

Victaulic® QuickVic™ Rigid Coupling

Style 107N



2 - 12"/50 - 300 mm

1.0 PRODUCT DESCRIPTION

Available Sizes

- 2 – 12"/50 – 300 mm

Pipe Material

- Carbon steel, Stainless steel

Maximum Working Pressure

- Accommodates pressures ranging from full vacuum (29.9 in Hg/760 mm Hg) up to 750 psi/5171 kPa.
- Working pressure dependent on material, wall thickness and size of pipe.

Operating Temperature

- Dependent on gasket selection from section 3.0.

Function

- Joins carbon steel and/or stainless steel pipe.
- Provides a rigid pipe joint designed to restrict axial or angular movement.

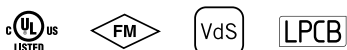
Pipe Preparation

- Cut or roll grooved in accordance with [Submittal 25.01](#): Victaulic Standard Groove Specifications.

Codes and Requirements

- Hanger support spacing corresponds to ASME B31.1 Power Piping Code and ASME B31.9 Building Services Piping Code.

2.0 CERTIFICATION/LISTINGS



NOTES

- See [Submittal 10.01](#): Victaulic Products for Fire Protection Piping Systems - Regulatory Approval Reference Guide for details.
- See [Submittal 02.06](#): Victaulic Potable Water Approvals ANSI/NSF for potable water approvals if applicable.

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 SPECIFICATIONS - MATERIAL

Housing:

Ductile iron conforming to ASTM A536, Grade 65-45-12. Ductile iron conforming to ASTM A395, Grade 65-45-15, is available upon special request.

Housing Coating: (specify choice)

Standard: Orange enamel.

Optional: Hot dipped galvanized.

Optional: Contact Victaulic with your requirements for other coatings.

Gasket: (specify choice¹)

Grade "EHP" EPDM

EHP (Red and Green stripes color code). Temperature range -30°F to +250°F/-34°C to +121°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. 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.

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, and 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.

Others

For alternate gasket selection, reference [Submittal 05.01](#): Victaulic Seal Selection Guide - Elastometric Seal Construction.

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 Seal Selection Guide](#) for specific gasket service guidelines and for a listing of services which are not compatible.

Bolts/Nuts: (specify choice²)

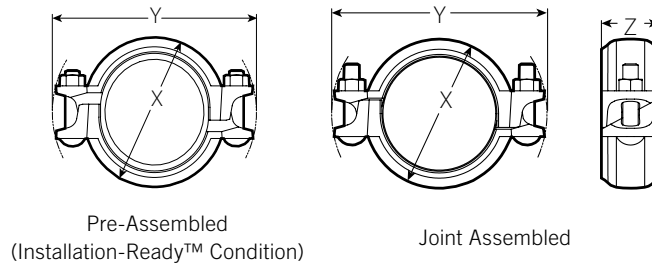
Standard: Carbon steel oval neck track bolts meeting the physical and chemical requirements of ASTM A449 (imperial) and ISO 898-1 Class 9.8 (metric). Carbon steel hex nuts meeting the physical and chemical requirements of ASTM A563 Grade B (imperial - heavy hex nuts) and ASTM A563M Class 9 (metric -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

Optional: Stainless steel oval neck track bolts meeting the requirements of ASTM F593, Group 2 (316 stainless steel), condition CW. Stainless steel heavy hex nuts meeting the requirements of ASTM F594, Group 2 (316 stainless steel), condition CW, with galling-resistant coating.²

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

4.0 DIMENSIONS

Style 107N



Size		Pipe End Separation ³		Bolt/Nut ⁴		Dimensions					Weight	
Nominal inches DN	Actual Outside Diameter inches mm	Allowable 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 DN50	2.375 60.3	0.15 3.8	2	½ x 3 M12 x 76	4.00 100	6.13 156	3.63 92	6.13 156	2.13 54	2.7 1.2		
2 ½	2.875 73.0	0.15 3.8	2	½ x 3 M12 x 76	4.50 114	6.75 171	4.00 102	6.75 171	2.13 54	3.0 1.4		
DN65	3.000 76.1	0.15 3.8	2	½ x 3 M12 x 76	4.63 118	6.88 175	4.13 105	6.88 175	2.13 54	3.1 1.4		
3 DN80	3.500 88.9	0.15 3.8	2	½ x 3 ¼ M12 x 83	5.25 133	7.38 187	4.63 118	7.50 191	2.13 54	3.7 1.7		
4 DN100	4.500 114.3	0.15 3.8	2	½ x 3 ¼ M12 x 83	6.63 168	8.75 222	5.88 149	8.75 222	2.13 54	5.1 2.3		
	4.250 108.0	0.15 3.8	2	½ x 3 ¼ M12 x 83	6.38 162	8.50 216	5.75 146	8.50 216	2.13 54	4.7 2.1		
5	5.563 141.3	0.15 3.8	2	¾ x 4 M16 x 101	7.75 197	10.25 260	7.13 181	10.25 260	2.25 57	7.0 3.2		
	5.250 133.0	0.15 3.8	2	¾ x 4 M16 x 101	7.50 191	10.00 254	6.75 171	9.88 251	2.25 57	6.1 3.0		
DN125	5.500 139.7	0.15 3.8	2	¾ x 4 M16 x 101	7.75 197	10.25 260	7.00 178	10.13 257	2.25 57	6.7 3.0		
6 DN150	6.625 168.3	0.15 3.8	2	¾ x 4 M16 x 101	8.88 226	11.38 289	8.13 207	11.25 286	2.25 57	8.2 3.7		
	6.250 159.0	0.15 3.8	2	¾ x 4 M16 x 101	8.50 216	11.00 279	7.75 197	10.88 276	2.25 57	7.6 3.4		
	6.500 165.1	0.15 3.8	2	¾ x 4 M16 x 101	8.75 222	11.25 286	8.00 203	11.13 283	2.25 57	7.9 3.6		
	8.515 216.3	0.22 5.6	2	¾ x 5 M20 x 127	11.25 286	14.25 362	10.38 264	14.13 359	2.63 67	15.0 6.8		
8 DN200	8.625 219.1	0.22 5.6	2	¾ x 5 M20 x 127	11.25 286	14.37 365	10.50 267	14.25 362	2.63 67	15.1 6.8		
10 DN250	10.750 273.0	0.20 5.1	2	¾ x 6 ½ M22 x 165	13.25 337	17.00 432	13.00 330	17.13 435	2.75 70	23.6 10.7		
12 DN300	12.750 323.9	0.20 5.1	2	¾ x 6 ½ M22 x 165	15.63 397	19.00 483	15.00 381	19.00 483	2.75 70	27.2 12.3		

³ The allowable pipe end separation dimension shown is for system layout purposes only. Style 107N QuickVic™ rigid couplings are considered rigid connections and will not accommodate expansion or contraction of the piping system.

⁴ Number of bolts required equals number of housing segments.

5.0 PERFORMANCE

Style 107N – ANSI Standard

Size		Schedule 10			Schedule 40		
Nominal inches DN	Actual Outside Diameter inches mm	Wall Thickness inches mm	Maximum Joint Working Pressure ⁵	Maximum Permissible End Load ⁵	Wall Thickness inches mm	Maximum Joint Working Pressure ⁵	Maximum Permissible End Load ⁵
			psi kPa	lb N		psi kPa	lb N
2 DN50	2.375 60.3	0.109 2.8	750 5171	3323 14781	0.154 3.9	750 5170	3323 14780
2 ½	2.875 73.0	0.120 3.1	600 4135	3895 17325	0.203 5.2	750 5170	4869 21658
3 DN80	3.500 88.9	0.120 3.1	600 4135	5773 25680	0.216 5.5	750 5170	7216 32098
4 DN100	4.500 114.3	0.120 3.1	600 4135	9543 42449	0.237 6.0	750 5170	11928 53058
5	5.563 141.3	0.134 3.4	500 3447	12153 54059	0.258 6.6	750 5171	18229 81087
6 DN150	6.625 168.3	0.134 3.4	500 3450	17236 76670	0.280 7.1	700 4825	24130 107335
8 DN200	8.625 219.1	0.148 3.8	300 2070	17528 77970	0.322 8.2	600 4135	35056 155936
10 DN250	10.750 273.0	0.165 4.2	300 2065	27200 121040	0.365 9.3	500 3450	45400 202030
12 DN300	12.750 323.9	0.180 4.6	200 1375	25500 113475	0.375 9.5	400 2750	51000 226950

⁵ Working Pressure and End Load are total, from all internal and external loads, based on ANSI B36.10 sized carbon steel pipe, grooved in accordance with Victaulic specifications. Contact Victaulic for performance on other pipe.

NOTES

- WARNING: FOR ONE-TIME FIELD TEST ONLY, the Maximum Joint Working Pressure may be increased to 1½ times the figures shown.
- LPCB and VdS approved for DIN wall pipe (6.3mm thickness) for 10" rated to 232 psi/16 bar, (7.8mm thickness) for 12" rated to 232 psi/16 bar.
- FM approved on schedule 10 pipe: 2-4 inch sizes rated to 400 psi/28 bar; 5-6 inch sizes rated to 300 psi/21 bar; and 8 and 10 inch sizes (.188" wall thickness) rated to 300 psi/21 bar. FM approved on schedule 40 pipe: 2-4 inch sizes rated to 600 psi/41 bar; 5-6 inch sizes rated to 500 psi/34 bar; and 10 and 12 inch sizes rated to 400 psi/28 bar. Includes all metric sizes in range.
- UL listed on schedule 10 pipe: 2, 2 ½, 3 and 4 inch sizes rated to 400 psi; and 6, 8 and 10 inch sizes rated to 300 psi. Schedule 40 pipe: 2, 2 ½ and 3 inch sizes rated to 600 psi; 4 inch rated to 450 psi; and 6, 8, 10 and 12 inch sizes rated to 400 psi.

5.1 PERFORMANCE

Style 107N – ISO Standard

Size		ISO Wall Pipe					
Nominal inches DN	Actual Outside Diameter inches mm	Wall Thickness inches mm	Maximum Joint Working Pressure ⁶ psi kPa	Maximum Permissible End Load ⁶ lb N	Wall Thickness inches mm	Maximum Joint Working Pressure ⁶ psi kPa	Maximum Permissible End Load ⁶ lb N
2	2.375	0.091	750	3323	0.157	750	3323
50	60.3	2.3	5171	14781	4.0	5171	14780
DN65	3.000	0.150	600	4239	0.200	750	5299
	76.1	3.8	4135	18856	5.1	5170	73571
3	3.500	0.114	600	5773	0.197	750	7216
80	88.9	2.9	4135	25680	5.0	5171	32098
4	4.500	0.126	600	9543	0.220	750	11928
100	114.3	3.2	4137	42449	5.6	5171	53058
	4.250	0.114	600	8507	0.220	750	10634
	108.0	2.3	4135	37841	5.6	5170	47302
	5.250	0.142	500	10818	0.248	750	16227
	133.0	3.6	3447	48121	6.3	5170	72181
DN125	5.500	0.150	500	11873	0.220	750	17810
	139.7	3.8	3447	52814	5.6	5170	79223
6	6.625	0.157	500	17236	0.280	700	24130
150	168.3	4.0	3450	76670	7.1	4826	107335
	6.250	0.197	500	15332	0.276	700	21465
	159.0	5.0	3447	68200	7.0	4825	95481
	6.500	0.134	500	16583	0.276	700	23216
	165.1	3.4	3447	73765	7.0	4825	103270
	8.515	0.228	300	17075	0.315	600	34150
	216.3	5.8	2070	75953	8.0	4135	151907
8	8.625	0.177	300	17528	0.315	600	35056
200	219.1	4.5	2070	77970	8.0	4137	155936
10	10.750	0.228	300	27200	0.248	500	45400
250	273.0	5.8	2065	121040	6.3	3450	202030
12	12.750	0.264	200	25500	0.307	400	51000
300	323.9	6.7	1375	113475	7.8	2750	226950

⁶ Working Pressure and End Load are total, from all internal and external loads, based on ISO 4200 sized carbon steel pipe, grooved in accordance with Victaulic specifications. Contact Victaulic for performance on other pipe.

NOTES

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- UL listed on schedule 10 pipe: 2, 2½, 3 and 4 inch sizes rated to 400 psi; and 6, 8 and 10 inch sizes rated to 300 psi. Schedule 40 pipe: 2, 2½ and 3 inch sizes rated to 600 psi; 4 inch rated to 450 psi; and 6, 8, 10 and 12 inch sizes rated to 400 psi.