

Victaulic® FireLock™ Installation-Ready™ Rigid Couplings

Style 009N and Style 109



Patented



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1.0 PRODUCT DESCRIPTION

Available Sizes

- Style 009N: 1 ¼ – 12"/DN32 – DN300
- Style 109: 1 ¼ – 4"/DN32 – DN100

Pipe Material

- Schedule 10, Schedule 40 or specialty carbon steel pipe listed in Section 5. For use with alternative materials and wall thicknesses please contact Victaulic
- For exceptions reference section 6.0 Notifications

Maximum Working Pressure

- Accommodates pressures ranging from full vacuum (29.9 in Hg/760 mm Hg) to 365 psi/2517 kPa

Function

- Joins carbon steel pipe with grooved ends conforming to [publication 25.01](#)
- Provides a rigid pipe joint designed to restrict axial or angular movement

2.0 CERTIFICATION/LISTINGS



LPS 1219: Issue 3.1
Cert/LPCB Ref. 104-1a/36



EN 10311
Regulation (EU)
No. 305/2011

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 A 536, Grade 65-45-12. Ductile iron conforming to ASTM A 395, Grade 65-45-15, is available upon special request.

Housing Coating: (specify choice)

- Orange coating
- Red coating (standard for EMEA-I and Asia Pacific)
- Optional for Style 009N: Hot Dipped Galvanized per ASTM A123
- Optional for Style 109: Mechanically Galvanized per ASTM B695 (available only in North America and Latin America).

Gasket: (specify choice)

Grade “E” EPDM (Type A) Vic-Plus™ Pre-lubricated Gasket

EPDM (Violet Color Code). Applicable for wet and dry (oil-free air) fire protection systems only. Listed/Approved for continuous use in wet and dry systems. Listed/Approved for dry systems at -40°F/-40°C and above. Not compatible for use with hot water services or steam services.

NOTES

- Reference should always be made to [publication I-100](#), Victaulic Field Installation Handbook for gasket lubrication instructions.
- 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 [publication 05.01](#), Victaulic Gasket Selection Guide for specific gasket service guidelines and for a listing of services which are not compatible.

Bolts/Nuts: (specify choice)

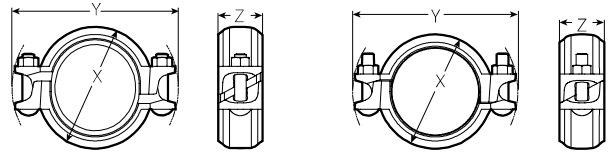
- Standard: Carbon steel oval neck track bolt(s) meeting the mechanical property requirements of ASTM A449 (imperial) and ISO 898-1 Class 9.8 (M10-M16) Class 8.8 (M20 and greater). Carbon steel hex nuts meeting the mechanical property requirements of ASTM A563 Grade B (imperial) and ASTM A563M Class 9 (metric). Track bolts and hex nuts are zinc electroplated per ASTM B633 Fe/Zn 5, finish Type III (imperial) or Type II (metric).
- Optional for Style 009N: 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.¹

¹ Optional bolts/nuts are available in imperial size only.

Coupling Linkage: High Strength Steel with comparable physical properties to that of the Track Bolt (ASTM A449). Linkage is zinc electroplated per ASTM B633 Fe/Zn 5, Type III Finish.

4.0 DIMENSIONS

Style 009N Two-Bolt Installation-Ready Coupling



Style 009N Pre-Assembled

Style 009N Joint Assembled

Size		Maximum Working Pressure ² psi kPa	Maximum End Load ² lb N	Allow. Pipe End Separation ³ inches mm	Qty.	Bolt/Nut Size inches mm	Dimensions					Weight Approx. (Each) lb kg
Nominal inches DN	Actual Outside Diameter inches mm						Pre-assembled		Joint Assembled		Z inches mm	
							X inches mm	Y inches mm	X inches mm	Y inches mm		
1 ¼ DN32	1.660 42.4	365 2517	790 3514	0.10 2.54	2	¾ × 2 M10 × 51	3.13 79	5.00 127	2.75 70	5.00 127	2.00 51	1.4 0.6
1 ½ DN40	1.900 48.3	365 2517	1035 4604	0.10 2.54	2	¾ × 2 M10 × 51	3.38 86	5.13 130	3.00 76	5.13 130	2.00 51	1.5 0.7
2 DN50	2.375 60.3	365 2517	1617 7193	0.12 3.05	2	¾ × 2 ½ M10 × 63	4.00 102	5.63 143	3.50 89	5.63 143	2.00 51	1.9 0.9
2 ½	2.875 73.0	365 2517	2370 10542	0.12 3.05	2	¾ × 2 ½ M10 × 63	4.50 114	6.13 156	4.00 102	6.13 156	2.00 51	2.1 1.0
DN65	3.000 76.1	365 2517	2580 11476	0.12 3.05	2	¾ × 2 ½ M10 × 63	4.63 118	6.00 152	4.13 105	6.13 156	2.00 51	2.1 1.0
3 DN80	3.500 88.9	365 2517	3512 15622	0.12 3.05	2	¾ × 2 ½ M10 × 63	5.13 130	6.75 171	4.63 117	6.75 171	2.00 51	2.3 1.0
4 DN100	4.500 114.3	365 2517	5805 25822	0.17 4.32	2	¾ × 2 ½ M10 × 63	6.00 152	7.88 200	5.63 143	7.50 191	2.13 54	2.9 1.3
	4.250 108.0	365 2517	5178 23020	0.17 4.32	2	¾ × 2 ½ M10 × 63	5.63 152	7.38 187	5.38 137	7.38 187	2.13 54	3.1 1.4
5	5.563 141.3	365 2517	8872 39456	0.17 4.32	2	½ × 3 M12 × 76	7.25 184	9.25 235	6.75 171	9.13 232	2.25 57	5.0 2.3
	5.250 133.0	365 2517	7901 35106	0.17 4.32	2	½ × 3 M12 × 76	6.63 168	9.00 229	6.38 162	9.00 229	2.25 57	4.8 2.2
DN125	5.500 139.7	365 2517	8672 38529	0.17 4.32	2	½ × 3 M12 × 76	6.88 175	9.25 235	6.75 171	9.13 232	2.25 57	4.9 2.2
6 DN150	6.625 168.3	365 2517	12582 44469	0.17 4.32	2	½ × 3 ¼ M12 × 83	8.38 213	10.38 264	7.88 200	10.13 257	2.25 57	6.0 2.7
	6.250 159.0	365 2517	11198 49753	0.17 4.32	2	½ × 3 ¼ M12 × 83	7.88 200	10.00 254	7.38 187	9.88 251	2.25 57	5.6 2.5
	6.500 165.1	365 2517	12112 53813	0.17 4.32	2	½ × 3 ¼ M12 × 83	8.00 203	10.25 260	7.75 197	10.13 257	2.25 57	6.0 2.7
8 DN200	8.625 219.1	365 2517	21326 94863	0.17 4.32	2	¾ × 4 M16 × 101	10.88 276	13.38 340	10.25 260	13.13 333	2.50 64	11.4 5.2
	8.500 216.0	365 2517	20712 55968	0.17 4.32	2	¾ × 4 M16 × 101	10.63 270	13.25 337	10.25 260	10.13 257	2.63 67	11.4 5.2
10 DN250	10.750 273.0	300 2068	27229 121121	0.25 6.4	2	7/8 × 6 ½ M22 × 165	13.75 349	17.00 432	13.25 337	17.13 435	2.75 70	22.6 10.3
12 DN300	12.750 323.9	300 2068	38303 170380	0.25 6.4	2	7/8 × 6 ½ M22 × 165	16.00 406	19.00 483	15.50 394	19.13 486	2.75 70	27.6 12.5

² Working Pressure and End Load are total, from all internal and external loads, based on standard weight (ANSI) steel pipe, standard roll or cut grooved in accordance with Victaulic specifications. See the Listings/Approvals section of this publication for ratings on other pipe.

³ The allowable pipe separation dimension shown is for system layout purposes only. Style 009N couplings are considered rigid connections and will not accommodate expansion or contraction of the piping system.

NOTES

- When assembling Style 009N or Style 109 couplings onto end caps, take additional care to make certain the end cap is fully seated against the gasket end stop. For Style 009N or Style 109 couplings, use FireLock No. 006 end caps containing the "EZ" marking on the inside face or No. 60 end caps containing the "QV EZ" marking on the inside face. Non-Victaulic end cap products shall not be used with Style 009N or Style 109 couplings. IMPORTANT: Gaskets intended for the Style 009 or Style 009V couplings cannot be used with the Style 009N or Style 109 coupling. There is no interchanging of gaskets or housings between coupling styles.
- Use Of FlushSeal Gaskets For Dry Pipe Systems** Style 009N or Style 109 couplings are supplied with Grade "E" Type A gaskets. These gaskets include an integral pipe stop, that once installed provides the similar benefits as a FlushSeal gasket for dry pipe systems. It should be noted that standard Victaulic FlushSeal gaskets cannot be used with the Style 009N or Style 109 couplings.
- The Allowable Pipe End Separation dimension shown is for system layout purposes only. Style 009N or Style 109 Installation-Ready 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.

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.
 - Wear safety glasses, hardhat, and foot protection.
- Failure to follow these instructions could result in death or serious personal injury and property damage.

- These products shall be used only in fire protection systems that are designed and installed in accordance with current, applicable National Fire Protection Association (NFPA 13, 13D, 13R, etc.) standards, or equivalent standards, and in accordance with applicable building and fire codes. These standards and codes contain important information regarding protection of systems from freezing temperatures, corrosion, mechanical damage, etc.
- The installer shall understand the use of this product and why it was specified for the particular application.
- The installer shall understand common industry safety standards and potential consequences of improper product installation.
- It is the system designer's responsibility to verify suitability of materials 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 materials to confirm system life will be acceptable for the intended service.

Failure to follow installation requirements and local and national codes and standards could compromise system integrity or cause system failure, resulting in death or serious personal injury and property damage.

NOTICE

- Victaulic does not recommend the use of any furnace butt-welded pipe with sizes 2" DN50 and smaller Victaulic gasketed joint products. This includes, but is not limited to, ASTM A53 Type F pipe.

7.0 REFERENCE MATERIALS

[05.01: Seal Selection Guide](#)

[25.01: Original Groove System \(OGS\) Groove Specifications](#)

[I-009N: Installation Instructions FireLock EZ™ Rigid Coupling Style 009N](#)

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

[I-109: Installation Instructions FireLock™ One-Bolt Rigid Coupling Style 109](#)

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

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

[AN-001: Application Notification - Potential Incompatibility of Type F Pipe, Sizes NPS 2" I DN50 and Smaller](#)

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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