

# Stainless Steel Flexible Coupling

## STYLE 77S

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 submittal publication 17.20 for the Style 77DX Duplex Stainless Steel Flexible Coupling.

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### MATERIAL SPECIFICATIONS



8 – 18"/200 – 450MM

**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. Recommended 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 to ANSI/NSF 61 for cold +86°F/+30°C and hot +180°F/+82°C potable water service. NOT RECOMMENDED FOR PETROLEUM SERVICES.

**Optional Gaskets:** (specify choice)

- **Grade "EW" EPDM**  
EPDM (Green W color code). Temperature range –30°F to +230°F/–34°C to +110°C. Recommended 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 to ANSI/NSF 61 for cold +86°F/+30°C and hot +180°F/+82°C potable water service. NOT RECOMMENDED 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. Recommended for petroleum products, air with oil vapors, vegetable and mineral oils within the specified temperature range. NOT RECOMMENDED 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. Recommended 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 05.01.

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

**JOB/OWNER**

System No. \_\_\_\_\_  
Location \_\_\_\_\_

**CONTRACTOR**

Submitted By \_\_\_\_\_  
Date \_\_\_\_\_

**ENGINEER**

Spec Sect \_\_\_\_\_ Para \_\_\_\_\_  
Approved \_\_\_\_\_  
Date \_\_\_\_\_

# Stainless Steel Flexible Coupling

STYLE 77S

**MATERIAL SPECIFICATIONS**

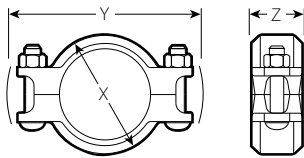
**Hardware:**

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

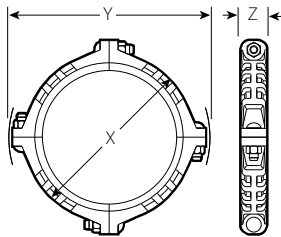
**Nuts:** ASTM F-594, Group 2, Type 316 stainless steel heavy hex nuts with galling resistant coating

**Washers:** none

**DIMENSIONS**



8 – 14"/200 – 350 mm SIZES



16 – 18"/400 – 450 mm SIZES

Nominal Size Inches mm	Size		Deflect. Fr. C <sub>t</sub> †		Bolt/Nut No.-Size*	Dimensions – Inches/mm			Approx. Wgt. Each  Lbs. kg
	Actual Out. Dia. Inches mm	Allow. Pipe End Sep. # In./mm	Per Deg. Cplg.	Pipe In./Ft. mm/m		X	Y	Z	
¾ – 6 20 – 150	For ¾ – 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.								
8 200	8.625 219.1	0 - 0.13 0 - 3.2	0° - 50'	0.18 14	2 - 7/8 X 5	11.38 229	14.74 374	2.44 62	23.5 10.7
10 250	10.750 273.0	0 - 0.13 0 - 3.2	0° - 40'	0.14 12	2 - 1 X 6	13.50 343	17.33 440	2.63 67	33.0 15.0
12 300	12.750 323.9	0 - 0.13 0 - 3.2	0° - 34'	0.12 9	2 - 1 X 6½	15.50 394	19.15 486	2.56 65	35.0 15.9
14 350	14.000 355.6	0 - 0.13 0 - 3.2	0° - 31'	0.11 9	2 - 1 X 6½	16.56 421	20.44 519	2.81 71	37.0 16.8
16 400	16.000 406.4	0 - 0.13 0 - 3.2	0° - 27'	0.10 9	4 - 1 X 5½	18.94 481	22.52 572	2.94 75	53.0 24.0
18 450	18.000 457.0	0 - 0.13 0 - 3.2	0° - 24'	0.08 7	4 - 1 X 5½	21.25 540	24.62 625	3.06 78	62.0 25.0

† 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 ¾ - 3 ½"/20 - 90 mm; 25% for 4"/100 mm and larger.

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## STYLE 77S

### PERFORMANCE ON ANSI WALL THICKNESSES

Pipe Diameter		Style 77S				
Nominal Pipe Size	Actual Outside Diameter	Pipe Wall Thickness		Grooving Method	Maximum	
		Inches mm	ANSI Schedule Number		Working Pressure	End Load
Inches mm	Inches mm	Inches mm		St = Standard Roll Set RX = SS Roll Set C = Cut Groove	PSI kPa	Lbs N
8 200	8.625 219.1	0.323 8.2	40S	C	300 2068	17524 77951
		0.323 8.2	40S	St	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	C	300 2068	27223 121094
		0.366 9.3	40S	St	300 2068	27223 121094
		0.165 4.2	10S	RX	125 862	11347 50475
		0.134 3.4	5S	RX	75 517	6806 30274
12 300	12.750 323.9	0.374 9.5	40S	C	300 2068	38295 170344
		0.374 9.5	40S	St	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	0.374 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	0.374 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	0.374 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 1 ½ 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.

### PERFORMANCE ON ISO WALL THICKNESSES

Pipe Diameter		Style 77S				
Nominal Pipe Size	Actual Outside Diameter	Pipe Wall Thickness	Grooving Method	Maximum		
				Working Pressure	End Load	
Inches mm	Inches mm	Inches mm	St = Standard Roll Set RX = SS Roll Set C = Cut Groove	PSI kPa	Lbs N	
8 200	8.625 219.1	0.492 12.5	C	300 2068	17524 77951	
		0.315 8.0	St/C	300 2068	17528 77968	
		0.256 6.5	St/C	232 1600	13555 60295	
		0.248 6.3	St/C	232 1600	13558 60311	
		0.197 5.0	St	175 1207	10225 45481	
		0.157 4.0	St	125 862	7303 32486	
		0.142 3.6	RX	100 689	5843 25989	
		0.126 3.2	RX	100 689	5843 25989	
		0.118 3.0	RX	75 517	4382 19492	
		0.102 2.6	RX	N/R		
10 250	10.750 273.0	0.559 14.2	C	300 2068	27223 121094	
		0.492 12.5	C	300 2068	27223 121094	
		0.394 10.0	C	300 2068	27223 121094	
		0.248 6.3	St/C	200 1379	18153 80746	
		0.157 4.0	RX	100 689	9076 40373	
		0.142 3.6"	RX	75 517	6807 30280	
		0.126 3.2	RX	N/R		
		0.102 2.6	RX	N/R		
		0.079 2.0	RX	N/R		
		12 300	12.750 323.9	0.492 12.5	C	300 2068
0.394 10.0	C			300 2068	38295 170344	
0.280 7.1	St/C			200 1379	25535 113586	
0.197 5.0	RX			125 862	15960 70991	
0.177 4.5	RX			125 862	15960 70991	
0.157 4.0	RX			75 517	9574 42586	
0.126 3.2	RX			N/R		
0.102 2.6	RX			N/R		

N/R Not Rated. Contact Victaulic for more information.

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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](http://www.victaulic.com).

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#### GENERAL NOTES

**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 ½ 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.

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#### WARRANTY

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

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For complete contact information, visit [www.victaulic.com](http://www.victaulic.com)

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