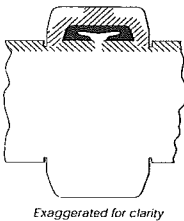
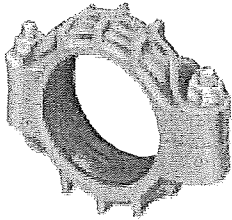


# Style 77 Standard Flexible Coupling

## PRODUCT DESCRIPTION



See Victaulic  
publication 10.01  
for details.

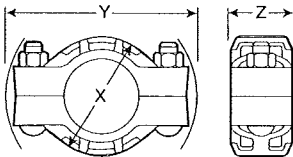
Style 77 couplings are designed with cross-ribbed construction to provide a strong component for pressure piping systems. Sizes 3/4 - 12" (20 - 300 mm) are two-piece housings. Sizes 14 - 22" (350 - 550 mm) are cast in four identical segments, with larger sizes cast in six segments. This eases handling and assures concentricity.

All sizes are provided with plated bolts and nuts. Galvanized and stainless steel housings are also available.

Independent testing has shown the Style 77 coupling to be an effective stress relief and vibration attenuation device providing performance superior to braided steel and elastomeric arch-type connectors when used in close proximity to the source of vibration. Refer to 26.04 for vibration information.

Independent testing has shown that Victaulic Style 77 and 75 flexible couplings and Style 07 Zero-Flex® rigid couplings provide exceptional functionality during and after earthquake conditions. Refer to 26.05 for further information.

## DIMENSIONS



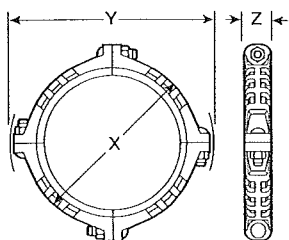
3/4 - 12" Sizes

| Pipe Size                     |                               | Max.<br>Work<br>Pres.<br>PSI*<br>kPa | Max.<br>End<br>Load<br>Lbs.*<br>N | Allow.<br>Pipe<br>End †<br>Sep.<br>In./mm | Deflect. Fr.<br>C <sub>L</sub> † |                         | @<br>Bolt/Nut<br>No. - Size<br>Inches<br>mm | Dimensions<br>Inches/millimeters |              |            | Aprx.<br>Wgt.<br>Each<br>Lbs.<br>kg |
|-------------------------------|-------------------------------|--------------------------------------|-----------------------------------|-------------------------------------------|----------------------------------|-------------------------|---------------------------------------------|----------------------------------|--------------|------------|-------------------------------------|
| Nominal<br>Diameter<br>In./mm | Actual<br>Out. Dia.<br>In./mm |                                      |                                   |                                           | Per<br>Cplg.<br>Deg.             | Pipe<br>In./Ft.<br>mm/m |                                             | X                                | Y            | Z          |                                     |
| 3/4<br>20                     | 1.050<br>26.7                 | 1,000<br>6900                        | 865<br>3850                       | 0 - 0.06<br>0 - 1.6                       | 3° - 24'                         | 0.72<br>60              | 2 - 3/8 X 2                                 | 2.13<br>54                       | 4.00<br>102  | 1.75<br>44 | 1.1<br>0.5                          |
| 1<br>25                       | 1.315<br>33.4                 | 1,000<br>6900                        | 1,360<br>6050                     | 0 - 0.06<br>0 - 1.6                       | 2° - 43'                         | 0.57<br>48              | 2 - 3/8 X 2                                 | 2.38<br>61                       | 4.12<br>105  | 1.75<br>44 | 1.2<br>0.5                          |
| 1 1/4<br>32                   | 1.660<br>42.2                 | 1,000<br>6900                        | 2,160<br>9610                     | 0 - 0.06<br>0 - 1.6                       | 2° - 10'                         | 0.45<br>38              | 2 - 1/2 X 2 1/2                             | 2.65<br>67                       | 5.00<br>127  | 1.88<br>48 | 2.0<br>0.9                          |
| 1 1/2<br>40                   | 1.900<br>48.3                 | 1,000<br>6900                        | 2,835<br>12615                    | 0 - 0.06<br>0 - 1.6                       | 1° - 56'                         | 0.40<br>33              | 2 - 1/2 X 2 1/2                             | 3.13<br>79                       | 5.38<br>137  | 1.88<br>48 | 2.1<br>1.0                          |
| 2<br>50                       | 2.375<br>60.3                 | 1,000<br>6900                        | 4,430<br>19715                    | 0 - 0.06<br>0 - 1.6                       | 1° - 31'                         | 0.32<br>26              | 2 - 1/2 X 2 1/2                             | 3.63<br>92                       | 5.88<br>149  | 1.88<br>48 | 2.6<br>1.2                          |
| 2 1/2<br>65                   | 2.875<br>73.0                 | 1,000<br>6900                        | 6,490<br>28880                    | 0 - 0.06<br>0 - 1.6                       | 1° - 15'                         | 0.26<br>22              | 2 - 1/2 X 2 3/4                             | 4.25<br>108                      | 6.50<br>165  | 1.88<br>48 | 3.1<br>1.4                          |
| 76.1 mm                       | 3.000<br>76.1                 | 1,000<br>6900                        | 7,070<br>31460                    | 0 - 0.06<br>0 - 1.6                       | 1° - 12'                         | 0.26<br>22              | 2 - 1/2 X 2 3/4                             | 4.38<br>111                      | 6.63<br>168  | 1.88<br>48 | 3.2<br>1.5                          |
| 3<br>80                       | 3.500<br>88.9                 | 1,000<br>6900                        | 9,620<br>46810                    | 0 - 0.06<br>0 - 1.6                       | 1° - 2'                          | 0.22<br>18              | 2 - 1/2 X 2 3/4                             | 5.00<br>127                      | 7.13<br>181  | 1.88<br>48 | 3.7<br>1.7                          |
| 3 1/2<br>90                   | 4.000<br>101.6                | 1,000<br>6900                        | 12,565<br>55915                   | 0 - 0.06<br>0 - 1.6                       | 0° - 54'                         | 0.19<br>16              | 2 - 5/8 X 3 1/4                             | 5.63<br>143                      | 8.25<br>210  | 1.88<br>48 | 5.6<br>2.5                          |
| 4<br>100                      | 4.500<br>114.3                | 1,000<br>6900                        | 15,900<br>70755                   | 0 - 0.13<br>0 - 3.2                       | 1° - 36'                         | 0.34<br>28              | 2 - 5/8 X 3 1/4                             | 6.13<br>156                      | 8.88<br>226  | 2.13<br>54 | 6.7<br>3.0                          |
| 108.0 mm                      | 4.250<br>108.0                | 1,000<br>6900                        | 14,180<br>63100                   | 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<br>125                      | 5.563<br>141.3                | 1,000<br>6900                        | 24,300<br>108135                  | 0 - 0.13<br>0 - 3.2                       | 1° - 18'                         | 0.27<br>23              | 2 - 3/4 X 4 1/4                             | 7.75<br>197                      | 10.65<br>270 | 2.13<br>54 | 10.6<br>4.8                         |
| 133.0 mm                      | 5.250<br>133.0                | 1,000<br>6900                        | 21,635<br>96275                   | 0 - 0.13<br>0 - 3.2                       | 1° - 21'                         | 0.28<br>24              | 2 - 20 X 108                                | 7.63<br>194                      | 10.38<br>264 | 2.13<br>54 | 10.0<br>4.5                         |
| 139.7 mm                      | 5.500<br>139.7                | 1,000<br>6900                        | 23,745<br>105665                  | 0 - 0.13<br>0 - 3.2                       | 1° - 18'                         | 0.28<br>24              | 2 - 20 X 108                                | 8.63<br>219                      | 10.65<br>270 | 2.13<br>54 | 10.0<br>4.5                         |
| 6<br>150                      | 6.625<br>168.3                | 1,000<br>6900                        | 34,470<br>153390                  | 0 - 0.13<br>0 - 3.2                       | 1° - 5'                          | 0.23<br>18              | 2 - 3/4 X 4 1/4                             | 8.63<br>219                      | 11.88<br>302 | 2.13<br>54 | 12.0<br>5.4                         |
| 159.0 mm                      | 6.250<br>159.0                | 1,000<br>6900                        | 30,665<br>136460                  | 0 - 0.13<br>0 - 3.2                       | 1° - 9'                          | 0.24<br>20              | 2 - 20 X 108                                | 8.63<br>219                      | 11.50<br>292 | 2.13<br>54 | 13.2<br>6.0                         |
| 165.1 mm                      | 6.500<br>165.1                | 1,000<br>6900                        | 33,185<br>147660                  | 0 - 0.13<br>0 - 3.2                       | 1° - 6'                          | 0.23<br>19              | 2 - 3/4 X 4 1/4                             | 8.88<br>226                      | 11.63<br>295 | 2.13<br>54 | 13.2<br>6.0                         |

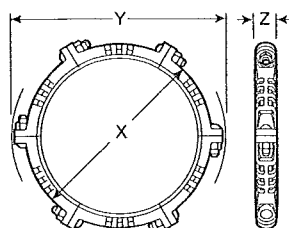
Table continued on page 2.

\*† Refer to notes on page 2.

## DIMENSIONS



14 - 22" Sizes



24" Sizes

| Pipe Size               |                         | Max. Work Pres. PSI*<br>kPa | Max. End Load Lbs.*<br>N | Allow. Pipe End † Sep. In./mm | Deflect. Fr. C <sub>L</sub> † |                   | @ Bolt/Nut No. - Size Inches mm | Dimensions Inches/millimeters |              |            | Aprx. Wgt. Each Lbs. kg |
|-------------------------|-------------------------|-----------------------------|--------------------------|-------------------------------|-------------------------------|-------------------|---------------------------------|-------------------------------|--------------|------------|-------------------------|
| Nominal Diameter In./mm | Actual Out. Dia. In./mm |                             |                          |                               | Per Cplg. Deg.                | Pipe In./Ft. mm/m |                                 | X                             | Y            | Z          |                         |
| 8 §<br>200              | 8.625<br>219,1          | 800<br>5500                 | 46,740<br>207995         | 0 - 0.13<br>0 - 3,2           | 0° - 50'                      | 0.18<br>14        | 2 - 7/8 X 5                     | 11.00<br>279                  | 14.75<br>375 | 2.50<br>63 | 20.8<br>9,4             |
| 10 §<br>250             | 10.750<br>273,0         | 800<br>5500                 | 73,280<br>326100         | 0 - 0.13<br>0 - 3,2           | 0° - 40'                      | 0.14<br>12        | 2 - 1 X 6                       | 13.63<br>346                  | 17.13<br>435 | 2.63<br>67 | 31.1<br>14,1            |
| 12 §<br>300             | 12.750<br>323,9         | 800<br>5500                 | 102,000<br>453900        | 0 - 0.13<br>0 - 3,2           | 0° - 34'                      | 0.12<br>9         | 2 - 1 X 6 1/2                   | 15.63<br>397                  | 19.25<br>489 | 2.63<br>67 | 27.8<br>12,6            |
| 14<br>350               | 14.000<br>355,6         | 300<br>2065                 | 46,180<br>205500         | 0 - 0.13<br>0 - 3,2           | 0° - 31'                      | 0.11<br>9         | 4 - 1 X 3 1/2                   | 16.63<br>422                  | 19.88<br>505 | 2.88<br>73 | 35.6<br>16,1            |
| 15<br>375               | 15.000<br>381,0         | 300<br>2065                 | 53,000<br>235850         | 0 - 0.13<br>0 - 3,2           | 0° - 29'                      | 0.10<br>9         | 4 - 1 X 5 1/2                   | 17.88<br>454                  | 21.63<br>549 | 3.00<br>76 | 48.8<br>22,1            |
| 16<br>400               | 16.000<br>406,4         | 300<br>2065                 | 60,320<br>268425         | 0 - 0.13<br>0 - 3,2           | 0° - 27'                      | 0.10<br>9         | 4 - 1 X 3 1/2                   | 19.00<br>482                  | 22.13<br>562 | 3.00<br>76 | 51.1<br>23,2            |
| 18<br>450               | 18.000<br>457,2         | 300<br>2065                 | 76,340<br>339710         | 0 - 0.13<br>0 - 3,2           | 0° - 24'                      | 0.08<br>7         | 4 - 1 X 3 1/2                   | 21.38<br>543                  | 24.50<br>622 | 3.13<br>80 | 64.4<br>29,2            |
| 20<br>500               | 20.000<br>508,0         | 300<br>2065                 | 94,000<br>418300         | 0 - 0.13<br>0 - 3,2           | 0° - 22'                      | 0.08<br>7         | 4 - 1 1/8 X 4                   | 23.63<br>600                  | 27.25<br>692 | 3.13<br>80 | 91.2<br>41,4            |
| 22<br>550               | 22.000<br>559,0         | 300<br>2065                 | 114,000<br>507300        | 0 - 0.13<br>0 - 3,2           | 0° - 19'                      | 0.07<br>6         | 4 - 1 1/8 X 4                   | 25.75<br>654                  | 29.50<br>749 | 3.13<br>80 | 92.0<br>41,7            |
| 24<br>600               | 24.000<br>609,6         | 250<br>1725                 | 113,000<br>502850        | 0 - 0.13<br>0 - 3,2           | 0° - 18'                      | 0.07<br>6         | 6 - 1 1/8 X 4                   | 27.75<br>704                  | 31.25<br>794 | 3.13<br>80 | 94.0<br>42,6            |

§ Couplings 8, 10, 12" (200, 250, 300 mm) sizes available to JIS standards. Refer to Section 06.17 for details.

\*† Refer to notes below.

### NOTES

\* 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 1 1/2 times the figures shown.

† 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 3/4 - 3 1/2" (20 - 90 mm); 25% for 4" (100 mm) and larger.

@ Number of bolts required equals number of housing segments.

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

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

## MATERIAL SPECIFICATIONS

**Housing:** Ductile iron conforming to ASTM A-395, grade 65-45-15, and ASTM A-536, grade 65-45-12.

**Housing Coating:** Orange enamel

• **Optional:** Hot dipped galvanized and others

**Coupling Gasket:** (specify choice\*)†

• **Grade "E" EPDM**

EPDM (Green color code). Temperature range -30°F to +230°F (-34°C to +110°C). Recommended 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 +86°F (+30°C) and hot +180°F (+82°C) potable water service. NOT RECOMMENDED FOR PETROLEUM SERVICES.

• **Grade "T" nitrile**

Nitrile (Orange color code). Temperature range -20°F to +180°F (-29°C to +82°C). Recommended for petroleum products, air with oil vapors, vegetable and mineral oils within the specified temperature range. Not recommended for hot water services over +150°F (+66°C) or for hot dry air over +140°F (+60°C).

\*Services listed are General Service Recommendations only. It should be noted that there are services for which these gaskets are not recommended. Reference should always be made to the latest Victaulic Gasket Selection Guide for specific gasket service recommendations and for a listing of services which are not recommended.

**Bolts/Nuts:** Heat treated carbon steel, zinc electroplated to ASTM B633, track-head conforming to physical properties of ASTM A-183 minimum tensile 110,000 psi (758340 kPa).

† Supplemental lubricant is recommended for services installed at or continuously operating below 0°F (-18°C).

• **Optional:** Type 316 stainless steel, Grade B-8M, Class 2.

This product shall be manufactured by Victaulic Company. 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.