

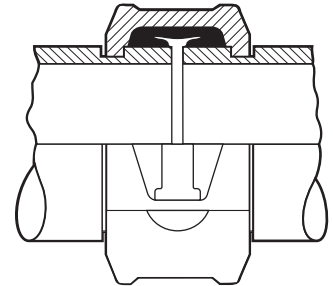
# Rigid Coupling

## 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. Style 89 is rated up to 750 psi/5171 kPa on standard wall stainless steel pipe, to 300 psi/2065 kPa on Schedule 10S stainless steel pipe and 200 psi/1375 kPa on Schedule 5S stainless steel pipe.

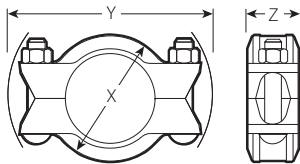
Style 89 will greatly reduce linear or angular movement and is useful for valve connections and other points where rigidity is required. The coupling is provided with plated bolts and nuts and pressure responsive gaskets for a variety of services (please specify gasket grade when ordering. Request publication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

Size		Schedule 40S			Schedule 10S			Schedule 5S		
Nominal Dia. Inches mm	Actual Outside Dia. Inches mm	Max. Joint Work. Press.* psi kPa	Max. Perm. End Load Lbs. N	Nom. Wall Thick. Inches mm	Max. Joint Work. Press.* psi kPa	Max. Perm. End Load Lbs. N	Nom. Wall Thick. Inches mm	Max. Joint Work. Press.* psi kPa	Max. Perm. End Load Lbs. N	Nom. Wall Thick. Inches mm
2 50	2.375 60.3	750 5171	3320 14774	0.154 3.9	300 2065	1330 5919	0.109 2.8	200 1379	890 3961	0.065 1.7
2½ 65	2.875 73.0	750 5171	4875 21694	0.203 5.2	300 2065	1950 8678	0.120 3.1	200 1379	1300 5785	0.083 2.1
76.1 mm	3.000 76.1	750 5171	5300 23585	0.203 5.2	300 2065	2120 9434	0.120 3.1	200 1379	1415 6297	0.083 2.1
3 80	3.500 88.9	750 5171	7215 32107	0.216 5.5	300 2065	2890 12861	0.120 3.1	200 1379	1925 8566	0.083 2.1
4 100	4.500 114.3	750 5171	11930 53089	0.237 6.0	300 2065	4775 21249	0.120 3.1	200 1379	3180 14151	0.083 2.1
5 125	5.500 139.7	750 5171	17820 79299	0.258 6.6	300 2065	7130 31729	0.134 3.4	200 1379	4750 21138	0.109 2.8
165.1 mm	6.500 165.1	750 5171	24890 110761	0.280 7.1	300 2065	9955 44300	0.134 3.4	200 1379	6640 29548	0.109 2.8
6 150	6.625 168.3	750 5171	25850 115035	0.280 7.1	300 2065	10340 46015	0.134 3.4	200 1379	6890 30660	0.109 2.8
216.3 mm	8.515 216.3	600 4136	34175 152079	0.322 8.2	300 2065	17090 76051	0.148 3.8	200 1379	11390 50686	0.109 2.8
8 200	8.625 219.1	600 4136	35055 155995	0.322 8.2	300 2065	17525 77985	0.148 3.8	200 1379	11685 51600	0.109 2.8
267.4 mm	10.528 267.4	600 4136	52230 232424	0.365 9.3	300 2065	26115 116212	0.165 4.2	200 1379	17410 77475	0.134 3.4
10 250	10.750 273.0	600 4136	54460 242345	0.365 9.3	300 2065	27225 121150	0.165 4.2	200 1379	18150 80770	0.134 3.4
318.5 mm	12.539 318.5	600 4136	74100 329745	0.375 9.5	300 2065	37050 164873	0.180 4.6	200 1379	24700 109915	0.156 4.0
12 300	12.750 323.9	600 4136	76605 340890	0.375 9.5	300 2065	38300 170435	0.180 4.6	200 1379	25535 113630	0.156 4.0

\* 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.

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

## Rigid Coupling

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### 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:** Orange enamel

- **Optional:** Hot dipped galvanized and others.

#### 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  $-30^{\circ}\text{F}$  to  $+230^{\circ}\text{F}$ / $-34^{\circ}\text{C}$  to  $+110^{\circ}\text{C}$ .

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  $+86^{\circ}\text{F}/+30^{\circ}\text{C}$  and hot  $+180^{\circ}\text{F}/+82^{\circ}\text{C}$  potable water service. NOT RECOMMENDED FOR PETROLEUM SERVICES.

- **Grade "T" nitrile**

Nitrile (Orange color code). Temperature range  $-20^{\circ}\text{F}$  to  $+180^{\circ}\text{F}$ / $-29^{\circ}\text{C}$  to  $+82^{\circ}\text{C}$ .

Recommended for petroleum products, air with oil vapors, vegetable and mineral oils within the specified temperature range. Not recommended for hot water services over  $+150^{\circ}\text{F}/+66^{\circ}\text{C}$  or for hot dry air over  $+140^{\circ}\text{F}/+60^{\circ}\text{C}$ .

- **Grade "O" fluoroelastomer**

Fluoroelastomer (Blue color code). Temperature range  $+20^{\circ}\text{F}$  to  $+300^{\circ}\text{F}$ / $-7^{\circ}\text{C}$  to  $+149^{\circ}\text{C}$ .

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  $+20^{\circ}\text{F}$  to  $+180^{\circ}\text{F}$ / $-7^{\circ}\text{C}$  to  $+82^{\circ}\text{C}$ . 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.

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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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**WARRANTY**

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

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**NOTE**

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

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