



1.0 PRODUCT DESCRIPTION

Available Sizes

- ½ – 2"

Pipe Material

- For use on carbon steel pipe conforming to the dimensional requirements of ASME B36.10 and the pipe standards ASTM A53, ASTM A106, ASTM A135 for Schedules 5 through 80
- For use on 6061-T6 aluminum pipe conforming to ASTM B241 for Schedule 40 only
- For exceptions reference section 6.0 Notifications

Pipe Coating

- For use on pipe with a mill-type finish
- For use on pipe with a metal-deposited coating not exceeding 0.005" (0.13 mm), such as thermally diffused zinc, hot dipped galvanized, etc.
- For use on pipe with latex paint with thickness not exceeding 0.005" (0.13 mm)

NOTE

- For use on other pipe materials and/or pipe coatings, please contact Victaulic.

Maximum Working Pressure

- 300 psi/2068 kPa/21 bar

Maximum Operating Temperature

- Dependent on gasket selection from section 3.0

Function

- Joins plain end carbon steel and aluminum pipe
- Rigid couplings and fittings featuring patented Victaulic Installation-Ready™ technology
- QuickVic™ SD Installation-Ready™ products include patented "Leak-If-Not-Tightened" technology during initial installation; Seal is designed to leak until the coupling or fitting is mechanically secured on the pipe

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

1.0 PRODUCT DESCRIPTION (CONTINUED)

PC3110 Cut & Mark Tool Capability

- ½ – 2" carbon steel pipe, Schedules 5 through 80
 - ½ – 2" aluminum pipe, Schedule 40
 - Designed to cut, mark and chamfer pipe outside diameter (OD) simultaneously
 - Knurled marks display a clear insertion depth on the outside of the pipe for proper coupling/fitting installation
-

2.0 CERTIFICATION/LISTINGS



Conforms to ASME B31.1, ASME B31.3 and ASME B31.9 code requirements.

Product designed and manufactured under the Victaulic Quality Management System, as certified by LPCB in accordance with ISO-9001:2008.

3.0 SPECIFICATIONS – MATERIAL

Couplings and Fittings

Housing: Ductile iron conforming to ASTM A536, Grade 65-45-12.

Housing Coating: (specify choice)

Standard: Orange coating.

Optional: Thermally diffused zinc-based coating conforming to ASTM A1059/A1059M.

Optional: Contact Victaulic with your requirements for other coatings.

Gasket: (specify choice¹)

Victaulic Grade "EHP" EPDM

EPDM (Red and Green stripes color code). Temperature range -30°F to +250°F/-34°C to +120°C. May be specified for hot water service within the specified temperature range plus a variety of dilute acids, oil-free air, and many chemical services. NOT COMPATIBLE FOR USE WITH PETROLEUM SERVICES OR STEAM SERVICES.

Victaulic 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, hydrocarbons, air with oil vapors, and vegetable and mineral oils within the specified temperature range; not compatible for hot dry air over +140°F/+60°C and water over +150°F/+66°C. NOT COMPATIBLE FOR USE WITH HOT WATER SERVICES OR STEAM SERVICES.

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.

3.0 SPECIFICATIONS – MATERIAL (CONTINUED)

Bolts/Nuts: Carbon steel oval neck track bolts meeting the mechanical property requirements of ASTM A449. Carbon steel hex nuts meeting the mechanical property requirements of ASTM A563 Grade B. Track bolts and hex nuts are zinc electroplated per ASTM B633 Fe/Zn 5, finish Type III.

Retainer: 301 stainless steel conforming to ASTM A666.

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.

No. P40 Threaded Adapter (Male NPT x Plain End): Carbon steel meeting the chemical and mechanical property requirements of ASTM A53 Grade A or B, or per GB/T 8163-2008 Grade 20, or equivalent.

No. P80 Threaded Adapter (Female NPT x Plain End): Ductile iron conforming to ASTM A536, Grade 65-45-12.

No. P47 and No. P97 Dielectric Adapters: Copper silicon conforming to UNS C87850.

No. P60 Cap: Ductile iron conforming to ASTM A536, Grade 65-45-12.

No. P42 Close Nipple: Schedule 40 carbon steel pipe per ASTM A53 Grade A or B or per GB/T 8163-2008 Grade 20, or equivalent, with black oxide coating.

Full Port Ball Valve

Body: Dezincification resistant (DZR) brass, CW602N.

Stem Seals: EPDM.

Ball: Plated DZR brass, CW602N (standard) or 316 stainless steel (optional).

Stem: DZR brass, CW602N (standard) or 316 stainless steel (optional).

Ball Seals: Polytetrafluoroethylene (PTFE).

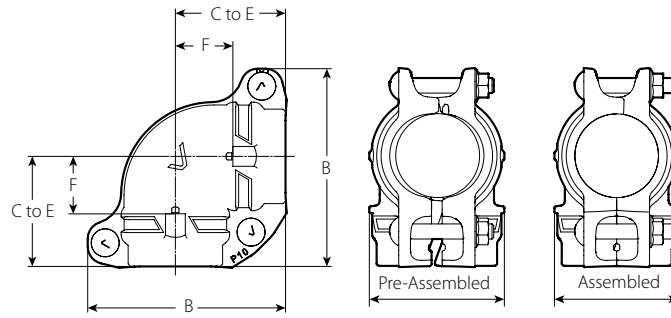
Handle: Steel with vinyl grip.

PC3110 Cut & Mark Tool

Required Power Supply: Power drive with foot switch.

4.0 DIMENSIONS

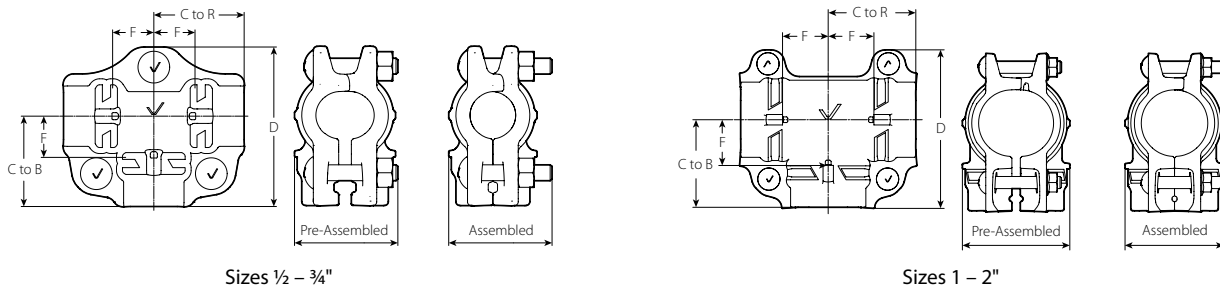
No. P10 90° Elbow



| Size | | Bolt/Nut | | Dimensions | | | | | Weight | |
|----------------|-----------------------------------|----------|--------------------------|---------------------|------------------|-------------|-------------------------|---------------------|--------------------------|--|
| Nominal inches | Actual Outside Diameter inches/mm | Qty. | Size inches/mm | F Takeout inches/mm | C to E inches/mm | B inches/mm | Pre-Assembled inches/mm | Assembled inches/mm | Approximate (Each) lb/kg | |
| 1/2 | 0.840 21.3 | 3 | 3/8 x 2 M10 x 51 | 0.88 22 | 2.13 54 | 3.88 99 | 2.38 60 | 2.38 60 | 1.8 0.8 | |
| 3/4 | 1.050 26.9 | 3 | 3/8 x 2 M10 x 51 | 1.00 25 | 2.13 54 | 4.00 102 | 2.50 64 | 2.50 64 | 2.1 1.0 | |
| 1 | 1.315 33.7 | 3 | 3/8 x 2 M10 x 51 | 1.13 29 | 2.25 57 | 4.38 111 | 2.75 70 | 2.63 67 | 2.4 1.1 | |
| 1 1/4 | 1.660 42.4 | 3 | 3/8 x 2 M10 x 51 | 1.25 32 | 2.50 64 | 4.75 121 | 3.00 76 | 2.75 70 | 2.8 1.3 | |
| 1 1/2 | 1.900 48.3 | 3 | 3/8 x 2 M10 x 51 | 1.38 35 | 3.00 76 | 5.38 137 | 3.25 83 | 3.00 76 | 3.4 1.5 | |
| 2 | 2.375 60.3 | 3 | 7/16 x 2 3/4 M11 x 70 | 1.63 41 | 3.25 83 | 5.88 149 | 4.00 102 | 3.63 92 | 5.8 2.6 | |

4.1 DIMENSIONS

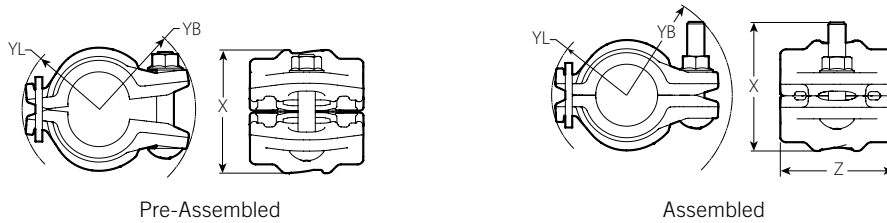
No. P20 Tee



| Size | | Bolt/Nut | | Dimensions | | | | | Weight | |
|----------------|-----------------------------------|----------|--------------------------|---------------------|------------------|------------------|-------------|-------------------------|---------------------|--------------------------|
| Nominal inches | Actual Outside Diameter inches/mm | Qty. | Size inches/mm | F Takeout inches/mm | C to B inches/mm | C to R inches/mm | D inches/mm | Pre-Assembled inches/mm | Assembled inches/mm | Approximate (Each) lb/kg |
| 1/2 | 0.840 21.3 | 3 | 3/8 x 2 M10 x 51 | 0.88 22 | 2.13 54 | 2.13 54 | 3.63 92 | 2.38 60 | 2.38 60 | 2.4 1.1 |
| 3/4 | 1.050 26.9 | 3 | 3/8 x 51 M10 x 2 | 1.00 25 | 2.25 57 | 2.25 57 | 3.88 99 | 2.50 64 | 2.50 64 | 2.8 1.3 |
| 1 | 1.315 33.7 | 4 | 3/8 x 2 M10 x 51 | 1.13 29 | 2.25 57 | 2.25 57 | 4.38 111 | 2.75 70 | 2.63 67 | 3.2 1.5 |
| 1 1/4 | 1.660 42.4 | 4 | 3/8 x 2 M10 x 51 | 1.25 32 | 2.50 64 | 2.50 64 | 4.75 121 | 3.00 76 | 2.75 70 | 3.7 1.7 |
| 1 1/2 | 1.900 48.3 | 4 | 3/8 x 2 M10 x 51 | 1.38 35 | 3.00 76 | 3.00 76 | 5.38 137 | 3.25 83 | 3.00 76 | 4.6 2.1 |
| 2 | 2.375 60.3 | 4 | 7/16 x 2 3/4 M11 x 70 | 1.63 41 | 3.25 83 | 3.25 83 | 5.88 149 | 4.00 102 | 3.63 92 | 7.0 3.2 |

4.2 DIMENSIONS

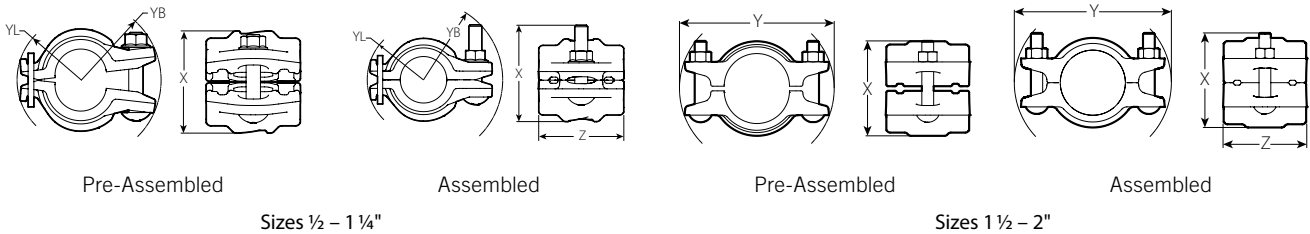
Style P07 Coupling



| Size | | Pipe End Separation inches mm | Qty. | Bolt/Nut Size inches mm | Dimensions | | | | | | | | Weight | |
|-------------------|---|-------------------------------------|------|----------------------------------|--------------------------------|--------------------------------|-------------------|--------------------------------|--------------------------------|-------------------|-------------------|-----|-----------------------------------|--|
| Nominal inches | Actual Outside Diameter inches mm | | | | Pre-Assembled | | | | Assembled | | | | Approximate (Each) lb kg | |
| | | | | | Y _L inches mm | Y _B inches mm | X inches mm | Y _L inches mm | Y _B inches mm | X inches mm | Z inches mm | | | |
| ½ | 0.840 | 0.14 | 1 | ¾ x 2 M10 x 51 | 1.50 | 2.00 | 2.38 | 1.50 | 2.13 | 2.50 | 2.50 | 1.2 | | |
| | 21.3 | 3.6 | | | 38 | 51 | 60 | 38 | 54 | 64 | 64 | 0.5 | | |
| ¾ | 1.050 | 0.14 | 1 | ¾ x 2 M10 x 51 | 1.63 | 2.13 | 2.38 | 1.50 | 2.13 | 2.63 | 2.50 | 1.3 | | |
| | 26.9 | 3.6 | | | 41 | 54 | 60 | 38 | 54 | 67 | 64 | 0.6 | | |
| 1 | 1.315 | 0.14 | 1 | ¾ x 2 M10 x 51 | 1.75 | 2.25 | 2.75 | 1.63 | 2.25 | 2.75 | 2.50 | 1.4 | | |
| | 33.7 | 3.6 | | | 44 | 57 | 70 | 41 | 57 | 70 | 64 | 0.6 | | |
| 1 ¼ | 1.660 | 0.14 | 1 | ¾ x 2 M10 x 51 | 1.88 | 2.38 | 3.00 | 1.88 | 2.50 | 2.88 | 2.50 | 1.6 | | |
| | 42.4 | 3.6 | | | 48 | 60 | 76 | 48 | 64 | 73 | 64 | 0.7 | | |
| 1 ½ | 1.900 | 0.14 | 1 | 7/16 x 2 ¾ M11 x 70 | 2.13 | 2.63 | 3.38 | 2.00 | 2.63 | 3.50 | 3.25 | 2.8 | | |
| | 48.3 | 3.6 | | | 54 | 67 | 86 | 51 | 67 | 89 | 83 | 1.3 | | |
| 2 | 2.375 | 0.14 | 1 | 7/16 x 2 ¾ M11 x 70 | 2.38 | 3.00 | 3.88 | 2.25 | 3.25 | 3.88 | 3.25 | 3.1 | | |
| | 60.3 | 3.6 | | | 60 | 76 | 99 | 57 | 83 | 99 | 83 | 1.4 | | |

4.3 DIMENSIONS

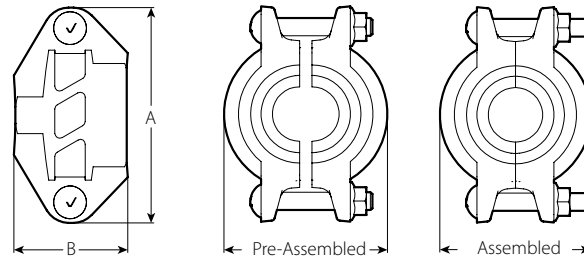
Style P08 Slip Coupling



| Size | | Pipe End Separation inches mm | Qty. | Bolt/Nut Size inches mm | Dimensions | | | | | | | | | | Weight | |
|-------------------|---|-------------------------------------|------|----------------------------------|--------------------------------|--------------------------------|-------------------|-------------------|--------------------------------|--------------------------------|-------------------|-------------------|-------------------|-----|-----------------------------------|--|
| Nominal inches | Actual Outside Diameter inches mm | | | | Pre-Assembled | | | | Assembled | | | | | | Approximate (Each) lb kg | |
| | | | | | Y _L inches mm | Y _B inches mm | Y inches mm | X inches mm | Y _L inches mm | Y _B inches mm | Y inches mm | X inches mm | Z inches mm | | | |
| ½ | 0.840 | 0.00 | 1 | ¾ x 2 M10 x 51 | 1.50 | 2.00 | - | 2.38 | 1.50 | 2.13 | - | 2.50 | 2.38 | 1.1 | | |
| | 21.3 | 0 | | | 38 | 51 | 60 | 38 | 54 | - | 64 | 60 | 0.5 | | | |
| ¾ | 1.050 | 0.00 | 1 | ¾ x 2 M10 x 51 | 1.63 | 2.13 | - | 2.38 | 1.63 | 2.13 | - | 2.63 | 2.38 | 1.2 | | |
| | 26.9 | 0 | | | 41 | 54 | 60 | 41 | 54 | - | 67 | 60 | 0.5 | | | |
| 1 | 1.315 | 0.00 | 1 | ¾ x 2 M10 x 51 | 1.75 | 2.25 | - | 2.75 | 1.75 | 2.25 | - | 2.75 | 2.38 | 1.4 | | |
| | 33.7 | 0 | | | 44 | 57 | 70 | 44 | 57 | - | 70 | 60 | 0.6 | | | |
| 1 ¼ | 1.660 | 0.00 | 1 | ¾ x 2 M10 x 51 | 1.88 | 2.38 | - | 3.00 | 1.88 | 2.50 | - | 2.88 | 2.38 | 1.6 | | |
| | 42.4 | 0 | | | 48 | 60 | 76 | 48 | 64 | - | 73 | 60 | 0.7 | | | |
| 1 ½ | 1.900 | 0.00 | 2 | ¾ x 2 M10 x 51 | - | - | 4.88 | 3.13 | - | - | 5.00 | 2.88 | 3.13 | 2.4 | | |
| | 48.3 | 0 | | | - | - | 124 | 80 | - | - | 127 | 73 | 80 | 1.1 | | |
| 2 | 2.375 | 0.00 | 2 | 7/16 x 2 ¾ M11 x 70 | - | - | 5.75 | 3.50 | - | - | 5.88 | 3.50 | 3.13 | 3.0 | | |
| | 60.3 | 0 | | | - | - | 146 | 89 | - | - | 149 | 89 | 80 | 1.4 | | |

4.4 DIMENSIONS

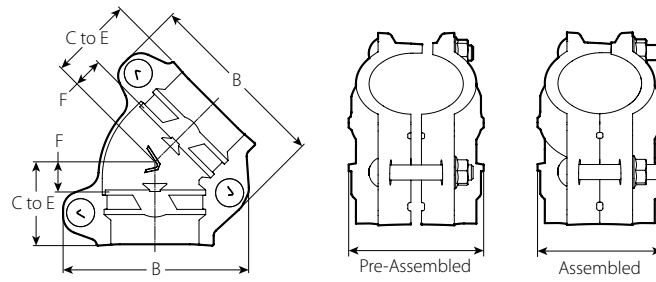
Style P50 Reducing Coupling



| Size | | Pipe End Separation inches mm | Bolt/Nut | | Dimensions | | | | Weight |
|-------------------|---|-------------------------------------|----------|--------------------------|-------------------|-------------------|-------------------------------|---------------------------|-----------------------------------|
| Nominal inches | Actual Outside Diameter inches mm | | Qty. | Size inches mm | A inches mm | B inches mm | Pre-Assembled inches mm | Assembled inches mm | Approximate (Each) lb kg |
| 3/4 x 1/2 | 1.050 x 0.840 26.9 x 21.3 | 0.15 4 | 2 | 3/8 x 2 M10 x 51 | 3.63 92 | 2.50 64 | 2.50 64 | 2.50 64 | 1.7 0.8 |
| 1 x 3/4 | 1.315 x 1.050 33.7 x 26.9 | 0.20 5 | 2 | 3/8 x 2 M10 x 51 | 3.88 99 | 2.50 64 | 2.75 70 | 2.63 67 | 1.9 0.9 |
| 1 1/4 x 3/4 | 1.660 x 1.050 42.4 x 26.9 | 0.06 2 | 2 | 3/8 x 2 M10 x 51 | 4.63 118 | 2.50 64 | 3.25 83 | 3.00 76 | 2.6 1.2 |
| | | 1.315 33.7 | 2 | 3/8 x 2 M10 x 51 | 4.63 118 | 2.50 64 | 3.25 83 | 3.00 76 | 2.3 1.0 |
| 1 1/2 x 3/4 | 1.900 x 1.050 48.3 x 26.9 | 0.06 2 | 2 | 3/8 x 2 M10 x 51 | 4.88 124 | 2.75 70 | 3.50 89 | 3.25 83 | 3.1 1.4 |
| | | 1.315 33.7 | 2 | 3/8 x 2 M10 x 51 | 4.88 124 | 2.75 70 | 3.50 89 | 3.25 83 | 3.0 1.4 |
| | | 1.660 42.4 | 2 | 3/8 x 2 M10 x 51 | 4.88 124 | 2.75 70 | 3.50 89 | 3.25 83 | 3.0 1.4 |
| 2 x 1 | 2.375 x 1.315 60.3 x 33.7 | 0.06 2 | 2 | 7/16 x 2 3/4 M11 x 70 | 5.25 133 | 2.75 70 | 4.00 102 | 3.75 95 | 3.8 1.7 |
| | | 1.660 42.4 | 2 | 7/16 x 2 3/4 M11 x 70 | 5.25 133 | 2.75 70 | 4.13 105 | 3.75 95 | 3.8 1.7 |
| | | 1.900 48.3 | 2 | 7/16 x 2 3/4 M11 x 70 | 5.25 133 | 3.13 79 | 4.00 102 | 3.88 99 | 4.1 1.9 |

4.5 DIMENSIONS

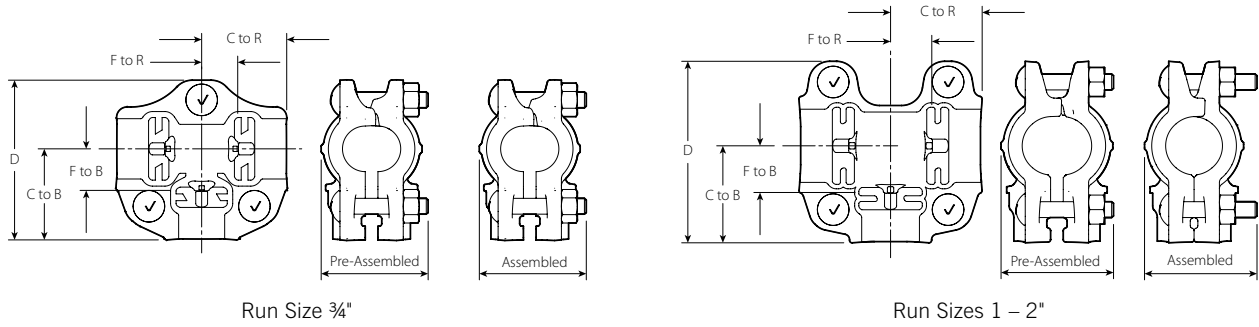
No. P11 45° Elbow



| Size | | Bolt/Nut | | Dimensions | | | | | Weight |
|----------------|-----------------------------------|----------|------------------------|---------------------|------------------|-------------|-------------------------|---------------------|--------------------------|
| Nominal inches | Actual Outside Diameter inches mm | Qty. | Size inches mm | F Takeout inches mm | C to E inches mm | B inches mm | Pre-Assembled inches mm | Assembled inches mm | Approximate (Each) lb kg |
| ½ | 0.840 21.3 | 3 | ⅜ x 2 M10 x 51 | 0.63 15 | 1.75 44 | 3.50 89 | 2.38 60 | 2.38 60 | 0.7 0.3 |
| ¾ | 1.050 26.9 | 3 | ⅜ x 2 M10 x 51 | 0.75 19 | 1.88 48 | 3.75 95 | 2.50 64 | 2.50 64 | 2.4 1.1 |
| 1 | 1.315 33.7 | 3 | ⅜ x 2 M10 x 51 | 0.75 19 | 1.88 48 | 4.00 102 | 2.75 70 | 2.63 67 | 2.7 1.2 |
| 1¼ | 1.660 42.4 | 3 | ⅜ x 2 M10 x 51 | 0.75 19 | 1.88 48 | 4.38 111 | 3.13 80 | 2.88 73 | 3.2 1.5 |
| 1½ | 1.900 48.3 | 3 | ⅜ x 2 M10 x 51 | 0.75 19 | 2.25 57 | 4.75 121 | 3.38 86 | 3.00 76 | 3.7 1.7 |
| 2 | 2.375 60.3 | 3 | 7/16 x 2 ¾ M11 x 70 | 0.88 22 | 2.38 60 | 5.38 137 | 3.88 99 | 3.88 99 | 5.4 2.5 |

4.6 DIMENSIONS

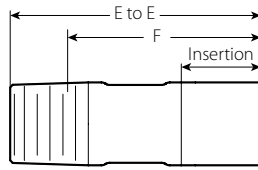
No. P25 Reducing Tee



| Size | | | Bolt/Nut | | Dimensions | | | | | | | Weight | |
|---------------------|---|---------------|----------|-------------------------|-----------------------------------|-----------------------------------|------------------------|------------------------|-------------------|-------------------------------|---------------------------|----------------------------|-----|
| Nominal inches | Actual Outside Diameter inches mm | | Qty | Size inches mm | F to B Takeout inches mm | F to R Takeout inches mm | C to B inches mm | C to R inches mm | D inches mm | Pre-Assembled inches mm | Assembled inches mm | Approx. (Each) lb kg | |
| 3/4 x 3/4 x 1/2 | 1.050 26.9 | 1.050 26.9 | 3 | 3/8 x 2 M10 x 51 | 1.13 29 | 1.00 25 | 2.25 57 | 2.13 54 | 3.88 99 | 2.50 64 | 2.50 64 | 2.9 | 1.3 |
| | | | | 3/8 x 2 M10 x 51 | 1.13 29 | 1.00 25 | 2.38 60 | 2.13 54 | 4.38 111 | 2.75 70 | 2.75 70 | 3.2 | 1.4 |
| 1 x 1 x 1/2 | 1.315 33.7 | 1.315 33.7 | 4 | 3/8 x 2 M10 x 51 | 1.13 29 | 1.00 25 | 2.38 60 | 2.25 57 | 4.63 117 | 2.75 70 | 2.63 67 | 3.3 | 1.5 |
| | | | | 3/8 x 2 M10 x 51 | 1.13 29 | 1.13 29 | 2.38 60 | 2.25 57 | 4.63 117 | 2.75 70 | 2.63 67 | 3.6 | 1.6 |
| 1 1/4 x 1 1/4 x 1/2 | 1.660 42.4 | 1.660 42.4 | 4 | 3/8 x 2 M10 x 51 | 1.38 35 | 1.00 25 | 2.50 64 | 2.13 54 | 4.75 121 | 3.00 76 | 2.88 73 | 4.0 | 1.8 |
| | | | | 3/8 x 2 M10 x 51 | 1.38 35 | 1.13 29 | 2.50 64 | 2.25 57 | 4.75 121 | 3.00 76 | 2.75 70 | 4.2 | 1.9 |
| 1 1/2 x 1 1/2 x 1/2 | 1.900 48.3 | 1.900 48.3 | 4 | 3/8 x 2 M10 x 51 | 1.63 41 | 0.88 22 | 2.75 70 | 2.38 60 | 5.00 127 | 3.25 83 | 3.00 76 | 4.2 | 1.9 |
| | | | | 3/8 x 2 M10 x 51 | 1.63 41 | 1.00 25 | 2.75 70 | 2.50 64 | 5.13 130 | 3.25 83 | 3.00 76 | 4.6 | 2.1 |
| 1 1/2 x 1 1/2 x 3/4 | 1.900 48.3 | 1.900 48.3 | 4 | 3/8 x 2 M10 x 51 | 1.63 41 | 1.13 29 | 2.75 70 | 2.75 70 | 5.13 130 | 3.25 83 | 3.00 76 | 4.8 | 2.2 |
| | | | | 3/8 x 2 M10 x 51 | 1.63 41 | 1.38 35 | 2.75 70 | 3.00 76 | 5.00 127 | 3.25 83 | 3.00 76 | 5.1 | 2.3 |
| 2 x 2 x 1/2 | 2.375 60.3 | 2.375 60.3 | 4 | 7/16 x 2.75 M11 x 70 | 1.88 48 | 0.88 22 | 3.13 79 | 2.38 60 | 5.63 143 | 4.00 102 | 3.63 92 | 6.2 | 2.8 |
| | | | | 7/16 x 2.75 M11 x 70 | 1.88 48 | 1.13 29 | 3.00 76 | 2.63 67 | 5.63 143 | 4.00 102 | 3.63 92 | 7.0 | 3.2 |
| 2 x 2 x 3/4 | 2.375 60.3 | 2.375 60.3 | 4 | 7/16 x 2.75 M11 x 70 | 1.88 48 | 1.38 35 | 3.00 76 | 2.88 73 | 5.63 143 | 4.00 102 | 3.63 92 | 7.5 | 3.4 |
| | | | | 7/16 x 2.75 M11 x 70 | 1.88 48 | 1.38 35 | 3.00 76 | 3.00 76 | 5.63 143 | 4.00 102 | 3.63 92 | 7.2 | 3.3 |
| 2 x 2 x 1 | 2.375 60.3 | 2.375 60.3 | 4 | 7/16 x 2.75 M11 x 70 | 1.88 48 | 1.63 41 | 3.25 83 | 3.13 79 | 5.75 146 | 4.00 102 | 3.63 92 | 8.0 | 3.6 |
| | | | | 7/16 x 2.75 M11 x 70 | 1.88 48 | 1.63 41 | 3.25 83 | 3.13 79 | 5.75 146 | 4.00 102 | 3.63 92 | 8.0 | 3.6 |

4.7 DIMENSIONS

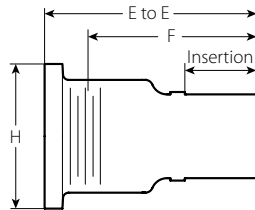
No. P40 Threaded Adapter (Male NPT x Plain End)



| Size | | Dimensions | | | Weight | |
|----------------|--------------------------------------|---------------------|------------------------|------------------------------|-------------------------|--|
| Nominal inches | Actual Outside Diameter inches mm | E to E inches mm | F Takeout inches mm | Insertion Depth inches mm | Approx. (Each) lb kg | |
| ½ | 0.840 21.3 | 3.75 95 | 3.25 83 | 1.125 29 | 0.3 0.1 | |
| ¾ | 1.050 26.9 | 3.75 95 | 3.25 83 | 1.125 29 | 0.3 0.1 | |
| 1 | 1.315 33.7 | 4.00 102 | 3.25 83 | 1.125 29 | 0.4 0.2 | |
| 1 ¼ | 1.660 42.4 | 4.00 102 | 3.38 86 | 1.125 29 | 0.6 0.3 | |
| 1 ½ | 1.900 48.3 | 4.38 111 | 3.75 95 | 1.500 38 | 0.7 0.3 | |
| 2 | 2.375 60.3 | 4.38 111 | 3.75 95 | 1.500 38 | 0.9 0.4 | |

4.8 DIMENSIONS

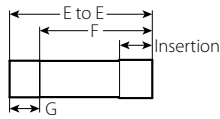
No. P80 Threaded Adapter (Female NPT x Plain End)



| Size | | Dimensions | | | Weight | |
|----------------|--------------------------------------|---------------------|------------------------|----------------|------------------------------|-------------------------|
| Nominal inches | Actual Outside Diameter inches mm | E to E inches mm | F Takeout inches mm | H inches mm | Insertion Depth inches mm | Approx. (Each) lb kg |
| ½ | 0.840 21.3 | 3.25 83 | 2.63 67 | 1.75 44 | 1.125 29 | 0.6 0.3 |
| ¾ | 1.050 26.9 | 3.25 83 | 2.63 67 | 2.00 51 | 1.125 29 | 0.9 0.4 |
| 1 | 1.315 33.7 | 3.38 86 | 2.63 67 | 2.25 58 | 1.125 29 | 1.2 0.6 |
| 1 ¼ | 1.660 42.4 | 3.38 86 | 2.63 67 | 2.63 67 | 1.125 29 | 1.6 0.7 |
| 1 ½ | 1.900 48.3 | 3.75 95 | 3.00 76 | 2.88 73 | 1.500 38 | 2.1 1.0 |
| 2 | 2.375 60.3 | 3.75 95 | 3.00 76 | 3.50 89 | 1.500 38 | 2.9 1.3 |

4.9 DIMENSIONS

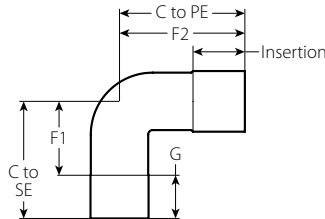
No. P47 Straight Dielectric Adapter (Sweat x Plain End)



| Size | | Dimensions | | | Insertion Depth | Weight |
|----------------|-----------------------------------|---------------------------|----------------------|---------------------|-----------------|----------------------|
| Nominal inches | Actual Outside Diameter inches mm | G (Sweat Depth) inches mm | End to End inches mm | F Takeout inches mm | | Approx. (Each) lb kg |
| ½ | 0.840 | 0.50 | 4.50 | 4.00 | 1.125 | 0.3 |
| | 21.3 | 13 | 114 | 102 | 29 | 0.1 |
| ¾ | 1.050 | 0.75 | 4.75 | 4.00 | 1.125 | 0.5 |
| | 26.9 | 19 | 121 | 102 | 29 | 0.2 |
| 1 | 1.315 | 0.91 | 5.00 | 4.00 | 1.125 | 0.7 |
| | 33.7 | 23 | 127 | 102 | 29 | 0.3 |
| 1 ¼ | 1.660 | 0.97 | 5.00 | 4.00 | 1.125 | 0.9 |
| | 42.4 | 25 | 127 | 102 | 29 | 0.4 |
| 1 ½ | 1.900 | 1.09 | 5.09 | 4.00 | 1.500 | 1.1 |
| | 48.3 | 28 | 129 | 102 | 38 | 0.5 |
| 2 | 2.375 | 1.34 | 5.34 | 4.00 | 1.500 | 1.5 |
| | 60.3 | 34 | 136 | 102 | 38 | 0.7 |

4.10 DIMENSIONS

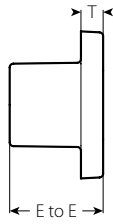
No. P97 90° Elbow Dielectric Adapter (Sweat x Plain End)



| Size | | Dimensions | | | | | Insertion Depth | Weight |
|----------------|-----------------------------------|---------------------------|---|---|-----------------------------|----------------------------|-----------------|----------------------|
| Nominal inches | Actual Outside Diameter inches mm | G (Sweat Depth) inches mm | C to SE (Center to Sweat End) inches mm | C to PE (Center to Plain End) inches mm | F1 Copper Takeout inches mm | F2 Steel Takeout inches mm | | Approx. (Each) lb kg |
| ½ | 0.840 | 0.50 | 1.84 | 2.59 | 1.34 | 2.59 | 1.125 | 0.3 |
| | 21.3 | 13 | 47 | 66 | 34 | 66 | 29 | 0.1 |
| ¾ | 1.050 | 0.75 | 2.09 | 2.59 | 1.34 | 2.59 | 1.125 | 0.4 |
| | 26.9 | 19 | 53 | 66 | 34 | 66 | 29 | 0.2 |
| 1 | 1.315 | 0.91 | 2.54 | 2.72 | 1.63 | 2.72 | 1.125 | 0.7 |
| | 33.7 | 23 | 65 | 69 | 41 | 69 | 29 | 0.3 |
| 1 ¼ | 1.660 | 0.97 | 2.82 | 2.88 | 1.85 | 2.88 | 1.125 | 1.0 |
| | 42.4 | 25 | 72 | 73 | 47 | 73 | 29 | 0.5 |
| 1 ½ | 1.900 | 1.09 | 2.88 | 2.88 | 1.79 | 2.88 | 1.500 | 1.2 |
| | 48.3 | 28 | 73 | 73 | 45 | 73 | 38 | 0.5 |
| 2 | 2.375 | 1.34 | 3.25 | 3.25 | 1.91 | 3.25 | 1.500 | 1.7 |
| | 60.3 | 34 | 83 | 83 | 49 | 83 | 38 | 0.8 |

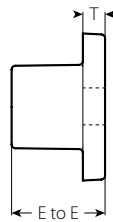
4.11 DIMENSIONS

No. P60 Cap/Tapped Cap



No. P60 Cap

| Size | | Dimensions | | Weight |
|-------------------|---|------------------------|-------------------|-----------------------------------|
| Nominal inches | Actual Outside Diameter inches mm | E to E inches mm | T inches mm | Approximate (Each) lb kg |
| 1/2 | 0.840 | 1.50 | 0.38 | 0.4 |
| | 21.3 | 38 | 10 | 0.2 |
| 3/4 | 1.050 | 1.50 | 0.38 | 0.5 |
| | 26.9 | 38 | 10 | 0.2 |
| 1 | 1.315 | 1.50 | 0.38 | 0.7 |
| | 33.7 | 38 | 10 | 0.3 |
| 1 1/4 | 1.660 | 1.50 | 0.38 | 0.9 |
| | 42.4 | 38 | 10 | 0.4 |
| 1 1/2 | 1.900 | 1.88 | 0.38 | 1.3 |
| | 48.3 | 48 | 10 | 0.6 |
| 2 | 2.375 | 1.88 | 0.38 | 1.7 |
| | 60.3 | 48 | 10 | 0.8 |

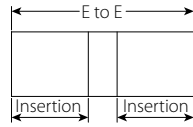


No. P60 Tapped Cap
(Optional)

| Size | | Dimensions | | Thread Size | Weight |
|-------------------|---|------------------------|-------------------|--------------|-----------------------------------|
| Nominal inches | Actual Outside Diameter inches mm | E to E inches mm | T inches mm | | Approximate (Each) lb kg |
| 1/2 | 0.840 | 1.50 | 0.38 | 1/4 - 18 NPT | 0.4 |
| | 21.3 | 38 | 10 | | 0.2 |
| 3/4 | 1.050 | 1.50 | 0.38 | 3/8 - 18 NPT | 0.5 |
| | 26.9 | 38 | 10 | | 0.2 |
| 1 | 1.315 | 1.50 | 0.38 | 1/2 - 14 NPT | 0.7 |
| | 33.7 | 38 | 10 | | 0.3 |
| 1 1/4 | 1.660 | 1.50 | 0.38 | 1/2 - 14 NPT | 0.9 |
| | 42.4 | 38 | 10 | | 0.4 |
| 1 1/2 | 1.900 | 1.88 | 0.38 | 1/2 - 14 NPT | 1.3 |
| | 48.3 | 48 | 10 | | 0.6 |
| 2 | 2.375 | 1.88 | 0.38 | 1/2 - 14 NPT | 1.7 |
| | 60.3 | 48 | 10 | | 0.8 |

4.12 DIMENSIONS

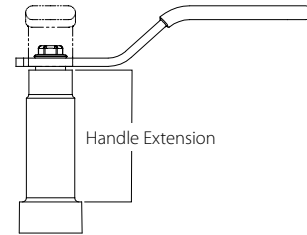
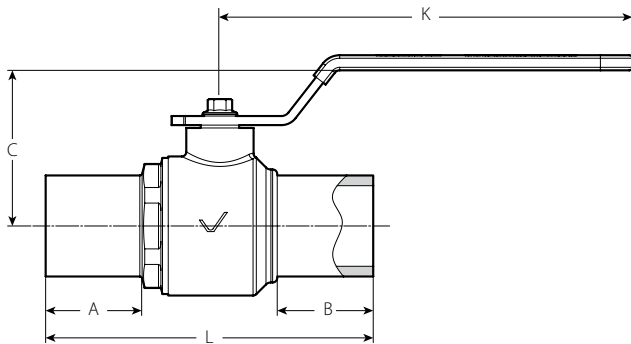
No. P42 Close Nipple



| Size | | Dimensions | | Weight |
|-------------------------|---|------------------------|------------------------------------|-------------------------------|
| Nominal inches DN | Actual Outside Diameter inches mm | E to E inches mm | Insertion Depth inches mm | Approx. (Each) lb kg |
| 1/2 DN15 | 0.840 21.3 | 2.38 60 | 1.13 29 | 0.2 0.1 |
| 3/4 DN20 | 1.050 26.9 | 2.38 60 | 1.13 29 | 0.3 0.1 |
| 1 DN25 | 1.315 33.7 | 2.38 60 | 1.13 29 | 0.4 0.2 |
| 1 1/4 DN32 | 1.660 42.4 | 2.38 60 | 1.13 29 | 0.5 0.2 |
| 1 1/2 DN40 | 1.900 48.3 | 3.13 79 | 1.50 38 | 0.8 0.4 |
| 2 DN50 | 2.375 60.3 | 3.13 79 | 1.50 38 | 1.0 0.5 |

4.13 DIMENSIONS

Series P89 Full Port Ball Valve

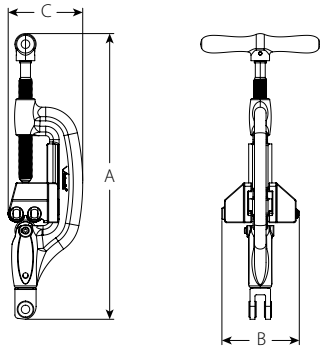


| Size | | Dimensions | | | | | Weight |
|-------------------|---|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------------------------|
| Nominal inches | Actual Outside Diameter inches mm | A inches mm | B inches mm | C inches mm | L inches mm | K inches mm | Approximate (Each) lb kg |
| 1/2 | 0.840 21.3 | 1.25 32 | 1.25 32 | 2.50 64 | 4.00 102 | 4.25 108 | 0.6 0.3 |
| 3/4 | 1.050 26.9 | 1.25 32 | 1.25 32 | 2.63 67 | 4.13 105 | 4.25 108 | 0.9 0.4 |
| 1 | 1.315 33.7 | 1.25 32 | 1.25 32 | 2.75 70 | 4.50 114 | 5.25 133 | 1.4 0.6 |
| 1 1/4 | 1.660 42.4 | 1.25 32 | 1.25 32 | 2.88 73 | 4.75 121 | 5.25 133 | 2.0 0.9 |
| 1 1/2 | 1.900 48.3 | 1.63 41 | 1.63 41 | 3.00 76 | 6.13 156 | 6.13 156 | 3.7 1.7 |
| 2 | 2.375 60.3 | 1.63 41 | 1.63 41 | 3.63 92 | 6.38 162 | 6.38 162 | 5.4 2.5 |

| Valve Inlet Size | 2" Handle Extension | 4" Handle Extension |
|------------------|---------------------|---------------------|
| | inches | |
| 1/2 - 3/4 | P-004-78Y-2HL | P-004-78Y-4HL |
| 1 - 1 1/4 | P-012-78Y-2HL | P-012-78Y-4HL |
| 1 1/2 - 2 | P-020-78Y-2HL | P-020-78Y-4HL |

4.14 DIMENSIONS

PC3110 Cut & Mark Tool



| Dimensions | | | Weight |
|------------|--------|--------|----------------|
| A | B | C | Approx. (Each) |
| inches | inches | inches | lb |
| mm | mm | mm | kg |
| 17.00 | 4.63 | 4.50 | 10.3 |
| 432 | 118 | 114 | 4.7 |

5.0 PERFORMANCE

Carbon Steel – Schedules 5 through 80

| Size | | Carbon Steel | | | |
|----------------|---|---|---|---|---|
| | | Schedule 5 | | Schedules 10 – 80 | |
| Nominal inches | Actual Outside Diameter inches mm | Maximum Joint Working Pressure ² | Maximum Permissible End Load ² | Maximum Joint Working Pressure ² | Maximum Permissible End Load ² |
| | | psi kPa | lb N | psi kPa | lb N |
| ½ | 0.840 | 175 | 190 | 300 | 330 |
| | 21.3 | 1207 | 845 | 2068 | 1468 |
| ¾ | 1.050 | 175 | 230 | 300 | 400 |
| | 26.9 | 1207 | 1023 | 2068 | 1779 |
| 1 | 1.315 | 175 | 265 | 300 | 450 |
| | 33.7 | 1207 | 1178 | 2068 | 2002 |
| 1 ¼ | 1.660 | 175 | 380 | 300 | 650 |
| | 42.4 | 1207 | 1690 | 2068 | 2891 |
| 1 ½ | 1.900 | 175 | 495 | 300 | 850 |
| | 48.3 | 1207 | 2201 | 2068 | 3781 |
| 2 | 2.375 | 175 | 775 | 300 | 1330 |
| | 60.3 | 1207 | 3447 | 2068 | 5916 |

² Working Pressure and End Load are total, from all internal and external loads, based on ANSI B36.10 sized carbon steel pipe, prepared in accordance with Victaulic specifications.

NOTE

- WARNING: FOR ONE-TIME FIELD TEST ONLY, the Maximum Joint Working Pressure may be increased to 1 ½ times the figures shown.

5.1 PERFORMANCE

Aluminum – Schedule 40

| Size | | Aluminum – Schedule 40 | |
|----------------|---|---|---|
| Nominal inches | Actual Outside Diameter inches mm | Maximum Joint Working Pressure ³ | Maximum Permissible End Load ³ |
| | | psi kPa | lb N |
| ½ | 0.840 | + | + |
| | 21.3 | | |
| ¾ | 1.050 | + | + |
| | 26.9 | | |
| 1 | 1.315 | 300 | 450 |
| | 33.7 | 2068 | 2002 |
| 1 ¼ | 1.660 | 300 | 650 |
| | 42.4 | 2068 | 2891 |
| 1 ½ | 1.900 | 300 | 850 |
| | 48.3 | 2068 | 3781 |
| 2 | 2.375 | 300 | 1330 |
| | 60.3 | 2068 | 5916 |

³ Working Pressure and End Load are total, from all internal and external loads, based on 6061-T6 aluminum pipe per ASTM B241, prepared in accordance with Victaulic specifications.

+ Contact Victaulic for more details.

NOTE

- WARNING: FOR ONE-TIME FIELD TEST ONLY, the Maximum Joint Working Pressure may be increased to 1 ½ times the figures shown.

5.2 PERFORMANCE

Frictional Resistance

| Size | | Equivalent Lengths Based on Sched. 40 Pipe (C=120) ⁴ | | |
|----------------|---|---|-------------------|-------------|
| Nominal inches | Actual Outside Diameter inches mm | No. P10 90° Elbow | No. P11 45° Elbow | No. P20 Tee |
| | | ft m | ft m | ft m |
| ½ | 0.840 | 1.0 | 1.0 | 2.0 |
| | 21.3 | 0.3 | 0.3 | 0.6 |
| ¾ | 1.050 | 1.5 | 1.0 | 2.5 |
| | 26.9 | 0.5 | 0.3 | 0.8 |
| 1 | 1.315 | 2.0 | 1.5 | 3.0 |
| | 33.7 | 0.6 | 0.5 | 0.9 |
| 1 ¼ | 1.660 | 2.5 | 1.5 | 3.5 |
| | 42.4 | 0.8 | 0.5 | 1.1 |
| 1 ½ | 1.900 | 3.0 | 2.0 | 4.0 |
| | 48.3 | 0.9 | 0.6 | 1.2 |
| 2 | 2.375 | 5.0 | 2.0 | 6.0 |
| | 60.3 | 1.5 | 0.6 | 1.8 |

⁴ Rounded to the nearest half foot.

5.3 PERFORMANCE

Flow Characteristics for Series P89 Full Port Ball Valve

C_v/K_v values for flow of water at 60°F/16°C are shown in the table below. For additional details, contact Victaulic.

Formulas for C_v and K_v values:

$$\Delta P = \frac{Q^2}{C_v^2}$$

$$Q = C_v \times \sqrt{\Delta P}$$

Where:

Q = Flow (GPM)
 ΔP = Pressure Drop (psi)
 C_v = Flow Coefficient

$$\Delta P = \frac{Q^2}{K_v^2}$$

$$Q = K_v \times \sqrt{\Delta P}$$

Where:

Q = Flow (m³/hr)
 ΔP = Pressure Drop (Bar)
 K_v = Flow Coefficient

| Size | | Flow |
|----------------|---|----------------------------------|
| Nominal inches | Actual Outside Diameter inches mm | C _v K _v |
| | | ½ |
| ¾ | 1.050 26.9 | 28.5 24.7 |
| | 1 | 1.315 33.7 |
| 1 ¼ | 1.660 42.4 | 114.0 98.6 |
| | 1 ½ | 1.900 48.3 |
| 2 | 2.375 60.3 | 245.0 211.9 |

6.0 NOTIFICATIONS

⚠ WARNING



- Read and understand all instructions before attempting to install, remove, adjust, or maintain any Victaulic piping products.
- Depressurize and drain the piping system before attempting to install, remove, adjust, or maintain any Victaulic piping products.
- Wear safety glasses, hardhat, and foot protection.

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

NOTICE

- Victaulic does not recommend the use of any furnace butt-welded pipe with sizes NPS 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: Victaulic Seal Selection Guide](#)

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

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

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

[I-P100: Victaulic Field Installation Handbook](#)

[TM-PC3110: Victaulic PC3110 Cut & Mark Tool Operating and Maintenance Instructions Manual](#)

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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