

Victaulic® Flexible Coupling for Steel

Style 177N



1.0 PRODUCT DESCRIPTION

- Installation-Ready™ flexible coupling for original roll or cut groove carbon steel piping systems
- Sizes from 2 – 8"/50 – 200 mm
- Working pressures from full vacuum (29.9 in Hg/760 mm Hg) up to 1000 psi/6900kPa

2.0 CERTIFICATION/LISTINGS



NOTES

- See Victaulic submittal [publication 10.01](#) for details

ALWAYS REFER TO ANY NOTIFICATIONS AT THE END OF THIS DOCUMENT REGARDING PRODUCT INSTALLATION, MAINTENANCE OR SUPPORT.

System No.		Location	
Submitted By		Date	

Spec Section		Paragraph	
Approved		Date	



3.0 MATERIAL SPECIFICATIONS

Housing: Ductile iron conforming to ASTM A-536, grade 65-45-12.

Optional: Ductile iron conforming to ASTM A-395, grade 65-45-15 available upon special request.

Housing Coating: (specify choice)

Standard: Orange enamel.

Optional: Hot dipped galvanized.

Gasket: (specify choice¹)

NOTE

- Additional gasket styles are available. Contact Victaulic for details.

Grade “EHP”

EHP (Red & Green stripe color code). Temperature range –30°F to +250°F/–34°C to +121°C. Recommended for hot water service within the specified temperature range plus a variety of dilute acids, oil-free air and many chemical services.¹ UL classified in accordance with ANSI/NSF61 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.²

Not recommended for hot water services over +150°F/+66°C or for hot dry air over +140°F/+60°C.

- ¹ 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](#) for specific gasket service guidelines and for a listing of services which are not compatible.

Bolts/Nuts: (specify choice²)

Standard: Carbon steel oval neck track bolts meeting the physical and chemical requirements of ASTM A449 (imperial) and ISO 898-1 Class 9.8 (metric). Carbon steel hex nuts meeting the physical and chemical requirements of ASTM A563 Grade B (imperial - heavy hex nuts) and ASTM A563M Class 9 (metric - hex nuts). Track bolts and hex nuts are zinc electroplated per ASTM B633 ZN/FE5, finish Type III (imperial) or Type II (metric).

Optional:²

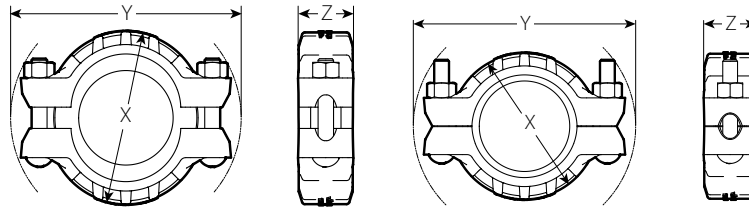
Bolts – Stainless steel, meeting the requirements of ASTM F593, Group 2 (316 stainless steel), condition CW.

Nuts – ASTM F594, Group 2 (316 stainless steel), condition CW, with galling resistant coating.

- ² Optional bolts/nuts are available in imperial size only.

4.0 DIMENSIONS

Style 177N



Style 177N Pre-Assembled
(Installation-Ready Condition)

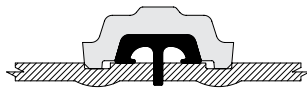
Style 177N Joint Assembled

Size		Pipe End Separation			Bolt/Nut		Dimensions					Weight
Nominal inches mm	Actual Outside Diameter inches mm	Min ³ inches mm	Max Roll Groove ⁴ inches mm	Max Cut Groove ⁴ inches mm	Qty.	Size inches mm	Pre-assembled (Installation-ready condition)		Joint Assembled			Approximate (Each) lb kg
							X inches mm	Y inches mm	X inches mm	Y inches mm	Z inches mm	
2	2.375	0.13	0.19	0.25	2	½ x 3	4.38	6.25	3.75	6.38	2.13	3.3
50	60.3	3.30	4.8	6.35	2	½ x 3	111	159	95	162	54	1.5
2½	2.875	0.13	0.19	0.25	2	½ x 3	4.88	6.88	4.38	6.88	2.13	3.8
65	73.0	3.3	4.8	6.4	2	½ x 3	124	175	111	175	54	1.7
76.1 mm	3.000	0.13	0.19	0.25	2	12 x 76.2	5.00	6.88	4.38	6.91	2.13	4.0
	76.1	3.30	4.8	6.35	2	12 x 76.2	127	175	111	176	54	1.8
3	3.500	0.13	0.19	0.25	2	½ x 3¾	5.63	7.38	5.00	7.50	2.13	4.3
80	88.9	3.3	4.8	6.4	2	½ x 3¾	143	187	127	191	54	2.0
108.0 mm	4.250	0.13	0.25	0.38	2	16 x 101.6	6.88	9.13	5.88	9.25	2.38	7.1
	108.0	3.3	6.4	9.7	2	16 x 101.6	175	232	149	235	60	3.2
4	4.500	0.13	0.25	0.38	2	¾ x 4	7.13	9.38	6.38	9.50	2.38	7.4
100	114.3	3.3	6.4	9.7	2	¾ x 4	181	238	162	241	60	3.4
133.0 mm	5.250	0.13	0.25	0.38	2	20 x 127	7.88	11.00	7.00	11.13	2.38	10.3
	133.0	3.3	6.4	9.7	2	20 x 127	200	279	178	283	60	4.7
139.7 mm	5.500	0.13	0.25	0.38	2	20 x 127	8.25	11.00	7.38	11.25	2.25	9.8
	139.7	3.3	6.4	9.7	2	20 x 127	210	279	187	286	57	4.4
159.0 mm	6.250	0.13	0.25	0.38	2	20 x 127	9.00	11.88	8.13	11.88	2.38	11.4
	159.0	3.3	6.4	9.7	2	20 x 127	229	302	206	302	60	5.2
165.1 mm	6.500	0.13	0.25	0.38	2	20 x 127	9.38	12.13	8.50	12.13	2.25	12.7
	165.1	3.3	6.4	9.7	2	20 x 127	238	308	216	308	57	5.8
6	6.625	0.13	0.25	0.38	2	¾ x 5	9.38	12.38	8.63	12.25	2.38	12.8
150	168.3	3.3	6.4	9.7	2	¾ x 5	238	314	219	311	60	5.8
8 ⁵	8.625	0.18	0.31	0.43	2	7/8 x 5½	11.00	15.13	10.00	15.13	2.63	20.7
200	219.1	4.6	7.9	10.9	2	7/8 x 5½	279	384	254	384	60	9.4

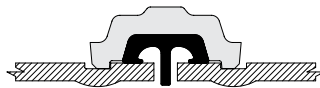
3 The minimum pipe end separation as required by the gasket center leg for roll or cut grooved pipe. See illustrations below.

4 The maximum pipe end separation to be used for determining overall piping system movement for roll or cut groove pipe. See illustration below.

5 8"/200mm size is not UL Listed/FM Approved.



Minimum Pipe Separation
Roll and Cut Groove



Maximum Pipe Separation
Exaggerated for clarity

4.0 DIMENSIONS (Continued)

Design and Installation

The amount of linear movement and angular deflection to be used for design and installation consideration for each coupling is listed below.

Size Range	Actual Outside Diameter	Design and Installation Values					
		Roll Groove Pipe			Cut Groove Pipe		
		Linear Movement	Angular Deflection ⁶		Linear Movement	Angular Deflection ⁶	
			Per Coupling Degree	Pipe In/Ft mm/m.		Per Coupling Degree	Pipe In/Ft mm/m.
inches mm	inches mm	inches mm			inches mm		
2 50	2.375 60.3	0.06 1.6	1.52°	0.32 26	0.13 3.3	3.04°	0.64 52
2 ½ 65	2.875 73.0	0.06 1.6	1.25°	0.26 22	0.13 3.3	2.50°	0.52 44
76.1 mm	3.000 76.1	0.06 1.6	1.20°	0.26 22	0.13 3.3	2.40°	0.52 44
3 80	3.500 88.9	0.06 1.6	1.03°	0.22 18	0.13 3.3	2.06°	0.44 36
108.0 mm	4.250 108.0	0.13 3.3	1.68°	0.35 29	0.25 6.4	3.36°	0.70 58
4 100	4.500 114.3	0.13 3.3	1.60°	0.34 28	0.25 6.4	3.20°	0.68 56
133.0 mm	5.250 133.0	0.13 3.3	1.35°	0.28 24	0.25 6.4	2.70°	0.56 48
139.7 mm	5.500 139.7	0.13 3.3	1.30°	0.28 24	0.25 6.4	2.60°	0.54 45
159.0 mm	6.250 159.0	0.13 3.3	1.15°	0.24 20	0.25 6.4	2.30°	0.48 40
165.1 mm	6.500 165.1	0.13 3.3	1.10°	0.23 18	0.25 6.4	2.20°	0.46 38
6 150	6.625 168.3	0.13 3.3	1.08°	0.23 18	0.25 6.4	2.16°	0.46 36
8 200	8.625 219.1	0.13 3.3	0.86°	0.18 15	0.25 6.4	1.66°	0.34 28

⁶ Victaulic recommends for design and installation purposes, these values should be reduced by 50% for 2 – 3"/50 – 80 mm sizes; 25% for 4"/100 mm and larger sizes.

5.0 PERFORMANCE

Style 177N – ANSI/ISO Standards

Size		Schedule 10 and light wall ISO (Steel Pipe)				Schedule 40 and ISO (Steel Pipe)			
Nominal inches mm	Actual Outside Diameter inches mm	ANSI Wall Thickness inches mm	ISO Wall Thickness inches mm	Max. ⁷ Joint Work Pressure lbs N	Max. ⁷ Permis. End Load lbs N	ANSI Wall Thickness inches mm	ISO Wall Thickness inches mm	Max. ⁷ Joint Work Pressure psi kPa	Max. ⁷ Permis. End Load lbs N
2 50	2.375 60.3	0.109 2.77	0.091 2.3	750 5170	3322 14780	0.154 3.91	0.157 4.0	1000 6900	4430 19706
2½ 65	2.875 73.0	0.120 3.05	– –	600 4135	3895 17326	0.230 5.84	– –	1000 6900	6492 28877
76.1 mm	3.000 76.1	– –	0.150 3.8	600 4135	4240 18870	– –	0.200 5.1	1000 6900	7070 31460
3 80	3.500 88.9	0.120 3.05	0.114 2.9	600 4135	5773 25678	0.216 5.49	0.197 5.0	1000 6900	9621 42797
108.0 mm	4.250 108.0	– –	0.114 2.9	600 4135	8512 37861	– –	0.220 5.6	1000 6900	14186 63102
4 100	4.250 108.0	0.120 3.05	0.126 3.2	600 4135	9543 42448	0.237 6.02	0.220 5.6	1000 6900	15904 70746
133.0 mm	5.250 133.0	– –	0.126 3.2	600 4135	12989 57774	– –	0.248 6.3	1000 6900	21648 96290
139.7 mm	5.500 139.7	– –	0.150 3.8	500 3445	11879 52840	– –	0.220 5.1	1000 6900	23758 105680
159.0 mm	6.250 159.0	– –	0.126 3.2	600 4135	18408 81879	– –	0.280 7.1	1000 6900	30680 136465
165.1 mm	6.500 168.3	– –	0.177 4.5	450 3100	14932 66243	– –	0.280 7.1	1000 6900	33183 147605
6 150	6.625 168.3	0.134 3.40	0.157 4.0	450 3100	15512 69000	0.280 7.11	0.280 7.1	1000 6900	34470 153390
8 200	8.625 219.1	0.148 3.76	0.177 4.5	300 2065	17525 77950	0.322 8.18	0.315 8	800 5500	46732 207836

⁷ Working Pressure and End Load are total, from all internal and external loads, based on (ANSI) steel pipe, grooved in accordance with Victaulic specifications. Contact Victaulic for performance on other pipe.

NOTE

- WARNING: FOR ONE TIME FIELD TEST ONLY, the Maximum Joint Working Pressure may be increased to 1½ times the figures shown.
- Depressurize and drain the piping system before attempting to install, remove or adjust any Victaulic piping products.

6.0 NOTIFICATIONS

- When assembling QuickVic™ couplings onto end caps, take additional care to make certain the end cap is fully seated against the gasket end stop. For QuickVic™ Style 177N couplings, use No. 60 end caps containing the “QV EZ” marking on the inside face. Non-Victaulic end cap products shall not be used with Style 177N couplings.
- IMPORTANT: Gaskets intended for the Style 177 couplings cannot be used with the Style 177N coupling. There is no interchanging of gaskets or housings between coupling styles.

7.0 REFERENCE MATERIALS

[I-177N QuickVic™ Installation-Ready™ Flexible Coupling Installation Instructions](#)

User Responsibility for Product Selection and Suitability

Each user bears final responsibility for making a determination as to the suitability of Victaulic products for a particular end-use application, in accordance with industry standards and project specifications, as well as Victaulic performance, maintenance, safety, and warning instructions. Nothing in this or any other document, nor any verbal recommendation, advice, or opinion from any Victaulic employee, shall be deemed to alter, vary, supersede, or waive any provision of Victaulic Company's standard conditions of sale, installation guide, or this disclaimer.

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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.

Installation

Reference should always be made to the Victaulic installation handbook or installation instructions of the product you are installing. Handbooks are included with each shipment of Victaulic products, providing 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.

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