# Victaulic® Rigid Coupling
# Style HP-70

06.12



2 – 16"/DN50 – DN400

## 1.0 PRODUCT DESCRIPTION

### Available Sizes

- 2 – 16"/DN50 – DN400

### Pipe Material

- Carbon Steel
- For use on stainless steel pipe, reference Publication 17.09: *Victaulic* Grooved Couplings Performance Data for Stainless Steel Pipe and Publication 17.01: Stainless Steel Pipe End Preparation

### Maximum Working Pressure

- Accommodates pressures ranging from full vacuum (29.9 in Hg / 760 mm Hg) up to 1000 psi / 6900 kPa / 69 bar
- Working pressure dependent on material, wall thickness, and size of pipe

### Operating Temperature

- Dependent on gasket selection – reference Section 3.0

### Pipe Preparation

- Cut or roll grooved in accordance with Publication 25.01: *Victaulic* Original Groove System (OGS) Specifications

### Application

- Joins carbon steel pipe, fittings, valves, and accessories prepared to *Victaulic* OGS Specifications
- Provides a rigid pipe joint designed to restrict axial or angular movement

### Codes and Requirements

- Support and hanging requirements correspond to ASME B31.1 Power Piping Code, ASME B31.9 Building Services Code and NFPA 13 Sprinkler Systems

## 2.0 CERTIFICATIONS/LISTINGS

FM APPROVED

c UL us LISTED

CE
EN 10311
CPR (EU)
No. 305/2011

**NOTES**

- Reference Publication 02.06: *Victaulic* Potable Water Approvals NSF/ANSI/CAN for potable water approvals, if applicable.
- Reference Publication 10.01 for Fire Protection Certifications/Listings Reference Guide.

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


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## 3.0 SPECIFICATIONS - MATERIAL

**Housing:** Ductile Iron conforming to ASTM A536

**Housing Coating: (specify choice)**

- ☐ Standard: Orange Enamel
- ☐ Optional: Hot Dipped Galvanized
- ☐ Optional: Contact Victaulic with your requirements for other coatings.

**Gasket: (specify choice[1])**

☐ **Grade "E" EPDM**

EPDM (Green Stripe color code); Temperature range –30°F to +230°F/–34°C to +110°C. May be specified for cold and 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 Publication 05.01: Victaulic® Seal 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* Seal Selection Guide for specific gasket service guidelines and for a listing of services which are not compatible.

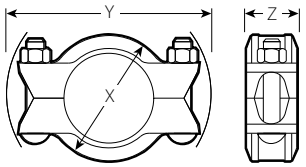
**Bolts/Nuts:**

☐ **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.

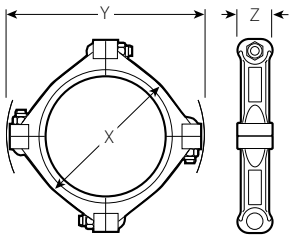
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## 4.0 DIMENSIONS

### Style HP-70




2 – 12"/DN50 – DN300 sizes




14 & 16"/DN350 – DN400 sizes

| Size | | Pipe End Separation[2] | Imperial Bolt/Nut[3] | | Nut Torque | Dimensions | | | Weight |
|---|---|---|---|---|---|---|---|---|---|
| Nominal<br>inches<br>DN | Actual Outside Diameter<br>inches<br>mm | Max. Allowable<br>inches<br>mm | Qty. | Size<br>inches | ft-lb<br>N•m | X<br>inches<br>mm | Y<br>inches<br>mm | Z<br>inches<br>mm | Approximate (Each)<br>lb<br>kg |
| 2<br>DN50 | 2.375<br>60.3 | 0.14<br>3.6 | 2 | ⅝ × 2¾ | 60 - 80<br>81 - 109 | 3.63<br>92 | 6.50<br>165 | 2.00<br>51 | 3.3<br>1.5 |
| 2½ | 2.875<br>73.0 | 0.14<br>3.6 | 2 | ⅝ × 3½ | 60 - 80<br>81 - 109 | 4.00<br>102 | 7.13<br>181 | 2.00<br>51 | 4.0<br>1.8 |
| 3<br>DN80 | 3.500<br>88.9 | 0.14<br>3.6 | 2 | ⅝ × 3½ | 60 - 80<br>81 - 109 | 4.75<br>121 | 7.75<br>197 | 2.00<br>51 | 4.6<br>2.1 |
| 4<br>DN100 | 4.500<br>114.3 | 0.25<br>6.4 | 2 | ¾ × 4¼ | 60 - 80<br>81 - 109 | 6.13<br>156 | 9.63<br>244 | 2.25<br>57 | 7.7<br>3.5 |
| 6<br>DN150 | 6.625<br>168.3 | 0.25<br>6.4 | 2 | ⅞ × 5½ | + | 8.50<br>216 | 12.63<br>321 | 2.50<br>64 | 15.8<br>7.2 |
| 8<br>DN200 | 8.625<br>219.1 | 0.25<br>6.4 | 2 | 1 × 5½ | + | 11.00<br>279 | 15.00<br>381 | 2.75<br>70 | 26.6<br>12.1 |
| 10<br>DN250 | 10.750<br>273.0 | 0.25<br>6.4 | 2 | 1 × 6½ | + | 13.38<br>340 | 17.25<br>438 | 3.00<br>76 | 33.7<br>15.3 |
| 12<br>DN300 | 12.750<br>323.9 | 0.25<br>6.4 | 2 | 1 × 6½ | + | 15.50<br>394 | 19.00<br>483 | 3.00<br>76 | 41.5<br>18.8 |
| 14[4]<br>DN350 | 14.000<br>355.6 | 0.25<br>6.4 | 4 | 1¼ × 4½ | 600<br>813 | 16.75<br>425 | 22.00<br>559 | 3.88<br>98 | 56.0<br>25.4 |
| 16[4]<br>DN400 | 16.000<br>406.4 | 0.25<br>6.4 | 4 | 1¼ × 4½ | 700<br>949 | 18.75<br>476 | 24.00<br>610 | 3.88<br>98 | 66.0<br>29.9 |

+ There are no torque requirements for these sizes. However, the nuts must be tightened evenly by alternating sides until metal-to-metal contact occurs at the bolt pads. NOTE: It is important to tighten all nuts evenly to prevent gasket pinching.

2 Style HP-70 couplings are essentially rigid and do not permit expansion/contraction or angular movement. Contact Victaulic for torsional resistance information. For field installation only. HP-70 couplings when sufficiently pressurized, will allow pipe ends to separate to maximum point shown before joint acts in a fully restrained manner.

3 Metric thread size bolts are available (yellow chromate finish) for all coupling sizes upon request. Contact Victaulic for details.

4 These sizes are not UL Listed or FM Approved. These sizes are NOT intended for use on Advanced Groove System (AGS) roll groove pipe.

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## 5.0 PERFORMANCE

| Size | | Performance | |
|---|---|---|---|
| Nominal | Actual Outside Diameter | Maximum Working Pressure[5] | Maximum End Load[5] |
| inches<br>DN | inches<br>mm | psi<br>kPa | lb<br>N |
| 2<br>DN50 | 2.375<br>60.3 | 1000<br>6895 | 4430<br>19,706 |
| 2½ | 2.875<br>73.0 | 1000<br>6895 | 6490<br>28,869 |
| 3<br>DN80 | 3.500<br>88.9 | 1000<br>6895 | 9620<br>42,792 |
| 4<br>DN100 | 4.500<br>114.3 | 1000<br>6895 | 15,900<br>70,727 |
| 6<br>DN150 | 6.625<br>168.3 | 1000<br>6895 | 34,470<br>153,330 |
| 8<br>DN200 | 8.625<br>219.1 | 800<br>5516 | 46,740<br>207,910 |
| 10<br>DN250 | 10.750<br>273.0 | 800<br>5516 | 72,640<br>323,119 |
| 12<br>DN300 | 12.750<br>323.9 | 800<br>5516 | 102,000<br>453,719 |
| 14<br>DN350 | 14.000<br>355.6 | 600<br>4137 | 92,360<br>410,838 |
| 16<br>DN400 | 16.000<br>406.4 | 600<br>4137 | 120,600<br>536,456 |

[5] 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. Contact Victaulic for performance on other pipe.

**WARNING**

- FOR ONE TIME FIELD TEST ONLY, the Maximum Joint Working Pressure may be increased to 1½ 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.**
- **Always read and follow the I-ENDCAP, *Victaulic* End Cap Installation Safety Instructions, which can be downloaded at Victaulic.com.**
- **Wear safety glasses, hardhat, foot protection, and hearing protection.**

**Failure to follow these instructions could result in death or serious personal injury and property damage.**

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## 7.0 REFERENCE MATERIALS

02.06: Victaulic® Potable Water Approvals NSF/ANSI/CAN
05.01: *Victaulic* Seal Selection Guide - Elastomeric Seal Construction
25.01: *Victaulic* Original Groove System (OGS) Specifications
26.01: *Victaulic* Design Data
29.01: *Victaulic* Terms and Conditions of Sale/Warranty
I-100: *Victaulic* Field Installation Handbook
I-ENDCAP: *Victaulic* End Cap Installation Safety Instructions

**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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