

# 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.

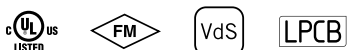
#### Pipe Preparation

- 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		Spec Section		Paragraph	
Submitted By		Date		Approved		Date	

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### 3.0 SPECIFICATIONS - MATERIAL

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#### 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 choice<sup>1</sup>)

##### 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.

<sup>1</sup> 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 choice<sup>2</sup>)

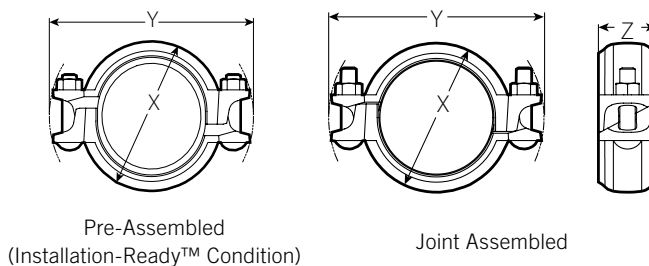
Standard: Carbon steel oval neck track bolts meeting the physical and chemical requirements of ASTM A449 (imperial) and ISO 898-1 Class 9.8 (metric). Carbon steel hex nuts meeting the physical and chemical requirements of ASTM A563 Grade B (imperial - heavy hex nuts) and ASTM A563M Class 9 (metric - 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.<sup>2</sup>

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

## 4.0 DIMENSIONS

### Style 107N



Size		Pipe End Separation <sup>3</sup>	Bolt/Nut <sup>4</sup>		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

<sup>3</sup> 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.

<sup>4</sup> 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 <sup>5</sup> psi kPa	Maximum Permissible End Load <sup>5</sup> lb N	Wall Thickness inches mm	Maximum Joint Working Pressure <sup>5</sup> psi kPa	Maximum Permissible End Load <sup>5</sup> 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

<sup>5</sup> 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 <sup>6</sup> psi kPa	Maximum Permissible End Load <sup>6</sup> lb N	Wall Thickness inches mm	Maximum Joint Working Pressure <sup>6</sup> psi kPa	Maximum Permissible End Load <sup>6</sup> lb N
2 50	2.375 60.3	0.091 2.3	750 5171	3323 14781	0.157 4.0	750 5171	3323 14780
DN65	3.000 76.1	0.150 3.8	600 4135	4239 18856	0.200 5.1	750 5170	5299 73571
3 80	3.500 88.9	0.114 2.9	600 4135	5773 25680	0.197 5.0	750 5171	7216 32098
4 100	4.500 114.3	0.126 3.2	600 4137	9543 42449	0.220 5.6	750 5171	11928 53058
	4.250 108.0	0.114 2.3	600 4135	8507 37841	0.220 5.6	750 5170	10634 47302
	5.250 133.0	0.142 3.6	500 3447	10818 48121	0.248 6.3	750 5170	16227 72181
DN125	5.500 139.7	0.150 3.8	500 3447	11873 52814	0.220 5.6	750 5170	17810 79223
6 150	6.625 168.3	0.157 4.0	500 3450	17236 76670	0.280 7.1	700 4826	24130 107335
	6.250 159.0	0.197 5.0	500 3447	15332 68200	0.276 7.0	700 4825	21465 95481
	6.500 165.1	0.134 3.4	500 3447	16583 73765	0.276 7.0	700 4825	23216 103270
	8.515 216.3	0.228 5.8	300 2070	17075 75953	0.315 8.0	600 4135	34150 151907
8 200	8.625 219.1	0.177 4.5	300 2070	17528 77970	0.315 8.0	600 4137	35056 155936
10 250	10.750 273.0	0.228 5.8	300 2065	27200 121040	0.248 6.3	500 3450	45400 202030
12 300	12.750 323.9	0.264 6.7	200 1375	25500 113475	0.307 7.8	400 2750	51000 226950

<sup>6</sup> 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

- 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, 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.

## 6.0 NOTIFICATIONS

### WARNING

- Victaulic RX roll sets must be used when grooving light-wall/thin-wall stainless steel pipe for use with Victaulic Couplings.

Failure to use Victaulic RX roll sets when grooving light-wall/thin-wall stainless steel pipe may cause joint failure, resulting in serious personal injury and/or property damage.

### NOTICE

- Victaulic RX grooving rolls must be ordered separately. They are identified by a silver color and the designation RX on the front of the roll sets.

### CAUTION

- When assembling Style 107N Couplings onto end caps, take additional care to ensure the end cap is seated fully against the center leg of the gasket.
- Use only Victaulic No. 60 End Caps containing the "EZ QV" marking on the inside face.
- Victaulic recommends the use of Victaulic fittings with Style 107N Couplings.
- Victaulic No. 460-SS Stainless Steel End Caps shall not be used with Style 107N Couplings. No 460-SS End Caps shall be used only with Style 89 Rigid Couplings for stainless steel pipe.

Failure to follow this instruction could cause improper product installation, resulting in personal injury and/or property damage.

## 7.0 REFERENCE MATERIALS

[02.06: Victaulic Potable Water Approvals ANSI/NSF](#)

[05.01: Victaulic Seal Selection Guide - Elastometric Seal Construction](#)

[06.15: Victaulic Pressure Ratings and End Loads for Victaulic Couplings on Steel Pipe](#)

[10.01: Victaulic Products for Fire Protection Piping Systems - Regulatory Approval Reference Guide](#)

[17.01: Victaulic Pipe Preparation for Use on Stainless Steel Pipe With Victaulic Products](#)

[17.09: Victaulic Pressure Ratings and End Loads for Victaulic Ductile Iron Grooved Couplings on Stainless Steel Pipe](#)

[25.01: Victaulic Standard Groove Specifications](#)

[26.01: Victaulic Design Data](#)

[29.01: Victaulic Terms and Conditions of Sale](#)

[I-100: Victaulic Field Installation Handbook](#)

[I-107: Victaulic Installation Instructions - Style 107N QuickVic™ Installation-Ready™ Rigid Coupling](#)

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

### Warranty

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

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