

Victaulic® QuickVic™ Rigid Coupling for Steel

Style 107H



1.0 PRODUCT DESCRIPTION

Available Sizes

- 2 – 8"/50 – 200 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/5200 kPa.
- Working pressure dependent on material, wall thickness and size of pipe.

Operating Temperature

- Dependent on gasket selection from section 3.0. For alternate gasket material available, reference [Submittal 05.01](#): Victaulic Gasket Selection Guide.

Function

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

Pipe Preparation

- Original Groove System (OGS), Cut Grooved, Roll Grooved

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 Fire Protection Approval Reference Guide for details.
- See [Submittal 02.06](#): Victaulic Approvals for Potable Water Products - ANSI/NSF 61 and ANSI/NSF 372 if applicable.
- Refer to section 3.0 for NSF approvals.

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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 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 stripe 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 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 Gasket Selection Guide.

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 mechanical property requirements of ASTM A449 (imperial). Carbon steel heavy hex nuts meeting the mechanical property requirements of ASTM A563 Grade B. Track bolts and heavy hex nuts are zinc electroplated per ASTM B633 Zn/F5, finish Type III (imperial) or Type II (metric).

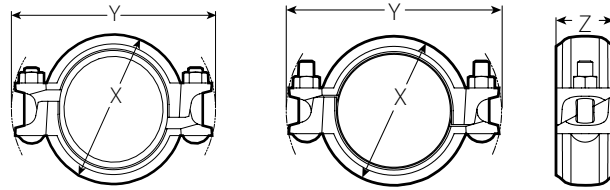
Optional:² Bolts – Stainless steel, meeting the mechanical property requirements of ASTM F593, Group 2 (316 stainless steel), condition CW. Nuts – Stainless steel, meeting the mechanical property requirements of ASTM F594, Group 2 (316 stainless steel) condition CW with galling reducing coating.

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

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4.0 DIMENSIONS

Style 107H



Pre-Assembled (Installation-Ready Condition) Joint Assembled

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	3/8 x 2 1/2 M10 x 63	3.87 98	5.75 146	3.63 92	5.63 143	1.97 50	2.1 0.9
2 1/2 DN65	2.875 73.0	0.15 3.8	2	3/8 x 2 1/2 M10 x 63	4.37 111	7.26 184	4.15 105	6.15 156	1.97 50	2.5 1.1
3 DN80	3.000 76.1	0.15 3.8	2	3/8 x 2 1/2 M10 x 63	4.43 113	6.89 175	4.25 108	6.28 160	1.97 50	2.4 1.1
4 DN100	3.500 88.9	0.15 3.8	2	1/2 x 3 M12 x 76	4.95 125	7.36 187	4.91 120	7.24 184	1.97 50	3.1 1.4
	4.500 114.3	0.15 3.8	2	1/2 x 3 M12 x 76	5.97 152	8.39 213	5.73 146	8.29 210	2.04 52	3.9 1.8
	4.250 108.0	0.13 3.2	2	1/2 x 3 M12 x 76	5.75 146	7.08 179	5.36 136	7.77 197	2.10 53	3.6 1.6
	5.250 133.0	0.13 3.2	2	1/2 x 3 M12 x 76	6.76 172	9.35 237	6.25 166	9.26 235	2.09 53	4.8 2.2
DN125	5.500 139.7	0.15 3.8	2	1/2 x 3 M12 x 76	7.31 187	9.60 244	6.90 175	9.44 240	2.09 53	5.0 2.3
5	5.563 141.3	0.15 3.8	2	1/2 x 3 x 3 M12 x 76	7.17 182	9.72 247	6.96 177	9.63 245	2.09 53	5.1 2.3
6 DN150	6.625 168.3	0.15 3.8	2	5/8 x 3 1/4 M16 x 83	8.37 211	11.32 288	8.13 207	11.23 285	2.04 52	6.8 3.1
	6.250 159.0	0.13 3.2	2	5/8 x 3 1/4 M16 x 83	7.89 200	10.92 277	7.87 200	10.80 274	2.17 55	7.1 3.2
	6.500 165.1	0.15 3.8	2	5/8 x 4 M16 x 102	9.18 208	11.30 287	7.98 203	11.11 282	2.10 53	6.7 3.0
8 DN200	8.625 219.1	0.22 5.6	2	5/8 x 4 M16 x 102	10.57 269	13.56 344	10.32 262	13.44 341	2.55 65	10.5 4.7
DN250 – DN300	For 10 1/2" (250) – 300 mm sizes, Victaulic offers Style 107N QuickVic™ Rigid Coupling.									

³ The allowable pipe separation dimension shown is for system layout purposes only. The Style 107H QuickVic™ Rigid Coupling is considered a rigid connection and will not accommodate expansion or contraction of the piping system.

⁴ Number of bolts required equals number of housing segments.

NOTE

- WARNING: Depressurize and drain the piping system before attempting to install, remove, or adjust any Victaulic piping products.

5.0 PERFORMANCE

Style 107H – ANSI Standard

Size		Schedule 10 Carbon Steel			Schedule 40 Carbon Steel		
Nominal	Actual Outside Diameter	Wall Thickness	Maximum Joint Working Pressure ⁵⁻⁶	Maximum Permis. End Load ⁵	Wall Thickness	Maximum Joint Working Pressure ^{5,7}	Maximum Permis. End Load ⁵
inches DN	inches mm	inches mm	psi kPa	lb N	inches mm	psi kPa	lb N
2	2.375	0.109	600	2658	0.154	750	3323
DN50	60.3	2.77	4135	11823	3.91	5170	14780
2 ½	2.875	0.120	600	3895	0.203	750	4869
	73.0	3.05	4135	17325	5.15	5170	21658
3	3.500	0.120	600	5773	0.216	750	7216
DN80	88.9	3.05	4135	25680	5.49	5170	32098
4	4.500	0.120	500	7952	0.237	750	11928
DN100	114.3	3.05	3450	35372	6.02	5170	53058
5	5.563	0.134	500	12153	0.258	750	18229
	141.3	3.40	3450	54060	6.55	5170	81086
6	6.625	0.134	500	17236	0.280	700	24130
DN150	168.3	3.40	3450	76670	7.11	4825	107335
8	8.625	0.148	363	17528	0.322	600	35056
DN200	219.1	3.76	2500	77970	8.18	4135	155936

⁵ Working Pressure and End Load are total, from all internal and external loads, based on (ANSI) carbon steel pipe, standard roll or cut grooved in accordance with Victaulic specifications. Contact Victaulic for performance on other pipe.

⁶ UL listed for use on schedule 10 pipe: 2", 2 ½", 3" and 4" to 363 psi/25 bar, 5" and 6" to 290 psi/20 bar, and 8" to 232 psi/16 bar. FM approved for use on schedule 10 pipe: 2", 2 ½", 3", 4", 5", 6" and 8" to 363 psi/25 bar.

⁷ UL listed for use on schedule 40 pipe: 2", 2 ½", 3", 4", 5", 6" and 8" to 363 psi/25 bar. FM approved for use on schedule 40 pipe: 2", 2 ½", 3", 4", 5", 6" and 8" to 363 psi/25 bar.

NOTES

- WARNING: FOR ONE-TIME FIELD TEST ONLY, the Maximum Joint Working Pressure may be increased to 1 ½ times the figures shown.
- For ratings on stainless steel pipe, refer to [Submittal 17.02](#), Victaulic Pressure Rating and End Load for Victaulic Ductile Iron Grooved Couplings on Stainless Steel Pipe.

5.1 PERFORMANCE

Style 107H – ISO Standard

Size		Normal ISO Wall Pipe			Other ISO Wall Pipe		
Actual Outside Diameter	Wall Thickness	Maximum Joint Working Pressure ⁸⁻⁹	Maximum Permis. End Load ⁸	Wall Thickness	Maximum Joint Working Pressure ^{8,10}	Maximum Permis. End Load ⁸	
inches mm	inches mm	psi kPa	lb N	inches mm	psi kPa	lb N	
3.000	0.102	600	4241	0.177	750	5301	
76.1	2.6	4135	18865	4.5	5171	23580	
4.250	0.126	500	7093	0.220	750	10640	
108.0	3.2	3445	31551	5.6	5170	47327	
5.250	0.126	500	10824	0.248	750	16236	
133.0	3.2	3445	48147	6.3	5170	72220	
5.500	0.177	500	11879	0.217	750	17819	
139.7	4.5	3450	52840	5.5	5171	79262	
6.250	0.126	500	15340	0.28	700	21476	
159.0	3.2	3445	68235	7.1	4825	95529	
6.500	0.177	500	16592	2.800	700	23228	
165.1	4.5	3445	73805	7.1	4826	103324	

⁸ Working Pressure and End Load are total, from all internal and external loads, based on (ISO) carbon steel pipe, standard roll or cut grooved in accordance with Victaulic specifications. Contact Victaulic for performance on other pipe.

⁹ UL listed for use on ISO pipe: 76.1 mm (2.9 mm) to 363 psi, 139.7 (4.0 mm) & 165.1 mm (4.5 mm) to 290 psi/20 bar. FM approved for use on schedule 10 pipe: 108 mm, 133 mm and 159 mm to 363 psi/25 bar. FM approved for use on ISO pipe: 76.1 mm, 139.7 mm and 165.1 mm to 363 psi/25 bar.

¹⁰ FM approved for use on schedule 40 pipe: 108 mm, 133 mm and 159 mm to 363 psi/25 bar.

NOTE

- WARNING: FOR ONE-TIME FIELD TEST ONLY, the Maximum Joint Working Pressure may be increased to 1 ½ times the figures shown.

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 107H 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 107H Couplings.
- Victaulic No. 460-SS Stainless Steel End Caps shall not be used with Style 107H 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 Approvals for Potable Water Products - ANSI/NSF 61 and ANSI/NSF 31](#)
- [05.01: Victaulic Gasket Selection Guide](#)
- [06.15: Victaulic Steel Pipe Pressure Ratings/End Loads Design Data](#)
- [10.01: Victaulic Fire Protection 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](#)
- [26.01: Victaulic Grooved Piping System Design Data](#)
- [29.01: Victaulic Terms & Conditions of Sale](#)
- [I-107N: Victaulic QuickVic™ Rigid Coupling Style 107N Installation Manual](#)

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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, and the applicable building codes and related regulations 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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