

Stainless Steel Flexible Coupling

Style 77S



8 – 18"/200 – 450MM

Approvals/Listings:

See Victaulic [Publication 02.06](#) for potable water approvals if applicable.

Product Description:

Designed to provide a rugged mechanical joint for grooved end stainless steel piping systems, the Style 77S coupling, available in sizes 8 – 18"/200-450 mm, is cast of CF8M (Type 316 stainless steel). See page 3 for pressure ratings on ANSI and ISO wall thicknesses. Style 77S couplings come standard with Grade "E" EPDM gasket material.

NOTE: For sizes ¾ – 6"/20 – 150 mm duplex and/or super duplex stainless steel flexible couplings, please see [publication 17.20](#) for the Style 77DX Duplex Stainless Steel Flexible Coupling.



WARNING

- Victaulic RX roll sets must be used when grooving light wall/thin wall stainless steel pipe for use with Victaulic Couplings.

Failure to use Victaulic RX roll sets when grooving light wall/thin wall stainless steel pipe may cause joint failure, resulting in serious personal injury and/or property damage.

NOTICE

- Victaulic "RX" grooving rolls must be ordered separately. They are identified by a silver color and the designation "RX" marked on the front of the roll set.

Material Specifications:

Housing: Stainless steel (CF8M) conforming to ASTM A351, A743 and A744.

Housing Coating: None

Gaskets:

Grade "E" EPDM: EPDM (Green stripe color code). Temperature range –30°F to +230°F/–34°C to +110°C. May be specified for cold and hot water service within the specified temperature range plus a variety of dilute acids, oil-free air and many chemical services. UL Classified in accordance with ANSI/NSF 61 for cold +73°F/+23°C and hot +180°F/+82°C potable water service and ANSI/NSF 372.
NOT COMPATIBLE FOR PETROLEUM SERVICES.

Job/Owner

System No.	
Location	

Contractor

Submitted By	
Date	

Engineer

Spec Section	
Paragraph	
Approved	
Date	

Material Specifications:

Optional Gaskets: (specify choice)

Grade "EW" EPDM: EPDM (Green W color code). Temperature range -30°F to +230°F/-34°C to +110°C. May be specified for hot water service within the specified temperature range plus a variety of dilute acids, oil-free air and many chemical services. WRAS-certified material with approved microbiological resistance to BS 6920 for cold and hot potable water service up to +149°F/+65°C. UL Classified in accordance with ANSI/NSF 61 for cold +73°F/+23°C and hot +180°F/+82°C potable water service and ANSI/NSF 372. NOT COMPATIBLE FOR PETROLEUM SERVICES. Note: Grade "EW" gaskets are available 8 – 12"/200 – 300mm sizes only.

Grade "T" nitrile: Nitrile (Orange stripe color code). Temperature range -20°F to +180°F/-29°C to +82°C. May be specified for petroleum products, air with oil vapors, vegetable and mineral oils within the specified temperature range. Not compatible for hot water services over +150°F/+66°C or for hot dry air over +140°F/+60°C.

Grade "O" fluoroelastomer: Fluoroelastomer (Blue stripe color code). Temperature range +20°F to +300°F/-7°C to +149°C. Compatible for many oxidizing acids, petroleum oils, halogenated hydrocarbons, lubricants, hydraulic fluids, organic liquids and air with hydrocarbons.

Grade "A" White Nitrile: White nitrile (White gasket). Temperature range +20°F to +180°F/-7°C to +82°C. No carbon black content. May be used for food services. Meets FDA requirements and conforms to CFR Title 21 Part 177.2600.

Other gaskets are available. Please refer to [publication 05.01](#).

* Services listed are General Service Guidelines only. It should be noted that there are services for which these gaskets are not compatible. Reference should always be made to the latest Victaulic Gasket Selection Guide ([05.01](#)) for specific gasket service guidelines and for a listing of services which are not compatible.

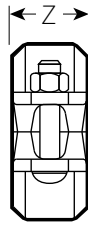
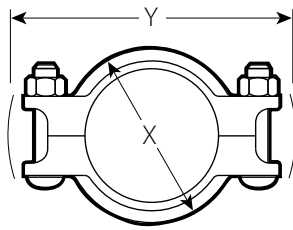
Hardware:

Bolts: ASTM F-593, Group 2, Type 316 stainless steel oval neck track bolts

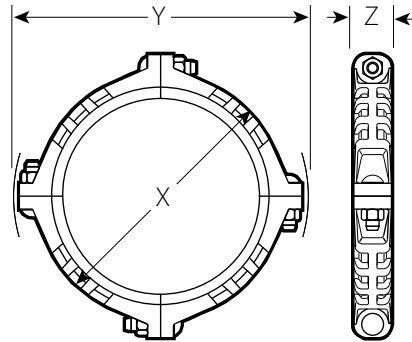
Nuts: ASTM F-594, Group 2, Type 316 stainless steel heavy hex nuts with galling resistant coating

Washers: none

Dimensions:



8 – 14"/200 – 350 mm SIZES



16 – 18"/400 – 450 mm SIZES

Nominal Size	Actual Outside Diameter	Allow. Pipe End Sep. #	Deflection from Centerline ¹		Bolt/Nut No.-Size*	Dimensions Inches/mm		Z	Approx. Weight Each
			Per Coupling Degrees	Pipe In./Ft. mm/m		X	Y		
inches	inches	inches			inches				Lbs.
mm	mm	mm							kg
1/2 – 6	For 3/4 – 6"/20-150 mm sizes Victaulic offers duplex and/or super duplex stainless steel couplings. See Submittal 17.20 for the Style 77DX Duplex Stainless Steel Flexible Coupling.								
20 – 150									
8	8.625	0 – 0.13	0° – 50'	0.18	2 – 7/8 x 5	11.38	14.74	2.44	23.5
200	219.1	0 – 3.2		14		229	374	62	10.7
10	10.750	0 – 0.13	0° – 40'	0.14	2 – 1 x 6	13.50	17.33	2.63	33.0
250	273.0	0 – 3.2		12		343	440	67	15.0
12	12.750	0 – 0.13	0° – 34'	0.12	2 – 1 x 6 1/2	15.50	19.15	2.56	35.0
300	323.9	0 – 3.2		9		394	486	65	15.9
14	14.000	0 – 0.13	0° – 31'	0.11	2 – 1 x 6 1/2	16.56	20.44	2.81	37.0
350	355.6	0 – 3.2		9		421	519	71	16.8
16	16.000	0 – 0.13	0° – 27'	0.10	4 – 1 x 5 1/2	18.94	22.52	2.94	53.0
400	406.4	0 – 3.2		9		481	572	75	24.0
18	18.000	0 – 0.13	0° – 24'	0.08	4 – 1 x 5 1/2	21.25	24.62	3.06	62.0
450	457.0	0 – 3.2		7		540	625	78	25.0

¹ Allowable Pipe End Separation and Deflection figures show the maximum nominal range of movement available at each joint for standard roll grooved pipe. Figures for standard cut grooved pipe may be doubled.

These figures are maximums; for design and installation purposes these figures should be reduced by: 50% for 3/4 - 3 1/2"/20 - 90 mm; 25% for 4"/100 mm and larger.

Performance on ANSI Wall Thicknesses:

Nominal Size inches mm	Actual Outside Diameter inches mm	Pipe Wall Thickness		Groove Type	Maximum	
		inches mm	ANSI Schedule Number		Working Pressure PSI kPa	End Load Lbs N
8 200	8.625 219.1	0.323 8.2	40S	Std/C	300 2068	17524 77951
		0.150 3.8	10S	RX	125 862	7305 32492
		0.110 2.8	5S	RX	75 517	4381 19488
10 250	10.750 273.0	0.366 9.3	40S	Std/C	300 2068	27223 121094
		1.165 4.2	10S	RX	125 862	11347 50475
		0.134 3.4	5S	RX	75 517	6806 30274
12 300	12.750 323.9	0.375 9.5	40S	Std/C	300 2068	38295 170344
		0.181 4.6	10S	RX	125 862	15962 71004
		0.156 4.0	5S	RX	75 517	9574 42586
14 350	14.000 355.6	0.375 9.5	40S	C	200 1379	30800 137060
		0.188 4.8	10S	RX	100 689	15400 68530
		0.156 4.0	5S	RX	65 448	10000 44500
16 400	16.000 406.4	0.375 9.5	40S	C	125 862	25130 111829
		0.188 4.8	10S	RX	45 276	9050 40273
		0.165 4.2	5S	RX	35 241	7040 31328
18 450	18.000 457.0	0.375 9.5	40S	C	100 689	25450 113253
		0.188 4.8	10S	RX	40 345	10180 45301
		0.165 4.2	5S	RX	30 207	7635 33976

WARNING: FOR ONE TIME FIELD TEST ONLY, the Maximum Joint Working Pressure may be increased to 1½ times the figures shown.

Metric thread size bolts are available for all coupling sizes upon request. Contact Victaulic for details.

WARNING: Depressurize and drain the piping system before attempting to install, remove, or adjust any Victaulic piping products.

RX= Roll Set for light wall stainless steel pipe marked with the prefix "RX"

Std= Standard roll set marked with the prefix "R"

C= Cut groove

Performance on ISO Wall Thicknesses:

Nominal Size mm inches	Actual Outside Diameter mm inches	Pipe Wall Thickness mm inches	Groove Type	Maximum	
				Working Pressure kPa PSI	End Load N Lbs
200 8	219.1 8.625	12.5 0.492	C	2068 300	77951 17524
		8.0 0.315	Std/C	2068 300	77968 17528
		6.5 0.256	Std/C	1600 232	60295 13555
		6.3 0.248	Std/C	1600 232	60311 13558
		5.0 0.197	Std	1207 175	45481 10225
		4.0 0.157	Std	862 125	32486 7303
		3.6 0.142	RX	689 100	25989 5843
		3.2 0.126	RX	689 100	25989 5843
		3.0 0.118	RX	517 75	19492 4382
250 10	273.0 10.750	14.2 0.559	C	2068 300	121094 27223
		12.5 0.492	C	2068 300	121094 27223
		10.0 0.394	C	2068 300	121094 27223
		6.3 0.248	Std/C	1379 200	80746 18153
		4.0 0.157	RX	689 100	40373 9076
		3.6 0.142	RX	517 75	30280 6807

For pressure ratings on wall thicknesses not mentioned please contact Victaulic.

RX= Roll Set for light wall stainless steel pipe marked with the prefix "RX"

Std= Standard roll set marked with the prefix "R"

C= Cut groove

Performance on ISO Wall Thicknesses:

Nominal Size mm inches	Actual Outside Diameter mm inches	Pipe Wall Thickness mm inches	Groove Type	Maximum	
				Working Pressure kPa PSI	End Load N Lbs
300 12	323.9 12.750	12.5 0.492	C	2068 300	170344 38295
		10.0 0.394	C	2068 300	170344 38295
		7.1 0.280	Std/C	862 125	113586 25535
		5.0 0.197	RX	517 75	70991 15960
		4.5 0.177	RX	517 75	70991 15960
		4.0 0.157	RX	517 75	42586 9574

For pressure ratings on wall thicknesses not mentioned please contact Victaulic.

RX= Roll Set for light wall stainless steel pipe marked with the prefix "RX"

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Installation

Reference should always be made to the [I-100 Victaulic Field Installation Handbook](#) for the product you are installing. Handbooks are included with each shipment of Victaulic products for complete installation and assembly data, and are available in PDF format on our website at www.victaulic.com.

Warranty

Refer to the Warranty section of the current Price List or contact Victaulic for details.

Note

Working Pressure and End Load are total, from all internal and external loads, based on stainless steel pipe, roll grooved with Victaulic rolls in accordance with Victaulic specifications. "RX" rolls must be used for Schedules 5S, 10S and 10. Standard rolls should be used for Schedule 40S and Standard Weight pipe. Contact Victaulic for performance on other pipe or cut grooved pipe. See submittal publication 24.01 for more information pertaining to tools.

WARNING: FOR ONE TIME FIELD TEST ONLY, the Maximum Joint Working Pressure may be increased to 1 1/2 times the figures shown.

Metric thread size bolts are available for all coupling sizes upon request. Contact Victaulic for details.

WARNING: Depressurize and drain the piping system before attempting to install, remove, or adjust any Victaulic piping products.

This product shall be manufactured by Victaulic or to Victaulic specifications. All products to be installed in accordance with current Victaulic installation/assembly instructions. Victaulic reserves the right to change product specifications, designs and standard equipment without notice and without incurring obligations.

Trademarks

Victaulic is a registered trademark of Victaulic Company.