	2-9/16	5	96.75	129.80
1/2	10	2-9/16	5	96.75	119.00
5/8	8	3-3/16	6-1/4	108.35	126.83
3/4	6	4-5/16	7-15/16	148.23	171.82
7/8	6	4-3/8	8-5/8	173.25	209.11

Size	Threads Per Inch	Thread Length	Overall Length	Price Each Right Hand 787	Price Each Left Hand 787L
1	5	5-1/4	10-1/8	180.84	219.84
1-1/8	5	5-1/4	10-3/4	193.88	293.66
1-1/4	5	5-1/4	11-1/8	231.00	324.50
1-3/8	4	5-7/8	12-1/4	290.40	360.80
1-1/2	4	5-7/8	12-5/8	309.65	401.50
2	4	6-1/2	14-7/8	368.50	438.90

WHITWORTH Taps

High Speed Steel – Ground Thread

List No. **772W** – 55° Thread Angle, British Standard, Plug, Chamfer.



Size	Threads Per Inch	Overall Length mm	Price Each
1/16	60	32	10.44
3/32	48	36	10.63
1/8	40	41	10.83
5/32	32	45	10.83
3/16	24	50	10.83
1/4	20	50	10.83
5/16	18	56	13.32
3/8	16	63	15.47

Size	Threads Per Inch	Overall Length mm	Price Each
7/16	14	70	23.58
1/2	12	75	27.06
9/16	12	80	27.06
5/8	11	80	44.45
3/4	10	95	61.85
7/8	9	100	86.97
1	8	110	108.23
1-1/4	7	125	110.00

Size	Threads Per Inch	Overall Length mm	Price Each
1-3/8	6	150	171.37
1-1/2	6	150	198.42
1-5/8	5	160	216.45
1-7/8	4-1/2	180	234.50
2	4-1/2	180	260.50
2-1/4	4	220	286.61
2-1/2	4	220	324.69
3	3-1/2	305	1234.80

WHITWORTH Nut Taps

High Speed Steel – Ground Thread

List No. **798W** – 55° Thread Angle, British Standard

Primarily used for threading nuts. Shank of tap is smaller than I.D. of nut allowing nuts to accumulate on the shank. Also used for long reach.



Size	Threads Per Inch	Overall Length mm	Price Each
1/8	40	70	43.27
3/16	24	90	47.40
1/4	20	110	52.00
5/16	18	125	57.40
3/8	16	140	65.97

Size	Threads Per Inch	Overall Length mm	Price Each
1/2	12	180	82.46
9/16	12	200	99.75
5/8	11	220	107.20
3/4	10	250	148.45
1"	8	315	206.16

Left Hand Taps

High Speed Steel – Ground Thread



Left Hand Standard Thread

List No. **770L** – Hand Tap ***Please specify plug, bottoming, or taper chamfer***
List No. **770LSET** – 3 Piece Set (Plug, Bottoming, Taper)
List No. **782L** – Spiral Point Plug Chamfer

Size	T.P.I.	Thread Limits	Straight No. of Flutes	Straight Price Each 770L	Straight Price Each 770LSET	Spiral Point No. of Flutes	Spiral Point Price Each 782L
1	72	H2	2	8.25	24.75	2	9.74
2	56	H2	3	8.25	24.75	2	9.74
2	64	H2	3	8.25	24.75	2	9.74
3	48	H2	3	8.25	24.75	2	9.74
3	56	H2	3	8.25	24.75	2	9.74
4	40	H2	3	7.59	22.77	2	8.96
4	48	H2	3	8.25	24.75	2	9.74
5	40	H2	3	7.59	22.77	2	8.96
5	44	H2	3	8.25	24.75	2	9.74
6	32	H3	3	6.76	20.28	2	7.98
6	40	H3	3	6.76	20.28	2	7.98
8	32	H3	4	6.76	20.28	2	7.98
8	36	H3	4	6.76	20.28	2	7.98
10	24	H3	4	6.76	20.28	2	7.98
10	32	H3	4	6.76	20.28	2	7.98
12	24	H3	4	7.91	23.73	2	9.33
12	28	H3	4	7.91	23.73	2	9.33
1/4	20	H3	4	7.91	23.73	2	9.33
1/4	28	H3	4	7.91	23.73	2	9.33
5/16	18	H3	4	8.77	26.31	2	10.35
5/16	24	H3	4	8.77	26.31	2	10.35
3/8	16	H3	4	11.35	34.05	3	13.39
3/8	24	H3	4	11.35	34.05	3	13.39
7/16	14	H3	4	14.51	43.53	3	17.12

Size	T.P.I.	Thread Limits	Straight No. of Flutes	Straight Price Each 770L	Straight Price Each 770LSET	Spiral Point No. of Flutes	Spiral Point Price Each 782L
7/16	20	H3	4	14.51	43.53	3	17.12
1/2	13	H3	4	17.15	51.45	3	20.24
1/2	20	H3	4	17.15	51.45	3	20.24
9/16	12	H3	4	25.59	76.77	3	30.20
9/16	18	H3	4	25.59	76.77	3	30.20
5/8	11	H3	4	32.47	97.41	3	38.31
5/8	18	H3	4	32.47	97.41	3	38.31
11/16	11	H3	4	35.74	107.22	3	42.17
11/16	16	H3	4	35.74	107.22	3	42.17
3/4	10	H3	4	42.34	127.02	3	49.96
3/4	16	H3	4	42.34	127.02	3	49.96
7/8	9	H4	4	57.48	172.44	3	67.83
7/8	14	H4	4	57.48	172.44	3	67.83
1"	8	H4	4	75.23	225.69	3	88.77
1"	12	H4	4	75.23	225.69	3	88.77
1"	14	H4	4	75.23	225.69	3	88.77
1-1/8	7	H4	4	126.59	379.77	—	—
1-1/8	12	H4	4	126.59	379.77	—	—
1-1/4	7	H4	4	159.81	479.43	—	—
1-1/4	12	H4	6	159.81	479.43	—	—
1-3/8	6	H4	4	199.03	597.09	—	—
1-3/8	12	H4	6	199.03	597.09	—	—
1-1/2	6	H4	4	231.00	693.00	—	—
1-1/2	12	H4	6	231.00	693.00	—	—

Metric Sizes

List No. **773MLH** – Plug Chamfer

Size mm	Pitch	No. of Flutes	Price Each
1.70	.35	2	23.50
2.00	.40	3	23.50
2.60	.45	3	16.00
3.00	.50	3	12.15
3.50	.60	3	11.77
4.00	.70	4	11.77
5.00	.80	4	12.40
6.00	1.00	4	12.95
7.00	1.00	4	14.09
8.00	.50	4	10.09
8.00	1.00	4	10.09
8.00	1.25	4	12.19
9.00	1.25	4	14.02
10.00	.75	4	14.02

Size mm	Pitch	No. of Flutes	Price Each
10.00	1.25	4	14.02
10.00	1.50	4	14.02
11.00	1.00	4	18.69
11.00	1.50	4	18.69
12.00	1.25	4	27.30
12.00	1.50	4	27.30
12.00	1.75	4	27.30
14.00	1.25	4	35.60
14.00	1.50	4	35.60
14.00	2.00	4	35.60
16.00	.75	4	42.25
16.00	1.50	4	42.25
16.00	2.00	4	42.25
18.00	1.00	4	54.00

Size mm	Pitch	No. of Flutes	Price Each
18.00	1.50	4	54.00
18.00	2.50	4	54.00
20.00	1.50	4	72.26
20.00	2.50	4	72.26
22.00	1.50	4	82.00
22.00	2.50	4	82.00
24.00	2.00	4	115.70
27.00	2.00	4	148.00
27.00	3.00	4	148.00
30.00	2.00	4	225.00
30.00	3.50	4	225.00
45.00	1.50	6	467.50

Left Hand Special Thread

List No. **779L** – Hand Tap ***Please specify plug, bottoming, or taper chamfer***
List No. **779LS** – Spiral Point - Plug Chamfer

Size	Threads Per Inch	Price Each Hand Tap **779L**	Price Each Spiral Point **779LS**
1/4	27	14.03	16.14
1/4	32	14.03	16.14
5/16	27	14.03	—
5/16	32	14.03	16.14
3/8	32	14.28	16.42
7/16	24	15.77	18.14
1/2	24	17.99	20.69
1/2	32	17.99	20.69
5/8	24	27.64	31.79
5/8	32	27.64	31.79
11/16	18	34.12	—
3/4	18	34.12	—
3/4	20	34.12	—
3/4	24	34.12	39.24
3/4	32	34.12	39.24

Size	Threads Per Inch	Price Each Hand Tap **779L**
7/8	20	70.00
1	20	82.00
1	24	82.00
1-1/16	12	88.00
1-1/16	18	88.00
1-1/8	8	90.16
1-1/4	8	90.16
1-5/16	20	139.00
1-3/8	8	146.48
1-7/16	16	188.00
1-1/2	8	194.57
1-9/16	20	208.73
1-5/8	12	250.00
1-3/4	8	272.02
3-1/4	6	1200.00
3-1/4	20	1200.00

Pipe Taps

High Speed Steel – Ground Thread


NPT


NPS


INT/NPT

Taper pipe taps are utilized to thread pipe fittings hence their nominal size is of the pipe being threaded.

List No. **790U** – Taper (NPT)
List No. **791U** – Straight (NPS)
List No. **792U** – Interrupted Thread Taper (INT/NPT)

For tapping tough, or gummy metals that have a tendency to load the tap teeth.

High Speed

MADE IN USA

MICHIGAN DRILL & CUTTING TOOLS

Size	Threads Per Inch	Price Each NPT 790U	NPS 791U	INT/NPT 792U
1/16	27	25.68	27.80	39.86
1/8	27 SM/SK	25.68	27.80	—
1/8	27 LG/SK	25.68	27.80	39.86
1/4	18	28.40	30.83	44.22
3/8	18	37.45	40.33	55.80
1/2	14	59.33	64.41	88.99
3/4	14	83.11	90.39	125.83

Size	Threads Per Inch	Price Each NPT 790U	NPS 791U	INT/NPT 792U
1	11-1/2	125.88	137.20	194.48
1-1/4	11-1/2	180.77	191.89	273.47
1-1/2	11-1/2	241.95	249.36	367.36
2	11-1/2	328.50	356.90	494.36
2-1/2	8	690.62	—	—
3	8	973.35	—	—

List No. **790** – Taper (NPT)
List No. **790T** – TiN Coated Taper (NPT)
List No. **791** – Straight (NPS)
List No. **792** – Interrupted Thread (INT/NPT)

List No. **790F** – Dryseal Taper (NPTF)
List No. **791F** – Dryseal Straight (NPSF)
List No. **792F** – Dryseal Interrupted Thread Taper (INT/NPTF)

MDX® SUPERIOR IMPORT

Size	Threads Per Inch	Price Each NPT 790	TiN Coated NPT 790T	NPS 791	INT/NPT 792	NPTF 790F	NPSF 791F	INT/NPTF 792F
1/16	27	19.58	26.22	21.02	29.37	20.86	22.41	31.31
1/8	27 SM/SK	19.58	28.55	21.02	—	—	—	—
1/8	27 LG/SK	19.58	28.55	21.02	29.37	20.86	22.41	31.31
1/4	18	21.56	32.92	23.49	32.49	23.00	25.03	34.65
3/8	18	28.49	42.30	30.69	41.79	30.38	32.72	44.55
1/2	14	45.16	65.25	48.94	65.14	48.15	52.19	69.47
3/4	14	63.18	86.37	68.61	92.55	67.39	73.17	98.70
1	11-1/2	97.05	133.26	104.28	145.56	103.50	111.24	155.25
1-1/4	11-1/2	139.23	182.29	140.02	207.72	148.50	157.50	221.55
1-1/2	11-1/2	191.97	250.76	196.20	278.87	204.75	202.50	297.45
2	11-1/2	252.97	328.80	258.08	375.44	269.82	301.50	400.46
2-1/2	8	458.06	—	670.50	538.20	625.50	718.20	—
3	8	580.50	—	945.00	—	706.50	1008.00	—
3-1/2	8	843.01	—	999.00	—	897.30	—	—
4	8	1161.34	—	1215.00	—	1219.00	—	—

Carbon Pipe Taps

Ground Thread



MADE IN USA

MICHIGAN DRILL & CUTTING TOOLS

List No. **793U** – Taper (NPT)
List No. **793UST** – Surface Treated With Steam Oxide for reduced wear.

Size	Threads Per Inch	Price Each 793U	793UST
1/16	27	10.17	15.17
1/8	27	10.17	15.17
1/4	18	12.00	17.60
3/8	18	15.53	21.65

Size	Threads Per Inch	Price Each 793U	793UST
1/2	14	20.62	30.20
3/4	14	33.03	43.00
1	11-1/2	48.68	61.00
1-1/4	11-1/2	57.43	79.00

Size	Threads Per Inch	Price Each 793U	793UST
1-1/2	11-1/2	81.07	127.00
2	11-1/2	124.16	163.00

List No. **793** – Taper (NPT)
List No. **793L** – Left Hand Taper (NPT)
List No. **793ST** – Right Hand Straight (NPS)

Size	Threads Per Inch	Price Each NPT 793	NPT LH 793L	Straight RH 793ST
1/16	27	7.86	10.88	—
1/8	27	7.86	10.88	12.15
1/4	18	9.05	12.52	13.39
3/8	18	11.99	16.61	18.45
1/2	14	15.93	22.05	24.44
3/4	14	25.49	35.33	39.06
1	11-1/2	37.55	52.07	55.05

Size	Threads Per Inch	Price Each NPT 793	NPT LH 793L	Straight RH 793ST
1-1/4	11-1/2	44.31	61.43	64.87
1-1/2	11-1/2	62.55	86.72	89.30
2	11-1/2	95.79	133.20	138.38
2-1/2	8	179.10	231.75	—
3	8	242.10	357.30	—
3-1/2	8	422.10	—	—
4	8	562.50	—	—

Long Reach NPT Pipe Taps

High Speed Steel – Ground Thread

List No. **797**

Size	Threads Per Inch	Price Each 3" OAL	4" OAL	6" OAL	8" OAL	12" OAL
1/16	27	18.90	22.95	27.68	33.75	51.60
1/8	27	—	26.55*	27.68*	33.75	51.60
1/4	18	—	30.56	31.73*	35.78	53.10
3/8	18	—	33.70	39.75	39.90	60.90
1/2	14	—	—	51.08	72.00	87.26
3/4	14	—	—	72.68	112.50	134.10
1	11-1/2	—	—	103.50	157.50	175.50
1-1/4	11-1/2	—	—	—	—	390.00
1-1/2	11-1/2	—	—	—	—	460.00
2	11-1/2	—	—	—	—	510.00

** NPS in stock - same price*



British Standard Pipe Taps

High Speed Steel – Ground Thread

List No. **794** – Taper (BSPT)
List No. **799** – Parallel (BSPP)



Size	Threads Per Inch	Price Each BSPT **794**	BSPP **799**
1/8	28	31.41	31.41
1/4	19	34.95	34.95
3/8	19	46.08	46.08
1/2	14	72.90	72.90
5/8	14	85.41	85.41
3/4	14	99.75	99.75
7/8	14	135.72	135.72
1	11	150.66	150.66

Size	Threads Per Inch	Price Each BSPT **794**	BSPP **799**
1-1/8	11	—	219.50
1-1/4	11	227.82	227.82
1-1/2	11	298.69	298.69
1-3/4	11	343.54	343.54
2	11	440.00	440.00
2-1/2	11	950.00	950.00
2-3/4	11	—	1060.00

Left Hand & Spiral Flute Pipe Taps

High Speed Steel – Ground Thread

List No. **790L** – Left Hand Taper (NPT)
List No. **791L** – Left Hand Straight (NPS)
List No. **790SP** – Spiral Taper (NPT)
List No. **791SP** – Spiral Straight (NPS)

Size	Threads Per Inch	Price Each LH NPT **790L**	LH NPS **791L**	Taper **790SP**	Straight **791SP**
1/16	27	23.50	26.28	39.24	—
1/8	27	23.50	26.28	39.24	45.13
1/4	18	25.87	29.36	48.51	55.79
3/8	18	34.19	38.36	60.30	69.35
1/2	14	54.19	61.18	76.05	—
3/4	14	75.82	85.76	115.20	—
1	11-1/2	116.46	130.35	144.90	—
1-1/4	11-1/2	160.08	175.03	—	—
1-1/2	11-1/2	230.36	245.25	—	—
2	11-1/2	303.56	322.60	—	—



LH NPT



LH NPS



Spiral

Pipe Tap Sets

High Speed Steel & Carbon

Sizes	Description	Pcs.	Set No.	Price
1/8, 1/4, 3/8, 1/2, 3/4, 1	USA H.S. Taper Pipe Set	6	**790US**	360.05
1/8, 1/4, 3/8, 1/2, 3/4, 1	USA Carbon Taper Pipe	6	**793US**	154.62
1/8, 1/4, 3/8, 1/2.	Import H.S. Taper Pipe Set	4	**790S**	114.79
1/8, 1/4, 3/8, 1/2.	Import Carbon Taper Pipe	4	**793S**	48.96



Combined Tap & Drill

High Speed Steel – Ground Thread



List No. **789** – 2 Flute

Designed to drill and tap thru holes in a single pass up to two times the tap diameter. Also can be used on multiple spindle heads with reversing mechanisms.

Size	Threads Per Inch	Drill Size	Thread Length	Overall Length	Price Each
4	40	.0910	3/8	1-7/8	16.50
4	48	.0945	3/8	1-7/8	16.50
5	40	.1040	13/32	1-15/16	16.50
6	32	.1115	7/16	2	16.50
6	40	.1170	7/16	2	16.50
8	32	.1375	1/2	2-1/8	16.50
10	24	.1545	5/8	2-3/8	16.50
10	32	.1635	5/8	2-3/8	16.50
12	24	.1805	21/32	2-3/8	17.60
12	28	.1860	21/32	2-3/8	17.60
1/4	20	.2080	25/32	2-1/2	16.50
1/4	28	.2200	25/32	2-1/2	17.60
5/16	18	.2660	15/16	2-27/32	24.20
5/16	24	.2770	15/16	2-27/32	24.20
3/8	16	.3225	1-1/16	3-3/8	28.60
3/8	24	.3395	1-1/16	3-3/8	28.60
7/16	14	.3770	1-1/4	3-3/4	36.86
7/16	20	.3955	1-1/4	3-3/4	36.86
1/2	13	.4350	1-3/8	4-1/16	42.58
1/2	20	.4580	1-3/8	4-1/16	42.58
5/8	11	.5750	1-3/4	5	87.46
3/4	10	.6650	2	6	108.90

Pipe Sizes

Size	Threads Per Inch	Drill Size	Thread Length	Overall Length	Price Each
1/16	27	.2420	11/16	2-13/16	63.35
1/8	27	.3320	3/4	2-7/8	79.89
1/4	18	.4370	1-1/16	3-5/16	90.68
3/8	18	.5620	1-1/16	3-1/2	104.63
1/2	14	.7030	1-3/8	4-3/8	159.12
3/4	14	.9060	1-3/8	4-9/16	222.18
1	11-1/2	1.1410	1-3/4	5-3/8	333.30

Metric Sizes

List No. **789M** – 2 Flute

Size	Threads Per Inch	Drill Size	Thread Length	Overall Length	Price Each
3.00	.50	.1015	13/32	1-15/16	18.76
3.50	.60	.1181	7/16	2	18.76
4.00	.70	.1339	1/2	2-1/8	18.76
4.50	.75	.1520	7/8	2-3/8	18.76
5.00	.80	.1695	5/8	2-3/8	18.76
6.00	1.00	.2031	25/32	2-1/2	18.76
7.00	1.00	.2420	15/16	2-27/32	18.76
8.00	1.25	.2735	15/16	2-27/32	18.76
10.00	1.50	.3445	1-1/16	3-3/8	38.86
12.00	1.75	.4134	1-3/8	4-1/4	38.86

Cobalt Combined Tap & Drill



List No. **789C** – 2 Flute

Designed to drill and tap thru holes in a single pass up to two times the tap diameter. Also can be used on multiple spindle heads with reversing mechanisms.

Size	Threads Per Inch	Drill Size	Thread Length	Overall Length	Price Each
4	40	.0910	3/8	1-7/8	22.88
4	48	.0945	3/8	1-7/8	24.72
5	40	.1040	13/32	1-15/16	22.88
6	32	.1115	7/16	2	22.88
6	40	.1170	7/16	2	24.72
8	32	.1375	1/2	2-1/8	22.88
8	36	.1400	1/2	2-1/8	24.88
10	24	.1545	5/8	2-3/8	22.88
10	32	.1635	5/8	2-3/8	22.88
12	24	.1805	21/32	2-3/8	22.88
12	28	.1860	21/32	2-3/8	24.72
1/4	20	.2080	25/32	2-1/2	22.88
1/4	28	.2200	25/32	2-1/2	22.88
5/16	18	.2660	15/16	2-27/32	34.08
5/16	24	.2770	15/16	2-27/32	34.08
3/8	16	.3225	1-1/16	3-3/8	41.04
3/8	24	.3395	1-1/16	3-3/8	41.04
7/16	14	.3770	1-1/4	3-3/4	49.20
7/16	20	.3955	1-1/4	3-3/4	49.20
1/2	13	.4350	1-3/8	4-1/16	55.12
1/2	20	.4580	1-3/8	4-1/16	55.12

Floating Die & Tap Holder System

THREADEX™

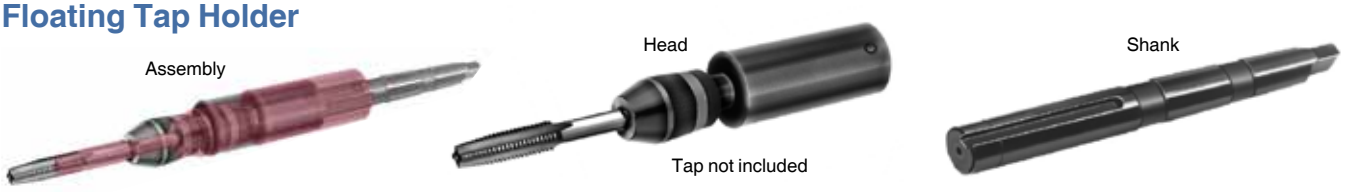
Cutting external and internal threads is simple, safe, accurate, and inexpensive!

MADE IN USA Exclusively By apt USA Approved Performance Tooling

- **Simple:** Cut threads on any lathe fitted with a Morse Taper tailstock
- **Accurate:** Improves thread quality with fewer part rejections over hand held method
- **Faster:** 4 to 5 times faster than threading with a single point tool
- **Safe:** Reduces chance for operator injury

Watch our instructional videos on www.MichiganDrill.com/videos

Floating Tap Holder



Heads

Tap Range	Max. Thread Length	Fits Shank Number	**Head Number**	Price Each
0 – 1/4	2-3/8	FDHS-2T	**FTH-014**	127.23
1/4 – 1/2	2-7/8	FDHS-3T, FDHS-4T	**FTH-1412**	161.62
1/2 – 3/4	2-7/8	FDHS-3T, FDHS-4T	**FTH-1234**	196.00
3/4 – 1	3-7/8	FDHS-4HD, FDHS-5T	**FTH-3410**	230.39
1 – 1-1/4	3-7/8	FDHS-4HD, FDHS-5T	**FTH-1114**	264.77
1-1/4 – 1-1/2	3-7/8	FDHS-4HD, FDHS-5T	**FTH-114112**	300.87

Shank

Morse Taper No.	Fits Head Number	**Shank Number**	Price Each
2	FTH-014	**FDHS-2T**	82.52
3	FTH-1412, FTH -1234	**FDHS-3T**	110.03
4	FTH-1412, FTH -1234	**FDHS-4T**	128.95
4	FTH-3410,FTH -1114, FTH-114112	**FDHS-4HD**	161.62
5	FTH-3410,FTH -1114, FTH-114112	**FDHS-5T**	240.70

Floating Die Holder



Heads

Fits Die O.D.	Max. Thread Length	Fits Shank Number	**Head Number**	Price Each
13/16	2-3/8	FDHS-2T	**FDH81-2**	84.24
1	2-3/8	FDHS-2T	**FDH1-2**	84.24
1	2-7/8	FDHS-3T, FDHS-4T	**FDH1-34**	99.72
1-1/2	2-7/8	FDHS-3T, FDHS-4T	**FDH15-34**	99.72
2	2-7/8	FDHS-3T, FDHS-4T	**FDH2-34**	110.03
2-1/2	3-7/8	FDHS-4HD, FDHS-5T	**FDH25-4HD5**	168.49

Shank

Morse Taper No.	Fits Head Number	**Shank Number**	Price Each
2	FDH1-2, FDH81-2	**FDHS-2T**	82.52
3	FDH1-34, FDH15-34, FDH2-34	**FDHS-3T**	110.03
4	FDH1-34, FDH15-34, FDH2-34	**FDHS-4T**	128.95
4	FDH25-4HD5	**FDHS-4HD**	161.62
5	FDH25-4HD5	**FDHS-5T**	240.70

Simulated tailstock assembly



Simulated tailstock assembly



Threadex® Operating Instructions

Step 1 Select head to fit desired die O.D. or tap range, insert and secure die or tap.
Step 2 Select appropriate shank and install into lathe tailstock.
Step 3 Slide head onto shank and advance tailstock within proximity of work piece.
Step 4 Lock tailstock and advance holder with tailstock crank until head begins to self feed.
Step 5 Reverse lathe at desired point and reverse tailstock crank a few turns as head is backing off work piece.

T-Handle Tap Wrenches

For hand tapping and for driving screw extractors, heavy knurled cap for better grip.

Plain Type



Tap Capacity			
Fractional Tap Sizes	Machine Screw Tap Sizes	**Tool No.**	Price Each
1/16 - 5/32	0-8	**TWH-1**	6.44
5/32 - 1/4	8-12	**TWH-2**	7.15
1/4 - 1/2	12	**TWH-3**	11.38

Reversible Ratchet Type

Holding Capacity				
Fractional Tap Sizes	Machine Screw Tap Sizes	Overall Length	**Tool No.**	Price Each
1/16-5/32	0-8	2-1/4	**TWR-1**	12.71
5/32-1/4	8-12	3-3/8	**TWR-2**	14.24
5/32-1/4	8-12	9-7/8	**TWR-2L**	20.80
1/4-1/2	12	4-3/8	**TWR-3**	18.64
1/4-1/2	12	12	**TWR-3L**	24.70

Tap Wrench Sets

Description	Pcs.	Capacity	**Set No.**	Price
Plain Type Tap Wrench	3	1/16 - 1/2"	**TWHS**	24.05
Reversible Ratchet Tap Wrench	3	1/16 - 1/2"	**TWRS**	44.14

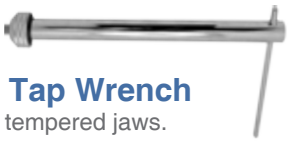
MDX SUPERIOR IMPORT



Mini Tap Wrench

Ideal for small tapping applications

Tap Capacity	Range	**Tool No.**	Price Each
1/4	#0 - 1/4	**TWM1**	6.24
1/2	5/16 - 1/2	**TWM2**	7.67



Extra Long Ratchet Tap Wrench

13" long, hardened and tempered jaws.

Tap Capacity	**Tool No.**	Price Each
5/32 - 1/4	**TWX1**	21.71
1/4 - 1/2	**TWX4**	30.29



Piloted Spindle Tap Wrench

For threading a drilled hole manually at one machine location without moving the workpiece. Hardened and tempered jaws.

Tap Capacity	**Tool No.**	Price Each
1/16 - 1/4	**TWP-1**	15.60
1/4 - 1/2	**TWP-2**	19.50

Adjustable Tap & Reamer Wrenches

Hardened and tempered jaws used for taps or reamers.

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Holding Capacity					
Fractional Tap Sizes	Machine Screw Tap Sizes	Pipe Tap Sizes	Hand Reamer Sizes	**Tool No.**	Price Each
1/16 - 1/4	0-14	—	1/8 - 7/64	**TW00**	18.14
1/16 - 1/4	0-14	—	1/8 - 21/64	**TW0**	19.34
1/16 - 3/8	0-14	—	1/8 - 25/64	**TW4**	26.00
5/32 - 1/2	8-14	1/8	11/64 - 7/16	**TW5**	36.80
5/32 - 3/4	8-14	1/8 - 1/4	11/64 - 41/64	**TW6**	36.80
1/4 - 1-1/8	—	1/8 - 3/4	9/32 - 29/32	**TW7**	41.03
1/2 - 1-3/8	—	1/8 - 1	3/8 - 1-5/32	**TW75**	51.74
3/4 - 1-5/8	—	3/8 - 1-1/4	37/64 - 1-11/32	**TW8**	122.68
7/8 - 2	—	1 - 2	3/4 - 1-1/2	**TW10**	144.63
1 - 2-1/2	—	3/4 - 2	7/8 - 2-1/8	**TW22**	159.25
1-3/4-4	—	1-1/2-4	1-7/16-3	**TW24**	210.00

Hand Tapper 0-5/8 Capacity

Uses Spiral Point Taps — Not included.
Taps thru the open base. Can be used vertical, horizontal, or inverted.
Assures straight perpendicular tapped holes.
Comes equipped with tap guide, ground work table, and tap spindle wrench.



Overall Height	Table Size	Clearance Height	Depth of Throat	Table Arm	Adapter Sizes	**Tool No.**	Price Each
14	13" Length 8" Width	7"	7-1/2"	8" x 11"	8-32, 10-24, 1/4, 5/16, 3/8, 7/16, 1/2, 5/8, 3/4	**TW949-320**	139.00

Tapping Accessories

MDX SUPERIOR IMPORT

Tap Guide Spring Center



Point hardened to 50-55 RC.
The center's body is to be gripped in a drill chuck/collet as hardened point is inserted into the center of the tapping handle.
The stroke of center will follow the tap
Assures straight and accurate threads.

Tool No.	Price Each
TG3	12.18

Self Aligning Tap & Reamer Holder Set



Set No. **TSA1**

Hardened jaws hold taps and reamers true, preventing breakage.

Description	Price
Set consists of tapping guide, tap holder, and jaw "A" for 1/4" capacity taps and jaw "B" for 1/4 - 1/2" taps	37.70

Tap Extension



Eliminates need for extension taps Knurled grip chuck.

Tap Capacity	Overall Length	Tool No.	Price Each
1/4	7	TEX1	12.87
1/2	10-3/4	TEX2	15.60

Tap Guide



1/2" diameter hardened shank.
Knurled for easy handling.
3/16" diameter hardened tension pin.
Adjustable tension spring.
Reversible tension pin for male or female hole centering of tap

Tool No.	Price Each
TG1	10.34

Machine Tapping Guide



Provides sensitive feel for tapping holes.
Starts holes straight & prevents breakage.
Shank diameter 3/8
Handle diameter 1"
Tap Capacity #0 to #12

Tool No.	Price Each
TG2	24.64

Reversable Tapping Attachment

CUSTANITE Precision

- For use on vertical machines and machines with rotating non-reversing spindles.
- Right or Left hand tapping.
- Smooth ball - clutch protects against tap breakage.
- Disengages smoothly and silently.
- Axial float ensures smooth tapping.
- Cushioned drive eliminates cross threading.
- Planetary gear allows tap to retract 75% faster.
- Accurate depth control.
- Accurate batch and mass production.





Reversable Tapping Attachment

Tool #	Capacity	Collet	Price Each
J576-600	1/16 -1/4	S-171	418.00
J576-601	1/8 - 1/2	S-222	478.00
J576-602	5/16 - 3/4	S-453	565.00
J576-603	9/16 - 1-1/8	S-623	995.00

Replacement Rubber Collets

Tool #	Capacity	Price Each
J576-604	.177 - .256	27.02
J576-605	.256 - .394	28.49
J576-606	.394 - .590	56.35
J576-607	.630 - .905	74.90

Knurling Tools

Single Knurl Tool



- Holder size: 4" x 1/2" x 1/2"
- Knurl size: 3/4" x 1/4" x 1/4"
- Includes 1 medium cut H.S.S. knurl

Tool No.	Price
J3230001	16.09

Replacement Knurls



Price: $9.00 Each

Knurl Dimensions (Dia. x Thick. x Hole Dia.)	T.P.I.	Price Each		
		Straight	RH Diagonal	LH Diagonal
5/8 x 5/16 x 7/32"	14	J4590140	J4590141	J4590142
	21	J4590210	J4590211	J4590212
	33	J4590330	J4590331	J4590332
3/4 x 3/8 x 1/4"	14	J2550140	J2550141	J2550142
	21	J2550210	J2550211	J2550212
	33	J2550330	J2550331	J2550332

NOTE:
- RH Knurling is produced with LH Knurls.
- LH Knurling is produced with RH Knurls.
- Male Diamond Knurling is produced by RH and LH Knurls in pairs.

MDX SUPERIOR IMPORT

Pivot Head Knurling Tool



- Holder size: 4" x 1/2" x 1/2"
- Knurl size: 3/4" x 1/4" x 1/4"
- Includes 1 medium cut H.S.S. knurl

Tool No.	Price
J3230002	33.57

Self Adjusting Head Knurling Tools



Double knurl, self-centering head for manual lathes. Includes one set of Medium Pitch diagonal (BL and BR) pattern knurls to produce a 30º diamond pattern.

Size of Holder	Knurl Dimensions	Tool No.	Price Each
5/16" x 3/4" x 5	5/8" x 5/16" x 7/32"	J3230020	54.13
3/8" x 7/8" x 5-1/2"	5/8" x 5/16" x 7/32"	J3230100	54.13
1/2" x 1-1/8" x 6-1/2"	3/4" x 3/8" x 1/4'	J3230101	57.75
5/8" x 1-3/8" x 7-1/2"	3/4" x 3/8" x 1/4"	J3230102	57.75

Round Adjustable Split Dies

High Speed Steel – Screw Adjusting Type

List No. **751** – Right Hand

For cutting external screw threads either by hand with a die stock or by machine with a floating die holder like the unique Threadex® Floating Die Holder. They can be utilized to cut smaller or larger tolerance by turning the adjusting screw.



High Speed

MDX® SUPERIOR IMPORT

Size	Threads Per Inch	Outside Diameter	Price Each
0	80	13/16	21.42
0	80	1	26.91
1	64	13/16	21.42
1	64	1	26.91
1	72	13/16	21.42
1	72	1	26.91
2	56	13/16	21.42
2	56	1	26.91
2	64	13/16	21.42
2	64	1	26.91
3	48	13/16	21.42
3	48	1	26.91
3	56	13/16	21.42
3	56	1	26.91
4	40	13/16	21.42
4	40	1	26.91
4	48	13/16	21.42
4	48	1	26.91
5	40	13/16	21.42
5	40	1	26.91
5	44	13/16	21.42
5	44	1	26.91
6	32	13/16	21.42
6	32	1	26.91
6	40	13/16	21.42
6	40	1	26.91
8	32	13/16	21.42
8	32	1	26.91
8	36	13/16	21.42
8	36	1	26.91
10	24	13/16	21.42
10	24	1	26.91
10	32	5/8	19.90
10	32	13/16	21.42
10	32	1	26.91
12	24	13/16	21.42
12	24	1	26.91
12	28	13/16	21.42
12	28	1	26.91
1/4	20	13/16	31.35
1/4	20	1	26.91

Size	Threads Per Inch	Outside Diameter	Price Each
1/4	20	1-1/2	40.50
1/4	20	2	69.21
1/4	28	13/16	21.42
1/4	28	1	26.91
1/4	28	1-1/2	40.50
1/4	28	2	69.21
5/16	18	13/16	21.42
5/16	18	1	26.91
5/16	18	1-1/2	40.50
5/16	18	2	69.21
5/16	24	13/16	21.42
5/16	24	1	26.91
5/16	24	1-1/2	40.50
5/16	24	2	69.21
3/8	16	13/16	21.42
3/8	16	1	26.91
3/8	16	1-1/2	40.50
3/8	16	2	69.21
3/8	24	13/16	21.42
3/8	24	1	26.91
3/8	24	1-1/2	40.50
3/8	24	2	69.21
7/16	14	1	26.91
7/16	14	1-1/2	40.50
7/16	14	2	69.21
7/16	20	1	26.91
7/16	20	1-1/2	40.50
7/16	20	2	69.21
1/2	13	1	26.91
1/2	13	1-1/2	40.50
1/2	13	2	69.21
1/2	20	1	26.91
1/2	20	1-1/2	40.50
1/2	20	2	69.21
9/16	12	1-1/2	40.50
9/16	12	2	69.21
9/16	18	1-1/2	40.50
9/16	18	2	69.21
5/8	11	1-1/2	40.50
5/8	11	2	69.21
5/8	18	1-1/2	40.50

Size	Threads Per Inch	Outside Diameter	Price Each
5/8	18	2	69.21
11/16	11	1-1/2	40.50
11/16	11	2	69.21
11/16	16	1-1/2	40.50
11/16	16	2	69.21
3/4	10	1-1/2	40.50
3/4	10	2	69.21
3/4	10	2-1/2	95.40
3/4	16	1-1/2	40.50
3/4	16	2	69.21
7/8	9	2-1/2	95.40
7/8	9	2	69.21
7/8	14	2	69.21
7/8	14	2-1/2	95.40
1	8	2	69.21
1	8	2-1/2	95.40
1	8	3	175.50
1	12	2	69.21
1	12	2-1/2	95.40
1	12	3	175.50
1	14	2	69.21
1	14	2-1/2	95.40
1	14	3	175.50
1-1/8	7	2-1/2	95.40
1-1/8	7	3	175.50
1-1/8	12	2-1/2	95.40
1-1/8	12	3	175.50
1-1/4	7	2	69.21
1-1/4	7	2-1/2	95.40
1-1/4	7	3	175.50
1-1/4	12	2-1/2	95.40
1-1/4	12	3	175.50
1-3/8	6	2-1/2	95.40
1-3/8	6	3	175.50
1-3/8	12	2-1/2	95.40
1-3/8	12	3	175.50
1-1/2	6	2-1/2	95.40
1-1/2	6	3	175.50
1-1/2	12	2-1/2	95.40
1-1/2	12	3	175.50

Carbon Steel Round Adjustable Split Dies

Screw Adjusting Type

List No. **751CB** – Right Hand



MDX® SUPERIOR IMPORT

Size	Threads Per Inch	Outside Diameter	Price Each
0	80	5/8	4.50
0	80	13/16	6.00
1	56	5/8	6.00
1	56	13/16	7.50
1	64	5/8	4.50
1	64	13/16	6.00
1	72	5/8	4.50
1	72	13/16	6.00
2	56	5/8	4.50
2	56	13/16	6.00

Size	Threads Per Inch	Outside Diameter	Price Each
2	64	5/8	4.50
2	64	13/16	6.00
3	48	5/8	4.50
3	48	13/16	6.00
3	56	5/8	4.50
3	56	13/16	6.00
4	32	5/8	6.00
4	32	13/16	7.50
4	36	5/8	6.00
4	36	13/16	7.50

Size	Threads Per Inch	Outside Diameter	Price Each
4	36	1	8.50
4	40	5/8	4.50
4	40	13/16	6.00
4	40	1	7.00
4	48	5/8	4.50
4	48	13/16	6.00
4	48	1	7.00
5	40	5/8	4.50
5	40	13/16	6.00
5	40	1	7.00

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Carbon Steel
Round Adjustable Split Dies

Screw Adjusting Type

List No. **751CB** – Right Hand ▶ *Continued*



MDX® SUPERIOR IMPORT

Size	Threads Per Inch	Outside Diameter	Price Each
5	44	5/8	4.50
5	44	13/16	6.00
6	32	5/8	4.50
6	32	13/16	6.00
6	32	1	7.00
6	36	5/8	6.00
6	36	13/16	7.50
6	36	1	8.50
6	40	5/8	4.50
6	40	13/16	6.00
6	40	1	7.00
8	32	5/8	4.50
8	32	13/16	6.00
8	32	1	7.00
8	36	5/8	4.50
8	36	13/16	6.00
8	36	1	7.00
8	40	5/8	6.00
8	40	13/16	7.50
10	24	5/8	4.50
10	24	13/16	6.00
10	24	1	7.00
10	30	5/8	7.50
10	30	13/16	8.50
10	32	5/8	4.50
10	32	13/16	6.00
10	32	1	7.00
12	24	5/8	4.50
12	24	13/16	6.00
12	24	1	7.00
12	28	5/8	4.50
12	28	13/16	6.00
12	28	1	7.00
12	32	5/8	7.00
12	32	13/16	8.50
12	32	1	9.50
14	20	13/16	8.50
14	20	1	9.50
14	24	5/8	7.00
14	24	13/16	8.50
14	24	1	9.50
14	28	13/16	8.50
1/16	64	13/16	8.50
1/8	40	1	9.50
9/64	36	5/8	6.00
9/64	40	13/16	8.50
9/64	40	5/8	7.00
5/32	32	13/16	8.50
5/32	36	1	9.50
3/16	24	13/16	7.50
3/16	24	1	9.50
3/16	32	13/16	7.50
3/16	32	1	9.50
7/32	24	5/8	6.00
7/32	24	13/16	7.00
7/32	24	1	9.50
7/32	24	1-1/2	19.00
7/32	32	1-1/2	19.00
1/4	20	5/8	4.50
1/4	20	13/16	6.00
1/4	20	1	7.00
1/4	20	1-1/2	13.00
1/4	20	2	21.00
1/4	24	5/8	6.00

Size	Threads Per Inch	Outside Diameter	Price Each
1/4	24	1	9.50
1/4	24	1-5/16	13.50
1/4	24	1-1/2	16.00
1/4	28	5/8	4.50
1/4	28	13/16	6.00
1/4	28	1	7.00
1/4	28	1-5/16	11.00
1/4	28	1-1/2	13.00
1/4	28	2	21.00
1/4	32	1	9.50
1/4	32	1-5/16	13.50
1/4	32	1-1/2	16.00
1/4	32	2	24.00
1/4	40	1	9.50
17/64	32	13/16	8.50
9/32	28	1	9.50
5/16	18	13/16	6.00
5/16	18	1	7.00
5/16	18	1-1/2	13.00
5/16	18	2	21.00
5/16	20	1	9.50
5/16	20	1-1/2	16.00
5/16	24	13/16	6.00
5/16	24	1	7.00
5/16	24	1-5/16	11.00
5/16	24	1-1/2	13.00
5/16	24	2	21.00
5/16	32	1	9.50
21/64	20	1	9.50
3/8	16	1	7.00
3/8	16	1-1/2	13.00
3/8	16	2	21.00
3/8	20	1-1/2	16.00
3/8	24	1	7.00
3/8	24	1-5/16	11.00
3/8	24	1-1/2	13.00
3/8	24	2	21.00
3/8	24	2-1/2	26.00
3/8	32	2	24.00
7/16	14	1	7.00
7/16	14	1-5/16	11.00
7/16	14	1-1/2	13.00
7/16	14	2	21.00
7/16	14	2-1/2	26.00
7/16	20	1	7.00
7/16	20	1-1/2	13.00
7/16	20	2	21.00
7/16	24	2	24.00
7/16	27	1	9.50
7/16	28	2	24.00
1/2	12	1-1/2	16.00
1/2	12	2	24.00
1/2	13	1	7.00
1/2	13	1-5/16	11.00
1/2	13	2	21.00
1/2	16	1-1/2	16.00
1/2	20	1	7.00
1/2	20	1-5/16	11.00
1/2	20	1-1/2	13.00
1/2	20	2	21.00
1/2	20	2-1/2	26.00
1/2	27	2	24.00
1/2	28	2	24.00
1/2	32	2	24.00

Size	Threads Per Inch	Outside Diameter	Price Each
9/16	12	1-1/2	13.00
9/16	12	2	21.00
9/16	12	2-1/2	26.00
9/16	16	1-1/2	19.00
9/16	18	1-1/2	16.00
9/16	18	2	21.00
9/16	18	2-1/2	26.00
9/16	24	2	24.00
9/16	27	1-1/2	19.00
9/19	27	2	24.00
9/16	36	1-1/2	19.00
5/8	11	1-1/2	13.00
5/8	11	2	21.00
5/8	11	2-1/2	26.00
5/8	18	1-1/2	13.00
5/8	18	2	21.00
5/8	20	1-1/2	19.00
5/8	24	1-1/2	19.00
11/16	11	1-1/2	13.00
11/16	11	2	21.00
11/16	11	2-1/2	26.00
11/16	16	1-1/2	13.00
11/16	16	2	21.00
11/16	24	2	24.00
11/16	27	1-1/2	19.00
47/64	16	2	24.00
3/4	10	1-1/2	13.00
3/4	10	2	21.00
3/4	16	1-1/2	13.00
3/4	16	2	21.00
3/4	16	2-1/2	26.00
13/16	20	1-1/2	19.00
7/8	9	2	21.00
7/8	9	2-1/2	26.00
7/8	12	2-1/2	29.00
7/8	14	2	21.00
7/8	14	2-1/2	26.00
7/8	14	3	30.00
1	8	2	21.00
1	8	2-1/2	26.00
1	8	3	30.00
1	12	2	21.00
1	12	2-1/2	26.00
1	12	3	30.00
1	14	2	21.00
1	14	2-1/2	26.00
1	14	3	30.00
1	16	2	24.00
1	27	3	35.00
1-1/8	7	3	30.00
1-1/8	12	3	30.00
1-1/8	16	2-1/2	29.00
1-1/4	7	3	30.00
1-1/4	12	3	30.00
1-3/8	6	3	30.00
1-3/8	12	3	30.00
1-3/8	14	3	35.00
1-3/8	24	3	35.00
1-1/2	6	3	30.00
1-1/2	12	3	30.00
1-5/8	5-1/2	3	35.00
1-5/8	18	3	35.00
1-11/16	12	3	35.00
1-3/4	18	3	35.00

Metric Round Adjustable Split Dies

High Speed Steel – Screw Adjusting Type



High Speed MDX® SUPERIOR IMPORT

List No. **753** – Right Hand

Size	Pitch	Outside Diameter	Price Each
1.00	.20	13/16	21.42
1.00	.20	1	26.91
1.00	.25	13/16	21.42
1.20	.20	13/16	21.42
1.20	.20	1	26.91
1.20	.25	13/16	21.42
1.25	.25	1	26.91
1.40	.20	13/16	21.42
1.40	.20	1	26.91
1.40	.30	13/16	21.42
1.40	.30	1	26.91
1.50	.30	13/16	21.42
1.50	.30	1	26.91
1.50	.35	13/16	21.42
1.50	.35	1	26.91
1.60	.35	13/16	21.42
1.60	.35	1	26.91
1.70	.20	13/16	21.42
1.70	.20	1	26.91
1.70	.35	13/16	21.42
1.70	.35	1	26.91
1.80	.35	13/16	21.42
1.80	.35	1	26.91
2.00	.20	13/16	21.42
2.00	.20	1	26.91
2.00	.25	13/16	21.42
2.00	.25	1	26.91
2.00	.40	13/16	21.42
2.00	.40	1	26.91
2.00	.45	13/16	21.42
2.00	.45	1	26.91
2.00	.50	13/16	21.42
2.00	.50	1	26.91
2.20	.25	13/16	21.42
2.20	.45	13/16	21.42
2.20	.45	1	26.91
2.30	.25	13/16	21.42
2.30	.25	1	26.91
2.30	.40	13/16	21.42
2.30	.40	1	26.91
2.30	.45	13/16	21.42
2.30	.45	1	26.91
2.50	.45	13/16	21.42
2.50	.45	1	26.91
2.50	.50	13/16	21.42
2.50	.50	1	26.91
2.60	.35	13/16	21.42
2.60	.35	1	26.91
2.60	.45	13/16	21.42
2.60	.45	1	26.91
3.00	.35	1	26.91
3.00	.50	13/16	21.42
3.00	.50	1	26.91
3.00	.60	13/16	21.42
3.00	.60	1	26.91
3.00	.75	1	26.91
3.30	.50	13/16	21.42
3.50	.35	1	26.91
3.50	.50	1	26.91
3.50	.60	13/16	21.42
3.50	.60	1	26.91
4.00	.35	1	26.91
4.00	.50	13/16	21.42
4.00	.50	1	26.91
4.00	.60	1	26.91
4.00	.70	13/16	21.42
4.00	.70	1	26.91
4.00	.75	13/16	21.42
4.00	.75	1	26.91
4.00	1.00	1	26.91
4.50	.50	13/16	21.42
4.50	.50	1	26.91
4.50	.75	13/16	21.42
4.50	.75	1	26.91
4.50	1.00	1	26.91
5.00	.50	13/16	21.42
5.00	.50	1	26.91
5.00	.75	1	26.91
5.00	.80	5/8	21.42
5.00	.80	13/16	21.42
5.00	.80	1	26.91
5.00	.90	13/16	21.42
5.00	.90	1	26.91
5.00	1.00	1	26.91
5.50	.70	1	26.91
5.50	.90	1	26.91
6.00	.50	13/16	21.42
6.00	.50	1	26.91
6.00	.75	13/16	21.42
6.00	.75	1	26.91
6.00	1.00	13/16	21.42
6.00	1.00	1	26.91
6.00	1.00	1-1/2	40.50
6.00	1.25	1	26.91
6.00	1.50	1	26.91
6.30	1.00	1	26.91
7.00	.50	1	26.91
7.00	.75	1	26.91
7.00	1.00	13/16	21.42
7.00	1.00	1	26.91
7.00	1.00	1-1/2	40.50
7.00	1.25	1	26.91
8.00	.50	1	26.91
8.00	.75	1	26.91
8.00	1.00	13/16	21.42
8.00	1.00	1	26.91
8.00	1.00	1-1/2	40.50
8.00	1.25	13/16	21.42
8.00	1.25	1	26.91
8.00	1.25	1-1/2	40.50
8.00	1.50	1	26.91
8.00	1.75	1	26.91
9.00	.50	1	26.91
9.00	.50	1-1/2	40.50
9.00	.75	1	26.91
9.00	.75	1-1/2	40.50
9.00	1.00	1	26.91
9.00	1.00	1-1/2	40.50
9.00	1.25	1	26.91
9.00	1.25	1-1/2	40.50
9.00	1.50	1	26.91
9.00	1.75	1	26.91
10.00	.50	1	26.91
10.00	.50	1-1/2	40.50
10.00	.75	1	26.91
10.00	.75	1-1/2	40.50
10.00	1.00	1	26.91
10.00	1.00	1-1/2	40.50
10.00	1.25	1	26.91
10.00	1.25	1-1/2	40.50
10.00	1.50	1	26.91
10.00	1.50	1-1/2	40.50
10.00	1.75	1	26.91
10.00	2.00	1	26.91
11.00	.50	1	26.91
11.00	.50	1-1/2	40.50
11.00	.75	1	26.91
11.00	.75	1-1/2	40.50
11.00	1.00	1	26.91
11.00	1.00	1-1/2	40.50
11.00	1.25	1	26.91
11.00	1.25	1-1/2	40.50
11.00	1.50	1	26.91
11.00	1.50	1-1/2	40.50
11.00	1.75	1	26.91
11.00	2.00	1	26.91
12.00	.50	1	26.91
12.00	.50	1-1/2	40.50
12.00	.75	1	26.91
12.00	.75	1-1/2	40.50
12.00	1.00	1	26.91
12.00	1.00	1-1/2	40.50
12.00	1.25	1	26.91
12.00	1.25	1-1/2	40.50
12.00	1.50	1	26.91
12.00	1.50	1-1/2	40.50
12.00	1.75	1	26.91
12.00	1.75	1-1/2	40.50
12.00	2.00	1	26.91
12.00	2.00	1-1/2	40.50
12.50	1.25	1-1/2	40.50
13.00	.50	1-1/2	40.50
13.00	.75	1-1/2	40.50
13.00	1.00	1-1/2	40.50
13.00	1.25	1-1/2	40.50
13.00	1.50	1-1/2	40.50
13.00	1.75	1-1/2	40.50
13.00	2.00	1-1/2	40.50
14.00	.50	1-1/2	40.50
14.00	.75	1-1/2	40.50
14.00	1.00	1-1/2	40.50
14.00	1.25	1-1/2	40.50
14.00	1.50	1-1/2	40.50
14.00	1.75	1-1/2	40.50
14.00	2.00	1-1/2	40.50
14.00	2.50	1-1/2	40.50
15.00	.50	1-1/2	40.50
15.00	1.00	1-1/2	40.50
15.00	1.50	1-1/2	40.50
15.00	1.50	2	69.21
15.00	2.00	1-1/2	40.50
16.00	.50	1-1/2	40.50
16.00	.75	1-1/2	40.50
16.00	1.00	1-1/2	40.50
16.00	1.00	2	69.21
16.00	1.25	1-1/2	40.50
16.00	1.50	1-1/2	40.50
16.00	1.50	2	69.21
16.00	1.75	1-1/2	40.50
16.00	2.00	1-1/2	40.50
16.00	2.00	2	69.21
16.00	2.50	1-1/2	40.50
17.00	.50	1-1/2	40.50
17.00	1.00	1-1/2	40.50
17.00	1.25	1-1/2	40.50
17.00	1.50	1-1/2	40.50
17.00	1.50	2	69.21
17.00	2.00	1-1/2	40.50

Metric Round Split Adjustable Dies



High Speed MDX® SUPERIOR IMPORT

High Speed Steel – Screw Adjusting Type

List No. **753** – Right Hand

Size	Pitch	Outside Diameter	Price Each
18.00	.50	1-1/2	40.50
18.00	1.00	1-1/2	40.50
18.00	1.00	2	69.21
18.00	1.25	1-1/2	40.50
18.00	1.50	2	69.21
18.00	1.50	1-1/2	40.50
18.00	1.75	1-1/2	40.50
18.00	2.00	2	69.21
18.00	2.00	1-1/2	40.50
18.00	2.50	2	69.21
19.00	.50	1-1/2	40.50
19.00	1.00	1-1/2	40.50
19.00	1.50	1-1/2	40.50
19.00	1.50	2	69.21
19.00	2.00	1-1/2	40.50
19.00	2.00	2	69.21
19.00	2.50	1-1/2	40.50
20.00	1.00	1-1/2	40.50
20.00	1.00	2	69.21
20.00	1.25	1-1/2	40.50
20.00	1.25	2	69.21
20.00	1.50	1-1/2	40.50
20.00	1.50	2	69.21
20.00	1.75	1-1/2	40.50
20.00	2.00	1-1/2	40.50
20.00	2.00	2	69.21
20.00	2.50	1-1/2	40.50
20.00	2.50	2	69.21
21.00	1.00	2	69.21
21.00	1.50	2	69.21
21.00	2.00	2	69.21
21.00	2.50	2	69.21
21.00	3.00	2	69.21
21.00	3.00	3	175.50
22.00	1.00	2	69.21
22.00	1.00	2-1/2	95.40
22.00	1.50	2	69.21
22.00	1.50	2-1/2	95.40
22.00	2.00	2	69.21
22.00	2.00	2-1/2	95.40
22.00	2.50	2	69.21
22.00	2.50	2-1/2	95.40
23.00	1.00	2	69.21
23.00	1.50	2	69.21
23.00	2.00	2	69.21
23.00	2.50	2	69.21

Size	Pitch	Outside Diameter	Price Each
24.00	1.00	2	69.21
24.00	1.25	2	69.21
24.00	1.50	2	69.21
24.00	1.50	2-1/2	95.40
24.00	2.00	2	69.21
24.00	2.00	2-1/2	95.40
24.00	3.00	2	69.21
24.00	3.00	2-1/2	95.40
25.00	1.00	2	69.21
25.00	1.00	2-1/2	95.40
25.00	1.50	2	69.21
25.00	1.50	2-1/2	95.40
25.00	2.00	2	69.21
25.00	2.00	2-1/2	95.40
25.00	2.50	2	69.21
25.00	2.50	2-1/2	95.40
25.00	3.00	2	69.21
26.00	1.25	2	69.21
26.00	1.50	2	69.21
26.00	1.50	2-1/2	95.40
26.00	2.00	2	69.21
26.00	3.00	2	69.21
27.00	1.00	2	69.21
27.00	1.00	2-1/2	95.40
27.00	1.50	2-1/2	95.40
27.00	2.00	2	69.21
27.00	2.00	2-1/2	95.40
27.00	3.00	2	69.21
27.00	3.00	2-1/2	95.40
28.00	1.00	2	69.21
28.00	1.00	2-1/2	95.40
28.00	1.25	2-1/2	95.40
28.00	1.50	2	69.21
28.00	1.50	2-1/2	95.40
28.00	2.00	2	69.21
28.00	2.00	2-1/2	95.40
28.00	3.00	2-1/2	95.40
30.00	1.00	2-1/2	95.40
30.00	1.50	2	69.21
30.00	1.50	2-1/2	95.40
30.00	2.00	2	69.21
30.00	2.00	2-1/2	95.40
30.00	2.00	3	175.50
30.00	3.00	2	69.21
30.00	3.00	2-1/2	95.40
30.00	3.00	3	175.50

Size	Pitch	Outside Diameter	Price Each
30.00	3.50	2	69.21
30.00	3.50	2-1/2	95.40
30.00	3.50	3	175.50
32.00	1.50	2-1/2	95.40
32.00	2.00	2-1/2	95.40
32.00	3.50	2-1/2	95.40
33.00	1.50	2-1/2	95.40
33.00	2.00	2-1/2	95.40
33.00	3.00	2-1/2	95.40
33.00	3.00	3	175.50
33.00	3.50	2-1/2	95.40
34.00	1.50	2-1/2	95.40
35.00	1.00	2-1/2	95.40
35.00	1.50	2-1/2	95.40
36.00	1.50	2-1/2	95.40
36.00	2.00	2-1/2	95.40
36.00	3.00	2-1/2	95.40
36.00	3.00	3	175.50
36.00	4.00	2-1/2	95.40
36.00	4.00	3	175.50
38.00	1.50	2-1/2	95.40
38.00	1.50	3	175.50
39.00	1.50	3	175.50
39.00	3.00	3	175.50
39.00	4.00	3	175.50
40.00	1.50	3	175.50
40.00	2.00	3	175.50
42.00	1.50	3	175.50
42.00	2.00	3	175.50
42.00	3.00	3	175.50
42.00	4.50	3	175.50
45.00	1.50	3	175.50
45.00	2.00	3	175.50
45.00	3.00	3	175.50
45.00	4.50	3	175.50
48.00	1.50	3	175.50
48.00	2.00	3	175.50
48.00	3.00	3	175.50
48.00	5.00	3	175.50
50.00	1.50	3	175.50
52.00	1.50	3	175.50
52.00	2.00	3	175.50
52.00	3.00	3	175.50
52.00	5.00	3	175.50

Metric Carbon Round Split Dies



MDX® SUPERIOR IMPORT

Screw Adjusting Type

List No. **753CB**

Size	Pitch	Outside Diameter	Price Each
3.00	.50	1	6.37
3.00	.60	1	6.37
4.00	.70	1	6.37
4.00	.75	1	6.37
4.50	.75	13/16	5.32
5.00	.75	13/16	5.32
5.00	.80	13/16	5.32
5.00	.80	1	6.37
5.00	.90	1	6.37
5.50	.50	1	6.37

Size	Pitch	Outside Diameter	Price Each
6.00	.75	1	6.37
6.00	1.00	13/16	5.32
6.00	1.00	1	6.37
6.00	1.00	1-1/2	9.44
7.00	.75	1	6.37
7.00	1.00	1	6.37
8.00	1.00	1	6.37
8.00	1.25	1	6.37
9.00	1.25	1-1/2	9.44
10.00	1.25	1	6.37

Size	Pitch	Outside Diameter	Price Each
10.00	1.50	1	6.37
12.00	.75	1	6.37
12.00	1.50	1	6.37
12.00	1.75	1	6.37
14.00	2.00	1-1/2	9.44
16.00	2.00	2	15.62
18.00	2.50	2	15.62
20.00	2.50	2	15.62
22.00	2.50	2	15.62
24.00	3.00	2	15.62

NPT Pipe Split Dies

High Speed Steel – Screw Adjusting Type



List No. **760** – Right Hand
List No. **760L** – Left Hand

Size	Threads Per Inch	Outside Diameter	Price Each Right Hand **760**	Price Each Left Hand **760L**
1/16	27	1	26.91	35.10
1/8	27	1	26.91	35.10
1/8	27	1-1/2	40.50	53.10
1/4	18	1-1/2	40.50	53.10
1/4	18	2	69.21	85.50
3/8	18	1-1/2	40.50	53.10
3/8	18	2	69.21	85.50
1/2	14	1-1/2	40.50	—
1/2	14	2	69.21	85.50
3/4	14	2	69.21	85.50
3/4	14	2-1/2	95.40	121.50
1	11-1/2	2-1/2	95.40	121.50
1	11-1/2	3	175.50	—
1	11-1/2	4	229.50	—
1-1/4	11-1/2	3	175.50	216.00
1-1/2	11-1/2	3	175.50	216.00
1-1/2	11-1/2	4	229.50	—
2	11-1/2	4	229.50	315.00
2-1/2	8	4	229.50	315.00
3	8	5	310.00	—

NPS Pipe Split Dies

High Speed Steel – Screw Adjusting Type



List No. **761** – Right Hand
List No. **761L** – Left Hand

Size	Threads Per Inch	Outside Diameter	Price Each Right Hand **761**	Price Each Left Hand **761L**
1/16	27	1	26.91	35.10
1/8	27	1	26.91	35.10
1/8	27	1-1/2	40.50	53.10
1/4	18	1-1/2	40.50	53.10
1/4	18	2	69.21	85.50
3/8	18	1-1/2	40.50	53.10
3/8	18	2	69.21	85.50
1/2	14	1-1/2	40.50	—
1/2	14	2	69.21	85.50
3/4	14	2	69.21	85.50
3/4	14	2-1/2	95.40	121.50
1	11-1/2	2-1/2	95.40	121.50
1	11-1/2	4	229.50	—
1-1/4	11-1/2	2-1/2	95.40	121.50
1-1/4	11-1/2	3	175.50	216.00
1-1/2	11-1/2	3	175.50	216.00
1-1/2	11-1/2	4	229.50	—
2	11-1/2	4	229.50	315.00
2-1/2	8	4	229.50	315.00
3	8	5	310.00	—

NPT Carbon Round Split Dies

Screw Adjusting Type



List No. **760CB**

Size	Threads Per Inch	Outside Diameter	Price Each
1/8	27	1	7.00
1/8	27	1-1/2	13.00
1/4	18	1-1/2	13.00
1/4	18	2	21.00
3/8	18	1-1/2	13.00
3/8	18	2	21.00
1/2	14	2	21.00
3/4	14	2	21.00
1	11-1/2	2-1/2	44.00



Round Die Stocks

For holding adjustable round split dies.

Die Diameter	Tool No.	Price Each
5/8	**TWS1**	17.10
13/16	**TWS2**	17.10
1	**TWS3**	19.80
1-1/2	**TWS4**	30.60
2	**TWS5**	39.69
2-1/2	**TWS6**	55.08
3	**TWS7**	91.80
4	**TWS8**	152.10
5	**TWS9**	247.50
7-1/2	**TWS10**	396.00



Die Holder

Can be used safely for threading shafts on lathes, milling machines and tapping heads.

Size	Shank Size	Tool No.	Price Each
13/16	1/2	**TWF1**	26.10
1	1/2	**TWF2**	26.10
1-1/2	3/4	**TWF3**	39.60

British Standard Split Dies

High Speed Steel Screw Adjustable



Pipe Fitting & Pipe Taper

List No.**755** – BSPP British Standard Pipe Fitting
List No.**756** – BSPT British Standard Pipe Taper

Size	Threads Per Inch	Outside Diameter	Price Each BSPP **755**	Price Each BSPT **756**
1/8	28	1	39.61	39.61
1/8	28	1-1/2	44.55	44.55
1/4	19	1-1/2	44.55	44.55
1/4	19	2	76.14	76.14
3/8	19	1-1/2	44.55	44.55
3/8	19	2	76.14	76.14
1/2	14	1-1/2	45.55	45.55

55° Thread Angle

Size	Threads Per Inch	Outside Diameter	Price Each BSPP **755**	Price Each BSPT **756**
1/2	14	2	76.14	76.14
5/8	14	2	76.14	76.14
3/4	14	2	76.14	76.14
7/8	14	2	76.14	76.14
1	11	2-1/2	104.94	104.94
1-1/4	11	3	198.00	—
1-3/4	11	4	316.80	—

Cycle

List No.**757** – British Standard Cycle

Size	Threads Per Inch	Outside Diameter	Price Each
1/4	26	1	29.61
5/16	26	1	29.61
3/8	26	1	29.61
7/16*	26	1	29.61
7/16*	26	1-1/2	44.55
1/2	26	1	29.61
1/2*	26	1-1/2	44.55

*Available in Left Hand

Fine

List No.**758** – British Standard Fine

Size	Threads Per Inch	Outside Diameter	Price Each
3/16	32	1	29.61
1/4	26	1	29.61
5/16	22	1	29.61
3/8	20	1	29.61
7/16	18	1	29.61
1/2	16	1	29.61
1/2	16	1-1/2	44.55
9/16	16	1-1/2	44.55

Size	Threads Per Inch	Outside Diameter	Price Each
5/8	14	1-1/2	44.55
5/8	14	2-1/2	104.94
11/16	14	2	76.14
11/16	14	2-1/2	104.94
3/4	12	1-1/2	45.55
7/8	11	2	76.14
15/16	11	2-1/2	104.94

WHITWORTH Round & Hex Dies

High Speed Steel or Carbon



List No.**751W** – BSW Round British Standard - Screw Adjustable
List No.**765W** – BSW Hex British Standard

55° Thread Angle

Size	Threads Per Inch	Round HSS **751W** Outside Dia.	Round HSS **751W** Price Each	Hex Carbon **765W** Price Each
1/16	60	16mm	29.61	—
3/32	48	16mm	29.61	—
1/8	40	1"	29.61	14.69
5/32	32	20mm	29.61	14.69
3/16	24	1"	29.61	14.69
1/4	20	1"	29.61	14.69
5/16	18	1"	29.61	16.20
3/8	16	1"	29.61	17.10
7/16	14	1"	29.61	19.22
1/2	12	1"	29.61	21.50
1/2	12	1-1/2	44.55	—

Size	Threads Per Inch	Round HSS **751W** Outside Dia.	Round HSS **751W** Price Each	Hex Carbon **765W** Price Each
9/16	12	38mm	44.55	24.85
5/8	11	45mm	49.00	26.27
3/4	10	1-1/2	44.55	36.48
3/4	10	2	74.11	—
7/8	9	2"	76.14	39.90
1"	8	2"	76.14	45.90
1-3/8	6	65mm	235.95	73.30
1-5/8	5	75mm	235.95	129.07
1-3/4	5	90mm	316.80	—
1-7/8	4-1/2	90mm	316.80	195.00
2"	4-1/2	90mm	405.85	204.30

British Standard Hex Dies

Carbon Steel



List No.**766PP** – Pipe Straight
List No.**766PT** – Pipe Taper

Size	Threads Per Inch	**766PP** Price Each	**766PT** Price Each
1/8	28	20.52	20.52
1/4	19	30.67	30.67
3/8	19	40.39	40.39
1/2	14	53.14	53.14

Size	Threads Per Inch	**766PP** Price Each	**766PT** Price Each
5/8	14	62.06	62.06
3/4	14	68.69	68.69
7/8	14	81.45	81.45
1	11	90.50	—

Left Hand Round Split Dies

High Speed Steel – Screw Adjusting Type



List No. **751L**

Size	Threads Per Inch	Outside Diameter	Price Each
0	80	13/16	25.65
0	80	1	31.50
1	56	13/16	25.65
1	64	13/16	25.65
1	72	13/16	25.65
2	56	13/16	25.65
2	56	1	31.50
2	64	13/16	25.65
2	64	1	31.50
3	48	13/16	25.65
3	48	1	31.50
3	56	13/16	25.65
3	56	1	31.50
4	40	13/16	25.65
4	40	1	31.50
4	48	13/16	25.65
4	48	1	31.50
5	40	13/16	25.65
5	40	1	31.50
5	44	13/16	25.65
5	44	1	31.50
6	32	13/16	25.65
6	32	1	31.50
6	40	13/16	25.65
6	40	1	31.50
8	32	13/16	25.65
8	32	1	31.50
8	36	13/16	25.65
8	36	1	31.50
10	24	13/16	25.65
10	24	1	31.50
10	32	13/16	25.65

Size	Threads Per Inch	Outside Diameter	Price Each
10	32	1	31.50
12	24	13/16	25.65
12	24	1	31.50
12	28	13/16	25.65
12	28	1	31.50
1/4	20	1	31.50
1/4	20	1-1/2	48.60
1/4	20	2	82.80
1/4	28	1	31.50
1/4	28	1-1/2	48.60
5/16	18	1	31.50
5/16	18	1-1/2	48.60
5/16	18	2	82.80
5/16	24	1	31.50
5/16	24	1-1/2	48.60
3/8	16	1	31.50
3/8	16	1-1/2	48.60
3/8	16	2	82.80
3/8	24	1	31.50
3/8	24	1-1/2	48.60
7/16	14	1	31.50
7/16	14	1-1/2	48.60
7/16	20	1	31.50
7/16	20	1-1/2	48.60
7/16	20	2	82.80
1/2	13	1	31.50
1/2	13	1-1/2	48.60
1/2	13	2	82.80
1/2	20	1	31.50
1/2	20	1-1/2	48.60
1/2	20	2	82.80
9/16	12	1	31.50

Size	Threads Per Inch	Outside Diameter	Price Each
9/16	12	1-1/2	48.60
9/16	12	2	82.80
9/16	18	1-1/2	48.60
9/16	18	2	82.80
5/8	18	1-1/2	48.60
5/8	18	2	82.80
5/8	11	1-1/2	48.60
5/8	11	2	82.80
11/16	11	1-1/2	48.60
11/16	11	2	82.80
11/16	16	1-1/2	48.60
3/4	10	1-1/2	48.60
3/4	10	2	82.80
3/4	16	1-1/2	48.60
3/4	16	2	82.80
7/8	9	2	82.80
7/8	9	2-1/2	114.75
7/8	14	2	82.80
1	8	2	82.80
1	12	2	82.80
1	14	2	82.80
1-1/8	7	2-1/2	114.75
1-1/8	12	2-1/2	114.75
1-1/4	7	2-1/2	114.75
1-1/4	12	2-1/2	114.75
1-3/8	6	2-1/2	114.75
1-3/8	12	2-1/2	114.75
1-3/8	12	3	210.60
1-1/2	6	2-1/2	114.75
1-1/2	6	3	210.60
1-1/2	12	2-1/2	114.75
1-1/2	12	3	210.60

Metric Left Hand Round Split Dies

High Speed Steel – Screw Adjusting Type



List No. **753LH**

Size	Pitch	Outside Diameter	Price Each
2.00	.40	1	32.89
2.30	.40	1	32.89
2.50	.45	1	32.89
2.60	.45	1	32.89
3.00	.50	1	32.89
3.50	.60	1	32.89
4.00	.70	1	32.89
4.50	.75	1	32.89
5.00	.80	1	32.89
5.50	.90	1	32.89
6.00	1.00	1	32.89
7.00	1.00	1	32.89
8.00	1.00	1	32.89

Size	Pitch	Outside Diameter	Price Each
8.00	1.25	1	32.89
9.00	1.25	1	32.89
10.00	1.00	1	32.89
10.00	1.25	1	32.89
10.00	1.50	1	32.89
10.00	1.75	1	32.89
11.00	1	1	32.89
12.00	1.25	1	32.89
12.00	1.25	1-1/2	49.50
12.00	1.50	1	32.89
12.00	1.50	1-1/2	49.50
12.00	1.75	1	32.89
12.00	1.75	1-1/2	49.50

Size	Pitch	Outside Diameter	Price Each
14.00	1.00	1-1/2	49.50
14.00	1.25	1-1/2	49.50
14.00	1.50	1-1/2	49.50
14.00	2.00	1-1/2	49.50
16.00	1.50	1-1/2	49.50
16.00	2.00	1-1/2	49.50
18.00	1.00	1-1/2	49.50
18.00	1.50	1-1/2	49.50
18.00	2.50	1-1/2	49.50
20.00	1.50	1-1/2	49.50
20.00	2.50	1-1/2	49.50

Carbon Left Hand Round Split Dies

Screw Adjusting Type



MDX® SUPERIOR IMPORT

List No. **751CBL** – Left Hand

Size	Threads Per Inch	Outside Diameter	Price Each
0	80	5/8	7.00
0	80	13/16	8.00
1	56	5/8	12.00
1	56	13/16	14.00
1	64	5/8	7.00
1	64	13/16	8.00
1	72	5/8	7.00
1	72	13/16	8.00
2	56	5/8	7.00
2	56	13/16	8.00
2	64	5/8	7.00
2	64	13/16	8.00
3	48	5/8	7.00
3	48	13/16	8.00
3	56	5/8	7.00
3	56	13/16	8.00
4	32	5/8	12.00
4	32	13/16	14.00
4	36	5/8	12.00
4	40	5/8	7.00
4	48	13/16	8.00
5	40	13/16	8.00
5	44	13/16	8.00
6	32	1	9.00
6	36	5/8	12.00
6	40	13/16	8.00
8	32	1	9.00
8	36	13/16	8.00
10	24	13/16	8.00
10	24	1	9.00
12	24	13/16	8.00
12	28	13/16	8.00
14	24	5/8	12.00
1/4	20	1	9.00
1/4	20	1-1/2	18.00
1/4	20	2	30.00
1/4	27	1-1/2	24.50
1/4	28	1-1/2	18.00
1/4	28	2	30.00
5/16	18	1	9.00
5/16	18	1-1/2	18.00
5/16	24	1	9.00
5/16	24	2	30.00
3/8	16	1	9.00
3/8	16	1-1/2	18.00
3/8	16	2	30.00
7/16	14	1	9.00
7/16	14	1-1/2	18.00
7/16	20	1-1/2	18.00
7/16	20	2	30.00
1/2	13	1	9.00
1/2	13	1-1/2	18.00
1/2	13	2	30.00
1/2	20	1	9.00
1/2	20	1-1/2	18.00
1/2	20	2	30.00
9/16	12	1-1/2	18.00
9/16	12	2	30.00
9/16	12	2-1/2	40.00
9/16	18	2	30.00
9/16	18	2-1/2	40.00
5/8	11	2-1/2	40.00
5/8	18	1-1/2	18.00
5/8	18	2	30.00
5/8	18	2-1/2	40.00
11/16	24	2	38.00
3/4	10	2-1/2	40.00
3/4	16	1-1/2	18.00
3/4	16	2	30.00
3/4	16	2-1/2	40.00
7/8	9	2	30.00
7/8	9	2-1/2	40.00
7/8	14	2-1/2	40.00
1	8	2	30.00
1	8	2-1/2	40.00
1	12	2	30.00
1	14	2	30.00
1	14	2-1/2	40.00
1-1/16	18	3	105.00
1-1/2	18	3	105.00
1-9/16	18	3	105.00

Left Hand Special Thread Round Split Dies

High Speed Steel – Screw Adjusting Type



High Speed MDX® SUPERIOR IMPORT

List No. **759LH**

Size	Threads Per Inch	Outside Diameter	Price Each
1	56	13/16	39.80
4	36	13/16	26.65
4	36	1	31.50
6	36	13/16	39.80
10	28	13/16	39.80
10	48	13/16	39.80
12	32	13/16	39.80
14	24	1	46.75
1/4	24	1-1/2	72.60
1/4	27	1	46.75
1/4	32	1	46.75
5/16	27	1-1/2	72.60
5/16	32	1	46.75
5/16	32	1-1/2	72.60
5/16	40	1	46.75
5/16	40	1-1/2	72.60
3/8	20	1	46.75
3/8	27	1-1/2	72.60
3/8	32	1	46.75
3/8	32	1-1/2	72.60
3/8	40	1-1/2	72.60
7/16	24	1	46.75
7/16	28	1	46.75
1/2	24	1	46.75
1/2	24	1-1/2	72.60
1/2	28	1-1/2	72.60
1/2	32	1	46.75
1/2	32	1-1/2	72.60
9/16	20	1-1/2	72.60
5/8	24	1-1/2	72.60
5/8	32	1-1/2	72.60
11/16	24	2	108.90
3/4	20	1-1/2	72.60
3/4	24	1-1/2	72.60
3/4	32	1-1/2	72.60
1-1/8	8	2-1/2	165.00
1-1/4	8	2-1/2	165.00
1-3/8	8	2-1/2	165.00
1-1/2	8	2-1/2	165.00
1-5/8	5-1/2	3	320.00
1-5/8	12	3	320.00
1-3/4	5	3	320.00
2	4-1/2	3	320.00
2-1/4	16	4	385.00
2-3/8	16	4	385.00

Hex Die Adapters

Hexagon die adapters are utilized when the space limitations do not allow the use of die stocks.

MDX® SUPERIOR IMPORT



OD Size Round Die	Dia. Across the Flats	Thickness	Tool No.	Price Each
13/16	1-1/16	11/32	**TWA1**	24.30
1	1-1/4	15/32	**TWA2**	24.30
1-1/2	1-31/32	13/16	**TWA3**	25.38
2	2-9/16	3/4	**TWA4**	26.46
2-1/2	3	29/32	**TWA5**	39.96
3	3-1/2	1-1/4	**TWA6**	58.50

Special Thread Round Adjustable Split Dies

High Speed Steel – Screw Adjusting Type



High Speed MDX® SUPERIOR IMPORT

List No. **759** – Right Hand

Size	Threads Per Inch	Outside Diameter	Price Each
00	90	13/16	31.35
00	96	13/16	31.35
0	72	13/16	31.35
0	80	13/16	31.35
0	96	13/16	31.35
1	48	13/16	31.35
1	56	13/16	31.35
1	80	13/16	31.35
2	48	13/16	31.35
2	72	13/16	31.35
2	80	13/16	31.35
3	64	13/16	31.35
3	72	13/16	31.35
3	80	13/16	31.35
4	32	13/16	31.35
4	32	1	32.90
4	36	13/16	31.35
4	36	1	32.90
4	56	13/16	31.35
4	56	1	32.90
4	60	13/16	31.35
4	60	1	32.90
4	64	13/16	31.35
4	64	1	32.90
4	72	13/16	31.35
4	80	13/16	31.35
4	80	1	32.90
5	32	13/16	31.35
5	32	1	32.90
5	36	13/16	31.35
5	36	1	32.90
5	48	13/16	31.35
5	48	1	32.90
5	56	1	32.90
5	60	13/16	31.35
5	60	1	32.90
5	64	13/16	31.35
5	64	1	32.90
5	72	13/16	31.35
5	80	13/16	31.35
6	30	13/16	31.35
6	30	1	32.90
6	36	1	32.90
6	48	13/16	31.35
6	48	1	32.90
6	56	13/16	31.35
6	56	1	32.90
6	60	13/16	31.35
6	64	13/16	31.35
6	80	13/16	31.35
8	24	13/16	31.35
8	24	1	32.90
8	30	13/16	31.35
8	30	1	32.90
8	40	13/16	31.35
8	40	1	32.90
8	48	13/16	31.35
8	48	1	32.90
8	56	13/16	31.35
8	56	1	32.90
8	60	13/16	31.35
8	64	13/16	31.35
8	64	1	32.90
8	80	13/16	31.35
10	26	13/16	31.35
10	26	1	32.90
10	27	1	32.90
10	28	13/16	31.35
10	28	1	32.90
10	30	13/16	31.35

Size	Threads Per Inch	Outside Diameter	Price Each
10	30	1	32.90
10	36	13/16	31.35
10	36	1	32.90
10	40	13/16	31.35
10	40	1	32.90
10	48	13/16	31.35
10	48	1	32.90
10	56	13/16	31.35
10	56	1	32.90
10	60	13/16	31.35
10	64	13/16	31.35
10	64	1	32.90
10	72	13/16	31.35
10	80	13/16	31.35
10	80	1	32.90
12	26	1	32.90
12	27	1	32.90
12	30	13/16	31.35
12	30	1	32.90
12	32	13/16	31.35
12	32	1	32.90
12	36	13/16	31.35
12	36	1	32.90
12	40	13/16	31.35
12	40	1	32.90
12	48	13/16	31.35
12	48	1	32.90
12	50	1	32.90
12	56	13/16	31.35
12	56	1	32.90
12	64	13/16	31.35
14	20	13/16	31.35
14	20	1	32.90
14	24	13/16	31.35
14	24	1	32.90
14	27	1	32.90
14	28	1	32.90
14	30	1	32.90
14	32	1	32.90
14	48	1	32.90
5/32	24	1	32.90
5/32	32	1	32.90
5/32	36	1	32.90
5/32	48	1	32.90
3/16	48	1	32.90
7/32	24	1	32.90
7/32	32	1	32.90
7/32	40	1	32.90
1/4	14	1	32.90
1/4	16	1	32.90
1/4	18	13/16	31.35
1/4	18	1	32.90
1/4	22	1	32.90
1/4	22	1-1/2	49.50
1/4	24	1	32.90
1/4	24	1-1/2	49.50
1/4	26	1	32.90
1/4	27	1	32.90
1/4	27	1-1/2	49.50
1/4	30	1	32.90
1/4	30	1-1/2	49.50
1/4	32	13/16	31.35
1/4	32	1	32.90
1/4	32	1-1/2	49.50
1/4	36	1	32.90
1/4	36	1-1/2	49.50
1/4	38	1	32.90
1/4	40	1	32.90
1/4	40	1-1/2	49.50
1/4	42	2	84.60

Size	Threads Per Inch	Outside Diameter	Price Each
1/4	48	1	32.90
1/4	48	1-1/2	49.50
1/4	56	1	32.90
1/4	60	1	32.90
1/4	64	1	32.90
1/4	72	1	32.90
1/4	80	1	32.90
9/32	32	13/16	31.35
5/16	16	1	32.90
5/16	16	1-1/2	49.50
5/16	20	1	32.90
5/16	20	1-1/2	49.50
5/16	22	1	32.90
5/16	22	1-1/2	49.50
5/16	26	1	32.90
5/16	27	1	32.90
5/16	27	1-1/2	49.50
5/16	28	1	32.90
5/16	28	1-1/2	49.50
5/16	30	1	32.90
5/16	30	1-1/2	49.50
5/16	32	1	32.90
5/16	32	1-1/2	49.50
5/16	36	1	32.90
5/16	36	1-1/2	49.50
5/16	40	1	32.90
5/16	40	1-1/2	49.50
5/16	48	1	32.90
5/16	48	1-1/2	49.50
5/16	56	1	32.90
5/16	60	1	32.90
5/16	64	1	32.90
5/16	72	1	32.90
5/16	80	1	32.90
11/32	32	1	32.90
11/32	40	1	32.90
3/8	14	1	32.90
3/8	14	1-1/2	49.50
3/8	18	1	32.90
3/8	18	1-1/2	49.50
3/8	20	1	32.90
3/8	20	1-1/2	49.50
3/8	22	1	32.90
3/8	22	1-1/2	49.50
3/8	26	1	32.90
3/8	26	1-1/2	49.50
3/8	27	1	32.90
3/8	27	1-1/2	49.50
3/8	28	1	32.90
3/8	28	1-1/2	49.50
3/8	30	1	32.90
3/8	30	1-1/2	49.50
3/8	32	1	32.90
3/8	32	1-1/2	49.50
3/8	36	1	32.90
3/8	36	1-1/2	49.50
3/8	36	2	84.60
3/8	40	1	32.90
3/8	40	1-1/2	49.50
3/8	48	1	32.90
3/8	48	1-1/2	49.50
3/8	56	1	32.90
3/8	56	1-1/2	49.50
3/8	60	1	32.90
3/8	64	1	32.90
3/8	72	1	32.90
3/8	80	1	32.90
13/32	32	1	32.90
13/32	36	1	32.90

Special Thread Round Adjustable Split Dies

High Speed Steel – Screw Adjusting Type

List No. **759** – Right Hand



High Speed MDX® SUPERIOR IMPORT

Size	Threads Per Inch	Outside Diameter	Price Each
13/32	40	1	32.90
7/16	12	1	32.90
7/16	12	1-1/2	49.50
7/16	16	1	32.90
7/16	16	1-1/2	49.50
7/16	18	1	32.90
7/16	18	1-1/2	49.50
7/16	18	2	84.60
7/16	22	1-1/2	49.50
7/16	24	1	32.90
7/16	24	1-1/2	49.50
7/16	24	2	84.60
7/16	26	1	32.90
7/16	27	1	32.90
7/16	27	1-1/2	49.50
7/16	28	1	32.90
7/16	28	1-1/2	49.50
7/16	30	1	32.90
7/16	30	1-1/2	49.50
7/16	32	1	32.90
7/16	32	1-1/2	49.50
7/16	36	1	32.90
7/16	36	1-1/2	49.50
7/16	40	1	32.90
7/16	40	1-1/2	49.50
7/16	48	1	32.90
7/16	48	1-1/2	49.50
7/16	56	1	32.90
7/16	64	1	32.90
15/32	32	1	32.90
15/32	32	1-1/2	49.50
15/32	36	1	32.90
15/32	40	1	32.90
1/2	10	1	32.90
1/2	12	1	32.90
1/2	12	1-1/2	49.50
1/2	12	2	84.60
1/2	14	1	32.90
1/2	14	1-1/2	49.50
1/2	16	1	32.90
1/2	16	1-1/2	49.50
1/2	16	2	84.60
1/2	18	1	32.90
1/2	18	1-1/2	49.50
1/2	18	2	84.60
1/2	22	1	32.90
1/2	22	1-1/2	49.50
1/2	24	1	32.90
1/2	24	1-1/2	49.50
1/2	24	2	84.60
1/2	26	1-1/2	49.50
1/2	27	1	32.90
1/2	27	1-1/2	49.50
1/2	27	2	84.60
1/2	28	1	32.90
1/2	28	1-1/2	49.50
1/2	28	2	84.60
1/2	30	1	32.90
1/2	30	1-1/2	49.50
1/2	30	2	84.60
1/2	32	1	32.90
1/2	32	1-1/2	49.50
1/2	32	2	84.60
1/2	36	1	32.90
1/2	36	1-1/2	49.50
1/2	40	1	32.90
1/2	40	1-1/2	49.50
1/2	48	1	32.90
1/2	48	1-1/2	49.50

Size	Threads Per Inch	Outside Diameter	Price Each
1/2	56	1	32.90
1/2	56	1-1/2	49.50
1/2	60	1	32.90
1/2	64	1	32.90
1/2	80	1	32.90
9/16	14	1-1/2	49.50
9/16	14	2	84.60
9/16	16	1-1/2	49.50
9/16	20	1-1/2	49.50
9/16	20	2	84.60
9/16	22	1-1/2	49.50
9/16	24	1-1/2	49.50
9/16	24	2	84.60
9/16	26	1-1/2	49.50
9/16	27	1-1/2	49.50
9/16	27	2	84.60
9/16	28	1-1/2	49.50
9/16	28	2	84.60
9/16	30	1-1/2	49.50
9/16	30	2	84.60
9/16	32	1-1/2	49.50
9/16	32	2	84.60
9/16	36	1-1/2	49.50
9/16	36	2	84.60
9/16	40	1-1/2	49.50
9/16	48	1-1/2	49.50
9/16	56	1-1/2	49.50
9/16	72	1-1/2	49.50
5/8	10	1-1/2	49.50
5/8	10	2	84.60
5/8	12	1-1/2	49.50
5/8	12	2	84.60
5/8	14	1-1/2	49.50
5/8	14	2	84.60
5/8	16	1-1/2	49.50
5/8	16	2	84.60
5/8	20	1-1/2	49.50
5/8	20	2	84.60
5/8	22	1-1/2	49.50
5/8	24	1-1/2	49.50
5/8	24	2	84.60
5/8	26	1-1/2	49.50
5/8	27	1-1/2	49.50
5/8	27	2	84.60
5/8	28	1-1/2	49.50
5/8	30	1-1/2	49.50
5/8	32	1-1/2	49.50
5/8	32	2	84.60
5/8	36	1-1/2	49.50
5/8	40	1-1/2	49.50
5/8	40	2	84.60
5/8	48	1-1/2	49.50
5/8	56	1-1/2	49.50
5/8	64	1-1/2	49.50
5/8	80	1-1/2	49.50
11/16	12	1-1/2	49.50
11/16	12	2	84.60
11/16	14	1-1/2	49.50
11/16	14	2	84.60
11/16	18	1-1/2	49.50
11/16	18	2	84.60
11/16	20	1-1/2	49.50
11/16	20	2	84.60
11/16	24	1-1/2	49.50
11/16	24	2	84.60
11/16	27	1-1/2	49.50
11/16	27	2	84.60
11/16	28	2	84.60
11/16	32	1-1/2	49.50

Size	Threads Per Inch	Outside Diameter	Price Each
11/16	32	2	84.60
11/16	36	1-1/2	49.50
11/16	36	2	84.60
11/16	40	1-1/2	49.50
11/16	40	2	84.60
11/16	48	1-1/2	49.50
11/16	70	1-1/2	49.50
3/4	8	1-1/2	49.50
3/4	11-1/2	1-1/2	49.50
3/4	12	1-1/2	49.50
3/4	12	2	84.60
3/4	12	3	214.50
3/4	14	1-1/2	49.50
3/4	14	2	84.60
3/4	18	1-1/2	49.50
3/4	18	2	84.60
3/4	20	1-1/2	49.50
3/4	20	2	84.60
3/4	24	1-1/2	49.50
3/4	24	2	84.60
3/4	27	1-1/2	49.50
3/4	27	2	84.60
3/4	28	1-1/2	49.50
3/4	28	2	84.60
3/4	30	1-1/2	49.50
3/4	32	1-1/2	49.50
3/4	32	2	84.60
3/4	36	1-1/2	49.50
3/4	36	2	84.60
3/4	40	1-1/2	49.50
3/4	40	2	84.60
3/4	48	1-1/2	49.50
3/4	56	1-1/2	49.50
3/4	64	1-1/2	49.50
3/4	72	1-1/2	49.50
13/16	10	1-1/2	49.50
13/16	10	2	84.60
13/16	12	1-1/2	49.50
13/16	12	2	84.60
13/16	14	2	84.60
13/16	16	1-1/2	49.50
13/16	16	2	84.60
13/16	18	2	84.60
13/16	20	1-1/2	49.50
13/16	20	2	84.60
13/16	24	1-1/2	49.50
13/16	24	2	84.60
13/16	27	2	84.60
13/16	28	1-1/2	49.50
13/16	28	2	84.60
13/16	30	2	84.60
13/16	32	1-1/2	49.50
13/16	32	2	84.60
13/16	36	2	84.60
13/16	40	1-1/2	49.50
13/16	40	2	84.60
13/16	48	1-1/2	49.50
13/16	48	2	84.60
7/8	10	2	84.60
7/8	12	2	84.60
7/8	16	2	84.60
7/8	18	2	84.60
7/8	20	2	84.60
7/8	24	2	84.60
7/8	27	2	84.60
7/8	28	2	84.60
7/8	30	2	84.60
7/8	32	2	84.60
7/8	36	2	84.60

Special Thread Round Adjustable Split Dies

High Speed Steel – Screw Adjusting Type



High Speed MDX® SUPERIOR IMPORT

List No. **759** – Right Hand

Size	Threads Per Inch	Outside Diameter	Price Each
7/8	40	2	84.60
7/8	48	2	84.60
15/16	9	2	84.60
15/16	10	2	84.60
15/16	12	2	84.60
15/16	14	2	84.60
15/16	16	2	84.60
15/16	18	2	84.60
15/16	20	2	84.60
15/16	24	2	84.60
15/16	27	2	84.60
15/16	28	2	84.60
15/16	30	2	84.60
15/16	32	2	84.60
15/16	40	2	84.60
1	10	2	84.60
1	10	2-1/2	116.60
1	10	3	214.50
1	16	2	84.60
1	16	2-1/2	116.60
1	16	3	214.50
1	18	2	84.60
1	18	2-1/2	116.60
1	18	3	214.50
1	20	2	84.60
1	20	2-1/2	116.60
1	20	3	214.50
1	24	2	84.60
1	24	2-1/2	116.60
1	24	3	214.50
1	26	2	84.60
1	26	2-1/2	116.60
1	27	2	84.60
1	27	2-1/2	116.60
1	28	2	84.60
1	28	2-1/2	116.60
1	30	2	84.60
1	32	2	84.60
1	32	2-1/2	116.60
1	36	2	84.60
1	40	2	84.60
1	48	2	84.60
1	56	2	84.60
1	64	2	84.60
1-1/16	7	2-1/2	116.60
1-1/16	8	2-1/2	116.60
1-1/16	8	3	214.50
1-1/16	10	2-1/2	116.60
1-1/16	10	3	214.50
1-1/16	12	2	84.60
1-1/16	12	2-1/2	116.60
1-1/16	12	3	214.50
1-1/16	14	2	84.60
1-1/16	14	2-1/2	116.60
1-1/16	14	3	214.50
1-1/16	16	2	84.60
1-1/16	16	2-1/2	116.60
1-1/16	16	3	214.50
1-1/16	18	2	84.60
1-1/16	18	2-1/2	116.60
1-1/16	18	3	214.50
1-1/16	20	2	84.60
1-1/16	20	2-1/2	116.60
1-1/16	20	3	214.50
1-1/16	24	2-1/2	116.60
1-1/16	24	3	214.50
1-1/16	27	2	84.60
1-1/16	27	2-1/2	116.60
1-1/16	28	2-1/2	116.60
1-1/16	32	2-1/2	116.60
1-1/16	40	2-1/2	116.60
1-1/8	8	2-1/2	116.60
1-1/8	8	3	214.50
1-1/8	10	2-1/2	116.60
1-1/8	10	3	214.50
1-1/8	14	2-1/2	116.60
1-1/8	14	3	214.50
1-1/8	16	2-1/2	116.60
1-1/8	16	3	214.50
1-1/8	17	2-1/2	116.60
1-1/8	18	2-1/2	116.60
1-1/8	18	3	214.50
1-1/8	20	2	84.60
1-1/8	20	2-1/2	116.60
1-1/8	20	3	214.50
1-1/8	24	2-1/2	116.60
1-1/8	24	3	214.50
1-1/8	26	2-1/2	116.60
1-1/8	27	2-1/2	116.60
1-1/8	28	2-1/2	116.60
1-1/8	30	2-1/2	116.60
1-1/8	32	2-1/2	116.60
1-1/8	40	2-1/2	116.60
1-3/16	7	2-1/2	116.60
1-3/16	8	2-1/2	116.60
1-3/16	8	3	214.50
1-3/16	10	2-1/2	116.60
1-3/16	12	2-1/2	116.60
1-3/16	12	3	214.50
1-3/16	14	2-1/2	116.60
1-3/16	16	2-1/2	116.60
1-3/16	16	3	214.50
1-3/16	18	2-1/2	116.60
1-3/16	20	2-1/2	116.60
1-3/16	24	2-1/2	116.60
1-3/16	27	2-1/2	116.60
1-3/16	28	2-1/2	116.60
1-3/16	32	2-1/2	116.60
1-3/16	40	2-1/2	116.60
1-1/4	6	2-1/2	116.60
1-1/4	6	3	214.50
1-1/4	8	2-1/2	116.60
1-1/4	8	3	214.50
1-1/4	10	2-1/2	116.60
1-1/4	10	3	214.50
1-1/4	14	2-1/2	116.60
1-1/4	14	3	214.50
1-1/4	16	2-1/2	116.60
1-1/4	16	3	214.50
1-1/4	18	2-1/2	116.60
1-1/4	18	3	214.50
1-1/4	20	2-1/2	116.60
1-1/4	20	3	214.50
1-1/4	24	2-1/2	116.60
1-1/4	24	3	214.50
1-1/4	26	2-1/2	116.60
1-1/4	27	2-1/2	116.60
1-1/4	28	2-1/2	116.60
1-1/4	30	2-1/2	116.60
1-1/4	32	2-1/2	116.60
1-1/4	32	3	214.50
1-1/4	36	2-1/2	116.60
1-1/4	40	2-1/2	116.60
1-5/16	8	2-1/2	116.60
1-5/16	8	3	214.50
1-5/16	10	2-1/2	116.60
1-5/16	10	3	214.50
1-5/16	12	2-1/2	116.60
1-5/16	12	3	214.50
1-5/16	14	2-1/2	116.60
1-5/16	14	3	214.50
1-5/16	16	2-1/2	116.60
1-5/16	16	3	214.50
1-5/16	18	2-1/2	116.60
1-5/16	18	3	214.50
1-5/16	20	2-1/2	116.60
1-5/16	20	3	214.50
1-5/16	24	2-1/2	116.60
1-5/16	27	2-1/2	116.60
1-5/16	32	2-1/2	116.60
1-11/32	14	2-1/2	116.60
1-3/8	5	2-1/2	116.60
1-3/8	7	2-1/2	116.60
1-3/8	7	3	214.50
1-3/8	8	2-1/2	116.60
1-3/8	8	3	214.50
1-3/8	10	2-1/2	116.60
1-3/8	10	3	214.50
1-3/8	14	2-1/2	116.60
1-3/8	14	3	214.50
1-3/8	16	2-1/2	116.60
1-3/8	16	3	214.50
1-3/8	18	2-1/2	116.60
1-3/8	18	3	214.50
1-3/8	20	2-1/2	116.60
1-3/8	20	3	214.50
1-3/8	24	2-1/2	116.60
1-3/8	24	3	214.50
1-3/8	27	2-1/2	116.60
1-3/8	28	3	214.50
1-3/8	32	2-1/2	116.60
1-3/8	32	3	214.50
1-13/32	14	2-1/2	116.60
1-7/16	6	2-1/2	116.60
1-7/16	6	3	214.50
1-7/16	8	2-1/2	116.60
1-7/16	8	3	214.50
1-7/16	12	2-1/2	116.60
1-7/16	12	3	214.50
1-7/16	16	2-1/2	116.60
1-7/16	16	3	214.50
1-7/16	18	2-1/2	116.60
1-7/16	18	3	214.50
1-7/16	20	2-1/2	116.60
1-7/16	24	2-1/2	116.60
1-7/16	27	2-1/2	116.60
1-7/16	28	2-1/2	116.60
1-1/2	7	2-1/2	116.60
1-1/2	8	2-1/2	116.60
1-1/2	8	3	214.50
1-1/2	10	2-1/2	116.60
1-1/2	10	3	214.50
1-1/2	14	2-1/2	116.60
1-1/2	14	3	214.50
1-1/2	16	2-1/2	116.60
1-1/2	16	3	214.50

Special Thread Round Adjustable Split Dies

High Speed Steel – Screw Adjusting Type



High Speed MDX® SUPERIOR IMPORT

List No. **759** – Right Hand

Size	Threads Per Inch	Outside Diameter	Price Each
1-1/2	18	2-1/2	116.60
1-1/2	18	3	214.50
1-1/2	20	2-1/2	116.60
1-1/2	20	3	214.50
1-1/2	24	2-1/2	116.60
1-1/2	24	3	214.50
1-1/2	27	2-1/2	116.60
1-1/2	28	2-1/2	116.60
1-1/2	28	3	214.50
1-1/2	30	2-1/2	116.60
1-1/2	32	2-1/2	116.60
1-1/2	40	2-1/2	116.60
1-9/16	6	3	214.50
1-9/16	8	3	214.50
1-9/16	10	3	214.50
1-9/16	12	3	214.50
1-9/16	16	3	214.50
1-9/16	18	3	214.50
1-9/16	20	3	214.50
1-9/16	24	3	214.50
1-9/16	32	3	214.50
1-5/8	5	3	214.50
1-5/8	5-1/2	3	214.50
1-5/8	6	3	214.50
1-5/8	8	3	214.50
1-5/8	10	3	214.50
1-5/8	12	3	214.50
1-5/8	14	3	214.50
1-5/8	16	3	214.50
1-5/8	18	3	214.50
1-5/8	20	3	214.50
1-5/8	24	3	214.50
1-5/8	28	3	214.50
1-5/8	32	3	214.50
1-21/32	14	3	214.50
1-21/32	16	3	214.50
1-11/16	6	3	214.50
1-11/16	8	3	214.50
1-11/16	12	3	214.50
1-11/16	16	3	214.50
1-11/16	18	3	214.50
1-11/16	20	3	214.50
1-11/16	24	3	214.50
1-11/16	32	3	214.50
1-3/4	5	3	214.50
1-3/4	5-1/2	3	214.50
1-3/4	6	3	214.50
1-3/4	8	3	214.50
1-3/4	10	3	214.50
1-3/4	12	3	214.50
1-3/4	14	3	214.50
1-3/4	16	3	214.50
1-3/4	18	3	214.50
1-3/4	20	3	214.50
1-3/4	24	3	214.50
1-3/4	28	3	214.50
1-3/4	32	3	214.50
1-3/4	40	3	214.50
1-13/16	8	3	214.50
1-13/16	12	3	214.50
1-13/16	14	3	214.50
1-13/16	16	3	214.50
1-13/16	18	3	214.50
1-13/16	20	3	214.50
1-13/16	24	3	214.50
1-13/16	32	3	214.50
1-7/8	5	3	214.50
1-7/8	5-1/2	3	214.50
1-7/8	6	3	214.50
1-7/8	8	3	214.50
1-7/8	10	3	214.50
1-7/8	12	3	214.50
1-7/8	14	3	214.50
1-7/8	16	3	214.50
1-7/8	18	3	214.50
1-7/8	20	3	214.50
1-7/8	24	3	214.50
1-7/8	32	3	214.50
1-15/16	8	3	214.50
1-15/16	10	3	214.50
1-15/16	12	3	214.50
1-15/16	14	3	214.50
1-15/16	16	3	214.50
1-15/16	18	3	214.50
1-15/16	20	3	214.50
1-15/16	24	3	214.50
1-15/16	32	3	214.50
2	4	3	214.50
2	4-1/2	3	214.50
2	6	3	214.50
2	8	3	214.50
2	10	3	214.50
2	12	3	214.50
2	14	3	214.50
2	16	3	214.50
2	18	3	214.50
2	18	4	264.00
2	20	3	214.50
2	24	3	214.50
2	28	3	214.50
2	32	3	214.50
2-1/8	4-1/2	4	264.00
2-1/8	8	4	264.00
2-1/8	12	4	264.00
2-1/8	16	4	264.00
2-1/8	18	4	264.00
2-1/8	20	4	264.00
2-1/4	4-1/2	4	264.00
2-1/4	8	4	264.00
2-1/4	12	4	264.00
2-1/4	16	4	264.00
2-1/4	18	4	264.00
2-1/4	20	4	264.00
2-1/4	24	4	264.00
2-5/16	6	4	264.00
2-5/16	12	4	264.00
2-5/16	16	4	264.00
2-3/8	4	4	264.00
2-3/8	8	4	264.00
2-3/8	12	4	264.00
2-3/8	16	4	264.00
2-3/8	18	4	264.00
2-3/8	20	4	264.00
2-3/8	24	4	264.00
2-1/2	4	4	264.00
2-1/2	6	4	264.00
2-1/2	8	4	264.00
2-1/2	12	4	264.00
2-1/2	16	4	264.00
2-1/2	18	4	264.00
2-5/8	4	5	448.80
2-5/8	8	5	448.80
2-5/8	12	4	448.80
2-5/8	12	5	448.80
2-5/8	16	5	448.80
2-5/8	18	5	448.80
2-5/8	20	5	448.80
2-3/4	4	5	448.80
2-3/4	8	5	448.80
2-3/4	12	4	264.00
2-3/4	16	4	264.00
2-3/4	16	5	448.80
2-3/4	18	5	448.80
2-3/4	20	5	448.80
2-7/8	4	5	448.80
2-7/8	8	5	448.80
2-7/8	12	4	264.00
2-7/8	12	5	448.80
2-7/8	16	5	448.80
2-7/8	18	5	448.80
2-7/8	20	5	448.80
3	4	5	448.80
3	8	4	264.00
3	8	5	448.80
3	12	4	264.00
3	12	5	448.80
3	16	5	448.80
3	18	5	448.80
3	20	5	448.80
3-1/8	4	5	448.80
3-1/8	8	5	448.80
3-1/8	12	5	448.80
3-1/8	16	5	448.80
3-1/8	18	5	448.80
3-1/8	20	5	448.80
3-1/4	4	5	448.80
3-1/4	8	5	448.80
3-1/4	12	5	448.80
3-1/4	16	5	448.80
3-1/4	18	5	448.80
3-1/4	20	5	448.80
3-3/8	4	5	448.80
3-3/8	8	5	448.80
3-3/8	12	5	448.80
3-3/8	16	5	448.80
3-1/2	4	5	448.80
3-1/2	8	5	448.80
3-1/2	12	5	448.80
3-1/2	16	5	448.80
3-5/8	4	5	448.80
3-5/8	8	5	448.80
3-5/8	12	5	448.80
3-5/8	16	5	448.80
3-3/4	4	6	611.60
3-3/4	8	6	611.60
3-3/4	12	6	611.60
3-3/4	16	6	611.60
3-7/8	4	6	611.60
3-7/8	8	6	611.60
3-7/8	12	6	611.60
3-7/8	16	6	611.60
4	4	6	611.60
4	8	6	611.60
4	12	6	611.60
4	16	6	611.60
4-1/4	8	7-1/2	770.00
4-1/4	12	7-1/2	770.00
4-1/2	8	7-1/2	770.00
4-1/2	12	7-1/2	770.00

Hexagon Rethreading Dies

Carbon Steel

For rethreading, damaged, jammed or rusty threads.
No special holder is required for these dies. Any wrench large enough will suffice.



MDX® SUPERIOR IMPORT

List No. **765** – Right Hand
List No. **765LH** – Left Hand

Size	Threads Per Inch	Price Each Right Hand 765	Price Each Left Hand 765LH
1	72	12.24	
2	56	12.24	
2	64	12.24	
3	48	12.24	
3	56	12.24	
4	36	12.24	
4	40	12.24	
4	48	12.24	
5	40	12.24	
5	44	12.24	
6	32	12.24	
6	40	12.24	
8	32	12.24	
8	36	12.24	
10	24	12.24	
10	32	12.24	
12	24	12.24	
12	28	12.24	
3/16	24	12.24	—
3/16	32	12.24	—
1/4	20	12.24	13.46
1/4	28	12.24	13.46
5/16	18	13.50	14.85
5/16	24	13.50	14.85
3/8	16	14.22	16.65
3/8	24	14.22	16.65
7/16	14	16.02	17.91
7/16	20	16.02	17.91
1/2	13	17.10	21.15
1/2	20	17.10	21.15
9/16	12	18.18	23.85
9/16	18	18.18	23.85
5/8	11	21.06	26.10
5/8	18	21.06	26.10
11/16	11	23.58	30.90
11/16	16	23.58	30.90
3/4	10	27.90	35.34
3/4	16	27.90	35.34
7/8	9	31.32	39.72
7/8	14	31.32	39.72
1	8	35.82	44.94
1	12	35.82	44.94
1	14	35.82	44.94
1-1/8	7	41.94	58.50
1-1/8	12	41.94	58.50
1-1/4	7	50.40	69.50
1-1/4	12	50.40	69.50
1-3/8	6	53.82	72.25
1-3/8	12	53.82	72.25
1-1/2	6	58.32	78.90
1-1/2	12	58.32	78.90

MADE IN USA

List No. **765U** – Right Hand

Size	Threads Per Inch	Price Each
6	32	17.73
6	40	17.73
8	32	17.73
10	24	17.73
10	32	17.73
12	24	17.73
1/4	20	17.73
1/4	28	17.73
5/16	18	19.58
5/16	24	19.58
3/8	16	20.61
3/8	24	20.61
7/16	14	23.22
7/16	20	23.22
1/2	13	24.80
1/2	20	24.80
9/16	12	26.37
9/16	18	26.37
5/8	11	30.56
5/8	18	30.56
11/16	11	34.20
11/16	16	34.20
3/4	10	40.46
3/4	16	40.46
7/8	9	45.45
7/8	14	45.45
1"	8	51.98
1"	12	51.98
1"	14	51.98
1-1/8	7	67.50
1-1/8	12	67.50
1-1/4	7	71.28
1-1/4	12	71.28
1-3/8	6	80.10
1-3/8	12	80.10

H.S. Hexagon Rethreading Dies

High Speed Steel

List No. **765HS** – Right Hand

Threading Dies are designed for tough cutting applications of all types of external threads, such as threading rods, bolts and studs.

High Speed

MDX® SUPERIOR IMPORT



Size	Threads Per Inch	Price Each
4	40	17.10
6	32	17.10
8	32	17.10
10	24	17.10
10	32	17.10
12	24	17.10
1/4	20	17.10
1/4	28	17.10
5/16	18	19.80
5/16	24	19.80
3/8	16	21.33
3/8	24	21.33
7/16	14	24.03
7/16	20	24.03
1/2	13	25.65
1/2	20	25.65
9/16	12	29.07
9/16	18	29.07
5/8	11	33.08
5/8	18	33.08
11/16	11	41.85
11/16	16	41.85
3/4	10	41.85
3/4	16	41.85
7/8	9	57.02
7/8	14	57.02
1	8	74.05
1	12	74.05
1	14	74.05
1-1/8	7	89.38
1-1/8	12	89.38
1-1/4	7	103.50
1-1/4	12	103.50
1-3/8	6	121.50
1-3/8	12	121.50
1-1/2	6	157.50
1-1/2	12	157.50

Metric Hexagon Rethreading Dies

Carbon Steel

List No. **767** – Right Hand

MDX® SUPERIOR IMPORT



Size	Threads Per Inch	Price Each
1.60	.35	11.47
2.00	.60	11.47
2.50	.45	11.47
3.00	.35	11.47
3.00	.50	11.47
3.00	.60	11.47
3.50	.50	11.47
3.50	.60	11.47
4.00	.35	11.47
4.00	.50	11.47
4.00	.70	11.47
4.00	.75	11.47
4.50	.50	11.47
4.50	.75	11.47
5.00	.50	11.47
5.00	.75	11.47
5.00	.80	11.47
5.00	.90	12.37
5.00	1.00	12.37
5.50	.80	12.37
5.50	.90	12.37
6.00	.50	12.08
6.00	.75	12.08
6.00	1.00	12.08
6.30	1.00	12.08
7.00	.50	13.59
7.00	.75	13.59
7.00	1.00	13.59
8.00	.50	13.59
8.00	.75	13.59
8.00	1.00	13.59
8.00	1.25	13.59
8.00	1.50	13.59
8.00	1.75	14.18
9.00	.50	14.18
9.00	.75	14.18
9.00	1.00	14.18
9.00	1.25	14.18
10.00	.50	15.97
10.00	.75	15.97
10.00	1.00	15.97
10.00	1.25	15.97
10.00	1.50	15.97
11.00	.50	15.97
11.00	.75	15.97
11.00	1.00	15.97
11.00	1.25	15.97
11.00	1.50	15.97
12.00	.50	17.15
12.00	.75	17.15
12.00	1.00	17.15
12.00	1.25	17.15
12.00	1.50	17.15
12.00	1.75	17.15
13.00	.50	18.26
13.00	.75	18.26
13.00	1.00	18.26
13.00	1.25	18.26
13.00	1.50	18.26

Size	Threads Per Inch	Price Each
13.00	1.75	18.26
13.00	2.00	18.26
14.00	.50	18.26
14.00	.75	18.26
14.00	1.00	18.26
14.00	1.25	18.26
14.00	1.50	18.26
14.00	2.00	18.26
15.00	.50	20.95
15.00	1.00	20.95
15.00	1.50	20.95
15.00	2.00	20.95
16.00	.50	20.95
16.00	.75	20.95
16.00	1.00	20.95
16.00	1.25	20.95
16.00	1.50	20.95
16.00	2.00	20.95
17.00	.50	31.34
17.00	1.00	31.34
17.00	1.50	31.34
17.00	2.00	31.34
18.00	.50	31.34
18.00	1.00	31.34
18.00	1.50	31.34
18.00	2.00	31.34
18.00	2.50	31.34
19.00	.50	31.34
19.00	1.00	31.34
19.00	1.50	31.34
19.00	2.00	31.34
20.00	1.00	31.34
20.00	1.25	31.34
20.00	1.50	31.34
20.00	2.00	31.34
20.00	2.50	31.34
21.00	1.00	40.25
21.00	1.50	40.25
21.00	2.00	40.25
21.00	2.50	40.25
22.00	1.00	40.25
22.00	1.50	40.25
22.00	2.00	40.25
22.00	2.50	40.25
22.00	3.00	40.25
23.00	1.00	40.25
23.00	1.50	40.25
23.00	2.00	40.25
23.00	2.50	40.25
24.00	1.00	40.25
24.00	1.25	40.25
24.00	1.50	40.25
24.00	2.00	40.25
24.00	2.50	40.25
24.00	3.00	40.25
25.00	1.00	44.77
25.00	1.25	44.77
25.00	1.50	44.77
25.00	2.00	44.77

Size	Threads Per Inch	Price Each
26.00	1.50	44.77
26.00	2.00	44.77
26.00	3.00	44.77
27.00	1.00	44.77
27.00	1.50	44.77
27.00	2.00	44.77
27.00	3.00	44.77
28.00	1.50	54.16
28.00	2.00	54.16
30.00	1.00	54.16
30.00	1.50	54.16
30.00	2.00	54.16
30.00	3.00	54.16
30.00	3.50	54.16
32.00	1.50	59.59
32.00	3.50	59.59
33.00	1.50	59.59
33.00	2.00	59.59
33.00	3.00	44.77
33.00	3.50	59.59
34.00	1.50	65.63
34.00	3.00	65.63
35.00	1.50	65.63
36.00	1.50	65.63
36.00	2.00	65.63
36.00	3.00	65.63
36.00	4.00	65.63
38.00	1.50	71.82
39.00	1.50	71.82
39.00	2.00	71.82
39.00	3.00	71.82
39.00	4.00	71.82
40.00	1.50	89.24
40.00	2.00	89.24
42.00	1.50	89.24
42.00	2.00	89.24
42.00	3.00	89.24
42.00	4.50	89.24
45.00	1.50	108.00
45.00	3.00	108.00
45.00	4.50	108.00
48.00	1.50	126.00
48.00	3.00	126.00
48.00	5.00	126.00
50.00	1.50	135.00
52.00	1.50	170.87
52.00	2.50	170.87
52.00	3.00	170.87
52.00	5.00	170.87
56.00	3.00	170.87
56.00	4.00	170.87
56.00	5.50	170.87
64.00	1.50	284.20
64.00	3.00	284.20
64.00	6.00	284.20
72.00	3.00	549.64
72.00	6.00	549.64

Special Thread Hexagon Rethreading Dies

Carbon Steel



List No. **769** – Right Hand

Size	Threads Per Inch	Price Each
3/16	24	14.28
3/16	32	14.28
14	20	15.71
14	24	15.71
1/4	24	15.71
1/4	27	15.71
1/4	32	15.71
1/4	36	15.71
1/4	40	15.71
1/4	48	15.71
5/16	10	17.33
5/16	16	17.33
5/16	20	17.33
5/16	27	17.33
5/16	28	17.33
5/16	32	17.33
5/16	40	17.33
3/8	18	18.25
3/8	20	18.25
3/8	27	18.25
3/8	32	18.25
3/8	40	18.25
7/16	24	20.56
7/16	28	20.56
7/16	32	20.56
7/16	40	20.56
1/2	10	21.95
1/2	12	21.95
1/2	16	21.95
1/2	18	21.95
1/2	24	21.95
1/2	27	21.95
1/2	28	21.95
1/2	32	21.95
1/2	40	21.95
9/16	14	23.33
9/16	16	23.33
9/16	20	23.33
9/16	24	23.33
9/16	32	23.33
5/8	10	27.03
5/8	12	27.03
5/8	16	27.03
5/8	20	27.03
5/8	24	27.03
5/8	32	27.03
11/16	12	30.26
11/16	18	30.26
11/16	20	30.26
11/16	24	30.26
3/4	11-1/2	35.81
3/4	12	35.81
3/4	18	35.81
3/4	20	35.81
3/4	24	35.81
3/4	32	35.81
13/16	10	40.19
13/16	12	40.19
13/16	16	40.19
13/16	18	40.19
13/16	20	40.19
13/16	24	40.19
13/16	32	40.19
7/8	10	40.19

Size	Threads Per Inch	Price Each
7/8	13	40.19
7/8	16	40.19
7/8	18	40.19
7/8	20	40.19
7/8	24	40.19
7/8	32	40.19
7/8	40	40.19
15/16	9	45.97
15/16	10	45.97
15/16	12	45.97
15/16	14	45.97
15/16	16	45.97
15/16	18	45.97
15/16	20	45.97
1	10	45.97
1	16	45.97
1	18	45.97
1	20	45.97
1	24	45.97
1	32	45.97
1-1/16	8	53.82
1-1/16	12	53.82
1-1/16	16	53.82
1-1/16	18	53.82
1-1/8	8	53.82
1-1/8	16	53.82
1-1/8	18	53.82
1-1/8	20	53.82
1-3/16	8	64.68
1-3/16	10	64.68
1-3/16	12	64.68
1-3/16	16	64.68
1-3/16	18	64.68
1-1/4	5	64.68
1-1/4	8	64.68
1-1/4	10	64.68
1-1/4	16	64.68
1-1/4	18	64.68
1-1/4	20	64.68
1-5/16	8	69.07
1-5/16	12	69.07
1-5/16	16	69.07
1-5/16	18	69.07
1-3/8	7	69.07
1-3/8	8	69.07
1-3/8	10	69.07
1-3/8	16	69.07
1-3/8	18	69.07
1-3/8	20	69.07
1-7/16	6	74.84
1-7/16	8	74.84
1-7/16	12	74.84
1-7/16	16	74.84
1-7/16	18	74.84
1-1/2	8	74.84
1-1/2	14	74.84
1-1/2	16	74.84
1-1/2	18	74.84
1-1/2	20	74.84
1-9/16	8	114.24
1-9/16	12	114.24
1-9/16	16	114.24
1-9/16	18	114.24
1-9/16	20	114.24

Size	Threads Per Inch	Price Each
1-5/8	4	114.24
1-5/8	5	114.24
1-5/8	5-1/2	114.24
1-5/8	6	114.24
1-5/8	8	114.24
1-5/8	10	114.24
1-5/8	12	114.24
1-5/8	14	114.24
1-5/8	16	114.24
1-5/8	18	114.24
1-11/16	18	138.03
1-3/4	5	138.03
1-3/4	5-1/2	138.03
1-3/4	6	138.03
1-3/4	8	138.03
1-3/4	10	138.03
1-3/4	12	138.03
1-3/4	14	138.03
1-3/4	16	138.03
1-3/4	18	138.03
1-3/4	20	138.03
1-13/16	12	202.36
1-13/16	18	202.36
1-7/8	4-1/2	202.36
1-7/8	5	202.36
1-7/8	8	202.36
1-7/8	12	202.36
1-7/8	16	202.36
1-7/8	18	202.36
2	4	202.36
2	4-1/2	202.36
2	8	202.36
2	10	202.36
2	12	202.36
2	14	202.36
2	16	202.36
2	18	202.36
2	20	202.36
2	24	202.36
2-1/8	4-1/2	277.20
2-1/8	6	277.20
2-1/8	8	277.20
2-1/8	12	277.20
2-1/8	14	277.20
2-1/8	16	277.20
2-1/8	18	277.20
2-1/4	4	277.20
2-1/4	4-1/2	277.20
2-1/4	6	277.20
2-1/4	8	277.20
2-1/4	10	277.20
2-1/4	12	277.20
2-1/4	14	277.20
2-1/4	16	277.20
2-1/4	18	277.20
2-3/8	4	323.40
2-3/8	8	323.40
2-3/8	10	323.40
2-3/8	12	323.40
2-3/8	14	323.40
2-3/8	16	323.40
2-3/8	18	323.40
2-1/2	4	323.40
2-1/2	4-1/2	323.40

Special Thread Hexagon Rethreading Dies

Carbon Steel



List No. **769** – Right Hand

Size	Threads Per Inch	Price Each
2-1/2	5	323.40
2-1/2	6	323.40
2-1/2	8	323.40
2-1/2	10	323.40
2-1/2	12	323.40
2-1/2	16	323.40
2-1/2	18	323.40
2-5/8	4	438.90
2-5/8	6	438.90
2-5/8	8	438.90
2-5/8	12	438.90
2-5/8	14	438.90
2-5/8	16	438.90
2-5/8	18	438.90
2-3/4	4	438.90
2-3/4	6	438.90
2-3/4	8	438.90
2-3/4	10	438.90
2-3/4	12	438.90
2-3/4	14	438.90
2-3/4	16	438.90

Size	Threads Per Inch	Price Each
2-7/8	4	483.08
2-7/8	6	483.08
2-7/8	8	483.08
2-7/8	12	483.08
2-7/8	16	483.08
2-7/8	18	483.08
3	8	483.08
3	12	483.08
3	16	483.08
3	18	483.08
3-1/8	4	607.24
3-1/8	8	607.24
3-1/8	12	607.24
3-1/4	4	607.24
3-1/4	5	607.24
3-1/4	8	607.24
3-1/4	12	607.24
3-3/8	4	656.04
3-3/8	8	656.04
3-3/8	12	656.04
3-1/2	4	656.04

Size	Threads Per Inch	Price Each
3-1/2	8	656.04
3-1/2	12	656.04
3-5/8	4	704.55
3-5/8	8	704.55
3-5/8	12	704.55
3-3/4	4	704.55
3-3/4	8	704.55
3-3/4	12	704.55
3-7/8	4	779.63
3-7/8	8	779.63
3-7/8	12	779.63
4	4	779.63
4	8	779.63
4	12	779.63
4-1/4	8	836.00
4-1/4	12	836.00
4-1/2	8	915.40
4-1/2	12	915.40
5	8	1078.70
5	12	1078.70

1" & 1-7/16" Across the Flats Hexagon Rethreading Dies

Carbon Steel



List No. **765AF**

Size	Threads Per Inch	Across the Flats	Price Each
2	56	1"	13.60
2	64	1"	13.60
3	48	1"	13.60
3	56	1"	13.60
4	36	1"	13.60
4	40	1"	13.60
4	48	1"	13.60
5	40	1"	13.60
5	44	1"	13.60
6	32	1"	13.60
8	32	1"	13.60
10	24	1"	13.60
10	32	1"	13.60
12	24	1"	13.60

Size	Threads Per Inch	Across the Flats	Price Each
1/4	20	1"	13.60
1/4	28	1"	13.60
5/16	18	1"	15.00
5/16	24	1"	15.00
3/8	16	1"	15.80
3/8	24	1"	15.80
1/2	20	1"	19.00
9/16	12	1-7/16"	20.20
9/16	18	1-7/16"	20.20
5/8	11	1-7/16"	23.40
5/8	18	1-7/16"	23.40
3/4	10	1-7/16"	31.00
3/4	16	1-7/16"	31.00

Metric Sizes

List No. **767AF**

Size	Threads Per Inch	Across the Flats	Price Each
4.00	0.70	1"	13.38
5.00	0.80	1"	13.38
6.00	1.00	1"	14.09
7.00	1.00	1"	15.86
8.00	1.00	1"	15.86
8.00	1.25	1"	15.86

Size	Threads Per Inch	Across the Flats	Price Each
10.00	1.25	1"	18.62
10.00	1.50	1"	18.62
12.00	1.25	1"	20.00
12.00	1.50	1"	20.00
12.00	1.75	1"	20.00

Hex Die Stock For holding hex dies.

Hex Die Size	Dia, Across The Flats	Tool No.	Price Each
1	1	**TWHX1**	13.50
1-7/16	1-7/16	**TWHX2**	30.60



Metric Left Hand Hexagon Rethreading Dies

Carbon Steel



List No. **767L** – Left Hand

Size	Threads Per Inch	Price Each
5.00	.80	13.76
6.00	1.00	14.49
7.00	1.00	16.31
8.00	1.25	16.31
10.00	1.25	19.16
10.00	1.50	19.16
12.00	1.25	20.58

Size	Threads Per Inch	Price Each
12.00	1.75	20.58
14.00	1.25	21.92
14.00	1.50	21.92
14.00	2.00	21.92
16.00	1.50	25.15
16.00	2.00	25.15
18.00	1.50	37.60

Size	Threads Per Inch	Price Each
18.00	2.00	37.60
20.00	1.50	37.60
20.00	2.50	37.60
24.00	1.50	48.29
24.00	2.00	48.29
24.00	3.00	48.29

H.S. Metric Hexagon Rethreading Dies

High Speed Steel



List No. **767HS** – Right Hand

Size	Threads Per Inch	Price Each
3.00	0.50	17.55
3.00	0.60	17.55
4.00	0.70	17.55
4.00	0.75	17.55
5.00	0.50	18.90
5.00	0.80	18.90
5.00	0.90	18.90
5.50	0.90	19.58
6.00	1.00	19.58
7.00	1.00	21.42
8.00	1.25	22.05
9.00	1.00	23.18
9.00	1.25	23.18

Size	Threads Per Inch	Price Each
10.00	1.25	26.10
10.00	1.50	26.10
11.00	1.50	28.78
12.00	1.00	29.25
12.00	1.50	29.25
12.00	1.75	29.25
14.00	1.25	32.13
14.00	2.00	32.13
16.00	1.50	35.10
16.00	2.00	35.10
18.00	1.50	51.98
18.00	2.50	51.98
20.00	1.00	52.78

Size	Threads Per Inch	Price Each
22.00	2.50	88.74
24.00	2.00	107.62
24.00	3.00	107.62
26.00	1.50	163.26
30.00	3.50	163.26
32.00	2.00	163.26
32.00	3.50	163.26
33.00	2.00	164.27
36.00	4.00	167.03
39.00	4.00	274.31
42.00	4.50	274.96

NPT/NPS Hexagon Pipe Dies

Carbon & High Speed Steel



List No. **766** – NPT, Carbon Steel
List No. **763** – NPS, Carbon Steel
List No. **766U** – NPT, Carbon Steel. Made in USA
List No. **766LH** – NPT Left Hand, Carbon Steel
List No. **766HS** – NPT, High Speed Steel

Size	Threads Per Inch	Price Each				
		NPT **766**	NPS **763**	NPT USA **766U**	NPT H.S. **766HS**	NPT LH **766LH**
1/16	27	17.10	18.81	—	—	—
1/8	27	17.10	18.81	24.80	26.10	24.00
1/4	18	25.56	28.12	37.08	40.50	35.00
3/8	18	33.66	37.03	48.83	50.40	—
1/2	14	44.28	48.71	64.22	66.60	—
3/4	14	56.70	62.37	83.07	90.21	85.50
1	11-1/2	75.42	82.96	109.46	127.20	—

Size	Threads Per Inch	Price Each		
		NPT **766**	NPS **763**	NPT H.S. **766HS**
1-1/4	11-1/2	107.55	118.31	170.58
1-1/2	11-1/2	157.50	173.25	248.14
2	8	319.50	351.45	612.00
2-1/2	8	382.50	420.75	—
3	8	414.00	455.40	—
3-1/2	8	621.22	683.33	—
4	8	—	920.00	—

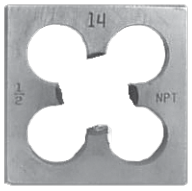
Solid Square Pipe Dies

Carbon Steel

Solid Square Pipe Dies are used to rethread damaged taper pipe threads.

List No. **768** – NPT, Right Hand
List No. **768L** – NPT, Left Hand

MDX SUPERIOR IMPORT

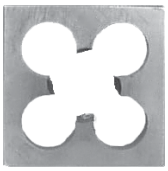


Size	Threads Per Inch	Price Each					
		Right Hand **768**					Left Hand **768L**
		2" Square 1/2" Deep	2-1/2" Square 3/4" Deep	3" Square 3/4" Deep	4" Square 1" Deep	5" Square 1-1/4" Deep	2-1/2" Square 3/4" Deep
1/8	27	28.82	34.02	–	–	–	–
1/4	18	28.82	34.02	–	–	–	–
3/8	18	28.82	34.02	59.22	–	–	–
1/2	14	28.82	34.02	59.22	–	–	61.00
3/4	14	–	34.02	59.22	–	–	–
1	11-1/2	–	34.02	59.22	65.01	–	61.00
1-1/4	11-1/2	–	–	59.22	65.01	–	–
1-1/2	11-1/2	–	–	–	65.01	–	–
***2**	11-1/2	–	–	–	65.01*	–	–
2-1/2	8	–	–	–	–	98.00	–
3	8	–	–	–	–	98.00	–

*NPS List. **768S 2x4** for **$69.25**.

Solid Square Bolt Dies

Carbon Steel



List No. **768B**

Solid Square Bolt Dies are used to rethread damaged threads of bolt and studs.

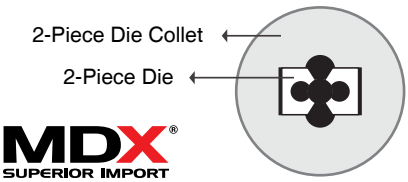
Size	Thread Per Inch	Square	Thickness	Price Each
1/4	20	2	1/2	28.82
1/4	20	2-1/2	1/2	31.00
1/4	28	2-1/2	1/2	31.00
5/16	18	2-1/2	1/2	31.00
5/16	24	2-1/2	1/2	31.00
3/8	16	2-1/2	1/2	31.00
3/8	24	2-1/2	1/2	31.00
7/16	14	2-1/2	1/2	31.00
7/16	20	2-1/2	1/2	31.00
1/2	13	2-1/2	3/4	39.92
1/2	20	2-1/2	3/4	39.92
9/16	12	2-1/2	3/4	39.92
9/16	18	2-1/2	3/4	39.92
5/8	11	2-1/2	3/4	39.92
5/8	18	2-1/2	3/4	39.92
3/4	10	2-1/2	3/4	39.92
3/4	16	2-1/2	3/4	39.92

Size	Thread Per Inch	Square	Thickness	Price Each
7/8	9	2-1/2	3/4	39.92
7/8	14	2-1/2	3/4	39.92
1	8	2-1/2	1	57.42
1	12	2-1/2	1	57.42
1	14	2-1/2	1	57.42
1-1/8	7	2-1/2	1	57.42
1-1/8	12	2-1/2	1	57.42
1-1/4	7	2-1/2	1	57.42
1-1/4	12	2-1/2	1	57.42
1-3/8	6	2-1/2	1	57.42
1-3/8	12	2-1/2	1	57.42
1-1/2	6	3	1	65.75
1-1/2	12	3	1	65.75
1-3/4	5	3	1-1/4	76.61
1-3/4	12	3	1-1/4	76.61
2	4-1/2	3-3/4	2	91.93
2	12	3-3/4	2	91.93

Adjustable 2-Piece Dies

Carbon Steel





MDX SUPERIOR IMPORT

Easy to sharpen and allows for a wide range of adjustment.

List No. **764** – Right Hand
List No. **764LH** – Left Hand

Size	T.P.I.	Compatible Collet No.	Price Each RH **764**	Price Each LH **764LH**
2	56	A-1	19.00	—
3	48	A-1	19.00	—
4	48	A-1	19.00	—
5	40	A-1	19.00	—
5	44	A-1	19.00	—
1/8	40	A-1	19.00	—
8	32	A-1	19.00	—
8	36	A-1	19.00	—
8	40	A-1	19.00	—
10	24	A-1	19.00	—
12	28	A-1	19.00	—
5/32	32	A-1	19.00	—
3/16	24	A-1	19.00	—
7/32	24	A-1	19.00	36.00
1/4	20	1 or 5	16.43	—

Size	T.P.I.	Compatible Collet No.	Price Each RH **764**	Price Each LH **764LH**
1/4	28	1 or 5	16.43	—
5/16	18	1 or 5	16.43	—
5/16	24	1 or 5	16.43	—
3/8	16	1 or 5	19.47	32.00
3/8	24	1 or 5	19.47	32.00
7/16	14	1 or 5	19.64	36.00
7/16	20	1 or 5	19.64	36.00
1/2	13	1 or 5	23.66	49.00
1/2	20	1 or 5	23.66	—
9/16	12	5	24.09	52.00
9/16	18	5	24.09	—
5/8	11	5 or 20	27.49	—
5/8	18	5 or 20	27.49	60.00
11/16	11	5 or 20	30.69	—
11/16	16	5 or 20	30.69	—

Size	T.P.I.	Compatible Collet No.	Price Each RH **764**	Price Each LH **764LH**
3/4	10	5 or 20	40.26	72.00
3/4	16	5 or 20	40.26	72.00
7/8	9	5, 20 or 25	41.25	—
7/8	14	5, 20 or 25	41.25	—
1	8	5, 20 or 25	43.46	74.00
1	12	5, 20 or 25	43.46	74.00
1	14	5, 20 or 25	43.46	74.00
1-1/8	7	20 or 25	66.30	74.00
1-1/8	12	20 or 25	66.30	74.00
1-1/4	7	20 or 25	73.04	74.00
1-1/4	12	20 or 25	73.04	74.00
1-3/8	6	25	81.15	74.00
1-3/8	12	25	81.15	74.00
1-1/2	6	25	99.49	74.00
1-1/2	12	25	99.49	74.00

Other sizes available. Please inquire.

Acorn Dies

High Speed Steel



High Speed MDX® SUPERIOR IMPORT

Standard Sizes

List No. **705**

Blank	Size – Thread Per Inch									Price Each
#1 (5/8)	0-80	1-64	1-72	2-56	2-64	3-48	3-56	4-36	4-40	46.36
	4-48	5-40	5-44	6-32	6-40	8-32	8-36	10-24	10-32	
	12-24	12-28	1/4-20	1/4-28						
#2 (7/8)	6-32	6-40	8-32	8-36	10-24	10-32	12-24	12-28	1/4-20	66.36
	1/4-28	5/16-18	5/16-24	3/8-16	7/16-20	1/8 NPT	1/8 NPS			
#3 (1-1/4)	3/8-16	3/8-24	7/16-14	7/16-20	1/2-13	1/2-20	9/16-12	9/16-18	5/8-11	82.28
	5/8-18	1/8 NPT	1/4 NPT	3/8 NPT	1/4 NPS	3/8 NPS				
#4 (1-3/4)	1/2-13	5/8-11	5/8-18	3/4-10	3/4-16	7/8-9	7/8-14	1-8	1-12	147.70
	1-14	1/2 NPT	3/4 NPT	1/2 NPS	3/4 NPS					
#5 (2-5/32)	1 1/8 - 7	1 1/8 - 12	1 1/4 - 7	1 1/4 - 12	1 3/8 - 12	1 1/2 - 12	1 NPT			178.28

Special Sizes

List No. **710**

Blank	Size – Threads Per Inch									Price Each
#1 (5/8)	3-40	4-32	5-32	5-36	5-48	6-36	6-48	8-40	9-32	65.00
	10-30	10-36	10-40	10-56	12-32	12-40	1/8-60	3/16-32	13/64-24	
	1/4-27	3x6mm	4x75mm							
#2 (7/8)	3/16-32	1/4-24	1/4-27	1/4-28 LH	1/4-32	1/4-32 LH	1/4-36	1/4-40	5/16-20	89.00
	5/16-27	5/16-32	5/16-36	5/16-40	5/16-48	11/32-32	3/8-16	3/8-20	3/8-24 LH	
	3/8-27	3/8-36	3/8-40	7/16-24	1/2-32	7/16-27				
#3 (1-1/4)	3/8-16LH	7/16-24	7/16-24 LH	7/16-27	7/16-32	7/16-36	7/16-40	1/2-24	1/2-27	115.00
	1/2-28	1/2-32	1/2-36	1/2-40	9/16-12LH	9/16-20	9/16-24	9/16-27	9/16-32	
	5/8-16	5/8-20	5/8-24	5/8-28	5/8-32	5/8-36	5/8-40	11/16-27		
#4 (1-3/4)	11/16-11	11/16-16	11/16-20	11/16-24	11/16-32	3/4-10 LH	3/4-12	3/4-20	3/4-24	185.00
	3/4-28	3/4-32	13/16-10	13/16-12	13/16-18	13/16-20	13/16-20 LH	13/16-24	7/8-9 LH	
	7/8-12	7/8-14LH	7/8-18	7/8-18 LH	7/8-24	7/8-27	7/8-32	15/16-12	15/16-18	
	5/8-20	5/8-24	5/8-28	5/8-32	5/8-36	5/8-40	11/16-27			
#5 (2-5/32)	1-1/8-18	1-1/8-20	1-3/16-20	1-1/4-20	1-5/16-20	1- 3/8-14	1-3/8-20	1-3/8-20 LH	1-7/16-20	225.00
	1-1/2-20									

Acorn Die Holder

High Speed Steel – Precision Thread

Acorn Die Holders are designed for use on automatic bar machines or any machine that can be set to reverse once the correct thread length has been cut. The holder is used for external threading with cone dies



High Speed MDX® SUPERIOR IMPORT

Acorn Die No.	Shank Dia.	Holds Die O.D.	Cone Die Capacity	Hole Die in Shank	Tool No.	Price Each
1	3/4	5/8	#0 - 1/4	7/16	**CD1750**	132.30
2	3/4	7/8	#6 - 7/16	7/16	**CD2750**	149.07
2	1	7/8	#6 - 7/16	21/32	**CD2100**	158.77
3	3/4	1-1/4	3/8 - 5/8	7/16	**CD3750**	158.77
3	1	1-1/4	3/8 - 5/8	21/32	**CD3100**	176.40
4	1	1-3/4	5/8 - 1	21/32	**CD4100**	185.22
4	1-1/4	1-3/4	5/8 - 1	7/8	**CD4114**	264.61
4	1-1/2	1-3/4	5/8 - 1	1-1/8	**CD4112**	282.24
5	2	2-5/32	1-1/8 - 1-1/2	1-1/4	**CD5200**	343.98

Screw Extractors

List No. **EXL Series** – Spiral Flute
List No. **EXT Series** – Straight Flute

For removing broken screws, studs, pipe fittings, etc., without damaging the threads.



MADE IN USA

Size	For Screws & Bolts, Sizes	Pipe Size	Price Each Spiral Flute EXL	Price Each Straight Flute EXT
1	3/16 - 1/4	—	2.21	2.66
2	1/4 - 5/16	—	2.34	2.88
3	5/16 - 7/16	—	2.90	3.24
4	7/16 - 9/16	—	3.15	3.56
5	9/16 - 3/4	1/8	3.78	4.28
5-1/4	11/16 - 15/16	1/4	6.75	—
6	3/4 - 1	3/8	8.90	9.50
6-3/8	15/16 - 1-1/8	3/8	12.90	—

Size	For Screws & Bolts, Sizes	Pipe Size	Price Each Spiral Flute EXL	Price Each Straight Flute EXT
7	1 - 1-3/8	1/2	14.31	16.00
7-1/2	1-1/8 - 1-1/2	1/2	18.74	—
8	1-3/8 - 1-3/4	3/4	22.50	—
9	1-3/4 - 2-1/8	1	33.21	—
10	2-1/8 - 2-1/2	1-1/4	46.10	49.50
11	2-1/2 - 3	1-1/2	70.50	—
12	3 - 3-1/2	2	112.50	—

MDX SUPERIOR IMPORT

List No. **EXE Series** – Spiral Flute

Size	For Screws & Bolts, Sizes	Price Each
1	3/16 - 1/4	1.22
2	1/4 - 5/16	1.44
3	5/16 - 7/16	1.53
4	7/16 - 9/16	1.76

Size	For Screws & Bolts, Sizes	Price Each
5	9/16 - 3/4	2.61
6	3/4 - 1	4.95
7	1 - 1-3/8	8.55
8	1-3/8 - 1-3/4	13.05

Size	For Screws & Bolts, Sizes	Price Each
9	1-3/4 - 2-1/8	18.90
10	2-1/8 - 2-1/2	30.60
11	2-1/2 - 3	44.10
12	3 - 3-1/2	67.50

Sets

Description	Pcs.	Sizes	Set No.	Price
Spiral Flute Set - USA	5	1, 2, 3, 4, 5	**EXL15**	14.38
Spiral Flute Set - Import	5	1, 2, 3, 4, 5	**EXE15**	8.58
Straight Flute Set - USA	5	1, 2, 3, 4, 5	**EXT15**	16.61
Spiral Flute Set - USA	4	6, 7, 8, 9	**EXL69**	78.92
Spiral Flute Set - USA	9	1, 2, 3, 4, 5, 6, 7, 8, 9	**EXL19**	93.30
Left Hand Drill & Spiral Flute Screw Extractor - USA	10	Jobber Drills: 5/64, 7/64, 5/32, 1/4, 3/8 Screw Extractors: 1, 2, 3, 4, 5	**EXLH10**	31.95



Combined Die & Handle

High Speed Steel

MDX SUPERIOR IMPORT

List No. **752**

HSS Die Permanently Integrated In Handle With Self-Centering Guide



Size Inches	Pitch	Price
1/8	27	19.95
6	32	19.95
8	32	19.95
10	24	19.95
10	32	19.95
12	24	19.95
1/4	20	19.95
1/4	28	19.95

Size Inches	Pitch	Price
5/16	18	19.95
5/16	24	19.95
3/8	16	19.95
3/8	24	19.95
7/16	14	19.95
7/16	20	19.95
1/2	13	19.95
1/2	20	19.95

Size MM	Pitch	Price
3.00	5	19.95
4.00	7	19.95
5.00	8	19.95
6.00	1	19.95
8.00	1.25	19.95
10.00	1.5	19.95
12.00	1.75	19.95

Sets

Size	Pcs.	Set No.	Price
6-32, 8-32, 10-24, 10-32, 1/4-20, 5/16-18, 3/81-6, 7/16-4, 1/2-13	9	**725ST9**	179.55
10-32, 1/4-28, 5/16-24, 3/8-24, 7/16-20, 1/2-20	6	**725ST6**	119.70
1/4-20, 5/16-1.8, 3/8-16, 7/16-14, 1/2-13	5	**725ST5**	99.75



Round Die & Tap Sets

MDX SUPERIOR IMPORT

12-Piece Sets – High Speed or Carbon Steel

Taps & Die Sizes Included	Tools Included	High Speed Set No.	High Speed Price	Carbon Steel Set No.	Carbon Steel Price
1/4-20, 5/16-18, 3/8-16, 7/16-14, 1/2-13	1 Die Stock (1" OD) 1 Straight Handle Tap Wrench (1/16" - 1/2")	**777H12**	67.93	**777CB12**	35.92



16-Piece Sets – High Speed or Carbon Steel

Taps & Die Sizes Included	Tools Included	High Speed Set No.	High Speed Price	Carbon Steel Set No.	Carbon Steel Price
1/4-20, 5/16-18, 3/8-16, 7/16-14, 1/2-13, 5/8-11, 3/4-10	1 Die Stock (1-1/2" OD) 1 Straight Handle Tap Wrench (1/4" - 3/4")	**777H16**	170.36	**777CB16**	61.96



22-Piece Sets – Left Hand - High Speed Steel

Taps & Die Sizes Included	Tools Included	Left Hand Set No.	Left Hand Price
1/4-20, 1/4-28, 5/16-18, 5/16-24, 3/8-16, 3/8-24, 7/16-14, 7/16-20, 1/2-13, 1/2-20	1 T-Handle Tap Wrench 1 Die Stock	**777L22**	159.92



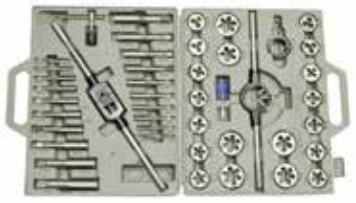
40-Piece Sets – High Speed or Carbon Steel

Taps & Die Sizes Included	Tools Included	High Speed Set No.	High Speed Price	Carbon Steel Set No.	Carbon Steel Price
4-40, 6-32, 8-32, 10-24, 10-32, 12-24, 1/4-20, 1/4-28, 5/16-18, 5/16-24, 3/8-16, 3/8-24, 7/16-14, 7/16-20, 1/2-13, 1/2-20, 1/8 NPT	3 Tap Wrenches 1 Die Stock(1" OD) 1 Screw Pitch Gauge 1 Screwdriver	**777S**	299.00	**777CB**	129.00



45-Piece Sets – Carbon Steel

Taps & Die Sizes Included	Tools Included	High Speed Set No.	High Speed Price	Carbon Steel Set No.	Carbon Steel Price
1/4-20, 1/4-28, 5/16-18, 5/16-24, 3/8-16, 3/8-24, 7/16-14, 7/16-20, 1/2-13, 1/2-20, 9/16-12, 9/16-18, 5/8-11, 5/8-18, 3/4-10, 3/4-16, 7/8-9, 7/8-14, 1-8, 1-14	2 Tap Wrenches 1/4"-1/2" "T" Type 1/4"-1" Large Screw Type 1 2" Diameter Die Stock 1 1-1/2" Adapter 1 Screwdriver	**777SD**	390.00	**777CD**	159.00



64-Piece Sets – High Speed or Carbon Steel

Taps & Die Sizes Included	Tools Included	High Speed Set No.	High Speed Price	Carbon Steel Set No.	Carbon Steel Price
UNC: #4, #6, #8, #10, #12, 1/4, 5/16, 3/8, 7/16, 1/2, 9/16, 5/8, 3/4, 7/8, 1 UNF: #10, 1/4, 5/16, 3/8, 7/16, 1/2, 9/16, 5/8, 3/4, 7/8, 1NS NPT: 1/8, 1/4	2 Tap wrenches 1 T-handle tap wrench 3 Die stocks (1", 1-1/2", & 2" OD) 1 screw pitch gauge 1 screw driver	**777H64**	719.60	**777CB64**	319.44



Carbon Tap & Round Adjustable Die
110-Piece Sets

Taper Taps, Bottom Taps, & Die Sizes Included	Tools Included	High Speed Set No.	High Speed Price	Carbon Steel Set No.	Carbon Steel Price
UNC: #4, #6, #8, #10, #12, 1/4, 5/16, 3/8, 7/16, 1/2, 9/16, 5/8, 3/4 UNF: #10, 1/4, 5/16, 3/8, 7/16, 1/2, 9/16, 5/8, 3/4 UNS: 1/4-24, 1/4-32. NPT: 1/8, 1/4 Metric: 6x1.00, 8x1.25, 10x1.00, 10x1.50, 11x1.50, 12x1.50 12x1.75, 14x1.25, 18x1.50	2 tap wrenches 1 T-handle tap wrench 2 Die Stocks (1", 1-1/2" OD)	**777H10**	827.20	**777CB10**	170.40



Metric Round Die & Tap Sets

MDX SUPERIOR IMPORT

23-Piece Sets – High Speed Steel

Taps & Die Sizes Included	Tools Included	Set No.	Price
5x0.80, 5x0.90, 6x0.75, 6x1.00, 8x1.00, 8x1.25, 10x1.25, 10x1.50, 12x1.50, 12x1.75	1 Tap Wrench 2 Piece Die Stocks (1" OD,1-1/2" OD)	**778T**	159.00



36-Piece Sets – High Speed & Carbon Steel

		High Speed		Carbon Steel	
Taps & Die Sizes Included	Tools Included	Set No.	Price	Set No.	Price
3x0.50, 3x0.60, 4x0.70, 4x0.75, 5x0.80, 6x1.00, 7x1.00, 8x1.00, 8x1.25, 10x1.25, 10x1.50, 11x1.50, 12x1.50, 12x1.75, 1/8 NPT	3 Tap Wrenches 1 Piece Die Stock (1" OD) 1 Screw Pitch Gauge 1 Screwdriver	**778S**	299.00	**778CB**	129.00



44-Piece Sets – High Speed & Carbon Steel

		High Speed		Carbon Steel	
Taps & Die Sizes	Tools Included	Set No.	Price	Set No.	Price
6x0.75, 6x1.00, 8x1.00, 8x1.25, 10x1.25, 10x1.50, 12x1.50, 12x1.75, 14x1.50, 14x2.00, 16x1.50, 16x2.00, 18x1.50, 18x2.50, 20x1.50, 20x2.50, 22x1.50, 22x2.50, 24x1.50, 24x3.00	1 Adjustable die stock 1 Adjustable tap wrench 1 T-tap wrench 1 screw driver	**778H44**	488.00	**777CB44**	169.00



Hexagon Die & Tap Sets



MDX SUPERIOR IMPORT

NPT Carbon Pipe Tap & Hexagon Pipe Die
12-Piece Sets

Taps & Die Sizes	Set No.	Price
1/8, 1/4, 3/8, 1/2, 3/4, 1"	**777P**	159.00

Fractional and Metric Carbon Tap & Hex Die
76-Piece Sets

Taps & Die Sizes	Tools Included	Set No.	Price
4-40, 6-32, 8-32, 10-24, 10-32, 12-24, 1/4-20, 1/4-28, 5/16-18, 5/16-24, 3/8-16, 3/8-24, 7/16-14, 7/16-20, 1/2-13, 1/2-20, 1/8-27 NPT, 3x0.50, 4x0.70, 4x0.75, 5x0.80, 5x0.90, 6x1.00, 7x1.00, 8x1.00, 8x1.25, 9x1.00, 9x1.25, 10x1.25, 10x1.50, 11x1.50, 12x1.50, 12x1.75, 1/8-28 BSP	1 Die stock 1 Plain Die stock 1 T-Tap Wrench 1 Hex Nut with 3/8 Sq. Drive 1 Hex Nut Screw Pitch Gauge (mm) 1 Screw Pitch Gauge 1 Screwdriver 2 Adj. Handle Tap Wrenches	**777X**	299.00



NC Carbon Tap & Hex Die Set
41-Piece Sets

Taps & Die Sizes	Tools Included	Set No.	Price
6-32, 8-32, 10-24, 12-24, 1/4-20, 5/16-18, 3/8-16, 7/16-14, 1/2-13, 9/16-12, 5/8-11, 3/4-10	2 Tap Wrenches 2 Die Stocks 1 T-handle	**777HC**	179.00



TiN Coated NC Tap & Hex Die Set
20-Piece Sets

Taps & Die Sizes	Tools Included	Set No.	Price
6-32, 8-32, 10-24, 12-24, 1/4-20, 5/16-18, 3/8-16, 7/16-14, 1/2-13	1 Tap Wrenches 1 Die Stocks	**777TD**	64.50



Style "D" Chasers

High Speed Steel / Ground Thread

MDX SUPERIOR IMPORT



For Geometric® and similar die heads.

NOTE: "D" and "DS" chasers for up to and including 3/4" DIE HEADS are interchangeable.

Chamfer Angle:
33° Regular Style &
45° Projection Style
10° Cutting Edge Grind

5/16 Inch Die Head

Style/List No.	Sizes-Thread Available	Price Each
Right Hand Standard **List No. 711**	0-80, 1-64, 1-72, 2-64, 3-56, 4-40, 4-48, 5-44, 6-32, 6-40, 8-32,8-36, 10-24, 10-32 12-24, 12-28, 1/4-20, 1/4-28, 5/16-18, 5/16-24, NPT: 1/16, NPS: 1/16, 1/8	180.00
Right Hand Standard **Projection** **List No. 711P**	0-80, 1-64, 1-72, 3-48, 4-48, 5-40 5-44, 6-32, 6-40, 8-32, 8-36 10-24, 10-32,12-24, 12-28 1/4-20, 1/4-28, 5/16-18, 5/16-24, NPS: 1/16, 1/8	228.00
Left Hand Standard **List No. 711L**	2-56, 2-64, 3-56, 4-40, 4-48, 5-40, 5-44, 6-32, 6-40, 8-32, 6-40, 8-32, 8-36, 10-24, 10-32,12-24, 12-28, 1/4-20, 1/4-28, 5/16-18, 5/16-24	250.00
Left Hand Standard **Projection** **List No. 711LP**	3-48, 6-40, 10-32, 12-24, 1/4-28	268.00

9/16 Inch Die Head

Style/List No.	Sizes-Thread Available	Price Each
Right Hand Standard **List No. 712**	2-56, 2-64, 3-48, 3-56, 4-48, 5-40, 5-44, 6-40, 6-32, 8-32, 8-36, 10-24, 10-32, 12-24, 12-28, 1/4-20, 1/4-28, 5/16-18, 5/16-24, 3/8-16, 7/16-14, 1/2-13, 1/2-20, 9/16-12 NPT: 1/16-27, 3/8-18, NPS: 1/16-27, 1/8-27, 1/4-18, 3/8-18	225.00
Right Hand Standard **Projection** **List No. 712P**	2-56, 2-64, 3-56, 4-40, 4-48, 5-40, 5-44, 6-32, 6-40, 8-32, 8-36, 10-24, 10-32, 12-24, 12-28, 1/4-20, 1/4-28, 5/16-18, 5/16-24, 3/8-16, 7/16-14, 7/16-20, 1/2-13, 1/2-20, 9/16-12, 9/16-18 NPT: 1/16, 1/4, NPS: 1/16, 1/8, 1/4, 3/8,	248.00
Left Hand Standard **List No. 712L**	3-48, 3-56, 3-50, 4-40, 4-48, 5-40, 5-44, 5-48, 6-32, 6-40, 8-32, 8-36, 10-24,10-32, 12-24, 12-28, 1/4-20, 1/4-28, 5/16-18, 5/16-24, 7/16-14, 7/16-20, 1/2-13, 1/2-20, 9/16-12	280.00
Left Hand Standard **Projection** **List No. 712LP**	8-32, 10-24, 10-32, 1/4-20, 1/4-28, 5/16-24, 3/8-16, 3/8-24, 7/16-14, 1/2-13, 1/2-20, 9/16-18	290.00

3/4 Inch Die Head

Style/List No.	Sizes-Thread Available	Price Each
Right Hand Standard **List No. 713**	6-32, 6-40, 8-32, 8-36, 10-24, 10-32, 12-24, 12-28, 1/4-20, 1/4-28, 5/16-18, 5/16-24, 3/8-16, 3/8-24, 7/16-20, 1/2-13, 9/16-12, 5/8-11, 11/16-11, 11/16-16, 3/4-10, 3/4-16 NPT: 1/16,1/8, 1/4, 3/8, 3/4, 1/2 NPS: 1/16, 1/8, 3/8	240.00
Right Hand Standard **Projection** **List No. 713P**	6-32, 6-40, 8-32, 8-36, 10-24, 10-32, 12-24, 12-32, 1/4-20, 1/4-28, 5/16-18, 5/16-24, 5/8-18, 3/8-16, 3/8-24, 7/16-14, 7/16-20, 1/2-13, 1/2-20, 9/16-12, 9/16-18, 11/16-11, 11/16-16, 3/4-10, 3/4-16, NPT: 1/16, 1/8, 1/4, 3/8, 1/2 NPS: 1/16, 1/8, 1/4, 3/8, 1/2, 1"	280.00
Left Hand Standard **List No. 713L**	8-36, 10-24, 10-32, 12-24, 1/4-20, 1/4-28, 5/16-18, 5/16-24, 3/8-16, 7/16-14, 7/16-20, 1/2-13,1/2-20, 9/16-12, 9/16-18, 5/8-11, 11/16-11, 3/4-10, 3/4-16	310.00
Left Hand Standard **Projection** **List No. 713LP**	5/16-24, 1/2-13, 1/2-20, 9/16-18, 3/4-10, 3/4-16	340.00

Surface Plates

Black Granite

- Lowest temperature coefficient, least responsive to temperature changes.
- Moisture and corrosion free, no rusting, no oiling, will not stain or discolor.
- Practically maintenance free, fast easy to clean.
- Smooth "Ball Bearing" surface.
- Resists dust and abrasives, non-magnetic.



TOOL ROOM ("B") GRADE - 0 LEDGE

Size	T	± A	Lbs.	Tool No.	Price Each
9 x 12	2	.0001	30	J6491011	27.72
12 x 18	3	.0001	75	J6491115	53.90
18 x 24	3	.00015	140	J6491152	106.33
24 x 36	4	.0002	430	J6491203	276.57
36 x 48	4	.0004	800	J6491304	693.00

INSPECTION ("A") GRADE - 2 LEDGE

12 x 18	3	.00005	70	J6493115	156.59
18 x 24	3	.000075	135	J6493152	288.40
24 x 36	4	.0001	365	J6493203	622.93
36 x 48	6	.0002	1140	J6493304	1141.98

T - Thickness ±A - Overall Lateral Accuracy

Style "D" Chasers

High Speed Steel / Ground Thread

MDX SUPERIOR IMPORT



For Geometric® and similar die heads.

NOTE: “D” and “DS” chasers for up to and including 3/4” DIE HEADS are interchangeable.

H & G Chasers available please inquire.

Chamfer Angle:
33° Regular Style &
45° Projection Style
10° Cutting Edge Grind

1 Inch Die Head

Style/List No.	Sizes-Thread Available	Price Each
Right Hand Standard **List No. 714**	6-32, 6-40, 8-32, 8-36, 10-24, 12-24, 12-28, 1/4-20, 1/4-28, 5/16-18, 5/16-24, 3/8-16, 3/8-24, 7/16-14, 7/16-20, 1/2-13, 1/2-20, 9/16-18, 11/16-11, 11/16-16, 7/8-9, 1-8, 1-14, NPT: 1/8, 1/4, 3/8, 1/2, 3/4 NPS: 1/8, 1/4, 3/8, 1/2, 3/4	280.00
Right Hand Standard **Projection** **List No. 714P**	8-32, 10-24, 10-32, 12-24, 12-28, 1/4-20, 1/4-28, 5/16-24, 3/8-24, 7/16-14, 7/16-20, 1/2-13, 1/2-20, 9/16-12, 9/16-18, 5/8-11, 5/8-18, 11/16-11, 11/16-16, 3/4-10, 3/4-16 7/8-9, 1-8, 1-12, 1-14, NPT: 1/8, 1/4, 3/8, 1/2, NPS: 1/8, 1/4, 3/8, 1/2, 3/4	295.00
Left Hand Standard **List No. 714L**	1/4-20, 1/4-28, 5/16-18, 15/16-24 3/8-16, 3/8-24, 7/16-14, 1/2-13, 7/16-20, 9/16-12, 9/16-18, 5/8-18, 3/4-10, 3/4-16, 7/8-9, 7/8-14 1-8, 1-14 14-12	330.00
Left Hand Standard **Projection** **List No. 714LP**	1/4-20, 5/16-18, 3/8-16, 3/8-24, 7/16-14, 7/16-20, 1/2-13, 1/2-20, 5/8-18, 3/4-10, 3/4-16, 7/8-9, 7/8-14, 1-8, 1-14	360.00

1-1/4 Inch Die Head

Style List No.	Sizes-Thread Available	Price Each
Right Hand Standard **List No. 715**	1/2-13, 1/2-20, 9/16-12, 9/16-18, 5/8-11, 5/8-18, 3/4-10, 11/16-11, 3/4-16, 7/8-9, 7/8-14, 1-8, 5/16-18, 5/16-24, 3/8-24, 7/16-14 1-12, 1-1/8-7, 1-1/8-12, 1-1/4-12, 7/16-20 NPT: 1/4, 3/8, 1/2, 3/4, 1 NPS: 1/4, 3/8, 1/2, 3/4, 11/16-16	330.00
Right Hand Standard **Projection** **List No. 715P**	1/2-13, 1/2-20, 9/16-12, 9/16-18, 5/8-11, 5/8-18, 11/16-11, 11/16-16, 3/4-10, 3/4-16, 7/8-9, 1-8, 1-12, 1-14, 1-1/8-7, 1-1/8-12, 1-1/4-7, 1-1/4-12, NPT Sizes: 1/4, 3/8, 1/2 NPS Sizes: 1/4, 3/8, 1/2, 1"	355.00
Left Hand Standard **List No. 715L**	1/2-13, 1/2-20, 9/16-12, 9/16-18, 5/8-11, 5/8-18 3/4-10, 3/4-20(SP), 3/4-16 7/8-9, 7/8-14 1-8, 1-12, 1-14, 1-1/8-7, 1-1/8-12 1-1/4-7, 1-1/4-12	360.00
Left Hand Standard **Projection** **List No. 715LP**	7/8-9, 7/8-14 1-8, 1-14, 1-20(SP), 3/4-14(SP), 1-1/8-7 1-1/4-7, 1-1/4-12	390.00

1-1/2 Inch Die Head

Style/List No.	Sizes-Thread Available	Price Each
Right Hand Standard **List No. 716**	3/8-16, 7/16-14, 1/2-13, 9/16-12, 5/8-11, 5/8-18, 1-8, 1-12, 7/8-9 1-1/8-7, 1-3/8-6 NPT: 3/8, 3/4, 1/2,	375.00
Right Hand Standard **Projection** **List No. 716P**	1/2-13, 5/8-11 5/8-18, 11/16-16, 1-8, 1-12	390.00

2 Inch Die Head

Style/List No.	Sizes-Thread Available	Price Each
Right Hand Standard **List No. 717**	5/8-11, 3/4-10, 7/8-9, 7/8-14, 1-8, 1-12, 1-14, 1-1/8-7, 1-1/8-12, 1-1/4-7, 1-1/4-12, 1-3/8-6, 1-1/2-6, 1-3/4-5, 2-4-1/2 NPT Sizes: 1/2, 3/4, 1", 1-1/4, 1-1/2 NPS Sizes: 3/4, 1"	440.00
Right Hand Standard **Projection** **List No. 717P**	7/8-9, 1-12, 1-14, 1-1/8-7, 1-1/8-12, 1-1/4-7, 1-1/4-12, 1-3/8-12, 1-1/2-6 NPT Sizes: 3/4, 1"	460.00

Style "D" Chasers

High Speed Steel – Special Ground Thread

MDX SUPERIOR IMPORT

For Geometric® and similar die heads.

NOTE: “D” and “DS” chasers for up to and including 3/4” DIE HEADS are interchangeable.



Chamfer Angle:
33° Regular Style &
45° Projection Style
10° Cutting Edge Grind

5/16 Inch Die Head

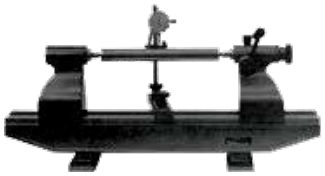
Style/List No.	Sizes-Thread Available	Price Each
Right Hand Special Thread **List No. 711S**	0-70, 1-56, 2-48, 4-32, 4-36, 4-64, 5-32, 5-36, 5-48, 5-56, 6-30, 6-36,6-48, 5/32-32, 5/32-36, 8-30, 8-40, 8-48, 9-28, 10-30, 10-36, 10-40, 10-48,10-56, 12-20, 12-26, 12-32, 12-36, 12-40, 12-48, 14-20, 14-24, 7/32-32, 1/4-24, 1/4-27, 1/4-32, 1/4-36, 1/4-40, 1/4-48, 1/4-56, 5-16-20, 5/16-27, 5/16-28, 5/16-30, 5/16-32, 5/16-36, 5/16-40, 5/16-48, 3/8-32	250.00
Right Hand Special Thread **Projection** **List No. 711SP**	0-70, 1-72, 1-56, 2-48, 4-32, 4-36, 4-64, 5-32, 5-36, 5-48, 5-56, 6-30, 6-32, 6-48, 6-52, 8-30, 8-40, 8-48, 10-28, 10-30, 10-36, 10-40, 10-44, 10-48, 12-32, 12-36, 12-40, 12-56, 14-24, 3/16-24, 3/16-32, 3/16-64, 1/4-24, 1/4-27, 1/4-32, 1/4-36, 1/4-38, 1/4-40, 1/4-48, 1/4-56, 5/16-20, 5/16-27, 5/16-28, 5/16-32, 5/16-36, 5/16-40, 5/16-48	280.00
Left Hand Special **Thread** **List No. 711SL**	4-32, 4-36, 5-48, 6-36, 6-40, 8-40, 1/4-24, 1/4-32, 1/4-40, 5/16-32	320.00
Left Hand Special Thread **Projection** **List No. 711SLP**	5/16-32	325.00

9/16 Inch Die Head

Style/List No.	Sizes-Thread Available	Price Each
Right Hand Special Thread **List No. 712S**	6-36, 6-48, 8-40, 8-48, 10-48, 10-56, 10-80,12-20, 12-32, 12-36, 12-40, 12-48, 14-20, 14-24, 7/32-32, 1/4-27, 1/4-32, 1/4-36, 1/4-48, 1/4-56, 5/16-27, 5/16-32, 5/16-36, 5/16-40, 5/16-48, 3/8-18, 3/8-20, 3/8-27, 3/8-28, 3/8-32, 3/8-36, 3/8-40, 3/8-48, 7/16-16, 7/16-18, 7/16-24, 7/16-27, 7/16-28, 7/16-32, 7/16-36, 7/16-40, 15/32-24, 1/2-12, 1/2-16, 1/2-18, 1/2-24, 1/2-27, 1/2-28, 1/2-32, 1/2-36, 1/2-38,1/2-40, 1/2-48, 1/2-64, 9/16-16, 9/16-20, 9/16-24, 9/16-27, 9/16-28, 9/16-32, 5/8-32	295.00
Right Hand Special Thread **Projection** **List No. 712SP**	6-30, 6-36, 6-48, 4-32, 4-36, 4-64, 5/32-32, 8-40, 10-56, 10-80, 12-32, 1/4-32, 1/4-56, 9/32-20, 5/16-20, 5/16-27, 5/16-28, 5/16-36, 5/16-40, 5/16-48, 3/8-18, 3/8-20, 3/8-28, 3/8-32, 3/8-40, 3/8-48, 7/16-15, 7/16-16, 7/16-18, 7/16-24, 7/16-27, 7/16-28, 7/16-40, 1/2-16, 1/2-18, 1/2-24, 1/2-32, 1/2-40, 1/2-48, 9/16-16, 9/16-20, 9/16-27, 10x.75mm	310.00
Left Hand Special Thread **List No. 712SL**	4-32, 4-36, 5-48, 6-36, 8-40, 1/4-24, 1/4-32, 1/4-40, 5/16-32, 3/8-32, 7/16-24, 1/2-32, m4.5x.75	330.00

Bench Centers

Features:
- Quick release centers.
- M.T.2 Centers are hardened and ground.
- Indicator Holder included.
- Hand Scraped ways, adjustable gibs.
- Head Stock can be adjusted lengthwise and locked securely in any position by special lever type handle.



For accurate concentricity inspection.

Distance Between Center	Swing	Overall Length	Weight	Tool No.	Price Each
16"	12"	30"	125 lbs.	**J6500100**	1225.00
32"	19"	48"	395 lbs.	**J6500200**	2940.00

Style "D" Chasers

High Speed Steel – Special Ground Thread

MDX SUPERIOR IMPORT

For Geometric® and similar die heads.

NOTE: “D” and “DS” chasers for up to and including 3/4” DIE HEADS are interchangeable.



Chamfer Angle:
33° Regular Style &
45° Projection Style
10° Cutting Edge Grind

3/4 Inch Die Head

Style/List No.	Sizes-Thread Available	Price Each
Right Hand Special Thread **List No. 713S**	3/16-24, 3/16-32,1/4-27, 1/4-32, 1/4-36, 1/4-40, 1/4-48, 1/4-56, 5/16-20, 5/16-27, 5/16-28, 5/16-32, 5/16-36, 5/16-40, 5/16-48, 3/8-18, 3/8-20, 3/8-27, 3/8-28, 3/8-32, 3/8-36, 3/8-40, 3/8-48, 7/16-16, 7/16-18, 7/16-24, 7/16-27, 7/16-28, 7/16-32, 7/16-36, 7/16-40 15/32-32,1/2-12, 1/2-14, 1/2-16, 1/2-24, 1/2-27, 1/2-28, 1/2-30, 1/2-32, 1/2-36, 1/2-40, 1/2-48, 9/16-16, 9/16-20, 9/16-24, 9/16-27, 9/16-28, 9/16-32, 9/16-36, 5/8-12, 5/8-14, 5/8-20, 5/8-27, 5/8-28, 5/8-32, 5/8-36, 11/16-12, 11/16-13, 11/16-18, 11/16-20, 11/16-24, 11/16-27, 11/16-32 3/4-12, 3/4-14, 3/4-18, 3/4-20, 3/4-24, 3/4-28, 3/4-32	310.00
Right Hand Special Thread **Projection** **List No. 713SP**	1/4-24, 1/4-32, 1/4-36, 1/4-48, 5/16-28, 5/16-32, 5/16-40, 3/8-18, 3/8-28, 3/8-32, 13/32-20, 7/16-18, 7/16-28, 7/16-32, 1/2-16, 1/2-18, 1/2-27, 1/2-28, 1/2-32, 1/2-40 9/16-20, 9/16-27, 5/8-12, 5/8-16, 5/8-20, 5/8-30, 5/8-36, 11/16-12, 11/16-18, 11/16-20, 11/16-32, 3/4-12, 3/4-18, 3/4-27, 3/4-28, 3/4-32, 15/16-14	330.00
Left Hand Special Thread **List No. 713SL**	1/4-24, 1/4-32, 1/4-40, 5/16-32, 3/8-32, 7/16-24, 3/4-20,	350.00

1 Inch Die Head

Style/List No.	Sizes-Thread Available	Price Each
Right Hand Special Thread **List No. 714S**	1/4-24, 1/4-27, 1/4-32, 1/4-36, 1/4-40, 1/4-48, 1/4-56, 5/16-20, 5/16-27, 5/16-28, 5/16-32, 5/16-36, 5/16-40, 5/16-48, 3/8-18, 3/8-20, 3/8-27, 3/8-32, 3/8-36, 3/8-40, 3/8-48, 7/16-16, 7/16-18, 7/16-24, 7/16-27, 7/16-28, 7/16-32, 7/16-36, 7/16-40, 1/2-12, 1/2-16, 1/2-18, 1/2-24, 1/2-27, 1/2-28, 1/2-32, 1/2-36, 1/2-40, 1/2-48, 9/16-16, 9/16-20, 9/16-24, 9/16-27, 9/16-28, 9/16-32, 5/8-12, 5/8-14, 5/8-16, 5/8-20, 5/8-24, 5/8-27, 5/8-32, 11/16-12, 11/16-18, 11/16-20, 11/16-24, 11/16-27, 11/16-32, 3/4-12, 3/4-14, 3/4-20, 3/4-24, 3/4-27, 3/4-28, 3/4-32 13/16-12, 13/16-14, 13/16-16, 13/16-18, 13/16-24, 13/16-27, 13/16-32,7/8-12, 7/8-18, 7/8-20, 7/8-24, 7/8-27, 7/8-28, 7/8-32 15/16-12, 15/16-14, 15/16-16, 15/16-18, 15/16-20, 15/16-24, 15-27, 15/16-32 1-10, 1-16, 1-20, 1-24, 1-27, 1-28, 1-32,	350.00
Right Hand Special Thread **Projection** **List No. 714SP**	5/16-20, 5/16-32, 3/8-28, 7/16-24, 1/2-12, 1/2-28, 1/2-32, 9/16-27, 5/8-16, 5/8-20, 5/8-24, 5/8-28, 11/16-12, 3/4-12, 3/4-18, 3/4-20, 3/4-24, 3/4-28, 13/16-14, 13/16-16, 13/16-20, 7/8-16, 7/8-18, 7/8-20, 7/8-27, 7/8-28, 15/16-18, 15/16-20, 15/16-24, 1-10,1-16, 1-20, 1-28, 1-32, 1-1/8-20	370.00
Left Hand Special Thread **List No. 714SL**	1/4-24, 1/4-32, 1/4-40, 5/16-32, 3/8-32, 7/16-24, 3/4-20	395.00

Milling and Drilling (Compound Sliding) Tables

Tool No.	J2425077	J2425612
Price Each	**157.30**	**186.20**
Size	7x7" (Rotatable 360°)	5-1/2 x 12"
Height	4-1/8"	4-1/2"
Travel	4" on each axis	8" Longitudinal / 5" Transverse
Base Size	4-5/8" diameter	8 x 9" oval
Mounting	1-1/8" Long Base Bolt	U Slots for up to 5/8" Bolts

Suitable for all kinds of precision machining operations. Easy to read dials are graduated in .001". Dovetail slides have a justable steel gibs to compensate for wear. T-slots are 5/8" wide x7/16" deep.



Style "D" Chasers

High Speed Steel – Special Ground Thread

MDX SUPERIOR IMPORT

For Geometric® and similar die heads.

NOTE: “D” and “DS” chasers for up to and including 3/4” DIE HEADS are interchangeable.



Chamfer Angle:
33° Regular Style &
45° Projection Style
10° Cutting Edge Grind

1-1/4 Inch Die Head

Style/List No.	Sizes-Thread Available	Price Each
Right Hand Special Thread **List No. 715S**	7/16-16, 7/16-18, 7/16-24, 7/16-27, 7/16-28, 7/16-32, 7/16-36, 7/16-40, 7/1/2-12, 1/2-16, 1/2-18, 1/2-24, 1/2-27, 1/2-28, 1/2-32, 1/2-36, 1/2-40, 1/2-48, 9/16-16, 9/16-20, 9/16-24, 9/16-27, 9/16-28, 9/16-32, 5/8-12, 5/8-14, 5/8-16, 5/8-20, 5/8-24, 5/8-27, 5/8-28, 5/8-32, 11/16-12, 11/16-18, 11/16-20, 11/16-24, 11/16-27, 11/16-32, 3/4-12, 3/4-14, 3/4-20, 3/4-18, 3/4-24,3/4-27, 3/4-28, 3/4-32, 13/16-12, 13/16-14, 13/16-16, 13/16-18, 13/16-20, 13/16-24, 13/16-27, 13/16-32, 7/8-12, 7/8-16, 7/8-18, 7/8-20, 7/8-24, 7/8-27, 7/8-28, 7/8-32 15/16-12, 15/16-14, 15/16-16, 15/16-18, 15/16-20, 15/16-24, 15/16-27, 15/16-32, 1-10,1-16, 1-18, 1-20, 1-24, 1-27, 1-28, 1-32, 1-1/16-12, 1-1/16-14, 1-1/16-16, 1-1/16-18, 1-1/16-20, 1-1/8-8, 1-1/8-16, 1/18-18, 1-1/8-20, 1-3/16-12, 1-3/16-16, 1-3/16-18, 1-1/4-8, 1-1/4-10, 1-1/4-14, 1-1/4-16, 1-1/4-18, 1-1/4-20, 1-1/4-24, 1-1/4-27, 1-3/16-20, 1-5/32-32	380.00
Right Hand Special Thread **Projection** **List No. 715SP**	5/8-24, 3/4-18, 13/16-20, 7/8-12, 7/8-20, 7/8-24, 7/8-27, 15/16-12, 15/16-16, 1-16, 1-20, 1-32, 1-1/16-12, 1-1/16-16, 1-1/16-20, 1-1/8-8, 1-1/8-16, 1-1/8-18, 1-1/8-20, 1-3/16-16, 1-3/16-18, 1-3/16-20, 1-1/4-14, 1-1/4-18, 1-1/4-20, 1-13/32-14	410.00

1-1/2 Inch Die Head

Style/List No.	Sizes-Thread Available	Price Each
Right Hand Special Thread **List No. 716S**	1-16, 1-18, 1-20, 1-1/16-12, 1-1/16-16, 1-1/16-32, 1-1/8-8, 1-1/8-16, 1-1/8-18, 1-1/4-8, 1-1/4-16, 1-1/4-18, 1-1/4-24, 1-3/8-8, 1-3/8-14, 1-3/8-16, 1-3/8-24, 1-1/2-8, 1-1/2-16, 1-1/2-18, 1-1/2-24	440.00
Right Hand Special Thread **Projection** **List No. 716SP**	7/8-12, 1-16, 1-18, 1-1/16-12, 1-1/8-8 1-1/8-16, 1-1/8-18, 1-1/4-8, 1-1/4-16, 1-3/8-8, 1-3/8-16, 1-3/8-18, 1-1/2-8, 1-1/2-18,	460.00

2 Inch Die Head

Style/List No.	Sizes-Thread Available	Price Each
Right Hand Special Thread **List No. 717S**	3/4-12, 1-16, 1-18, 1-20, 1-1/16-18, 1-1/8-16, 1-1/8-18, 1-3/16-16, 1-1/4-8, 1-1/4-16, 1-1/4-18, 1-1/4-24, 1-7/16-18, 1-7/16-24, 1-3/8-8, 1-3/8-16, 1-3/8-18, 1-1/2-7, 1-1/2-16, 1-1/2-18, 1-5/8-5, 1-5/8-8, 1-5/8-10, 1-5/8-12, 1-5/8-16, 1-5/8-24, 1-5/8-5-1/2, 1-5/16-18, 1-5/16-24, 1-3/4-10, 1-7/8-8, 2-1/2-4, 2-5/8-12, 2-4-1/2	495.00
Right Hand Special Thread **Projection** **List No. 717SP**	7/8-32, 1-16, 1-18, 1-1/16-12, 1-1/8-8, 1-1/8-16, 1-1/8-18, 1-1/4-16, 1-1/4-18, 1-3/8-18, 1-1/2-16, 1-1/2-18, 1-5/8-10, 1-3/4-5, 1-3/4-12, 1-7/8-8	510.00

Self-Opening Die Heads

Stationary Type



For use on automatic and semi automatic machines. Head opens automatically when the selected thread length is reached. Used with type “D” chasers. Heads have special device for roughing and finishing and can be used for cutting over and undersized threads, as well as left and right hand threads.

Capacity In	Capacity mm	Capacity Pipe	Head Dia.	Shank Dia.	Bore	Tool No.	Price
5/16	8	1/16	1-1/2	5/8	3/8	**J2410040**	820.80
9/16	14	1/16-1/4	2-1/2	5/8	3/8	**J2410140**	820.80
9/16	14	1/16-1/4	2-1/2	3/4	3/8	**J2410148**	820.80
9/16	14	1/16-1/4	2-1/2	1	5/8	**J2410164**	820.80
3/4	18	1/16-1/2	3-1/4	3/4	3/8	**J2410248**	990.00
3/4	18	1/16-1/2	3-1/4	1	1/2	**J2410264**	990.00
1	24	1/8-3/4	3-3/4	1	1/2	**J2410364**	1150.00
1	24	1/8-3/4	3-3/4	1-1/2	1-1/16	**J2410396**	1150.00
1-1/4	30	1/4-1	4-7/8	1-1/2	7/8	**J2410496**	1315.00
1-1/4	30	1/4-1	4-7/8	2	1-3/8	**J2410420**	1315.00
1-1/2*	-	-	5-5/16	1-1/2	-	**J2410596**	2331.85
1-1/2*	-	-	5-5/16	2	-	**J2410520**	2331.85
2*	-	-	6-3/8	2	-	**J2410620**	2584.10
2*	-	-	6-3/8	2-1/2	-	**J2410625**	2584.10

Metric Style "D" Chasers

High Speed Steel – Ground Thread

MDX SUPERIOR IMPORT

For Geometric® and similar die heads.

NOTE: "D" and "DS" chasers for up to and including 3/4" DIE HEADS are interchangeable.

Chamfer Angle:
33° Regular Style &
45° Projection Style
10° Cutting Edge Grind



5/16 Inch Die Head - Metric

Style/List No.	Sizes-Thread Available	Price Each
Right Hand **List No. 711M**	1.7 x .35, 2.3 x .40, 2.5 x .45, 2.6 x .45, 3.0 x .50, 3.5 x .60, 4.0 x .50, 4.0 x .70, 4.5 x .75, 5.0 x .80, 6.0 x .50, 6.0 x 1.0, 8.0 x .75, 8.0 x 1, 8.0 x 1.25	198.00
Right Hand **Projection** **List No. 711MP**	2.6 x .45, 3.5 x .60 4.0 x .50, 4.0 x .70, 4.50 x .75, 5.0 x .80, 6.0 x .50, 6.0 x 1.0, 7.0 x 1.0, 8.0 x 1.0, 8.0 x 1.25	245.00

1 Inch Die Head - Metric

Style/List No.	Sizes-Thread Available	Price Each
Right Hand **List No. 713M**	6.0 x 1.0, 7.0 x 1.0, 8.0 x .75, 8.0 x 1.25, 9.0 x 1.25, 10.0 x 1.25, 10.0 x 1.5, 11.0 x 1.50, 12.0 x 1.0, 12.0 x 1.25,12.0 x 1.75, 14.0 x 1.25, 14.0 x 1.5, 16.0 x 1.50, 18.0 x 1.25 18.0 x 2.50 22	310.00
Right Hand **Projection** **List No. 713MP**	10.0 x 1.5, 12.0 x 1.75, 14.0 x 1.5, 18.0 x 1.5, 18.0 x 2.5, 20.0 x 1.5, 22.0 x 2.5, 22.00 x 1.50, 24.0 x 1.5 24 x 3.00	330.00

9/16 Inch Die Head - Metric

Style/List No.	Sizes-Thread Available	Price Each
Right Hand **List No. 712M**	3.0 x .50, 3.5 x .60 4.0 x .70, 5.0 x .80, 6.0 x .50, 6.0 x 1.0, 7.0 X 1.00, 8.0 X .50, 8.0 x .75, 8.0 x 1.25, 9.0 X 1.25, 10.0 X 1.50, 11.0 X 1.50, 12.0 X 1.50, 12.0 X 1.75, 14 x 1.25	250.00
Right Hand **Projection** **List No. 712MP**	3.0 x .50, 3.5 x .60 4.0 x .70, 4.5 x .75 5.0 X .75, 5.0 x .80, 6.0 x .50, 6.0 x 1.0, 8.0 x 1.00, 8.0 x 1.25, 9.0 X 1.25 10.0 X 1.50, 11 x 1.50, 12.0 X 1.00, 12.0 X 1.50, 12.0 X 1.75	278.00

1-1/4 Inch Die Head - Metric

Style/List No.	Sizes-Thread Available	Price Each
Right Hand **List No. 714M**	12.0 x 1.75, 14.0 x 2.0, 18.0 x 2.5, 20.0 x 1.5, 22.0 x 2.5, 24.0 x 1.5, 27.0 x 3.00 30.0 x 3.5	370.00
Right Hand **Projection** **List No. 714MP**	16.0 x 2.00, 18.0 x 2.5, 20.0 x 1.5, 20.0 x 2.5, 22.0 x 2.5, 24.0 x 2.0, 24.0 x 3.0, 30.0 x 1.5, 30.0 x 3.5	395.00

Hardness Testers

Rockwell System

Standard Accessories

- 5-3/4" Testing Table
- 2-3/16" Testing Table
- 2-3/16" Testing Table with "V" groove
- 120° Diamond Penetrator
- 1/16" Steel Ball Penetrator
- Rockwell A Test Block
- Rockwell B Test Block
- Rockwell C Test Blocks (3pcs.)
- Screwdrivers (2pc.)
- Instruction Manual
- Dustproof Cover

Features:
Automatic weight selection

Specifications:
Maximum Load (kgf.): 150
Load Range (kgf.): 60, 100, 150
Initial Range Load (kgf.): 10
Maximum Test Height: 4-1/4"
Depth of Throat: 5-1/4"
Size of Base: 7x18"
Machine Height: 24-1/2"
Approx. Net Weight: 150 lbs.

Tool No.	Price Each
PR1705500	1755.00



Keyway Broaches

High Speed Steel

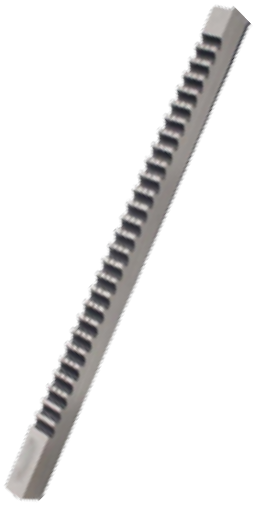
- Supplied with Shims
- Replacement shims sold seperately

MDX SUPERIOR IMPORT

Fractional Sizes

Size	Bushings	Tolerances	Broach Dimensions	Shims Required	Tool No.	Price
1/16	A	.0625 – .0635	1/8 x 5-1/4	0	**KWB116-A**	38.50
3/32	A	.0937 – .0947	1/8 x 5-1/4	0	**KWB332-A**	38.50
1/8	A	.1252 – .1262	1/8 x 5-1/4	1	**KWB18-A**	38.50
3/32	B	.0937 – .0947	3/16 x 7	0	**KWB332-B**	43.95
1/8	B	.1252 – .1262	3/16 x 7	1	**KWB18-B**	43.95
5/32	B	.1564 – .1574	3/16 x 7	1	**KWB532-B**	43.95
3/16	B	.1877 – .1887	3/16 x 7	1	**KWB316-B**	43.95
3/16	C	.1877 – .1887	3/8 x 11-7/8	1	**KWB316-C**	52.09
1/4	C	.2502 – .2512	3/8 x 11-7/8	1	**KWB14-C**	52.09
5/16	C	.3127 – .3137	3/8 x 11-7/8	1	**KWB516-C**	52.09
3/8	C	.3755 – .3765	3/8 x 11-7/8	2	**KWB38-C**	52.09
5/16	D	.3127 – .3137	9/16 x 13-7/8	1	**KWB516-D**	79.10
3/8	D	.3755 – .3765	9/16 x 13-7/8	2	**KWB38-D**	79.10
7/16	D	.4380 – .4390	9/16 x 13-7/8	2	**KWB716-D**	79.10
1/2	D	.5006 – .5016	9/16 x 13-7/8	3	**KWB12-D**	79.10
5/8	E	.6260 – .6270	3/4 x 15-1/4	4	**KWB58-E**	132.90
3/4	E	.7515 – .7525	3/4 x 15-1/4	5	**KWB34-E**	132.90
7/8	F	.8765 – .8775	1 x 19-1/4	6	**KWB78-F**	209.10
1"	F	1.0015 – 1.0025	1 x 19-1/4	7	**KWB1-F**	209.10

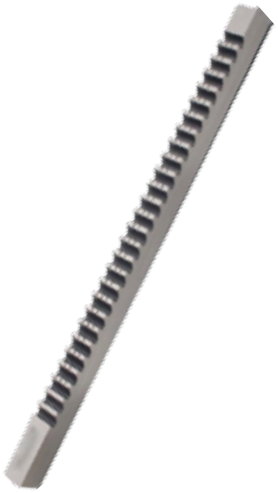
Plain & Collared Bushing Available Upon Request



Metric Sizes

Size	Bushings	Tolerances	Broach Dimensions	Stand. Milli Keys	Shims Required	Tool No.	Price
2.00	A	.0787-.0792	1/8 x 5-1/4	2x2	0	**KWB2-A**	38.17
3.00	A	.1181-.1186	1/8 x 5-1/4	3x3	1	**KWB3-A**	38.17
4.00	B	.1575-.1580	1/4 x 7	4x4	1	**KWB4-B**	44.50
5.00	B	.1968-.1974	1/4 x 7	5x5	1	**KWB5-B**	44.50
5.00	C	.1968-.1974	3/8 x 11-7/8	5x5	1	**KWB5-C**	52.52
6.00	C	.2362-.2367	3/8 x 11-7/8	6x6	1	**KWB6-C**	52.52
8.00	C	.3150-.3155	3/8 x 11-7/8	8x7	1	**KWB8-C**	52.52
10.00	D	.3937-.3942	9/16 x 13-7/8	10x8	2	**KWB10-D**	84.75
12.00	D	.4724-.4730	9/16 x 13-7/8	12x8	2	**KWB12-D**	84.75
14.00	D	.5512-.5519	9/16 x 13-7/8	14x9	2	**KWB14-D**	84.75
16.00	E	.6299-.6306	3/4 x 15-1/4	16x10	3	**KWB16-E**	141.00
18.00	E	.7087-.7093	3/4 x 15-1/4	18x11	3	**KWB18-E**	141.70
20.00	F	.7874-.7883	1 x 19-1/4	20x12	3	**KWB20-F**	211.79
22.00	F	.8661-.8669	1 x 19-1/4	22x14	4	**KWB22-F**	218.00
24.00	F	.9449-.9458	1 x 19-1/4	24x14	4	**KWB24-F**	218.00
25.00	F	.9842-.9851	1 x 19-1/4	25x14	4	**KWB25-F**	218.00

Bushing Available Upon Request



Sets

Set	Keyway Comb.	Broach Sizes	Bushings*	Tool No.	Price Each
1	15	1/16-A, 3/32-A, 1/8-A	A:1/4, 5/16, 3/8, 7/16, 1/2	**KWB15S**	113.45
C-1	18	1/8-B, 3/16-B, 1/4-C, 3/8-C	B: 1/2, 5/8, 3/4, 7/8, C: 1, 1-1/8, 1-1/4, 1-3/8, 1-1/2	**KWB18S**	244.45
C-10	36	1/8-B, 3/16-B, 1/4-C, 3/8-C	B: 1/2, 9/16, 5/8, 11/16, 3/4, 13/16, 7/8 C: 15/16, 1, 1-1/16, 1-1/8, 1-3/16, 1-1/4, 1-5/16, 1-3/8, 1-7/16, 1-1/2, 1-9/16	**KWB36S**	314.60
M26	26	4mm-B,5mm-B 6mm-C,8mm-C	B: 12, 14, 15, 16mm C: 18, 19, 20, 22, 24, 25, 26, 28, 30mm	**KWB26S**	323.40

*Bushing supplied with sets 1, C-1, C10 are collared.



Compatible Shims

Size	Tool No.	Price
A 1/8" & A 3mm	**KWS1**	1.56
B 1/8"	**KWS2**	1.56
B 5/32	**KWS3**	1.56
B - 1 4mm	**KWS4**	1.56
B 3/16"	**KWS5**	1.56
B - 1 5mm	**KWS6**	1.56
C 3/16"	**KWS7**	1.56
C 5mm	**KWS8**	1.56

Size	Tool No.	Price
C 1/4 & 3/8", C-1 6mm	**KWS9**	1.56
C 5/16 & C-1 8mm	**KWS10**	1.56
D 5/16	**KWS11**	1.56
D 3/8 & 1/2", D-1 14mm	**KWS12**	1.56
D - 1 10 & 12mm	**KWS13**	1.56
D 7/16	**KWS14**	1.56
E 5/8", 3/4" E-1 16&18mm	**KWS15**	1.95
F7/8 & 1" F-1 20-25mm	**KWS16**	1.95

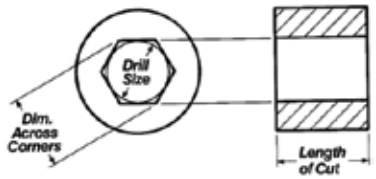


Hexagon Broaches

High Speed Steel

MDX® SUPERIOR IMPORT

- For cutting hexagonal shaped hole in round machined holes.
- Used to re-cut a round hole into a hole having a hexagonal shape in a single pass through the workpiece.
- Well suited for use in a variety of ferrous and non-ferrous materials.
- Broach is tapered, allowing teeth to cut hole to proper depth and width.
- Bright finish.





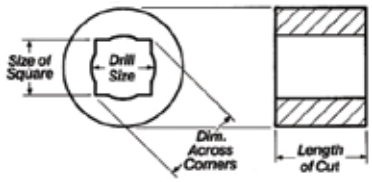
Broach Size	Broach Length	Pilot Dia.	Drill Size	Length of Cut Min.	Length of Cut Max.	Tolerance	Tool No.	Price
3/16	5-1/16	3/16	3/16	1/4	5/8	.1880-.1890	**KWH316**	98.97
7/32	5-3/8	7/32	7/32	1/4	3/4	.2190-.2200	**KWH732**	98.97
1/4	6	1/4	1/4	1/4	3/4	.2505-.2515	**KWH14**	98.97
9/32	7-1/4	9/32	9/32	5/16	1	.2815-.2825	**KWH932**	106.44
5/16	7-3/4	5/16	5/16	3/8	1	.3130-.3140	**KWH516**	106.44
11/32	7-3/4	11/32	11/32	3/8	1-1/4	.3440-.3450	**KWH1132**	106.44
3/8	8-1/2	3/8	3/8	3/8	1-1/4	.3755-.3765	**KWH38**	123.75
13/32	9-5/8	13/32	13/32	1/2	1-3/8	.4065-.4075	**KWH1332**	136.44
7/16	10-5/8	7/16	7/16	1/2	1-3/8	.4385-.4395	**KWH716**	153.60
15/32	11-7/8	15/32	15/32	1/2	1-3/8	.4690-.4700	**KWH1532**	183.30
1/2	11-7/8	1/2	1/2	1/2	1-3/8	.5005-.5015	**KWH12**	183.30
9/16	13-3/4	9/16	9/16	1/2	1-5/8	.5630-.5640	**KWH916**	225.60
5/8	16-1/4	5/8	5/8	5/8	2	.6260-.6270	**KWH58**	254.97
11/16	16-3/4	11/16	11/16	5/8	2	.6880-.6890	**KWH1116**	282.30
3/4	17-1/4	3/4	3/4	5/8	2	.7510-.7520	**KWH34**	346.50
7/8	18-1/2	7/8	7/8	5/8	2	.8765-.8775	**KWH78**	445.50
1	19-3/4	1	1	5/8	2	1.002-1.003	**KWH1**	479.70

Square Broaches

High Speed Steel

MDX® SUPERIOR IMPORT

- For cutting Square shaped hole in round pilot holes.
- Used to re-cut a round hole into a hole having a square shape in a single pass through the workpiece.
- Well suited for use in a variety of ferrous and non-ferrous materials.
- Broach is tapered, allowing teeth to cut hole to proper depth and width.
- Bright finish.





Broach Size	Broach Length	Pilot Dia.	Drill Size	Length of Cut Min.	Length of Cut Max.	Tolerance	Tool No.	Price
1/8	4-1/8	.1285	#30	3/16	1/2	.1250-.1260	**KWS18**	76.49
5/32	5-1/8	.1590	#21	1/4	1/2	.1565-.1575	**KWS532**	76.49
3/16	5-9/16	.1935	#10	1/4	5/8	.1880-.1890	**KWS316**	76.49
7/32	6-3/8	.2280	#1	1/4	3/4	.2190-.2200	**KWS732**	76.49
1/4	6-1/2	17/64	17/64	1/4	3/4	.2505-.2515	**KWS14**	76.49
9/32	7-3/4	19/64	19/64	5/16	1	.2815-.2825	**KWS932**	80.94
5/16	7-7/8	21/64	21/64	5/16	1	.3130-.3140	**KWS516**	80.94
11/32	9-3/8	23/64	23/64	3/8	1-1/4	.3440-.3450	**KWS1132**	101.25
3/8	9-3/8	25/64	25/64	3/8	1-1/4	.3755-.3765	**KWS38**	123.75
13/32	10-5/8	27/64	27/64	1/2	1-3/8	.4065-.4075	**KWS1332**	136.44
7/16	10-7/8	29/64	29/64	1/2	1-3/8	.4385-.4395	**KWS716**	153.60
15/32	12	1/2	1/2	1/2	1-3/8	.4690-.4700	**KWS1532**	183.30
1/2	12	17/32	17/32	1/2	1-3/8	.5005-.5015	**KWS12**	183.30
9/16	14-3/4	19/32	19/32	1/2	1-1/2	.5630-.5640	**KWS916**	225.60
5/8	16-5/16	21/32	21/32	5/8	1-5/8	.6260-.6270	**KWS58**	254.97
11/16	17-3/4	3/4	3/4	5/8	1-5/8	.6880-.6890	**KWS1116**	282.30
3/4	17-3/4	13/16	13/16	5/8	1-5/8	.7510-.7520	**KWS34**	346.50
7/8	22-3/4	15/16	15/16	1/2	2	.8765-.8775	**KWS78**	445.50
1	24-1/8	1-3/32	1-3/32	1/2	2	1.002-1.003	**KWS1**	479.70

End Mills

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Multi Flute End Mills

High Speed Steel



These end mills are designed for general purpose milling in most types of materials

List No. **205U** – Non-Center Cutting
List No. **240U** – Center Cutting

Dia. of Cut	Shank Diameter	Length of Cut	Overall Length	No. of Flutes	Price Each 205U	Price Each Center Cut 240U
1/8	3/8	3/8	2-5/16	4	15.74	18.45
5/32	3/8	7/16	2-1/4	4	17.27	19.50
3/16	3/8	1/2	2-3/8	4	15.74	18.45
7/32	3/8	5/8	2-3/8	4	17.27	19.50
1/4	3/8	5/8	2-7/16	4	15.74	18.45
9/32	3/8	11/16	2-1/2	4	16.11	19.55
5/16	3/8	3/4	2-1/2	4	15.74	18.45
21/64	3/8	3/4	2-1/2	4	16.11	—
11/32	3/8	3/4	2-1/2	4	16.11	19.55
3/8	3/8	3/4	2-1/2	4	15.74	18.45
13/32	3/8	1	2-11/16	4	22.23	27.65
7/16	3/8	1	2-11/16	4	20.88	26.10
29/64	3/8	1	2-11/16	4	21.98	—
15/32	3/8	1	2-11/16	4	20.88	—
1/2	3/8	1	2-11/16	4	20.61	26.10
1/2	1/2	1-1/4	3-1/4	4	20.61	26.10
17/32	1/2	1-3/8	3-3/8	4	26.91	35.20
9/16	1/2	1-3/8	3-3/8	4	26.91	35.20
5/8	1/2	1-3/8	3-3/8	4	29.52	—
5/8	5/8	1-5/8	3-3/4	4	33.03	35.20
21/32	1/2	1-3/8	3-3/8	4	34.68	—
21/32	5/8	1-5/8	3-5/8	4	34.68	—
11/16	1/2	1-5/8	3-5/8	4	31.59	—
11/16	5/8	1-5/8	3-3/4	4	34.07	37.08
3/4	1/2	1-5/8	3-5/8	4	33.39	—
3/4	5/8	1-5/8	3-3/4	4	35.33	—
3/4	3/4	1-5/8	3-7/8	4	36.68	42.10
13/16	1/2	1-7/8	3-7/8	4	45.00	—
13/16	5/8	1-7/8	4	6	45.00	—
13/16	3/4	1-7/8	4-1/8	4	42.30	47.30
7/8	5/8	1-7/8	4	6	46.22	—
7/8	3/4	1-7/8	4-1/8	4	46.22	53.91
7/8	7/8	1-7/8	4-1/8	4	45.54	49.25

Dia. of Cut	Shank Diameter	Length of Cut	Overall Length	No. of Flutes	Price Each 205U	Price Each Center Cut 240U
57/64	7/8	1-7/8	4-1/8	4	57.51	—
15/16	1/2	1-7/8	3-7/8	6	57.51	—
15/16	3/4	1-7/8	4-1/8	4	57.51	—
15/16	7/8	1-7/8	4-1/8	4	51.48	57.30
61/64	1	1-7/8	4-1/8	4	54.00	—
1	5/8	1-7/8	4	6	52.74	—
1	3/4	1-7/8	4-1/8	4	51.75	62.10
1	7/8	1-7/8	4-1/8	4	51.75	—
1	1	2	4-1/2	4	54.86	62.10
1	1	2	4-1/2	6	64.80	68.00
1-1/8	3/4	1-1/2	3-7/8	6	77.13	—
1-1/8	7/8	2	4-1/4	6	72.62	—
1-1/8	1	2	4-1/2	6	74.88	82.90
1-1/4	3/4	1-1/2	3-7/8	6	79.20	—
1-1/4	7/8	2	4-1/4	6	79.20	—
1-1/4	1	2	4-1/2	6	81.76	98.50
1-1/4	1-1/4	2	4-1/2	4	84.60	96.30
1-1/4	1-1/4	2	4-1/2	6	84.60	96.30
1-3/8	3/4	1-1/2	3-7/8	6	97.20	—
1-3/8	1	2	4-1/2	6	99.35	—
1-1/2	3/4	1-1/2	3-7/8	6	109.17	—
1-1/2	1	2	4-1/2	6	104.40	123.30
1-1/2	1-1/4	2	4-1/2	4	104.40	118.80
1-1/2	1-1/4	2	4-1/2	6	104.40	118.80
1-5/8	3/4	1-1/2	3-7/8	6	130.50	—
1-5/8	1-1/4	2	4-1/2	6	130.50	—
1-3/4	1-1/4	2	4-1/2	4	130.50	—
1-3/4	1-1/4	2	4-1/2	6	130.50	155.00
1-7/8	1-1/4	2	4-1/2	8	130.50	—
2	3/4	2	4-1/2	8	149.31	—
2	1-1/4	2	4-1/2	4	149.31	166.50
2	1-1/4	2	4-1/2	6	149.31	166.50
2	1-1/4	2	4-1/2	8	149.31	—

Sets

Size	Pcs.	Description	Set No.	Price
1/8, 3/16, 1/4, 5/16, 3/8, 1/2	6	3/8" Shank	**205AU**	103.11
1/8, 3/16, 1/4, 5/16, 3/8, 1/2	6	3/8" Shank, Center Cut	**240AU**	122.15
3/4, 7/8, 1", 1-1/8, 1-1/4, 1-1/2	6	3/4" Shank	**205SU**	407.29

All sets are supplied in wood block



No. 30, 40, 50 Taper End Mill Adapters

Hole Diameter	No. 30 Taper Tool No.	No. 30 Taper Price Each	No. 40 Taper Tool No.	No. 40 Taper Price Each	No. 50 Taper Tool No.	No. 50 Taper Price Each
3/16	**H30316**	63.70	**H40316**	74.10	**H50316**	110.50
1/4	**H3014**	63.70	**H4014**	74.10	**H5014**	114.40
3/8	**H3038**	63.70	**H4038**	74.10	**H5038**	114.40
1/2	**H3012**	63.70	**H4012**	74.10	**H5012**	114.40
5/8	**H3058**	63.70	**H4058**	74.10	**H5058**	114.40
3/4	**H3034**	71.50	**H4034**	74.10	**H5034**	114.40
7/8	**H3078**	78.00	**H4078**	84.50	**H5078**	127.40
1	**H301**	78.00	**H401**	84.50	**H501**	127.40
1-1/4	**H30114**	86.00	**H40114**	89.70	**H50114**	127.40
1-1/2	**H30112**	91.00	**H40112**	101.40	**H50112**	195.00
2	—	—	—	—	**H502**	208.00
2-1/2	—	—	—	—	**H50212**	234.00



Multi Flute End Mills

High Speed Steel



These end mills are designed for general purpose end milling in most types of materials

List No. **205** – Non-Center Cutting
List No. **240** – Center Cutting

Dia. of Cut	Shank Diameter	Length of Cut	Overall Length	No. of Flutes	Price Each 205	Price Each Center Cut 240
7/64	3/8	3/8	2-5/16	4	10.56	—
1/8	3/8	3/8	2-5/16	4	9.37	10.82
5/32	3/8	7/16	2-1/4	4	9.99	11.50
11/64	3/8	1/2	2-3/8	4	9.85	—
3/16	3/8	1/2	2-3/8	4	9.37	10.82
7/32	3/8	5/8	2-3/8	4	9.99	10.82
15/64	3/8	5/8	2-7/16	4	9.99	—
1/4	3/8	5/8	2-7/16	4	9.37	10.82
9/32	3/8	11/16	2-1/2	4	9.99	10.82
19/64	3/8	3/4	2-1/2	4	9.85	—
5/16	3/8	3/4	2-1/2	4	9.37	10.82
21/64	3/8	3/4	2-1/2	4	9.85	—
11/32	3/8	3/4	2-1/2	4	9.99	—
3/8	3/8	3/4	2-1/2	4	9.37	10.82
13/32	3/8	1	2-11/16	4	12.54	15.31
27/64	3/8	1	2-11/16	4	13.17	—
7/16	3/8	1	2-11/16	4	12.54	15.51
29/64	3/8	1	2-11/16	4	12.54	—
15/32	3/8	1	2-11/16	4	12.54	15.51
31/64	1/2	1-1/4	3-1/4	4	13.46	—
1/2	3/8	1	2-11/16	4	12.54	15.51
1/2	1/2	1-1/4	3-1/4	4	12.80	15.51
1/2	1/2	1-1/4	3-1/4	6	—	17.88
9/16	1/2	1-3/8	3-3/8	4	16.24	18.41
5/8	1/2	1-3/8	3-3/8	4	17.69	21.45
5/8	5/8	1-5/8	3-3/4	4	19.14	21.45
5/8	5/8	1-5/8	3-3/4	6	—	21.45
21/32	5/8	1-5/8	3-3/4	4	20.34	—
11/16	1/2	1-5/8	3-5/8	4	19.67	22.31
11/16	5/8	1-5/8	3-3/4	4	20.33	22.31
47/64	1/2	1-5/8	3-5/8	4	22.18	—
3/4	1/2	1-5/8	3-5/8	4	21.12	25.08
3/4	5/8	1-5/8	3-3/4	4	21.12	25.08
3/4	3/4	1-5/8	3-7/8	4	21.91	25.08
3/4	3/4	1-5/8	3-7/8	6	21.91	25.08
13/16	1/2	1-7/8	4	4	26.93	—
13/16	5/8	1-7/8	4	4	26.93	33.00
13/16	5/8	1-7/8	4	6	26.93	—
13/16	3/4	1-7/8	4-1/8	4	27.44	—
27/32	5/8	1-7/8	4-1/8	4	30.93	—
27/32	3/4	1-7/8	4-1/8	4	30.93	—
7/8	1/2	1-5/8	3-5/8	4	27.72	34.00
7/8	1/2	1-5/8	3-5/8	6	27.72	—
7/8	5/8	1-7/8	4	6	27.72	—
7/8	3/4	1-7/8	4-1/8	4	28.64	31.68
7/8	7/8	1-7/8	4-1/8	4	27.32	31.68
7/8	7/8	1-7/8	4-1/8	6	—	31.68
29/32	3/4	2	4-1/8	4	34.41	—
15/16	1/2	1-7/8	4	6	30.33	—

Dia. of Cut	Shank Diameter	Length of Cut	Overall Length	No. of Flutes	Price Each 205	Price Each Center Cut 240
15/16	3/4	1-7/8	4-1/8	4	32.72	34.98
15/16	7/8	1-7/8	4-1/8	4	32.72	34.98
31/32	3/4	2	4-1/8	4	34.41	—
1	1/2	1-7/8	3-7/8	4	31.68	—
1	1/2	1-7/8	3-7/8	6	31.68	—
1	5/8	1-7/8	4	4	31.15	34.98
1	5/8	1-7/8	4	6	31.15	34.98
1	3/4	1-7/8	4-1/8	4	31.15	34.98
1	7/8	1-7/8	4-1/8	4	33.00	36.30
1	1	2	4-1/2	4	33.00	38.28
1	1	2	4-1/2	6	33.00	38.28
1-1/16	3/4	2	4-1/4	6	48.18	56.75
1-1/8	3/4	1-1/2	3-7/8	6	44.88	53.00
1-1/8	7/8	2	4-1/4	6	43.56	—
1-1/8	1	2	4-1/2	6	44.88	—
1-3/16	3/4	1-1/2	3-7/8	6	48.18	—
1-1/4	3/4	1-1/2	3-7/8	6	49.50	56.93
1-1/4	7/8	2	4-1/4	6	47.52	—
1-1/4	1	2	4-1/2	6	49.10	—
1-1/4	1-1/4	2	4-1/2	4	52.80	56.93
1-1/4	1-1/4	2	4-1/2	6	52.80	56.93
1-5/16	3/4	1-1/2	3-7/8	4	62.04	—
1-5/16	3/4	1-1/2	3-7/8	4	62.04	—
1-5/16	3/4	1-1/2	3-7/8	6	62.04	—
1-3/8	3/4	1-1/2	3-7/8	4	63.36	—
1-3/8	3/4	1-1/2	3-7/8	6	63.36	69.20
1-3/8	1	2	4-1/2	6	58.74	—
1-3/8	1-1/4	2	4-1/2	6	58.74	—
1-7/16	3/4	1-1/2	3-7/8	6	66.00	—
1-1/2	3/4	1-1/2	3-7/8	6	66.00	70.13
1-1/2	1	2	4-1/2	6	66.00	—
1-1/2	1-1/4	2	4-1/2	4	66.00	70.13
1-1/2	1-1/4	2	4-1/2	6	66.00	70.13
1-5/8	3/4	1-1/2	3-7/8	6	72.00	76.00
1-5/8	1-1/4	2	4-1/2	6	72.00	—
1-3/4	3/4	1-1/2	3-7/8	6	77.88	—
1-3/4	1-1/4	2	4-1/2	4	77.88	—
1-3/4	1-1/4	2	4-1/2	6	77.88	88.00
1-7/8	3/4	1-1/2	3-7/8	6	84.04	92.00
1-7/8	1-1/4	2	4-1/2	4	84.04	—
1-7/8	1-1/4	2	4-1/2	6	84.04	—
1-7/8	1-1/4	2	4-1/2	8	84.04	—
2	3/4	1-1/2	3-7/8	6	95.04	—
2	3/4	1-1/2	3-7/8	8	95.04	110.00
2	1-1/4	2	4-1/2	4	95.04	—
2	1-1/4	2	4-1/2	6	95.04	—
2	1-1/4	2	4-1/2	8	95.04	—
2-1/4	1-1/4	2	4-1/2	6	128.70	—

Sets

Size	Pcs.	Description	Set No.	Price
1/8, 3/16, 1/4, 5/16, 3/8, 1/2	6	3/8" Shank	**205A**	63.19
1/8, 3/16, 1/4, 5/16, 3/8, 1/2	6	3/8" Shank, Center Cut	**240A**	70.44
3/4, 7/8, 1", 1-1/8, 1-1/4, 1-1/2	6	3/4" Shank	**205S**	249.22

All sets are supplied in wood block



R-8 End Mill Adapters

Hole Diameter	Tool No.	Price Each
1/4	**R8E14**	47.45
3/16	**R8E316**	47.45
3/8	**R8E38**	47.45
1/2	**R8E12**	48.10
5/8	**R8E58**	50.70

Hole Diameter	Tool No.	Price Each
3/4	**R8E34**	54.60
7/8	**R8E78**	59.80
1	**R8E1**	59.80
1-1/4	**R8E114**	78.98
1-1/2	**R8E112**	90.35



R-8 Adapter Set	Set No.	Price
3/16, 3/8, 1/2, 5/8, 3/4, 1"	**R8EM**	323.69

Multi Flute End Mills

High Speed Steel

Medium Flute

List No. **206MF**

Diameter of Cut	Shank Diameter	Length of Cut	Overall Length	No. of Flutes	Price Each
1	1	3	5-1/2	4	39.60
1-1/4	1-1/4	3	5-1/2	4	62.70
1-1/4	1-1/4	3	5-1/2	6	62.70
1-1/2	1-1/4	3	5-1/2	4	81.18
1-1/2	1-1/4	3	5-1/2	6	81.18

MDX® SUPERIOR IMPORT



Diameter of Cut	Shank Diameter	Length of Cut	Overall Length	No. of Flutes	Price Each
1-3/4	1-1/4	3	5-1/2	6	100.32
2	1-1/4	3	5-1/2	6	128.04
2-1/4	1-1/4	3	5-1/2	6	174.24
2-1/2	1-1/4	3	5-1/2	6	186.78
2-1/2	1-1/4	3	5-1/2	8	186.78

Long Flute

MADE IN USA

List No. **206U**

Dia. of Cut	Shank Diameter	Length of Cut	Overall Length	No. of Flutes	Price Each
3/16	3/8	3/4	2-5/8	4	20.25
7/32	3/8	1-1/4	3-1/16	4	22.00
1/4	3/8	1-1/4	3-1/16	4	20.25
5/16	3/8	1-3/8	3-1/8	4	20.25
3/8	3/8	1-1/2	3-1/4	4	20.25
7/16	1/2	1-3/4	3-3/4	4	28.17
1/2	1/2	2	4	4	28.17
5/8	5/8	2-1/2	4-5/8	4	39.15
3/4	3/4	3	5-1/4	4	45.45
7/8	7/8	3-1/2	5-3/4	4	60.12

MICHIGAN DRILL & CUTTING TOOLS



Diameter of Cut	Shank Diameter	Length of Cut	Overall Length	No. of Flutes	Price Each
7/8	7/8	3-1/2	5-3/4	6	60.12
1	1	4	6-1/2	4	78.12
1-1/8	1	3	5-1/2	6	97.00
1-1/8	1	4	6-1/2	6	114.00
1-1/4	1-1/4	4	6-1/2	4	121.23
1-1/4	1-1/4	4	6-1/2	6	121.23
1-1/2	1-1/4	4	6-1/2	6	154.26
2	1-1/4	3	5-1/2	6	179.00
2	1-1/4	4	6-1/2	4	231.30
2	1-1/4	4	6-1/2	8	231.30

List No. **206**
List No. **206L** Center Cut

Diameter of Cut	Shank Diameter	Length of Cut	Overall Length	No. of Flutes	Price Each 206	Price Each 206L
1/4	3/8	1-1/4	3-1/16	4	12.41	15.00
5/16	3/8	1-3/8	3-1/8	4	12.41	15.00
3/8	3/8	1-1/2	3-1/4	4	12.41	15.00
7/16	1/2	1-3/4	3-3/4	4	16.37	—
1/2	1/2	2	4	4	16.37	19.50
5/8	5/8	2-1/2	4-5/8	4	22.97	24.68
3/4	1/2	3	5-1/4	4	27.98	—
3/4	3/4	3	5-1/4	4	27.98	31.00
7/8	3/4	3-1/2	5-3/4	4	35.24	—
7/8	7/8	3-1/2	5-3/4	4	35.24	40.50
1	3/4	4	6-1/2	4	47.52	—
1	1	4	6-1/2	4	46.20	51.00
1-1/8	1	4	6-1/2	6	60.72	—

MDX® SUPERIOR IMPORT

Diameter of Cut	Shank Diameter	Length of Cut	Overall Length	No. of Flutes	Price Each 206
1-1/4	3/4	4	6-1/2	6	75.90
1-1/4	1	4	6-1/2	6	72.60
1-1/4	1-1/4	4	6-1/2	4	72.60
1-1/4	1-1/4	4	6-1/2	6	72.60
1-3/8	1	4	6-1/2	6	85.25
1-1/2	1	4	6-1/2	6	89.10
1-1/2	1-1/4	4	6-1/2	4	89.10
1-1/2	1-1/4	4	6-1/2	6	89.10
1-1/2	1-1/4	6	8-1/2	6	95.70
1-3/4	1-1/4	4	6-1/2	6	112.20
2	1-1/4	4	6-1/2	4	137.28
2	1-1/4	4	6-1/2	6	137.28
2	1-1/4	4	6-1/2	8	137.28

Extra Long Flute

MADE IN USA

MICHIGAN DRILL & CUTTING TOOLS



List No. **207U**

Diameter of Cut	Shank Diameter	Length of Cut	Overall Length	No. of Flutes	Price Each
3/16	3/8	1-1/4	3-1/16	4	22.95
1/4	3/8	1-3/4	3-9/16	4	22.95
5/16	3/8	2	3-3/4	4	24.21
3/8	3/8	2-1/2	4-1/4	4	24.73
1/2	1/2	3	5	4	31.73
5/8	5/8	4	6-1/8	4	45.81

Diameter of Cut	Shank Diameter	Length of Cut	Overall Length	No. of Flutes	Price Each
3/4	3/4	4	6-1/4	4	53.82
7/8	7/8	5	7-1/4	4	69.00
1	1	6	8-1/2	4	93.78
1-1/4	1-1/4	6	8-1/2	6	141.26
1-1/2	1-1/4	6	8-1/2	6	165.00
1-1/2	1-1/4	8	10-1/2	6	179.75

List No. **207**
List No. **207L** Center Cut

Diameter of Cut	Shank Diameter	Length of Cut	Overall Length	No. of Flutes	Price Each 207	Price Each 207L
1/4	3/8	1-3/4	3-9/16	4	14.26	16.70
5/16	3/8	2	3-3/4	4	14.92	16.70
3/8	3/8	2-1/2	4-1/4	4	15.58	18.00
1/2	1/2	3	5	4	19.54	24.10
5/8	1/2	4	6-1/8	4	27.72	31.50
5/8	5/8	4	6-1/8	4	27.72	31.50
3/4	1/2	4	6-1/4	4	33.66	36.40
3/4	3/4	4	6-1/4	4	33.00	36.40

MDX® SUPERIOR IMPORT

Diameter of Cut	Shank Diameter	Length of Cut	Overall Length	No. of Flutes	Price Each 207	Price Each 207L
7/8	7/8	5	7-1/4	4	42.90	47.00
15/16	7/8	5	7-1/4	4	56.76	—
1	1	6	8-1/2	4	56.76	61.50
1-1/4	1-1/4	6	8-1/2	4	85.80	94.00
1-1/4	1-1/4	6	8-1/2	6	85.80	94.00
1-1/2	1-1/4	6	8-1/2	6	85.80	94.00
1-1/2	1-1/4	8	10-1/2	6	135.96	145.00
2	1-1/4	6	8-1/2	6	—	124.00

Heavy Duty End Mills with Combination Shanks

High Speed Steel



List No. **277** — Right Hand

Diameter of Cut	Shank Diameter	Length of Cut	Overall Length	No. of Flutes	Price Each
1-1/2	1-1/2	2	5-3/4	4	78.00
2	1-1/2	4	6-7/8	3	115.00
2	1-1/2	4	6-7/8	4	115.00
2	2	2	5-3/4	2	179.10
2	2	2	5-3/4	2 Ball	230.40
2	2	2	5-3/4	3	186.30
2	2	2	5-3/4	4	179.10
2	2	2	5-3/4	6	186.30
2	2	3	6-3/4	2	210.00
2	2	3	6-3/4	2 Ball	275.00
2	2	3	6-3/4	3	241.20
2	2	3	6-3/4	4	210.00
2	2	3	6-3/4	6	210.00
2	2	4	7-3/4	2	225.00
2	2	4	7-3/4	3	260.00
2	2	4	7-3/4	4	225.00
2	2	4	7-3/4	6	225.00
2	2	4	7-3/4	6 Ball	297.00
2	2	4	7-3/4	8	225.00
2	2	5	8-3/4	2	240.40
2	2	5	8-3/4	2 Ball	328.95
2	2	5	8-3/4	3	275.00
2	2	5	8-3/4	4	240.40
2	2	6	9-3/4	2	252.00
2	2	6	9-3/4	3	275.00
2	2	6	9-3/4	4	252.00
2	2	6	9-3/4	6	252.00
2	2	6	9-3/4	6 Ball	365.40
2	2	6	9-3/4	6 Cobalt	486.00
2	2	8	11-3/4	3	300.60
2	2	8	11-3/4	4	300.60
2	2	8	11-3/4	6	300.60
2	2	8	11-3/4	6 Ball	430.20
2	2	10	13-3/4	3	349.20

Diameter of Cut	Shank Diameter	Length of Cut	Overall Length	No. of Flutes	Price Each
2	2	12	15-3/4	6	486.00
2-1/2	2	4	7-3/4	2	320.00
2-1/2	2	4	7-3/4	3	320.00
2-1/2	2	4	7-3/4	4	320.00
2-1/2	2	4	7-3/4	6	320.00
2-1/2	2	6	9-3/4	2	464.40
2-1/2	2	6	9-3/4	3	360.00
2-1/2	2	6	9-3/4	4	360.00
2-1/2	2	6	9-3/4	6	360.00
2-1/2	2	6	9-3/4	6 Ball	410.00
2-1/2	2	8	11-3/4	3	421.20
2-1/2	2	8	11-3/4	4	421.20
2-1/2	2	8	11-3/4	6	421.20
2-1/2	2-1/2	4	8	3	320.00
2-1/2	2-1/2	4	8	4	320.00
2-1/2	2-1/2	4	8	6	320.00
2-1/2	2-1/2	5	9	4	371.70
2-1/2	2-1/2	5	9	6	371.70
2-1/2	2-1/2	6	10	2	450.00
2-1/2	2-1/2	6	10	3	472.50
2-1/2	2-1/2	6	10	4	450.00
2-1/2	2-1/2	6	10	6	480.00
2-1/2	2-1/2	8	11-3/4	2	488.00
2-1/2	2-1/2	8	11-3/4	4	488.00
2-1/2	2-1/2	8	11-3/4	6	488.00
2-1/2	2-1/2	12	15-3/4	6	520.00
3	2-1/2	4	7-3/4	3	395.00
3	2-1/2	4	7-3/4	6	376.20
3	2-1/2	5	8-3/4	6	412.20
3	2-1/2	5	8-3/4	8	412.20
3	2-1/2	6	9-3/4	6	495.00
3	2-1/2	8	11-3/4	6	648.00
3	2-1/2	8	11-3/4	8	648.00
3	2-1/2	10	13-3/4	8	979.00

List No. **277LH** — Left Hand

Diameter of Cut	Shank Diameter	Length of Cut	Overall Length	No. of Flutes	Price Each
2	2	2	5-3/4	2	279.45
2	2	3	6-3/4	2	310.00

Diameter of Cut	Shank Diameter	Length of Cut	Overall Length	No. of Flutes	Price Each
2	2	8	11-3/4	6	450.90
2-1/2	2	4	7-3/4	6	446.85

#50 Taper End Mill Holder

For 2" combination shank end mills

This holder assures safe and sure locking. The end mill cannot possibly vibrate loose or pull out of the holder as its torque aids the locking.



Description	Part No.	Price Each
For 2" combination shank end mills	**HC50-2**	400.00

End Mill Dispenser Metal Cabinets

Description		Case No.	Price Each
Two Flute	Single and Double End 1/16 to 1"	**CZD10**	510.30
Four Flute	Single and Double End 1/16 to 1"	**CZD11**	510.30
Two and Four Flute	Single and Double End 1/8 to 1"	**CZD12**	121.50



2-Flute End Mills

High Speed Steel

High Speed

MADE IN USA

MICHIGAN DRILL & CUTTING TOOLS

These end mills are designed for plunge cutting and can be used in slotting operations for all types of materials.



Regular Length

List No. **231U**

Dia. of Cut	Shank Dia.	Length of Cut	Overall Length	Price Each
1/8	3/8	3/8	2-5/16	14.36
5/32	3/8	3/8	2-5/16	16.43
3/16	3/8	7/16	2-5/16	14.36
7/32	3/8	1/2	2-5/16	16.43
1/4	3/8	1/2	2-5/16	14.36
9/32	3/8	9/16	2-5/16	16.43
5/16	3/8	9/16	2-5/16	14.36
11/32	3/8	9/16	2-5/16	16.43
3/8	3/8	9/16	2-5/16	14.36
13/32	3/8	13/16	2-1/2	21.33
7/16	3/8	13/16	2-1/2	21.33
15/32	3/8	13/16	2-1/2	21.33
1/2	3/8	13/16	2-1/2	21.33
1/2	1/2	1	3	21.38
9/16	1/2	1-1/8	3-1/8	25.31
19/32	1/2	1-1/8	3-1/8	31.46
5/8	1/2	1-1/8	3-1/8	29.43
5/8	5/8	1-5/16	3-7/16	28.80
21/32	1/2	1-5/16	3-5/16	33.75
11/16	1/2	1-5/16	3-5/16	31.46
11/16	5/8	1-5/16	3-7/16	31.46
23/32	1/2	1-5/16	3-5/16	33.75
3/4	1/2	1-5/16	3-5/16	33.75
3/4	5/8	1-5/16	3-7/16	33.75
3/4	3/4	1-5/16	3-9/16	33.75
25/32	1/2	1-1/2	3-1/2	44.10
13/16	1/2	1-1/2	3-5/8	42.21
13/16	5/8	1-1/2	3-5/8	42.21
13/16	3/4	1-1/2	3-3/4	42.21
27/32	1/2	1-1/2	3-1/2	42.21
7/8	1/2	1-1/2	3-1/2	41.67
7/8	5/8	1-1/2	3-5/8	41.67
7/8	3/4	1-1/2	3-3/4	41.67
7/8	7/8	1-1/2	3-3/4	41.67
29/32	1/2	1-1/2	3-1/2	47.14
15/16	1/2	1-1/2	3-1/2	47.14
15/16	5/8	1-1/2	3-3/8	46.78
15/16	3/4	1-1/2	3-3/4	47.14
15/16	7/8	1-1/2	3-3/4	46.78
61/64	1/2	1-1/2	3-1/2	47.14
31/32	1/2	1-1/2	3-1/2	47.14
1	1/2	1-1/2	3-5/8	46.62
1	5/8	1-1/2	3-5/8	46.62
1	3/4	1-1/2	3-3/4	46.62
1	7/8	1-1/2	3-3/4	49.68
1	1	1-5/8	4-1/2	56.61
1-1/8	3/4	1-5/8	3-7/8	85.50
1-1/8	7/8	1-5/8	3-7/8	76.50
1-1/8	1	1-5/8	4-1/8	76.50
1-3/16	3/4	1-1/2	3-7/8	93.60
1-1/4	3/4	1-1/2	3-7/8	93.60
1-1/4	7/8	1-5/8	3-7/8	79.65
1-1/4	1	1-5/8	4-1/2	86.40
1-1/4	1-1/4	1-5/8	4-1/2	86.40
1-3/8	3/4	1-1/2	3-7/8	102.42
1-3/8	1	1-5/8	4-1/2	96.21
1-1/2	3/4	1-1/2	3-7/8	112.05
1-1/2	1	1-5/8	4-1/2	105.39
1-1/2	1-1/4	1-5/8	4-1/2	105.39
1-5/8	1-1/4	1-5/8	4-1/2	113.14
1-3/4	1-1/4	1-5/8	4-1/2	125.96
1-7/8	1-1/4	1-5/8	4-1/2	136.25
2	3/4	1-5/8	4-1/8	150.17
2	1-1/4	1-5/8	4-1/8	145.80
2-1/2	1-1/4	1-5/8	4-1/8	182.99

MDX® SUPERIOR IMPORT

List No. **231**

Dia. of Cut	Shank Dia.	Length of Cut	Overall Length	Price Each
1/8	3/8	3/8	2-5/16	8.84
5/32	3/8	3/8	2-5/16	8.84
3/16	3/8	7/16	2-5/16	8.84
7/32	3/8	1/2	2-1/4	8.84
1/4	3/8	1/2	2-5/16	8.84
9/32	3/8	9/16	2-1/4	8.84
5/16	3/8	9/16	2-5/16	8.84
11/32	3/8	9/16	2-1/4	8.84
3/8	3/8	9/16	2-5/16	8.84
13/32	3/8	13/16	2-1/2	13.07
7/16	3/8	13/16	2-1/2	13.07
15/32	3/8	13/16	2-1/2	13.07
15/32	1/2	7/8	2-13/16	14.38
1/2	3/8	13/16	2-1/2	13.07
1/2	1/2	1	3	13.86
33/64	1/2	1-1/8	3	18.81
17/32	1/2	1-1/8	3-1/8	18.81
9/16	1/2	1-1/8	3-1/8	16.16
19/32	1/2	1-1/8	3-1/8	18.81
5/8	1/2	1-1/8	3-1/8	18.11
5/8	5/8	1-5/16	3-7/16	18.35
21/32	1/2	1-5/16	3-5/16	22.47
21/32	5/8	1-5/16	3-3/4	22.47
11/16	1/2	1-5/16	3-5/16	19.54
11/16	5/8	1-5/16	3-7/16	19.54
3/4	1/2	1-5/16	3-5/16	20.86
3/4	5/8	1-5/16	3-7/16	20.86
3/4	3/4	1-5/16	3-9/16	20.86
25/32	1/2	1-1/2	3-1/2	24.55
13/16	1/2	1-1/2	3-1/2	24.55
13/16	5/8	1-1/2	3-5/8	24.55
13/16	3/4	1-1/2	3-3/4	24.55
27/32	5/8	1-1/2	3-1/2	29.60
27/32	3/4	1-1/2	3-1/2	29.60
7/8	1/2	1-1/2	3-1/2	24.55
7/8	5/8	1-1/2	3-5/8	24.55
7/8	3/4	1-1/2	3-3/4	24.55
7/8	7/8	1-1/2	3-3/4	25.74
29/32	1/2	1-1/2	3-1/2	29.17
15/16	1/2	1-1/2	3-1/2	29.17
15/16	5/8	1-1/2	3-5/8	29.17
15/16	3/4	1-1/2	3-3/4	29.17
15/16	7/8	1-1/2	3-3/4	29.17
1	1/2	1-1/2	3-5/8	29.17
1	5/8	1-1/2	3-5/8	29.17
1	3/4	1-1/2	3-3/4	29.17
1	7/8	1-1/2	3-3/4	29.17
1	1	1-5/8	4-1/2	31.15
1-1/16	5/8	1-5/8	3-7/8	41.84
1-1/16	3/4	1-5/8	3-7/8	41.84
1-1/16	7/8	1-5/8	3-7/8	41.84
1-1/8	3/4	1-5/8	3-7/8	41.84
1-1/8	7/8	1-5/8	3-7/8	45.41
1-1/8	1	1-5/8	4-1/8	45.41
1-3/16	3/4	1-5/8	3-7/8	52.93
1-3/16	1	1-5/8	3-7/8	52.93
1-1/4	3/4	1-5/8	3-7/8	52.93
1-1/4	7/8	1-5/8	3-7/8	44.75
1-1/4	1	1-5/8	4-1/2	50.69
1-1/4	1-1/4	1-5/8	4-1/2	54.25
1-5/16	3/4	1-5/8	3-7/8	62.96
1-3/8	3/4	1-5/8	3-7/8	62.96
1-3/8	1	1-5/8	4-1/2	60.19
1-3/8	1-1/4	1-5/8	4-1/2	60.19
1-7/16	3/4	1-5/8	3-7/8	63.10
1-1/2	3/4	1-5/8	3-7/8	63.10
1-1/2	1	1-5/8	4-1/2	66.00
1-1/2	1-1/4	1-5/8	4-1/2	66.00
1-5/8	3/4	1-5/8	3-7/8	72.78
1-5/8	1-1/4	1-5/8	4-1/2	72.30
1-3/4	3/4	1-5/8	3-7/8	85.80
1-3/4	1-1/4	1-5/8	4-1/2	79.20
1-7/8	3/4	1-5/8	3-7/8	87.12
1-7/8	1-1/4	1-5/8	4-1/2	85.38
2	3/4	1-5/8	4-1/8	98.01
2	1-1/4	1-5/8	4-1/8	93.72
2-1/4	1-1/4	1-5/8	4-1/8	160.00
2-1/2	1-1/4	1-5/8	4-1/8	200.00

Sets

Size	Pcs.	Description	Set No.	Price
1/8, 3/16, 1/4, 5/16, 3/8, 1/2	6	3/8" Shank, Made in USA	**231AU**	96.93
1/8, 3/16, 1/4, 5/16, 3/8, 1/2	6	3/8" Shank, Quality Import	**231A**	61.07
3/4, 7/8, 1, 1-1/8, 1-1/4, 1-1/2	6	3/4" Shank, Made in USA	**231SU**	420.33
3/4, 7/8, 1, 1-1/8, 1-1/4, 1-1/2	6	3/4" Shank, Quality Import	**231S**	239.59

All sets are supplied in wood block



2-Flute End Mills

High Speed Steel

High Speed

MADE IN USA

MICHIGAN DRILL & CUTTING TOOLS

Long Length



List No. **233U**

Diameter of Cut	Shank Diameter	Length of Cut	Overall Length	Price Each
1/4	3/8	1-1/4	3-5/16	23.54
5/16	3/8	3/4	2-1/2	23.54
3/8	3/8	1	2-3/4	23.54
3/8	3/8	1-1/2	3-1/4	25.89
7/16	1/2	1-3/4	2-3/4	29.75
1/2	1/2	1-1/2	3-1/2	30.95
1/2	1/2	2-1/2	4-5/8	36.73
1/2	1/2	3	5-1/16	40.50
5/8	5/8	2	4-1/8	44.55
5/8	1/2	2-3/8	4-1/2	60.08
3/4	3/4	1-3/4	4	41.85
7/8	7/8	2	4-1/4	48.25
7/8	7/8	2-1/2	4-3/4	57.49
7/8	7/8	3-5/8	6-1/2	71.76
1	1	2-1/4	4-3/4	62.00
1	1	3	5-1/2	72.16
1	1	4	6-1/2	89.70

Diameter of Cut	Shank Diameter	Length of Cut	Overall Length	Price Each
1	1	4-5/8	7-5/16	99.75
1-1/8	1	2-1/4	4-3/4	85.00
1-1/8	1	3	5-1/2	89.25
1-1/4	1	2-1/4	4-3/4	93.75
1-1/4	1	3	5-1/2	120.00
1-1/4	1-1/4	2-1/4	4-3/4	93.75
1-1/4	1-1/4	3	5-1/2	120.00
1-1/4	1-1/4	4	6-1/2	145.57
1-1/4	1-1/4	4-3/4	7-5/16	151.76
1-1/4	1-1/4	6	8-1/2	159.06
1-3/8	1	2-1/4	4-3/4	131.25
1-1/2	1-1/4	2-1/4	4-3/4	123.85
1-1/2	1-1/4	3	5-1/2	148.00
1-5/8	1-1/4	3	5-1/2	160.00
1-3/4	1-1/4	3	5-1/2	180.00
2	1-1/4	2-1/4	4-3/4	203.05
2	1-1/4	3	5-1/2	217.98

Titanium Nitride coating available. Please inquire.

MDX® SUPERIOR IMPORT

List No. **233**

Diameter of Cut	Shank Diameter	Length of Cut	Overall Length	Price Each
1/4	3/8	1-1/2	3-1/4	18.66
5/16	3/8	1-1/2	3-1/4	18.66
3/8	3/8	1	2-3/4	16.20
3/8	3/8	1-1/2	3-1/4	18.72
7/16	1/2	1-1/2	3-9/16	23.76
1/2	1/2	1-1/2	4-1/2	21.64
1/2	1/2	2	4	23.76
1/2	1/2	2-1/2	4-9/16	33.00
1/2	1/2	3	5-1/16	31.75
5/8	1/2	2-3/8	4-1/2	29.70
5/8	5/8	2	4-1/8	27.72
5/8	5/8	2-1/2	4-5/8	34.82
5/8	5/8	3	5-1/8	41.91
3/4	1/2	2-3/4	5-1/4	35.81
3/4	3/4	1-3/4	4	29.39
3/4	3/4	2-1/4	4-1/2	33.48
3/4	3/4	3-1/2	6	52.20
7/8	7/8	2	4-1/4	38.16
7/8	7/8	2-1/2	4-3/4	41.07
7/8	7/8	3	5-1/4	42.38
1	1	2-1/4	4-3/4	49.80
1	1	2-1/2	5-1/16	47.25

Diameter of Cut	Shank Diameter	Length of Cut	Overall Length	Price Each
1	1	3	5-1/2	55.08
1-1/8	1	2-1/4	4-3/4	68.31
1-1/8	1	3	5-1/2	73.61
1-1/4	1	2-1/4	4-3/4	76.67
1-1/4	1	3	5-1/2	86.04
1-1/4	1-1/4	2-1/4	4-3/4	76.67
1-1/4	1-1/4	3	5-1/2	86.04
1-1/4	1-1/4	3-1/2	6-1/16	106.20
1-3/8	1	2-1/4	4-3/4	87.40
1-3/8	1	3	5-1/2	93.70
1-1/2	1-1/4	2-1/4	4-3/4	109.00
1-1/2	1-1/4	3	5-1/2	103.50
1-5/8	1-1/4	3	5-1/2	118.52
1-3/4	1-1/4	3	5-1/2	129.60
1-7/8	1-1/4	3	5-1/2	147.52
2	1-1/4	2-1/4	4-3/4	144.00
2	1-1/4	2-1/2	5	150.00
2	1-1/4	3	5-1/2	155.70
2*	2	2	5-3/4	179.10
2*	2	3	6-3/4	241.20
2*	2	4	7-3/4	213.30
2*	2	5	8-3/4	260.40

**Combination Shank.*

Extension Type

MADE IN USA

MICHIGAN DRILL & CUTTING TOOLS



List No. **234U**

Diameter of Cut	Shank Diameter	Length of Cut	Overall Length	Price Each
5/16	3/8	3/4	1-1/4	25.96
3/8	3/8	3/4	1-1/4	27.50
1/2	1/2	1	4	31.14
5/8	1/2	1-3/8	4-1/2	47.96

Diameter of Cut	Shank Diameter	Length of Cut	Overall Length	Price Each
5/8	5/8	1-3/8	4-5/8	43.60
3/4	3/4	1-5/8	5-3/8	55.04
7/8	7/8	2	6	62.32
1	1	2-1/2	7-1/4	96.64

MDX® SUPERIOR IMPORT

List No. **234**

Diameter of Cut	Shank Diameter	Length of Cut	Overall Length	Price Each
1/8	3/8	3/8	2-3/8	18.18
3/16	3/8	1/2	2-11/16	18.18
1/4	3/8	5/8	3-1/16	18.18
5/16	3/8	3/4	3-5/16	18.18
3/8	3/8	3/4	3-5/16	18.18
1/2	1/2	1	4	21.78
5/8	1/2	1-3/8	4-1/2	32.04

Diameter of Cut	Shank Diameter	Length of Cut	Overall Length	Price Each
5/8	5/8	1-3/8	4-5/8	32.04
3/4	1/2	1-5/8	5-1/4	40.68
3/4	3/4	1-5/8	5-3/8	40.68
7/8	7/8	2	6	52.74
1	1	2-1/2	7-1/4	72.00
1-1/4	1-1/4	3	7-1/4	99.00

Titanium Nitride coating available. Please inquire.

TiN-Coated Multi Flute End Mills

High Speed



MADE IN USA

MICHIGAN DRILL & CUTTING TOOLS

High Speed Steel

List No. **205TU**

Diameter of Cut	Shank Diameter	Length of Cut	Overall Length	No. of Flutes	Price Each
1/8	3/8	3/8	2-5/16	4	24.30
5/32	3/8	7/16	2-1/4	4	24.30
3/16	3/8	1/2	2-3/8	4	24.30
7/32	3/8	5/8	2-3/8	4	24.30
1/4	3/8	5/8	2-7/16	4	24.30
9/32	3/8	11/16	2-1/2	4	24.30
5/16	3/8	3/4	2-1/2	4	24.30
11/32	3/8	3/4	2-1/2	4	24.30
3/8	3/8	3/4	2-1/2	4	24.30
13/32	3/8	1	2-11/16	4	33.30
7/16	3/8	1	2-11/16	4	33.30
15/32	3/8	1	2-11/16	4	33.30
1/2	3/8	1	2-11/16	4	33.30
1/2	1/2	1-1/4	3-1/4	4	34.20
9/16	1/2	1-3/8	3-3/8	4	44.96
5/8	1/2	1-3/8	3-3/8	4	48.60
5/8	5/8	1-5/8	3-3/4	4	52.20
21/32	5/8	1-5/8	3-3/4	4	62.10
11/16	1/2	1-5/8	3-5/8	4	55.35
11/16	5/8	1-5/8	3-3/4	4	58.50
3/4	1/2	1-5/8	3-5/8	4	60.12
3/4	5/8	1-5/8	3-3/4	4	60.12
3/4	3/4	1-5/8	3-7/8	4	61.74
13/16	1/2	1-7/8	4	4	86.40
13/16	5/8	1-7/8	4	6	86.40
13/16	3/4	1-7/8	4-1/8	4	86.40
7/8	1/2	1-5/8	3-5/8	4	88.65

Diameter of Cut	Shank Diameter	Length of Cut	Overall Length	No. of Flutes	Price Each
7/8	5/8	1-7/8	4	6	88.65
7/8	3/4	1-7/8	4-1/8	4	88.65
7/8	7/8	1-7/8	4-1/8	4	88.65
15/16	5/8	1-7/8	4	6	74.25
15/16	3/4	1-7/8	4-1/8	4	74.25
15/16	7/8	1-7/8	4-1/8	4	74.25
1	1/2	1-7/8	3-7/8	4	96.30
1	5/8	1-7/8	4	6	96.30
1	3/4	1-7/8	4-1/8	4	96.30
1	7/8	1-7/8	4-1/8	4	96.30
1	1	2	4-1/2	4	96.30
1-1/16	3/4	2	4-1/4	6	117.00
1-1/8	3/4	1-1/2	3-7/8	6	129.60
1-1/8	1	2	4-1/2	6	129.60
1-1/4	3/4	1-1/2	3-7/8	6	129.60
1-1/4	7/8	2	4-1/4	6	129.60
1-1/4	1	2	4-1/2	6	133.20
1-1/4	1-1/4	2	4-1/2	4	140.40
1-1/4	1-1/4	2	4-1/2	6	140.40
1-3/8	3/4	1-1/2	3-7/8	6	153.00
1-3/8	1	2	4-1/2	6	153.00
1-7/16	3/4	1-1/2	3-7/8	6	170.10
1-1/2	3/4	1-1/2	3-7/8	6	170.10
1-1/2	1	2	4-1/2	6	170.10
1-1/2	1-1/4	2	4-1/2	4	170.10
1-1/2	1-1/4	2	4-1/2	6	170.10
2	1-1/4	2	4-1/2	8	216.00

List No. **205T**

MDX SUPERIOR IMPORT

Diameter of Cut	Shank Diameter	Length of Cut	Overall Length	No. of Flutes	Price Each
1/8	3/8	3/8	2-5/16	4	17.96
5/32	3/8	7/16	2-1/4	4	18.80
3/16	3/8	1/2	2-3/8	4	17.96
7/32	3/8	5/8	2-3/8	4	18.80
1/4	3/8	5/8	2-7/16	4	17.96
9/32	3/8	11/16	2-1/2	4	18.80
5/16	3/8	3/4	2-1/2	4	17.96
11/32	3/8	3/4	2-1/2	4	18.80
3/8	3/8	3/4	2-1/2	4	17.96
13/32	3/8	1	2-11/16	4	23.15
7/16	3/8	1	2-11/16	4	23.15
15/32	3/8	1	2-11/16	4	23.15
1/2	3/8	1	2-11/16	4	23.15
1/2	1/2	1-1/4	3-1/4	4	25.67
9/16	1/2	1-3/8	3-3/8	4	31.32
5/8	1/2	1-3/8	3-3/8	4	33.30
5/8	5/8	1-5/8	3-3/4	4	35.28
11/16	1/2	1-5/8	3-5/8	4	37.84
11/16	5/8	1-5/8	3-3/4	4	38.74
3/4	1/2	1-5/8	3-5/8	4	39.82
3/4	5/8	1-5/8	3-3/4	4	39.82
3/4	3/4	1-5/8	3-7/8	4	40.90
13/16	1/2	1-7/8	4	4	52.61
13/16	5/8	1-7/8	4	6	52.61
13/16	3/4	1-7/8	4-1/8	4	55.68
7/8	1/2	1-5/8	3-5/8	4	53.69
7/8	5/8	1-7/8	4	6	53.69

Diameter of Cut	Shank Diameter	Length of Cut	Overall Length	No. of Flutes	Price Each
7/8	3/4	1-7/8	4-1/8	4	57.32
7/8	7/8	1-7/8	4-1/8	4	55.52
15/16	5/8	1-7/8	4	6	57.25
15/16	3/4	1-7/8	4-1/8	4	62.88
15/16	7/8	1-7/8	4-1/8	4	62.88
1	1/2	1-7/8	3-7/8	4	59.09
1	5/8	1-7/8	4	6	59.09
1	3/4	1-7/8	4-1/8	4	60.74
1	7/8	1-7/8	4-1/8	4	60.74
1	1	2	4-1/2	4	63.26
1-1/16	3/4	2	4-1/4	6	90.32
1-1/8	3/4	1-1/2	3-7/8	6	85.82
1-1/8	1	2	4-1/2	6	85.82
1-1/4	3/4	1-1/2	3-7/8	6	92.12
1-1/4	7/8	2	4-1/4	6	89.42
1-1/4	1	2	4-1/2	6	91.58
1-1/4	1-1/4	2	4-1/2	4	96.62
1-1/4	1-1/4	2	4-1/2	6	96.62
1-3/8	3/4	1-1/2	3-7/8	6	124.85
1-3/8	1	2	4-1/2	6	118.55
1-5/8	3/4	1-1/2	3-7/8	6	159.32
1-3/4	3/4	1-1/2	3-7/8	6	167.34
1-7/16	3/4	1-1/2	3-7/8	6	128.45
1-1/2	3/4	1-1/2	3-7/8	6	128.45
1-1/2	1	2	4-1/2	6	128.45
1-1/2	1-1/4	2	4-1/2	4	128.45
1-1/2	1-1/4	2	4-1/2	6	128.45

Sets

Size	Pcs.	Description	Made in U.S.A. Set No.	Made in U.S.A. Price	Quality Import Set No.	Quality Import Price
1/8, 3/16, 1/4, 5/16, 3/8, 1/2	6	TiN Coated, 3/8" Shank	**205ATU**	158.60	**205AT**	116.75
3/4, 7/8, 1", 1-1/8, 1-1/4, 1-1/2	6	TiN Coated, 3/4" Shank	**205STU**	683.13	**205ST**	472.49

All sets are supplied in wood block



TiN-Coated Two Flute End Mills

High Speed Steel



MADE IN USA

MICHIGAN DRILL & CUTTING TOOLS

List No. 231TU

Diameter of Cut	Shank Diameter	Length of Cut	Overall Length	Price Each
1/8	3/8	3/8	2-5/16	24.30
5/32	3/8	3/8	2-5/16	24.30
3/16	3/8	7/16	2-5/16	26.10
7/32	3/8	1/2	2-5/16	26.10
1/4	3/8	1/2	2-5/16	26.10
9/32	3/8	9/16	2-5/16	26.10
5/16	3/8	9/16	2-5/16	26.10
11/32	3/8	9/16	2-5/16	26.10
3/8	3/8	9/16	2-5/16	26.10
13/32	3/8	13/16	2-1/2	34.83
7/16	3/8	13/16	2-1/2	34.83
15/32	3/8	13/16	2-1/2	37.35
1/2	3/8	13/16	2-1/2	37.35
1/2	1/2	1	3	37.35
9/16	1/2	1-1/8	3-1/8	45.45
5/8	1/2	1-1/8	3-1/8	51.57
5/8	5/8	1-5/16	3-7/16	51.57
11/16	1/2	1-5/16	3-5/16	53.91
11/16	5/8	1-5/16	3-7/16	53.91
3/4	1/2	1-5/16	3-5/16	56.16
3/4	5/8	1-5/16	3-7/16	56.16
3/4	3/4	1-5/16	3-9/16	59.31
13/16	1/2	1-1/2	3-1/2	63.81
13/16	5/8	1-1/2	3-5/8	63.81
13/16	3/4	1-1/2	3-3/4	63.81
7/8	1/2	1-1/2	3-1/2	63.81
7/8	5/8	1-1/2	3-5/8	63.81
7/8	3/4	1-1/2	3-3/4	66.60
7/8	7/8	1-1/2	3-3/4	69.21
15/16	5/8	1-1/2	3-3/4	74.25
15/16	3/4	1-1/2	3-3/4	74.25
15/16	7/8	1-1/2	3-3/4	74.25
1	1/2	1-1/2	3-5/8	75.60
1	5/8	1-1/2	3-5/8	75.60
1	3/4	1-1/2	3-3/4	75.60
1	7/8	1-1/2	3-3/4	84.15
1	1	1-5/8	4-1/8	92.70
1-1/16	3/4	1-5/8	3-7/8	103.50
1-1/8	3/4	1-5/8	3-7/8	107.82
1-1/8	7/8	1-5/8	3-7/8	116.01
1-1/8	1	1-5/8	4-1/8	121.14
1-1/4	3/4	1-5/8	3-7/8	134.10
1-1/4	1	1-5/8	4-1/8	129.60
1-3/8	3/4	1-5/8	3-7/8	144.00
1-3/8	1	1-5/8	4-1/8	154.80
1-1/2	3/4	1-5/8	3-7/8	162.90
1-1/2	1	1-5/8	4-1/8	189.90
1-1/2	1-1/4	1-5/8	4-1/8	189.90

Sizes larger than 1-1/2 are available upon request.

MDX SUPERIOR IMPORT

List No. 231T

Diameter of Cut	Shank Diameter	Length of Cut	Overall Length	Price Each
1/8	3/8	3/8	2-5/16	17.24
5/32	3/8	3/8	2-5/16	17.24
3/16	3/8	7/16	2-5/16	17.24
7/32	3/8	1/2	2-5/16	17.24
1/4	3/8	1/2	2-5/16	17.24
9/32	3/8	9/16	2-5/16	17.24
5/16	3/8	9/16	2-5/16	17.24
11/32	3/8	9/16	2-5/16	17.24
3/8	3/8	9/16	2-5/16	17.24
13/32	3/8	13/16	2-1/2	23.00
7/16	3/8	13/16	2-1/2	23.00
15/32	3/8	13/16	2-1/2	23.00
1/2	3/8	13/16	2-1/2	23.87
1/2	1/2	1	3	24.95
9/16	1/2	1-1/8	3-1/8	31.21
5/8	1/2	1-1/8	3-1/8	33.88
5/8	5/8	1-5/16	3-7/16	34.20
11/16	1/2	1-5/16	3-5/16	37.66
11/16	5/8	1-5/16	3-7/16	37.66
3/4	1/2	1-5/16	3-5/16	39.46
3/4	5/8	1-5/16	3-7/16	39.46
3/4	3/4	1-5/16	3-9/16	39.46
13/16	1/2	1-1/2	3-1/2	39.46
13/16	5/8	1-1/2	3-5/8	49.36
13/16	3/4	1-1/2	3-3/4	49.36
7/8	1/2	1-1/2	3-1/2	49.36
7/8	5/8	1-1/2	3-5/8	49.36
7/8	3/4	1-1/2	3-3/4	49.36
7/8	7/8	1-1/2	3-3/4	50.98
15/16	5/8	1-1/2	3-3/4	55.66
15/16	3/4	1-1/2	3-3/4	55.66
15/16	7/8	1-1/2	3-3/4	55.66
1	1/2	1-1/2	3-5/8	55.66
1	5/8	1-1/2	3-5/8	55.66
1	3/4	1-1/2	3-3/4	55.66
1	7/8	1-1/2	3-3/4	55.66
1	1	1-5/8	4-1/8	60.73
1-1/16	3/4	1-5/8	3-7/8	77.04
1-1/8	3/4	1-5/8	3-7/8	77.04
1-1/8	7/8	1-5/8	3-7/8	81.90
1-1/8	1	1-5/8	4-1/8	86.54
1-1/4	3/4	1-5/8	3-7/8	92.16
1-1/4	7/8	1-5/8	3-7/8	92.16
1-1/4	1	1-5/8	4-1/8	93.74
1-3/8	3/4	1-5/8	3-7/8	117.07
1-3/8	1	1-5/8	4-1/8	120.53
1-1/2	3/4	1-5/8	3-7/8	117.25
1-1/2	1	1-5/8	4-1/8	128.45
1-1/2	1-1/4	1-5/8	4-1/8	128.45

Sets

Size	Pcs.	Description	Made in U.S.A. Set No.	Made in U.S.A. Price	Quality Import Set No.	Quality Import Price
1/8, 3/16, 1/4, 5/16, 3/8, 1/2	6	TiN Coated, 3/8" Shank	231ATU	169.85	231AT	113.87
3/4, 7/8, 1", 1-1/8, 1-1/4, 1-1/2	6	TiN Coated, 3/4" Shank	231STU	606.33	231ST	438.07

All sets are supplied in wood block



Double-End End Mills

High Speed Steel

List No. **261U** – Two Flute
List No. **241U** – Four Flute
List No. **242U** – Four Flute, Center Cut



Diameter of Cut	Two Flute **261U**				Four Flute				
	Shank Diameter	Length of Cut	Overall Length	Price Each	Shank Diameter	Length of Cut	Overall Length	Price Each **241U**	Price Each Center Cut **242U**
1/8	3/8	3/8	3-1/16	22.23	3/8	3/8	3-1/16	20.34	26.91
9/64	3/8	7/16	3-1/8	22.23	3/8	7/16	3-1/4	23.91	—
5/32	3/8	7/16	3-1/8	22.23	3/8	7/16	3-1/8	21.15	27.90
11/64	3/8	7/16	3-1/8	22.23	3/8	1/2	3-1/4	23.91	—
3/16	3/8	7/16	3-1/8	22.23	3/8	1/2	3-1/4	20.34	26.91
13/64	3/8	7/16	3-1/8	22.23	3/8	9/16	3-1/4	23.91	—
7/32	3/8	1/2	3-1/8	22.23	3/8	9/16	3-1/4	21.15	27.90
15/64	3/8	1/2	3-1/8	22.23	3/8	9/16	3-3/8	23.91	—
1/4	3/8	1/2	3-1/8	22.23	3/8	5/8	3-3/8	20.34	26.91
17/64	3/8	9/16	3-1/8	22.23	3/8	11/16	3-3/8	23.91	—
9/32	3/8	9/16	3-1/8	22.23	3/8	11/16	3-3/8	21.15	27.90
19/64	3/8	9/16	3-1/8	22.23	3/8	3/4	3-1/2	23.91	—
5/16	3/8	9/16	3-1/8	22.23	3/8	3/4	3-1/2	20.34	26.91
21/64	3/8	9/16	3-1/8	22.23	3/8	3/4	3-1/2	22.23	—
11/32	3/8	9/16	3-1/8	22.23	3/8	3/4	3-1/2	21.15	27.90
23/64	3/8	9/16	3-1/8	22.23	3/8	3/4	3-1/2	23.91	—
3/8	3/8	9/16	3-1/8	22.23	3/8	3/4	3-1/2	20.34	26.91
25/64	1/2	13/16	3-3/4	33.53	1/2	1	4-1/8	31.73	—
13/32	1/2	13/16	3-3/4	33.53	1/2	1	4-1/8	31.73	27.90
27/64	1/2	13/16	3-3/4	33.53	1/2	1	4-1/8	31.73	—
7/16	1/2	13/16	3-3/4	32.13	1/2	1	4-1/8	30.20	41.40
29/64	1/2	13/16	3-3/4	33.53	1/2	1	4-1/8	31.73	—
15/32	1/2	13/16	3-3/4	33.53	1/2	1	4-1/8	31.46	41.40
31/64	1/2	13/16	3-3/4	33.53	1/2	1	4-1/8	31.73	—
1/2	1/2	13/16	3-3/4	33.53	1/2	1	4-1/8	30.60	40.46
17/32	5/8	1-1/8	4-1/2	44.37	5/8	1-3/8	5	44.29	—
9/16	5/8	1-1/8	4-1/2	44.37	5/8	1-3/8	5	42.29	56.34
19/32	5/8	1-1/8	4-1/2	44.37	5/8	1-3/8	5	42.29	—
5/8	5/8	1-1/8	4-1/2	44.37	5/8	1-3/8	5	42.29	56.34
21/32	3/4	1-5/16	5	55.80	3/4	1-5/8	5-5/8	44.29	—
11/16	3/4	1-5/16	5	55.80	3/4	1-5/8	5-5/8	53.42	71.01
23/32	3/4	1-5/16	5	61.20	3/4	1-5/8	5-5/8	61.20	—
3/4	3/4	1-5/16	5	55.80	3/4	1-5/8	5-5/8	54.43	71.01
25/32	7/8	1-9/16	5-1/2	70.20	7/8	1-7/8	6-1/8	67.05	—
13/16	7/8	1-9/16	5-1/2	70.20	7/8	1-7/8	6-1/8	67.05	90.81
27/32	7/8	1-9/16	5-1/2	70.20	7/8	1-7/8	6-1/8	68.40	—
7/8	7/8	1-9/16	5-1/2	70.20	7/8	1-7/8	6-1/8	67.01	90.81
29/32	1	1-5/8	5-7/8	86.40	1	1-7/8	6-3/8	81.68	—
15/16	1	1-5/8	5-7/8	86.40	1	1-7/8	6-3/8	77.13	110.52
31/32	1	1-5/8	5-7/8	86.40	1	1-7/8	6-3/8	81.68	—
1	1	1-5/8	5-7/8	86.40	1	1-7/8	6-3/8	81.68	110.52

Sets

Size	Pcs.	Description	Set No.	Price
1/8, 5/32, 3/16, 1/4, 5/16, 3/8	6	Two Flute	**261AU**	137.43
1/8, 5/32, 3/16, 1/4, 5/16, 3/8	6	Four Flute	**241AU**	126.90
1/8, 5/32, 3/16, 1/4, 5/16, 3/8	6	Four Flute Center Cutting	**242AU**	166.50

All sets are supplied in wood block



Double-End End Mills

High Speed Steel

List No. **261** – Two Flute
List No. **241** – Four Flute
List No. **242** – Four Flute, Center Cut



Diameter of Cut	Two Flute **261**				Four Flute				
	Shank Diameter	Length of Cut	Overall Length	Price Each	Shank Diameter	Length of Cut	Overall Length	Price Each **241**	Price Each Center Cut **242**
1/8	3/8	3/8	3-1/16	13.07	3/8	3/8	3-1/16	13.07	15.95
9/64	3/8	7/16	3-1/8	13.33	3/8	7/16	3-1/4	13.60	—
5/32	3/8	7/16	3-1/8	13.33	3/8	7/16	3-1/8	13.60	17.54
11/64	3/8	7/16	3-1/8	13.46	3/8	1/2	3-1/4	13.60	—
3/16	3/8	7/16	3-1/8	12.80	3/8	1/2	3-1/4	13.07	15.95
13/64	3/8	1/2	3-1/8	13.73	3/8	9/16	3-1/4	13.60	—
7/32	3/8	1/2	3-1/8	13.33	3/8	9/16	3-1/4	13.60	17.54
15/64	3/8	1/2	3-1/8	13.73	3/8	5/8	3-3/8	13.60	—
1/4	3/8	1/2	3-1/8	12.80	3/8	5/8	3-3/8	13.07	15.95
17/64	3/8	9/16	3-1/8	13.73	3/8	11/16	3-3/8	13.60	—
9/32	3/8	9/16	3-1/8	13.33	3/8	11/16	3-3/8	13.60	17.54
19/64	3/8	9/16	3-1/8	13.73	3/8	3/4	3-1/2	13.60	—
5/16	3/8	9/16	3-1/8	12.80	3/8	3/4	3-1/2	13.07	15.95
21/64	3/8	9/16	3-1/8	13.73	3/8	3/4	3-1/2	13.73	—
11/32	3/8	9/16	3-1/8	13.33	3/8	3/4	3-1/2	13.60	17.54
23/64	3/8	9/16	3-1/8	13.73	3/8	3/4	3-3/8	13.60	—
3/8	3/8	9/16	3-1/8	12.80	3/8	3/4	3-1/2	13.07	15.95
25/64	1/2	13/16	3-3/4	20.20	1/2	1	4-1/8	19.40	—
13/32	1/2	13/16	3-3/4	20.20	1/2	1	4-1/8	18.35	23.12
27/64	1/2	13/16	3-3/4	20.20	1/2	1	4-1/8	19.40	—
7/16	1/2	13/16	3-3/4	18.88	1/2	1	4-1/8	19.40	24.06
29/64	1/2	13/16	3-3/4	20.20	1/2	1	4-1/8	19.40	—
15/32	1/2	13/16	3-3/4	20.20	1/2	1	4-1/8	20.20	24.24
31/64	1/2	13/16	3-3/4	20.20	1/2	1	4-1/8	20.20	—
1/2	1/2	13/16	3-3/4	20.20	1/2	1	4-1/8	19.67	22.82
17/32	5/8	1-1/8	4-1/2	26.66	5/8	1-3/8	5	27.46	—
9/16	5/8	1-1/8	4-1/2	26.66	5/8	1-3/8	5	26.66	31.20
19/32	5/8	1-1/8	4-1/2	26.66	5/8	1-3/8	5	26.66	—
5/8	5/8	1-1/8	4-1/2	26.66	5/8	1-3/8	5	26.27	30.74
21/32	3/4	1-5/16	5	34.32	3/4	1-5/8	5-5/8	34.67	—
11/16	3/4	1-5/16	5	33.00	3/4	1-5/8	5-5/8	33.66	39.05
23/32	3/4	1-5/16	5	34.98	3/4	1-5/8	5-5/8	35.35	—
3/4	3/4	1-5/16	5	33.00	3/4	1-5/8	5-5/8	34.32	40.15
25/32	7/8	1-9/16	5-1/2	37.39	7/8	1-7/8	6-1/8	43.51	—
13/16	7/8	1-9/16	5-1/2	41.98	7/8	1-7/8	6-1/8	42.90	50.62
27/32	7/8	1-9/16	5-1/2	43.51	7/8	1-7/8	6-1/8	43.51	—
7/8	7/8	1-9/16	5-1/2	42.24	7/8	1-7/8	6-1/8	42.24	49.84
29/32	1	1-5/8	5-7/8	53.02	1	1-7/8	6-3/8	53.02	—
15/16	1	1-5/8	5-7/8	51.48	1	1-7/8	6-3/8	45.54	54.65
31/32	1	1-5/8	5-7/8	53.02	1	1-7/8	6-3/8	51.48	—
1	1	1-5/8	5-7/8	51.48	1	1-7/8	6-3/8	51.48	61.78
1-1/2	1-1/2	2	7-1/2	122.10	—	—	—	—	—

Sets

Size	Pcs.	Description	Set No.	Price
1/8, 5/32, 3/16, 1/4, 5/16, 3/8	6	Two Flute	**261A**	81.65
1/8, 3/16, 1/4, 5/16, 3/8, 1/2	6	Two Flute	**261B**	88.52
1/8, 5/32, 3/16, 1/4, 5/16, 3/8	6	Four Flute	**241A**	83.00
1/8, 3/16, 1/4, 5/16, 3/8, 1/2	6	Four Flute	**241B**	89.07
1/8, 5/32, 3/16, 1/4, 5/16, 3/8	6	Center Cutting, Four Flute	**242A**	97.02

All sets are supplied in wood block



TiN-Coated Double-End End Mills

High Speed

High Speed Steel



MADE IN USA

MICHIGAN DRILL & CUTTING TOOLS

List No. **261TU** – Two Flute
List No. **241TU** – Four Flute

	Two Flute **261TU**				Four Flute **241TU**			
Diameter of Cut	Shank Diameter	Length of Cut	Overall Length	Price Each	Shank Diameter	Length of Cut	Overall Length	Price Each
1/8	3/8	3/8	3-1/16	37.35	3/8	3/8	3-1/16	37.35
5/32	3/8	7/16	3-1/8	37.35	3/8	7/16	3-1/8	38.25
3/16	3/8	7/16	3-1/8	37.35	3/8	1/2	3-1/4	37.35
7/32	3/8	1/2	3-1/8	38.25	3/8	9/16	3-1/4	38.25
1/4	3/8	1/2	3-1/8	37.35	3/8	5/8	3-3/8	37.35
9/32	3/8	9/16	3-1/8	38.25	3/8	11/16	3-3/8	38.25
5/16	3/8	9/16	3-1/8	37.35	3/8	3/4	3-1/2	37.35
11/32	3/8	9/16	3-1/8	38.25	3/8	3/4	3-1/2	38.25
3/8	3/8	9/16	3-1/8	37.35	3/8	3/4	3-1/2	37.35
13/32	1/2	13/16	3-3/4	58.50	1/2	1	4-1/8	56.70
7/16	1/2	13/16	3-3/4	56.97	1/2	1	4-1/8	55.35
15/32	1/2	13/16	3-3/4	60.12	1/2	1	4-1/8	56.85
1/2	1/2	13/16	3-3/4	56.25	1/2	1	4-1/8	55.23
9/16	5/8	1-1/8	4-1/2	80.91	5/8	1-3/8	5	77.70
5/8	5/8	1-1/8	4-1/2	75.69	5/8	1-3/8	5	80.76
11/16	3/4	1-5/16	5	111.62	3/4	1-5/8	5-5/8	100.80
3/4	3/4	1-5/16	5	98.10	3/4	1-5/8	5-5/8	100.80
13/16	7/8	1-9/16	5-1/2	116.10	7/8	1-7/8	6-1/8	122.83
7/8	7/8	1-9/16	5-1/2	119.70	7/8	1-7/8	6-1/8	123.30
15/16	1	1-5/8	5-7/8	135.00	1	1-7/8	6-3/8	146.70
1	1	1-5/8	5-7/8	148.50	1	1-7/8	6-3/8	146.70

List No. **261T** – Two Flute
List No. **241T** – Four Flute

MDX® SUPERIOR IMPORT

	Two Flute **261T**				Four Flute **241T**			
Diameter of Cut	Shank Diameter	Length of Cut	Overall Length	Price Each	Shank Diameter	Length of Cut	Overall Length	Price Each
1/8	3/8	3/8	3-1/16	30.13	3/8	3/8	3-1/16	30.13
5/32	3/8	7/16	3-1/8	30.49	3/8	7/16	3-1/8	30.85
3/16	3/8	7/16	3-1/8	29.77	3/8	1/2	3-1/4	30.13
7/32	3/8	1/2	3-1/8	30.49	3/8	9/16	3-1/4	30.85
1/4	3/8	1/2	3-1/8	29.77	3/8	5/8	3-3/8	30.13
9/32	3/8	9/16	3-1/8	30.49	3/8	11/16	3-3/8	30.85
5/16	3/8	9/16	3-1/8	29.77	3/8	3/4	3-1/2	30.13
11/32	3/8	9/16	3-1/8	30.49	3/8	3/4	3-1/2	30.85
3/8	3/8	9/16	3-1/8	29.77	3/8	3/4	3-1/2	30.13
13/32	1/2	13/16	3-3/4	45.15	1/2	1	4-1/8	42.63
7/16	1/2	13/16	3-3/4	43.35	1/2	1	4-1/8	44.07
15/32	1/2	13/16	3-3/4	45.15	1/2	1	4-1/8	45.15
1/2	1/2	13/16	3-3/4	45.15	1/2	1	4-1/8	44.43
9/16	5/8	1-1/8	4-1/2	57.00	5/8	1-3/8	5	57.00
5/8	5/8	1-1/8	4-1/2	57.00	5/8	1-3/8	5	56.46
11/16	3/4	1-5/16	5	69.31	3/4	1-5/8	5-5/8	70.21
3/4	3/4	1-5/16	5	69.31	3/4	1-5/8	5-5/8	71.11
13/16	7/8	1-9/16	5-1/2	84.67	7/8	1-7/8	6-1/8	85.93
7/8	7/8	1-9/16	5-1/2	85.03	7/8	1-7/8	6-1/8	85.03
15/16	1	1-5/8	5-7/8	101.42	1	1-7/8	6-3/8	93.32
1	1	1-5/8	5-7/8	101.42	1	1-7/8	6-3/8	101.42

Sets

			Made in U.S.A.		Quality Import	
Size	Pcs.	Description	**Set No.**	Price	**Set No.**	Price
1/8, 5/32, 3/16, 1/4, 5/16, 3/8	6	Two Flute, TiN Coated, 3/8" Shank	**261ATU**	224.10	**261AT**	179.28
1/8, 5/32, 3/16, 1/4, 5/16, 3/8	6	Four Flute, TiN Coated, 3/8" Shank	**241ATU**	224.10	**241AT**	179.74



All sets are supplied in wood block

Miniature Double-End End Mills

High Speed Steel & Cobalt

Regular Length – 3/16" Shank, 2-1/4" Overall Length

List No. **265** – H.S. Two Flute
List No. **245** – H.S. Four Flute
List No. **265C** – Cobalt, Two Flute
List No. **245C** – Cobalt, Four Flute, Center Cut



Diameter of Cut	Length of Cut	Price Each			
		Two Flute		Four Flute	
		H.S. 265	Cobalt 265C	H.S. 245	Cobalt 245C
1/32	1/8	17.51	26.91	—	—
3/64	9/64	17.51	26.91	—	—
1/16	3/16	16.34	26.91	15.26	26.91
5/64	15/64	16.34	26.91	15.26	26.91
3/32	9/32	15.66	26.91	15.26	26.91
7/64	21/64	15.66	26.91	15.26	26.91
1/8	3/8	15.66	26.91	15.26	26.91
9/64	13/32	15.66	26.91	15.26	26.91
5/32	7/16	15.66	26.91	15.26	26.91
11/64	1/2	15.66	26.91	15.26	26.91
3/16	1/2	15.66	26.91	15.26	26.91

Sets

Size	Pcs.	Description	Set No.	Price
1/16, 3/32, 1/8, 5/32, 3/16	5	H.S. Two Flute	**265A**	78.75
1/16, 3/32, 1/8, 5/32, 3/16	5	H.S. Four Flute	**245A**	76.05
1/16, 3/32, 1/8, 5/32, 3/16	5	Cobalt Two Flute	**265CA**	134.10
1/16, 3/32, 1/8, 5/32, 3/16	5	Cobalt Four Flute	**245CA**	134.10

All sets are supplied in wood block



Long Length – 3/16" Shank

List No. **266** – H.S. Two Flute
List No. **246** – H.S. Four Flute
List No. **266C** – Cobalt Two Flute
List No. **246C** – Cobalt, Four Flute, Center Cut



Diameter of Cut	Length of Cut	Overall Length	Price Each			
			Two Flute		Four Flute	
			H.S. 266	Cobalt 266C	H.S. 246	Cobalt 246C
1/16	7/32	2-1/2	19.44	29.70	19.71	29.70
5/64	7/32	2-1/2	19.44	29.70	19.71	29.70
3/32	9/32	2-5/8	19.44	29.70	19.71	29.70
7/64	9/32	2-5/8	19.44	29.70	19.71	29.70
1/8	3/4	3-1/8	19.44	29.70	19.71	29.70
9/64	3/4	3-1/8	19.44	29.70	19.71	29.70
5/32	7/8	3-1/4	19.44	29.70	19.71	29.70
11/64	7/8	3-1/4	19.44	29.70	19.71	29.70
3/16	1	3-3/8	19.44	29.70	19.71	29.70

Stub Length – 3/16" Shank, 2" Overall

List No. **266S** – H.S. Two Flute
List No. **246S** – H.S. Four Flute, Center Cut
List No. **266CS** – Cobalt, Two Flute
List No. **246CS** – Cobalt, Four Flute, Center Cut



Diameter of Cut	Length of Cut	Price Each			
		Two Flute		Four Flute	
		H.S. 266S	Cobalt 266CS	H.S. 246S	Cobalt 246CS
1/32	3/64	16.25	21.60	—	—
3/64	1/16	14.27	21.60	—	21.60
1/16	3/32	14.27	21.60	14.45	21.60
5/64	1/8	14.27	21.60	14.45	21.60
3/32	9/64	14.04	21.60	14.45	21.60
7/64	5/32	14.04	21.60	14.45	21.60
1/8	3/16	14.04	21.60	14.45	21.60
9/64	7/32	14.04	21.60	14.45	21.60
5/32	15/64	14.04	21.60	14.45	21.60
11/64	1/4	14.04	21.60	14.45	21.60
3/16	9/32	14.04	21.60	14.45	21.60

Metric End Mills

High Speed Steel

List No. **231M** – Two Flute, Single End
List No. **205M** – Four Flute, Single End



Diameter of Cut (mm)	Two Flute 231M				Four Flute 205M			
	Shank Diameter	Length of Cut	Overall Length	Price Each	Shank Diameter	Length of Cut	Overall Length	Price Each
2.00	3/8	1/4	2-5/16	11.48	3/8	1/4	2-5/16	11.28
2.50	3/8	9/32	2-5/16	11.48	3/8	9/32	2-5/16	11.28
3.00	3/8	3/8	2-5/16	11.48	3/8	3/8	2-5/16	11.28
3.50	3/8	3/8	2-5/16	11.48	3/8	3/8	2-3/8	11.28
4.00	3/8	7/16	2-5/16	11.48	3/8	1/2	2-3/8	11.28
4.50	3/8	7/16	2-5/16	11.48	3/8	1/2	2-3/8	11.28
5.00	3/8	1/2	2-5/16	11.48	3/8	9/16	2-1/2	11.28
5.50	3/8	1/2	2-5/16	11.48	3/8	5/8	2-7/16	11.28
6.00	3/8	1/2	2-5/16	11.48	3/8	5/8	2-1/2	11.28
7.00	3/8	9/16	2-5/16	11.48	3/8	3/4	2-1/2	11.28
8.00	3/8	9/16	2-5/16	11.48	3/8	3/4	2-1/2	11.28
9.00	3/8	9/16	2-5/16	11.48	3/8	3/4	2-1/2	11.28
10.00	3/8	13/16	2-1/2	13.92	3/8	1	2-11/16	13.92
11.00	3/8	13/16	2-1/2	16.75	3/8	1	2-11/16	15.11
12.00	3/8	13/16	2-1/2	17.62	3/8	1	2-11/16	15.44
12.00	1/2	1-1/8	3	17.62	—	—	—	—
12.50	1/2	1	3	21.84	1/2	1-1/4	3-1/4	17.35
13.00	1/2	1-1/8	3-1/8	21.84	1/2	1-1/4	3-1/4	17.62
14.00	1/2	1-1/8	3-1/8	21.84	1/2	1-1/4	3-1/4	17.62
15.00	1/2	1-1/8	3-1/8	21.84	1/2	1-3/8	3-3/8	18.41
16.00	1/2	1-1/8	3-1/8	23.42	—	—	—	—
16.00	5/8	1-5/16	3-7/16	23.42	5/8	1-5/8	3-3/4	21.17
18.00	1/2	1-5/16	3-7/16	26.06	1/2	1-1/2	3-5/8	23.75
18.00	5/8	1-5/16	3-7/16	26.06	5/8	1-5/8	3-3/4	23.75
18.00	—	—	—	—	3/4	1-5/8	3-3/4	23.75
19.00	3/4	1-5/16	3-7/16	26.86	3/4	1-5/8	3-3/4	25.14
20.00	5/8	1-1/2	3-3/4	31.21	5/8	1-7/8	4-1/8	25.14
20.00	3/4	1-1/2	3-3/4	31.21	3/4	1-7/8	4-1/8	25.14
21.00	5/8	1-1/2	3-3/4	33.32	—	—	—	—
22.00	3/4	1-1/2	3-3/4	33.32	3/4	1-7/8	4-1/8	32.07
22.00	7/8	1-1/2	3-3/4	33.32	7/8	1-7/8	4-1/8	32.07
24.00	1/2	2	4-1/2	39.66	3/4	2	4-1/2	37.55
24.00	3/4	2	4-1/2	39.66	7/8	2	4-1/2	37.55
25.00	3/4	2	4-1/2	39.66	3/4	1-7/8	4-1/2	39.53
25.00	1	2	4-1/2	39.66	1	2	4-1/2	39.53
26.00	3/4	2	4-1/2	65.99	3/4	2	4-1/2	98.00
26.00	1	2	4-1/2	65.99	1	2	4-1/2	64.68
30.00	1	2	4-1/2	65.99	1	2	4-1/2	66.00
32.00	1	2	4-1/2	75.23	1	2	4-1/2	72.59
36.00	1	2	4-1/2	75.23	1	2	4-1/2	72.59
40.00	—	—	—	—	1-1/4	2	4-1/2	125.40
50.00	—	—	—	—	1-1/4	2	4-1/2	125.40

Sets

Size	Pcs.	Description	High Speed Steel		TiN Coated	
			Set No.	Price	**Set No.**	Price
3.00, 5.00, 7.00, 8.00, 10.00, 12.00	6	Two Flute, 3/8" Shank with wood block	**231MA**	77.22	**231MAT**	137.22
3.00, 5.00, 7.00, 8.00, 10.00, 12.00	6	Four Flute, 3/8" Shank with wood block	**205MA**	74.58	**205MAT**	134.58
14.00 x 1/2 shank, 16.00 x 5/8 shank, 20.00 x 3/4 shank, 24.00 x 3/4 shank	4	Two Flute with wood block	**231MB**	116.16	**231MBT**	176.16
14.00 x 1/2 shank, 16.00 x 5/8 shank, 20.00 x 3/4 shank, 24.00 x 3/4 shank	4	Four Flute with wood block	**205MB**	101.64	**205MBT**	161.64
3.00, 4.00, 5.00, 6.00, 8.00, 10.00, 12.00, 14.00, 18.00 x 5/8, 20.00 x 3/4	10	Two Flute with plastic case	**231MD**	78.05	**231MDT**	101.45
3.00, 4.00, 5.00, 6.00, 8.00, 10.00, 12.00, 14.00, 18.00 x 5/8, 20.00 x 3/4	10	Four Flute with plastic case	**205MF**	78.05	**205MFT**	101.45
3.00, 4.00, 5.00, 6.00, 8.00, 10.00, 12.00, 14.00, 18.00 x 5/8, 20.00 x 3/4	20	Two & Four Flute with plastic case	**205MM**	148.23	**205MMT**	195.00





Metric Double-End End Mills

High Speed Steel

List No. **261M** – Two Flute
List No. **241M** – Four Flute



Diameter of Cut	Two Flute 261M				Four Flute 241M			
	Shank Diameter	Length of Cut	Overall Length	Price Each	Shank Diameter	Length of Cut	Overall Length	Price Each
2.00	3/8	1/4	3	13.72	3/8	1/4	3	13.72
3.00	3/8	3/8	3-1/16	13.72	3/8	3/8	3-1/16	13.72
4.00	3/8	7/16	3-1/8	13.72	3/8	7/16	3-1/8	13.72
5.00	3/8	1/2	3-1/8	13.72	3/8	9/16	3-1/4	13.72
6.00	3/8	1/2	3-1/8	13.72	3/8	5/8	3-3/8	13.72
7.00	3/8	9/16	3-1/8	13.72	3/8	11/16	3-3/8	13.72
8.00	3/8	9/16	3-1/8	13.72	3/8	3/4	3-1/2	13.72
9.00	3/8	9/16	3-1/8	13.72	3/8	3/4	3-1/2	13.72
10.00	1/2	13/16	3-3/4	21.20	1/2	1	4-1/8	21.20
11.00	1/2	13/16	3-3/4	21.20	1/2	1	4-1/8	21.20
12.00	1/2	13/16	3-3/4	21.20	1/2	1	4-1/8	21.20
13.00	5/8	1-1/8	4-1/2	28.00	5/8	1-3/8	5	28.00
14.00	5/8	1-1/8	4-1/2	28.00	5/8	1-3/8	5	28.00
15.00	5/8	1-1/8	4-1/2	28.00	5/8	1-3/8	5	28.00
16.00	3/4	1-5/16	5	34.65	3/4	1-5/8	5-5/8	38.50
18.00	3/4	1-5/16	5	34.65	3/4	1-5/8	5-5/8	38.50
20.00	7/8	1-9/16	5-1/2	39.26	7/8	1-7/8	6-1/8	45.00
22.00	7/8	1-9/16	5-1/2	39.26	7/8	1-7/8	6-1/8	45.00
24.00	1	1-5/8	5-7/8	54.05	1	1-7/8	6-3/8	47.81
25.00	---	---	---	---	1	1-7/8	6-3/8	47.81

Left Hand End Mills

High Speed Steel

Single End

List No. **205LH** – Four Flute
List No. **231LH** – Two Flute



Dia. of Cut	Shank Dia.	Four Flute 205LH			Two Flute 231LH		
		Length of Cut	Overall Length	Price Each	Length of Cut	Overall Length	Price Each
1/8	3/8	3/8	2-5/16	12.38	3/8	2-5/16	11.68
3/16	3/8	1/2	2-3/8	12.38	3/8	2-5/16	11.68
7/32	3/8	5/8	2-3/8	13.68	---	---	---
1/4	3/8	5/8	2-1/2	12.38	1/2	2-5/16	11.68
5/16	3/8	3/4	2-1/2	12.38	9/16	2-5/16	11.68
3/8	3/8	3/4	2-1/2	12.38	9/16	2-3/8	11.68
7/16	3/8	1	2-11/16	16.11	13/16	2-1/2	15.20
1/2	1/2	1-1/4	3-1/4	16.11	1	3	15.20
1/2	1/2	2	4	24.00	2	4	24.00
9/16	1/2	1-3/8	3-3/8	22.58	1-1/8	3-1/8	21.30
5/8	5/8	1-5/8	3-3/4	23.93	1-5/16	3-7/16	22.58
5/8	5/8	4	6-1/2	36.00	4	6-1/2	35.10
11/16	5/8	1-5/8	3-3/4	24.65	1-5/16	3-7/16	23.25
3/4	5/8	1-5/8	3-3/4	25.36	1-5/16	3-7/16	24.62
3/4	3/4	2	4-1/4	26.54	1-5/16	3-7/16	24.62
3/4	3/4	3	5-1/2	49.00	---	---	---
13/16	5/8	1-7/8	4	36.54	1-1/2	3-5/8	22.48
7/8	5/8	1-7/8	4	32.30	1-1/2	3-5/8	31.06

Dia. of Cut	Shank Dia.	Four Flute 205LH			Two Flute 231LH		
		Length of Cut	Overall Length	Price Each	Length of Cut	Overall Length	Price Each
7/8	3/4	1-7/8	4-1/8	32.30	1-1/2	3-5/8	31.06
15/16	5/8	---	---	---	1-1/2	3-5/8	35.64
15/16	3/4	---	---	---	1-1/2	3-3/4	35.64
15/16	7/8	1-7/8	4-1/8	37.06	---	---	---
1	3/4	---	---	---	1-1/2	3-3/4	37.48
1	7/8	---	---	---	1-1/2	3-3/4	37.48
1	1	2	4-1/2	39.00	3	5-1/2	59.50
1-1/4	1	1-7/8	4	68.77	---	---	---
1-1/4*	1	4*	6-1/2	120.12	---	---	---
1-1/4	1-1/4	2	4-1/2	68.77	2	4-1/2	68.77
1-1/4*	1-1/4	2*	4-1/2	68.73	---	---	---
1-1/4	1-1/4	3	5-1/2	87.78	---	---	---
1-1/4*	1-1/4	6*	8-1/2	140.00	---	---	---
1-1/2*	1-1/4	2*	4-1/2	98.00	---	---	---
1-1/2	1-1/4	4	6-1/2	124.74	---	---	---
1-1/2	1-1/4	7	9-1/2	195.00	---	---	---
1-7/8	1-1/4	2	4-1/2	215.00	---	---	---
2	1-1/4	1-1/2	4	208.00	1-5/8	4-1/2	208.00

* Supplied with 6 flutes not 4 flutes.

Double End

List No. **261LH** – Two Flute
List No. **241LH** – Four Flute



Dia. of Cut	Shank Dia.	Two Flute 261LH			Four Flute 241LH		
		Length of Cut	Overall Length	Price Each	Length of Cut	Overall Length	Price Each
1/8	3/8	3/8	3-1/8	14.95	3/8	3-1/4	14.95
5/32	3/8	7/16	3-1/8	14.95	7/16	3-1/4	14.95
3/16	3/8	7/16	3-1/8	14.95	1/2	3-1/4	14.95
7/32	3/8	1/2	3-1/8	14.95	9/16	3-1/4	14.95
1/4	3/8	1/2	3-1/8	14.95	5/8	3-3/8	14.95
9/32	3/8	9/16	3-1/8	15.05	11/16	3-3/8	14.95
5/16	3/8	9/16	3-1/8	15.05	3/4	3-3/8	15.05
11/32	3/8	9/16	3-1/8	15.05	3/4	3-3/8	15.05
3/8	3/8	9/16	3-1/8	15.05	3/4	3-3/8	15.05

Dia. of Cut	Shank Dia.	Two Flute 261LH			Four Flute 241LH		
		Length of Cut	Overall Length	Price Each	Length of Cut	Overall Length	Price Each
13/32	1/2	13/16	3-3/4	24.24	3/4	3-3/8	24.24
7/16	1/2	13/16	3-3/4	24.24	1	4-1/8	24.24
15/32	1/2	13/16	3-3/4	24.24	1	4-1/8	24.24
1/2	1/2	13/16	3-3/4	24.24	1	4-1/8	28.00
9/16	5/8	1-1/8	4-1/2	32.00	1-3/8	5	32.00
5/8	5/8	1-1/8	4-1/2	32.00	1-3/8	5	35.20
3/4	3/4	1-5/16	5	36.30	1-5/8	5-5/8	38.72
7/8	7/8	1-9/16	5-1/2	48.57	1-7/8	6-1/4	48.57
1	1	1-5/8	5-7/8	59.02	1-7/8	6-1/2	59.02

Ball Nose End Mills

High Speed Steel



Regular Length

MADE IN USA — MICHIGAN DRILL & CUTTING TOOLS

List No. **291U** – Two Flute

Diameter of Cut	Shank Diameter	Length of Cut	Overall Length	Price Each
1/8	3/8	3/8	2-5/16	20.70
3/16	3/8	1/2	2-3/8	20.70
1/4	3/8	5/8	2-7/16	20.70
9/32	3/8	3/4	2-1/2	23.40
5/16	3/8	3/4	2-1/2	23.40
3/8	3/8	3/4	2-1/2	23.40
7/16	1/2	1	3	30.71
1/2	1/2	1	3	30.71
9/16	1/2	1-1/8	3-1/8	43.20
5/8	1/2	1-1/8	3-1/8	48.60
5/8	5/8	1-3/8	3-1/2	48.60
11/16	1/2	1-5/16	3-5/16	55.80
11/16	5/8	1-5/16	3-5/16	55.80
3/4	1/2	1-5/16	3-5/16	58.50
3/4	3/4	1-5/8	3-7/8	58.50
13/16	1/2	1-1/2	3-1/2	69.17
13/16	3/4	2	4-1/2	69.17
7/8	3/4	2	4-1/4	69.17
7/8	7/8	2	4-1/4	69.17
27/32	1/2	1-1/2	3-1/2	77.20
15/16	1/2	1-1/2	3-1/2	86.40
15/16	3/4	2-1/4	4-1/2	86.40
15/16	7/8	2-1/4	4-1/2	86.40
1	1	2-1/4	4-3/4	86.40
1-1/8	7/8	2-1/4	4-3/4	116.10
1-1/8	1	2-1/4	4-3/4	116.10
1-1/4	1-1/4	2-1/2	5	117.90
1-3/8	1-1/4	2-1/2	5	127.80
1-1/2	1-1/4	2-1/2	5	144.45
2	1-1/4	2-1/2	5	231.75

MDX SUPERIOR IMPORT

List No. **291** – Two Flute,

Diameter of Cut	Shank Diameter	Length of Cut	Overall Length	Price Each
1/8	3/8	3/8	2-1/4	13.46
5/32	3/8	1/2	2-3/8	13.46
3/16	3/8	1/2	2-3/8	13.46
7/32	3/8	5/8	2-7/16	13.46
1/4	3/8	5/8	2-7/16	13.46
9/32	3/8	3/4	2-1/2	15.18
5/16	3/8	3/4	2-1/2	15.18
11/32	3/8	3/4	2-1/2	15.18
3/8	3/8	3/4	2-1/2	15.18
13/32	3/8	1	3	19.93
7/16	1/2	1	3	19.93
15/32	3/8	1	3	19.93
1/2	1/2	1	3	19.93
9/16	1/2	1-1/8	3-1/8	25.74
5/8	1/2	1-1/8	3-1/8	29.70
5/8	5/8	1-3/8	3-1/2	29.70
11/16	1/2	1-5/16	3-5/16	32.93
3/4	1/2	1-5/16	3-5/16	34.98
3/4	3/4	1-5/8	3-7/8	34.98
13/16	3/4	2	4-1/2	42.90
7/8	3/4	2	4-1/2	44.88
7/8	7/8	2	4-1/4	44.88
15/16	3/4	2-1/4	4-1/2	56.10
1	3/4	2-1/4	4-1/2	56.10
1	1	2-1/4	4-3/4	56.10
1-1/8	3/4	2-1/4	4-1/2	66.00
1-1/8	1	2-1/4	4-3/4	66.00
1-1/4	3/4	1-5/8	4-1/8	78.00
1-1/4	1-1/4	2-1/2	5	76.56
1-3/8	3/4	1-5/8	4-1/8	83.82
1-3/8	1-1/4	2-1/2	5	85.93
1-1/2	3/4	2-1/2	4-3/4	93.72
1-1/2	1-1/4	2-1/2	5	93.72
2	1-1/4	2-1/2	5	151.14

Sets

Size	Pcs.	Description	Made in U.S.A. Set No.	Made in U.S.A. Price	Quality Import Set No.	Quality Import Price
1/8, 3/16, 1/4, 5/16, 3/8, 1/2	6	Two Flute, Regular Length	**291AUS**	139.62	**291AS**	90.75

All sets are supplied in wood block



Extension Type

MADE IN USA — MICHIGAN DRILL & CUTTING TOOLS



List No. **293U** – Two Flute

Diameter of Cut	Shank Diameter	Length of Cut	Overall Length	Price Each
1/8	3/8	3/8	2-3/8	31.06
3/16	3/8	1/2	2-11/16	31.06
1/4	3/8	5/8	3-1/16	31.06
5/16	3/8	3/4	3-5/16	33.94
3/8	3/8	3/4	3-5/16	33.94
7/16	1/2	1	3	44.64
1/2	1/2	1	4	41.58
5/8	5/8	1-3/8	4-5/8	67.50
3/4	3/4	1-5/8	5-3/8	81.90
7/8	7/8	2	6	82.98
1	1	2-1/2	7-1/4	130.50
1-1/4	1-1/4	3	7-1/4	148.50

MDX SUPERIOR IMPORT

List No. **293** – Two Flute

Diameter of Cut	Shank Diameter	Length of Cut	Overall Length	Price Each
1/8	3/8	3/8	2-3/8	16.32
3/16	3/8	1/2	2-11/16	16.32
1/4	3/8	5/8	3-1/16	17.00
5/16	3/8	3/4	3-5/16	20.10
3/8	3/8	3/4	3-5/16	19.58
7/16	1/2	1	3	28.26
1/2	1/2	1	4	26.36
5/8	5/8	1-3/8	4-5/8	35.92
3/4	3/4	1-5/8	5-3/8	43.90
7/8	7/8	2	6	53.28
1	1	2-1/2	7-1/4	69.96
1-1/4	1-1/4	3	7-1/4	75.78

Ball Nose End Mills

High Speed Steel

Multi Flute – Regular Length

List No. **294** – Center Cutting



Diameter of Cut	Shank Diameter	Length of Cut	Overall Length	No. of Flutes	Price Each
1/8	3/8	7/16	2-5/16	4	26.00
3/16	3/8	9/16	2-7/16	4	27.90
1/4	3/8	5/8	2-7/16	4	27.90
5/16	3/8	3/4	2-1/2	4	27.90
3/8	3/8	3/4	2-1/2	4	27.90
7/16	1/2	1	3	4	31.05
1/2	1/2	1	3	4	32.40
9/16	1/2	1-1/8	3-1/8	4	43.20
5/8	1/2	1-1/8	3-1/8	4	48.60
5/8	5/8	1-3/8	3-1/2	4	48.60
11/16	1/2	1-5/16	3-5/16	4	55.80
3/4	3/4	1-5/8	3-7/8	4	56.70
7/8	7/8	1-7/8	4-1/8	4	79.20
1	1	2	4-1/2	4	93.60
1	1	2	4-1/2	6	93.60
1-1/4	1-1/4	2	4-1/2	4	111.60
1-1/4	1-1/4	2	4-1/2	6	111.60
1-1/2	1-1/4	2	4-1/2	4	153.00
1-1/2	1-1/4	2	4-1/2	6	153.00

Multi Flute – Long Length

List No. **294L** – Center Cutting



Diameter of Cut	Shank Diameter	Length of Cut	Overall Length	No. of Flutes	Price Each
1/4	3/8	1-1/4	3-1/16	4	32.64
1/4	3/8	1-3/4	3-1/2	4	40.50
5/16	3/8	1-3/8	3-1/8	4	32.64
5/16	3/8	2	3-3/4	4	40.50
3/8	3/8	1-1/2	3-1/4	4	34.02
3/8	3/8	2-1/2	4-1/2	4	42.00
1/2	1/2	2	4	4	45.00
1/2	1/2	3	5	4	77.00
5/8	5/8	2-1/2	4-5/8	4	59.94
5/8	5/8	4	6-1/8	4	71.10
3/4	3/4	3	5-1/4	4	68.40
3/4	3/4	4	6-1/8	4	80.55
7/8	7/8	3-1/2	5-3/4	4	117.00
7/8	7/8	5	7-1/4	4	133.20
1	1	4	6-1/2	4	113.94
1-1/4	1-1/4	4	6-1/2	4	135.72
1-1/4	1-1/4	4	6-1/2	6	135.72
1-1/4	1-1/4	6	8-1/2	4	152.10
1-1/4	1-1/4	6	8-1/2	6	152.10
1-1/2	1-1/4	4	6-1/2	4	185.94
1-1/2	1-1/4	4	6-1/2	6	185.94
1-1/2	1-1/4	6	8-1/2	4	205.20

Ball Nose Double-End End Mills

High Speed Steel

Regular Length

List No. **292** – Two Flute Import
List No. **292U** – Two Flute USA



Diameter of Cut	Shank Diameter	Length of Cut	Overall Length	Price Each 292	Price Each 292U
1/8	3/8	3/8	3-1/16	29.70	48.00
5/32*	3/8	7/16	3-1/8	30.78	48.00
3/16	3/8	7/16	3-1/8	29.70	48.00
7/32	3/8	1/2	3-1/8	30.78	48.00
1/4*	3/8	1/2	3-1/8	29.70	48.00
9/32	3/8	9/16	3-1/8	30.78	48.00
5/16*	3/8	9/16	3-1/8	29.70	48.00
11/32	3/8	9/16	3-1/8	30.78	48.00
3/8	3/8	9/16	3-1/8	29.70	48.00
7/16	1/2	13/16	3-3/4	41.40	68.00
1/2*	1/2	13/16	3-3/4	41.40	68.00
9/16	1/2	1-1/8	3-1/8	49.50	79.00
5/8	5/8	1-1/8	4-1/2	57.60	89.00
3/4*	3/4	1-5/16	5	72.00	115.00
7/8	7/8	1-9/16	5-1/2	88.67	140.00
1	1	1-5/8	5-7/8	109.80	169.00

** Available in 4 Flute Use List No. 292M*

Miniature - 3/16" Shank

List No. **268** – H.S., Regular Length
List No. **268C** – Cobalt, Regular Length
List No. **269** – H.S. Long Length



Diameter of Cut	Regular Length 268: Length of Cut	Overall Length	Price Each H.S.	Price Each Cobalt	Long Length 269: Length of Cut	Overall Length	Price Each
1/32	1/8	2-1/4	23.81	28.96	—	—	—
3/64	9/64	2-1/4	23.81	28.96	7/32	2-1/2	31.77
1/16	3/16	2-1/4	23.81	28.96	7/32	2-1/2	31.77
5/64	15/64	2-1/4	23.81	28.96	1/4	2-1/2	31.77
3/32	9/32	2-1/4	23.81	28.96	9/32	2-5/8	30.47
7/64	21/64	2-1/4	23.81	28.96	9/32	2-5/8	30.47
1/8	3/8	2-1/4	23.81	28.96	3/4	3-1/8	30.47
9/64	13/32	2-1/4	23.81	28.96	3/4	3-1/8	30.47
5/32	7/16	2-1/4	23.81	28.96	7/8	3-1/4	30.47
11/64	1/2	2-1/4	23.81	28.96	7/8	3-1/4	30.47
3/16	1/2	2-1/4	24.17	28.96	1	3-3/8	30.47

3-Flute End Mills

High Speed Steel & Cobalt

Three flute end mills are used for production milling of slots, pockets, keyways, and other general purpose applications. These end mills, single and double end, have a one tooth to center design with chip-free action which allows the machinist to feed endwise and still maintain a high quality finish on slotting.

Standard Flute



List No. **238** – High Speed Steel, Center Cutting
List No. **238C** – Cobalt, Center Cutting

Diameter of Cut	Shank Diameter	Length of Cut	Overall Length	Price Each H.S. 238	Price Each Cobalt 238C
1/8	3/8	3/8	2-5/16	11.09	15.00
3/16	3/8	1/2	2-3/8	11.09	21.50
1/4	3/8	5/8	2-1/2	11.09	21.50
5/16	3/8	3/4	2-1/2	11.09	21.50
3/8	3/8	3/4	2-1/2	13.15	21.50
7/16	3/8	1	2-11/16	14.46	29.00
1/2	3/8	1	2-11/16	14.46	–
1/2	1/2	1-1/4	3-1/4	14.79	29.00
9/16	1/2	1-3/8	3-3/8	21.24	–
5/8	1/2	1-3/8	3-3/8	21.24	–
5/8	5/8	1-5/8	3-3/4	21.24	39.00
11/16	1/2	1-5/8	3-5/8	22.00	–
11/16	5/8	1-5/8	3-3/4	22.00	–
3/4	1/2	1-5/8	3-5/8	25.34	–
3/4	5/8	1-5/8	3-3/4	25.34	49.50
3/4	3/4	1-5/8	3-7/8	25.34	49.50

Diameter of Cut	Shank Diameter	Length of Cut	Overall Length	Price Each H.S. 238	Price Each Cobalt 238C
7/8	5/8	1-7/8	4	30.27	–
7/8	3/4	1-7/8	4-1/8	30.27	–
7/8	7/8	1-7/8	4-1/8	30.27	–
1	5/8	1-7/8	4	36.36	–
1	3/4	1-7/8	4-1/8	36.36	–
1	7/8	1-7/8	4-1/8	36.36	–
1	1	2	4-1/2	36.36	79.50
1-1/8	1	2	4-1/2	49.95	110.00
1-1/4	1	2	4-1/2	58.40	–
1-1/4	1-1/4	2	4-1/2	62.37	115.00
1-3/8	1	2	4-1/2	69.01	–
1-3/8	1-1/4	2	4-1/2	69.01	–
1-1/2	1	2	4-1/2	75.65	–
1-1/2	1-1/4	2	4-1/2	75.65	149.00
1-3/4	1-1/4	2	4-1/2	80.97	169.00
2	1-1/4	2	4-1/2	99.73	189.00

Long Flute



List No. **239** – High Speed Steel, Center Cutting
List No. **239C** – Cobalt, Center Cutting

Diameter of Cut	Shank Diameter	Length of Cut	Overall Length	Price Each H.S. 239	Price Each Cobalt 239C
1/4	3/8	1-1/4	3-1/8	17.13	28.50
5/16	3/8	1-3/8	3-1/8	17.13	28.50
3/8	3/8	1-1/2	3-1/4	17.51	28.50
7/16	1/2	1-3/4	3-3/4	24.30	–
1/2	1/2	2	4	24.51	37.26
5/8	5/8	2-1/2	4-5/8	34.51	55.00
3/4	3/4	3	5-1/4	42.47	71.88

Diameter of Cut	Shank Diameter	Length of Cut	Overall Length	Price Each H.S. 239	Price Each Cobalt 239C
7/8	7/8	3-1/2	5-3/4	53.09	–
1	1	4	6-1/2	70.35	121.31
1-1/4	1-1/4	4	6-1/2	103.53	155.00
1-1/2	1-1/4	4	6-1/2	132.46	210.00
1-3/4	1-1/4	4	6-1/2	208.37	270.00
2	1-1/4	4	6-1/2	229.20	314.99
2	2	4	7-3/4	241.20	314.99

3-Flute Double-End End Mills

High Speed Steel



List No. **263** – Center Cutting

Diameter of Cut	Shank Diameter	Length of Cut	Overall Length	Price Each
1/8	3/8	3/8	3-1/8	15.97
5/32	3/8	7/16	3-1/8	17.00
3/16	3/8	1/2	3-1/8	15.97
7/32	3/8	9/16	3-1/8	15.97
1/4	3/8	5/8	3-3/8	15.97
9/32	3/8	11/16	3-3/8	17.00
5/16	3/8	3/4	3-3/8	15.97
11/32	3/8	3/4	3-3/8	17.00
3/8	3/8	3/4	3-3/8	15.97
7/16	1/2	1	4-1/4	24.15

Diameter of Cut	Shank Diameter	Length of Cut	Overall Length	Price Each
15/32	1/2	1	4-1/4	24.15
1/2	1/2	1	4-1/4	24.15
9/16	5/8	1-3/8	5	34.01
5/8	5/8	1-3/8	5	34.01
11/16	3/4	1-5/8	5-3/8	42.00
3/4	3/4	1-5/8	5-5/8	43.27
13/16	7/8	1-1/2	6-1/4	55.00
7/8	7/8	1-7/8	6-1/4	58.93
15/16	1	1-7/8	6-1/4	71.67
1	1	1-7/8	6-1/2	71.67

High Helix End Mills for Aluminum

High Speed Steel

These end mills are designed to cut aluminum and non-ferrous materials at high material removal rates, therefore, providing better work piece tolerances, surface finishes and cuts without vibration, chatter or scaring.



Two Flute, Center Cutting

List No. **235** – Regular Length
List No. **236** – Long Flute Length
List No. **237** – Extra Long Flute Length

		Regular Length **235**			Long Flute Length **236**			Extra Long Flute Length **237**		
Diameter of Cut	Shank Diameter	Length of Cut	Overall Length	Price Each	Length of Cut	Overall Length	Price Each	Length of Cut	Overall Length	Price Each
1/4	3/8	5/8	2-1/2	15.53	1-1/4	3-1/8	18.00	1-3/4	3-1/2	20.30
5/16	3/8	3/4	2-1/2	15.53	1-3/8	3-1/8	18.00	2	3-3/4	20.88
3/8	3/8	3/4	2-1/2	15.53	1-1/2	3-1/4	18.00	2-1/2	4-1/4	21.92
7/16	1/2*	1	2-11/16	18.95	1-3/4	3-1/4	24.12	2-3/4	4-3/4	29.25
1/2	1/2	1-1/4	3-1/4	21.06	2	4	24.53	3	5	29.25
5/8	1/2	1-3/8	3-5/8	32.94	—	—	—	—	—	—
5/8	5/8	1-5/8	3-3/4	29.41	2-1/2	4-5/8	32.94	4	6-1/8	40.55
3/4	1/2	1-5/8	3-5/8	34.05	—	—	—	—	—	—
3/4	3/4	1-5/8	3-7/8	30.65	3	5-1/4	42.57	4	6-1/4	57.60
7/8	7/8	1-7/8	4-1/8	44.37	3-1/2	5-3/4	56.70	5	7-1/4	66.47
1	3/4	1-7/8	4-1/8	56.85	—	—	—	—	—	—
1	1	2	4-1/2	51.17	4	6-1/2	74.25	6	8-1/2	90.36
1-1/8	3/4	2	4-1/4	75.00	—	—	—	—	—	—
1-1/4	3/4	2	4-1/2	87.20	—	—	—	—	—	—
1-1/4	1-1/4	2	4-1/2	78.48	4	6-1/2	106.12	6	8-1/2	133.10
1-3/8	3/4	2	4-1/4	95.00	—	—	—	—	—	—
1-1/2	3/4	2	4-1/4	108.35	—	—	—	—	—	—
1-1/2	1-1/4	2	4-1/2	97.52	4	6-1/2	134.54	6	8-1/2	188.83
1-1/2	1-1/4	—	—	—	—	—	—	8	10-1/2	209.81
1-3/4	1-1/4	2	4-1/2	129.03	4	6-1/2	187.20	—	—	—
2	1-1/4	2	4-1/2	154.38	4	6-1/2	216.92	—	—	—

** 3/8 Shank on List No. 235*

Ball End, Two Flute

List No. **235B** – Regular Length
List No. **236B** – Long Flute Length
List No. **237B** – Extra Long Flute Length



		Regular Length **235B**			Long Flute Length **236B**			Extra Long Flute Length **237B**		
Diameter of Cut	Shank Diameter	Length of Cut	Overall Length	Price Each	Length of Cut	Overall Length	Price Each	Length of Cut	Overall Length	Price Each
1/4	3/8	5/8	2-1/2	20.19	1-1/4	3-1/8	23.40	1-3/4	3-1/2	26.39
5/16	3/8	3/4	2-1/2	20.19	1-3/8	3-1/8	23.40	2	3-3/4	27.14
3/8	3/8	3/4	2-1/2	20.19	1-1/2	3-1/4	23.40	2-1/2	4-1/4	28.50
7/16	1/2	1	2-11/16	24.64	1-3/4	3-1/4	31.36	2-3/4	4-3/4	38.03
1/2	1/2	1-1/4	3-1/4	27.38	2	4	31.89	3	5	38.03
5/8	1/2	1-3/8	3-3/8	42.05	—	—	—	—	—	—
5/8	5/8	1-5/8	3-3/4	38.23	2-1/2	4-5/8	42.82	4	6-1/8	52.72
3/4	1/2	1-5/8	3-5/8	44.27	—	—	—	—	—	—
3/4	3/4	1-5/8	3-7/8	39.85	3	5-1/4	55.34	4	6-1/4	74.88
7/8	3/4	1-7/8	4-1/8	63.45	—	—	—	—	—	—
7/8	7/8	1-7/8	4-1/8	57.68	3-1/2	5-3/4	73.71	5	7-1/4	86.41
1	3/4	1-7/8	4-1/8	73.91	—	—	—	—	—	—
1	1	2	4-1/2	66.52	4	6-1/2	96.53	6	8-1/2	117.47
1-1/8	3/4	2	4-1/4	97.50	—	—	—	—	—	—
1-1/4	3/4	2	4-1/4	113.36	—	—	—	—	—	—
1-1/4	1-1/4	2	4-1/2	102.02	4	6-1/2	137.96	6	8-1/2	173.03
1-3/8	3/4	2	4-1/4	123.50	—	—	—	—	—	—
1-1/2	3/4	2	4-1/4	140.86	—	—	—	—	—	—
1-1/2	1-1/4	2	4-1/2	126.78	4	6-1/2	174.90	6	8-1/2	245.48
1-3/4	1-1/4	2	4-1/2	167.74	4	6-1/2	243.36	—	—	—
2	1-1/4	2	4-1/2	200.69	4	6-1/2	282.00	—	—	—

Cobalt & TiN Coated Cobalt Multi Flute End Mills

Center Cutting



List No. **205CU** – Regular Length, Cobalt
List No. **205CUT** – Regular Length, TiN Coated Cobalt
List No. **206CU** – Long Length, Cobalt
List No. **206CUT** – Long Length, TiN Coated Cobalt
List No. **207CU** – Extra Long Length, Cobalt
List No. **207CUT** – Extra Long Length, TiN Coated Cobalt

MADE IN USA — MICHIGAN DRILL & CUTTING TOOLS

			Regular				Long Length				Extra Long Length			
Dia. of Cut	Shank Dia.	No. of Flutes	Flute Length	Overall Length	Cobalt **205CU**	TiN/Cob. **205CUT**	Length of Cut	Overall Length	Cobalt **206CU**	TiN/Cob. **206CUT**	Length of Cut	Overall Length	Cobalt **207CU**	TiN/Cob. **207CUT**
1/8	3/8	4	3/8	2-5/16	26.10	35.10	—	—	—	—	—	—	—	—
3/16	3/8	4	1/2	2-3/8	26.10	35.10	—	—	—	—	—	—	—	—
1/4	3/8	4	5/8	2-7/16	26.10	35.10	1-1/4	3-1/8	35.55	45.00	1-3/4	3-9/16	42.30	54.00
5/16	3/8	4	3/4	2-1/2	26.10	35.10	1-3/8	3-1/8	35.55	45.00	2	3-3/4	42.30	54.00
3/8	3/8	4	3/4	2-1/2	26.10	35.10	1-1/2	3-1/4	35.55	45.00	2-1/2	4-1/4	42.30	54.00
7/16	3/8	4	1	2-11/16	37.80	46.80	—	—	—	—	—	—	—	—
1/2	3/8	4	1	2-11/16	40.41	54.81	—	—	—	—	—	—	—	—
1/2	1/2	4	1-1/4	3-1/4	40.41	54.81	2	4	47.25	63.45	3	5	55.80	72.00
9/16	1/2	4	1-3/8	3-3/8	49.50	63.90	—	—	—	—	—	—	—	—
5/8	1/2	4	1-3/8	3-3/8	58.50	72.90	—	—	—	—	—	—	—	—
5/8	5/8	4	1-5/8	3-3/4	58.50	72.90	2-1/2	4-5/8	70.20	92.70	4	6-1/8	87.75	114.75
3/4	3/4	4	1-5/8	3-7/8	71.10	94.50	3	5-1/4	87.30	116.10	4	6-1/4	103.50	130.50
7/8	3/4	4	1-7/8	4-1/8	94.50	117.90	—	—	—	—	—	—	—	—
7/8	7/8	4	1-7/8	4-1/8	94.50	117.90	3-1/2	5-3/4	108.00	144.00	5	7-1/4	149.00	192.00
1	1	4	2	4-1/2	112.50	135.90	4	6-1/2	143.10	183.60	6	8-1/2	175.50	229.50
1	1	6	2	4-1/2	112.50	135.90	4	6-1/2	143.10	183.60	—	—	—	—
1-1/8	3/4	6	1-1/2	3-7/8	157.50	180.90	—	—	—	—	—	—	—	—
1-1/4	3/4	6	1-1/2	3-7/8	144.00	167.40	—	—	—	—	—	—	—	—
1-1/4	1-1/4	4	2	4-1/2	144.00	167.40	4	6-1/2	202.50	256.50	6	8-1/2	211.50	312.30
1-1/4	1-1/4	6	2	4-1/2	144.00	167.40	4	6-1/2	202.50	256.50	6	8-1/2	247.50	312.30
1-3/8	3/4	6	1-1/2	3-7/8	153.00	167.40	—	—	—	—	—	—	—	—
1-1/2	3/4	6	1-1/2	3-7/8	189.00	224.10	—	—	—	—	—	—	—	—
1-1/2	1-1/4	4	2	4-1/2	189.00	224.10	4	6-1/2	240.00	290.00	6	10-1/2	315.00	347.40
1-1/2	1-1/4	6	2	4-1/2	189.00	224.10	—	—	—	—	—	—	—	—
1-3/4	1-1/4	6	2	4-1/2	351.00	386.10	—	—	—	—	—	—	—	—
2	1-1/4	6	2	4-1/2	405.00	440.10	—	—	—	—	—	—	—	—

List No. **205C** – Regular Length, Cobalt
List No. **206C** – Long Length, Cobalt
List No. **207C** – Extra Long Length, Cobalt

MDX® SUPERIOR IMPORT

			Regular Length **205C**			Long Length **206C**			Extra Long Length **207C**		
Diameter of Cut	Shank Diameter	No. of Flutes	Flute Length	Overall Length	Price Each	Length of Cut	Overall Length	Price Each	Length of Cut	Overall Length	Price Each
1/8	3/8	4	3/8	2-5/16	19.44	—	—	—	—	—	—
5/32	3/8	4	7/16	2-1/4	19.44	—	—	—	—	—	—
3/16	3/8	4	1/2	2-3/8	19.44	—	—	—	—	—	—
7/32	3/8	4	5/8	2-3/8	19.44	—	—	—	—	—	—
1/4	3/8	4	5/8	2-7/16	19.44	1-1/4	3-1/16	27.90	1-3/4	3-9/16	30.87
9/32	3/8	4	3/4	2-1/2	19.44	—	—	—	—	—	—
5/16	3/8	4	3/4	2-1/2	19.44	1-3/8	3-1/8	27.90	2	3-3/4	30.87
11/32	3/8	4	3/4	2-1/2	19.44	—	—	—	—	—	—
3/8	3/8	4	3/4	2-1/2	19.44	1-1/2	3-1/4	27.90	2-1/2	4-1/4	33.30
13/32	3/8	4	1	2-11/16	29.03	—	—	—	—	—	—
7/16	3/8	4	1	2-11/16	29.03	—	—	—	—	—	—
7/16	1/2	4	—	—	—	1-3/4	3-3/4	36.90	—	—	—
15/32	3/8	4	1	2-11/16	29.03	—	—	—	—	—	—
1/2	3/8	4	1	2-11/16	29.03	—	—	—	—	—	—
1/2	1/2	4	1-1/4	3-1/4	30.42	2	4	36.90	3	5	43.20
1/2	1/2	6	1-1/2	3-1/4	30.42	—	—	—	—	—	—
9/16	1/2	4	1-3/8	3-3/8	43.20	—	—	—	—	—	—
5/8	1/2	4	1-3/8	3-3/8	43.20	—	—	—	—	—	—

Continued on Next Page ▶

Cobalt Multi Flute End Mills

Center Cutting ▶ *Continued*

List No. **205C** – Regular Length, Cobalt
List No. **206C** – Long Length, Cobalt
List No. **207C** – Extra Long Length, Cobalt



Cobalt

MDX® SUPERIOR IMPORT

			Regular Length **205C**			Long Length **206C**			Extra Long Length **207C**		
Diameter of Cut	Shank Diameter	No. of Flutes	Flute Length	Overall Length	Price Each	Length of Cut	Overall Length	Price Each	Length of Cut	Overall Length	Price Each
5/8	5/8	4	1-5/8	3-3/4	43.20	2-1/2	4-5/8	54.00	4	6-1/8	71.55
5/8	5/8	6	1-5/8	3-3/8	43.20	—	—	—	—	—	—
11/16	5/8	4	1-5/8	3-3/4	59.40	—	—	—	—	—	—
3/4	1/2	4	1-5/8	3-5/8	54.00	3	5-1/4	54.00	—	—	—
3/4	5/8	4	1-5/8	3-3/4	54.00	—	—	—	—	—	—
3/4	3/4	4	1-5/8	3-7/8	54.00	3	5-1/4	67.50	4	6-1/4	79.88
3/4	3/4	6	1-5/8	3-7/8	54.00	3	5-1/4	67.50	4	6-1/4	79.88
13/16	3/4	4	1-7/8	4-1/8	69.21	—	—	—	—	—	—
7/8	5/8	6	1-7/8	4-1/8	69.21	—	—	—	—	—	—
7/8	3/4	4	1-7/8	4-1/8	69.21	—	—	—	—	—	—
7/8	7/8	4	1-7/8	4-1/8	69.21	3-1/2	5-3/4	81.90	5	7-1/4	115.00
7/8	7/8	6	1-7/8	4-1/8	69.21	—	—	—	—	—	—
15/16	1/2	6	1-7/8	4-1/8	79.20	—	—	—	—	—	—
15/16	3/4	4	1-7/8	4-1/8	79.20	—	—	—	—	—	—
15/16	7/8	4	1-7/8	4-1/8	79.20	—	—	—	—	—	—
1	5/8	6	1-7/8	4	82.80	—	—	—	—	—	—
1	3/4	4	1-7/8	4-1/8	82.80	4	6-1/2	108.00	—	—	—
1	3/4	6	1-7/8	4-1/8	82.80	—	—	—	—	—	—
1	1	4	2	4-1/2	82.80	4	6-1/2	108.00	6	8-1/2	135.00
1	1	6	2	4-1/2	82.80	3	5-1/2	95.85	6	8-1/2	135.00
1-1/16	3/4	6	2	4-1/4	118.80	—	—	—	—	—	—
1-1/8	3/4	6	2	4-1/2	118.80	—	—	—	—	—	—
1-1/8	7/8	6	2	4-1/2	118.80	—	—	—	—	—	—
1-1/8	1	4	2	4-1/2	118.80	—	—	—	—	—	—
1-1/8	1	6	2	4-1/2	118.80	4	6-1/2	153.00	—	—	—
1-3/16	3/4	6	2	4-1/2	118.80	—	—	—	—	—	—
1-1/4	3/4	6	2	4-1/4	118.80	—	—	—	—	—	—
1-1/4	1	6	2	4-1/4	118.80	4	6-1/2	153.00	—	—	—
1-1/4	1-1/4	6	—	—	—	3	5-1/2	139.00	—	—	—
1-1/4	1-1/4	4	2	4-1/2	118.80	4	6-1/2	153.00	6	8-1/2	190.80
1-1/4	1-1/4	6	2	4-1/2	118.80	4	6-1/2	153.00	6	8-1/2	190.80
1-5/16	3/4	6	2	4-1/2	124.00	—	—	—	—	—	—
1-3/8	3/4	6	2	4-1/2	124.00	—	—	—	—	—	—
1-3/8	1	6	2	4-1/2	124.00	—	—	—	—	—	—
1-7/16	3/4	6	2	4-1/2	140.40	—	—	—	—	—	—
1-1/2	3/4	6	2	4-1/2	140.40	—	—	—	—	—	—
1-1/2	1	6	2	4-1/2	140.40	—	—	—	—	—	—
1-1/2	1-1/4	4	2	4-1/2	140.40	3	5-1/2	189.00	—	—	—
1-1/2	1-1/4	6	2	4-1/2	140.40	4	6-1/2	233.10	8	10-1/2	256.50
1-5/8	3/4	6	1-1/2	3-7/8	161.46	—	—	—	—	—	—
1-5/8	1	6	2	4-1/2	161.40	—	—	—	—	—	—
1-3/4	3/4	6	1-1/2	3-7/8	211.50	—	—	—	—	—	—
1-3/4	1-1/4	4	2	4-1/2	211.50	4	6-1/2	268.92	—	—	—
1-3/4	1-1/4	6	2	4-1/2	211.50	4	6-1/2	268.92	—	—	—
1-7/8	1-1/4	6	2	4-1/2	243.25	—	—	—	—	—	—
2	1-1/4	6	—	—	—	3	5-1/2	271.35	—	—	—
2	1-1/4	4	2	4-1/2	254.70	4	6-1/2	294.30	—	—	—
2	1-1/4	6	2	4-1/2	254.70	4	6-1/2	294.30	—	—	—
2	1-1/4	8	2	4-1/2	—	4	6-1/2	294.30	—	—	—
2	2	4	—	—	—	4	7-3/4	294.30	—	—	—

Sets

Size	Pcs.	Description	Made in U.S.A.		Quality Import	
			Set No.	Price	**Set No.**	Price
1/8, 3/16, 1/4, 5/16, 3/8, 1/2	6	Regular Length, 3/8" Shank	**205CAU**	174.71	**205CA**	130.03

All sets are supplied in wood block



Cobalt Two Flute End Mills

Cobalt



MADE IN USA

MICHIGAN DRILL & CUTTING TOOLS

List No. **231CU** – Two Flute, Center Cutting

Diameter of Cut	Shank Diameter	Length of Cut	Overall Length	Price Each
1/8	3/8	3/8	2-5/16	26.10
5/32	3/8	7/16	2-5/16	26.10
3/16	3/8	7/16	2-5/16	26.10
7/32	3/8	1/2	2-5/16	26.10
1/4	3/8	1/2	2-5/16	26.10
9/32	3/8	9/16	2-5/16	26.10
5/16	3/8	9/16	2-5/16	26.10
11/32	3/8	9/16	2-5/16	26.10
3/8	3/8	9/16	2-5/16	26.10
13/32	3/8	13/16	2-1/2	35.10
7/16	1/2	1	3	35.10
15/32	3/8	13/16	2-1/2	35.10
1/2	3/8	13/16	2-1/2	35.10
1/2	1/2	1	3	35.10
9/16	1/2	1-1/8	3-1/8	44.10
5/8	1/2	1-1/8	3-3/8	49.50
5/8	5/8	1-5/16	3-7/16	49.50
3/4	1/2	1-5/16	3-7/16	62.10
3/4	5/8	1-5/16	3-7/16	62.10

Diameter of Cut	Shank Diameter	Length of Cut	Overall Length	Price Each
3/4	3/4	1-5/16	3-9/16	62.10
13/16	5/8	1-1/2	3-5/8	76.40
7/8	3/4	1-1/2	3-3/4	80.10
7/8	7/8	1-1/2	3-3/4	80.10
15/16	5/8	1-1/2	3-3/8	99.00
15/16	7/8	1-1/2	3-3/4	99.00
1	5/8	1-1/2	3-5/8	99.00
1	3/4	1-1/2	3-3/4	99.00
1	1	1-5/8	4-1/8	99.00
1-1/8	7/8	1-5/8	4-5/16	119.00
1-1/8	1	1-5/8	4-1/2	119.00
1-1/4	7/8	1-5/8	4-5/16	125.10
1-1/4	1-1/4	1-5/8	4-1/8	125.10
1-1/2	1	1-5/8	4-1/2	179.10
1-1/2	1-1/4	1-5/8	4-1/8	179.10
1-5/8	1-1/4	1-5/8	4-1/2	189.50
1-3/4	1-1/4	1-5/8	4-1/8	199.00
1-7/8	1-1/4	1-5/8	4-1/2	215.00
2	1-1/4	1-5/8	4-1/8	225.00

List No. **231C** – Two Flute, Center Cutting

MDX® SUPERIOR IMPORT

Diameter of Cut	Shank Diameter	Length of Cut	Overall Length	Price Each
1/8	3/8	3/8	2-5/16	19.26
5/32	3/8	3/8	2-5/16	19.26
3/16	3/8	7/16	2-5/16	19.26
7/32	3/8	1/2	2-5/16	19.26
1/4	3/8	1/2	2-5/16	19.26
9/32	3/8	9/16	2-5/16	19.26
5/16	3/8	9/16	2-5/16	19.26
11/32	3/8	9/16	2-5/16	19.26
3/8	3/8	9/16	2-5/16	19.26
13/32	3/8	13/16	2-1/2	27.18
7/16	3/8	13/16	2-1/2	27.18
15/32	3/8	13/16	2-1/2	27.18
1/2	3/8	13/16	2-1/2	27.18
1/2	1/2	1	3	27.18
9/16	1/2	1-1/8	3-1/8	37.17
5/8	1/2	1-1/8	3-3/8	36.00
5/8	5/8	1-5/16	3-7/16	36.00
11/16	1/2	1-5/16	3-7/16	45.00
11/16	5/8	1-5/16	3-7/16	45.00
3/4	1/2	1-5/16	3-7/16	45.00
3/4	5/8	1-5/16	3-7/16	45.00
3/4	3/4	1-5/16	3-9/16	45.00
13/16	5/8	1-1/2	3-5/8	52.92
13/16	3/4	1-1/2	3-5/8	52.92
7/8	1/2	1-1/2	3-1/2	61.74
7/8	5/8	1-1/2	3-5/8	61.74
7/8	3/4	1-1/2	3-3/4	61.74
7/8	7/8	1-1/2	3-3/4	61.74
15/16	1/2	1-1/2	3-3/4	67.50
15/16	3/4	1-1/2	3-3/4	67.50

Diameter of Cut	Shank Diameter	Length of Cut	Overall Length	Price Each
1	1/2	1-1/2	3-1/2	72.00
1	5/8	1-1/2	3-5/8	72.00
1	3/4	1-1/2	3-3/4	72.00
1	7/8	1-1/2	3-3/4	72.00
1	1	1-5/8	4-1/8	72.00
1-1/16	5/8	1-5/8	3-7/8	97.20
1-1/16	3/4	1-5/8	3-7/8	97.20
1-1/16	7/8	1-5/8	4-5/16	97.20
1-1/8	3/4	1-5/8	3-7/8	97.20
1-1/8	7/8	1-5/8	4-5/16	97.20
1-1/8	1	1-5/8	4-1/8	97.20
1-3/16	3/4	1-5/8	3-7/8	95.40
1-1/4	3/4	1-5/8	3-7/8	95.40
1-1/4	7/8	1-5/8	4-5/16	97.20
1-1/4	1	1-5/8	4-1/8	95.40
1-1/4	1-1/4	1-5/8	4-1/8	95.40
1-5/16	3/4	1-5/8	3-7/8	132.12
1-3/8	3/4	1-5/8	4-1/8	132.12
1-3/8	1	1-5/8	4-1/8	132.12
1-3/8	1-1/4	1-5/8	4-1/8	132.12
1-1/2	3/4	1-5/8	3-7/8	142.65
1-1/2	1	1-5/8	4-1/8	142.65
1-1/2	1-1/4	1-5/8	4-1/8	142.65
1-5/8	3/4	1-5/8	3-7/8	157.50
1-5/8	1-1/4	1-5/8	4-1/8	157.50
1-3/4	1-1/4	1-5/8	4-1/8	171.00
1-7/8	3/4	1-5/8	3-7/8	180.00
1-7/8	1-1/4	1-5/8	4-1/8	178.20
2	1-1/4	1-5/8	4-1/8	186.48
2-1/4	1-1/4	1-5/8	4-1/8	248.50

Sets

Size	Pcs.	Description	Made in USA Set No.	Made in USA Price	Quality Import Set No.	Quality Import Price
1/8, 3/16, 1/4, 5/16, 3/8, 1/2	6	Cobalt, 3/8" Shank	**231CUA**	166.50	**231CA**	124.20
3/4, 7/8, 1", 1-1/8, 1-1/4, 1-1/2	6	Cobalt, 3/4" Shank	—	—	**231CS**	517.50

All sets are supplied in wood block



Cobalt Double-End End Mills



For milling abrasive, high strength thermal resistant metals. Recognized for great abrasive resistance and high red hardness. For higher speeds, feeds and easy resharpening.

Cobalt

List No. **261CU** – Two Flute, Center Cutting
List No. **241CU** – Four Flute, Center Cutting

MADE IN USA — MICHIGAN DRILL & CUTTING TOOLS

		Two Flute **261CU**			Four Flute **241CU**		
Diameter of Cut	Shank Diameter	Length of Cut	Overall Length	Price Each	Length of Cut	Overall Length	Price Each
1/8	3/8	3/8	3-1/16	35.10	3/8	3-1/16	37.80
5/32	3/8	7/16	3-1/8	35.10	7/16	3-1/8	37.80
3/16	3/8	7/16	3-1/8	35.10	1/2	3-1/4	37.80
7/32	3/8	1/2	3-1/8	35.10	9/16	3-1/4	37.80
1/4	3/8	1/2	3-1/8	35.10	5/8	3-3/8	37.80
9/32	3/8	9/16	3-1/8	35.10	11/16	3-3/8	37.80
5/16	3/8	9/16	3-1/8	35.10	3/4	3-1/2	37.80
11/32	3/8	9/16	3-1/8	35.10	3/4	3-1/2	37.80
3/8	3/8	9/16	3-1/8	35.10	3/4	3-1/2	37.80
13/32	1/2	13/16	3-3/4	44.10	1	4-1/8	49.50
7/16	1/2	13/16	3-3/4	44.10	1	4-1/8	49.50
15/32	1/2	13/16	3-3/4	44.10	1	4-1/8	59.40
1/2	1/2	13/16	3-3/4	52.20	1	4-1/8	59.40
9/16	5/8	1-1/8	4-1/2	62.10	1-3/8	5	71.10
5/8	5/8	1-1/8	4-1/2	69.57	1-3/8	5	84.60
11/16	3/4	1-5/16	5	88.74	1-5/8	5-5/8	94.95
3/4	3/4	1-5/16	5	88.74	1-5/8	5-5/8	100.80
13/16	7/8	1-9/16	5-1/2	116.10	1-7/8	6-1/8	121.50
7/8	7/8	1-9/16	5-1/2	119.70	1-7/8	6-1/8	130.50
15/16	1	1-5/8	5-7/8	134.55	1-7/8	6-3/8	165.60
1	1	1-5/8	5-7/8	141.03	1-7/8	6-3/8	165.60

List No. **261C** – Two Flute, Center Cutting
List No. **241C** – Four Flute, Center Cutting

MDX® SUPERIOR IMPORT

		Two Flute **261C**			Four Flute **241C**		
Diameter of Cut	Shank Diameter	Length of Cut	Overall Length	Price Each	Length of Cut	Overall Length	Price Each
1/8	3/8	3/8	3-1/16	26.90	3/8	3-1/16	26.33
5/32	3/8	7/16	3-1/8	28.44	7/16	3-1/8	26.33
3/16	3/8	7/16	3-1/8	28.44	1/2	3-1/4	26.33
7/32	3/8	1/2	3-1/8	28.44	9/16	3-1/4	26.33
1/4	3/8	1/2	3-1/8	28.44	5/8	3-3/8	26.33
9/32	3/8	9/16	3-1/8	28.98	11/16	3-3/8	26.33
5/16	3/8	9/16	3-1/8	28.44	3/4	3-1/2	26.33
11/32	3/8	9/16	3-1/8	31.23	3/4	3-1/2	28.80
3/8	3/8	9/16	3-1/8	28.44	3/4	3-1/2	26.33
13/32	1/2	13/16	3-3/4	38.12	1	4-1/8	36.90
7/16	1/2	13/16	3-3/4	38.12	1	4-1/8	36.90
15/32	1/2	13/16	3-3/4	41.54	1	4-1/8	40.82
1/2	1/2	13/16	3-3/4	41.54	1	4-1/8	40.82
9/16	5/8	1-1/8	4-1/2	58.50	1-3/8	5	55.35
5/8	5/8	1-1/8	4-1/2	66.31	1-3/8	5	65.16
11/16	3/4	1-5/16	5	83.34	1-5/8	5-5/8	82.35
3/4	3/4	1-5/16	5	87.75	1-5/8	5-5/8	86.85
13/16	7/8	—	—	—	1-7/8	6-1/8	93.00
7/8	7/8	1-9/16	5-1/2	107.10	1-7/8	6-1/8	107.82
15/16	1	—	—	—	1-7/8	6-3/8	130.95
1	1	1-5/8	5-7/8	125.55	1-7/8	6-3/8	130.95

Sets

			Made in USA		Quality Import	
Size	Pcs.	Description	**Set No.**	Price	**Set No.**	Price
1/8, 3/16, 1/4, 5/16, 3/8, 1/2	6	Two Flute	**261CUS**	228.15	**261CS**	179.10
1/8, 3/16, 1/4, 5/16, 3/8, 1/2	6	Four Flute	**241CUS**	248.40	**241CS**	175.50

All sets are supplied in wood block



Cobalt Ball Nose End Mills

Center Cutting

Single End

List No. **291CU** – Two Flute
List No. **294CU** – Four Flute



Diameter of Cut	Shank Diameter	Two Flute **291CU** Length of Cut	Two Flute **291CU** Overall Length	Two Flute **291CU** Price Each	Four Flute **294CU** Length of Cut	Four Flute **294CU** Overall Length	Four Flute **294CU** Price Each
1/8	3/8	3/8	2-5/16	32.40	3/8	2-5/16	32.40
3/16	3/8	1/2	2-3/8	33.30	1/2	2-3/8	33.30
1/4	3/8	5/8	2-7/16	33.30	5/8	2-7/16	33.30
5/16	3/8	3/4	2-1/2	35.10	3/4	2-1/2	35.10
9/32	3/8	3/4	2-1/2	37.35	3/4	2-1/2	37.35
3/8	3/8	3/4	2-1/2	37.35	3/4	2-1/2	37.35
11/32	3/8	3/4	2-1/2	37.35	3/4	2-1/2	37.35
7/16	1/2	3/4	3	44.10	—	—	—
1/2	1/2	1	3	52.20	1-1/4	3-1/4	52.20
5/8	5/8	1-3/8	3-1/2	75.60	1-5/8	3-3/4	75.60
3/4	3/4	1-5/8	3-7/8	88.20	1-5/8	3-7/8	88.20
7/8	3/4	2	4-1/4	112.50	—	—	—
1	1	2-1/4	4-3/4	130.50	2	4-1/2	130.50
1-1/4	1-1/4	2-1/4	4-3/4	170.10	2	4-1/2	179.10
1-1/2	1-1/4	2-1/2	5	225.00	2	4-1/2	234.00

Single or Double End

List No. **291C** – Two Flute, Single End
List No. **294C** – Four Flute, Single End
List No. **292C** – Two Flute, Double End



Diameter of Cut	Shank Diameter	Single End, Two Flute **291C** Length of Cut	Single End, Two Flute **291C** Overall Length	Single End, Two Flute **291C** Price Each	Double End, Two Flute **292C** Length of Cut	Double End, Two Flute **292C** Overall Length	Double End, Two Flute **292C** Price Each	Single End, Four Flute **294C** Length of Cut	Single End, Four Flute **294C** Overall Length	Single End, Four Flute **294C** Price Each
1/8	3/8	3/8	2-5/16	27.00	3/8	3-1/16	44.10	3/8	2-5/16	35.10
5/32	3/8	—	—	—	7/16	3-1/8	49.00	—	—	—
3/16	3/8	1/2	2-3/8	27.00	7/16	3-1/8	44.10	1/2	2-3/8	37.80
7/32	3/8	—	—	—	1/2	3-1/8	49.00	—	—	—
1/4	3/8	5/8	2-7/16	27.00	1/2	3-1/8	44.10	5/8	2-7/16	37.80
9/32	3/8	—	—	—	9/16	3-1/8	49.00	—	—	—
5/16	3/8	3/4	2-1/2	30.15	9/16	3-1/8	44.10	3/4	2-1/2	41.40
11/32	3/8	—	—	—	9/16	3-1/8	49.00	—	—	—
3/8	3/8	3/4	2-1/2	30.15	9/16	3-1/8	44.10	3/4	2-1/2	41.40
13/32	1/2	—	—	—	13/16	3-3/4	59.70	—	—	—
7/16	3/8	1	3	40.50	—	—	—	—	—	—
7/16	1/2	1	3	40.50	13/16	3-3/4	56.70	1	3	50.40
15/32	1/2	—	—	—	13/16	3-3/4	59.70	—	—	—
1/2	1/2	1	3	37.80	13/16	3-3/4	66.24	1-1/4	3-1/4	50.40
9/16	1/2	1-1/8	3-1/8	47.70	—	—	—	1-1/8	3-1/8	68.40
5/8	1/2	1-1/8	3-1/8	54.00	—	—	—	—	—	—
5/8	5/8	1-3/8	3-1/2	54.00	1-5/16	5	85.50	1-5/8	3-3/4	67.95
3/4	3/4	1-5/8	3-7/8	63.00	1-5/16	5	103.50	1-5/8	3-7/8	77.85
7/8	7/8	2	4-1/4	81.90	—	—	—	1-7/8	4-1/8	107.10
1	3/4	2-1/4	4-9/16	106.20	—	—	—	—	—	—
1	1	2-1/4	4-3/4	106.20	1-5/8	5-7/8	153.00	2	4-1/2	117.00
1-1/4	3/4	2-1/2	4-13/16	141.29	—	—	—	—	—	—
1-1/4	1-1/4	2-1/2	5	141.29	—	—	—	2	4-1/2	144.00
1-1/2	3/4	2-1/2	4-13/16	182.78	—	—	—	2	4-1/4	181.80
1-1/2	1-1/4	2-1/2	5	182.78	—	—	—	2	4-1/2	181.80

Cobalt Long & Extra Long Two Flute End Mills



For milling alloyed and non-alloyed steels with medium tensile strength of up to 145,000 PSI, as well as for short chip producing aluminium and copper alloys. Also for materials and cast iron alloys up to 280HB.

List No. **233C** – Center Cutting

Diameter of Cut	Shank Diameter	Length of Cut	Overall Length	Price Each
3/8	3/8	1	2-3/4	28.50
3/8	3/8	1-1/2	3-1/4	31.20
1/2	1/2	1-1/2	3-1/2	37.50
1/2	1/2	2	4	39.60
5/8	5/8	1-5/8	3-3/4	42.00

Diameter of Cut	Shank Diameter	Length of Cut	Overall Length	Price Each
5/8	5/8	2	4-1/8	46.20
3/4	3/4	1-3/4	4	54.00
3/4	3/4	2-1/4	4-1/4	55.80
1	1	2-1/4	4-3/4	89.67
1	1	3	5-1/2	91.80

MillDrill™ 90° Drill Point End Mills

High Speed Steel & Cobalt



Can be used for drilling, slotting, chamfering and profile milling. These end mills are designed for general purpose end milling in most types of materials

List No. **290** – High Speed Steel, Two Flute
List No. **290C** – Cobalt, Two Flute

Dia. of Cut	Shank Diameter	Length of Cut	Overall Length	Price Each H.S. 290	Price Each Cobalt 290C
1/8	3/8	3/8	2-5/16	19.50	29.80
1/4	3/8	5/8	2-7/16	20.95	33.47
5/16	3/8	23/32	2-15/32	20.95	33.47
3/8	3/8	3/4	2-1/2	21.95	35.12
7/16	3/8	1-1/32	2-23/32	31.70	44.38
1/2	1/2	1-1/4	3-1/4	31.70	44.38
9/16	1/2	1-13/32	3-13/32	38.12	55.37

Dia. of Cut	Shank Diameter	Length of Cut	Overall Length	Price Each H.S. 290	Price Each Cobalt 290C
5/8	5/8	1-5/8	3-3/4	42.00	58.80
11/16	5/8	1-21/32	3-25/32	46.95	65.73
3/4	3/4	1-11/16	3-15/16	49.50	69.30
13/16	3/4	1-29/32	4-5/32	62.90	88.06
7/8	3/4	1-15/16	4-3/16	62.30	87.22
15/16	3/4	1-31/32	4-7/32	72.38	94.09
1	3/4	2	4-1/4	71.80	93.34

MillDrill™ Solid Carbide 90° Drill Point End Mills

Solid Carbide & TiAlN Coated



Can be used for drilling, slotting, chamfering and profile milling. These end mills are designed for general purpose end milling in most types of materials

List No. **KS90** – Two Flute
List No. **KSTLN90** – TiAlN Coated, Two Flute

Dia. of Cut	Shank Diameter	Length of Cut	Overall Length	Price Each Solid Carbide KS90	Price Each TiAlN Coated Solid Carbide KSTLN90
1/8	1/8	1/2	1-1/2	16.27	19.67
3/16	3/16	5/8	2	20.00	25.00
1/4	1/4	3/4	2-1/2	24.10	32.60
5/16	5/16	13/16	2-1/2	32.50	44.17
3/8	3/8	1	2-1/2	36.27	47.95

Dia. of Cut	Shank Diameter	Length of Cut	Overall Length	Price Each Solid Carbide KS90	Price Each TiAlN Coated Solid Carbide KSTLN90
7/16	7/16	1	2-3/4	60.00	76.01
1/2	1/2	1	3	65.01	81.68
5/8	5/8	1-1/4	3-1/2	110.02	131.69
3/4	3/4	1-1/2	4	175.05	195.59

Cobalt Roughing End Mills

Rough Profile

For deeper slotting or heavy side cutting in steel.

Cobalt MDX® SUPERIOR IMPORT



Cutter Dia.	Shank Dia.	Length of Cut	Overall Length	No. of Flutes	Tool No.	Price Each
3/16	3/8	1/2	2-3/8	4	**CR6-3**	26.27
1/4	3/8	5/16	2-1/8	4	**CRS8-3**	23.76
1/4	3/8	5/8	2-7/16	4	**CR8-3**	26.27
1/4	3/8	1-1/4	3-1/16	4	**CL8-3**	31.52
9/32	3/8	11/16	2-1/2	4	**CR9-3**	28.90
5/16	3/8	7/16	2-3/16	4	**CRS10-3**	23.76
5/16	3/8	3/4	2-1/2	4	**CR10-3**	26.27
5/16	3/8	1-3/8	3-1/8	4	**CL10-3**	32.01
11/32	3/8	5/8	2-1/2	4	**CR11-3**	29.77
3/8	3/8	7/16	2-3/16	4	**CRS12-3**	23.76
3/8	3/8	3/4	2-1/2	4	**CR12-3**	27.06
3/8	3/8	1-1/2	3-1/4	4	**CL12-3**	32.84
7/16	3/8	1	2-11/16	4	**CR14-3**	32.97
1/2	1/2	5/8	2-5/8	4	**CRS16-4**	32.34
1/2	1/2	1-1/4	3-1/4	4	**CR16-4**	36.96
1/2	1/2	2	4	4	**CL16-4**	42.77
9/16	1/2	1-3/8	3-3/8	4	**CR18-4**	40.85
5/8	5/8	3/4	2-7/8	4	**CRS20-5**	39.27
5/8	5/8	1-5/8	3-3/4	4	**CR20-5**	45.87
5/8	5/8	2-1/2	4-5/8	4	**CL20-5**	59.07
11/16	5/8	1-5/8	3-3/4	4	**CR22-5**	49.17
3/4	5/8	1-5/8	3-3/4	4	**CR24-5**	53.26
3/4	5/8	3	5-1/8	4	**CL24-5**	65.97
3/4	3/4	3/4	3	4	**CRS24-6**	46.00
3/4	3/4	1-5/8	3-3/4	4	**CR24-6**	59.30
3/4	3/4	3	5-1/4	4	**CL24-6**	65.97
3/4	3/4	4	6-1/4	6	**CX24-6**	82.00
13/16	3/4	1-5/8	3-3/4	4	**CR26-6**	59.73
7/8	3/4	1-1/8	3-3/8	5	**CRS28-6**	58.74
7/8	3/4	1-5/8	4-1/8	5	**CR28-6**	59.73
7/8	3/4	3-1/2	5-5/8	4	**CL28-6**	83.66
7/8	7/8	1-7/8	4-1/8	5	**CR28-7**	59.73
7/8	7/8	3-1/2	5-3/4	4	**CL28-7**	83.66
15/16	7/8	1-7/8	4-1/8	4	**CR30-7**	78.13
1	3/4	1-1/8	3-3/8	5	**CRS32-6**	71.45
1	3/4	2	4-1/2	5	**CR32-6**	81.68
1	3/4	4	6-1/4	5	**CL32-6**	89.73
1	1	1-1/8	3-5/8	5	**CRS32-8**	71.45
1	1	2	4-1/2	5	**CR32-8**	81.68
1	1	3	5-1/2	5	**CM32-8**	84.19
1	1	4	6-1/2	6	**CL32-8**	89.73
1	1	6	8-1/2	6	**CX32-8**	118.67
1-1/8	3/4	1-1/8	3-5/8	6	**CRS36-6**	74.75
1-1/8	3/4	2	4-1/4	6	**CR36-6**	86.63
1-1/8	1	2	4-1/2	6	**CR36-8**	86.63
1-1/8	1	3	5-1/2	6	**CM36-8**	97.00
1-1/8	1	3-1/2	6	6	**CL36-8**	110.00
1-1/4	3/4	1-1/8	3-1/2	6	**CRS40-6**	85.54
1-1/4	3/4	2	4-1/4	6	**CR40-6**	100.65
1-1/4	3/4	4	6-1/4	6	**CL40-6**	122.60
1-1/4	1	2	4-1/2	6	**CR40-8**	100.65
1-1/4	1-1/4	1-3/8	3-7/8	6	**CRS40-10**	85.54
1-1/4	1-1/4	2	4-1/2	6	**CR40-10**	100.65
1-1/4	1-1/4	3	5-1/2	6	**CM40-10**	102.76
1-1/4	1-1/4	4	6-1/2	6	**CL40-10**	122.60
1-1/4	1-1/4	6	8-1/2	6	**CX40-10**	157.08
1-3/8	3/4	2	4-1/4	6	**CR44-6**	116.82
1-1/2	3/4	1-1/8	3-5/8	6	**CRS48-6**	110.00
1-1/2	3/4	2	4-1/4	6	**CR48-6**	129.99
1-1/2	3/4	4	6-1/4	6	**CL48-6**	158.40
1-1/2	1-1/4	2	4-1/2	6	**CR48-10**	129.99
1-1/2	1-1/4	3	5-1/2	6	**CM48-10**	134.15
1-1/2	1-1/4	4	6-1/2	6	**CL48-10**	158.40
1-1/2	1-1/4	5	7-1/2	6	**CX48-10**	187.08
1-1/2	1-1/4	6	8-1/2	6	**CX48-10L**	230.34
1-3/4	1-1/4	2	4-1/2	6	**CR56-10**	151.21
1-3/4	1-1/4	4	6-1/2	8	**CL56-10**	212.19
2	3/4	1-1/8	3-5/8	8	**CRS64-6**	155.00
2	3/4	2	4-1/2	8	**CR64-6**	176.72
2	1-1/4	2	4-1/2	8	**CR64-10**	176.72
2	1-1/4	3	5-1/2	8	**CM64-10**	207.90
2	1-1/4	4	6-1/2	8	**CL64-10**	273.57
2	2*	2	5-3/4	8	**CR64-162**	181.50
2	2*	3	6-3/4	8	**CR64-163**	195.20
2	2*	4	7-3/4	8	**CR64-164**	223.74
2	2*	5	8-3/4	8	**CM64-165**	255.20
2	2*	6	9-3/4	8	**CM64-166**	270.60
2	2*	7	10-3/4	8	**CL64-167**	367.62
2	2*	8	11-3/4	8	**CL64-168**	455.40
2	2*	12	15-3/4	8	**CL64-162**	590.70
2-1/2	2	4	7-3/4	8	**CL82-164**	345.00
2-1/2	2*	6	9-3/4	8	**CM82-166**	389.40

** Supplied with combination shanks.*

Fine Profile

For shallow slotting or peripheral milling. Recommended for use in exotic materials.

Cutter Dia.	Shank Dia.	Length of Cut	Overall Length	No. of Flutes	Tool No.	Price Each
1/4	3/8	5/16	2-7/16	4	**CRFS8-3**	23.76
1/4	3/8	5/8	2-7/16	4	**CRF8-3**	28.27
1/4	3/8	1-1/4	3-1/16	4	**CLF8-3**	31.52
5/16	3/8	3/4	2-1/2	4	**CRF10-3**	28.27
5/16	3/8	1-3/8	3-1/8	4	**CLF10-3**	35.00
3/8	3/8	7/16	2-1/2	4	**CRFS12-3**	23.76
3/8	3/8	3/4	2-1/2	4	**CRF12-3**	29.90
3/8	3/8	1-1/2	3-1/4	4	**CLF12-3**	35.00
7/16	3/8	1	2-11/16	4	**CRF14-3**	37.96
1/2	1/2	1-1/4	3-1/4	4	**CRF16-4**	39.40
1/2	1/2	2	4	4	**CLF16-4**	45.00
9/16	1/2	1-3/8	3-3/8	4	**CRF18-4**	48.71
5/8	5/8	3/4	3-3/4	4	**CRFS20-5**	39.27
5/8	5/8	1-5/8	3-3/4	4	**CRF20-5**	51.55
5/8	5/8	2-1/2	4-5/8	4	**CLF20-5**	62.50
3/4	5/8	1-5/8	3-3/4	4	**CRF24-5**	58.62
3/4	3/4	1-5/8	3-3/4	4	**CRF24-6**	60.87
3/4	3/4	3	5-1/4	4	**CLF24-6**	70.96
7/8	3/4	1-5/8	4-1/8	5	**CRF28-6**	66.45
7/8	7/8	1-7/8	4-1/8	5	**CRF28-7**	66.45
7/8	7/8	3-1/2	5-3/4	5	**CLF28-7**	93.00
1	3/4	2	4-1/2	5	**CRF32-6**	97.38
1	1	2	4-1/2	5	**CRF32-8**	97.38
1	1	3	5-1/2	5	**CMF32-8**	102.35
1	1	4	6-1/2	6	**CLF32-8**	110.36
1-1/8	1	2	4-1/2	6	**CRF36-8**	109.13
1-1/4	1	2	4-1/2	6	**CRF40-8**	115.25
1-1/4	1-1/4	2	4-1/2	6	**CRF40-10**	115.25
1-1/4	1-1/4	3	5-1/2	6	**CMF40-10**	118.70
1-1/4	1-1/4	4	6-1/2	6	**CLF40-10**	128.18
1-1/2	1-1/4	1-1/4	6-1/2	6	**CRFS48-10**	128.18
1-1/2	1-1/4	2	4-1/2	6	**CRF48-10**	135.26
1-1/2	1-1/4	3	5-1/2	6	**CMF48-10**	144.00
1-1/2	1-1/4	4	6-1/2	6	**CLF48-10**	162.50
1-3/4	1-1/4	2	4-1/2	6	**CRF56-10**	168.00
1-3/4	1-1/4	4	6-1/2	6	**CLF56-10**	225.00
2	1-1/4	2	4-1/2	8	**CRF64-10**	184.10
2	1-1/4	3	4-3/4	8	**CMF64-10**	225.00
2	1-1/4	4	7-3/4	8	**CLF64-10**	288.00
2	2	2	5-3/4	8	**CRF64-162**	204.00
2	2	3	6-3/4	8	**CRF64-163**	215.00
2	2	4	7-3/4	8	**CRF64-164**	258.00

** Supplied with combination shanks.*

Cobalt Roughing End Mills



Rough Profile & Fine Profile

MADE IN USA

Cutter Diameter	Shank Diameter	Length of Cut	Overall Length	No. of Flutes	Rough Profile Tool No.	Rough Profile Price Each	Fine Profile Tool No.	Fine Profile Price Each
1/4	3/8	5/8	2-7/16	4	**CR8-3U**	38.21	**CRF8-3U**	38.21
3/8	3/8	3/4	2-1/2	4	**CR12-3U**	40.01	**CRF12-3U**	40.01
1/2	1/2	1-1/4	3-1/4	4	**CR16-4U**	54.00	**CRF16-4U**	54.00
1/2	1/2	2	4	4	**CL16-4U**	72.00	**CLF16-4U**	72.00
5/8	5/8	1-5/8	3-3/4	4	**CR20-5U**	66.60	**CRF20-5U**	66.60
3/4	3/4	1-5/8	3-3/4	4	**CR24-6U**	86.22	**CRF24-6U**	86.22
7/8	3/4	1-5/8	4-1/8	5	**CR28-6U**	86.85	**CRF28-6U**	86.85
7/8	7/8	1-7/8	4-1/8	4	**CR28-7U**	86.85	**CRF28-7U**	86.85
1	3/4	2	4-1/2	5	**CR32-6U**	118.80	**CRF32-6U**	118.80
1	1	2	4-1/2	5	**CR32-8U**	118.80	**CRF32-8U**	118.80
1	1	3	5-1/2	5	**CM32-8U**	138.00	**CMF32-8U**	138.00
1-1/8	1	2	4-1/2	6	**CR36-8U**	146.25	—	—
1-1/4	3/4	2	4-1/4	6	**CR40-6U**	146.25	**CRF40-6U**	146.25
1-1/4	1-1/4	3	5-1/2	6	**CM40-10U**	195.00	**CMF40-10U**	195.00
1-1/2	3/4	2	4-1/4	6	**CR48-6U**	146.25	—	—
1-1/2	1-1/4	2	4-1/2	6	**CR48-10U**	189.00	**CRF48-10U**	189.00
2	1-1/4	2	4-1/2	8	**CR64-10U**	256.50	**CRF64-10U**	257.04
2	1-1/4	4	6-1/2	6	**CL64-10U**	420.00	**CLF64-10U**	420.00
2	2	2	5-3/4	8	**CR64-162U**	260.00	—	—
2	2*	3	6-3/4	8	**CR64-163U**	295.00	**CRF64-163U**	295.00
2	2*	4	7-3/4	8	**CM64-164U**	420.00	**CRF64-164U**	425.00
2	2*	6	9-3/4	8	**CM64-166U**	450.00	—	—
2-1/2	2*	6	9-3/4	8	**CM80-166U**	940.00	—	—

**Supplied with combination shanks.*

3-Flute High Helix – Center Cut

For use in aluminum and other nonferrous materials. Can also be used for slotting.

MDX® SUPERIOR IMPORT

Cutter Dia.	Shank Dia.	Length of Cut	Overall Length	Tool No.	Price Each
1/4	3/8	1-1/4	3-1/16	**CLA8-3**	51.58
5/16	3/8	3/4	2-1/2	**CRA10-3**	52.65
5/16	3/8	1-3/8	3-1/8	**CLA10-3**	42.80
3/8	3/8	3/4	2-1/2	**CRA12-3**	46.01
3/8	3/8	1-1/2	3-1/4	**CLA12-3**	55.21
1/2	1/2	1-1/4	3-1/4	**CRA16-4**	62.10
1/2	1/2	2	4	**CLA16-4**	71.52
5/8	5/8	1-5/8	3-3/4	**CRA20-5**	76.59
5/8	5/8	2-1/2	4-5/8	**CLA20-5**	98.69
3/4	3/4	1-5/8	3-7/8	**CRA24-6**	99.15
3/4	3/4	3	5-1/4	**CLA24-6**	111.57
7/8	3/4	2	4-1/8	**CRA28-6**	99.86
1	3/4	1-1/2	3-3/4	**CRA32-6**	136.62
1	3/4	3	5-1/4	**CMA32-6**	149.81
1	1	2	4-1/2	**CRA32-8**	136.62
1	1	3	5-1/4	**CMA32-8**	149.81
1	1	4	6-1/2	**CLA32-8**	149.81

Cutter Dia.	Shank Dia.	Length of Cut	Overall Length	Tool No.	Price Each
1-1/4	1-1/4	2	4-1/2	**CRA40-10**	168.19
1-1/4	1-1/4	3	5-1/2	**CMA40-10**	230.00
1-1/4	1-1/4	4	6-1/2	**CLA40-10**	204.93
1-1/2	1-1/4	2	4-1/2	**CRA48-10**	217.35
1-1/2	1-1/4	3	5-1/2	**CMA48-10**	240.00
1-1/2	1-1/4	4	6-1/2	**CLA48-10**	264.96
2	1-1/4	2	4-1/2	**CRA64-10**	352.26
2	1-1/4	3	5-1/4	**CLA64-10**	400.19
2	1-1/4	4	6-1/2	**CMA64-10**	428.99
2	2*	3	6-3/4	**CRA64-163**	415.50
2	2*	4	7-3/4	**CRA64-164**	440.00
2	2*	5	8-3/4	**CMA64-165**	418.50
2	2*	6	9-3/4	**CMA64-166**	442.80
3	2-1/2*	4	7-3/4	**CMA96-164**	950.00
3	2-1/2*	6	9-3/4	**CMA96-166**	1200.00
3	2-1/2*	8	11-3/4	**CMA96-168**	1480.00

** Supplied with combination shanks.*

Sets

Size	Pcs.	Description	Set No.	Price
1/4, 5/16, 3/8, 1/2	4	Rough Mini Set	**CRS-1**	106.82
1/2, 5/8, 3/4 x 3/4, 1 x 3/4	4	RoughBridgeport Set	**CRS-2**	223.95

All sets are supplied in wood block



Ball Nose

MDX® SUPERIOR IMPORT



Cutter Dia.	Shank Dia.	Length of Cut	Overall Length	No. of Flutes	Tool No.	Price Each
1/4	3/8	5/8	2-7/16	4	**CRB8-3**	45.60
5/16	3/8	3/4	2-1/2	4	**CRB10-3**	46.32
3/8	3/8	3/4	2-1/2	4	**CRB12-3**	49.91
7/16	3/8	1	2-11/16	4	**CRB14-3**	59.07
1/2	1/2	1-1/4	3-1/4	4	**CRB16-4**	64.99
1/2	1/2	2	4	4	**CLB16-4**	73.23
9/16	1/2	1-3/8	3-3/8	4	**CRB18-4**	72.00
5/8	5/8	1-5/8	3-3/4	4	**CRB20-5**	79.20
5/8	5/8	2-1/2	4-5/8	4	**CLB20-5**	98.42
3/4	3/4	1-5/8	3-3/4	4	**CRB24-6**	89.73
3/4	3/4	3	5-1/4	4	**CLB24-6**	114.13
7/8	3/4	1-5/8	4-1/8	5	**CRB28-6**	106.65
7/8	7/8	1-7/8	4-1/8	5	**CRB28-7**	106.65

Ball End Roughers also available in medium and extra long lengths. Please inquire.

Cutter Dia.	Shank Dia.	Length of Cut	Overall Length	No. of Flutes	Tool No.	Price Each
7/8	7/8	3-1/2	5-3/4	4	**CLB28-7**	141.30
1	3/4	2	4-1/2	5	**CRB32-6**	140.40
1	1	2	4-1/2	5	**CRB32-8**	140.40
1	1	4	6-1/2	6	**CLB32-8**	152.10
1-1/8	1	2	4-1/2	6	**CRB36-8**	163.71
1-1/4	3/4	2	4-1/2	6	**CRB40-6**	184.05
1-1/4	1-1/4	2	4-1/2	6	**CRB40-10**	184.05
1-1/4	1-1/4	4	6-1/2	6	**CLB40-10**	216.00
1-1/2	3/4	2	4-1/2	6	**CRB48-6**	244.80
1-1/2	1-1/4	2	4-1/2	6	**CRB48-10**	244.80
1-1/2	1-1/4	4	6-1/2	6	**CLB48-10**	286.20
2	2*	4	7-3/4	8	**CRB64-164**	470.00
2	2*	6	9-3/4	8	**CRB64-166**	665.00

** Supplied with combination shanks.*

M2-AL Roughing End Mills

Specially Formulated High Speed Steel



Specially formulated High Speed Steel which in many application rivals the performance of Cobalt. The cost is significantly lower than Cobalt roughers. The aluminum content of the M2-AL rougher reduces friction during cutting allowing the rougher to run cooler and last longer.

High Speed MDX® SUPERIOR IMPORT

		Regular Length					Long Length				
Diameter of Cut	Shank Diameter	Length of Cut	Overall Length	No. of Flutes	Tool No.	Price Each	Length of Cut	Overall Length	No. of Flutes	Tool No.	Price Each
1/4	3/8	5/8	2-7/16	4	**ALR8-3**	13.43	—	—	—	—	—
5/16	3/8	3/4	2-1/2	4	**ALR10-3**	13.43	—	—	—	—	—
3/8	3/8	3/4	2-1/2	4	**ALR12-3**	13.43	—	—	—	—	—
7/16	3/8	1	2-11/16	4	**ALR14-3**	17.39	—	—	—	—	—
1/2	1/2	1-1/4	3-1/4	4	**ALR16-4**	18.50	2	4	4	**ALL16-4**	23.99
5/8	5/8	1-5/8	3-3/4	4	**ALR20-5**	20.84	2-1/2	4-5/8	4	**ALL20-5**	25.48
3/4	3/4	1-5/8	3-3/4	4	**ALR24-6**	25.84	3	5-1/4	4	**ALL24-6**	32.41
7/8	3/4	1-5/8	4-1/8	4	**ALR28-6**	33.41	3-1/2	5-5/8	4	**ALL28-6**	39.36
7/8	7/8	1-7/8	4-1/8	4	**ALR28-7**	31.37	—	—	—	—	—
15/16	3/4	1-7/8	4-1/8	4	**ALR30-6**	37.43	—	—	—	—	—
1	3/4	2	4-1/2	6	**ALR32-6**	37.43	—	—	—	—	—
1	1	2	4-1/2	6	**ALR32-8**	37.43	4	6-1/2	6	**ALL32-8**	44.76
1-1/8	1	2	4-1/2	6	**ALR36-8**	48.59	—	—	—	—	—
1-1/4	3/4	2	4-1/2	6	**ALR40-6**	55.74	—	—	—	—	—
1-1/4	1-1/4	2	4-1/2	6	**ALR40-10**	55.74	3	5-1/2	6	**ALM40-10**	67.60
1-1/4	1-1/4	—	—	—	—	—	4	6-1/2	6	**ALL40-10**	75.40
1-1/2	1-1/4	2	4-1/2	6	**ALR48-10**	73.96	3	5-1/2	6	**ALM48-10**	85.00
1-1/2	1-1/4	—	—	—	—	—	4	6-1/2	6	**ALL48-10**	90.32
1-3/4	1-1/4	2	4-1/2	6	**ALR56-10**	91.00	4	6-1/2	6	**ALL56-10**	118.30
2	1-1/4	2	4-1/2	8	**ALR64-10**	111.51	4	6-1/2	6	**ALL64-10**	135.27
2	2	4	7-3/4	8	**ALR64-164**	160.00	8	11-3/4	6	**ALL64-168**	325.00

TiN Coated Cobalt Roughing End Mills

Cobalt



MDX® SUPERIOR IMPORT

Rough Profile

Dia. of Cut	Shank Dia.	Length of Cut	Overall Length	No. of Flutes	Tool No.	Price Each
3/16	3/8	1/2	2-3/8	4	**CRT6-3**	44.91
1/4	3/8	5/8	2-7/16	4	**CRT8-3**	44.91
5/16	3/8	3/4	2-1/2	4	**CRT10-3**	44.91
3/8	3/8	3/4	2-1/2	4	**CRT12-3**	47.25
7/16	3/8	1	2-11/16	4	**CRT14-3**	55.35
1/2	1/2	1-1/4	3-1/4	4	**CRT16-4**	61.20
9/16	1/2	1-3/8	3-3/8	4	**CRT18-4**	69.30
5/8	5/8	1-5/8	3-3/4	4	**CRT20-5**	77.40
11/16	5/8	1-5/8	3-3/4	4	**CRT22-5**	84.91
3/4	5/8	1-5/8	3-3/4	4	**CRT24-5**	87.44

Dia. of Cut	Shank Dia.	Length of Cut	Overall Length	No. of Flutes	Tool No.	Price Each
3/4	3/4	1-5/8	3-3/4	4	**CRT24-6**	87.44
7/8	3/4	1-5/8	4-1/8	5	**CRT28-6**	106.20
1	3/4	2	4-1/2	5	**CRT32-6**	131.85
1	1	2	4-1/2	5	**CRT32-8**	131.85
1-1/8	3/4	2	4-1/4	5	**CRT36-6**	161.55
1-1/8	1	2	4-1/2	6	**CRT36-8**	161.55
1-1/4	3/4	2	4-1/4	6	**CRT40-6**	180.99
1-1/4	1	2	4-1/2	5	**CRT40-8**	180.99
1-1/2	1-1/4	2	4-1/2	6	**CRT48-10**	211.95
2	1-1/4	2	4-1/2	8	**CRT64-10**	324.00

MADE IN USA

MICHIGAN DRILL & CUTTING TOOLS

Dia. of Cut	Shank Dia.	Length of Cut	Overall Length	No. of Flutes	Tool No.	Price Each
3/16	3/8	1/2	2-3/8	4	**CRT6-3U**	54.60
1/4	3/8	5/8	2-7/16	4	**CRT8-3U**	54.60
5/16	3/8	3/4	2-1/2	4	**CRT10-3U**	54.60
3/8	3/8	3/4	2-1/2	4	**CRT12-3U**	54.60
1/2	1/2	2	4	4	**CLT16-4U**	99.22
9/16	1/2	1-3/8	3-1/8	4	**CRT18-4U**	82.16
5/8	5/8	1-5/8	3-3/4	4	**CRT20-5U**	92.22
5/8	5/8	2-1/2	4-5/8	4	**CLT20-5U**	118.40
3/4	5/8	1-5/8	3-3/4	4	**CRT24-5U**	113.54
3/4	3/4	3/4	3	4	**CRST24-6U**	109.18
3/4	3/4	1-5/8	3-3/4	4	**CRT24-6U**	119.18
3/4	3/4	3	5-1/4	4	**CLT24-6U**	142.38
7/8	3/4	1-7/8	4-1/8	5	**CRT28-6U**	160.62
7/8	7/8	1-7/8	4-1/8	5	**CRT28-7U**	156.15
7/8	7/8	3-1/2	5-3/4	5	**CLT28-6U**	182.50
1	3/4	1-1/2	3-3/4	5	**CRT32-6U**	167.38

Dia. of Cut	Shank Dia.	Length of Cut	Overall Length	No. of Flutes	Tool No.	Price Each
1	1	2	4-1/2	5	**CRT32-8U**	167.36
1	1	3	5-1/2	5	**CMT32-8U**	205.58
1	1	4	6-1/2	5	**CLT32-8U**	221.67
1-1/4	3/4	2	4-1/2	6	**CRT40-6U**	219.98
1-1/4	1-1/4	2	4-1/2	6	**CRT40-10U**	219.98
1-1/4	1-1/4	3	5-1/2	6	**CMT40-10U**	276.98
1-1/4	1-1/4	4	6-1/2	6	**CLT40-10U**	313.49
1-1/2	3/4	3/4	3-1/2	6	**CRST48-6U**	248.72
1-1/2	3/4	1-1/2	4	6	**CRST48-6AU**	248.72
1-1/2	1-1/4	2	4-1/2	6	**CRT48-10U**	262.42
1-1/2	1-1/4	3	5-1/2	6	**CMT48-10U**	325.68
1-1/2	1-1/4	4	6-1/4	6	**CLT48-10U**	364.78
2	1-1/4	4	6-1/2	8	**CLT64-10U**	485.66
2	2*	3	6-1/2	8	**CRT64-163U**	550.82
2	2*	6	9-3/4	8	**CXT64-166U**	847.00
2-1/2	2*	10	12-1/2	8	**CXT80-16U**	1939.04

** Combinations Shank.*

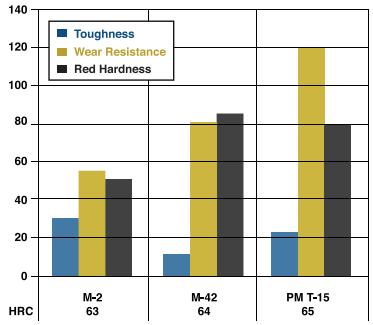
T-15 Superior Cobalt End Mills

Super High Speed Steel

A tungsten-type super high speed steel containing high vanadium for excellent abrasion resistance and cobalt for good red hardness. Ideal for cutting difficult to machine materials where high frictional heat is present; stainless steel, cast iron, abrasive plastics, bakelite.

Cobalt MDX® SUPERIOR IMPORT

T-15 High Speed Steel Comparision







Regular Length

List No. **T2005** – Two Flute
List No. **T2031** – Multi Flute, Center Cutting

Sets

Size	Pcs.	Description	Set No.	Price
1/8, 3/16, 1/4, 5/16, 3/8	10	1 pc. of each: 2 & 4-Flute	TC151	332.10

	Multi Flute **T2005**					Two Flute **T2031**		
Diameter of Cut	Length of Cut	Overall Length	No. of Flutes	Price Each	Shank Diameter	Length of Cut	Overall Length	Price Each
1/8	3/8	2-5/16	4	34.20	3/8	3/8	2-5/16	33.30
3/16	1/2	2-3/8	4	34.20	3/8	7/16	2-5/16	33.30
1/4	5/8	2-7/16	4	34.20	3/8	1/2	2-5/16	33.30
5/16	3/4	2-1/2	4	34.20	3/8	9/16	2-5/16	33.30
3/8	3/4	2-1/2	4	34.20	3/8	9/16	2-5/16	33.30
7/16	1	2-11/16	4	46.29	3/8	13/16	2-1/2	42.55
1/2	1-1/4	3-1/4	4	48.60	1/2	1	3	45.00
5/8	1-5/8	3-3/4	4	66.60	5/8	1-5/16	3-7/16	64.80
3/4	1-5/8	3-7/8	4	77.40	3/4	1-5/16	3-9/16	75.60
7/8	1-7/8	4-1/8	4	102.60	7/8	1-1/2	3-3/4	103.83
1	2	4-1/2	4	124.20	1	1-5/8	4-1/8	120.60
1-1/4	2	4-1/2	6	171.00	1-1/4	1-5/8	4-1/8	171.00
1-1/2	2	4-1/2	6	207.00	1-1/4	1-5/8	4-1/8	216.00
1-3/4	2	4-1/2	6	297.64	1-1/4	1-5/8	4-1/8	255.59
2	2	4-1/2	4	321.54	1-1/4	1-5/8	4-1/8	298.06
2	2	4-1/2	6	321.54	1-1/4	—	—	—
2	2	4-1/2	8	321.54	1-1/4	—	—	—

Long & Extra Long Length

List No. **T2006** – Long Length, Multi Flute Center Cutting
List No. **T2007** – Extra Long Length, Multi Flute Center Cutting



		Long Length **T2006**				Extra Long Length **T2007**			
Diameter of Cut	Shank Diameter	Length of Cut	Overall Length	No. of Flutes	Price Each	Length of Cut	Overall Length	No. of Flutes	Price Each
1/4	3/8	1-1/4	3-1/16	4	40.50	1-3/4	3-9/16	4	50.40
5/16	3/8	1-3/8	3-1/8	4	40.50	2	3-3/4	4	50.40
3/8	3/8	1-1/2	3-1/4	4	40.50	2-1/2	4-1/4	4	50.40
1/2	1/2	2	4	4	52.20	3	5	4	66.60
5/8	5/8	2-1/2	4-5/8	4	72.00	4	6-1/8	4	90.00
3/4	3/4	3	5-1/4	4	84.60	4	6-1/4	4	99.00
1	1	4	6-1/2	4	147.60	6	8-1/2	4	198.00
1-1/4	1-1/4	4	6-1/2	6	228.60	6	8-1/2	4	279.00
1-1/2	1-1/4	4	6-1/2	6	320.23	6	8-1/2	6	467.33
2	1-1/4	4	6-1/2	6	427.11	—	—	—	—
2	1-1/4	4	6-1/2	8	427.11	—	—	—	—

Ball End

List No. **T2091** – Two Flute
List No. **T2092** – Multi Flute, Center Cutting





		Two Flute **T2091**			Multi Flute **T2092**			
Diameter of Cut	Shank Diameter	Length of Cut	Overall Length	Price Each	Length of Cut	Overall Length	No. of Flutes	Price Each
1/8	3/8	3/8	2-5/16	43.20	3/8	2-5/16	4	55.80
3/16	3/8	7/16	2-5/16	43.20	1/2	2-3/8	4	55.80
1/4	3/8	1/2	2-5/16	43.20	5/8	2-7/16	4	55.80
5/16	3/8	9/16	2-5/16	43.20	3/4	2-1/2	4	55.80
3/8	3/8	9/16	2-5/16	43.20	3/4	2-1/2	4	64.80
1/2	1/2	1	3	61.20	1-1/4	3-1/4	4	75.60
5/8	5/8	1-5/16	3-7/16	91.80	1-5/8	3-3/4	4	99.00
3/4	3/4	1-5/16	3-9/16	104.40	1-5/8	3-7/8	4	117.00
1	1	1-5/8	4-1/8	167.40	2	4-1/2	4	171.00
1-1/4	1-1/4	1-5/8	4-1/8	235.40	2	4-1/2	6	252.00
1-1/2	1-1/4	1-5/8	4-1/8	293.88	2	4-1/2	6	297.00

Corner Rounding End Mills

High Speed Steel & Cobalt



These end mills are used for rounding corners and adapting many screw machine applications as end forming tools to form a specific radius. They can be resharpened many times without changing the contour.

List No. **282** – High Speed Steel
List No. **282C** – Cobalt

Radius	Shank Diameter	Cutter Diameter	Overall Length	Price Each H.S. 282	Price Each Cobalt 282C
1/32	3/8	3/8	2-1/2	48.42	82.35
1/16	3/8	7/16	2-1/2	48.42	82.35
3/32	3/8	1/2	2-1/2	49.01	83.30
1/8	3/8	5/8	3	53.91	91.67
1/8	1/2	5/8	3	53.91	91.67
5/32	1/2	3/4	3	57.92	98.46
3/16	1/2	7/8	3-1/8	61.29	104.18
3/16	3/4	7/8	3-1/8	61.29	104.18
7/32	1/2	7/8	3-1/4	65.88	112.05
1/4	1/2	1	3-1/4	65.88	112.05
1/4	3/4	1	3-1/4	65.88	112.05
9/32	1/2	1-1/8	3-1/4	72.50	125.50
5/16	1/2	1-1/8	3-1/4	80.50	137.61
5/16	3/4	1-1/8	3-1/4	80.95	137.61
5/16	7/8	1-1/8	3-1/2	80.95	137.61
3/8	1/2	1-1/4	3-1/2	91.80	156.06
3/8	3/4	1-1/4	3-1/2	91.80	156.06
3/8	7/8	1-1/4	3-3/4	91.80	156.06
7/16	3/4	1-3/8	3-3/4	101.08	171.81
7/16	1	1-3/8	4	101.08	171.81

Radius	Shank Diameter	Cutter Diameter	Overall Length	Price Each H.S. 282	Price Each Cobalt 282C
15/32	3/4	1-3/8	3-3/4	125.55	—
1/2	3/4	1-1/2	3-7/8	125.55	213.39
1/2	1	1-1/2	4-1/8	125.55	213.39
9/16	3/4	1-15/16	4	150.39	255.60
5/8	3/4	1-15/16	4	150.39	255.60
5/8	1	1-15/16	4	150.39	—
11/16	3/4	2-1/4	4-1/8	178.11	303.65
21/32	3/4	1-15/16	4	178.11	—
3/4	3/4	2-1/4	4-1/8	178.11	303.66
3/4	1	2-1/4	4-5/16	178.11	303.66
13/16	3/4	2-1/4	4-1/8	210.60	346.50
13/16	1	2-1/4	4-5/16	210.60	—
7/8	1	2-1/2	4-1/2	248.50	393.82
29/32	3/4	2-5/8	4-3/4	280.00	—
15/16	1	2-5/8	4-3/4	280.00	448.00
31/32	3/4	2-5/8	4-3/4	300.00	—
1	3/4	2-5/8	4-3/4	263.70	—
1	1	2-5/8	4-3/4	283.50	452.80
1-1/8	1	2-7/8	4-3/4	326.03	—

Arbor type corner rounding cutters available. Please inquire.

Sets

Size	Pcs.	Description	Set No.	Price
3/8" Shank Sizes: 1/16, 3/32 **1/2" Shank Sizes:** 1/8, 5/32, 3/16, 1/4, 5/16, 3/8	8	High Speed Steel	**282A**	499.00
3/4" Shank Sizes: 1/2, 9/16, 5/8, 3/4	4	High Speed Steel	**282B**	599.00

All sets are supplied in wood block



Shell End Mills

High Speed Steel



For facing and slab milling in all types of materials.

List No. **285** – Right Hand
List No. **285L** – Left Hand

Diameter of Cut	Hole Size	Length of Cut	No. of Flutes	Price Each Right Hand 285	Price Each Left Hand 285L
1-1/4	1/2	1	8	49.86	64.80
1-1/2	1/2	1-1/8	8	54.18	66.83
1-5/8	3/4	1-1/4	8	63.00	82.00
1-3/4	3/4	1-1/4	8	65.97	85.32
1-7/8	3/4	1-3/8	8	97.00	120.00
2	3/4	1-3/8	10	73.80	101.48
2-1/8	1	1-1/2	10	110.00	148.00
2-1/4	1	1-1/2	10	82.35	116.06
2-1/2	1	1-5/8	10	97.43	124.20
2-5/8	1	1-5/8	10	135.00	166.00

Diameter of Cut	Hole Size	Length of Cut	No. of Flutes	Price Each Right Hand 285	Price Each Left Hand 285L
2-3/4	1	1-5/8	10	122.22	162.81
3	1-1/4	1-3/4	12	139.41	191.70
3-1/4	1-1/4	1-7/8	12	178.20	249.00
3-1/2	1-1/4	1-7/8	12	190.13	256.86
3-3/4	1-1/2	2-1/4	14	222.30	310.00
4	1-1/2	2-1/4	14	233.64	322.65
4-1/2	1-1/2	2-1/4	14	304.92	419.40
5	1-1/2	2-1/4	16	362.03	540.00
5-1/2	2	2-1/4	16	513.72	718.20
6	2	2-1/4	16	533.03	787.50

Cobalt Shell End Mills



For facing and slab milling in tough, high tensile strength materials like stainless steels, titanium, and inconel.

List No. **285C**

Diameter of Cut	Hole Size	Length of Cut	No. of Flutes	Price Each
1-1/4	1/2	1	8	69.75
1-1/2	1/2	1-1/8	8	71.56
1-3/4	3/4	1-1/4	8	95.28
2	3/4	1-3/8	8	107.02
2	3/4	1-3/8	10	106.62
2-1/4	1	1-1/2	10	120.06
2-1/2	1	1-5/8	8	140.94
2-3/4	1	1-5/8	10	177.30
3	1-1/4	1-3/4	12	210.00
3-1/2	1-1/4	1-7/8	12	339.30
4	1-1/2	2-1/4	14	382.50
4-1/2	1-1/2	2-1/4	14	550.00
5	1-1/2	2-1/4	16	575.00
5-1/2	2	2-1/4	16	790.00
6	2	2-1/4	16	898.20

Cobalt Roughing Shell End Mills



For deep slotting or heavy side cuts. Recommended for applications in tough, high tensile strength materials like Stainless Steels, Titanium, and Inconel.

Diameter of Cut	Hole Size	Length of Cut	No. of Flutes	Tool No.	Price Each
2	3/4	2	7	**CS64-16**	178.20
2-1/4	1	2	8	**CS72-16**	209.00
2-1/2	1	2	8	**CS80-16**	278.30
2-3/4	1	2	8	**CS88-16**	286.00
3	1-1/4	2	8	**CS96-16**	323.40
3-1/2	1-1/4	2	9	**CS112-16**	429.00
4	1-1/2	2-1/4	10	**CS128-18**	529.10
4-1/2	1-1/2	2-1/4	12	**CS144-18**	657.80
5	1-1/2	2-1/4	12	**CS160-18**	836.00
5-1/2	2	2-1/4	14	**CS176-18**	1041.70
6	2	2-1/4	14	**CS192-18**	1171.50

Shell End Mills for Aluminum

High Speed Steel



For face and slab milling in Aluminum.

List No. **286** – Right Hand

Diameter of Cut	Hole Size	Length of Cut	No. of Flutes	Price Each
1-1/4	1/2	1	4	53.10
1-3/8	1/2	1-1/8	4	53.80
1-1/2	1/2	1-1/8	4	61.20
1-5/8	3/4	1-1/4	4	65.97
1-3/4	3/4	1-1/4	4	67.50
2	3/4	1-3/8	4	78.30
2-1/8	1	1-1/2	4	98.00
2-1/4	1	1-1/2	4	88.20
2-1/2	1	1-5/8	4	108.00
2-5/8	1	1-5/8	6	140.00
2-3/4	1	1-5/8	6	129.60
2-7/8	1-1/4	1-3/4	6	168.00
3	1-1/4	1-3/4	6	151.20
3-1/4	1-1/4	1-7/8	6	210.00
3-1/2	1-1/4	1-7/8	6	216.00
4	1-1/2	2-1/4	6	243.00
4-1/2	1-1/2	2-1/4	6	315.00
5	1-1/2	2-1/4	8	439.20
5-1/2	2	2-1/4	8	576.00
6	2	2-1/4	8	664.20

Carbide Tipped Shell End Mills



List No. **CT285LS** – Left Hand Spiral, Right Hand Cut

Cuts faster than high speed steel. Generally used on steel and steel alloys.

List No. **CT285SR** – Straight Flute, Right Hand Cut

For Cast Iron, Brass, and other soft materials.

Diameter of Cut	Hole Size	Length of Cut	Price Each	
			LH Spiral **CT285LS**	Straight Flt. **CT285SR**
1-1/4	1/2	1	256.64	256.64
1-1/2	1/2	1-1/8	267.20	267.20
1-3/4	3/4	1-1/4	332.88	332.88
2	3/4	1-3/8	371.92	371.92
2-1/4	1	1-1/2	402.72	402.72
2-1/2	1/2	1	422.08	422.08
2-3/4	1/2	1-1/8	428.32	428.32
3	3/4	1-1/4	481.60	481.60
3-1/2	3/4	1-3/8	598.72	598.72
4	1	1-1/2	743.60	743.60

Shell End Mill Arbors

MDX SUPERIOR IMPORT

Supplied either tanged or threaded for draw bar. When ordering, please specify type required. A wrench is furnished with each arbor, where required.



Morse Taper

Style "A" Tanged
Style "B" Threaded for Draw Bar

Morse Taper No.	Bore	Dia. Range of Standard Shell End Mill	Part# Style A	Part# Style B	Price Each
4	1/2	1-1/4 to 1-1/2	**HST412A**	**HST412B**	76.32
4	3/4	1-5/8 to 2	**HST434A**	**HST434B**	89.04
4	1	2-1/8 to 2-3/4	**HST41A**	**HST41B**	94.43
4	1-14	3 to 3-1/2	**HST4114A**	**HST4114B**	104.16
4	1-1/2	4 to 5	**HST4112A**	**HST4112B**	110.25
4	2	5-1/2 to 6	**HST42A**	—	141.10
5	1	2-1/8 to 2-3/4	**HST51A**	**HST51B**	122.29
5	1-1/4	3 to 3-1/2	**HST5114A**	**HST5114B**	124.99
5	1-1/2	4 to 5	**HST5112A**	**HST5112B**	137.34

Threads for Drawbar			
	M.T. #2 3/8" -16	M.T. #4 5/8" -11	M.T. #6 1" -10
	M.T. #3 1/3" -13	M.T. #5 3/4" -10	

Morse Taper No.	Bore	Dia. Range of Standard Shell End Mill	Part# Style A	Price Each
5	2	5-1/2 to 6	**HST5126A**	182.00
6	1	2-1/8 to 2-3/4	**HST61A**	184.10
6	1-1/4	3 to 3-1/2	**HST6114A**	198.80
6	1-1/2	4 to 5	**HST6112A**	233.17
6	2	5-1/2 to 6	**HST62A**	275.80
6	2-1/2	6-1/2 to larger	**HST6212A**	382.20
7	1-1/2	4 to 5	**HST7112A**	615.30
7	2	5-1/2 to 6	**HST72A**	679.00
7	2-1/2	6-1/2 to larger	**HST7212A**	757.40

Brown & Sharpe

Style "A" Tanged
Style "B" Threaded for Draw Bar

B&S Taper	Bore	Dia. Range of Standard Shell End Mill	Part# Style A	Part# Style B	Price Each
7	1/2	1-1/4 to 1-1/2	**HST712A**	**HST712B**	62.40
7	3/4	1-5/8 to 2	**HST734A**	**HST734B**	54.60
7	1	2-1/8 to 2-3/4	**HST71A**	**HST71B**	57.40
9	1/2	1-1/4 to 1-1/2	**HST912A**	**HST912B**	61.60
9	3/4	1-5/8 to 2	**HST934A**	**HST934B**	61.60
9	1	2-1/8 to 2-3/4	**HST91A**	**HST91B**	63.00
9	1-1/4	3 to 3-1/2	**HST9114A**	**HST9114B**	64.40
9	1-1/2	4 to 5	**HST9112A**	**HST9112B**	66.50
9	2	5-1/2 to 6	**HST92A**	**HST92B**	79.10
10	1/2	1-1/4 to 1-1/2	**HST1012A**	**HST1012B**	68.60
10	3/4	1-5/8 to 2	**HST1034A**	**HST1034B**	69.30
10	1	2-1/8 to 2-3/4	**HST101A**	**HST101B**	74.90

Threads for Drawbar			
	B&S #7 3/8" -16	B&S #10 5/8" -11	B&S #12 3/4" -10
	B&S #9 1/2" -13	B&S #11 5/8" -11	

B&S Taper	Bore	Dia. Range of Standard Shell End Mill	Part# Style A	Part# Style B	Price Each
10	1-1/4	3 to 3-1/2	**HST10114A**	**HST10114B**	77.70
10	1-1/2	4 to 5	**HST10112A**	**HST10112B**	85.40
10	2	5-1/2 to 6	**HST102A**	**HST102B**	88.90
11	1/2	1-1/4 to 1-1/2	**HST1112A**	**HST1112B**	82.60
11	3/4	1-5/8 to 2	**HST1134A**	**HST1134B**	87.50
11	1	2-1/8 to 2-3/4	**HST111A**	**HST111B**	91.00
11	1-1/4	3 to 3-1/2	**HST11114A**	**HST11114B**	95.90
11	1-1/2	4 to 5	**HST11112A**	**HST11112B**	123.20
11	2	5-1/2 to 6	**HST112A**	**HST112B**	133.70
12	1-1/4	3 to 3-1/2	**HST114A**	**HST114B**	465.60
12	1-1/2	4 to 5	**HST12112A**	**HST12112B**	499.20
12	2	5-1/2 to 6	**HST2A**	**HST2B**	532.80

NST / NMTB Shank

These arbors are made of alloy forged steel for a more durable service life.



NST Shank	Diameter of Bore	Diameter Range of Shell End Mill	Tool No.	Price Each
30	1/2	1-1/4 to 1-1/2	**HS3012**	94.64
30	3/4	1-5/8 to 2	**HS3034**	94.64
30	1	2-1/8 to 2-3/4	**HS301**	94.64
30	1-1/4	3 to 3-1/2	**HS30114**	94.64
40	1/2	1-1/4 to 1-1/2	**HS4012**	128.70
40	3/4	1-5/8 to 2	**HS4034**	128.70
40	1	2-1/8 to 2-3/4	**HS401**	128.70
40	1-1/4	3 to 3-1/2	**HS40114**	128.70
40	1-1/2	4 to 5	**HS40112**	128.70

NST Shank	Diameter of Bore	Diameter Range of Shell End Mill	Tool No.	Price Each
40	2	5-1/2 to 6	**HS402**	128.70
50	1/2	1-1/4 to 1-1/2	**HS5012**	193.70
50	3/4	1-5/8 to 2	**HS5034**	193.70
50	1	2-1/8 to 2-3/4	**HS501**	193.70
50	1-1/4	3 to 3-1/2	**HS50114**	193.70
50	1-1/2	4 to 5	**HS50112**	193.70
50	2	5-1/2 to 6	**HS502**	193.70
50	2-1/2	6-1/2 and larger	**HS50212**	299.00

Straight Shank

Hardened and Ground



Dia of Shank	Bore Dia	Dia Range Standard	Part#	Price Each
1/2	1/2	1-1/4 to 1-1/2	**HSS1212**	62.92
1/2	3/4	1-5/8 to 2	**HSS1234**	65.94
3/4	3/4	1-5/8 to 2	**HSS3434**	65.94
3/4	1	2-1/8 to 2-3/4	**HSS341**	71.96
3/4	1-1/4	3 to 3-1/2	**HSS34114**	75.56

With R8 Shank

Bore	Dia. Range of Standard Shell	Tool No.	Price Each
1/2	1-1/4 to 1-1/2	**R8S12**	71.18
3/4	1-5/8 to 2	**R8S34**	71.18
1	2-1/4 to 2-3/4	**R8S1**	76.38
1-1/4	3 to 3-1/2	**R8S114**	76.38
1-1/2	4 to 5	**R8S112**	102.38



Sets

Size	Pcs.	Set No.	Price
1/2, 3/4, 1", 1-1/4, 1-1/2	5	**R8 Shell**	299.00

Supplied in wood block

End Mill Holder & Milling Adapters

MDX® SUPERIOR IMPORT



Style "A" Tanged



Style "B" Threaded for draw bar

Morse Taper

Style "A" Tanged
Style "B" Threaded for draw bar

Morse Taper	Bore	Tool No. Tanged A	Tool No. Threaded B	Price Each
2	3/16	**HM2316A**	**HM2316B**	73.85
2	3/8	**HM238A**	**HM238B**	73.85
2	1/2	**HM212A**	**HM212B**	73.85
2	5/8	**HM258A**	**HM258B**	83.50
3	3/16	**HM3316A**	**HM3316B**	74.70
3	3/8	**HM338A**	**HM338B**	74.70
3	1/2	**HM312A**	**HM312B**	74.70
3	5/8	**HM358A**	**HM358B**	76.55
3	3/4	**HM334A**	**HM334B**	76.55
4	3/16	**HM4316A**	**HM4316B**	82.80
4	3/8	**HM438A**	**HM438B**	82.80
4	1/2	**HM412A**	**HM412B**	82.80
4	5/8	**HM458A**	**HM458B**	92.10
4	3/4	**HM434A**	**HM434B**	92.10
4	7/8	**HM478A**	**HM478B**	110.20
4	1	**HM41A**	**HM41B**	114.75
5	3/16	**HM5316A**	**HM5316B**	114.75
5	3/8	**HM538A**	**HM538B**	114.75
5	1/2	**HM512A**	**HM512B**	114.75
5	5/8	**HM558A**	**HM558B**	123.85
5	3/4	**HM534A**	**HM534B**	131.00
5	7/8	**HM578A**	**HM578B**	148.00
5	1	**HM51A**	**HM51B**	140.00
5	1-1/4	**HM114A**	**HM114B**	155.00
5	1-1/2	**HM112A**	**HM112B**	169.00
5	2	**HM52A**	**HM52B**	190.00
6	1	**HM61A**	—	164.00
6	1-1/4	**HM6114A**	—	278.00
6	1-1/2	**HM6112A**	—	332.00
6	2	**HM62A**	—	557.00
7	2	**HM72A**	—	630.00
7	2-1/2	**HM7212A**	—	730.00

Brown & Sharpe

Style "A" Tanged
Style "B" Threaded for draw bar

B&S Taper	Bore	Tool No. Tanged A	Tool No. Threaded B	Price Each
7	3/16	**HB7316A**	**HB7316B**	81.20
7	1/4	**HB714A**	**HB714B**	81.20
7	3/8	**HB738A**	**HB738B**	81.20
7	1/2	**HB712A**	**HB712B**	81.20
7	5/8	**HB758A**	**HB758B**	89.60
7	3/4	**HB734A**	**HB734B**	99.40
9	3/16	**HB9316A**	**HB9316B**	114.80
9	3/8	**HB938A**	**HB938B**	114.80
9	1/2	**HB912A**	**HB912B**	114.80
9	5/8	**HB958A**	**HB958B**	114.80
9	3/4	**HB934A**	**HB934B**	114.80
9	7/8	**HB978A**	**HB978B**	126.00
9	1	**HB91A**	**HB91B**	130.20
9	1-1/4	**HB9114A**	**HB9114B**	144.20
10	3/16	**HB10316A**	**HB10316B**	147.00
10	3/8	**HB1038A**	**HB1038B**	147.00
10	1/2	**HB1012A**	**HB1012B**	147.00
10	5/8	**HB1058A**	**HB1058B**	154.00
10	3/4	**HB1034A**	**HB1034B**	155.40

Threads for Drawbar			
	B&S #7 3/8" -16	B&S #10 5/8" -11	B&S #12 3/4" -10
	B&S #9 1/2" -13	B&S #11 5/8" -11	

B&S Taper	Bore	Tool No. Tanged A	Tool No. Threaded B	Price Each
10	7/8	**HB1078A**	**HB1078B**	158.20
10	1	**HB101A**	**HB101B**	168.00
10	1-1/4	**HB10114A**	**HB10114B**	172.20
11	3/8	**HB1138A**	**HB1138B**	186.20
11	1/2	**HB1112A**	**HB1112B**	186.20
11	5/8	**HB1158A**	**HB1158B**	193.20
11	3/4	**HB1134A**	**HB1134B**	197.40
11	7/8	**HB1178A**	**HB1178B**	201.60
11	1	**HB111A**	**HB111B**	201.60
11	1-1/4	**HB11114A**	**HB11114B**	207.20
12	3/8	**HB1238A**	**HB1238B**	246.40
12	1/2	**HB1212A**	**HB1212B**	246.40
12	5/8	**HB1258A**	**HB1258B**	253.40
12	3/4	**HB1234A**	**HB1234B**	261.80
12	7/8	**HB1278A**	**HB1278B**	267.40
12	1	**HB121A**	**HB121B**	267.40
12	1-1/4	**HB12114A**	—	274.40
12	1-1/2	**HB12112A**	**HB12112B**	331.80
12	2	**HB122A**	**HB122B**	359.80

Milling Machine Adapters

Hardened and Ground
For changing from National Standard Taper to Morse Taper



Outside Taper	Inside Taper	Open End Type Tool No.	Draw End Type Tool No.	Price Each
30	2	—	**HPD30-2**	99.00
30	3	—	**HPD30-3**	99.00
40	2	**HP40-2**	**HPD40-2**	102.70
40	3	**HP40-3**	**HPD40-3**	102.70
40	4	**HP40-4**	**HPD40-4**	102.70
40	5	**HP40-5**	**HPD40-5**	128.06
50	2	**HP50-2**	**HPD50-2**	143.00
50	3	**HP50-3**	**HPD50-3**	143.00
50	4	**HP50-4**	**HPD50-4**	143.00
50	5	**HP50-5**	**HPD50-5**	187.20

R-8 Milling Machine Adapters

National Standard Taper Adapters



Inside Taper	Outside Taper	Tool No.	Price Each
R-8	40	**R8N40**	139.10
R-8	50	**R8N50**	166.40

For changing a larger National Standard Taper to a smaller one.



Outside Taper	Inside Taper	Reducing Type Tool No.	Price Each
40	30	**HR40-30**	156.09
50	30	**HR50-30**	168.64
50	40	**HR50-40**	168.64

NMTB Quick Change Tooling

Hardened and Ground Throughout

MADE IN USA

apt USA

Allows quick and easy change between different tools while ensuring the tool or tool holder will be tightly and rigidly connected to the spindle, and accurately coaxial with it.



End Mill Taper Adapters

Diameter of Hole	No. 30 Taper Tool No.	No. 30 Taper Price Each	No. 40 Taper Tool No.	No. 40 Taper Price Each
3/16	**QCE3-187**	119.77	**QCE4-187**	142.86
3/8	**QCE3-375**	119.77	**QCE4-375**	134.93
1/2	**QCE3-500**	119.77	**QCE4-500**	134.93
5/8	**QCE3-625**	129.87	**QCE4-625**	139.97
3/4	**QCE3-750**	129.87	**QCE4-750**	139.97
7/8	**QCE3-875**	135.64	**QCE4-875**	151.52
1	**QCE3-1000**	141.41	**QCE4-1000**	170.27
1-1/4	**QCE3-1250**	155.84	**QCE4-1250**	184.70

Replacement screws are available. Please Inquire.



Shell & Facemill Adapters

Pilot Diameter	No. 30 Taper Tool No.	No. 30 Taper Price Each	No. 40 Taper Tool No.	No. 40 Taper Price Each
1/2	**QCS3-500**	147.19	**QCS4-500**	157.29
3/4	**QCS3-750**	152.96	**QCS4-750**	163.18
1	**QCS3-1000**	154.40	**QCS4-1000**	191.92
1-1/4	**QCS3-1250**	191.92	**QCS4-1250**	191.92
1-1/2	**QCS3-1500**	202.02	**QCS4-1500**	213.56

Replacement screws and arbor keys are available. Please Inquire.

CAT V-Flange Precision CNC End Mill Holders

Thread Size:
CAT40 5/8"-11
CAT50 1"-8

MDX® SUPERIOR IMPORT



Taper	Bore	Gage Depth	Nose Dia	Tool No.	Price Each
40	1/8	2-1/2	3/4	**J987049**	121.42
40	3/16	2-1/2	3/4	**J987050**	121.42
40	1/4	2-1/2	13/16	**J987050A**	117.91
40	1/4	4-1/2	13/16	**J987050B**	117.91
40	5/16	2-1/2	7/8	**J987050C**	107.71
40	3/8	2-1/2	1	**J987051**	110.06
40	3/8	5	1	**J987051A**	122.66
40	7/16	2-1/2	1-1/8	**J987051B**	107.71
40	1/2	2-1/2	1-1/4	**J987052**	110.83
40	1/2	5	1-1/4	**J987052B**	122.66
40	5/8	3-3/4	1-3/4	**J987053**	116.61
40	5/8	5-1/2	1-3/4	**J987053A**	123.76
40	3/4	3-3/4	1-3/4	**J987054**	116.61
40	3/4	5-1/2	1-3/4	**J987054A**	123.76
40	7/8	4	2-3/64	**J987055**	124.93
40	1	4	2-1/2	**J987056**	129.55
40	1-1/4	4-3/8	2-3/4	**J987057**	131.24
40	1-1/4	6	2-3/4	**J987057A**	149.89
40	1-1/2	4-5/8	3-9/64	**J987058**	170.04
40	1-1/2	6	3-9/64	**J987058A**	194.09

Taper	Bore	Gage Depth	Nose Dia	Tool No.	Price Each
50	1/4	2-1/2	7/8	**J987058B**	170.57
50	3/8	2-1/2	1-1/4	**J987059**	170.57
50	3/8	4-1/2	1-1/4	**J987060**	175.37
50	3/8	6-1/2	1-1/4	**J987061**	198.64
50	1/2	2-5/8	1-3/4	**J987062**	155.35
50	1/2	4-5/8	1-3/4	**J987063**	186.88
50	1/2	6-5/8	1-3/4	**J987064**	198.51
50	5/8	3-3/4	1-3/4	**J987065**	169.56
50	5/8	5-3/4	1-3/4	**J987066**	191.10
50	5/8	7-3/4	1-3/4	**J987067**	202.41
50	3/4	3-3/4	1-3/4	**J987068**	170.17
50	3/4	5-3/4	1-3/4	**J987069**	191.62
50	3/4	7-3/4	1-3/4	**J987070**	202.93
50	7/8	3-3/4	2-3/64	**J987071**	173.55
50	1	4	2-31/64	**J987074**	172.25
50	1	6	2-31/64	**J987075**	215.61
50	1	8	2-31/64	**J987076**	216.06
50	1-1/4	4	2-3/4	**J987077**	161.95
50	1-1/2	4	3-9/64	**J987080**	220.09
50	1-1/2	6	3-9/64	**J987081**	250.00

BT Flange Precision CNC End Mill Holders

MDX® SUPERIOR IMPORT

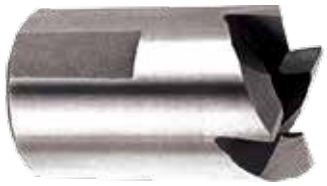


Taper	Bore	Gage Depth	Nose Dia	Tool No.	Price Each
40	1/8	2-1/2	3/4	**J087099**	139.63
40	3/16	2-1/2	3/4	**J987100**	139.63
40	1/4	4	3/4	**J987101**	135.60
40	5/16	2-1/2	7/8	**J987102**	123.87
40	3/8	2-1/2	1-1/8	**J987103**	126.57
40	3/8	4	1-1/8	**J987104**	141.06
40	1/2	2-1/2	1-1/2	**J987105**	127.45
40	1/2	4	1-1/2	**J987106**	141.06
40	5/8	3	1-1/2	**J987107**	134.10
40	5/8	4	1-1/2	**J987108**	142.32
40	3/4	3	1-3/4	**J987109**	134.10
40	3/4	4	1-3/4	**J987110**	142.32

Taper	Bore	Gage Depth	Nose Dia	Tool No.	Price Each
40	7/8	3-1/2	1-7/8	**J987111**	143.67
40	1	2	2-1/4	**J987112**	148.98
40	1	4	2-3/8	**J987113**	152.43
50	1/4	2-1/2	13/16	**J987114A**	196.16
50	3/8	2-1/2	1	**J987114**	196.16
50	1/2	3	1-1/4	**J987115**	196.16
50	5/8	3	1-1/2	**J987116**	219.77
50	3/4	3	1-3/4	**J987117**	220.36
50	1	4	2-3/8	**J987118**	198.09
50	1-1/4	4	2-1/2	**J987119**	186.24
50	1-1/2	4	2-1/2	**J987120**	253.10
50	2	5	3-3/4	**J987121**	287.50

Hollow Mills

High Speed Steel



#1 Three Flute

1-1/8" Overall Length 1/2" Outside Diameter 1/2" Shank Diameter

Size ID	Tool No.	Price Each	Size ID	Tool No.	Price Each	Size ID	Tool No.	Price Each
1/16	**HM196-104**	79.13	9/64	**HM196-109**	79.13	7/32	**HM196-114**	79.13
5/64	**HM196-105**	116.47	5/32	**HM196-110**	79.13	15/64	**HM196-115**	101.94
3/32	**HM196-106**	79.13	11/64	**HM196-111**	79.13	1/4	**HM196-116**	101.94
7/64	**HM196-107**	79.13	3/16	**HM196-112**	79.13			
1/8	**HM196-108**	79.13	13/64	**HM196-113**	79.13			

#2 Three Flute

1-3/4" Overall Length 3/4" Outside Diameter 5/8" Shank Diameter

Size ID	Tool No.	Price Each	Size ID	Tool No.	Price Each	Size ID	Tool No.	Price Each
1/8	**HM196-208**	92.69	7/32	**HM196-214**	92.69	5/16	**HM196-220**	110.69
9/64	**HM196-209**	92.69	15/64	**HM196-215**	92.69	21/64	**HM196-221**	110.69
5/32	**HM196-210**	92.69	1/4	**HM196-216**	92.69	11/32	**HM196-222**	110.69
11/64	**HM196-211**	92.69	17/64	**HM196-217**	92.69	23/64	**HM196-223**	110.69
3/16	**HM196-212**	92.69	9/32	**HM196-218**	92.69	3/8	**HM196-224**	110.69
13/64	**HM196-213**	92.69	19/64	**HM196-219**	92.69			

#3 Three Flute

2-1/8" Overall Length 1" Outside Diameter 1" Shank Diameter

Size ID	Tool No.	Price Each	Size ID	Tool No.	Price Each
1/4	**HM196-316**	124.28	3/8	**HM196-324**	124.28
5/16	**HM196-320**	124.28	1/2	**HM196-332**	133.39

#4 Three Flute

2-1/4" Overall Length 1-1/4" Outside Diameter 1" Shank Diameter

Size ID	Tool No.	Price Each	Size ID	Tool No.	Price Each
15/32	**HM196-430**	153.39	5/8	**HM196-440**	153.39
1/2	**HM196-432**	153.39	11/16	**HM196-444**	153.39
9/16	**HM196-436**	153.39	3/4	**HM196-448**	203.36
19/32	**HM196-438**	153.39			

Four Flute For Milling Steel

Size ID	Shank Diameter	Overall Length	Tool No.	Price Each	Size ID	Shank Diameter	Overall Length	Tool No.	Price Each
3/32*	5/8	1-1/2	**HM196-450**	94.76	5/8	1-1/4	2	**HM196-476**	128.00
1/8*	5/8	1-1/2	**HM196-452**	90.20	11/16	1-1/2	2	**HM196-478**	157.18
5/32*	5/8	1-1/2	**HM196-454**	85.90	3/4	1-1/2	2	**HM196-480**	157.18
7/32*	5/8	1-1/2	**HM196-458**	83.07	13/16	1-1/2	2	**HM196-482**	204.23
1/4*	5/8	1-1/2	**HM196-460**	89.96	7/8	1-3/4	2-1/4	**HM196-484**	204.23
11/32	3/4	1-1/2	**HM196-466**	89.96	15/16	1-3/4	2-1/4	**HM196-486**	212.59
9/16	1-1/4	2	**HM196-474**	128.00	1"	1-3/4	2-1/4	**HM196-488**	212.59

** Three flute*

Taper Shank End Mills

High Speed Steel

Morse Taper Shank – Multi Flute

List No. **205TS**

Size	Morse Taper Shank	Flute Length	Overall Length	No. of Flute	Price Each
1/4	#1	5/8	3-1/2	2	65.73
1/4	#1	5/8	3-1/2	4	65.73
1/4LH	#1	5/8	3-1/2	4	65.73
9/32	#1	3/4	4	2	67.20
5/16	#1	11/16	3-9/16	4	69.54
7/16	#1	7/8	3-3/4	4	64.84
1/2	#1	15/16	3-13/16	4	64.84
1/2	#2	15/16	4-7/16	4	78.07
1/2	#3	2-1/2	7	4	81.92
5/8	#2	1-1/8	4-5/8	2	83.04
5/8	#2	1-1/8	4-5/8	4	80.00
3/4	#2	1-1/4	4-3/4	4	91.40
1-1/4DB	#3	3-1/8	7	6	210.99
1-1/2	#3	2	6	6	232.00
1-7/8	#5	2-1/2	9	6	320.00

DB: Drawbar LH: Left hand



Brown & Sharpe – Multi Flute

List No. **205BS**

Size	Brown & Sharpe	Flute Length	Overall Length	No. of Flute	Price Each
1/4	#5	5/8	2-13/16	4	52.00
7/16	#5	7/8	3-1/16	4	65.25
1/2	#5	15/16	3-1/8	4	65.25
1/2	#7	15/16	4-15/16	4	86.91
5/8	#7	1-1/8	5-1/8	4	91.80
3/4DB	#7	1-1/4	5-1/4	4	92.14
7/8	#7	1-7/16	5-7/16	4	105.94
1-1/8DB	#9	1-3/4	7	6	167.52
1-1/4DB	#9	2	7-1/2	6	189.77
1-3/8	#9	2	7	6	233.60
1-1/2DB	#9	2-1/4	7-1/2	6	277.39
1-3/4	#9	2-1/2	7-3/4	6	354.43
1-3/4LH	#9	2-3/4	8	6	305.12
1-3/4DB	#10	2-1/2	8	8	318.40
1-3/4	#10	2-3/4	10	6	318.40
2	#10	2-3/4	8	8	360.00
2DB	#12	6	14	6	400.00
2-1/2DB	#12	6	14	6	440.00

DB: Drawbar LH: Left hand



Brown & Sharpe – Two Flute

List No. **231BS**

Size	Brown & Sharpe	Flute Length	Overall Length	No. of Flute	Price Each
1/4	#7	3/8	4-3/8	2	88.78
5/16	#7	15/32	4-15/32	2	88.78
3/8LH*	#7	9/16	4-9/16	2	80.00
7/16	#7	21/32	4-21/32	2	90.58
1/2	#7	3/4	4-3/4	2	87.77
5/8	#7	15/16	4-15/16	2	93.17
3/4	#7	1-1/8	5-1/8	2	96.63
7/8	#7	1-5/16	5-5/16	2	127.09
1	#9	1-1/2	6-3/4	2	166.10
1LH**	#9	1-1/2	6-3/4	2	184.00

**LH: Spiral*

***LH: Left hand Cut*



ProductionMax™

Solid Carbide End Mills 45° Helix for Aluminum



- For slotting & production at high speeds
- For aluminum and other non-ferrous materials

List No. **KS9245** – 2-Flute, Solid Carbide

Size	Flute Length	Overall Length	Price Each
1/8	1/4	1-1/2	31.58
1/8	1/2	1-1/2	34.78
3/16	5/16	2	43.51
3/16	9/16	2	48.61
1/4	3/8	2-1/2	58.63
1/4	3/4	2-1/2	65.27
1/4	1-1/8	3	92.99
1/4	1-1/2	4	101.58
5/16	7/16	2-1/2	63.50
5/16	13/16	2-1/2	70.53
5/16	1-1/8	3	106.48
5/16	1-5/8	4	154.42
3/8	1/2	2-1/2	74.03
3/8	1	2-1/2	81.76
3/8	1-1/8	3	115.28
3/8	1-3/4	4	156.16
7/16	9/16	2-3/4	104.72
7/16	1	2-3/4	117.20
7/16	2	4	181.27
7/16	3	6	250.12
1/2	5/8	3	119.30
1/2	1-1/4	3	132.47
1/2	2	4	208.80
1/2	3	6	349.86
5/8	3/4	3-1/2	228.09
5/8	1-5/8	3-1/2	253.34
5/8	2-1/4	5	383.71
5/8	3	6	555.13
3/4	1	4	320.00
3/4	1-5/8	4	355.46
3/4	2-1/4	5	486.64
3/4	3	6	547.76
1	1-1/4	4	580.75
1	2	4	642.50
1	2-1/4	5	731.98
1	3	6	770.22

Carbide Tipped End Mills

High Speed

MADE IN USA

MICHIGAN DRILL & CUTTING TOOLS

Two Flute – Straight Flute

List No. **CT231** – Non Ferrous Materials



Diameter of Cut	Shank Diameter	C2 Carbide Tip Length	Overall Length	Price Each
1/4	3/8	1/2	2-1/2	59.61
5/16	3/8	5/8	2-1/2	61.93
3/8	3/8	5/8	2-1/2	66.31
7/16	3/8	1	2-11/16	66.31
1/2	1/2	1	3-1/4	72.04
9/16	1/2	1	3-3/8	75.22
5/8	1/2	1	3-3/8	75.22
11/16	5/8	1	3-3/8	81.38

Diameter of Cut	Shank Diameter	C2 Carbide Tip Length	Overall Length	Price Each
3/4	5/8	1	3-5/8	84.40
13/16	5/8	1	3-5/8	102.76
7/8	5/8	1-1/4	4	102.76
15/16	7/8	1-1/4	4	109.97
1	7/8	1-1/4	4	110.32
1-1/8	1	1-1/4	4	129.95
1-1/4	1	1-1/4	4-1/4	146.04
1-1/2	1-1/4	1-1/2	4-1/2	188.30

Multiple Flute – Straight Flute

List No. **CT205S** – For Iron



Diameter of Cut	Shank Diameter	No. of Flutes	C2 Carbide Tip Length	Overall Length	Price Each
1/4	3/8	4	1/2	2-1/2	60.16
5/16	3/8	4	5/8	2-1/2	64.23
3/8	3/8	4	5/8	2-1/2	67.72
7/16	3/8	4	1	2-11/16	67.72
1/2	1/2	4	1	3-1/4	69.36
9/16	1/2	4	1	3-3/8	77.90
5/8	1/2	4	1	3-3/8	77.90
5/8	5/8	4	1	3-3/8	77.90
11/16	5/8	4	1	3-3/8	87.08
3/4	5/8	4	1	3-5/8	83.92
7/8	5/8	4	1-1/4	4	99.14

Diameter of Cut	Shank Diameter	No. of Flutes	C2 Carbide Tip Length	Overall Length	Price Each
7/8	3/4	4	1-1/4	4	99.14
1	7/8	4	1-1/4	4	114.56
1-1/8	1	4	1-1/4	4-1/4	129.95
1-1/4	1	4	1-1/4	4-1/4	146.04
1-1/2	1-1/4	4	1-1/2	4-1/2	235.00
1-1/2	1-1/4	6	2	4-1/2	196.00
1-3/4	1-1/4	6	1-1/2	4-1/2	242.73
2	1-1/4	6	1-1/2	4-1/2	279.22
2	2	6	2-1/2	6-1/4	260.00
2-1/2	1-1/4	6	1-1/2	4-1/2	279.22
2-1/2	2	8	3	6-3/4	355.00

Right Hand Spiral

List No.**CT205** – For Ferrous Materials



Diameter of Cut	Shank Diameter	No. of Flutes	C2 Carbide Tip Length	Overall Length	Price Each
1/4	3/8	2	1/2	2-1/2	62.07
5/16	3/8	2	5/8	2-1/2	64.37
3/8	3/8	2	5/8	2-1/2	68.90
7/16	3/8	2	1	2-11/16	68.90
1/2	1/2	2	1	3-1/4	70.69
9/16	1/2	2	1	3-3/8	78.26
5/8	1/2	4	1	3-3/8	81.30

Diameter of Cut	Shank Diameter	No. of Flutes	C2 Carbide Tip Length	Overall Length	Price Each
3/4	5/8	4	1	3-5/8	92.89
7/8	5/8	4	1-1/4	4	112.86
7/8	7/8	4	1-1/4	4	112.86
1-1/8	1	4	1-1/4	4-1/4	162.68
1-1/4	1	4	1-1/4	4-1/4	182.88
1-1/2	1-1/4	4	1-1/2	4-1/2	226.46
1-3/4	1-1/4	8	1-1/2	4-1/2	265.00

Left Hand Spiral

List No. **CT205L** – For Hardened Steel



Diameter of Cut	Shank Diameter	No. of Flutes	C2 Carbide Tip Length	Overall Length	Price Each
1/4	3/8	2	1/2	2-1/2	70.54
5/16	3/8	2	5/8	2-1/2	76.03
3/8	3/8	2	5/8	2-1/2	80.64
7/16	3/8	2	1	2-11/16	80.64
1/2	1/2	4	1	3-1/4	86.87
9/16	1/2	4	1	3-3/8	93.33
5/8	1/2	4	1	3-3/8	112.19
3/4	5/8	4	1	3-5/8	128.38

Diameter of Cut	Shank Diameter	No. of Flutes	C2 Carbide Tip Length	Overall Length	Price Each
7/8	5/8	4	1-1/4	4	154.59
7/8	3/4	4	1-1/4	4	154.59
1	7/8	6	1-1/4	4	177.75
1-1/8	1	6	1-1/4	4-1/4	188.52
1-1/4	1	6	1-1/4	4-1/4	227.87
1-1/2	1-1/4	6	1-1/2	4-1/2	277.18
1-3/4	1-1/4	8	1-1/2	4-1/2	333.78
2	1-1/4	8	1-1/2	4-1/2	372.59

Solid Carbide End Mills

MicroGrain – Center Cutting

Regular Length

List No. **KS92** – 2-Flute
List No. **KS93** – 3-Flute
List No. **KS94** – 4-Flute





Diameter of Cut	Shank Diameter	Length of Cut	Overall Length	Price Each 2-Flute **KS92** 3-Flute **KS93** 4-Flute **KS94**
1/64	1/8	1/32	1-1/2	17.55
1/32	1/8	5/64	1-1/2	13.28
3/64	1/8	7/64	1-1/2	13.28
1/16	1/8	3/16	1-1/2	10.89
5/64	1/8	3/16	1-1/2	11.70
3/32	1/8	9/32	1-1/2	10.89
7/64	1/8	3/8	1-1/2	11.70
1/8	1/8	1/2	1-1/2	10.89
9/64	3/16	1/2	2	15.35
5/32	3/16	1/2	2	14.99
11/64	3/16	5/8	2	15.35
3/16	3/16	5/8	2	15.35
13/64	1/4	5/8	2-1/2	18.81
7/32	1/4	5/8	2-1/2	18.81
15/64	1/4	3/4	2-1/2	20.30
1/4	1/4	3/4	2-1/2	19.76
17/64	5/16	3/4	2-1/2	24.12
9/32	5/16	3/4	2-1/2	22.68
19/64	5/16	13/16	2-1/2	24.12
5/16	5/16	13/16	2-1/2	22.28
21/64	3/8	7/8	2-1/2	31.68
11/32	3/8	7/8	2-1/2	29.70
23/64	3/8	7/8	2-1/2	31.68
3/8	3/8	7/8	2-1/2	28.80
25/64	7/16	7/8	2-1/2	45.90
13/32	7/16	7/8	2-1/2	28.80
27/64	7/16	7/8	2-1/2	45.90
7/16	7/16	1	2-3/4	41.40
29/64	1/2	1	3	55.25
15/32	1/2	1	3	53.10
31/64	1/2	1	3	55.25
1/2	1/2	1	3	48.06

Diameter of Cut	Shank Diameter	Length of Cut	Overall Length	Price Each 2-Flute **KS92** 3-Flute **KS93** 4-Flute **KS94**
33/64	9/16	1-1/4	3-1/2	101.34
17/32	9/16	1-1/4	3-1/2	100.62
35/64	9/16	1-1/4	3-1/2	95.40
9/16	9/16	1-1/4	3-1/2	88.20
37/64	5/8	1-1/4	3-1/2	104.76
19/32	5/8	1-1/4	3-1/2	100.80
39/64	5/8	1-1/4	3-1/2	97.20
5/8	5/8	1-1/4	3-1/2	91.80
41/64	3/4	1-1/2	4	154.30
21/32	3/4	1-1/2	4	153.00
43/64	3/4	1-1/2	4	151.20
11/16	3/4	1-1/2	4	133.20
45/64	3/4	1-1/2	4	142.20
23/32	3/4	1-1/2	4	142.20
47/64	3/4	1-1/2	4	142.20
3/4	3/4	1-1/2	4	127.80
49/64	7/8	1-1/2	4	257.40
25/32	7/8	1-1/2	4	257.40
51/64	7/8	1-1/2	4	257.40
13/16	7/8	1-1/2	4	257.40
53/64	7/8	1-1/2	4	249.48
27/32	7/8	1-1/2	4	249.48
55/64	7/8	1-1/2	4	249.48
7/8	7/8	1-1/2	4	226.80
57/64	1	1-1/2	4	264.96
29/32	1	1-1/2	4	264.96
59/64	1	1-1/2	4	264.96
15/16	1	1-1/2	4	253.44
61/64	1	1-1/2	4	253.44
31/32	1	1-1/2	4	253.44
63/64	1	1-1/2	4	253.44
1	1	1-1/2	4	230.40

Sets

Size	Pcs.	Description	Set No.	Price
1/8, 3/16, 1/4, 5/16, 3/8, 1/2	6	Solid Carbide, 2-Flute	**KS92S**	153.13
1/8, 3/16, 1/4, 5/16, 3/8, 1/2	6	Solid Carbide, 3-Flute	**KS93S**	153.13
1/8, 3/16, 1/4, 5/16, 3/8, 1/2	6	Solid Carbide, 4-Flute	**KS94S**	153.13

All sets are supplied in wood case



Stub Length

List No. **KSST92** – 2-Flute
List No. **KSST93** – 3-Flute
List No. **KSST94** – 4-Flute

List No. **KSSTA92** – AlTiN Coated 2-Flute
List No. **KSSTA93** – AlTiN Coated 3-Flute
List No. **KSSTA94** – AlTiN Coated 4-Flute



Diameter of Cut	Length of Cut	Overall Length	Price Each Uncoated 2FL **KSST92** 3FL **KSST93** 4FL **KSST94**	Price Each AlTiN Coated 2FL **KSSTA92** 3FL **KSSTA93** 4FL **KSSTA94**
1/32	1/16	1-1/2	12.00	19.20
3/64	3/32	1-1/2	12.00	19.20
1/16	1/8	1-1/2	9.80	15.68
3/32	3/16	1-1/2	8.95	14.32
1/8	1/4	1-1/2	8.95	14.32
5/32	5/16	2	13.00	20.80
3/16	3/8	2	13.00	20.80
7/32	7/16	2	17.00	27.20

Diameter of Cut	Length of Cut	Overall Length	Price Each Uncoated 2FL **KSST92** 3FL **KSST93** 4FL **KSST94**	Price Each AlTiN Coated 2FL **KSSTA92** 3FL **KSSTA93** 4FL **KSSTA94**
1/4	1/2	2	18.00	28.80
5/16	1/2	2	19.00	30.40
3/8	5/8	2	26.00	41.60
7/16	5/8	2-1/2	35.00	56.00
1/2	5/8	2-1/2	43.00	68.80
5/8	3/4	3	85.00	136.00
3/4	1	3	115.00	184.00
1	1	3	219.00	350.40

Solid Carbide End Mills

MicroGrain – Center Cutting



Long Length

List No. **KS92L** – 2-Flute
List No. **KS93L** – 3-Flute
List No. **KS94L** – 4-Flute

List No. **KST92L** – TiN 2-Flute
List No. **KST93L** – TiN 3-Flute
List No. **KST94L** – TiN 4-Flute

List No. **KSA92L** – AlTiN 2-Flute
List No. **KSA93L** – AlTiN 3-Flute
List No. **KSA94L** – AlTiN 4-Flute

Dia. of Cut	Shank Dia.	Length of Cut	Overall Length	Price Each		
				Uncoated	TiN Coated	AlTiN Coated
1/8	1/8	3/4	2-1/4	21.89	28.45	33.29
3/16	3/16	3/4	2-1/4	26.35	36.85	43.25
1/4	1/4	1-1/8	3	35.20	45.76	50.26
5/16	5/16	1-1/8	3	39.27	51.05	55.00
3/8	3/8	1-1/8	3	49.50	64.33	69.00
7/16	7/16	2	4	76.45	99.38	104.00
1/2	1/2	2	4	93.50	121.00	125.00
5/8	5/8	2-1/4	5	192.50	250.00	265.00
3/4	3/4	2-1/4	5	253.88	330.00	350.00
1	1	2-1/4	5	438.90	570.00	585.00



Extra Long Length

List No. **KS92XL** – 2-Flute
List No. **KS93XL** – 3-Flute
List No. **KS94XL** – 4-Flute

List No. **KST92XL** – TiN 2-Flute
List No. **KST93XL** – TiN 3-Flute
List No. **KST94XL** – TiN 4-Flute

List No. **KSA92XL** – AlTiN 2-Flute
List No. **KSA93XL** – AlTiN 3-Flute
List No. **KSA94XL** – AlTiN 4-Flute

Dia. of Cut	Shank Dia.	Length of Cut	Overall Length	Price Each		
				Uncoated	TiN Coated	AlTiN Coated
1/8	1/8	1	3	29.15	33.52	41.90
3/16	3/16	1-1/8	3	33.55	37.89	48.22
1/4	1/4	1-1/2	4	41.25	46.85	58.69
5/16	5/16	1-5/8	4	52.69	64.31	75.66
3/8	3/8	1-3/4	4	76.75	84.66	99.60
7/16	7/16	3	6	138.44	151.44	158.44
1/2	1/2	3	6	141.90	156.90	161.20
5/8	5/8	3	6	260.70	275.95	280.70
3/4	3/4	3	6	327.80	342.91	350.00
1	1	3	6	484.00	534.00	572.60



Extra Extra Long Length

List No. **KS92XXL** – 2-Flute
List No. **KS93XXL** – 3-Flute
List No. **KS94XXL** – 4-Flute

List No. **KST92XXL** – TiN 2-Flute
List No. **KST93XXL** – TiN 3-Flute
List No. **KST94XXL** – TiN 4-Flute

List No. **KSA92XXL** – AlTiN 2-Flute
List No. **KSA93XXL** – AlTiN 3-Flute
List No. **KSA94XXL** – AlTiN 4Flute

Dia. of Cut	Shank Dia.	Length of Cut	Overall Length	Price Each		
				Uncoated	TiN Coated	AlTiN Coated
1/4	1/4	3	6	46.00	53.00	60.70
5/16	5/16	3	6	57.00	64.00	71.00
3/8	3/8	4	7	71.40	80.00	86.40
7/16	7/16	3	6	86.85	92.00	99.81
1/2	1/2	4	7	105.69	112.00	120.37
5/8	5/8	5	8	138.00	180.00	194.00
3/4	3/4	6	9	259.00	270.00	279.00
1	1	7	10	650.70	668.00	680.00

TiN Coated & AlTiN Coated Solid Carbide End Mills

MicroGrain – Center Cutting

List No. **KST92** – TiN Coated, 2-Flute
List No. **KST93** – TiN Coated, 3-Flute
List No. **KST94** – TiN Coated, 4-Flute
List No. **KSAT92** – AlTiN Coated, 2-Flute
List No. **KSAT93** – AlTiN Coated, 3-Flute
List No. **KSAT94** – AlTiN Coated, 4-Flute



Diameter of Cut	Shank Diameter	Length of Cut	Overall Length	Price Each TiN Coated KST92 KST93 KST94	Price Each AlTiN Coated KSAT92 KSAT93 KSAT94
1/64	1/8	1/32	1-1/2	19.80	—
1/32	1/8	5/64	1-1/2	16.02	17.62
3/64	1/8	7/64	1-1/2	16.02	17.62
1/16	1/8	3/16	1-1/2	14.08	15.49
5/64	1/8	3/16	1-1/2	14.96	16.46
3/32	1/8	9/32	1-1/2	14.08	15.49
7/64	1/8	3/8	1-1/2	14.96	16.46
1/8	1/8	1/2	1-1/2	14.08	15.49
9/64	3/16	1/2	2	17.60	19.36
5/32	3/16	1/2	2	17.42	19.17
11/64	3/16	5/8	2	17.95	19.74
3/16	3/16	5/8	2	17.95	19.74
13/64	1/4	5/8	2-1/2	25.96	28.56
7/32	1/4	5/8	2-1/2	25.96	28.56
15/64	1/4	3/4	2-1/2	27.63	30.39
1/4	1/4	3/4	2-1/2	27.28	30.01
17/64	5/16	3/4	2-1/2	34.32	37.75
9/32	5/16	3/4	2-1/2	33.88	37.27
19/64	5/16	13/16	2-1/2	34.32	37.75
5/16	5/16	13/16	2-1/2	33.18	36.50
21/64	3/8	7/8	2-1/2	40.04	44.05
11/32	3/8	7/8	2-1/2	38.90	42.78
23/64	3/8	7/8	2-1/2	40.04	44.05
3/8	3/8	7/8	2-1/2	39.30	43.22
25/64	7/16	7/8	2-1/2	52.98	58.27
13/32	7/16	1	2-3/4	39.30	43.22
27/64	7/16	7/8	2-1/2	52.98	58.27
7/16	7/16	1	2-3/4	51.92	57.11
29/64	1/2	1	3	65.63	72.19
15/32	1/2	1	3	61.51	67.66
31/64	1/2	1	3	65.63	72.19
1/2	1/2	1	3	57.82	63.60

Diameter of Cut	Shank Diameter	Length of Cut	Overall Length	Price Each TiN Coated KST92 KST93 KST94	Price Each AlTiN Coated KSAT92 KSAT93 KSAT94
33/64	9/16	1-1/4	3-1/2	107.19	117.91
17/32	9/16	1-1/4	3-1/2	104.74	115.22
35/64	9/16	1-1/4	3-1/2	120.33	132.36
9/16	9/16	1-1/4	3-1/2	83.95	92.34
37/64	5/8	1-1/4	3-1/2	103.68	114.05
19/32	5/8	1-1/4	3-1/2	101.32	111.46
39/64	5/8	1-1/4	3-1/2	98.38	108.22
5/8	5/8	1-1/4	3-1/2	82.94	91.24
41/64	3/4	1-1/2	4	147.31	162.04
21/32	3/4	1-1/2	4	145.30	159.82
43/64	3/4	1-1/2	4	143.05	157.35
11/16	3/4	1-1/2	4	137.81	151.59
45/64	3/4	1-1/2	4	135.54	149.09
23/32	3/4	1-1/2	4	134.18	147.59
47/64	3/4	1-1/2	4	133.06	146.36
3/4	3/4	1-1/2	4	119.23	131.15
49/64	7/8	1-1/2	4	229.05	251.95
25/32	7/8	1-1/2	4	227.78	250.55
51/64	7/8	1-1/2	4	226.51	249.16
13/16	7/8	1-1/2	4	224.93	247.42
53/64	7/8	1-1/2	4	226.05	248.66
27/32	7/8	1-1/2	4	225.62	248.18
55/64	7/8	1-1/2	4	224.93	247.42
7/8	7/8	1-1/2	4	202.46	222.71
57/64	1	1-1/2	4	240.57	264.62
29/32	1	1-1/2	4	236.02	259.62
59/64	1	1-1/2	4	232.85	256.14
15/16	1	1-1/2	4	228.10	250.90
61/64	1	1-1/2	4	231.21	254.33
31/32	1	1-1/2	4	229.77	252.74
63/64	1	1-1/2	4	228.10	250.90
1	1	1-1/2	4	205.34	225.88

Metric Solid Carbide End Mills

MicroGrain – Center Cutting



List No. **KSM92** – Two Flute
List No. **KSM93** – Three Flute
List No. **KSM94** – Four Flute

Diameter of Cut mm	Shank Diameter mm	Length of Cut mm	Overall Length mm	Price Each
1.00	3	4	38	14.74
1.50	3	4.5	38	14.74
2.00	3	6.3	38	14.74
2.50	3	9.5	38	14.74
3.00	3	12	38	14.74
3.50	4	12	50	19.69
4.00	4	14	50	19.69
4.50	5	16	50	21.73
5.00	5	16	50	21.73
6.00	6	19	50	28.38
7.00	8	19	63	36.30

Diameter of Cut mm	Shank Diameter mm	Length of Cut mm	Overall Length mm	Price Each
8.00	8	20	63	40.04
9.00	10	22	75	54.89
10.00	10	22	75	54.89
11.00	11	25	75	62.70
12.00	12	25	75	75.79
14.00	14	32	89	102.96
16.00	16	32	89	118.69
18.00	18	38	100	167.70
20.00	20	38	100	202.29
22.00	25	38	100	293.37
25.00	25	38	100	312.40

BLUMILL™

Solid Carbide

MADE IN USA

Solid Carbide End Mills

MicroGrain – Center Cutting

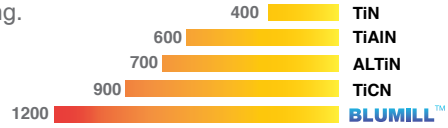
Exclusively By apt USA Approved Performance Tooling

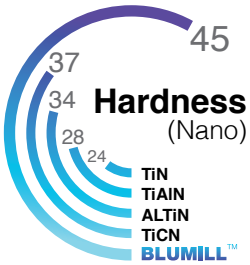


FINALLY, A COATING THAT STAYS COOL & LASTS LONGER

Characteristics: Universal, especially for drilling, reaming and turning, also for inserts, extended AlTiN with SiN based Nanocomposites

Cutting Application: Hard machining on stable machine, drilling, reaming, and grooving.





Regular Length

List No. **KS92BM** – 2-Flute
List No. **KS93BM** – 3-Flute
List No. **KS94BM**– 4-Flute

Diameter of Cut	Shank Diameter	Length of Cut	Overall Length	Price Each 2-Flute **KS92BM** 3-Flute **KS93BM** 4-Flute **KS94BM**
1/64	1/8	1/32	1-1/2	29.43
1/32	1/8	5/64	1-1/2	24.22
3/64	1/8	7/64	1-1/2	24.22
1/16	1/8	3/16	1-1/2	21.30
5/64	1/8	3/16	1-1/2	22.63
3/32	1/8	9/32	1-1/2	21.30
7/64	1/8	3/8	1-1/2	22.63
1/8	1/8	1/2	1-1/2	21.30
9/64	3/16	1/2	2	26.62
5/32	3/16	1/2	2	26.36
11/64	3/16	5/8	2	27.15
3/16	3/16	5/8	2	27.15
13/64	1/4	5/8	2-1/2	39.27
7/32	1/4	5/8	2-1/2	39.27
15/64	1/4	3/4	2-1/2	41.79
1/4	1/4	3/4	2-1/2	41.26
17/64	5/16	3/4	2-1/2	51.91
9/32	5/16	3/4	2-1/2	51.25
19/64	5/16	13/16	2-1/2	51.91
5/16	5/16	13/16	2-1/2	50.18
21/64	3/8	7/8	2-1/2	60.57
11/32	3/8	7/8	2-1/2	58.83
23/64	3/8	7/8	2-1/2	60.57
3/8	3/8	7/8	2-1/2	59.43
25/64	7/16	7/8	2-1/2	80.12
13/32	7/16	1	2-3/4	59.43
27/64	7/16	7/8	2-1/2	80.12
7/16	7/16	1	2-3/4	78.53
29/64	1/2	1	3	99.26
15/32	1/2	1	3	93.04
31/64	1/2	1	3	99.26
1/2	1/2	1	3	87.45

Diameter of Cut	Shank Diameter	Length of Cut	Overall Length	Price Each 2-Flute **KS92BM** 3-Flute **KS93BM** 4-Flute **KS94BM**
33/64	9/16	1-1/4	3-1/2	162.13
17/32	9/16	1-1/4	3-1/2	158.42
35/64	9/16	1-1/4	3-1/2	182.00
9/16	9/16	1-1/4	3-1/2	126.97
37/64	5/8	1-1/4	3-1/2	156.82
19/32	5/8	1-1/4	3-1/2	153.25
39/64	5/8	1-1/4	3-1/2	148.81
5/8	5/8	1-1/4	3-1/2	125.46
41/64	3/4	1-1/2	4	222.81
21/32	3/4	1-1/2	4	219.76
43/64	3/4	1-1/2	4	216.36
11/16	3/4	1-1/2	4	208.44
45/64	3/4	1-1/2	4	205.00
23/32	3/4	1-1/2	4	202.94
47/64	3/4	1-1/2	4	201.25
3/4	3/4	1-1/2	4	180.33
49/64	7/8	1-1/2	4	346.43
25/32	7/8	1-1/2	4	344.51
51/64	7/8	1-1/2	4	342.60
13/16	7/8	1-1/2	4	340.21
53/64	7/8	1-1/2	4	341.90
27/32	7/8	1-1/2	4	341.24
55/64	7/8	1-1/2	4	340.21
7/8	7/8	1-1/2	4	306.23
57/64	1	1-1/2	4	363.86
29/32	1	1-1/2	4	356.97
59/64	1	1-1/2	4	352.19
15/16	1	1-1/2	4	344.99
61/64	1	1-1/2	4	349.70
31/32	1	1-1/2	4	347.52
63/64	1	1-1/2	4	344.99
1	1	1-1/2	4	310.59

Double End, Stub Length





List No. **KD92BM** – Two Flute List No. **KD93BM** – Three Flute List No. **KD94BM** – Four Flute

Diameter of Cut	Shank Diameter	Length of Cut	Overall Length	Price Each
1/32	1/8	1/16	1-1/2	24.36
3/64	1/8	3/32	1-1/2	23.29
1/16	1/8	1/8	1-1/2	22.28
5/64	1/8	1/8	1-1/2	23.29
3/32	1/8	3/16	1-1/2	22.28
7/64	1/8	3/16	1-1/2	23.29
1/8	1/8	1/4	1-1/2	20.85
9/64	3/16	5/16	2	32.86
5/32	3/16	5/16	2	29.12
11/64	3/16	5/16	2	32.86
3/16	3/16	3/8	2	30.00

Diameter of Cut	Shank Diameter	Length of Cut	Overall Length	Price Each
13/64	1/4	1/2	2-1/2	37.00
7/32	1/4	1/2	2-1/2	42.37
1/4	1/4	1/2	2-1/2	50.77
9/32	5/16	1/2	2-1/2	42.37
5/16	5/16	1/2	2-1/2	55.06
3/8	3/8	9/16	2-1/2	55.06
7/16	7/16	5/8	2-3/4	58.27
1/2	1/2	5/8	3	80.78
9/16	9/16	11/16	3-1/2	92.34
5/8	5/8	11/16	3-1/2	138.58
3/4	3/4	7/8	4	176.28

Solid Carbide Ball End Mills

MicroGrain

Regular Length





List No. **KB92** – Two Flute
List No. **KB93** – Three Flute
List No. **KB94** – Four Flute

List No. **KBT92** – TiN Coated, Two Flute
List No. **KBT93** – TiN Coated, Three Flute
List No. **KBT94** – TiN Coated, Four Flute

Diameter of Cut	Shank Diameter	Length of Cut	Overall Length	Price Each Carbide KB92 KB93 KB94	Price Each TiN-Carbide KBT92 KBT93 KBT94
1/64	1/8	1/32	1-1/2	20.25	26.95
1/32	1/8	5/64	1-1/2	17.06	21.89
3/64	1/8	9/64	1-1/2	17.06	21.89
1/16	1/8	3/16	1-1/2	13.05	17.05
5/64	1/8	1/4	1-1/2	14.04	18.37
3/32	1/8	3/8	1-1/2	13.05	17.05
7/64	1/8	3/8	1-1/2	14.04	18.37
1/8	1/8	1/2	1-1/2	13.05	17.05
9/64	3/16	1/2	2	19.80	25.85
5/32	3/16	9/16	2	18.00	23.65
11/64	3/16	9/16	2	19.80	25.85
3/16	3/16	5/8	2	18.63	24.75
13/64	1/4	5/8	2-1/2	25.20	33.00
7/32	1/4	5/8	2-1/2	23.49	30.80
15/64	1/4	5/8	2-1/2	26.61	32.60
1/4	1/4	3/4	2-1/2	23.67	30.80
17/64	5/16	3/4	2-1/2	28.05	38.90
9/32	5/16	3/4	2-1/2	25.65	36.30
19/64	5/16	7/8	2-1/2	31.67	36.92
5/16	5/16	13/16	2-1/2	26.64	37.40

Diameter of Cut	Shank Diameter	Length of Cut	Overall Length	Price Each Carbide KB92 KB93 KB94	Price Each TiN-Carbide KBT92 KBT93 KBT94
21/64	3/8	7/8	2-1/2	35.67	45.08
11/32	3/8	7/8	2-1/2	36.45	49.50
23/64	3/8	7/8	2-1/2	36.84	49.90
3/8	3/8	7/8	2-1/2	33.84	46.20
25/64	7/16	7/8	2-1/2	54.98	65.25
13/32	7/16	7/8	2-1/2	53.94	65.25
27/64	7/16	7/8	2-1/2	53.94	64.55
7/16	7/16	1	2-3/4	49.73	66.00
29/64	1/2	1	3	59.51	70.78
15/32	1/2	1	3	58.97	70.78
31/64	1/2	1	3	60.89	79.10
1/2*	1/2	1	3	57.69	75.90
9/16	9/16	1-1/8	3-1/2	97.29	129.80
5/8	5/8	1-1/4	3-1/2	134.10	174.90
11/16	3/4	1-3/8	4	161.64	207.90
3/4	3/4	1-1/2	4	161.64	207.90
13/16	13/16	1-1/2	4	322.95	338.10
7/8	7/8	1-1/2	4	267.30	358.60
15/16	15/16	1-1/2	4	316.68	361.90
1	1	1-1/2	4	279.00	361.90

**Size 1/2" also available in Left Hand - four flute: $72.45*

Sets

Size	Pcs.	Description	2 Flute Set No.	2 Flute Price	4 Flute Set No.	4 Flute Price
1/8, 3/16, 1/4, 5/16, 3/8, 1/2	6	Solid Carbide	**KB92S**	178.00	**KB94S**	178.00

All sets are supplied in wood case



Long & Extra Long Length

List No. **KB92L** – Two Flute
List No. **KB94L** – Four Flute
List No. **KBA92L** – AlTiN Coated, Two Flute
List No. **KBA94L** – AlTiN Coated, Four Flute

List No. **KB92XL** – Two Flute
List No. **KB94XL** – Four Flute
List No. **KBA92XL** – AlTiN Coated, Two Flute
List No. **KBA94XL** – AlTiN Coated, Four Flute

Long Dia. of Cut	Shank Dia.	Length of Cut	Overall Length	Price Each Uncoated	Price Each AlTiN Coated	Extra Long Length of Cut	Extra Long Overall Length	Price Each Uncoated	Price Each AlTiN Coated
1/8	1/8	3/4	2-1/4	32.84	37.68	1	3	36.44	49.19
3/16	3/16	3/4	2-1/4	34.59	40.99	1-1/8	3	41.93	56.60
1/4	1/4	1-1/8	3	48.32	56.92	1-1/2	4	51.56	69.00
5/16	5/16	1-1/8	3	54.27	67.19	1-5/8	4	65.86	88.83
3/8	3/8	1-1/8	3	65.55	78.67	1-3/4	4	92.10	112.10
7/16	7/16	2	4	93.51	109.85	—	—	—	—
1/2	1/2	2	4	113.30	136.74	3	4	170.28	193.95
5/8	5/8	2-1/4	5	234.22	269.42	3	5	299.70	358.84
3/4	3/4	2-1/4	5	311.88	351.96	3	5	376.97	437.52
1	1	2-1/4	5	498.00	550.68	3	5	532.40	621.88

Decimal Solid Carbide End Mills

MicroGrain – Center Cutting



1/8" Shank – 1-1/2" Overall Length

List No. **KSD92** – Two Flute
List No. **KSD94** – Four Flute

Diameter of Cut	Length of Cut	Price Each
.010	.030	26.95
.015	.045	21.45
.020	.060	20.79
.025	.075	19.53
.030	.090	19.53
.035	.105	19.53
.040	.120	19.53
.045	.135	16.45

Diameter of Cut	Length of Cut	Price Each
.050	.150	16.45
.055	.165	16.45
.060	.180	16.45
.065	.195	16.45
.070	.210	16.45
.075	.225	16.45
.080	.240	16.45
.085	.255	16.45

Diameter of Cut	Length of Cut	Price Each
.090	.270	16.45
.095	.285	16.45
.100	.300	16.45
.105	.315	16.45
.110	.330	16.45
.115	.345	16.45
.120	.360	16.45

Left Hand Solid Carbide End Mills



MicroGrain – Center Cutting

List No. **KS94LH** – Left Hand Four Flute

Diameter of Cut	Shank Diameter	Length of Cut	Overall Length	Price Each
3/16	3/16	5/8	2	17.20
1/4	1/4	3/4	2-1/2	17.00
5/16	5/16	13/16	2-1/2	23.00
3/8	3/8	1	2-1/2	29.20
7/16	7/16	1	2-3/4	42.00

Diameter of Cut	Shank Diameter	Length of Cut	Overall Length	Price Each
1/2	1/2	1	3	50.00
5/8	5/8	1-1/4	3-1/2	87.00
3/4	3/4	1-1/2	4	134.00
1	1	1-1/2	4	186.00

Straight Flute Solid Carbide End Mills



MicroGrain

List No. **KSS92** – Two Flute
List No. **KSS94** – Four Flute

Diameter of Cut	Shank Diameter	Length of Cut	Overall Length	Price Each
1/8	1/8	1/2	1-1/2	5.50
5/32	5/32	5/8	2	10.00
3/16	3/16	5/8	2	9.60
1/4	1/4	3/4	2-1/2	12.20
9/32	9/32	13/16	2-1/2	17.50
5/16	5/16	13/16	2-1/2	16.50

Diameter of Cut	Shank Diameter	Length of Cut	Overall Length	Price Each
3/8	3/8	1	2-1/2	20.30
7/16	7/16	1	2-3/4	28.20
1/2	1/2	1	3	34.50
5/8	5/8	1-1/4	3-1/2	76.00
3/4	3/4	1-1/2	4	104.00
1	1	1-1/2	4	166.00

Heavy Duty – Center Cutting

List No. **KSS92HD** – Two Flute
List No. **KBSS92HD** – Ball End, Two Flute



Flute Diameter	Shank Diameter	Length of cut	Overall Length	Price Each	
				Straight End **KSS92HD**	Ball End **KBSS92HD**
1/8	1/8	1/2	1-1/2	21.00	24.38
3/16	3/16	5/8	2	27.14	32.00
1/4	1/4	3/4	2-1/2	33.00	39.00
5/16	5/16	13/16	2-1/2	42.57	52.00
3/8	3/8	1	2-1/2	49.00	58.00
1/2	1/2	1	3	73.13	95.00

Solid Carbide Double End Mills

MicroGrain – Center Cutting



Regular Length – Weldon Style Shank

List No. **KD82** – 2-Flute
List No. **KD84** – 4-Flute
List No. **KDA82** – AlTiN 2-Flute
List No. **KDA84** – AlTiN 4-Flute

Diameter of Cut	Shank Diameter	Length of Cut	Overall Length	Price Each Uncoated	Price Each AlTiN Coated
3/32	3/8	5/16	3	40.39	53.89
1/8	3/8	3/8	3-1/16	39.60	53.10
5/32	3/8	7/16	3-1/8	41.86	55.36
3/16	3/8	1/2	3-1/4	43.62	57.12
7/32	3/8	9/16	3-3/8	50.22	63.72
1/4	3/8	5/8	3-3/8	53.57	67.07
5/16	3/8	3/4	3-1/2	64.35	77.85

Diameter of Cut	Shank Diameter	Length of Cut	Overall Length	Price Each Uncoated	Price Each AlTiN Coated
11/32	3/8	3/4	3-1/2	69.85	83.35
3/8	3/8	3/4	3-1/2	69.85	83.35
7/16	1/2	7/8	4	109.45	125.20
1/2	1/2	1	4	111.10	125.85
9/16	5/8	1-1/4	5	126.36	153.36
5/8	5/8	1-1/2	6	136.08	163.08
3/4	3/4	1-1/2	6	197.64	224.67

Sets

Size	Pcs.	Description	2 Flute Set No.	2 Flute Price	4 Flute Set No.	4 Flute Price
1/8, 3/16, 1/4, 5/16, 3/8, 1/2	6	Solid Carbide	**KD92S**	188.17	**KD94S**	188.17

All sets are supplied in wood case



Stub Length

List No. **KD92** – Two Flute
List No. **KD94** – Four Flute
List No. **KDT92** – TiN Coated, Two Flute
List No. **KDT94** – TiN Coated, Four Flute



Diameter of Cut	Shank Diameter	Length of Cut	Overall Length	Price Each Carbide KD92 KD94	Price Each TiN-Carbide KDT92 KDT94
1/32	1/8	1/16	1-1/2	15.30	23.65
3/64	1/8	3/32	1-1/2	14.49	22.61
1/16	1/8	1/8	1-1/2	12.87	21.63
5/64	1/8	1/8	1-1/2	14.49	22.61
3/32	1/8	3/16	1-1/2	12.87	21.63
7/64	1/8	3/16	1-1/2	14.49	22.61
1/8	1/8	1/4	1-1/2	12.11	20.24
9/64	3/16	5/16	2	21.33	31.90
5/32	3/16	5/16	2	17.10	28.27
11/64	3/16	5/16	2	21.33	31.90
3/16	3/16	3/8	2	18.18	29.13

Diameter of Cut	Shank Diameter	Length of Cut	Overall Length	Price Each Carbide KD92 KD94	Price Each TiN-Carbide KDT92 KDT94
13/64	1/4	1/2	2-1/2	27.11	46.95
7/32	1/4	1/2	2-1/2	22.50	41.14
15/64	1/4	1/2	2-1/2	25.65	49.29
1/4	1/4	1/2	2-1/2	22.50	41.14
9/32	5/16	1/2	2-1/2	29.25	53.46
5/16	5/16	1/2	2-1/2	30.87	53.46
3/8	3/8	9/16	2-1/2	32.31	56.57
7/16	7/16	5/8	2-3/4	46.58	78.43
1/2	1/2	5/8	3	56.07	89.65
5/8	5/8	11/16	3-1/2	118.32	134.54
3/4	3/4	7/8	4	144.48	171.15

Solid Carbide Roughing End Mills



Four Flutes

Cutter Diameter	Shank Diameter	Length of Cut	Overall Length	Tool No.	Price Each
1/4	1/4	3/4	2-1/2	**CRSC8-3**	35.91
5/16	5/16	3/4	2-1/2	**CRSC10-3**	42.30
3/8	3/8	1	2-1/2	**CRSC12-3**	48.60
7/16	7/16	1	3	**CRSC14-3**	57.60

Cutter Diameter	Shank Diameter	Length of Cut	Overall Length	Tool No.	Price Each
1/2	1/2	1-1/4	3	**CRSC16-4**	62.01
5/8	5/8	1-5/8	3-1/2	**CRSC20-6**	102.51
3/4	3/4	1-5/8	4	**CRSC24-6**	141.21
1	1	1-3/4	4	**CRSC32-8**	228.60

Solid Carbide Ball End Mills

MicroGrain

Double Ball End, Stub Length

List No. **KB82** – Two Flute
List No. **KB84** – Four Flute



Diameter of Cut	Shank Diameter	Length of Cut	Overall Length	Price Each
1/32	1/8	1/16	1-1/2	20.70
3/64	1/8	3/32	1-1/2	20.70
1/16	1/8	1/8	1-1/2	15.48
5/64	1/8	1/8	1-1/2	15.48
3/32	1/8	3/16	1-1/2	15.48
7/64	1/8	3/16	1-1/2	15.48
1/8	1/8	1/4	1-1/2	14.40
9/64	3/16	5/16	2	22.05
5/32	3/16	5/16	2	20.52
11/64	3/16	5/16	2	25.47
3/16	3/16	3/8	2	21.83

Diameter of Cut	Shank Diameter	Length of Cut	Overall Length	Price Each
7/32	1/4	1/2	2-1/2	28.80
1/4	1/4	1/2	2-1/2	34.29
9/32	5/16	1/2	2-1/2	36.99
5/16	5/16	1/2	2-1/2	38.70
3/8	3/8	9/16	2-1/2	40.50
7/16	7/16	5/8	2-3/4	56.03
1/2	1/2	5/8	3	71.78
9/16	9/16	11/16	3-1/2	163.56
5/8	5/8	11/16	3-1/2	158.40
3/4	3/4	7/8	4	194.88

Sets

Size	Pcs.	Description	2 Flute Set No.	2 Flute Price	4 Flute Set No.	4 Flute Price
1/8, 3/16, 1/4, 5/16, 3/8, 1/2	6	Solid Carbide	**KB82S**	226.00	**KB84S**	226.00

All sets are supplied in block



3-Flute High Helix Solid Carbide End Mills

MicroGrain – Center Cutting

Three cutting edges to reduce vibration and produce better finishes. High shear design is engineered for slotting, plunging and peripheral milling applications.

List No. **KS9345** – 45° High Helix
List No. **KS9360** – 60° High Helix



Diameter of Cut	Shank Diameter	Length of Cut	Overall Length	Price Each
1/8	1/8	1/2	1-1/2	27.94
3/16	3/16	5/8	2	30.25
1/4	1/4	3/4	2-1/2	31.90
5/16	5/16	13/16	2-1/2	40.70
3/8	3/8	7/8	2-1/2	60.28

Diameter of Cut	Shank Diameter	Length of Cut	Overall Length	Price Each
7/16	7/16	1	3	86.24
1/2	1/2	1	3	92.95
5/8	5/8	1-1/4	3-1/2	149.60
3/4	3/4	1-1/2	4	218.90
1	1	1-1/2	4	412.50

6-Flute Solid Carbide End Mills

MicroGrain – Center Cutting

List No. **KSD96**
The 6-flute design helps reduce chip load and improve the work piece finish.



Diameter of Cut	Shank Diameter	Length of Cut	Overall Length	Price Each
1/8	1/8	3/8	1-1/2	25.11
5/32	3/16	1/2	2	34.73
3/16	3/16	9/16	2	36.25
1/4	1/4	3/4	2-1/2	47.07

Diameter of Cut	Shank Diameter	Length of Cut	Overall Length	Price Each
5/16	5/16	13/16	2-1/2	52.64
3/8	3/8	7/8	2-1/2	66.79
7/16	7/16	1	2-3/4	96.75
1/2	1/2	1	3	111.32

ProductionMax™ High Performance Solid Carbide End Mills

AlTiN Coated MicroGrain – Center Cutting

Solid Carbide

MADE IN USA

MICHIGAN DRILL & CUTTING TOOLS

ProductionMax High Performance end mills are designed for fast metal removal of harder alloys than standard carbide end mills. These 4 flute variable indexed end mills perform with less vibrations, greater strength and faster feed and speeds.

- Aluminium Titanium Nitride Coated
- Standard corner radius
- Special O.D. Coolant Groove on each flute
- 35° Helix

Regular Length

List No. **KSP94** – Four Flute



Cutter Diameter	Flute Length	Overall Length	Corner Radius	Price Each
1/8	1/2	1-1/2	.010	19.36
3/16	5/8	2	.010	24.68
1/4	3/4	2-1/2	.015	37.51
5/16	7/8	2-1/2	.015	42.62
3/8	1	2-1/2	.020	54.00

Cutter Diameter	Flute Length	Overall Length	Corner Radius	Price Each
7/16	1-1/8	2-3/4	.025	71.00
1/2	1-1/4	3	.030	71.00
5/8	1-1/2	3-1/2	.030	120.00
3/4	1-3/4	4	.040	190.00
1	1-3/4	4	.045	299.00

Long Reach

List No. **KSLP94** – Four Flute



Cutter Diameter	Flute Length	Overall Length	Corner Radius	Price Each
1/4	3/4	4	.015	41.00
5/16	7/8	4	.015	51.00
3/8	1	4	.020	73.00
1/2	1-1/4	6	.030	123.00

Cutter Diameter	Flute Length	Overall Length	Corner Radius	Price Each
5/8	1-1/2	6	.030	214.00
3/4	1-3/4	6	.040	294.00
1	1-3/4	6	.045	389.00

Ball Length

List No. **KBP94** – Four Flute



Cutter Diameter	Flute Length	Overall Length	Price Each
1/8	1/2	1-1/2	23.00
3/16	5/8	2	25.53
1/4	3/4	2-1/2	36.40
5/16	7/8	2-1/2	50.00
3/8	1	2-1/2	56.00

Cutter Diameter	Flute Length	Overall Length	Price Each
7/16	1-1/8	2-3/4	78.40
1/2	1-1/4	3	101.00
5/8	1-1/2	3-1/2	179.00
3/4	1-3/4	4	245.00
1	1-3/4	4	389.00

Stub Length

List No. **KSSP94** – Four Flute



Cutter Diameter	Flute Length	Overall Length	Corner Radius	Price Each
1/8	1/4	1-1/2	.010	14.00
3/16	1/4	2	.010	15.40
1/4	5/16	2	.015	22.40
5/16	3/8	2	.015	32.20
3/8	1/2	2	.020	40.60

Cutter Diameter	Flute Length	Overall Length	Corner Radius	Price Each
7/16	5/8	2-1/2	.025	61.60
1/2	5/8	2-1/2	.030	74.00
5/8	1	3	.030	123.00
3/4	1	3	.040	180.00
1	1	3	.045	270.00

Stub Length Ball End

List No. **KBSP94** – Four Flute



Cutter Diameter	Flute Length	Overall Length	Price Each
1/8	1/4	1-1/2	19.60
3/16	1/4	2	22.40
1/4	5/16	2	33.60
5/16	3/8	2	44.80
3/8	1/2	2	51.80

Cutter Diameter	Flute Length	Overall Length	Price Each
7/16	5/8	2-1/2	71.40
1/2	5/8	2-1/2	92.46
5/8	1	3	169.00
3/4	1	3	229.00
1	1	3	368.00

Corner Radius Solid Carbide End Mills

MicroGrain – Center Cutting





Solid Carbide

MADE IN USA

MICHIGAN DRILL & CUTTING TOOLS

2-Flute Regular Length

List No. **KSR215** – .015 Corner Radius
List No. **KSR232** – .032 Corner Radius
List No. **KSR262** – .062 Corner Radius
List No. **KSR293** – .093 Corner Radius
List No. **KSR2125** – .125 Corner Radius

List No. **KSRA215** – AlTiN Coated .015 Corner Radius
List No. **KSRA232** – AlTiN Coated.032 Corner Radius
List No. **KSRA262** – AlTiN Coated.062 Corner Radius
List No. **KSRA293** – AlTiN Coated.093 Corner Radius
List No. **KSRA2125** – AlTiN Coated.125 Corner Radius

Cutter Diameter	Flute Length	Overall Length	Price Each Uncoated	Price Each AlTiN Coated
1/8	1/2	1-1/2	9.50	11.91
3/16	5/8	2	15.80	19.25
1/4	3/4	2-1/2	18.12	24.41
5/16	7/8	2-1/2	23.17	32.02
3/8	1	2-1/2	28.22	37.07

Cutter Diameter	Flute Length	Overall Length	Price Each Uncoated	Price Each AlTiN Coated
1/2	1	3	47.52	60.18
5/8	1-1/4	3-1/2	90.59	110.35
3/4	1-1/2	4	124.74	147.31
1	1-1/2	4	224.10	259.01

4-Flute Regular Length

List No. **KSR415** – .015 Corner Radius
List No. **KSR432** – .032 Corner Radius
List No. **KSR462** – .062 Corner Radius
List No. **KSR493** – .093 Corner Radius
List No. **KSR4125** – .125 Corner Radius

List No. **KSRA415** – AlTiN Coated .015 Corner Radius
List No. **KSRA432** – AlTiN Coated.032 Corner Radius
List No. **KSRA462** – AlTiN Coated.062 Corner Radius
List No. **KSRA493** – AlTiN Coated.093 Corner Radius
List No. **KSRA4125** – AlTiN Coated.125 Corner Radius

Cutter Diameter	Flute Length	Overall Length	Price Each Uncoated	Price Each AlTiN Coated
1/8	1/2	1-1/2	9.50	11.91
3/16	5/8	2	15.80	19.25
1/4	3/4	2-1/2	18.12	24.41
5/16	7/8	2-1/2	23.17	32.02
3/8	1	2-1/2	28.22	37.07

Cutter Diameter	Flute Length	Overall Length	Price Each Uncoated	Price Each AlTiN Coated
1/2	1	3	47.52	60.18
5/8	1-1/4	3-1/2	90.59	110.35
3/4	1-1/2	4	124.74	147.31
1	1-1/2	4	224.10	259.01

2-Flute Long Length

List No. **KSRL215** – .015 Corner Radius
List No. **KSRL232** – .032 Corner Radius
List No. **KSRL262** – .062 Corner Radius
List No. **KSRL293** – .093 Corner Radius
List No. **KSRL2125** – .125 Corner Radius

List No. **KSRLA215** – AlTiN Coated .015 Corner Radius
List No. **KSRLA232** – AlTiN Coated.032 Corner Radius
List No. **KSRLA262** – AlTiN Coated.062 Corner Radius
List No. **KSRLA293** – AlTiN Coated.093 Corner Radius
List No. **KSRLA2125** – AlTiN Coated.125 Corner Radius

Cutter Diameter	Flute Length	Overall Length	Price Each Uncoated	Price Each AlTiN Coated
1/8	1	3	22.28	25.30
3/16	1-1/8	3	24.76	28.76
1/4	1-1/2	4	32.54	39.83
5/16	1-5/8	4	40.69	49.28
3/8	1-1/2	6	66.83	79.30

Cutter Diameter	Flute Length	Overall Length	Price Each Uncoated	Price Each AlTiN Coated
1/2	1-1/2	6	102.60	124.69
5/8	1-1/2	6	156.60	184.28
3/4	2	6	210.60	242.22
1	2-1/4	6	364.50	419.77

4-Flute Long Length

List No. **KSRL415** – .015 Corner Radius
List No. **KSRL432** – .032 Corner Radius
List No. **KSRL462** – .062 Corner Radius
List No. **KSRL493** – .093 Corner Radius
List No. **KSRL4125** – .125 Corner Radius

List No. **KSRLA415** – AlTiN Coated .015 Corner Radius
List No. **KSRLA432** – AlTiN Coated.032 Corner Radius
List No. **KSRLA462** – AlTiN Coated.062 Corner Radius
List No. **KSRLA493** – AlTiN Coated.093 Corner Radius
List No. **KSRLA4125** – AlTiN Coated.125 Corner Radius

Cutter Diameter	Flute Length	Overall Length	Price Each Uncoated	Price Each AlTiN Coated
1/8	1	3	22.28	25.30
3/16	1-1/8	3	24.76	28.76
1/4	1-1/2	4	32.54	39.83
5/16	1-5/8	4	40.69	49.28
3/8	1-1/2	6	66.83	79.30

Cutter Diameter	Flute Length	Overall Length	Price Each Uncoated	Price Each AlTiN Coated
1/2	1-1/2	6	102.60	124.69
5/8	1-1/2	6	156.60	184.28
3/4	2	6	210.60	242.22
1	2-1/4	6	364.50	419.77

Tri-Dex™ Indexable End Mills

Triangle Inserted - Positive Rake - 90° Cut

Exclusively By apt USA Approved Performance Tooling

MADE IN USA

- Low cost
- Finest quality and workmanship
- A large range of standard diameters available
- A wide variety of shanks to choose from
- All sizes use standard 3/8" I.C. triangle inserts
- One clamp fits all tool sizes
- Used effectively on low horsepower milling machines
- Simple, rugged clamp design
- Versatile - can be used for many different types of cuts
- Can be used with inserts with wiping flats for improved finish


Straight Shank


R-8 Shank


NST Shank


V-Flange Shank

End Mills

Cutting Diameter	Shank Dia. or Style	No. of Inserts	Tool Number	Price Each
3/4	1/2	1	**EM075-50**	82.23
3/4	3/4	1	**EM075-34**	82.23
3/4	R-8	1	**EM075-R8**	110.63
7/8	3/4	1	**EM087-34**	92.69
1	1	1	**EM100-1**	104.65
1	3/4	1	**EM100-34**	101.66
1	R-8	1	**EM100-R8**	110.63
1-1/4	1	2	**EM125-1**	115.12
1-1/4	3/4	2	**EM125-34**	118.11
1-1/4	R-8	2	**EM125-R8**	128.57
1-1/4	40V-Flange	2	**EM125-V40**	277.24
1-3/8	1	2	**EM137-1**	136.70
1-3/8	3/4	2	**EM137-34**	140.53
1-3/8	R-8	2	**EM137-R8**	146.51
1-1/2	1	3	**EM150--1**	153.99
1-1/2	3/4	3	**EM150-34**	158.47
1-1/2	R-8	3	**EM150-R8**	170.43
1-1/2	40V-Flange	3	**EM150-V40**	318.44
1-5/8	3/4	3	**EM162-34**	161.46
1-5/8	1	3	**EM162-1**	161.46

Cutting Diameter	Shank Dia. or Style	No. of Inserts	Tool Number	Price Each
1-5/8	R-8	3	**EM162-R8**	182.39
1-3/4	1	3	**EM175-1**	185.38
1-3/4	3/4	3	**EM175-34**	188.37
1-3/4	R-8	3	**EM175-R8**	213.79
2	1	3	**EM20-1**	210.80
2	3/4	3	**EM20-34**	215.28
2	R-8	3	**EM20-R8**	233.22
2	30 NST	3	**EM20-S30**	272.09
2	40 NST	3	**EM20-S40**	309.47
2	40V-Flange	3	**EM20-V40**	369.27
2-1/4	R-8	4	**EM225-R8**	309.47
2-1/2	1-1/4	5	**EM250-125**	339.37
2-1/2	R-8	5	**EM250-R8**	360.30
2-3/4	R-8	5	**EM275-R8**	367.77
3	1-1/4	5	**EM300-125**	373.75
3	R-8	5	**EM300-R8**	405.15
3	40 NST	5	**EM300-S40**	405.15
3	40V-Flange	5	**EM300-V40**	463.45
3-1/2	R-8	5	**EM350-R8**	442.52
4	R-8	6	**EM400-R8**	509.80

Inserts sold separately. Cutter body length 1-5/8"

Sets

Shank Style	Cutting Diameter	Pieces	Set No.	Price
3/4	3/4, 7/8, 1	3	**EM34**	281.24
3/4	1-1/4, 1-1/2, 2"	3	**EM750**	496.52
1	1-1/4, 1-1/2, 2"	3	**EM1000**	485.65
R-8	1", 1-1/4, 1-1/2	3	**EM8R1**	416.91
R-8	2", 2-1/2, 3"	3	**EM8R2**	1005.00
R-8	2", 2-1/4, 2-1/2	3	**EM8R3**	910.27
R-8	2-3/4, 3", 3-1/2	3	**EM8R4**	1222.72
V-Flange	1-1/4, 1-1/2, 2"	3	**EMV1000**	972.23

Inserts sold separately.

All sets are supplied in wood block.



TPG Carbide Inserts

Triangle - Positive rake - Ground all over

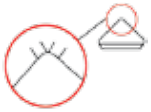


Insert Number	Radius	I.C.	Thickness	Price Each		
				C-2	C-6	TiN Coated*
TPG321	1/64	3/8	1/8	6.74	6.74	8.08
TPG322	1/32	3/8	1/8	6.74	6.74	8.08
TPG323	3/64	3/8	1/8	6.74	6.74	8.08
TPG324	1/16	3/8	1/8	6.74	6.74	8.08

** C-6 Grade TiN Coated*

TPC Carbide Inserts

Triangle - Positive rake - Ground all over with wiping flats on three corners



Insert Number	Radius	I.C.	Thickness	Price Each		
				C-2	C-6	TiN Coated*
TPC32ZR	-	3/8	1/8	6.48	6.48	7.62

** C-6 Grade TiN Coated*

Replacement Parts

Part No.	Description	Price Each
Part CTD-2	Hold Down Clamp	7.95
Part CS832-12	Clamp Screw	0.65
Part CSW	9/64 Allen Wrench for 8-32 Screw	0.65

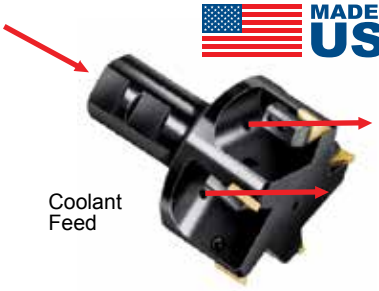
Coolant Fed Tri-Dex™ Indexable End Mills

Exclusively By apt USA Approved Performance Tooling

MADE IN USA

Triangle Inserted - Positive Rake - 90° Cut

- Tool life is greatly improved when coolant is fed to each cutting edge of the tool
- Allows increased cutting speeds and feeds
- Greatly improves surface finishes
- Extends insert life
- Uses standard 3/8" I.C. triangle inserts
- One clamp fits all tools



End Mills

Cutting Diameter	Shank Dia. or Style	No. of Inserts	Tool Number	Price Each
3/4	3/4	1	**EMC075-34**	107.29
1	3/4	1	**EMC100-34**	133.94
1	1	1	**EMC100-1**	133.94
1-1/4	3/4	2	**EMC125-34**	149.50
1-1/4	1	2	**EMC125-1**	149.50

Cutting Diameter	Shank Dia. or Style	No. of Inserts	Tool Number	Price Each
1-1/2	1	3	**EMC150-1**	197.29
1-3/4	1	3	**EMC175-1**	238.29
2	1	3	**EMC20-1**	261.86
3	1-1/4	5	**EMC300-125**	452.01

Inserts sold separately (see previous page). Cutter body length 1-5/8"

Sets

Shank Style	Cutting Diameter	Pieces	Set No.	Price
3/4	3/4, 1", 1-1/4	3	**EMC34**	395.39
1	1-1/2, 1-3/4, 2"	3	**EMC1000**	699.00

Inserts sold separately. All sets are supplied in wood block.



Miniature Tri-Dex™ Indexable End Mills

MADE IN USA

Exclusively By apt USA Approved Performance Tooling

Triangle Inserted - Positive Rake - 90° cut

- One clamp fits all sizes
- Uses standard 1/4" I.C. triangle insert
- Fine surface finishes



End Mills

Cutting Diameter	Shank Diameter	Body Length	Overall Length	Tool Number	Price Each
1/2	1/2	1	3	**EMM500-5**	73.26
9/16	1/2	1	3	**EMM562-5**	73.26
5/8	1/2	1	3	**EMM625-5**	73.26

Cutting Diameter	Shank Diameter	Body Length	Overall Length	Tool Number	Price Each
12mm	1/2	1	3	**EMM12M-5**	73.26
15mm	1/2	1	3	**EMM15M-5**	73.26
18mm	1/2	1	3	**EMM18M-5**	73.26

Sets

Cutting Diameter	Pieces	Set No.	Price
1/2, 9/16, 5/8	3	**EMM500**	223.09
12mm, 15mm, 18mm	3	**EMM500A**	223.09

All sets are supplied in wood block.



Inserts sold separately.
Torx™ wrench included.

TPG Carbide Inserts

Triangle - Positive rake - Ground all over



Insert Number	Radius	I.C.	Thickness	Price Each C-2	Price Each C-6	Price Each TiN Coated*
TPG-221	1/64	1/4	1/8	5.70	5.70	6.90
TPG-222	1/32	1/4	1/8	5.70	5.70	6.90
TPG-223	3/64	1/4	1/8	5.70	5.70	6.90

**C-6 Grade TiN Coated*

Replacement Parts

Part No.	Description	Price Each
Part CTM	Hold Down Clamp	2.66
Part CB632-38	Torx Clamp Screw	2.16
Part CTW-10	T-10 Trox Wrench for 6-32 Screw	3.52

Tri-Dex™-Extra Long Length Indexable End Mills

Triangle Inserted - Positive Rake - 90° Cut

MADE IN USA

Exclusively By apt USA Approved Performance Tooling

- Used where extra long reach is required
- Available in a wide range of diameters
- A large variety of shank styles
- Uses standard 3/8" I.C. triangle inserts
- One clamp fits all size

End Mills

Cutting Diameter	Shank Dia. or Style	Overall Length	No. of Inserts	Tool Number	Price Each
3/4	3/4	6-1/4	1	**EML075-34**	116.61
1	3/4	6-1/4	1	**EML100-34**	142.03
1-1/4	1	6-1/4	2	**EML125-1**	162.96
1-1/4	R-8	8-1/4	2	**EML125-R8**	182.39
1-1/2	1	6-1/4	3	**EML150-1**	215.28
1-1/2	R-8	8-1/4	3	**EML150-R8**	240.70
2	1	6-1/4	3	**EML20-1**	290.03
2	1-1/4	6-1/4	3	**EML20-125**	275.08
2	R-8	8-1/4	3	**EML20-R8**	322.92
2-1/2	1-1/4	6-1/4	5	**EML250-125**	445.51
2-1/2	R-8	8-1/4	5	**EML250-R8**	472.42
3	1-1/4	6-1/4	5	**EML300-125**	479.90
3	R-8	8-1/4	5	**EML300-R8**	532.22

Inserts sold separately. Cutter body length 4"



Sets

Shank Style	Cutting Diameter	Pieces	Set No.	Price
R-8	2, 2-1/2, 3"	3	**EML8R2**	1327.56
1-1/4	2, 2-1/2, 3"	3	**EML12500**	1200.49

Inserts sold separately.

All sets are supplied in wood block.



TPG Carbide Inserts

Triangle - Positive rake - Ground all over

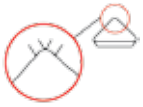


Insert Number	Radius	I.C.	Thickness	Price Each C-2	Price Each C-6	Price Each TiN Coated*
TPG321	1/64	3/8	1/8	6.74	6.74	8.08
TPG322	1/32	3/8	1/8	6.74	6.74	8.08
TPG323	3/64	3/8	1/8	6.74	6.74	8.08
TPG324	1/16	3/8	1/8	6.74	6.74	8.08

**C-6 Grade TiN Coated*

TPC Carbide Inserts

Triangle - Positive rake - Ground all over with wiping flats on three corners



Insert Number	Radius	I.C.	Thickness	Price Each C-2	Price Each C-6	Price Each TiN Coated*
TPC32ZR	-	3/8	1/8	6.48	6.48	7.62

**C-6 Grade TiN Coated*

Replacement Parts

Part No.	Description	Price Each
Part CTD-2	Hold Down Clamp	7.95
Part CS832-12	Clamp Screw	0.65
Part CSW	9/64 Allen Wrench for 8-32 Screw	0.65

Little Hogger Mill

1" Diameter, 3/4" Weldon Shank

Degree	Compatible Insert	Tool Number	Price Each
45º	SNMA-322	**JH-134-45**	69.00
90º	TNMA-32	**JH-134-32**	69.00
3/16R	RNMA-32	**JH-134-90**	69.00
3-piece set (one each of above mills)		**JH-134SET**	207.00



MADE IN USA

apt USA

8X More Metal Removal

Complete with insert, screw, & wrench

Carbide Inserts

Insert Number	Radius	I.C.	Thickness	Price Each C-2	Price Each C-6	Price Each TiN Coated*
SNMA322	1/8	3/8	1/8	3.22	3.22	4.34
TNMA322	1/8	3/8	1/8	3.06	3.06	4.42
RNMA32	–	3/8	1/8	3.21	3.21	4.42

**C-6 Grade TiN Coated*

- Mill at 5 times the speed of H.S. tools.
- Can be run at 1600 RPM at an average rate of 12"/min.
- Improves surface finishes.
- Mills tool steels & cast iron with no loss of edge due to abrasion.
- Uses standard carbide inserts.
- Useful on all milling machines from Bridgport™ to large boring mill and CNC equipment

RounDex™ Indexable End Mills

Round Inserted - Positive Rake

Exclusively By apt USA Approved Performance Tooling

MADE IN USA

- Use as a roughing cutter for higher stock removal
- Use in applications where a radius corner is desired
- Adjust speeds and feeds for good surface finishes
- Use effectively on low horsepower milling machines
- Achieve better finishes
- More cutting edges
- Use standard 1/2" round inserts

End Mills

			Regular Length			Extra Long Length		
Cutting Diameter	Shank Dia. or Style	No. of Inserts	Overall Length	Tool Number	Price Each	Overall Length	Tool Number	Price Each
3/4	3/4	1	3-7/8	**EMR075-34**	91.20	6-1/4	**EMLR075-34**	125.58
7/8	3/4	1	3-7/8	**EMR087-34**	101.66	—	—	—
1	3/4	1	3-7/8	**EMR100-34**	112.13	6-1/4	**EMLR100-34**	138.80
1	1	1	3-7/8	**EMR100-1**	116.00	—	—	—
1	R-8	1	5-7/8	**EMR100-R8**	118.11	—	—	—
1-1/4	3/4	2	3-7/8	**EMR125-34**	130.07	—	—	—
1-1/4	1	2	3-7/8	**EMR125-1**	126.33	—	—	—
1-1/4	R-8	2	5-7/8	**EMR125-R8**	140.53	8-1/4	**EMLR125-R8**	198.84
1-1/2	3/4	3	3-7/8	**EMR150-34**	170.43	—	—	—
1-1/2	1	3	3-7/8	**EMR150-1**	167.44	6-1/4	**EMLR150-1**	234.72
1-1/2	R-8	3	5-7/8	**EMR150-R8**	188.37	8-1/4	**EMLR150-R8**	266.11
1-3/4	3/4	3	3-7/8	**EMR175-34**	204.82	—	—	—
1-3/4	R-8	3	5-7/8	**EMR175-R8**	233.22	—	—	—
2	3/4	3	3-7/8	**EMR20-34**	237.71	—	—	—
2	1	3	3-7/8	**EMR20-1**	233.22	6-1/4	**EMLR20-1**	307.97
2	1-1/4	3	—	—	—	6-1/4	**EMLR20-125**	307.97
2	R-8	3	5-7/8	**EMR20-R8**	246.68	8-1/4	**EMLR20-R8**	352.82
2-1/2	1-1/4	5	3-7/8	**EMR250-125**	376.74	6-1/4	**EMLR250-125**	488.87
2-1/2	R-8	5	5-7/8	**EMR250-R8**	393.19	8-1/4	**EMLR250-R8**	514.28
3	1-1/4	5	3-7/8	**EMR300-125**	403.65	6-1/4	**EMLR300-125**	524.75
3	R-8	5	5-7/8	**EMR300-R8**	427.57	8-1/4	**EMLR300-R8**	575.58

Inserts sold separately. Cutter body length 1-5/8"



Sets

Regular Length

Description	Sizes	Pieces	Set No.	Price
3/4	3/4, 7/8, 1	3	**EMR34**	309.65
3/4	1-1/4, 1-1/2, 2"	3	**EMR750**	542.28
1	1-1/4, 1-1/2, 2"	3	**EMR1000**	532.73
R-8	1", 1-1/4, 1-1/2	3	**EMR8R1**	454.29
R-8	2", 2-1/2, 3"	3	**EMR8R2**	1074.72

Inserts sold separately.

All sets are supplied in wood block.



RPG Carbide Inserts

Round - Positive rake - Ground all over



Insert Number	Radius	I.C.	Thickness	Price Each C-2	Price Each C-6	Price Each TiN Coated*
RPG42	1/4	1/2	1/8	6.44	6.44	7.68

**C-6 Grade TiN Coated*

Replacement Parts

Part No.	Description	Price Each
Part CTD-2	Hold Down Clamp	7.95
Part CS832-12	Clamp Screw	0.65
Part CSW	9/64 Allen Wrench for 8-32 Screw	0.65

CY Centerless Ground Carbide Rounds

C2 Micro-Grain +.0000/-.0005"

MADE IN USA

MICHIGAN DRILL & CUTTING TOOLS



Tool #	Diameter	Length	Price
CY11	1/8	1-1/2	2.68
CY13	1/8	2	3.26
CY14	1/8	2-1/4	3.87
CY16	1/8	3	5.20
CY17A	5/32	2	7.04
CY19	3/16	1-1/2	5.96
CY20	3/16	2	6.26
CY21	3/16	2-1/2	8.30
CY22	3/16	3	8.96
CY23	3/16	4	11.70
CY24	1/4	2	8.91
CY26	1/4	2-1/2	11.07
CY27	1/4	3	13.32
CY28	1/4	4	17.73

Tool #	Diameter	Length	Price
CY29	5/16	2	13.86
CY30	5/16	2-1/2	17.28
CY30A	5/16	3	20.52
CY32	5/16	4	28.15
CY34	3/8	2	18.34
CY35	3/8	2-1/2	21.60
CY36	3/8	3	25.92
CY37	3/8	3-1/2	30.24
CY38	3/8	4	34.56
CY40	7/16	2-1/2	29.43
CY41	7/16	3	35.28
CY41A	7/16	4	62.86
CY43	1/2	2-1/2	39.06
CY44	1/2	3	46.08

Tool #	Diameter	Length	Price
CY45	1/2	3-1/2	53.73
CY46	1/2	4	61.38
CY47	1/2	6	110.43
CY47A	9/16	3-1/2	67.95
CY49	5/8	3-1/2	83.88
CY50	5/8	4	95.85
CY50A	5/8	6	171.90
CY52	3/4	4	138.06
CY52A	3/4	5	168.12
CY53	3/4	6	227.79
CY54	1	4	245.34
CY55	1	6	367.92

Quad-Mill™ Indexable End Mills

Square Inserted - Positive Rake

MADE IN USA Exclusively By apt USA Approved Performance Tooling

- Finest quality and workmanship
- Uses standard 1/2" I.C. square inserts
- One clamp fits all tools
- Higher metal removal rates
- Fine surface finishes



15° Lead Quad-Mills

Cutting Diameter	Shank Dia. Style	No. of Inserts	Tool Number	Price Each
1	3/4	1	**QM100-34**	113.62
1	R-8	1	**QM100-R8**	142.03
2	1	3	**QM20-100**	222.76
2	R-8	3	**QM20-R8**	249.67
2	1-1/4	3	**QM20-125**	222.76

Cutting Diameter	Shank Dia. Style	No. of Inserts	Tool Number	Price Each
2-1/2	R-8	5	**QM250-R8**	387.21
2-1/2	1-1/4	5	**QM250-125**	360.30
3	R-8	5	**QM30-R8**	429.07
3	1-1/4	5	**QM30-125**	393.19

Inserts sold separately.

45° Lead Quad-Mills

Cutting Diameter	Shank Dia. Style	No. of Inserts	Tool Number	Price Each
3/4	3/4	1	**QMD075-34**	101.66
1	3/4	1	**QMD100-34**	113.62
1	R-8	1	**QMD100-R8**	142.03
1-1/4	3/4	1	**QMD125-34**	133.06
1-1/4	R-8	1	**QMD125-R8**	176.41
1-1/2	3/4	1	**QMD150-34**	164.45
1-1/2	R-8	1	**QMD150-R8**	200.33

Cutting Diameter	Shank Dia. Style	No. of Inserts	Tool Number	Price Each
2	3/4	3	**QMD20-34**	222.76
2	R-8	3	**QMD20-R8**	248.17
2	1-1/4	3	**QMD20-125**	222.76
2-1/2	R-8	4	**QMD250-R8**	387.21
3	R-8	5	**QMD30-R8**	429.07
3	1-1/4	5	**QMD30-125**	393.10

Inserts sold separately.

Sets

Shank Dia. Style	Style	Cutting Diameter	Set Number	Price Each
R-8	15° Lead	2, 2-1/2, 3	**QMS15-R82**	1073.23
1-1/4	15° Lead	2, 2-1/2, 3	**QMS15-125**	982.61
R-8	45° Lead	1, 1-1/4, 1-1/2	**QMS45-R81**	526.05
R-8	45° Lead	2, 2-1/2, 3	**QMS45-R82**	1070.81
3/4	45° Lead	1, 1-1/4, 1-1/2	**QMS45-34**	415.79



SPG Carbide Inserts

Square - Positive rake – Ground all over.
*Note: Do **not** use SPG-424 1/16 Radius on 15° lead end mills*

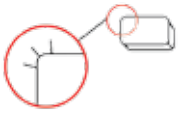


Insert Number	Radius	I.C.	Thick ness	Price Each		
				C-2	C-6	TiN Coated*
SPG422	1/32	1/2	1/8	6.67	6.67	7.54
SPG423	3/64	1/2	1/8	6.67	6.67	7.54

**C-6 Grade TiN Coated*

SPC Carbide Inserts

Square - Positive rake - Ground all over with wiping flats on four corners



Insert Number	I.C.	Thick ness	Price Each		
			C-2	C-6	TiN Coated*
SPC42ZR	1/2	1/8	6.90	6.90	8.26

**C-6 Grade TiN Coated*

SPU Carbide Inserts

Square - Positive rake
Ground top & bottom.
*Note: Do **not** use SPU-424*



Insert Number	Radius	I.C.	Thick ness	Price Each		
				C-2	C-6	TiN Coated*
SPU422	1/32	1/2	1/8	5.80	5.80	6.68
SPU423	3/64	1/2	1/8	5.80	5.80	6.68

**C-6 Grade TiN Coated*

Replacement Parts List

Part No.	Description	Price Each
Part CTD-2	Hold Down Clamp	7.95
Part CS832-12	Clamp Screw	0.65
Part CSW	9/64 Allen Wrench for 8-32 Screw	0.65

Dyna-Mill™ Indexable End Mills & Face Mills

MADE IN USA Exclusively By apt USA Approved Performance Tooling

H.D. Triangle Inserted - Negative Rake - 90° Cut

Dyna-Mill Indexable End Mills

- For use in heavy duty milling application
- Higher metal removal rates
- Both styles use standard 1/2" I.C. inserts
- Unique clamping mechanism, one clamp fits all sizes

Cutting Diameter	Length of Cut	Shank Dia. Style	No. of Inserts	Tool Number	Price Each
1-1/4	2-1/8	1-1/4	2	**DM19**	152.49
1-1/2	2-1/8	1-1/4	2	**DM20**	182.39
1-3/4	2-1/8	1-1/4	3	**DM21**	221.26
2	2-1/8	1-1/4	3	**DM22**	240.70
2-1/2	2-1/8	1-1/4	3	**DM22.5**	342.36
3	2-1/8	1-1/4	5	**DM23**	399.17

Inserts sold separately.



Dyna-Mill Indexable Face Mills

Cutting Diameter	Length of Cut	Hole Size	No. of Inserts	Tool Number	Price Each
4	2-3/4	1-1/4	6	**DM24**	532.22
5	2-3/4	1-1/2	7	**DM25**	633.88
6	2-3/4	2	8	**DM26**	801.32
8	2-3/4	2-1/2	10	**DM28**	1100.32

Inserts sold separately.



TNMG Carbide Inserts

Triangle - Negative rake - with chip control



Insert Number	I.C.	Radius	Thickness	Price Each		
				C-2	C-6	TiN Coated*
TNMG431	1/2	3/16	1/64	5.80	5.80	6.76
TNMG432	1/2	3/16	1/32	5.80	5.80	6.76
TNMG433	1/2	3/16	3/64	5.80	5.80	6.76
TNMG434	1/2	3/16	1/16	5.80	5.80	6.76
TNMG438	1/2	3/16	1/8	5.80	5.80	6.76

**C-6 Grade TiN Coated*

Replacement Parts List

Part No.	Description	Price Each
Part CDM	Hold Down Clamp	11.95
Part CB1032-12	Clamp Screw for DM19 only	0.65
Part CS1032-58	Clamp Screw	0.65
Part AS5818-2	Arbor Screw for DM24 only	2.60

Tri-Dex™ Indexable Face Mills

Triangle Inserted - Positive Rake - 90° Cut

MADE IN USA Exclusively By apt USA Approved Performance Tooling

- Achieve face milling cuts at higher R.P.M.'s
- Use in low horse power milling machines
- One clamp fits all sizes
- Uses standard 3/8" I.C. triangle inserts
- Use with standard shell end mill adapters

Cutting Diameter	Length of Cut	Hole Size	No. of Inserts	Tool Number	Price Each
2	1-3/4	3/4	3	**EMS200**	221.26
2-1/2	2	3/4	5	**EMS250**	318.44
3	2	1	5	**EMS300**	342.36

Inserts sold separately.



TPG Carbide Inserts

Triangle - Positive rake
Ground all over



Insert Number	Radius	I.C.	Thick ness	Price Each		
				C-2	C-6	TiN Coated*
TPG320	0	3/8	1/8	6.74	6.74	8.08
TPG321	1/64	3/8	1/8	6.74	6.74	8.08
TPG322	1/32	3/8	1/8	6.74	6.74	8.08
TPG323	3/64	3/8	1/8	6.74	6.74	8.08
TPG324	1/16	3/8	1/8	6.74	6.74	8.08

**C-6 Grade TiN Coated*

Replacement Parts List

Part No.	Description	Price Each
Part CTD-2	Hold Down Clamp	7.95
Part CSW	9/64 Allen Wrench for 8-32 Screw	0.65
Part CS832-12	Clamp Screw	0.65
Part AS3824-114	Shell Mill Arbor Screw EMS200	1.63
Part AS3824-112	Shell Mill Arbor Screw EMS250	1.95
Part AS1220-112	Shell Mill Arbor Screw EMS300	2.28

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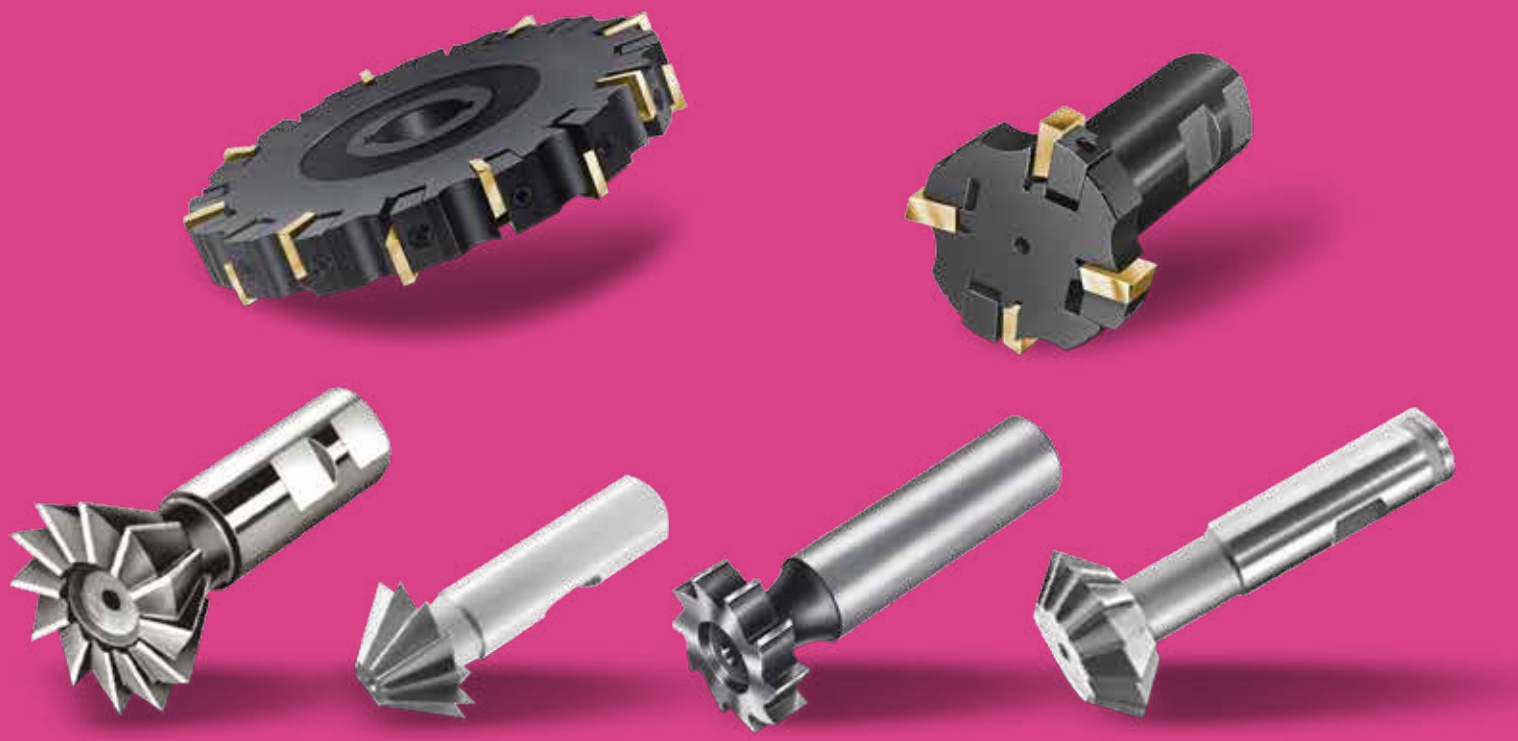
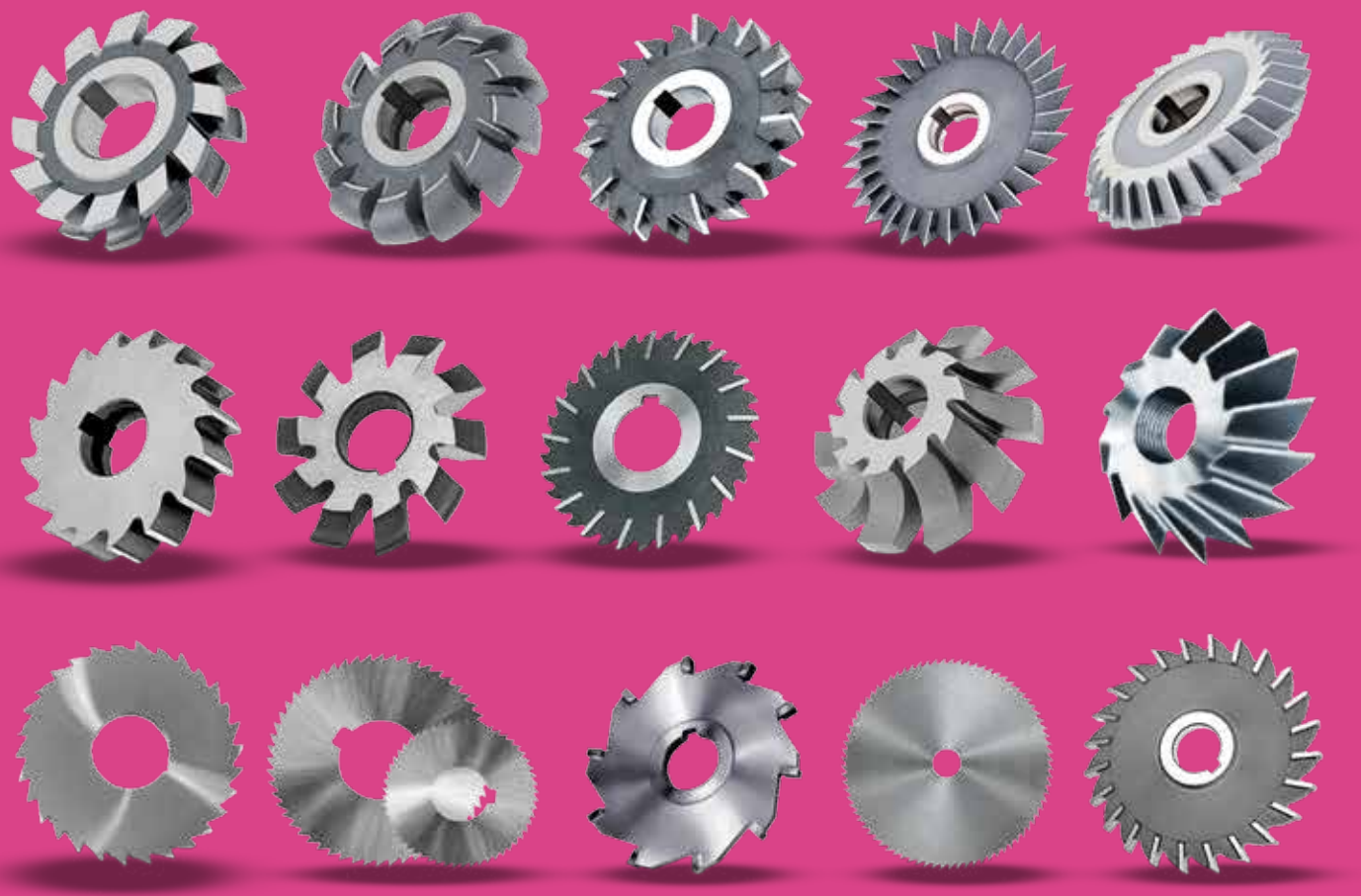
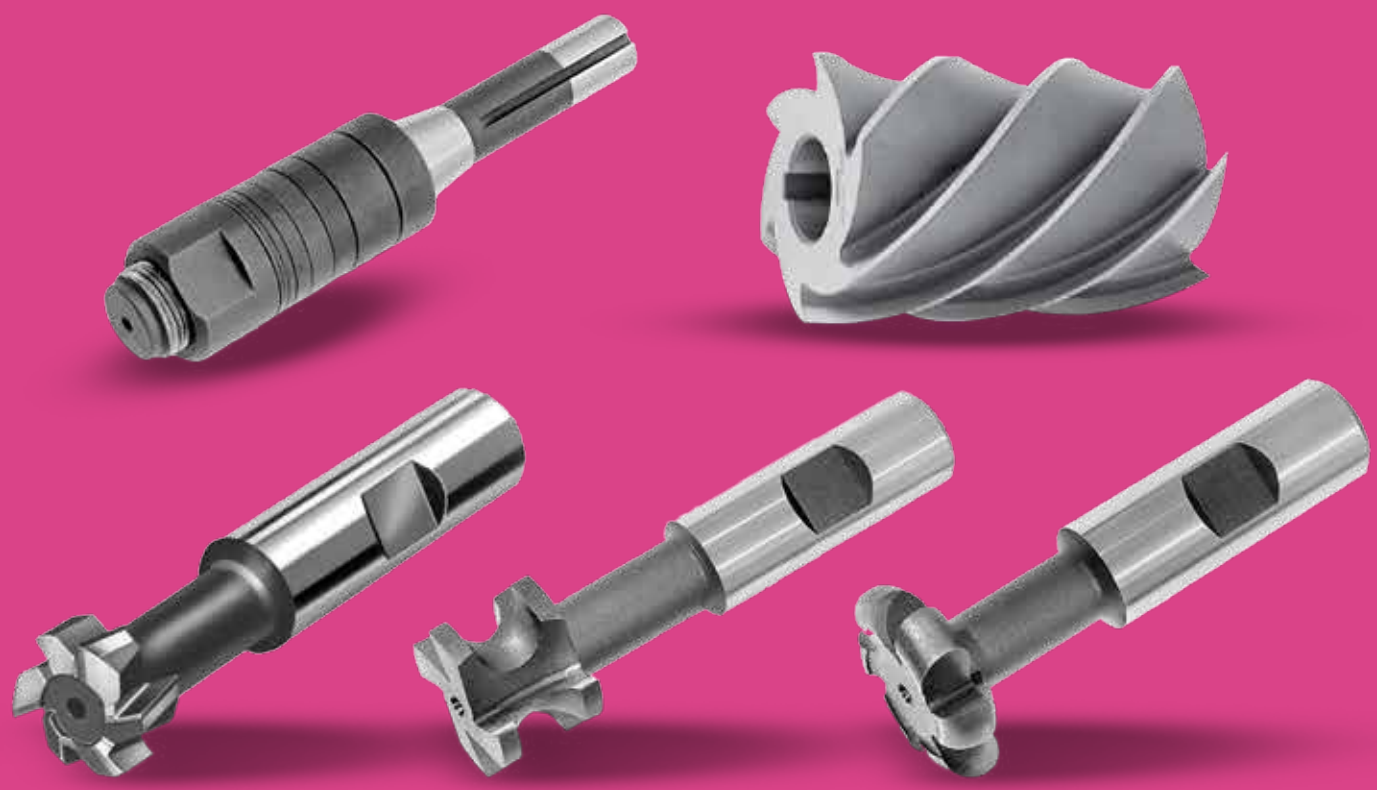






Dovetail Cutters

High Speed Steel & Cobalt



45° Lead Angle

List No. **275** – High Speed Steel
List No. **275C** – Cobalt

60° Lead Angle

List No. **276** – High Speed Steel
List No. **276C** – Cobalt

Diameter of Cut	Width of Cut	Shank Diameter	Overall Length	Price Each 45° Angle High Speed 275	Price Each 45° Angle Cobalt 275C	Price Each 60° Angle High Speed 276	Price Each 60° Angle Cobalt 276C
3/8	1/8	3/8	2-1/8	38.25	63.11	38.25	63.11
1/2	7/32	3/8	2-1/8	40.40	66.66	40.40	66.66
3/4	5/16	3/8	2-1/8	48.92	80.70	48.92	80.70
1-3/8	9/16	5/8	2-7/8	80.55	132.91	80.55	132.91
1-7/8	13/16	7/8	3-1/4	156.60	258.30	156.60	258.30
2-1/4	1-1/16	1	3-3/4	186.66	307.80	186.66	307.80
3-3/4	2-1/4	1-1/4	4-7/8	—	—	280.00	410.00

Sets

Sizes	Description	Pcs.	High Speed Set No.	High Speed Price	Cobalt Set No.	Cobalt Price
3/8, 1/2, 3/4, 1-3/8	45° Lead Angle	4	**275S**	197.10	**275CS**	323.10
3/8, 1/2, 3/4, 1-3/8	60° Lead Angle	4	**276S**	197.10	**276CS**	323.10

All sets are supplied in wood block

Carbide Tipped Dovetail Cutters

List No. **CT275** – 45° Angle
List No. **CT276** – 60° Angle



Dia. of Cut	Shank Dia.	Overall Length	45° Angle CT275 Width of Cut	45° Angle CT275 Price Each	60° Angle CT276 Width of Cut	60° Angle CT276 Price Each
3/4	3/8	2-1/4	1/4	74.06	1/4	74.06
1	1/2	2-1/2	5/16	82.46	3/8	82.46
1-1/4	5/8	2-3/4	3/8	91.05	1/2	91.05
1-1/2	3/4	3-1/4	1/2	101.30	5/8	101.30
2	1	4-1/4	5/8	193.85	3/4	193.85
2-1/2	1-1/4	4-3/8	3/4	281.51	7/8	281.51
3	1-1/4	4-1/2	1	327.00	1-1/8	327.00

Threaded Hole Angle Cutters

High Speed Steel - 60°

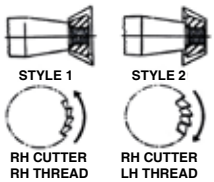


These cutters can be furnished either Right or Left Hand and with either Right or Left Hand threaded hole. They have an included angle of 60°.

Diameter	Thickness	Threaded Hole	Tool No. Style 1	Tool No. Style 2	Tool No. Style 3	Tool No. Style 4	Price Each
1-1/4	7/16	3/8-24 N.F.	**J320-801**	**J320-802**	**J320-803**	**J320-804**	25.00
1-5/8	9/16	1/2-20 N.F.	**J320-811**	**J320-812**	**J320-813**	**J320-814**	32.60

WHEN ORDERING SPECIFY STYLE NUMBER.

Determining The Hand Of An Angular Cutter



Arbors For Threaded Angle Cutters

Taper Shank

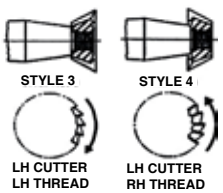


Tool No.	B&S Taper	Size of Threaded	Price Each
J320-910	7	3/8-24 L.H.	20.00
J320-915	7	3/8-24 R.H.	20.00
J320-920	9	1/2-20 L.H.	24.00
J320-925	9	1/2-20 R.H.	24.00

Straight Shank



Tool No.	B&S Taper	Size of Threaded	Price Each
J320-930	1/2	3/8-24 L.H.	18.00
J320-935	1/2	3/8-24 R.H.	17.00
J320-940	1/2	1/2-20 L.H.	21.00
J320-945	1/2	1/2-20 R.H.	20.00



Woodruff Key Seat Cutters

High Speed Steel

For cutting standard and woodruff keyways in steel and other ferrous materials.



High Speed

MDX® SUPERIOR IMPORT

Straight & Staggered Teeth

1/2" Diameter, Straight Shank

				Straight Teeth		Staggered Teeth	
Nominal Diameter	Width of Face	Overall Length	American Standard #	**Tool No.**	Price Each	**Tool No.**	Price Each
1/4	1/16	2-1/16	202	**KC202**	17.24	**KCT202**	23.94
5/16	1/16	2-1/16	202-1/2	**KC202-1/2**	17.24	**KCT202-1/2**	23.94
5/16	3/32	2-3/32	302-1/2	**KC302-1/2**	17.24	**KCT302-1/2**	23.94
3/8	1/16	2-1/16	203	**KC203**	17.24	**KCT203**	23.94
3/8	3/32	2-3/32	303	**KC303**	17.24	**KCT303**	23.94
3/8	1/8	2-1/8	403	**KC403**	17.24	**KCT403**	23.94
1/2	1/16	2-1/16	204	**KC204**	17.24	**KCT204**	23.94
1/2	3/32	2-3/32	304	**KC304**	17.24	**KCT304**	23.94
1/2	1/8	2-1/8	404	**KC404**	17.24	**KCT404**	23.94
5/8	3/32	2-3/32	305	**KC305**	17.24	**KCT305**	23.94
5/8	1/8	2-1/8	405	**KC405**	17.24	**KCT405**	23.94
5/8	5/32	2-5/32	505	**KC505**	17.24	**KCT505**	23.94
5/8	3/16	2-3/16	605	**KC605**	17.24	**KCT605**	23.94
3/4	1/8	2-1/8	406	**KC406**	17.24	**KCT406**	23.94
3/4	5/32	2-5/32	506	**KC506**	18.30	**KCT506**	25.41
3/4	3/16	2-3/16	606	**KC606**	18.30	**KCT606**	25.41
3/4	1/4	2-1/4	806	**KC806**	18.30	**KCT806**	25.41
7/8	5/32	2-5/32	507	**KC507**	20.37	**KCT507**	28.29
7/8	3/16	2-3/16	607	**KC607**	20.37	**KCT607**	28.29
7/8	7/32	2-7/32	707	**KC707**	20.37	**KCT707**	28.29
7/8	1/4	2-1/4	807	**KC807**	20.37	**KCT807**	28.29
1	3/16	2-3/16	608	**KC608**	21.96	**KCT608**	30.50
1	7/32	2-7/32	708	**KC708**	21.96	**KCT708**	30.50
1	1/4	2-1/4	808	**KC808**	21.96	**KCT808**	30.50
1	5/16	2-5/16	1008	**KC1008**	22.47	**KCT1008**	31.21
1	3/8	2-3/8	1208	**KC1208**	22.47	**KCT1208**	31.21
1-1/8	3/16	2-3/16	609	**KC609**	24.57	**KCT609**	34.15
1-1/8	7/32	2-7/32	709	**KC709**	24.57	**KCT709**	34.15
1-1/8	1/4	2-1/4	809	**KC809**	24.57	**KCT809**	34.15
1-1/8	5/16	2-5/16	1009	**KC1009**	26.15	**KCT1009**	36.31
1-1/4	3/16	2-3/16	610	**KC610**	27.18	**KCT610**	37.75
1-1/4	7/32	2-7/32	710	**KC710**	27.18	**KCT710**	37.75
1-1/4	1/4	2-1/4	810	**KC810**	28.22	**KCT810**	39.20
1-1/4	5/16	2-5/16	1010	**KC1010**	29.28	**KCT1010**	40.66
1-1/4	3/8	2-3/8	1210	**KC1210**	29.28	**KCT1210**	40.66
1-3/8	1/4	2-1/4	811	**KC811**	31.37	**KCT811**	43.56
1-3/8	5/16	2-5/16	1011	**KC1011**	31.37	**KCT1011**	43.56
1-3/8	3/8	2-3/8	1211	**KC1211**	32.43	**KCT1211**	45.04
1-1/2	1/4	2-1/4	812	**KC812**	32.43	**KCT812**	45.04
1-1/2	5/16	2-5/16	1012	**KC1012**	32.43	**KCT1012**	45.04
1-1/2	3/8	2-3/8	1212	**KC1212**	34.52	**KCT1212**	48.56

Sets

Size	Pcs.	Description	Set No.	Price
KC204, KC305, KC403, KC404, KC406, KC505, KC606, KC608, KC806, KC808	10	Straight Teeth	**KCS1**	192.06
KCT204, KCT305, KCT403, KCT404, KCT406, KCT505, KCT606, KCT608, KCT806, KCT808	10	Staggered Teeth	**KCTS1**	255.46
KC202 – KC1212	41	Straight Teeth	**KCS2**	924.11
KCT202 – KCT1212	41	Staggered Teeth	**KCTS2**	1284.05

All sets are supplied in wood case



Side Chip Clearance Metal Slitting Saws



High Speed Steel

Staggered Teeth

List No. **739ST**

For making deeper cuts with coarser feeds in heavy duty slotting operations.

Diameter	Width of Face	Hole Size	Price Each
2-1/2	1/16	1	55.00
2-1/2	3/32	1	57.00
2-1/2	1/8	7/8	58.00
2-1/2	1/8	1	58.00
2-3/4	3/16	1	60.00
3	1/16	1	60.00
3	1/16	1-1/4	61.50
3	5/64	1	61.50
3	5/64	1-1/4	61.50
3	3/32	1	59.50
3	3/32	1-1/4	59.50
3	7/64	1	59.50
3	7/64	1-1/4	59.50
3	1/8	1	59.50
3	1/8	1-1/4	59.50
3	9/64	1	59.50
3	9/64	1-1/4	59.50
3	5/32	1	59.50
3	5/32	1-1/4	59.50
3	11/64	1	59.50
3	11/64	1-1/4	59.50
3	3/16	1	60.78
3	3/16	1-1/4	60.78
3	7/32	1	62.98
3	7/32	1-1/4	62.98
3	1/4	1	62.98
4	1/16	1	80.50
4	1/16	1-1/4	80.50
4	5/64	1	80.50
4	5/64	1-1/4	80.50
4	3/32	1	79.90
4	3/32	1-1/4	79.90
4	7/64	1	79.90
4	7/64	1-1/4	79.90

Diameter	Width of Face	Hole Size	Price Each
4	1/8	1	79.90
4	1/8	1-1/4	79.90
4	9/64	1	84.00
4	9/64	1-1/4	84.00
4	5/32	1	84.00
4	5/32	1-1/4	84.00
4	11/64	1	84.00
4	11/64	1-1/4	84.00
4	3/16	1	84.00
4	3/16	1-1/4	84.00
4	7/32	1	90.00
4	7/32	1-1/4	90.00
4	1/4	1	90.00
4	1/4	1-1/4	90.00
4	9/32	1	98.00
5	5/64	1	104.00
5	3/32	1	99.00
5	1/8	1	99.00
5	1/8	1-1/4	99.00
5	9/64	1	104.00
5	9/64	1-1/4	104.00
5	5/32	1	104.00
5	5/32	1-1/4	104.00
5	11/64	1	109.00
5	11/64	1-1/4	109.00
5	3/16	1	112.00
5	3/16	1-1/4	112.00
5	7/32	1	135.00
5	1/4	1	115.00
5	1/4	1-1/4	115.00
6	3/32	1-1/4	135.00
6	1/8	1	135.00
6	1/8	1-1/4	135.00
6	9/64	1	139.90

Diameter	Width of Face	Hole Size	Price Each
6	9/64	1-1/4	139.90
6	5/32	1	139.90
6	5/32	1-1/4	139.90
6	11/64	1	149.49
6	11/64	1-1/4	149.49
6	3/16	1	152.00
6	3/16	1-1/4	152.00
6	1/4	1	155.00
6	1/4	1-1/4	155.00
6	9/32	1-1/4	168.00
7	7/32	1-1/2	199.00
7	1/4	1	265.50
7	1/4	1-1/4	265.50
7	9/32	1-1/4	270.00
8	3/32	1-1/4	277.00
8	1/8	1	277.00
8	1/8	1-1/4	277.00
8	3/16	1	285.00
8	3/16	1-1/4	285.00
8	1/4	1	299.00
8	1/4	1-1/4	299.00
10	1/8	1-1/4	650.00
10	1/8	1-1/2	650.00
10	3/16	1-1/4	620.00
10	3/16	1-1/2	620.00
10	1/4	1	628.00
10	1/4	1-1/4	628.00
10	1/4	1-1/2	628.00
12	1/8	1-1/4	1100.00
12	1/8	1-1/2	1100.00
12	3/16	1-1/4	1155.00
12	3/16	1-1/2	1155.00
12	1/4	1-1/2	1190.00
12	5/16	1-1/2	1200.00

Carbide Tipped Metal Slitting Saws



Specs: Diameter Tolerance ±.0625/-.0000"
Width + .001/-.000

			Non-Ferrous			Cast Iron			Steel			Stainless Steel		
Diameter	Width of Face	Hole Size	No. of Teeth	**Tool No.**	Price Each	No. of Teeth	**Tool No.**	Price Each	No. of Teeth	**Tool No.**	Price Each	No. of Teeth	**Tool No.**	Price Each
3	3/32	1	6	**J351000**	181.62	6	**J351050**	209.01	8	**J351100**	207.16	8	**J351150**	194.10
4	3/32	1	6	**J351012**	222.97	8	**J351062**	268.04	8	**J351112**	268.04	10	**J351162**	279.33
4	1/8	1	6	**J351014**	229.51	8	**J351064**	271.53	8	**J351114**	271.53	10	**J351164**	283.00
4	3/16	1	6	**J351016**	233.00	8	**J351066**	292.62	8	**J351116**	292.62	10	**J351166**	286.75
6	1/8	1-1/4	8	**J351032**	328.48	12	**J351082**	472.23	12	**J351132**	472.23	14	**J351182**	453.44
6	3/16	1-1/4	8	**J351034**	432.88	12	**J351084**	487.82	12	**J351134**	487.82	14	**J351184**	465.25
6	1/4	1-1/4	8	**J351036**	449.00	12	**J351086**	498.34	12	**J351136**	498.34	14	**J351186**	472.75
8	3/16	1-1/4	–	–	–	16	**J351090**	671.29	16	**J351140**	671.29	–	–	–
8	1/4	1-1/4	–	–	–	16	**J351092**	696.98	16	**J351142**	696.98	–	–	–

Side Chip Clearance Metal Slitting Saws

High Speed Steel



Straight Teeth

List No. **739S**

The side chip clearance allows cut-off or slotting operations of considerable depth.

Diameter	Width of Face	Hole Size	Price Each
2	3/32	5/8	35.10
2	1/8	5/8	37.80
2	5/32	5/8	40.50
2	11/64	1	40.50
2-1/2	1/16	7/8	39.35
2-1/2	1/16	1	39.35
2-1/2	5/64	7/8	39.35
2-1/2	3/32	7/8	39.35
2-1/2	3/32	1	39.35
2-1/2	7/64	7/8	39.35
2-1/2	1/8	7/8	39.35
2-1/2	1/8	1	43.20
2-1/2	9/64	7/8	47.52
2-1/2	5/32	7/8	47.52
2-1/2	11/64	7/8	47.52
3	3/64	1	58.50
3	1/16	1	53.10
3	1/16	1-1/4	53.10
3	5/64	1	53.10
3	5/64	1-1/4	53.10
3	3/32	1	53.10
3	3/32	1-1/4	53.10
3	7/64	1	53.10
3	7/64	1-1/4	53.10
3	1/8	1	53.10
3	1/8	1-1/4	53.10
3	9/64	1	58.50
3	9/64	1-1/4	58.50
3	5/32	1	58.50
3	5/32	1-1/4	58.50
3	11/64	1	61.20
3	11/64	1-1/4	61.20
3	3/16	1	61.20
3	3/16	1-1/4	61.20
3	7/32	1	61.20
3	7/32	1-1/4	61.20
3	1/4	1	64.80
4	3/64	1	79.50
4	1/16	1	60.44
4	1/16	1-1/4	60.44
4	5/64	1	67.50
4	5/64	1-1/4	67.50
4	3/32	1	67.50
4	3/32	1-1/4	67.50
4	7/64	1	67.50
4	7/64	1-1/4	67.50
4	1/8	1	67.50
4	1/8	1-1/4	67.50
4	9/64	1	67.50
4	9/64	1-1/4	67.50
4	5/32	1	67.50
4	5/32	1-1/4	67.50
4	11/64	1	72.00
4	11/64	1-1/4	72.00
4	3/16	1	72.00
4	3/16	1-1/4	72.00
4	7/32	1	72.00
4	7/32	1-1/4	72.00
4	1/4	1	72.00
4	1/4	1-1/4	72.00
4	9/32	1	72.00
5	1/16	1	81.00
5	1/16	1-1/4	85.50
5	5/64	1	85.50
5	3/32	1	85.50
5	3/32	1-1/4	85.50
5	7/64	1	85.50
5	7/64	1-1/4	85.50
5	1/8	1	85.50
5	1/8	1-1/4	85.50
5	9/64	1	87.30
5	9/64	1-1/4	87.30
5	5/32	1	87.30
5	5/32	1-1/4	87.30
5	11/64	1	91.80
5	11/64	1-1/4	91.80
5	3/16	1	91.80
5	3/16	1-1/4	91.80
5	7/32	1	108.00
5	7/32	1-1/4	108.00
5	1/4	1	115.20
5	1/4	1-1/4	115.20
5-1/2	1/8	1-1/4	99.00
6	1/16	1	134.78
6	1/16	1-1/4	134.78
6	3/32	1	107.10
6	3/32	1-1/4	107.10
6	7/64	1	112.50
6	7/64	1-1/4	112.50
6	1/8	1	112.50
6	1/8	1-1/4	112.50
6	9/64	1	144.00
6	9/64	1-1/4	144.00
6	5/32	1	144.00
6	5/32	1-1/4	144.00
6	11/64	1	144.00
6	11/64	1-1/4	144.00
6	3/16	1	144.00
6	3/16	1-1/4	144.00
6	3/16	1-1/2	144.00
6	1/4	1	157.50
6	1/4	1-1/4	157.50
6	9/32	1-1/4	175.00
6	5/16	1	157.50
7	1/4	1	240.00
8	1/8	1	247.50
8	1/8	1-1/4	247.50
8	1/8	1-1/2	247.50
8	3/16	1	256.50
8	3/16	1-1/4	256.50
8	3/16	1-1/2	256.50
8	1/4	1	292.50
8	1/4	1-1/4	292.50
8	1/4	1-1/2	292.50
8	9/32	1-1/4	350.00
10	3/32	1-1/4	531.00
10	3/32	1-1/2	531.00
10	1/8	1-1/4	531.00
10	1/8	1-1/2	531.00
10	3/16	1-1/4	531.00
10	3/16	1-1/2	531.00
10	1/4	1-1/4	531.00
10	1/4	1-1/2	531.00
12	1/8	1-1/4	675.00
12	1/8	1-1/2	675.00
12	3/16	1-1/4	693.00
12	3/16	1-1/2	693.00
12	1/4	1-1/2	693.00

Metric Plain Metal Slitting Saws

High Speed Steel

List No. **738M**

For general purpose slitting or cutting-off operations.



Diameter	Width of Face	Hole Size	Price Each
50.00	2.00	1/2	75.00
50.00	3.00	1/2	80.00
75.00	1.50	7/8	78.00
75.00	2.50	7/8	85.00
75.00	3.00	7/8	92.00
75.00	3.50	7/8	95.00
75.00	4.00	7/8	99.00
75.00	5.00	7/8	104.00

Plain Metal Slitting Saws



High Speed Steel

List No. **738**

For general purpose slitting or cutting-off operations.

Diameter	Width of Face	Hole Size	Price Each
1-1/2	1/32	1/2	17.01
1-1/2	1/16	1/2	17.01
1-1/2	3/32	1/2	17.01
1-1/2	1/8	1/2	17.01
1-3/4	1/32	1/2	17.91
1-3/4	1/16	1/2	17.91
1-3/4	3/32	1/2	17.91
1-3/4	1/8	1/2	17.91
2	1/32	1/2	17.91
2	1/16	1/2	19.80
2	5/64	3/4	22.05
2	1/8	1/2	23.31
2	3/32	1/2	22.05
2	5/32	1/2	23.31
2	3/16	1/2	25.56
2-1/2	1/32	7/8	25.56
2-1/2	3/64	3/8	25.56
2-1/2	3/64	7/8	25.56
2-1/2	1/16	7/8	25.56
2-1/2	1/16	1	25.56
2-1/2	5/64	5/8	25.56
2-1/2	5/64	7/8	25.56
2-1/2	5/64	1	25.56
2-1/2	3/32	7/8	25.56
2-1/2	3/32	1	25.56
2-1/2	7/64	1	25.56
2-1/2	1/8	5/8	27.90
2-1/2	1/8	7/8	27.90
2-1/2	5/32	1	27.90
2-1/2	3/16	7/8	27.90
2-1/2	3/16	1	27.90
3	1/64	1	32.43
3	1/32	1	29.48
3	3/64	1	29.48
3	1/16	1	30.60
3	3/32	1	30.60
3	7/64	1	30.60
3	1/8	1	31.50
3	1/8	1-1/4	31.50
3	9/64	1	31.50
3	5/32	1	33.26
3	11/64	1	33.26
3	3/16	1	33.26
3	1/4	1	49.00

Diameter	Width of Face	Hole Size	Price Each
3	7/32	1	35.06
3	7/32	1-1/4	42.07
3-1/2	1/32	1	35.06
3-1/2	1/16	1	35.06
3-1/2	3/64	1	35.06
3-1/2	3/32	1	35.06
3-1/2	1/8	1	35.06
3-1/2	9/64	1	35.06
3-1/2	5/32	1	35.06
3-1/2	3/16	1	35.06
4	1/64	1	41.18
4	1/32	1	41.18
4	1/32	1-1/4	41.18
4	3/64	1	41.85
4	1/16	1	42.44
4	5/64	1	42.44
4	3/32	1	44.82
4	7/64	1	44.82
4	1/8	1	47.34
4	9/64	1	49.14
4	5/32	1	49.14
4	11/64	1	62.32
4	3/16	1	51.93
4-1/4	1/32	1	65.00
4-1/4	1/4	1	68.00
4-1/2	1/32	1	55.86
4-1/2	3/64	1	55.86
4-1/2	1/16	1	55.86
4-1/2	3/32	1	60.23
4-1/2	1/8	1	66.97
4-1/2	5/32	1	66.97
5	1/32	1	87.98
5	3/64	1	101.99
5	1/16	1	62.55
5	1/16	1-1/4	62.55
5	3/32	1	62.55
5	3/32	1-1/4	88.46
5	7/64	1	67.95
5	1/8	1	67.95
5	1/8	1-1/4	67.95
5	1/8	1-1/2	72.00
5	9/64	1	70.43
5	9/64	1-1/4	70.43
5	5/32	1	70.43

Diameter	Width of Face	Hole Size	Price Each
5	5/32	1-1/4	70.43
5	3/16	1	70.43
5	3/16	1-1/4	70.43
5	1/4	1	71.91
6	3/64	1	71.91
6	1/16	1	71.91
6	1/16	1-1/4	71.91
6	5/64	1	71.91
6	1/32	1	85.00
6	3/32	1	82.35
6	3/32	1-1/4	82.35
6	7/64	1	82.35
6	1/8	1	84.92
6	1/8	1-1/4	84.92
6	1/8	1-1/2	89.90
6	9/64	1	101.25
6	5/32	1	101.25
6	3/16	1	101.25
6	3/16	1-1/4	101.25
6	1/4	1	120.95
6	1/4	1-1/4	120.95
7	1/16	1-1/4	90.38
7	3/32	1	98.65
7	1/8	1	88.26
7	1/8	1-1/4	88.26
7	5/32	1	101.48
7	3/16	1	102.03
7	7/32	1	112.24
7	7/32	1-1/4	112.24
7	1/4	1	144.00
8	1/8	1	175.77
8	1/8	1-1/4	175.77
8	3/16	1	209.70
8	3/16	1-1/4	209.70
8	7/32	1	230.67
8	1/4	1-1/4	253.78
9	3/16	1-1/4	290.00
10	3/32	1-1/4	293.54
10	3/32	1	293.45
10	1/8	1-1/4	275.40
10	3/16	1-1/4	315.00
10	1/4	1-1/4	315.00
12	1/8	1	393.75

Solid Carbide Slitting Saws



Solid Carbide

List No. **C738**

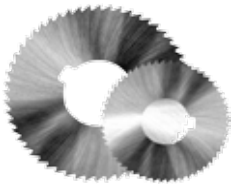
Please specify thickness when ordering.

Diameter	Thickness Range	Hole Size	No. of Teeth	Price Each	
				1-3 Pcs.	4+ Pcs.
1/4	.010-.035	1/8	12	41.37	30.73
5/16	.010-.035	1/8	12	41.37	30.73
3/8	.010-.030	3/16	14	41.37	30.73
3/8	.031-.063	3/16	14	43.00	31.50
1/2	.010-.035	3/16	14	41.37	30.73
1/2	.036-.063	3/16	14	40.46	29.54
5/8	.015-.040	1/4	16	47.04	36.00
5/8	.041-.063	1/4	16	50.00	38.00
3/4	.015-.081	1/4	18	54.15	39.76
3/4	.082-.125	1/4	18	63.63	47.81
1	.015-.081	5/16	20	66.97	58.00
1	.082-.125	5/16	20	76.79	60.62

Diameter	Thickness Range	Hole Size	No. of Teeth	Price Each	
				1-3 Pcs.	4+ Pcs.
1-1/2	.030-.078	1/2	36	78.30	62.56
1-1/2	.079-.125	1/2	36	89.17	72.42
2	.040-.078	1/2	40	107.88	93.52
2	.079-.125	1/2	40	139.49	122.55
2-1/2	.040-.078	1	48	122.59	106.93
2-1/2	.079-.125	1	48	159.20	144.85
3	.040-.078	1	72	178.42	166.24
3	.079-.125	1	72	240.55	227.21
3-1/2	.040-.078	1	76	206.10	195.00
3-1/2	.079-.125	1	76	304.50	288.98
4	.040-.078	1	80	218.95	204.00
4	.079-.125	1	80	315.00	299.00

Screw Slotting Saws

High Speed Steel



High Speed MDX® SUPERIOR IMPORT

List No. **729**

For slotting and cut-off applications.

Diameter	Width of Face	Hole Size	Price Each
1-3/4	.006	5/8	19.66
1-3/4	.008	5/8	19.66
1-3/4	.010	5/8	18.47
1-3/4	.012	5/8	16.63
1-3/4	.013	5/8	20.52
1-3/4	.014	5/8	13.50
1-3/4	.016	5/8	13.18
1-3/4	.018	5/8	12.74
1-3/4	.020	5/8	12.31
1-3/4	.023	5/8	12.31
1-3/4	.025	5/8	12.31
1-3/4	.028	5/8	12.31
1-3/4	.032	5/8	12.31
1-3/4	.036	5/8	12.74
1-3/4	.040	5/8	12.74
1-3/4	.045	5/8	12.74
1-3/4	.050	5/8	22.80
1-3/4	.051	5/8	12.74
1-3/4	.057	5/8	13.50
1-3/4	.064	5/8	14.36
1-3/4	.072	5/8	14.36
1-3/4	.081	5/8	22.80
1-3/4	.091	5/8	22.80
1-3/4	.102	5/8	22.80
2-1/4	.006	5/8	20.52
2-1/4	.008	5/8	20.52
2-1/4	.010	5/8	20.52
2-1/4	.012	5/8	23.11
2-1/4	.013	5/8	23.11
2-1/4	.014	5/8	19.55
2-1/4	.016	5/8	19.55
2-1/4	.018	5/8	16.20
2-1/4	.020	5/8	16.20
2-1/4	.023	5/8	16.20
2-1/4	.025	5/8	16.20
2-1/4	.028	1/2	15.34
2-1/4	.028	5/8	15.34
2-1/4	.032	5/8	15.34
2-1/4	.035	5/8	15.34
2-1/4	.036	5/8	15.34
2-1/4	.040	5/8	16.20
2-1/4	.045	1/2	17.08
2-1/4	.045	5/8	17.08
2-1/4	.051	1/2	17.08
2-1/4	.051	5/8	17.08
2-1/4	.057	1/2	17.06
2-1/4	.057	5/8	17.06
2-1/4	.064	1/2	17.06
2-1/4	.064	5/8	17.06
2-1/4	.072	5/8	17.06
2-1/4	.081	5/8	18.25
2-1/4	.091	5/8	19.66
2-1/4	.102	5/8	21.38
2-3/4	.006	3/4	22.80
2-3/4	.006	1	32.94
2-3/4	.008	3/4	22.80
2-3/4	.008	1	24.34
2-3/4	.010	3/4	22.80
2-3/4	.010	1	30.02
2-3/4	.012	3/4	22.80
2-3/4	.012	1	28.19
2-3/4	.013	1	28.19
2-3/4	.014	3/4	22.80
2-3/4	.014	1	26.14
2-3/4	.016	3/4	22.80
2-3/4	.016	1	24.73
2-3/4	.018	3/4	22.80
2-3/4	.018	1	22.80
2-3/4	.020	3/4	17.06
2-3/4	.020	1	17.06
2-3/4	.022	1	22.80
2-3/4	.023	3/4	17.06
2-3/4	.023	1	17.06
2-3/4	.025	3/4	17.06
2-3/4	.025	1	17.06
2-3/4	.027	1	22.80
2-3/4	.028	3/4	17.06
2-3/4	.028	1	17.06
2-3/4	.032	3/4	17.06
2-3/4	.032	1	17.06
2-3/4	.036	3/4	17.06
2-3/4	.036	1	17.06
2-3/4	.040	5/8	17.06
2-3/4	.040	3/4	17.06
2-3/4	.040	1	17.06
2-3/4	.045	3/4	20.52
2-3/4	.045	1	20.52
2-3/4	.048	1	36.72
2-3/4	.051	3/4	20.52
2-3/4	.051	1	20.52
2-3/4	.057	3/4	20.52
2-3/4	.057	1	20.52
2-3/4	.064	3/4	20.52
2-3/4	.064	1	20.52
2-3/4	.072	3/4	20.52
2-3/4	.072	1	20.52
2-3/4	.081	3/4	23.87
2-3/4	.081	1	23.87
2-3/4	.083	1/2	26.50
2-3/4	.091	3/4	25.70
2-3/4	.091	1	25.70
2-3/4	.102	3/4	27.00
2-3/4	.102	1	27.04
2-3/4	.110	1	27.86
2-3/4	.114	3/4	27.86
2-3/4	.114	1	27.86
2-3/4	.128	3/4	27.86
2-3/4	.128	1	28.73
2-3/4	.144	3/4	33.05
2-3/4	.144	1	33.05
2-3/4	.162	3/4	36.07
2-3/4	.162	1	36.07
2-3/4	.182	3/4	42.23
2-3/4	.182	1	42.23

Slitting & Slotting Saw Arbor

The spring-loaded mechanism on HSA12 & HSAR8 accepts saw blades with hole diameters from 1/2" to 1". Blades are firmly held with a flat head socket cap screw.

Shank Diameter	Overall Length	Fits Hole Sizes	Tool No.	Price Each
1/2" Weldon	2-9/16	1/2 – 1 by 8ths	**HSA12**	25.36
1/2" Weldon	2-3/4	1/4	**HSA1214**	15.87
1/2" Weldon	2-1/2	3/8	**HSA1238**	16.65
1/2" Weldon	2-1/2	1/2	**HSA1212**	19.09
R-8	5-3/32	1/2 – 1 by 8ths	**HSAR8**	28.28

Set

Sizes	Pcs.	Set No.	Price
HSA1214, HSA1238, HSA1212	3	**HSASET**	49.03

Slitting Saw and Stub Milling Machine Arbors with R8 Shank



These arbors are made of alloy forged steel for a more durable service life.

Diameter of Arbor	Shoulder to Nut	Tool No.	Price Each
1	2	**R8SM1**	110.50
1-1/4	2	**R8SM114**	120.26

Supplied with spacers. Replacement spacers, nuts, and arbor keys available.

Slitting & Slotting Saw Arbor



Hardened & Ground

Rigid arbors, with extended length, reach areas that standard short arbors cannot. Each arbor is ground for precision within 0.002". Super low profile cups allows cutter to get lower and closer to working area. Plug style cup gives extra support and rigidity when working with larger diameter saws.

Shank Dia. d	T.I.R. Hole size D	d_1	L	Tool No.	Price Each
.500	.250	.500	2.70	**HSA514**	33.82
.500	.375	.625	2.88	**HSA538**	41.33
.500	.500	.750	3.07	**HSA512**	45.12
.750	.625	1.00	3.53	**HSA758**	48.83
.750	1.000	1.50	3.78	**HSA71**	52.62
.750	1.250	1.75	4.03	**HSA7114**	60.13

Sets

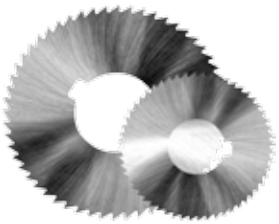


Sizes	Pcs.	Set No.	Price
HSA514, HSA538, HSA512	3	**HSA5SET**	120.26
HSA758, HSA71, HSA7114	3	**HSA7SET**	161.65

All sets are supplied with wood stand

Jewelers Slotting Saws

High Speed Steel



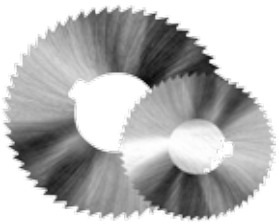
List No. **728**

For slotting and grooving very thin material or cutting off wire, thin tubing, sheeting, extrusions or other thin materials.

Diameter	Width of Face	Hole Size	Number of Teeth	Price Each
1	.006	1/4	98	13.93
1	.006	5/16	98	13.93
1	.006	3/8	98	13.93
1	.006	1/2	98	13.93
1	.008	1/4	98	13.93
1	.008	5/16	98	13.93
1	.008	3/8	99	13.93
1	.008	1/2	98	13.93
1	.010	1/4	98	10.80
1	.010	5/16	98	10.80
1	.010	3/8	99	10.80
1	.010	1/2	98	10.80
1	.012	1/4	98	10.80
1	.012	5/16	98	10.80
1	.012	3/8	99	10.80
1	.012	1/2	98	10.80
1	.014	1/4	76	9.94
1	.014	5/16	76	9.94
1	.014	3/8	75	9.94
1	.014	1/2	76	9.94
1	.016	1/4	76	9.40
1	.016	5/16	76	9.40
1	.016	3/8	75	9.40
1	.016	1/2	76	9.40
1	.018	1/4	76	8.53
1	.018	5/16	76	8.53
1	.018	3/8	75	8.53
1	.018	1/2	76	8.53
1	.020	1/4	76	8.53
1	.020	5/16	76	8.53
1	.020	3/8	75	8.53
1	.020	1/2	76	8.53
1	.023	1/4	76	7.78
1	.023	5/16	76	7.78
1	.023	3/8	75	7.78
1	.023	1/2	76	7.78
1	.025	1/4	75	7.78
1	.025	5/16	76	7.78
1	.025	3/8	75	7.78
1	.025	1/2	76	7.78
1	.028	1/4	76	9.40
1	.028	5/16	76	9.40
1	.028	3/8	75	9.40
1	.028	1/2	76	9.40
1	.032	1/4	76	9.40
1	.032	5/16	76	9.40
1	.032	3/8	75	9.40
1	.032	1/2	76	9.40
1-1/4	.006	5/16	120	16.42
1-1/4	.006	3/8	120	16.42
1-1/4	.006	1/2	120	16.42
1-1/4	.008	5/16	120	16.42
1-1/4	.008	3/8	120	16.42
1-1/4	.008	1/2	120	16.42
1-1/4	.010	5/16	120	15.01
1-1/4	.010	3/8	120	15.01
1-1/4	.010	1/2	120	15.01
1-1/4	.012	5/16	120	12.10
1-1/4	.012	3/8	120	12.10
1-1/4	.012	1/2	120	12.10
1-1/4	.013	3/8	120	11.66
1-1/4	.014	5/16	98	11.66
1-1/4	.014	3/8	99	11.66
1-1/4	.014	1/2	99	11.66
1-1/4	.016	5/16	98	11.66
1-1/4	.016	3/8	99	11.66
1-1/4	.016	1/2	99	11.66
1-1/4	.018	5/16	98	10.80
1-1/4	.018	3/8	99	10.80
1-1/4	.018	1/2	99	10.80
1-1/4	.020	5/16	98	9.94
1-1/4	.020	3/8	99	9.94
1-1/4	.020	1/2	99	9.94
1-1/4	.022	3/8	98	10.80
1-1/4	.023	5/16	98	9.40
1-1/4	.023	3/8	99	9.40
1-1/4	.023	1/2	99	9.40
1-1/4	.024	3/8	98	9.94
1-1/4	.025	5/16	98	9.40
1-1/4	.025	3/8	99	9.40
1-1/4	.025	1/2	99	9.40
1-1/4	.028	5/16	98	9.40
1-1/4	.028	3/8	99	9.94
1-1/4	.028	1/2	99	9.94
1-1/4	.032	5/16	99	9.94
1-1/4	.032	3/8	99	9.94
1-1/4	.032	1/2	99	9.94
1-1/2	.006	3/8	140	20.30
1-1/2	.006	1/2	140	20.30
1-1/2	.008	3/8	140	20.30
1-1/2	.008	1/2	140	20.30
1-1/2	.010	3/8	140	20.30
1-1/2	.010	1/2	140	20.30
1-1/2	.012	3/8	140	13.93
1-1/2	.012	1/2	140	13.93
1-1/2	.014	3/8	110	12.96
1-1/2	.014	1/2	110	12.96
1-1/2	.016	3/8	110	12.10
1-1/2	.016	1/2	110	12.10
1-1/2	.018	3/8	110	11.66
1-1/2	.018	1/2	110	11.66
1-1/2	.020	3/8	110	10.80
1-1/2	.020	1/2	110	10.80
1-1/2	.023	3/8	110	10.80
1-1/2	.023	1/2	110	10.80
1-1/2	.025	3/8	110	10.80
1-1/2	.025	1/2	110	10.80
1-1/2	.028	3/8	110	10.80
1-1/2	.028	1/2	110	10.80
1-1/2	.032	3/8	110	12.31
1-1/2	.032	1/2	110	12.31
1-3/4	.006	5/16	160	17.82
1-3/4	.006	3/8	160	17.82
1-3/4	.006	1/2	160	17.82
1-3/4	.008	5/16	160	21.82
1-3/4	.008	3/8	160	21.82
1-3/4	.008	1/2	160	21.82
1-3/4	.010	5/16	160	20.30
1-3/4	.010	3/8	160	20.30
1-3/4	.010	1/2	160	20.30
1-3/4	.012	5/16	160	17.82
1-3/4	.012	3/8	160	17.82
1-3/4	.012	1/2	160	14.36
1-3/4	.014	3/8	132	14.36
1-3/4	.014	1/2	132	14.36
1-3/4	.016	3/8	132	13.93
1-3/4	.016	1/2	132	13.93
1-3/4	.018	3/8	132	12.96
1-3/4	.018	1/2	132	12.96
1-3/4	.020	3/8	132	12.40
1-3/4	.020	1/2	132	12.10
1-3/4	.023	3/8	132	10.80
1-3/4	.023	1/2	132	10.80
1-3/4	.025	3/8	132	10.80
1-3/4	.025	1/2	132	10.80
1-3/4	.028	3/8	132	11.66
1-3/4	.028	1/2	132	11.66
1-3/4	.032	3/8	132	11.66
1-3/4	.032	1/2	132	11.66
2	.006	3/8	190	25.27
2	.006	1/2	190	25.27
2	.008	3/8	190	25.27
2	.008	1/2	190	25.27
2	.010	3/8	190	24.30
2	.010	1/2	190	24.30
2	.012	3/8	190	22.68
2	.012	1/2	190	22.68
2	.014	3/8	152	18.36
2	.014	1/2	152	18.36
2	.016	3/8	152	16.52
2	.016	1/2	152	16.52
2	.018	3/8	152	14.80
2	.018	1/2	152	14.80
2	.020	3/8	152	13.93
2	.020	1/2	152	13.93
2	.023	3/8	152	12.96
2	.023	1/2	152	12.96
2	.025	3/8	152	13.93
2	.025	1/2	152	13.93
2	.028	3/8	152	13.93
2	.028	1/2	152	13.93
2	.032	3/8	110	13.93
2	.032	1/2	110	13.93
2	.035	3/8	110	13.93
2	.035	1/2	110	13.93
2	.036	1/2	110	22.25
2	.040	3/8	110	14.80
2	.040	1/2	110	14.80
2	.045	3/8	110	14.80
2	.045	1/2	110	14.80
2	.051	3/8	110	16.52
2	.051	1/2	110	16.52
2	.057	3/8	110	16.52
2	.057	1/2	110	16.52
2	.081	1/2	110	19.00
2-1/4	.008	1/2	210	26.00
2-1/4	.010	1/2	210	30.67
2-1/4	.012	1/2	210	24.95
2-1/4	.014	1/2	210	24.95
2-1/4	.018	1/2	210	17.82
2-1/4	.032	1/2	210	17.82
2-1/4	.075	1/2	210	27.72
2-1/2	.006	1/2	240	33.90
2-1/2	.008	1/2	240	29.40
2-1/2	.010	1/2	240	30.67
2-1/2	.012	1/2	240	26.78
2-1/2	.013	1/2	240	26.78
2-1/2	.014	1/2	190	24.30
2-1/2	.016	1/2	190	20.09

Jewelers Slotting Saws

High Speed Steel



High Speed

MDX® SUPERIOR IMPORT

List No. **728**

For slotting and grooving very thin material or cutting off wire, thin tubing, sheeting, extrusions or other thin materials.

Diameter	Width of Face	Hole Size	Number of Teeth	Price Each
2-1/2	.018	1/2	190	17.06
2-1/2	.020	1/2	190	15.98
2-1/2	.023	1/2	190	14.80
2-1/2	.025	1/2	190	14.80
2-1/2	.028	1/2	190	16.52
2-1/2	.032	1/2	140	16.52
2-1/2	.035	1/2	140	17.82
2-1/2	.040	1/2	140	18.79
2-1/2	.045	1/2	140	18.79
2-1/2	.051	1/2	140	20.09
2-1/2	.057	1/2	140	20.09
2-1/2	.071	1/2	140	23.50
2-1/2	.075	1/2	140	23.50
3	.006	1/2	280	44.80
3	.006	3/4	280	44.80
3	.006	1	280	44.80
3	.008	1/2	280	44.80
3	.008	3/4	280	44.80
3	.008	1	280	44.80
3	.010	1/2	280	35.21
3	.010	3/4	280	35.21
3	.010	1	280	35.21
3	.012	1/2	280	31.32
3	.012	3/4	280	31.32
3	.012	1	280	31.32
3	.014	1/2	230	31.32
3	.014	3/4	230	31.32
3	.014	1	230	31.32
3	.016	1/2	230	26.78
3	.016	3/4	230	26.78
3	.016	1	230	26.78
3	.018	1/2	230	23.87
3	.018	3/4	230	23.87
3	.018	1	230	23.87
3	.020	1/2	230	19.66
3	.020	3/4	230	21.84
3	.020	1	230	19.66
3	.023	1/2	230	17.82
3	.023	3/4	230	17.82
3	.023	1	230	17.82
3	.025	1/2	230	17.82
3	.025	3/4	230	17.82
3	.025	1	230	17.82
3	.028	1/2	230	20.09
3	.028	3/4	230	20.09
3	.028	1	230	20.09
3	.032	1/2	168	20.09
3	.032	3/4	168	20.09
3	.032	1	168	20.09
3	.035	1/2	168	22.25
3	.035	3/4	168	22.25
3	.035	1	168	22.25
3	.039	1	168	26.28
3	.040	1/2	168	22.25
3	.040	3/4	168	22.25
3	.040	1	168	22.25
3	.045	1/2	168	22.25
3	.045	3/4	168	22.25
3	.045	1	168	22.25
3	.051	1/2	168	23.65
3	.051	3/4	168	23.65
3	.051	1	168	23.65
3	.053	1/2	168	26.28
3	.057	1/2	168	23.65
3	.057	3/4	168	23.65
3	.057	1	168	23.65
4	.010	1/2	310	56.70
4	.010	1	310	56.70
4	.012	1/2	310	49.70
4	.012	3/4	310	49.70
4	.012	1	310	49.70
4	.014	1/2	310	39.88
4	.014	3/4	310	39.88
4	.014	1	310	39.88
4	.016	1/2	310	45.79
4	.016	3/4	310	45.79
4	.016	1	310	45.79
4	.018	1/2	310	42.66
4	.018	3/4	310	47.40
4	.018	1	310	42.66
4	.020	1/2	310	40.61
4	.020	3/4	310	40.61
4	.020	1	310	40.61
4	.023	1/2	310	32.51
4	.023	3/4	310	32.51
4	.023	1	310	32.51
4	.025	1/2	310	29.92
4	.025	3/4	310	29.92
4	.025	1	310	29.92
4	.028	1/2	310	29.92
4	.028	3/4	310	29.92
4	.028	1	310	29.92
4	.032	1/2	220	32.51
4	.032	3/4	220	32.51
4	.032	1	220	32.51
4	.035	1/2	220	33.80
4	.035	3/4	220	33.80
4	.035	1	220	33.80
4	.040	1/2	220	33.80
4	.040	3/4	220	33.80
4	.040	1	220	33.80
4	.045	1/2	220	37.37
4	.045	3/4	220	37.37
4	.045	1	220	37.37
4	.051	1/2	220	37.37
4	.051	3/4	220	37.37
4	.051	1	220	37.37
4	.057	1/2	220	38.12
4	.057	3/4	220	38.12
4	.057	1	220	38.12
4	.064	1/2	220	38.12
4	.064	3/4	220	38.12
4	.064	1	220	38.12
4	.072	1	220	51.12
5	.016	1/2	380	59.54
5	.016	1	380	59.54
5	.018	1/2	380	56.20
5	.018	3/4	380	56.20
5	.018	1	380	56.20
5	.020	1/2	380	71.58
5	.020	1	380	71.58
5	.023	1	380	54.43
5	.025	1/2	380	54.43
5	.025	3/4	380	54.43
5	.025	1	280	54.43
5	.028	1/2	280	54.43
5	.028	1	280	54.43
5	.032	1/2	280	46.01
5	.032	1	280	46.01
5	.035	1/2	280	46.01
5	.035	1	280	46.01
5	.036	1	280	46.01
5	.040	1/2	280	46.01
5	.040	3/4	280	46.01
5	.040	1	280	46.01
5	.045	1/2	280	51.62
5	.045	3/4	280	51.62
5	.045	1	280	51.62
5	.051	1/2	280	51.62
5	.051	1	280	51.62
5	.057	1/2	280	53.14
5	.057	3/4	280	53.14
5	.057	1	280	53.14
5	.064	1/2	280	53.14
5	.064	1	280	53.14
6	.020	1/2	280	78.79
6	.020	3/4	280	78.79
6	.023	3/4	460	78.79
6	.023	1	460	78.79
6	.025	1/2	460	69.50
6	.025	3/4	460	69.50
6	.025	1	460	69.50
6	.028	3/4	340	65.56
6	.028	1	340	65.56
6	.032	1/2	340	61.40
6	.032	3/4	340	61.40
6	.032	1	340	61.40
6	.035	1/2	340	74.64
6	.035	3/4	340	82.56
6	.035	1	340	74.30
6	.040	1/2	340	74.30
6	.040	1	340	74.30
6	.045	1/2	340	67.18
6	.045	3/4	340	67.18
6	.045	1	340	67.18
6	.051	1/2	232	74.30
6	.051	3/4	232	74.30
6	.051	1	232	74.30
6	.057	1/2	232	74.30
6	.057	1	232	74.30
6	.064	1/2	232	74.30
6	.064	3/4	232	74.30
6	.064	1	232	74.30
6	.072	1/2	232	76.80
6	.072	3/4	232	76.80
6	.072	1	232	76.90
6	.081	1/2	232	76.90
6	.081	1	232	76.90
6	.091	1/2	232	83.59
6	.091	3/4	232	83.59
6	.091	1	232	83.59
6	.102	1/2	232	93.31
6	.102	3/4	232	93.31
6	.102	1	232	93.31
6	.114	1/2	232	135.00
6	.114	3/4	232	135.00
6	.114	1	232	135.00
6	.128	1/2	232	147.74
6	.128	1	232	147.74

Side Milling Cutters

High Speed Steel

Staggered Teeth

List No. **744**

For deep slotting and heavy duty side milling.
The Shear cutting action eliminates the side thrust.

High Speed



MDX® SUPERIOR IMPORT

Diameter	Width of Face	Hole Size	Price Each
2-1/8	3/16	3/4	44.56
2-1/8	1/4	3/4	46.58
2-1/8	5/16	3/4	51.98
2-1/8	3/8	3/4	58.50
2-1/2	3/16	7/8	71.85
2-1/2	1/4	7/8	61.60
2-1/2	1/4	1	61.60
2-1/2	5/16	7/8	60.84
2-1/2	5/16	1	73.88
2-1/2	3/8	7/8	69.87
2-1/2	7/16	7/8	73.36
2-1/2	1/2	7/8	73.36
2-1/2	1/2	1	66.49
2-1/2	5/8	1	72.00
2-3/4	1/4	1	64.26
2-3/4	5/16	1	68.04
2-3/4	3/8	1	71.92
2-3/4	7/16	1	75.60
2-3/4	1/2	1	80.92
3	5/32	1	59.09
3	3/16	1	59.09
3	3/16	1-1/4	59.09
3	7/32	1	81.20
3	7/32	1-1/4	81.20
3	1/4	1	58.69
3	1/4	1-1/4	58.69
3	9/32	1	67.95
3	9/32	1-1/4	67.95
3	5/16	1	69.57
3	5/16	1-1/4	69.57
3	11/32	1	71.87
3	3/8	1	71.87
3	3/8	1-1/4	73.08
3	7/16	7/8	84.60
3	7/16	1	73.08
3	7/16	1-1/4	76.14
3	1/2	1	76.14
3	1/2	1-1/4	77.86
3	9/16	1	76.32
3	9/16	1-1/4	80.10
3	5/8	1	80.10
3	5/8	1-1/4	80.10
3	11/16	1	84.30
3	11/16	1-1/4	84.30
3	3/4	1	85.22
3	3/4	1-1/4	85.22
3	13/16	1	98.55
3	13/16	1-1/4	98.55
3	7/8	1	100.80
3	7/8	1-1/4	100.80
3	15/16	1	117.00
3	15/16	1-1/4	117.00
3	1	1	122.18
3	1	1-1/4	121.59
3	1-1/4	1	145.00
3-1/2	3/16	1	105.27
3-1/2	7/32	7/8	110.00
3-1/2	1/4	1	85.50
3-1/2	9/32	1	85.50
3-1/2	5/16	1	85.50
3-1/2	3/8	1	97.88
3-1/2	3/8	1-1/4	97.88
3-1/2	7/16	1	105.08
3-1/2	1/2	1	108.00
3-1/2	1/2	1-1/4	108.00

Diameter	Width of Face	Hole Size	Price Each
3-1/2	9/16	1-1/4	129.50
3-1/2	5/8	1	121.50
3-1/2	5/8	1-1/4	116.78
3-1/2	11/16	1	125.56
3-1/2	11/16	1-1/4	125.56
3-1/2	3/4	1	125.56
3-1/2	3/4	1-1/4	125.56
3-1/2	13/16	1	116.78
3-1/2	13/16	1-1/4	116.78
3-1/2	7/8	1	125.67
3-1/2	7/8	1-1/4	125.67
3-1/2	15/16	1	139.09
3-1/2	15/16	1-1/4	139.09
3-1/2	1	1	159.22
3-1/2	1	1-1/4	159.22
4	3/16	1	83.25
4	3/16	1-1/4	83.25
4	7/32	1	86.40
4	7/32	1-1/4	86.40
4	1/4	1	94.73
4	1/4	1-1/4	94.73
4	9/32	1	98.64
4	9/32	1-1/4	98.64
4	5/16	1	100.80
4	5/16	1-1/4	100.80
4	11/32	1	102.50
4	11/32	1-1/4	102.50
4	3/8	1	105.56
4	3/8	1-1/4	105.56
4	3/8	1-1/2	112.00
4	13/32	1-1/4	108.86
4	7/16	1	108.86
4	7/16	1/1/4	110.16
4	1/2	1	112.23
4	1/2	1/1/4	112.23
4	9/16	1	116.74
4	9/16	1-1/4	116.74
4	5/8	1	130.12
4	5/8	1-1/4	130.12
4	11/16	1	134.10
4	11/16	1-1/4	134.10
4	3/4	1	136.40
4	3/4	1-1/4	136.40
4	13/16	1	144.77
4	13/16	1-1/4	144.77
4	7/8	1	144.77
4	7/8	1-1/4	144.77
4	15/16	1	160.64
4	15/16	1-1/4	160.64
4	1	1	167.40
4	1	1-1/4	167.40
4	1-1/8	1-1/4	181.80
4	1-3/16	1-1/4	197.45
4	1-1/4	1-1/4	240.00
4	1-1/2	1-1/4	265.50
4-1/2	1/2	1	149.04
4-1/2	1/2	1-1/4	149.04
4-1/2	5/8	1-1/4	155.69
4-1/2	3/4	1	155.69
4-1/2	3/4	1-1/4	155.69
4-1/2	7/8	1	155.69
4-1/2	7/8	1-1/4	155.69
4-1/2	1	1	190.49
4-1/2	1	1-1/4	190.49
4-1/2	1-1/4	1	255.00

Diameter	Width of Face	Hole Size	Price Each
4-1/2	1-1/4	1-1/4	255.00
5	7/32	1	134.55
5	7/32	1-1/4	134.55
5	1/4	1	134.55
5	1/4	1-1/4	134.55
5	5/16	1	138.38
5	5/16	1-1/4	138.38
5	3/8	1	142.74
5	3/8	1-1/4	142.74
5	7/16	1	148.60
5	7/16	1-1/4	148.60
5	1/2	1	151.92
5	1/2	1-1/4	151.92
5	9/16	1	158.40
5	9/16	1-1/4	158.40
5	5/8	1	169.95
5	5/8	1-1/4	169.95
5	11/16	1	185.72
5	11/16	1-1/4	185.72
5	3/4	1	183.65
5	3/4	1-1/4	183.65
5	13/16	1	202.64
5	13/16	1-1/4	202.64
5	7/8	1	202.64
5	7/8	1-1/4	202.64
5	15/16	1	225.08
5	15/16	1-1/4	225.08
5	1	1-1/4	229.50
5	1-1/4	1-1/4	290.00
6	1/4	1	165.50
6	1/4	1-1/4	165.50
6	9/32	1	165.50
6	9/32	1-1/4	165.50
6	5/16	1	178.20
6	5/16	1-1/4	178.20
6	3/8	1	178.20
6	3/8	1-1/4	178.20
6	7/16	1	188.96
6	7/16	1-1/4	188.96
6	1/2	1	200.70
6	1/2	1-1/4	200.70
6	17/32	1-1/4	215.00
6	9/16	1	214.17
6	9/16	1-1/4	214.17
6	5/8	1	227.68
6	5/8	1-1/4	227.68
6	11/16	1	243.00
6	11/16	1-1/4	243.00
6	3/4	1	243.00
6	3/4	1-1/4	243.00
6	13/16	1	288.00
6	13/16	1-1/4	288.00
6	7/8	1	288.00
6	7/8	1-1/4	288.00
6	15/16	1	305.10
6	15/16	1-1/4	305.10
6	1	1	310.10
6	1	1-1/4	310.10
6	1	1-1/2	310.10
6	1-1/8	1-1/4	332.10
6	1-3/16	1-1/4	332.10
6	1-1/4	1-1/4	332.10
6	1-1/2	1-1/4	390.00
6-1/2	1	1-1/4	328.00
6-1/2	1	1-1/2	328.00

Side Milling Cutters

High Speed Steel

Staggered Teeth

List No. **744**

For deep slotting and heavy duty side milling.
The Shear cutting action eliminates the side thrust.



Diameter	Width of Face	Hole Size	Price Each
7	1/4	1-1/4	329.45
7	5/16	1-1/4	329.45
7	3/8	1-1/4	360.00
7	7/16	1-1/4	360.00
7	1/2	1-1/4	392.45
7	9/16	1-1/4	402.38
7	5/8	1-1/4	440.30
7	11/16	1-1/4	440.30
7	3/4	1-1/4	440.30
7	13/16	1-1/4	440.30
7	7/8	1-1/4	531.10
7	15/16	1-1/4	531.10
7	1	1-1/4	570.56
7	1	1-1/2	570.56
8	1/4	1-1/4	358.28
8	1/4	1-1/2	358.28
8	9/32	1-1/4	420.00
8	5/16	1-1/4	365.38
8	5/16	1-1/2	365.38
8	3/8	1-1/4	386.10
8	3/8	1-1/2	386.10
8	7/16	1-1/4	399.00
8	7/16	1-1/2	399.00
8	1/2	1	426.02
8	1/2	1-1/4	426.02
8	1/2	1-1/2	426.79
8	9/16	1-1/4	475.28
8	9/16	1-1/2	475.28

Diameter	Width of Face	Hole Size	Price Each
8	5/8	1-1/4	475.20
8	5/8	1-1/2	475.20
8	11/16	1-1/4	482.00
8	11/16	1-1/2	482.00
8	3/4	1-1/4	512.18
8	3/4	1-1/2	512.18
8	13/16	1-1/4	562.58
8	13/16	1-1/2	565.58
8	7/8	1-1/4	571.58
8	7/8	1-1/2	601.16
8	15/16	1-1/4	648.00
8	15/16	1-1/2	648.00
8	1	1-1/2	648.00
8	1	1-1/4	648.00
8	1-1/2	1-1/2	764.00
9	1/4	1-1/4	445.00
9	1/4	1-1/2	445.00
9	3/8	1-1/4	575.90
9	3/8	1-1/2	575.90
9	7/16	1-1/4	619.99
9	1/2	1-1/4	647.96
9	1/2	1-1/2	647.96
9	5/8	1-1/4	688.50
9	5/8	1-1/2	688.50
9	3/4	1-1/4	738.00
9	3/4	1-1/2	738.00
9	1	1-1/4	828.00
9	1	1-1/2	828.00

Diameter	Width of Face	Hole Size	Price Each
10	1/4	1-1/2	696.56
10	5/16	1-1/2	763.16
10	3/8	1-1/2	804.56
10	7/16	1-1/2	881.98
10	1/2	1-1/2	915.29
10	9/16	1-1/2	935.98
10	5/8	1-1/2	967.46
10	11/16	1-1/2	1011.58
10	3/4	1-1/2	1022.38
10	13/16	1-1/2	1066.46
10	7/8	1-1/2	1110.58
10	15/16	1-1/2	1164.58
10	1	1-1/2	1218.56
10	1-1/8	1-1/2	1400.00
10	1-1/4	1-1/2	1550.00
12	1/4	1-1/2	1179.88
12	5/16	1-1/2	1247.39
12	3/8	1-1/2	1247.39
12	7/16	1-1/2	1232.00
12	1/2	1-1/2	1232.00
12	9/16	1-1/2	1300.00
12	5/8	1-1/2	1404.00
12	11/16	1-1/2	1404.00
12	3/4	1-1/2	1529.97
12	13/16	1-1/2	1529.97
12	7/8	1-1/2	1629.00
12	15/16	1-1/2	1695.00
12	1	1-1/2	1709.96

Straight Teeth – With Side Clearance

List No. **740**

For slotting and light duty side milling.
These cutters can be ganged or used as straddle mills.



Diameter	Width of Face	Hole Size	Price Each
2	3/16	1/2	37.58
2	3/16	5/8	37.58
2	1/4	1/2	37.58
2	1/4	5/8	34.10
2	1/4	7/8	37.58
2	5/16	1/2	36.44
2	5/16	5/8	36.44
2	5/16	7/8	36.44
2	3/8	1/2	37.58
2	3/8	5/8	37.58
2	3/8	7/8	37.58
2	7/16	7/8	46.00
2-1/4	5/32	1	46.00
2-1/2	3/32	7/8	49.00
2-1/2	1/8	7/8	49.00
2-1/2	5/32	7/8	49.00
2-1/2	3/16	7/8	44.20
2-1/2	3/16	1	44.20
2-1/2	7/32	7/8	49.75
2-1/2	1/4	7/8	45.86
2-1/2	1/4	1	45.86
2-1/2	5/16	7/8	46.90
2-1/2	5/16	1	46.90

Diameter	Width of Face	Hole Size	Price Each
2-1/2	3/8	7/8	51.14
2-1/2	3/8	1	51.14
2-1/2	7/16	7/8	59.00
2-1/2	7/16	1	59.00
2-1/2	9/16	7/8	60.30
2-1/2	1/2	7/8	52.07
2-1/2	1/2	1	52.07
2-1/2	5/8	1	60.30
3	3/16	1	44.99
3	3/16	1-1/4	45.45
3	7/32	1	48.68
3	7/32	1-1/4	46.68
3	1/4	1	52.88
3	1/4	1-1/4	52.88
3	9/32	1	54.50
3	9/32	1-1/4	54.50
3	5/16	1	55.61
3	5/16	1-1/4	55.61
3	11/32	1	56.70
3	11/32	1-1/4	56.70
3	3/8	1	59.09
3	3/8	1-1/4	59.09
3	13/32	1	60.75

Diameter	Width of Face	Hole Size	Price Each
3	13/32	1-1/4	60.75
3	7/16	1	62.64
3	7/16	1-1/4	62.64
3	1/2	1	63.50
3	1/2	1-1/4	63.50
3	9/16	1	64.89
3	9/16	1-1/4	64.89
3	5/8	1	66.83
3	5/8	1-1/4	66.83
3	11/16	1	70.65
3	11/16	1-1/4	70.65
3	3/4	1	72.14
3	3/4	1-1/4	72.14
3	13/16	1	90.18
3	13/16	1-1/4	90.18
3	7/8	1	105.96
3	7/8	1-1/4	105.96
3	15/16	1	108.68
3	15/16	1-1/4	108.68
3	1	1	114.39
3	1	1-1/4	114.39
3-1/2	3/16	1	62.30
3-1/2	1/4	1	62.30

Side Milling Cutters

High Speed Steel



Straight Teeth – Side Clearance

List No. **740**

For slotting and light duty side milling.
These cutters can be ganged or used as straddle mills.

High Speed MDX® SUPERIOR IMPORT

Diameter	Width of Face	Hole Size	Price Each
3-1/2	5/16	1	68.40
3-1/2	5/16	1-1/4	68.40
3-1/2	3/8	1	71.64
3-1/2	3/8	1-1/4	71.64
3-1/2	7/16	1	72.41
3-1/2	7/16	1-1/4	72.41
3-1/2	1/2	1	76.50
3-1/2	1/2	1-1/4	76.50
3-1/2	9/16	1	83.52
3-1/2	9/16	1-1/4	83.52
3-1/2	5/8	1	83.52
3-1/2	11/16	1	98.00
3-1/2	11/16	1-1/4	98.00
3-1/2	3/4	1	103.50
3-1/2	3/4	1-1/4	103.50
3-1/2	13/16	1-1/4	103.50
3-1/2	7/8	1	106.00
3-1/2	7/8	1-1/4	106.00
3-1/2	1	1	108.00
3-1/2	1	1-1/4	108.00
4	3/16	1	65.25
4	3/16	1-1/4	65.25
4	7/32	1	68.22
4	7/32	1-1/4	68.22
4	1/4	1	71.55
4	1/4	1-1/4	71.55
4	9/32	1	72.00
4	9/32	1-1/4	72.00
4	5/16	1	72.14
4	5/16	1-1/4	72.14
4	11/32	1	77.51
4	11/32	1-1/4	77.51
4	3/8	1	81.99
4	3/8	1-1/4	81.99
4	13/32	1	81.99
4	13/32	1-1/4	81.99
4	7/16	1	82.76
4	7/16	1-1/4	82.76
4	1/2	1	91.31
4	1/2	1-1/4	91.31
4	9/16	1	91.70
4	9/16	1-1/4	91.70
4	5/8	1	101.88
4	5/8	1-1/4	101.88
4	11/16	1	108.10
4	11/16	1-1/4	108.10
4	3/4	1	108.10
4	3/4	1-1/4	108.10
4	13/16	1	110.55
4	13/16	1-1/4	110.55
4	7/8	1	119.64
4	7/8	1-1/4	119.64
4	15/16	1	124.74
4	15/16	1-1/4	124.74
4	1	1	140.22
4	1	1-1/4	140.22
4	1-1/8	1	155.00
4	1-1/8	1-1/4	155.00
4	1-1/4	1	168.00
4	1-1/4	1-1/4	168.00
4	1-1/2	1-1/4	220.00
4-1/2	3/16	1-1/4	104.78
4-1/2	1/4	1-1/4	110.30
4-1/2	5/16	1	110.30
4-1/2	3/8	1-1/4	116.10
4-1/2	7/16	1	121.50
4-1/2	7/16	1-1/4	121.50
4-1/2	1/2	1	121.50
4-1/2	1/2	1-1/4	121.50
4-1/2	7/8	1	135.00
5	3/16	1	115.00
5	1/4	1	103.50
5	1/4	1-1/4	103.50
5	9/32	1	108.00
5	9/32	1-1/4	108.00
5	5/16	1	110.53
5	5/16	1-1/4	110.53
5	11/32	1	112.37
5	11/32	1-1/4	112.37
5	3/8	1	121.58
5	3/8	1-1/4	121.58
5	13/32	1	125.21
5	13/32	1-1/4	125.21
5	7/16	1	128.46
5	7/16	1-1/4	128.46
5	1/2	1	128.46
5	1/2	1-1/4	128.46
5	1/2	1-1/2	145.00
5	9/16	1	138.60
5	9/16	1-1/4	138.60
5	9/16	1-1/2	142.20
5	5/8	1	142.20
5	5/8	1-1/4	142.20
5	11/16	1	153.00
5	11/16	1-1/4	153.00
5	3/4	1	154.25
5	3/4	1-1/4	154.25
5	13/16	1	162.45
5	13/16	1-1/4	162.45
5	7/8	1	171.80
5	7/8	1-1/4	171.80
5	15/16	1	175.50
5	15/16	1-1/4	175.50
5	1	1	182.60
5	1	1-1/4	182.60
5	1-1/4	1-1/4	210.00
5-1/2	3/8	1	119.00
5-1/2	1/2	1	139.50
5-1/2	3/4	1	166.25
6	1/4	1	143.10
6	1/4	1-1/4	143.10
6	9/32	1-1/4	148.50
6	5/16	1	148.50
6	5/16	1-1/4	148.50
6	11/32	1-1/4	152.10
6	3/8	1	152.10
6	3/8	1-1/4	152.10
6	13/32	1-1/4	153.26
6	7/16	1	153.26
6	7/16	1-1/4	153.26
6	1/2	1	160.58
6	1/2	1-1/4	160.58
6	9/16	1	166.50
6	9/16	1-1/4	166.50
6	5/8	1	175.23
6	5/8	1-1/4	175.23
6	11/16	1	179.46
6	11/16	1-1/4	179.46
6	3/4	1	205.70
6	3/4	1-1/4	205.70
6	13/16	1	207.86
6	13/16	1-1/4	207.86
6	7/8	1	212.21
6	7/8	1-1/4	212.21
6	15/16	1	218.30
6	15/16	1-1/4	218.30
6	1	1	243.45
6	1	1-1/4	243.45
6	1-1/8	1-1/4	283.50
6	1-1/4	1	283.50
6	1-1/4	1-1/4	283.50
7	1/4	1-1/4	273.60
7	7/16	1-1/4	273.60
7	9/16	1-1/4	280.00
7	5/8	1-1/4	291.33
7	11/16	1-1/4	309.00
7	3/4	1-1/4	312.71
7	13/16	1-1/4	317.70
7	7/8	1-1/4	328.50
7	15/16	1-1/4	337.50
7	1	1-1/4	382.23
7	1	1-1/2	410.00
8	1/4	1-1/4	297.00
8	1/4	1-1/2	330.00
8	5/16	1	393.75
8	5/16	1-1/4	393.75
8	3/8	1	411.39
8	3/8	1-1/4	411.39
8	7/16	1	414.90
8	7/16	1-1/4	414.90
8	1/2	1-1/4	436.50
8	1/2	1-1/2	436.50
8	9/16	1-1/4	448.29
8	5/8	1-1/4	448.20
8	11/16	1-1/4	449.10
8	3/4	1	499.00
8	3/4	1-1/4	499.00
8	13/16	1-1/4	501.00
8	7/8	1-1/4	504.00
8	15/16	1-1/4	517.50
8	1	1-1/4	602.10
8	1	1-1/2	602.10
9	1/4	1-1/4	395.00
9	3/8	1-1/4	475.00
9	1/2	1-1/4	510.00
9	5/8	1-1/4	540.00
9	3/4	1-1/4	590.00
9	1	1-1/4	680.00
10	1/4	1-1/2	495.00
10	5/16	1-1/2	575.00
10	3/8	1-1/2	620.00
10	7/16	1-1/2	650.00
10	1/2	1-1/2	675.00
10	9/16	1-1/2	710.00
10	5/8	1-1/4	720.00
10	5/8	1-1/2	720.00
10	11/16	1-1/2	750.00
10	3/4	1-1/4	780.00
10	3/4	1-1/2	780.00
10	13/16	1-1/2	799.00
10	7/8	1-1/2	820.00
10	15/16	1-1/2	895.00
10	1	1-1/2	904.00
12	3/8	1-1/2	890.00
12	1/2	1-1/2	1108.00

Milling Cutters

High Speed Steel



Plain Milling Cutter

List No. **741**

For light milling or finishing cuts.

- Cutters less than 3/4" width have straight teeth.
- Cutters 3/4" and over are furnished with 20º left hand helix.

Circle Diameter	Cutter Length	Hole Size	Price Each
2-1/4	1/4	7/8	50.94
2-1/4	1/2	7/8	54.00
2-1/4	1	7/8	59.00
2-1/2	3/16	1	26.72
2-1/2	1/4	7/8	43.00
2-1/2	1/4	1	32.04
2-1/2	5/16	1	33.83
2-1/2	3/8	7/8	36.64
2-1/2	3/8	1	36.44
2-1/2	7/16	1	42.00
2-1/2	1/2	1/2	48.00
2-1/2	1/2	1	42.00
2-1/2	5/8	1	45.86
2-1/2	3/4	1	50.28
2-1/2	7/8	1	76.66
2-1/2	1	1	61.24
2-1/2	1-1/2	1	78.48
2-1/2	2	1	94.38
2-1/2	2-1/2	1	113.39
2-1/2	3	1	124.88
2-1/2	4	1	161.34
3	3/16	1	32.46
3	1/4	1	41.45
3	1/4	1-1/4	41.45
3	5/16	1	44.51
3	5/16	1-1/4	44.51
3	3/8	1	48.48
3	3/8	1-1/4	48.48
3	7/16	1	52.50
3	7/16	1-1/4	52.50
3	1/2	1	53.88
3	1/2	1-1/4	53.88
3	9/16	1	88.19
3	9/16	1-1/4	88.19
3	5/8	1	59.12
3	5/8	1-1/4	59.12
3	11/16	1	95.06
3	11/16	1-1/4	95.06
3	3/4	1	61.30
3	3/4	1-1/4	61.30
3	13/16	1	99.22
3	13/16	1-1/4	99.22
3	7/8	1	66.46
3	7/8	1-1/4	66.46
3	1	1	79.34
3	1	1-1/4	79.34
3	1-1/4	1-1/4	89.42
3	1-1/2	1-1/4	100.04
3	2	1-1/4	122.76
3	2-1/2	1-1/4	160.60
3	3	1-1/4	265.69
3	4	1-1/4	356.20
3	6	1-1/4	391.82
3-1/2	5/8	1	77.00
4	3/16	1	75.00
4	1/4	1	61.30
4	1/4	1-1/4	61.30
4	5/16	1	66.12
4	5/16	1-1/4	66.12
4	3/8	1	69.66
4	3/8	1-1/4	69.66
4	7/16	1-1/4	84.60
4	1/2	1	85.14
4	1/2	1-1/4	85.14
4	1/2	1-1/2	126.00
4	9/16	1-1/4	90.00
4	5/8	1	90.35
4	5/8	1-1/4	90.35
4	11/16	1-1/4	140.00
4	3/4	1	99.60
4	3/4	1-1/4	99.60
4	13/16	1	154.00
4	13/16	1-1/4	154.00
4	7/8	1	164.50
4	7/8	1-1/2	164.50
4	15/16	1	180.90
4	1	1	187.00
4	1	1-1/4	187.00
4	1	2	196.00
4	1-1/16	1-1/4	210.00
4	1-1/8	1-1/4	210.00
4	1-1/4	1-1/4	244.80
4	1-1/4	1-1/2	244.80
4	1-1/2	1-1/4	272.29
4	1-1/2	1-1/2	272.29
4	2	1	327.20
4	2	1-1/4	216.00
4	2	1-1/2	327.20
4	2-1/2	1-1/4	376.88
4	3	1-1/4	294.89
4	4	1-1/4	416.66
4	5-1/2	2	499.92
4	6	1	481.32
4	6	1-1/2	601.29
4-1/4	1/4	1	92.88
4-1/2	6	1-1/4	960.00
4-1/2	6	2	960.00
5	1/4	1-1/4	80.00
5	1/2	1-1/4	107.00
5	1-1/4	1-1/4	180.00
5	1-1/2	1-1/4	240.00
6	1/4	1	108.00
6	3/8	1	126.82
6	1/2	1	230.00
8	1-1/2	1-1/4	600.00

Plain Heavy Duty

List No. **741HD**

For heavy stock removal furnished with 45º left hand helix.



Circle Diameter	Cutter Length	No. of Flutes	Hole Size	Price Each
2-1/2	2	6	1	94.38
3	1-1/4	8	1-1/4	116.10
3	2	8	1-1/4	134.10
3	2-1/2	8	1-1/4	166.50
3	4	10	1-1/4	234.00
3	5	10	1-1/4	330.00
3	6	10	1-1/4	387.00
4	1-1/2	10	1-1/2	175.00
4	2	10	1-1/2	207.00
4	3	10	1-1/2	297.00
4	4	10	1-1/2	439.20
4	6	10	1-1/2	625.50
4-1/2	6	10	2	850.69
5	1-1/2	10	1-1/4	210.00

Plain Milling Cutter

List No. **742** – 45° Left Hand Helix

For milling thin walled matirial & loose pieces in the milling machine



Circle Diameter	Cutter Length	No. of Flutes	Hole Size	Price Each
3	4	6	1-1/4	315.89
3	6	6	1-1/4	563.39
4	3	6	1-1/2	522.00
4	4	6	1-1/2	715.50
4	6	6	1-1/2	832.50
4	8	6	1-1/2	1150.00
4	10	6	1-1/2	1595.00
4-1/2	6	6	2	1744.00
4-1/2	12	10	2	2450.00
5	5-1/2	10	1-1/4	1350.00

Convex Milling Cutters

High Speed Steel

These cutters are made for milling half circles and may be sharpened without changing their form.



List No. **737**

For milling female half circles.

Circle Diameter	Cutter Diameter	Hole Size	Price Each
1/16	2-1/4	1	65.31
3/32	2-1/4	1	65.31
1/8	2	7/8	65.31
1/8	2-1/4	7/8	65.31
1/8	2-1/4	1	65.31
1/8	3	1	85.50
1/8	4	1	124.20
5/32	2-1/4	1	79.20
3/16	2	7/8	59.39
3/16	2-1/4	1	62.10
3/16	3	1	106.20
3/16	4	1	135.00
3/16	4	1-1/4	135.00
7/32	2-1/4	1	70.19
7/32	4	1	98.00
1/4	2	7/8	72.00
1/4	2-1/4	1	73.35
1/4	2-1/2	1	74.70
1/4	4	1-1/4	151.20
9/32	2-1/2	1	85.82
9/32	3-3/4	2	98.00
5/16	2-1/4	7/8	72.00
5/16	2-3/4	1	85.82
5/16	3	1	142.20
5/16	4	1	162.00
5/16	5	1-1/4	179.10
11/32	2-3/4	1	87.30
3/8	2-1/4	7/8	89.99
3/8	2-1/4	1	89.99
3/8	2-1/2	1	95.00
3/8	2-3/4	1	99.00
3/8	4	1	172.80
3/8	4	1-1/4	172.80
13/32	2-3/4	1	99.00
7/16	2-1/4	7/8	97.02
7/16	2-1/2	1	101.00
7/16	3	1	103.22
7/16	4	1	179.10
7/16	5	1-1/4	198.00
7/16	6	1-1/4	239.00
1/2	2-1/4	7/8	111.60
1/2	2-1/4	1	111.60
1/2	2-1/2	1	119.00
1/2	3	1	125.00
1/2	4	1-1/4	188.05
1/2	6	1-1/4	217.80
9/16	2-3/4	1	142.20
9/16	3-1/2	1-1/4	158.76
5/8	2-3/4	1	142.20
5/8	3	1	148.00
5/8	3-1/2	1	155.00
5/8	3-1/2	1-1/4	155.00
5/8	6	1-1/4	280.00
11/16	3	1	176.40
3/4	2-3/4	7/8	167.58
3/4	3	1	176.40
3/4	3-3/4	1-1/4	190.00
3/4	5	1-1/4	242.00
3/4	6	1-1/4	308.00
13/16	3-1/4	1	201.50
7/8	3-1/4	1	201.50
7/8	4	1-1/4	201.50
7/8	5	1-1/4	306.00
7/8	6	1-1/4	342.00
15/16	3-1/2	1	224.10
1	3-1/4	1	224.10
1	4-1/4	1-1/4	240.00
1	5	1-1/4	321.30
1-1/8	4	1-1/4	341.24
1-1/8	5-1/2	1-1/4	414.00
1-3/16	5	1-1/4	434.70
1-1/4	4	1-1/4	341.24
1-1/4	5-1/2	1-1/4	441.00
1-3/8	4-1/4	1-1/4	397.30
1-3/8	6	1-1/4	567.00
1-1/2	4-1/4	1-1/4	523.65
1-1/2	6	1-1/4	613.80
1-5/8	5-1/2	1-1/4	537.47
1-3/4	5-1/2	1-1/4	573.89
1-7/8	6	1-1/2	625.16
2	6	1-1/2	715.50

Concave Milling Cutters

High Speed Steel



List No. **736**

For milling male half circles.

Circle Diameter	Cutter Diameter	Hole Size	Price Each
1/16	2-1/4	1	62.99
3/32	2-1/4	1	62.99
1/8	2	7/8	63.00
1/8	2-1/4	1	66.60
1/8	3	1	97.00
5/32	2-1/4	1	90.70
3/16	2	7/8	67.50
3/16	2	1	67.50
3/16	2-1/4	1	71.10
3/16	3	1	171.00
7/32	2-1/4	1	101.48
7/32	3	1	142.00
1/4	2	7/8	72.00
1/4	2-1/2	1	76.50
9/32	2-1/2	1	99.00
5/16	2-1/4	7/8	91.80
5/16	2-3/4	1	99.00
5/16	3	1	162.00
11/32	2-3/4	1	179.55
3/8	2-1/4	7/8	99.00
3/8	2-1/2	1	108.00
3/8	2-3/4	1	112.50
3/8	4	1	207.00
3/8	4	1-1/4	207.00
13/32	2-3/4	1	124.20
7/16	2-1/4	7/8	109.80
7/16	2-1/2	1	119.00
7/16	3	1	124.20
7/16	4	1	234.00
1/2	2-1/4	7/8	124.20
1/2	2-1/2	1	127.20
1/2	3	1	129.60
1/2	4	1-1/4	252.00
1/2	5	1-1/4	403.00
9/16	2-3/4	1	139.60
9/16	3	1	149.85
5/8	2-3/4	1	153.00
5/8	3	1	156.60
5/8	3-1/2	1-1/4	162.00
11/16	3	1	179.10
3/4	3	1	187.20
3/4	3-3/4	1-1/4	198.00
3/4	5	1-1/4	459.00
3/4	6	1-1/4	584.00
13/16	3-1/4	1	204.30
13/16	3-1/2	1-1/4	210.00
7/8	3-1/4	1	234.00
7/8	4	1-1/4	250.20
15/16	3-1/2	1	274.50
1	3-1/4	1	288.00
1	4-1/4	1-1/4	300.60
1	5	1-1/4	432.00
1-1/16	4	1-1/4	490.05
1-1/8	4	1-1/4	490.05
1-1/8	5-1/2	1-1/4	477.00
1-3/16	3-1/4	1	457.20
1-3/16	3-1/4	1-1/4	457.20
1-1/4	4	1-1/4	457.20
1-3/8	4-1/4	1-1/4	517.50
1-3/8	6	1-1/4	742.50
1-1/2	4-1/4	1-1/4	585.00
1-1/2	6	1-1/4	765.00
1-5/8	5-1/2	1-1/4	625.50
1-3/4	5-1/2	1-1/4	742.50
1-7/8	6	1-1/2	846.00
2	6	1-1/2	898.20

Shank Type Concave & Convex Milling Cutters

High Speed Steel – Form Relieved

To be used in Manual or NC machining centers.



Concave – Weldon Shanks

List No. **736S**

For milling male half circles.

Radius	Cutter Diameter	Overall Length	Shank Diameter	No. of Flutes	Price Each 736S 737S
1/32	3/4	3	1/2	6	54.08
1/16	3/4	3	1/2	6	54.08
3/32	3/4	3	1/2	6	54.08
1/8	1	3-1/2	3/4	6	64.72
5/32	1	3-1/2	3/4	6	69.30
3/16	1	3-1/2	3/4	6	74.70
1/4	1-1/4	4	3/4	4	83.16
5/16	1-1/4	4	3/4	4	98.10
3/8	1-1/2	4-3/16	3/4	4	116.82



Convex – Weldon Shanks

List No. **737S**

For milling female half circles.

Radius	Cutter Diameter	Overall Length	Shank Diameter	No. of Flutes	Price Each
1/32	3/4	3	1/2	6	58.60
1/16	3/4	3	1/2	6	58.60
3/32	3/4	3	1/2	6	61.30
1/8	1	3-1/2	3/4	6	65.16
5/32	1	3-1/2	3/4	6	71.58
3/16	1	3-1/2	3/4	6	74.70
1/4	1-1/4	4	3/4	4	83.16
5/16	1-1/4	4	3/4	4	111.68
3/8	1-1/2	4-3/16	3/4	4	116.82

"T" Slot Cutters

High Speed Steel & Cobalt

For milling T-Slots in tables and beds of machine tools

List No. **749** – High Speed Steel

List No. **749C** – Cobalt

List No. **749CR** – Cobalt Roughing

List No. **749B** – High Speed Steel, Brown & Sharpe



Bolt Size	Diameter of Cutter	Cutter Width	Diameter of Neck	Diameter of Shank	Overall Length	Price Each: High Speed 749	Price Each: Cobalt 749C	Price Each: Cobalt Roughing 749CR	Price Each: Brown & Sharpe B&S Taper	Price Each: Brown & Sharpe 749B
1/4	9/16	15/64	17/64	1/2	2-19/32	43.20	70.40	—	—	—
5/16	21/32	17/64	21/64	1/2	2-11/16	47.52	77.00	78.10	—	—
3/8	25/32	21/64	13/32	3/4	3-1/4	59.40	99.00	115.00	7	94.50
1/2	31/32	25/64	17/32	3/4	3-7/16	68.04	115.50	126.50	7	108.00
5/8	1-1/4	31/64	21/32	1	3-15/16	92.34	149.00	162.80	—	—
3/4	1-15/32	5/8	25/32	1	4-7/16	99.00	169.00	179.30	9	171.00
1	1-27/32	53/64	1-1/32	1-1/4	4-13/16	171.90	286.00	313.50	9	259.20
1-1/4	2-7/32	1-3/32	1-9/32	1-1/4	5-3/8	215.55	352.00	379.50	9	333.00
1-1/2	2-21/32	1-11/32	1-17/32	1-1/4	5-29/32	275.40	459.80	484.00	10	468.00

Sets

Sizes	Description	Pcs.	Set No.	Price
1/4, 5/16, 3/8, 1/2, 5/8, 3/4, 1"	High Speed Steel	7	**749S**	581.40
1/2, 5/8, 3/4, 1"	Cobalt Roughing	4	**749CRS**	782.10



Angle Milling Cutters

High Speed Steel



Single Angle

These cutters are utilized for milling ratchet teeth or dovetails.

List No. **720R** – 45° Right Hand
List No. **720L** – 45° Left Hand
List No. **721R** – 60° Right Hand
List No. **721L** – 60° Left Hand

Cutter Dia.	Width of Face	Hole Size	Price Each 45° Right H. 720R	45° Left H. 720L	60° Right H. 721R	60° Left H. 721L
2-1/2	1/2	7/8	68.09	68.09	68.09	68.09
2-3/4	1/2	1	76.28	76.28	76.28	76.28
2-3/4	5/8	1	—	—	—	95.00
2-3/4	3/4	1	—	—	—	110.00
3	1/2	1	92.48	92.48	92.48	92.48
3	1/2	1-1/4	92.48	92.48	92.48	92.48
3	5/8	1	134.10	134.10	134.10	134.10
3	5/8	1-1/4	134.10	134.10	134.10	134.10
3	3/4	1	148.94	148.94	148.94	148.94
3	3/4	1-1/4	---	---	148.94	148.94

Cutter Dia.	Width of Face	Hole Size	Price Each 45° Right H. 720R	45° Left H. 720L	60° Right H. 721R	60° Left H. 721L
4	1/2	1	—	166.46	166.46	166.46
4	1/2	1-1/4	194.85	194.85	194.85	194.85
4	3/4	1	214.43	214.43	214.43	214.43
4	3/4	1-1/4	214.43	214.43	214.43	214.43
4	1	1-1/4	214.43	214.43	214.43	214.43
5	3/4	1-1/4	247.73	247.73	247.73	247.73
5	1	1-1/4	291.96	291.96	291.96	291.96
6	3/4	1-1/4	331.47	331.47	331.47	331.47
6	1	1-1/4	394.92	394.92	394.92	394.92
6	1-1/4	1-1/4	—	430.20	430.20	430.20

Double Angle

Double angle cutters are used for milling notches, grooves, serrations, or threads.

List No. **722** – 45° Included
List No. **724** – 90° Included
List No. **723** – 60° Included



Cutter Dia.	Width of Face	Hole Size	Price Each 45° 722	60° 723	90° 724
2-1/2	1/2	7/8	76.50	—	—
2-3/4	1/2	1	70.65	70.65	70.65
3	1/2	1	155.09	155.09	155.09
3	1/2	1-1/4	155.09	155.09	155.09
3	5/8	1	179.09	179.09	179.09
3	3/4	1	—	179.09	179.09
4	1/2	1-1/4	160.56	160.56	160.56
4	3/4	1	199.13	199.13	199.13

Cutter Dia.	Width of Face	Hole Size	Price Each 45° 722	60° 723	90° 724
4	3/4	1-1/4	219.60	219.60	219.60
4	1	1-1/4	277.00	277.00	219.60
5	3/4	1-1/4	277.00	277.00	237.60
5	1	1-1/4	320.00	285.00	237.60
6	3/4	1-1/4	368.55	368.55	368.56
6	1	1-1/4	377.10	377.10	377.10
6	1-1/4	1-1/4	557.10	478.00	501.40
6	1-1/2	1-1/4	534.38	534.38	534.38

Shank Type Milling Cutters

High Speed Steel

To be used in manual or NC machining centers.
These cutters are preferred over form relief type cutters.



Single Angle

For chamfers and other angular milling operations.

List No. **745** – 45° Included Angle
List No. **746** – 60° Included Angle

Cutter Dia.	Shank Dia.	Overall Length	45° (745) Cutter Width	45° (745) Price Each	60° (746) Cutter Width	60° (746) Price Each
1/2	3/8	2-1/8	1/8	46.35	7/32	46.35
3/4	3/8	2-1/8	3/16	54.37	5/16	54.37
1	1/2	2-1/2	5/16	67.57	7/16	67.57
1-1/2	3/4	2-3/4	1/2	87.21	5/8	87.21



Double Angle

For notches, V-Grooves and other angular milling operations.

List No. **747** – 60° Included Angle
List No. **748** – 90° Included Angle

Cutter Dia.	Shank Dia.	60° (747) Overall Length	60° (747) Cutter Width	60° (747) Price Each	90° (748) Overall Length	90° (748) Cutter Width	90° (748) Price Each
3/4	3/8	2-3/8	3/16	36.83	2-7/16	1/4	36.83
1	1/2	2-7/8	5/16	58.95	2-7/8	3/8	58.95
1-3/8	5/8	3-7/32	7/16	78.60	3-1/4	1/2	78.60
1-1/2	5/8	3-3/8	1/2	109.08	3-7/16	9/16	109.08
1-7/8	3/4	3-13/16	5/8	119.48	3-3/4	5/8	119.48
2-1/4	3/4	3-1/8	1/2	175.08	3-1/8	1/2	175.08
2-1/4	7/8	4-1/8	3/4	178.05	4-1/8	3/4	178.05

Corner Rounding Milling Cutters – Arbor Type

High Speed Steel



These cutters are designed to mill radii on various materials.

List No. **732R** – Right Hand
List No. **732L** – Left Hand

Radius of Circle	Cutter Diameter	Width of Face	Hole Size	Price Each Right Hand 732R	Price Each Left Hand 732L
3/32	2	1/4	7/8	69.20	69.20
3/32	2-1/4	1/4	1	69.20	69.20
7/64	2-1/2	1/4	1	69.20	69.20
1/8	2	1/4	7/8	67.50	67.50
1/8	2-1/4	1/4	1	68.25	—
1/8	2-1/2	1/4	1	69.20	69.20
5/32	2-1/2	5/16	1	84.01	84.01
3/16	2-1/2	5/16	1	130.15	130.15
13/64	3	1/4	1	136.00	136.00
7/32	2	1/4	7/8	125.75	125.75
7/32	2-1/2	1/4	1	130.15	130.15
15/64	3	1/4	1	138.00	138.00
1/4	2-1/4	13/32	7/8	91.50	91.55
1/4	2-1/2	13/32	1	98.60	98.60
1/4	3	13/32	1	98.60	98.65
9/32	2-3/4	5/8	1	149.50	149.50
9/32	3	5/8	1	149.50	149.50
5/16	2-3/4	7/16	1	149.50	149.50
5/16	3	7/16	1	167.37	167.37
11/32	3	11/16	1	156.97	156.97

Radius of Circle	Cutter Diameter	Width of Face	Hole Size	Price Each Right Hand 732R	Price Each Left Hand 732L
3/8	3	9/16	1	136.55	136.55
3/8	3-3/4	9/16	1-1/4	136.55	136.55
13/32	2-1/4	1/4	1	173.64	173.64
13/32	2-1/2	3/4	1	173.64	173.64
13/32	3-1/4	3/4	1	178.05	178.05
7/16	3-1/4	5/8	1	178.05	178.05
7/16	3-1/4	5/8	1-1/4	178.05	178.05
15/32	3-1/2	3/4	1	204.98	204.98
1/2	3-1/4	3/4	1	182.45	182.45
1/2	4-1/4	3/4	1-1/4	185.95	185.95
9/16	3-1/2	13/16	1	229.75	229.75
9/16	4-1/4	13/16	1-1/4	229.75	229.75
5/8	3-1/2	15/16	1	205.50	205.50
5/8	4-1/4	15/16	1-1/4	210.25	210.25
11/16	3-3/4	1-1/8	1	238.00	238.00
3/4	3-3/4	1-1/8	1	248.00	248.00
3/4	4-1/4	1-1/8	1-1/4	260.00	260.00
7/8	3-3/4	1-3/8	1	324.50	—
7/8	4-1/2	1-3/8	1-1/4	330.00	330.00
1	4-1/2	1-1/2	1-1/4	336.35	336.35

Woodruff Key Seat Cutters

Arbor Type

Staggered Teeth - High Speed Steel



Cutter Dia.	Width of Face	Hole Size	American Standard #	Tool No.	Price Each
2-1/8	3/16	3/4	617	**KCA617**	44.55
2-1/8	1/4	3/4	817	**KCA817**	46.57
2-1/8	5/16	3/4	1017	**KCA1017**	51.97
2-1/8	3/8	3/4	1217	**KCA1217**	58.50
2-3/4	1/4	1	822	**KCA822**	64.26
2-3/4	5/16	1	1022	**KCA1022**	68.04
2-3/4	3/8	1	1222	**KCA1222**	71.91
2-3/4	7/16	1	1422	**KCA1422**	75.60

Cutter Dia.	Width of Face	Hole Size	American Standard #	Tool No.	Price Each
2-3/4	1/2	1	1622	**KCA1622**	80.91
3-1/2	3/8	1	1228	**KCA1228**	97.87
3-1/2	7/16	1	1428	**KCA1428**	105.75
3-1/2	1/2	1	1628	**KCA1628**	108.00
3-1/2	9/16	1	1828	**KCA1828**	121.50
3-1/2	5/8	1	2028	**KCA2028**	121.50
3-1/2	11/16	1	2228	**KCA2228**	125.55
3-1/2	3/4	1	2428	**KCA2428**	125.55

Half-Side Milling Cutters

High Speed Steel & Cobalt



List No. **743R** – High Speed, RH Helix
List No. **743CR** – Cobalt, RH Helix
List No. **743L** – High Speed, LH Helix
List No. **743CL** – Cobalt, LH Helix

Cutting geometry for heavy duty machining, specially for Stainless Steel, Nimonic-Iconel-Titanic Alloys.

Cutter Dia.	Width of Face	Hole Size	No. of Teeth	Price Each Right Hand High Speed 743R	Price Each Right Hand Cobalt 743CR	Price Each Left Hand High Speed 743L	Price Each Left Hand Cobalt 743CL
4	3/4	1-1/4	16	122.76	184.14	122.76	184.14
5	3/4	1-1/4	20	161.15	241.73	161.15	241.73
6	3/4	1-1/4	22	218.70	328.05	218.70	328.05
6	1	1-1/2	22	274.59	411.89	274.59	411.89
7	3/4	1-1/2	24	417.96	629.94	417.96	629.94
7	1	1-1/2	24	513.50	–	513.50	–
8	3/4	1-1/2	28	462.42	693.63	462.42	693.63
8	1	1-1/2	28	583.20	–	583.20	–
9	3/4	1-1/2	30	–	–	650.00	–
10	1	1-1/2	30	755.00	–	–	–

Involute Gear Cutters

High Speed Steel

Involute Gear Cutters are used to mill gears with a 14.5º or 20º pressure angle. Eight (8) cutters are required to make a full set of gears from (12) teeth to a rack for each diametral pitch.



High Speed

MDX® SUPERIOR IMPORT

Please specify cutter number when ordering.

8 cutters are made for each pitch diameter:

Cutter No.	1	2	3	4	5	6	7	8
Range of Teeth	135 – Rack	55 – 134	35 – 54	26 – 34	21 – 25	17 – 20	14 – 16	12 – 13

14.5° Pressure Angle

List No. **730**

Diametral Pitch	Cutter Diameter	Hole Size	Price Each
1	8-1/2	2	1791.00
1-1/4	7-3/4	2	1260.00
1-1/2	7	1-3/4	895.50
1-3/4	6-1/2	1-3/4	765.00
2	5-3/4	1-1/2	490.23
2-1/2	5-3/4	1	382.12
2-1/2	5-3/4	1-1/2	382.12
3	4-3/4	1-1/4	269.07
3	5-1/4	1-1/2	334.00
4	3-5/8	1	167.01
4	4-1/4	1-1/4	189.36
4	4-1/2	1-1/2	202.91
5	3-3/8	1	144.86
5	3-3/4	1-1/4	149.36
6	3-1/8	1	117.40
6	3-1/2	1-1/4	133.85
7	2-7/8	1	117.75
7	3-3/8	1-1/4	133.85
8	2-7/8	1	97.19

Diametral Pitch	Cutter Diameter	Hole Size	Price Each
8	3-1/4	1-1/4	112.62
9	2-3/4	1	96.53
9	3-1/8	1-1/4	112.62
10	2-3/8	7/8	76.89
10	2-3/4	1	87.17
11	2-3/8	7/8	76.89
11	2-5/8	1	84.22
12	2-1/4	7/8	67.94
12	2-5/8	1	76.89
13	2-1/4	7/8	66.20
13	2-5/8	1	77.50
14	2-1/8	7/8	66.19
14	2-1/2	1	77.49
16	2-1/8	7/8	66.19
16	2-1/8	1	77.49
18	2	7/8	58.95
18	2-3/8	1	70.40
20	2	7/8	58.95
20	2-3/8	1	70.40

Diametral Pitch	Cutter Diameter	Hole Size	Price Each
22	2	7/8	58.95
22	2-1/4	1	70.40
24	1-3/4	7/8	58.95
24	2-1/4	1	70.40
26	1-3/4	7/8	58.95
26	2-1/4	1	70.40
28	1-3/4	7/8	58.95
28	2-1/4	1	70.40
30	1-3/4	7/8	58.95
30	2-1/4	1	70.40
32	1-3/4	7/8	54.95
32	2-1/4	1	62.83
36	1-3/4	7/8	54.95
36	2-1/4	1	62.83
40	1-3/4	7/8	54.95
40	2-1/4	1	62.83
48	1-3/4	7/8	54.95
48	2-1/4	1	62.83

20° Pressure Angle

List No. **731**

Diametral Pitch	Cutter Diameter	Hole Size	Price Each
1	8-1/2	2	2160.00
1-1/4	7-3/4	2	1620.00
1-1/2	7	1-3/4	1125.00
1-3/4	6-1/2	1-3/4	990.00
2	5-3/4	1-1/2	765.00
2-1/2	5-3/4	1-1/2	657.00
3	4-3/4	1-1/4	535.50
4	3-5/8	1	405.00
4	4-1/4	1-1/4	441.00
5	3-3/8	1	355.50
5	3-3/4	1-1/4	423.00
6	3-1/8	1	198.00
6	3-1/2	1-1/4	279.00
7	2-7/8	1	337.50
8	2-7/8	1	178.20
8	3-1/4	1-1/4	238.50
9	2-3/4	1	161.10

Diametral Pitch	Cutter Diameter	Hole Size	Price Each
10	2-3/8	7/8	157.50
10	2-3/4	1	175.50
11	2-3/8	7/8	157.50
11	2-5/8	1	175.50
12	2-1/4	7/8	148.50
12	2-5/8	1	169.20
14	2-1/8	7/8	82.80
14	2-1/2	1	112.50
16	2-1/8	7/8	89.10
16	2-1/8	1	124.20
18	2	7/8	88.20
18	2-3/8	1	124.20
20	2	7/8	88.20
20	2-3/8	1	124.20
22	2	7/8	88.20
22	2	1	149.00
24	1-3/4	7/8	99.00

Diametral Pitch	Cutter Diameter	Hole Size	Price Each
24	2-1/4	1	134.10
26	1-3/4	7/8	99.00
26	2-1/4	1	134.10
28	1-3/4	7/8	99.00
28	2-1/4	1	133.20
30	1-3/4	7/8	99.00
30	2-1/4	1	133.20
32	1-3/4	7/8	99.00
32	2-1/4	1	133.20
36	1-3/4	7/8	99.00
36	2-1/4	1	133.20
40	1-3/4	7/8	99.00
40	2-1/4	1	133.20
48	1-3/4	7/8	99.00
48	2-1/4	1	133.20

Carbide Tipped Side Milling Cutters



MADE IN USA

Straight Teeth

List No. **CT740S** – For Steel
List No. **CT740C** – For Cast Iron
List No. **CT740N** – For Non-Ferrous Material

Cutter Diameter	Face Width	Arbor Hole	No. of Teeth	Price Each For Steel CT740S	For Cast Iron CT740C	For Non-Ferrous CT740N
3	1/4	1	6	192.90	194.51	155.52
3	5/16	1	6	194.67	195.38	163.33
3	3/8	1	6	197.14	199.29	169.23
3	7/16	1	6	219.90	215.56	176.16
3	1/2	1	6	222.82	224.41	184.70
4	1/4	1	8	252.97	251.29	202.72
4	5/16	1	8	268.60	259.74	208.46
4	3/8	1	8	268.60	273.00	213.88
4	3/8	1-1/4	8	268.60	273.00	213.88
4	7/16	1	8	276.58	278.48	214.92
4	1/2	1	8	286.22	287.65	214.92
4	1/2	1-1/4	8	286.22	287.65	214.92
4	9/16	1	8	300.33	295.63	233.66
4	5/8	1	8	351.13	320.43	250.73
4	5/8	1-1/4	8	351.13	320.43	250.73
4	3/4	1	8	355.60	320.43	280.87
4	3/4	1-1/4	8	355.60	320.43	280.87
5	1/4	1	10	333.03	332.79	283.20
5	5/16	1	10	333.03	332.79	—
5	3/8	1-1/4	10	349.62	340.93	340.93
5	7/16	1-1/4	10	360.86	342.52	294.60
5	1/2	1	10	360.94	363.66	298.10
5	1/2	1-1/4	10	360.94	363.66	298.10
5	9/16	1-1/4	10	376.81	369.88	307.68
5	5/8	1-1/4	10	442.37	393.64	323.70
5	3/4	1	10	489.50	445.80	345.08
5	3/4	1-1/4	10	489.50	445.80	345.08
5	1	1-1/4	10	516.30	485.05	345.63
6	3/8	1-1/4	12	442.45	418.76	303.84
6	1/2	1	12	455.69	444.76	332.80
6	1/2	1-1/4	12	455.69	444.76	332.80
6	5/8	1-1/4	12	495.72	486.00	364.77
6	3/4	1	12	564.63	545.25	419.50
6	3/4	1-1/4	12	564.63	545.25	419.50
6	1	1-1/4	12	576.11	551.10	480.81
8	3/4	1-1/4	12	593.65	572.29	545.72
8	3/4	1-1/2	12	593.65	572.29	545.72
8	1	1-1/4	12	617.90	596.45	592.14
8	1	1-1/2	12	617.90	596.45	592.14

Staggered Teeth

List No. **CT744S** – For Steel
List No. **CT744C** – For Cast Iron
List No. **CT744N** – For Non-Ferrous Material

Cutter Dia.	Face Width	Arbor Hole	No. of Teeth	Price Each For Steel CT744S	For Cast Iron CT744C	No. of Teeth	For Non-Ferrous CT744N
4	3/4	1	8	450.00	—	—	—
4	3/4	1-1/4	8	450.00	—	—	—
5	3/4	1	10	465.00	—	—	—
5	3/4	1-1/4	10	465.00	—	—	—
5	1	1-1/4	10	531.10	608.20	8	487.58
6	3/4	1	12	592.60	—	—	—
6	3/4	1-1/4	12	592.60	—	—	—
6	1	1-1/4	12	622.23	691.00	8	602.90
7	3/4	1-1/4	12	610.70	—	—	—
7	1	1-1/4	12	612.53	720.00	8	672.72
8	3/4	1-1/4	12	625.30	—	—	—
8	3/4	1-1/2	12	625.30	—	—	—
8	1	1-1/4	12	635.60	747.90	8	742.50
8	1	1-1/2	12	635.60	747.90	8	742.50

Slot-Master™- Adjustable Width Indexable Milling Cutter

Exclusively By apt USA Approved Performance Tooling

MADE IN USA

87° Parallelograms - Positive Rake

- Rugged, simple design
- Finest quality
- Lowest price
- Easy width adjustment
- For exact slot size



Shank Type Mill Cutter

Shank Length = 3" OAL Minus Cutting Body Width

Cut-ting Dia.	Cutting width Range	Cutting Body width Range	Shank Dia.	No. of Inserts	Use Wedge No.	Use Insert No.	Right or Left Hand	Tool Number	Price Each
2	.375-.530	.330	3/4	4	W2	CTA-2	Right	**SM2475R-2**	310.70
2	.485-.765	.450	3/4	4	W4	CTA-4	Right	**SM2475R-4**	336.70
2	.375-.530	.330	1”	4	W2	CTA-2	Right	**SM2410R-2**	310.70
2	.485-.765	.450	1”	4	W4	CTA-4	Right	**SM2410R-4**	336.70
2	.375-.530	.330	3/4	4	W2	CTA-2	Left	**SM2475L-2**	344.50
2	.485-.765	.450	3/4	4	W4	CTA-4	Left	**SM2475L-4**	366.60
2	.375-.530	.330	1”	4	W2	CTA-2	Left	**SM2410L-2**	344.50
2	.485-.765	.450	1”	4	W4	CTA-4	Left	**SM2410L-4**	366.60
3	.375-.530	.330	1”	6	W2	CTA-2	Right	**SM3610R-2**	416.00
3	.485-.765	.450	1”	6	W4	CTA-4	Right	**SM3610R-4**	455.00
3	.720-1.025	.690	1”	4	W6	CTA-6	Right	**SM3410R-6**	403.00
3	.982-1.265	.950	1”	4	W8	CTA-8	Right	**SM3410R-8**	435.50
3	.375-.530	.330	1”	6	W2	CTA-2	Left	**SM3610L-2**	416.00
3	.485-.765	.450	1”	6	W4	CTA-4	Left	**SM3610L-4**	455.00
3	.720-1.025	.690	1”	4	W6	CTA-6	Left	**SM3410L-6**	408.20
3	.982-1.265	.950	1”	4	W8	CTA-8	Left	**SM3410L-8**	435.50

Inserts sold separately.

1) Slotting or Staggered Cutter

With the ring setting gauge for the shank type, inserts may be quickly indexed and precision adjusted to produce any cutting width within the range of the cutter.

2) Half Side Milling Cutter

Half side milling may be accomplished by positioning the inserts in a left or right hand orientation.

CTA Carbide Inserts

87° Parallelograms
Positive rake
All surfaces ground



Insert Number	Please Specify Radii							I.C.	Thickness	Price Each	
										C-2 or C-6	TiN Coated*
CTA-2**	0	1/64	1/32	1/16	3/32	1/8	—	.355	5/32	7.78	8.82
CTA-4	0	1/64	1/32	1/16	3/32	1/8	—	.460	3/16	9.30	10.58
CTA-6	—	—	1/32	1/16	3/32	1/8	—	.685	3/16	13.60	17.96
CTA-8	—	—	1/32	1/16	3/32	1/8	1/4	.750	3/16	16.16	18.82

***88° Parallelogram*

**TiN Coated is C6*



Ring Setting Gauge

With the Slot Master™ Ring Setting Gauge, cutter widths can be precision set for infinitely variable slot widths.

Tool No.	Shank Diameter	Price Each
SMG750	3/4	75.40
SMG1000	1"	81.90

Replacement Parts List

Part No.	Description	Price Each
Part W2	Wedge	8.84
Part W4	Wedge	8.84
Part W6	Wedge	8.84
Part W8	Wedge	8.84
Part SMC1	Wedge Screw for W2 & W4	2.95
Part SMC2	Wedge Screw for W6 & W8	2.95
Part SS1420-38	Screw for Ring Setting Gauges	0.78

Slot-Master™- Adjustable Width Indexable Milling Cutter

Exclusively By apt USA Approved Performance Tooling

MADE IN USA

87° Parallelograms - Positive Rake

- Rugged, simple design
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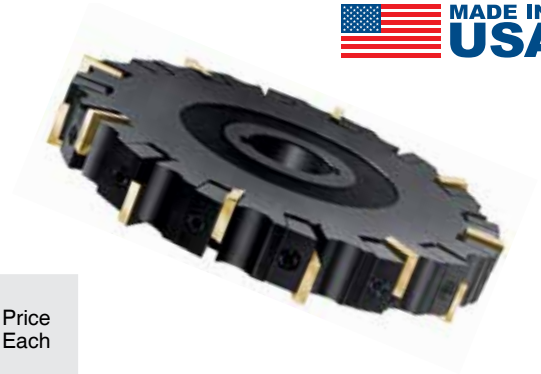
- For exact slot size

Exclusive By APT



Arbor Type Mill Cutter

Cutting Dia	Cutting width Range	Cutter Body width	Arbor Dia.	No. of Inserts	Use Insert No.	Use Wedge No.	Tool Number	Price Each
4	.375 - .530	.330	1-1/4	8	CTA-2	W2	**SM48122**	517.40
4	.485 - .765	.450	1-1/4	8	CTA-4	W4	**SM48124**	517.40
6	.375 - .530	.330	1-1/4	12	CTA-2	W2	**SM612122**	663.00
6	.485 - .765	.450	1-1/4	12	CTA-4	W4	**SM612124**	663.00
6	.720 - 1.025	.690	1-1/4	12	CTA-6	W6	**SM612126**	682.50
6	.982 - 1.265	.950	1-1/4	12	CTA-8	W8	**SM612128**	702.00
6	.375 - .530	.330	1-1/2	12	CTA-2	W2	**SM612152**	663.00
6	.485 - .765	.450	1-1/2	12	CTA-4	W4	**SM612154**	663.00
6	.720 - 1.025	.690	1-1/2	12	CTA-6	W6	**SM612156**	682.50
6	.982 - 1.265	.950	1-1/2	12	CTA-8	W8	**SM612158**	702.00
8	.375 - .530	.330	1-1/4	16	CTA-2	W2	**SM816122**	819.00
8	.485 - .765	.450	1-1/4	16	CTA-4	W4	**SM816124**	819.00
8	.720 - 1.025	.690	1-1/4	16	CTA-6	W6	**SM816126**	838.50
8	.982 - 1.265	.950	1-1/4	16	CTA-8	W8	**SM816128**	868.40
8	.375 - .530	.330	1-1/2	16	CTA-2	W2	**SM816152**	819.00
8	.485 - .765	.450	1-1/2	16	CTA-4	W4	**SM816154**	819.00
8	.720 - 1.025	.690	1-1/2	16	CTA-6	W6	**SM816156**	838.50
8	.982 - 1.265	.950	1-1/2	16	CTA-8	W8	**SM816158**	868.40
10	.375 - .530	.330	2	20	CTA-2	W2	**SM102022**	1020.50
10	.485 - .765	.450	2	20	CTA-4	W4	**SM102024**	1020.50
10	.720 - 1.025	.690	2	20	CTA-6	W6	**SM102026**	1055.60
10	.982 - 1.265	.950	2	20	CTA-8	W8	**SM102028**	1092.00
12	.485 - .765	.450	2	24	CTA-4	W4	**SM122424**	1215.50
12	.720 - 1.025	.690	2	24	CTA-6	W6	**SM122426**	1285.70
12	.982 - 1.265	.950	2	24	CTA-8	W8	**SM122428**	1332.50

Inserts sold separately.

4 Cutters in 1 Tool

1) **Slotting or Staggered Cutter**
With the magnetic micrometer gauge for the arbor type, inserts may be quickly indexed and precision adjusted to produce any cutting width within the range of the cutter.

2) **Slab Milling Cutter**
Cutter bodies may be interlocked in pairs to accomodate indexable staggered tooth orientation.

3) **Straddle Milling Cutter**
Cutters are double key-waye to allow multiple cutter set-up of an arbor for straddle milling.

4) **Half Side Milling Cutter**
Half side milling may be accomplished by positioning the inserts in a left or right hand orientation.

CTA Carbide Inserts

87° Parallelograms
Positive rake
All surfaces ground



Insert Number	Please Specify Radii							I.C.	Thickness	Price Each	
										C-2 or C-6	TiN Coated*
CTA2**	0	1/64	1/32	1/16	3/32	1/8	—	.355	5/32	7.78	8.82
CTA-4	0	1/64	1/32	1/16	3/32	1/8	—	.460	3/16	9.30	10.58
CTA-6	—	—	1/32	1/16	3/32	1/8	—	.685	3/16	13.60	17.96
CTA-8	—	—	1/32	1/16	3/32	1/8	1/4	.750	3/16	16.16	18.82

***88° Parallelogram*

**TiN Coated is C6*

Replacement Parts List

Part No.	Description	Price Each
Part W2	Wedge	8.84
Part W4	Wedge	8.84
Part W6	Wedge	8.84
Part W8	Wedge	8.84
Part SMC1	Wedge Screw for W2 & W4	2.95
Part SMC2	Wedge Screw for W6 & W8	2.95
Part SS1420-38	Screw for Ring Setting Gauges	0.78

Magnetic Micrometer Setting Gauge

With the Slot Master™ Setting Gauge, cutter widths can be precision set for infinitely variable slot widths and inserts can be indexed while the cutter remains on the arbor.

TOOL NO. **SMC2000**
PRICE EACH – $448.50



Milling Machine Arbors

MDX SUPERIOR IMPORT

Style A Arbors are provided with end pilots 23/32" x 1-3/4"

Style B Arbors are draw bar type furnished with appropriate spacers and running bushings.



Taper	Arbor Dia.	Length of shoulder to Nut	Dia. of Running Bushing	Style	Arbor No.	Price
30	7/8	10	1-5/8	A	**M30-7/8-A10-2**	245.70
30	1	10	1-5/8	A	**M31-A10-2**	266.50
30	1	2	—	B	**M31-B2**	188.50
30	1-1/4	2	—	B	**M31-1/4 B2**	245.05
30	1-1/4	10	1-5/8	A	**M31-1/4-A10-2**	297.70
30	1-1/4	10	1-7/8	A	**M31-1/4-A10-3**	297.70
40	7/8	10	—	A	**M40-7/8-A10**	266.50
40	7/8	14	1-7/8	B	**M40-7/8-B14-3**	292.50
40	7/8	16	1-7/8	A	**M40-7/8-A16-3**	388.70
40	7/8	16	1-7/8	B	**M40-7/8-B16-3**	357.50
40	7/8	20	—	B	**M40-7/8-B20**	393.25
40	7/8	20	1-7/8	B	**M40-7/8-B20-3**	393.25
40	1	3	—	B	**M41-B3**	178.10
40	1	8	—	A	**M41-A8**	271.70
40	1	10	—	A	**M41-A10**	284.70
40	1	12	—	A	**M41-A12**	336.70
40	1	14	1-7/8	B	**M41-B14-3**	409.50
40	1	16	1-7/8	A	**M41-A16-3**	409.50
40	1	20	1-7/8	B	**M41-B20-3**	474.50
40	1-1/4	3	—	B	**M41-1/4-B3**	188.50
40	1-1/4	8	—	A	**M41-1/4-A8**	297.70
40	1-1/4	10	—	A	**M41-1/4-A10**	331.50
40	1-1/4	12	—	A	**M41-1/4-A12**	357.50
40	1-1/4	12	—	B	**M41-1/4-B12**	328.90
40	1-1/4	12	2-1/8	B	**M41-1/4-B12-4**	361.79
40	1-1/4	14	1-7/8	B	**M41-1/4-B14-3**	414.70
40	1-1/4	16	1-7/8	A	**M41-1/4-A16-3**	414.70
40	1-1/4	20	1-7/8	B	**M41-1/4-B20-3**	505.70
40	1-1/2	3	—	B	**M41-1/2-B3**	314.00
40	1-1/2	10	—	A	**M41-1/2-A10**	468.00

Taper	Arbor Dia.	Length of shoulder to Nut	Dia. of Running Bushing	Style	Arbor No.	Price
40	1-1/2	20	2-1/8	B	**M41-1/2-B20-4**	585.00
50	7/8	10	—	A	**M50-7/8-A10**	334.10
50	7/8	18	2-1/8	A	**M50-7/8-A18-4**	492.70
50	1	3-1/2	—	B	**M51-B3-1/2**	218.40
50	1	8	—	A	**M51-A8**	278.20
50	1	12	—	A	**M51-A12**	371.80
50	1	15	2-1/8	B	**M51-B15-4**	396.50
50	1	18	2-1/8	A	**M51-A18-4**	491.40
50	1	18	2-1/8 (2)	B	**M51-B18-4**	444.60
50	1	24	2-1/8 (2)	B	**M51-B24-4**	518.70
50	1-1/4	3-1/2	—	B	**M51-1/4-B3-1/2**	210.60
50	1-1/4	8	—	A	**M51-1/4-A8**	302.90
50	1-1/4	12	—	A	**M51-1/4-A12**	426.40
50	1-1/4	15	2-1/8	B	**M51-1/4-B15-4**	451.10
50	1-1/4	18	2-1/8	A	**M51-1/4-A18-4**	518.70
50	1-1/4	18	2-1/8 (2)	B	**M51-1/4-B18-4**	474.50
50	1-1/4	24	2-1/8 (2)	B	**M51-1/4-B24-4**	551.20
50	1-1/4	30	2-1/8 (2)	B	**M51-1/4-B30-4**	692.90
50	1-1/2	3-1/2	—	B	**M51-1/2-B3-1/2**	250.90
50	1-1/2	18-4	2-1/2	A	**M51-1/2-A-18-4**	826.00
50	1-1/2	18	2-1/8 (2)	B	**M51-1/2-B18-4**	787.80
50	1-1/2	24	2-3/4 (2)	B	**M51-1/2-B24-5**	611.00
50	1-1/2	30	2-3/4 (2)	B	**M51-1/2-B30-5**	744.90
50	1-1/2	36	2-3/4 (2)	B	**M51-1/2-B36-5**	839.80
50	2	24	2-3/4 (2)	B	**M52-B24-5**	744.90
50	2	30	2-3/4 (2)	B	**M52-B30-5**	843.70
50	2	36	2-3/4 (2)	B	**M52-B36-5**	936.00
50	2	48	2-3/4	B	**M52-B48-5**	2231.60
50	2-1/2	36	3-3/8 (2)	B	**M52-1/2-B36-6**	1430.00
50	2-1/2	48	3-3/8	B	**M52-1/2-B48-6**	3525.20

Brown & Sharpe Taper Milling Machine Arbors

All style "A" arbors have a 23/32" pilot.

Threads for Drawbar
9 B.&S. 1/2" - 13
#10 B.&S. 5/8" - 11
#11 B.&S. 5/8" - 11



Tool No.	B & S Taper	Dia. of Arbor	Length Shoulder to nut	Running Bushing Diameter	Price Each
MBS9-7/8 A 8-3	9	7/8	8	1-7/8	319.41
MBS9-7/8-B8	9	7/8	8	1-7/8	319.41
MBS9-7/8 A 10-3	9	7/8	10	1-7/8	319.41
MBS9-1-B6	9	1	6	1-7/8	319.41
MBS9-1 B6-3	9	1	6	1-7/8	319.41
MBS9-1 A 10-3	9	1	10	1-7/8	319.41
MBS9-1 A 16-3	9	1	16	1-7/8	343.07
MBS9-1-1/4 A 8-3	9	1-1/4	8	1-7/8	387.01
MBS9-1-1/4 A 10-3	9	1-1/4	10	1-7/8	387.01
MBS9-1-1/4 A 12-3	9	1-1/4	12	1-7/8	387.01
MBS9-1-1/4 B 12-3	9	1-1/4	12	1-7/8	387.01
MBS9-1-1/4 A 16-3	9	1-1/4	16	1-7/8	387.01

Tool No.	B & S Taper	Dia. of Arbor	Length Shoulder to nut	Running Bushing Diameter	Price Each
MBS10-7/8 A 10-3	10	7/8	10	1-7/8	346.45
MBS10-7/8 A 18-3	10	7/8	18	1-7/8	505.31
MBS10-1-A 18-3	10	1	18	1-7/8	532.35
MBS10-1-B6	10	1	6	1-7/8	353.21
MBS10-1-B8	10	1	8	1-7/8	353.21
MBS10-1-1/4 A 12-3	10	1-1/4	12	1-7/8	464.75
MBS10-1-1/4 A 18-3	10	1-1/4	18	1-7/8	580.58
MBS11-1-A18-4	11	1	18	1-7/8	577.98
MBS11-1-B 22-A	11	1	22	2-1/8 (2)	650.00
MBS11-1-1/4 B 26-4	11	1-1/4	26	2-1/8 (2)	728.00
MBS11-1-1/2 B 26-4	11	1-1/2	26	2-1/8 (2)	812.50

Stub Milling Machine Arbors

With Weldon Straight Shank & R8 Shank

Utilized for holding smaller cutters or saws and designed to fit directly into end mill adapters. Three arbors spacers are included.



Shank	Arbor Diameter	Tool No.	Price Each
1/2	1/2	**HSM1212**	71.50
1/2	5/8	**HSM5812**	76.70
1/2	3/4	**HSM3412**	85.15
3/4	1/2	**HSM1234**	85.15
3/4	5/8	**HSM5834**	85.15

Shank	Arbor Diameter	Tool No.	Price Each
3/4	3/4	**HSM3434**	85.15
3/4	7/8	**HSM7834**	85.15
3/4	1	**HSM10034**	95.55
3/4	1-1/4	**HSM11434**	109.85
R8 2" Shoulder to Nut	1	**R8SM1**	110.50
R8 2" Shoulder to Nut	1-1/4	**R8SM114**	120.26

supplied with 1" spacers & nuts

Milling Machine Arbors

MDX® SUPERIOR IMPORT

Arbor Spacers

with Keyways

Hardened and ground on all surfaces

Lapped for parallelism



	3/4" Bore		7/8" Bore		1" Bore		1-1/4" Bore		1-1/2" Bore		2" Bore		2-1/2" Bore	
Size	Tool No.	Price Each	Tool No.	Price Each	Tool No.	Price Each	Tool No.	Price Each	Tool No.	Price Each	Tool No.	Price Each	Tool No.	Price Each
1/16	**AS11634**	5.14	**AS11678**	5.14	**AS116100**	5.72	**AS116114**	6.72	**AS116112**	8.52	**AS116200**	10.40	**AS116250**	15.60
3/32	**AS33234**	5.14	**AS33278**	5.14	**AS332100**	5.72	**AS332114**	6.72	**AS332112**	8.52	**AS332200**	10.40	**AS332250**	15.60
1/8	**AS1834**	5.14	**AS1878**	5.14	**AS18100**	5.72	**AS18114**	6.72	**AS18112**	8.52	**AS18200**	10.40	**AS18250**	15.60
3/16	**AS31634**	5.14	**AS31678**	5.14	**AS316100**	5.72	**AS316114**	6.72	**AS316112**	8.52	**AS316200**	10.40	**AS316250**	15.60
1/4	**AS1434**	5.46	**AS1478**	5.46	**AS14100**	6.33	**AS14114**	7.15	**AS14112**	9.50	**AS14200**	11.38	**AS14250**	16.90
5/16	**AS51634**	5.92	**AS51678**	5.92	**AS516100**	7.10	**AS516114**	7.87	**AS516112**	10.54	**AS516200**	13.00	**AS516250**	19.31
3/8	**AS3834**	5.92	**AS3878**	5.92	**AS38100**	7.10	**AS38114**	7.87	**AS38112**	8.22	**AS38200**	13.91	**AS38250**	20.80
7/16	**AS71634**	7.22	**AS71678**	7.22	**AS716100**	8.26	**AS716114**	8.91	**AS716112**	12.01	**AS716200**	15.93	**AS716250**	23.40
1/2	**AS1234**	7.61	**AS1278**	7.61	**AS12100**	8.26	**AS12114**	9.93	**AS12112**	12.88	**AS12200**	16.90	**AS12250**	25.48
5/8	**AS5834**	8.26	**AS5878**	8.26	**AS58100**	9.10	**AS58114**	10.82	**AS58112**	14.50	**AS58200**	19.76	**AS58250**	29.90
3/4	**AS3434**	9.10	**AS3478**	9.10	**AS34100**	10.60	**AS34114**	12.01	**AS34112**	15.60	**AS34200**	21.84	**AS34250**	31.53
7/8	**AS7834**	10.14	**AS7878**	10.14	**AS78100**	12.39	**AS78114**	12.88	**AS78112**	16.45	**AS78200**	23.92	**AS78250**	33.15
1	**AS134**	10.14	**AS178**	10.14	**AS1100**	12.39	**AS1114**	13.92	**AS1112**	18.59	**AS1200**	23.40	**AS1250**	36.01
1-1/4	**AS11434**	11.96	**AS11478**	11.96	**AS114100**	14.91	**AS114114**	15.60	**AS114112**	20.80	**AS114200**	25.94	**AS114250**	39.00
1-1/2	**AS11234**	12.87	**AS11278**	12.87	**AS112100**	17.37	**AS112114**	17.75	**AS112112**	22.95	**AS112200**	31.85	**AS112250**	47.78
2	**AS234**	16.77	**AS278**	16.77	**AS2100**	23.14	**AS2114**	20.80	**AS2112**	27.11	**AS2200**	35.36	**AS2250**	52.98
3	**AS334**	23.73	**AS378**	23.73	**AS3100**	26.53	**AS3114**	28.17	**AS3112**	34.19	**AS3200**	46.74	**AS3250**	69.88

Arbor Spacer Shim Sets

With standard keyways

Assortments contain 19 pc. of the most needed shims.
2 Ea. .001, .002, .003, .004, .005, .006
1 Ea. .007, .008, .010, .012, .015, .020, .025

Bore	Outside Dia.	Tool No.	Price Each
1/2	3/4	**MABS12**	11.76
5/8	1	**MABS58**	14.32
3/4	1-1/8	**MABS34**	16.72
7/8	1-3/8	**MABS78**	18.16
1	1-1/2	**MABS1**	20.00
1-1/4	1-3/4	**MABS114**	21.36
1-1/2	2-1/8	**MABS112**	22.80
2	2-3/4	**MABS2**	38.72

Individual spacer availble upon request.



Micrometer Adjustable Spacing Collars



Meter spacing collars are calibrated in 1/1000" and will provide accurate and positive adjustment.

Hole Dia (Inches)	O.D. (Inches)	Thickness (Inches)	Range (Inches)	Tool No.	Price Each
3/4	1-1/2	7/16	7/16-5/8	**MAC-1**	85.14
7/8	1-1/2	9/16	9/16-3/4	**MAC-2**	85.14
1	1-3/4	5/8	5/8-7/8	**MAC-3**	69.29
1-1/4	2-1/8	3/4	3/4-1	**MAC-4**	111.14
1-1/2	2-5/8	7/8	7/8-1-1/4	**MAC-5**	136.00
2	3-5/8	15/16	15/16-1-1/2	**MAC-6**	168.00

Arbor Running Bushings

With keyways hardened and ground



Sizes	I.D. of Hole	Overall Length	Tool No.	Price Each
1-5/8	7/8	2-5/8	**ASB1587800**	28.93
1-5/8	1	2-5/8	**ASB158100**	28.93
1-5/8	1-1/4	2-5/8	**ASB158114**	28.93
1-7/8	7/8	3-1/8	**ASB1787800**	37.70
1-7/8	1	3-1/8	**ASB178100**	37.70
1-7/8	1-1/4	3-1/8	**ASB178114**	37.70
2-1/8	7/8	3-3/4	**ASB2187800**	56.55
2-1/8	1	3-3/4	**ASB218100**	56.55
2-1/8	1-1/4	3-3/4	**ASB218114**	56.55
2-1/8	1-1/2	3-3/4	**ASB218112**	56.55
2-3/4	7/8	4-1/4	**ASB2347800**	71.50
2-3/4	1	4-1/4	**ASB234100**	71.50
2-3/4	1-1/4	4-1/4	**ASB234114**	71.50
2-3/4	1-1/2	4-1/4	**ASB234112**	71.50
2-3/4	2	4-1/4	**ASB234200**	71.50
3-3/8	7/8	4-1/4	**ASB33878**	97.50
3-3/8	1	4-1/4	**ASB3381**	97.50
3-3/8	1-1/4	4-1/4	**ASB338114**	97.50
3-3/8	1-1/2	4-1/4	**ASB338112**	97.50
3-3/8	2	4-1/4	**ASB338200**	97.50
3-3/8	2-1/2	4-1/4	**ASB338212**	97.50

Milling Machine Arbor Nuts

For milling machine arbors



Size	Thread Size	RH Tool No.	LH Tool No.	Price Each
7/8	7/8-14	**MAN78RH**	**MAN78LH**	35.36
1"	1-14	**MAN1RH**	**MAN1LH**	42.32
1-1/4	1-1/4-12	**MAN114RH**	**MAN114LH**	48.35
1-1/2	1-1/2-12	**MAN112RH**	**MAN112LH**	86.68
2"	2-12	**MAN2RH**	**MAN2LH**	110.32
2-1/2	2-1/2-12	**MAN212RH**	**MAN212LH**	176.80

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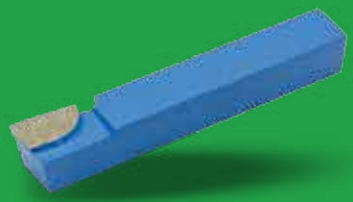
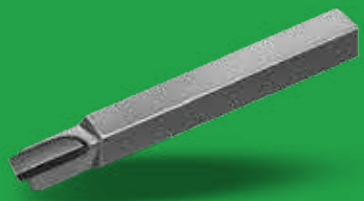
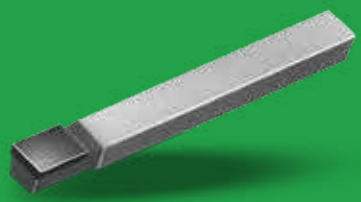
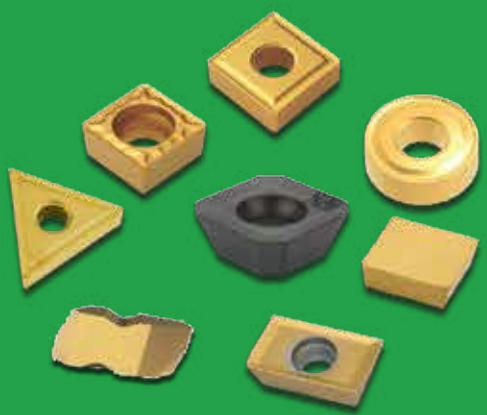


















Super-Bore™
Carbide Tipped Boring Bars



- High quality alloy steel for greater rigidity
- Precision ground shanks
- Offset taper to provide greater rigidity at cutting point
- Grade C-2 or C-6

Please specify grade when ordering

C-2: for Cast Iron applications
C-6: for Steel applications

3/8" Shank

Min. Bore	Bore Depth	Overall Length	Tool No.	Price Each
5/16	3/4	2	**PA5S**	11.32
5/16	1-1/8	2-3/8	**PA5M**	11.83
5/16	1-1/2	2-3/4	**PA5L**	12.33
3/8	15/16	2-3/16	**PA3S**	12.58
3/8	1-13/32	2-21/32	**PA3M**	12.97
3/8	1-7/8	3-1/8	**PA3L**	13.85
7/16	1-1/8	2-3/8	**PA7S**	14.17
7/16	1-11/16	2-15/16	**PA7M**	14.42
7/16	2-1/4	3-1/2	**PA7L**	15.11

1/2" Shank

Min. Bore	Bore Depth	Overall Length	Tool No.	Price Each
5/16	3/4	2-1/4	**PB5S**	15.11
5/16	1-1/8	2-5/8	**PB5M**	15.50
5/16	1-1/2	3	**PB5L**	16.19
7/16	1-1/8	2-5/8	**PB7S**	16.76
7/16	1-11/16	3-3/16	**PB7M**	17.46
7/16	2-1/4	3-3/4	**PB7L**	17.64
9/16	1-1/2	3	**PB9S**	18.15
9/16	2-1/4	3-3/4	**PB9M**	18.40
9/16	3	4-1/2	**PB9L**	18.79

5/8" Shank

Min. Bore	Bore Depth	Overall Length	Tool No.	Price Each
5/16	3/4	2-1/4	**PC5S**	18.95
5/16	1-1/8	2-5/8	**PC5M**	19.55
5/16	1-1/2	3	**PC5L**	20.56
7/16	1-1/8	2-5/8	**PC7S**	21.32
7/16	1-11/16	3-3/16	**PC7M**	22.20
7/16	2-1/4	3-3/4	**PC7L**	23.60
9/16	1-1/2	3	**PC9S**	24.04
9/16	2-1/4	3-3/4	**PC9M**	24.98
9/16	3	4-1/2	**PC9L**	26.13
11/16	1-7/8	3-3/8	**PC11S**	26.95
11/16	2-13/16	4-5/16	**PC11M**	27.97
11/16	3-3/4	5-1/4	**PC11L**	29.60

3/4" Shank

Min. Bore	Bore Depth	Overall Length	Tool No.	Price Each
7/16	1-1/8	3-1/8	**PD7S**	22.20
7/16	1-11/16	3-11/16	**PD7M**	23.34
7/16	2-1/4	4-1/4	**PD7L**	24.35
9/16	1-1/2	3-1/2	**PD9S**	25.18
9/16	2-1/4	4-1/4	**PD9M**	25.87
9/16	3	5	**PD9L**	27.01
11/16	1-7/8	3-7/8	**PD11S**	27.76
11/16	2-13/16	4-13/16	**PD11M**	28.66
11/16	3-3/4	5-3/4	**PD11L**	29.73
13/16	2-1/4	4-1/4	**PD13S**	31.50
13/16	3-3/8	5-3/8	**PD13M**	33.33
13/16	4-1/2	6-1/2	**PD13L**	35.17

1" Shank

Min. Bore	Bore Depth	Overall Length	Tool No.	Price Each
7/16	1-3/4	3-3/4	**PE7S**	38.64
9/16	2-1/4	4-1/4	**PE9S**	41.43
9/16	3	5	**PE9L**	43.96
11/16	3	5	**PE11S**	43.96
11/16	3-3/4	5-3/4	**PE11L**	45.35
13/16	3-3/4	5-3/4	**PE13L**	45.35
7/8	4-1/2	6-1/2	**PE14L**	48.51
15/16	3-3/4	5-3/4	**PE15S**	50.48
1-1/16	4-1/2	6-1/2	**PE17L**	51.87
1-1/4	5-3/4	7-3/4	**PE20L**	55.66
1-1/2	6-1/4	8-1/4	**PE24L**	58.83
1-5/8	7-1/2	9-1/2	**PE26L**	63.18

Super-Bore™
Carbide Tipped Boring Bars



MADE IN USA

- High quality alloy steel for greater rigidity
- Precision ground shanks
- Offset taper to provide greater rigidity at cutting point
- Grade C-2 or C-6

Metric Sizes

Please specify grade when ordering

C-2: for Cast Iron applications
C-6: for Steel applications

8mm Shank

Min. Bore	Bore Depth	Overall Length	Tool No.	Price Each
7mm	20mm	50mm	**PMA7S**	13.58
7mm	30mm	60mm	**PMA7M**	14.20
7mm	40mm	70mm	**PMA7L**	14.80
8mm	25mm	55mm	**PMA8S**	15.09
8mm	40mm	67mm	**PMA8M**	15.56

Min. Bore	Bore Depth	Overall Length	Tool No.	Price Each
8mm	50mm	80mm	**PMA8L**	16.62
10mm	30mm	60mm	**PMA10S**	17.00
10mm	50mm	80mm	**PMA10M**	17.30
10mm	60mm	90mm	**PMA10L**	18.13

10mm Shank

Min. Bore	Bore Depth	Overall Length	Tool No.	Price Each
8mm	25mm	65mm	**PMB8S**	18.13
8mm	40mm	80mm	**PMB8M**	18.60
8mm	50mm	90mm	**PMB8L**	19.43
10mm	30mm	70mm	**PMB10S**	20.11
10mm	50mm	90mm	**PMB10M**	20.95

Min. Bore	Bore Depth	Overall Length	Tool No.	Price Each
10mm	60mm	100mm	**PMB10L**	21.17
12mm	40mm	80mm	**PMB12S**	21.78
12mm	60mm	100mm	**PMB12M**	22.08
12mm	75mm	115mm	**PMB12L**	22.54

12mm Shank

Min. Bore	Bore Depth	Overall Length	Tool No.	Price Each
8mm	25mm	65mm	**PMC8S**	22.74
8mm	40mm	80mm	**PMC8M**	23.46
8mm	50mm	90mm	**PMC8L**	24.67
10mm	30mm	70mm	**PMC10S**	25.58
10mm	50mm	90mm	**PMC10M**	26.64
10mm	60mm	100mm	**PMC10L**	28.32

Min. Bore	Bore Depth	Overall Length	Tool No.	Price Each
12mm	40mm	80mm	**PMC12S**	28.85
12mm	60mm	100mm	**PMC12M**	29.98
12mm	75mm	115mm	**PMC12L**	31.35
14mm	50mm	90mm	**PMC14S**	32.34
14mm	70mm	110mm	**PMC14M**	33.56
14mm	95mm	135mm	**PMC14L**	35.52

16mm Shank

Min. Bore	Bore Depth	Overall Length	Tool No.	Price Each
10mm	30mm	80mm	**PMD10S**	26.64
10mm	50mm	100mm	**PMD10M**	28.00
10mm	60mm	110mm	**PMD10L**	29.22
12mm	40mm	90mm	**PMD12S**	30.22
12mm	60mm	110mm	**PMD12M**	31.04
12mm	75mm	125mm	**PMD12L**	32.41

Min. Bore	Bore Depth	Overall Length	Tool No.	Price Each
14mm	50mm	100mm	**PMD14S**	33.31
14mm	75mm	120mm	**PMD14M**	34.39
14mm	95mm	145mm	**PMD14L**	35.68
18mm	60mm	110mm	**PMD18S**	37.80
18mm	90mm	140mm	**PMD18M**	39.40
18mm	110mm	160mm	**PMD18L**	42.70

Sets

Set Type	Pcs.	Sizes	Set No.	Price
3/8" Shank	9	Every 3/8" size shown on previous page	**PA375**	117.70
1/2" Shank	9	Every 1/2" size shown on previous page	**PB500**	150.70
5/8" Shank	12	Every 5/8" size shown on previous page	**PC625**	284.90
3/4" Shank	12	Every 3/2" size shown on previous page	**PD750**	334.40
1" Shank	5	Contains PE7S, PE9S, PE11S, PE15S, PE17L	**PE1000S**	225.50
1" Shank Long Length	5	Contains PE11L, PE17L, PE20L, PE24L, PE26L	**PE1000L**	275.00
8mm Shank	9	Every 8mm size shown above	**PMA375**	142.28
10mm Shank	9	Every 10mm size shown above	**PMB500**	189.79
12mm Shank	12	Every 12mm size shown above	**PMC625**	342.71
16mm Shank	12	Every 16mm size shown above	**PMD750**	400.31

All sets are supplied in wood block



Indexable Boring Bars



Boring bars come complete with insert screw and one insert

MADE IN USA Exclusively By apt USA Approved Performance Tooling

1/2" Shank

Min. Bore	Bore Depth	Overall Length	Tool No.	Price Each
7/16	1-1/4	2-3/4	**NB7S**	43.33
7/16	1-7/8	3-3/8	**NB7M**	43.33
7/16	2-1/2	4	**NB7L**	43.33
1/2	1-1/2	3	**NB8S**	47.83
1/2	2-1/8	3-5/8	**NB8M**	47.83

Min. Bore	Bore Depth	Overall Length	Tool No.	Price Each
1/2	2-3/4	4-1/4	**NB8L**	47.83
9/16	1-3/4	3-1/4	**NB9S**	50.82
9/16	2-3/8	3-7/8	**NB9M**	50.82
9/16	3	4-1/2	**NB9L**	50.82

5/8" Shank

Min. Bore	Bore Depth	Overall Length	Tool No.	Price Each
7/16	1-1/4	3	**NC7S**	47.83
7/16	1-7/8	3-5/8	**NC7M**	47.83
7/16	2-1/2	4-1/4	**NC7L**	47.83
1/2	1-1/2	3-1/4	**NC8S**	49.32
1/2	2-1/8	3-7/8	**NC8M**	49.32
1/2	2-3/4	4-1/2	**NC8L**	49.32
9/16	1-3/4	3-1/2	**NC9S**	52.31
9/16	2-3/8	4-1/8	**NC9M**	52.31

Min. Bore	Bore Depth	Overall Length	Tool No.	Price Each
9/16	3	4-3/4	**NC9L**	52.31
5/8	2	3-3/4	**NC10S**	55.30
5/8	2-5/8	4-3/8	**NC10M**	55.30
5/8	3-1/4	5	**NC10L**	55.30
11/16	2-1/4	4	**NC11S**	58.29
11/16	2-7/8	4-5/8	**NC11M**	58.29
11/16	3-1/2	5-1/4	**NC11L**	58.29

3/4" Shank

Min. Bore	Bore Depth	Overall Length	Tool No.	Price Each
7/16	1-1/4	3-1/4	**ND7S**	52.31
7/16	1-7/8	3-7/8	**ND7M**	52.31
7/16	2-1/2	4-1/2	**ND7L**	52.31
1/2	1-1/2	3-1/2	**ND8S**	53.81
1/2	2-1/8	4-1/8	**ND8M**	53.81
1/2	2-3/4	4-3/4	**ND8L**	53.81
9/16	1-3/4	3-3/4	**ND9S**	56.80
9/16	2-3/8	4-3/8	**ND9M**	56.80
9/16	3	5	**ND9L**	56.80
5/8	2	4	**ND10S**	58.29
5/8	2-5/8	4-5/8	**ND10M**	58.29

Min. Bore	Bore Depth	Overall Length	Tool No.	Price Each
5/8	**3-1/4**	**5-1/4**	**ND10L**	58.29
11/16	**2-1/4**	**4-1/4**	**ND11S**	59.79
11/16	**2-7/8**	**4-7/8**	**ND11M**	59.79
11/16	**3-1/2**	**5-1/2**	**ND11L**	59.79
3/4	**2-1/2**	**4-1/2**	**ND12S**	59.93
3/4	**3-1/4**	**5-1/4**	**ND12M**	59.93
3/4	**4**	**6**	**ND12L**	59.93
13/16	**2-3/4**	**4-3/4**	**ND13S**	62.52
13/16	**4**	**6**	**ND13M**	62.52
13/16	**4-1/2**	**6-1/2**	**ND13L**	62.52

Sets

Set Type	Pcs.	Description	Set No.	Price
1/2" Shank	9	1 of each 7/16 to 9/16	**ND500**	430.40
5/8" Shank	12	1 of each 1/2 to 11/16	**ND625**	651.74
3/4" Shank	12	1 of each 5/8 to 13/16	**ND750**	638.08

All sets are supplied in wood block



Compatible Carbide Inserts



TPGH – Triangle, Positive Rake
Ground all over with chip groove on one side

Insert Number	I.C.	Width	Radius	Price Each C-2	Price Each C-6	Price Each TiN Coated*
TPGH21.50	1/4	3/32	0	6.80	6.80	7.96
TPGH21.51	1/4	3/32	1/64	6.80	6.80	7.96
TPGH21.52	1/4	3/32	1/32	6.80	6.80	7.96

**C-6 Grade TiN Coated*

Replacement Parts

Description	Tool No.	Price
Torx® drive flat head screw for 1/4" I.C.	**Part TF440-195**	1.87
Torx® Wrench –T6	**Part CTW-6**	2.91

Co-Bore™

Cobalt Boring Bars

Made of premium cobalt high speed steel in a one piece construction, these boring bars may also be modified to a special grooving tool to produce various internal shapes and radii. Cobalt is an ideal tool material because of its high red-hardness, abrasive resistance and ability to maintain a sharp edge. In addition, cobalt is used successfully to significantly extend tool life.



Cobalt MADE IN USA Exclusively By apt USA Approved Performance Tooling

3/8" Shank

Min. Bore	Bore Depth	Overall Length	Tool No.	Price Each
3/16	9/16	1-13/16	**COA3S**	17.06
3/16	15/16	2-3/16	**COA3L**	18.07
1/4	3/4	2	**COA4S**	18.66
1/4	1-1/4	2-1/2	**COA4L**	19.55

Min. Bore	Bore Depth	Overall Length	Tool No.	Price Each
5/16	15/16	2-3/16	**COA5S**	19.81
5/16	1-9/16	2-13/16	**COA5L**	20.80
3/8	1-1/8	2-3/8	**COA6S**	21.26
3/8	1-7/8	3-1/8	**COA6L**	22.28

1/2" Shank

Min. Bore	Bore Depth	Overall Length	Tool No.	Price Each
1/4	3/4	2-1/8	**COB4S**	21.72
1/4	1-1/4	2-5/8	**COB4L**	22.28
5/16	15/16	2-5/16	**COB5S**	22.63
5/16	1-9/16	2-15/16	**COB5L**	23.65
3/8	1-1/8	2-1/2	**COB6S**	24.01

Min. Bore	Bore Depth	Overall Length	Tool No.	Price Each
3/8	1-7/8	3-1/4	**COB6L**	24.92
7/16	1-5/16	2-11/16	**COB7S**	24.92
7/16	2-3/16	3-9/16	**COB7L**	25.57
1/2	1-1/2	2-7/8	**COB8S**	26.82
1/2	2-1/2	3-7/8	**COB8L**	27.42

5/8" Shank

Min. Bore	Bore Depth	Overall Length	Tool No.	Price Each
3/8	1-1/8	2-5/8	**COC6S**	28.41
3/8	1-7/8	3-3/8	**COC6L**	29.04
7/16	1-5/16	2-13/16	**COC7S**	30.56
7/16	2-3/16	3-11/16	**COC7L**	33.09
1/2	1-1/2	3	**COC8S**	33.96

Min. Bore	Bore Depth	Overall Length	Tool No.	Price Each
1/2	2-1/2	4	**COC8L**	36.28
9/16	1-11/16	3-3/16	**COC9S**	38.74
9/16	2-13/16	4-5/16	**COC9L**	40.46
5/8	1-7/8	3-3/8	**COC10S**	42.45
5/8	3-1/8	4-5/8	**COC10L**	44.14

3/4" Shank

Min. Bore	Bore Depth	Overall Length	Tool No.	Price Each
3/8	1-1/8	2-7/8	**COD6S**	33.29
3/8	1-7/8	3-5/8	**COD6L**	34.48
7/16	1-5/16	3-1/16	**COD7S**	35.36
7/16	2-3/16	3-15/16	**COD7L**	36.99
1/2	1-1/2	3-1/4	**COD8S**	38.08
1/2	2-1/2	4-1/4	**COD8L**	39.08
9/16	1-11/16	3-7/16	**COD9S**	39.83

Min. Bore	Bore Depth	Overall Length	Tool No.	Price Each
9/16	2-13/16	4-9/16	**COD9L**	41.35
5/8	1-7/8	3-5/8	**COD10S**	42.22
5/8	3-1/8	4-7/8	**COD10L**	43.52
11/16	2-1/16	3-13/16	**COD11S**	44.49
11/16	3-7/16	5-3/16	**COD11L**	46.36
3/4	2-1/4	4	**COD12S**	47.10
3/4	3-3/4	5-1/2	**COD12L**	48.43

Sets

Set Type	Pcs.	Description	Set No.	Price
3/8" Shank	8	Set Includes all 3/8" sizes	**COAH375**	157.30
1/2" Shank	10	Set Includes all 1/2" sizes	**COBH500**	243.10
5/8" Shank	10	Set Includes all 5/8" sizes	**COCH625**	356.20
3/4" Shank	14	Set Includes all 3/4" sizes	**CODH750**	566.80

All sets are supplied in wood block



Miniature Boring Bars

Solid Carbide Stem



MADE IN USA

3/8" Shank

Min. Bore	Bore Depth	Overall Length	Tool No.	Price Each
1/16	5/16	1-9/16	**MA1**	37.96
3/32	15/32	1-23/32	**MA2**	41.21
1/8	5/8	1-7/8	**MA3**	44.59
5/32	25/32	2-1/32	**MA4**	55.32
3/16	15/16	2-3/16	**MA5**	62.79
1/4	1-1/4	2-1/2	**MA6**	71.76

1/2" Shank

Min. Bore	Bore Depth	Overall Length	Tool No.	Price Each
1/16	5/16	1-13/16	**MB1**	42.60
3/32	15/32	1-15/16	**MB2**	44.85
1/8	5/8	2-1/8	**MB3**	47.84
5/32	25/32	2-1/4	**MB4**	58.31
3/16	15/16	2-7/16	**MB5**	65.78
1/4	1-1/4	2-13/16	**MB6**	75.08

Sets

Set Type	Pcs.	Sizes	Set No.	Price
3/8" Shank	6	MA1, MA2, MA3, MA4, MA5, MA6	**MA375**	326.52
1/2" Shank	6	MB1, MB2, MB3, MB4, MB5, MB6	**MB500**	346.82

All sets are supplied in wood block



Stubby Boring Bars

High Speed Steel & Carbide Tipped

- Maximum rigidity
- Precision ground shanks
- Shanks feature set screw flats



High Speed

MADE IN USA

	Minimum Bore	Bore Depth	Overall Length	High Speed Tool No.	High Speed Price Each	Carbide Tipped Tool No.	Carbide Tipped Price Each
1/2" Shank	1/8	1/4	1-21/32	**PSBH2**	25.35	**PSBC2**	35.75
	3/16	5/16	1-13/16	**PSBH3**	25.35	**PSBC3**	35.75
	1/4	7/16	2	**PSBH4**	25.35	**PSBC4**	35.75
	5/16	9/16	2-3/16	**PSBH5**	25.35	**PSBC5**	35.75
	3/8	11/16	2-3/8	**PSBH6**	26.85	**PSBC6**	35.75
	1/2	13/16	2-9/16	**PSBH8**	27.76	**PSBC8**	35.75
5/8" Shank	3/8	11/16	2-5/16	**PSCH6**	38.35	**PSCC6**	42.54
	1/2	15/16	2-9/16	**PSCH8**	38.35	**PSCC8**	42.54
	5/8	1-1/8	2-3/4	**PSCH10**	38.35	**PSCC10**	42.54
3/4" Shank	1/2	1-5/16	2-15/16	**PSDH8**	64.74	**PSDC8**	45.76
	3/4	1-17/32	3-5/32	**PSDH12**	68.25	**PSDC12**	45.76
	1	1-3/4	3-3/8	**PSDH16**	74.88	**PSDC16**	49.34
1" Shank	3/4	1-17/32	3-5/32	**PSEH12**	70.20	**PSEC12**	49.34
	1	1-3/4	3-3/8	**PSEH16**	74.75	**PSEC16**	49.34
	1-1/4	1-31/32	3-19/32	**PSEH20**	90.68	**PSEC20**	60.78

Sets

Description	Size	Pieces	High Speed Set No.	High Speed Price	Carbide Tipped Set No.	Carbide Tipped Price
1/2" Shank	1/8, 3/16, 1/4, 5/16, 3/8, 1/2	6	**PSBH500**	161.97	**PSBC500**	220.46
5/8" Shank	3/8, 1/2, 5/8	3	**PSCH625**	115.05	**PSCC625**	127.40
3/4" Shank	1/2, 3/4, 1"	3	**PSDH750**	212.53	**PSDC750**	145.52
1" Shank	3/4, 1", 1-1/4	3	**PSEH1000**	241.37	**PSEC1000**	165.20

All sets are supplied in wood block.



Precision Boring Heads with Integrated Shanks

- Direct reading .001 micrometer dia.
- Precision hardened steel
- Boring capacity up to 4"

MADE IN USA

Straight Shank

Head Dia	Shank Dia	Hole Dia	Offset Travel	Vert. Hole Spacing	Shank Length	Overall Length	Tool No.	Price Each
2	3/4	3/8	3/4	5/8	2-5/8	5-1/16	**BH34A**	182.00
2-1/2	3/4	1/2	3/4	3/4	2-5/8	5-13/16	**BH34B**	204.82
2-1/2	3/4	5/8	3/4	3/4	2-5/8	5-13/16	**BH34C**	221.26
3	1	3/4	1-1/4	15/16	2-5/8	6-1/8	**BH1D**	254.15



R-8 Shank

Head Dia	Shank Dia	Hole Dia	Offset Travel	Vert. Hole Spacing	Shank Length	Overall Length	Tool No.	Price Each
2	R-8	3/8	3/4	5/8	4	6-7/16	**BHR8A**	255.65
2-1/2	R-8	1/2	3/4	3/4	4	7-3/16	**BHR8B**	273.59
2-1/2	R-8	5/8	3/4	3/4	4	7-3/16	**BHR8C**	300.50
3	R-8	3/4	1-1/4	15/16	4	7-1/2	**BHR8D**	340.86



Sets

Description	Boring Bars included	Pcs.	Set No.	Price
Contains: **BH34B** 3/4" Shank Boring Head & **PB500** 1/2" Shank Carbide Tipped Boring Bar Set.	Sizes 5/16, 7/16, 9/16 in Standard, Medium, & Long Length	10	**BH34BS**	355.52
Contains: **BHR8B** R-8 Shank Boring Head & **PB500** 1/2" Shank Carbide Tipped Boring Bar Set.	Sizes 5/16, 7/16, 9/16 in Standard, Medium, & Long Length	10	**BHR8BS**	424.29

All sets come with a C6 boring bar set unless C2 is requested.

All sets are supplied in metal case.



Boring Heads with Interchangeable Shanks

MADE IN USA

- Direct reading .001 micrometer dia.
- Precision hardened steel
- Boring capacity up to 4"

Boring Heads

Head Dia	Threaded Back	Hole Dia	Overall Length	Offset Travel	Vert. Hole Spacing	Tool No.	Price Each
2	7/8 — 20	3/8	2-7/16	3/4	5/8	**BHTA**	221.26
2-1/2	7/8 — 20	1/2	3-3/16	3/4	3/4	**BHTB**	239.20
2-1/2	7/8 — 20	5/8	3-3/16	3/4	3/4	**BHTC**	266.11
3	1-1/2 — 18	3/4	3-1/2	1-1/4	5/16	**BHTD**	307.97



Interchangable Shanks

Description	7/8" – 20 Thread		1-1/2" – 18 Thread	
	Tool No.	Price Each	Tool No.	Price Each
2 M.T. with Tang	**BHQM2**	50.18	–	–
3 M.T. with Tang	**BHQM3**	56.16	**BHXM3**	70.34
4 M.T. with Tang	**BHQM4**	66.30	**BHXM4**	79.30
#30 N.T. with Draw Bar & Drive Flange	**BHQS3**	115.70	**BHXS3**	130.00
#40 N.T. with Draw Bar & Drive Flange	**BHQS4**	143.40	**BHXS4**	261.80
1/2" Diameter Straight Shank	**BHQ16**	28.74	–	–
3/4" Diameter Straight Shank	**BHQ24**	28.74	–	–
1" Diameter Straight Shank	**BHQ32**	28.74	**BHX32**	41.08
1-1/4" Diameter Straight Shank	–	–	**BHX40**	58.24
1-1/2" Diameter Straight Shank	–	–	**BHX48**	58.24
R-8 Shank	**BHQR8**	62.02	**BHXR8**	71.90



Tri-Lead™ Indexable Boring Bars

Exclusively By apt USA Approved Performance Tooling

MADE IN USA

- Inserts can be indexed and replaced without loss of hole size or depth
- Made of tempered alloy steel for rigidity
- Cartridges are hardened and ground to precision accuracy
- Uses standard 3/8" I.C. triangle inserts
- 3 different cartridges - 3 different lead angles - all interchangeable
- Available in four different shank sizes
- If pocket becomes damaged during use simply replace the cartridge



Holders

	Minimum Bore	Distance Across Flats	Center to Sharp Point	Overall Length	Tool No.	Price Each
3/4" Shank	1-1/16	11/16	11/16	4	**TL344**	113.37
	1-1/16	11/16	11/16	5-1/2	**TL345**	122.72
	1-1/16	11/16	11/16	7	**TL346**	133.46
	1-1/16	11/16	11/16	10	**TL347**	155.71
1" Shank	1-1/4	7/8	3/4	4	**TL105**	131.43
	1-1/4	7/8	3/4	7	**TL106**	141.57
	1-1/4	7/8	3/4	9	**TL107**	192.31
	1-1/4	7/8	3/4	12	**TL108**	175.41
1-1/4" Shank	1-1/2	1-1/8	13/16	6-1/2	**TL125**	158.53
	1-1/2	1-1/8	13/16	9	**TL126**	179.89
	1-1/2	1-1/8	13/16	11-1/2	**TL127**	193.27
	1-1/2	1-1/8	13/16	15	**TL128**	221.08
1-1/2" Shank	1-3/4	1-1/4	1	15	**TL138**	277.93

Each tool is supplied with (1) TPG-321 C-6 insert.

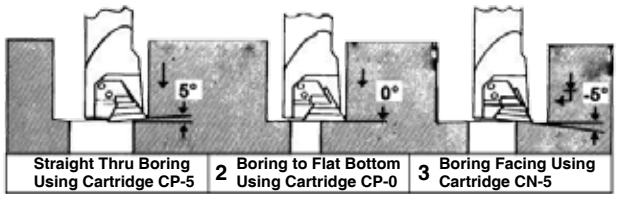
TPG Carbide Inserts

Triangle - Positive rake - Ground all over



Insert Number	I.C.	Width	Radius	Price Each C-2	Price Each C-6	Price Each TiN Coated*
TPG320	3/8	1/8	0	6.74	6.74	8.08
TPG321	3/8	1/8	1/64	6.74	6.74	8.08
TPG322	3/8	1/8	1/32	6.74	6.74	8.08
TPG323	3/8	1/8	3/64	6.74	6.74	8.08
TPG324	3/8	1/8	1/16	6.74	6.74	8.08

**C-6 Grade TiN Coated*



Replacement Parts

Part No.	Description	Price Each
Part CTL	Hold Down Clamp	8.29
Part CBT-12	3/8" I.C. Chipbreaker	4.77
SHIM41	3/8" I.C. Shim	5.60
Part CP0	0° Lead Cartridge	12.99
Part CP5	+5° Positive Lead Cartridge	12.99
Part CN5	-5° Negative Lead Cartridge	12.99
Part CRP-1	Roll Pin	0.55
Part CF440-14	Shim Screw	0.55
Part CS540-38	Cartridge Screw (2 Required)	0.55
Part CS832-58	Clamp Screw for 3/4" Shank	0.55
Part CS832-34	Clamp Screw for 1", 1-1/4" & 1-1/2" Shank	0.55

Interchangeable Cartridges

Part No.	Description	Price Each
Part CP5	+5° Positive Lead Cartridge	12.99
Part CN5	-5° Negative Lead Cartridge	12.99

Cartridge & Insert Package

Part No.	Description	Price Each
Part TLPK	10 TPG321 C6 Carbide Inserts 1 CP5 Cartridge (+5° Positive lead) 1 CN5 Cartridge (-5° Negative lead)	93.20

Sets

Description	Sizes	Pieces	Set No.	Price
3/4" Shank	TL344, TL345, TL346	3	**TL348**	369.55
1" Shank	TL105, TL106, TL107	3	**TL109**	466.27
1-1/4" Shank	TL125, TL126, TL127	3	**TL129**	527.69
3/4" 1" & 1-1/4 Shank	TL345, TL106, TL126	3	**TL130**	440.18



Super-Lok™ Boring Bars

Regular Length and Long Length

Exclusively By apt USA Approved Performance Tooling

- No special components
- Insert is held rigidly by a unique clamping design
- Uses standard 1/4" and 3/8" I.C. triangle inserts
- Chose from a wide variety of shank sizes and lengths



End View

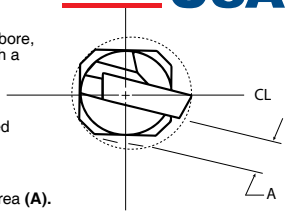


MADE IN USA

To achive such a small minimum bore, it is necesary to make the tool with a negative radial relief.

For the tool to perform properly, the cutting point must be postioned on the centerline **(CL).**

By doing this, it gives the tool more strength under the pocket area **(A).**



Holders

	Minimum Bore	Bore Depth	Distance Across Flats	Overall Length	Inserts Size I.C.	Tool No.	Price Each
1/2" Shank	1/2	1-1/2	7/16	3	1/4	**LB8S**	61.89
	1/2	2-1/4	7/16	3-3/4	1/4	**LB8M**	63.69
	9/16	1-3/4	7/16	3-1/4	1/4	**LB9S**	61.89
	9/16	2-5/8	7/16	4-1/8	1/4	**LB9M**	70.73
	9/16**	–	7/16	8	1/4	**LB9L**	77.74
	5/8	2	7/16	3-1/2	1/4	**LB10S**	63.69
	5/8	3	7/16	4-1/2	1/4	**LB10M**	66.83
5/8" Shank	1/2	1-1/2	9/16	3-1/4	1/4	**LC8S**	70.88
	1/2	2-1/4	9/16	4	1/4	**LC8M**	73.11
	5/8	2	9/16	3-3/4	1/4	**LC10S**	70.88
	5/8	3	9/16	4-3/4	1/4	**LC10M**	75.21
	11/16**	–	9/16	9	3/8	**LC11L**	93.89
	3/4	2-3/4	9/16	4-1/2	3/8	**LC12S**	75.21
	3/4	3-3/4	9/16	5-1/2	3/8	**LC12M**	80.43
3/4" Shank	1/2	1-1/2	5/8	3-1/2	1/4	**LD8S**	80.43
	1/2	2-1/4	5/8	4-1/4	1/4	**LD8M**	80.43
	5/8	2	5/8	4	1/4	**LD10S**	80.43
	5/8	3	5/8	5	1/4	**LD10M**	85.67
	3/4	2-3/4	5/8	4-3/4	3/8	**LD12S**	85.67
	3/4	3-3/4	5/8	5-3/4	3/8	**LD12M**	88.36
	13/16	3	5/8	5	3/8	**LD13S**	88.36
	13/16	4-1/2	5/8	6-1/2	3/8	**LD13M**	92.09
	13/16**	–	5/8	10	3/8	**LD13L**	107.04
1" Shank	3/4	3	7/8	5-1/4	3/8	**LE12S**	98.37
	3/4	4	7/8	6-1/4	3/8	**LE12M**	108.24
	13/16	3-1/4	7/8	5-1/2	3/8	**LE13S**	103.16
	13/16	4-1/2	7/8	6-3/4	3/8	**LE13M**	116.61
	15/16	3-1/2	7/8	5-3/4	3/8	**LE15S**	108.39
	15/16	4-3/4	7/8	7	3/8	**LE15M**	119.30
	1-1/16	4	7/8	6-1/4	3/8	**LE17S**	113.92
	1-1/16	5-1/4	7/8	7-1/2	3/8	**LE17M**	125.14
	1-1/16**	–	7/8	12	3/8	**LE17L**	132.46
1-1/4" Shank	1-5/16**	–	1-1/8	15	3/8	**LF21L**	209.90
1-1/2" Shank	1-9/16**	–	1-1/4	15	3/8	**LG25L**	209.90

*** Indicates Long Length*

TPG Carbide Inserts



Triangle - Positive rake - Ground all over

Insert Number	I.C.	Width	Radius	Price Each C-2	Price Each C-6	Price Each TiN Coated*
TPG220	1/4	1/8	0	5.70	5.70	6.90
TPG321	3/8	1/8	1/64	6.74	6.74	8.08

**C-6 Grade TiN Coated*

Replacement Parts

Part No.	Description	Price Each
Part CS632-38	Screw for 1/4" I.C. Holders	0.60
Part CS1032-12	Screw for 3/8" I.C. Holders	0.75
Part CS1032-38	Screw for LC11L Only	0.75
Part CS1032-58	Screw for LE15S, LE15M	0.75
Part CS1420-58	Screw for LE17L Only	0.60
Part CS1420-34	Screw for LF21L, LG25L	0.60

Sets

Description	Sizes	Pieces	Set No.	Price
1/2" Shank	LB8S, LB8M, LB9S, LB9M, LB10S, LB10M	6	**LB500**	388.72
5/8" Shank	LC8S, LC8M, LC10S, LC10M, LC12S, LC12M	6	**LC625**	445.72
3/4" Shank	LD8S, LD8M, LD10S, LD10M, LD12S, LD12M, LD13S, LD13M	8	**LD750**	681.44
1" Shank	LE12S, LE12M, LE13S, LE13M, LE15S, LE15M, LE17S, LE17M, LE17L	9	**LE1000**	1025.59

All sets are supplied in wood block.



Micro-Range™ Carbide Indexable Adjustable Boring Bar

Exclusively By apt USA Approved Performance Tooling

MADE IN USA

- For use on CNC and conventional mills and lathes
- Can be precision adjusted while tool is in machine
- .002 graduation adjustment
- C6 carbide insert and Torx® wrench included with each tool



↖ Micrometer adjustment screw

Holders

Minimum* Bore	Maximum* Bore	Shank Diameter	Overall Length	Maximum Depth of Cut	Insert Size I.C.	Tool No.	Price Each
3/4	15/16	5/8	5-1/4	3-1/8	1/4	**TLA625S**	280.68
3/4	15/16	R-8	7-3/8	3-1/8	1/4	**TLA625R8**	333.00
15/16	1-3/16	3/4	6-5/16	4-1/8	3/8	**TLA750S**	321.05
15/16	1-3/16	R-8	8-3/8	4-1/8	3/8	**TLA750R8**	383.84
1-3/16	1-5/8	1"	8-1/4	5-1/8	3/8	**TLA1000S**	367.39
1-3/16	1-5/8	R-8	9-3/8	5-1/8	3/8	**TLA1000R8**	445.13
1-7/16	2-3/8	1-1/4	10-5/16	6-1/4	3/8	**TLA1250S**	422.71
1-7/16	2-3/8	R-8	10-1/2	6-1/4	3/8	**TLA1250R8**	501.94

**NOTE: Bore diameter produced when using insert TPGH-21.51 (radius 1/64).*

TPGH Carbide Inserts



Triangle - Positive rake - Ground all over with chip groove on one side

Insert Number	I.C.	Width	Radius	Price Each C-2	Price Each C-6	Price Each TiN Coated*
TPGH21.50	1/4	3/32	0	6.80	6.80	7.96
TPGH21.51	1/4	3/32	1/64	6.80	6.80	7.96
TPGH21.52	1/4	3/32	1/32	6.80	6.80	7.96
TPGH321	3/8	1/8	1/64	7.42	7.42	9.04
TPGH322	3/8	1/8	1/32	7.42	7.42	9.04

**C-6 Grade TiN Coated*

Replacement Parts

Part No.	Description	Price Each
Part TF832-285	Torx® drive flat head screw for 3/8" I.C.	2.61
Part TF440-195	Torx® drive flat head screw for 1/4" I.C.	1.87
Part CTW-10	Torx® wrench for 3/8" I.C.	3.67
Part CTW-6	Torx® wrench for 1/4" I.C.	2.91



Micro-Range Adjustable Boring Bar Cartridge



Tool No.	Description	Price Each
CRTLA 625	Cartridge for 5/8" holder	40.04
CRTLA 750	Cartridge for 3/4" holder	40.04
CRTLA 1000	Cartridge for 1" holder	60.06
CRTLA 1250	Cartridge for 1-1/4" holder	60.06

Micro-Range Adjustment Screw

Tool No.	Description	Price Each
MSTLA625	Micro-range screw for 5/8" dia. holder	12.71
MSTLA750	Micro-range screw for 3/4" dia. holder	13.46
MSTLA1000	Micro-range screw for 1" dia. holder	14.95
MSTLA1250	Micro-range screw for 1-1/4" dia. holder	15.70

Radial Relief Boring Bars

High Speed Steel Head



Interchangeable thread boring tools.
Alloy Steel Boring Bars are supplied with one high speed steel head.

Style "A" for General Boring
Style "B" for Bottoming & Facing

					STYLE A				STYLE B			
					Bar & Head		Head Only		Bar & Head		Head Only	
Part #	Bar Diameter	Min. Boring Depth	Max. Boring Depth	Overall Length	Tool No.	Price Each	Tool No.	Price Each	Tool No.	Price Each	Tool No.	Price Each
7	3/4	1-1/16	8-1/2	12	**J866-607**	50.00	**J866-615**	10.00	**J866-707**	55.00	**J866-715**	13.00
8	7/8	1-3/16	9-1/4	13	**J866-608**	60.00	**J866-616**	11.00	**J866-708**	65.00	**J866-716**	15.00
9	7/8	1-5/16	10	13-3/4	**J866-609**	65.00	**J866-617**	12.00	**J866-709**	75.00	**J866-717**	18.00
10	1	1-1/2	10-3/4	14-3/4	**J866-610**	75.00	**J866-618**	15.00	**J866-710**	85.00	**J866-718**	20.00
11	1-1/4	1-3/4	12-3/4	16-3/4	**J866-611**	85.00	**J866-619**	20.00	**J866-711**	95.00	**J866-719**	25.00
12	1-3/8	2	15	19-3/4	**J866-612**	95.00	**J866-620**	25.00	–	–	–	–

Easy-Bore™ Boring Bars

Exclusively By apt USA Approved Performance Tooling

MADE IN USA

- Precision broached holes accept standard tool bits
- Use in any typical boring operation
- Made of stress resistant steel to minimize or eliminate vibration
- Easily reworked to accept adjustable boring tips for high precision boring

Double End 45°/90° Style

Bar Diameter	Tool Bit Diameter	Overall Length	Tool No.	Price Each
1/4	5/32 round	5	**BD1**	16.45
5/16	3/16 round	5	**BD2**	18.72
3/8	3/16 round	6	**BD3**	20.28
1/2	3/16 square	6	**BD4**	26.52
9/16	3/16 square	9	**BD5**	29.90
5/8	1/4 square	10	**BD6**	31.20
3/4	1/4 square	12	**BD7**	35.88
1	5/16 square	12	**BD9**	44.72
1	3/8 square	12	**BD9X**	44.72
1-1/4	1/2 square	16	**BD11**	74.10
1-1/2	1/2 square	18	**BD15**	98.67

Prices do not include tool bits. Replacement screws available. Please inquire.



45° & 90° Combined

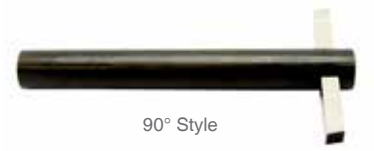
Single End 45° Style & 90° Style

Bar Diameter	Tool Bit Diameter	Overall Length	Tool No.		Price Each
			45° Style	90° Style	
1/4	5/32 round	2-1/2	**BA1**	**BS1**	9.88
5/16	3/16 round	2-1/2	**BA2**	**BS2**	11.25
3/8	3/16 round	3	**BA3**	**BS3**	12.09
1/2	3/16 square	3	**BA4**	**BS4**	16.06
9/16	3/16 square	4-1/2	**BA5**	**BS5**	18.20
5/8	1/4 square	5	**BA6**	**BS6**	18.85
3/4	1/4 square	6	**BA7**	**BS7**	21.71
1	5/16 square	6	**BA9**	**BS9**	27.30
1	3/8 square	6	**BA9X**	**BS9X**	27.30
1-1/4	1/2 square	8	**BA11**	**BS11**	44.46
1-1/2	1/2 square	9	**BA15**	**BS15**	59.28

Prices do not include tool bits. Replacement screws available. Please inquire.



45° Style



90° Style



Sets

Sizes	Pieces	Set No.	Price
BD1, BD3, BD4, BD6, BD7	5	**BD459**	130.00

Set does not include tool bits.

All sets are supplied in wood block.

Boring Tool Holder

Boring Bar Diameter	Tool Bit Size	Size of Holder	Tool No.	Price Each
9/16	3/16	3/8 x 7/8 x 5-3/8	**THB2**	88.40
3/4	1/4	1/2 x 1-1/8 x 6-1/8	**THB3**	102.70



MDX® SUPERIOR IMPORT

High Speed Cobalt

Tool Bits

Size	Overall Length	Price Each			
		H.S. Round **Tool No 704**	H.S. Square **Tool No 700**	5% Cobalt Square **Tool No. 700C**	8% Super Cobalt Square **Tool No 700SC**
5/32	3-1/8	2.92	–	–	–
3/16	2-1/2	–	2.82	3.83	5.04
3/16	3-1/2	4.50	–	–	–
1/4	2-1/2	–	2.92	4.32	6.21
1/4	4	–	4.49	6.80	
5/16	2-1/2	–	3.34	5.04	7.92
5/16	4	–	5.71	8.66	–
3/8	4	–	6.23	9.68	–
1/2	4	–	9.36	15.21	18.72
1/2	6	–	13.64	20.76	–



Lathe Tooling

Carbon, High Speed, & Carbide Tipped

Hardened and Ground

MDX® SUPERIOR IMPORT

Morse Taper Lathe Dead Centers

60° Included point Angle

List No. **LA100** – Carbon Alloy
List No. **LA200** – High Speed Steel
List No. **LA300** – Carbide Tipped



Morse Taper	Overall Length	Price Each Carbon LA100	Price Each High Speed LA200	Price Each Carbide Tipped LA300
0	2-7/8	3.19	6.44	9.75
1	3-3/16	3.19	6.44	9.75
2	3-15/16	3.84	8.45	12.35
3	4-15/16	6.18	11.38	20.41
4	6-5/16	8.78	17.94	29.71
5	7-7/8	17.55	37.70	49.40
6	11	41.54	70.20	90.35

Jarno Taper Lathe Centers

List No. **LA100J** – Carbon Steel
List No. **LA200J** – High Speed Steel
List No. **LA300J** – Carbide Tipped



Jarno Taper	Price Each Carbon LA100J	Price Each High Speed LA200J	Price Each Carbide Tipped LA300J
4	–	94.03	–
5	79.12	98.90	–
6	83.29	104.11	–
7	–	109.59	119.36
8	–	140.68	151.45
9	–	142.21	153.55
10	–	148.76	160.01
11	–	156.60	168.56
12	–	166.08	177.42
13	–	234.26	261.28
14	–	–	273.99

Heavy Duty Morse Taper Live Centers

Precision High Quality Bearings

List No. **LA400** – Precision Grade
List No. **LA500** – Superior Precision Grade



Morse Taper	Max. Lbs. of Work Piece	Precision LA400 Tolerance	Precision LA400 Price Each	Super Precision LA500 Tolerance	Super Precision LA500 Price Each
1	220	.0003	38.68	.0002	62.40
2	460	.0003	51.35	.0001	76.70
3	925	.0003	68.25	.0001	89.70
4	1850	.0003	90.35	.0001	123.50
5	4400	.0004	128.70	.0002	165.10
6	7700	.0004	240.50	.0002	403.00

Brown & Sharpe Lathe Centers

List No. **LA100B** – Carbon Steel
List No. **LA200B** – High Speed Steel
List No. **LA300B** – Carbide Tipped



B & S Taper	Price Each Carbon LA100B	Price Each High Speed LA200B	Price Each Carbide Tipped LA300B
5	59.58	74.48	–
6	–	48.40	–
7	66.02	82.53	91.89
8	87.90	109.85	–
9	97.54	121.93	135.98
10	121.89	152.37	175.69
11	–	228.56	255.06
12	200.70	250.88	277.92

Half Centers

List No. **LA250M**– High Speed Steel
List No. **LA350M** – Carbide Tipped



Taper Style	Price Each High Speed LA250M	Price Each Carbide Tipped LA350M
Morse Taper 2	66.60	51.39
Morse Taper 3	100.98	94.23
Morse Taper 4	146.97	110.07
Morse Taper 5	266.40	171.72
Brown & Sharpe 7	78.03	87.30
Brown & Sharpe 9	119.43	133.20
Brown & Sharpe 10	165.42	183.69
Jarno Taper 6	78.03	86.76
Jarno Taper 10	156.24	179.19
Jarno Taper 12	195.21	222.05

Long-Nose Live Centers

Head Driving Type for N/C & Copying Lathes



These N/C live centers are designed to withstand dust, chips and coolant coming inside the bearings, preventing down time. Trouble free high speed operation is insured, and guaranteed with in .0002". Hardened to 61-65 Rockwell "C" and ground. Load factor is high in comparison with standard live centers.

Morse Taper	Tolerance	OAL	Model No.	Price Each
3	.0002	6.45	LA400L-3	215.55
4	.0002	7.35	LA400L-4	252.18
5	.0002	10.55	LA400L-5	502.92

Lathe Tooling

Hardened and Ground

MDX® SUPERIOR IMPORT

Bullnose Live Centers



- Designed to hold pipe and hollow work.
- Preloaded bearings to achieve good thrust and radial capacities.
- Head made from heat treated hardened high carbon alloy steel.

Morse Taper	Small End	Large End	Tool No.	Price Each
2	1/2	2-7/16	**LA600-2**	94.64
3	3/4	3	**LA600-3**	159.64
3	1-1/4	4	**LA600-3A**	171.44
3	1-1/2	5	**LA600-3B**	240.64
4	1-3/8	5	**LA600-4**	236.00
4	2	6	**LA600-4A**	276.96
5	1-3/8	6	**LA600-5**	313.92
5	2-1/8	8	**LA600-5A**	807.20

Live Center Sets with seven Inserts

The body of these sets are constructed similar to Series 312 Live Centers, however, for versatility the bodies are provided with the following seven interchangeable inserts:

- 2 large male centers
- 1 female center
- 3 smaller, different sized male centers
- 1 bullnose center



Morse Taper	Model No.	Price Each
2	**LASET-2**	177.75
3	**LASET-3**	182.25
4	**LASET-4**	201.15
5*	**LASET-5**	304.12

*Supplied with three inserts only.

Lathe Mandrels

Made of hardened steel and accurately ground to size. Designed for setting up accurately bored or reamed blanks and castings for pulleys, handwheels or hubs on centers, so that the outside diameter can be turned concentrically with the axis of the hole in which the mandrel is fixed.



Size	Overall Length	Tool No.	Price Each
1/8	2-1/2	**LM4**	7.09
5/32	3	**LM5**	7.74
3/16	3	**LM6**	7.74
7/32	3-3/4	**LM7**	8.45
1/4	3-3/4	**LM8**	8.45
9/32	4	**LM9**	8.78
5/16	4	**LM10**	8.78
11/32	4-1/4	**LM11**	9.04
3/8	4-1/4	**LM12**	9.04
13/32	4-1/2	**LM13**	9.75
7/16	4-1/2	**LM14**	9.75
29/64	4-1/2	**LM14A**	10.72
15/32	5	**LM15**	11.05
31/64	5	**LM15A**	12.16
1/2	5	**LM16**	11.05
33/64	5	**LM16A**	12.16
17/32	5-1/4	**LM17**	12.48
35/64	5	**LM17A**	13.73
9/16	5-1/4	**LM18**	12.48
37/64	5-1/4	**LM18A**	13.73
19/32	5-1/2	**LM19**	12.48
5/8	5-1/2	**LM20**	12.48
21/32	5-3/4	**LM21**	12.94
43/64	5-1/2	**LM21A**	14.24
11/16	5-3/4	**LM22**	12.94
45/64	5-3/4	**LM22A**	14.24

Size	Overall Length	Tool No.	Price Each
23/32	6	**LM23**	12.94
47/64	6	**LM23A**	14.24
3/4	6	**LM24**	12.94
49/64	6	**LM24A**	14.23
25/32	6-1/4	**LM25**	16.25
51/64	6	**LM25A**	17.88
13/16	6-1/4	**LM26**	16.25
53/64	6-1/4	**LM26A**	17.88
27/32	6-1/2	**LM27**	16.25
55/64	6-1/2	**LM27A**	17.88
7/8	6-1/2	**LM28**	16.25
57/64	6-1/2	**LM28A**	17.88
29/32	6-3/4	**LM29**	17.88
59/64	6-3/4	**LM29A**	19.67
15/16	6-3/4	**LM30**	17.88
61/64	6-3/4	**LM30A**	19.67
31/32	7	**LM31**	17.88
63/64	6-3/4	**LM31A**	19.67
1	7	**LM32**	17.88
1-1/32	7	**LM33**	22.43
1-1/16	7-1/4	**LM34**	22.43
1-3/32	7-1/4	**LM35**	24.00
1-1/8	7-1/2	**LM36**	22.43
1-5/32	7-3/4	**LM37**	24.00
1-3/16	7-3/4	**LM38**	25.94
1-7/32	7-1/2	**LM39**	28.53

Size	Overall Length	Tool No.	Price Each
1-1/4	8	**LM40**	25.94
1-17/64	8	**LM40A**	31.85
1-9/32	8	**LM41**	31.85
1-5/16	8-1/4	**LM42**	31.85
1-11/32	8-1/4	**LM43**	31.85
1-3/8	8-1/2	**LM44**	31.85
1-13/32	8-1/2	**LM45**	37.05
1-7/16	8-3/4	**LM46**	37.05
1-15/32	8-3/4	**LM47**	40.76
1-1/2	9	**LM48**	37.05
1-9/16	9-1/4	**LM50**	41.93
1-5/8	9-1/2	**LM52**	41.93
1-11/16	9-3/4	**LM54**	47.45
1-3/4	10	**LM56**	47.45
1-13/16	10-1/4	**LM58**	54.28
1-7/8	10-1/2	**LM60**	54.28
1-15/16	10-3/4	**LM62**	59.15
2	11	**LM64**	59.15
2-1/8	11-1/2	**LM68**	64.68
2-1/4	12	**LM72**	72.48
2-3/8	12	**LM76**	77.68
2-1/2	12-1/2	**LM82**	87.10
2-5/8	12-1/2	**LM84**	101.40
2-3/4	13	**LM88**	110.50
2-7/8	13	**LM92**	115.70
3	13	**LM96**	128.70

Expanding Mandrels

Center holes are ground and lapped. Automatic expansion feature can be utilized on any bore within the range of the mandrel. Sizes up to 1" furnished with one sleeve, over 1" two sleeves.



Sets

Size	Pieces	Set No.	Price
1/2 to 1"	5	**LME100**	466.70

Size Range	Length of Arbor	Length of Sleeve	Sleeves Furnished	Tool No.	Price Each
1/2 - 9/16	5	2-1/2	1	**LME1**	71.50
9/16 - 21/32	6	2-3/4	1	**LME2**	89.70
21/32 - 3/4	7	2-3/4	1	**LME3**	93.60
3/4 - 7/8	7	3-1/4	1	**LME4**	109.20
7/8 - 1	7	3-1/4	1	**LME5**	116.35

Size Range	Length of Arbor	Length of Sleeve	Sleeves Furnished	Tool No.	Price Each
1 - 1-1/4	9	4	2	**LME6**	206.70
1-1/4 - 1-1/2	9	4	2	**LME7**	220.35
1-1/2 - 2	11-1/2	5	2	**LME8**	240.50
2 - 2-3/4	14	6	2	**LME9**	576.24
2-3/4-3-3/4	17	7	2	**LME10**	735.98

Adjustable Clamp/Chipbreaker Indexable Turning Tool Holders

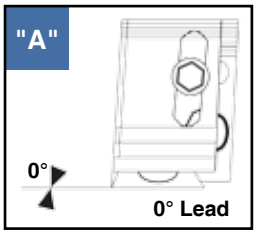
Exclusively By apt USA Approved Performance Tooling

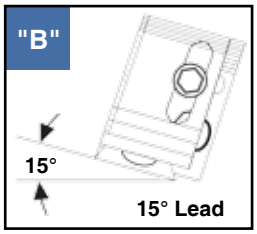
MADE IN USA

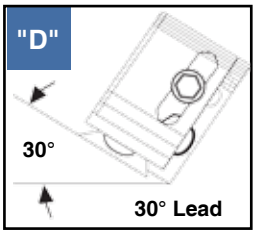
Small Shank Series

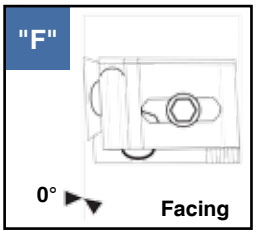
- No tool like it on the market!
- Each tool has precision hardened and ground pockets
- Uses inexpensive 1/4" I.C. triangle inserts
- Replaces old style brazed tip tool bits

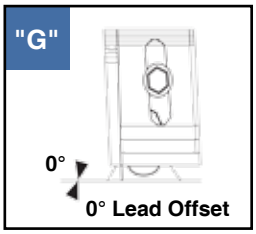












Positive Rake

Style	Shank Height & Width	OAL	Tool No. "A" Series 0° Lead	"B" Series 15° Lead	"D" Series 30° Lead	"F" Series Facing Tool	"G" Series 0° Lead Offset	Price Each
Right Hand	3/8	2-1/2	MPAR-6	MPBR-6	MPDR-6	MPFR-6	MPGR-6	34.45
	1/2	3-1/2	MPAR-8	MPBR-8	MPDR-8	MPFR-8	MPGR-8	37.44
	5/8	4	MPAR-10	MPBR-10	MPDR-10	MPFR-10	MPGR-10	42.25
Left Hand	3/8	2-1/2	MPAL-6	MPBL-6	MPDL-6	MPFL-6	MPGL-6	34.45
	1/2	3-1/2	MPAL-8	MPBL-8	MPDL-8	MPFL-8	MPGL-8	37.44
	5/8	4	MPAL-10	MPBL-10	MPDL-10	MPFL-10	MPGL-10	42.25

Negative Rake

Style	Shank Height & Width	OAL	Tool No. "A" Series 0° Lead	"B" Series 15° Lead	"D" Series 30° Lead	"F" Series Facing Tool	"G" Series 0° Lead Offset	Price Each
Right Hand	3/8	2-1/2	MNAR-6	MNBR-6	MNDR-6	MNFR-6	MNGR-6	34.45
	1/2	3-1/2	MNAR-8	MNBR-8	MNDR-8	MNFR-8	MNGR-8	37.44
	5/8	4	MNAR-10	MNBR-10	MNDR-10	MNFR-10	MNGR-10	42.25
Left Hand	3/8	2-1/2	MNAL-6	MNBL-6	MNDL-6	MNFL-6	MNGL-6	34.45
	1/2	3-1/2	MNAL-8	MNBL-8	MNDL-8	MNFL-8	MNGL-8	37.44
	5/8	4	MNAL-10	MNBL-10	MNDL-10	MNFL-10	MNGL-10	42.25

Inserts sold separately.

Sets

Description	Size	Pcs.	Set No.	Price
3/8" Shank - Positive Rake	MPBR-6, MPDR-6, MPFR-6, MPGR-6	4	MP12S	128.70
3/8" Shank - Negative Rake	MNBR-6, MNDR-6, MNFR-6, MNGR-6	4	MN12S	128.70
1/2" Shank - Positive Rake	MPBR-8, MPDR-8, MPFR-8, MPGR-8	4	MP38S	139.10
1/2" Shank - Negative Rake	MNBR-8, MNDR-8, MNFR-8, MNGR-8	4	MN38S	139.10



TPG Carbide Inserts

Triangle — Positive rake - Ground all over



Insert Number	I.C.	Width	Radius	Price Each C-2	C-6	TiN Coated*
TPG221	1/4	1/8	1/64	5.70	5.70	6.90
TPG222	1/4	1/8	1/32	5.70	5.70	6.90
TPG223	1/4	1/8	3/64	5.70	5.70	6.90

** TiN coated is C-6 grade*

TNG Carbide Inserts

Triangle — Negative rake - Ground all over



Insert Number	I.C.	Width	Radius	Price Each C-2	C-6	TiN Coated*
TNG221	1/4	1/8	1/64	3.66	3.66	5.26
TNG222	1/4	1/8	1/32	3.66	3.66	5.26

** TiN coated is C-6 grade*

Replacement Parts List

Part No.	Description	Price Each
Part CMD	Combination Clamp & Chipbreaker	8.52
Part CS540-12	Clamp Screw	0.52





Adjustable Clamp/Chipbreaker Indexable Turning Tool Holders

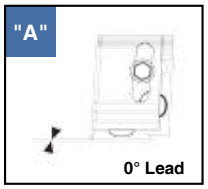
Exclusively By apt USA Approved Performance Tooling

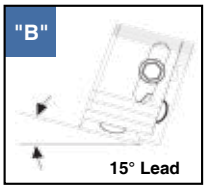
MADE IN USA

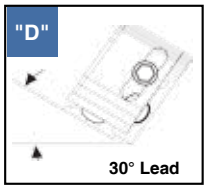
Large Shank Series

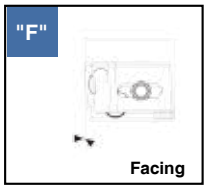
- Adjustable chipbreaker eliminates stocking various sizes
- Precision hardened and ground pockets
- Regrind inserts at substantial savings
- Tools are easily repaired by simply replacing the cartridge
- Uses standard 3/8" and 1/2" I.C. triangle inserts

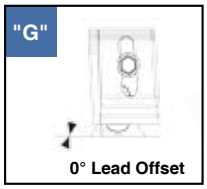














Positive Rake

Style	(A) OAL	(B) Shank Width	(C) Shank Height	Insert I.C.	Tool No. "A" Series 0° Lead	Tool No. "B" Series 15° Lead	Tool No. "D" Series 30° Lead	Tool No. "F" Series Facing Tool	Tool No. "G" Series 0° Lead Offset	Price Each
Right Hand	4-1/2	3/4	3/4	3/8	PTAR12	PTBR12	PTDR12	PTFR12	PTGR12	50.05
	6	1	1	3/8	PTAR16	PTBR16	PTDR16	PTFR16	PTGR16	58.50
	6	1	1	1/2	PTAR16A	PTBR16A	PTDR16A	PTFR16A	PTGR16A	58.50
	6	1-1/4	1-1/4	1/2	PTAR20	PTBR20	PTDR20	PTFR20	PTGR20	63.70
	6	1	1-1/4	3/8	PTAR85	PTBR85	PTDR85	PTFR85	PTGR85	63.70
	6	1	1-1/4	1/2	PTAR85A	PTBR85A	PTDR85A	PTFR85A	PTGR85A	63.70
	6	1	1-1/2	1/2	PTAR86	PTBR86	PTDR86	PTFR86	PTGR86	68.25
Left Hand	4-1/2	3/4	3/4	3/8	PTAL12	PTBL12	PTDL12	PTFL12	PTGL12	50.05
	6	1	1	3/8	PTAL16	PTBL16	PTDL16	PTFL16	PTGL16	58.50
	6	1	1	1/2	PTAL16A	PTBL16A	PTDL16A	PTFL16A	PTGL16A	58.50
	6	1-1/4	1-1/4	1/2	PTAL20	PTBL20	PTDL20	PTFL20	PTGL20	63.70
	6	1	1-1/4	3/8	PTAL85	PTBL85	PTDL85	PTFL85	PTGL85	63.70
	6	1	1-1/4	1/2	PTAL85A	PTBL85A	PTDL85A	PTFL85A	PTGL85A	63.70
	6	1	1-1/2	1/2	PTAL86	PTBL86	PTDL86	PTFL86	PTGL86	68.25

Negative Rake

Style	(A) OAL	(B) Shank Width	(C) Shank Height	Insert I.C.	Tool No. "A" Series 0° Lead	Tool No. "B" Series 15° Lead	Tool No. "D" Series 30° Lead	Tool No. "F" Series Facing Tool	Tool No. "G" Series 0° Lead Offset	Price Each
Right Hand	4-1/2	3/4	3/4	3/8	NTAR12	NTBR12	NTDR-12	NTFR12	NTGR12	50.05
	6	1	1	3/8	NTAR16	NTBR16	NTDR-16	NTFR16	NTGR16	58.50
	6	1	1	1/2	NTAR16A	NTBR16A	NTDR-16A	NTFR16A	NTGR16A	58.50
	6	1-1/4	1-1/4	1/2	NTAR20	NTBR20	NTDR-20	NTFR20	NTGR20	63.70
	6	1	1-1/4	3/8	NTAR85	NTBR85	NTDR-85	NTFR85	NTGR85	63.70
	6	1	1-1/4	1/2	NTAR85A	NTBR85A	NTDR-85A	NTFR85A	NTGR85A	63.70
	6	1	1-1/2	1/2	NTAR86	NTBR86	NTDR-86	NTFR86	NTGR86	68.25
Left Hand	4-1/2	3/4	3/4	3/8	NTAL12	NTBL12	NTDL12	NTFL12	NTGL12	50.05
	6	1	1	3/8	NTAL16	NTBL16	NTDL16	NTFL16	NTGL16	58.50
	6	1	1	1/2	NTAL16A	NTBL16A	NTDL16A	NTFL16A	NTGL16A	58.50
	6	1-1/4	1-1/4	1/2	NTAL20	NTBL20	NTDL20	NTFL20	NTGL20	63.70
	6	1	1-1/4	3/8	NTAL85	NTBL85	NTDL85	NTFL85	NTGL85	63.70
	6	1	1-1/4	1/2	NTAL85A	NTBL85A	NTDL85A	NTFL85A	NTGL85A	63.70
	6	1	1-1/2	1/2	NTAL86	NTBL86	NTDL86	NTFL86	NTGL86	68.25

Inserts sold separately.

Replacement Parts List

Description	Tool No. For 3/8" I.C. Right Hand	Tool No. For 3/8" I.C. Left Hand	Price Each	Tool No. For 1/2" I.C. Right Hand	Tool No. For 1/2" I.C. Left Hand.	Price Each
Cartridge-Positive	Part CP3R	Part CP3L	17.20	Part CP4R	Part CP4L	19.81
Cartridge-Negative	Part CN3R	Part CN3L	17.20	Part CN4R	Part CN4L	19.81
Cartridge Screw	Part CS540-38	Part CS540-38	0.46	Part CS1032-12	Part CS1032-12	0.65
Positive Shim	SHIM41	SHIM41	4.88	SHIM37	SHIM37	5.97
Negative Shim	SHIM48	SHIM48	5.19	SHIM26	SHIM26	5.60
Shim Screw	Part CF440-14	Part CF440-14	0.46	Part CF832-38	Part CF832-38	0.46
Chipbreaker	Part CB-3	Part CB-3	3.89	Part CB-4	Part CB-4	6.36
Roll Pin	Part CRP-1	Part CRP-1	0.46	Part CRP-2	Part CRP-2	0.46
Clamp	Part CR-3	Part CL-3	8.75	Part CR-4	Part CL-4	9.72
Clamp Screw	Part CS1032-34	Part CS1032-34	0.46	Part CS1420-1	Part CS1420-1	0.46

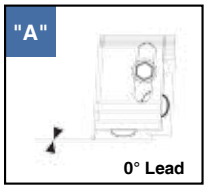
Indexable Turning Tool Holders

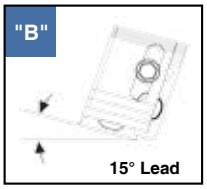
Exclusively By apt USA Approved Performance Tooling

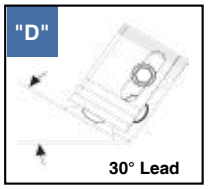
- Each tool has precision pockets
- Replaces old style brazed tip tool bits
- Uses inexpensive 1/4" and 3/8" I.C. triangle inserts

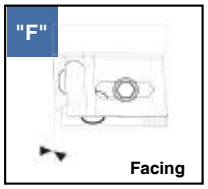


MADE IN USA













Holders

Inserts sold separately.

Style	(A) OAL	(B) Shank Width	Insert I.C.	Tool No. "A" Series 0° Lead	"B" Series 15° Lead	"D" Series 30° Lead	"F" Series Facing Tool	"G" Series 0° Lead Offset	Price Each
Right Hand	2-1/2	3/8	1/4	TPAR6	TPBR6	TPDR6	TPFR6	TPGR6	31.53
	3-1/2	1/2	1/4	TPAR8	TPBR8	TPDR8	TPFR8	TPGR8	34.78
	4	5/8	1/4	TPAR10	TPBR10	TPDR10	TPFR10	TPGR10	37.05
	4-1/2	3/4	3/8	TPAR12	TPBR12	TPDR12	TPFR12	TPGR12	47.78
	6	1	3/8	TPAR16	TPBR16	TPDR16	TPFR16	TPGR16	55.25
	6	1-1/4	3/8	TPAR20	TPBR20	TPDR20	TPFR20	TPGR20	60.78
Left Hand	2-1/2	3/8	1/4	TPAL6	TPBL6	TPDL6	TPFL6	TPGL6	31.53
	3-1/2	1/2	1/4	TPAL8	TPBL8	TPDL8	TPFL8	TPGL8	34.78
	4	5/8	1/4	TPAL10	TPBL10	TPDL10	TPFL10	TPGL10	37.05
	4-1/2	3/4	3/8	TPAL12	TPBL12	TPDL12	TPFL12	TPGL12	47.78
	6	1	3/8	TPAL16	TPBL16	TPDL16	TPFL16	TPGL16	55.25
	6	1-1/4	3/8	TPAL20	TPBL20	TPDL20	TPFL20	TPGL20	60.78

Sets

Description	Sizes	Pieces	Set No.	Price
3/8" Shank	TPAR6, TPBR6, TPAL6, TPBL6	4	TP6	125.00
1/2" Shank	TPAR8, TPBR8, TPAL8, TPBL8	4	TP8	139.00

Replacement Parts List

Part No.	Description	Price
Part TF440195	Torx® drive flat head screw for 1/4" I.C.	1.95
Part TF832285	Torx® flat head cap screw for 3/8" I.C.	2.54
Part CTW6	Torx® Wrench for TF440-195	2.54
Part CTW10	Torx® Wrench for TF832-285	3.19

TPGH Carbide Inserts



Triangle - Positive rake - Ground all over with chip groove on one side

Insert Number	I.C.	Width	Radius	Price Each C-2	C-6	TiN Coated*
TPGH21.50	1/4	3/32	0	6.80	6.80	7.96
TPGH21.51	1/4	3/32	1/64	6.80	6.80	7.96
TPGH21.52	1/4	3/32	1/32	6.80	6.80	7.96
TPGH321	3/8	1/8	1/64	7.42	7.42	9.04
TPGH322	3/8	1/8	1/32	7.42	7.42	9.04

** TiN coated is C-6 grade*

Indexable Profile/Tracing Tool holders

MADE IN USA

-5° Lead Angle - Negative Rake

Exclusively By apt USA Approved Performance Tooling



Inserts sold separately.

Insert Number	Overall Length	I.C.	Thick-ness	Tool No. Left Hand	Right Hand	Price Each
3/4	3/4	6	1/2	TR80L12	TR80R12	45.50
1	1	6	3/4	TR80L16A	TR80R16A	54.60
1-1/4	1-1/4	7	3/4	TR80L20	TR80R20	58.50
1-1/4	1	6	1/2	TR80L85	TR80R85	58.50
1-1/4	1	6	3/4	TR80L85A	TR80R85A	58.50
1-1/2	1	7	3/4	TR80L86	TR80R86	62.40

CNMP & CNMG Carbide Inserts



Insert Number	I.C.	Width	Radius	Price Each C-2	C-6	TiN Coated*
CNMG431	1/2	3/16	1/64	4.96	4.96	5.66
CNMG432	1/2	3/16	1/32	4.96	4.96	5.66
CNMG643	3/4	1/4	3/64	10.72	10.72	14.08
CNMG644	3/4	1/4	1/16	10.72	10.72	14.08

Insert Number	I.C.	Width	Radius	Price Each C-2	C-6	TiN Coated*
CNMP431	1/2	3/16	1/64	6.12	6.12	7.04
CNMP432	1/2	3/16	1/32	6.12	6.12	7.04
CNMP433	1/2	3/16	3/64	6.12	6.12	7.04

** TiN coated is C-6 grade*

Replacement Parts List

Part No.	Description	Price Each
Part TRC1	1/2 I.C. Hold Down Clamp	9.75
Part CS1032-58	Screw for TRC-1 Clamp	0.65
Part TRC2	3/4 I.C. Hold Down Clamp	13.52
Part CS1428-78	Screw for TRC-2 Clamp	0.52

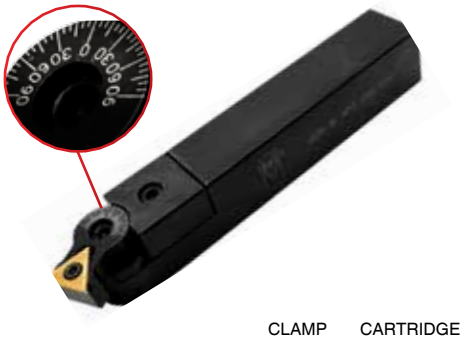
Versadex™ - Adjustable Angle Turning & Chamfering Tool

Exclusive By APT

Degree Angles 0° to 180°

- Use full width of insert with no chip interference
- Set at any angle from 0º to 180º
- Allows right hand and left hand cutting
- Tool comes complete with C-6 grade insert, and wrenches

Insert Number	Shank Size	Overall Length	Price Each
VER12	3/4	6	193.70
VER16	1	6	206.70
VER20	1-1/4	6	232.70





TPGH Carbide Inserts

Triangle - Positive rake - Ground all over with chip groove on one side



Insert Number	Radius	I.C.	Thickness	Price Each		
				C-2	C-6	TiN Coated*
TPGH321	3/8	1/8	1/64	7.42	7.42	9.04
TPGH322	3/8	1/8	1/32	7.42	7.42	9.04

** TiN coated is C-6 grade*

Replacement Parts List

Part No.	Description	Price Each
Part VERCR	Versadex Cartridge	21.40
Part VERCL	Versadex Clamp	18.58
Part TF832-285	Torx® drive flat head screw for insert	2.46
Part CTW10	Torx® wrench T10	3.45
Part CS1032-34	Clamp screw	0.49
Part CSW2	5/32 allen wrench for clamp screw	0.70

Milldex™ - Adjustable Angle Milling & Chamfering Tool

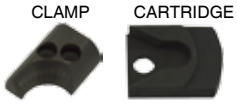
Exclusively By Approved Performance Tooling

Degree Angles 5° to 85°

- Change chamfer angle with a quick adjustment
- Can be held in round tool holder or tool post
- Cutting range from 1/4 to 1-1/4
- Tool comes complete with insert and wrenches

Shank Diameter	Shank Style	Overall Length	Distance Across Flats	Tool No.	Price Each
3/4	Weldon	3-3/4	—	**ML750**	206.70
3/4	Round w/4 equal flats	6	5/8	**MLSL750**	237.25
1	Weldon	3-3/4	—	**ML1000**	222.30
1	Round w/4 equal flats	6	7/8	**MLSL1000**	265.20
1-1/4	Weldon	3-3/4	—	**ML1250**	253.50
1-1/4	Round w/4 equal flats	6	1-1/8	**MLSL1250**	293.80
R8	R8	5-7/8	—	**MLR8**	279.50





TPGH Carbide Inserts

Triangle - Positive rake - Ground all over with chip groove on one side



Insert Number	Radius	I.C.	Thickness	Price Each		
				C-2	C-6	TiN Coated*
TPGH321	3/8	1/8	1/64	7.42	7.42	9.04
TPGH322	3/8	1/8	1/32	7.42	7.42	9.04

** TiN coated is C-6 grade*

Replacement Parts List

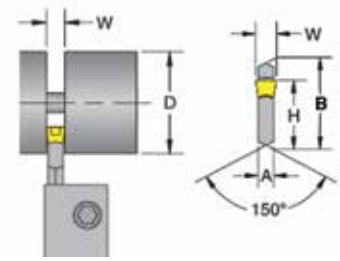
Part No.	Description	Price Each
Part MLCL	Milldex Clamp	21.80
Part MLCR	Milldex Cartridge	18.92
Part TF832-285	Torx® drive flat head screw for insert	2.28
Part CTW-10	Torx® wrench T10	3.19
Part CSW-2	5/32 allen wrench for clamp screw	0.65
Part CS832-12	Clamp screw	0.65

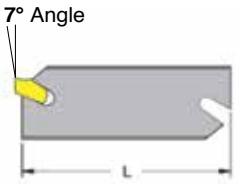
Cut-Off & Grooving Tool System

Blocks & Blades

Interchangeable with other brands
and other major cut-off and tool systems.







Cut-Off & Grooving Blades

Inserts are securely held in self locking blades by a tapered locking system.
No additional clamping devices are needed.

Dimensions					Insert Width	**Tool Number**	Price Each
A	L	H	B	D Maximum Cutting Depth			
1/16	3-3/8	39/64	3/4	1-1/2	.087 & .094	**GIH19-2**	81.25
1/16	4-5/16	53/64	1-1/32	2	.087 & .094	**GIH26-2**	81.25
3/32	4-5/16	53/64	1-1/32	3	.120	**GIH26-3**	88.40
1/8	4-5/16	53/64	1-1/32	3	.160	**GIH26-4**	88.40
5/32	4-5/16	53/64	1-1/32	3	.187 & 200	**GIH26-5**	88.40
13/64	4-5/16	53/64	1-1/32	3	.250	**GIH26-6**	96.72
1/16*	5-7/8	63/64	1-1/4	2	.087 & .094	**GIH32-2**	98.28
3/32	5-7/8	63/64	1-1/4	4	.120	**GIH32-3**	98.28
1/8	5-7/8	63/64	1-1/4	4	.160	**GIH32-4**	102.70
5/32	5-7/8	63/64	1-1/4	5	.187 & .200	**GIH32-5**	99.79
13/64	5-7/8	63/64	1-1/4	5	.250	**GIH32-6**	99.79
17/64	5-7/8	63/64	1-1/4	5-1/2	.315	**GIH32-8**	167.70
5/16	5-7/8	63/64	1-1/4	5-1/2	.375	**GIH32-9**	167.70

** 1/16 at front end only for clearance. Overall thickness is 3/32.*



Carbide Inserts - Neutral

Width	**Insert Number 0° Face Angle**	Price Each		
		C-2	C-6	TiN Coated*
.087	**GTN-2**	7.74	7.74	9.44
.094	**GTN-2.4**	7.74	7.74	9.44
.120	**GTN-3**	7.74	7.74	9.44
.160	**GTN-4**	7.87	7.87	9.58
.187	**GTN-4.8**	9.30	9.30	11.40

**TiN Coated are C-6 grade*

Width	**Insert Number 0° Face Angle**	Price Each		
		C-2	C-6	TiN Coated*
.200	**GTN-5**	9.30	9.30	11.40
.250	**GTN-6**	10.96	10.96	12.18
.315	**GTN-8**	43.34	43.34	48.54
.375	**GTN-9**	47.67	47.67	53.39

Carbide Inserts - Right Hand

Width	**Insert Number**		Price Each		
	0° Face Angle	**8° Face Angle**	C-2	C-6	TiN Coated*
.087	**GTR2-3**	**GTR2-8**	9.76	9.76	11.40
.094	**GTR2.4-3**	**GTR2.4-8**	8.52	8.52	10.22
.120	**GTR3-3**	**GTR3-8**	8.52	8.52	10.22
.160	**GTR4-3**	**GTR4-8**	9.44	9.44	11.32

**TiN Coated are C-6 grade*

Width	**Insert Number**		Price Each		
	0° Face Angle	**8° Face Angle**	C-2	C-6	TiN Coated*
.187	**GTR4.8-3**	**GTR4.8-8**	10.14	10.14	12.26
.200	**GTR5-3**	**GTR5-8**	10.14	10.14	12.26
.250	**GTR6-3**	**GTR6-8**	11.16	11.16	13.50

Carbide Inserts - Left Hand

Width	**Insert Number**		Price Each		
	0° Face Angle	**8° Face Angle**	C-2	C-6	TiN Coated*
.087	**GTL2-3**	**GTL2-8**	9.76	9.76	12.18
.094	**GTL2.4-3**	**GTL2.4-8**	8.52	8.52	10.22
.120	**GTL3-3**	**GTL3-8**	8.52	8.52	10.22
.160	**GTL4-3**	**GTL4-8**	9.44	9.44	11.32

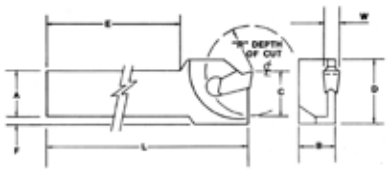
**TiN Coated are C-6 grade*

Width	**Insert Number**		Price Each		
	0° Face Angle	**8° Face Angle**	C-2	C-6	TiN Coated*
.187	**GTL4.8-3**	**GTL4.8-8**	10.14	10.14	12.26
.200	**GTL5-3**	**GTL5-8**	10.14	10.14	12.26
.250	**GTL6-3**	**GTL6-8**	11.16	11.16	13.50

Cut-Off & Grooving Tool System

Blocks & Blades

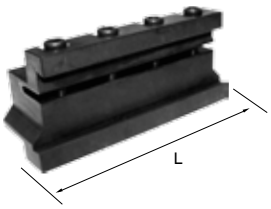
Interchangeable with other brands
and other major cut-off and tool systems.

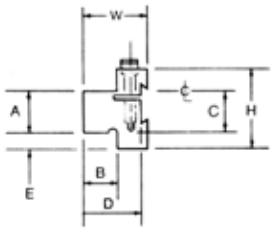




Tool Holders

Dimensions									Insert Number	Tool Number		Price Each
A	B	C	D	E	F	L	R	Width		Left Hand	Right Hand	
3/8	3/8	3/8	3/4	2-3/4	3/16	3-3/8	1/2	.087, .094	GTN/R/L-2,2.4	**GTHL10-2**	**GTHR10-2**	69.91
12mm	3/8	15/32	3/4	3-37/64	5/32	4-5/16	19/32	.087, .094	GTN/R/L-2,2.4	**GTHL12-2**	**GTHR12-2**	76.38
1/2	3/8	1/2	3/4	3-37/64	5/32	4-5/16	19/32	.087, .094	GTN/R/L-2,2.4	**GTHL12.7-2**	**GTHR12.7-2**	80.00
1/2	3/8	1/2	3/4	3-37/64	5/32	4-5/16	5/8	.120	GTN/R/L-3	**GTHL12.7-3**	**GTHR12.7-3**	80.00
5/8	3/8	5/8	3/4	3-37/64	0	4-5/16	19/32	.087, .094	GTN/R/L-2,2.4	**GTHL16-2**	**GTHR16-2**	81.72
5/8	1/2	5/8	1	3-29/64	11/64	4-5/16	5/8	.120	GTN/R/L-3	**GTHL16-3**	**GTHR16-3**	85.71
5/8	1/2	5/8	1	3-29/64	11/64	4-5/16	5/8	.160	GTN/R/L-4	**GTHL16-4**	**GTHR16-4**	90.56
3/4	1/2	3/4	1	3-29/64	0	4-5/16	5/8	.087, .094	GTN/R/L-2,2.4	**GTHL19-2**	**GTHR19-2**	98.07
3/4	1/2	3/4	1	3-29/64	0	4-5/16	5/8	.120	GTN/R/L-3	**GTHL19-3**	**GTHR19-3**	91.82
3/4	1/2	3/4	1	3-29/64	1/16	4-5/16	3/4	.160	GTN/R/L-4	**GTHL19-4**	**GTHR19-4**	98.07
3/4	1/2	3/4	1	4-7/16	3/64	4-5/16	3/4	.187, .200	GTN/R/L-4.8,5	**GTHL19-5**	**GTHR19-5**	99.76





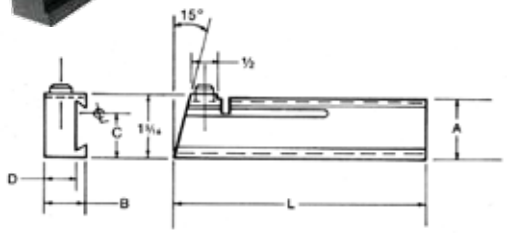
Tool Blocks - Neutral

Dimensions								Use Blade Number	Tool Number	Price Each
A	B	C	D	E	H	W	L			
5/8	5/8	5/8	31/32	11/64	1-3/16	1-1/16	3	GIH19-2	**GTBN16-2**	139.48
5/8	5/8	5/8	1-1/32	7/16	1-1/2	1-3/16	3	GIH26-2,3,4,5,6	**GTBN16-5**	140.96
3/4	3/4	3/4	1-1/8	21/64	1-17/32	1-5/16	3-3/8	GIH26-2,3,4,5,6	**GTBN19-5**	152.75
3/4	3/4	3/4	1-1/8	1/2	1-7/8	1-3/8	4	GIH32-2,3,4,5,6,8,9	**GTBN19-6**	152.75
1	1	1	1-13/32	5/16	1-7/8	1-5/8	4-3/8	GIH32-2,3,4,5,6,8,9	**GTBN25-6**	154.70
1-1/4	1-1/4	1-1/4	1-11/16	1/8	1-7/8	1-7/8	4-11/16	GIH32-2,3,4,5,6,8,9	**GTBN32-6**	162.50

Tool Blocks - Left & Right Hand

Dimensions					Use Blade Number	Tool Number	Price Each
A	B	C	D	L			
1	3/4	3/4	43/64	4	GIH19-2	**GTBR19-2**	102.70
1	3/4	3/4	43/64	4	GIH19-2	**GTBL19-2**	102.70
1-1/4	25/32	1	19/32	4-3/4	GIH26-2,3,4,5,6	**GTBR25-6**	102.70
1-1/4	25/32	1	19/32	4-3/4	GIH26-2,3,4,5,6	**GTBL25-6**	102.70





Replacement Parts List

Part No.	Description	Price Each
Part GEX1	Insert Extractor for .087-.250	4.55
Part GEX2	Insert Extractor for .315-.375	4.55

Carbide Tipped Tool Bits

High Speed Steel Body

Please specify grade when ordering:
C-2 Cast Iron and nonferrous materials or C-6 Steel and ferrous materials.

AR & AL - Straight Turning Tool Bits

For turning on the outside of the part.

Shank Diameter	Overall Length	Tool No.		Price Each
		Right Hand	Left Hand	
1/4	2	**AR4U**	**AL4U**	6.98
5/16	2-1/4	**AR5U**	**AL5U**	7.99
3/8	2-1/2	**AR6U**	**AL6U**	8.30
7/16	3	**AR7U**	**AL7U**	8.63
1/2	3-1/2	**AR8U**	**AL8U**	10.78
5/8	4	**AR10U**	**AL10U**	15.21
3/4	4-1/2	**AR12U**	**AL12U**	18.98
1	7	**AR16U**	**AL16U**	35.28



BR & BL - 15° Lead Angle Turning Tool Bits

For turning on the outside of the part.

Shank Diameter	Overall Length	Tool No.		Price Each
		Right Hand	Left Hand	
1/4	2	**BR4U**	**BL4U**	6.98
5/16	2-1/4	**BR5U**	**BL5U**	7.99
3/8	2-1/2	**BR6U**	**BL6U**	8.30
7/16	3	**BR7U**	**BL7U**	8.63
1/2	3-1/2	**BR8U**	**BL8U**	10.78
5/8	4	**BR10U**	**BL10U**	15.21
3/4	4-1/2	**BR12U**	**BL12U**	18.98
1	7	**BR16U**	**BL16U**	35.28



C- Square Nose Tool Bits

For chamfering or special designs.



Shank Diameter	Overall Length	Tool No.	Price Each
1/4	2	**C4U**	7.09
5/16	2-1/4	**C5U**	8.66
3/8	2-1/2	**C6U**	8.73
7/16	3	**C7U**	10.00
1/2	3-1/2	**C8U**	11.83
5/8	4	**C10U**	17.43
3/4	4-1/2	**C12U**	24.32
1	7	**C16U**	41.79

D - Pointed Nose Tool Bits

For chamfering corners on the outside or inside of the part. 80° Included angle.



Shank Diameter	Overall Length	Tool No.	Price Each
1/4	2	**D4U**	6.58
5/16	2-1/4	**D5U**	7.18
3/8	2-1/2	**D6U**	7.89
7/16	3	**D7U**	8.10
1/2	3-1/2	**D8U**	10.41
5/8	4	**D10U**	15.02
3/4	4-1/2	**D12U**	20.53
1	7	**D16U**	33.50

E - Threading Tool Bits

For threading on the outside of the part. 60° Included angle.



Shank Diameter	Overall Length	Tool No.	Price Each
1/4	2	**E4U**	6.58
5/16	2-1/4	**E5U**	7.18
3/8	2-1/2	**E6U**	7.89
7/16	3	**E7U**	8.10
1/2	3-1/2	**E8U**	10.41
5/8	4	**E10U**	15.02
3/4	4-1/2	**E12U**	20.53
1	7	**E16U**	33.50

FR & FL - Offset End-Cutting

For facing on the outside of the part–offset head provides additional side clearance.

Shank Diameter	Overall Length	Tool No. Right Hand	Tool No. Left Hand	Price Each
1/2	3-1/2	**FR8**	**FL8**	12.35
5/8	4	**FR10**	**FL10**	13.98
3/4	4-1/2	**FR12**	**FL12**	16.25
1	7	**FR16**	**FL16**	24.05



Carbide Tipped Tool Bits

High Speed Steel Body

MDX® SUPERIOR IMPORT

Please specify grade when ordering:
C-2 Cast Iron and nonferrous materials or C-6 Steel and ferrous materials.

AR & AL - Straight Turning Tool Bits

For turning on the outside of the part.

Shank Diameter	Overall Length	Tool No.		Price Each
		Right Hand	Left Hand	
1/4	2	**AR4**	**AL4**	5.40
5/16	2-1/4	**AR5**	**AL5**	5.72
3/8	2-1/2	**AR6**	**AL6**	5.72
7/16	3	**AR7**	**AL7**	5.85
1/2	3-1/2	**AR8**	**AL8**	6.33
5/8	4	**AR10**	**AL10**	9.04
3/4	4-1/2	**AR12**	**AL12**	11.57
1	7	**AR16**	**AL16**	20.48
1-1/4	8	**AR20**	**AL20**	23.00
1-1/2	8	**AR24**	**AL24**	25.35



BR & BL - 15° Lead Angle Turning Tool Bits

For turning on the outside of the part.

Shank Diameter	Overall Length	Tool No.		Price Each
		Right Hand	Left Hand	
1/4	2	**BR4**	**BL4**	5.40
5/16	2-1/4	**BR5**	**BL5**	5.72
3/8	2-1/2	**BR6**	**BL6**	5.72
7/16	3	**BR7**	**BL7**	5.85
1/2	3-1/2	**BR8**	**BL8**	6.33
5/8	4	**BR10**	**BL10**	9.04
3/4	4-1/2	**BR12**	**BL12**	11.57
1	7	**BR16**	**BL16**	20.48
1-1/4	8	**BR20**	**BL20**	23.00



C- Square Nose Tool Bits

For chamfering or special designs.



Shank Diameter	Overall Length	Tool No.	Price Each
1/4	2	**C4**	5.29
5/16	2-1/4	**C5**	5.59
3/8	2-1/2	**C6**	5.72
7/16	3	**C7**	5.98
1/2	3-1/2	**C8**	7.22
5/8	4	**C10**	10.01
3/4	4-1/2	**C12**	14.17
1	7	**C16**	23.40

D - Pointed Nose Tool Bits

For chamfering corners on the outside or inside of the part. 80° Included angle.



Shank Diameter	Overall Length	Tool No.	Price Each
1/4	2	**D4**	5.29
5/16	2-1/4	**D5**	5.59
3/8	2-1/2	**D6**	5.59
7/16	3	**D7**	5.79
1/2	3-1/2	**D8**	6.76
5/8	4	**D10**	9.28
3/4	4-1/2	**D12**	12.42
1	7	**D16**	18.66

E - Threading Tool Bits

For threading on the outside of the part. 60° Included angle.



Shank Diameter	Overall Length	Tool No.	Price Each
1/4	2	**E4**	5.46
5/16	2-1/4	**E5**	5.72
3/8	2-1/2	**E6**	5.72
7/16	3	**E7**	5.85
1/2	3-1/2	**E8**	7.22
5/8	4	**E10**	8.89
3/4	4-1/2	**E12**	12.42
1	7	**E16**	20.15

Sets

Size	Pieces in Set	Sets include these tool bits:							Set No.	Price Each
		AR	AL	BR	BL	C	D	E		
1/4	38	8	8	4	4	4	4	6	**CTBS-14**	167.70
5/16	38	8	8	4	4	4	4	6	**CTBS-516**	180.70
3/8	38	8	8	4	4	4	4	6	**CTBS-38**	180.70
1/2	38	8	8	4	4	4	4	6	**CTBS-12**	206.70



Carbide Tipped Tool Bits

MDX® SUPERIOR IMPORT

High Speed Steel Body

Please specify grade when ordering:
C-2 Cast Iron and nonferrous materials or C-6 Steel and ferrous materials.

GR & GL - Offset Side-Cutting

For turning on the outside of the part–offset head provides additional side clearance.

Shank Diameter	Overall Length	Tool No.		Price Each
		Right Hand	Left Hand	
1/2	3-1/2	GR8	GL8	12.35
5/8	4	GR10	GL10	13.98
3/4	4-1/2	GR12	GL12	16.25
1	7	GR16	GL16	24.05



CTR & CTL - Cut-Off For grooving, trepanning and cut–off.

Tip Width	Shank Width	Shank Height	Overall Length	Tool No.		Price Each
				Right Hand	Left Hand	
1/8	1/2	1	5	CTR11	CTL11	15.28
3/16	1/2	1	5	CTR22	CTL22	15.60
1/4	1/2	1	5	CTR33	CTL33	15.93
5/16	1/2	1	5	CTR44	CTL44	15.93
3/8	5/8	1-1/4	5	CTR55	CTL55	19.24



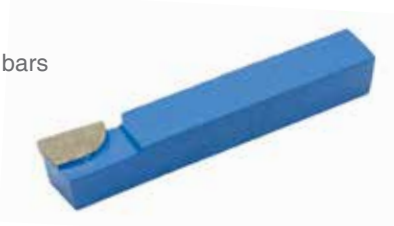
ER & EL - Offset Threading

Shank Diameter	Overall Length	Tool No.		Price Each
		Right Hand	Left Hand	
1/4	2	ER4	EL4	9.04
5/16	2-1/4	ER5	—	9.17
3/8	2-1/2	ER6	EL6	9.17
1/2	3-1/2	ER8	EL8	10.27
5/8	4	—	EL10	16.80



TSA - Square Shank Boring For boring to a square shoulder in 90º boring bars

Shank Diameter	Overall Length	Tool No.	Price Each
5/16	1-1/2	TSA5	8.71
3/8	1-3/4	TSA6	8.71
1/2	2-1/2	TSA8	9.62



TRC & TRE - Round Shank Boring

Shank Diameter	Overall Length	Tool No.	Price Each
5/16	1-1/2	TRC5	7.54
5/16	1-1/2	TRE5	7.54
3/8	1-3/4	TRE6	8.00
1/2	2-1/2	TRE8	9.62



TSC - Square Shank Boring

For boring to a square shoulder in 30º boring bars or internal chamfering.

Shank Diameter	Overall Length	Tool No.	Price Each
5/16	1-1/2	TSC5	8.71
3/8	1-3/4	TSC6	8.71
1/2	2-1/2	TSC8	9.62
5/8	3	TSC10	14.04
3/4	3-1/2	TSC12	22.75



TSE - Square Shank Boring For boring to a square shoulder in 45º boring bars or boring with a 15º lead angle in 30° boring bar.

Shank Diameter	Overall Length	Tool No.	Price Each
5/16	1-1/2	TSE5	8.71
3/8	1-3/4	TSE6	8.71
1/2	2-1/2	TSE8	9.62
5/8	3	TSE10	14.04



Lathe Turning Tool Holders

For Tool Bits



For Square Tool Bits

Each complete with wrench

Tool Bit Size	Holder Width	Holder Height	Holder Length	Tool No.			Price Each
				Straight Shank	Right Hand	Left Hand	
1/8	5/16	1/2	4	TH000S	TH000R	TH000L	25.38
3/16	5/16	3/4	4-1/2	TH00S	TH00R	TH00L	26.45
1/4	3/8	7/8	5	TH0S	TH0R	TH0L	28.24
5/16	1/2	1-1/8	6	TH1S	TH1R	TH1L	31.46
3/8	5/8	1-3/8	7	TH2S	TH2R	TH2L	35.39
7/16	3/4	1-5/8	8	TH3S	TH3R	TH3L	42.18
1/2	7/8	1-3/4	9	TH4S	TH4R	TH4L	54.34
5/8	1	2	11	TH5S	TH5R	TH5L	92.95
3/4	1-1/4	2-1/4	13	TH6S	TH6R	TH6L	121.55



For Carbide Tipped Tool Bits

Tool Bit Size	Holder Width	Holder Height	Holder Length	Tool No.			Price Each
				Straight Shank	Right Hand	Left Hand	
1/4	3/8	15/16	6	THT0S	THT0R	THT0L	31.46
5/16	1/2	1-1/4	7	THT1S	THT1R	THT1L	35.76
3/8	5/8	1-1/2	8	THT2S	THT2R	THT2L	41.48
7/16	3/4	1-3/4	9	THT3S	THT3R	THT3L	48.46
1/2	7/8	1-7/8	10	THT4S	THT4R	THT4L	60.06
5/8	1	2-1/8	12	THT5S	THT5R	THT5L	105.82
3/4	1-1/4	2-1/4	13	THT6S	—	THT6L	149.00

Straight & Bent Tail Lathe Dogs

Size	Tool No.		Price Each
	Straight	Bent	
1/2	THLD50	THBD50	3.93
3/4	THLD75	THBD75	5.70
1	THLD100	THBD100	8.51
1-1/4	THLD125	THBD125	9.86
1-1/2	THLD150	THBD150	11.23
1-3/4	THLD175	THBD175	11.86
2	THLD200	THBD200	13.83
2-1/2	THLD250	THBD250	25.02
3	THLD300	THBD300	32.17
4	THLD400	THBD400	48.41
5	THLD500	THBD500	61.91
6	THLD600	THBD600	71.35



Grinding Carriers

Size	Tool No.	Price Each
1/4	THG25	5.59
3/8	THG375	5.85
1/2	THG500	5.98
5/8	THG625	6.43
3/4	THG750	7.15
1	THG1000	7.67
1-1/4	THG1250	10.07

Size	Tool No.	Price Each
1-1/2	THG1500	11.50
1-3/4	THG1750	13.65
2	THG2000	15.47
2-1/2	THG2500	17.42
3	THG3000	19.30
3-1/2	THG3500	26.50
4	THG4000	28.00



Tool Bits

High Speed Steel & Cobalt



Square Bits Ground - Both ends beveled 10°

List No. **700** – High Speed Steel
List No. **700C** – 5% Cobalt
List No. **700SC** – 8% Super Cobalt

MDX® SUPERIOR IMPORT

Size	Overall Length	Price Each H.S. 700	Price Each 5% Cobalt 700C	Price Each 8% Cobalt 700SC
1/8	2-1/2	3.33	4.86	6.60
1/8	4	5.09	—	—
3/16	2-1/2	2.82	3.83	5.04
3/16	4	4.23	—	—
3/16	8	7.50	—	—
1/4	2-1/2	2.92	4.32	6.21
1/4	4	4.49	6.80	—
1/4	6	6.74	10.18	—
1/4	8	8.96	13.52	—
5/16	2-1/2	3.34	5.04	7.92
5/16	4	5.71	8.66	—
5/16	6	8.09	12.21	—
3/8	3	4.44	6.84	9.90
3/8	4	6.23	9.68	—
3/8	6	8.96	13.52	—
3/8	8	12.56	18.95	—

Size	Overall Length	Price Each H.S. 700	Price Each 5% Cobalt 700C	Price Each 8% Cobalt 700SC
7/16	3-1/2	6.48	10.67	13.28
7/16	6	11.50	—	—
1/2	4	10.40	16.90	18.72
1/2	6	15.15	23.07	—
1/2	8	20.80	31.41	—
5/8	4	15.39	—	—
5/8	4-1/2	17.22	26.00	30.60
5/8	8	30.78	46.48	—
3/4	5	24.30	41.00	45.90
3/4	8	28.00	—	—
7/8	6	39.92	65.90	73.35
1	7	58.39	98.00	—
1-1/8	8	89.31	149.00	—
1-1/4	7	116.24	169.00	—
1-1/4	9	—	—	188.99
1-1/2	10	220.00	—	—

List No. **700U** – High Speed Steel
List No. **700CU** – 5% Cobalt

MADE IN USA

Size	Overall Length	Price Each H.S. 700U	Price Each Cobalt 700CU
1/8	2-1/2	6.68	9.72
3/16	2-1/2	6.68	9.72
1/4	2-1/2	7.00	10.36
1/4	4	9.00	15.25
5/16	2-1/2	8.02	12.09
3/8	3	10.66	16.42

Size	Overall Length	Price Each H.S. 700U	Price Each Cobalt 700CU
7/16	3-1/2	12.96	25.63
1/2	4	18.72	36.53
5/8	4-1/2	31.00	56.16
3/4	5	52.51	88.56
7/8	6	86.26	142.37
1	7	126.05	211.68

Rectangular Bits

List No. **701** – High Speed Steel
List No. **701C** – 5% Cobalt

MDX® SUPERIOR IMPORT



Size	Overall Length	Price Each H.S. 701	Price Each Cobalt 701C
1/8 x 5/8	5	13.55	—
1/8 x 3/4	5	14.25	—
1/8 x 7/8	6	25.19	—
3/16 x 3/4	6	25.41	—
3/16 x 7/8	6	29.04	—
3/16 x 1	6-1/2	35.50	—
1/4 x 3/8	3	5.90	9.46
1/4 x 1/2	4	7.24	10.80
1/4 x 3/4	5	11.57	—
1/4 x 1	6	18.23	23.00
5/16 x 7/16	3	7.16	10.94
5/16 x 1/2	4	8.59	12.00
5/16 x 5/8	4-1/2	8.96	—

Size	Overall Length	Price Each H.S. 701	Price Each Cobalt 701C
5/16 x 3/4	5	10.00	15.00
5/16 x 1	6	10.76	16.00
3/8 x 1/2	4	9.09	13.95
3/8 x 1/2	6	10.91	16.74
3/8 x 1/2	8	14.14	—
3/8 x 5/8	4	11.25	15.08
3/8 x 3/4	3	8.50	—
3/8 x 5/8	6	13.50	18.10
3/8 x 3/4	5	13.12	19.71
3/8 x 1	6	26.60	—
1/2 x 3/4	4	20.21	23.25
1/2 x 3/4	6	22.46	30.78
1/2 x 1	6	32.40	48.60

Size	Overall Length	Price Each H.S. 701	Price Each Cobalt 701C
1/2 x 1-1/4	7	38.70	—
5/8 x 3/4	5	22.50	35.10
5/8 x 7/8	6	31.50	48.33
5/8 x 1	7	38.70	59.76
5/8 x 1-1/4	7	46.80	—
3/4 x 1	6	40.73	62.91
3/4 x 1-1/4	7	58.50	80.00
3/4 x 1-1/2	7	64.35	92.00
7/8 x 1-1/8	7	65.00	90.00
7/8 x 1-1/4	7	72.00	99.00
1 x 1-1/4	6	72.00	99.00
1 x 1-1/2	7	84.00	110.00

Round Tool Bits

List No. **704** – High Speed Steel
List No. **704C** – 5% Cobalt



MDX® SUPERIOR IMPORT

Size	Overall Length	Price Each H.S. 704	Price Each Cobalt 704C
1/8	2-3/4	2.79	5.52
1/8	4	4.18	—
5/32	3-1/8	3.21	5.70
5/32	4	3.53	—
3/16	3-1/2	3.63	6.48
3/16	4	4.35	—
1/4	4	5.49	9.88

Size	Overall Length	Price Each H.S. 704	Price Each Cobalt 704C
1/4	6	6.55	10.90
5/16	4	6.98	—
5/16	4-1/2	7.35	12.72
5/16	6	8.45	—
3/8	5	9.99	15.68
3/8	8	11.99	—
7/16	5-1/2	12.50	19.44

Size	Overall Length	Price Each H.S. 704	Price Each Cobalt 704C
1/2	4	13.74	—
1/2	6	15.26	25.92
1/2	8	18.31	—
9/16	6	30.70	37.26
5/8	6	25.20	45.36
3/4	6	39.19	72.26
1	6	58.00	—

Cut-Off Blades

Blades, Holders and Bits

Ground Cut-Off Blades

List No. **702** – High Speed Steel
List No. **702C** – Cobalt



Size	Overall Length	Price Each H.S. 702	Price Each Cobalt 702C
1/16 x 3/16	2-1/2	17.00	—
1/16 x 11/16	5	19.45	29.00
1/16 x 13/16	6	20.60	30.95
5/64 x 1/2	4-1/2	17.58	—
3/32 x 3/16	6	16.55	26.90
3/32 x 1/2	4-1/2	14.80	25.46
3/32 x 5/8	5	16.76	28.50
3/32 x 11/16	5	18.25	—
3/32 x 13/16	6	20.60	30.95
3/32 x 1	6-1/2	22.67	31.98
1/8 x 1/2	4-1/2	16.90	—
1/8 x 3/4	6	21.42	27.32
1/8 x 13/16	6	23.70	30.50
1/8 x 7/8	6	25.15	33.12
1/8 x 1	6-1/2	26.81	—
5/32 x 13/16	6	26.91	37.26
3/16 x 3/4	7	25.15	—
3/16 x 13/16	8	25.15	37.12
3/16 x 1	6-1/2	28.00	—
3/16 x 1	8	30.01	42.69
3/16 x 1-1/8	7	32.40	48.13
1/4 x 13/16	6	37.26	—
1/4 x 1-1/8	6-1/2	34.65	52.01
1/4 x 1-1/4	7	39.85	55.89

"P" Type, T-Shaped Cut-Off Blades

Produces a chip narrower than the blade itself and is suited for cutting off, grooving and similar operations. Increased clearance angles on each side of the blade reduces friction and the narrow design conserves material being cut and reduces the heat generated when cutting.





List No. **703** – High Speed Steel
List No. **703C** – Cobalt

Width	Height	Overall Length	Blade No.	Price Each H.S. 703	Price Each Cobalt 703C
.040	1/2	3-1/2	**P1N**	15.84	20.18
1/16	1/2	4-1/2	**P1**	15.21	20.60
5/64	1/2	4-1/2	**P2N**	16.72	21.73
3/32	1/2	4-1/2	**P2**	16.72	21.73
1/8	1/2	4-1/2	**P3S**	17.28	22.25
3/32	11/16	5	**P3N**	17.70	22.25
1/8	11/16	5	**P3**	17.91	23.80
5/32	11/16	5	**P4**	20.54	28.46
3/16	11/16	5	**P5S**	22.77	33.12
1/8	3/4	5	**P3W**	17.91	33.12
5/32	3/4	5	**P4W**	22.77	37.26
3/16	3/4	5	**P5W**	24.98	33.12
1/8	7/8	6	**P5X**	21.96	37.26
5/32	7/8	6	**P5N**	25.73	37.26
3/16	7/8	6	**P5**	25.40	45.54
1/4	7/8	6	**P6**	30.51	55.37
1/8	1-1/8	6-1/2	**P8X**	38.03	56.92
5/32	1-1/8	6-1/2	**P8N**	42.43	55.37
3/16	1-1/8	6-1/2	**P8**	38.03	56.92
1/4	1-1/8	6-1/2	**P9**	42.43	56.93

Cut-Off Blade Tool Holders

Complete with wrench



Cut Off Blade Size	Holder Width	Holder Height	Holder Length	Tool No. Straight Shank	Tool No. Right Hand	Tool No. Left Hand	Price Each
3/32 x 1/2	5/16	3/4	4-1/2	**TH29S**	**TH29R**	**TH29L**	21.31
3/32 x 5/8	3/8	7/8	5	**TH30S**	**TH30R**	**TH30L**	25.39
1/8 x 3/4	1/2	1-1/8	6	**TH31S**	**TH31R**	**TH31L**	31.46
1/8 x 7/8	5/8	1-3/8	7	**TH32S**	**TH32R**	**TH32L**	37.90
3/16 x 1	3/4	1-5/8	8	**TH33S**	**TH33R**	**TH33L**	51.48
3/16 x 1-1/8	7/8	1-3/4	9	**TH34S**	**TH34R**	**TH34L**	70.07
1/4 x 1-3/8	1	2	10	**TH35S**	**TH35R**	**TH35L**	92.95

Metric Tool Bits

High Speed Steel & Cobalt

Square Tool Bits

List No. **700M** – High Speed Steel
List No. **700MC** – Cobalt



Size	Overall Length (mm)	Price Each H.S. 700M	Price Each Cobalt 700MC
4.00	80	3.85	5.40
5.00	100	4.72	6.75
5.00	200	8.92	13.83
6.00	100	4.72	6.97
6.00	200	8.92	13.83
8.00	100	7.35	10.68
8.00	200	13.82	21.26
10.00	100	10.50	15.52

Size	Overall Length (mm)	Price Each H.S. 700M	Price Each Cobalt 700MC
10.00	200	19.95	30.93
12.00	100	14.70	21.48
12.00	200	27.82	42.86
14.00	150	28.35	42.52
16.00	150	36.22	54.33
18.00	150	44.97	67.38
20.00	200	70.52	109.01
25.00	200	93.20	138.00

Round Tool Bits

List No. **704M** – High Speed Steel
List No. **704MC** – Cobalt



Size	Overall Length (mm)	Price Each H.S. 704M	Price Each Cobalt 704MC
3.00	60	2.00	3.43
4.00	80	2.30	5.08
5.00	100	3.30	6.46
6.00	100	4.02	6.60
8.00	100	6.82	11.13
10.00	100	9.10	15.81

Size	Overall Length (mm)	Price Each H.S. 704M	Price Each Cobalt 704MC
12.00	100	12.62	22.00
14.00	150	24.32	45.10
16.00	150	29.75	56.78
18.00	150	37.45	69.43
20.00	200	60.55	112.61

Uni-Kut™ Fly Tool Cutters

Straight & R-8 Shank

Exclusively By apt USA Approved Performance Tooling

MADE IN USA

- Uses inexpensive standard tool bits
- Makes wider cuts than end mills
- Saves purchase and re-grind costs of end mills
- Faster speeds and better finishes
- Less chatter and free cutting on thin material or non-rigid set ups

Straight Shank

Head Diameter	Shank Size	Tool Bit Size	Tool No.	Price Each
3/4	1/2	3/16	**K121**	14.24
1-1/8	1/2	1/4	**K122**	16.25
1-3/8	1/2	5/16	**K123**	18.14
1-3/8	3/4	5/16	**K341**	29.25
1-1/2	3/4	3/8	**K341A**	30.23
2	3/4	5/16	**K342**	30.88
2	3/4	3/8	**K342A**	31.85
2-1/2	3/4	5/16	**K343**	35.75
2-1/2	3/4	3/8	**K343A**	37.05
2-1/2	1/2	3/4	**K343B**	69.68
3	1/2	3/4	**K344**	73.32

Tool Bits are featured on page 390



R-8 Shank

Head Diameter	Shank Size	Tool Bit Size	Tool No.	Price Each
2-1/2	R-8	5/16	**K348**	57.85

Sets

Sizes	Description	Pcs.	Set No.	Price
K121, K122, K123	1/2" Straight Shank for 3/16, 1/4, & 5/16 Tool Bits	3	**K120**	48.04
K341, K342, K343	3/4" Straight Shank for 5/16" Tool Bits	3	**K340**	95.88
K341A, K342A, K343A	3/4" Straight Shank for 3/8" Tool Bits	3	**K340A**	99.45
K121, K122, K123, K341, K342, K343	1/2" & 3/4" Straight Shank for 3/16, 1/4, & 5/16 Tool Bits	6	**K340B**	141.70

All sets are supplied in wood block



UNO-DEX™ Indexable Fly Cutter

Single Flute – Positive Rake

- Low cost
- Rugged construction for long tool life
- One clamp fits all tool sizes
- Uses standard inexpensive inserts
- Produces wider cuts than end mills

MADE IN USA

Exclusively By apt USA Approved Performance Tooling

Watch our instructional videos on www.MichiganDrill.com/videos





Triangle Inserted

Cutting & Head Diameter	Shank Style or Diameter	Tool No	Price Each
1-1/2	3/4	**KT150-34**	95.68
1-1/2	R-8	**KT150-R8**	112.13
2	3/4	**KT200-34**	109.14
2	R-8	**KT200-R8**	127.08
2-1/2	3/4	**KT250-34**	128.57
2-1/2	R-8	**KT250-R8**	152.49
3	3/4	**KT300-34**	151.00
3	R-8	**KT300-R8**	170.43

Inserts sold separately.

Square Inserted

Cutting & Head Diameter	Shank Style or Diameter	Tool No	Price Each
1-1/2	3/4	**KX150-34**	95.68
1-1/2	R-8	**KX150-R8**	112.13
2	3/4	**KX200-34**	109.14
2	R-8	**KX200-R8**	127.08
2-1/2	3/4	**KX250-34**	128.57
2-1/2	R-8	**KX250-R8**	152.49
3	3/4	**KX300-34**	151.00
3	R-8	**KX300-R8**	170.43

Inserts sold separately.

Sets

Sizes	Description	Pcs.	Set No.	Price
1-1/2, 2, 2-1/2, 3	Triangle Inserted – 3/4" Shank	4	**KT750**	484.39
1-1/2, 2, 2-1/2, 3	Triangle Inserted – R-8 Shank	4	**KTR8**	562.13
1-1/2, 2, 2-1/2, 3	Square Inserted – 3/4" Shank	4	**KX750**	484.39
1-1/2, 2, 2-1/2, 3	Square Inserted – R-8 Shank	4	**KXR8**	562.13

All sets are supplied in wood block

TPG Carbide Inserts

- Triangle
- Positive rake ground all over

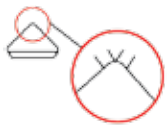


Insert No.	I.C.	Width	Radius	Price Each C–2	Price Each C–6	Price Each Tin Coated*
TPG321	3/8	1/8	1/64	6.74	6.74	8.08
TPG322	3/8	1/8	1/32	6.74	6.74	8.08
TPG323	3/8	1/8	3/64	6.74	6.74	8.08
TPG324	3/8	1/8	1/16	6.74	6.74	8.08

*C-6 Grade TiN Coated

TPC Carbide Inserts

- Triangle
- Positive rake ground all over
- Wiping flats on three corners



Insert No.	I.C.	Width	Price Each C–2	Price Each C–6	Price Each Tin Coated*
TPC32ZR	3/8	1/8	6.48	6.48	7.62

*C-6 Grade TiN Coated

SPG Carbide Inserts

- Square
- Positive rake ground all over



SPU Carbide Inserts

- Square
- Positive rake ground top & bottom

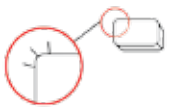


Insert No.	I.C.	Width	Radius	Price Each C–2	Price Each C–6	Price Each Tin Coated*
SPG422	1/2	1/8	1/32	6.67	6.67	7.54
SPG423	1/2	1/8	3/64	6.67	6.67	7.54
SPG424	1/2	1/8	1/16	6.67	6.67	7.54
SPU422	1/2	1/8	1/8	5.80	5.80	6.68
SPU423	1/2	1/8	1/8	5.80	5.80	6.68

*C-6 Grade TiN Coated

SPC Carbide Inserts

- Square
- Positive rake ground all over
- Wiping flats on four corners



Insert No.	Radius	I.C.	Thickness	Price Each C–2	Price Each C–6	Price Each Tin Coated*
SPC42ZR	–	1/2	1/8	6.90	6.90	8.26

*C-6 Grade TiN Coated

Replacement Parts

Part No.	Description	Price Each
Part CTD-2	Hold Down Clamp	7.95
Part CS832-12	Clamp Screw	.75
Part CSW	9/64 Allen Wrench for 8-32 Screw	.75

Recessing Tools

High Speed and Carbide Tipped

For cutting recessed grooves for self-locking and retaining rings.



Regular Length

- Maximum reach - 3/8"
- Length of shank - 1-1/2"
- Overall length - 2"

Type	Minimum Bore	width of Recess	Max. Depth of Recess	Cutting Edge to CL	High Speed Steel Tool Number	High Speed Steel Price Each	Carbide Tipped Tool Number	Carbide Tipped Price Each
3/8" Shank	1/4	.017/.018	.050	.14	RA17S-H	29.84	RA17S-C	44.93
	1/4	.022/.023	.050	.14	RA22S-H	29.84	RA22S-C	44.93
	1/4	.025/.026	.050	.14	RA25S-H	29.84	RA25S-C	44.93
	1/4	.028/.030	.050	.14	RA28S-H	29.84	RA28S-C	44.93
	1/4	.030/.031	.050	.14	RA30S-H	29.84	RA30S-C	44.93
	1/4	.040/.042	.050	.14	RA40S-H	29.84	RA40S-C	44.93
1/2" Shank	13/32	.033/.034	.100	.25	RB33S-H	31.85	RB33S-C	48.09
	13/32	.038/.039	.100	.25	RB38S-H	31.85	RB38S-C	48.09
	13/32	.039/.041	.100	.25	RB39S-H	31.85	RB39S-C	48.09
	13/32	.046/.048	.100	.25	RB46S-H	31.85	RB46S-C	48.09
	13/32	.055/.057	.100	.25	RB55S-H	31.85	RB55S-C	48.09

Long Length

Length of Shank -2"

Type	Min Bore	Max. Reach	Width of Recess	Max. Depth of Recess	Cutting Edge to CL	Overall Length	High Speed Steel Tool Number	High Speed Steel Price Each	Carbide Tipped Tool Number	Carbide Tipped Price Each
3/8" Shank	1/4	5/8	.017/.018	.050	.14	2-3/4	RA17L-H	31.59	RA17L-C	47.62
	1/4	5/8	.022/.023	.050	.14	2-3/4	RA22L-H	31.59	RA22L-C	47.62
	1/4	5/8	.025/.026	.050	.14	2-3/4	RA25L-H	31.59	RA25L-C	47.62
	1/4	5/8	.028/.030	.050	.14	2-3/4	RA28L-H	31.59	RA28L-C	47.62
	1/4	5/8	.030/.031	.050	.14	2-3/4	RA30L-H	31.59	RA30L-C	47.62
	1/4	5/8	.040/.042	.050	.14	2-3/4	RA40L-H	31.59	RA40L-C	47.62
1/2" Shank	13/32	1-1/8	.033/.034	.100	.25	3-1/4	RB33L-H	33.74	RB33L-C	50.97
	13/32	1-1/8	.038/.039	.100	.25	3-1/4	RB38L-H	33.74	RB38L-C	50.97
	13/32	1-1/8	.039/.041	.100	.25	3-1/4	RB39L-H	33.74	RB39L-C	50.97
	13/32	1-1/8	.046/.048	.100	.25	3-1/4	RB46L-H	33.74	RB46L-C	50.97
	13/32	1-1/8	.055/.057	.100	.25	3-1/4	RB55L-H	33.74	RB55L-C	50.97

Sets

Type	Pieces	Length	High Speed Steel Set No.	High Speed Steel Price Each	Carbide Tipped Set No.	Carbide Tipped Price Each
3/8" Shank	6	Regular	RA375HS	182.84	RA375CS	273.38
	6	Long	RA375HL	193.34	RA375CL	289.52
1/2" Shank	5	Regular	RB500HS	158.60	RB500CS	239.20
	5	Long	RB500HL	167.70	RB500CL	168.70

Supplied in wood block.



Recessing Tool Holder

MDX® SUPERIOR IMPORT

- Gibbed V-guide construction
- 2 adjustable stops
- Rugged - simple
- All steel construction

Shank Diameter	Offset	Recessing Tool Dia.	Tool No.	Price Each
5/8	5/16	3/8 Rnd.	J868-080	350.00
3/4	1/2	1/2	J868-085	400.00



Wheel Dressers

MDX® SUPERIOR IMPORT

Diamond Dresser

Round Shank



- 6" Overall length unless otherwise shown
- For the tool room - Surface grinders, universal grinders, etc.
- Re-settable points
- Select quality diamonds because of their many cutting edges, may be reset several times.

Carat	Tool No. 3/8 Shank	Tool No. 7/16 Shank	Tool No. 1/2 Shank	Price
1/4	**J353000**	**J353100**	**J353200**	7.65
1/3	**J353001**	**J353101**	**J353201**	10.58
1/2	**J353002**	**J353102**	**J353202**	14.48
3/4	**J353003**	**J353103**	**J353203**	21.53
1	**J353004**	**J353104**	**J353204**	28.65
1-1/2	**J353005**	**J353105**	**J353205**	42.98
2	**J353006**	**J353106**	**J353206**	57.00
3	**J353007**	**J353107**	**J353207**	80.85



Approx. 1/4" carat 3" OAL

Shank Diameter	Tool No.	Price Each
3/8	**J353011**	11.00
7/16	**J353111**	11.00
1/2	**J353211**	13.32

Hand Diamond Dressers



7/16" Shank diameter, 8" OAL. Chrome finish. Ideal for dressing surface grinder wheels, universal grinder wheels, etc

Carat	Tool No.	Price Each
1/4	**J353300**	11.92
1/3	**J353301**	15.12
1/2	**J353302**	19.04
3/4	**J353303**	32.16
1	**J353304**	45.60
2	**J353305**	89.28
3	**J353306**	114.40
4	**J353307**	138.40
5	**J353308**	122.56

Diamond Clusters

7/16" Shank x 1-1/2" body. 1, 2, & 3 Carat cluster have one row of diamonds, 4 & 5 have two rows.



Carat	Tool No.	Price Each
1	**J35309**	32.12
2	**J35310**	51.04
3	**J35311**	65.12
4	**J35312**	98.73
5	**J35313**	114.31

Low-Boy Angle Dresser

- Designed for use on all grinding machines
- Base Angle-Plate is Heavy, Precision Ground, Square on all six sides to an accuracy of .0005"
- Side Block Pivots on hardened shoulder screws
- Includes Diamond dresser 3/8" (9.5mm) x 2" (50mm) (1/4 Carat)

Tool No. **J945806** Price Each — $136.40



Replacement Diamond Dresser

- 3/8" (9.5mm) x 2" (50mm)(1/4 carat)

Tool No. **J945807** Price Each — $11.00



Diamond Nib Holder

- Designed for use on surface grinders
- Holds Diamond dresser at proper 15° Angle
- Base dimension: 2-1/2" x 6" (63.5mm x 152mm)
- Key-way: 1/2" wide x 7/8" (12.7mm x 22.22mm)
- Includes Diamond dresser 7/16 (11.1mm) x 2(50mm) (1/4 Carat)

Tool No. **J945804** Price Each — $38.08

Replacement Diamond Dresser

7/16" (11.1mm) x 2" (50mm)(1/4 carat)

Tool No. **J945805** Price Each — $11.00

Hi-Low Adjustable Dresser



- Designed for use on all grinding machines
- Dress O.D. and face of wheels
- Adjustable to 7" (175mm) height
- Dress any width
- Rugged Construction
- Includes Diamond dresser: 3/8"(9.5mm) x 3"(75mm) (1/4 Carat)

Tool No. **J945808** Price Each — $70.88

STB Rectangular Carbide Strips

MADE IN USA

Carbide Grade C-2



Regular Length

Blank #	Thickness	Width	Length	Price Each
STB12	1/32	1/16	1	1.31
STB13	3/64	3/32	1	1.64
STB13A	3/64	3/32	13/16	1.95
STB24A	1/16	1/8	1	1.98
STB24C	1/16	1/8	1-1/4	2.34
STB24B	1/16	1/8	3	5.58
STB26A	1/16	3/16	1	2.25
STB26C	1/16	3/16	3	5.04
STB28A	1/16	1/4	1	2.43
STB28B	1/16	1/4	1-1/4	2.97
STB28D	1/16	1/4	3	10.44
STB34	3/32	1/8	5	7.29
STB36	3/32	3/16	1-1/8	3.15
STB36A	3/32	3/16	1-1/4	3.42
STB38A	3/32	1/4	1	3.06
STB38B	3/32	1/4	1-1/2	4.23
STB38D	3/32	1/4	5	13.77
STB310A	3/32	5/16	2	7.00
STB310B	3/32	5/16	3	10.42
STB310C	3/32	5/16	5	16.81
STB312	3/32	3/8	5	20.32
STB46	1/8	3/16	6	14.40
STB48A	1/8	1/4	1	3.51
STB48B	1/8	1/4	1-1/4	4.21
STB48C	1/8	1/4	2-1/4	7.29
STB48E	1/8	1/4	6	22.41
STB410	1/8	5/16	6	24.61
STB410A	1/8	5/16	1-1/2	5.87
STB410B	1/8	5/16	3	18.00

Blank #	Thickness	Width	Length	Price Each
STB412D	1/8	3/8	1	4.86
STB412A	1/8	3/8	2	10.44
STB412B	1/8	3/8	3	14.15
STB412C	1/8	3/8	6	27.88
STB416A	1/8	1/2	1	6.12
STB416B	1/8	1/2	1-1/2	8.82
STB416C	1/8	1/2	3	19.28
STB416	1/8	1/2	6	38.09
STB420	1/8	5/8	6	47.61
STB424	1/8	3/4	6	55.26
STB432	1/8	1	6	70.38
STB68	3/16	1/4	6	26.46
STB610	3/16	5/16	6	33.03
STB612A	3/16	3/8	3	19.62
STB612	3/16	3/8	6	40.30
STB616A	3/16	1/2	3	26.46
STB616	3/16	1/2	6	52.83
STB620A	3/16	5/8	3	34.83
STB620	3/16	5/8	6	63.00
STB624	3/16	3/4	6	80.64
STB812A	1/4	3/8	3	26.46
STB812	1/4	3/8	6	52.83
STB816	1/4	1/2	6	70.38
STB816A	1/4	1/2	3	35.19
STB816B	1/4	1/2	4	46.50
STB820A	1/4	5/8	3	44.01
STB820	1/4	5/8	6	88.02
STB824A	1/4	3/4	3	52.83
STB824	1/4	3/4	6	105.57

Long Length



Blank #	Thickness	Width	Length	Price Each
STB22L	1/16	1/16	6	16.88
STB24L	1/16	1/8	6	10.17
STB26L	1/16	3/16	6	13.84
STB28L	1/16	1/4	6	20.79
STB210L	1/16	5/16	6	37.35
STB212L	1/16	3/8	6	47.48
STB216L	1/16	1/2	6	55.69
STB220L	1/16	5/8	6	86.40
STB224L	1/16	3/4	6	98.55
STB232L	1/16	1	6	108.22
STB34L	3/32	1/8	8	17.78
STB36L	3/32	3/16	8	22.05
STB38L	3/32	1/4	8	34.31
STB310L	3/32	5/16	8	35.66
STB312L	3/32	3/8	8	38.59
STB316L	3/32	1/2	8	50.74
STB320L	3/32	5/8	8	59.51
STB44L	1/8	1/8	12	25.31
STB46L	1/8	3/16	12	40.72
STB48L	1/8	1/4	12	47.02
STB412L	1/8	3/8	12	48.06
STB416L	1/8	1/2	12	92.25
STB420L	1/8	5/8	12	104.51
STB424L	1/8	3/4	12	127.12

Blank #	Thickness	Width	Length	Price Each
STB432L	1/8	1	12	249.48
STB66L	3/16	3/16	12	50.62
STB68L	3/16	1/4	12	69.30
STB610L	3/16	5/16	12	80.78
STB612L	3/16	3/8	12	95.51
STB616L	3/16	1/2	12	124.74
STB620L	3/16	5/8	12	156.26
STB624L	3/16	3/4	12	187.11
STB632L	3/16	1	12	374.22
STB640L	3/16	1-1/4	12	467.82
STB88L	1/4	1/4	12	85.28
STB812L	1/4	3/8	12	124.74
STB816L	1/4	1/2	12	167.18
STB820L	1/4	5/8	12	207.90
STB824L	1/4	3/4	12	249.48
STB832L	1/4	1	12	498.96
STB840L	1/4	1-1/4	12	623.70
STB1212L	3/8	3/8	12	187.11
STB1216L	3/8	1/2	12	249.48
STB1224L	3/8	3/4	12	374.22
STB1232L	3/8	1	12	748.44
STB1616L	1/2	1/2	12	332.64
STB1624L	1/2	3/4	12	498.96

Cut-Off Inserts



*NOTE: All Tin Coated inserts are C6 grade unless otherwise specified

Approved Performance Tooling

Carbide Inserts - Neutral

Insert Number 0° Face Angle	Width	Price Each		
		C-2	C-6	TiN Coated*
GTN-2	.087	7.74	7.74	9.44
GTN-2.4	.094	7.74	7.74	9.44
GTN-3	.120	7.74	7.74	9.44
GTN-4	.160	7.87	7.87	9.58
GTN-4.8	.187	9.30	9.30	11.40

Insert Number 0° Face Angle	Width	Price Each		
		C-2	C-6	TiN Coated*
GTN-5	.200	9.30	9.30	11.40
GTN-6	.250	10.96	10.96	12.18
GTN-8	.315	43.34	43.34	48.54
GTN-9	.375	47.67	47.67	53.39

Carbide Inserts - Right Hand

Insert Number		Width	Price Each		
3° Face Angle	8° Face Angle		C-2	C-6	TiN Coated*
GTR2-3	GTR2-8	.087	9.76	9.76	11.40
GTR2.4-3	GTR2.4-8	.094	8.52	8.52	10.22
GTR3-3	GTR3-8	.120	8.52	8.52	10.22
GTR4-3	GTR4-8	.160	9.44	9.44	11.32

Insert Number		Width	Price Each		
3° Face Angle	8° Face Angle		C-2	C-6	TiN Coated*
GTR4.8-3	GTR4.8-8	.187	10.14	10.14	12.26
GTR5-3	GTR5-8	.200	10.14	10.14	12.26
GTR6-3	GTR6-8	.250	11.16	11.16	13.50

Carbide Inserts - Left Hand

Insert Number		Width	Price Each		
3° Face Angle	8° Face Angle		C-2	C-6	TiN Coated*
GTL2-3	GTL2-8	.087	9.76	9.76	12.18
GTL2.4-3	GTL2.4-8	.094	8.52	8.52	10.22
GTL3-3	GTL3-8	.120	8.52	8.52	10.22
GTL4-3	GTL4-8	.160	9.44	9.44	11.32

Insert Number		Width	Price Each		
3° Face Angle	8° Face Angle		C-2	C-6	TiN Coated*
GTL4.8-3	GTL4.8-8	.187	10.14	10.14	12.26
GTL5-3	GTL5-8	.200	10.14	10.14	12.26
GTL6-3	GTL6-8	.250	11.16	11.16	13.50

Standard Turning, Boring and Drilling Insert Identification System

SHAPE

A - Parallelogram 85°
B - Parallelogram 82°
C -Diamond 80°
D- Diamond 55°
E - Diamond 755°
H - Hexagon
K - Parallelogram 55°
L - Rectangle
M - Diamond 86°
O - Octagon
P - Pentagon
R - Round
S - Square
T - Triangle
V - Diamond 35°
W -Trigon 80°

RELIEF ANGLE

N - 0°
A- 3°
B - 5°
C -7°
P - 11°
D -15°
E - 20°
F - 25°
G - 30°

TOLERANCES

Insert I.C.	Thickness
A = ± .0002	± .001
B = ± .0002	± .005
C = ± .0005	± .001
D = ± .0005	± .005
E = ± .001	± .001
F = ± .0002	± .001
G = ± .001	± .005
H = ± .0005	± .001
J = ± .0002	± .001
K = ± .0005	± .001
L = ± .001	± .001
M & U = *	± .005
N = *	± .001

I.C.	Min	U
3/16"	.003	.005
7/32"	.003	.005
1/4"	.003	.005
5/16"	.003	.005
3/8"	.003	.005
1/2"	.005	.008
5/8"	.006	.011
3/4"	.006	.011
1"	.007	.015
1-1/4"	.008	.015

R=Blank w/grind stock on all surface
S=Blank w/grind stock on top & bottom only.

TYPE

A w/hole
B w/hole & 1 Countersink
C w/hole & 2 Countersink
D smaller than 1/4" I.C. w/hole
E smaller than 1/4" w/o hole
F clamp-on type w/chipbreaker
G w/hole & chipbreaker
H w/hole, 1 countersink & chipbreaker
J w/hole, 2 countersinks & chipbreaker
K* w/hole, double sided, special 5° positive chipbreaker
L* w/hole, double sided, special 5° negative chipbreaker
M w/hole & special features on top rake surface only
N* narrow chipbreaker land both sides w/hole
O* chipbreaker bumpy both sides w/hole
P 10° positive chipbreaker both sides
Q* double positive chipbreaker one side, w/hole
R extra wide chipbreakers land both sides w/hole
S Double positive chipbreaker both sides w/hole
T w/hole, one countersink
W w/hole, one countersink
X extra wide chipbreaker groove both sides w/hole
Y high double positive chipbreaker one side w/hole
Z high positive chipbreaker both sides w/hole
*ANC Identification only

SIZE

Number of 1/32nds on inserts LESS than 1/4" I.C.

Number of 1/8ths on inserts 1/4" I.C. and OVER

Rectangle and parallelogram inserts require TWO digits:

1st digit - Number of 1/8ths in WIDTH.

2nd Digit - Number of 1/4ths in LENGTH.

THICKNESS

Number of 1/32nds on inserts LESS than 1/4" I.C.

Number of 1/16ths on inserts 1/4" I.C. and OVER

Use width dimension in place of I.C. on rectangle and parallelogram

CUTTING POINT RADIUS, FLATS

0 - Sharp Corner
1 - 1/64 Radius
2 - 1/32 Radius
3 - 3/64 Radius
4 - 1/16 Radius
6 - 1/16 Radius
8 - 1/8 Radius

A - Square insert w/45° chamfer
B - Square insert w/4° chamfer & sweep angle R.H. or Negative
C - Square insert w/45° chamfer & 4° sweep angle, L.H.
D - Square insert w/30° chamfer R.H. or Negative
E - Square insert w/15° chamfer R.H. or Negative
F - Square insert w/5° chamfer R.H. or Negative
G - Square insert w/30° chamfer L.H.
H - Square insert w/30° chamfer L.H.
I - Square insert w/15° chamfer L.H.
J - Square insert w/5° chamfer L.H.
K - Square insert w/30° dble chamfer
L - Square insert w/15° dble chamfer
M - Square insert w/5° dble chamfer
N - Truncated triangle insert
P - Flatted corner triangle R..H. or Negative
R - Flatted corner triangle L.H.
S - Square negative insert w/10° double chamfer
T - Square negative insert w/30° positive rake chamfer
V - Octogon negative insert w/2-1/2° corner chamfer

OTHER CONDITIONS

A-Honed .001 - .003
B-Honed .003 - .005
C-Honed .005 - .007
J-Polished cutting surface only
K-Chamfer cutting edge - complete
J-Chamfer cutting edge - partial edge
J-Honed .001

T	N	M	G	5	4	2	A

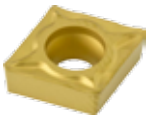
Carbide Turning Inserts

Approved Performance Tooling

Please order in package quantity, 10 inserts in a package.
* TiN Coated is C6

CCMT

80° Diamond
Single sided with Chipbreaker
7° Positive rake



Insert Number	I.C.	Width	Radius	Hole Size	Price Each C-2	Price Each C-6	Price Each TiN Coated*
CCMT21.51	1/4	3/32	1/64	.110	5.14	5.14	6.06
CCMT21.52	1/4	3/32	1/32	.110	5.14	5.14	6.06
CCMT25.22	5/16	1/8	1/32	.110	5.70	5.70	5.95
CCMT32.51	3/8	5/32	1/64	.173	6.06	6.06	7.42
CCMT32.52	1/2	5/32	1/32	.173	6.06	6.06	7.42
CCMT432	1/2	3/16	1/32	.027	6.54	6.54	8.01

CNMA

80° Diamond
Double sided without chipbreaker
0° Relief Angle
Combo Pin and Clamp Insert
Used for turning facing and boring
Feed Range .003 to .020 IPR.



Insert Number	I.C.	Width	Corner Flat	Price Each C-2	Price Each C-6	Price Each TiN Coated*
CNMA431	1/2	3/16	1/64	5.03	5.03	6.84
CNMA432	1/2	3/16	1/32	5.03	5.03	6.84
CNMA433	1/2	3/16	3/64	5.03	5.03	6.84
CNMA542	5/8	1/4	1/32	9.16	9.16	10.96
CNMA543	5/8	1/4	3/64	9.16	9.16	10.96
CNMA544	5/8	1/4	1/16	9.16	9.16	10.96
CNMA642	3/4	1/4	1/32	10.78	10.78	13.80
CNMA643	3/4	1/4	3/64	10.78	10.78	13.80
CNMA644	3/4	1/4	1/16	10.78	10.78	13.80
CNMA646	3/4	1/4	3/32	10.78	10.78	13.80

CNMM

80° Diamond Single Sided with molded chipbreaker.
Screw-On Insert
Used for semi-finishing and finishing on a wide range of materials



Insert Number	I.C.	Width	Corner Flat	Price Each C-2	Price Each C-6	Price Each TiN Coated*
CNMM432	1/2	3/16	1/32	5.03	5.03	6.84
CNMM433	1/2	3/16	3/64	5.03	5.03	6.84
CNMM642	3/4	1/4	1/32	10.71	10.71	13.74
CNMM643	3/4	1/4	3/64	10.71	10.71	13.74

CNMG

80° Diamond
Negative rake
Ground all over



Insert Number	I.C.	Width	Radius	Hole Size	Price Each C-2	Price Each C-6	Price Each TiN Coated*
CNMG431	1/2	3/16	1/64	.203	4.96	4.96	5.66
CNMG432	1/2	3/16	1/32	.203	4.96	4.96	5.66
CNMG433	1/2	3/16	3/64	.203	4.96	4.96	5.66
CNMG542	5/8	1/4	1/32	.250	8.18	8.18	10.66
CNMG543	5/8	1/4	3/64	.250	8.18	8.18	10.66
CNMG544	5/8	1/4	1/16	.250	8.18	8.18	10.66
CNMG642	3/4	1/4	1/32	.312	10.72	10.72	14.08
CNMG643	3/4	1/4	3/64	.312	10.72	10.72	14.08
CNMG644	3/4	1/4	1/16	.312	10.72	10.72	14.08

CNMP

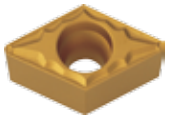
80° DIamond
5° Positive lapped with hole and cast chipbreaker



Insert Number	I.C.	Width	Radius	Hole Size	Price Each C-2	Price Each C-6	Price Each TiN Coated*
CNMP431	1/2	3/16	1/64	.203	6.12	6.12	7.04
CNMP432	1/2	3/16	1/32	.203	6.12	6.12	7.04
CNMP433	1/2	3/16	3/64	.203	6.12	6.12	7.04
CNMP642	3/4	1/4	1/32	.312	13.60	13.60	15.64
CNMP643	3/4	1/4	3/64	.312	13.60	13.60	15.64

DCMT

55° Diamond
Single sided with Chipbreaker
7° Relief Angle



Insert Number	I.C.	Width	Radius	Hole Size	Price Each C-2	Price Each C-6	Price Each TiN Coated*
DCMT21.50	1/4	3/32	.006	.110	10.20	10.20	12.24
DCMT21.51	1/4	3/32	1/64	.110	10.20	10.20	12.24
DCMT21.52	1/4	3/32	1/32	.110	10.20	10.20	12.24
DCMT32.51	3/8	5/32	1/64	.173	10.74	10.74	12.84
DCMT32.52	3/8	5/32	1/32	.173	10.74	10.74	12.84
DCMT32.53	3/8	5/32	3/64	.173	10.74	10.74	12.84

C2 for cast Iron & non-ferrous material. C6 for steel & steel alloys. TiN coated where higher speeds & feeds are possible.

Carbide Turning Inserts

Approved Performance Tooling

Please order in package quantity, 10 inserts in a package.
* TiN Coated is C6

DNMG

55° Diamond
Negative rake
with chip control



Insert Number	I.C.	Width	Radius	Hole Size	Price Each C-2	C-6	TiN Coated*
DNMG431	1/2	3/16	1/64	.203	7.96	7.96	8.52
DNMG432	1/2	3/16	1/32	.203	7.96	7.96	8.52
DNMG433	1/2	3/16	3/64	.203	7.96	7.96	8.52
DNMG532	5/8	3/16	1/32	.250	7.96	7.96	8.52
DNMG533	5/8	3/16	3/64	.250	7.96	7.96	8.52
DNMG542	5/8	1/4	1/32	.250	12.62	12.62	13.92
DNMG543	5/8	1/4	3/64	.250	12.62	12.62	13.92

RCMT

Round
Single sided with
Chipbreaker
7° Positive rake



Insert Number	I.C.	Thickness	Hole Size	Price Each C-2	C-6	TiN Coated*
RCMT32.50	3/8	5/32	.173	13.60	13.60	15.34

RNMA

Round
Negative rake
Lapped top
and bottom with hole



Insert Number	Dia. ±.001	Width	Hole Size	Price Each C-2	C-6	TiN Coated*
RNMA32	3/8	1/8	.150	3.21	3.21	4.42
RNMA43	1/2	3/16	.203	3.91	3.91	5.19
RNMA54	5/8	1/4	.250	5.50	5.50	7.40
RNMA64	3/4	1/4	.313	7.74	7.74	9.76
RNMA86	1	3/8	.359	18.64	18.64	22.60
RNMA106	1-1/4	3/8	.503	18.64	18.64	22.60

RNMA-86 and RNMA-106 have 5 pieces per pkg.

RNG

Round
Negative rake
Ground all over



Insert Number	Dia. ±.001	Width	Price Each C-2	C-6	TiN Coated*
RNG32	3/8	1/8	4.00	4.00	4.74
RNG42	1/2	1/8	5.02	5.02	5.88
RNG43	1/2	3/16	6.44	6.44	7.48

RNMG

Round
Negative rake
with chip control



Insert Number	Dia. ±.001	Width	Hole Size	Price Each C-2	C-6	TiN Coated*
RNMG32	3/8	1/8	.150	3.23	3.23	4.14
RNMG43	1/2	3/16	.203	4.32	4.32	2.90
RNMG54	5/8	1/4	.250	6.60	6.60	7.15
RNMG64	3/4	1/4	.312	8.58	8.58	11.34
RNMG86	1	3/8	.358	19.32	19.32	24.22

RNMG-86 has 5 pcs per pkg.

RPG

Round
Positive rake
Ground all over



Insert Number	Dia. ±.001	Width	Price Each C-2	C-6	TiN Coated*
RPG42	1/2	1/8	6.44	6.44	7.68

SCMT

Square
Single sided with
Chipbreaker
7° Positive rake



Insert Number	I.C.	Width	Radius	Hole Size	Price Each C-2	C-6	TiN Coated*
SCMT32.51	3/8	5/32	1/64	.173	6.32	6.32	6.80
SCMT32.52	3/8	5/32	1/32	.173	6.32	6.32	6.80
SCMT431	1/2	3/16	1/64	.216	6.96	6.96	7.28
SCMT432	1/2	3/16	1/32	.216	6.96	6.96	7.28

SNG

Square
Negative rake
Ground all over



Insert Number	I.C.	Width	Radius	Price Each C-2	C-6	TiN Coated*
SNG321	3/8	1/8	1/64	4.70	4.70	5.52
SNG322	3/8	1/8	1/32	4.70	4.70	5.52
SNG323	3/8	1/8	3/64	4.70	4.70	5.52
SNG332	3/8	3/16	1/32	5.02	5.02	5.98
SNG333	3/8	3/16	3/64	5.02	5.02	5.98
SNG422	1/2	1/8	1/32	5.32	5.32	6.14
SNG423	1/2	1/8	3/64	5.32	5.32	6.14
SNG424	1/2	1/8	1/16	5.32	5.32	6.14
SNG432	1/2	3/16	1/32	6.50	6.50	7.48
SNG433	1/2	3/16	3/64	6.50	6.50	7.48
SNG434	1/2	3/16	1/16	6.50	6.50	7.48
SNG533	5/8	3/16	3/64	9.73	9.73	11.21
SNG632	3/4	3/16	1/32	10.74	10.74	12.30
SNG633	3/4	3/16	3/64	10.74	10.74	12.30
SNG634	3/4	3/16	1/16	10.74	10.74	12.30

C2 for cast Iron & non-ferrous material. C6 for steel & steel alloys. TiN coated where higher speeds & feeds are possible.

Carbide Turning Inserts

apt Approved Performance Tooling

Please order in package quantity, 10 inserts in a package.
* TiN Coated is C6

SNMA

Square
Negative rake
Lapped top
and bottom with hole



Insert Number	I.C.	Width	Radius	Hole Size	Price Each C-2	C-6	TiN Coated*
SNMA322	3/8	1/8	1/32	.150	3.22	3.22	4.34
SNMA432	1/2	3/16	1/32	.203	4.64	4.64	5.74
SNMA433	1/2	3/16	3/64	.203	4.64	4.64	5.74
SNMA543	5/8	1/4	3/64	.250	7.06	7.06	8.74
SNMA643	3/4	1/4	3/64	.312	9.70	9.70	11.92
SNMA644	3/4	1/4	1/16	.312	9.70	9.70	11.92
SNMA866	1	3/8	3/32	.358	26.64	26.64	33.00

SNMG

Square
Negative rake
with chip control



Insert Number	I.C.	Width	Radius	Hole Size	Price Each C-2	C-6	TiN Coated*
SNMG322	3/8	1/8	1/32	.150	3.42	3.42	4.26
SNMG323	3/8	1/8	3/64	.150	3.42	3.42	4.26
SNMG332	3/8	3/16	1/32	.150	4.10	4.10	5.11
SNMG333	3/8	3/16	3/64	.150	4.10	4.10	5.11
SNMG431	1/2	3/16	1/64	.203	5.14	5.14	6.28
SNMG432	1/2	3/16	1/32	.203	5.14	5.14	6.28
SNMG433	1/2	3/16	3/64	.203	5.14	5.14	6.28
SNMG434	1/2	3/16	1/16	.203	5.14	5.14	6.28
SNMG542	5/8	1/4	1/32	.250	7.80	7.80	9.02
SNMG543	5/8	1/4	3/64	.250	7.80	7.80	9.02
SNMG544	5/8	1/4	1/16	.250	7.80	7.80	9.02
SNMG642	3/4	1/4	1/32	.312	10.64	10.64	13.74
SNMG643	3/4	1/4	3/64	.312	10.64	10.64	13.74
SNMG644	3/4	1/4	1/16	.312	10.64	10.64	13.74
SNMG866	1	3/8	3/32	.358	25.74	25.74	30.40

SNMM

Square
Single sided with
Chipbreaker
Negative rake



Insert Number	I.C.	Width	Radius	Hole Size	Price Each C-2	C-6	TiN Coated*
SNMM432	1/2	3/16	1/32	.203	4.48	4.48	5.82
SNMM433	1/2	3/16	3/64	.203	4.48	4.48	5.82
SNMM434	1/2	3/16	1/16	.203	4.48	4.48	5.82
SNMM643	3/4	1/4	3/64	.312	9.52	9.52	12.38
SNMM644	3/4	1/4	1/16	.312	9.52	9.52	12.38

SNU

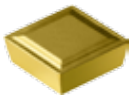
Square
Negative rake
Ground top & bottom



Insert Number	I.C.	Width	Radius	Price Each C-2	C-6	TiN Coated*
SNU322	3/8	1/8	1/32	2.97	2.97	4.09
SNU422	1/2	1/8	1/32	3.88	3.88	4.66
SNU423	1/2	1/8	3/64	3.88	3.88	4.66
SNU424	1/2	1/8	1/16	3.88	3.88	4.66
SNU432	1/2	3/16	1/32	4.92	4.92	5.68
SNU433	1/2	3/16	3/64	4.92	4.92	5.68
SNU434	1/2	3/16	1/16	4.92	4.92	5.68
SNU533	5/8	3/16	3/64	7.38	7.38	9.22
SNU633	3/4	3/16	3/64	8.84	8.84	10.34
SNU634	3/4	3/16	1/16	8.84	8.84	10.34

SPMR

Square
Single sided with
Chipbreaker
11° Relief angle



Insert Number	I.C.	Width	Radius	Price Each C-2	C-6	TiN Coated*
SPMR321	3/8	1/8	1/64	3.91	3.91	5.16
SPMR322	3/8	1/8	1/32	3.91	3.91	5.16
SPMR421	1/2	1/8	1/64	4.06	4.06	5.94
SPMR422	1/2	1/8	1/32	4.06	4.06	5.94

C2 for cast Iron & non-ferrous material. C6 for steel & steel alloys. TiN coated where higher speeds & feeds are possible.

Carbide Turning Inserts

apt Approved Performance Tooling

Please order in package quantity, 10 inserts in a package.
* TiN Coated is C6

Insert Number	I.C.	Width	Radius	Price Each		
				C-2	C-6	TiN Coated*
SPG321	3/8	1/8	1/64	5.88	5.88	6.82
SPG322	3/8	1/8	1/32	5.88	5.88	6.82
SPG323	3/8	1/8	3/64	5.88	5.88	6.82
SPG420	1/2	1/8	0	6.67	6.67	7.54
SPG421	1/2	1/8	1/64	6.67	6.67	7.54
SPG422	1/2	1/8	1/32	6.67	6.67	7.54
SPG423	1/2	1/8	3/64	6.67	6.67	7.54
SPG424	1/2	1/8	1/16	6.67	6.67	7.54
SPG432	1/2	3/16	1/32	8.02	8.02	9.82
SPG433	1/2	3/16	3/64	8.02	8.02	9.82
SPG632	3/4	3/16	1/32	11.38	11.38	13.40
SPG633	3/4	3/16	3/64	11.38	11.38	13.40
SPG634	3/4	3/16	1/16	11.38	11.38	13.40

SPG

Square
Positive rake
Ground all over



Insert Number	I.C.	Width	Radius	Hole Size	Price Each		
					C-2	C-6	TiN Coated*
SPGH432	1/2	3/16	1/32	.177	12.94	12.94	15.54
SPGH433	1/2	3/16	3/64	.177	12.94	12.94	15.54

SPGH

Square, Positive rake. Ground all over
Chip groove in one side



Insert Number	I.C.	Width	Radius	Price Each		
				C-2	C-6	TiN Coated*
SPU322	3/8	1/8	1/8	4.50	4.50	5.28
SPU421	1/2	1/8	1/8	5.80	5.80	6.68
SPU422	1/2	1/8	1/8	5.80	5.80	6.68
SPU423	1/2	1/8	1/8	5.80	5.80	6.68
SPU632	3/4	3/16	3/16	11.22	11.22	13.00
SPU633	3/4	3/16	3/16	11.22	11.22	13.00
SPU634	3/4	3/16	3/16	11.22	11.22	13.00

SPU

Square
Positive rake
Ground top and bottom



Insert Number	I.C.	Width	Radius	Hole Size	Price Each		
					C-2	C-6	TiN Coated*
TCMT21.50	1/4	3/32	0	.110	5.20	5.20	6.50
TCMT21.51	1/4	3/32	1/64	.110	5.20	5.20	6.50
TCMT21.52	1/4	3/32	1/32	.110	5.20	5.20	6.50
TCMT32.50	3/8	5/32	.008	.173	7.42	7.42	9.04
TCMT32.51	3/8	5/32	1/64	.173	7.42	7.42	9.04
TCMT32.52	3/8	5/32	1/32	.173	7.42	7.42	9.04

TCMT

80° Diamond
Single sided with Chipbreaker
7° Positive rake



Insert Number	I.C.	Width	Radius	Price Each		
				C-2	C-6	TiN Coated*
TNG221	1/4	1/8	1/64	3.66	3.66	5.26
TNG222	1/4	1/8	1/32	3.66	3.66	5.26
TNG321	3/8	1/8	1/64	4.74	4.74	6.48
TNG322	3/8	1/8	1/32	4.74	4.74	6.48
TNG323	3/8	1/8	3/64	4.74	4.74	6.48
TNG324	3/8	1/8	1/16	4.74	4.74	6.48
TNG332	3/8	3/16	1/32	5.70	5.70	7.58
TNG333	3/8	3/16	3/64	5.70	5.70	7.58
TNG432	1/2	3/16	1/32	7.88	7.88	10.48
TNG433	1/2	3/16	3/64	7.88	7.88	10.48
TNG434	1/2	3/16	1/16	7.88	7.88	10.48
TNG544	5/8	1/4	1/16	12.58	12.58	17.56

TNG

Triangle
Negative rake
Ground all over



C2 for cast Iron & non-ferrous material. C6 for steel & steel alloys. TiN coated where higher speeds & feeds are possible.

Carbide Turning Inserts

Approved Performance Tooling

Please order in package quantity, 10 inserts in a package.
* TiN Coated is C6

TNMA

Triangle
Negative rake
Lapped top
and bottom with hole
TNMA-666 has 5 Pcs per pkg.



Insert Number	I.C.	Width	Radius	Hole Size	Price Each C-2	C-6	TiN Coated*
TNMA222	1/4	1/8	1/32	.093	2.46	2.46	3.74
TNMA322	3/8	1/8	1/32	.150	3.06	3.06	4.42
TNMA323	3/8	1/8	3/64	.150	3.06	3.06	4.42
TNMA331	3/8	3/16	1/64	.150	4.42	4.42	6.05
TNMA332	3/8	3/16	1/32	.150	4.42	4.42	6.05
TNMA333	3/8	3/16	3/64	.150	4.42	4.42	6.05
TNMA432	1/2	3/16	1/32	.203	5.54	5.54	6.84
TNMA433	1/2	3/16	3/64	.203	5.54	5.54	6.84
TNMA434	1/2	3/16	1/16	.203	5.54	5.54	6.84
TNMA438	1/2	3/16	1/8	.203	5.54	5.54	6.84
TNMA542	5/8	1/4	1/32	.250	10.24	10.24	12.56
TNMA544	5/8	1/4	1/16	.250	10.24	10.24	12.56
TNMA666	3/4	3/8	3/32	.312	15.46	15.46	22.30

TNMG

Triangle
Negative rake
with chip control
TNMG-666 has 5 Pcs per pkg.



Insert Number	I.C.	Width	Radius	Hole Size	Price Each C-2	C-6	TiN Coated*
TNMG221	1/4	1/8	1/64	.093	3.08	3.08	4.09
TNMG222	1/4	1/8	1/32	.093	3.08	3.08	4.09
TNMG321	3/8	1/8	1/64	.150	3.34	3.34	4.10
TNMG322	3/8	1/8	1/32	.150	3.34	3.34	4.10
TNMG323	3/8	1/8	3/64	.150	3.34	3.34	4.10
TNMG324	3/8	1/8	1/16	.150	3.34	3.34	4.10
TNMG331	3/8	3/16	1/64	.150	4.10	4.10	5.02
TNMG332	3/8	3/16	1/32	.150	4.10	4.10	5.02
TNMG333	3/8	3/16	3/64	.150	4.10	4.10	5.02
TNMG431	1/2	3/16	1/64	.203	5.80	5.80	6.76
TNMG432	1/2	3/16	1/32	.203	5.80	5.80	6.76
TNMG433	1/2	3/16	3/64	.203	5.80	5.80	6.76
TNMG434	1/2	3/16	1/16	.203	5.80	5.80	6.76
TNMG438	1/2	3/16	1/8	.203	5.80	5.80	6.76
TNMG542	5/8	1/4	1/32	.250	10.44	10.44	13.14
TNMG543	5/8	1/4	3/64	.250	10.44	10.44	13.14
TNMG544	5/8	1/4	1/16	.250	10.44	10.44	13.14
TNMG666	3/4	3/8	3/32	.312	18.50	18.50	21.78

TNMM

Triangle
Single sided with
Chipbreaker
Negative rake



Insert Number	I.C.	Width	Radius	Hole Size	Price Each C-2	C-6	TiN Coated*
TNMM332	1/8	3/16	1/32	.150	3.95	3.95	5.13
TNMM432	1/2	3/16	1/32	.203	5.60	5.60	7.28
TNMM433	1/2	3/16	3/64	.203	5.60	5.60	7.28
TNMM542	5/8	1/4	1/32	.250	10.72	10.72	13.94
TNMM544	5/8	1/4	1/16	.250	10.72	10.72	13.94

TNMP

Triangle
Negative rake
5° Positive



Insert Number	I.C.	Width	Radius	Hole Size	Price Each C-6	TiN Coated*
TNMP321	3/8	1/8	1/64	.150	4.30	5.34
TNMP322	3/8	1/8	1/32	.150	4.30	5.34
TNMP323	3/8	1/8	3/64	.150	4.30	5.34
TNMP331	3/8	3/16	1/64	.150	4.88	5.92
TNMP332	3/8	3/16	1/32	.150	4.88	5.92
TNMP333	3/8	3/16	3/64	.150	4.88	5.92
TNMP431	1/2	3/16	1/64	.203	8.29	9.66
TNMP432	1/2	3/16	1/32	.203	8.29	9.66
TNMP433	1/2	3/16	3/64	.203	8.29	9.66
TNMP434	1/2	3/16	1/16	.203	8.29	9.66
TNMP542	5/8	1/4	1/32	.250	10.77	12.76

C2 for cast Iron & non-ferrous material. C6 for steel & steel alloys. TiN coated where higher speeds & feeds are possible.

Carbide Turning Inserts

Approved Performance Tooling

Please order in package quantity, 10 inserts in a package.
* TiN Coated is C6

Insert Number	I.C.	Width	Radius	Price Each C-2	Price Each C-6	Price Each TiN Coated*
TNU221	1/4	1/8	1/64	2.08	2.08	3.38
TNU222	1/4	1/8	1/32	2.08	2.08	3.38
TNU322	3/8	1/8	1/32	2.94	2.94	4.40
TNU323	3/8	1/8	3/64	2.94	2.94	4.40
TNU332	3/8	3/16	1/32	3.80	3.80	5.28
TNU333	3/8	3/16	3/64	3.80	3.80	5.28
TNU334	3/8	3/16	1/16	3.80	3.80	5.28
TNU432	1/2	3/16	1/32	5.60	5.60	7.66
TNU433	1/2	3/16	3/64	5.60	5.60	7.66
TNU434	1/2	3/16	1/16	5.60	5.60	7.66
TNU544	5/8	1/4	1/16	10.34	10.34	12.94

TNU
Triangle
Negative rake
Ground top & bottom



Insert Number	I.C.	Width	Radius	Hole Size	Price Each C-2
TNUC21.52	1/4	3/32	1/32	0.136	3.84
TNUC222	1/4	1/8	1/32	0.136	4.04

TNUC
Triangle
Negative rake
Brake turning insert



Insert Number	I.C.	Width	Radius	Price Each C-2	Price Each C-6	Price Each TiN Coated*
TPG220	1/4	1/8	0	5.70	5.70	6.90
TPG221	1/4	1/8	1/64	5.70	5.70	6.90
TPG222	1/4	1/8	1/32	5.70	5.70	6.90
TPG223	1/4	1/8	3/64	5.70	5.70	6.90
TPG320	3/8	1/8	0	6.74	6.74	8.08
TPG321	3/8	1/8	1/64	6.74	6.74	8.08
TPG322	3/8	1/8	1/32	6.74	6.74	8.08
TPG323	3/8	1/8	3/64	6.74	6.74	8.08
TPG324	3/8	1/8	1/16	6.74	6.74	8.08
TPG430	1/2	3/16	0	8.46	8.46	9.88
TPG431	1/2	3/16	1/64	8.46	8.46	9.88
TPG432	1/2	3/16	1/32	8.46	8.46	9.88
TPG433	1/2	3/16	3/64	8.46	8.46	9.88
TPG434	1/2	3/16	1/16	8.46	8.46	9.88
TPG542	5/8	1/4	1/32	14.12	14.12	16.84
TPG543	5/8	1/4	3/64	14.12	14.12	16.84
TPG544	5/8	1/4	1/16	14.12	14.12	16.84

TPG
Triangle
Positive rake
Ground all over



Insert Number	I.C.	Width	Radius	Hole Size	Price Each C-2	Price Each C-6	Price Each TiN Coated*
TPGH21.50	1/4	3/32	0	.120	6.80	6.80	7.96
TPGH21.51	1/4	3/32	1/64	.120	6.80	6.80	7.96
TPGH21.52	1/4	3/32	1/32	.120	6.80	6.80	7.96
TPGH321	3/8	1/8	1/64	.177	7.42	7.42	9.04
TPGH322	3/8	1/8	1/32	.177	7.42	7.42	9.04

TPGH
Triangle
Positive rake
Ground all over
with chip groove on one side



Insert Number	I.C.	Width	Radius	Price Each C-2	Price Each C-6	Price Each TiN Coated*
TPMR221	1/4	1/8	1/64	4.21	4.21	5.25
TPMR222	1/4	1/8	1/32	4.21	4.21	5.25
TPMR321	3/8	1/8	1/64	4.30	4.30	5.55
TPMR322	3/8	1/8	1/32	4.30	4.30	5.55

TPMR
Triangle
Single sided with
Chipbreaker
11° Relief angle



Insert Number	I.C.	Width	Radius	Price Each C-2	Price Each C-6	Price Each TiN Coated*
TPU221	1/4	1/8	1/64	3.64	3.64	4.62
TPU222	1/4	1/8	1/32	3.64	3.64	4.62
TPU321	3/8	1/8	1/64	4.50	4.50	6.06
TPU322	3/8	1/8	1/32	4.50	4.50	6.06
TPU323	3/8	1/8	3/64	4.50	4.50	6.06
TPU431	1/2	3/16	1/64	7.22	7.22	8.70
TPU432	1/2	3/16	1/32	7.22	7.22	8.70
TPU433	1/2	3/16	3/64	7.22	7.22	8.70
TPU434	1/2	3/16	1/16	7.22	7.22	8.70
TPU543	5/8	1/4	3/64	12.88	12.88	14.76
TPU544	5/8	1/4	1/16	12.88	12.88	14.76

TPU
Triangle
Positive rake
Ground top & bottom



C2 for cast Iron & non-ferrous material. C6 for steel & steel alloys. TiN coated where higher speeds & feeds are possible.

Carbide Turning Inserts

Approved Performance Tooling

Please order in package quantity, 10 inserts in a package.
* TiN Coated is C6

TT

11° Positive lapped with hole and cast chipbreaker



Insert Number	I.C.	Width	Radius	Hole Size	Price Each C-2	Price Each C-6	Price Each TiN Coated*
TT221	1/4	1/8	1/64	.090	5.02	5.02	5.88
TT222	1/4	1/8	1/32	.090	5.02	5.02	5.88
TT321	3/8	1/8	1/64	.150	6.32	6.32	7.18
TT322	3/8	1/8	1/32	.150	6.32	6.32	7.18
TT323	3/8	1/8	3/64	.150	6.32	6.32	7.18
TT431	1/2	3/16	1/64	.203	7.58	7.58	8.62
TT432	1/2	3/16	1/32	.203	7.58	7.58	8.62
TT433	1/2	3/16	3/64	.203	7.58	7.58	8.62

VBMT

35° Diamond Single sided with Chipbreaker
7° Positive rake



Insert Number	I.C.	Width	Radius	Hole Size	Price Each C-2	Price Each C-6	Price Each TiN Coated*
VBMT331	3/8	3/16	1/64	.173	12.94	12.94	16.32
VBMT332	3/8	3/16	1/32	.173	12.94	12.94	16.32

VNMG

35° DIamond Negative rake with chip control



Insert Number	I.C.	Width	Radius	Hole Size	Price Each C-2	Price Each C-6	Price Each TiN Coated*
VNMG331	3/8	3/16	1/64	.150	7.48	7.48	8.06
VNMG332	3/8	3/16	1/32	.150	7.48	7.48	8.06
VNMG333	3/8	3/16	3/64	.150	8.62	8.62	8.06
VNMG431	1/2	3/16	1/64	.203	8.62	8.62	10.00
VNMG432	1/2	3/16	1/32	.203	8.62	8.62	10.00

WNMG

80° Trigon Negative rake with chip control



Insert Number	I.C.	Width	Radius	Hole Size	Price Each C-2	Price Each C-6	Price Each TiN Coated*
WNMG331	3/8	3/16	1/64	.150	6.58	6.58	7.64
WNMG332	3/8	3/16	1/32	.150	6.58	6.58	7.64
WNMG431	1/2	3/16	1/64	.203	7.42	7.42	9.04
WNMG432	1/2	3/16	1/32	.203	7.42	7.42	9.04
WNMG434	1/2	3/16	1/16	.203	7.42	7.42	9.04
WNMG542	5/8	1/4	1/32	.250	11.50	11.50	13.00
WNMG543	5/8	1/4	3/64	.250	11.50	11.50	13.00

Shims



Part Number	Dimensions I.C.	Dimensions Thickness	Positive or negative width	Screw Size	Price Each
SHIM41	3/8	1/8	P	4-40	4.88
SHIM48	3/8	3/16	N	4-40	5.20
SHIM26	1/2	1/8	N	8-32	5.62
SHIM37	1/2	1/8	P	8-32	5.98

Chipbreakers



Part Number	I.C.	Effective Width	Price Each
CBT12	3/8	.129	4.16
CBT12N	3/8	.080	4.16
CBT12F	3/8	.056	4.16
CBT16	1/2	.190	4.64

Part Number	I.C.	Effective Width	Price Each
CBT16N	1/2	.100	5.56
CBT16F	1/2	.054	5.56
CBT20	5/8	.190	6.24
CBT20N	5/8	.100	6.24

C2 for cast Iron & non-ferrous material. C6 for steel & steel alloys. TiN coated where higher speeds & feeds are possible.

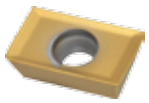
Carbide Milling Inserts

Please order in package quantity, 10 inserts in a package.
* TiN Coated is C6

Approved Performance Tooling

APKT

Rectangular
Single sided
11° Relief angle



Insert Number	L	D	T	R	Hole Size	Price Each C-2	C-6	TiN Coated*
APKT1604	.650	.376	.227	.031	.173	—	9.65	13.00

CTA

87° Parallelograms
Positive rake
Ground all over
CTA-2 has 88° Parallelograms



Insert Number	Please Specify Radii							I.C.	Width	Price Each C-2	C-6	TiN Coated*
CTA2	0	1/64	1/32	1/16	3/32	1/8	—	.355	5/32	7.78	7.78	8.82
CTA4	0	1/64	1/32	1/16	3/32	1/8	—	.460	3/16	9.30	9.30	10.58
CTA6	—	—	1/32	1/16	3/32	1/8	—	.685	3/16	13.60	13.60	17.96
CTA8	—	1/64	1/32	1/16	3/32	1/8	1/4	.750	3/16	16.16	16.16	18.82

RPMM

Round
Single sided
11° Relief angle



Insert Number	I.C.	Width	Hole Size	Price Each C-2	C-6	TiN Coated*
RPMM1204	1/2	3/16	.191	—	—	6.16

RDKT

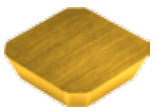
Round
Single sided
15° Relief angle



Insert Number	I.C.	Width	Hole Size	Price Each C-2	C-6	TiN Coated*
RDKT12T3	12mm	3/16	.157	—	—	15.44

SEAN

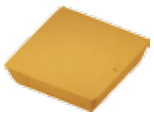
Square
20° Positive rake



Insert Number	I.C.	Width	Corner Flat	Price Each C-2	C-6	TiN Coated*
SEAN42AFTN	1/2	1/8	0.097 x 45°	5.12	5.12	6.58
SEAN43AFTN	1/2	3/16	0.097 x 45°	5.12	5.12	6.58
SEAN53AFTN	5/8	3/16	0.097 x 45°	6.58	6.58	9.67
SEAN42AFN	1/2	1/8	0.097 x 45°	5.12	5.12	6.58
SEAN43AFN	1/2	3/16	0.097 x 45°	5.12	5.12	6.58
SEAN53AFN	5/8	3/16	0.097 x 45°	6.58	6.58	9.67

SEC

Square
20° Positive rake
with Corner Flat
Single sided



Insert Number	I.C.	Width	Corner Flat	Price Each C-2	C-6	TiN Coated*
SEC422	1/2	1/8	1/32	5.30	5.30	7.11
SEC424	1/2	1/8	1/16	5.30	5.30	7.11
SEC533	5/8	3/16	3/64	7.18	7.18	9.00
SEC633	3/4	3/16	3/64	10.47	10.47	13.49
SEC634	3/4	3/16	1/16	10.47	10.47	13.49

SEC

Square
20° Positive rake
with Radius
Ground all over



Insert Number	I.C.	Width	Price Each C-2	C-6	TiN Coated*
SEC422N	1/2	1/8	8.46	8.46	9.62
SEC422J	1/2	1/8	9.86	9.86	11.04

J= Polished Top N= Not Polish on Top

SEHT

Square
Single sided
20° Relief angle



Insert Number	I.C.	Width	Hole Size	Price Each C-2	C-6	TiN Coated*
SEHT1204	1/2	3/16	.220	—	—	12.24

C2 for cast Iron & non-ferrous material. C6 for steel & steel alloys. TiN coated where higher speeds & feeds are possible.

Carbide Milling Inserts

Approved Performance Tooling

Please order in package quantity, 10 inserts in a package.
* TiN Coated is C6

SEKN

Square
20° Positive rake
Milling Inserts



Insert Number	I.C.	Width	Corner Flat	Price Each		
				C-2	C-6	TiN Coated*
SEKN42AFN	1/2	1/8	3/32 x 45°	5.02	5.02	6.84
SEKN42AFTN	1/2	1/8	3/32 x 45°	5.02	5.02	6.84
SEKN42AFSN	1/2	1/8	3/32 x 45°	5.85	5.85	7.67
SEKN43AFN	1/2	3/16	3/32 x 45°	5.85	5.85	7.67
SEKN43AFTN	1/2	3/16	3/32 x 45°	5.85	5.85	7.67
SEKN53AFN	5/8	3/16	1/8 x 45°	8.08	8.08	11.12
SEKN53AFTN	5/8	3/16	1/8 x 45°	8.08	8.08	11.12

SEKR

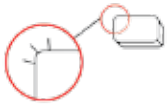
Square
20° Positive rake
Milling Inserts
for end mills and
face millins



Insert Number	I.C.	Width	Corner Flat	Price Each		
				C-2	C-6	TiN Coated*
SEKR42AFTN	1/2	1/8	0.097 x 45°	5.85	5.85	7.67
SEKR43AFTN	1/2	3/16	0.097 x 45°	6.25	6.25	8.07
SEKR53AFTN	5/8	3/16	0.097 x 45°	7.96	7.96	10.17

SPC

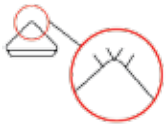
Square
Positive rake , Ground all over
with wiping flats on four corners



Insert Number	I.C.	Width	Price Each		
			C-2	C-6	TiN Coated*
SPC42ZR	1/2	1/8	6.90	6.90	8.26
SPC53ER	5/8	3/16	9.95	9.95	12.29

TPC

Triangle
Positive rake
Ground all over with
wiping flats on three corners



Insert Number	I.C.	Width	Price Each		
			C-2	C-6	TiN Coated*
TPC32ZR	3/8	1/8	6.48	6.48	7.62

Carbide Grooving Inserts



Left and Right Hand Grooving and Profiling Inserts

Insert Number Left	Insert Number Right	Groove Width	Depth of Cut	Radius	Price Each		
					C-2	C-6	TiN Coated*
NG2031L	**NG2031R**	.031	.050	.005/.010	8.88	8.88	10.10
NG2041L	**NG2041R**	.041	.050	.005/.010	8.88	8.88	10.10
NG2047L	**NG2047R**	.047	.050	.005/.010	8.88	8.88	10.10
NG2056L	**NG2056R**	.056	.050	.005/.010	8.88	8.88	10.10
NG2062L	**NG2062R**	.062	.050	.005/.010	8.88	8.88	10.10
NG2094L	**NG2094R**	.094	.110	.005/.010	8.88	8.88	10.10
NG2125L	**NG2125R**	.125	.110	.005/.010	8.88	8.88	10.10
NG3031L	**NG3031R**	.031	.075	.005/.010	9.58	9.58	10.80
NG3047L	**NG3047R**	.047	.075	.005/.010	9.58	9.58	10.80
NG3062L	**NG3062R**	.062	.094	.005/.010	9.58	9.58	10.80
NG3072L	**NG3072R**	.072	.094	.005/.010	9.58	9.58	10.80
NG3088L	**NG3088R**	.088	.094	.005/.010	9.58	9.58	10.80
NG3094L	**NG3094R**	.094	.150	.005/.010	9.58	9.58	10.80
NG3097L	**NG3097R**	.097	.150	.005/.010	9.58	9.58	10.80
NG3105L	**NG3105R**	.105	.150	.005/.010	9.58	9.58	10.80
NG3125L	**NG3125R**	.125	.150	.005/.010	9.58	9.58	10.80
NG3142L	**NG3142R**	.142	.150	.005/.010	9.58	9.58	10.80
NG3156L	**NG3156R**	.156	.150	.005/.010	9.58	9.58	10.80
NG3178L	**NG3178R**	.178	.150	.005/.010	9.58	9.58	10.80
NG3189L	**NG3189R**	.189	.150	.020/.025	9.58	9.58	10.80
NG4125L	**NG4125R**	.125	.250	.020/.025	18.19	18.19	20.72
NG4189L	**NG4189R**	.189	.250	.020/.025	18.19	18.19	20.72
NG2250L	**NG2250R**	.250	.250	.020/.025	18.19	18.19	20.72

C2 for cast Iron & non-ferrous material. C6 for steel & steel alloys. TiN coated where higher speeds & feeds are possible.

Carbide Threading Inserts

Approved Performance Tooling

Please order in package quantity, 10 inserts in a package.
* TiN Coated is C6

Insert Number	I.C.	Width	Hole Size	Price Each C-2	C-6	TiN Coated*
TNMA32NV	3/8	1/8	.150	11.38	11.38	13.12
TNMA43NV	1/2	3/16	.203	13.94	13.94	15.96
TPMA54NV	5/8	1/4	.250	16.73	16.73	19.15

TNMA-NV
Triangle
Neutral rake
60° V-Thread



Insert Number	I.C.	Width	Hole Size	Price Each C-2	C-6	TiN Coated*
TNMC32NV	3/8	1/8	.150	11.38	11.38	13.12
TNMC43NV	1/2	3/16	.203	13.94	13.94	15.96
TPMC54NV	5/8	1/4	.250	16.73	16.73	19.15

TNMC-NV
Triangle
Neutral rake
60° V-Thread
Double Countersink hole



Insert Number	I.C.	Width	Hole Size	Price Each C-2	C-6	TiN Coated*
TPMA32NV	3/8	1/8	.150	13.42	13.42	15.16
TPMA43NV	1/2	3/16	.203	15.58	15.58	17.06
TPMA54NV	5/8	1/4	.250	18.70	18.70	20.47

TPMA-NV
Triangle
10° Positive rake
60° V-Thread



Insert Number	I.C.	Width	Hole Size	Price Each C-2	C-6	TiN Coated*
TPMC32NV	3/8	1/8	.150	13.42	13.42	15.16
TPMC43NV	1/2	3/16	.203	15.58	15.58	17.06
TPMC54NV	5/8	1/4	.250	18.70	18.70	20.47

TPMC-NV
Triangle
10° Positive rake
60° V-Thread
Double Countersink hole



Carbide Notched Threading Inserts

Please order in package quantity, 10 inserts in a package.
* TiN Coated is C6

Insert Number	External Threads per Inch	Internal Threads per Inch	Price Each C-2	C-6	TiN Coated*
NT2L	8-36	7-20	9.58	9.58	10.18
NT3L	6-20	5-12	9.58	9.58	10.18
NT4L	4-20	4-12	17.19	17.19	19.00

NT - Left Hand



Insert Number	External Threads per Inch	Internal Threads per Inch	Price Each C-2	C-6	TiN Coated*
NT2R	8-36	7-20	9.58	9.58	10.18
NT3R	6-20	5-12	9.58	9.58	10.18
NT4R	4-20	4-12	17.19	17.19	19.00

NT - Right Hand



Insert Number	External Threads per Inch	Internal Threads per Inch	Price Each C-2	C-6	TiN Coated*
NTP2L	8-36	7-20	9.58	9.58	10.18
NTP3L	6-20	5-12	9.58	9.58	10.18
NTP4L	4-20	4-12	18.11	18.11	19.68

NTP - Left Hand



Insert Number	External Threads per Inch	Internal Threads per Inch	Price Each C-2	C-6	TiN Coated*
NTP2R	8-36	7-20	9.58	9.58	10.18
NTP3R	6-20	5-12	9.58	9.58	10.18
NTP4R	4-20	4-12	18.11	18.11	19.68

NTP - Right Hand



C2 for cast Iron & non-ferrous material. C6 for steel & steel alloys. TiN coated where higher speeds & feeds are possible.

Solid Carbide Burs

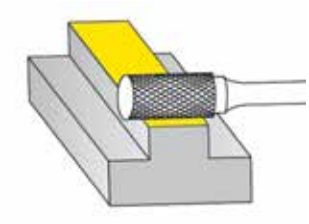
1/4" Steel Shank - Single & Double Cut

apt Approved Performance Tooling

Cylindrical Shape (SA)

Tool Number				
Single Cut	Double Cut	Cutter Dia.	Length of Cut	Price Each
SA11S	SA11	1/8	1/2	9.81
SA12S	SA12	1/8	5/8	8.56
SA14S	SA14	3/16	5/8	8.92
SA1S	SA1	1/4	5/8	8.73
SA1LS	SA1L	1/4	1	18.18
SA2S	SA2	5/16	3/4	10.98
SA2LS	SA2L	5/16	1	21.84
SA3S	SA3	3/8	3/4	11.88

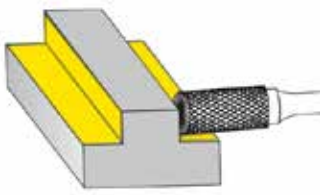
Tool Number				
Single Cut	Double Cut	Cutter Dia.	Length of Cut	Price Each
SA3LS	SA3L	3/8	1	23.22
SA3XLS	SA3XL	3/8	1-1/2	23.22
SA4S	SA4	7/16	1	17.82
SA5S	SA5	1/2	1	18.72
SA6S	SA6	5/8	1	23.67
SA16S	SA16	3/4	3/4	28.18
SA7S	SA7	3/4	1	35.37
SA9S	SA9	1	1	51.03



Cylindrical Shape with End Cut (SB)

Double Cut	Cutter Dia.	Length of Cut	Price Each
SB11	1/8	1/2	9.82
SB12	1/8	5/8	11.74
SB14	3/16	5/8	10.18
SB1	1/4	5/8	9.46
SB1L	1/4	1	20.80
SB2	5/16	3/4	12.16
SB2L	5/16	1	25.85
SB3	3/8	3/4	13.05

Double Cut	Cutter Dia.	Length of Cut	Price Each
SB3L	3/8	1	24.58
SB3XL	3/8	1-1/2	30.66
SB4	7/16	1	19.26
SB5	1/2	1	20.79
SB6	5/8	1	25.92
SB16	3/4	3/4	31.06
SB7	3/4	1	37.80
SB9	1	1	56.70



Cylindrical Shape with Radius End (SC)

Tool Number				
Single Cut	Double Cut	Cutter Dia.	Length of Cut	Price Each
SC11S	SC11	1/8	1/8	9.82
SC12S	SC12	1/8	1/8	10.18
SC14S	SC14	3/16	3/16	10.18
SC1S	SC1	1/4	1/4	9.99
SC1AS	SC1A	1/4	1	19.22
SC1LS	SC1L	1/4	1/4	21.69
SC2S	SC2	5/16	5/16	13.06
SC2LS	SC2L	5/16	1	17.30

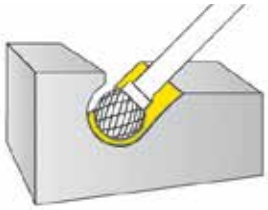
Tool Number				
Single Cut	Double Cut	Cutter Dia.	Length of Cut	Price Each
SC3S	SC3	3/8	3-1/4	13.23
SC3LS	SC3L	3/8	1	24.58
SC3XLS	SC3XL	3/8	1-1/2	30.66
SC4S	SC4	7/16	7/16	19.26
SC5S	SC5	1/2	1/2	20.79
SC6S	SC6	5/8	5/8	26.64
SC7S	SC7	3/4	3/4	37.80
SC9S	SC9	1	1	66.16



Ball Shape (SD)

Tool Number				
Single Cut	Double Cut	Cutter Dia.	Length of Cut	Price Each
SD11S	SD11	1/8	1/8	10.00
SD14S	SD14	3/16	3/16	10.00
SD1S	SD1	1/4	1/4	9.63
SD2S	SD2	5/16	5/16	10.44
SD3S	SD3	3/8	3/8	11.79

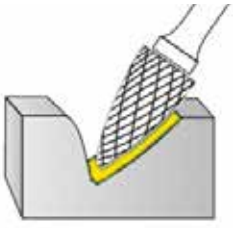
Tool Number				
Single Cut	Double Cut	Cutter Dia.	Length of Cut	Price Each
SD4S	SD4	7/16	7/16	14.68
SD5S	SD5	1/2	1/2	15.12
SD6S	SD6	5/8	5/8	18.90
SD7S	SD7	3/4	3/4	25.74
SD9S	SD9	1	1	42.30



Tree Shape with Pointed End (SG)

Tool Number				
Single Cut	Double Cut	Cutter Dia.	Length of Cut	Price Each
SG1S	SG1	1/4	5/8	10.87
SG1LS	SG1L	1/4	3/4	22.32
SG2S	SG2	5/16	3/4	14.58
SG3S	SG3	3/8	3/4	13.59
SG13S	SG13	1/2	3/4	19.08

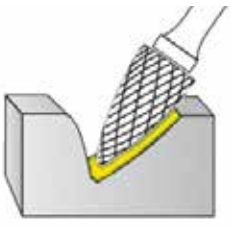
Tool Number				
Single Cut	Double Cut	Cutter Dia.	Length of Cut	Price Each
SG5S	SG5	1/2	1	17.34
SG6S	SG6	5/8	1	24.88
SG7S	SG7	3/4	1	32.82
SG15S	SG15	3/4	1-1/2	56.14



Tree Shape with Radius End (SF)

Tool Number				
Single Cut	Double Cut	Cutter Dia.	Length of Cut	Price Each
SF11S	SF11	1/8	1/2	10.80
SF1S	SF1	1/4	5/8	10.80
SF1LS	SF1L	1/4	3/4	22.32
SF3S	SF3	3/8	3/4	13.59
SF4S	SF4	7/16	1	17.74
SF13S	SF13	1/2	3/4	19.08

Tool Number				
Single Cut	Double Cut	Cutter Dia.	Length of Cut	Price Each
SF5S	SF5	1/2	1	17.34
SF6S	SF6	5/8	1	27.63
SF7S	SF7	3/4	1	36.45
SF14S	SF14	3/4	1-1/4	37.98
SF15S	SF15	3/4	1-1/2	52.92



Solid Carbide Burs

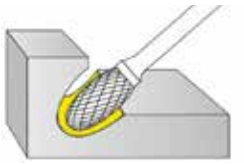
1/4" Steel Shank - Single & Double Cut

apt Approved Performance Tooling

Oval Shape (SE)

Tool Number				
Single Cut	Double Cut	Cutter Dia.	Length of Cut	Price Each
SE11S	SE11	3/16	5/16	11.88
SE1S	SE1	1/4	3/8	11.88
SE2S	SE2	5/16	5/8	12.80
SE3S	SE3	3/8	5/8	14.67

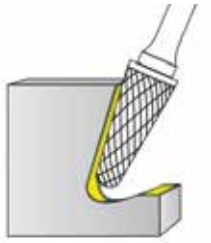
Tool Number				
Single Cut	Double Cut	Cutter Dia.	Length of Cut	Price Each
SE5S	SE5	1/2	7/8	20.79
SE6S	SE6	5/8	1	29.43
SE7S	SE7	3/4	1	37.80



Taper Shape (SL) with Radius End & 14° Included Angle

Tool Number				
Single Cut	Double Cut	Cutter Dia.	Length of Cut	Price Each
SL1S	SL1	1/4	5/8	10.89
SL2S	SL2	5/16	7/8	13.78
SL3S	SL3	3/8	1-1/16	16.47
SL4S	SL4	1/2	1-1/8	20.98

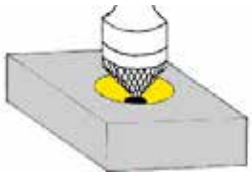
Tool Number				
Single Cut	Double Cut	Cutter Dia.	Length of Cut	Price Each
SL5S	SL5	5/8	1-3/16	36.82
SL6S	SL6	5/8	1-5/16	36.82
SL7S	SL7	3/4	1-1/2	52.92



Cone Shape (SK) with 90° Included Angle

Tool Number				
Single Cut	Double Cut	Cutter Dia.	Length of Cut	Price Each
SK1S	SK1	1/4	1/8	9.90
SK2S	SK2	5/16	3/16	10.80
SK3S	SK3	3/8	3/16	12.06
SK5S	SK5	1/2	1/4	13.49

Tool Number				
Single Cut	Double Cut	Cutter Dia.	Length of Cut	Price Each
SK6S	SK6	5/8	5/16	19.62
SK7S	SK7	3/4	3/8	26.38
SK9S	SK9	1	1/2	41.58



Cone Shape (SJ) with 60° Included Angle

Tool Number				
Single Cut	Double Cut	Cutter Dia.	Length of Cut	Price Each
SJ1S	SJ1	1/4	3/16	9.90
SJ2S	SJ2	5/16	1/4	10.80
SJ3S	SJ3	3/8	1/4	12.06
SJ5S	SJ5	1/2	7/16	14.94

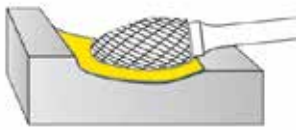
Tool Number				
Single Cut	Double Cut	Cutter Dia.	Length of Cut	Price Each
SJ6S	SJ6	5/8	1/2	19.62
SJ7S	SJ7	3/4	5/8	26.38
SJ9S	SJ9	1	3/4	41.58



Flame Shape (SH)

Tool Number				
Single Cut	Double Cut	Cutter Dia.	Length of Cut	Price Each
SH1S	SH1	1/4	1/2	11.88
SH2S	SH2	5/16	3/4	13.24
SH5S	SH5	1/2	1-1/4	27.18

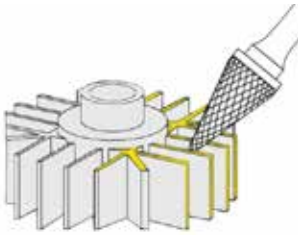
Tool Number				
Single Cut	Double Cut	Cutter Dia.	Length of Cut	Price Each
SH6S	SH6	5/8	1-7/16	39.16
SH7S	SH7	3/4	1-5/8	56.70



Cone Shape (SM)

Tool Number				
Single Cut	Double Cut	Cutter Dia.	Length of Cut	Price Each
SM1S	SM1	1/4	1/2	10.53
SM2S	SM2	1/4	3/4	11.34
SM3S	SM3	1/4	1	12.06
SM3LS	SM3L	1/4	1-1/4	13.62

Tool Number				
Single Cut	Double Cut	Cutter Dia.	Length of Cut	Price Each
SM4S	SM4	3/8	5/8	16.20
SM4LS	SM4L	3/8	1	25.62
SM5S	SM5	1/2	7/8	20.79
SM6S	SM6	5/8	1	32.32



Inverted Cone Shape (SN)

Tool Number				
Single Cut	Double Cut	Cutter Dia.	Length of Cut	Price Each
SN1S	SN1	1/4	5/16	9.72
SN2S	SN2	3/8	3/8	18.54
SN4S	SN4	1/2	1/2	19.26

Tool Number				
Single Cut	Double Cut	Cutter Dia.	Length of Cut	Price Each
SN6S	SN6	5/8	3/4	27.62
SN7S	SN7	3/4	5/8	32.50



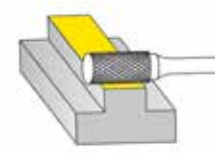
Extra Long Solid Carbide Burs

1/4" Steel Shank - Double Cut 6" Overall

Approved Performance Tooling

Cylindrical Shape

Tool No.	Cutter Dia.	Length of Cut	Price Each
SA1L6	1/4	1/2	18.18
SA3L6	3/8	3/4	23.22
SA5L6	1/2	1	30.06



Pointed Tree Shape

Tool No.	Cutter Dia.	Length of Cut	Price Each
SG1L6	1/4	1/2	22.14
SG3L6	3/8	3/4	24.93
SG5L6	1/2	1	30.60



Cylindrical Ball Nose

Tool No.	Cutter Dia.	Length of Cut	Price Each
SC1L6	1/4	1/2	21.69
SC3L6	3/8	3/4	24.57
SC5L6	1/2	1	32.13



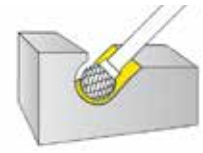
Round Tree Shape

Tool No.	Cutter Dia.	Length of Cut	Price Each
SF1L6	1/4	1/2	22.14
SF3L6	3/8	3/4	24.93
SF5L6	1/2	1	30.60



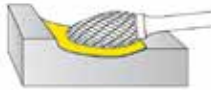
Ball Shape

Tool No.	Cutter Dia.	Length of Cut	Price Each
SD1L6	1/4	7/32	20.97
SD3L6	3/8	5/16	22.86
SD5L6	1/2	7/16	26.46



Flame Shape

Tool No.	Cutter Dia.	Length of Cut	Price Each
SH2L6	5/16	3/4	24.57
SH5L6	1/2	1-1/4	38.88



Oval Shape

Tool No.	Cutter Dia.	Length of Cut	Price Each
SE1L6	1/4	3/8	23.13
SE3L6	3/8	5/8	26.01
SE5L6	1/2	7/8	32.13



14° Included Angle

Tool No.	Cutter Dia.	Length of Cut	Price Each
SL1L6	1/4	5/8	22.23
SL3L6	3/8	1-1/16	27.81
SL4L6	1/2	1-1/8	32.31



Solid Carbide Burs for Aluminum

1/4" Shank - Single Cut

Approved Performance Tooling

Oval Shape

Tool No.	Cutter Dia.	Length of Cut	Price Each
SE1NF	1/4	7/32	20.88
SE3NF	3/8	5/8	18.81
SE5NF	1/2	7/8	26.73
SE6NF	5/8	1	37.90
SE7NF	3/4	1	48.60



Cylindrical

Tool No.	Cutter Dia.	Length of Cut	Price Each
SA1NF	1/4	3/4	11.25
SA3NF	3/8	3/4	15.30
SA5NF	1/2	1	24.03
SA6NF	5/8	1	30.15
SA7NF	3/4	1	45.45



Round Tree Shape

Tool No.	Cutter Dia.	Length of Cut	Price Each
SF1NF	1/4	3/4	13.86
SF3NF	3/8	3/4	17.55
SF5NF	1/2	1	24.84
SF6NF	5/8	1	35.46
SF14NF	3/4	1-1/4	48.87



Cylindrical Ball Nose

Tool No.	Cutter Dia.	Length of Cut	Price Each
SC1NF	1/4	3/4	13.05
SC3NF	3/8	3/4	17.01
SC5NF	1/2	1	26.74
SC6NF	5/8	1	34.04
SC7NF	3/4	1	48.60



14° Included Angle

Tool No.	Cutter Dia.	Length of Cut	Price Each
SL1NF	1/4	5/8	21.16
SL3NF	3/8	1-1/16	21.16
SL4NF	1/2	1-1/8	27.00
SL5NF	5/8	1-3/16	47.44
SL6NF	5/8	1-5/16	47.44
SL7NF	3/4	1-1/2	68.04



Ball Shape

Tool No.	Cutter Dia.	Length of Cut	Price Each
SD1NF	1/4	7/32	12.78
SD3NF	3/8	5/16	14.85
SD5NF	1/2	7/16	19.44
SD6NF	5/8	9/16	24.30
SD7NF	3/4	11/16	33.03



Miniature Burs

Solid Carbide

- Double cut
- 1/16" thru 1/4" diameter head
- 1-1/2" overall length
- 1/8" shank



apt Approved Performance Tooling

Tool No.	Cutter Dia.	Length of Cut	Shank Dia.	Price Each
SA41	1/16	1/4	1/8	4.68
SA42	3/32	7/16	1/8	4.68
SA43	1/8	9/16	1/8	4.68
SA51	1/4	1/2	1/8	9.51
SA52	5/32	1/2	1/8	9.77
SA53	3/16	1/2	1/8	9.77
SA61	1/4	1/4	3/32	5.40
SA63	3/32	3/8	3/32	5.40
SB43	1/8	9/16	1/8	5.91
SB51	1/4	3/16	1/8	8.01
SC41	3/32	7/16	1/8	4.95
SC42	1/8	9/16	1/8	4.95
SC51	1/4	1/2	1/8	8.01
SC61	3/32	3/8	3/32	5.40
SD41	3/32	3/32	1/8	4.95
SD42	1/8	1/8	1/8	4.95
SD51	1/4	7/32	1/8	8.01
SD61	3/32	3/32	3/32	5.40
SE41	1/8	7/32	1/8	4.95
SE51	1/4	3/8	1/8	8.01
SE53	3/16	9/32	1/8	9.77
SE61	3/32	1/8	3/32	5.40
SF41	1/8	1/4	1/8	4.95
SF42	1/8	1/2	1/8	4.95
SF51	1/4	1/2	1/8	8.01
SF53	3/16	1/2	1/8	9.77

Tool No.	Cutter Dia.	Length of Cut	Shank Dia.	Price Each
SF61	3/32	1/4	3/32	5.40
SG41	1/8	1/4	1/8	4.95
SG42	1/8	5/16	1/8	4.95
SG43	1/8	3/8	1/8	4.95
SG44	1/8	1/2	1/8	6.99
SG51	1/4	1/2	1/8	8.01
SG53	3/16	1/2	1/8	9.77
SG61	3/32	1/4	3/32	5.40
SH41	1/8	1/4	1/8	4.95
SH53	3/16	3/8	1/8	9.77
SJ42	1/8	3/32	1/8	4.95
SK42	1/8	1/16	1/8	4.95
SL41	1/8	3/8	1/8	4.95
SL42	1/8	1/2	1/8	4.95
SL53	3/16	1/2	1/8	9.77
SM41	1/8	11/32	1/8	4.95
SM42	1/8	7/16	1/8	4.95
SM43	1/8	5/8	1/8	4.95
SM51	1/4	1/2	1/8	8.01
SM53	3/16	1/2	1/8	9.77
SM61	3/32	1/4	3/32	5.40
SN41	1/8	1/8	1/8	5.91
SN42	1/8	3/16	1/8	4.95
SN51	1/4	1/4	1/8	8.01
SN53	3/16	1/4	1/8	9.77
SN61	3/32	1/8	3/32	5.40

Bur Sets

apt Approved Performance Tooling

- Double cut
- Case Included

Size	Pieces	Set No.	Price
SA5, SC5, SD5, SE5, SF5, SG5, SL5, SM5	8	**CBS3**	175.39
SA1, SA3, SA5, SC1, SC3, SC5, SD3, SH1, SF3, SF5	10	**CBS4**	148.89
SF5, SG3, SG5, SE3, SL4, SA5, SC3, SC5, SD5, SF3	10	**CBS5**	176.62
SA1, SA3, SC1, SC3, SD1, SD3, SF1, SF3	8	**CBS8**	128.70
SA51, SB51, SC51, SD51, SE51, SF51, SG51, SM51, SN51	9	**CBS9**	104.13
SA1, SC1, SD1, SE1, SF1, SG1, SL1, SM1	8	**CBS11**	79.32
SA1, SC1, SD1, SE1, SF1, SG1, SH1, SJ1, SK1, SM1, SN1, SLI	12	**CBS12**	189.80
SA3, SC3, SD3, SE3, SF3, SG3, SL3, SM3	8	**CBS23**	115.28



Bur Dispenser

Dimensions:
14-5/8" W x 7-3/8" D x 7-3/4" H
Weight: 10-1/2 lbs.

Part No. **CZD132**
Price Each: $101.40

Holds these sizes:		
SA1	SD5	SG3
SA3	SE1	SG4
SA5	SE3	SL1
SB1	SE5	SL3
SB3	SF1	SL4
SB5	SF3	SM2
SD1	SF5	SM3
SD3	SG1	SM5



Work Holding

R-8 Precision Collets & Sets	414
Full Grip Round Collets & Sets	414
ER Precision Spring Collets & Sets	415
5C Precision Collets & Sets	416
5C Step Clutch	416
5C Precision Square Collets	416
5C Precision Hexagon Collets	416
5C Emergency Collets	416
5C Collet Stops	416
5C Expanding Collets & Sets	417
5C Collet Stands	417
5-C Collet Rack	417
5C Horizontal Vertical Collet Fixture	417
5-C Hexagon & Square Collet Blocks	417
5-C Rotating Index Fixture	417
Vertical 5-C Collet Vise	417
Double Angle Spring Precison Collets	418
Morse Taper Precison Collets	418
Brown & Sharpe Taper Precison Collets	418
2A Precission Collets	419
3AT Precission Collets	419
3C Precission Collets	419
3AT Emergency Precission Collets	419
3C Emergency Precission Collets	419
3C Step Precission Collets	419
4C Precision Collets	420
6K Hi-Quality Collets	420
#10 Collets	420
Punches	421
KANT-TWIST® Multipurpose Clamps	422
Clamping Kits	423
Drill Jig Bushings	424-436
Slip Fixed Renewable Bushing	437-442
Drill Jig Bushings	442
Original De-burr-it	443













R-8 Precision Collets

Round by 32nds



MDX® SUPERIOR IMPORT

Fractional Sizes

Sizes	Tool No.	Price Each
1/16	R8C116	7.80
3/32	R8C332	7.80
1/8	R8C18	7.80
5/32	R8C532	7.80
3/16	R8C316	7.80
7/32	R8C732	7.80
1/4	R8C14	7.80
9/32	R8C932	7.80
5/16	R8C516	7.80
11/32	R8C1132	7.80
3/8	R8C38	7.80
13/32	R8C1332	7.80
7/16	R8C716	7.80
15/32	R8C1532	7.80
1/2	R8C12	7.80
17/32	R8C1732	7.80
9/16	R8C916	7.80
19/32	R8C1932	7.80
5/8	R8C58	7.80
21/32	R8C2132	7.80
11/16	R8C1116	7.80
23/32	R8C2332	7.80
3/4	R8C34	7.80
25/32	R8C2532	7.80
13/16	R8C1316	7.80
27/32	R8C2732	7.80
7/8	R8C78	7.80

Metric Sizes

Sizes	Tool No.	Price Each
2.00	R8CM2	19.37
3.00	R8CM3	19.37
4.00	R8CM4	19.37
5.00	R8CM5	19.37
6.00	R8CM6	19.37
7.00	R8CM7	19.37
8.00	R8CM8	19.37
9.00	R8CM9	19.37
10.00	R8CM10	19.37
11.00	R8CM11	19.37
12.00	R8CM12	19.37
13.00	R8CM13	19.37
14.00	R8CM14	19.37
15.00	R8CM15	19.37
16.00	R8CM16	19.37
17.00	R8CM17	19.37
18.00	R8CM18	19.37
19.00	R8CM19	19.37
20.00	R8CM20	19.37
21.00	R8CM21	19.37
22.00	R8CM22	19.37

Sets & Stands

Size	Pieces	Includes	Set No.	Price Each
1/8, 1/4, 3/8, 1/2, 5/8, 3/4	6	Wood Block	R8CS-1	46.80
1/16 - 1-1/8 by 16ths	14	Metal Stand	R8CS-2	109.20
1/16 - 7/8 by 32nds	27	Metal Stand	R8CS-3	210.60
2mm - 20mm by 1mm	19	Metal Stand	R8CM	148.20
Holds 16 Collets	Metal Stand	Stand Only	CZR8	36.00
Holds 14 Collets	Wood Block	Stand Only	BLKR8	47.40



R8 Emergency Steel Type Collet

Tool No. **R8CES**

Price Each — $35.00

Full Grip Round Collets





Fractional Sizes

Sizes	Tool No.	Price Each
1/8	CKFG18	50.40
3/16	CKFG316	50.40
7/32	CKFG732	50.40
1/4	CKFG14	50.40
9/32	CKFG932	50.40
5/16	CKFG516	50.40
11/32	CKFG1132	50.40
3/8	CKFG38	50.40
7/16	CKFG716	50.40
15/32	CKFG1532	50.40
1/2	CKFG12	50.40
17/32	CKFG1732	50.40
9/16	CKFG916	50.40
19/32	CKFG1932	50.40
5/8	CKFG58	50.40
21/32	CKFG2132	50.40
11/16	CKFG1116	50.40
23/32	CKFG2332	50.40
3/4	CKFG34	50.40
25/32	CKFG2532	50.40
13/16	CKFG1316	50.40
27/32	CKFG2732	50.40
7/8	CKFG78	50.40
29/32	CKFG2932	50.40
15/16	CKFG1516	50.40
31/32	CKFG3132	50.40
1	CKFG1	50.40

Metric Sizes

Sizes	Tool No.	Price Each
4.00	CKFGM4	62.00
5.00	CKFGM5	62.00
6.00	CKFGM6	62.00
8.00	CKFGM8	62.00
10.00	CKFGM10	62.00
12.00	CKFGM12	62.00
14.00	CKFGM14	62.00
15.00	CKFGM15	62.00
16.00	CKFGM16	62.00
18.00	CKFGM18	62.00
20.00	CKFGM20	62.00
22.00	CKFGM22	62.00
24.00	CKFGM24	62.00
25.00	CKFGM25	62.00

Sets

Size	Taper	D.B. Thread	Pcs.	Set No.	Price Each
3/8 to 1-1/4 by 1/8th	#40	5/8-11	8	CK969-128	768.60
3/8 to 1-1/4 by 1/8th	#50	1"-8	8	CK969-130	801.15

ER Precision Spring Collets

MDX® SUPERIOR IMPORT



The only clamping collet system for combined milling, drilling, reaming, tapping and boring operations. Wide holding range allows for fewer collets and changes.

Unique self-releasing system eliminates sticking. These collets allow for machining in tight locations with reduced outside nose diameter.

Fractional

Size	Collet Range	ER11 Tool No.	ER11 Price Each	ER16 Tool No.	ER16 Price Each	ER20 Tool No.	ER20 Price Each	ER25 Tool No.	ER25 Price Each	ER32 Tool No.	ER32 Price Each	ER40 Tool No.	ER40 Price Each
1/32	.020–.040	**ER11–132**	18.00	**ER16–132**	20.00	—	—	—	—	—	—	—	—
1/16	.040–.080	**ER11–116**	18.00	**ER16–116**	20.00	**ER20–116**	20.00	**ER25–116**	20.00	**ER32–116**	22.00	—	—
3/32	.080–.120	**ER11–332**	18.00	**ER16–332**	20.00	**ER20–332**	20.00	**ER25–332**	20.00	**ER32–332**	22.00	—	—
1/8	.120–.160	**ER11–18**	18.00	**ER16–18**	20.00	**ER20–18**	20.00	**ER25–18**	20.00	**ER32–18**	22.00	**ER40–18**	24.00
3/16	.160–.200	**ER11–316**	18.00	**ER16–316**	20.00	**ER20–316**	20.00	**ER25–316**	20.00	**ER32–316**	22.00	**ER40–316**	24.00
7/32	.200–.236	**ER11–732**	18.00	**ER16–732**	20.00	**ER20–732**	20.00	**ER25–732**	20.00	**ER32–732**	22.00	**ER40–732**	24.00
1/4	.236–.275	**ER11–14**	18.00	**ER16–14**	20.00	**ER20–14**	20.00	**ER25–14**	20.00	**ER32–14**	22.00	**ER40–14**	24.00
5/16	.275–.315	—	—	**ER16–516**	20.00	**ER20–516**	20.00	**ER25–516**	20.00	**ER32–516**	22.00	**ER40–516**	24.00
11/32	.315–.354	—	—	**ER16–1132**	20.00	**ER20–1132**	20.00	**ER25–1132**	20.00	**ER32–1132**	22.00	**ER40–1132**	24.00
3/8	.354–.393	—	—	**ER16–38**	20.00	**ER20–38**	20.00	**ER25–38**	20.00	**ER32–38**	22.00	**ER40–38**	24.00
13/32	.393–.433	—	—	—	—	**ER20–1332**	20.00	**ER25–1332**	20.00	**ER32–1332**	22.00	**ER40–1332**	24.00
7/16	.433–.472	—	—	—	—	**ER20–716**	20.00	**ER25–716**	20.00	**ER32–716**	22.00	**ER40–716**	24.00
1/2	.472–.511	—	—	—	—	**ER20–12**	20.00	**ER25–12**	20.00	**ER32–12**	22.00	**ER40–12**	24.00
17/32	.511–.551	—	—	—	—	—	—	**ER25–1732**	20.00	**ER32–1732**	22.00	**ER40–1732**	24.00
9/16	.551–.590	—	—	—	—	—	—	**ER25–916**	20.00	**ER32–916**	22.00	**ER40–916**	24.00
5/8	.590–.629	—	—	—	—	—	—	—	—	**ER32–58**	22.00	**ER40–58**	24.00
21/32	.629–.669	—	—	—	—	—	—	—	—	**ER32–2132**	22.00	**ER40–2132**	24.00
11/16	.669–.708	—	—	—	—	—	—	—	—	**ER32–1116**	22.00	**ER40–1116**	24.00
3/4	.708–.751	—	—	—	—	—	—	—	—	**ER32–34**	22.00	**ER40–34**	24.00
25/32	.751–.787	—	—	—	—	—	—	—	—	—	—	**ER40–2532**	24.00
13/16	.787–.826	—	—	—	—	—	—	—	—	**ER32-1316**	22.00	**ER40–1316**	24.00
27/32	.826–.866	—	—	—	—	—	—	—	—	—	—	**ER40–2732**	24.00
7/8	.866–.905	—	—	—	—	—	—	—	—	—	—	**ER40–78**	24.00
15/16	.905–.944	—	—	—	—	—	—	—	—	—	—	**ER40–1516**	24.00
31/32	.944–.984	—	—	—	—	—	—	—	—	—	—	**ER40–3132**	24.00
1	.984–1.02	—	—	—	—	—	—	—	—	—	—	**ER40–1**	24.00

Metric

Size	Collet Range	ERM11 Tool No.	ERM11 Price Each	ERM16 Tool No.	ERM16 Price Each	ERM20 Tool No.	ERM20 Price Each	ERM25 Tool No.	ERM25 Price Each	ERM32 Tool No.	ERM32 Price Each	ERM40 Tool No.	ERM40 Price Each
1	.5 - 1	**ERM11–1**	18.00	**ERM16–1**	20.00	—	—	—	—	—	—	—	—
2	1 - 2	**ERM11–2**	18.00	**ERM16–2**	20.00	**ERM20–2**	20.00	—	—	—	—	—	—
3	2 - 3	**ERM11–3**	18.00	**ERM16–3**	20.00	**ERM20–3**	20.00	**ERM25–3**	20.00	**ERM32–3**	22.00	—	—
4	3-4	**ERM11–4**	18.00	**ERM16–4**	20.00	**ERM20–4**	20.00	**ERM25–4**	20.00	**ERM32–4**	22.00	**ERM40–4**	24.00
5	4-5	**ERM11–5**	18.00	**ERM16–5**	20.00	**ERM20–5**	20.00	**ERM25–5**	20.00	**ERM32–5**	22.00	**ERM40–5**	24.00
6	5-6	**ERM11–6**	18.00	**ERM16–6**	20.00	**ERM20–6**	20.00	**ERM25–6**	20.00	**ERM32–6**	22.00	**ERM40–6**	24.00
7	6-7	**ERM11–7**	18.00	**ERM16–7**	20.00	**ERM20–7**	20.00	**ERM25–7**	20.00	**ERM32–7**	22.00	**ERM40–7**	24.00
8	7-8	—	—	**ERM16–8**	20.00	**ERM20–8**	20.00	**ERM25–8**	20.00	**ERM32–8**	22.00	**ERM40–8**	24.00
9	8-9	—	—	**ERM16–9**	20.00	**ERM20–9**	20.00	**ERM25–9**	20.00	**ERM32–9**	22.00	**ERM40–9**	24.00
10	9-10	—	—	**ERM16–10**	20.00	**ERM20–10**	20.00	**ERM25–10**	20.00	**ERM32–10**	22.00	**ERM40–10**	24.00
11	10-11	—	—	—	—	**ERM20–11**	20.00	**ERM25–11**	20.00	**ERM32–11**	22.00	**ERM40–11**	24.00
12	11-12	—	—	—	—	**ERM20–12**	20.00	**ERM25–12**	20.00	**ERM32–12**	22.00	**ERM40–12**	24.00
13	12-13	—	—	—	—	—	—	**ERM25–13**	20.00	**ERM32–13**	22.00	**ERM40–13**	24.00
14	13-14	—	—	—	—	—	—	**ERM25–14**	20.00	**ERM32–14**	22.00	**ERM40–14**	24.00
15	14-15	—	—	—	—	—	—	**ERM25–15**	20.00	**ERM32–15**	22.00	**ERM40–15**	24.00
16	15-16	—	—	—	—	—	—	—	—	**ERM32–16**	22.00	**ERM40–16**	24.00
17	16-17	—	—	—	—	—	—	—	—	**ERM32–17**	22.00	**ERM40–17**	24.00
18	17-18	—	—	—	—	—	—	—	—	**ERM32–18**	22.00	**ERM40–18**	24.00
19	18-19	—	—	—	—	—	—	—	—	**ERM32–19**	22.00	**ERM40–19**	24.00
20	19-20	—	—	—	—	—	—	—	—	**ERM32–20**	22.00	**ERM40–20**	24.00
21	20-21	—	—	—	—	—	—	—	—	—	—	**ERM40–21**	24.00
22	21-22	—	—	—	—	—	—	—	—	—	—	**ERM40–22**	24.00
23	22-23	—	—	—	—	—	—	—	—	—	—	**ERM40–23**	24.00
24	23-24	—	—	—	—	—	—	—	—	—	—	**ERM40–24**	24.00
25	24-25	—	—	—	—	—	—	—	—	—	—	**ERM40–25**	24.00
26	25-26	—	—	—	—	—	—	—	—	—	—	**ERM40–26**	24.00

Sets

Size	Pieces	Set No.	Price
1/32, 1/16, 3/32, 1/8, 3/16, 7/32, 1/4	7	**ER11S**	127.25
1/8, 3/16, 7/32, 1/4, 5/16, 11/32, 3/8	7	**ER16S**	127.25
1/8, 3/16, 7/32, 1/4, 5/16, 11/32, 3/8, 13/32, 7/16, 1/2	10	**ER20S**	181.50
1/8, 3/16, 7/32, 1/4, 5/16, 11/32, 3/8, 13/32, 7/16, 1/2, 17/32, 9/16	12	**ER25S**	218.00
1/8, 3/16, 1/4, 5/16, 3/8, 13/32, 7/16, 9/16, 5/8, 11/16, 3/4	11	**ER32S**	234.50
1/8, 3/16, 1/4, 5/16, 3/8, 13/32, 7/16, 9/16, 5/8, 11/16, 3/4, 13/16, 7/8, 15/16, 1	15	**ER40S**	375.00



5C Precision Collets



MDX® SUPERIOR IMPORT

Made of specially selected steels, treated and ground. Round by 64ths.

Fractional Sizes

Sizes	Tool No.	Price Each
1/64	CK164	7.80
1/32	CK132	7.80
3/64	CK364	7.80
1/16	CK116	7.80
5/64	CK564	7.80
3/32	CK332	7.80
7/64	CK764	7.80
1/8	CK18	7.80
9/64	CK964	7.80
5/32	CK532	7.80
11/64	CK1164	7.80
3/16	CK316	7.80
13/64	CK1364	7.80
7/32	CK732	7.80
15/64	CK1564	7.80
1/4	CK14	7.80
17/64	CK1764	7.80
9/32	CK932	7.80
19/64	CK1964	7.80
5/16	CK516	7.80
21/64	CK2164	7.80
11/32	CK1132	7.80
23/64	CK2364	7.80
3/8	CK38	7.80

Sizes	Tool No.	Price Each
25/64	CK2564	7.80
13/32	CK1332	7.80
27/64	CK2764	7.80
7/16	CK716	7.80
29/64	CK2964	7.80
15/32	CK1532	7.80
31/64	CK3164	7.80
1/2	CK12	7.80
33/64	CK3364	7.80
17/32	CK1732	7.80
35/64	CK3564	7.80
9/16	CK916	7.80
37/64	CK3764	7.80
19/32	CK1932	7.80
39/64	CK3964	7.80
5/8	CK58	7.80
41/64	CK4164	7.80
21/32	CK2132	7.80
43/64	CK4364	7.80
11/16	CK1116	7.80
45/64	CK4564	7.80
23/32	CK2332	7.80
47/64	CK4764	7.80
3/4	CK34	7.80

Sizes	Tool No.	Price Each
49/64	CK4964	7.80
25/32	CK2532	7.80
51/64	CK5164	7.80
13/16	CK1316	7.80
53/64	CK5364	7.80
27/32	CK2732	7.80
55/64	CK5564	7.80
7/8	CK78	7.80
57/64	CK5764	7.80
29/32	CK2932	7.80
59/64	CK5964	7.80
15/16	CK1516	7.80
61/64	CK6164	7.80
31/32	CK3132	7.80
63/64	CK6364	7.80
1	CK1	7.80
1-1/64	CK164-1	7.80
1-1/32	CK132-1	7.80
1-3/64	CK364-1	7.80
1-1/16	CK116-1	7.80
1-5/64	CK564-1	7.80
1-3/32	CK332-1	7.80
1-7/64	CK764-1	7.80
1-1/8	CK118-1	7.80

Metric Sizes

Sizes	Tool No.	Price Each
3.00	CKM3	9.00
4.00	CKM4	9.00
5.00	CKM5	9.00
6.00	CKM6	9.00
7.00	CKM7	9.00
8.00	CKM8	9.00
9.00	CKM9	9.00
10.00	CKM10	9.00

Sizes	Tool No.	Price Each
11.00	CKM11	9.00
12.00	CKM12	9.00
13.00	CKM13	9.00
14.00	CKM14	9.00
15.00	CKM15	9.00
16.00	CKM16	9.00
17.00	CKM17	9.00
18.00	CKM18	9.00

Sizes	Tool No.	Price Each
19.00	CKM19	9.00
20.00	CKM20	9.00
21.00	CKM21	9.00
22.00	CKM22	9.00
23.00	CKM23	9.00
24.00	CKM24	9.00
25.00	CKM25	9.00
26.00	CKM26	9.00

Sets

Size	Pcs.	Set No.	Price
1/8, 1/4, 3/8, 1/2, 5/8, 3/4	6	CKS-1	46.80
1/16 – 1-1/8 x 16ths	18	CKS-2	141.70
1/16 – 13/16 by 32nds & 7/8 – 1-1/8 x 16ths	30	CKS-3	235.40

All sets supplied with metal stand



5C Step Clutch



Sizes	Tool No.	Price Each
2	CKSTEP2	38.72
3	CKSTEP3	47.04
4	CKSTEP4	71.23
5	CKSTEP5	81.90
6	CKSTEP6	115.03

5C Precision Square



Sizes	Tool No.	Price Each
1/8	CK5S18	25.95
3/16	CK5S316	25.95
1/4	CK5S14	25.95
5/16	CK5S516	25.95
3/8	CK5S38	25.95
7/16	CK5S716	25.95
1/2	CK5S12	25.95
9/16	CK5S916	25.95
5/8	CK5S58	25.95
11/16	CK5S1116	25.95
3/4	CK5S34	25.95

5C Precision Hexagon



Sizes	Tool No.	Price Each
1/8	CK5H18	25.95
3/16	CK5H316	25.95
1/4	CK5H14	25.95
5/16	CK5H516	25.95
3/8	CK5H38	25.95
7/16	CK5H716	25.95
1/2	CK5H12	25.95
9/16	CK5H916	25.95
5/8	CK5H58	25.95
11/16	CK5H1116	25.95
3/4	CK5H34	25.95
13/16	CK5H1316	25.95
7/8	CK5H78	25.95
15/16	CK5H1516	25.95

5C Emergency



Type	Tool No.	Price Each
Steel	CKES	21.78
Brass	CKEB	46.74
Nylon	CKEN	19.75



5C Collet Stop
5C Threaded Stop

5C Collet Stops

Tool No.	Type	Price Each
CKUK	SC Collet Stop	19.31
CKAT	5C Adjustable Threaded Stop	6.44

5C Precision Collets

5C Expanding Collets

Machinable head permits machining of collets to size required.
Ideal for holding small parts by the I.D.
Rapid Opening and closing.

Tool No.	Range	Price Each
CK155X	.250-.460 x 1" L	38.57
CK156X	.437-.800 x 1" L	38.57
CK157X	.750-.1435 x 1" L	38.57
CK158X	.750-1.935 x 1" L	38.57



MDX® SUPERIOR IMPORT

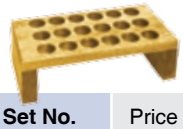


5C Expanding Collet Set

Comes with wooden stand.

Size	Pcs.	Set No.	Price
CK155X, CK156X, CK157X, CK158X	4	**CK1558SET**	154.00

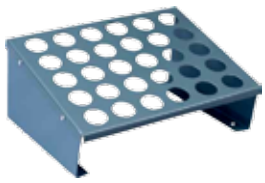
5C Collet Stands



Size	Finish	Set No.	Price Each
Holds 30 5C Collets	Metal	**CZ5C**	36.00
Holds 18 5C Collects	Wood	**BLK5C**	31.50

5C Collet Rack

Specifications:
Holds up to 30 Collets.
Can be hung on wall or set up on shelf or work bench.



Tool No. **J974-811**
Price Each — $22.75

5C Tooling

Cam Operated 5C Horizontal Vertical Collet Fixture

Specifications:
In horizontal position:
Base: 5" x 4" Height: 3-5/8"
In vertical position:
Base: 5" x 3-5/8" Height: 4"

Cam operated spindle permits opening and closing of collet so that setups remain undisturbed.



Tool No. **J2045000**
Price Each — $82.46

5C Hexagon & Square Collet Blocks



For fast and easy setups. Made of hardened tool steel precision group. Accuracy of parallelism, Squareness and flatness within +.0005". Includes drawbar type nut for tightening and releasing. 1/16" through 1-1/8" capacity. Cam operated quick acting closer also available.

Description	Tool No.	Price
Hexagon Collet Block	**J1985005**	38.75
Square Collet Block	**J1985010**	38.75
Quick Acting Closer	**J1985015**	19.32
(Complete Set) Hexagon & square blocks + nuts & Quick acting closer	**J1985020**	65.45

Horizontal / Vertical 5C Collet Indexing Fixture

Specifications:
Horizontal Base - 4" x 8"
Vertical Base - 4" x 6"
Vertical Height - 8"
Swing - 8"
Center Height - 4"





Tool No. **J2070000**
Fixture Price Each — $382.62

Tool No. **J2070001**
Tailstock Price Each — $140.07

For rapid indexing in both vertical and horizontal positions using 5-C collets. 2-1/4" - 8 threaded spindle nose for use with lathe chucks. Instant opening and closing of collets is accomplished by a lever having a leverage ratio of 100 to 1. Rapid rotation of spindle nose is accomplished through a ratchet device on the front of the spindle. Supplied with a 24 hole index plate for 2, 3, 4, 6, 8, 12 and 24 divisions or 15 degree spacing. Index plate is supplied with screws for masking holes not in use.

5C Rotating Index Fixture

Specifications:
Overall Length: 9"
Base: 4" x 4"

Tool No. **J2065000**
Price Each — $59.45



One degree indexing over 360 using 5-C Collets, makes this tool ideal for grinding, machining, layout, inspection, etc. Hardened and ground spindle is accurate within .0004".

Vertical 5C Collet Vise

Specifications:
Base: 2-1/2" x 7-3/4"
Height: 4"



Tool No. **J2030000**
Price Each — $60.00

Precision Collets



MDX® SUPERIOR IMPORT

Double Angle Spring Collets

Sizes	DA100° Tool No.	DA180° Tool No.	Price Each
1/16	DA1116	DA116	25.94
5/64	DA1564	DA564	25.94
3/32	DA1332	DA332	25.94
7/64	DA1764	DA764	25.94
1/8	DA118	DA18	25.94
9/64	DA1964	DA964	25.94
5/32	DA1532	DA532	25.94
11/64	DA11164	DA1164	25.94
3/16	DA1316	DA316	25.94
13/64	DA11364	DA1364	25.94
7/32	DA1732	DA732	25.94
15/64	DA11564	DA1564	25.94
1/4	DA114	DA14	20.15
17/64	DA11764	DA1764	20.15
9/32	DA1932	DA932	20.15
19/64	DA11964	DA1964	20.15
5/16	DA1516	DA516	20.15
21/64	DA12164	DA2164	20.15
11/32	DA11132	DA1132	20.15
23/64	DA12364	DA2364	20.15
3/8	DA138	DA38	20.15
25/64	DA12564	DA2564	20.15
13/32	DA11332	DA1332	20.15
27/64	DA12764	DA2764	20.15
7/16	DA1716	DA716	20.15
29/64	DA12964	DA2964	20.15
15/32	DA11532	DA1532	20.15
31/64	DA13164	DA3164	20.15
1/2	DA112	DA12	20.15
33/64	DA13364	DA3364	20.15
17/32	DA1732	DA3564	20.15
35/64	DA3564	DA916	20.15
9/16	DA916	DA3764	20.15
37/64	DA3764	DA1932	20.15
19/32	DA1932	DA3964	20.15
39/64	DA3964	DA58	20.15
5/8	DA58	DA4164	20.15
41/64	DA4164	DA2132	20.15
21/32	DA2132	DA4364	20.15
43/64	DA4364	DA1116	20.15
11/16	DA1116	DA4564	20.15
45/64	DA4564	DA2332	20.15
23/32	DA2332	DA4764	20.15
47/64	DA4764	DA34	20.15
3/4	DA34		

Sets

Size	Pieces	Set No.	Price Each
1/4 - 3/4 by 32nds	17	DA17S	336.70
1/4 - 3/4 by 64ths	33	DA33S	663.00

Supplied in wood box

Morse Taper

Round by 32nds

Threads for Drawbar:
#2 & #3 Morse Taper



	#2 Morse Taper		#3 Morse Taper	
Sizes	Tool No.	Price Each	Tool No.	Price Each
1/16	CK2T116	38.22	—	—
3/32	CK2T332	38.22	—	—
1/8	CK2T18	38.22	CK3T18	45.84
3/16	CK2T316	38.22	CK3T316	45.84
1/4	CK2T14	38.22	CK3T14	45.84
9/32	CK2T932	38.22	—	—
5/16	CK2T516	38.22	CK3T516	45.84
11/32	CK2T1132	38.22	—	—
3/8	CK2T38	38.22	CK3T38	45.84
13/32	CK2T1332	38.22	—	—
7/16	CK2T716	38.22	CK3T716	45.84
1/2	CK2T12	38.22	CK3T12	45.84
17/32	—	—	—	—
9/16	—	—	CK3T916	45.84
5/8	—	—	CK3T58	45.84
11/16	—	—	CK3T1116	45.84
3/4	—	—	CK3T34	45.84

Brown & Sharpe Taper

Round 1/8" to 3/4" by 16ths

Threads for Drawbar:
B&S #7 - 3/8" - 16
B&S #9 - 1/2" - 13



	#7 B&S Taper		#9 B&S Taper	
Sizes	Tool No.	Price Each	Tool No.	Price Each
1/8	CK7T18	45.84	CK9T18	48.60
3/16	CK7T316	45.84	CK9T316	48.60
1/4	CK7T14	45.84	CK9T14	48.60
5/16	CK7T516	45.84	CK9T516	48.60
3/8	CK7T38	45.84	CK9T38	48.60
7/16	CK7T716	45.84	CK9T716	48.60
1/2	CK7T12	45.84	—	—
9/16	—	—	CK9T12	48.60
5/8	—	—	CK9T58	48.60
11/16	—	—	CK9T1116	48.60
3/4	—	—	CK9T34	48.60



#21 Brown & Sharpe Precision Collets

Sizes	Tool No.	Price Each
1/16	CK21116	49.00
3/32	CK21332	49.00
1/8	CK2118	49.00
5/32	CK21532	49.00
3/16	CK21316	49.00
7/32	CK21732	49.00
1/4	CK2114	49.00
9/32	CK21932	49.00
5/16	CK21516	49.00
11/32	CK211132	49.00
3/8	CK2138	49.00
13/32	CK211332	49.00
7/16	CK21716	49.00
15/32	CK211532	49.00
1/2	CK2112	49.00
17/32	CK211732	49.00
9/16	CK21916	49.00
19/32	CK211932	49.00
5/8	CK2158	49.00
21/32	CK212132	49.00
11/16	CK211116	49.00
23/32	CK212332	49.00
3/4	CK2134	49.00
25/32	CK212532	49.00
13/16	CK211316	49.00
27/32	CK212732	49.00
7/8	CK2178	49.00
29/32	CK212932	49.00
15/16	CK211516	49.00
31/32	CK213132	49.00
1	CK211	49.00

Precision Collets



MDX® SUPERIOR IMPORT

2A Precision

For South Bend machines or fixtures. Round by 64ths

Sizes	Tool No.	Price Each
1/64	CK2A164	54.40
1/32	CK2A132	54.40
3/64	CK2A364	54.40
1/16	CK2A116	54.40
5/64	CK2A564	54.40
3/32	CK2A332	54.40
7/64	CK2A764	54.40
1/8	CK2A18	48.50
9/64	CK2A964	48.50
5/32	CK2A532	48.50
11/64	CK2A1164	48.50
3/16	CK2A316	48.50
13/64	CK2A1364	48.50
7/32	CK2A732	48.50
15/64	CK2A1564	48.50

Sizes	Tool No.	Price Each
1/4	CK2A14	48.50
17/64	CK2A1764	48.50
9/32	CK2A932	48.50
19/64	CK2A1964	48.50
5/16	CK2A516	48.50
21/64	CK2A2164	48.50
11/32	CK2A1132	48.50
23/64	CK2A2364	48.50
3/8	CK2A38	48.50
25/64	CK2A2564	48.50
13/32	CK2A1332	48.50
27/64	CK2A2764	48.50
7/16	CK2A716	48.50
29/64	CK2A2964	48.50
15/32	CK2A1532	48.50

Sizes	Tool No.	Price Each
31/64	CK2A3164	48.50
1/2	CK2A12	48.50
33/64	CK2A3364	48.50
17/32	CK2A1732	48.50
35/64	CK2A3564	48.50
9/16	CK2A916	48.50
37/64	CK2A3764	48.50
19/32	CK2A1932	48.50
39/64	CK2A3964	48.50
5/8	CK2A58	48.50
41/64	CK2A4164	48.50
21/32	CK2A2132	48.50
43/64	CK2A4364	48.50
11/16	CK2A1116	48.50

3AT Precision Round

Sizes	Tool No.	Price Each
1/64	CK3AT164	50.95
1/32	CK3AT132	50.95
3/64	CK3AT364	50.95
1/16	CK3AT116	40.50
5/64	CK3AT564	40.50
3/32	CK3AT332	40.50
7/64	CK3AT764	40.50
1/8	CK3AT18	40.50
9/64	CK3AT964	40.50
5/32	CK3AT532	40.50
11/64	CK3AT1164	40.50
3/16	CK3AT316	40.50
13/64	CK3AT1364	40.50
7/32	CK3AT732	40.50
15/64	CK3AT1564	40.50
1/4	CK3AT14	40.50

3AT Precision Round

Sizes	Tool No.	Price Each
17/64	CK3AT1764	40.50
9/32	CK3AT932	40.50
19/64	CK3AT1964	40.50
5/16	CK3AT516	40.50
21/64	CK3AT2164	40.50
11/32	CK3AT1132	40.50
23/64	CK3AT2364	40.50
3/8	CK3AT38	40.50
25/64	CK3AT2564	40.50
13/32	CK3AT1332	40.50
27/64	CK3AT2764	40.50
7/16	CK3AT716	40.50
29/64	CK3AT2964	40.50
15/32	CK3AT1532	40.50
31/64	CK3AT3164	40.50
1/2	CK3AT12	40.50

3AT Precision Hexagon

Sizes	Tool No.	Price Each
1/8	CK3H18	68.00
3/16	CK3H316	68.00
1/4	CK3H14	68.00
5/16	CK3H516	68.00
3/8	CK3H38	68.00
7/16	CK3H716	68.00

3AT Precision Square

Sizes	Tool No.	Price Each
1/8	CK3S18	68.00
3/16	CK3S316	68.00
1/4	CK3S14	68.00
5/16	CK3S516	68.00



3C Precision

For South Bend machines or fixtures. Round by 64ths

Sizes	Tool No.	Price Each
1/32	CK3C132	50.04
3/64	CK3C364	50.04
1/16	CK3C116	36.12
5/64	CK3C564	36.12
3/32	CK3C332	36.12
7/64	CK3C764	36.12
1/8	CK3C18	36.12
9/64	CK3C964	36.12
5/32	CK3C532	36.12
11/64	CK3C1164	36.12
3/16	CK3C316	36.12

Sizes	Tool No.	Price Each
13/64	CK3C1364	36.12
7/32	CK3C732	36.12
15/64	CK3C1564	36.12
1/4	CK3C14	36.12
17/64	CK3C1764	36.12
9/32	CK3C932	36.12
19/64	CK3C1964	36.12
5/16	CK3C516	36.12
21/64	CK3C2164	36.12
11/32	CK3C1132	36.12
23/64	CK3C2364	36.12

Sizes	Tool No.	Price Each
3/8	CK3C38	36.12
25/64	CK3C2564	36.12
13/32	CK3C1332	36.12
27/64	CK3C2764	36.12
7/16	CK3C716	36.12
29/64	CK3C2964	36.12
15/32	CK3C1532	36.12
31/64	CK3C3164	36.12
1/2	CK3C12	36.12
9/16	CK3C916	36.12



3C Precision Hexagon by 16ths

Sizes	Tool No.	Price Each
1/8	CKH3C18	45.36
3/16	CKH3C316	45.36
1/4	CKH3C14	45.36
5/16	CKH3C516	45.36
3/8	CKH3C38	45.36
7/16	CKH3C716	45.36



3C Precision Square by 16ths

Sizes	Tool No.	Price Each
1/8	CKS3C18	45.36
3/16	CKS3C316	45.36
1/4	CKS3C14	45.36
5/16	CKS3C516	45.36
3/8	CKS3C38	45.36

3AT Emergency

Brass Tool No. **CKEB3A**
Price Each — $50.90

Steel Tool No. **CKES3A**
Price Each — $41.65



3C Emergency

Brass Tool No. **CKEB3C**
Price Each — $58.00

3C Step 3" Diameter

Tool No. **CK3C18**
Price Each — $52.92



Precision Collets



MDX® SUPERIOR IMPORT

4C Precision Collets

Sizes	Tool No.	Price Each
1/64	CK4C164	67.10
1/32	CK4C132	67.10
3/64	CK4C364	67.10
1/16	CK4C116	57.90
5/64	CK4C564	57.90
3/32	CK4C332	57.90
7/64	CK4C764	57.90
1/8	CK4C18	57.90
9/64	CK4C964	57.90
5/32	CK4C532	57.90
11/64	CK4C1164	57.90
3/16	CK4C316	57.90
13/64	CK4C1364	57.90
7/32	CK4C732	57.90
15/64	CK4C1564	57.90
1/4	CK4C14	57.90

Sizes	Tool No.	Price Each
17/64	CK4C1764	57.90
9/32	CK4C932	57.90
19/64	CK4C1964	57.90
5/16	CK4C516	57.90
21/64	CK4C2164	57.90
11/32	CK4C1132	57.90
23/64	CK4C2364	57.90
3/8	CK4C38	57.90
25/64	CK4C2564	57.90
13/32	CK4C1332	57.90
27/64	CK4C2764	57.90
7/16	CK4C716	57.90
29/64	CK4C2964	57.90
15/32	CK4C1532	57.90
31/64	CK4C3164	57.90
1/2	CK4C12	57.90

Sizes	Tool No.	Price Each
33/64	CK4C3364	57.90
17/32	CK4C1732	57.90
35/64	CK4C3564	57.90
9/16	CK4C916	57.90
37/64	CK4C3764	57.90
19/32	CK4C1932	57.90
39/64	CK4C3964	57.90
5/8	CK4C58	57.90
41/64	CK4C4164	57.90
21/32	CK4C2132	57.90
43/64	CK4C4364	57.90
11/16	CK4C1116	57.90
45/64	CK4C4564	57.90
23/32	CK4C2332	57.90
47/64	CK4C4764	57.90
3/4	CK4C34	57.90

4C Precision Square

Sizes	Tool No.	Price Each
1/8	CK4S18	97.20
3/16	CK4S316	97.20
1/4	CK4S14	97.20
5/16	CK4S516	97.20
3/8	CK4S38	97.20
7/16	CK4S716	97.20
1/2	CK4S12	97.20

4C Precision Hexagon

Sizes	Tool No.	Price Each
1/8	CK4H18	97.20
3/16	CK4H316	97.20
1/4	CK4H14	97.20
5/16	CK4H516	97.20
3/8	CK4H38	97.20
7/16	CK4H716	97.20
1/2	CK4H12	97.20
9/16	CK4H916	97.20
5/8	CK4H58	97.20



Square



Hexagon

6K Hi-Quality Collets Round by 64ths



Sizes	Tool No.	Price Each
1/16	CK6K116	66.90
5/64	CK6K564	66.90
3/32	CK6K332	66.90
7/64	CK6K764	66.90
1/8	CK6K18	66.90
9/64	CK6K964	66.90
5/32	CK6K532	66.90
11/64	CK6K1164	66.90
3/16	CK6K316	66.90
13/64	CK6K1364	66.90
7/32	CK6K732	66.90
15/64	CK6K1564	66.90
1/4	CK6K14	66.90

Sizes	Tool No.	Price Each
17/64	CK6K1764	66.90
9/32	CK6K932	66.90
19/64	CK6K1964	66.90
5/16	CK6K516	66.90
21/64	CK6K2164	66.90
11/32	CK6K1132	66.90
23/64	CK6K2364	66.90
3/8	CK6K38	66.90
25/64	CK6K2564	66.90
13/32	CK6K1332	66.90
27/64	CK6K2764	66.90
7/16	CK6K716	66.90
29/64	CK6K2964	66.90

Sizes	Tool No.	Price Each
15/32	CK6K1532	66.90
31/64	CK6K3164	66.90
1/2	CK6K12	66.90
33/64	CK6K3364	66.90
17/32	CK6K1732	66.90
35/64	CK6K3564	66.90
9/16	CK6K916	66.90
37/64	CK6K3764	66.90
19/32	CK6K1932	66.90
39/64	CK6K3964	66.90
5/8	CK6K58	66.90



#10 Collets

Sizes	Tool No.	Price Each
1/16	CK10116	52.60
3/32	CK10332	52.60
1/8	CK1018	52.60
5/32	CK10532	52.60
3/16	CK10316	52.60
7/32	CK10732	52.60
1/4	CK1014	52.60

Sizes	Tool No.	Price Each
9/32	CK10932	52.60
5/16	CK10516	52.60
11/32	CK101132	52.60
3/8	CK1038	52.60
13/32	CK101332	52.60
7/16	CK10716	52.60
15/32	CK101532	52.60

Sizes	Tool No.	Price Each
1/2	CK1012	52.60
17/32	CK101732	52.60
9/16	CK10916	52.60
19/32	CK101932	52.60
5/8	CK1058	52.60

Punches

Hardened Steel



Center Punches

- Round and square shanks
- Hardened and tempered
- Ground points
- Knurled body for better grip

Nominal size	Overall Lengh	Tool No. Round Shank	Price Each	Tool No. Square Shank	Price Each
1/16	4	**PHC1**	2.54	**PHCS1**	3.45
5/64	4	**PHC2**	2.80	**PHCS2**	3.45
3/32	4	**PHC3**	2.93	**PHCS3**	3.45
9/64	4	**PHC4**	3.06	**PHCS4**	3.64
5/32	4	**PHC5**	3.19	**PHCS5**	4.23

Sets

Size	Pieces	Set No.	Price Each
Round Shank with pouch 1/16, 5/64, 3/32, 9/64 and 5/32	5	**PHC15**	12.94
Square Shank with pouch 1/16, 5/64, 3/32, 9/64 and 5/32	8	**PHCS15**	16.58



Drive Pin Punches

- 4" and 8" Overall
- Hardened and tempered
- Centerless ground
- Punch diameter point is .005 undersize of nominal tip.

Nominal size	Tool No. 4" Overall	Price Each	Tool No. 8" Overall	Price Each
1/16	**PHD1**	2.34	—	—
3/32	**PHD2**	2.34	—	—
1/8	**PHD3**	2.34	**PHL3**	3.71
5/32	**PHD4**	2.34	—	—
3/16	**PHD5**	2.34	**PHL5**	3.71
7/32	**PHD6**	2.34	—	—
1/4	**PHD7**	2.34	**PHL7**	3.71
5/16	**PHD8**	2.34	**PHL8**	3.71
3/8	—	—	**PHL9**	3.71

Sets

Size	Pieces	Set No.	Price Each
4" Overall with pouch 1/16, 3/32, 1/8, 5/32, 3/16, 7/32, 1/4 and 5/16	8	**PHD18**	17.55
8" Overall with pouch 1/8, 3/16, 1/4, 5/16 and 3/8	8	**PHL15**	17.55

Transfer Punches

Size	Tool No.	Price Each	Size	Tool No.	Price Each	Size	Tool No.	Price Each
3/32	**PHT332**	1.95	1/4	**PHT14**	1.95	13/32	**PHT1332**	2.65
7/64	**PHT764**	1.95	17/64	**PHT1764**	2.20	27/64	**PHT2764**	2.65
1/8	**PHT18**	1.95	9/32	**PHT932**	2.20	7/16	**PHT716**	2.65
9/64	**PHT964**	1.95	19/64	**PHT1964**	2.20	29/64	**PHT2964**	3.30
5/32	**PHT532**	1.95	5/16	**PHT516**	2.20	15/32	**PHT1532**	3.30
11/64	**PHT1164**	1.95	21/64	**PHT2164**	2.20	31/64	**PHT3164**	3.30
3/16	**PHT316**	1.95	11/32	**PHT1132**	2.20	1/2	**PHT12**	3.30
13/64	**PHT1364**	1.95	23/64	**PHT2364**	2.20	17/32	**PHT1732**	3.30
7/32	**PHT732**	1.95	3/8	**PHT38**	2.65			
15/64	**PHT1564**	1.95	25/64	**PHT2564**	2.65			



Transfer Punch Sets

- Oxide Finish
- Heat-treated tempered tool steel
- Supplied in metal stand.



Size	Pieces	Tool No.	Price Each
3/32 thru 1/2 by 64th and 17/32	28	**PH100**	25.94
#1 - 60	60	**PH101**	42.25
A - Z	26	**PH102**	37.70
1/2 thru 1" by 64th	33	**PH104**	127.40

Universal Transfer Center Punch & Aligner

- All parts hardened steel
- For perfect center hole alignment
- Precision ground punch
- Knurled body

Accomodates itself automatically to accurately transfer center holes within range of punch.



Range of Measure	Tool No.	Price Each
3/16 to 5/8	**PHUA1**	16.84
3/16 to 1-3/16	**PHUA2**	22.04

Automatic Center Punch

Tool No. **PHA**

- Steel body
- Hardened and ground punch
- Knurled body
- Spring loaded, no hammer required
- Adjustable tension cap

Price Each — $12.35



Center Punch with Magnifier

Tool No. **PHM**

Small powerful magnifier helps locate center

Price Each — $16.84

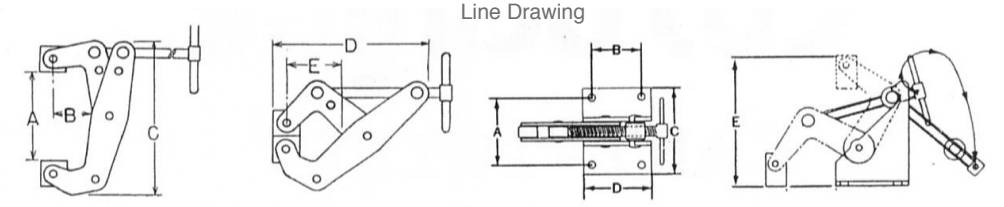


KANT-TWIST™ Multipurpose Clamps

MADE IN USA

- Floating jaws that always stay parallel
- Designed to eliminate distortion or twisting action
- Cantilever clamping action; handle is out of work area
- Built in “V” block for round or rod stock
- Full support, no loose pads to walk off center
- Copper plated jaws and screws are ideal for welding
- Diagonal grooves on jaws and screws are ideal for round bars
- 3-Jaw version for accurate positioning and holding

Line Drawing





Round Handle



Deep Throat Jaw Opening



400A Terminal Lug



Poly Jaw



Hold Down



Standard T Handle



3 Jaw Clamp



Universal “No Mar”



Stainless Steel

Size	Description	A	B	C	D	E	Load	Part #	Price
3/4	Round Handle	3/4	3/8	1-3/8	1-1/2	3/8	200	**C396**	29.84
1	Round Handle	1	1/2	1-3/4	2-1/8	1/2	350	**C401-1**	37.28
1-1/2	Round Handle	1-1/2	1-1/8	3	3-1/16	1	600	**C403-1**	60.71
2	Round Handle	2	1-1/8	3-1/4	3-1/2	1-1/4	800	**C405-1**	71.60
1	T Handle	1	1/2	1-3/4	2-1/8	1/2	350	**C401**	32.22
2	T Handle	2	1-1/8	3-1/4	3-1/2	1-1/4	800	**C405**	50.24
3	T Handle	3	1-1/4	5	5-1/4	1-3/4	1500	**C410**	87.19
6	T Handle	6	2-1/8	8-1/4	8-1/4	3-3/8	2000	**C420**	124.31
9	T Handle	9	3-3/8	13	12	5-1/4	2500	**C430**	218.81
12	T Handle	12	5	16-1/2	16-1/2	7	6000	**C440**	365.76
2-1/2 D	Deep Throat	2-7/16	2	4-1/16	4-1/8	1-13/16	700	**C407**	59.78
4-1/2 D	Deep Throat	4-1/2	2-1/4	6-3/4	7	3-13/16	1700	**C415**	84.22
6 D	Deep Throat	6	4-1/2	10	11	5-1/2	2000	**C421**	124.31
10 D	Deep Throat	10	6	15	16	7	3500	**C435**	339.23
6 D3J	3-Jaw	6	2-1/8	8-1/4	8-1/4	3-5/8	2000	**C421-1**	199.69
4-1/2	400A Terminal Lug Ground	4-1/2	2-1/8	6-3/4	7	2-1/2	1700	**C415-2**	97.94
4-1/2 D	Round Jaw Pad (No Mar)	4-1/4	2-1/4	6-3/4	7	2-1/2	1700	**C415-4**	89.89
4 -1/2 D	Deep Throat W/Polyurethane Jaws	4-1/2	2-1/4	6-3/4	7	3-13/16	1700	**C415-8**	91.08
2	Stainless-303 T-Handle	2	1-1/8	3-1/4	3-1/2	1-1/4	700	**C505**	95.47
3	Stainless-303 T-Handle	3	1-1/4	5	5-1/4	1-3/4	1200	**C510**	189.59
4-1/2 D	Stainless-303 T-Handle	4-1/2	2-1/4	6-3/4	7	2-1/2	1500	**C515**	172.76
3 F	Hold down No Base Plate	1-9/10	1-1/2	2-11/16	2-1/4	4	1500	**C411**	107.62
6 F	Hold down No Base Plate	2-9/10	2-5/8	3-3/4	3-3/4	6-7/8	3200	**C423**	104.40

Model No.	Description	Price
C1WG	#1 Weaver Grip	7.99
C2WG	#2 Weaver Grip	9.99
C3WG	#3 Weaver Grip	12.06
C6WG	#6 Weaver Grip	16.47



Clamping Kits

52 PC Clamping Kit

For Bridgeport Type Machines



Includes:

- 24 Studs - 4 Pcs each: 3, 4, 5, 6, 7 & 8 long
- 4 Coupling nuts
- 6 Forged steel step clamps
- 6 T-Slot nuts
- 6 Flange nuts
- 6 Steel step blocks
- Includes a Fitted Rack

Stud Size	Table Slot	Tool No.	Price Each
3/8-16	7/16	**J7800001**	91.10
3/8-16	1/2	**J7800002**	91.10
3/8-16	9/16	**J7800003**	91.10
1/2-13*	9/16	**J7801001**	99.55
1/2-13*	5/8	**J7801002**	90.93
1/2-13*	11/16	**J7801003**	99.55
5/8-11	11/16	**J7802001**	124.26
5/8-11	3/4	**J7802002**	124.26
5/8-11	13/16	**J7802003**	124.26

Metric Clamping Kit - 58 PC

M10 through M18 sets include a fitted rack suitable for hanging



Table Slot	Thread Size	Tool No.	Price Each
M10	M8-1.25	**J4013008**	125.36
M12	M10-1.25	**J4013010**	125.36
M14	M12-1.75	**J4013012**	131.04
M15.7	M12-1.75	**J4013112**	131.04
M16	M14-2.0	**J4013014**	153.60
M18	M16-2.0	**J4013016**	160.40
M20	M18-2.5	**J4013018***	354.56
M22	M20-2.5	**J4013020***	377.20

*Packed with wooden container.

T-Slot Bolts

- Forged from selected steel.
- Cannot twist or jam in slots.



Length Under Head	3/8-16		1/2-13		5/8-11		3/4-10	
	Tool No.	Price Each	Tool No.	Price Each	Tool No.	Price Each	Tool No.	Price Each
1-1/2	**J7112415**	4.27	-	-	-	-	-	-
2	**J7112420**	4.34	**J7113220**	5.18	**J7114020**	5.95	-	-
3	**J7112430**	4.55	**J7113230**	5.53	**J7114030**	6.30	**J7114830**	8.61
4	**J7112440**	4.76	**J7113240**	5.74	**J7114040**	6.65	**J7114840**	9.10
5	**J7112450**	4.97	**J7113250**	6.02	**J7114050**	7.00	**J7114850**	9.66
6	**J7112460**	5.25	**J7113260**	6.30	**J7114060**	7.56	**J7114860**	10.29
8	-	-	**J7113280**	7.28	**J7114080**	8.47	**J7114880**	11.41
10	-	-	-	-	-	-	**J7114890**	13.30

Clamping Studs

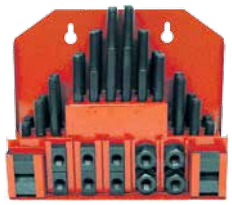
- Case hardened steel
- Black Oxide finish



Overall Lgth	3/8-16		1/2-13		5/8-11		3/4-10	
	Tool No.	Price Each	Tool No.	Price Each	Tool No.	Price Each	Tool No.	Price Each
3	**J6745243**	1.62	**J6745323**	1.74	**J6745403**	2.10	**J6745483**	2.70
4	**J6745244**	1.62	**J6745324**	1.74	**J6745404**	2.10	**J6745484**	2.70
5	**J6745245**	1.62	**J6745325**	1.80	**J6745405**	2.40	**J6745485**	3.06
6	**J6745246**	1.74	**J6745326**	1.80	**J6745406**	2.58	**J6745486**	3.42
7	**J6745247**	1.74	**J6745327**	2.16	**J6745407**	2.70	**J6745487**	3.78
8	**J6745248**	1.80	**J6745328**	2.40	**J6745408**	3.06	**J6745488**	3.96

T-Nut and Stud Sets

38 pc. set in fitted steel rack suitable for hanging 38 pc. set in fitted wooden container.



Includes:

- 24 studs (4 each: 3",4",5",6",7",8")
- 4 Coupling nuts
- 4 Flange nuts
- 6 T-Slot nuts

Stud Size	Table Slot	Tool No. In Wood	Tool No. In Steel	Price Each
3/8-16	7/16	-	**J7900001**	49.12
	1/2	-	**J7900002**	44.88
	9/16	-	**J7900003**	49.12
1/2-13*	9/16	-	**J7901001**	68.96
	5/8	-	**J7901002**	63.20
	11/16	-	**J7901003**	68.96
5/8-11	11/16	-	**J7902001**	72.72
	3/4	-	**J7902002**	66.72
	13/16	-	**J7902003**	72.72
3/4-10	13/16	**J7853001**	-	171.28
	7/8	**J7853002**	-	134.72
	1	**J7853003**	-	177.52

T-Slot Nuts

- Case hardened steel
- Black Oxide finish



Table Slot	Thread Size	Tool No.	Price Each
7/16	3/8-16	**J6740437**	1.89
1/2		**J6740500**	1.89
9/16		**J6740560**	1.96
9/16	1/2-13	**J6740562**	1.96
5/8		**J6740625**	2.10
11/16		**J6740680**	2.45
11/16	5/8-11	**J6740687**	2.59
3/4		**J6740750**	2.80
13/16		**J6740800**	4.06
13/16	3/4-10	**J6740812**	4.41
7/8		**J6740875**	4.76
1		**J6740102**	5.18

Flange Nuts

- Case hardened steel
- Black Oxide finish



Table Slot	Thread Size	Tool No.	Price Each
FN38	3/8-16	**J6741024**	1.80
FN12	1/2-13	**J6741032**	2.10
FN58	5/8-11	**J6741040**	2.70
FN34	3/4-10	**J6741048**	3.96

Coupling Nuts

- Case hardened steel
- Black Oxide finish

Couple any number of studs together to make a stud of any desired length



Table Slot	Thread Size	Tool No.	Price Each
CN38	3/8-16	**J6742024**	2.52
CN12	1/2-13	**J6742032**	2.70
CN58	5/8-11	**J6742040**	3.42
CN34	3/4-10	**J6742048**	4.98

Drill Jig Bushings

Headless Press Fit - Type "P"



Drill Bushings are used for permanent press fit installations. When used as a drill guide, accurate hole size is maintained while eliminating bending and wandering on the workpiece.

Please inquire for quantity discount.

MADE IN USA

Fractional Sizes

Inside Dia.	Outside Dia.	Price Each — Overall Length												
		3/16	1/4	5/16	3/8	1/2	5/8	3/4	1	1-1/4	1-3/8	1-1/2	1-3/4	2-1/8
1/64	5/32	—	—	20.30	22.40	23.10	—	—	—	—	—	—	—	—
1/64	13/64	—	—	20.30	22.40	23.10	—	—	—	—	—	—	—	—
1/32	5/32	—	20.30	20.30	22.40	23.10	—	23.80	—	—	—	—	—	—
1/32	3/16	—	20.30	20.30	22.40	23.10	—	—	—	—	—	—	—	—
1/32	13/64	—	20.30	20.30	22.40	23.10	—	23.80	—	—	—	—	—	—
3/64	5/32	—	20.30	20.30	22.40	23.10	—	23.80	—	—	—	—	—	—
3/64	3/16	—	20.30	20.30	22.40	23.10	—	23.80	—	—	—	—	—	—
3/64	13/64	—	20.30	20.30	22.40	23.10	—	23.80	—	—	—	—	—	—
1/16	5/32	—	—	20.30	21.00	21.70	—	—	—	—	—	—	—	—
1/16	3/16	—	20.30	20.30	21.00	21.70	22.40	23.10	—	—	—	—	—	—
1/16	13/64	—	20.30	20.30	21.00	21.70	—	23.10	—	—	—	—	—	—
5/64	3/16	—	8.75	9.10	9.80	10.50	11.20	11.55	—	—	—	—	—	—
5/64	13/64	—	8.75	9.10	9.80	10.50	—	11.55	11.90	—	12.25	—	—	—
5/64	1-3/8	—	—	—	—	—	—	—	—	—	12.25	—	—	—
3/32	3/16	—	8.75	9.10	9.80	10.50	—	11.55	—	—	—	—	—	—
3/32	13/64	—	8.75	9.10	9.80	10.50	—	11.55	11.90	—	—	—	—	—
7/64	1/4	—	7.70	9.10	9.80	10.50	11.20	11.55	11.90	—	12.25	—	13.30	—
1/8	1/4	—	7.70	9.10	9.80	10.50	11.20	11.55	11.90	—	12.25	—	—	—
1/8	5/16	—	6.30	6.65	7.35	7.70	—	8.05	8.40	—	12.25	—	13.30	—
9/64	1/4	—	6.30	8.40	9.10	9.80	10.50	8.40	11.20	—	12.25	—	13.30	—
9/64	5/16	—	6.30	7.00	7.35	7.70	—	8.40	8.75	—	9.10	—	13.30	—
5/32	5/16	—	6.30	7.00	7.35	7.70	—	8.40	8.75	—	9.10	9.90	—	—
5/32	1/2	—	—	—	—	—	—	8.40	—	—	—	—	—	—
11/64	5/16	—	6.30	7.00	7.35	7.70	8.05	8.40	8.75	—	9.10	—	10.15	—
3/16	5/16	—	6.30	7.00	7.35	7.70	8.05	8.40	8.75	—	9.10	—	10.15	—
3/16	3/8	—	—	7.00	7.35	—	8.05	—	—	—	—	—	—	—
3/16	13/32	—	5.60	5.95	6.30	6.65	—	7.35	7.70	—	8.40	—	10.15	11.20
3/16	1/2	—	5.60	5.95	6.30	6.65	—	7.35	7.70	—	8.40	—	10.15	11.20
13/64	3/8	—	5.60	5.95	6.30	6.65	7.00	7.35	7.70	—	—	—	—	—
13/64	13/32	—	5.60	5.95	6.30	6.65	—	7.35	7.70	—	8.40	9.90	10.15	—
13/64	1/2	—	5.60	5.95	6.30	6.65	—	7.35	7.70	—	8.40	—	10.15	11.20
7/32	3/8	—	5.60	5.95	6.30	6.65	7.00	7.35	7.70	—	—	—	—	—
7/32	13/32	—	5.60	5.95	6.30	6.65	—	7.35	7.70	—	8.40	—	10.15	—
7/32	1/2	—	5.60	5.95	6.30	6.65	—	7.35	7.70	—	8.40	—	10.15	—
15/64	3/8	—	—	—	—	6.65	—	7.35	—	—	—	—	—	—
15/64	13/32	—	5.60	5.95	6.30	6.65	7.00	7.35	7.70	—	8.40	—	10.15	—
15/64	7/16	—	5.60	5.95	6.30	6.65	7.00	7.35	7.70	—	—	—	—	—
15/64	1/2	—	5.60	5.95	6.30	6.65	7.00	7.35	7.70	—	8.40	—	10.15	—
1/4	3/8	—	—	—	—	6.65	—	—	—	—	—	—	—	—
1/4	13/32	5.95	5.60	5.95	6.30	6.65	—	7.35	7.70	—	8.40	—	10.15	11.20
1/4	7/16	—	5.60	5.95	6.30	6.65	7.00	7.35	7.70	—	—	—	—	—
1/4	1/2	—	5.60	5.95	6.30	6.65	—	7.35	7.70	—	8.40	9.10	10.15	11.20
17/64	7/16	—	5.60	5.95	6.30	6.65	7.00	7.35	7.70	—	—	—	—	—
17/64	1/2	—	5.60	5.95	6.30	6.65	—	7.35	7.70	—	8.40	—	10.15	11.20
9/32	7/16	—	5.60	5.95	6.30	6.65	7.00	7.35	7.70	—	—	—	10.15	—
9/32	1/2	—	5.60	5.95	6.30	6.65	7.00	7.35	7.70	—	8.40	9.10	10.15	11.20
19/64	1/2	—	5.60	5.95	6.30	6.65	7.00	7.35	7.70	—	—	9.10	10.15	11.20
19/64	9/16	—	6.58	6.86	7.00	6.65	7.00	7.35	7.70	—	—	—	—	—
19/64	5/8	—	—	—	—	6.65	—	—	—	—	—	—	—	—
19/64	3/4	—	—	—	—	6.65	—	—	—	—	—	—	—	—
5/16	1/2	—	5.60	—	—	6.65	—	7.35	7.70	—	8.40	9.10	—	11.20
5/16	9/16	—	6.58	6.86	7.00	6.65	7.00	7.35	7.70	—	—	—	10.15	—
5/16	5/8	—	6.58	6.86	7.00	6.65	7.00	7.35	7.70	8.05	8.40	9.10	10.15	—
5/16	3/4	—	6.58	6.86	7.00	6.65	—	7.35	—	—	8.40	—	—	—
21/64	9/16	—	6.58	6.86	7.00	6.65	—	7.35	7.70	—	—	—	—	—
21/64	5/8	—	6.58	6.86	7.00	6.65	7.00	7.35	7.70	8.05	8.40	9.10	10.15	11.20
21/64	3/4	—	6.58	6.86	7.00	6.65	7.00	7.35	7.70	8.05	8.40	9.10	10.15	11.20
11/32	9/16	—	6.58	6.86	7.00	6.65	7.00	7.35	7.70	—	—	—	—	—
11/32	5/8	—	6.58	6.86	7.00	6.65	7.00	7.35	7.70	8.05	8.40	9.10	10.15	11.20
11/32	3/4	—	6.58	6.86	7.00	6.65	7.00	7.35	7.70	8.05	8.40	9.10	10.15	—
23/64	5/8	—	6.58	6.86	7.00	6.65	7.00	7.35	7.70	8.05	8.40	—	10.15	11.20
23/64	3/4	—	6.58	6.86	7.00	6.65	7.00	7.35	7.70	—	8.40	—	10.15	11.20
3/8	5/8	—	6.58	6.86	7.00	6.65	7.00	7.35	7.70	8.05	8.40	9.10	10.15	11.20
3/8	3/4	—	6.58	6.86	7.00	6.65	7.00	7.35	7.70	8.05	8.40	—	10.15	—
25/64	5/8	—	6.58	6.86	7.00	6.65	7.00	7.35	7.70	8.05	8.40	9.10	10.15	11.20
25/64	3/4	—	6.58	6.86	7.00	6.65	7.00	7.35	7.70	8.05	8.40	—	10.15	—
13/32	5/8	—	6.58	6.86	7.00	6.65	7.00	7.35	7.70	8.05	8.40	9.10	10.15	11.20
13/32	3/4	—	6.58	6.86	7.00	6.65	7.00	7.35	7.70	8.05	8.40	—	10.15	11.20
27/64	5/8	—	6.58	6.86	7.00	6.65	7.00	7.35	7.70	—	8.40	—	10.15	11.20
27/64	3/4	—	6.58	6.86	7.00	6.65	—	7.35	7.70	8.05	8.40	9.10	10.15	11.20
7/16	5/8	—	6.58	6.86	7.00	6.65	7.00	7.35	7.70	—	8.40	—	10.15	11.20
7/16	3/4	—	6.58	6.86	7.00	6.65	7.00	7.35	7.70	8.05	8.40	—	10.15	11.20

Drill Jig Bushings

Headless Press Fit - Type "P"



Drill Bushings are used for permanent press fit installations. When used as a drill guide, accurate hole size is maintained while eliminating bending and wandering on the workpiece.

Please inquire for quantity discount.

MADE IN USA

Fractional Sizes

Inside Dia.	Outside Dia.	Price Each — Overall Length													
		1/4	5/16	3/8	1/2	5/8	3/4	1	1-1/4	1-3/8	1-1/2	1-3/4	2-1/8	2-1/2	3
29/64	3/4	6.58	6.86	7.00	7.00	7.00	7.35	7.70	8.05	8.40	9.10	10.15	11.20	—	—
15/32	5/8	—	—	—	7.00	—	—	7.70	—	—	—	—	—	—	—
15/32	3/4	6.58	6.86	7.00	7.00	7.00	7.35	7.70	—	8.40	—	9.80	11.20	—	—
31/64	3/4	6.58	6.86	7.00	7.00	7.00	7.35	7.70	8.05	8.40	9.10	9.80	11.20	—	—
1/2	3/4	6.58	6.86	7.00	7.00	7.00	7.35	7.70	—	8.40	—	9.80	11.20	—	—
1/2	7/8	6.58	6.86	7.70	8.05	—	8.40	8.75	—	9.10	9.45	9.80	11.20	—	—
1/2	1	—	—	—	8.05	—	8.75	8.75	9.10	9.10	—	9.80	11.20	12.60	13.65
33/64	3/4	6.58	6.86	7.00	7.00	7.00	7.35	7.70	9.10	8.40	—	9.80	—	—	—
33/64	7/8	6.58	6.86	8.05	8.05	8.05	8.40	8.75	9.10	9.10	9.45	9.80	11.20	12.60	—
33/64	1	—	—	—	8.05	8.05	8.75	8.75	—	9.10	—	9.80	11.20	—	—
17/32	3/4	6.58	6.86	7.00	7.00	—	7.35	7.70	9.10	8.40	—	9.80	—	—	—
17/32	7/8	6.58	6.86	8.05	8.05	8.05	8.40	8.75	9.10	9.10	9.45	9.80	11.20	12.60	—
17/32	1	—	—	—	8.05	8.05	8.75	8.75	9.10	9.10	9.45	9.80	11.20	—	—
35/64	7/8	6.58	6.86	8.05	8.05	—	8.40	8.75	9.10	9.10	—	9.80	11.20	12.60	—
35/64	1	—	—	—	8.05	8.05	8.75	8.75	—	9.10	9.45	9.80	11.20	—	—
9/16	7/8	6.58	6.86	8.05	8.05	8.05	8.40	8.75	9.10	9.10	9.45	9.80	11.20	—	—
9/16	1	—	—	—	8.05	—	8.75	8.75	9.10	9.10	—	9.80	11.20	—	—
37/64	3/4	—	—	—	8.05	—	—	—	—	—	—	—	—	—	—
37/64	7/8	—	6.86	8.05	8.05	8.05	8.40	8.75	9.10	9.10	—	9.80	11.20	12.60	—
37/64	1	—	—	—	8.05	8.05	8.75	8.75	9.10	9.10	—	9.80	11.20	—	—
19/32	7/8	6.58	6.86	8.05	8.05	—	8.75	8.75	9.10	9.10	9.45	9.80	11.20	—	—
19/32	1	—	—	—	8.05	8.05	8.75	8.75	9.10	9.10	9.45	9.80	11.20	—	—
39/64	7/8	6.58	6.86	8.05	8.05	8.05	8.40	8.75	9.10	9.10	9.45	9.80	11.20	12.60	—
39/64	1	—	—	—	8.05	8.05	8.75	8.75	—	9.10	—	9.80	11.20	—	—
5/8	7/8	6.58	6.86	—	8.05	8.05	8.40	8.75	—	9.10	9.45	9.80	11.20	—	—
5/8	1	—	—	—	8.05	8.05	8.75	8.75	9.10	9.10	—	9.80	—	—	—
5/8	1-3/8	—	—	—	8.05	—	11.20	11.90	11.90	12.25	—	13.30	—	—	—
41/64	7/8	6.58	6.86	8.05	8.05	8.05	8.40	8.75	9.10	9.10	—	10.15	11.20	12.60	—
41/64	1	—	—	8.40	8.40	8.40	8.75	8.75	9.10	9.10	—	10.15	11.20	12.60	—
41/64	1-3/8	—	—	—	—	—	11.20	11.90	11.90	12.25	—	13.30	—	—	—
21/32	7/8	6.58	6.86	8.40	8.40	—	8.40	8.75	9.10	9.10	9.45	10.15	—	—	—
21/32	1	—	—	—	8.40	—	8.75	8.75	9.10	9.10	9.45	10.15	11.20	—	13.65
21/32	1-3/8	—	—	—	—	—	11.20	11.90	—	12.25	12.60	13.30	—	—	—
43/64	1	—	—	—	8.40	—	8.75	8.75	—	9.10	—	10.15	11.20	—	—
43/64	1-3/8	—	—	—	8.40	—	11.20	11.90	—	12.25	—	13.30	—	—	—
11/16	7/8	—	—	—	8.40	—	—	—	—	—	—	—	—	—	—
11/16	1	—	—	—	8.40	8.40	11.20	8.75	9.10	9.10	9.45	10.15	—	—	—
11/16	1-3/8	—	—	—	—	11.20	11.20	11.90	—	12.25	12.60	13.30	—	—	—
45/64	1	—	—	—	8.40	—	8.75	8.75	9.10	9.10	—	10.15	11.20	12.60	13.65
45/64	1-3/8	—	—	—	8.40	—	11.20	11.90	11.90	12.25	12.60	13.30	—	—	—
23/32	1	—	—	—	8.40	—	8.75	8.75	—	9.10	9.45	10.15	11.20	—	—
23/32	1-3/8	—	—	—	8.40	11.20	11.20	11.90	—	12.25	12.60	13.30	—	15.46	—
47/64	1	—	—	8.40	8.40	8.40	8.75	8.75	9.10	9.10	9.45	10.15	11.20	—	—
47/64	1-3/8	—	—	—	8.40	—	11.20	11.90	—	12.25	12.60	13.30	—	—	—
3/4	1	—	—	—	8.40	8.40	8.75	8.75	9.10	9.10	9.45	10.15	11.20	—	—
3/4	1-3/8	—	—	—	—	11.20	11.20	11.90	—	12.25	12.60	13.30	15.12	15.40	—
49/64	1	—	—	—	8.40	8.40	8.75	8.75	—	9.10	9.45	10.15	11.20	12.60	—
49/64	1-1/8	—	—	—	12.60	—	11.20	11.90	11.90	—	12.60	13.30	—	—	—
49/64	1-3/8	—	—	—	12.60	—	11.20	11.90	—	12.25	12.60	13.30	15.12	15.40	—
25/32	1-1/8	—	—	—	12.60	11.20	11.20	11.90	11.90	—	12.60	13.30	—	—	—
25/32	1-3/8	—	—	—	12.60	—	11.20	11.90	—	12.25	12.60	13.30	15.12	—	—
51/64	1-1/8	—	—	—	12.60	11.20	11.20	11.90	11.90	—	12.60	13.30	—	—	—
51/64	1-3/8	—	—	—	12.60	—	11.20	11.90	—	12.25	12.60	13.30	15.12	—	—
13/16	1-1/8	—	—	—	12.60	11.20	—	11.90	—	—	—	—	—	—	—
13/16	1-3/8	—	—	11.20	12.60	11.20	11.20	11.90	11.90	12.25	12.60	13.30	15.12	15.40	17.00
53/64	1-1/8	—	—	—	12.60	11.20	11.20	11.90	11.90	—	12.60	13.30	—	—	—
53/64	1-3/8	—	—	—	12.60	—	11.20	11.90	—	12.25	12.60	13.30	—	15.40	—
27/32	1-1/8	—	—	—	12.60	11.20	11.20	11.90	11.90	—	12.60	13.30	—	—	—
27/32	1-3/8	—	—	—	12.60	—	11.20	11.90	11.90	12.25	12.60	13.30	15.12	15.40	—
55/64	1-1/4	—	—	—	—	11.20	11.20	11.90	11.90	—	12.60	13.30	—	—	—
55/64	1-3/8	—	—	—	12.60	—	11.20	11.90	—	12.25	12.60	13.30	15.12	15.40	—
7/8	1-1/4	—	—	11.20	—	11.20	11.20	11.90	—	—	12.60	13.30	—	—	—
7/8	1-3/8	—	—	—	12.60	11.20	11.20	11.90	—	12.25	12.60	13.30	15.12	15.40	—
57/64	1-1/4	—	—	—	—	11.20	11.20	11.90	—	—	12.60	13.30	—	—	—
57/64	1-3/8	—	—	—	12.60	—	11.20	11.90	—	12.25	12.60	13.30	15.12	15.40	—
29/32	1-1/4	—	—	—	—	11.20	11.20	11.90	11.90	—	12.60	13.30	—	—	—
29/32	1-3/8	—	—	—	12.60	—	11.20	11.90	—	12.25	12.60	13.30	—	—	—
59/64	1	—	—	—	12.60	11.20	—	11.90	—	—	—	—	—	—	—
59/64	1-1/4	—	—	—	—	11.20	11.20	11.90	11.90	—	12.60	13.30	—	—	—
59/64	1-3/8	—	—	—	12.60	—	11.20	11.90	—	12.25	12.60	13.30	15.12	15.40	—

Drill Jig Bushings

Headless Press Fit - Type "P"

Drill Bushings are used for permanent press fit installations. When used as a drill guide, accurate hole size is maintained while eliminating bending and wandering on the workpiece.

Please inquire for quantity discount.



MADE IN USA

Fractional Sizes

Inside Dia.	Outside Dia.	Price Each — Overall Length									
		5/8	3/4	1	1-1/4	1-3/8	1-1/2	1-3/4	2-1/8	2-1/2	3
15/16	1-1/4	11.20	11.20	11.90	12.60	—	14.00	16.10	—	—	—
15/16	1-3/8	—	11.20	11.90	—	13.30	14.00	16.10	17.00	18.20	—
61/64	1-3/8	—	11.20	11.90	12.60	13.30	14.00	16.10	17.00	18.20	—
31/32	1-3/8	—	11.20	11.90	—	13.30	—	16.10	17.00	18.20	—
63/64	1-3/8	—	11.20	11.90	12.60	13.30	14.00	16.10	—	18.20	—
1	1-3/8	11.20	—	11.90	12.60	13.30	—	16.10	—	—	—
1	1-3/4	—	11.90	12.60	—	14.00	14.70	17.50	20.30	—	—
1-1/64	1-3/8	—	11.20	11.90	—	13.30	—	16.10	—	—	—
1-1/64	1-3/4	—	11.90	—	—	—	—	—	—	—	—
1-1/32	1-3/8	—	11.20	11.90	—	12.60	—	16.10	—	—	—
1-3/64	1-1/2	—	13.30	14.00	14.00	—	—	16.10	—	—	—
1-3/64	1-3/4	—	13.30	—	—	—	—	17.50	—	—	—
1-1/16	1-1/2	—	13.30	14.00	14.00	—	14.70	16.10	—	—	—
1-1/16	1-3/4	—	13.30	14.00	—	15.40	—	17.50	20.30	—	—
1-5/64	1-1/2	—	13.30	14.00	14.00	—	15.40	16.10	—	—	—
1-5/64	1-3/4	—	—	—	—	—	—	—	20.30	—	—
1-3/32	1-1/2	—	13.30	14.00	—	—	16.00	—	—	—	—
1-7/64	1-1/2	—	13.30	14.00	—	15.40	—	16.10	—	—	—
1-7/64	1-3/4	—	—	14.00	—	—	—	—	—	—	—
1-1/8	1-3/4	—	13.30	14.00	—	15.40	—	17.50	20.30	23.10	29.40
1-9/64	1-3/4	—	13.30	14.00	—	15.40	—	17.50	20.30	—	—
1-5/32	1-3/4	—	13.30	14.00	—	15.40	—	17.50	20.30	—	—
1-11/64	1-3/4	—	—	—	—	—	16.00	17.50	—	23.10	—
1-3/16	1-3/4	—	13.30	14.00	—	15.40	—	17.50	20.30	23.10	—
1-7/32	1-3/4	—	13.30	14.00	—	15.40	—	17.50	20.30	—	—
1-15/64	1-3/4	—	—	14.00	—	—	—	17.50	—	—	—
1-1/4	1-5/8	13.30	13.30	—	—	—	16.00	17.50	—	—	—
1-1/4	1-3/4	—	13.30	14.00	—	15.40	—	17.50	20.30	—	29.40
1-17/64	1-3/4	—	—	—	—	—	—	—	—	23.10	—
1-9/32	1-3/4	—	13.30	14.00	—	15.40	—	17.50	20.30	—	—
1-9/32	1-3/4	—	13.30	14.00	—	15.40	—	17.50	20.30	—	—
1-5/16	1-3/4	—	13.30	14.00	—	15.40	—	17.50	20.30	23.10	—
1-21/64	1-3/4	—	—	—	—	—	—	—	—	—	29.40
1-11/32	1-3/4	—	13.30	14.00	—	15.40	—	17.50	20.30	—	—
1-23/64	1-3/4	—	—	—	—	—	—	17.50	20.30	—	—
1-3/8	1-3/4	—	13.30	—	—	15.40	—	17.50	20.30	23.10	—
1-3/8	2-1/4	—	—	16.80	—	18.90	—	21.00	26.60	—	—
1-13/32	1-3/4	—	—	—	—	—	—	—	25.90	—	—
1-13/32	2-1/4	—	—	16.80	18.20	18.90	—	—	—	—	—
1-27/64	2-1/4	—	—	16.80	—	—	—	21.00	—	—	—
1-7/16	2-1/4	—	—	16.80	—	18.90	—	21.00	26.60	29.40	32.20
1-29/64	2-1/4	—	—	—	—	18.90	—	—	—	—	—
1-15/32	2-1/4	—	—	—	—	18.90	—	—	—	—	—
1-31/64	2-1/4	—	—	16.80	—	18.90	—	21.00	—	—	—
1-1/2	1-7/8	—	—	—	—	—	—	—	—	29.40	—
1-1/2	2-1/4	—	—	16.80	—	18.90	—	21.00	26.60	29.40	—
1-17/32	2-1/4	—	—	—	—	—	—	21.00	—	—	—
1-35/64	2-1/4	—	—	16.80	—	—	20.30	21.00	—	—	—
1-9/16	2-1/4	—	—	16.80	—	18.90	—	21.00	—	29.40	—
1-19/32	2-1/4	—	—	—	—	—	—	—	26.60	29.40	32.20
1-39/64	2-1/4	—	—	—	—	—	—	21.00	26.60	—	—
1-5/8	2-1/4	—	—	16.80	—	18.90	20.30	21.00	26.60	—	—
1-11/16	2-1/4	—	—	—	—	18.90	—	21.00	—	29.40	32.20
1-45/64	2-1/4	—	—	—	—	—	—	—	—	—	32.20
1-23/32	2-1/4	—	—	—	—	—	—	—	—	—	32.20
1-47/64	2-1/4	—	—	—	—	—	—	21.00	—	—	32.20
1-3/4	2-1/4	—	16.80	—	—	18.90	20.30	21.00	26.60	—	32.20
1-53/64	2-3/4	—	—	—	—	—	—	—	—	29.40	—
1-29/32	2-3/4	—	—	—	—	—	—	—	—	29.40	—
2-1/32	2-3/4	—	—	22.40	—	—	—	—	—	—	—
2-1/8	2-3/4	—	—	—	—	—	—	—	—	—	32.20
2-9/64	2-3/4	—	—	—	—	—	—	—	—	—	32.20
2-1/4	2-3/4	—	21.70	22.40	—	—	—	26.60	29.40	—	—
2-13/32	2-3/4	—	—	22.40	—	—	—	—	—	—	—

Drill Jig Bushings

Headless Press Fit - Type "P"

Drill Bushings are used for permanent press fit installations. When used as a drill guide, accurate hole size is maintained while eliminating bending and wandering on the workpiece.
Please inquire for quantity discount.



MADE IN USA

Letter Sizes

Inside Dia.	Outside Dia.	Price Each — Overall Length											
		1/4	5/16	3/8	1/2	5/8	3/4	1	1-1/4	1-3/8	1-1/2	1-3/4	2-1/8
A	13/32	5.57	5.74	6.13	6.44	—	7.14	7.70	—	8.40	—	10.36	—
A	7/16	5.57	5.74	6.13	6.44	6.93	7.14	7.70	—	—	—	—	—
A	1/2	5.57	5.74	6.13	6.44	—	7.14	7.70	—	8.40	9.38	10.36	11.20
B	13/32	5.57	5.74	6.13	6.44	—	7.14	7.70	—	8.40	—	10.36	—
B	7/16	5.57	5.74	6.13	6.44	6.93	7.14	7.70	—	—	—	—	—
B	1/2	5.57	5.74	6.13	6.44	—	7.14	7.70	—	8.40	—	10.36	11.20
C	13/32	5.57	5.74	6.13	6.44	—	7.14	7.70	—	8.40	—	10.36	—
C	7/16	5.57	5.74	6.13	6.44	6.93	7.14	7.70	—	—	—	—	—
C	1/2	5.57	5.74	6.13	6.44	—	7.14	7.70	—	8.40	9.38	10.36	11.20
D	13/32	5.57	5.74	6.13	6.44	6.93	7.14	7.70	—	8.40	—	10.36	—
D	7/16	5.57	5.74	6.13	6.44	6.93	7.14	7.70	—	—	—	—	—
D	1/2	5.57	5.74	6.13	6.44	—	7.14	7.70	—	8.40	—	10.36	11.20
F	13/32	5.57	5.74	6.13	6.44	—	7.07	7.70	—	—	—	10.36	—
F	7/16	5.57	5.74	6.13	6.44	6.93	7.07	7.70	—	—	—	—	—
F	1/2	5.57	5.74	6.13	6.44	—	7.07	7.70	—	8.40	9.38	10.36	11.20
G	13/32	—	—	—	6.93	—	7.07	7.70	—	—	—	—	—
G	7/16	5.57	5.74	6.13	6.44	6.93	7.07	7.70	—	—	—	—	—
G	1/2	5.57	5.74	6.13	6.44	—	7.07	7.70	—	8.40	—	10.36	—
H	13/32	—	—	—	6.93	—	7.07	7.70	—	—	—	—	—
H	7/16	5.57	5.74	6.13	6.44	6.93	7.07	7.70	—	—	—	—	—
H	1/2	5.57	5.74	6.13	6.44	—	7.07	7.70	—	8.40	9.38	10.36	11.20
I	7/16	5.57	5.74	6.13	6.44	6.93	7.07	7.70	—	—	—	—	—
I	1/2	5.57	5.74	6.13	6.44	—	7.07	7.70	—	8.40	9.38	10.36	11.20
J	7/16	5.57	5.74	6.13	6.44	6.93	7.07	7.70	—	—	—	—	—
J	1/2	5.57	5.74	6.13	6.44	—	7.07	7.70	—	8.40	9.38	10.36	11.20
K	7/16	5.57	5.74	6.13	6.44	6.93	7.07	7.70	—	—	—	—	—
K	1/2	5.57	5.74	6.13	6.44	—	7.07	7.70	—	8.40	9.38	10.36	11.20
L	7/16	5.57	5.74	6.13	6.44	6.93	7.07	7.70	—	—	—	—	—
L	1/2	5.57	5.74	6.13	6.44	—	7.07	7.70	—	8.40	9.38	10.36	11.20
M	1/2	5.57	5.74	6.13	6.44	—	7.07	7.70	—	8.40	9.38	10.36	11.20
M	9/16	6.13	6.13	6.13	6.44	6.93	7.07	7.70	—	—	—	—	—
N	1/2	6.13	6.13	6.13	6.44	—	7.07	7.70	—	8.40	—	10.36	11.20
N	9/16	6.13	6.13	6.13	6.44	—	7.07	7.70	—	—	—	—	—
O	1/2	6.13	6.13	6.13	6.44	—	7.07	7.70	—	—	—	10.36	—
O	9/16	6.13	6.13	6.13	6.44	6.93	7.07	7.70	—	—	—	—	—
O	5/8	6.13	6.13	6.13	6.44	6.93	7.07	7.70	8.12	—	—	10.36	11.20
O	3/4	—	6.13	6.44	6.58	6.93	7.07	7.70	8.12	8.40	9.38	10.36	11.20
P	1/2	—	—	6.93	7.00	—	7.07	7.70	—	—	—	—	—
P	9/16	6.13	6.13	6.27	6.58	—	7.07	7.70	—	—	—	—	—
P	5/8	6.13	6.13	6.27	6.58	6.93	7.07	7.70	8.12	8.40	—	10.36	11.20
P	3/4	6.83	6.13	6.44	6.44	6.93	7.07	—	8.12	8.40	—	10.36	11.20
Q	9/16	6.13	6.13	6.27	6.44	6.93	7.07	7.70	—	—	—	—	—
Q	5/8	6.13	6.13	6.27	6.44	—	7.07	7.70	8.12	8.40	9.38	10.36	11.20
Q	3/4	6.83	6.13	6.44	6.44	6.93	7.07	7.70	8.12	8.40	9.38	—	11.20
R	9/16	6.13	6.13	6.27	6.58	6.93	7.07	7.70	—	—	—	—	—
R	5/8	6.13	6.13	6.27	6.44	6.93	7.07	7.70	—	8.40	—	10.36	11.20
R	3/4	6.83	6.13	6.44	6.44	6.93	7.07	7.70	8.12	8.40	9.38	10.36	11.20
S	5/8	6.13	6.13	6.27	6.58	—	7.07	7.70	8.12	8.40	—	10.36	—
S	3/4	6.83	—	6.44	6.44	6.93	7.07	7.70	—	8.40	9.38	—	11.20
T	5/8	6.13	6.13	6.27	6.58	—	7.07	7.70	—	8.40	—	10.36	11.20
T	3/4	6.83	6.13	6.44	6.44	6.93	7.07	7.70	8.12	8.40	—	10.36	11.20
U	5/8	6.13	6.13	6.27	6.58	6.93	7.07	7.70	8.12	8.40	—	10.36	11.20
U	3/4	6.83	—	6.44	6.44	—	7.07	7.70	—	8.40	—	10.36	11.20
V	5/8	6.13	—	6.27	6.58	—	7.07	7.70	8.12	8.40	—	10.36	11.20
V	3/4	6.13	6.13	6.44	6.44	6.93	7.07	7.70	—	8.40	9.38	10.36	—
W	5/8	6.13	—	6.27	6.58	6.93	7.07	7.70	8.12	8.40	9.38	10.36	11.20
W	3/4	6.13	—	6.44	6.44	6.93	7.07	7.70	—	8.40	—	—	11.20
X	5/8	6.13	6.13	6.27	6.58	—	7.07	7.70	8.12	8.40	9.38	10.36	—
X	3/4	—	—	—	6.44	6.93	7.07	7.70	8.12	8.40	9.38	—	—
Y	5/8	6.13	6.13	6.27	6.44	—	7.07	7.70	—	8.40	9.38	10.36	11.20
Y	3/4	—	6.13	—	6.44	—	7.07	7.70	8.12	8.40	—	10.36	—
Z	5/8	6.13	6.13	6.27	6.58	—	7.07	7.70	—	8.40	—	10.36	—
Z	3/4	—	—	6.44	6.44	6.93	7.07	7.70	—	8.40	9.38	—	—

Drill Jig Bushings

Headless Press Fit - Type "P"

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MADE IN USA

Wire Gauge Sizes

Inside Dia.	Outside Dia.	Price Each — Overall Length										
		1/4	5/16	3/8	1/2	5/8	3/4	1	1-3/8	1-1/2	1-3/4	2-1/8
1	3/8	5.60	5.95	6.30	6.65	7.00	7.35	7.70	—	—	—	—
1	13/32	5.60	5.95	6.30	6.65	—	7.35	7.70	8.40	—	13.30	—
1	1/2	5.60	5.95	6.30	6.65	—	7.35	7.70	8.40	—	13.30	17.50
2	3/8	5.60	5.95	6.30	6.65	7.00	7.35	7.70	—	—	—	—
2	13/32	5.60	5.95	6.30	6.65	—	7.35	7.70	8.40	—	13.30	—
2	1/2	5.60	5.95	6.30	6.65	—	7.35	7.70	8.40	—	13.30	17.50
3	3/8	5.60	5.95	6.30	6.65	7.00	7.35	7.70	—	—	—	—
3	13/32	5.60	5.95	6.30	6.65	—	7.35	7.70	8.40	—	13.30	—
3	1/2	5.60	5.95	6.30	6.65	—	7.35	7.70	8.40	9.10	13.30	17.50
4	3/8	5.60	5.95	6.30	6.65	7.00	7.35	7.70	—	—	—	—
4	13/32	5.60	5.95	6.30	6.65	—	7.35	7.70	8.40	—	13.30	—
4	1/2	5.60	5.95	6.30	6.65	—	7.35	7.70	8.40	9.10	13.30	17.50
5	3/8	5.60	5.95	6.30	6.65	7.00	7.35	7.70	—	—	—	—
5	13/32	5.60	5.95	6.30	6.65	—	7.35	7.70	8.40	—	13.30	—
5	1/2	5.60	5.95	6.30	6.65	—	7.35	7.70	8.40	9.10	13.30	17.50
6	3/8	5.60	5.95	6.30	6.65	7.00	7.35	7.70	—	—	—	—
6	13/32	5.60	5.95	6.30	6.65	—	7.35	7.70	8.40	—	13.30	—
6	1/2	5.60	5.95	6.30	6.65	—	7.35	7.70	8.40	9.10	13.30	17.50
7	3/8	5.60	5.95	6.30	6.65	7.00	7.35	7.70	—	—	—	—
7	13/32	5.60	5.95	6.30	6.65	—	7.35	7.70	8.40	—	13.30	—
7	1/2	5.60	5.95	6.30	6.65	—	7.35	7.70	8.40	—	13.30	17.50
8	3/8	5.60	5.95	6.30	6.65	7.00	7.35	7.70	—	—	—	—
8	13/32	5.60	5.95	6.30	6.65	—	7.35	7.70	8.40	—	13.30	—
8	1/2	5.60	5.95	6.30	6.65	—	7.35	7.70	8.40	—	13.30	17.50
9	3/8	5.60	5.95	6.30	6.65	7.00	7.35	7.70	—	—	—	—
9	13/32	5.60	5.95	6.30	6.65	—	7.35	7.70	8.40	—	13.30	—
9	1/2	5.60	5.95	6.30	6.65	—	7.35	7.70	8.40	9.10	13.30	17.50
10	5/16	6.30	6.65	6.30	6.65	7.00	7.70	8.05	8.40	—	13.30	—
10	3/8	6.30	6.65	7.00	7.35	7.70	7.70	8.05	—	—	—	—
10	13/32	6.30	6.65	7.00	7.35	—	7.70	8.05	8.40	—	13.30	—
10	1/2	6.30	6.65	7.00	7.35	—	7.70	8.05	8.40	—	13.30	—
11	5/16	6.30	6.65	7.00	7.35	7.70	7.70	8.05	8.40	—	13.30	—
11	13/32	6.30	6.65	7.00	7.35	—	7.70	8.05	8.40	9.10	13.30	—
11	1/2	6.30	6.65	7.00	7.35	—	7.70	8.05	8.40	—	13.30	17.50
12	5/16	6.30	6.65	7.00	7.35	7.70	7.70	8.05	8.40	—	—	—
12	3/8	6.30	6.65	7.00	7.35	—	7.70	—	—	—	—	—
12	13/32	6.30	6.65	7.00	7.35	—	8.05	9.10	9.40	—	13.30	—
12	1/2	6.30	6.65	7.00	7.35	—	8.05	9.10	9.40	—	13.30	—
13	5/16	6.30	6.65	7.00	7.35	—	8.05	9.10	9.40	—	—	—
14	5/16	6.30	6.65	7.00	7.35	7.70	8.05	9.10	9.40	—	—	—
15	5/16	6.30	6.65	7.00	7.35	7.70	8.05	9.10	9.40	—	—	—
16	5/16	6.30	6.65	7.00	7.35	7.70	8.05	9.10	9.40	—	11.20	11.90
17	5/16	6.30	6.65	7.00	7.35	7.70	8.05	9.10	9.40	—	11.20	11.90
18	5/16	6.30	6.65	7.00	7.35	—	8.05	9.10	9.40	—	11.20	11.90
19	5/16	6.30	6.65	7.00	7.35	7.70	8.05	9.10	9.40	—	11.20	11.90
20	5/16	6.30	6.65	7.00	7.35	7.70	8.05	9.10	9.40	—	11.20	11.90
21	5/16	6.30	6.65	7.00	7.35	7.70	8.05	9.10	9.40	—	11.20	11.90
22	5/16	6.30	6.65	7.00	7.35	7.70	8.05	9.10	9.40	—	11.20	11.90
23	5/16	6.30	6.65	7.00	7.35	—	8.05	9.10	9.40	—	11.20	11.90
24	13/64	—	6.65	7.00	7.35	—	—	—	—	—	—	—
24	5/16	6.30	6.65	7.00	7.35	—	8.05	9.10	9.40	—	11.20	11.90
25	5/16	6.30	6.65	7.00	7.35	7.70	8.05	9.10	9.40	—	11.20	11.90
26	5/16	6.30	6.65	7.00	7.35	7.70	8.05	9.10	9.40	—	11.20	11.90

Drill Jig Bushings

Headless Press Fit - Type "P"

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MADE IN USA

Wire Gauge Sizes

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		1/4	5/16	3/8	1/2	5/8	3/4	1	1-3/8	1-3/4	2-1/8
27	5/16	6.30	6.65	7.00	7.35	7.70	8.05	9.10	9.50	11.20	11.90
28	1/4	6.30	6.65	7.00	7.35	7.70	8.05	9.10	16.80	16.80	18.20
28	5/16	6.30	6.65	7.00	7.35	7.70	8.05	9.10	16.80	11.20	12.60
29	1/4	6.30	6.65	7.00	7.35	7.70	8.05	9.10	16.80	16.80	—
29	5/16	6.30	6.65	7.00	7.35	—	8.05	9.10	16.80	11.20	12.60
30	1/4	6.30	6.65	7.00	7.35	7.70	8.75	9.10	16.80	16.80	18.20
30	5/16	7.00	7.35	7.70	8.05	—	8.75	9.10	16.80	11.20	12.60
31	1/4	7.00	7.35	7.70	8.05	8.40	8.75	9.10	16.80	16.80	18.20
32	1/4	7.00	7.35	7.70	8.05	8.40	8.75	9.10	16.80	16.80	18.20
33	1/4	7.00	7.35	7.70	8.05	8.40	8.75	9.10	16.80	16.80	18.20
34	13/64	—	8.40	—	9.45	—	—	—	—	—	—
34	1/4	7.00	7.35	7.70	8.05	8.40	8.75	9.10	16.80	16.80	18.20
35	1/4	7.00	7.35	7.70	8.05	8.40	8.75	9.10	16.80	16.80	18.20
36	1/4	7.00	7.35	7.70	8.05	8.40	8.75	9.10	16.80	16.80	18.20
37	1/4	7.00	7.35	7.70	8.05	8.40	8.75	9.80	16.80	18.20	—
38	13/64	—	8.40	—	9.45	—	—	—	—	—	—
38	1/4	7.00	7.35	7.70	8.05	8.40	8.75	9.80	16.80	18.20	—
39	3/16	7.70	8.40	9.10	9.45	9.80	10.50	—	—	—	—
39	13/64	7.70	8.40	9.10	9.45	—	10.50	11.20	16.80	—	—
39	1/4	7.70	8.40	9.10	9.45	9.80	10.50	11.20	16.80	18.20	—
40	3/16	7.70	8.40	9.10	9.45	—	10.50	—	—	—	—
40	13/64	7.70	8.40	9.10	9.45	—	10.50	11.20	16.80	—	—
40	1/4	7.70	8.40	9.10	9.45	9.80	10.50	11.20	16.80	18.20	—
40	1/2	—	—	—	9.45	—	10.50	—	—	—	—
41	3/16	7.70	8.40	9.10	9.45	—	10.50	—	—	—	—
41	13/64	7.70	8.40	9.10	9.45	—	10.50	11.20	16.80	—	—
42	3/16	7.70	8.40	9.10	9.45	9.80	10.50	—	—	—	—
42	13/64	7.70	8.40	9.10	9.45	—	10.50	11.20	16.80	—	—
43	3/16	7.70	8.40	9.10	9.45	9.80	10.50	—	—	—	—
43	13/64	7.70	8.40	9.10	9.45	—	10.50	11.20	16.80	—	—
44	3/16	7.70	8.40	9.10	9.45	9.80	10.50	—	—	—	—
44	13/64	7.70	8.40	9.10	9.45	—	10.50	11.20	16.80	—	—
44	1/4	7.70	8.40	9.10	9.45	—	—	—	—	—	—
45	3/16	7.70	8.40	9.10	9.45	9.80	10.50	—	—	—	—
45	13/64	7.70	8.40	9.10	9.45	—	10.50	11.20	16.80	—	—
46	3/16	7.70	8.40	9.10	9.45	9.80	10.50	—	—	—	—
46	13/64	7.70	8.40	9.10	9.45	—	10.50	11.20	16.80	—	—
47	3/16	7.70	8.40	9.10	9.45	9.80	10.50	—	—	—	—
47	13/64	7.70	8.40	9.10	9.45	—	10.50	11.20	16.80	—	—
48	3/16	7.70	8.40	9.10	9.45	9.80	10.50	—	—	—	—
48	13/64	7.70	8.40	9.10	9.45	—	10.50	11.20	16.80	—	—
49	3/16	7.70	8.40	9.10	9.45	9.80	10.50	—	—	—	—
49	13/64	7.70	8.40	9.10	9.45	—	10.50	11.20	16.80	—	—
50	3/16	7.70	8.40	9.10	9.45	—	10.50	—	—	—	—
50	13/64	7.70	8.40	9.10	9.45	—	10.50	11.20	16.80	—	—
51	3/16	7.70	8.40	9.10	9.45	9.80	10.50	—	—	—	—
51	13/64	7.70	8.40	9.10	9.45	—	10.50	11.20	16.80	—	—
52	3/16	7.70	8.40	9.10	9.45	9.80	10.50	—	—	—	—
52	13/64	7.70	8.40	9.10	9.45	—	10.50	11.20	16.80	—	—
53	5/32	—	16.80	—	18.20	—	—	—	—	—	—
53	3/16	16.10	16.80	17.50	18.20	—	18.90	—	—	—	—
53	13/64	16.10	16.80	17.50	18.20	—	18.90	—	—	—	—
54	5/32	16.10	16.80	17.50	18.20	—	—	—	—	—	—

Inside Dia.	Outside Dia.	Price Each — Overall Length				
		1/4	5/16	3/8	1/2	3/4
54	3/16	16.10	16.80	17.50	18.20	18.90
54	13/64	16.10	16.80	17.50	18.20	18.90
55	5/32	—	16.80	—	18.20	18.90
55	3/16	16.10	16.80	17.50	18.20	18.90
55	13/64	16.10	16.80	17.50	18.20	18.90
56	5/32	—	16.80	21.70	22.40	—
56	3/16	20.30	16.80	21.70	22.40	23.10
56	13/64	20.30	16.80	21.70	22.40	23.10
57	5/32	20.30	21.00	21.70	22.40	—
57	3/16	20.30	21.00	21.70	22.40	23.10
57	13/64	20.30	21.00	21.70	22.40	23.10
58	5/32	20.30	21.00	21.70	22.40	—
58	3/16	20.30	21.00	21.70	22.40	23.10
58	13/64	20.30	21.00	21.70	22.40	23.10
59	5/32	20.30	21.00	21.70	22.40	—
59	3/16	20.30	21.00	21.70	22.40	23.10
59	13/64	20.30	21.00	21.70	22.40	23.10
60	5/32	20.30	21.00	21.70	22.40	—
60	3/16	20.30	21.00	21.70	—	23.10
60	13/64	20.30	21.00	21.70	22.40	23.10
61	5/32	20.30	21.00	21.70	22.40	—
61	3/16	20.30	21.00	—	—	—
61	13/64	—	—	—	22.40	—
62	5/32	20.30	21.00	21.70	22.40	—
62	3/16	20.30	21.00	21.70	22.40	—
63	5/32	20.30	21.00	21.70	22.40	—
63	3/16	20.30	21.00	21.70	22.40	—
63	13/64	—	21.00	—	22.40	—
64	5/32	20.30	21.00	21.70	22.40	—
64	3/16	20.30	21.00	21.70	22.40	—
65	5/32	20.30	21.00	21.70	22.40	—
65	3/16	20.30	21.00	21.70	22.40	—
66	5/32	20.30	21.00	21.70	22.40	—
66	3/16	20.30	21.00	21.70	22.40	—
66	13/64	—	—	21.70	22.40	—
67	5/32	20.30	21.00	21.70	22.40	—
67	3/16	20.30	21.00	21.70	22.40	—
68	5/32	—	21.00	21.70	22.40	—
68	3/16	—	21.00	21.70	22.40	—
69	5/32	—	21.00	21.70	22.40	23.10
69	3/16	—	21.00	21.70	22.40	—
70	5/32	—	21.00	21.70	22.40	—
70	3/16	—	21.00	21.70	22.40	—
71	5/32	—	21.00	21.70	22.40	—
72	5/32	—	21.00	21.70	22.40	—
73	5/32	—	21.00	21.70	22.40	—
74	5/32	20.30	21.00	21.70	22.40	—
75	5/32	—	21.00	21.70	22.40	—
76	5/32	20.30	—	21.70	22.40	—
77	5/32	—	—	21.70	22.40	—
78	5/32	20.30	21.00	21.70	22.40	—
79	5/32	—	21.00	21.70	22.40	—
80	5/32	20.30	21.00	21.70	22.40	—

Drill Jig Bushings

Head Press Fit - Type "H"



MADE IN USA

Drill Bushings are used for permanent press fit installations. When used as a drill guide, accurate hole size is maintained while eliminating bending and wandering on the workpiece. Correct overall length is measured on barrel only. Do not include collar. *Please inquire for quantity discount.*

Correct overall length is measured on barrel only. Do not include collar.

Fractional Sizes

Inside Dia.	Outside Dia.	Price Each — Overall Length									
		1/4	5/16	3/8	1/2	5/8	3/4	1	1-3/8	1-3/4	2-1/8
1/64	5/32	—	23.80	24.50	25.20	—	—	—	—	—	—
1/32	5/32	23.10	23.80	24.50	25.20	—	—	—	—	—	—
1/32	3/16	23.10	23.80	24.50	25.20	—	—	—	—	—	—
1/32	13/64	—	23.80	24.50	25.20	—	—	—	—	—	—
3/64	5/32	23.10	23.80	24.50	25.20	—	—	—	—	—	—
3/64	3/16	23.10	23.80	24.50	25.20	—	25.90	—	—	—	—
3/64	13/64	—	23.80	24.50	25.20	—	—	—	—	—	—
1/16	5/32	18.20	18.90	19.60	20.30	—	21.70	—	—	—	—
1/16	3/16	18.20	18.90	19.60	20.30	—	21.70	—	—	—	—
1/16	13/64	18.20	18.90	19.60	20.30	—	21.70	23.10	—	—	—
1/16	1/4	18.20	—	—	—	—	—	—	—	—	—
1/16	3/8	—	—	—	20.30	—	—	—	—	—	—
5/64	3/16	10.50	11.20	11.90	12.25	—	14.00	—	—	—	—
5/64	13/64	10.50	11.20	11.90	12.25	—	14.00	16.80	—	—	—
3/32	3/16	10.50	11.20	11.90	12.25	—	14.00	—	—	—	—
3/32	13/64	10.50	11.20	11.90	12.25	—	14.00	16.80	—	—	—
7/64	1/4	9.10	9.45	11.90	12.25	12.40	12.60	16.80	23.10	—	—
1/8	1/4	9.10	9.45	9.80	12.25	12.40	12.60	16.80	—	—	—
1/8	5/16	8.05	8.40	8.75	9.10	9.45	9.80	10.50	16.80	—	—
1/8	3/8	—	—	8.75	9.10	—	—	—	—	—	—
1/8	1/2	—	—	—	—	—	9.80	—	—	—	—
9/64	1/4	9.10	9.45	9.80	10.15	—	—	16.80	23.10	—	—
9/64	5/16	8.05	8.40	8.75	9.10	9.45	9.80	10.50	16.80	—	—
9/64	13/32	—	—	—	8.05	—	—	—	—	—	—
5/32	5/16	—	8.40	8.75	9.10	9.45	9.80	10.50	16.80	—	—
11/64	5/16	—	8.40	8.75	9.10	9.45	9.80	10.50	16.80	—	—
3/16	5/16	8.05	8.40	8.75	9.10	—	9.80	10.50	16.80	—	18.20
3/16	3/8	—	8.40	—	—	—	9.80	—	—	—	—
3/16	13/32	6.86	7.35	7.70	8.05	—	8.40	9.10	10.50	—	—
3/16	1/2	—	7.35	7.70	8.05	—	8.40	9.10	10.50	11.90	—
13/64	3/8	6.86	7.35	7.70	8.05	8.40	8.40	9.10	—	—	—
13/64	13/32	6.86	7.35	7.70	8.05	—	8.40	9.10	10.50	11.90	—
13/64	1/2	—	7.35	7.70	8.05	—	8.40	9.10	10.50	11.90	—
7/32	3/8	6.86	7.35	7.70	8.05	8.40	8.40	9.10	—	—	—
7/32	13/32	6.86	7.35	7.70	8.05	8.40	8.40	9.10	10.50	11.90	—
7/32	1/2	—	7.35	7.70	8.05	—	8.40	9.10	10.50	11.90	—
7/32	3/4	—	—	—	—	—	—	—	10.50	—	—
15/64	13/32	6.86	7.35	7.70	8.05	—	8.40	9.10	10.50	11.90	—
15/64	7/16	6.86	7.35	7.70	8.05	—	8.40	9.10	—	—	—
15/64	1/2	6.86	7.35	7.70	8.05	—	8.40	9.10	10.50	11.90	—
15/64	5/8	—	—	—	—	—	—	—	—	12.60	—
1/4	3/8	—	—	—	8.05	—	—	—	—	—	—
1/4	13/32	6.86	7.35	7.70	8.05	—	8.40	9.10	10.50	11.90	—
1/4	7/16	6.86	7.35	7.70	8.05	8.40	—	—	—	—	—
1/4	1/2	6.86	7.35	7.70	8.05	—	8.40	9.10	10.50	—	—
17/64	13/32	—	—	—	8.05	—	8.40	—	—	—	—
17/64	7/16	6.86	7.35	7.70	8.05	—	8.40	9.10	—	—	—
17/64	1/2	—	7.35	7.70	8.05	—	5.15	9.10	10.50	—	—
9/32	13/32	—	—	—	8.05	—	8.40	—	—	—	—
9/32	7/16	6.86	7.35	7.70	8.05	8.40	8.40	—	—	—	—
9/32	1/2	—	—	7.70	8.05	—	8.40	9.10	10.50	11.90	—
19/64	1/2	6.86	7.35	7.70	8.05	—	8.40	9.10	10.50	11.90	—
19/64	9/16	6.86	8.40	8.40	8.40	8.40	8.75	9.45	—	—	—
5/16	1/2	—	7.35	7.70	8.05	8.40	8.40	9.10	10.50	11.90	12.60
5/16	9/16	8.40	8.40	8.40	8.40	8.40	8.75	9.45	—	—	—
5/16	5/8	8.40	8.40	8.40	8.40	8.40	8.75	9.80	—	—	13.30
5/16	3/4	8.40	8.40	8.40	8.40	8.40	8.75	9.80	11.20	12.60	13.30
21/64	9/16	8.40	8.40	8.40	8.40	8.40	8.75	—	—	—	—
21/64	5/8	8.40	8.40	8.40	8.40	8.40	8.75	9.80	11.20	12.60	—
21/64	3/4	8.40	8.40	8.40	8.40	8.40	8.75	9.80	11.20	12.60	13.30
11/32	9/16	8.40	8.40	8.40	8.40	8.40	8.75	—	—	—	—
11/32	5/8	8.40	8.40	8.40	8.40	8.40	8.75	9.80	11.20	12.60	13.30
11/32	3/4	8.40	8.40	8.40	8.40	8.40	8.75	9.80	11.20	12.60	—
23/64	5/8	8.40	8.40	8.40	8.40	8.40	8.75	9.80	11.20	12.60	—
23/64	3/4	8.40	8.40	8.40	8.40	8.40	8.75	9.80	11.20	12.60	13.30
3/8	5/8	8.40	8.40	8.40	8.40	8.40	8.75	9.80	11.20	12.60	13.30
3/8	3/4	8.40	8.40	8.40	8.40	8.40	8.75	9.80	11.20	12.60	13.30
25/64	5/8	8.40	8.40	8.40	8.40	8.40	8.75	9.80	11.20	12.60	13.30
25/64	3/4	8.40	8.40	8.40	8.40	8.40	8.75	9.80	11.20	12.60	13.30
13/32	5/8	8.40	8.40	8.40	8.40	8.40	8.75	9.80	11.20	12.60	13.30
13/32	3/4	8.40	8.40	8.40	8.40	8.40	8.75	9.80	11.20	12.60	—

Drill Jig Bushings

Head Press Fit - Type "H"



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Correct overall length is measured on barrel only. Do not include collar.

MADE IN USA

Fractional Sizes

Inside Dia.	Outside Dia.	Price Each — Overall Length											
		1/4	5/16	3/8	1/2	5/8	3/4	1	1-1/4	1-3/8	1-1/2	1-3/4	2-1/8
27/64	5/8	8.40	8.40	8.40	8.40	8.40	8.75	9.80	—	11.20	—	12.60	—
27/64	3/4	8.40	8.40	8.40	8.40	8.40	8.75	9.80	10.50	11.20	—	12.60	13.30
7/16	5/8	—	8.40	8.40	8.40	8.40	8.75	9.80	—	11.20	—	12.60	—
7/16	3/4	8.40	8.40	8.40	8.40	8.40	8.75	9.80	—	11.20	—	12.60	—
29/64	3/4	8.40	8.40	8.40	8.40	8.40	8.75	9.80	—	11.20	—	12.60	—
15/32	3/4	—	8.40	8.40	8.40	8.40	8.75	9.80	—	11.20	—	12.60	13.30
15/32	1	—	—	—	—	—	10.50	—	—	—	—	—	—
31/64	3/4	8.40	8.40	8.40	8.40	8.40	8.75	9.80	—	11.20	—	12.60	13.30
1/2	5/8	—	—	—	8.40	—	—	—	—	—	—	—	—
1/2	3/4	—	8.40	8.40	8.40	8.40	8.75	9.80	10.50	11.20	—	12.60	13.30
1/2	7/8	—	—	5.57	9.80	—	10.50	11.20	—	11.90	—	13.30	14.70
1/2	1	—	—	—	5.92	—	10.50	11.20	—	11.90	—	14.00	15.40
33/64	3/4	8.40	8.40	8.40	8.40	8.40	8.75	9.80	10.50	—	—	12.60	—
33/64	7/8	—	—	9.10	9.80	9.89	10.50	11.20	—	11.90	—	13.30	14.70
33/64	1	—	—	—	10.15	—	10.50	11.20	—	11.90	—	14.00	15.40
17/32	3/4	8.40	8.40	8.40	8.40	9.80	10.50	9.80	10.50	11.20	—	12.60	13.30
17/32	7/8	—	—	9.10	9.80	9.80	10.50	11.20	—	11.20	—	13.30	14.70
17/32	1	—	—	—	10.15	—	10.50	11.20	—	11.20	—	14.00	15.40
35/64	7/8	—	—	9.10	9.80	9.80	10.50	11.20	10.50	11.20	—	13.30	14.70
35/64	1	—	—	—	10.15	—	10.50	11.20	—	11.20	—	14.00	15.40
9/16	7/8	—	—	9.10	9.80	—	10.50	11.20	—	11.20	—	13.30	14.70
9/16	1	—	—	—	10.15	—	10.50	11.20	—	11.20	—	14.00	15.40
37/64	7/8	—	—	9.10	9.80	9.80	10.50	11.20	10.50	11.20	—	13.30	14.70
37/64	1	—	—	—	10.15	—	10.50	11.20	—	11.20	—	14.00	15.40
19/32	7/8	—	—	9.10	9.80	9.80	10.50	11.20	10.50	11.20	—	13.30	14.70
19/32	1	—	9.45	—	10.15	9.80	10.50	11.20	—	11.20	12.60	14.00	15.40
39/64	7/8	9.10	9.45	9.10	9.80	9.80	10.50	11.20	10.50	11.20	12.60	13.30	14.70
39/64	1	—	9.45	—	10.15	9.80	10.50	11.20	—	11.20	12.60	14.00	15.40
5/8	7/8	9.10	9.45	9.80	9.80	9.80	10.50	11.20	—	11.20	12.60	13.30	15.40
5/8	1	—	9.45	—	10.15	9.80	10.50	11.20	—	11.20	12.60	—	15.40
5/8	1-3/8	—	14.00	—	15.40	16.80	17.50	18.20	—	18.90	19.60	20.30	22.40
41/64	7/8	9.10	9.45	9.80	9.80	10.15	10.50	11.20	—	11.20	12.60	13.30	—
41/64	1	—	9.45	—	10.15	10.15	10.50	11.20	—	11.20	12.60	13.30	15.40
41/64	1-3/8	—	14.00	—	15.40	16.80	17.50	18.20	—	18.90	—	20.30	—
21/32	7/8	9.10	9.45	9.80	9.80	10.15	10.50	11.20	—	11.20	12.60	13.30	15.40
21/32	1	—	9.45	—	10.15	10.15	10.50	11.20	—	11.20	12.60	13.30	15.40
21/32	1-3/8	—	14.00	—	15.40	16.80	17.50	18.20	—	18.90	—	—	—
43/64	1	—	9.45	—	10.15	10.15	—	11.20	—	11.20	12.60	14.00	15.40
43/64	1-3/8	—	14.00	—	15.40	16.80	17.50	18.20	—	18.90	—	—	—
11/16	1	—	9.45	—	10.15	10.50	11.00	11.20	—	11.20	12.60	14.00	15.40
11/16	1-3/8	—	14.00	—	15.40	16.80	17.50	18.20	—	18.90	19.50	—	22.40
45/64	1	—	9.45	—	10.15	10.50	11.00	11.20	—	11.20	12.60	14.00	15.40
45/64	1-3/8	—	14.00	—	15.40	16.80	17.50	18.20	18.90	—	—	—	—
23/32	1	—	9.45	—	10.15	10.50	17.50	11.20	—	11.20	12.60	14.00	15.40
23/32	1-3/8	—	14.00	—	15.40	16.80	17.50	18.20	—	18.90	—	—	—
47/64	1	—	9.45	—	10.15	10.50	17.50	11.20	—	11.20	12.60	14.00	15.40
47/64	1-3/8	—	14.00	—	15.40	16.80	17.50	18.20	—	18.90	—	—	—
3/4	1	—	9.45	9.80	10.15	10.50	17.50	11.20	—	11.20	12.60	14.00	15.40
3/4	1-3/8	—	14.00	—	15.40	16.80	17.50	18.20	—	18.90	—	—	—
49/64	1	—	9.45	—	10.15	10.50	—	11.20	—	11.20	12.60	14.00	—
49/64	1-1/8	—	—	—	—	—	17.50	—	18.90	18.90	—	—	—
49/64	1-3/8	—	14.00	—	15.40	16.80	17.50	18.20	—	18.90	—	20.30	—
25/32	1-3/8	—	14.00	—	15.40	16.80	17.50	18.20	—	18.90	19.60	—	—
51/64	1-3/8	—	14.00	—	15.40	16.80	17.50	18.20	—	18.90	—	—	—
13/16	1-1/8	—	14.00	—	—	16.80	—	18.20	—	18.90	—	—	—
13/16	1-3/8	—	14.00	—	15.40	16.80	—	18.20	18.90	18.90	19.60	20.30	22.40
53/64	1-1/8	—	14.00	—	15.40	16.80	—	18.20	—	—	—	—	—
53/64	1-3/8	—	14.00	—	15.40	16.80	17.50	18.20	—	18.90	19.60	—	—
27/32	1-1/8	—	—	—	15.40	16.80	—	—	—	—	—	—	—
27/32	1-3/8	—	14.00	—	15.40	16.80	17.50	18.20	—	18.90	19.60	20.30	22.40
55/64	1-1/4	—	—	—	15.40	16.80	—	—	18.90	18.90	—	20.30	—
55/64	1-3/8	—	14.00	—	15.40	16.80	17.50	18.20	—	18.90	—	—	—
7/8	1-1/4	—	—	—	15.40	16.80	—	—	18.90	18.90	—	20.30	—
7/8	1-3/8	—	—	—	15.40	16.80	17.50	18.20	—	18.90	19.60	20.30	22.40
57/64	1-1/4	—	—	—	15.40	—	17.50	—	—	18.90	—	20.30	—
57/64	1-3/8	—	14.00	—	15.40	16.80	17.50	18.20	—	18.90	—	20.30	—
29/32	1-1/4	—	—	—	15.40	—	17.50	—	—	18.90	—	—	—
29/32	1-3/8	—	14.00	—	15.40	16.80	17.50	18.20	—	18.90	19.60	—	22.40

Drill Jig Bushings

Head Press Fit - Type "H"

Drill Bushings are used for permanent press fit installations. When used as a drill guide, accurate hole size is maintained while eliminating bending and wandering on the workpiece. Correct overall length is measured on barrel only. Do not include collar. *Please inquire for quantity discount.*

Correct overall length is measured on barrel only. Do not include collar.



MADE IN USA

Fractional Sizes

Inside Dia.	Outside Dia.	Price Each — Overall Length								
		1/2	3/4	1	1-1/4	1-3/8	1-3/4	2-1/8	2-1/2	3
59/64	1-1/4	—	17.50	18.20	—	—	21.00	—	—	—
59/64	1-3/8	15.40	17.50	18.20	—	18.90	21.00	22.40	—	—
15/16	1-1/4	—	17.50	18.20	—	—	21.00	—	—	—
15/16	1-3/8	—	17.50	18.20	—	18.90	—	22.40	—	—
61/64	1-3/8	15.40	17.50	18.20	—	18.90	—	—	—	—
31/32	1-3/8	15.40	17.50	18.20	—	18.90	—	22.40	23.10	—
63/64	1-3/8	15.40	17.50	18.20	18.90	18.90	—	—	23.10	—
1	3/4	15.40	17.50	—	—	—	—	—	—	—
1	1-3/8	15.40	—	18.20	—	18.90	21.00	22.40	—	—
1	1-3/4	—	18.20	20.30	—	21.70	—	—	—	—
1-1/64	1-3/8	15.40	—	18.20	—	18.90	—	—	—	—
1-1/32	1-3/8	15.40	17.50	18.20	—	21.70	—	—	—	—
1-1/32	1-3/4	—	—	20.30	—	—	—	—	—	—
1-3/64	1-3/4	—	—	—	—	21.70	23.10	—	—	—
1-1/16	1-3/4	—	—	20.30	—	21.70	23.10	24.50	25.90	—
1-5/64	1-3/4	—	—	—	—	21.70	—	—	—	—
1-3/32	1-3/4	—	—	20.30	—	21.70	—	—	—	—
1-7/64	1-3/4	—	—	—	—	21.70	—	—	—	—
1-1/8	1-1/2	—	—	20.30	21.70	—	—	—	—	—
1-1/8	1-3/4	—	18.20	20.30	—	21.70	23.10	24.50	—	29.40
1-9/64	1-3/4	—	—	—	—	21.70	23.10	—	—	—
1-5/32	1-3/4	—	18.20	20.30	—	21.70	23.10	24.50	—	—
1-11/64	1-3/4	—	—	20.30	—	21.70	—	24.50	—	—
1-3/16	1-3/4	—	18.20	20.30	—	21.70	23.10	24.50	25.90	—
1-13/64	1-3/4	—	—	—	—	21.70	—	—	—	—
1-7/32	1-5/8	—	—	—	—	—	—	—	25.90	—
1-7/32	1-3/4	—	18.20	20.30	—	21.70	23.10	24.50	—	—
1-15/64	1-3/4	—	—	—	—	21.70	—	—	—	—
1-1/4	1-3/4	—	18.20	20.30	—	21.70	23.10	24.50	25.90	—
1-17/64	1-3/4	—	—	20.30	—	—	23.10	—	25.90	—
1-9/32	1-3/4	—	18.20	20.30	—	21.70	23.10	24.50	—	—
1-19/64	1-3/4	—	—	—	—	—	23.10	—	—	—
1-5/16	1-3/4	—	18.20	20.30	21.70	21.70	23.10	24.50	—	—
1-21/64	1-3/4	—	—	—	—	—	23.10	24.50	—	29.40
1-11/32	1-3/4	—	18.20	20.30	—	21.70	23.10	24.50	—	29.40
1-23/64	1-3/4	—	—	20.30	—	21.70	23.10	—	—	—
1-3/8	1-3/4	—	18.20	20.30	—	21.70	23.10	24.50	—	—
1-3/8	2-1/4	—	—	—	—	23.10	—	—	—	—
1-13/32	1-3/4	—	—	—	—	—	—	24.50	—	—
1-13/32	2-1/4	—	—	21.70	—	23.10	24.50	27.30	—	—
1-27/64	1-3/4	—	—	—	—	—	—	27.30	—	—
1-7/16	2-1/4	—	—	21.70	—	23.10	24.50	27.30	—	—
1-29/64	2-1/4	—	—	—	—	23.10	—	—	—	—
1-15/32	2-1/4	—	—	21.70	—	23.10	24.50	27.30	—	—
1-1/2	2-1/4	—	—	—	—	23.10	24.50	27.30	—	32.20
1-17/32	2-1/4	—	—	21.70	—	23.10	24.50	27.30	—	—
1-35/64	2-1/4	—	—	—	—	—	—	—	29.40	—
1-9/16	2-1/4	—	—	21.70	—	23.10	24.50	27.30	—	—
1-19/32	2-1/4	—	—	21.70	—	23.10	24.50	27.30	—	—
1-39/64	2-1/4	—	—	—	—	—	—	27.30	—	—
1-5/8	2	—	—	—	23.10	—	—	—	—	—
1-5/8	2-1/4	—	—	21.70	—	23.10	24.50	27.30	—	—
1-41/64	2-1/4	—	—	—	—	—	—	—	29.40	—
1-21/32	2-1/4	—	—	21.70	—	23.10	24.50	27.30	—	—
1-43/64	2-1/4	—	—	—	—	—	—	—	29.40	—
1-11/16	2-1/4	—	—	21.70	—	23.10	24.50	27.30	29.40	—
1-45/64	2-1/4	—	—	—	—	—	—	—	—	32.20
1-23/32	2-1/4	—	—	21.70	—	23.10	24.50	27.30	—	—
1-47/64	2-1/4	—	—	—	—	23.10	24.50	27.30	—	—
1-3/4	2-1/4	—	—	21.70	—	23.10	24.50	27.30	29.40	32.20
2-1/4	2-3/4	—	—	—	—	23.10	—	27.30	—	—

Drill Jig Bushings

Head Press Fit - Type "H"



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Correct overall length is measured on barrel only. Do not include collar.

MADE IN USA

Letter Sizes

Inside Dia.	Outside Dia.	Price Each — Overall Length									
		1/4	5/16	3/8	1/2	5/8	3/4	1	1-3/8	1-3/4	2-1/8
A	13/32	6.93	7.35	7.70	8.05	—	8.40	9.10	10.50	11.90	—
A	7/16	6.93	7.35	7.70	8.05	8.40	8.40	9.10	—	—	—
A	1/2	6.93	7.35	7.70	8.05	—	8.40	9.10	10.50	11.90	—
B	13/32	6.93	7.35	7.70	8.05	—	8.40	9.10	10.50	11.90	—
B	7/16	6.93	7.35	7.70	8.05	8.40	8.40	9.10	—	—	—
B	1/2	6.93	7.35	7.70	8.05	—	8.40	9.10	10.50	—	—
C	13/32	6.93	7.35	7.70	8.05	—	8.40	9.10	10.50	11.90	—
C	7/16	6.93	7.35	7.70	8.05	8.40	8.40	9.10	—	—	—
C	1/2	6.93	—	7.70	8.05	—	8.40	9.10	—	11.90	—
D	13/32	6.93	7.35	7.70	8.05	—	8.40	9.10	10.50	11.90	—
D	7/16	6.93	7.35	7.70	8.05	8.40	8.40	9.10	—	—	—
D	1/2	6.93	—	7.70	8.05	—	8.40	9.10	10.50	—	—
F	13/32	6.93	7.35	7.70	8.05	—	8.40	9.10	10.50	11.90	—
F	7/16	6.93	7.35	7.70	8.05	8.40	8.40	—	—	—	—
F	1/2	—	7.35	7.70	8.05	—	8.40	9.10	10.50	11.90	—
F	5/8	—	—	—	—	—	—	9.80	—	—	—
F	3/4	—	—	—	—	—	—	9.80	—	—	—
G	13/32	—	7.35	7.70	—	—	8.40	9.10	—	—	—
G	7/16	6.93	7.35	7.70	8.05	8.40	8.40	9.10	—	—	—
G	1/2	6.93	7.35	7.70	8.05	—	8.40	9.10	—	11.90	—
H	13/32	—	—	7.70	8.05	—	8.40	9.10	—	—	—
H	7/16	6.93	7.35	7.70	8.05	8.40	8.40	9.10	—	—	—
H	1/2	6.93	7.35	7.70	8.05	—	8.40	9.10	10.50	11.90	—
I	7/16	6.93	7.35	7.70	8.05	8.40	8.40	9.10	—	—	—
I	1/2	6.93	7.35	7.70	8.05	—	8.40	9.10	10.50	11.90	12.95
J	7/16	6.93	7.35	7.70	8.05	8.40	8.40	9.10	—	—	—
J	1/2	—	7.35	7.70	8.05	—	8.40	9.10	10.50	11.90	—
K	13/32	—	—	—	8.05	—	—	—	—	—	—
K	7/16	6.93	7.35	7.70	8.05	8.40	8.40	9.10	—	—	—
K	1/2	6.93	7.35	7.70	8.05	—	8.40	9.10	10.50	11.90	—
L	7/16	6.93	7.35	7.70	8.05	8.40	8.40	9.10	—	—	—
L	1/2	6.93	7.35	7.70	8.05	—	8.40	9.10	10.50	11.90	12.95
M	1/2	6.93	7.35	7.70	8.05	—	8.40	9.10	10.50	11.90	—
M	9/16	8.40	8.40	8.40	8.40	8.40	8.75	9.45	—	11.90	—
N	1/2	6.93	7.35	7.70	8.05	—	8.40	9.10	10.50	11.90	—
N	9/16	8.40	8.40	8.40	8.40	8.40	8.75	9.45	—	—	—
O	9/16	8.40	8.40	8.40	8.40	8.40	8.75	9.45	—	—	—
O	1/2	6.93	7.35	7.70	8.05	—	8.40	9.10	—	—	—
O	5/8	8.40	—	—	8.40	—	8.75	9.80	11.20	11.90	12.95
O	3/4	8.40	—	—	8.40	—	8.75	9.80	—	—	13.30
P	1/2	—	—	—	8.05	—	8.40	9.10	—	—	—
P	9/16	8.40	8.40	8.40	8.40	8.40	8.75	9.45	—	—	—
P	5/8	8.40	—	8.40	8.40	8.40	8.75	9.80	11.20	—	13.30
P	3/4	—	—	8.40	8.40	—	8.75	9.80	—	12.60	—
Q	1/2	—	8.40	—	8.40	—	8.40	—	—	—	—
Q	9/16	8.40	8.40	8.40	8.40	8.40	8.75	9.45	—	—	—
Q	5/8	—	8.40	8.40	8.40	8.40	8.75	9.80	11.20	12.60	—
Q	3/4	8.40	8.40	8.40	8.40	8.40	8.75	9.80	—	—	—
R	9/16	8.40	8.40	8.40	8.40	8.40	8.75	9.45	—	—	—
R	5/8	—	8.40	8.40	8.40	8.40	8.75	9.80	11.20	12.60	—
R	3/4	—	—	8.40	8.40	—	8.75	9.80	11.20	—	13.30
S	5/8	8.40	8.40	8.40	8.40	—	8.75	9.80	—	12.60	—
S	3/4	—	—	—	8.40	—	8.75	9.80	—	12.60	—
T	5/8	—	—	8.40	8.40	—	8.75	9.80	—	12.60	13.30
T	3/4	—	—	—	8.40	—	8.75	9.80	—	12.60	—
U	5/8	—	—	8.40	8.40	8.40	8.75	9.80	—	—	13.30
U	3/4	8.40	—	8.40	8.40	8.40	8.75	9.80	11.20	—	—
V	5/8	8.40	—	8.40	8.40	8.40	8.75	9.80	11.20	12.60	13.30
V	3/4	—	—	—	8.40	8.40	8.75	9.80	—	—	—
W	5/8	—	—	8.40	8.40	8.40	8.75	9.80	11.20	12.60	13.30
W	3/4	—	8.40	—	8.40	—	8.75	9.80	—	—	13.30
X	5/8	—	—	8.40	8.40	8.40	8.75	9.80	11.20	—	—
X	3/4	8.40	—	—	8.40	—	8.75	9.80	11.20	12.60	—
Y	5/8	8.40	—	8.40	8.40	—	8.75	9.80	—	12.60	13.30
Y	3/4	—	—	—	8.40	—	8.75	9.80	—	—	—
Z	5/8	—	8.40	8.40	—	—	8.75	9.80	11.20	12.60	13.30
Z	3/4	8.40	—	—	8.40	—	8.75	9.80	11.20	—	—

Drill Jig Bushings

Head Press Fit - Type "H"



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Correct overall length is measured on barrel only. Do not include collar.

MADE IN USA

Wire Gauge Sizes

Inside Diameter	Outside Diameter	Price Each — Overall Length								
		1/4	5/16	3/8	1/2	5/8	3/4	1	1-3/8	1-3/4
1	3/8	6.93	7.35	7.70	8.05	—	8.40	9.10	—	—
1	13/32	6.93	7.35	7.70	8.05	—	8.40	9.10	10.50	11.90
1	1/2	6.93	7.35	7.70	8.05	—	8.40	9.10	10.50	11.90
2	3/8	6.93	7.35	7.70	8.05	8.40	8.40	9.10	—	—
2	13/32	6.93	7.35	7.70	8.05	—	8.40	9.10	10.50	11.90
2	1/2	6.93	7.35	7.70	8.05	—	8.40	9.10	10.50	11.90
3	3/8	6.93	7.35	7.70	8.05	8.40	8.40	9.10	—	—
3	13/32	6.93	7.35	7.70	8.05	—	8.40	9.10	10.50	11.90
3	1/2	6.93	7.35	7.70	8.05	—	8.40	9.10	10.50	11.90
4	3/8	6.93	7.35	7.70	8.05	8.40	8.40	9.10	—	—
4	13/32	6.93	7.35	7.70	8.05	—	8.40	9.10	10.50	11.90
4	1/2	6.93	7.35	7.70	8.05	—	8.40	9.10	10.50	11.90
5	5/16	—	—	—	—	—	9.80	—	—	—
5	3/8	6.93	7.35	7.70	8.05	8.40	8.40	9.10	—	—
5	13/32	6.93	7.35	7.70	8.05	—	8.40	9.10	10.50	11.90
5	1/2	6.93	7.35	7.70	8.05	—	8.40	9.10	10.50	11.90
6	3/8	6.93	7.35	7.70	8.05	8.40	8.40	9.10	—	—
6	13/32	6.93	7.35	7.70	8.05	—	8.40	9.10	10.50	11.90
6	1/2	—	7.35	7.70	8.05	—	8.40	9.10	—	11.90
7	3/8	6.93	7.35	7.70	8.05	8.40	8.40	9.10	—	—
7	13/32	6.93	7.35	7.70	8.05	—	8.40	9.10	10.50	11.90
7	1/2	6.93	7.35	7.70	8.05	—	8.40	9.10	10.50	11.90
8	3/8	—	7.35	7.70	8.05	8.40	8.40	9.10	—	—
8	13/32	6.93	7.35	7.70	8.05	—	8.40	9.10	10.50	11.90
8	1/2	6.93	7.35	7.70	8.05	—	8.40	9.10	10.50	11.90
9	3/8	6.93	7.35	7.70	8.05	8.40	8.40	9.10	—	—
9	13/32	6.93	7.35	7.70	8.05	—	8.40	9.10	10.50	11.90
9	1/2	6.93	8.40	7.70	8.05	—	8.40	9.10	10.50	11.90
10	5/16	8.05	7.35	—	9.10	9.80	9.80	10.50	16.80	—
10	3/8	6.93	7.35	7.70	8.05	8.40	8.40	9.10	—	—
10	13/32	6.93	7.35	7.70	8.05	—	8.40	9.10	10.50	11.90
10	1/2	6.93	7.35	7.70	8.05	—	8.40	9.10	10.50	11.90
11	5/16	8.05	8.40	8.75	9.10	9.80	9.80	10.50	16.80	11.90
11	3/8	—	7.35	—	8.05	—	8.40	—	—	—
11	13/32	6.93	7.35	7.70	8.05	—	8.40	9.10	10.50	11.90
11	1/2	6.93	7.00	7.70	8.05	—	8.40	9.10	—	11.90
12	5/16	8.05	8.40	8.75	9.10	9.80	9.80	10.50	16.80	—
12	3/8	—	7.35	7.70	8.05	—	8.40	—	—	—
12	13/32	6.93	7.35	7.70	8.05	—	8.40	9.10	10.50	11.90
12	1/2	6.93	7.35	7.70	8.05	—	8.40	9.10	10.50	11.90
13	5/16	8.05	8.40	8.75	9.10	9.80	9.80	10.50	16.80	—
13	13/32	—	7.35	—	—	—	—	—	—	—
14	5/16	8.05	8.40	8.75	9.10	9.80	9.80	10.50	16.80	—
14	13/32	—	7.35	—	—	—	9.80	—	—	—
15	5/16	8.05	8.40	8.75	9.10	9.80	9.80	10.50	16.80	—
16	5/16	—	8.40	8.75	9.10	9.80	9.80	10.50	16.80	—
17	5/16	8.05	8.40	8.75	9.10	9.80	9.80	10.50	16.80	—
17	1/2	—	—	—	9.10	—	9.80	—	—	—
18	5/16	8.05	8.40	8.75	9.10	9.80	9.80	10.50	16.80	—
19	5/16	8.05	8.40	8.75	9.10	9.80	9.80	10.50	16.80	—
20	5/16	8.05	8.40	8.75	9.10	9.80	9.80	10.50	16.80	—
20	1/2	—	—	8.75	—	—	9.80	—	16.80	—
21	1/4	—	8.40	—	—	—	—	—	—	—
21	5/16	8.05	8.40	8.75	9.10	9.80	9.80	10.50	16.80	—
21	13/32	—	—	—	—	—	—	—	16.80	—
21	1/2	—	—	—	9.10	—	9.80	—	16.80	—
22	5/16	8.05	8.40	8.75	9.10	9.80	9.80	10.50	16.80	—
23	5/16	8.05	8.40	8.75	9.10	9.80	9.80	10.50	16.80	—
24	5/16	8.05	8.40	8.75	9.10	9.80	9.80	10.50	16.80	—
24	1/2	—	—	—	9.10	—	—	—	—	—
24	3/8	—	—	—	9.10	—	—	—	—	—
25	5/16	8.05	8.40	8.75	9.10	9.80	9.80	10.50	16.80	—

Drill Jig Bushings

Head Press Fit - Type "H"



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MADE IN USA

Wire Gauge Sizes

Inside Diameter	Outside Diameter	Price Each — Overall Length							
		1/4	5/16	3/8	1/2	5/8	3/4	1	1-3/8
26	1/4	—	—	8.75	—	—	—	—	—
26	5/16	8.05	8.40	8.75	9.10	9.80	9.80	10.50	16.80
27	5/16	8.05	8.40	8.75	9.10	9.80	9.80	10.50	16.80
28	1/4	8.05	8.40	8.75	10.50	11.20	11.20	16.10	23.10
28	5/16	8.05	8.40	8.75	9.10	9.80	9.80	10.50	16.80
29	1/4	8.05	8.40	8.75	10.50	—	11.20	16.10	23.10
29	5/16	8.05	8.40	8.75	9.10	9.80	9.80	10.50	16.80
30	1/4	8.05	8.40	8.75	10.50	11.20	11.20	16.10	23.10
30	5/16	8.05	8.40	8.75	10.50	11.20	5.46	16.10	16.80
31	1/4	8.05	8.40	8.75	10.50	11.20	11.20	16.10	—
32	1/4	8.05	8.40	8.75	10.50	11.20	11.20	16.10	23.10
33	1/4	8.05	8.40	8.75	10.50	11.20	11.20	16.10	23.10
34	1/4	8.05	8.40	8.75	10.50	11.20	11.20	16.10	23.10
35	1/4	8.05	8.40	8.75	10.50	11.20	11.20	16.10	23.10
36	1/4	8.05	8.40	8.75	10.50	11.20	11.20	16.10	23.10
36	5/16	—	—	—	10.50	—	11.20	—	—
37	13/64	—	—	—	10.50	—	—	—	—
37	1/4	8.05	8.40	8.75	10.50	11.20	11.20	16.10	23.10
38	1/4	8.05	8.40	8.75	10.50	11.20	11.20	16.10	23.10
39	3/16	10.50	11.20	11.55	11.90	—	13.30	—	—
39	13/64	10.50	11.20	11.55	11.90	—	13.30	16.10	—
39	1/4	10.50	11.20	11.55	11.90	—	13.30	16.10	23.10
40	3/16	10.50	11.20	11.55	11.90	—	13.30	16.10	—
40	13/64	10.50	11.20	11.55	11.90	—	13.30	16.10	—
40	1/4	10.50	11.20	11.55	11.90	—	13.30	—	23.10
40	5/16	—	—	—	—	—	13.30	—	—
40	13/32	—	11.20	—	11.90	—	—	—	—
41	3/16	10.50	11.20	11.55	11.90	12.60	13.30	—	—
41	13/64	10.50	11.20	11.55	11.90	—	13.30	16.10	—
41	5/16	—	—	—	—	—	13.30	—	—
42	3/16	10.50	11.20	11.55	11.90	—	13.30	—	—
42	13/64	10.50	11.20	11.55	11.90	—	13.30	16.10	—
43	3/16	10.50	11.20	11.55	11.90	—	13.30	—	—
43	13/64	10.50	11.20	11.55	11.90	—	13.30	16.10	—
44	3/16	10.50	11.20	11.55	11.90	—	13.30	—	—
44	13/64	10.50	11.20	11.55	11.90	—	13.30	16.10	—
45	3/16	10.50	11.20	11.55	11.90	—	13.30	—	—
45	13/64	10.50	11.20	11.55	11.90	—	13.30	16.10	—
46	3/16	10.50	11.20	11.55	11.90	—	13.30	—	—
46	13/64	10.50	11.20	11.55	11.90	—	13.30	16.10	—
47	3/16	10.50	11.20	11.55	11.90	—	13.30	—	—
47	13/64	10.50	11.20	11.55	11.90	—	13.30	16.10	—
48	3/16	10.50	11.20	11.55	11.90	—	13.30	—	—
48	13/64	10.50	11.20	11.55	11.90	—	13.30	16.10	—
49	3/16	10.50	11.20	11.55	11.90	—	13.30	—	—
49	13/64	10.50	11.20	11.55	11.90	—	13.30	16.10	—
50	5/32	—	—	—	11.90	—	—	—	—
50	3/16	10.50	11.20	11.55	11.90	12.60	13.30	—	—
50	13/64	10.50	11.20	11.55	11.90	—	13.30	16.10	—
50	5/16	—	—	—	11.90	—	—	—	—
51	3/16	10.50	11.20	11.55	11.90	—	13.30	—	—
51	13/64	10.50	11.20	11.55	11.90	—	13.30	16.10	—
51	5/32	—	—	—	11.90	—	—	—	—

Drill Jig Bushings

Head Press Fit - Type "H"



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MADE IN USA

Wire Gauge Sizes

Inside Diameter	Outside Diameter	Price Each — Overall Length					
		1/4	5/16	3/8	1/2	3/4	1
52	3/16	10.50	11.20	12.25	13.30	13.30	—
52	13/64	10.50	11.20	12.25	13.30	13.30	23.10
53	5/32	18.20	18.90	19.60	20.30	—	—
53	3/16	18.20	18.90	19.60	20.30	21.70	—
53	13/64	18.20	18.90	19.60	20.30	21.70	23.10
54	5/32	18.20	18.90	19.60	20.30	—	—
54	3/16	18.20	18.90	19.60	20.30	21.70	—
54	13/64	18.20	18.90	19.60	20.30	21.70	—
55	5/32	18.20	18.90	19.60	20.30	—	—
55	3/16	18.20	18.90	19.60	20.30	21.70	—
55	13/64	18.20	18.90	19.60	20.30	21.70	23.10
56	5/32	18.20	24.50	24.50	25.20	21.70	—
56	3/16	18.20	24.50	24.50	25.20	21.70	—
56	13/64	—	24.50	24.50	25.20	21.70	—
57	5/32	18.20	24.50	24.50	25.20	—	—
57	3/16	18.20	24.50	24.50	25.20	21.70	—
57	13/64	—	24.50	24.50	25.20	—	—
58	5/32	18.20	24.50	24.50	25.20	21.70	—
58	3/16	18.20	24.50	24.50	25.20	21.70	—
58	13/64	—	24.50	24.50	25.20	—	23.10
59	5/32	18.20	24.50	24.50	25.20	—	—
59	3/16	18.20	24.50	24.50	25.20	21.70	—
59	13/64	—	24.50	24.50	25.20	—	—
60	5/32	18.20	24.50	24.50	25.20	21.70	—
60	3/16	18.20	24.50	24.50	25.20	21.70	—
60	13/64	—	24.50	24.50	25.20	—	—
61	5/32	18.20	24.50	24.50	25.20	—	—
61	3/16	18.20	24.50	24.50	25.20	—	—
62	5/32	18.20	24.50	24.50	25.20	—	—
62	3/16	18.20	24.50	24.50	25.20	—	—
63	5/32	23.10	23.80	24.50	25.20	—	—
63	3/16	23.10	23.80	24.50	25.20	—	—
64	5/32	23.10	23.80	24.50	25.20	—	—
64	3/16	23.10	23.80	—	25.20	—	—
65	5/32	23.10	23.80	24.50	25.20	—	—
65	3/16	23.10	23.80	24.50	25.20	—	—
66	5/32	23.10	23.80	24.50	25.20	—	—
66	3/16	23.10	23.80	24.50	25.20	—	—
67	5/32	23.10	23.80	24.50	25.20	—	—
67	3/16	23.10	23.80	24.50	25.20	—	—
68	5/32	—	23.80	24.50	25.20	—	—
68	3/16	23.10	23.80	24.50	25.20	—	—
69	5/32	—	23.80	24.50	25.20	—	—
69	3/16	23.10	23.80	24.50	25.20	—	—
70	5/32	—	23.80	24.50	25.20	—	—
70	3/16	23.10	23.80	24.50	25.20	—	—
71	5/32	—	23.80	24.50	25.20	—	—
72	5/32	—	23.80	24.50	25.20	—	—
73	5/32	—	23.80	24.50	25.20	—	—
74	5/32	—	23.80	24.50	25.20	—	—
75	5/32	—	23.80	24.50	25.20	—	—
76	5/32	—	23.80	24.50	25.20	—	—
77	5/32	—	23.80	24.50	25.20	—	—
78	5/32	—	23.80	24.50	25.20	—	—
79	5/32	—	23.80	24.50	25.20	—	—
79	5/16	23.10	—	—	—	—	—
80	5/32	—	23.80	24.50	25.20	—	—

Slip Fixed Renewable Bushing

Type "SF"



Ideal for use in long run production jobs where the bushing may need replacement. Lock screw holds the bushing in place. A simple turn allows the bushing to be removed - without needing to remove the lock screw. *Please inquire for quantity discount.*

Correct overall length is measured on barrel only. Do not include collar.

MADE IN USA

Fractional Sizes

Inside Dia.	Out Side Dia.	Price Each — Overall Length												
		1/4	5/16	3/8	1/2	5/8	3/4	1	1-3/8	1-1/2	1-3/4	2-1/8	2-1/2	3
1/16	3/16	21.52	21.74	21.74	21.74	22.90	24.48	—	—	—	—	—	—	—
1/16	5/16	—	21.74	21.74	21.74	—	—	24.48	—	—	—	—	—	—
5/64	3/16	11.90	11.90	11.90	12.85	13.10	13.50	—	—	—	—	—	—	—
5/64	1/4	—	11.90	11.90	12.85	—	13.50	16.05	—	—	—	—	—	—
3/32	5/16	—	12.00	12.00	—	—	13.50	—	—	—	—	—	—	—
7/64	1/4	12.00	12.00	12.00	12.00	12.60	13.50	—	—	—	—	—	—	—
7/64	5/16	12.00	12.00	12.00	12.00	—	—	16.05	19.50	—	—	—	—	—
1/8	1/4	12.00	12.00	12.00	12.00	12.60	—	—	—	—	—	—	—	—
1/8	5/16	—	12.00	12.00	12.00	—	13.50	—	19.50	—	21.00	—	—	—
9/64	5/16	12.00	12.00	12.00	12.00	—	13.50	16.05	19.50	—	—	—	—	—
9/64	1/2	—	—	12.00	12.00	—	13.50	16.05	19.50	—	21.00	—	—	—
5/32	5/16	12.00	12.00	12.00	12.00	—	13.50	16.05	—	—	—	—	—	—
5/32	1/2	—	12.00	12.00	12.00	12.60	13.50	16.05	19.50	—	21.00			
11/64	5/16	12.00	12.00	12.00	12.00	—	13.50	16.05	19.50	—	—	—	—	—
11/64	1/2	—	12.00	12.00	12.00	—	13.50	16.05	19.50	19.50	21.00	—	—	—
3/16	5/16	12.00	12.00	12.00	—	—	13.50	—	—	—	—	—	—	—
3/16	1/2	—	12.00	12.00	—	—	13.50	16.05	19.50	—	21.00	—	—	—
13/64	3/8	9.50	9.50	9.50	9.50	—	10.75	11.00	—	—	—	—	—	—
13/64	1/2	—	9.50	9.50	9.50	—	10.75	11.00	16.00	—	21.00	22.50	—	—
7/32	3/8	—	9.50	9.50	9.50	—	—	11.00	—	—	—	—	—	—
7/32	1/2	—	9.50	9.50	9.50	—	—	11.00	16.00	—	21.00	—	—	—
15/64	7/16	—	9.50	9.50	9.50	—	10.75	11.00	—	—	—			
15/64	1/2	—	9.50	9.50	9.50	—	10.75	11.00	—	19.50	21.00	—	—	—
1/4	7/16	7.60	8.00	8.00	8.00	—	10.75	11.00	—	—	—	—	—	—
1/4	1/2	7.60	8.00	8.00	8.00	—	10.75	11.00	16.00	—	21.00	—	—	—
17/64	7/16	—	8.00	8.00	8.00	9.96	10.75	11.00	—	—	—	—	—	—
17/64	1/2	—	8.00	8.00	8.00	—	10.75	11.00	16.00	19.50	21.00	22.00	—	—
9/32	7/16	—	—	8.00	8.00	9.96	10.75	11.00	—	—	—	—	—	—
9/32	1/2	—	8.00	8.00	8.00	—	10.75	11.00	16.00	—	21.00	22.50	—	—
9/32	3/4	—	—	—	8.05	—	10.75	11.00	16.00	19.50	21.00	22.50	25.00	—
19/64	1/2	—	8.00	8.00	8.05	—	10.75	11.00	16.00	—	21.00	22.50	—	33.00
19/64	9/16	7.60	8.00	8.00	8.05	—	10.75	11.00	—	—	—	—	—	—
19/64	3/4	—	—	—	8.05	—	10.75	11.00	16.00	19.50	21.00	22.50	—	33.00
5/16	1/2	—	8.00	8.00	8.05	—	10.75	11.00	16.00	17.00	21.00	—	—	—
5/16	9/16	7.60	8.00	8.00	8.05	9.96	10.75	11.00	—	—	—	—	—	—
5/16	3/4	—	—	—	8.05	—	10.75	11.00	16.00	19.50	21.00	22.50	—	33.00
21/64	1/2	—	8.00	8.00	8.05	—	10.75	11.00	16.00	17.00	17.00	22.50	25.00	33.00
21/64	9/16	7.60	8.00	8.00	8.05	—	10.75	11.00	—	—	—	—	—	—
21/64	3/4	—	—	8.00	8.05	—	10.75	11.00	16.00	19.50	—	22.50	—	—
11/32	1/2	—	8.00	8.00	8.05	—	10.75	11.00	16.00	17.00	17.00	22.50	—	—
11/32	9/16	7.60	8.00	8.00	8.05	—	10.75	11.00	—	—	—	—	—	—
11/32	3/4	—	—	—	8.05	9.96	10.75	11.00	16.00	19.50	21.00	22.50	25.00	33.00
23/64	5/8	—	8.00	8.00	8.05	9.96	10.75	11.00	—	—	—	—	—	—
23/64	3/4	—	—	—	8.05	—	10.75	11.00	16.00	19.50	21.00	—	25.00	33.00
3/8	5/8	—	8.00	8.00	8.05	9.96	10.75	11.00	—	—	—	—	—	—
3/8	3/4	—	—	—	8.05	9.96	10.75	11.00	16.00	19.50	21.00	22.50	25.00	33.00
25/64	5/8	—	8.00	8.00	8.05	9.96	10.75	11.00	—	—	—	—	—	—
25/64	3/4	—	—	—	8.05	—	10.75	11.00	16.00	—	—	22.50	—	33.00
13/32	5/8	7.60	8.00	8.00	8.05	9.96	10.75	11.00	16.00	—	17.00	—	—	—
13/32	3/4	7.60	8.00	8.00	8.05	—	10.75	11.00	16.00	19.50	21.00	22.50	—	33.00
27/64	5/8	7.60	8.00	8.00	8.47	9.96	10.75	11.00	16.00	—	17.00	—	—	—
27/64	3/4	7.60	8.00	8.00	8.47	9.96	10.75	11.00	16.00	19.50	17.00	22.50	25.00	33.00

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Correct overall length is measured on barrel only. Do not include collar.

In Side Dia.	Out Side Dia.	Price Each — Overall Length												
		1/4	5/16	3/8	1/2	5/8	3/4	1	1-3/8	1-1/2	1-3/4	2-1/8	2-1/2	3
7/16	5/8	7.60	8.00	8.00	8.47	9.96	10.75	11.00	16.00	—	17.00	—	—	—
7/16	3/4	7.60	8.00	8.00	8.47	—	10.75	11.00	16.00	—	17.00	—	25.00	33.00
29/64	3/4	7.60	8.00	8.00	8.47	—	10.75	11.00	16.00	17.00	17.00	22.50	—	—
15/32	3/4	7.60	8.00	8.00	8.47	—	10.75	11.00	16.00	—	17.00	22.50	25.00	33.00
15/32	1	—	—	—	8.47	—	10.75	11.00	16.00	17.00	17.00	22.50	25.00	35.00
31/64	3/4	7.60	8.00	8.00	8.47	—	10.75	11.00	16.00	—	17.00	22.50	—	—
31/64	1	—	—	—	8.47	—	10.75	11.00	16.00	17.00	17.00	22.50	25.00	—
1/2	3/4	—	8.00	8.00	8.47	9.96	10.75	11.00	16.00	—	17.00	22.50	—	33.00
1/2	7/8	—	9.24	—	9.65	10.95	11.10	11.80	16.00	—	—	—	—	—
1/2	1	—	—	8.75	9.65	10.95	11.10	11.80	16.00	17.00	17.00	22.50	25.00	33.00
33/64	3/4	7.60	8.00	—	9.65	—	11.10	11.80	16.00	17.00	17.00	22.50	25.00	33.00
33/64	7/8	—	—	—	9.65	—	11.10	—	16.00	—	—	—	—	—
33/64	1	—	—	—	9.65	—	11.10	11.80	16.00	17.00	—	22.50	25.00	—
17/32	3/4	7.60	8.00	8.75	9.65	—	11.10	11.80	16.00	17.00	17.00	22.50	25.00	33.00
17/32	7/8	—	—	8.75	9.65	—	11.10	—	16.00	17.00	17.00	—	—	—
17/32	1	—	—	—	9.65	—	11.10	—	16.00	17.00	17.00	22.50	25.00	33.00
35/64	3/4	—	—	—	9.65	—	11.10	11.80	16.00	17.00	17.00	22.50	25.00	33.00
35/64	7/8	7.60	—	8.75	9.65	10.95	11.10	11.80	16.00	17.00	17.00	—	—	—
35/64	1	—	—	—	9.65	10.95	11.10	11.80	16.00	17.00	17.00	22.50	—	—
9/16	3/4	—	—	—	9.65	—	11.10	11.80	16.00	—	17.00	22.50	—	35.00
9/16	7/8	7.60	—	8.75	9.65	10.95	11.10	11.80	—	17.00	17.00	—	—	—
9/16	1	—	—	—	9.65	—	11.10	11.80	16.00	17.00	17.00	22.50	—	33.00
37/64	7/8	—	—	8.75	9.65	10.95	11.10	11.80	16.00	17.00	17.00	—	—	—
37/64	1	—	—	—	9.65	—	11.10	11.80	16.00	17.00	17.00	22.50	25.00	33.00
19/32	7/8	7.60	—	—	9.65	10.95	11.10	11.80	16.00	17.00	—	—	—	—
19/32	1	—	—	—	9.65	—	11.10	11.80	16.00	17.00	17.00	22.50	25.00	—
39/64	7/8	7.60	—	8.75	9.65	10.95	11.10	11.80	16.00	17.00	17.00	—	—	—
39/64	1	—	—	—	9.65	—	11.10	11.80	16.00	17.00	17.00	22.50	—	—
5/8	7/8	—	—	—	10.62	10.95	11.10	11.80	16.00	17.00	17.00	22.50	25.00	—
5/8	1	—	—	—	10.62	—	11.10	11.80	16.00	17.00	17.00	22.50	25.00	33.00
5/8	1-3/8	—	—	—	15.50	—	16.12	—	20.00	—	—	—	—	—
41/64	7/8	—	—	—	10.62	10.95	11.10	11.80	—	17.00	—	—	—	—
41/64	1	—	—	—	10.62	—	11.10	11.80	16.00	17.00	17.00	—	25.00	—
41/64	1-3/8	—	—	—	15.50	—	16.12	—	—	20.00	—	—	—	—
21/32	7/8	—	—	—	10.62	10.95	11.10	11.80	16.00	17.00	—	—	—	32.00
21/32	1	—	—	—	10.62	—	11.10	11.80	16.00	17.00	17.00	26.00	30.00	33.00
21/32	1-3/8	—	—	—	15.50	—	16.12	—	20.00	—	24.00	26.00	31.00	39.00
43/64	1	—	—	—	10.62	—	11.10	11.80	16.00	17.00	17.00	22.50	30.00	35.00
43/64	1-3/8	—	—	—	15.50	—	11.10	18.32	20.00	—	24.00	26.00	—	—
11/16	1	—	—	—	10.62	10.95	11.10	11.80	16.00	17.00	17.00	—	32.00	35.00
11/16	1-3/8	—	—	—	15.50	—	16.12	18.32	—	—	24.00	26.00	—	—
45/64	1	—	—	—	10.62	10.95	11.10	11.80	16.00	—	17.00	—	32.00	35.00
45/64	1-3/8	—	—	—	—	—	16.10	18.32	20.00	—	24.00	26.00	—	—
23/32	1	—	—	—	10.62	—	11.10	11.80	16.00	17.00	17.00	22.50	—	35.00
23/32	1-3/8	—	—	—	—	—	16.10	18.32	20.00	—	24.00	26.00	—	35.00
47/64	1	—	—	—	10.62	—	11.10	11.80	16.00	17.00	17.00	22.50	32.00	35.00
47/64	1-3/8	—	—	—	15.50	—	16.12	18.32	20.00	23.00	24.00	—	—	—
3/4	1	—	—	—	10.62	—	11.10	11.80	16.00	17.00	17.00	27.50	32.00	35.00
3/4	1-3/8	—	—	—	15.50	—	16.12	18.32	20.00	—	24.00	29.00	32.00	39.00
49/64	1	—	—	—	12.00	—	12.70	13.50	17.00	18.00	18.60	—	32.00	35.00
49/64	1-1/8	—	—	—	—	—	17.40	—	—	—	26.00	29.00	32.00	—
49/64	1-3/8	—	—	—	16.50	—	17.40	19.00	21.50	—	—	29.00	32.00	—
25/32	1	—	—	—	12.00	—	12.70	13.50	17.00	18.00	26.00	29.00	32.00	39.00
25/32	1-3/8	—	—	—	16.50	—	17.40	19.00	21.50	—	26.00	29.00	32.00	—
51/64	1-3/8	—	—	—	16.50	—	17.40	19.00	21.50	—	26.00	29.00	32.00	—
13/16	1-3/8	—	—	—	16.50	—	17.40	19.00	21.50	—	26.00	29.00	—	39.00
53/64	1-3/8	—	—	—	16.50	—	17.40	19.00	21.50	—	26.00	29.00	32.00	39.00

Slip Fixed Renewable Bushing

Type "SF"



Ideal for use in long run production jobs where the bushing may need replacement. Lock screw holds the bushing in place. A simple turn allows the bushing to be removed - without needing to remove the lock screw. *Please inquire for quantity discount.*

MADE IN USA

Fractional Size

Correct overall length is measured on barrel only. Do not include collar.

In Side Dia.	Out Side Dia.	Price Each — Overall Length										
		1/2	5/8	3/4	1	1-1/4	1-3/8	1-1/2	1-3/4	2-1/8	2-1/2	3
27/32	1-3/8	—	17.00	17.40	19.00	—	21.50	—	26.00	29.00	32.00	—
55/64	1-1/4	—	17.00	17.40	19.00	—	—	25.00	26.00	—	—	—
55/64	1-3/8	—	—	17.40	19.00	—	21.50	25.00	26.00	29.00	32.00	—
7/8	1-1/4	—	17.00	17.40	19.00	—	—	25.00	26.00	—	32.00	—
7/8	1-3/8	—	—	17.40	19.00	—	21.50	—	26.00	29.00	—	39.00
57/64	1-1/4	—	17.00	17.40	19.00	—	—	25.00	26.00	—	—	—
57/64	1-3/8	16.50	—	17.00	19.00	—	21.50	—	26.00	29.00	32.00	—
29/32	1-1/4	—	17.00	17.00	19.00	—	—	25.00	—	—	—	—
29/32	1-3/8	16.50	—	17.00	19.00	—	21.50	—	26.00	29.00	32.00	—
59/64	1-1/4	—	17.00	17.00	19.00	—	—	26.00	26.00	—	—	—
59/64	1-3/8	16.50	—	17.00	19.00	—	21.50	—	26.00	29.00	32.00	—
15/16	1-1/4	—	—	17.00	19.00	—	—	25.00	26.00	—	—	—
15/16	1-3/8	—	—	17.00	19.00	—	21.50	—	26.00	29.00	32.00	—
61/64	1-3/8	16.50	—	17.00	19.00	—	21.50	—	26.00	29.00	32.00	—
31/32	1-3/8	—	17.00	17.00	19.00	—	21.50	—	26.00	29.00	32.00	—
31/32	1-3/4	—	—	17.00	24.50	—	26.00	—	32.00	34.00	32.00	46.00
63/64	1-3/8	16.50	—	17.00	19.00	—	21.50	—	26.00	29.00	32.00	—
63/64	1-3/4	—	—	24.00	24.50	—	—	—	26.00	34.00	32.00	46.00
1	1-3/8	—	—	17.00	19.00	—	21.50	—	26.00	29.00	32.00	42.00
1	1-3/4	—	—	24.00	24.50	—	—	—	32.00	34.00	38.00	46.00
1-1/64	1-3/8	—	—	—	20.00	—	23.00	—	27.50	31.00	—	—
1-1/64	1-1/2	—	—	—	24.50	26.00	—	28.00	—	—	—	—
1-1/32	1-3/8	17.00	—	18.00	20.00	24.00	23.00	—	27.50	31.00	—	—
1-1/32	1-1/2	—	—	24.00	24.50	26.00	—	28.00	—	—	—	—
1-1/32	1-3/4	—	—	24.00	24.50	—	—	—	—	34.00	—	46.00
1-3/64	1-3/8	—	—	21.00	22.00	—	—	—	—	—	—	—
1-3/64	1-1/2	—	—	24.00	24.50	26.00	—	—	—	—	—	—
1-1/16	1-3/8	—	—	21.00	22.00	—	23.00	—	—	34.00	—	42.00
1-1/16	1-1/2	—	—	24.00	24.50	26.00	—	28.00	—	—	—	—
1-1/16	1-3/4	—	—	—	24.50	—	26.00	—	—	34.00	—	—
1-5/64	1-1/2	—	—	21.00	24.50	26.00	—	28.00	—	—	—	—
1-3/32	1-1/2	—	—	24.00	24.50	26.00	—	28.00	—	—	—	—
1-3/32	1-3/4	—	—	24.00	24.50	—	—	—	—	34.00	—	46.00
1-7/64	1-1/2	—	—	24.00	—	26.00	—	28.00	—	—	—	—
1-1/8	1-1/2	—	—	—	24.50	26.00	—	28.00	—	—	—	—
1-1/8	1-3/4	—	—	24.00	24.50	—	26.00	—	32.00	—	38.00	—
1-9/64	1-3/4	—	—	—	—	—	26.00	—	—	34.00	—	—
1-5/32	1-3/4	—	—	24.00	24.50	—	26.00	—	32.00	34.00	—	—
1-11/64	1-3/4	—	—	—	24.50	—	—	28.00	—	—	—	—
1-3/16	1-3/4	—	—	24.00	24.50	—	26.00	—	32.00	34.00	38.00	46.00
1-13/64	1-3/4	—	—	—	—	—	26.00	—	—	—	—	—
1-7/32	1-3/4	—	—	24.00	24.50	—	—	—	32.00	34.00	38.00	46.00
1-15/64	1-3/4	—	—	—	—	—	26.00	—	—	—	—	—
1-1/4	1-3/4	—	—	24.00	24.50	—	26.00	—	32.00	34.00	38.00	46.00
1-9/32	1-3/4	—	—	24.00	24.50	—	26.00	—	32.00	34.00	—	—
1-5/16	1-3/4	—	—	24.00	24.50	—	26.00	—	32.00	34.00	38.00	46.00
1-11/32	1-3/4	—	—	24.00	24.50	—	26.00	—	32.00	—	—	—
1-3/8	1-3/4	—	—	24.00	24.50	—	26.00	—	32.00	34.00	38.00	46.00
1-3/8	2-1/4	—	—	29.00	31.00	—	—	—	—	—	—	—
1-13/32	2-1/4	—	—	29.00	31.00	—	—	—	36.00	—	—	—
1-7/16	2-1/4	—	—	29.00	31.00	—	33.00	—	36.00	—	38.00	—
1-1/2	2-1/4	—	—	29.00	—	—	33.00	—	36.00	—	38.00	—
1-17/32	2-1/4	—	—	—	31.00	—	33.00	—	36.00	—	—	—
1-9/16	2-1/4	—	—	29.00	—	—	33.00	—	36.00	39.00	42.00	—
1-5/8	2-1/4	—	—	29.00	31.00	—	33.00	—	36.00	39.00	42.00	46.00
1-11/16	2-1/4	—	—	29.00	31.00	—	33.00	—	—	—	—	—
1-3/4	2-1/4	—	—	29.00	31.00	—	33.00	—	—	—	—	—
1-13/16	2-1/4	—	—	—	—	—	—	—	—	45.00	48.50	52.00
1-7/8	2-1/4	—	—	—	—	—	—	—	—	45.00	48.50	52.00
1-7/8	2-3/4	—	—	29.00	31.00	—	—	—	—	—	—	—

Slip Fixed Renewable Bushing

Type "SF"

Ideal for use in long run production jobs where the bushing may need replacement. Lock screw holds the bushing in place. A simple turn allows the bushing to be removed - without needing to remove the lock screw. *Please inquire for quantity discount.*

Correct overall length is measured on barrel only. Do not include collar.



MADE IN USA

Letter Sizes

In Side Dia.	Out Side Dia.	Price Each — Overall Length												
		1/4	5/16	3/8	1/2	5/8	3/4	1	1-3/8	1-1/2	1-3/4	2-1/8	2-1/2	3
A	7/16	9.50	9.50	9.50	9.50	9.96	10.75	11.00	—	—	—	—	—	—
A	1/2	—	9.50	9.50	9.50	—	10.75	11.00	12.00	14.00	18.00	24.50	—	—
B	7/16	9.50	—	9.50	9.50	9.96	10.75	11.00	—	—	—	—	—	—
B	1/2	—	9.50	9.50	9.50	—	10.75	11.00	12.00	—	18.00	24.50	—	—
C	7/16	9.50	9.50	9.50	9.50	9.96	10.75	11.00	—	—	—	—	—	—
C	1/2	—	9.50	9.50	9.50	—	10.75	11.00	12.00	14.00	18.00	24.50	—	—
D	7/16	8.00	8.00	8.00	8.50	9.96	10.75	11.00	—	—	—	—	—	—
D	1/2	—	8.00	8.00	8.50	9.96	10.75	11.00	12.00	14.00	18.00	24.50	—	—
F	7/16	8.00	8.00	—	8.50	9.96	10.75	—	—	—	—	—	—	—
F	1/2	—	8.00	8.00	8.50	—	10.75	11.00	12.00	14.00	18.00	—	—	—
G	7/16	8.00	8.00	8.00	8.50	9.96	10.75	11.00	—	—	—	—	—	—
G	1/2	—	8.00	8.00	8.50	—	10.75	11.00	12.00	14.00	18.00	—	—	—
H	7/16	8.00	8.00	8.00	8.50	9.96	10.75	11.00	—	—	—	—	—	—
H	1/2	—	8.00	8.00	8.50	—	10.75	11.00	12.00	14.00	18.00	24.50	—	—
I	7/16	8.00	8.00	8.00	8.50	9.96	10.75	11.00	—	—	—	—	—	—
I	1/2	—	8.00	8.00	8.50	—	10.75	11.00	12.00	14.00	18.00	24.50	—	—
J	7/16	8.00	—	8.00	8.50	9.96	10.75	11.00	—	—	—	—	—	—
J	1/2	—	8.00	8.00	8.50	—	10.75	11.00	12.00	14.00	18.00	24.50	—	—
K	7/16	8.00	8.00	8.00	8.50	9.96	10.75	11.00	—	—	—	—	—	—
K	1/2	—	8.00	8.00	8.50	—	10.75	11.00	12.00	14.00	18.00	24.50	—	—
L	7/16	8.00	8.00	8.00	8.50	9.96	10.75	11.00	—	—	—	—	—	—
L	1/2	—	8.00	8.00	8.50	—	10.75	11.00	12.00	14.00	18.00	24.50	—	—
L	3/4	—	—	—	8.50	—	10.75	11.00	12.00	—	—	—	—	35.00
M	1/2	—	8.00	8.00	8.50	—	10.75	11.00	12.00	14.00	18.00	24.50	—	—
M	9/16	8.00	8.00	8.00	8.50	—	10.75	11.00	—	—	—	—	—	—
M	3/4	—	—	—	8.50	—	10.75	11.00	12.00	14.00	18.00	24.50	32.00	35.00
N	1/2	—	8.00	8.00	8.50	—	10.75	11.00	12.00	—	18.00	—	—	—
N	9/16	8.00	8.00	8.00	8.50	—	10.75	—	—	—	—	—	—	—
N	3/4	—	—	—	8.50	—	10.75	11.00	12.00	14.00	18.00	24.50	32.00	35.00
O	1/2	—	8.00	8.00	8.50	—	10.75	—	12.00	14.00	18.00	24.50	—	35.00
O	9/16	—	8.00	8.00	8.50	—	10.75	11.00	—	—	—	—	—	—
O	3/4	—	—	—	8.50	—	10.75	11.00	12.00	14.00	18.00	—	32.00	35.00
P	1/2	—	8.00	8.00	8.50	—	10.75	11.00	12.00	—	18.00	24.50	—	35.00
P	9/16	8.00	8.00	8.00	8.50	—	—	—	—	—	—	—	—	—
P	3/4	—	—	—	8.50	—	10.75	11.00	12.00	14.00	18.00	24.50	—	35.00
Q	1/2	—	8.00	8.00	8.50	—	10.75	11.00	12.00	—	18.00	24.50	—	35.00
Q	9/16	8.00	8.00	8.00	—	—	10.75	11.00	—	—	—	—	—	—
Q	3/4	—	—	—	—	—	10.75	11.00	12.00	14.00	18.00	—	—	35.00
R	1/2	—	8.00	8.00	8.50	—	10.75	11.00	12.00	14.00	18.00	24.50	—	—
R	9/16	8.00	8.00	8.00	8.50	—	10.75	11.00	—	—	—	—	—	—
R	3/4	—	—	—	8.50	—	10.75	11.00	12.00	14.00	18.00	24.50	—	—
S	5/8	—	—	—	8.50	10.50	10.75	11.00	—	—	—	—	—	—
S	3/4	—	—	—	8.50	—	—	11.00	12.00	14.00	18.00	24.50	—	—
T	5/8	—	—	—	8.50	10.50	—	—	—	14.00	—	—	—	—
T	3/4	—	—	—	8.50	—	—	11.00	12.00	14.00	18.00	24.50	32.00	35.00
U	5/8	—	8.00	8.00	8.00	10.50	10.75	11.00	—	14.00	—	—	—	—
U	3/4	—	—	—	8.00	—	10.75	11.00	13.00	—	19.00	24.50	32.00	35.00
V	5/8	—	8.50	8.50	8.50	10.75	11.00	11.60	—	—	—	—	—	—
V	3/4	—	—	—	8.50	—	11.00	11.60	13.75	14.00	19.00	—	32.00	36.00
W	5/8	—	8.50	8.50	8.50	10.75	11.00	11.60	—	—	—	—	—	—
W	3/4	—	—	—	8.50	—	11.00	11.60	13.75	—	19.00	—	32.00	36.00
X	5/8	—	—	8.50	8.50	—	—	11.60	—	14.00	—	—	—	—
X	3/4	—	—	—	8.50	—	11.00	11.60	13.75	—	19.00	—	—	36.00
Y	5/8	—	8.50	8.50	8.50	10.75	—	—	—	—	—	—	—	—
Y	3/4	—	—	—	8.50	—	11.00	11.60	13.75	14.00	19.00	—	—	36.00
Z	5/8	—	8.50	8.50	8.50	10.75	—	11.60	—	14.00	—	—	—	—
Z	3/4	—	—	—	8.50	—	11.00	11.60	13.75	—	19.00	—	—	36.00

Slip Fixed Renewable Bushing

Type "SF"



MADE IN USA

Ideal for use in long run production jobs where the bushing may need replacement. Lock screw holds the bushing in place. *Please inquire for quantity discount.*

Wire Gauge Sizes

Correct overall length is measured on barrel only. Do not include collar.

In Side Dia.	Out Side Dia.	Price Each — Overall Length									
		1/4	5/16	3/8	1/2	5/8	3/4	1	1-3/8	1-3/4	2-1/8
1	3/8	9.50	9.50	9.50	9.50	12.50	12.50	13.00	—	—	—
1	1/2	—	10.00	10.00	10.70	12.00	12.00	13.00	16.50	19.50	23.00
2	3/8	10.00	10.00	10.00	10.70	12.00	12.00	13.00	—	—	—
2	1/2	—	10.00	10.00	10.70	12.00	12.50	13.00	16.50	19.50	—
3	3/8	10.00	10.00	10.00	10.70	12.00	12.50	13.00	—	—	—
3	1/2	—	10.00	10.00	10.70	12.00	12.50	13.00	16.50	19.50	23.00
4	3/8	10.00	10.00	10.00	10.70	12.00	12.50	13.00	—	—	—
4	1/2	—	10.00	10.00	10.70	12.00	12.50	13.00	16.50	19.50	23.00
5	3/8	10.00	10.00	10.00	10.70	12.00	12.50	13.00	—	—	—
5	1/2	—	10.00	10.00	10.70	12.00	12.50	13.00	16.50	19.50	—
6	3/8	10.00	10.00	10.00	10.70	12.00	12.50	13.00	—	—	—
6	1/2	—	10.00	10.00	10.70	—	12.50	—	16.50	19.50	23.00
7	3/8	10.00	—	10.00	10.70	12.00	12.50	—	—	—	—
7	1/2	—	10.00	10.00	10.70	12.00	12.50	13.00	16.50	19.50	23.00
8	3/8	10.00	10.00	10.00	10.70	12.00	12.50	13.00	—	—	—
8	1/2	—	10.00	10.00	10.70	12.00	12.50	13.00	16.50	19.50	23.00
9	3/8	10.00	10.00	10.00	10.70	12.00	12.50	13.00	—	—	—
9	1/2	—	11.90	11.90	12.85	—	13.50	16.05	19.50	20.30	23.00
10	5/16	—	11.90	11.90	12.85	—	13.50	16.05	19.50	—	—
10	3/8	11.70	11.90	11.90	12.85	13.10	13.50	16.05	—	—	—
10	1/2	—	11.90	11.90	12.85	—	13.50	16.05	19.50	20.30	23.00
11	5/16	—	11.90	11.90	12.85	—	13.50	16.05	19.50	—	—
11	1/2	—	11.90	11.90	12.85	—	13.50	16.05	19.50	20.30	23.00
12	5/16	—	11.90	11.90	12.85	—	13.50	16.05	19.50	—	—
12	1/2	—	11.90	11.90	12.85	—	13.50	16.05	19.50	20.30	23.00
13	5/16	—	11.90	11.90	12.85	—	13.50	16.05	19.50	—	—
13	1/2	—	11.90	11.90	12.85	—	13.50	16.05	19.50	20.30	—
14	5/16	—	11.90	11.90	12.85	—	13.50	16.05	19.50	—	—
14	1/2	—	11.90	11.90	12.85	—	13.50	16.05	19.50	20.30	—
15	5/16	—	11.90	11.90	12.85	—	13.50	16.05	19.50	—	—
15	1/2	—	11.90	11.90	12.85	—	13.50	16.05	19.50	20.30	—
16	5/16	—	—	—	—	—	13.50	16.05	19.50	—	—
16	1/2	—	11.90	11.90	12.85	—	13.50	16.05	19.50	20.30	—
17	5/16	—	11.90	11.90	12.85	—	13.50	16.05	19.50	—	—
17	1/2	—	11.90	11.90	12.85	—	13.50	16.05	19.50	20.30	—
18	5/16	—	11.90	11.90	12.85	—	13.50	16.05	—	—	—
18	1/2	—	11.90	11.90	12.85	—	13.50	16.05	19.50	20.30	—
19	5/16	—	—	11.90	12.85	—	13.50	16.05	—	—	—
19	1/2	—	11.90	11.90	12.85	—	13.50	16.05	19.50	20.30	—
20	5/16	—	11.90	11.90	12.85	—	13.50	16.05	19.50	—	—
20	1/2	—	11.90	11.90	12.85	—	13.50	16.05	19.50	20.30	—
21	5/16	—	11.90	11.90	12.85	—	13.50	16.05	19.50	—	—
21	1/2	—	11.90	11.90	12.85	—	13.50	16.05	19.50	20.30	—
22	5/16	—	11.90	11.90	12.85	—	13.50	16.05	19.50	—	—
22	1/2	—	11.90	11.90	12.85	—	13.50	16.05	19.50	20.30	—
23	5/16	—	11.90	11.90	12.85	—	13.50	16.05	19.50	—	—
23	1/2	—	11.90	11.90	12.85	—	13.50	16.05	19.50	20.30	—
24	5/16	—	11.90	11.90	12.85	—	13.50	16.05	19.50	—	—
24	1/2	—	11.90	11.90	12.85	—	13.50	16.05	19.50	20.30	—
25	5/16	—	11.90	11.90	12.85	—	13.50	16.05	19.50	—	—
25	1/2	—	11.90	11.90	12.85	—	13.50	16.05	19.50	—	—
26	5/16	—	11.90	—	12.85	—	13.50	16.05	19.50	—	—
26	1/2	—	11.90	11.90	12.85	—	13.50	16.05	19.50	20.30	—
27	5/16	—	11.90	11.90	12.85	—	13.50	16.05	19.50	—	—
27	1/2	—	11.90	11.90	12.85	—	13.50	16.05	19.50	20.30	—
28	1/4	11.70	11.90	—	12.85	13.10	—	—	—	—	—
28	5/16	11.70	11.90	11.90	12.85	—	13.50	16.05	19.50	—	—
28	1/2	—	11.90	11.90	12.85	—	13.50	16.05	19.50	20.30	—
29	1/4	11.70	11.90	11.90	12.85	13.10	13.50	16.05	19.50	—	—
29	5/16	11.70	—	11.90	12.85	—	13.50	—	19.50	—	—
30	1/4	11.70	11.90	11.90	12.85	13.10	13.50	—	—	—	—
30	5/16	11.70	11.90	11.90	12.85	—	13.50	16.05	19.50	—	—
31	1/4	11.70	11.90	11.90	12.85	13.10	13.50	—	—	—	—
31	5/16	11.70	11.90	11.90	12.85	—	13.50	16.05	19.50	—	—
32	1/4	11.70	11.90	11.90	12.85	13.10	13.50	—	—	—	—
32	5/16	11.70	11.90	11.90	12.85	—	13.50	16.05	19.50	—	—
33	1/4	11.70	—	—	12.85	—	13.50	—	—	—	—
33	5/16	11.70	—	11.90	12.85	—	13.50	16.05	19.50	—	—
34	1/4	11.70	11.90	11.90	12.85	—	13.50	—	—	—	—
34	5/16	11.70	11.90	11.90	12.85	—	13.50	16.05	19.50	—	—
35	1/4	11.70	11.90	11.90	12.85	13.10	13.50	—	—	—	—
35	5/16	11.70	11.90	11.90	12.85	—	13.50	16.05	19.50	—	—
36	1/4	—	11.90	—	12.85	—	13.50	—	—	—	—
36	5/16	11.70	11.90	11.90	12.85	—	13.50	16.05	19.50	—	—

Slip Fixed Renewable Bushing

Type "SF"



MADE IN USA

Wire Gauge Sizes - *Continued*

Correct overall length is measured on barrel only. Do not include collar.

In Side Dia.	Out Side Dia.	Price Each Overall Length 1/4	5/16	3/8	1/2	5/8	3/4	1	1-3/8
37	1/4	11.90	11.90	11.90	12.85	—	13.50	—	—
37	5/16	—	11.90	11.90	12.85	—	13.50	16.05	19.50
38	1/4	11.90	—	11.90	12.85	13.10	13.50	—	—
38	5/16	11.90	11.90	11.90	12.85	—	13.50	16.05	19.50
39	1/4	—	11.90	11.90	—	13.10	—	—	—
40	3/16	11.90	—	—	12.85	—	13.50	—	—
41	3/16	—	—	11.90	12.85	—	13.50	—	—
41	5/16	—	11.90	11.90	—	—	—	16.05	19.50
42	3/16	11.90	11.90	11.90	12.85	13.10	—	—	—
42	5/16	—	—	11.90	12.85	—	—	16.05	19.50
43	3/16	11.90	—	11.90	12.85	—	—	—	—
43	5/16	11.90	11.90	11.90	12.85	—	13.50	16.05	—
44	3/16	11.90	—	11.90	12.85	13.10	—	—	—
44	1/4	11.90	—	11.90	12.85	—	—	—	—
44	5/16	—	11.90	11.90	—	—	13.50	16.05	—
45	3/16	11.90	—	11.90	12.85	—	13.50	—	—
45	5/16	—	11.90	11.90	13.85	—	13.50	16.05	—
46	3/16	11.90	—	11.90	13.85	—	—	—	—
47	3/16	11.90	—	11.90	13.85	—	—	—	—
47	5/16	—	11.90	11.90	13.85	—	—	16.05	—
48	3/16	11.90	—	—	13.85	—	—	—	—
49	3/16	11.90	—	11.90	—	—	13.50	—	—
49	5/16	—	11.90	11.90	13.85	—	13.50	16.65	—
50	3/16	21.74	—	21.74	24.48	—	—	—	—
50	5/16	—	21.74	21.74	21.74	—	—	—	—
51	3/16	21.74	21.74	—	—	—	—	—	—
51	5/16	—	21.74	21.74	21.74	—	22.50	—	—
52	3/16	21.74	21.74	21.74	21.74	—	22.50	—	—
52	5/16	—	21.74	21.74	21.74	—	22.50	24.00	—
53	3/16	—	21.74	—	21.74	—	—	—	—
53	5/16	—	—	21.74	21.74	—	—	—	—
54	5/16	—	—	21.74	21.74	—	—	—	—
55	3/16	21.74	—	—	21.74	—	—	—	—

Drill Jig Bushings

Used with Slipfixed Bushings

L



HL



MADE IN USA

Headless Liners "L"

List No. **085-**

Drill Size	Nominal	Body Length 5/16 Tool#	Price	3/8 Tool#	Price	1/2 Tool#	Price	3/4 Tool#	Price	1 Tool#	Price	1-3/8 Tool#	Price	1-3/4 Tool#	Price	2-1/8 Tool#	Price	2-1/2 Tool#	Price	3 Tool#	Price
5/16 - .3126 - .3129	1/2	**002**	7.78	**003**	8.50	**004**	8.62	—	—	**006**	11.04	**007**	12.72	**008**	14.60	—	—	—	—	—	—
1/2 - .5002 - .5005	3/4	**009**	7.84	**010**	8.62	**011**	8.62	**012**	9.16	**013**	11.04	**014**	12.72	**015**	14.60	—	—	—	—	—	—
3/4 - .7503 - .7506	1	—	—	**018**	9.28	—	—	**020**	10.82	**021**	11.48	**022**	13.50	**023**	15.32	**024**	16.94	—	—	—	—
1 - 1.0004 - 1.0007	1-3/8	—	—	—	—	**024**	13.50	**028**	14.22	**029**	16.94	**030**	18.88	**031**	22.40	**032**	26.10	**033**	29.16	—	—
1-3/8 - 1.3756 - 1.3760	1-3/4	—	—	—	—	**060**	21.08	**035**	21.34	**036**	21.34	**037**	21.34	**038**	24.34	**039**	28.30	**040**	31.72	**041**	37.00
1-3/4 - 1.7508 - 1.7512	2-1/4	—	—	—	—	—	—	**042**	27.24	—	—	**044**	27.24	**045**	29.84	**046**	34.46	**047**	37.88	**048**	44.00
2-1/4 - 2.2510 - 2.2515	2-3/4	—	—	—	—	—	—	**049**	30.10	**050**	30.10	**051**	30.10	**52**	33.88	**053**	36.78	—	—	**055**	48.00

Head Liners "HL"

List No. **087-**

Drill Size	Nominal	Body Length 5/16 Tool#	Price	1/2 Tool#	Price	3/4 Tool#	Price	1 Tool#	Price	1-3/8 Tool#	Price	1-3/4 Tool#	Price	2-1/8 Tool#	Price	2-1/2 Tool#	Price	3 Tool#	Price
5/16 - .3126 - .3129	1/2	—	—	**004**	10.82	—	—	—	—	**007**	15.76	—	—	—	—	—	—	—	—
1/2 - .5002 - .5005	3/4	**009**	10.38	**011**	10.82	**012**	11.74	**013**	13.56	**014**	15.76	**015**	18.48	**016**	21.34	—	—	**025**	26.92
3/4 - .7503 - .7506	1	—	—	**019**	13.12	**020**	14.25	**021**	14.92	**022**	15.76	**023**	19.84	**024**	22.40	**025**	26.92	**026**	31.00
1 - 1.0004 - 1.0007	1-3/8	—	—	**027**	17.78	**028**	17.78	**029**	17.78	**030**	19.44	**031**	23.54	**032**	27.00	**033**	29.12	**033**	29.12
1-3/8 - 1.3756 - 1.3760	1-3/4	—	—	—	—	**035**	21.74	**036**	22.96	—	—	**038**	28.30	**039**	32.30	040	37.00	**041**	39.00
1-3/4 - 1.7508 - 1.7512	2-1/4	—	—	—	—	042	26.00	043	29.40	044	32.21	**045**	34.72	**046**	38.32	047	44.46	**048**	49.00
2-1/4 - 2.2510 - 2.2515	2-3/4	—	—	—	—	—	—	**050**	31.90	**051**	38.32	**052**	42.66	—	—	054	48.00	**055**	53.00

“Original” De-burr-it ™

Deburring Sets and Tools

CUSTANITE Precision

Series B
Rotational Deburring Workhorse



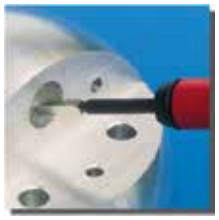


Set B

Tool No.	Price
JS76-620	5.70

- For deburring of holes, slots and edges in metals and plastics
- Contains: Blades B10, B20, Blade Holder B and Handle A.
- Blades can be inserted on the axis of the blade holder or perpendicular to it. Minimum hole diameter 3.0mm (0.12”).

Series C - The Scraper Set




Tool No.	Price
JS76-621	8.00

- Tools for quality finishing and scraping.

Contains:

- Blade C42, Blade Holder C, Handle A and a key.
- Triangular blade geometry provides 3 cutting edges to reach the most inaccessible locations

Series E - The Heavy Duty Rotational Deburring Tool




Tool No.	Price
JS76-622	6.86

The tool for heavy duty deburring of holes, slots, and edges.
Contains Blades E100, E200, E300, Blade Holder E and Handle A

- Minimum hole diameter 4.0mm (0.16”)
- All blades are High Speed Steel unless otherwise stated

Each set features the UNI handle,engineered for unparalleled comfort, safety and high performance. This tools is extremely powerful yet lightweight, Comes with the special asapter for an extra- close grip.

Universal Deburring Set



Includes:

- UNI handle,
- M5 holder, Adapter B, Adapter E,
- Baldes: B10, B20, B30, E100, E200, E300,
- Wrench

Tool No.	Price
JS76-623	30.05

Replacement Parts

Pkg. Quantity: 10 Pcs.

	Blade No.	Description	Tool No.	Price Each
	B10	H.S. blade excellent for materials with spiral chips such as aluminium plastic, steels, etc.	**JS76-624**	0.95
	B20	H.S. blade Can deburr in both clockwise and counterclockwise directions	**JS76-625**	0.95
	C60	H.S. 3.2x50mm D1 Bladeholder with UN handle.	**JS76-626**	5.11
	C66	H.S. 3.2x48mm D1 Bladeholder with UN handle.	**JS76-627**	5.11
	E100	H.S. Excellent for materials with spiral chips such as aluminium, plastic, steel, etc.	**JS76-628**	1.26
	E200	H.S. Ideal for brass, cast iron & other metals with a powdery chip. Can deburr in both clockwise and counterclockwise directions.	**JS76-629**	1.26
	E300	H.S. Hooked blade simultaneously removes both external and internal burrs from holes drilled into steel and plastic up to 4mm (0.16”) thick	**JS76-630**	1.80

All blades are packed in quantity of 10

9 Pc. Deburring Tool Set

- Blades can be stored in plastic handle.
- Blades can be easily changed by pressing collar of holder.
- Packed in fitted case.

9 Pcs/Set includes:
One plastic handle
One each of E100, E200, E300, B10, B20, B30 blades
One each of E holder and B holder



Tool No.	Price
JS76-631	11.37

Edge Off Disposable

Includes: E100 Blade mounted in an 8 mm Hexagonal painted Aluminium Handle.
The blade is not replaceable. Handy pocket clip.



Tool No.	Price
JS76-632	9.00

Precision Tools

Outside Micrometers & Micrometer Sets 446
Digital Outside Micrometers 446
Digital Electronic Outside Micrometers 446
Micrometer Standards 446
Interchangeable Anvil Outside Micrometers 447
Interchangeable Digital Electronic Anvil Micrometers 447
Multi-Anvil Micrometers 447
Digital Electronic Multi-Anvil Micrometers 447
Precision Micrometer Attachment Kit 447
Micrometer Stand 448
Blade Micrometers 448
Digital Electronic Blade Micrometer 448
Tube Micrometers 448
Disc Micrometers (Gear Tooth) 448
Digital Electronic Disc Micrometer 448
Indicator Micrometers 448
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Depth Micrometers 449
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Taper (Bore) Gage 450
Precision Vernier Calipers with Locking Screw 450
Precision Vernier Caliper with Thumb Lock 450
Precision Vernier Calipers with Fine Adjustment 450
Heavy Duty Chrome Finished Vernier Calipers 451
Universal Caliper Accessory Kit 451
Brass Caliper 451
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Mini Magnetic Stands 455
Universal Magnetic Indicator Holders 456
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Universal Clamp 456
Universal Dial Indicator Holder 456
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Dial Comparator Stand 456
Machinist Kits 456
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Economy Sine Bar 457
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Protractor & Depth Gage 461
Universal Bevel Protractor 461
Universal Bevel Protractor with Dial Reading 461
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Precision Wavy Parallels 462
Thin Style Steel Parallel Set 462
Ultra-Thin Steel Parallel Set 462
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CUSTANITE

Precision



MICROMETERS

All micrometers, unless otherwise indicated, are supplied with:

- **Satin-Chrome Finish Sleeve and Thimble**
- **Fitted Case**
- **Appropriate Standards**

OUTSIDE MICROMETERS AND MICROMETER SETS

Micrometers from 0-1" / 0-25mm through 3-4" / 75-100mm have forged steel frames. Larger micrometers have lightweight enamel frames.



- Carbide tipped measuring faces.
- Locknut
- Ratchet Stop

INCH Grad. .0001"		
Range	Order No.	Price
0 - 1"	PR4753010	25.50
1 - 2"	PR4753020	27.50
2 - 3"	PR4753030	30.50
3 - 4"	PR4753040	32.50
4 - 5"	PR4753050	37.50
5 - 6"	PR4753060	43.50
6 - 7"	PR4753070	58.50
7 - 8"	PR4753080	61.00
8 - 9"	PR4753090	78.00
9 - 10"	PR4753100	87.50
10 - 11"	PR4753110	95.00
11 - 12"	PR4753120	110.00

METRIC Grad. .01mm		
Range (mm)	Order No.	Price
0 - 25	PR1960025	25.50
25 - 50	PR1962550	27.50
50 - 75	PR1965075	30.50
75 - 100	PR1967510	32.50
100 - 125	PR1961012	37.50
125 - 150	PR1961215	43.50
150 - 175	PR1961517	58.50
175 - 200	PR1961720	61.00
200 - 225	PR1962022	78.00
225 - 250	PR1962225	87.50
250 - 275	PR1962527	95.00
275 - 300	PR1962730	110.00

SETS - OF ABOVE MICROMETERS IN FITTED CASES





INCH SETS			
Range	Grad.	Order No.	Price
0 - 3"	.0001"	PR4750401	72.00
0 - 6"	.0001"	PR4750402	195.00
6 - 12"	.0001"	PR4750403	425.00
0 - 12"	.0001"	PR4750404	580.00

METRIC SETS			
Range	Grad	Order No.	Price
0 - 75	.01mm	PR1960075	77.00
0 - 150	.01mm	PR1960150	197.00
150 - 300	.01mm	PR1961530	390.00
0 - 300	.01mm	PR1960300	610.00

DIGITAL OUTSIDE MICROMETERS

The digital counter indicates direct reading in 1/1000; "tenths" are read by means of a clearly marked vernier scale.



- Carbide tipped measuring faces.
- Locknut
- Ratchet Stop

INCH			
Range	Grad.	Order No.	Price
0 - 1	.0001	PR1450601	45.00
1 - 2	.0001	PR1450602	49.00
2 - 3	.0001	PR1450603	55.00
3 - 4	.0001	PR1450604	69.00

SET - IN FITTED CASE			
Range	Grad.	Order No.	Price
0 - 3	.0001	PR1450649	160.50

DIGITAL ELECTRONIC OUTSIDE MICROMETERS

- 5 keys
- Large and clear LCD.
- Absolute and incremental conversion.
- Friction thimble.
- Data hold and Tolerance set.
- SPC output



Range	Graduation	Order No.	Price
0-1" / 0-25mm	.00005" / .001mm	PR7250001	115.70
1-2" / 25-50mm	.00005" / .001mm	PR7250012	140.00
2-3" / 50-75mm	.00005" / .001mm	PR7250023	158.00

MICROMETER STANDARDS



Size Inch	Order No.	Price	Size mm	Order No.	Price
1"	PR1960011	7.50	25mm	PR1960026	7.50
2"	PR1960012	9.90	50mm	PR1960050	9.90
3"	PR1960013	12.00	75mm	PR1960076	12.00
4"	PR1960014	14.50	100mm	PR1960100	14.50
5"	PR1960015	17.10	125mm	PR1960125	17.10
6"	PR1960006	18.70	150mm	PR1960151	18.70
7"	PR1960007	22.50	175mm	PR1960175	22.50
8"	PR1960008	24.30	200mm	PR1960200	24.30
9"	PR1960009	27.20	225mm	PR1960225	27.20
10"	PR1960010	29.50	250mm	PR1960250	29.50
11"	PR1960111	32.00	275mm	PR1960275	32.00

INTERCHANGEABLE ANVIL OUTSIDE MICROMETERS

- Ratchet stop and lock nut
- High accuracy interchangeable anvils
- Carbide measuring faces
- Laser engraved graduations
- Enamel frame
- With standards in a fitted case



Range	Grad	Order No.	Price
0 - 6”	.001”	PR9030006	182.00
6 - 12”	.001”	PR2030612	259.00

MULTI-ANVIL MICROMETERS

- Interchangeable anvils (Round and Flat) permit quick accurate measure ment of tubing, cylindrical walls, from a hole or slot to an edge, and many hard-to-reach locations.
- Friction thimble for exact
- Chrome-Plated frame.
- Carbide-tipped spindle.
- .0001” Graduation.



Range	Order No.	Price
0 - 1”	PR2030010	120.00
1 - 2”	PR2030013	136.00

INTERCHANGEABLE ANVIL OUTSIDE MICROMETERS

FEATURES:

Pipe Construction
- Pipe combined steel frame provides lightness plus extreme rigidity for perfect balance
- Carbide measuring faces
- With standards in a fitted case
- Rapid stop and lock nut



Range	Graduation	Order No.	Price
12 - 16”	.001”	PR201216	327.00
16 - 20”	.001”	PR9201620	375.00
20 - 24”	.001”	PR202024	460.00

DIGITAL ELECTRONIC MULTI-ANVIL MICROMETERS

- 5 key Deluxe Model micrometer head
- Friction thimble for exact repetitive readings.
- Chrome-Plated frame.
- Carbide-tipped spindle.
- Interchangeable anvils permit quick accurate measurement of tubing, cylindrical walls, from a hole or slot to an edge, and many hard-to-reach locations.



Range	Graduation	Order No.	Price
0-1” / 0-25mm	0.00005” / 0.001mm	PR7254001	192.00
1-2” / 25-50mm	0.00005” / 0.001mm	PR7254012	222.50

INTERCHANGEABLE DIGITAL ELECTRONIC ANVIL MICROMETERS

FEATURES

- Friction Thimble
- With 5 key deluxe micrometer head
- Carbide Measuring Faces
- With Standards
- Fitted Case



Range	Graduation	Order No.	Price
0-6” / 0-150mm	0.00005” / 0.001mm	PR7256006	242.00
6-12” / 150-300mm	0.00005” / 0.001mm	PR7256612	332.00

7 - PC. PRECISION MICROMETER ATTACHMENT KIT

All anvils are held on with its own individual boot. Hardened and ground. Finest quality steel. Highest quality surface finish. Each anvil hand inspected. Plastic case. Micrometer not included.

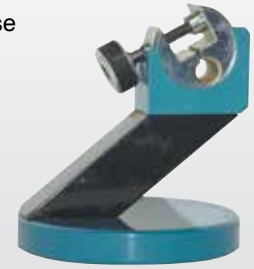


Anvil Type	Specifications
Disc	.500
Ball	.200
Spline	.100
Super Spline	.050
Comparator	.040 Face x 30°
Blade	.030
Knife	.020 Face x 30°

Order No.	Price
PR5250007	19.00

MICROMETER STAND

- Designed to allow bench-top use with hand micrometers or other gages which have frame area sufficient to grab onto.
- For 0-4”/100mm micrometers.
- Adjustable to any position and angle
- Attractive finish.



Order No.	Price
PR5252000	28.00

BLADE MICROMETERS

- Non-rotating spindle.
- .0001” Graduation.
- Laser engraved graduations.
- Rathcet frinction trimble.
- Enamel frame.



Range	Order No.	Price
0 - 1”	PR2030014	136.80
1 - 2”	PR2030015	159.60

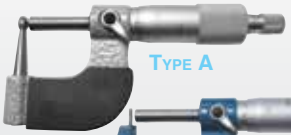
DIGITAL ELECTRONIC BLADE MICROMETER



- Friction thimble
- Chrome-plated frame.
- 5 key deluxe micrometer head.

Range	Graduation	Order No.	Price
0-1” / 0-25mm	0.00005” / 0.001mm	PR7257001	230.00

TUBE MICROMETERS





Features

- Ratchet stop
- Carbide-tipped spindle
- Laser engraved graduations
- Enamel frame

Range	Graduation	Order No.	Price
0 - 1” (A)	.0001”	PR1462020	44.00
0 - 1” (B)	.0001”	PR1462025	48.00

DISC MICROMETERS (GEAR TOOTH)

Special features :



- Anvil and spindle hardened and precision ground micro-lap finish on measuring faces.
- Quick and easy zero adjustment.
- Every thousandth is numbered micro-fine for easy reading.
- Deluxe heat-insulator on satin chrome finished forged steel frame, tapered for hard to get at places.
- Disc type anvil and spindle - simplifies measuring thicknesses of difficult, closely spaced sections, ribs, keys, fins, cutting edges on forming tools, chordal thickness of gear teeth, etc.
- Positive locking clamp.
- Large diameter, disc will enter inaccessible places such as narrow grooves, slots and recesses over .030” width.

Range	Graduation	Order No.	Price
0 - 1”	.001”	PR1475901	82.00
1 - 2”	.001”	PR1475902	95.00
0 - 25 mm	.01mm	PR1475903	95.00
25 - 50 mm	.01mm	PR1475904	110.00

DIGITAL ELECTRONIC DISC MICROMETER



- Friction thimble.
- Chrome-plated frame.
- With 5 key deluxe model micrometer head.

Range	Graduation	Order No.	Price
0-1” / 0-25mm	.00005” / .001mm	PR7253001	197.00

INDICATOR MICROMETERS



- Carbide faces
- Chrome-plated frame
- Premium quality
- Can be used as Go/No Go gage

Range	Graduation	Order No.	Price
INCH			
0 - 1”	.00005”	PR2030005	320.00
1 - 2”	.00005”	PR2030009	350.00
METRIC			
0 - 25mm	.001mm	PR2030007	320.00

SCREW THREAD MICROMETERS

- Ratchet Stop
- Laser engraved graduations.
- Enamel frame.
- V-Anvils included
- Graduation .001" or .01mm

Range	Order No.	Price
INCH		
0 - 1"	PR2030001	130.00
1 - 2"	PR2030002	142.00
2 - 3"	PR2030003	158.00
3 - 4"	PR2030004	234.00
METRIC		
0 - 25mm	PR9030025	138.50



INSIDE MICROMETERS



- Graduations .001" or .01mm
- Caliper type jaws.
- Chrome-plated
- Carbide measuring faces.
- Ratchet stop for exact repetitive readings.
- Complete with fitted case.

Range	Order No.	Price
0.2 - 1.2"	PR2050212	63.50
1 - 2"	PR2051020	77.00
5 - 30mm	PR2050530	63.50
25 - 50mm	PR2052550	77.00

DEPTH MICROMETERS

Rods are easily interchangeable and adjustable. Base fully hardened and lapped for highest accuracy. All surfaces are satin-chrome plated. Ratchet stop. Graduated in .001" or .01mm.



Range	Length of Base	No. of Rods	Order No.	Price
0 - 4"	2½"	4	PR5001502	66.00
0 - 4"	4"	4	PR5001503	67.00
0 - 6"	4"	6	PR5001504	86.00

Range	Length of Base	No. of Rods	Order No.	Price
0 - 100mm	63mm	4	PR5001100	113.40
0 - 100mm	101.5mm	4	PR5001125	124.10
0 - 150mm	101.5mm	6	PR5001150	134.90

DIGITAL ELECTRONIC INSIDE MICROMETERS

- Graduation .00005"/.001mm
- With 5 key deluxe model micrometer head



Range	Order No.	Price
0.2 - 1.2" / 5 - 30mm	PR7250212	190.00
1 - 2" / 25 - 50mm	PR7251021	212.50

DIGITAL ELECTRONIC DEPTH MICROMETER

- 5 key Deluxe Model micrometer head
- Spherical rod end
- High accuracy interchangeable rods
- Friction thimble
- .00005"/.001mm
- 4" Base



Range	No. of Rods	Order No.	Price
0 - 6" / 0 - 150mm	6	PR7258001	190.00

INSIDE DIAMETER MICROMETERS LARGE RANGE TUBULAR TYPE

- Carbide measuring faces
- Laser engraved graduations
- Thermal insulator on each rod
- Each rod marked with length
- Laser engraved grads.
- Carbide measuring faces
- Chrome-plated



Range	Graduation	Order No.	Price
2 - 10"	.001"	PR203210	127.50
4 - 36"	.001"	PR203436	670.00
6 - 55"	.001"	PR203655	1104.00

DIAL BORE GAGE SETS

For close tolerance I.D. measurements. Sets include dial indicator with protective cover, anvils, and spacers, in a fitted case.

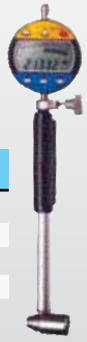


INCH - Graduation .0005”			
Range	Bore Depth	Order No.	Price
.25 - .40”	1.57	PR5670010	120.00
.40 - .70”	4	PR5670018	120.00
.7 - 1.5”	5	PR5670035	120.00
1.4 - 2.4”	6	PR5670060	120.00
2.0 - 6.0”	6	PR5670150	120.00

METRIC - Graduation .01mm			
Range	Bore Depth	Order No.	Price
6 - 10mm	40mm	PR5670610	120.00
10 - 18mm	100mm	PR5671018	120.00
18 - 35mm	125mm	PR5671835	120.00
35 - 50mm	150mm	PR5673550	120.00
50 - 100mm	150mm	PR5675010	120.00
50 - 160mm	150mm	PR5675016	120.00

DIGITAL BORE GAGES

- For inside measurements
- Zero setting at any position
- With data output interface
- Metric/Inch system conversion at any position
- Resolution: 0.005”/0.01mm



Range	Order No.	Price
2” - 4” / 50 - 100mm	PR5670204	171.70
2” - 6.125” / 50 - 160mm	PR5670206	171.70
4” - 6.125” / 100 - 160mm	PR5670406	220.00
6.125” - 10” / 160 - 250mm	PR5671610	230.00

TAPER (BORE) GAGE



- Handy gage for measuring cylindrical bores, bearing work and for gaging slots.
- Made from polished stainless steel
- Clearly etched graduations for precise measurement. (Inch one side, mm’s on the other)

Order No.	Range		Price
	Inch	mm	
PR2470115	1/32 - 5/8”	1 to 15	10.20

PRECISION VERNIER CALIPERS WITH LOCKING SCREW



Special Features:

All measurements can be read directly from vernier scale. Micro-fine black graduation on a satin chrome finish for easy reading. Jaws designed for outside, inside, and step measurement. Satin chrome finish with clear black engravings. Made of fully hardened stainless steel throughout. Includes fitted case.

Range	Vernier Scale		Order No.	Price
	Top	Bottom		
6” /150mm	1 / 1000”	.02 mm	PR1480106	23.00
8”/200mm	1 / 1000”	.02 mm	PR1480108	32.00
12” /300mm	1 / 1000”	.02 mm	PR1480112	51.50

PRECISION VERNIER CALIPERS WITH THUMB LOCK

All the features of the Locking Screw calipers.
The jaw can be moved only when spring loaded thumb clamp is depressed.



Range	Vernier Scale		Order No.	Price
	Top	Bottom		
150mm / 6”	1 / 1000”	1 / 20mm	PR1485106	20.50

PRECISION VERNIER CALIPERS WITH FINE ADJUSTMENT

All the features of the Locking Screw Calipers with additional fine adjustment feature for more pricise measurement.



Range	Vernier Scale		Order No.	Price
	Top	Bottom		
150mm / 6”	1 / 1000”	.02mm	PR2140006	25.00
200mm / 8”	1 / 1000”	.02mm	PR2140008	34.00
300mm / 12”	1 / 1000”	.02mm	PR2140012	54.00

HEAVY DUTY CHROME FINISHED VERNIER CALIPERS



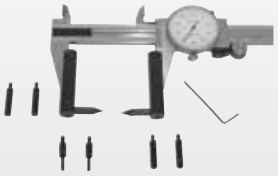
SPECIAL FEATURES :

- Machine divided and engraved from master for extreme accuracy.
- Made of hardened stainless steel throughout, ground and lapped for accuracy.
- Stepped jaws for inside measurements.
- "Double Spaced" vernier scales with easy to read, clear graduations on satin chrome finish.
- Longer jaws permit greater accessibility and simpler measurement of larger work-pieces.
- Fine adjustment screw.
- Fitted case.

Measuring Range	Jaw Depth	Vernier Scale		Order No.	Price
		Top	Bottom		
12" / 300mm	4"	1/50mm	1/1000"	**PR5301012**	**60.50**
18" / 450mm	4	1/50mm	1/1000"	**PR5301018**	**95.00**
24" / 600mm	4	1/50mm	1/1000"	**PR5301024**	**129.00**
40" / 1000mm	6½	1/50mm	1/1000"	**PR5301040**	**365.00**
60" / 1500mm	8	1/50mm	1/1000"	**PR5301060**	**595.00**

UNIVERSAL CALIPER ACCESSORY KIT

- Fits Dial Calipers & Verniers 4-6-8 In. Range
- Measures, slots, grooves, webs, shoulders, holes, pockets, etc.
- Saves Time and Money
- Will not scar or mar Jaws
- Adapts to all brands
- Measures hard to reach places



Order No.	Price
PR1495000	**19.70**

Caliper not included

KIT CONTAINS :

- 2 Universal Jaw Clamp Ons
- 8 Accessory Points (4pair) 2 ea.
- Flat - Conical - Stem - Ball End
- User friendly Instructions
- All parts packaged in a high impact clear box

4" BRASS CALIPER



Top scale graduated in 16ths of an inch, and bottom in millimeters. Fixed pin in the center of the scale allows smooth, easy adjustment.

Order No.	Price
PR12660240	**13.30**

CENTERLINE GAGE SETS





- Designed for dial, vernier, and digital calipers to measure centerline distance.
- Sold in pairs, these gages quickly adapt to most calipers.
- Centerline measurements read in exact figures; no adding or subtracting is required.
- The 60 degree conical probe fits snugly into holes. Takes guesswork away from center distance measurements or to edge from a hole.
- Constructed of high quality alloy steel hardened to 50 RC, black oxide finished.
- Outside diameter and cone ground for accuracy.
- Each probe has two small holding nuts and is supplied with a hex wrench.

Description	Dia-meter	Jaw Length	Thick-ness	Order No.	Price
For 4",6",8" calipers	.375"	2.195"	.155"	**PR1495001**	**12.10**
For 10",12" calipers	.500"	2.750"	.188"	**PR1495004**	**15.20**

Caliper not included

DIAL CALIPERS

Of stainless steel, hardened throughout with sat-in-chrome finish. Suitable for outside, inside and depth measurement. Thumb roll. Direct reading in .001" or .02mm with adjustable dial setting and locknut. Covered rack for longer life. Fitted case. .100" or 2mm per revolution.



INCH				
Range	White Face		Black Face	
	Order No.	Price	Order No.	Price
0 - 4"	**PR1495104**	**31.00**	-	-
0 - 6"	**PR1495106**	**36.00**	**PR1495206**	**36.00**
0 - 8"	**PR1495108**	**64.50**	**PR1495208**	**64.50**
0 - 12"	**PR1495112**	**97.50**	**PR1495212**	**97.50**

METRIC		
Range	White Face	
	Order No.	Price
0 - 150mm	**PR1495306**	**39.00**

6" PLASTIC INCH & METRIC CALIPER



Order No.	Range	Graduations	Price
PR12660071	6"	1/128" top ; 0.1 mm bottom	2.90

INCH AND METRIC COMBINATION DIAL CALIPER



Range	Graduation	Order No.	Price
0 - 6” / 0-150mm	.001” / .02mm	PR2156150	52.00

SHOCK / DUST PROOF & TIN COATED DIAL CALIPERS

- Manufactured to close toler ances for excellent repeat ability and accuracy
- Smooth movement
- Swiss design casing





1495600

- Titanium nitride coating provides superior wear and corrosion resistance
- Swiss design metal casing

.001” Per Revolution / Stainless Steel			
Range	Graduation	Order No.	Price
0 - 6”	.001”	PR2155006	44.00
0 - 8”	.001”	PR2155008	72.00
0 - 12”	.001”	PR2155012	112.00
0 - 6” TiN	.001”	PR1495600	58.50

ELECTRONIC CALIPERS

Rugged construction of stainless steel with no rack, no pinion, and no glass scale.

FEATURES:

- 5 Digit high contrast display
- Inch / Metric switch
- Floating “Zero” reference point
- Resolution ± .0005” / 0.01mm
- Accuracy .001”
- SPC Output
- Includes: fitted case / battery

Description	Order No.	Price
4” Caliper	PR7251004	36.00
6” Caliper	PR7251006	68.00
8” Caliper	PR7251008	89.00
12” Caliper	PR7251012	115.00



ELECTRONIC CALIPERS - HEAVY DUTY TYPE WITH FINE ADJUSTMENT

- Inch/mm conversion.
- Resolution .0005”/.01mm
- Manual power on / off
- Zero settings at any position.
- SPC output



Range	Order No.	4” Jaw Length Order No.	6” Jaw Length Price
24” / 600mm	PR7255600	-	290.00
40” / 1000mm	-	PR7251000	750.00

VERNIER HEIGHT GAGES

Amply proportioned measuring beams and bases for extra rigidity.

- Satin - chrome Finish
- Double Spaced Vernier
- Vernier Scale : 1/1000” x 1/50mm
- Magnifying Glass
- Fitted Case

Sliding scale permitting all measurement to start from an even reference point.



Range	Order No.	Price
0 - 12” / 0 - 300mm	PR1500112	94.00
0 - 18” / 0 - 450mm	PR1500118	133.50
0 - 24” / 0 - 600mm	PR1500124	224.00

DOUBLE BEAM HEIGHT GAGES WITH COUNTER

Furnished with two error proof digital counters which can be reset individually anywhere within the range for quick and easy upward and downward reading. The last digit on the counter is .1” or 1.0mm. The dial face is graduated in .001” or .01mm.

- Bottom surface of the base is stainless steel, hardened and ground
- With fine-adjusting wheel and lock
- Carbide tipped scriber



INCH		
Range	Order No.	Price
0 - 12”	PR2160000	310.00
0 - 18”	PR2160001	370.00
0 - 24”	PR2160002	405.00

ELECTRONIC DIGITAL DOUBLE BEAM HEIGHT GAGES



Made Of Stainless Steel

Features :

- Rigid twin column structure
- 6 digit LCD display and minus sign (-)
- Large size feed wheel
- Lock on measuring slider
- Battery furnished
- Carbide tipped scriber

Functions :

- Zero setting,
- Inch/mm conversion
- Data hold
- Plus/minus presetting

Range	Graduation	Order No.	Price
0 - 12" / 0 - 300mm	.001" / .01mm	PR7255012	390.00
0 - 18" / 0 - 450mm	.001" / .01mm	PR7255018	490.00
0 - 24" / 0 - 600mm	.001" / .01mm	PR7255024	595.00

ELECTRONIC HEIGHT GAGES

Rugged construction of stainless steel with no rack, no pinion, and no glass scale.



Features:

- 5 Digit high contrast display
- Inch / Metric switch
- Floating "Zero" reference point
- Resolution ± .0005" / 0.01mm
- Accuracy .001"
- Includes: fitted case / battery

Range	Order No.	Price
0 - 12" / 0 - 300mm	PR7251112	238.00
0 - 18" / 0 - 450mm	PR7251118	285.00
0 - 24" / 0 - 600mm	PR7251124	340.00

UNIVERSAL INDICATOR HOLDER

- Ideal for Bridgeport®-type machines.
- A quicker way of indicating.
- Suitable for all popular indicators with 5/32" shank or dovetail.
- Mounts with a single screw directly on machine quill, bypassing the working tool.
- Adapts immediately for fast and positive indicating.



Order No.	Price
PR2199500	29.50

DIAL TRAVEL INDICATORS

These Indicators are graduated in .001" or .01mm with the second hand reading every .010" or .1mm. Range per revolution .10" or 1.0mm. Reading 0-100. Back has clamping lug.



Travel	White Face		Black Face	
	Order No.	Price	Order No.	Price
¼"	PR1530025	17.80	-	
½"	PR1530005	18.20	-	
1"	PR1530010	21.80	PR1530011	21.80
2"	PR1530020	62.40	PR1530021	62.40

MAGNETIC BASE & INDICATOR SETS



Magnetic Base	Indicator	Order No.	Price
Standard	1" Travel	PR1540001	35.50
Fine/Adj.	1" Travel	PR1540006	37.00

22 PIECE INDICATOR POINT KIT

- All points have standard 4-48 threads.
- For use with Series 1-2-3-4 Dial Indicators.
- Carefully knurled stem for ease of operation.
- Plastic case.



Order No.	Price
PR2190022	8.50

MAGNETIC BACK FOR DIAL INDICATORS

Product Description :

- Permanent powerful magnet
- Attaches to the back of 2" diameter AGD dial indicators



Diameter		Thickness		Order No.	Price
in.	mm	in.	mm		
2¼	57	½	12.5	PR2210000	6.50

ELECTRONIC INDICATOR

Range : 0 - .5" / 0 - 12.7mm
Resolution : 0.0005" / 0.01mm

FUNCTIONS INCLUDE:
in/mm conversion, zero-set.



Order No.	Price
PR7250102	122.50

ELECTRONIC INDICATORS

FEATURES:

- Zero setting at any position
- Auto power on/off
- Data output
- Metric/Inch system conversion at any position



7250104



7250107



7250105
7250106

Range	Resolution	Order No	Price
0 - 0.4" / 0 - 10mm	.0005" / 0.01mm	PR7250104	95.50
0 - 1.2" / 0 - 30mm	.0005" / 0.01mm	PR7250105	144.50
0 - 2" / 0 - 50mm	.0005" / 0.01mm	PR 7250106	174.20
0 - .6" / 0 - 15mm	.00005" / 0.001mm	PR7250107	123.20

DIAL TEST INDICATORS

- Automatic Reversing
- Satin Chrome Finish
- Adjustable Bezel
- Three-way Dovetail mounting
- Carbide point
- 5/32" and 3/8" mounting stems
- Fitted case



HORIZONTAL



VERTICAL

Range	Dial Grad.	Reading	Type	Order No.	Price
.030"	.0005"	0 - 15 - 0		PR2198000	42.50
.030"	.0005"	0 - 15 - 0	Horizontal	PR2198005*	42.50
.008"	.0001"	0 - 4 - 0		PR2198010	65.50
0.8mm	0.01mm	0 - 40 - 0		PR2198030	51.40
.030"	.0005"	0 - 15 -0	Vertical	PR2198020	50.50
0.8mm	.0.01mm	0 - 40 - 0		PR2198040	77.90

* Black Dial Face

DIGITAL TEST INDICATOR

- Power on / off key, Zero setting key, Inch / Metric key, Tolerance key.
- Contact Point Diameter: ⅛" / 2.5mm
- Accuracy: ± 0.001" / 0.02mm

RANGE: ± 0.02" / 0.5mm
GRAD.: 0.0005" / 0.01mm



Order No.	Price
PR2190010	210.00

CENTERING INDICATOR

Supplied complete with: restraining rod, center point feeler, 4" straight feeler, 8" straight feeler, 12" straight feeler, 4" curved feeler, 8" curved feeler, 12" curved feeler, fitted case



- Designed for quick and accurate centering of a work piace or fixture.
- Operates at any angle.
- Use on vertical and horizontal machines
- Use for internal and external diameters.
- While spindle rotates, the centering indicator remains stationary and always faces the operator

INCH			
Specifications		Order No.	Price
Length:	6⅞"		
Shank:	⅜"dia. x ⅞" long		
Probe ball:	⅛" diameter		
Measuring range:	.250 axis offset		
Capacity:	Internal: 5/32" to 4¼" dia.	PR2190005	120.00
	External: 0 - 4¼" dia.		
Speed:	Not exceed 800RPM Approx.		
Locating accuracy	To within 0.00025" of true center		
Graduation:	0.0005"		

MAGNETIC BASE INDICATOR HOLDERS

On/off switch controls strong permanent magnet. Complete with "V" area for clamping to round surfaces, 3 diameter dial holding rod with swivel adapter for lug back indicator to accept all AGD dial indicators, upright, swivel clamp, universal swivel attachment, and scriber.



Order No.	Description	Price
PR1540000	Standard	23.50
PR1540005	With Fine Adjustment	29.00

MAGNETIC BASE INDICATOR HOLDER FLEXIBLE TYPE

Strong magnetic holding power includes "V" area for clamping to round surfaces. On/off switch, made of hardened and ground components, flexes almost 360°, and is rigidly locked into position with a lever. Includes 5" rod having 3 different diameters and a swivel adapter for lug back indicators to accept all AGD dial indicators.



Order No.	Price
PR1540011	49.00

FLEXIBLE ARM MAGNETIC BASE

- Articulated arm style alnico magnetic base, positions and locks easily.
- Includes ON/OFF switch and central locking knob to tighten both arms.
- Includes two balls joints and one central cylindrical joint.
- Dial gage holder includes fine adjustment and full 360° swivel.
- Hydraulic clamping system suitable for dial gauges with stem of ¼" (6.35 mm), 5/16 (8mm) and 3/8" (9.5mm) and dovetail indicators.
- Magnetic pull approx. 130 lbs. (60 Kgs.)



Order No.	Max Height	Base Dimension	Price
PR1540012	14"/ 355mm	2½ x 1⅞ x 2⅛" 63 x 48 x 55mm	38.50

UNIVERSAL MAGNETIC BASE

- A universal magnetic base that will save time and improve accuracy
- Strong magnet with 45 lbs. of holding power
- Zinc die cast housing
- Size 4½" x 1" x 1¼"
- 5 different locations for mounting accessories



Order No.	Price
PR2220000	12.95

MAGNETIC BASE INDICATOR HOLDER

Accommodates almost all test and dial indicators. Precision adjustment controlled by thumb screw.



Dimensions	Order No.	Price
3½" x 1⅛" x 1½" high	PR9210001	33.00

MINI MAGNETIC BASE INDICATOR HOLDERS

Small size and strong magnetic holding power for mounting indicators in not easily accessible locations.

Height of base: 1"
Diameter of base: 1"
Height of rod: 3½"
Diameter of rod: ¼"

Includes universal holder and disc on bottom for neutralizing magnet when not in use.



Order No.	Description	Price
PR1540015	Standard	35.00
PR1540020	With Fine Adjustment	39.00

MINI MAGNETIC STANDS

- Compact and small universal permanent magnetic stand.
- High magnetic power affords maximum rigidity.
- Includes disc on bottom for neutralizing magnet when not in use.



Order No.	Description	Base Dia	Total Height	Price
PR1540016	Without fine Adjustment	1-1/8"/28mm	5"/125mm	20.50
PR1540021	With fine Adjustment	1-1/8"/28mm	5-3/8"/135mm	22.00

UNIVERSAL MAGNETIC INDICATOR HOLDERS

- Two universal ball sockets permits adjustment to any angle or position.
- Dovetail clamp for test indicators.
- ¼"(6.35mm) hole for ¼" (6.35mm) stem indicators.
- Provided with extension rod ¼" x 3½" (6.35 x 90mm)
- Powerful magnetic force.



Order No.	Description	Base Dia.	Base Height	Body Height	Price
PR1540002	Without Fine Adjustment	1-3/16" /30mm	1" /25mm	5" /125mm	39.00
PR1540003	With Fine Adjustment	1-3/16" /30mm	1" /25mm	4¾" / 120mm	44.00

GRANITE DIAL GAGE STAND

Black granite base can be used as a small toolmaker's and inspector's granite surface plate. Fine adjustment knob. For use with any indicator.



SPECIFICATIONS
.00005" Flatness
BASE: 6" x 6" x 2" Thick
COLUMN HEIGHT: 10"

Order No.	Price
PR1545000	58.50

UNIVERSAL CLAMP

- Black finished clamps for use with magnetic bases and dial gages.
- One clamp for dovetail and universal indicators.



Order No.	Clamping Hole	Price
PR2199501	⅛ - ¼" (3 - 6.35mm)	11.00

UNIVERSAL DIAL INDICATOR HOLDER



Fits all dial indicators.
Clamps all standard dovetails.
Swivels in all directions.
Shank Size: ¼" Dia. x 3" Overall Length

Order No.	Price
PR2199000	13.40

DIAL GAGE STAND

Precision Ground Base.
Fine adjustment knob.
For use with any indicator.



SPECIFICATIONS:
BASE: 5½" x 4¼"
COLUMN DIAMETER: 1"
WORKING CAPACITY: 8½"

Order No.	Price
PR1545005	26.00

DIAL COMPARATOR STAND

WITH FINE ADJUSTMENT

Anvil Size:2-3/8(60mm)
Throat Depth: 3" (75mm)
Measuring Range: 5" (125mm)



- Compact and versatile
- Rugged enamelled cast iron base
- Rustproof chrome plated column at right angle to base
- Hardened and precision ground round serrated anvil
- Provided with fine adjustment knob for zero setting
- Suitable for all dial gages including ⅜" and 5/16" dia. stem
- Base dimension: 6" x 4" (150 x 100mm)
- Column diameter: 1" (25.4mm)

Order No.	Price
PR2230000	96.90

MACHINIST KITS

With the high quality tools contained in these kits, O.D.'s, I.D.'s, Depths, and Lengths can be accurately and reliably measured.
Fitted plastic case.



0-1" Micrometer	6" Dial Caliper	6" Rule
• .0001" grad. • Carbide tipped faces • Friction thimble • Satin chrome sleeve	• Reading .001" • Fully hardened stainless steel • Outside, inside and depth measurement • Satin chrome finish	• ⅛, 1⁄16, 1⁄32, 1⁄64 graduations • Satin chrome finish • Stainless steel • Fully flexible • Locknut

Order No.	Price
PR6400001	65.00

3" THIN SINE BAR



Precision ground and hardened. Two ¼" holes are provided for mounting. 7⁄32" wide. Fits in bottom of vise to accurately set work piece to desired angle. Can be used for accurately setting swivel vise or angle vise, to set work piece at an angle to T-Slots of milling table, back rail of magnetic chuck, setting milling machine head etc.

Order No.	Price
PR2530000	19.80

5” ECONOMY SINE BAR



Sine bar and rolls are made of quality tool steel, hardened and ground for extreme accurate to .00003” per inch of length. Parallelism .00004”. Rolls are accurate to within .0002” center to center. The bottom part of the bar extends past the bottom of the rolls, when the tool is moved over the surface plate, all wear is eliminated from the rolls.

Dist. of Roll	Center body size	Dimensions	Order No.	Price
5”	1” x 1/2	5-7/8 x 1” x 1”	PR12910066	29.00

DELUXE SINE BARS



Parallelism .00004”. Top surface accuracy: .00003”. Bar and rolls are hardened and ground. Center to center distance between rolls is accurate to within .0002”. Sine bars have tapped holes for holding down. Bottom of tool protrudes past rolls which eliminates wear.

Dist. of Roll	Center body size	Dimensions	Order No.	Price
5”	15/16 x 1-1/8	6-1/4 x 15/16 x 1-3/4	PR12911165	70.40
10”	1-1/4 x 1-1/2	12-1/16 x 1-1/4 x 3	PR12911170	126.40

3 PIECE 6” MINI COMBINATION SQUARE SET



Includes: Square head, Center Head, 6” 4 R (8,16,32,64, graduations), Satin Chrome Finish. Flitted Case.

Order No.	Price
PR12790100	55.00

PLANER AND SHAPER GAGE

Max Range ¼ - 9¼” with extension rod. Makes setting of planer and shaper tools easy. Set gage with micrometer, surface gage or caliper and bring cutting tool in contact with it. Gives the operator a reliable starting point, thus eliminating trial cuts. Also use in conjunction with Dial Indicator to level large plates for planing, etc.



Order No.	Price
PR2470100	116.00

SINE BARS AND SINE PLATE



- Body and rolls made of hardened and precise ground tool steel.
- Perfect tool for angular inspection and measurement.
- Top parallel to bottom of rolls ±.0004”
- Distance between center of rolls ±.0004”

Order No.	Width	Distance Between Rollers	Price
PR1715005	15/16”	5”	76.90
PR1715010	1”	10”	152.60
PR1715050	2”	5”	83.50

COMBINATION SQUARE SET - 4 PIECE

Hardened and Ground. Set includes 12” stainless steel chrome plated blade with 4R inch (8ths, 16ths, 32nds, 64ths) graduations, double indexed and reversible Protractor Head with full 180° graduation and spirit level, Square Head with level and scriber, and Center Head.



Order No.	Price
PR1600112	76.50

CENTER SQUARE

- Made from ground tool steel.
- Hardened and tempered blade.
- Useful square for rapid location of round bar or disc center.
- To execute, place the round bar between the centre square. Scribe different lines on the work piece each time changing its position. Center of the scribed lines will give the accurate center of the work piece.

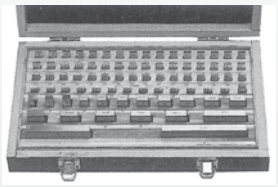


Max. Work Dia.		Order No.	Price
Inch	mm		
1½	38	PR2290112	11.60
3	75	PR2290375	25.00

CUSTANITE Precision

GAGE BLOCK SETS

Can be supplied with a certificate traceable to the U.S. National Bureau of Standards. Please inquire for price and delivery.



Pieces	Grade	Order No.	Price
RECTANGULAR			
81	2	PR1575281	385.00
81	3	PR1575381	385.00
81	B	PR1550810	245.00
36	2	PR1575236	230.00
36	3	PR1575336	144.70
36	B	PR1550036	139.00
SQUARE			
81	2	PR1560281	1624.00
81	3	PR1560381	1376.00
81	B	PR1560481	636.00

81 pc. sets consist of the following blocks:	36 pc. sets consist of the following blocks:
9 blocks from .1001" to 1.009"	1 block .050"
49 blocks from .101" to .149"	10 blocks from .1000" to .1009"
19 blocks from .050" to .950"	9 blocks from .101" to .109"
4 blocks from 1.000" to 4.000"	9 blocks from .110" to .190"
	4 blocks from .200" to .500"
	3 blocks 1.000" - 2.000" - 4.000"

PLUG GAGE HANDLE

Handles all Plug Gage sizes from 1/32" thru ½", 0.79 to 12.7mm diameter. GO and NO-GO clearly marked.



Order No.	Price
PR4630567	14.75

HANDLES FOR PIN GAGES



One set uses one handle, 8 handles cover all sizes
8 size collets are spring adjusting and self-centering design, which are used for whole range of sizes of pins (Collets for MO are self-expanding design). Handles & collets are made from aluminum to protect gages. (Collets for Mo are made of copper). Color coded handle for GO/NOGO checking. Powder coated handle body. Includes One handle with two free collets

Description	Order No.	Price
.011-.060 for MO 50 pc set	PR13270150	12.60
.061-to .250 for M11 190 pc set	PR13270155	15.00
.251 to .500 for M2 250 pc set	PR13270160	17.00
.501 to .625 for M3 125 pc set	PR13270165	19.90
.626 to .750 for M4 125 pc set	PR13270170	24.00
.751 to .832 for M5 82 pc set	PR13270175	28.00
.833 to .916 for M6 84 pc set	PR13270180	28.00
.917 to 1.000 for M7 84 pc set	PR13270185	30.00

SPACE BLOCK SET - 36 PIECES

Can often take the place of gage blocks. Outside diameter is .750"; inside diameter has ¼" - 28 thread for accurately connecting the individual blocks. 4 threaded connecting studs included. Hardened, ground, and lapped to ±.0001". Supplied in fitted wooden case.



SET CONSISTS OF THE FOLLOWING 36 BLOCKS :

- 9 pcs. .101" - .109" by .001"
- 15 pcs. .050" - .190" by .010"
- 9 pcs. .200" - 1.000" by .100"
- 1 pc. .0625"
- 1 pc. .125"
- 1 extra block 1.000"

Order No.	Price
PR1570036	78.00

PIN GAGE SETS

EACH GAGE IS :

- Centerless lapped to a 10 micro finish or better
- 2" Long
- Hardened to 60 - 62 RC.
- Electro etched with size (over .060")



Useful for checking locations, measuring hole sizes and depths, GO and NO-GO gaging, setting micrometers, checking distances between holes etc.

US TOLERANCE SETS + .0002" - .0000"			
Range	No. of Mem	Order No.	Price
.011" - .060"	50	PR4630001	39.00
.061 - .250	190	PR4630010	84.00
.251 - .500	250	PR4630020	128.00
.501 - .625	125	PR4630030	140.00
.626 - .750	125	PR4630040	170.00
MINUS TOLERANCE SETS - .0002" + .0000"			
.011" - .060"	50	PR4630100	39.00
.061 - .250	190	PR4630110	84.00
.251 - .500	250	PR4630120	128.00
.501 - .625	125	PR4630130	140.00
.626 - .750	125	PR4630140	170.00



Precision lapped to a microlapped finish. Each gage is clearly marked with size and are 2" long. Center-less lapped to 10 micro-finish. Fully hardened, Rockwell 60-62. Price includes delux fitted case.

Range	Pcs.	Accuracy	Order No.	Price
.011-.250	240	+.0000-.0002	PR13270035	170.00
.751-.832	81	+.0000-.0002	PR13270067	185.00
.833-.916	84	+.0002-.0000	PR13270070	195.00
.833-.916	84	+.0000-.0002	PR13270072	195.00
.917-1.000	84	+.0002-.0000	PR13270075	235.00
.917-1.000	84	+.0000-.0002	PR13270077	235.00

PRECISION RULES

Highly accurate, made of the finest quality steel, hardened and tempered, with satin-chrome finish.



Flexible Rule

Rigid Rule

Graduations:
4R - 8ths, 16ths, 32nds, 64ths
5R - 32nds, 64ths, 10ths, 100ths

FLEXIBLE & RIGID RULES

Length	Width	Grad.	FLEXIBLE Order No.	RIGID Order No.	Price
6	½	4R	PR2510006	PR2520006	3.85
6	½	5R	PR2510106	PR2520106	3.85
12	½	4R	PR2510012	PR2520012	8.50
12	½	5R	PR2510112	PR2520112	8.50
18	¾	4R	PR2510018	PR2520018	19.90
18	¾	5R	PR2510118	PR2520118	19.90
24	¾	4R	PR2510024	PR2520024	27.10
24	¾	5R	PR2510124	PR2520124	27.10

WIDE RIGID RULES

Length	Width	Grad.	Order No.	Price
6	¾	4R	PR2515006	4.60
6	¾	5R	PR2515106	4.60
12	1	4R	PR2515012	7.50
12	1	5R	PR2515112	7.50
18	1⅛	4R	PR2515018	19.90
18	1⅛	5R	PR2515118	19.90
24	1⅛	4R	PR2515024	27.10
24	1⅛	5R	PR2515124	27.10

CLIP RULE



Round end rules with depth gage pocket clip.

Description	Order No.	Price
FRONT - mm, 32nds, BACK - Conversion Table	PR2180500	2.80

CYLINDER SQUARES

These squares are hardened, and the ends are lapped to 90° angular accuracy with the cylinders as follows: 6" square to ± .00010", 12" square to ± .00015". Includes fitted case.



Height	Diameter	Order No.	Price
6	3	PR1620003	149.00
12	4	PR1620004	240.00

STRAIGHT EDGES



with Double Bevel Blades
Hardened & Precision Ground

Description	Order No.	Price
5" Long	PR13020165	6.35
7" Long	PR13020170	7.95

BEVEL EDGE SQUARES

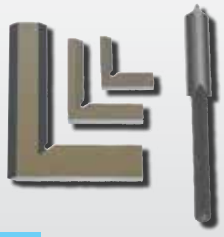
Made from a single piece of high grade tool steel. Entire square is hardened, accurately ground, and lapped for straightness and parallelism. Blades are beveled on both edges of each side.



Size & Lgth. of Blade	Lgth. of Beam	Order No.	Price
1⅜	1	PR1585001	15.50
2⅜	1⅜	PR1585002	16.50
3⅛	2	PR1585003	19.75
4	2½	PR1585004	24.00
5	3	PR1585005	29.00
6¾	4	PR1585006	32.50
8½	5⅛	PR1585008	40.00
10½	6⅜	PR1585010	68.00

DIE MAKERS' SQUARE SET

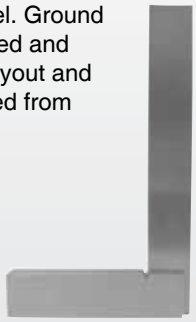
Especially made for precise miniature layout. Set consists of three hardened bevel edged squares ¾", 1¼", and 2⅜" long, plus a 1½" triangular straight edge with a removable handle. Includes fitted case.



Order No.	Price
PR1590000	74.30

PRECISION SQUARES

Accurately made of fine grade tool steel. Ground and polished blade and beam. Hardened and tempered blade. Suitable for precise layout and measuring. Length of blade is measured from inner edge of beam to end of blade.



Set includes:
2", 3", 4" & 6"
in a wooden case.

Order No.	Price
PR2290000	48.50

In/mm Size & Lgth. of Blade	In/mm Lgth. of Beam	Squareness of Blade	Order No.	Price
2" / 50mm	2 / 50	.001"/25 microns	PR1580002	11.40
3" / 75mm	2½ / 63	.001"/25 microns	PR1580003	12.10
4" / 100mm	3 / 75	.001"/25 microns	PR1580004	13.60
6" / 150mm	4 / 100	.001"/25 microns	PR1580006	19.70
8" / 225mm	6 / 150	.001"/25 microns	PR1580009	28.80
12" / 300mm	8 / 200	.002"/50 microns	PR1580012	45.50
18" / 450mm	10 / 250	.0038"/90 microns	PR1580018	119.60
24" / 600mm	13 / 33	.0038"/90 microns	PR1580024	165.00

CUSTANITE Precision

DIAL THICKNESS GAGES

Designed to measure outer thickness. Ideally suited for quick inspection of paper, leather, wire, plastic, sheet metal etc. Measuring faces are finely ground for precise measurement to .001" or .02mm. Dial Reading 0 - 100.



Type	Range	Throat Depth	Grad.	Order No.	Price
Standard	.4"	1.125"	.001"	PR6330112	57.00
	.5"	.5"	.001"	PR6330510	57.00
Pocket	10mm		.01mm	PR6330520	60.00

SURFACE GAGES

Hardened Base. "V" Groove in bottom of base for cylindrical work. Spindle can be set below base level. Tension screw permits fine adjustment.

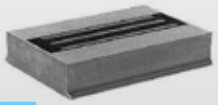


Base Size (L x W x H)	Spindle Length	Order No.	Price
2 3/16 x 1 5/8 x 3/4	4 & 7	PR1630398	28.50
3 1/4 x 2 1/2 x 1	9 & 12	PR1630399	31.90
4 x 3 1/2 x 1 1/8	12 & 18	PR1630400	51.90

HIGH POWER MAGNETIC ADAPTOR PLATE

Top & bottom surface magnetic. Makes your surface gage a magnetic base. Can be used as magnetic grinding chuck for precision operations.

2-1/2" W x 7/8" H x 3-1/2" L
.001" top & bottom parallel



Order No.	Price
PR19710005	29.00

INTERNAL & EXTERNAL DIAL CALIPERS

- For measuring inside diameters, recesses, etc.
- Can be set with a micrometer or ring gage.
- Graduated in .001".
- Arms automatically open and close at the touch of a button.
- Supplied in a fitted case.



Range	Internal Dial		External Dial	
	Order No.	Price	Order No.	Price
0 - 1	-		PR653601	125.00
3/8 - 1 3/8	PR653611	110.00	PR653602	60.00
3/4 - 1 3/4	PR653612	125.00	PR653603	64.00
1 1/8 - 2 1/8	PR653613	135.00	PR653604	77.00
1 1/2 - 2 1/2	PR653614	140.00	PR653605	82.00
1 7/8 - 2 7/8	PR653615	158.00	PR653606	84.05
2 1/4 - 3 1/4	PR653616	175.00	PR653607	88.00
2 7/8 - 3 7/8	PR653617	178.00	PR653608	90.00
3 1/4 - 4 1/4	PR653618	182.00	PR653609	97.00
3 5/8 - 4 5/8	PR653619	195.00	-	
4 - 5	PR653620	240.00	-	

ELECTRONIC DIGITAL THICKNESS GAGES

- Graduation .01mm / .0005"
- Throat Depth .5"
- Zero Set
- Inch/mm conversion.



Range	Order No.	Price
0-.6" / 0-15mm	PR7250000	119.00

SPRING CALIPERS, DIVIDERS AND SETS



Legs machined to rigid length and balance.
Hardened and tempered spring. Polished finish. Flat leg pattern.

Size Inch	Outside Caliper Order No.	Inside Caliper Order No.	Spring Divider Order No.	Price
3	PR1710103	PR1710303	PR1710603	5.50
4	PR1710104	PR1710304	PR1710604	5.50
6	PR1710106	PR1710306	PR1710606	6.50
8	PR1710108	PR1710308	PR1710608	8.00
10	PR1710110	PR1710310	PR1710610	12.50
12	PR1710112	PR1710312	PR1710612	14.25
18	PR1710118	PR1710318	PR1710618	25.00
24	PR1710124	PR1710324	PR1710624	42.00
36	PR1710136	PR1710336	PR1710636	64.00

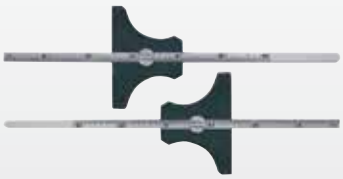
SETS

- Three piece set consists of one each of Divider, Inside Caliper, and Outside Caliper.
- Set packed in a box.

Divider and Caliper Sets

Catalog No.	Size		Price
	Inch	mm	
PR1710704	4	100	15.00
PR9710706	6	150	19.00
PR1710708	8	200	23.00
PR1710710	10	250	36.00
PR1710712	12	300	42.00

DEPTH AND ANGLE GAGES

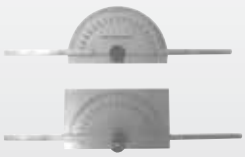


- Hardened and ground steel body.
- Spring tension knurled nut for easy depth measurement and locking.
- Fitted with stainless steel rule graduated 64th one one side and 0.5 mm on reverse.
- Rule measures 7/32" (5.5mm) wide and .041"(1.05mm) thick.
- Angular depth gage has an added feature permitting its use as a protractor for measuring angles.

Order No.	Description	Length	Body Dimension	Price
PR1655001	Plain Depth Gage	6"(150mm)	1-1/2 x 2-1/4 x 1⁄8" 40 x 58 x 3.2mm	12.50
PR1655000	Angular Depth Gage	6"(150mm)	1-1/2 x 2-1/4 x 1⁄8" 40 x 58 x 3.2mm	13.10

PROTRACTOR / DEPTH GAGE

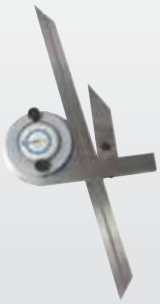
- Graduated from 0-180°
- Spring tension nut to secure rule to desired depth and angle.
- Narrow 6" (150mm) rule graduated 64th on one side and 0.5mm at reverse.



Order No.	Description	Price
PR2431015	Round	13.80
PR2431020	Rectangular	13.80

UNIVERSAL BEVEL PROTRACTOR WITH DIAL READING

- Direct reading to 5 minutes from 1⅜" diameter dial.
- Two-color rotating disc shows 10° graduations and direction of indication in window.
- Two-color fixed dial clearly indicates the measured values in far spread degree and 5 minute increments.
- Indicating range 4 x 90°.
- Stainless steel head and blades, hardened and ground.
- Head satin chromed. Positive locks.
- High accuracy and extreme versatility.
- Includes: Bevel Protractor, 12" blade, acute angle attachment, case.



Order No.	Price
PR2280000	120.00

PRECISION ANGLE BLOCK SET - ¼ - 45°

- Made from hardened steel.
- Use for grinding and milling machine operations.
- Complete in fitted case.
- 17pc. set includes the following angles: ¼°, ½°, 1°, 2°, 3°, 4°, 5°, 10°, 15°, 20°, 25°, 30°, 35°, 40°, and 45° plus 2 riser blocks.



Order No.	Price
PR1570150	102.00

UNIVERSAL ANGLE BLOCK SET

An accurate and direct method for angle set-ups in production and inspection.

Set includes:
3 "V" Blocks - 10°, 15°, 30°
5 Angle Blocks - 1°, 2°, 3°, 4°, 5°

Dimensions (L x W x H):
"V" Blocks - 3 x 1-3⁄16 x 13⁄16
Angle Blocks - 2-3/4 x 13⁄16

All blocks are made of hardened steel and precision ground to ±10 second accuracy.
Includes fitted case.



Order No.	Price
PR1570100	103.50

PRECISION ANGLE BLOCK SET - 1° - 30°

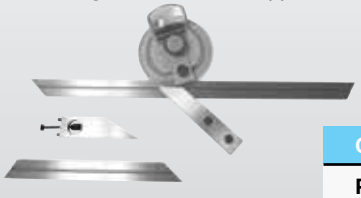
An accurate and direct method for angle set-ups in production and inspection.
Set Includes: 10 Blocks; 1° increments up to 5° and 5° increments up to 30°
Dimensions: 3" Long x ¼" Thick
Made of hardened steel and precision ground to ±.0001" accuracy. Includes fitted case.



Order No.	Price
PR1570010	89.70

UNIVERSAL BEVEL PROTRACTOR

This precision instrument with magnifying lens has the features of an optical protractor. The rotating disc is graduated in 4 x 90°. Made of stainless steel with satin-chrome finish for easy reading. Permits setting and reading to 5 minutes or 1/12°. Included are 6" and 12" hardened blades and an acute angle attachment. Supplied in fitted case.



Order No.	Price
PR1575000	89.70

CUSTANITE Precision

PRECISION PARALLEL SETS

Tolerance: Parallel 0.0003" on 2 sides, top and bottom.
Dimensions: within 0.001" allowance.
Hardness: Case hardened to RC 55 to 62 on 2 sides top and bottom only.

The holes are designed for easier handling and set-ups. Made from fine quality tool steel, stress relieved against distortion, precision ground, and hardened. These precision parallels are recommended for layout work, standards and set-ups.

STEEL PARALLEL SETS - 3/16" AND 1/2"

Each set consists of 4 pairs of hardened and ground parallels. All parallels are 6" long. Includes fitted case.



Height	Thickness	Hole Dia.	Order No.	Price
1 1 1/4 1 1/2 1 3/4	3/16 3/16 3/16 3/16	5/16 3/8 7/16 1/2	PR1645001	49.00
1 1 1/4 1 1/2 1 3/4	1/2 1/2 1/2 1/2	5/16 3/8 7/16 1/2	PR1645002	59.00
1 1 1/4 1 1/2 1 3/4	3/16 3/16 1/2 1/2	5/16 5/16 1/2 1/2	PR1645003	49.50

PRECISION WAVY PARALLELS

- Unique innovation in the field of clamping-aid techniques.
- Engineered to exceed the practical application possibilities of conventional precision parallels.
- New concept, practical and reliable for the precision vertical positioning of workpiece.
- Economical, simple and easy to use in precision clamping of parts in drilling, boring, milling, grinding, assembly work, etc.
- Ideal for clamping a group of flat workpieces.
- Can readily be used as classic shims.
- Thin and fragile workpieces can be secured without damage by utilizing the spring pressure of these parallels, for example in assembly applications, etc.
- Range of 9 pair set 1/2" to 1 1/2" in 1/8" height increments.
- Each parallel is .012" Thick x 4 9/16" Long
- Made of high quality spring steel, hardened, stress relieved & precision ground.
- Guaranteed to size in height & parallelism ±.0002".
- Set of 9 pairs furnished in attractive fitted case.

Order No.	Price
PR2410000	72.00



1/4" STEEL PARALLEL SET

Parallels in matched pairs made of special steel hardened and precision ground. 2 holes in each parallel. 9 pair in fitted case.

Each parallel is 1/4" wide and 6" long.
Height : 1 pair each

3/4, 7/8, 1, 1 1/8, 1 1/4, 1 3/8, 1 1/2, 1 5/8, 1 3/4".
Includes fitted case.



Order No.	Price
PR2410009	95.00

1/8" THIN STYLE STEEL PARALLEL SET

Parallels in matched pairs made of special steel, hardened and precision ground. 2 holes in each parallel. 10 pair in fitted case.

Each parallel is 1/8" wide and 6" long.
Height: 1 pair each 1/2 - 1 5/8 x 8ths.
Includes fitted case.



Order No.	Price
PR1645004	69.50

1/32" ULTRA-THIN STEEL PARALLEL SET

All are 6" long and only 1/32" thick
Set includes: 20 pairs: 1/2, 9/16, 5/8, 11/16, 3/4, 11/16, 7/8, 11/16, 1, 1 1/16, 1 1/8, 1 11/16, 1 1/4, 1 5/16, 1 3/8, 1 7/16, 1 1/2, 1 9/16, 1 5/8, 1 11/16".

- Includes fitted case.



Order No.	Price
PR2410020	89.00

ILLUMINATED MAGNIFIER

3" diameter lens. 5-1/2" long handle, 3 power.
Uses two " C" batteries (not included).

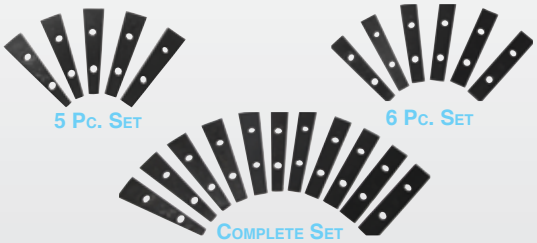


Illuminate work or inspection with this quality affordable magnifier. Plastic body.

Tool No.	Price Each
PR66023575	7.95

THIN ANGLE BLOCK SETS

- Hardened and precision ground on working surfaces.
- Two ¼" holes for mounting 3½" Long x 5/32" Thick.
- Fitted case.



*Using two blocks a range of ½° - 10½° x ½° can be covered.

Consists of	Order No.	Price
½° & 1°- 5°x 1°	1570006	15.80
6° - 10° x 1°	1570005	15.80
All Above Blocks	1570011	19.50

STEEL PARALLELS

Made of quality steel, hardened and precision ground to very close tolerances on all four sides. Parallels are finished, packed and sold in pairs.



Dim.	Tool No.	Price
1/4 x 1/2 x 6	PR2411632	19.80
1/4 x 5/8 x 6	PR2411640	21.30
1/4 x 3/4 x 6	PR2411648	22.90
3/8 x 1/2 x 6	PR2412432	22.90
3/8 x 3/4 x 6	PR2412448	23.40
1/2 x 3/4 x 6	PR2413248	28.00
1/2 x 1 x 6	PR2413264	31.00
1/2 x 3/4 x 9	PR2413249	52.00
1/2 x 1 x 9	PR2413265	52.00
3/4 x 1 x 9	PR2414864	53.50
3/4 x 1 x 12	PR2414865	74.00
3/4 x 1-1/4 x 12	PR2414872	85.22
1 x 2 x 12	PR2416499	93.30
1-1/4 x 1-1/2 x 12	PR2418096	107.80
1-1/4 x 2 x 12	PR2418099	111.70
1-1/2 x 2 x 12	PR2419620	117.10
1-1/2 x 3 x 12	PR2419630	179.50

0°- 60° PRECISION ANGLE BLOCKS

Fast, simple, easy to use for drilling, milling and set-up applications.



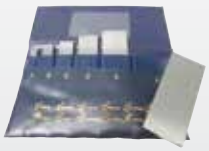
Features:

- 0°- 60° Adjustable angle by locking the hex screw on the bottom.
- 90° "V"
- Squareness .0002"
- Angle accuracy ± 10 seconds.
- Hardened to HRC 50-55°

Length x Height x Width	Width of "V"	Order No.	Price
4 x 1⅞ x 1⅞	1⅞	PR2270001	82.00
4 x 1⅞ x 1 3/16	1⅞	PR2270002	74.00
3 x 1¼ x 1	1	PR2270003	70.00

ADJUSTABLE PARALLEL SET

Useful for layout, inspecting and gaging work. Highly accurate dovetail construction. The 2 halves slide smoothly and are quickly locked into position. The 6 piece set is supplied in an attractive plastic wallet and has the following range:



3/8"	to	½"
½"	to	11/16"
11/16"	to	15/16"
13/16"	to	1 5/16"
1 5/16"	to	1¾"
1¾"	to	2¼"

6 Piece (⅜ - 2¼)	
Order No.	Price
PR1650016	63.70

SOLID ANGLE PLATES

Made of hardened steel, precision ground angles for convenient set-ups in tooling production and inspection. Four holes for easy mounting. ¼" Thick.



Dimensions	Angles	Order No.	Price
3 x 3"	45°, 45°, 90°	PR1570201	25.00
2 x 3⅜"	30°, 60°, 90°	PR1570202	25.00
Above two in a plastic case.		PR1570200	48.00

THIN PARALLEL SET

Set consists of 4 matched pairs of hardened and precision ground parallels 5/32" thick, 3" long in ½, 5/8, 3/4, and 7/8 heights. Two 1/4" holes in each parallel. Useful for fast setting of work pieces to needed height in vise jaws



Order No.	Price
PR2410500	14.70

STEPPED ANGLE PLATE

PRODUCT DESCRIPTION

- Solid one piece construction for longer life
- Hardened to 55 to 62 HRC
- Ground flat, square and parallel within .0002”/.005mm
- Made from alloy steel



Size	Thread Size	Order No.	Price
3” x 3” x 3”	¼” - 20 UNC	PR2276456	149.00

1-2-3, 2-4-6 AND 25MM x 50MM x 75MM BLOCK SETS

Used in layout and setup work. Each set consists of 2 matched, hardened and precision-ground blocks. The squareness on all sides is within .0001” per inch. The blocks are supplied with a plus allowance of .0001” to .0003” to allow nominal lapping. Five 3⁄8”-16 tapped holes are provided for clamping.



Size	Order No.	Price
1 x 2 x 3	PR1720123	29.50
2 x 4 x 6	PR1720246	149.00
25-50-75mm	PR1720124	27.00

1-2-3 DELUXE BLOCK SET

Used in layout and setup work. Each set consists of 2 matched, hardened and precision-ground blocks. The squareness on all sides is within .0001” per inch. The blocks are supplied with a plus allowance of .0001” to .0003” to allow nominal lapping. Five 3⁄8”-16 tapped holes are provided for clamping. 5 stainless steel socket head 3⁄8” - 16 cap screws, one hex key in a plastic fitted case.



Order No.	Price
PR1725123	36.00

PROTRACTORS

Used to set bevels, transfer angles etc.. Stainless steel with permanently etched graduations from 0-180° in opposite directions. Protractor arm of 6”. Head size: 3½ x 2”.



Description	Order No.	Price
Round Head	PR2280005	12.95
Rectangular Head	PR2280010	12.95

TELESCOPING GAGE SET

Double action, self centering, for measuring inside diameters, widths of slots, etc. Contact points are hardened and precision-ground to a radius.



Set of 6, in a plastic wallet with the following range:

5⁄16	to	½”
½	to	¾”
¾	to	1¼”
1¼	to	2⅛”
2⅛	to	3½”
3½	to	6”

Order No.	Price
PR1625000	21.60

SMALL HOLE GAGE SETS

SUPPLIED IN TWO DIFFERENT STYLES :

1. Full ball construction
2. Half ball - flat bottom construction; for measuring inside diameters or widths of small shallow holes or slots where regular gages are not accessible.



HALF BALL



FULL BALL

Each set consists of the following 4 gages in a plastic wallet.

Measuring Range	
.125 - .200”	3.2 - 5.1mm
.200 - .300”	5.1 - 7.6mm
.300 - .400”	7.6 - 10.2mm
.400 - .500”	10.2 - 12.7mm

Description	Order No.	Price
Half ball construction	PR1640096	19.50
Full ball construction	PR1640097	19.50

RADIUS GAGES

- Handy device for checking radii of tools and dies easier and faster.
- Gage features leaves for measuring both concave and convex radii.
- Each leaf is clearly stamped with the radius size.



Order No.	Range	No. of Leaves	Price
PR1680030	1⁄32” to1¼” by 1⁄64”	30	15.00
PR1680032	11⁄64” to ½” by 1⁄64”	32	16.00

RADIUS GAGE SETS

For inspection and layout work. Each gage is marked with its radius size and has five measuring surfaces for concave and convex radii. Satin chrome finish. Each set comes in fitted wallet.

No. of Leaves	Range	Order No.	Price
25	1⁄64 - 17⁄64 x 64ths 9⁄32 - ½ x 32nds	PR1680025	79.00
8	9⁄16 - 1 x 16ths	PR1685300	149.00
25	.010 - .030 x .005 .040 - .100 x .010 .120 - .220 x .020 .240 - .320 x .040 .350 - .500 x .050	PR1683300	79.00



THREAD MEASURING WIRE SET

48 Wires - 16 different sizes - to measure external threads by the 3 wire method. Measures all threads from 3-48 TPI and metric threads from .5mm to 6mm pitch. Wires are fitted in a plastic pouch marked with sizes. Includes a laminated chart compiled from the U.S. Standard Handbook.



Order No.	Price
PR2450000	13.90

SCREW CUTTING GAGE

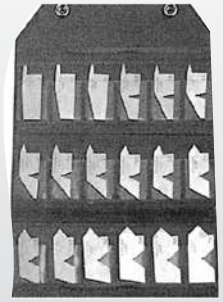
- Made from ground stainless steel
- Clearly etched Graduation.
- Used for gaging thread profiles 47½° British Association, 14½° Acme, 60° American and metric, 55° Whitworth and BSF.



Order No.	Overall length	Price
PR2355000	2”/50mm	7.20

18 PIECE ANGLE GAGE SET

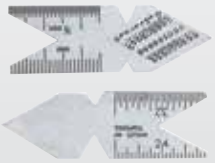
- Eight gaging surfaces per gage,
- Each gage checks primary, ½ primary and complimentary angles.
- Quick and accurate inspection of angles and I.D. or O.D. Chamfers in or out of the machine.
- Indispensable for every inspector, toolmaker, machinist, layout and draftsman.
- Complete with fitted case.



Order No.	Price
PR2470018	39.00

CENTER GAGES

- Very handy gage used in grinding and setting screw cutting tools.
- Clearly etched scale for finding number of threads per inch.
- Made of tempered stainless steel.
- Inch gage is graduated in 14ths, 20ths, 24ths, 32nds and features a table of double depth of thread for determining size of tap drills.
- Metric Gage graduated in mm and ½mm.
- Supplied in a plastic pouch.



Order No.	Description	Price
PR1690060	American Unified National Standard 60°	4.50
PR1690560	Metric 60°	9.50

29° ACME SCREW THREAD GAGE

Used in grinding and setting tools when cutting Acme threads.
Range: 1-10 threads per inch.



Order No.	Price
PR2450029	14.50

UNIVERSAL GRINDING GAGE

- Made of polished Stainless Steel.
- Clearly etched graduations.
- Combines twist drill grinding gages, thread gage.
- Measures square and hexagonal angles of 120°, 118°, 90°, 60°, 55°



Order No.	Overall length	Price
PR1615003	3¾” / 95mm	7.20

TWIST DRILL GRINDING GAGE

- For twist drills with acute angle of 118° up to 2” (50mm) diameter.
- Made from Stainless Steel.



Order No.	Overall length	Price
PR1615002	4½” / 114mm	7.20

WIRE GAGES

- Popular gage for iron wire, hot and cold rolled sheet steel.
- Made from bright finished and polished hardened stainless steel.
- Gages have a convenient decimal equivalent of each number.
- Clear permanently etched graduations in USA Standard.





Order No.	Description	Price
PR1660400	Rectangular	20.80
PR1660300	Round	20.80

TAPER (BORE) GAGE

- Handy gage for measuring cylindrical bores, bearing work and for gaging slots.
- Made from matte finished stainless steel
- Clearly etched graduations for precise measurement.



Order No.	Range	Price
PR2470115	1/32 - 5/8” 1 to 15mm	10.20

FEELER OR THICKNESS GAGES

- Each gage set comprised of thin polished steel blades within a steel case.
- Appropriate thickness clearly marked on each blade (inch and millimeter).
- Approximate length 3½" (90mm)
- Used to check bearing clearance in auto industry, flatness of jigs and fixtures, adjusting spark plugs, etc.



No. of Leaves	Leaf Thickness Range	Straight Blades		Tapered Blades	
		Tool No.	Price Each	Tool No.	Price Each
9	.0015" - .015"	PR1680009	5.95	PR1682009	5.95
26	.0015" - .025"	PR1680026	10.50	PR1682026	10.45
20	.05 - 1.00mm	PR1685120	11.55	PR1685020	11.55

SCREW PITCH (THREAD) GAGES

Product Description

- Very handy gage to quickly determine the pitch of various threads
- Made of high quality polished tool steel
- Features a locking device at both ends to securely lock the leaves
- All leaves clearly marked with size
- Comes in a plastic pouch



For gaging of 60° "V" thread (except where noted). Each leaf swings out and can be locked into position. Each gage is marked with its size.

TPI Range No. of Leaves	Range of Pitches	Tool No.	Price
4 - 42 (30)	4, 4-1/2, 5, 5-1/2, 6, 7, 8, 9, 10, 11, 11-1/2, 12, 13, 14, 15, 16, 18, 20, 22, 24, 26, 27, 28, 30, 32, 34, 36, 38, 40, 42	PR1665442	7.20
4 - 84 (51)	All of above plus: 44, 46, 48, 50, 52, 54, 56, 58, 60, 62, 64, 66, 68, 70, 72, 74, 76, 78, 80, 82, 84	PR1670484	14.90
0.25 - 2.5mm (28)	.25, .30, .35, .40, .45, .50, .55, .60, .65, .70, .75, .80, .85, .90, 1.00, 1.10, 1.20, 1.25, 1.30, 1.40, 1.50, 1.60, 1.70, 1.75, 1.80, 1.90, 2.00, 2.50,	PR1675001	7.20
.40 - 6.0mm (20)	.40, .45, .50, .60, .70, .75, .80, 1.00, 1.25, 1.50, 1.75, 2.00, 2.50, 3.00, 3.50, 4.00, 4.50, 5.00, 5.50, 6.00	PR1675002	7.50
4 - 42 & 0.25 to 6.0mm (31 + 24 = 55)	Combination-American Nat'l 60° and Metric 60° Threads	PR2451116	11.00
4 - 62 & 0.25 to 6.0mm (28 + 24 = 52)	Combination-Whitworth Standard 55° and Metric Standard 60°	PR2451118	13.00
4 - 62G (28)	Whitworth Standard 55°	PR1451120	8.10
0.25 - 6mm (24)	. 25, .30, .35,.40, .45, .50, .60, .70, .75, .80, 1.00, 1.25, 1.50, 1.75, 2.00, 2.50, 3.00, 3.50, 4.00, 4.50, 5.00, 5.50, 6.00	PR12890040	6.80

MACHINIST GAGE SETS

4 PIECES — INCH

4 to 84 Screw Pitch Gage, 1/32" to ¼" Radius Gage, 60° Center Gage & .0015 to .25" Feeler Gage

4 PIECES — METRIC

0.4 to 6 Screw Pitch Gage, 1-7mm Radius Gage, 55° Center Gage & .05 to 1.0mm Feeler Gage



Type	Order No.	Price
Inch	PR2472203	48.50
Metric	PR2472298	48.50

ROUND BAR CENTER FINDER

- Accurately and quickly locates center on round workpiece.
- For execution place the tool in drill chuck or collet and line up pointer with line scribed on shaft.
- Supplied with instructions



Order No.	Shank Dia.	Overall Length	Price
PR1700025	⅜" / 9.5mm	4⅛" / 105mm	8.70

ELECTRONIC EDGE FINDER

Highly sensitive for fast and accurate positioning. Lights up on contact. T.I.R. within .0002". ¾" Shank Diameter. .400 Probe Diameter.



Order No.	Price
PR5440500	69.00

FINDERS (EDGE AND CENTER)

To locate work edges shoulders, grooves, center points, and scribed lines for accurate machining such as jig boring, etc. All parts hardened and ground.



Style/Type	Shank Dia.	Contact Dia.	Order No.	Price
Single End / Edge	3/8"	.200"	PR1700001	7.10
Single End / Edge	1/2"	.500"	PR1700002	7.50
Double End / Edge	1/2"	.200 & .500"	PR1700003	7.50
Double End / Edge & Center	1/2"	.200 & Ptd. Contact	PR1700004	7.90
Double End / Edge & Center	3/8"	.200 & Ptd. Contact	PR1700005	7.50
Single End / Edge	1/2"	.200"	PR1700006	7.90
Single End / Center	3/8"	Pointed Contact	PR1700007	7.50
Single End / Center	1/2"	Pointed Contact	PR1700008	7.90
Single End / Edge	10mm	10mm	PR1700026	8.50
Single End / Edge	12mm	5mm	PR1700027	8.50

Sets	Order No.	Price
4pc Set of #'s 1700001 - PR1700004	PR1700021	29.00
4pc Set of #'s 1700005 - PR1700008	PR1700022	30.50
6pc Set of #'s 1700006 - PR1700006	PR1700023	40.00
8pc Set of #'s 1700001 - PR1700008	PR1700024	56.50

WIGGLER OR CENTER FINDER

The attachments permit this tool to be used for many different applications such as: checking concentricity, establishing center distances, positioning tool spindle in relation to work surfaces, etc. Set includes body and the following interchangeable attachments:





- Ball contact (.250" dia.)
- Disc contact (.100" Dia.)
- Needle point
- Offset indicator holder

Order No.	Price
PR1700500	13.00

COMPARATORS AND MAGNIFIERS

Combination of lenses produces different powers

Magnification range of 4x, 7x, and 10x

Focal length of 2.5", 1.5" and 1" or 6cm, 3.8cm and 2.5cm



Tool No.	Price Each
PRMGP	11.40

EYE LOUPES

Hand – Free Magnification
Lenses made of ground and polished optical glass



Magnification Power	Focal Length	Tool No.	Price Each
2X	4.5"/114mm	PRMGL2	2.55
3X	3.5"/89mm	PRMGL3	3.25
4X	2.5"/63mm	PRMGL4	4.55
5X	2.0"/50mm	PRMGL5	5.15
10X	1.0"/25mm	PRMGL10	8.45

POCKET COMPARATOR

Has a precision ground achromatic lens (3 element, 2 groups), photo etched scale, with 7x magnification.



Order No.	Price
PR1001975	121.00

POCKET COMPARATOR SET

Includes the Model 1975 comparator with the 5 most popular reticles, namely #1,#5,#7,#8, and #12 in fitted case.



Order No.	Price
PR1001976	175.00

POCKET COMPARATOR

Has a precisely ground achromatic lens (coated 4 elements, 2 groups), photo etched scale with a 10x magnification.



Order No.	Price
PR1001983	133.25

POCKET COMPARATOR SET

Includes the Model 1983 comparator with the 5 most popular reticles, namely, #1,#5,#7,#8 and #12 in fitted case.



Order No.	Price
PR1002004	265.00

FLASHLIGHT MAGNIFIER

With 10x magnification is an excellent instrument. It features a built-in lighting device that works on two 1.5 Volt batteries.



Order No.	Price
PR1001966	47.80

FLASHLIGHT MAGNIFIER AND COMPARATOR

Combination with 7x magnification consists of a magnifying unit and a section to insert batteries.



Order No.	Price
PR1001998	133.25

STEREO MICROSCOPES

- Fully coated, excellent optics give an upright image over a wide field of view, sharp and clear
- Provides the original true color of the viewed object
- Accurate alignment ensures the observer fatigue-free viewing
- 45° inclined binocular head, with locked-in eyepieces.
- Left ocular-tube with diopter adjustment range of +5mm
- Interpupillary distance adjustable between 2.16 - 2.95"
- Working distance 2.09"
- Includes paired eyecaps, a dust cover, paired clips
- Well-painted metal base
- Precise and smooth rack & pinion focus system
- Equipped with an arm stand.



Order No.	Price
PR5100600	345.00

CARBIDE TIPPED SCRIBERS



- For use on hard surfaces
- Fixed points on round or hexagonal steel body.
- 6" (150mm) long, provided with clip.

Description	Tool No.	Price Each
Carbide Scriber in Steel Body	PR7020825	3.70

FOLDABLE LENS MAGNIFIER

2 Power 4" dia. Stands 7-1/2" H.
5-1/4" x 7-1/2" Base.



Inch and metric scale on base.

Tool No.	Price Each
PR66023705	7.95

POCKET MICROSCOPE



50 POWER (Microscope has inverted image)		
Model No.	Order No.	Price
2013	PR5105010	103.00

MACHINISTS SCRIBERS

- Points hardened for accurate work.
- Ideal marking tool.
- Moderately priced.



Size	Description	Tool No.	Price Each
8-1/2" /215mm	Double end scriber w/ knurled body (A)	PR7020812	3.15
7" /175mm	Single point heavy duty scriber with knurled body (H)	PR7020819	2.70
9" /225mm	Double point heavy duty scriber with knurled body (I)	PR7020820	3.25
6-1/2" /165mm	Chisel type scriber with one end sharp point and other knife edge (J)	PR7020821	3.25

POCKET MICROSCOPES

ILLUMINTED WITH FOCUSING WHEEL:

For reading fine print, industrial quality control, fine inspections, textiles, etc. Uses 2 AA batteries (not included).



Size	Order No.	Price Each
40X	PR66020090	15.95
60-100X	PR66020095	23.95

MAGNIFYING READING GLASSES

2" x 1-3/16 lens. With metal frame



Power	Tool No.	Price Each
1.5	PR66023577	3.15
2	PR66023578	3.15
2.5	PR66023579	3.15
3	PR66023580	3.15

POCKET MICRO STAND



This powerful microscope stand is available in 30x and 40x power. Self-Standing with adjustable focus.

Size	Order No.	Price Each
MS-30 30X	PR66023945	47.95
MS-40 40X	PR66023950	49.95

RATCHET MACHINE COUNTER

- 5 Digits with rotary reset knob
- 4 Flange holes for rigid mounting
- Lever furnished with spring and can be set in any position



Tool No.	Price
PRMC5	8.45

POT MAGNETS

- Has unlimited applications such as magnetic fasteners, displays, holding maps etc.
- Has tapped hole of 1/4" - 20
- Comes with Plated Keepers



Tool No.	Diameter	Height	Pull	Price
MG2391116	11/16"	5/8"	6 lbs.	**5.24**
MG2391316	13/16"	3/4"	10 lbs.	**6.47**
MG2391016	1-1/16"	1"	14 lbs.	**9.09**
MG2390138	1-3/8"	1-3/16"	30 lbs.	**14.09**

MAGNETIC SEPARATOR

- Specially designed for separating ferrous sheets or particles.
- Very useful in workshops for cleaning machine beds, agriculture industry, etc.
- Powerful magnetic force can be demagnetized by simply pulling up the handle.



Tool No.	Diameter	Price
MG9990002	9-1/4 x 5-1/4 x 1"/ 235 x 135 x 25mm	35.27

SHALLOW POT CERAMIC MAGNETS

- Permanent, Powerful Magnets to hold, lift and attract metal parts.
- Shallow Depth permits use in confined spaces
- Model 2390134 has 10 x 24 threaded Center Hole for fastening with machine screw.
- Large Sizes have 3/8" clearance holes for fastening with rods or bolts.



Tool No.	Diameter	Depth	Pull	Price
MG2390134	1-3/4"	1/4"	10 lbs.	**5.16**
MG2390200	2"	3/8"	20 lbs.	**5.78**
MG2390234	2-3/4"	7/16"	35 lbs.	**7.47**
MG2391138	3-1/8"	1/2"	50 lbs.	**11.01**

MAGNETIC RACK (ORGANIZER)



- Specially designed for separating ferrous sheets or particles.
- Very useful in workshops for cleaning machine beds, agriculture industry, etc.
- Powerful magnetic force can be demagnetized by simply pulling up the handle.

Tool No.	Length	Price
MG9990012	12"/300mm	**21.71**
MG2390018	18"/450mm	**26.72**
MG2390024	24"/600mm	**37.88**

EXTRA POWER MAGNETIC HOLDFASTS

- Have tremendous power.
- Provided with Push Off Screw to push work away from the holdfasts as this cannot be done by hand.
- Also provided with plated Keepers which protect and retain magnetic field.
- Can be used to hold work for welding, grinding. Ideal for making inexpensive lifting devices and jigs.
- Have many applications in material handling and machine shop.



Tool No.	Diameter	Magnetic Pull	Price
MG2391340	1-3/4"	45 lbs.	**43.35**
MG2392180	2-1/8"	70 lbs.	**54.13**
MG2392340	2-3/4"	110 lbs.	**64.91**

MAGNETIC QUICK CLAMPS



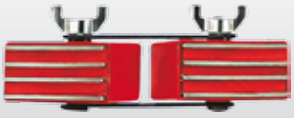
- Designed to enable fast and accurate holding of ferrous metals for welding and assembly.
- Small compact design with powerful magnetic force.
- Body holes enable the clamps to be built into jigs or hung when not in use.

Tool No.	Diameter	Angles	Price
MG2394258	4-3/8" x 3-3/4"	30°, 90°, 135°	**14.17**
MG2394380	4" x 2-5/8"	30°, 45°, 60°, 75°, and 90°	**12.01**

MAGNETIC WELDING LINK

- Ideal for holding steel parts for welding, brazing etc.
- Wing nut adjustment.
- No clamp needed
- Two heavy magnetic blocks 2-3/8"(60mm) long x 1-1/8"(28mm) square linked together for easy adjustment.

Tool No.	Price
MG9990001	**27.72**









Cushman Chucks

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CUSHMAN
CHUCKS
SINCE 1862

CARIBOU®
CUSHMAN

















3-Jaw Self-Centering Universal Accra-Set Chucks



High Quality, Steel Body, Scroll Chuck

Special Features:

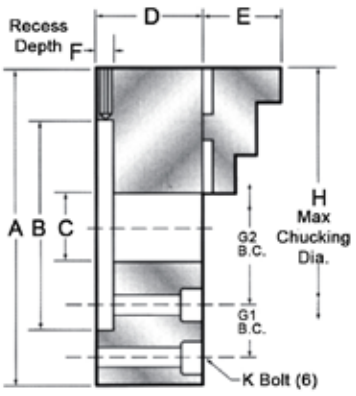
- Sizes 6" through 32" (larger sizes available)
- American Standard Tongue & Groove Jaw Mount
- Straight recess
- Two piece/reversible stepped hard jaws
- For use with mounting plates

For Mounting Plates See page 476.

Series Y10-104

Chuck Size	Model No.	Est. Gross Weight (lbs)	Gripping Capacity		Max Rpm	Price
			Min	Max		
6"	**Y10-104-06-000Z**	26	3/16	5	4900	1,360.00
8"	**Y10-104-08-000Z**	46	3/16	6-1/2	4200	2,080.00
10"	**Y10-104-10-000Z**	71	3/16	8	3300	2,560.00
12"	**Y10-104-12-000Z**	112	3/4	10	2300	3,520.00
15"	**Y10-104-15-000Z**	146	1-1/2	13	2000	6,080.00
18"	**Y10-104-18-000Z**	270	1-1/2	16	1300	15,120.00
*20"	**Y10-104-20-000Z**	450	1-1/2	18	—	16,800.00
24"	**Y10-104-24-000Z**	550	2	18	850	20,450.00
*28"	**Y10-104-28-000Z**	730	2	26	—	25,688.00
*32"	**Y10-104-32-000Z**	960	2	30	—	34,225.00

*Not Accra-Set, Not Fine Adjustment. Please call for dimensional data.



Chuck Dimensions

Chuck Size	A	B*	C	D	E	F	Bolt Pattern		H	K
							G1	G2		
6"	6.31	3.125	1.81	2.88	1.59	0.69	5.34	—	7.31	1/4
8"	8.25	4.750	2.25	3.25	1.75	0.75	7.50	—	9.25	3/8
10"	9.85	6.375	3.00	3.63	2.13	0.81	—	4.38	11.00	7/16
12"	12.20	7.906	4.06	4.00	2.28	0.84	—	5.25	14.00	1/2
15"	15.74	11.781	4.56	5.13	3.16	1.13	—	6.75	17.00	5/8
18"	18.00	11.781	5.025	5.781	3.27	1.125	—	6.75	19.00	5/8
24"	24.00	16.030	7.025	6.530	3.27	1.188	—	9.25	25.00	3/4

** Tolerance: -0.000/+0.001"*

6-Jaw Self-Centering Universal Accra-Set Chucks



High Quality, Steel Body, Scroll Chuck

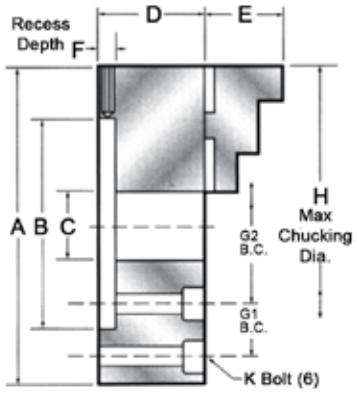
Special Features:

- Medium duty steel body
- Sizes 6" through 18" (larger sizes available)
- American Standard Tongue & Groove Jaw Mount
- Straight recess
- Two piece/reversible stepped hard jaws
- For use with mounting plates

For Mounting Plates See page 476.

Series Y10-174

Chuck Size	Model No.	Est. Gross Weight (lbs)	Gripping Capacity		Max Rpm	Price
			Min	Max		
6"	**Y10-174-06-000Z**	27	3/16	5	2500	2.275.00
8"	**Y10-174-08-000Z**	49	3/16	6-1/2	2200	2.690.00
10"	**Y10-174-10-000Z**	76	3/16	8	1900	3.490.00
12"	**Y10-174-12-000Z**	116	3/4	10	1500	4.560.00
15"	**Y10-174-15-000Z**	205	1-1/2	13	1300	8.160.00
18"	**Y10-174-18-000Z**	290	1-1/2	16	1100	23.600.00



Chuck Dimensions

Chuck Size	A	B*	C	D	E	F	Bolt Pattern		H	K
							G1	G2		
6"	6.31	3.125	1.81	2.88	1.59	0.69	5.34	—	7.31	1/4
8"	8.25	4.750	2.25	3.25	1.75	0.75	7.50	—	9.25	3/8
10"	9.85	6.375	3.00	3.63	2.13	0.81	—	4.38	11.00	7/16
12"	12.20	7.906	4.06	4.00	2.28	0.84	—	5.25	14.00	1/2
15"	15.74	11.781	4.56	5.13	3.16	1.13	—	6.75	17.00	5/8
18"	18.00	11.781	5.025	5.781	3.27	1.125	—	6.75	19.00	5/8

3-Jaw Self-Centering Heavy Duty Chucks

CUSHMAN CHUCKS SINCE 1862

High Quality, Steel Body Scroll Chuck

- Forged steel body
- Extra heavy duty American Standard, hard top and master jaws
- Gripping surfaces serrated for more holding power
- Large thru-holes standard
- Hardened scroll gear for long life

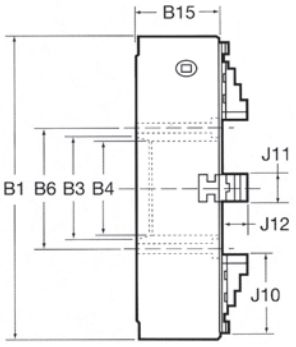
For Mounting Plates See page 476.



Series Y10-114

Chuck Size	Model No.	Mount	Thru Hole	Max RPMs	Approx. Weight	Price
*12"	Y10-114-12-000Z	Flat Back	3.13	*	152 lbs	14,800.00
*15"	Y10-114-15-000Z	Flat Back	5.13	*	235 lbs	18,480.00
20"	Y10-114-20-A11Z	A2-11	6.75	1100	475 lbs	19,560.00
24"	Y10-114-24-A15Z	A2-15	10.75	850	695 lbs	24,560.00
24"	Y10-114-24-A20Z	A2-20	12.50	850	670 lbs	24,560.00
28"	Y10-114-28-A15Z	A2-15	10.75	750	890 lbs	32,340.00
28"	Y10-114-28-A20Z	A2-20	12.50	750	870 lbs	32,340.00
32"	Y10-114-32-A15Z	A2-15	10.75	600	1290 lbs	38,730.00
32"	Y10-114-32-A20Z	A2-20	14.50	600	1270 lbs	38,730.00

*Dimensional table will be provided upon request.



Dimensional Data - 3-Jaw Self-Centering Heavy Duty Chuck

Model No.	B1 O.D.	Mount Type	B3 Mount Recess	B4 Thru Hole	B6 Mounting Bolt Radius	B15 Body Width	J10 Master Jaw Length	J11 Top Jaw Width	J12 Top Jaw Height
Y10-114-20-A11Z	19.68	A2-11	7.75	6.75	4.625	6.34	6.50	2.36	3.27
Y10-114-24-A15Z	24.80	A2-15	11.25	10.75	6.50	6.61	6.50	2.36	3.27
Y10-114-24-A20Z	24.80	A1-20	16.25	12.50	7.25	6.69	6.50	2.36	3.27
Y10-114-28-A15Z	27.56	A2-15	11.25	10.75	6.50	6.81	8.50	2.95	3.62
Y10-114-28-A20Z	27.56	A1-20	16.25	12.50	7.25	6.89	8.50	2.95	3.62
Y10-114-32-A15Z	31.49	A2-15	11.25	10.75	6.50	7.01	9.84	2.95	3.62
Y10-114-32-A20Z	31.49	A2-20	16.25	14.50	9.175	7.09	8.50	2.95	3.62

NOTE: Note to be used for design purposes unless approved by the factory.

Component Parts - Series Y10-114 - Old Style (Price on Application)

Chuck Size	Component Model Numbers							
	Scroll	Pinion	Pinion Retainer	Pinion Bushing	Pinion Bushing Retainer	Wrench	Jaws - Set of 3	
							No. 6 Master Jaws	No. 6 Top Jaws
8"	Y03-001521-F1	Y03-001521-03	Y05-000895-00	—	—	Y06-201801-00	Y03-001521-F4	Y03-001521-F2
10"	Y05-003542-F0	Y03-001089-02	Y05-000896-00	—	—	Y06-201848-00	Y03-003541-F0	Y03-001089-F3
12"	Y04-008003-F0	Y05-006367-00	Y05-006375-00	Y04-008720-00	Y05-002242-00	Y06-201848-00	Y05-006374-F0	Y03-001438-F3
15"	Y04-007965-F0	Y05-006193-00	Y05-006307-00	Y04-008052-00	Y05-002242-00	Y06-201868-00	Y04-007839-F0	Y04-007840-F0
18"	Y03-005896-F0	Y05-006286-00	Y05-006307-00	Y04-008072-00	Y05-002242-00	Y06-201868-00	Y04-007913-F0	Y04-007840-F0
21"	Y03-005925-F0	Y05-006398-00	Y05-006307-00	Y04-007978-00	Y05-002242-00	Y06-201868-00	Y04-008030-F0	Y04-007840-F0
24"	Y03-002692-F2	Y04-007977-00	Y05-006307-00	Y04-007978-00	Y05-002242-00	Y06-201868-00	Y04-007979-F0	Y04-007840-F0

3 & 6-Jaw Plain Back Semi-Steel Shop Chucks *New*

Semi-Steel Body Plain Back with Fine Adjustment

- 0.0005" T.I.R.
- Two-piece American Standard reversible jaws
- Two-piece body design
- 10", 12" and 15" chucks provided with the pinion in the bushing

Standard Accessories

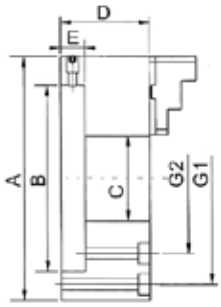
- 1 Set of hard master jaws
- 1 Set of hard top reversible jaws
- 1 Chuck wrench
- 2 Hex keys
- 1 Semi-steel body
- 1 Pinion
- 1 Set of mounting screws



Series Y10-161



Series Y10-171

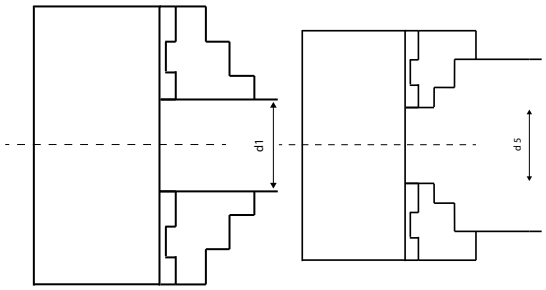


See page 476 for mounting plates.

Chuck Size	3-Jaw Model Number	RPM Max	Price Each	6-Jaw Model Number	RPM Max	Price Each
6"	**Y10-161-006-000Z**	3400	1,000.00	**Y10-171-006-000Z**	2500	1,400.00
8"	**Y10-161-008-000Z**	3100	1,500.00	**Y10-171-008-000Z**	2200	1,600.00
10"	**Y10-161-010-000Z**	2700	1,900.00	**Y10-171-010-000Z**	2000	2,000.00
12"	**Y10-161-012-000Z**	2200	2,600.00	**Y10-171-012-000Z**	1500	2,800.00
15"	**Y10-161-015-000Z**	1800	5,000.00	—	—	—

Chuck Dimensions

Chuck Size	A	B	C	D	E	G1	G2	Qty of Bolts	G1/G2 Thread
6"	6.0	3.125	1.540	2.35	0.69	5.34	—	6	1/4"-20
8"	8.25	4.700	2.348	3.15	0.75	7.50	—	6	3/8"-16
10"	10.0	6.375	2.850	3.40	0.81	—	4.38	6	7/16"-14
12"	12.0	1.906	3.295	4.00	0.84	—	5.25	6	1/2"-13
15"	15.0	11.781	4.280	6.78	1.13	—	6.75	6	5/8"-11



Gripping Capacity

3 Jaw Chuck

Chuck Dia. D	Min d1	Max d5
6-1/4	0.118	6.30
8	0.157	7.87
10	0.197	9.84
12-1/2	0.394	12.40
15-3/4	0.394	15.75

6 Jaw Chuck

Chuck Dia. D	Min d1	Max d5
6-1/4	0.315	6.30
8	0.315	7.67
10	0.470	9.84
12-1/2	0.470	12.40
15-3/4	0.690	15.75

Mounting Plates for 3 & 6-Jaw Chucks

CUSHMAN CHUCKS SINCE 1862

For Independent Chucks - Series Y10-104, Y10-174, Y10-114, Y10-161, Y10-171 (Old Type Design)

Mounting plates are precision machined to suit the spindle nose of your machine.
For maximum accuracy of Accra-Set™ mounting plates, mount plate on machine spindle nose, place a dial indicator on the chuck side face of the adapter close to the mounting holes, rotate the adapter, and if the total indicator reading (TIR) exceeds .0005", take a light truing cut across the face of the mounting plate.

Type D Mounting Plates - "Camlock"

	Model Number						
Spindle	6"	8"	10"	12"	15"	18"	24"
D-3 Price	**Y03-0605020** 440.00	**Y03-0805020** 465.00	—	—	—	—	—
D-4 Price	**Y03-0605021** 440.00	**Y03-0805021** 465.00	**Y03-1005021** 595.00	—	—	—	—
D-5 Price	**Y03-0605022** 500.00	**Y03-0805022** 500.00	**Y03-1005022** 660.00	—	—	—	—
D-6 Price	—	**Y03-0805023** 500.00	**Y03-1005023** 660.00	**Y03-1205023** 770.00	**Y03-1505023** 1,008.00	—	—
D-8 Price	—	—	**Y03-1005024** 720.00	**Y03-1205024** 880.00	**Y03-1505024** 1,040.00	**Y03-1805024** 1,435.00	**Y03-2405024** 2,040.00
D-11 Price	—	—	—	**Y03-1205025** 1,008.00	**Y03-1505025** 1,200.00	**Y03-1805025** 1,595.00	**Y03-2405025** 2,075.00

Type A American Standard Short Taper A-1 & A-2 Spindles

	Model Number						
Spindle	6"	8"	10"	12"	15"	18"	24"
A-4 Price	**Y03-0605009** 450.00	—	—	—	—	—	—
A-5 Price	**Y03-0605010** 450.00	**Y03-0805010** 480.00	**Y03-1005010** 635.00	—	—	—	—
A-6 Price	—	**Y03-0805011** 480.00	**Y03-1005011** 690.00	**Y03-1205011** 705.00	—	—	—
A-8 Price	—	—	**Y03-1005012** 690.00	**Y03-1205012** 705.00	**Y03-1505012** 1,008.00	**Y03-1805012** 1,450.00	—
A-11 Price	—	—	—	—	**Y03-1505013** 1,008.00	**Y03-1805013** 1,595.00	**Y03-2405013** 2,040.00
A-15 Price	—	—	—	—	—	—	**Y03-2405014** 2,075.00

Type L American Standard Long Taper Key Drive Spindle

	Model Number						
Spindle	6"	8"	10"	12"	15"	18"	24"
L-00 Price	**Y03-0605031** 560.00	**Y03-0805031** 625.00	**Y03-1005031** 740.00	—	—	—	—
L-0 Price	**Y03-0605032** 560.00	**Y03-0805032** 625.00	**Y03-1005032** 740.00	**Y03-1205032** 1,025.00	—	—	—
L-1 Price	—	**Y03-0805033** 720.00	**Y03-1005033** 740.00	**Y03-1205033** 1,025.00	**Y03-1505033** 1,440.00	**Y03-1805033** 2,075.00	**Y03-2405033** 3,035.00
L-2 Price	—	—	**Y03-1005034** 955.00	**Y03-1205034** 1,025.00	**Y03-1505034** 1,440.00	**Y03-1805034** 2,555.00	**Y03-2405034** 3,035.00
L-3 Price	—	—	—	—	**Y03-1505035** 1,440.00	**Y03-1805035** 2,715.00	**Y03-2405035** 3,035.00

For Hardinge® and Elgin Lathe

	Model Number	
Spindle	5"	6"
4° Taper Price	**Y03-0505044** 400.00	**Y03-0605044** 475.00
2-3/16"-10 Threaded Price	**Y03-0505045** 400.00	**Y03-0605045** 475.00

Plates for rotary tables also available.

Threaded & Blank Mountings for Accra-Set™ Chucks

	Model Number				
Spindle	5"	6"	8"	10"	12"
Blank Price	**Y03-0505040** 340.00	**Y03-0605040** 340.00	**Y03-0805040** 440.00	**Y03-1005040** 450.00	**Y03-1205040** 480.00
1-1/2"-8 Price	**Y03-0505041** 440.00	**Y03-0605041** 440.00	**Y03-0805041** 480.00	—	—
1-3/4"-8 Price	**Y03-0505042** 465.00	**Y03-0605042** 465.00	**Y03-0805042** 480.00	—	—
2-1/4"-8 Price	**Y03-0505043** 465.00	**Y03-0605043** 465.00	**Y03-0805043** 480.00	—	—
2-3/8"-6 Price	—	**Y03-0605046** 640.00	**Y03-0805046** 688.00	—	—

* Threaded adapter plates and special plates are available upon request.
"Accra-Set™" chucks and adapters are shipped unassembled unless ordered assembled at an extra charge.
When ordering special adapters, give make, model number, size, and spindle dimensions of machine.

Component Parts

Independent Chucks - Series Y10-001, Y10-002, Y10-003, Y10-004 (Old Type Design)

For older model Cushman chucks manufacturer prior to 2006

Chuck Size	Model Letter	Component Model Numbers					
		Operating Screw	Thrust Bearing	Wrench	Jaws - Set of 4 only		
					Solid One-Piece Reversable	2-Pc Tongue and Groove Type	
						No. 6 Master Jaws	No. 6 Top Jaws
10"	C	Y05-002184-00	Y06-201883-00	Y06-201260-00	Y05-003019-F0	Y04-001201-F2	Y04-001201-F1
12"	C	Y05-002185-00	Y06-201883-00	Y06-201260-00	Y05-003019-F0	Y04-001202-F2	Y04-001202-F1
15"	C	Y05-002187-00	Y06-201883-00	Y06-201260-00	Y05-006534-F0	Y04-001213-F1	Y04-001213-F2
18"	C	Y05-002199-00	Y06-201866-00	Y06-201264-00	Y04-004551-F0	Y04-003948-F0	Y04-003947-F0
21"	C	Y05-002195-00	Y06-201866-00	Y06-201264-00	Y04-004551-F0	Y04-002065-F0	Y04-003947-F0
24"	C	Y04-002559-00	Y06-201866-00	Y06-201264-00	Y04-004551-F0	Y04-002065-F0	Y04-003947-F0
28"	C	Y04-002560-00	Y06-201866-00	Y06-201264-00	Y04-004551-F0	Y04-002065-F0	Y04-003947-F0
32"	C	Y04-000309-02	Y06-201851-00	Y06-201885-00	Y04-000612-F0	Y03-001981-F1	Y03-001981-F2

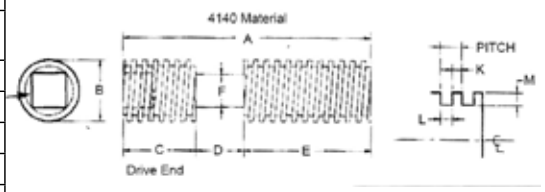
Independent Chucks - Series 10-003, 10-004

Chuck Size	Model Letter	Component Model Numbers					
		Operating Screw	Thrust Bearing	Wrench	Jaws - Set of 4 only		
					Solid One-Piece Reversable	2-Pc Tongue and Groove Type	
						No. 6 Master Jaws	No. 6 Top Jaws
10"	C, D, E	Y05-002184-00	Y06-201883-00	Y06-201260-00	Y05-003019-F0	Y04-001201-F2	Y04-001201-F1
12"	C, D, E	Y05-002185-00	Y06-201883-00	Y06-201260-00	Y05-003019-F0	Y04-001202-F2	Y04-001202-F1
15"	C, D, E	Y05-002187-00	Y06-201883-00	Y06-201260-00	Y05-006534-F0	Y04-001213-F1	Y04-001213-F2
18"	D, E	Y05-210722-00	Y06-201851-00	Y06-201885-00	Y04-210721-F0	Y03-210871-F0	Y03-001981-F2
21"	D, E	Y05-211793-00	Y06-201851-00	Y06-201885-00	Y04-210721-F0	Y03-210871-F0	Y03-001981-F2
24"	D, E	*Y05-209524-00	Y06-201881-00	Y06-201867-00	Y03-209509-F0	Y03-209504-F0	Y04-001941-F0
28"	D, E	**Y05-211858-00	Y06-201881-00	Y06-201867-00	Y03-209509-F0	Y03-209504-F0	Y04-001941-F0
32"	D, E	Y05-211423-00	Y06-201881-00	Y06-201867-00	Y03-209509-F0	Y03-209504-F0	Y04-001941-F0

* Chuck Size 24" A11/D11 E Model Mount, use Operating Screw Part No. Y05-225822-00.
** Chuck Size 28" 000 D Model, Straight Recess Mount, use Operating Screw Part No. Y05-216862-00.
NOTE: Please refer to the factory when ordering component parts for Chuck Models A & B.

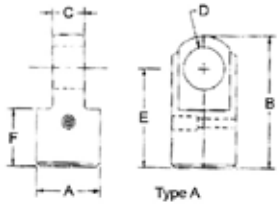
Replacement Screws & Thrust Bearings

Single End	
Double End	
Internal	
External	
Hex	
Square	
Depth	



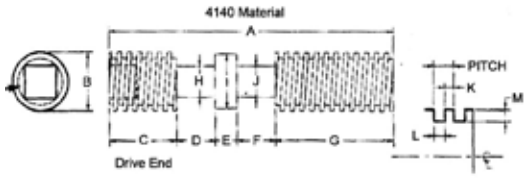
Pitch	
Right	
Left	
Acme	
Square	

Quantity:	Approved By:	Date:						
A	B	C	D	E	F	K	L	M



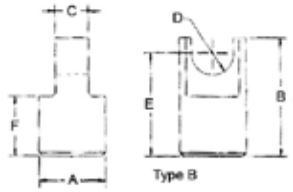
A*	B	C	D*	E	F

Single End	
Double End	
Internal	
External	
Hex	
Square	
Depth	



Pitch	
Right	
Left	
Acme	
Square	

Quantity:	Approved By:								Date:			
A	B	C	D	E	F	G	H	I	J	K	L	M



A*	B	C	D*	E	F

* Diameter

Qty:	Approved By:	Date:

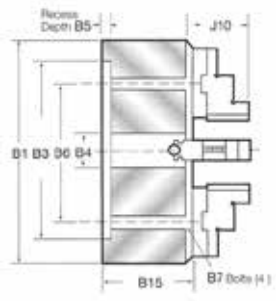
4-Jaw Independent Iron Body Chucks *New*

- High value and lower cost
- One year warranty
- Hardened and ground operating screws
- High tensile strength iron body
- Straight recess for adapter mounting
- Available with A, D, L and straight recess mounting
- 1 Set of Solid Reversible Jaws



Iron Body Flatback

Chuck Size	Model No.	Spindle	Price
5"	**Y10-051-05-000**	Flatback	460.00
6"	**Y10-051-06-000**	Flatback	540.00
8"	**Y10-051-08-000**	Flatback	750.00
10"	**Y10-051-10-000**	Flatback	780.00
12"	**Y10-051-12-000**	Flatback	950.00
16"	**Y10-051-16-000**	Flatback	1,350.00
18"	**Y10-051-18-000**	Flatback	2,000.00
20"	**Y10-051-20-000**	Flatback	2,800.00
24"	**Y10-051-24-000**	Flatback	4,200.00



Iron Body Type D Mountings

Chuck Size	Model No.	Spindle	Price
5"	**Y10-051-006-0D3**	D-3	680.00
6"	**Y10-051-006-0D4**	D-4	680.00
8"	**Y10-051-008-0D3**	D-3	820.00
8"	**Y10-051-008-0D4**	D-4	820.00
8"	**Y10-051-008-0D5**	D-5	820.00
10"	**Y10-051-010-0D5**	D-5	1,050.00
10"	**Y10-051-010-0D6**	D-6	1,050.00
12"	**Y10-051-012-0D6**	D-6	1,250.00
12"	**Y10-051-012-0D8**	D-8	1,250.00
16"	**Y10-051-016-0D8**	D-8	1,750.00
16"	**Y10-051-016-D11**	D-11	1,750.00
18"	**Y10-051-018-0D8**	D-8	2,300.00
18"	**Y10-051-018-D11**	D-11	2,300.00
20"	**Y10-051-020-0D8**	D-8	3,200.00
20"	**Y10-051-020-D11**	D-11	3,200.00
24"	**Y10-051-024-0D8**	D-8	4,600.00

Dimensional Data 4-Jaw Independent Iron Body Chucks

Chuck Size	B1	B3	B4	B5	B6	B7	B9	B15	J10
6"	6.30	2.56	1.77	.197	3.74	(4) M-10	2.36	2.56	1.24
8"	7.87	4.92	1.97	.236	4.11	(4) M-10	4.33	2.95	1.37
10"	9.84	4.33	2.56	.236	4.72	(4) M-12	4.62	3.29	1.39
12"	12.40	5.51	3.74	.236	6.49	(4) M-16	5.27	3.54	1.73
16"	15.75	6.30	4.92	.315	7.28	(4) M-16	5.63	3.74	1.89
18"	17.71	7.08	5.51	.315	8.07	(4) M-16	5.79	3.94	1.85
20"	19.68	7.87	6.30	.315	9.29	(4) M-20	6.39	4.17	2.16
24"	24.80	8.66	7.08	.394	10.26	(4) M-20	7.06	4.64	2.56

Note: Dimensions are for flatback-mounted chucks; on A, L and D mounted chucks dimension B15 will vary. All A & D-11 mount chucks have a 6.5" thru-hole as standard.

High Quality Steel Body Independent 4-Jaw Chucks

CUSHMAN CHUCKS SINCE 1862

High Quality, Steel Body Scroll Chuck

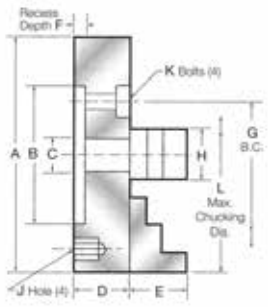
- Broadest line available
- Solid reversible or two-piece American Standard Jaws available as noted
- Straight recess
- Steel body
- Sizes 6" to 48"

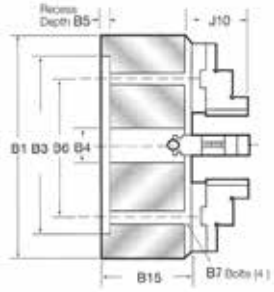


Series Y10-003



Series Y10-004





Series Y10-003 Steel Body Solid Reversible Jaws

Chuck Size	Model No.	Est. Gross Wgt. Lbs	Price
6"	Y10-003-06-000Z	16	1,185.00
8"	Y10-003-08-000Z	31	1,475.00
10"	Y10-003-10-000Z	43	1,680.00
12"	Y10-003-12-000Z	72	2,225.00
14"	Y10-003-14-000Z	126	2,680.00
16"	Y10-003-16-000Z	180	3,190.00

Series Y10-004 Steel Body American Standard 2-Piece Tongue & Groove Jaws

Chuck Size	Model No.	Est. Gross Wgt. Lbs	Price
16"	Y10-004-16-000Z	200	6,400.00
18"	Y10-004-18-000Z	310	8,800.00
20"	Y10-004-20-000Z	390	10,080.00
24"	Y10-004-24-000Z	475	12,320.00
28"	Y10-004-28-000Z	560	15,840.00
32"	Y10-004-32-000Z	715	18,480.00

Dimensional Data Y10-003 4-Jaw Independent Steel Body Chucks

Chuck Size	A	B	C	D	E	F	G	H	J	K	L	Gripping Capacity	
												Min.	Max.
6"	6.30	4.921	1.77	2.12	.87	.16	5.512	.94	M10	M10	7-1/8	5/16	5
8"	7.87	4.921	1.97	2.83	1.22	.16	5.512	1.26	M10	M10	9-1/4	5/16	7
10"	9.84	7.874	2.36	2.83	1.22	.19	8.819	1.26	M12	M12	12	1/2	8
12"	12.40	7.874	2.95	3.15	1.42	.19	8.819	1.42	M12	M12	14	1/2	10
14"	13.80	10.236	2.95	3.58	1.47	.19	11.26	1.42	-	M12	16	3/4	12
16"	15.75	10.236	2.95	3.58	1.47	.19	11.26	1.42	-	M12	18	3/4	14

Dimensional Data Y10-004 4-Jaw Independent Steel Body Chucks

Chuck Dia.	B1	B3	B4	B5	B6	B7	B15	J10
16"	15.8	7.874	4.055	.196	6.61	M-20	3.15	2.00
18"	17.7	7.874	4.055	.196	6.61	M-20	4.33	2.00
20"	19.6	9.842	4.055	.196	8.66	M-20	4.33	2.00
24"	23.6	9.842	4.055	.196	8.66	M-20	4.92	3.75
28"	27.5	9.842	4.72	.196	8.66	M-20	4.92	3.75
32"	31.5	9.842	5.31	.196	8.66	M-20	4.92	3.75

Mounting Plates for 4-Jaw Independent Chucks

Mounting plates are precision machined to suit the spindle nose of your machine.
Plates are stocked semifinished.
If ordering plates separately, specify the model number of your chuck so that Cushman can finish machine the adapter to suit your Cushman chuck.

Type D Mounting Plates - “Camlock"

	Model Number					
Spindle	6"	8"	10"	12"	14"	16"
D-3 Price	**Y03-0603020** 400.00	**Y03-0603020** 400.00	**Y03-1003020** 545.00	**Y03-1003020** 545.00	—	—
D-4 Price	**Y03-0603021** 400.00	**Y03-0603021** 400.00	**Y03-1003021** 545.00	**Y03-1003021** 545.00	—	—
D-5 Price	**Y03-0603022** 450.00	**Y03-0603022** 450.00	**Y03-1003022** 560.00	**Y03-1003022** 560.00	**Y03-1203022** 865.00	—
D-6 Price	—	**Y03-0603023** 515.00	**Y03-1003023** 580.00	**Y03-1003023** 580.00	**Y03-1203023** 865.00	**Y03-1203023** 865.00
D-8 Price	—	—	**Y03-1003024** 675.00	**Y03-1003024** 675.00	**Y03-1203024** 930.00	**Y03-1203024** 930.00
D-11 Price	—	—	—	—	**Y03-1203025** 1,040.00	**Y03-1203025** 1,040.00

Type A American Standard Short Taper A-1 & A-2 Spindles

	Model Number					
Spindle	6"	8"	10"	12"	14"	16"
A-5 Price	**Y03-0603010** 400.00	**Y03-0603010** 400.00	**Y03-1003010** 610.00	—	—	—
A-6 Price	**Y03-0603011** 400.00	**Y03-0603011** 400.00	**Y03-1003011** 640.00	**Y03-1003011** 640.00	—	—
A-8 Price	—	—	**Y03-1003012** 640.00	**Y03-1003012** 640.00	**Y03-1203012** 720.00	**Y03-1203012** 720.00
A-11 Price	—	—	—	—	**Y03-1203013** 930.00	**Y03-1203013** 930.00

Type L American Standard Long Taper Key Drive Spindle

	Model Number					
Spindle	6"	8"	10"	12"	14"	16"
L-00 Price	**Y03-0603031** 510.00	**Y03-0603031** 510.00	**Y03-1003031** 610.00	—	—	—
L-0 Price	**Y03-0603032** 510.00	**Y03-0603032** 510.00	**Y03-1003032** 610.00	**Y03-1003032** 610.00	**Y03-1203032** 880.00	—
L-1 Price	—	—	**Y03-1003033** 625.00	**Y03-1003033** 625.00	**Y03-1203033** 880.00	**Y03-1203033** 880.00
L-2 Price	—	—	**Y03-1003034** 945.00	**Y03-1003034** 945.00	**Y03-1203034** 980.00	**Y03-1203034** 980.00

Hardinge® 4° Taper Plate

	Model Number	
Spindle	6"	8"
4° Taper Price	**Y03-0604044** 610.00	**Y03-0604044** 610.00

Threaded Spindles

	Model Number		
Spindle	6"	8"	10"
1-1/2-8 Price	**Y03-0603041** 340.00	**Y03-0603041** 340.00	—
1-3/4-8 Price	**Y03-0603042** 390.00	**Y03-0603042** 390.00	—
2-1/4-8 Price	**Y03-0603043** 390.00	**Y03-0603043** 390.00	**Y03-1003043** 465.00

Special adapter plates available upon request. Specify chuck number and spindle nose specifications.

4-Jaw Extra Heavy Duty Independent Oil Country Chucks



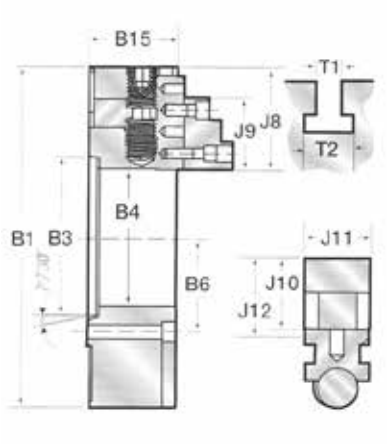
Extra Heavy-Duty Oil Country Chuck
Sizes 18" through 48"

- Forged steel body
- Extra heavy duty American Standard, hard top and master jaws
- Gripping surfaces serrated for more holding power
- Larger thru-holes standard
- T-Slots standard
- Direct A type mounting
- One year warranty
- Available in smaller and larger sizes on request

Series Y10-014

Chuck Size	Model No.	Mount	Thru Hole	Max RPMs	Approx. Weight	Price
18"	**Y10-014-18-A11Z**	A2-11	6.50	1100	350	12,880.00
21"	**Y10-014-21-A11Z**	A2-11	6.50	1000	540	12,560.00
21"	**Y10-014-21-A15Z**	A2-15	7.30	1000	533	12,560.00
24"	**Y10-014-24-A11Z**	A2-11	6.50	850	720	15,920.00
24"	**Y10-014-24-A15Z**	A2-15	10.50	850	700	15,920.00
24"	**Y10-014-24-A20Z**	A2-20	12.59	850	685	15,920.00
28"	**Y10-014-28-A15Z**	A2-15	10.50	700	905	19,840.00
28"	**Y10-014-28-A20Z**	A2-20	12.59	700	920	19,840.00
32"	**Y10-014-32-A15Z**	A2-15	10.50	600	1265	23,200.00
32"	**Y10-014-32-A20Z**	A2-20	12.59	600	1255	23,200.00
36"	**Y10-014-36-A20Z**	A2-20	12.59	600	1930	POA*
40"	**Y10-014-40-A20Z**	A2-20	12.59	500	2350	POA*
40"	**Y10-014-40-A28Z**	A2-28	18.50	500	2275	POA*

* Consult factory for 36", 40" and larger sizes.



Chuck Dimensions

Model No.	B1 O.D.	Mount Type	B3 Mount Recess	B4 Thru Hole	B6 Mounting Bolt Radius	B15 Body Width	J8 Master Jaw Length	J9 Top Jaw Length	J10 Top Jaw Height	J11 Top Jaw Width	J12 Top Jaw Height from Face	T1 T-Slot	T2 T-Slot
Y10-014-18-A11Z	18	A2-11	7.75	6.50	4.625	5.75	6.50	5.00	2.87	2.40	3.26	.855	1.565
Y10-014-21-A11Z	21	A2-11	7.75	6.57	4.625	5.75	6.50	5.00	2.87	2.40	3.26	.855	1.565
Y10-014-21-A15Z	21	A2-15	11.25	7.30	6.500	5.75	6.50	5.00	2.87	2.40	3.26	.855	1.565
Y10-014-24-A11Z	24	A2-11	7.75	6.57	4.625	6.10	8.00	5.00	3.26	3.00	3.62	.855	1.565
Y10-014-24-A15Z	24	A2-15	11.25	10.51	6.500	6.10	8.00	5.00	3.26	3.00	3.62	.855	1.565
Y10-014-24-A20Z	24	A2-20	16.25	12.59	9.125	6.10	8.00	5.00	3.26	3.00	3.62	.855	1.565
Y10-014-28-A15Z	28	A2-15	11.25	10.51	6.500	6.10	8.00	5.00	3.26	3.00	3.62	.855	1.565
Y10-014-28-A20Z	28	A2-20	16.25	12.59	9.125	6.10	8.00	5.00	3.26	3.00	3.62	.855	1.565
Y10-014-32-A15Z	32	A2-15	11.25	10.51	6.500	6.50	8.00	5.00	3.26	3.00	3.62	.855	1.565
Y10-014-32-A20Z	32	A2-20	16.25	12.59	9.125	6.50	8.00	5.00	3.26	3.00	3.62	.855	1.565
Y10-014-36-A20Z	36	A2-20	16.25	12.59	9.125	6.50	8.00	5.00	3.26	3.00	3.62	.855	1.565
Y10-014-40-A20Z	39.37	A2-20	16.25	12.59	9.125	6.50	8.00	5.00	3.26	3.00	3.62	.855	1.565
Y10-014-40-A28Z	39.37	A2-28	23.00	18.50	12.750	6.50	8.00	5.00	3.26	3.00	3.62	.855	1.565

NOTE: Not to be used for design purposes unless approved by the factory.

3-Jaw High Speed Power Chucks

High Quality, Lever Style, High Speed Power Chuck

Cushman thru-hole high speed chucks, hydraulic cylinders and tooling are integrated, power operated workholding packages. Acme serrated master jaws are standard on these thru-hole cylinder and chuck combinations.

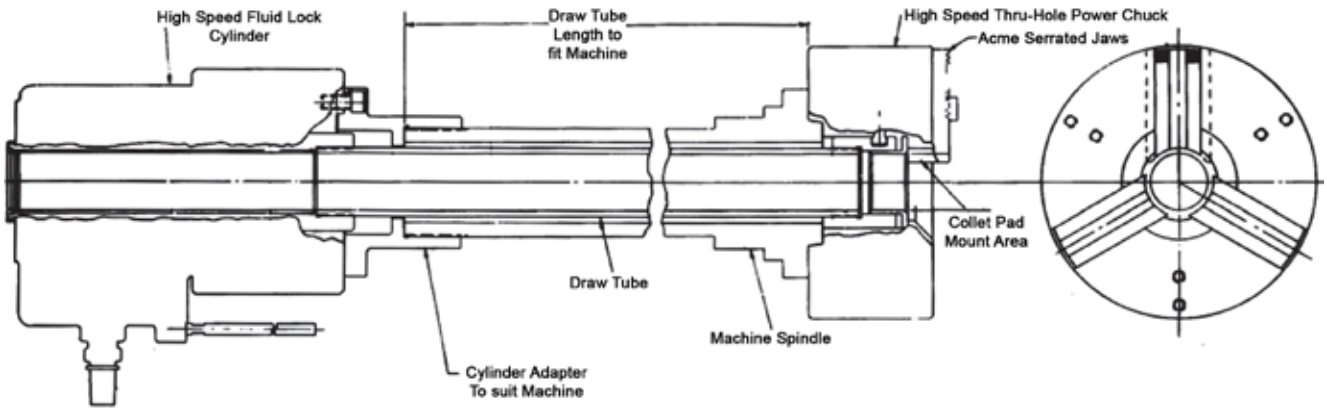
With a work clearance hole through both hydraulic cylinder and chuck, a Cushman high speed workholding package affords great flexibility for users of conventional bar and chucking machines as well as automatic N/C equipment.

Cushman high speed chucks counter centrifugal force using a system of counter weights to reduce the tendency of the jaws to release at higher speeds.

NOTE: Master Jaws, Levers, Lever Pins, Plungers, Bushings, and Counterweights are available from stock upon request.



All chucks are priced on application.



High-Speed Thru-Hole Chucks Series Y10-590

Model No.	Size (Inches)	Est. Gross Wgt. (lbs)	Thru Hole (Inches)	Recommended Operating Limits: Max Rec. Speed (R.P.M.) (2)	Max Rec. Draw-Tube Pull (lbs) (1)	Jaw Force @ Max Rec. D.T.P. (lbs/Jaw) (1)	Jaw Force @ Max Rec. D.T.P. (lbs/Jaw) (2)	Max Top Jaw WR for Rated Speed (lb.-in.) (2)
Y10-590-08-A06A	08	58	1.50	4,500	14,000	5,300	2,650	3.03
Y10-590-10-A06A	10	100	2.56	4,000	16,500	6,100	3,050	6.74
Y10-590-10-A08A	10	100	2.56	4,000	16,500	6,100	3,050	6.74
Y10-590-12-A08C	12	150	2.56	3,500	18,000	9,500	4,750	10.16
Y12-590-12-A08A	12	150	3.13	3,500	18,000	9,500	4,750	10.16
Y10-590-15-A08C	15	260	2.56	3,000	24,950	15,200	7,600	24.23
Y12-590-15-A08A	15	260	3.13	3,000	24,950	15,200	7,600	24.23
Y10-590-15-A11C	15	260	4.62	3,000	24,950	15,200	7,600	24.23
Y10-590-18-A11C	18	390	4.62	2,250	24,950	18,500	9,250	29.68

(1) Rated jaw force is based on static conditions (O.R.P.M.) with factory lubrication. Variations in jaw force due to changes in chuck, lubrication or both may occur. Jaw force may increase with use.This will not be detrimental to the chuck as long as the increase does not exceed 20%.

(2) Maximum recommended speeds are based on 50% jaw force retention at the stated WR (weight x radius to center-of-gravity) value. Specific applications must be reviewed by the user to establish that the jaw force is adequate for the loads to be encountered.
Higher speeds may be permissible but must be reviewed. Contact your Cushman representative.

Serrated Jaw Self-Centering Power Chucks

Type A American Standard Spindles

All power chucks are carefully designed and are built to provide accurate repetitive workholding. Bodies are of steel with all moving surfaces precision ground and all wearing surfaces flame-hardened and ground. Internal parts are protected by dust plates carefully fitted to the chuck face, thereby preventing the entry of chips and dirt. Reliability combined with heavy duty type performance enables these chucks to be used for most types of workholding over a long, rugged, trouble-free service life.

Note: Chucks listed below do not include top jaws. All chucks in sizes 12" and larger are furnished with T-slots.

†To order chucks with Draw Tubes, change the reference number as shown above each listing.
(Example: to order chuck number Y20-670-12-A06 with a draw tube, change the refrence number to Y20-673-12-A06.) Most of the chucks listed in this catalog are for direct mounting on Type A American Standard Spindles. Other chuck sizes and spindle seats are available on request.

Chucks with serrated master jaws are especially recommended for production and chucking operations where it is necessary to provide a wide range of jaw capacity, and is achieved by “stepping" the top jaw along the master jaw. One set of master jaw keys are furnished with each chuck; top jaws are not included. Balanced to eliminate vibration and chatter at high RPM.

All chucks are priced on application.

Series Y20-670 - 3-Jaw Chucks

American Standard Serrated Master Jaws*
(For Draw Tube type, change number to Y20-673)† See statement at top of page.

Series:
- Y20-670
- Y20-673



Size	Model Number	Size	Model Number	Size	Model Number	Size	Model Number
10"	**Y20-670-10-A06**	12"	**Y20-670-12-A08**	18"	**Y20-670-18-A11**	21"	**Y20-670-21-A15**
10"	**Y20-670-10-A08**	15"	**Y20-670-15-A08**	18"	**Y20-670-18-A15**	24"	**Y20-670-24-A15**
12"	**Y20-670-12-A06**	15"	**Y20-670-15-A11**	21"	**Y20-670-21-A11**		

**Accralock Angular Serrated Master Jaws can be furnished at slight extra cost.*

Series Y20-671 - 2-Jaw Chucks

American Standard Serrated Master Jaws*
(For Draw Tube type, change number to Y20-674)† See statement at top of page.

Series:
- Y20-671
- Y20-674



Size	Model Number	Size	Model Number	Size	Model Number	Size	Model Number
10"	**Y20-671-10-A06**	12"	**Y20-671-12-A08**	18"	**Y20-671-18-A11**	21"	**Y20-671-21-A15**
10"	**Y20-671-10-A08**	15"	**Y20-671-15-A08**	18"	**Y20-671-18-A15**	24"	**Y20-671-24-A15**
12"	**Y20-671-12-A06**	15"	**Y20-671-15-A11**	21"	**Y20-671-21-A11**		

**Accralock Angular Serrated Master Jaws can be furnished at slight extra cost.*

Series Y20-672 - 2 & 3-Jaw Chucks

American Standard Serrated Master Jaws*
(For Draw Tube type, change number to Y20-675)† See statement at top of page.

Series:
- Y20-672
- Y20-675



Size	Model Number	Size	Model Number	Size	Model Number	Size	Model Number
10"	**Y20-672-10-A06**	15"	****Y20-672-15-A08**	18"	**Y20-672-18-A15**	21"	**Y20-672-21-A15**
10"	**Y20-672-10-A08**	15"	**Y20-672-15-A11**	21"	**Y20-672-21-A11**	24"	**Y20-672-24-A15**
12"	**Y20-672-12-A08**	18"	**Y20-672-18-A11**				

**Accralock Angular Serrated Master Jaws can be furnished at slight extra cost.*
***Adapter for mounting included.*

Non-Adjustable Jaw Self-Centering Power Chucks

CUSHMAN CHUCKS SINCE 1862

Type A American Standard Spindles

All power chucks are carefully designed and are built to provide accurate repetitive workholding. Bodies are of steel with all moving surfaces precision ground and all wearing surfaces flame-hardened and ground. Internal parts are protected by dust plates carefully fitted to the chuck face, thereby preventing the entry of chips and dirt. Reliability combined with heavy duty type performance enables these chucks to be used for most types of workholding over a long, rugged, trouble-free service life.

Note: Chucks listed below do not include top jaws. All chucks in sizes 12" and larger are furnished with T-slots.

†To order chucks with Draw Tubes, change the reference number as shown above each listing.
(Example: to order chuck number Y20-620-12-A06 with a draw tube, change the refrence number to Y20-623-12-A06.) Most of the chucks listed in this catalog are for direct mounting on Type A American Standard Spindles. Other chuck sizes and spindle seats are available on request.

Recommended for general manufacturing service where adjustability of individual jaws is not required. Particularly suited for repetitive operations, especially heavy workpieces. Provides a simple and economical method of workholding, eliminating costly special devices. Balanced to eliminate vibration and chatter at high RPM.

All chucks are priced on application.

Series Y20-620 - 3-Jaw Chucks

American Standard Tongue & Groove Master Jaws
(For Draw Tube type, change number to Y20-623)† See statement at top of page.

Series:
- Y20-620
- Y20-623



Size	Model Number	Size	Model Number	Size	Model Number	Size	Model Number
6"	Y20-620-06-A05	10"	Y20-620-10-A06	15"	Y20-620-15-A08	21"	Y20-620-21-A11
6"	Y20-620-06-A06	10"	Y20-620-10-A08	15"	Y20-620-15-A11	21"	Y20-620-21-A15
8"	Y20-620-08-A06	12"	Y20-620-12-A06	18"	Y20-620-18-A11	24"	Y20-620-24-A15
8"	Y20-620-08-A08	12"	Y20-620-12-A08	18"	Y20-620-18-A15		

Series Y20-621 - 2-Jaw Chucks

American Standard Tongue & Groove Master Jaws
(For Draw Tube type, change number to Y20-624)† See statement at top of page.

Series:
- Y20-621
- Y20-624



Size	Model Number	Size	Model Number	Size	Model Number	Size	Model Number
6"	Y20-621-06-A05	10"	Y20-621-10-A06	15"	Y20-621-15-A08	21"	Y20-621-21-A11
6"	Y20-621-06-A06	10"	Y20-621-10-A08	15"	Y20-621-15-A11	21"	Y20-621-21-A15
8"	Y20-621-08-A06	12"	Y20-621-12-A06	18"	Y20-621-18-A11	24"	Y20-621-24-A15
8"	Y20-621-08-A08	12"	Y20-621-12-A08	18"	Y20-621-18-A15		

Series Y20-622 - 2 & 3-Jaw Chucks

American Standard Tongue & Groove Master Jaws
(For Draw Tube type, change number to Y20-625)† See statement at top of page.

Series:
- Y20-622
- Y20-625



Size	Model Number	Size	Model Number	Size	Model Number	Size	Model Number
8"	Y20-622-08-A06	10"	Y20-622-10-A08	15"	Y20-622-15-A11	21"	Y20-622-21-A11
8"	Y20-622-08-A08	12"	Y20-622-12-A08	18"	Y20-622-18-A11	21"	Y20-622-21-A15
10"	Y20-622-10-A06	15"	**Y20-622-15-A08	18"	Y20-622-18-A15	24"	Y20-622-24-A15

***Adapter for mounting included.*

Adjustable Jaw Self-Centering Power Chucks

Type A American Standard Spindles

All power chucks are carefully designed and are built to provide accurate repetitive workholding. Bodies are of steel with all moving surfaces precision ground and all wearing surfaces flame-hardened and ground. Internal parts are protected by dust plates carefully fitted to the chuck face, thereby preventing the entry of chips and dirt. Reliability combined with heavy duty type performance enables these chucks to be used for most types of workholding over a long, rugged, trouble-free service life.

Note: Chucks listed below do not include top jaws. All chucks in sizes 12" and larger are furnished with T-slots.

†To order chucks with Draw Tubes, change the reference number as shown above each listing.
(Example: to order chuck number Y20-640-12-A06 with a draw tube, change the refrence number to Y20-643-12-A06.) Most of the chucks listed in this catalog are for direct mounting on Type A American Standard Spindles. Other chuck sizes and spindle seats are available on request.

Self-centering Power Chucks with American Standard Master Jaws providing independent jaw action are simple and quick to adjust. This series of chucks is designed for accurate, expeditious holding of irregularly shaped workpieces. Initial accuracy maintained on repetitive chucking operations. Balanced to eliminate vibration and chatter at high RPM.

All chucks are priced on application.

Series Y20-640 - 3-Jaw Chucks

American Standard Tongue & Groove Master Jaws
(For Draw Tube type, change number to Y20-643)† See statement at top of page.

Series:
- Y20-640
- Y20-643



Size	Model Number	Size	Model Number	Size	Model Number	Size	Model Number
8"	Y20-640-08-A06	12"	Y20-640-12-A06	18"	Y20-640-18-A11	21"	Y20-640-21-A15
8"	Y20-640-08-A08	12"	Y20-640-12-A08	18"	Y20-640-18-A15	24"	Y20-640-24-A11
10"	Y20-640-10-A06	15"	Y20-640-15-A08	21"	Y20-640-21-A11	24"	Y20-640-24-A15
10"	Y20-640-10-A08	15"	Y20-640-15-A11				

Series Y20-641 - 2-Jaw Chucks

American Standard Tongue & Groove Master Jaws
(For Draw Tube type, change number to Y20-644)† See statement at top of page.

Series:
- Y20-641
- Y20-644



Size	Model Number	Size	Model Number	Size	Model Number	Size	Model Number
8"	Y20-641-08-A06	12"	Y20-641-12-A06	15"	Y20-641-15-A11	21"	Y20-641-21-A11
8"	Y20-641-08-A08	12"	Y20-641-12-A08	18"	Y20-641-18-A11	21"	Y20-641-21-A15
10"	Y20-641-10-A06	15"	Y20-641-15-A08	18"	Y20-641-18-A15	24"	Y20-641-24-A11
10"	Y20-641-10-A08						

Series Y20-642 - 2 & 3-Jaw Chucks

American Standard Tongue & Groove Master Jaws
(For Draw Tube type, change number to Y20-645)† See statement at top of page.

Series:
- Y20-642
- Y20-645



Size	Model Number	Size	Model Number	Size	Model Number	Size	Model Number
8"	Y20-642-08-A06	12"	Y20-642-12-A08	18"	Y20-642-18-A11	21"	Y20-642-21-A15
8"	Y20-642-08-A08	15"	**Y20-642-15-A08	18"	Y20-642-18-A15	24"	Y20-642-24-A11
10"	Y20-642-10-A06	15"	Y20-642-15-A11	21"	Y20-642-21-A11	24"	Y20-642-24-A15
10"	Y20-642-10-A08						

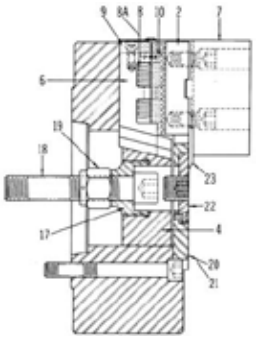
***Adapter for mounting included.*

Self-Centering Power Chucks Component Parts List

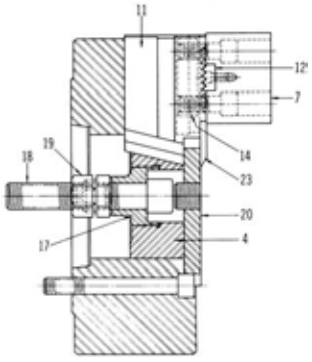
CUSHMAN CHUCKS SINCE 1862

Serrated/Adjustable/Non-Adjustable Jaw Types

Series: Y20-620; Y20-621; Y20-622; Y20-623; Y20-624; Y20-625
Series: Y20-670; Y20-671; Y20-672; Y20-673; Y20-674; Y20-675
Series: Y20-640; Y20-641; Y20-642; Y20-643; Y20-644; Y20-645

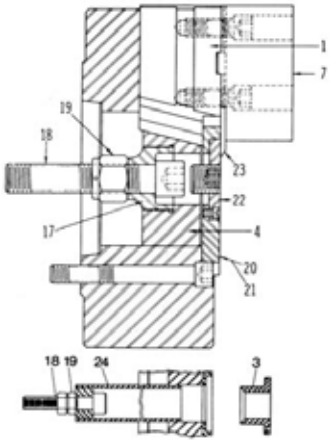


Adjustable Jaw Type



Serrated Jaw Type

Non-Adjustable Jaw Type



Draw Tube Assembly

Chuck Size (Inches)	Component Model Numbers										
	1	2	3	4	6	8	9	10	11	12	14
	Master Jaws NonAdjustable Tongue and Groove	Master Jaws Adjustable Tongue and Groove	Center Hole Bushing	Wedge	Screw Carrier	Adjusting Screw	Screw Locking Plate	Screw Locking Washer	Master Jaw Acme Serrated	Acme Seratted Jaw Key	Jaw Nut
6"	Y03200269F0	—	Y2500389300	Y2400389000	—	—	—	—	—	—	—
8"	Y24009673F0	Y25009552F0	Y2500427000	Y2400426800	Y04207492F0	Y3500487400	Y3500487500	Y3500487600	—	—	—
10"	Y23009782F0	Y23009675F0	Y3500593700	Y2400431400	Y0420749300	Y2500847500	Y2500847600	Y3500486000	Y23010917F0	Y2501091200	Y2501091800
12" A-6 Spindle	Y23009632F0	Y23009681F0	Y3500593700	Y2400431400	Y04207495F0	Y3500486400	Y2500847600	Y3500486000	Y23013875F0	Y2501091200	Y2501091100
12" A-8 Spindle	Y23009685F0	Y23009681F0	Y2500430400	Y2400429900	Y04207495F0	Y3500486400	Y2500836600	Y3500486000	Y23010909F0	Y2501091200	Y2501091100
15"	Y24011821F0	Y23009710F0	Y2501239300	Y2401223100	Y04207496F0	Y3500488600	Y2500836600	Y3500488700	Y23010906F0	Y2501090700	Y2501091600
18"	Y23009718F0	Y23009715F0	Y2500447400	Y2400447200	Y04214857F0	Y3500567400	Y2500836600	Y3500488700	Y23010914F0	Y2501090700	Y2501091600
21"	Y03204131F0	Y03204138F0	Y0520329800	Y2301778900	Y0421496100	Y3500497900	Y3500741800	Y3500488700	Y03204613F0	Y2501119900	Y2501120000
24"	Y03205889F0	Y03203276	Y0520329800	Y2301778900	Y0421541900	Y3500497900	Y3500741800	Y3500488700	Y03205381F0	Y2501119900	Y2501120000

Chuck Size (Inches)	Component Model Numbers									
	15	16	17	18	19	20	21	22	23	24
	Hard Stepped Top Jaw	Wrench	Wedge Plug	Draw Rod Stud	Draw Rod Lock Nut	Protector Plate	Protector Plate with Cover Plate Recess	Cover Plate	Chip Plates	Draw Tube Assembly
6" A5	—	—	Y2500448100	Y9820645100	Y9823806400	—	Y2400929900	Y2500520400	Y0520027000	Y2601302300
6" A6	—	—	Y2500448100	Y9820645100	Y9823806400	—	Y2400389200	Y2500520400	Y0520027000	Y2601302300
8" A6	—	Y2601252300	Y2500448200	Y9820645100	Y9823806400	—	Y3400447200	Y2500520500	Y2500955500	Y2601302400
8" A8	—	Y2601252300	Y2500448200	Y9820645100	Y9823806400	—	Y3400831300	Y2500520500	Y2500955500	Y2601302400
10" A6	—	Y2601250400	Y2500448300	Y9820644700	Y9820644500	—	Y3400318500	Y2500520600	Y2500967700	Y2601302500
10" A8	—	Y2601250400	Y2500448300	Y9820644700	Y9820644500	—	Y3400451000	Y2500520600	Y2500967700	Y2601302500
12" A6	Y24010957F0	Y2601250400	Y2500448300	Y9820644700	Y9820644500	—	Y3400318500	Y2500520600	Y2500967700	Y2601302500
12" A8	Y24010957F0	Y2601250400	Y2500448400	Y9820644900	Y9820644500	—	Y3400447700	Y2500524400	Y2500967700	Y2601302600
15" A8	Y24011058F0	Y2601405300	Y3500238200	Y9820644900	Y9820645000	—	Y2401144100	Y2500520800	Y2501143900	Y2601302700
15" A11	Y24011058F0	Y2601405300	Y3500238200	Y9820644900	Y9820645000	—	Y2401225200	Y2500520800	Y2501143900	Y2601302700
18"	Y24011058F0	Y2601405300	Y3500447500	Y9820644900	Y9820645000	—	Y2401180300	Y2500520800	Y2500971900	Y2601302800
21" A11	Y24011205F0	Y2601405300	Y2500448600	Y9820644900	Y9820645000	Y0420298100	—	—	Y0520449300	Y2620330200
21" A15	Y24011205F0	Y2601405300	Y2500448600	Y9820644900	Y9820645000	Y0420426800	—	—	Y0520449300	Y2620330200
24" A11	Y24011205F0	Y2601405300	Y2500448600	Y9820644900	Y9820645000	Y0420298100	—	—	Y0520449300	Y2620330200
24" A15	Y24011205F0	Y2601405300	Y2500448600	Y9820644900	Y9820645000	Y0420426800	—	—	—	Y2620330200

Workholding Power Chucks

Direct replacement chucks for Kitagawa B200

- Sizes 6" through 12"
- Easy retrofit
- Interchangeable top tooling 1.5mm x 60° serrations
- High speed
- Full 1 year warranty on parts and labor
- Hardened jaw ways, master jaws and internal parts
- Large thru-holes, plus quick change cover plate for closed center applications
- Chuck accuracy +/- .0005" repeatability
- Great price and value



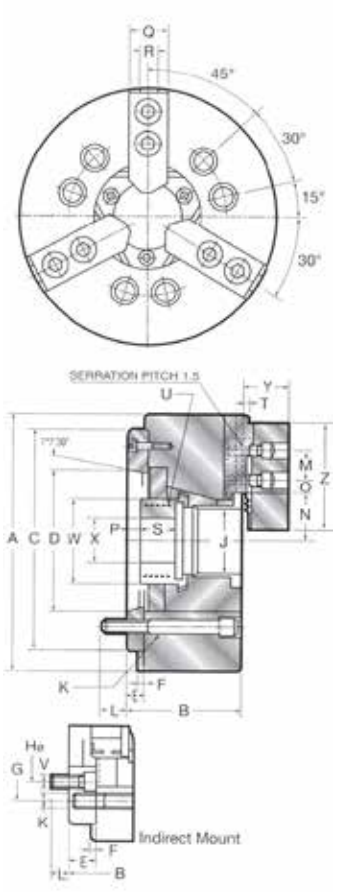
Series Y20-679

Chuck Size	Model Number	Mount	Thru Hole Dia.	Jaw Stroke Dia.	Sleeve Stroke	Gripping Capacity		Draw Bar Pull lb/f	Grip Force lb/f	Max RPM	Wt Lbs	Price
						Max	Min.					
6"	**Y20-679-06A5DZ**	A2-5	1.771	.216	.472	6.65	.590	4,945	12,813	6000	30	2,480.00
8"	**Y20-679-08A5IZ**	A2-5	2.047	.291	.630	8.27	.512	7,824	19,332	5000	52	2,800.00
8"	**Y20-679-08A6DZ**	A2-6	2.047	.291	.630	8.27	.512	7,824	19,332	5000	52	2,800.00
10"	**Y20-679-10A6IZ**	A2-6	2.952	.346	.748	10.00	1.220	9,667	24,953	4200	91	3,745.00
10"	**Y20-679-10A8DZ**	A2-8	2.952	.346	.748	10.00	1.220	9,667	24,953	4200	91	3,745.00
12"	**Y20-679-12A6IZ**	A2-6	3.582	.417	.905	11.97	1.653	12,363	32,372	3300	148	4,640.00
12"	**Y20-679-12A8DZ**	A2-8	3.582	.417	.905	11.97	1.978	12,363	32,372	3300	141	4,640.00
12"	**Y20-679-12A11IZ**	A2-11	3.582	.417	.905	11.97	1.978	12,363	32,372	3300	141	4,640.00

I - Indirect Mount D - Direct Mount

Dimensional Data

Model	06A5D	08A5I	08A6D	10A6I	10A8D	12A6I	12A8D	12A11I
A	6.63	8.26	8.26	10.00	10.00	11.97	11.97	11.97
B	3.582	-	4.055	4.724	4.449	5.079	4.832	-
C	5.512	6.693	6.693	8.661	8.661	8.661	8.661	8.661
D	3.250	3.250	4.188	4.188	5.501	4.188	5.501	7.751
E	.590	-	.669	.984	.708	.984	.708	-
F	.167	.167	.167	.167	.167	.236	.236	.236
G	-	5.252	5.252	6.748	6.748	6.748	6.748	6.748
H	4.126	4.126	-	5.252	6.748	5.252	6.748	9.250
J	1.771	2.047	2.047	2.953	2.953	3.582	3.582	3.582
K	6-M10	6-M12	6-M12	6-M16	6-M16	6-M16	6-M16	6-M16
L	.630	-	.708	.728	.945	.728	984	-
M	.787	.984	.984	1.181	1.181	1.181	1.181	1.181
N max	1.259	1.523	1.523	2.007	2.007	2.413	2.413	2.413
min	1.151	1.378	1.378	1.834	1.834	2.204	2.204	2.204
O max	.895	1.171	1.171	1.329	1.326	1.801	1.801	1.801
min	.364	.581	.581	.581	.581	.620	.620	.620
P max	1.023	-	1.240	1.319	1.043	1.299	1.299	1.299
min	.551		.610	.571	.295	.394	.394	.394
Q	1.220	1.378	1.378	1.575	1.575	1.968	1.968	1.968
R	.472	.551	.551	.630	.630	.827	.827	.827
S	.748	.807	.807	.984	.984	1.102	1.102	1.102
T	.0789	.0789	.0789	.0789	.0789	.0789	.0789	.0789
U max	M55x2.0	M60x2.0	M60x2.0	M85x2.0	M85x2.0	M90x2.0	M100x2.0	-
V	M10	M10	-	6-M12	-	6-M12	-	6-M20
W	2.362	2.598	2.598	3.701	3.701	4.252	4.252	4.252
X	.787	1.181	1.181	1.771	1.771	1.968	1.968	1.968
Y	1.142	1.535	1.535	1.693	1.693	2.009	2.009	2.009
Z	2.834	3.740	3.740	4.331	4.331	4.370	4.370	4.370



Workholding Large-Diameter Open Center Power Chucks

CUSHMAN CHUCKS SINCE 1862



Direct replacement chucks for Kitagawa B200

- Sizes 15" through 24"
- Easy retrofit
- Interchangeable top tooling 1.5mm x 60° serrations 15" and 18" chucks, and 3mm x 60° on 21" and 24" chucks
- High speed
- Full 1 Year warranty on parts and labor
- Hardened jaw ways, master jaws and internal parts
- Large thru-holes, plus quick change cover plate for closed center applications
- Chuck accuracy +/- .0005" repeatability

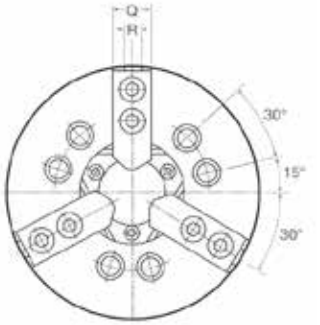
Series Y20-679

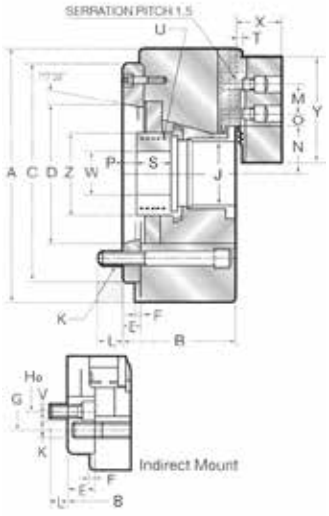
Chuck Size	Model Number	Mount	Thru Hole Dia.	Jaw Stroke Dia.	Sleeve Stroke	Gripping Capacity		Draw Bar Pull lb/f	Grip Force lb/f	Max RPM	Wt Lbs	Price
						Max	Min.					
15"	**Y20-679-15A8IZ**	A2-8	4.626	.417	.905	15.00	1.181	15,961	40,465	2500	295	10,800.00
15"	**Y20-679-15A11DZ**	A2-11	4.626	.417	.905	15.00	1.181	15,961	40,465	2500	280	10,800.00
18"	**Y20-679-18A11DZ**	A2-11	4.626	.417	.905	17.71	1.181	15,961	40,465	2000	392	15,920.00
21"	**Y20-679-21A11IZ**	A2-11	5.512	.417	.905	20.86	3.425	20,231	43,940	1700	542	20,400.00
21"	**Y20-679-21A15DZ**	A2-15	5.512	.417	.905	20.86	3.425	20,231	43,940	1700	542	20.400.00
24"	**Y20-679-24A11IZ**	A2-11	6.496	.417	.905	24.01	4.331	20,231	43,940	1400	670	25,840.00
24"	**Y20-679-24A15DZ**	A2-15	6.496	.417	.905	24.01	4.331	20,231	43,940	1400	670	25,840.00

I - Indirect Mount D - Direct Mount

Dimensional Data

Model	15A8I	15A11D	18A11D	21A11I	21A15D	24A11I	24A15D
A	15.00	15.00	17.72	20.86	20.86	24.01	24.01
B	6.299	5.860	5.860	6.338	6.338	6.693	6.693
C	11.811	11.811	14.960	14.960	14.960	14.960	14.960
D	5.501	7.751	7.751	11.251	11.251	11.251	11.251
E	1.299	.866	.866	.866	1.063	.866	1.063
F	.234	.234	.234	.234	.234	.234	.234
G	9.252	9.252	9.250	13.000	13.000	13.000	13.000
Hø	6.748	9.552	-	9.252	13.000	9.252	13.000
J	4.626	4.626	4.626	5.511	5.511	6.496	6.496
K	6-M20	6-M20	6-M20	6-M22	6-M22	6-M22	6-M22
L	.945	1.102	1.102	1.338	1.338	1.378	1.378
M	1.693	1.693	1.693	2.362	2.362	2.362	2.362
N max min	3.228 3.016	3.228 3.016	3.228 3.016	3.878 3.669	3.878 3.669	4.252 4.043	4.252 4.043
O max min	1.722 .718	1.722 .718	3.081 .718	3.445 .846	3.445 .846	4.626 .846	4.626 .846
P max min	1.732 .827	1.142 .236	1.299 .394	1.496 .590	1.496 .590	1.850 .945	1.850 .945
Q	.244	.244	.244	.256	.256	.256	.256
R	.866	.866	.866	.866	.866	.866	.866
S	1.555	1.555	1.555	1.555	1.555	1.575	1.575
T	.197	.197	.197	.197	.197	.197	.197
U max	M130x2.0	M130x2.0	M130x2.0	M155x2.0	M155x2.0	M175x2.0	M175x2.0
V	6-M16	-	-	6-M20	-	6-M20	-
W	2.362	2.362	2.362	3.146	3.146	3.146	3.146
X	2.756	2.756	2.756	2.874	2.874	2.874	2.874
Y	6.496	6.496	6.496	7.046	7.046	7.046	7.046
Z	5.472	5.472	5.472	6.693	6.693	7.362	7.362





Workholding Large Bore Power Chucks

- Sizes 6" through 12"
- Easy retrofit
- Interchangeable top tooling 1.5mm x 60° serrations
- High Speed
- Full 1 Year warranty on parts and labor
- Hardened jaw ways, master jaws and internal parts
- Super large thru-hole, plus quick change cover plate for closed center applications
- Chuck accuracy +/- .0005" repeatability

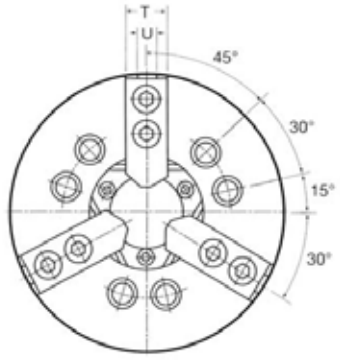


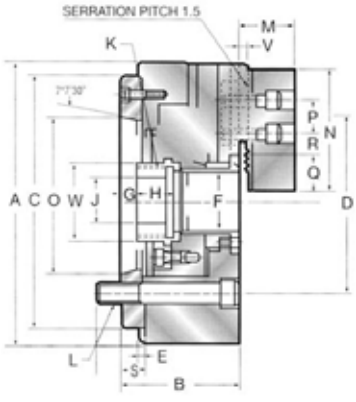
Series Y20-689

Chuck Size	Model Number	Mount	Thru Hole Dia.	Jaw Stroke Dia.	Sleeve Stroke	Gripping Capacity		Draw Bar Pull lb/f	Grip Force lb/f	Max RPM	Wt Lbs	Price
						Max	Min.					
6"	**Y20-689-06A5Z**	A2-5	2.047	.252	.591	6.89	.649	5,624	12,815	6000	26	3,040.00
8"	**Y20-689-08A5Z**	A2-5	2.598	.291	.689	8.27	.905	7,928	19,554	5000	51	3,440.00
8"	**Y20-689-08A6Z**	A2-6	2.598	.291	.689	8.27	.905	7,928	19,554	5000	51	3,440.00
10"	**Y20-689-10A6Z**	A2-6	3.030	.346	.748	10.00	1.220	24,953	19,554	4200	89	4,080.00
10"	**Y20-689-10A8Z**	A2-8	3.030	.346	.748	10.00	1.220	24,953	19,554	4200	89	4,080.00
12"	**Y20-689-12A8Z**	A2-8	4.055	.417	.905	12.40	2.126	12,363	32,376	2800	123	5,040.00
12"	**Y20-689-12A11Z**	A2-11	4.055	.417	.905	12.40	2.126	12,363	32,376	2800	123	5,040.00

Dimensional Data

Model	06A5	08A5	08A6	10A6	10A8	12A8	12A11
A	6.889	8.267	8.267	10.00	10.00	12.401	12.401
B	4.173	5.354	5.118	4.724	4.449	5.512	5.827
C	5.512	6.693	6.693	8.661	8.661	11.811	11.811
D	4.126	5.252	5.252	6.748	6.748	9.252	9.252
E	.197	.197	.197	.167	.167	.236	.236
F	2.204	2.598	2.598	3.033	3.033	4.055	4.055
G max min	.551 -.039	.275 -.354	.275 -.354	1.319 .571	1.319 .295	.315 -.590	.315 -.590
H	.689	1.082	1.082	.984	.984	1.102	1.102
J	.787	1.578	1.578	1.771	1.771	1.968	1.968
K	M60x2.0	M74x1.5	M74x1.5	M85x2.0	M85x2.0	M112x2.0	M112x2.0
L	6-M10x95	6-M12x120	6-M12x120	6-M16	6-M16	6-M20x130	6-M20x130
M	1.279	1.535	1.535	1.693	1.693	1.988	1.988
N	2.834	3.740	3.740	6.748	6.748	4.370	4.370
O	3.201	3.201	4.188	4.188	5.501	5.501	7.751
P	.787	.984	1.181	1.181	1.181	1.181	1.181
Q max min	1.496 1.370	1.799 1.653	1.799 1.653	2.007 1.834	2.007 1.834	2.649 2.441	2.649 2.441
R max min	.856 .903	.935 .462	.935 .462	1.329 .581	1.801 .620	1.801 .620	1.801 .620
S	1.181	1.969	1.733	.984	.708	1.417	1.732
T	1.229	1.378	1.378	1.575	1.575	1.968	1.968
U	.472	.551	.551	.630	.630	.708	.708
V	.078	.078	.078	.078	.078	.078	.078
W	2.559	3.149	3.149	3.701	3.701	4.882	4.882





Workholding 2 Jaw High Speed Open Center Power Chuck

- 1.5mm x 60° master jaw
- Repeatability +/- .0005"
- Large thru-hole
- Hardened jaw ways and all internal parts
- All steel body
- High RPM

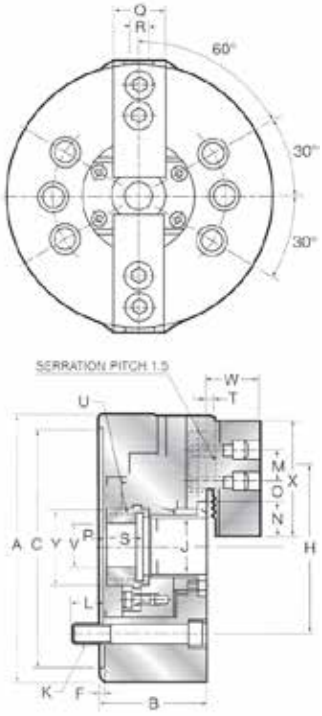


Series Y20-687

Chuck Size	Model Number	Mount	Thru Hole Dia.	Jaw Stroke Dia.	Sleeve Stroke	Gripping Capacity		Draw Bar Pull lb/f	Grip Force lb/f	Max RPM	Wt Lbs	Price
						Max	Min.					
6"	**Y20-687-06A5DZ**	A2-5	1.771	.216	.472	6.65	.590	4,945	12,813	6000	30	4,560.00
8"	**Y20-687-08A5IZ**	A2-5	2.047	.291	.630	8.27	.512	7,824	19,332	5000	52	5,520.00
8"	**Y20-687-08A6DZ**	A2-6	2.047	.291	.630	8.27	.512	7,824	19,332	5000	52	5,520.00
10"	**Y20-687-10A6IZ**	A2-6	2.952	.346	.748	10.00	1.220	9,667	24,953	4200	91	6,320.00
10"	**Y20-687-10A8DZ**	A2-8	2.952	.346	.748	10.00	1.220	9,667	24,953	4200	91	6,320.00
12"	**Y20-687-12A6IZ**	A2-6	3.582	.417	.905	11.97	1.653	12,363	32,372	3300	148	7,600.00
12"	**Y20-687-12A8DZ**	A2-8	3.582	.417	.905	11.97	1.978	12,363	32,372	3300	141	7,600.00
12"	**Y20-687-12A11IZ**	A2-11	3.582	.417	.905	11.97	1.978	12,363	32,372	3300	141	8,400.00

Dimensional Data

Model	06A5D	08A5I	08A6D	10A6I	10A8D	12A6I	12A8D	12A11I
A	6.63	8.26	8.26	10.00	10.00	11.97	11.97	11.97
B	3.582	-	4.055	4.724	4.449	5.079	4.832	-
C	5.512	6.693	6.693	8.661	8.661	8.661	8.661	8.661
D	3.201	3.201	4.188	4.188	5.501	4.118	5.501	7.751
E	.590	-	.669	.984	.708	.984	.708	-
F	.167	.167	.167	.167	.167	.236	.236	.236
G	4.126	5.252	5.252	6.748	6.748	6.748	6.748	6.748
H	4.126	-	5.252	5.252	6.748	5.252	6.748	9.250
J	1.771	2.047	2.047	2.953	2.953	3.582	3.582	3.582
K	6-M10	6-M12	6-M12	6-M16	6-M16	6-M16	6-M16	6-M16
L	.630	-	.708	.728	.945	.728	.984	-
M	.787	.984	.984	1.181	1.181	1.181	1.181	1.181
N max min	1.259 1.151	1.523 1.378	1.523 1.378	2.007 1.834	2.007 1.834	2.413 2.204	2.413 2.204	2.413 2.204
O max min	.895 .364	1.171 .581	1.171 .581	1.329 .581	1.326 .581	1.801 .620	1.801 .620	1.801 .620
P max min	1.023 .551	- -	1.240 .610	1.319 .571	1.043 .295	1.299 .394	1.299 .394	1.299 .394
Q	1.220	1.378	1.378	1.575	1.575	1.968	1.968	1.968
R	.472	.551	.551	.630	.630	.827	.827	.827
S	.748	.807	.807	.984	.984	1.102	1.102	1.102
T	.0789	.0789	.0789	.0789	.0789	.0789	.0789	.0789
U max	M55x2.0	M60x2.0	M60x2.0	M85x2.0	M85x2.0	M90x2.0	M100x2.0	-
V	-	6-M10	-	6-M12	-	6-M12	-	6-M20
W	2.362	2.598	2.598	3.701	3.701	4.252	4.252	4.252
X	.787	1.181	1.181	1.771	1.771	1.968	1.968	1.968
Y	1.142	1.535	1.535	1.693	1.693	2.009	2.009	2.009



Workholding 2/3 Jaw Thru-Hole Power Chuck

- Used as 2 jaw or 3 jaw power chuck
- Thru-hole and long stroke
- Adapter mounted
- Serration pitch 1.5mm 8", 10" & 12" - 3mm 15"
- Larger diameters available upon request

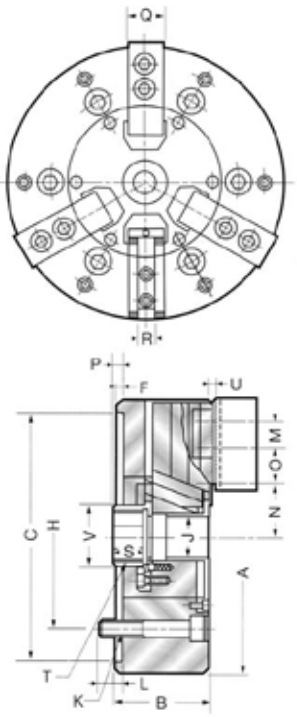


Series Y20-677

Chuck Size	Model Number	Jaw Stroke Dia.	Sleeve Stroke	Gripping Diameter		Maximum Pull		Max Grip		Max RPM	Wt Lbs	Price
				2 Jaw Max	3 Jaw Min	2 Jaw (lbs)	3 Jaw (lbs)	2 Jaw (lbs)	3 Jaw (lbs)			
6"	**Y20-677-08-A5Z**	.378	.709	7.87	1.181	3,306	4,409	7,275	9,700	3000	44	10,000.00
8"	**Y20-677-08-A6Z**	.378	.709	7.87	1.181	3,306	4,409	7,275	9,700	3000	44	10,000.00
10"	**Y20-677-10-A6Z**	.728	.984	9.84	1.181	5,070	7,716	9,038	13,668	3000	70	11,600.00
10"	**Y20-677-10-A8Z**	.728	.984	9.84	1.181	5,070	7,716	9,038	13,668	3000	70	11,600.00
12"	**Y20-677-12-A8Z**	.803	1.102	11.81	1.967	6,613	9,920	11,684	17,636	2500	121	14,000.00
12"	**Y20-677-12-A11Z**	.803	1.102	11.81	1.967	6,613	9,920	11,684	17,636	2500	121	14,000.00
15"	**Y20-677-15-A8Z**	.803	1.102	13.78	2.756	8,818	13,227	15,652	23,148	2000	218	21,600.00
15"	**Y20-677-15-A11Z**	.803	1.102	13.78	2.756	8,818	13,227	15,652	23,148	2000	218	21,600.00

Dimensional Data

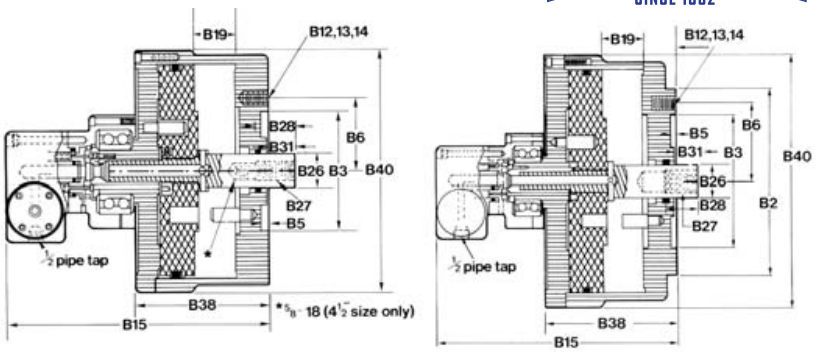
Model	8	10	12	15
A	8.26	10	11.97	15
B	2.874	3.346	3.819	4.803
C	7.480	9.055	11.024	13.760
F	.197	.197	.197	.276
H	5.250	6.750	7.874	9.843
J	1.378	1.575	2.165	2.953
K	6-M12	6-M16	6-M20	6-M20
L	.787	.866	.984	1.063
M	.984	1.181	1.181	1.969
N max min	1.803 1.614	2.020 1.661	2.891 2.189	3.378 2.976
O max min	1.181 .295	1.654 .374	1.831 .413	2.608 .591
P max min	.827 .118	0 -.984	0 -1.102	0 -1.102
Q	1.181	1.378	1.575	1.575
R	.475	.630	.630	.826
S	1.063	1.102	1.181	1.575
T	M42	M50	M65	M85
U	.197	.197	.197	.197
V	1.890	2.283	2.953	3.740



Air Cylinder

These double-acting, rotating, aluminum body, air operated cylinders are especially designed for power chuck actuation.

Trouble-free service is due to precision finishing bores and the patented swivel connection which provides maximum performance.



Series Y10-752

Model Number	Y10-752-04Z	Y10-752-06Z	Y10-752-08Z*	Y10-752-10Z*	Y10-752-12Z*	Y10-752-14Z*	Y10-752-16Z*	Y10-752-18Z*	Y10-752-20Z
Price	6,400.00	6,400.00	8,000.00	8,000.00	8,000.00	10,880.00	11,200.00	14,720.00	16,000.00
Piston Diameter	4.50	6.00	8.00	10.00	12.00	14.00	16.00	18.00	20.00
Piston Area Sq. Inch	15.14	27.05	49.04	76.77	111.33	152.17	197.92	251.34	309.25
Piston Stroke	1.0	1.50	1.50	1.50	1.50	2.00	2.00	2.00	2.00
Max. Recommended Speed RPM	4,000	4,000	3,900	3,000	2,400	*1,980	1,560	1,470	1,300
Draw Bar Pull at Max Pressure Lbs.*	1,226	2,191	3,972	6,218	9,018	12,326	16,032	20,359	29,049
Max. Pressure PSI	90	90	90	90	90	90	90	90	90
Weight Lbs.	17	32	39	57	72	112	137	212	227
WR² Inertia Lbs. Ft.²	.3	.8	3.1	4.2	8.0	19.5	28.0	52.6	80.0

**Operating Efficiency 90%*

Dimensional Data

Size	4"	6"	8"	10"	12"	14"	16"	18"	20"
B-2	—	—	6.750	8.380	8.380	10.880	10.880	10.880	10.880
B-3	3.001	4.501	4.501	6.001	6.001	6.001	6.001	6.001	6.001
B-5	.312	.312	.312	.312	.312	.312	.312	.312	.312
B-6	1.875	2.750	2.750	3.500	3.500	3.500	3.500	3.500	3.500
R-2	—	—	—	—	—	4.750	4.750	4.750	4.750
B-12	.375-16UNC	.500-13UNC	.500-13UNC	.625-11UNC	.625-11UNC	.625-11UNC	.625-11UNC	.625-11UNC	.750-10UNC
B-13*	.750	1.000	1.000	1.120	1.120	1.120	1.120	1.120	1.250
B-14†	4.000	4.000	4.000	6.000	6.000	12.000	12.000	12.000	12.000
B-15	8.880	9.880	9.880	10.500	12.130	12.130	12.130	12.130	12.130
B-19	1.000	1.500	1.500	1.500	1.500	2.000	2.000	2.000	2.000
B-26	1.000	1.250	1.250	1.500	1.500	1.500	2.000	2.000	2.500
B-27	.750-16UNF	.750-16UNF	.750-16UNF	1.000-14UNS	1.000-14UNS	1.000-14UNS	1.250-12UNF	1.250-12UNF	1.500-12UNF
B-28	1.500	1.500	1.500	1.500	1.500	1.500	1.880	1.880	2.520
B-31	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
B-38	4.000	5.000	5.000	5.750	5.750	7.310	7.310	7.310	7.310
B-40	5.500	7.130	9.130	11.250	13.250	15.250	17.500	19.380	21.500

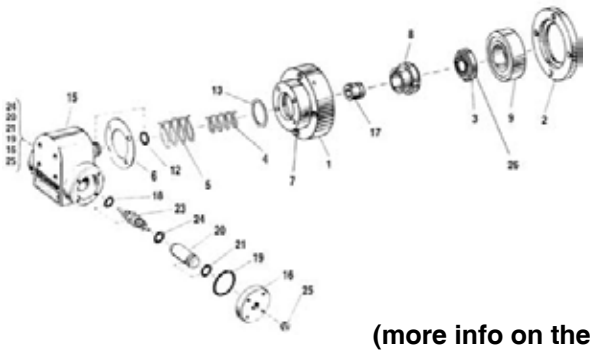
**B-13 Full depth of thread* *†B-14 Number of tapped holes*

Parts Kits For Series Y10-752

Cylinder Size in Inches	Model Number	Price
4	Y06-217201-00	580.00
6	Y06-217202-00	625.00
8	Y06-217203-00	625.00
10	Y06-217204-00	625.00
12	Y06-217205-00	680.00
14	Y06-217206-00	680.00
16	Y06-217207-00	760.00
18	Y06-217208-00	825.00
20	Y06-217209-00	925.00

Air Lock/Air Swivel Connection for Series Y10-752 Air Cylinders

Complete Swivel Assembly **Model Number Y06-214827-00** 2,400.00



(more info on the next page)

Component Parts

Series Y10-752

(more info on the previous page)

	Component Model Numbers								
Detail No.	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	
Cylinder Size in.	Guide Pin	CylinderBody "O Ring"	Piston Rod	Piston Rod "O" Ring	Piston	Piston "O" Ring	Cylinder Cap	Gasket	Parts Kit*
4"	**Y15-002181-00**	**YARP568 02140**	**Y04-207155-00**	**YARP568 01140**	**Y04-205450-00**	**YAPR568 03460**	**Y14-001023-00**	**Y98-00218000**	**Y06-217201-00**
6"	**Y15-002235-00**	**YARP568 02180**	**Y04-205445-00**	**YARP568 01140**	**Y04-205451-00**	**YAPR568 04330**	**Y14-001065-00**	**Y98-00223700**	**Y06-217202-00**
8"	**Y15-002235-00**	**YARP568 02180**	**Y04-205445-00**	**YARP568 01140**	**Y04-205452-00**	**YAPR568 04430**	**Y13-000658-00**	**Y98-00107000**	**Y06-217203-00**
10"	**Y15-002412-00**	**YARP568 03250**	**Y04-209517-00**	**YARP568 01140**	**Y04-205453-00**	**YAPR568 04480**	**Y13-000695-00**	**Y98-00278300**	**Y06-217204-00**
12"	**Y15-002412-00**	**YARP568 03250**	**Y04-209517-00**	**YARP568 01140**	**Y04-205454-00**	**YAPR568 04520**	**Y12-001129-00**	**Y98-00278200**	**Y06-217205-00**
14"	**Y15-000167-00**	**YARP568 03250**	**Y04-205447-00**	**YARP568 01140**	**Y03-205455-00**	**YAPR56804560**	**Y12-001328-00**	**Y98-00017600**	**Y06-217206-00**
16"	**Y15-000167-00**	**YARP568 03290**	**Y04-205448-00**	**YARP568 01140**	**Y03-205456-00**	**YAPR568 04600**	**Y12-001559-00**	**Y98-00080000**	**Y06-217207-00**
18"	**Y15-000167-00**	**YARP568 03290**	**Y04-205448-00**	**YARP568 01140**	**Y03-205457-00**	**Y98-206901-00**	**Y12-001891-00**	**Y98-00298000**	**Y06-217208-00**
20"	**Y15-000167-00**	**YARP568 03330**	**Y04-205449-00**	**YARP568 01140**	**Y03-205458-00**	**Y98-206902-00**	**Y12-002270-00**	**Y98-00394400**	**Y06-217209-00**

*Parts kit includes Cylinder Details #3, 5, 7, and 9, as well as Air Swivel Connection Details #4, 5, 6, 8, 12, 13, 17, 18, 19, 21, 24 and 26

Air Lock / Air Swivel Connection

for Series Y10-752 Air Cylinders

Complete Swivel Assembly - **Model No. Y06-214827-00** 2,400.00 *(see previous page)*

	Component Model Numbers						
Detail No.	**1**	**2**	**3**	**4**	**5**	**6**	**7**
For All Cylinder Sizes	Swivel Body Assembly	Swivel Clamp Ring	Bearing Plate	Inner Spring	Outer Spring	Swivel Cap Gasket	Swivel Lockscrew
Part No.	**Y06-208009-00**	**Y15-002179-00**	**Y15-003578-00**	**Y98-003747-00**	**Y98-003597-00**	**Y98-002520-00**	**Y15-002164-00**
Quantity	1	1	1	1	1	1	1

Detail No.	**8**	**9**	**10**	**11**	**12**	**13**	**14**
For All Cylinder Sizes	Outer Bearing Assembly	Ball Bearing	Socket Head Capscrew	Socket Head Capscrew	"O" Ring	"O" Ring	Low Head Socket Lockscrew
Part No.	**Y06-201719-00**	**Y98-206492-00**	**YSC-1620 22500**	**YSC1620 12500**	**YARP568 01140**	**YARP568 02220**	**Y98-234217-00**
Quantity	1	1	4	4	1	1	4

Detail No.	**15**	**16**	**17**	**18**	**19**	**20**	**21**
For All Cylinder Sizes	Swivel Cap	End Cap	Inner Bearing	"O" Ring	"O" RIng	Check Value	"O" Ring
Part No.	**Y03-214574-00**	**Y05-214576-00**	**Y06-201720-00**	**YARP568 00130**	**YARP568 00260**	**Y98-214642-00**	**YARP568 00150**
Quantity	1	2	1	1	2	2	2

Detail No.	**22**	**23**	**24**	**25**	**26**
For All Cylinder Sizes	Button Head Screw Cap	Valve Pin	Stop Washer	Plug	Bearing Plate Gasket
Part No.	**YBH1024 06250**	**Y05-214577-00**	**Y98-214636-00**	**YFPP827**	**Y98-241581-00**
Quantity	8	1	2	2	1

Check Valve Kit*
Y06-231281-00

*Kit includes 2 each of Details #19, 20 & 21; and 1 each of Detail #18.
Priced on application.

Workholding Closed Center Rotating Hydraulic Cylinder

RCV With Safety Device/Optional Stroke Sensing

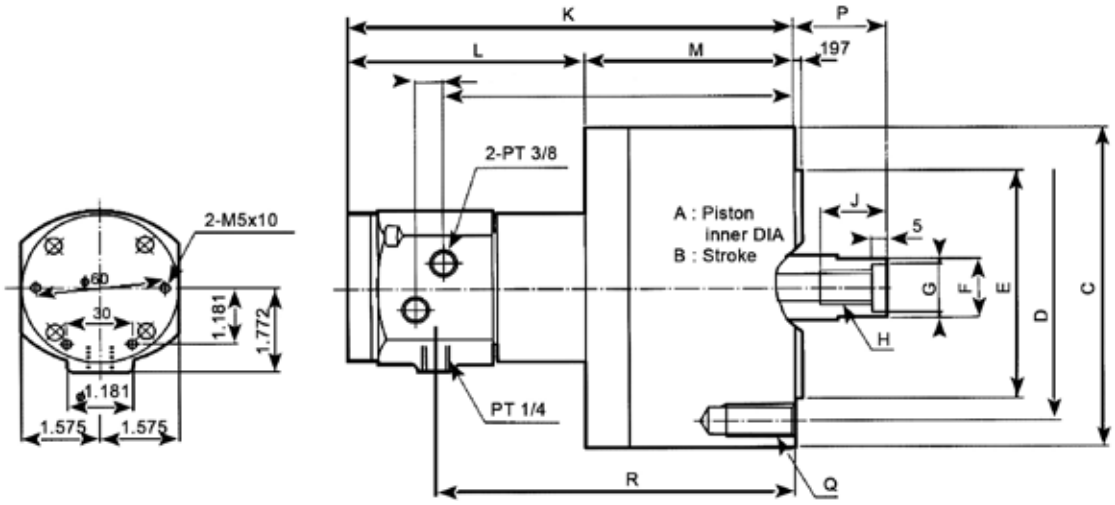
- High speed closed center hydraulic cylinder
- This can be installed in both horizontal and vertical applications
- Equipped with safety check valves, preventing loss of grip if power supply is interrupted
- Available with stroke sensing



Series Y10-766

Model Number*	Piston Area (Sp. In.)		Piston Stroke	Max Speed RPM	Draw Bar Pull lb/f	Max Pressure PSI	Drain gal/min	Wt. lbs.	Price
	Push	Pull							
Y10-766-0750Z	6.83	5.73	.591	6000	3,325	580	.2	9	2,080.00
Y10-766-1000Z	13.33	12.24	.787	6000	7,100	580	.2	16	2,320.00
Y10-766-1250Z	18.91	17.52	.984	6000	10,160	580	.2	22	2,800.00
Y10-766-1500Z	27.28	24.80	1.181	5500	14,385	580	.2	30	3,170.00
Y10-766-2000Z	48.67	44.95	1.378	5500	26,100	580	.2	49	5,360.00
Y10-766-2500Z	67.30	70.80	2.360	2000	63,720	900	.2	193	14,880.00

** For stroke sensing, add RE to the end of the part number (Example: 10-766-0750ZRE)*



Dimensional Data

Model No.	A	B	C	D	E	F	G	H	J	K	L	M	N	P		Q	R
														Max	Min		
0750Z	2.953	.591	4.094	3.543	2.559	1.181	.827	M20x2.5	1.378	6.772	4.173	2.598	5.000	1.811	1.220	6-M6x20	5.236
1000Z	4.134	.787	5.345	3.937	3.150	1.181	.827	M20x2.5	1.378	7.756	4.252	3.504	5.984	1.772	.984	6-M10x20	6.220
1250Z	4.921	.984	6.299	5.118	4.331	1.378	.984	M24x3.0	1.732	8.071	4.252	3.819	6.299	2.008	1.024	6-M12x24	6.535
1500Z	5.906	1.181	7.480	5.118	4.331	1.772	1.220	M30x3.5	1.772	8.425	4.252	4.173	6.654	2.005	1.024	6-M12x24	6.890
2000Z	7.874	1.378	9.646	5.709	4.724	2.165	1.457	M36x4.0	2.362	8.976	4.173	4.803	2.205	2.717	1.339	12-M16x30	7.441
2500Z	9.842	1.968	11.810	10.827	6.298	2.559	1.732	M42x3.0P	2.165	12.400	4.921	7.283	9.720	2.953	.590	6-M16x190	10.000

Workholding Closed Center Rotating Hydraulic Double Cylinder

- Special double acting cylinder has two separate piston actuations
- Can integrate rear attachments such as air sensing, air blow, coolant, etc
- Available with stroke control
- Can be used vertically or horizontally
- Optionally add rotary union for air sensing, air blow, or coolant
- Priced on Application

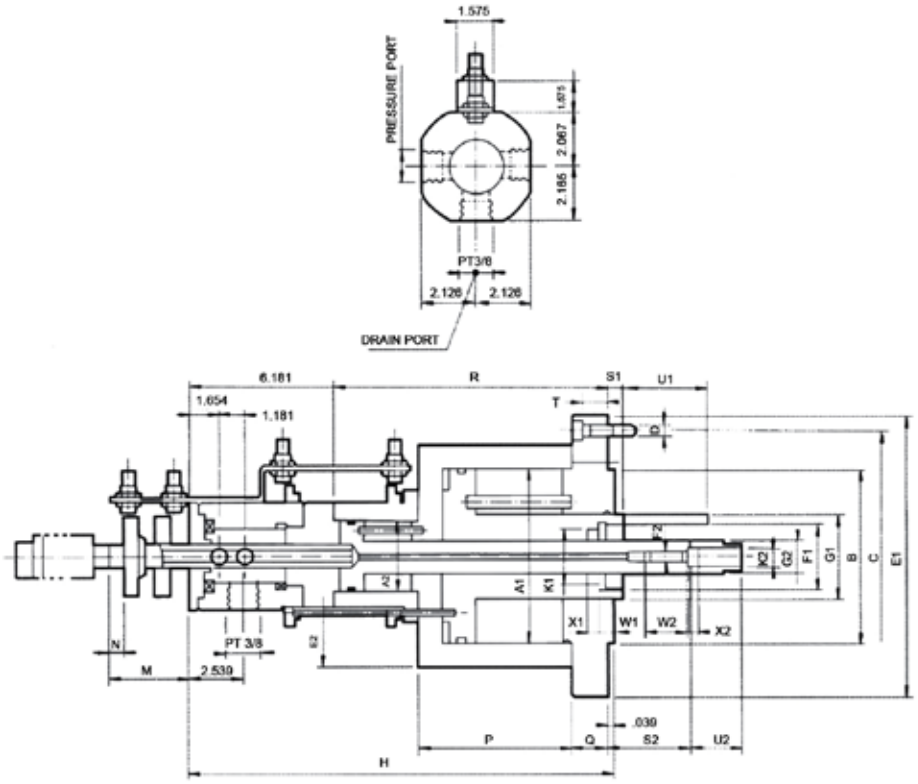


Series Y10-767

Model Number	Piston Area (Sp. In.)		Max Piston Stroke	Max Speed RPM	Max Pressure PSI	Weight lbs.
	Piston 1	Piston 2				
Y10-767-1370Z	17.52/19.38	4.96/5.58	2.756/.787	5000	735	66
Y10-767-1770Z	29.14/34.10	4.96/5.58	3.223/.787	4000	735	110

Dimensional Data

Model	1370Z	1770Z
A1	5.118	6.693
A2	2.756	2.756
B	5.118	6.693
C	7.480	9.252
D	6-M12	6-M16
E1	8.465	10.630
E2	6.693	8.268
F1	M42xP1.5	M42xP1.5
F2	M16	M16
G1	1.969	2.756
G2	1.102	1.102
H	15.039	15.906
I	.197	.197
K1	1.102	1.969
K2	.708	.708
M	2.559	2.559
N	.591	.591
P	5.197	5.748
Q	1.024	1.339
R	8.661	9.528
S1 (min)	.394	.394
S2 (min)	3.701	2.835
T	.551	.709
U1	2.756	3.228
U2	.787	.787
W1	.709	.787
W2	.984	.984
X1	.472	.472
X2	.472	.472



Face Plate Jaws

- Face plate jaws furnished for tables with single radial slots
- Face plate available with solid reversible jaws in sets of 4
- Face plate jaws sizes 6", 8"



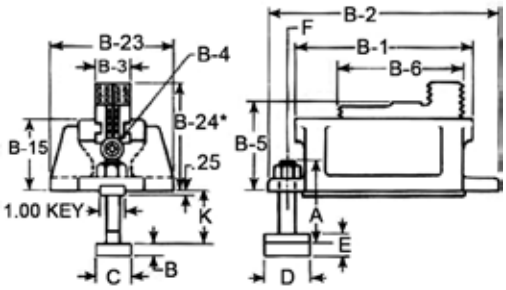
Series Y10-063 Steel Body
Set of 4 with Solid Reversible Jaws

Size	Model Number	Est. Gross Wgt. lbs	Price
6"	**Y10-061-06-000D**	160	13,120.00
8"	**Y10-063-08-000D**	280	14,080.00

Note: 4" Face Plate Jaws #Y10-061-04-000 are available

Dimensional Data

Jaw Size	6	8
B-1	6.25	8.25
B-2	8.50	10.50
B-3	1.69	1.69
B-4	1.17	1.17
B-5	4.38	4.38
B-6	5.00	5.00
B-15	3.75	3.75
B-23	5.00	5.50
B-24	5.25	5.25



T-Bolt Dimensional Data

Jaw Size	A	B	C	D	E	F	Std. K Min.
4 thru 8	3.00	.53	1.31	1.75	.97	3/4-10	1.437-.750

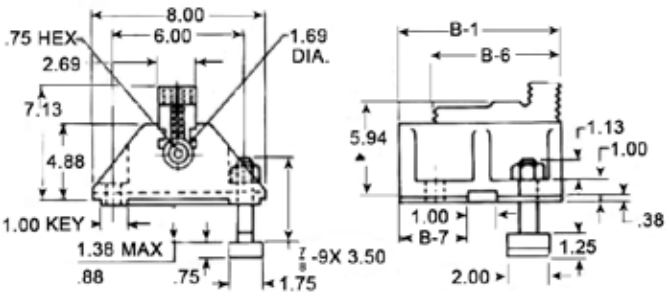
Boring Mill Jaws

- Boring mill jaws furnished for tables with double parallel slots
- Boring mill jaws available with solid reversible jaws in sets of 4
- Boring mill jaws sizes 8", 10", 12", 14"
- Two piece boring mill jaws available upon request



Series 10-073 Steel Body
Set of 4 with Solid Reversible Jaws

Jaw Size	Model Number	Est. Gross Wgt. lbs.	Price
8"	**Y10-073-08-000B**	260	13,600.00
10"	**Y10-073-10-000B**	320	18,400.00
12"	**Y10-073-12-000B**	360	20,000.00
14"	**Y10-073-14-000B**	420	23,200.00



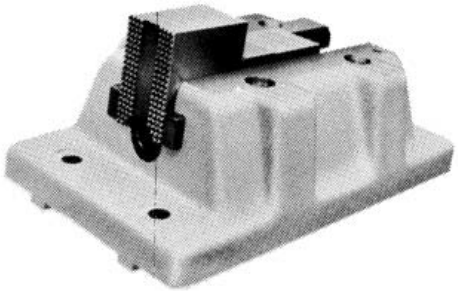
Dimensional Data

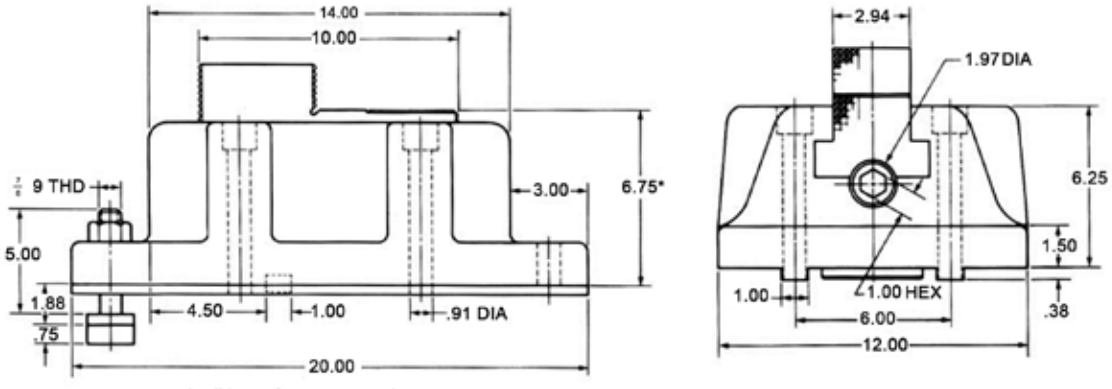
Jaw Size	8"	10"	12"	14"
B-1	8.00	10.00	12.00	14.00
B-6	6.00	6.00	8.00	8.00
B-7	3.50	3.00	3.50	4.50

Heavy-Duty Boring Mill Jaws

Series Y10-076 Steel Bodies
Set of 4 with Solid Reversible Jaws
For tables with double parallel slots

Size	Model Number	Est. Gross Wgt. lbs.	Price
14"	**Y10-076-14-000A**	1,250	40,800.00





*Will be uniform in sets within .003.

Component Parts for Older Models

Independent Chucks - Series Y10-061, Y10-063

	Component Model Numbers			
Size	Operating Screw	Thrust Bearing	Wrench	Jaw
4"	**Y05-002501-00**	**Y06-201883-00**	**Y06-201260-00**	**Y04-000326-F0**
6"	**Y05-002502-00**	**Y06-201883-00**	**Y06-201260-00**	**Y04-000326-F0**
8"	**Y05-002503-00**	**Y06-201883-00**	**Y06-201260-00**	**Y04-000326-F0**
10"	**Y05-002504-00**	**Y06-201866-00**	**Y06-201264-00**	**Y04-000857-F0**
12"	**Y05-003943-00**	**Y06-201866-00**	**Y06-201264-00**	**Y04-000857-F0**

Independent Chucks - Series Y10-073

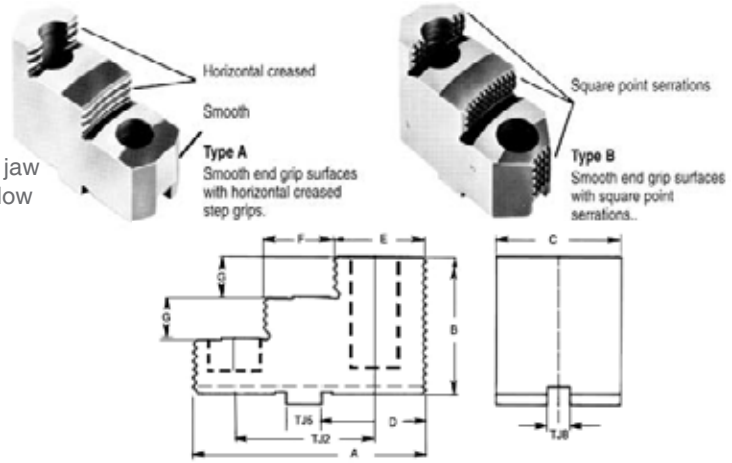
	Component Model Numbers			
Size	Operating Screw	Thrust Bearing	Wrench	Jaw
8"	**Y05-214201-00**	**Y06-217101-00**	**Y04-217094-00**	**Y03-214200-F0**
10"	**Y05-217522-00**	**Y06-217101-00**	**Y04-217094-00**	**Y03-214200-F0**
12"	**Y05-217099-00**	**Y06-217101-00**	**Y04-217094-00**	**Y03-217098-F0**
14"	**Y05-217518-00**	**Y06-217101-00**	**Y04-217094-00**	**Y03-217098-F0**

Independent Chucks - Series Y10-076

	Component Model Numbers			
Size	Operating Screw	Thrust Bearing	Wrench	Jaw
14"	**Y05-005099-00**	**Y06-201948-00**	**Y06-201914-00**	**Y03-207473-F0**

Hard Step Top Jaws

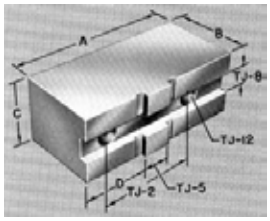
- For American Standard tongue and groove configuration
- Hard step top jaws can be quickly reversed for internal or external chucking
- Easily removed for applications requiring soft blank or formed top jaws
- Square point serrations, smooth, and horrizontal creased jaw gripping surfaces available in combinations as shown below
- All jaws listed apply to manual chucks in this catalog
- All jaws listed will fit comparable chucks with American Standard jaw configuration
- All jaws made of high alloy steels



Model Number	Chuck Size	Jaw Type	A	B	C	D	E	F	G	TJ-2	TJ-5	TJ-8	Bolt Size	Bolt Length	Price (Set of 3)
Y03232927-F0	6"	A	2.68	1.47	1.18	1.13	.62	1.00	.38	1.50	.499	.313	3/8-16	3/4 & 1	770.00
Y03232771-F0	8"	A	3.12	1.50	1.18	1.37	.75	1.18	.38	1.75	.499	.313	3/8-16	3/4 & 1-1/4	890.00
Y03232799-F0	10"	A	3.75	1.81	1.44	1.56	.87	1.44	.50	2.12	.749	.502	1/2-13	1 & 1-1/2	920.00
Y03232953-F0	12"	A	4.25	1.94	1.69	1.87	1.00	1.66	.56	2.50	.749	.502	1/2-13	1 & 1-1/2	1,300.00
Y03001728-F3	15"	B	5.00	2.06	1.69	2.25	1.00	1.87	.56	3.00	.749	.502	5/8-11	1-1/4 & 1-3/4	1,350.00
Y03001736-F3	18-36"	B	5.00	2.62	.194	2.25	2.00	1.50	.69	3.00	.749	.502	3/4-10	1-3/4 & 3	1,450.00

Custom Hard Jaws are available, Please inquire

Soft Blank Top Jaws



Number one in workholding, and in top jaws.
NOTE: You can machine and form Cushman top jaws for use on all chucks with American Standard, tongue and groove jaw design.

American Standard Tongue and Groove - Rectangular

Medium Duty

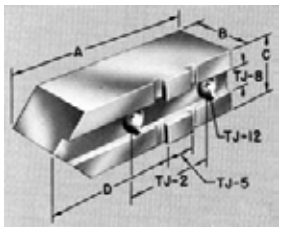
Standard Height										Extra Height		Standard Height Price	Extra Height Price
Chuck Size	Model Number	Dimensions				Critical Dimensions				Model Number	Dim. B		
		A	B	C	D	TJ-2	TJ-5	TJ-8	TJ-12				
6"	**Y0520144700**	2-5/8	1-5/8	1-1/4	1-1/8	1-1/2	.499-.498	.315-.313	3/8	**Y0520147100**	3-3/8	32.00	72.00
8"	**Y0520145000**	3-1/2	1-5/8	1-1/4	1-5/8	1-3/4	.499-.498	.315-.313	3/8	**Y0520147400**	3-3/8	40.00	80.00
10"	**Y0520145200**	4-1/4	1-7/8	1-1/2	1-15/16	2-1/8	.749-.748	.503-.501	1/2	**Y0520147600**	3-3/8	40.00	100.00
12"	**Y0520145400**	4-7/8	2-3/8	1-3/4	2-5/16	2-1/2	.749-.748	.503-.501	1/2	**Y0520147800**	3-7/8	50.00	100.00
15"	**Y0520145600**	5-5/8	2-1/4	2	2-3/4	3	.749-.748	.503-.501	5/8	**Y0520148000**	3-3/4	65.00	104.00
18-21"	**Y0520145700**	5-5/8	2-1/4	2	2-3/4	3	.749-.748	.503-.501	3/4	**Y0520148100**	3-3/4	68.00	144.00
24-36"	**Y0520145800**	5-5/8	3-1/4	2-1/2	2-3/4	3	.749-.748	.503-.501	3/4	**Y0520148200**	4-3/4	104.00	159.00

Heavy Duty

Standard Height										Extra Height		Standard Height Price	Extra Height Price
Chuck Size	Model Number	Dimensions				Critical Dimensions				Model Number	Dim. B		
		A	B	C	D	TJ-2	TJ-5	TJ-8	TJ-12				
6"	**Y0520144800**	2-5/8	1-5/8	1-1/4	1-1/8	1-1/2	.499-.498	.315-.313	7/16	-	-	40.00	-
8"	**Y0520145100**	3-1/2	1-7/8	1-1/2	1-5/8	1-3/4	.499-.498	.315-.313	1/2	**Y0520147500**	3-3/8	52.00	72.00
10"	**Y0520145300**	4-1/4	2-3/8	1-3/4	1-15/16	2-1/8	.749-.748	.503-.501	5/8	**Y0520147700**	3-7/8	52.00	72.00
12"	**Y0520145500**	4-7/8	2-3/8	2	2-5/16	2-1/2	.749-.748	.503-.501	5/8	**Y0520147900**	3-7/8	65.00	100.00
15-36"	**Y0520145700**	5-5/8	2-1/4	2	2-3/4	3	.749-.748	.503-.501	3/4	**Y0520148100**	3-3/4	68.00	144.00
15-36"	**Y0520145800**	5-5/8	3-1/4	2-1/2	2-3/4	3	.749-.748	.503-.501	3/4	**Y0520148200**	4-3/4	104.00	159.00

Soft Blank Top Jaws

Number one in workholding, and in top jaws.
NOTE: You can machine and form Cushman top jaws for use on all chucks with American Standard, tongue and groove jaw design.



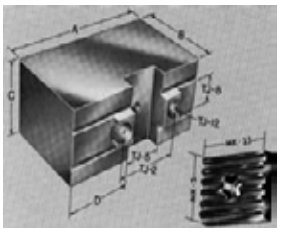
American Standard Tongue and Groove - Long Pointed

Medium Duty

Chuck Size	Model Number	Standard Height Dimensions A	B	C	D	Critical Dimensions TJ-2	TJ-5	TJ-8	TJ-12	Extra Height Model Number	Dim. B	Standard Height Price	Extra Height Price
6"	**Y0520145900**	3-3/16	1-5/8	1-1/4	1-11/16	1-1/2	.499-.498	.315-.313	3/8	**Y0520148300**	3-3/8	52.00	72.00
8"	**Y0520146200**	3-15/16	1-5/8	1-1/4	2-1/4	1-3/4	.499-.498	.315-.313	3/8	**Y0520148600**	3-3/8	52.00	72.00
10"	**Y0520146400**	4-13/16	1-7/8	1-1/2	2-11/16	2-1/8	.749-.748	.503-.501	1/2	**Y0520148800**	3-3/8	65.00	80.00
12"	**Y0520146600**	5-3/4	2-3/8	1-3/4	3-3/8	2-1/2	.749-.748	.503-.501	1/2	**Y0520149000**	3-7/8	78.00	130.00
15"	**Y0520146800**	7-1/4	2-1/4	2	4-1/2	3	.749-.748	.503-.501	5/8	**Y0520149500**	3-3/4	100.00	160.00
18-36"	**Y0520151900**	7-1/4	3-1/4	2-1/2	4-1/2	3	.749-.748	.503-.501	3/4	**Y0520152000**	4-3/4	130.00	200.00

Heavy Duty

Chuck Size	Model Number	Standard Height Dimensions A	B	C	D	Critical Dimensions TJ-2	TJ-5	TJ-8	TJ-12	Extra Height Model Number	Dim. B	Standard Height Price	Extra Height Price
6"	**Y0520146000**	3-3/16	1-5/8	1-1/4	1-11/16	1-1/2	.499-.498	.315-.313	7/16	**Y0520148400**	3-3/8	52.00	72.00
8"	**Y0520146300**	3-15/16	1-7/8	1-1/2	2-1/4	1-3/4	.499-.498	.315-.313	1/2	**Y0520148700**	3-3/8	72.00	80.00
10"	**Y0520146500**	4-13/16	2-3/8	1-3/4	2-11/16	2-1/8	.749-.748	.503-.501	5/8	**Y0520148900**	3-7/8	72.00	85.00
12"	**Y0520146700**	5-3/4	2-3/8	2	3-3/8	2-1/2	.749-.748	.503-.501	5/8	**Y0520149100**	3-7/8	85.00	130.00
15"	**Y0520156900**	7-1/4	2-1/4	2	4-1/2	3	.749-.748	.503-.501	3/4	**Y0520149600**	3-3/4	104.00	160.00
15-36"	**Y0520151900**	7-1/4	3-1/4	2-1/2	4-1/2	3	.749-.748	.503-.501	3/4	**Y0520152000**	4-3/4	130.00	200.00



American Standard - Serrated

Acme

Chuck Size	Model Number	Standard Height Dimensions A	B	C	D	Critical Dimensions TJ-2	TJ-5	TJ-8	TJ-12	Master Keys Model Number	Dim. MK-5	Dim. MK-23	Acme Serrated Price	Master Keys Price
10"	**Y2501307200**	4-1/8	2-5/16	1-3/4	1-13/16	1-3/4	1.030	.750	1/2	**Y2501091200**	1.030	1-11/16	85.00	176.00
12	**Y2501307100**	4-1/8	2-5/16	1-3/4	1-13/16	2	1.030	.875	5/8	**Y2501091200**	1.030	1-11/16	160.00	176.00
15-18"	**Y2501307000**	5-5/8	3-1/4	2-1/2	2-5/8	2-1/2	1.530	1.000	3/4	**Y2501090700**	1.530	2-1/16	160.00	176.00
21-24"	**Y2501306900**	5-7/8	3-1/4	3	2-3/4	3	1.530	1.250	7/8	**Y2501119900**	1.530	2-7/16	175.00	208.00
										Y040082800	1.530	2-7/8	-	200.00

Square

Chuck Size	Model Number	Standard Height Dimensions A	B	C	D	E	Critical Dimensions TJ-2	TJ-5	TJ-8	TJ-12	Master Keys Model Number	Square Serrated Price	Master Keys Price
8"	**Y0520457000**	3	2	1-1/4	1-11/32	1/4-20	1-7/16	.746-.745	.503-.501	3/8	**Y0522711600**	100.00	176.00
10-12"	**Y0520457100**	4	2-1/2	1-3/4	1-5/8	5/16-18	1-3/4	.995-.994	.753-.751	1/2	**Y0522729900**	105.00	240.00
15-18"	**Y0520457200**	5	3	2-1/4	1-3/4	3/8-16	2-1/2	1.489-1.487	1.003-1.001	3/4	**Y0522700500**	150.00	240.00

Key Type Drill Chucks Plain Bearing



The one piece gear ring and sleeve eliminates the possiblity of tooth breakage.
The jaws, gear ring and body are all totally hardened to avoid wear and lengthen the life of the drill chuck.
Fits tools up to 3/4" in diameter.
These chucks come standard with Jacobs taper mounts.

For Portable Drilling Machines
Medium Duty

Capacity	Model No.	Mount	Key No.	Price
1/64-5/32	**J859-045**	5/16-24	K0	140.00
1/32-1/4	**J859-046**	3/8-24	CK4	98.00
1/32-3/8	**J859-047**	3/8-24	K34	130.00
1/32-3/8	**J859-048**	1/2-20	K34	144.00
1/16-1/2	**J859-049**	1/2-20	K2	153.00
1/16-1/2	**J859-050**	3/8-24	K2	140.00
3/64-1/2	**J859-051**	3/8-24	K2	140.00
3/64-1/2	**J859-052**	1/2-20	K2	150.00

For Stationary Drilling Machines
Medium Duty

Capacity	Model No.	Mount	Key No.	Price
1/64-5/32	**J859-060**	0JT	K0	120.00
1/32-1/4	**J859-061**	1JT	CK4	96.00
1/32-3/8	**J859-062**	1JT	K34	120.00
1/32-3/8	**J859-063**	2JT	K34	133.00
1/16-1/2	**J859-064**	33JT	K2	155.00
1/16-5/8	**J859-065**	3JT	K3	210.00
1/8-3/4	**J859-066**	3JT	K4	273.00
13/64-5/8	**J859-067**	4JT	K4	220.00

For Portable Drilling Machines
Heavy Duty

Capacity	Model No.	Mount	Key No.	Price
1/64-5/32	**J859-040**	3/8-24	K0	96.00
1/32-3/8	**J859-041**	3/8-24	CK4	96.00
1/32-3/8	**J859-042**	1/2-20	K34	110.60

For Stationary Drilling Machines
Heavy Duty

Capacity	Model No.	Mount	Key No.	Price
1/32-3/8	**J859-035**	2JT	K34	103.00
1/32-1/2	**J859-036**	2JT	K3	106.00
1/32-1/2	**J859-037**	6JT	K3	138.00
1/32-1/2	**J859-038**	33JT	K3	110.00

Key Type Drill Chucks Ball Bearing

Drill chuck with key for indistrial applications that require the toughest machining conditions
Equipped with ball bearings to reduce friction in the tightening mechanism and provide a better grip on the drill shaft
All components are hardened and ground
The one piece gear ring and sleeve eliminates the possiblity of tooth breakage.
Fits tools up to 1" in diameter.
These chucks come standard with Jacobs taper mounts.



For Production Drilling Machines
Heavy Duty

Capacity	Model No.	Mount	Key No.	Price
1/32-5/16	**J859-025**	2JT	K30	142.00
1/32-3/8	**J859-026**	2JT	K32	158.00
1/16-1/2	**J859-027**	3JT	K3	222.00
1/16-5/8	**J859-028**	3JT	K4	255.00
1/8-3/4	**J859-029**	4JT	K4	303.00
3/16-1	**J859-030**	5JT	K5	516.00

Key Type Drill Chucks



For Portable Drilling Machines
Medium Duty

Capacity	Model No.	Mount	Price
1/32-3/8	**DCK375**	3/8-24	14.99
1/32-3/8	**DCK375A**	1/2-20	14.99
1/32-1/2	**DCK500**	1/2-20	20.44

Capacity	Model No.	Mount	Price
1/32-1/2	**DCK500A**	33JT	20.44
1/32-1/2	**DCK500B**	6JT	20.44
1/32-5/8	**DCK625**	5/8-16	31.43

Taper Mounted

Capacity	Model No.	Mount	Price
1/64-5/32	**J859-405**	0JT	61.05
1/64-1/4	**J859-410**	1JT	52.71
1/64-5/16	**J859-415**	1JT	70.61
1/32-3/8	**J859-420**	2JT	68.70
1/32-1/2	**J859-440**	2JT	76.86
1/32-1/2	**J859-435**	6JT	76.44
1/32-1/2	**J859-430**	33JT	76.44
1/16-1/2	**J859-625**	33JT	90.00

Capacity	Model No.	Mount	Price
3/16-1	**J859-455**	5JT	271.14
1/64-1/4	**J859-705**	3/8-24	50.00
1/64-1/4	**J859-710**	1/2-20	60.00
1/64-5/16	**J859-715**	3/8-24	46.00
1/64-5/16	**J859-720**	1/2-20	55.00
1/32-5/16	**J859-750**	1/2-20	50.00
1/32-3/8	**J859-725**	3/8-24	75.00
1/32-3/8	**J859-738**	1/2-20	50.00

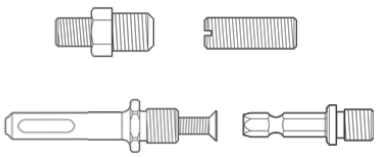
Adapters

Converts drill chuck's female threaded mounts into male threaded mounts, SDS-Plus™ or 1/4" Hexagonal bit to fit drill chuck to all kinds of machines.

Thread	Model No.	Fitting	Price
3/8" x 24	**JC51-001**	3/8" x 24	6.25
3/8" x 24	**JC52-002**	1/2-20	6.50
1/2" x 20	**JC53-003**	SDS-Plus	30.00
3/8" x 24	**JC54-004**	1/4-Hex	18.25

SETS

Model No.	Description	Price
JCS5	4PC Set	50.00



Chuck Keys

List No. **CH100**

Model No.	For Use On	Pilot Size.	No. of Teeth	Price
K0	0 Series	1/8	11	3.77
K1	1 Series	5/32	11	2.54
K2	2 Series	1/4	11	3.77
K3	3, 6, 34 Series,14N, 55B, 56B, 58B, 75A	5/16	11	4.29
K3C	633C, 633D	5/16	11	4.49
K4	36, 37 Series,16N, 18N, 59B	3/8	12	8.84
K5	20N	7/16	12	16.90
K7	7 Series	7/32	11	3.06
K30	30, 31 Series, 8-1/2N	15/64	10	3.58
K32	32, 33 Series,11N	1/4	10	3.84
KK	DC8, SM8, 74K, 22BA, 23B, 24BA, 26BA, 29A	9/32	11	2.47
ST13	Small Master Chuck Keys			16.90
ST12	Large Master Chuck Keys			18.46



Keyless Drill Chucks



Standard screw thread mount for portable drilling machines.
Standard tapered mount for stationary machines.
Self-tightening mechanism automatically increases the clamping forces in proportion to the increase in torque during the drilling operation.
This prevents tool slippage in clockwise rotation.

For Portable Drilling Machines
Medium Duty

Capacity	Model No.	Mount	Price
1/64-1/4	**J859-081**	3/8-24	125.00
1/32-5/16	**J859-082**	3/8-24	115.00
1/32-5/16	**J859-083**	1/2-20	145.00
1/32-3/8	**J859-084**	3/8-24	130.00
1/32-3/8	**J859-085**	1/2-20	130.00
1/16-1/2	**J859-086**	3/8-24	140.00
1/16-1/2	**J859-087**	1/2-20	145.00
1/8-5/8	**J859-088**	1/2-20	180.00
1/8-5/8	**J859-089**	5/8-16	180.00

For Stationary Drilling Machines
Medium Duty

Capacity	Model No.	Mount	Price
1/64-1/4	**J859-071**	1JT	120.00
1/32-5/16	**J859-072**	1JT	110.00
1/32-5/16	**J859-73**	2JT	110.00
1/32-3/8	**J859-074**	2JT	125.00
1/32-3/8	**J859-075**	33JT	125.00
1/32-1/2	**J859-076**	33JT	140.00
1/32-1/2	**J859-077**	6JT	140.00
1/8-5/8	**J859-078**	33JT	175.00
1/8-5/8	**J859-079**	6JT	175.00
3/16-3/4	**J859-080**	3JT	265.00

Super Precision Keyless Drill Chucks



100% of these drill chucks are indivdually controlled to ensure a maximum total indicator run-out of 0.0016".
Self-tightening mechanism automatically increases the clamping forces in proportion to the increase in torque during the drilling operation.
This prevents tool slippage in clockwise rotation.
Engineered with milled flats for additional gripping torque with spanner wrench.
Light tightening with wrench increases gripping torque up to 3 times higher than hand tightening.
All chucks come with wrench

Standard Gripping

Capacity	Model No.	Mount	Price
1/64-1/8	**J859-091**	1JT	250.00
1/64-1/8	**J859-092**	5/16-24	250.00
1/64-1/4	**J859-093**	1JT	265.00
1/64-5/16	**J859-094**	1JT	250.00
1/64-5/16	**J859-095**	2JT	250.00
1/32-3/8	**J859-096**	2JT	264.00
1/32-3/8	**J859-097**	33JT	264.00
1/32-1/2	**J859-098**	2JT	278.00
1/32-1/2	**J859-099**	33JT	276.00
1/32-1/2	**J859-100**	6JT	276.00
1/8-5/8	**J859-011**	33JT	320.00
1/8-5/8	**J859-022**	6JT	320.00

Extra Gripping Torque

Capacity	Model No.	Mount	Price
1/64-1/4	**J859-023**	1JT	260.00
1/64-5/16	**J859-024**	2JT	260.00
1/32-3/8	**J859-031**	2JT	298.00
1/32-3/8	**J859-032**	33JT	298.00
1/32-1/2	**J859-033**	2JT	298.00
1/32-1/2	**J859-034**	33JT	298.00
1/32-1/2	**J859-039**	6JT	298.00
1/8-5/8	**J859-044**	6JT	360.00

Keyless Drill Chucks

with Ball Bearing Integrated Shank

- High precision integrated shank keyless drill chucks
- One-piece construction for tighter tolerance on T.I.R.
- 100% of the drill chuck is individually controlled to ensure a maximum total indicator run-out of 0.0016"
- Compact design; no possibility of arbor slipping from drill chuck



Precision
R-8



Precision
MT

Precision

Capacity	Model No.	Shank	Price
1/32-1/2	**J859-001**	R8	298.00
1/8-5/8	**J859-002**	R8	305.00
1/32-1/2	**J859-005**	MT2	296.00
1/32-1/2	**J859-006**	MT3	298.00
1/32-1/2	**J859-007**	MT4	305.00
1/8-5/8	**J859-009**	MT3	300.00

Super Precision CAT & BT Shanks

Capacity	Model No.	Shank	Price
1/8-5/8	**J859-010**	MT4	305.00
1/64-5/16	**J859-013**	CAT40	506.00
1/32-1/2	**J859-014**	CAT40	450.00
1/8-5/8	**J859-016**	CAT40	550.00
1/32-1/2	**J859-020**	BT40	360.00
1/8-5/8	**J859-021**	BT40	400.00

Keyless Drill Chucks

- For high accuracy applications on conventional or CNC machines in drilling, boring & counter-boring operations.
- Tighten and release by hand.
- Chucks have self-tightening feature.



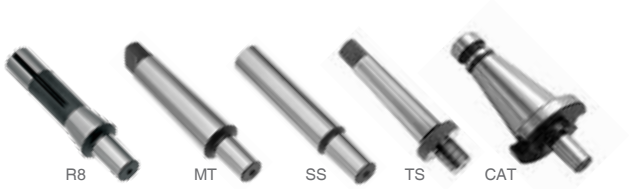
Heavy Duty Ball Bearing

Capacity	Model No.	Mount	Price
0-1/4	**JDCK1JT**	1JT	69.95
1/64-3/8	**JDCK2JT**	2JT	72.36
1/64-3/8	**JDCK33JT**	33JT	72.36
1/32-1/2	**JDCK2JTA**	2JT	86.03
1/32-1/2	**JDCK33JTA**	33JT	86.03
1/32-1/2	**JDCK6JT**	6JT	86.03
1/8-5/8	**JDCK6JTA**	6JT	105.12
1/8-5/8	**JDCK3JT**	3JT	105.12

Heavy Duty Ball Bearing

Capacity	Model No.	Mount	Price
0-5/32	**J859-805**	0JT	157.35
0-1//4	**J859-810**	1JT	117.50
0-5/16	**J859-815**	1JT	118.35
0-3/8	**J859-820**	2JT	141.10
0-3/8	**J859-825**	33JT	174.10
1/32-1/2	**J859-830**	2JT	174.10
1/32-1/2	**J859-835**	6JT	174.10
1/32-1/2	**J859-840**	33JT	167.35
1/8-5/8	**J859-845**	6JT	200.70
1/8-5/8	**J859-850**	33JT	230.50

Drill Chuck Arbors



Straight to Jacobs Taper

Straight Shank	To Jacobs Taper	Tool No.	Price Each
1/2	0	DCS12J-0	7.48
1/2	1	DCS12J-1	7.48
1/2	2	DCS12J-2	7.48
1/2	3	DCS12J-3	7.48
1/2	33	DCS12J-33	7.48
1/2	4	DCS12J-4	10.08
1/2	6	DCS12J-6	7.48
5/8	1	DCS58J-1	7.74
5/8	2	DCS58J-2	7.74
5/8	3	DCS58J-3	8.45
5/8	33	DCS58J-33	8.45
5/8	4	DCS58J-4	10.08
5/8	6	DCS58J-6	10.08
3/4	1	DCS34J-1	11.57
3/4	2	DCS34J-2	11.57
3/4	3	DCS34J-3	11.57
3/4	33	DCS34J-33	12.35
3/4	4	DCS34J-4	12.94
3/4	6	DCS34J-6	12.35
1	1	DCS1J-1	12.94
1	2	DCS1J-2	12.94
1	3	DCS1J-3	12.94
1	33	DCS1J-33	12.94
1	4	DCS1J-4	12.94
1	6	DCS1J-6	12.94
1-1/2	3	DCS112J-3	20.67
1-1/2	4	DCS112J-4	20.67

NMTB Taper to Jacobs Taper

		APT USA		MDX	
Shank Number	Jacobs Taper	Tool No.	Price Each	Tool No.	Price Each
30	1	QCJ3-1	135.64	DCN301	79.00
30	2	QCJ3-2	124.10	DCN302	79.00
30	3	QCJ3-3	124.10	DCN303	80.36
30	33	QCJ3-33	124.10	DCN333	80.36
30	4	QCJ3-4	128.43	DCN304	81.00
30	6	QCJ3-6	128.43	DCN306	85.00
40	2	QCJ4-2	126.98	DCN402	96.74
40	3	QCJ4-3	126.98	DCN403	99.47
40	33	QCJ4-33	126.98	DCN433	97.51
40	4	QCJ4-4	139.97	DCN404	99.47
40	6	QCJ4-6	150.07	DCN406	99.47
50	2	—	—	DCN502	184.10
50	3	—	—	DCN503	184.10
50	33	—	—	DCN533	184.10
50	5	—	—	DCN505	191.24
50	6	—	—	DCN506	191.24

R-8 to Jacobs Taper

R-8 Shank	To Jacobs Taper	Tool No.	Price Each
R8	1	R8J1	34.84
R8	2	R8J2	34.84
R8	3	R8J3	34.84
R8	33	R8J33	34.84
R8	4	R8J4	34.84
R8	6	R8J6	34.84

B Taper European Shanks

Shank Type	B-Shank #	Tool No.	Price Each
1/2SS	10	DCB12-10	18.00
2 M.T.	12	DCB2M-12	18.00
R8	12	DCBR8-12	18.00
1/2SS	16	DCB12-16	18.00
2 M.T.	16	DCB2MT-16	28.00
3 M.T.	16	DCB3MT-16	28.00
R8	16	DCBR8-16	28.00
3 M.T.	22	DCB3MT-22	30.00
4 M.T.	22	DCB4MT-22	30.00

Morse Taper to Jacobs Taper

Morse Taper Shank	To Jacobs Taper	Tool No.	Price Each
t	33	DCM0J-33	7.74
1	0	DCM1J-0	7.74
1	1	DCM1J-1	7.74
1	2	DCM1J-2	7.74
1	3	DCM1J-3	8.45
1	33	DCM1J-33	8.45
1	5	DCM1J-5	8.45
1	6	DCM1J-6	8.45
2	0	DCM2J-0	7.74
2	1	DCM2J-1	7.74
2	2	DCM2J-2	7.74
2	3	DCM2J-3	7.74
2	33	DCM2J-33	7.74
2	4	DCM2J-4	10.08
2	5	DCM2J-5	10.08
2	6	DCM2J-6	10.08
3	0	DCM3J-0	10.34
3	1	DCM3J-1	10.34
3	2	DCM3J-2	10.34
3	3	DCM3J-3	10.34
3	33	DCM3J-33	10.34
3	4	DCM3J-4	11.38
3	5	DCM3J-5	11.38
3	6	DCM3J-6	11.38
4	1	DCM4J-1	16.25
4	2	DCM4J-2	16.25
4	3	DCM4J-3	16.25
4	33	DCM4J-33	16.25
4	4	DCM4J-4	16.25
4	5	DCM4J-5	16.25
4	6	DCM4J-6	16.25
5	2	DCM5J-2	29.58
5	3	DCM5J-3	29.58
5	33	DCM5J-33	29.58
5	4	DCM5J-4	29.58
5	5	DCM5J-5	29.58
5	6	DCM5J-6	29.58

Threaded Shank Arbors

Shank	To Threaded Mount	Tool No.	Price Each
1/2	3/8-24	DCS1238	38.53
1/2	1/2-20	DCS1212	38.53
1/2	5/8-16	DCS1258	40.73
1 M.T.	3/8-24	DCT138	40.73
1 M.T.	1/2-20	DCT112	42.87
2 M.T.	3/8-24	DCT238	42.87
2 M.T.	1/2-20	DCT212	42.87
2 M.T.	5/8-16	DCT258	42.87
3 M.T.	3/8-24	DCT338	47.16
3 M.T.	1/2-20	DCT312	47.16
3 M.T.	5/8-16	DCT358	47.16
R8	3/8-24	DCR838	34.84
R8	1/2-20	DCR812	34.84
R8	5/8-16	DCR858	34.84

CAT V To Jacobs Taper

CAT #	Jacobs Taper	Tool No.	Price Each
40	6	DCC40J-6	98.00
40	33	DCC40J-33	98.00
50	6	DCC50J-6	175.00
50	33	DCC50J-33	175.00

Brown & Sharpe to Jacobs Taper

B&S	Jacob Taper	Tool No.	Price Each
7 Tanged	33	DCB7T	55.00
7 Drawbar	33	DCB7D	55.00
9 Drawbar	33	DCB9D	65.00

Vises

Bench Vises with Swivel Base

- Removable Hardened alloy steel jaw inserts.
- Completely enclosed center screw.
- Attractive hammered enamel finish.



Jaw Width	Jaw Opening	Weight Lbs	Model No.	Price
2-1/2	2-1/2	8	**J3980102**	28.91
3	3	14	**J3980103**	31.00

Drill Press Vises



- For small drilling, tapping and grinding
- Can be turned on either side or stood on end.
- Accurately machined and assembled from high tensile cast iron.
- Hardened and ground jaws have horizontal and vertical grooves for holding round work.

Jaw Width	Jaw Depth	Jaw Opening	Model No.	Price
2-1/2	1-1/2	2-1/2	**J2290002**	28.70
3-1/2	1-3/4	3-1/2	**J2290003**	38.50
4-1/2	1-3/4	4-1/2	**J2290004**	54.45

Swivel and Tilt Vises

- All features of above vises, plus.
- The base has keyway and two bolt slots for locating and mounting on machine table.
- Mounted on swivel base, providing complete 360° rotation.



Jaw Width	Jaw Depth	Jaw Opening	Model No.	Price
2-1/2	1-1/2	2-1/2	**J2300002**	49.15
3-1/2	1-3/8	3	**J2300003**	57.20
4-1/2	1-5/8	4	**J2300004**	79.45

Adjustable Angle Vises

- All Features of above vises plus
- Adjustable up to 90
- Base has slots for mounting



Jaw Width	Jaw Depth	Jaw Opening	Model No.	Price
2-1/2	1-1/2	2-3/8	**J2295002**	32.20
3-1/2	1-3/8	3	**J2295003**	40.60
4-1/2	1-5/8	4	**J2295004**	63.70

Ultra Precision Milling Machine Vises with Swivel Base

Special construction prevents tilting of jaw and work. Manufactured to highest precision standards with many features including: totally enclosed lead screw, hardened and ground top and bottom surfaces, coolant trough, graduated swivel base, flame hardened vise bed, etc



Width of Jaws	Height of Jaws	Jaw Opening	Overall Length	Weight	Model No.	Price
4	1-1/8	4	4-3/4	46 lbs.	**J2235104**	231.00
6	1-1/2	5-1/2	6	107 lbs.	**J2235106**	189.00
8	2	7-3/4	7	225 lbs.	**J2235108**	322.00

Universal 3-way Angle Machine Vise

- Removable Hardened alloy steel jaw inserts.
- Completely enclosed center screw.
- Attractive hammered enamel finish.



Model No.	Width of Jaws	Height of Jaws	Max Jaw Opening	Overall Length (Lowered)	Overall Height (Lowered)	Weight	Model No.	Price
UAV3	3-3/16	1-3/16	3-5/8	15-13/16	6	32 lbs.	**J6650003**	413.00
UAV4	4-1/4	1-1/2	4-3/16	18-7/16	6-7/8	65 lbs.	**J6650004**	490.00
UAV5	5-1/4	1-5/8	5-5/8	25	8-3/16	96 lbs.	**J6650005**	694.00

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3AT Precision Collets	**419**
3C Precision Collets	**419**
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Bridge Reamers	**197**
Countersinks	**140**
Drills, Solid Carbide	**113**
End Mills	**306,326-330,333**
3-Jaw Chucks	
HS Power Chuck	**482**
Plain Back Semi-Steel Shop Chuck	**475**
Self-Centering HD Chuck	**474**
Self-Centering Universal Accra Chuck	**472**
4C Precision Collets	**400**
4-Flute	
Counterbores	**148**
Countersinks	**140**
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4-Jaw Chucks	**478-481**
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Logo Apparel

Polo Shirts

Colors	Price	Order No.
WHITE	26.00	MPSW
BLACK	26.00	MPSK
NAVY BLUE	26.00	MPSB

T-Shirts

Colors	Price	Order No.
WHITE	13.00	MTSW
NAVY BLUE	13.00	MTSB

Sweatshirts

Colors	Price	Order No.
WHITE	32.50	MSSW
NAVY BLUE	32.50	MSSB

Size Code

Size	Code
SMALL	-1
MEDIUM	-2
LARGE	-3



MTSW **MSSB** **MPSK**

Please indicate the product number and size code.
Example: White Large T-shirt would be: MTSW-3



Order No. **MBCB**
PRICE EACH: **14.95**
One size fits all for baseball caps

Size Conversion Charts

3.5" X 6"
DECIMAL POCKET CHART
Order No. **DPC**
Price Each **4.95**



27" X 37"
DECIMAL WALL CHART
Order No. **DWC**
Price Each **9.75**





MICHIGAN
DRILL & CUTTING TOOLS

Decimal Equivalents and Tap Sizes of Fraction, Number, Letter and Metric Sizes

Recommended Tap drill sizes for approximately 75% depth of thread

Drill Size	Decimal Inches	Drill Size	Decimal Inches	Tap Size	Drill Size	Decimal Inches	Tap Size	Drill Size	Decimal Inches	Tap Size	Drill Size	Decimal Inches	Tap Size
97	.0059	58	.0420		27	.1440		H	.2660		17/32	.5312	5/8 - 11NC
.15mm	.0059	57	.0430		3.7mm	.1457		6.8mm	.2677		13.5mm	.5315	
96	.0063	1.1mm	.0433		26	.1470	3/16 - 24NS	6.9mm	.2717		35/64	.5469	
.16mm	.0063	1.15mm	.0453		3.75mm	.1476	m4.5x0.75	I	.2720	5/16-24NF	14mm	.5512	m16x2
95	.0067	56	.0465		25	.1495	#10 - 24NC	7mm	.2756	m8x1	9/16	.5625	
.17mm	.0067	3/64	.0469	#0 - 80NF	3.8mm	.1496		J	.2770		14.5mm	.5709	m16x1.5
94	.0071	1.2mm	.0472		24	.1520		7.1mm	.2795		37/64	.5781	3/8-18 NPT PIPE 5/8-18NF
.18mm	.0071	1.25mm	.0492	m1.6x0.35	3.9mm	.1535		K	.2810		15mm	.5906	
93	.0075	1.3mm	.0512		23	.1540		9/32	.2812	5/16-32NS	19/32	.5938	3/8 - 18 NPS PIPE
.19mm	.0075	55	.0520		5/32	.1562		7.2mm	.2835		39/64	.6094	
92	.0079	1.35mm	.0531		22	.1570	3/16 - 32NS	7.25mm	.2854		15.5mm	.6102	m18x2.5
.2mm	.0079	54	.0550		4mm	.1575		7.3mm	.2874		5/8	.6250	11/16-16NS
91	.0083	1.4mm	.0551		21	.1590	#10 - 32NF	L	.2900		16mm	.6299	m18x2.0
.21mm	.0083	1.45mm	.0571	m1.8x0.35	20	.1610		7.4mm	.2913		41/64	.6406	
90	.0087	1.5mm	.0591		4.1mm	.1614		M	.2950		16.5mm	.6496	
.22mm	.0087	53	.0595	#1-64, 72	4.2mm	.1654	m5x0.8	7.5mm	.2953		21/32	.6562	3/4-10NC
89	.0091	1.55mm	.0610		19	.1660		19/64	.2969		17mm	.6693	
.23mm	.0091	1/16	.0625		4.25mm	.1673		7.6mm	.2992		43/64	.6719	
.24mm	.0094	1.6mm	.0630	m2x0.4	4.3mm	.1693		N	.3020		11/16	.6875	3/4-16NF
88	.0095	52	.0635		18	.1695		7.7mm	.3031		17.5mm	.6890	m20x2.5
.25mm	.0098	1.65mm	.0650		11/64	.1719		7.75mm	.3051	m9x1.25	45/64	.7031	
87	.0100	1.7mm	.0669		17	.1730		7.8mm	.3071		18mm	.7087	m20x2.0
.26mm	.0102	51	.0670	#2 - 56NC	4.4mm	.1732		7.9mm	.3110		23/32	.7188	1/2-14NPT PIPE
86	.0105	1.75mm	.0689	m2.2x0.45	16	.1770	#12 - 24NC	5/16	.3125	3/8-16NC	18.5mm	.7283	m20x1.5
.27mm	.0106	50	.0700	#2 - 64NF	4.5mm	.1772		8mm	.3150		47/64	.7344	1/2-14NPS PIPE
85	.0110	1.8mm	.0709		15	.1800		O	.3160		19mm	.7480	
.28mm	.0110	1.85mm	.0728		4.6mm	.1811		8.1mm	.3189		3/4	.7500	
.29mm	.0114	49	.0730		14	.1820	#12 - 28NF	8.2mm	.3228		49/64	.7656	7/8-9NC
84	.0115	1.9mm	.0748	m2.3x0.4	13	.1850		P	.3230		19.5mm	.7677	m22x2.5
.3mm	.0118	48	.0760		4.7mm	.1850		8.25mm	.3248		25/32	.7812	
83	.0120	1.95mm	.0768		4.75mm	.1870		8.3mm	.3268		20mm	.7874	m22x2.0
82	.0125	5/64	.0781	#3 - 48NC	3/16	.1875		21/64	.3281		51/64	.7969	
.32mm	.0126	47	.0785		4.8mm	.1890	7/32 -32NS	8.4mm	.3307		20.5mm	.8071	m22x1.5
81	.0130	2mm	.0787		12	.1890		Q	.3320	3/8-24NF	13/16	.8125	7/8-14NF
.34mm	.0134	2.05mm	.0807	m2.5x0.45	11	.1910		8.5mm	.3346	m10x1.5	21mm	.8268	m24x3
80	.0135	46	.0810		4.9mm	.1929		8.6mm	.3386		53/64	.8281	
.35mm	.0138	45	.0820	#3 - 56NF	10	.1935		R	.3390	1/8-27NPT PIPE	27/32	.8438	
.36mm	.0142	2.1mm	.0827		9	.1960		8.7mm	.3425		21.5mm	.8465	
79	.0145	2.15mm	.0846	m2.6x0.45	5mm	.1969	m6x1	11/32	.3438		55/64	.8594	
.38mm	.0150	44	.0860	#4 - 36	8	.1990		8.75mm	.3445	m10x1.25	22mm	.8661	m24x2
1/64	.0156	2.2mm	.0866		5.1mm	.2008		8.8mm	.3465		7/8	.8750	1-8NC
.4mm	.0157	2.25mm	.0886		7	.2010	1/4 - 20NC	S	.3480	1/8-27NPT PIPE	22.25mm	.8760	
78	.0160	43	.0890	#4 - 40NC	13/64	.2031		8.9mm	.3504		22.5mm	.8858	m24x1.50
.42mm	.0165	2.3mm	.0906		6	.2040		9mm	.3543	m10x1.00	57/64	.8906	
.44mm	.0173	2.35mm	.0925		5.2mm	.2047		T	.3580		23mm	.9055	
.45mm	.0177	42	.0935	#4 - 48NF	5	.2055		9.1mm	.3583		29/32	.9062	
77	.0180	3/32	.0938		5.25mm	.2067	m6x0.75	23/64	.3594		59/64	.9219	3/4-14 NPT PIPE 1-12NF
.46mm	.0181	2.4mm	.0945		5.3mm	.2087		9.2mm	.3622		23.5mm	.9252	
.48mm	.0189	41	.0960		4	.2090	1/4 - 24	9.25mm	.3642		15/16	.9375	3/4-14 NPS PIPE 1-14NS
.5mm	.0197	2.45mm	.0965		5.4mm	.2126		9.3mm	.3661		24mm	.9449	m27x3
76	.0200	40	.0980		3	.2130	1/4 - 28NF	U	.3680	7/16-14NC	61/64	.9531	
75	.0210	2.5mm	.0984	m3x0.5	5.5mm	.2165		9.4mm	.3701		24.5mm	.9646	
.55mm	.0217	39	.0995		7/32	.2188		9.5mm	.3740	m11x1.50	31/32	.9688	
74	.0225	38	.1015	#5 - 40NC	5.6mm	.2205		3/8	.3750		25mm	.9843	m27x2
.6mm	.0236	2.6mm	.1024		2	.2210		V	.3770		63/64	.9844	1-1/8-7NC
73	.0240	37	.1040	#5 - 44NF	5.7mm	.2244		9.6mm	.3780		1	1.0000	
72	.0250	2.7mm	.1063		5.75mm	.2264		9.7mm	.3819		25.5mm	1.0039	
.65mm	.0256	36	.1065	#6 - 32NC	1	.2280		9.75mm	.3839		1-1/64	1.0156	
71	.0260	2.75mm	.1083		5.8mm	.2283		9.8mm	.3858		26mm	1.0236	
.7mm	.0276	7/64	.1094		5.9mm	.2323		W	.3860		1-1/32	1.0312	
70	.0280	35	.1100		A	.2340		9.9mm	.3898		26.5mm	1.0433	m30x3.5
69	.0292	2.8mm	.1102		15/64	.2344		25/64	.3906	7/16 - 20NF	1-3/64	1.0469	1-1/8-12NF
.75mm	.0295	34	.1110		6mm	.2362	m7x1	10mm	.3937	m12x1.75	1-1/16	1.0625	
68	.0310	33	.1130	#6 - 40NF	B	.2380		X	.3970		27mm	1.0630	
1/32	.0312	2.9mm	.1142	m3.5x0.6	6.1mm	.2402		Y	.4040		1-5/64	1.0781	
.8mm	.0315	32	.1160		C	.2420		13/32	.4062		27.5mm	1.0827	
67	.0320	3mm	.1181		6.2mm	.2441		Z	.4130		1-3/32	1.0938	
66	.0330	31	.1200		D	.2460	1/16-27NPT PIPE	10.5mm	.4134	m12x1.25	28mm	1.1024	m30x2.0
.85mm	.0335	3.1mm	.1220		6.25mm	.2461		27/64	.4219	1/2 - 13	1-7/64	1.1094	1-1/4-7NC
65	.0350	1/8	.1250	5/32 - 32NS	6.3mm	.2480		11mm	.4331		28.5mm	1.1220	
.9mm	.0354	3.2mm	.1260		E	.2500		7/16	.4375	1/4-18NPT PIPE	1-1/8	1.1250	
64	.0360	3.25mm	.1280		1/4	.2500	1/16-27NPS PIPE	11.5mm	.4528		1-9/64	1.1406	
63	.0370	30	.1285	5/32 - 36NS	6.4mm	.2520		29/64	.4531	1/4-18 NPT PIPE 1/2x20	29mm	1.1417	
.95mm	.0374	3.3mm	.1299	m4x0.7	6.5mm	.2559		15/32	.4688		1-5/32	1.1562	1-11 1/2 NPT PIPE
62	.0380	3.4mm	.1339		F	.2570	5/16 - 18NC	12mm	.4724	m14x2	29.5mm	1.1614	
61	.0390	29	.1360	#8 - 32, 36	6.6mm	.2598		31/64	.4844	9/16 - 12NC	1-11/64	1.1719	1-1/4-12NF
1mm	.0394	3.5mm	.1378		G	.2610		12.5mm	.4921	m14x1.5	30mm	1.1811	
60	.0400	28	.1405		6.7mm	.2638		1/2	.5000		1-3/16	1.1875	
59	.0410	9/64	.1406		17/64	.2656		13mm	.5118	m14x 1.25	30.5mm	1.2007	
1.05mm	.0413	3.6mm	.1417		6.75mm	.2657	m8x1.25	33/64	.5156	9/16 - 18NF	1-7/32	1.2188	

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