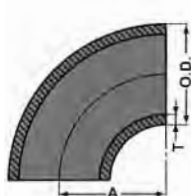
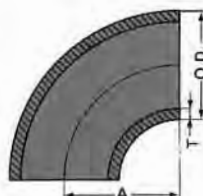


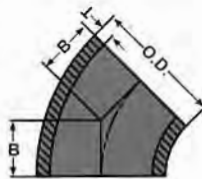
**90° ELBOW
LONG RADIUS**



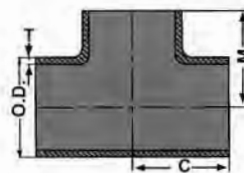
**90° ELBOW
SHORT RADIUS**



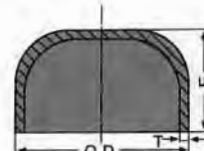
**45° ELBOW
LONG RADIUS**



TEE



CAP

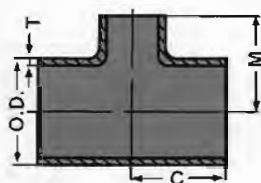


DIMENSION ANSI B16.9 (S/R ANSI B16.28)

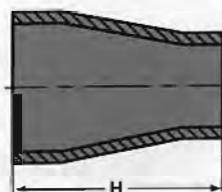
UNIT: INCH/mm

NOMINAL PIPE SIZE	OUTSIDE DIAMETER	WALL THICKNESS SCHEDULE				ELBOW			TEE	CAP	NOMINAL PIPE SIZE
						90°		45°			
		T				L/R	S/R	L/R			
INCH	O.D.	5S	10S	40S	80S	A	A	B	C, M	E	INCH
1/2	0.840	0.065	0.083	0.109	0.147	1.50	—	0.62	1.00	1.00	1/2
	21.30	1.65	2.11	2.77	3.73	38.1	—	16	25.4	25.4	
3/4	1.050	0.065	0.083	0.113	0.154	1.12	—	0.44	1.125	1.00	3/4
	26.70	1.65	2.11	2.87	3.91	28.5	—	11	28.6	25.4	
1	1.315	0.065	0.109	0.133	0.179	1.50	1.00	0.88	1.50	1.50	1
	33.40	1.65	2.77	3.38	4.55	38.1	25.4	22	38.1	38.0	
1 1/4	1.660	0.065	0.109	0.140	0.191	1.88	1.25	1.00	1.88	1.50	1 1/4
	42.2	1.65	2.77	3.56	4.85	47.5	32	25	47.6	38	
1 1/2	1.90	0.065	0.109	0.145	0.200	2.25	1.50	1.12	2.25	1.50	1 1/2
	48.3	1.65	2.77	3.68	5.08	57.0	38	29	57.2	38	
2	2.375	0.065	0.109	0.154	0.218	3.00	2.00	1.38	2.50	1.50	2
	60.3	1.65	2.77	3.91	5.54	76.0	51	35	63.5	38	
2 1/2	2.875	0.083	0.120	0.203	0.276	3.75	2.50	1.75	3.00	1.50	2 1/2
	73.0	2.11	3.05	5.16	7.01	95.0	63.5	45	76.2	38	
3	3.50	0.083	0.120	0.216	0.300	4.50	3.00	2.00	3.38	2.00	3
	88.9	2.11	3.05	5.49	7.62	114.5	76	51	85.7	51	
3 1/2	4.00	0.083	0.120	0.226	0.318	5.25	3.50	2.25	3.75	2.50	3 1/2
	101.6	2.11	3.05	5.74	8.08	133.5	89	57	95.3	64	
4	4.50	0.083	0.120	0.237	0.337	6.00	4.00	2.50	4.12	2.50	4
	114.3	2.11	3.05	6.02	8.56	152.5	101.5	64	104.8	64	
5	5.563	0.109	0.134	0.258	0.375	7.50	5.00	3.12	4.88	3.00	5
	141.3	2.77	3.40	6.55	9.52	190.5	127	79	123.8	76	
6	6.625	0.109	0.134	0.280	0.432	9.00	6.00	3.75	5.62	3.50	6
	168.3	2.77	3.40	7.11	10.97	228.5	152.5	95	142.9	89	
8	8.625	0.109	0.148	0.322	0.50	12.00	8.00	5.00	7.00	4.00	8
	219.1	2.77	3.76	8.18	12.70	305	203	127	177.8	102	
10	10.75	0.134	0.165	0.365	0.500	15.00	10.00	6.25	8.50	5.00	10
	273	3.40	4.19	9.27	12.70	381	254	159	215.9	127	
12	12.75	0.156	0.180	0.375	0.500	18.00	12.00	7.50	10.00	6.00	12
	323.9	3.96	4.57	9.52	12.70	457	305	191	254	152	

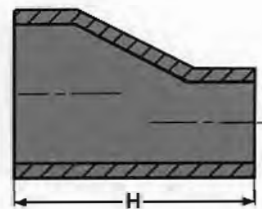
REDUCING TEE



CONCENTRIC REDUCER



ECCENTRIC REDUCER



DIMENSION ANSI B16.9

UNIT: INCH/mm

NOMINAL PIPE SIZE INCH	REDUCING TEE		REDUCERS CONCENTRIC ECCENTRIC
	C	M	H
$\frac{3}{4} \times \frac{1}{2}$	1.125 28.6	1.125 28.6	1.500 38.1
1 $\times \frac{3}{4}$ $\times \frac{1}{2}$	1.500 38.1	1.500 38.1	2.000 50.80
		1.500 38.1	
$\times 1$ 1 $\frac{1}{4} \times \frac{3}{4}$ $\times \frac{1}{2}$	1.875 47.6	1.875 47.6	2.000 50.8
		1.875 47.6	
$\times 1 \frac{1}{4}$ $\times 1$ 1 $\frac{1}{2} \times \frac{3}{4}$ $\times \frac{1}{2}$	2.250 57.2	2.250 57.2	2.500 63.5
		2.250 57.2	
		2.250 57.2	
		2.250 57.2	
		2.250 57.2	
2 $\times 1 \frac{1}{2}$ $\times 1 \frac{1}{4}$ $\times 1$ $\times \frac{3}{4}$	2.500 63.5	2.375 60.3	3.000 76.2
		2.250 57.2	
		2.000 50.8	
		1.752 44.5	
2 $\frac{1}{2} \times 2$ $\times 1 \frac{1}{2}$ $\times 1 \frac{1}{4}$ $\times 1$	3.000 76.2	2.750 69.9	3.500 88.9
		2.625 66.7	
		2.500 63.5	
		2.250 57.2	
3 $\times 2 \frac{1}{2}$ $\times 2$ $\times 1 \frac{1}{2}$ $\times 1 \frac{1}{4}$ $\times 1$	3.375 85.7	3.250 82.6	3.500 88.9
		3.000 76.2	
		2.875 73.0	
		2.752 69.9	
		2.626 66.7	
3 $\frac{1}{2} \times 3$ $\times 2 \frac{1}{2}$ $\times 2$ $\times 1 \frac{1}{2}$	3.752 95.3	3.626 92.1	4.000 101.6
		3.500 88.9	
		3.252 82.6	
		3.126 79.4	

NOMINAL PIPE SIZE INCH	REDUCING TEE		REDUCERS CONCENTRIC ECCENTRIC
	C	M	H
4 $\times 3 \frac{1}{2}$ $\times 3$ $\times 2 \frac{1}{2}$ $\times 2$ $\times 1 \frac{1}{2}$	4.126 104.8	4.00 101.6	4.000 101.6
		3.875 98.4	
		3.750 95.3	
		3.500 88.9	
		3.374 85.7	
5 $\times 4$ $\times 3 \frac{1}{2}$ $\times 3$ $\times 2 \frac{1}{2}$ $\times 2$	4.874 123.8	4.626 117.5	5.000 127.0
		4.50 114.3	
		4.374 111.1	
		4.252 108.0	
		4.126 104.8	
6 $\times 5$ $\times 4$ $\times 3 \frac{1}{2}$ $\times 3$ $\times 2 \frac{1}{2}$ $\times 2$	5.626 142.9	5.374 136.5	5.500 139.7
		5.122 130.1	
		5.00 127.0	
		4.874 123.8	
		4.752 120.7	
8 $\times 6$ $\times 5$ $\times 4$ $\times 3 \frac{1}{2}$ $\times 3$	7.000 178	6.625 168	6.000 152
		6.375 162	
		6.125 155	
		6.000 152	
		5.87 149.1	
10 $\times 8$ $\times 6$ $\times 5$ $\times 4$	8.500 216	8.000 203	7.000 178
		7.625 194	
		7.500 191	
		7.250 184	
12 $\times 10$ $\times 8$ $\times 6$ $\times 5$	10.000 254	9.500 241	8.000 203
		9.000 229	
		8.625 219	
		8.500 216	