

# Victaulic® Standard Flexible Coupling Style 77



¾ – 12"/DN20 – DN300 sizes    14 – 24"/DN350 – DN600 sizes

## 1.0 PRODUCT DESCRIPTION

### Available Sizes

- ¾ – 24"/DN20 – DN600

### Maximum Working Pressure

- Accommodates pressures ranging from full vacuum (29.9 in Hg/760 mm Hg) up to 1000 psi/6894 kPa.
- Working pressure dependent on material, wall thickness and size of pipe.

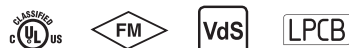
### Application

- Joins standard roll grooved and cut grooved pipe, as well as grooved fittings, valves and accessories.
- Provides a flexible pipe joint which allows for expansion, contraction and deflection.
- Operating temperature dependent upon gasket and/or seal selection - see Section 3.0.
- Exclusively for use with pipe and Victaulic products which feature ends formed with the Victaulic OGS groove profile (See section 7.0 for Reference Materials).

### Pipe Material

- Carbon steel.
- For use with stainless steel pipe, refer to Victaulic [publication 17.09](#) for pressure ratings and end loads.

## 2.0 CERTIFICATION/LISTINGS



### NOTE

- See [publication 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 |  |
| 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 and others.

Optional: Contact Victaulic with your requirements for other coatings.

**Gasket: (specify choice<sup>1</sup>)**

**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 OR STEAM 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, 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 - Elastomeric 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>)**

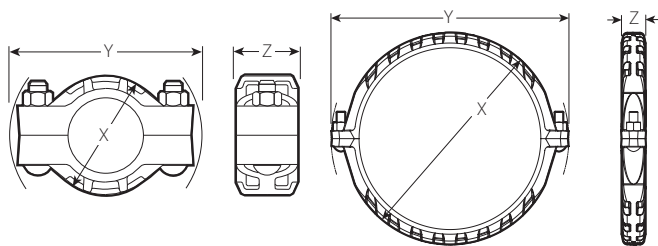
Standard: Carbon steel oval neck track bolts meeting the mechanical property requirements of ASTM A449 (imperial) and ISO 898-1 Class 9.8 (M10-M16) Class 8.8 (M20 and greater). Carbon steel hex nuts meeting the mechanical property requirements of ASTM A563 Grade B (imperial - heavy hex nuts) and ASTM A563M Class 9 (metric - hex nuts). Track bolts and hex nuts are zinc electroplated per ASTM B633 ZN/FE5, finish Type III (imperial) or Type II (metric).

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 hex nuts meeting the mechanical property requirements of ASTM F594, Group 2 (316 stainless steel), condition CW, with galling reducing coating.

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

## 4.0 DIMENSIONS

### Style 77



¾ – 12"/DN20 – DN300 sizes

14 – 24"/DN350 – DN600 sizes

| Size         |                         | Pipe End Separation <sup>3</sup> | Deflection from Centerline <sup>3</sup> |                    | Bolt/Nut |           | Dimensions   |              |              | Weight         |
|--------------|-------------------------|----------------------------------|-----------------------------------------|--------------------|----------|-----------|--------------|--------------|--------------|----------------|
| Nominal      | Actual Outside Diameter | Allowable                        | Per Cplg.                               | Pipe               | Qty.     | Size      | X            | Y            | Z            | Approx. (Each) |
| inches<br>DN | inches<br>mm            | inches<br>mm                     | Degrees                                 | inches/ft.<br>mm/m |          | inches    | inches<br>mm | inches<br>mm | inches<br>mm | lb<br>kg       |
| ¾<br>DN20    | 1.050<br>26.7           | 0–0.06<br>0–1.6                  | 3°–24'                                  | 0.72<br>60         | 2        | ¾ x 2     | 2.13<br>54   | 4.00<br>102  | 1.75<br>44   | 1.1<br>0.5     |
| 1<br>DN25    | 1.315<br>33.7           | 0–0.06<br>0–1.6                  | 2°–43'                                  | 0.57<br>48         | 2        | ¾ x 2     | 2.38<br>61   | 4.12<br>105  | 1.75<br>44   | 1.2<br>0.5     |
| 1¼<br>DN32   | 1.660<br>42.2           | 0–0.06<br>0–1.6                  | 2°–10'                                  | 0.45<br>38         | 2        | ½ x 2½    | 2.65<br>67   | 5.00<br>127  | 1.88<br>48   | 2.0<br>0.9     |
| 1½<br>DN40   | 1.900<br>48.3           | 0–0.06<br>0–1.6                  | 1°–56'                                  | 0.40<br>33         | 2        | ½ x 2½    | 3.13<br>79   | 5.38<br>137  | 1.88<br>48   | 2.1<br>1.0     |
| 2<br>DN50    | 2.375<br>60.3           | 0–0.06<br>0–1.6                  | 1°–31'                                  | 0.32<br>26         | 2        | ½ x 2½    | 3.63<br>92   | 5.88<br>149  | 1.88<br>48   | 2.6<br>1.2     |
|              | 2.664<br>57.0           | 0–0.06<br>0–1.6                  | 1°–34'                                  | 0.33<br>27         | 2        | ½ x 2½    | 3.43<br>87   | 5.73<br>146  | 1.90<br>48   | 3.0<br>1.4     |
| 2½           | 2.875<br>73.0           | 0–0.06<br>0–1.6                  | 1°–15'                                  | 0.26<br>22         | 2        | ½ x 2¾    | 4.25<br>108  | 6.50<br>165  | 1.88<br>48   | 3.1<br>1.4     |
| DN65         | 3.000<br>76.1           | 0–0.06<br>0–1.6                  | 1°–12'                                  | 0.26<br>22         | 2        | ½ x 2¾    | 4.38<br>111  | 6.63<br>168  | 1.88<br>48   | 3.2<br>1.5     |
| 3<br>DN80    | 3.500<br>88.9           | 0–0.06<br>0–1.6                  | 1°–2'                                   | 0.22<br>18         | 2        | ½ x 2¾    | 5.00<br>127  | 7.13<br>181  | 1.88<br>48   | 3.7<br>1.7     |
| 3½<br>DN90   | 4.000<br>101.6          | 0–0.06<br>0–1.6                  | 0°–54'                                  | 0.19<br>16         | 2        | ⅝ x 3¼    | 5.63<br>143  | 8.25<br>210  | 1.88<br>48   | 5.6<br>2.5     |
| 4<br>DN100   | 4.500<br>114.3          | 0–0.13<br>0–3.2                  | 1°–36'                                  | 0.34<br>28         | 2        | ⅝ x 3¼    | 6.13<br>156  | 8.88<br>226  | 2.13<br>54   | 6.7<br>3.0     |
|              | 4.250<br>108.0          | 0–0.13<br>0–3.2                  | 1°–41'                                  | 0.35<br>29         | 2        | 16 x 82.5 | 6.00<br>152  | 8.63<br>219  | 2.13<br>54   | 11.0<br>5.0    |
| 5            | 5.563<br>141.3          | 0–0.13<br>0–3.2                  | 1°–18'                                  | 0.27<br>23         | 2        | 2–¾ x 4¼  | 7.75<br>197  | 10.65<br>270 | 2.13<br>54   | 10.6<br>4.8    |

<sup>3</sup> Allowable Pipe End Separation and Deflection figures show the maximum nominal range of movement available at each joint for standard **roll** grooved pipe. Figures for standard **cut** grooved pipe may be doubled. These figures are maximums; for design and installation purposes these figures should be reduced by: 50% for ¾ – 3 ½"/DN20 – DN90; 25% for 4"/DN100 and larger.

#### NOTE

- Metric thread size bolts are available (color coded gold) for all coupling sizes upon request. Contact Victaulic for details.