

Victaulic® QuickVic™ Rigid Coupling

Style 107V



2 – 12"/DN50 – DN300

1.0 PRODUCT DESCRIPTION

Available Size

- 2 – 12"/DN50 – DN300

Pipe Material

- Carbon steel; Stainless steel
- For exceptions, reference section 6.0 Notifications

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 pipe material, wall thickness and size of pipe

Operating Temperature

- Dependent on gasket selection from section 3.0

Function

- Joins roll or cut grooved pipe, grooved fittings, valves, and accessories
- Provides a rigid pipe joint designed to restrict axial or angular movement

NOTE

- Applications that require NSF 61-approved products should specify the Victaulic Installation-Ready™ Rigid Coupling Style 807N ([publication 06.28](#))

Pipe Preparation

- Cut or roll grooved in accordance with [publication 25.01](#): Victaulic Original Groove System (OGS) 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



EN 10311
CPR (EU)
No. 305/2011

NOTE

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

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

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:

- Orange coating.
- Optional for Style 107V:** 2 – 4" Mechanically Galvanized per ASTM B695 (North America Only).
- Optional for Style 107V:** 2 – 4" Hot dipped galvanized conforming to ASTM A123. (EMEA & Asia Only).
- Optional for Style 107V:** 5 – 12" Hot dipped galvanized conforming to ASTM A123.

Gasket: (specify choice¹)

- Grade "EHP" EPDM**

EHP (Red and Green or Yellow 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, fire protection, and many chemical services. NOT COMPATIBLE WITH PETROLEUM SERVICES.

- Grade "HMT" Nitrile**

Nitrile (Orange and Yellow 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, vegetable and mineral oils within the specified temperature range. Not compatible with hot water services over +150°F/+66°C or for hot dry air over +140°F/+60°C.

- Grade "O" Fluoroelastomer**

Fluoroelastomer (Blue stripe color code). Temperature range +20°F to +300°F/–7°C to +149°C. May be specified for many oxidizing acids, petroleum oils, halogenated hydrocarbons, lubricants, hydraulic fluids, organic liquids and air with hydrocarbons. NOT COMPATIBLE FOR USE WITH HOT WATER SERVICES OR STEAM SERVICES.

- Others**

For alternate gasket selection, reference [publication 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.

NOTES

- Victaulic reserves the right to substitute equivalent and/or higher grade elastomer products.

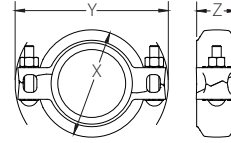
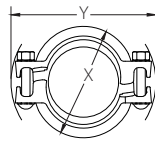
Bolts/Nuts: (specify choice²)

- Standard: Carbon steel oval neck track bolts meeting the mechanical property requirements of (imperial) ASTM A449 or (metric) ISO 898-1 Class 9.8 (M10-M16) or Class 8.8 (M20 and greater). Carbon steel hex nuts meeting the mechanical property requirements of (imperial heavy hex nuts) ASTM A563 Grade B or (metric hex nuts) ISO 898-2 Class 10 (M12-M16) or Class 8 (M20 and greater). Track bolts and hex nuts are zinc electroplated per ASTM B633 Fe/Zn5 finish (imperial) Type III or (metric) Type II.
- Optional: Stainless steel oval neck track bolts meeting the mechanical property requirements of ASTM F593, Group 2 (316 stainless steel), condition CW. Stainless steel heavy nuts meeting the mechanical property requirements of ASTM F594, Group 2 (316 stainless steel), condition CW. Bolts and nuts include galling reducing coating.
- Optional: Hot-dipped galvanized meeting the mechanical property requirements of ASTM A449 for bolts and ASTM A563 for heavy hex nuts.
- Optional: Carbon steel oval neck track bolts meeting the mechanical property requirements of ASTM A449 (imperial) and ISO 898-1 Class 9.8 (M10-M16) Class 8.8 (M20 and greater). Carbon steel hex nuts meeting the mechanical property requirements of ASTM A563 Grade B (imperial - heavy hex nuts) and ASTM A563M Class 9 (metric - hex nuts). Track bolts and hex nuts are thermally diffused galvanized per ASTM A1059.

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

4.0 DIMENSIONS

Style 107V QuickVic™ Rigid Coupling



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	½ x 2¾ M12 x 70	4.13 105	6.25 159	3.63 92	6.25 159	2.38 60	3.0 1.4
2 ½	2.875 73.0	0.15 3.8	2	½ x 2¾ M12 x 70	4.69 119	6.81 173	4.19 106	6.81 173	2.44 62	3.4 1.5
DN65	3.000 76.1	0.15 3.8	2	½ x 2¾ M12 x 70	4.81 122	7.00 178	4.31 110	7.00 178	2.38 60	3.6 1.6
3 DN80	3.500 88.9	0.15 3.8	2	½ x 3 M12 x 76	5.38 137	7.50 191	4.81 122	7.56 192	2.44 62	3.9 1.8
4 DN100	4.500 114.3	0.15 3.8	2	½ x 3 M12 x 76	6.75 171	8.81 224	6.06 154	8.81 224	2.50 64	5.2 2.4
5	5.563 141.3	0.15 3.8	2	⅝ x 3⅝ M16 x 92	7.81 198	10.44 265	7.19 183	10.38 264	2.50 62	7.5 3.4
DN125	5.500 139.7	0.15 3.8	2	⅝ x 3⅝ M16 x 92	7.75 197	10.38 264	7.13 181	10.31 262	2.50 64	7.5 3.4
	6.500 165.1	0.15 3.8	2	⅝ x 3⅝ M16 x 92	8.81 224	11.38 289	8.06 205	11.25 286	2.50 64	8.4 3.8
6 DN150	6.625 168.3	0.15 3.8	2	⅝ x 3⅝ M16 x 92	9.00 229	11.44 291	8.25 210	11.38 289	2.50 64	8.4 3.8
8 DN200	8.625 219.1	0.20 5.1	2	¾ x 4⅝ M20 x 117	11.31 287	14.63 371	10.56 268	14.38 365	2.88 73	17.0 7.7
10 DN250	10.750 273.0	0.20 5.1	2	7/8 x 6 M22 x 152	13.75 349	17.50 445	13.00 330	17.25 438	2.94 75	26.0 12.0
12 DN300	12.750 323.9	0.20 5.1	2	7/8 x 6 M22 x 152	16.00 406	19.50 495	15.13 384	19.25 489	2.94 75	30.0 13.5

³ The Allowable Pipe End Separation dimension shown is for system layout purposes only. Style 107V QuickVic™ rigid couplings are considered rigid connections and will not accommodate expansion/contraction or angular movement of the piping system. Contact Victaulic for torsional resistance information.

⁴ Contact Victaulic for stainless steel bolt lengths.

5.0 PERFORMANCE

Style 107V QuickVic™ Rigid Coupling

ANSI Standard

Size		Schedule 10			Standard Weight (STD)		
Nominal inches DN	Actual Outside Diameter inches mm	Wall Thickness inches mm	Maximum Joint Working Pressure ⁵ psi kPa	Maximum Permissible End Load ⁵ lb N	Wall Thickness inches mm	Maximum Joint Working Pressure ⁵ psi kPa	Maximum Permissible End Load ⁵ lb N
2 DN50	2.375 60.3	0.109 2.8	750 5171	3,320 14,768	0.154 3.9	750 5171	3,320 14,768
2 ½	2.875 73.0	0.120 3.0	600 4137	3,890 17,304	0.203 5.2	750 5171	4,860 21,618
3 DN80	3.500 88.9	0.120 3.0	600 4137	5,770 25,666	0.216 5.5	750 5171	7,210 32,072
4 DN100	4.500 114.3	0.120 3.0	600 4137	9,540 42,436	0.237 6.0	750 5171	11,900 52,934
5	5.563 141.3	0.134 3.4	500 3447	12,100 53,824	0.258 6.6	750 5171	18,200 80,958
6 DN150	6.625 168.3	0.134 3.4	500 3447	17,200 76,510	0.280 7.1	700 4826	24,100 107,202
8 DN200	8.625 219.1	0.148 3.8	300 2068	17,500 77,844	0.322 8.2	600 4137	35,000 155,688
10 DN250	10.750 273.0	0.165 4.2	300 2068	27,200 120,992	0.365 9.3	500 3447	45,300 201,504
12 DN300	12.750 323.9	0.180 4.6	300 2068	38,300 170,366	0.375 9.5	400 2758	51,000 226,860

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 1 ½ times the figures shown.
- FM approved on Schedule 10 pipe: sizes 2 – 4"/DN50 – DN100 rated to 400 psi/28 bar; size 6"/DN150 rated to 300 psi/21 bar; and sizes 8 – 10"/DN200 – DN250 (0.188" wall thickness) rated to 300 psi/21 bar. FM approved on standard weight pipe: sizes 2 – 4"/DN50 – DN100 rated to 600 psi/41 bar; size 6"/DN150 rated to 500 psi/34 bar; size 8"/DN200 rated to 450 psi/31 bar; and sizes 10 – 12"/DN250 – DN300 rated to 400 psi/28 bar.
- UL listed on Schedule 10 pipe: sizes 2 – 4"/DN50 – DN100 rated to 400 psi/28 bar and sizes 6 – 10"/DN150 – DN250 rated to 300 psi/21 bar. UL listed on standard weight pipe: sizes 2 – 3"/DN50 – DN80 rated to 600 psi/41 bar; size 4"/DN100 rated to 450 psi/31 bar; and sizes 6 – 12"/DN150 – DN300 rated to 400 psi/28 bar.

5.0 PERFORMANCE

Style 107V QuickVic™ Rigid Coupling

ISO Standard

Size		Wall Thickness	Performance		Wall Thickness	Performance	
inches DN	Actual Outside Diameter		Maximum Working Pressure ⁵	Maximum Permissible End Load ⁵		Maximum Working Pressure ⁵	Maximum Permissible End Load ⁵
		inches mm	psi kPa	lbs N	inches mm	psi kPa	lbs N
2 DN50	2.375 60.3	0.091 2.3	750 5171	3,320 14,768	0.157 4.0	750 5171	3,320 14,768
3 DN65	3.000 76.1	0.150 3.8	600 4137	4,240 18,860	0.200 5.1	750 5171	5,300 23,576
4 DN80	3.500 88.9	0.114 2.9	600 4137	5,770 25,666	0.197 5.0	750 5171	7,210 32,072
5 DN100	4.500 114.3	0.126 3.2	600 4137	9,540 42,436	0.220 5.6	750 5171	11,900 52,934
6 DN125	5.500 139.7	0.150 3.8	500 3447	11,800 52,490	0.220 5.6	750 5171	17,800 79,178
7 DN150	6.500 165.1	0.134 3.4	500 3447	16,500 73,396	0.276 7.0	700 4826	23,200 103,198
8 DN200	8.625 219.1	0.157 4.0	500 3447	17,200 76,510	0.280 7.1	700 4826	24,100 107,202
9 DN250	10.750 273.0	0.177 4.5	300 2068	17,500 77,844	0.315 8.0	600 4137	35,000 155,688
10 DN300	12.750 323.9	0.228 5.8	300 2068	27,200 120,992	0.248 6.3	500 3447	45,300 201,504
11 DN300	12.750 323.9	0.264 6.7	300 2068	38,300 170,366	0.307 7.8	400 2758	51,000 226,860

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.

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



- Read and understand all instructions before attempting to install any Victaulic products.
 - Always verify that the piping system has been completely depressurized and drained immediately prior to installation, removal, adjustment, or maintenance of any Victaulic products.
 - Confirm that any equipment, branch lines, or sections of piping that may have been isolated for/during testing or due to valve closures/positioning are identified, depressurized, and drained immediately prior to installation, removal, adjustment, or maintenance of any Victaulic products.
 - Wear safety glasses, hardhat, foot protection, and hearing protection.
 - When assembling Style 107V Couplings onto end caps, take additional time to inspect and verify that the end cap is seated fully against the center leg of the gasket.
 - Use only Victaulic® End Caps containing the “QV” or “EZ QV” marking on the inside face.
 - Always read and follow the [I-ENDCAP](#), Victaulic® End Cap Installation Safety Instructions, which can be downloaded at Victaulic.com.
 - Victaulic recommends the use of Victaulic® fittings with Style 107V Couplings.
- Failure to follow these instructions could result in death or serious personal injury and property damage.

WARNING

FOR STYLE 107V COUPLINGS USED ON STAINLESS STEEL:

- Victaulic® RX roll sets shall be used when grooving light-wall/thin-wall stainless steel pipe. 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.
 - It is the system designer's responsibility to verify suitability of stainless steel components for use with the intended fluid media within the piping system and external environment.
 - The material specifier shall evaluate the effect of chemical composition, pH level, operating temperature, chloride level, oxygen level, and flow rate on stainless steel components to confirm system life will be acceptable for the intended service.
 - Always reference Victaulic publication [17.01](#) for stainless steel pipe end preparation and grooving roll set requirements.
- Failure to follow these instructions may cause joint failure, resulting in death or serious personal injury and property damage.

7.0 REFERENCE MATERIALS

[05.01: Victaulic Seal Selection Guide](#)

[06.28: Victaulic QuickVic™ Installation-Ready™ Rigid Coupling for Potable Water Applications Style 807N](#)

[07.14 Rev A QuickVic™ Grooved End Fittings](#)

[10.01: Victaulic Fire Protection Certifications/Listings 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 Original Groove System Specifications](#)

[26.01: Victaulic Design Data](#)

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

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

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

[I-ENDCAP: Victaulic End Cap Installation Safety Instructions](#)

[I-IMPACT: Victaulic Impact Tool Usage Guidelines](#)

User Responsibility for Product Selection and Suitability

Each user bears final responsibility for determining the suitability of Victaulic products for their end-use application, in accordance with industry standards, project specifications, and Victaulic's published performance, maintenance, and safety data, as well as all warnings and installation 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, warranty, installation instructions, or this disclaimer.

Installation

Always refer to and follow the [Victaulic Installation Handbook](#) or installation instructions for 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 victaulic.com.

Warranty

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

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Note

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