

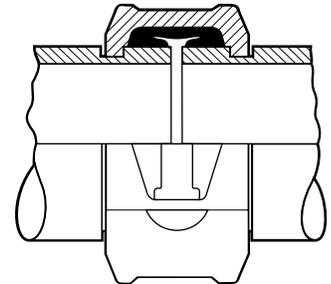
Rigid Coupling

STYLE 89 (FOR STAINLESS STEEL PIPE)

Style 89 is constructed with heavy ductile iron housings, designed for use on stainless steel pipe only. The housing key is wider than standard and the coupling housing is designed to clamp the bottom of the groove, thus providing an essentially rigid joint. To achieve this rigidity, it is necessary to torque the nuts to the values shown in the table below. For pressure ratings, see page 2 for pressure ratings based on ANSI wall thicknesses and page 3 for those based on ISO wall thicknesses.

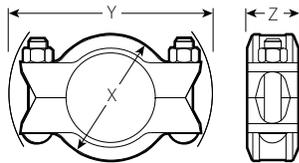
Style 89 will greatly reduce linear or angular movement and is useful for valve connections and other points where rigidity is required. The coupling is provided with plated bolts and nuts and pressure responsive gaskets for a variety of services (please specify gasket grade when ordering. Request publication 05.01 for gasket service ratings).

Style 89 couplings are suitable for use on stainless steel piping where the corrosion resistant properties of stainless are not required for the external environment.



Exaggerated for clarity

DIMENSIONS



TYPICAL FOR ALL SIZES

Size		Allow. Pipe End Sep. #	@ Bolts/Nuts No. - Size	Nut Torque	Dimensions Inches/millimeters			Approx. Weight Each
Nominal Size Inches mm	Actual Outside Diameter Inches mm	Inches mm	Inches mm	ft-lbs N•m	X	Y	Z	Lbs. kg
2 50	2.375 60.3	0.14 3.6	2 - 5/8 x 2 3/4	60 - 90 80 - 120	3.50 89	6.68 168	2.00 51	3.1 1.4
2 1/2 65	2.875 73.0	0.14 3.6	2 - 5/8 x 3 1/2	60 - 90 80 - 120	4.13 105	7.13 181	2.00 51	4.0 1.8
76.1 mm	3.000 76.1	0.14 3.6	2 - 5/8 x 3 1/2	60 - 90 80 - 120	4.13 105	7.25 184	2.00 51	4.1 1.9
3 80	3.500 88.9	0.14 3.6	2 - 5/8 x 3 1/2	60 - 90 80 - 120	4.75 121	7.75 197	2.00 51	4.3 2.0
4 100	4.500 114.3	0.25 6.4	2 - 3/4 x 4 1/4	85 - 125 115 - 170	6.00 152	9.63 245	2.13 54	7.5 3.4
139.7 mm	5.500 139.7	0.25 6.4	2 - 3/4 x 4 1/4	85 - 125 115 - 170	7.13 181	10.63 270	2.38 60	12.5 5.7
5 125	5.563 141.3	0.25 6.4	2 - 3/4 x 4 1/4	85 - 125 115 - 170	7.13 181	10.63 270	2.38 60	12.5 5.7
165.1 mm	6.500 165.1	0.25 6.4	2 - 7/8 x 5 1/2	175 - 250 237 - 339	8.63 219	12.38 314	2.38 60	15.8 7.2
6 150	6.625 168.3	0.25 6.4	2 - 7/8 x 5 1/2	175 - 250 237 - 339	8.63 219	12.68 321	2.50 64	16.0 7.3
216.3 mm	8.515 216.3	0.25 6.4	2 - 1 x 5 1/2	200 - 300 271 - 407	11.00 279	15.25 387	2.63 67	25.2 11.4
8 200	8.625 219.1	0.25 6.4	2 - 1 x 5 1/2	200 - 300 271 - 407	11.00 279	15.25 387	2.75 70	26.1 11.8
267.4 mm	10.528 267.4	0.25 6.4	2 - 1 x 6 1/2	250 - 350 339 - 475	13.38 340	17.00 432	2.75 70	32.5 14.7
10 250	10.750 273.0	0.25 6.4	2 - 1 x 6 1/2	250 - 350 339 - 475	13.50 343	17.25 438	2.75 70	32.8 14.9
318.5 mm	12.539 318.5	0.25 6.4	2 - 1 x 6 1/2	250 - 350 339 - 475	15.63 397	19.63 499	2.88 73	42.0 19.1
12 300	12.750 323.9	0.25 6.4	2 - 1 x 6 1/2	250 - 350 339 - 475	15.63 397	19.63 499	2.88 73	46.0 20.9

For field installation only. Style 89 couplings when sufficiently pressurized, will allow pipe ends to separate to maximum point shown before joint acts in a fully restrained manner.

@ Metric thread size bolts are available (color coded gold) for all coupling sizes upon request. Contact Victaulic for details.

JOB/OWNER

System No. _____
Location _____

CONTRACTOR

Submitted By _____
Date _____

ENGINEER

Spec Sect _____ Para _____
Approved _____
Date _____

Rigid Coupling

**STYLE 89
(FOR STAINLESS STEEL PIPE)**

PERFORMANCE ON ANSI WALL THICKNESSES

Pipe Diameter		Style 89				
Nominal Pipe Size	Actual Outside Diameter	Pipe Wall Thickness		Grooving Method	Maximum	
					Working Pressure	End Load
Inches mm	Inches mm	Inches mm	ANSI Schedule Number	St = Standard Roll Set RX = SS Roll Set C = Cut Groove	PSI kPa	Lbs N
2 50	2.375 60.3	0.217 5.5	80S	C	750 5171	3323 14780
		0.154 3.9	Duplex/Super Duplex 40S	C	1200 8273	5320 23676
		0.154 3.9	40S	St/C	750 5171	3323 14780
		0.110 2.8	10S	RX	500 3447	2215 9853
		0.067 1.7	5S	RX	325 2241	1440 6405
2½ 65	2.875 73.0	0.276 7.0	80S	C	750 5171	4869 21658
		0.203 5.2	Duplex/Super Duplex 40S	C	1200 8273	7800 34712
		0.205 5.2	40S	St/C	750 5171	4869 21658
		0.122 3.1	10S	RX	500 3447	3246 14438
		0.083 2.1	5S	RX	325 2241	2110 9386
3 80	3.500 88.9	0.299 7.6	80S	C	750 5171	7216 32098
		0.216 5.5	Duplex/Super Duplex 40S	C	1200 8273	11560 51444
		0.217 5.5	40S	St/C	750 5171	7216 32098
		0.122 3.1	10S	RX	500 3447	4814 21415
		0.083 2.1	5S	RX	325 2241	3127 13910
4 100	4.500 114.3	0.339 8.6	80S	C	750 5171	11928 53059
		0.237 6.0	Duplex/Super Duplex 40S	C	1200 8273	19100 84996
		0.236 6.0	40S	St/C	750 5171	11928 53059
		0.122 3.1	10S	RX	400 2758	6362 28298
		0.083 2.1	5S	RX	250 1725	3979 17700
5 125	5.500 139.7	0.237 6.0	Duplex/Super Duplex 40S	C	1200 8273	28520 126916
		0.258 6.6	40S	St/C	750 5171	18229 81087
		0.134 3.4	10S	RX	300 2065	7280 32381
		0.109 2.8	5S	RX	275 1896	6684 29732

Pipe Diameter		Style 89				
Nominal Pipe Size	Actual Outside Diameter	Pipe Wall Thickness		Grooving Method	Maximum	
					Working Pressure	End Load
Inches mm	Inches mm	Inches mm	ANSI Schedule Number	St = Standard Roll Set RX = SS Roll Set C = Cut Groove	PSI kPa	Lbs N
6 150	6.625 168.3	0.237 6.0	Duplex/Super Duplex 40S	C	1200 8273	41360 184060
		0.280 7.1	40S	St/C	750 5171	25854 115003
		0.134 3.4	10S	RX	300 2068	10324 45925
		0.110 2.8	5S	RX	250 1724	8618 38334
8 200	8.625 219.1	0.323 8.2	Duplex/Super Duplex 40S	C	1200 8273	70100 311940
		0.323 8.2	40S	St/C	600 4136	35049 155903
		0.150 3.8	10S	RX	300 2068	17499 77838
		0.110 2.8	5S	RX	200 1379	11686 51980
10 250	10.750 273.0	0.366 9.3	Duplex/Super Duplex 40S	C	1200 8273	108900 484600
		0.366 9.3	40S	St/C	600 4136	54446 242188
		0.165 4.2	10S	RX	300 2068	27184 120918
		0.134 3.4	5S	RX	250 1724	22691 100933
12 300	12.750 323.9	0.374 9.5	Duplex/Super Duplex 40S	C	1200 8273	153200 681740
		0.374 9.5	40S	St/C	600 4136	76590 340687
		0.181 4.6	10S	RX	300 2068	38239 170097
		0.156 4.0	5S	RX	200 1379	25536 113590

Rigid Coupling

STYLE 89
(FOR STAINLESS STEEL PIPE)

PERFORMANCE ON ISO WALL THICKNESSES

Pipe Diameter		Style 89			
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
2 50	2.375 60.3	0.220 5.6	C	750 5171	3323 14780
		0.157 4.0	St/C	750 5171	3323 14780
		0.142 3.6	St	675 4654	2990 13302
		0.126 3.2	St	600 4137	2658 11824
		0.114 2.9	St	525 3620	2326 10346
		0.102 2.6	RX	475 3275	2104 9360
		0.091 2.3	RX	425 2930	1883 8375
		0.079 2.0	RX	375 2586	1661 7390
		0.063 1.6	RX	325 2241	1440 6405
76.1mm	3.00 76.1	0.280 7.1	C	750 5171	5301 23582
		0.252 6.4	C	750 5171	5301 23582
		0.197 5.0	St/C	650 4482	4595 20438
		0.157 4.0	St	575 3964	4064 18079
		0.142 3.6	St	550 3792	3888 17293
		0.122 3.1	St	500 3450	3537 15733
		0.114 2.9	RX	475 3275	3358 14935
		0.102 2.6	RX	400 2758	2827 12577
		0.091 2.3	RX	350 2413	2474 11005
		0.083 2.1	RX	325 2241	2297 10220
		0.079 2.0	RX	325 2241	2297 10220
		3 80	3.500 88.9	0.315 8.0	C
0.220 5.6	St/C			750 5171	7216 32098
0.157 4.0	St			600 4137	5773 25678
0.142 3.6	St			550 3792	5292 23538
0.126 3.2	RX			500 3450	4811 21398
0.114 2.9	RX			475 2758	4570 20328
0.102 2.6	RX			400 2930	3848 17119
0.091 2.3	RX			350 2413	3367 14979
0.079 2.0	RX			325 2241	3127 13910

Pipe Diameter		Style 89			
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
4 100	4.500 114.3	0.346 8.8	C	750 5171	11928 53059
		0.248 6.3	C	750 5171	11928 53059
		0.177 4.5	St	575 3964	9145 40679
		0.142 3.6	St	650 4482	10338 45985
		0.114 2.9	RX	375 2586	5964 26530
		0.102 2.6	RX	325 2238	5161 22958
		0.079 2.0	RX	232 1600	3691 16417
		139.7mm	5.500 139.7	0.394 10.0	C
0.280 7.1	C			750 5171	17819 79261
0.260 6.6	St			750 5171	17819 79261
0.260 6.6	C			750 5171	17819 79261
0.248 6.3	St/C			700 4826	16631 73977
0.220 5.6	St/C			600 4137	14255 63409
0.197 5.0	St			525 3620	12474 55487
0.157 4.0	St			375 2586	8909 39631
0.134 3.4	RX			300 2068	7116 31652
0.126 3.2	RX			300 2068	7127 31704
0.118 3.0	RX			275 1896	6534 29062
0.110 2.8	RX			275 1896	6534 29062
0.102 2.6	RX			250 1724	5940 26420
0.079 2.0	RX			232 1600	5513 24525

Rigid Coupling

**STYLE 89
(FOR STAINLESS STEEL PIPE)**

PERFORMANCE ON ISO WALL THICKNESSES

Pipe Diameter		Style 89			
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
6 150	6.625 168.3	0.433 11.0	C	750 5171	25854 115003
		0.280 7.1	St	750 5171	25854 115003
		0.280 7.1	C	750 5171	25854 115003
		0.197 5.0	St	500 3447	17236 76668
		0.177 4.5	St	450 3103	15512 69002
		0.157 4.0	St	375 2586	12927 57501
		0.126 3.2	RX	275 1896	9480 42168
		0.118 3.0	RX	275 1896	9480 42168
		0.102 2.6	RX	232 1600	7999 35583
		0.079 2.0	RX	232 1600	7997 35574
8 200	8.625 219.1	0.492 12.5	C	600 4136	35049 155903
		0.315 8.0	St/C	575 3964	33595 149438
		0.256 6.5	St/C	475 3275	27752 123449
		0.248 6.3	St/C	450 3103	26292 116951
		0.197 5.0	St	375 2586	21910 97459
		0.157 4.0	St	325 2241	18989 84465
		0.142 3.6	RX	275 1896	16067 71470
		0.126 3.2	RX	250 1724	14607 64973
		0.118 3.0	RX	225 1551	13146 58476
		0.102 2.6	RX	175 1207	10225 45481
		0.079 2.0	RX	150 1034	8746 38984

Pipe Diameter		Style 89			
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
10 250	10.750 273.0	0.559 14.2	C	600 4136	54446 242188
		0.492 12.5	C	600 4136	54446 242188
		0.394 10.0	C	600 4136	54446 242188
		0.248 6.3	St/C	425 2930	38574 171585
		0.157 4.0	RX	300 2068	27229 121119
		0.142 3.6	RX	250 1724	22691 100933
		0.126 3.2	RX	232 1600	21062 93690
		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
0.394 10.0	C			600 4136	76590 340687
0.280 7.1	St/C			450 3103	57454 255568
0.197 5.0	RX			325 2241	41495 184577
0.177 4.5	RX			300 2068	38303 170379
0.157 4.0	RX			200 1379	25536 113590
0.126 3.2	RX			N/R	
0.102 2.6	RX			N/R	

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

Rigid Coupling

STYLE 89 (FOR STAINLESS STEEL PIPE)

MATERIAL SPECIFICATIONS

Housing: Ductile iron conforming to ASTM A-536, grade 65-45-12. Ductile iron conforming to ASTM A-395, grade 65-45-15, is available upon special request.

Housing Coating: Hot dipped galvanized

Gaskets:

* 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.

- **Grade "E" EPDM**

EPDM (Green 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.

- **Grade "T" nitrile**

Nitrile (Orange 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 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.

Bolts/Nuts: Heat-treated plated carbon steel, trackhead meeting the physical and chemical requirements of ASTM A-449 and physical requirements of ASTM A-183.

Rigid Coupling

STYLE 89
(FOR STAINLESS STEEL PIPE)

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.

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.

For complete contact information, visit www.victaulic.com

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