



No. P10



No. P20



Style P07



Style P08



Style P50



No. P47



No. P97



Series P89



PC3110 Cut & Mark Tool

1.0 PRODUCT DESCRIPTION

Available Sizes

- ½ – 2"/DN15 – DN50

Pipe Material

- For use on carbon steel pipe, Schedules 10 through 80

Maximum Working Pressure

- 300 psi/2068 kPa/21 bar

Maximum Operating Temperature

- Dependent on gasket selection from section 3.0

Function

- 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

PC3110 Cut & Mark Tool Capability

- ½ – 2"/DN15 – DN50 carbon steel pipe, Schedules 10 through 80
- Designed to cut the pipe and mark the pipe simultaneously
- Knurled marks display a clear insertion depth on the outside of the pipe for proper coupling/fitting installation

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	

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 enamel.

Optional: Zinc coating.

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.

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 (imperial).

Retainer: 301 stainless steel conforming to ASTM A666.

Coupling Linkage: CrMo alloy steel zinc electroplated per ASTM B633 Fe/Zn 5, finish Type III.

Dielectric Adapter: Copper silicon conforming to UNS C87850.

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)

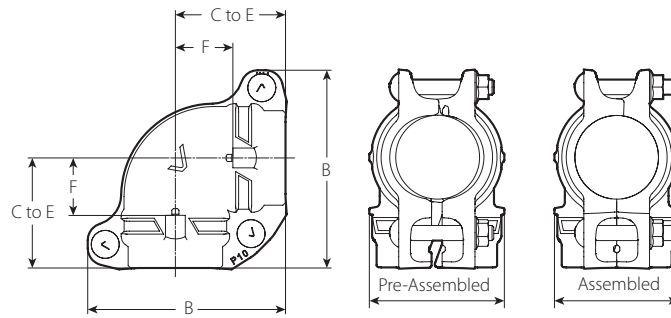
Handle: Steel with vinyl grip

PC3110 Cut & Mark Tool:

- Required Power Supply: Power drive with foot switch.

4.0 DIMENSIONS

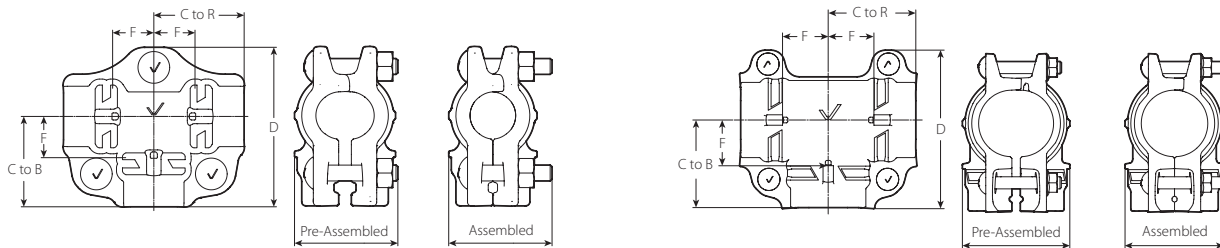
No. P10 90° Elbow



Size		Bolt/Nut		Dimensions					Weight	
Nominal inches DN	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 DN15	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 DN20	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 DN25	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 DN32	1.660 42.4	3	3/8 x 2 M10 x 51	1.38 35	2.50 64	4.75 121	3.00 76	2.75 70	2.8 1.3	
1 1/2 DN40	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 DN50	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



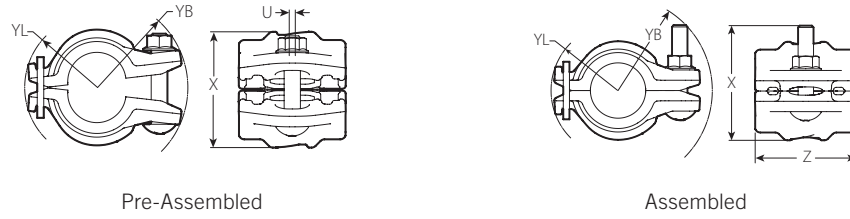
1/2 - 3/4"/DN15 - DN20

1 - 2"/DN25 - DN50

Size		Bolt/Nut		Dimensions					Weight	
Nominal inches DN	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 DN15	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 DN20	1.050 26.9	3	3/8 x 2 M10 x 51	1.00 25	2.25 57	2.25 57	3.88 98	2.50 64	2.50 64	2.8 1.3
1 DN25	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 DN32	1.660 42.4	4	3/8 x 2 M10 x 51	1.38 35	2.50 64	2.50 64	4.75 121	3.00 76	2.75 70	3.7 1.7
1 1/2 DN40	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 DN50	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

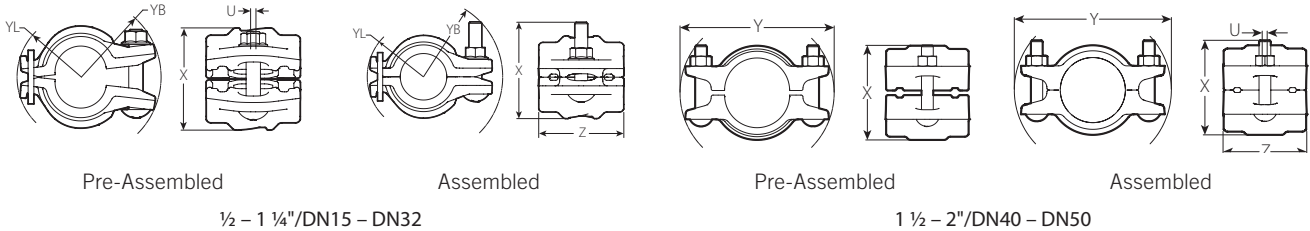
Style P07 Coupling



Size		Bolt/Nut		Dimensions								Weight	
Nominal inches mm	Actual Outside Diameter inches mm	Qty.	Size 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	U inches mm	Z inches mm		
1/2 DN15	0.840 21.3	1	3/8 x 2 M10 x 51	1.50 38	2.00 51	2.38 60	1.50 38	2.13 54	2.50 64	0.14 3.6	2.50 64	1.2 0.5	
3/4 DN20	1.050 26.9	1	3/8 x 2 M10 x 51	1.63 41	2.13 54	2.38 60	1.50 38	2.13 54	2.63 67	0.14 3.6	2.50 64	1.3 0.6	
1 DN25	1.315 33.7	1	3/8 x 2 M10 x 51	1.75 44	2.25 57	2.75 70	1.63 41	2.25 57	2.75 70	0.14 3.6	2.50 64	1.4 0.6	
1 1/4 DN32	1.660 42.4	1	3/8 x 2 M10 x 51	1.88 48	2.38 60	3.00 76	1.88 48	2.50 64	2.88 73	0.14 3.6	2.50 64	1.6 0.7	
1 1/2 DN40	1.900 48.3	1	3/8 x 2 1/2 M10 x 64	2.13 54	2.63 67	3.38 86	2.00 51	2.88 73	3.50 89	0.14 3.6	3.25 83	2.5 1.1	
2 DN50	2.375 60.3	1	7/16 x 2 3/4 M11 x 70	2.38 60	3.00 76	3.88 99	2.25 57	3.25 83	3.88 98	0.14 3.6	3.25 83	3.1 1.4	

4.3 DIMENSIONS

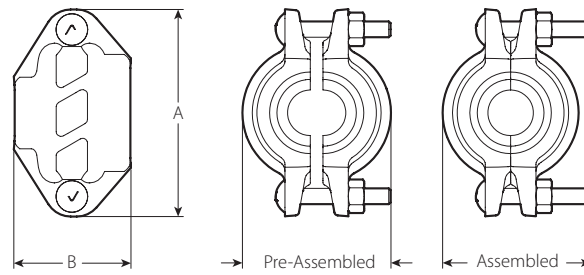
Style P08 Slip Coupling



Size		Bolt/Nut		Dimensions										Weight	
Nominal inches mm	Actual Outside Diameter inches mm	Qty.	Size 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	U inches mm	Z inches mm		
1/2 DN15	0.840 21.3	1	3/8 x 2 M10 x 51	1.50 38	2.00 51	-	2.38 60	1.50 38	2.13 54	-	2.50 64	0.00 0	2.38 60	1.1 0.5	
3/4 DN20	1.050 26.9	1	3/8 x 2 M10 x 51	1.63 41	2.13 54	-	2.38 60	1.50 38	2.13 54	-	2.63 67	0.00 0	2.38 60	1.2 0.5	
1 DN25	1.315 33.7	1	3/8 x 2 M10 x 51	1.75 44	2.25 57	-	2.75 70	1.63 41	2.25 57	-	2.75 70	0.00 0	2.38 60	1.4 0.6	
1 1/4 DN32	1.660 42.4	1	3/8 x 2 M10 x 51	1.88 48	2.38 60	-	3.00 76	1.88 48	2.50 64	-	2.88 73	0.00 0	2.38 60	1.6 0.7	
1 1/2 DN40	1.900 48.3	2	3/8 x 2 M10 x 51	-	-	4.92 125	3.14 80	-	-	5.03 128	2.91 74	0.00 0	3.07 78	2.4 1.1	
2 DN50	2.375 60.3	2	7/16 x 2 3/4 M11 x 70	-	-	5.74 146	3.52 89	-	-	5.84 148	3.52 89	0.00 0	3.11 79	3.0 1.4	

4.4 DIMENSIONS

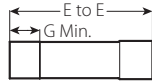
Style P50 Reducing Coupling



Size		Pipe End Separation inches mm	Bolt/Nut		Dimensions				Weight
Nominal inches DN	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 DN20 DN15	1.050 x 0.840 26.9 x 21.3	0.15 4	2	3/8 x 2 M10 x 51	3.65 93	2.52 64	2.98 76	2.98 76	1.7 0.8
1 x 3/4 DN25 DN20	1.315 x 1.050 33.7 x 26.9	0.20 5	2	3/8 x 2 M10 x 51	3.96 101	2.53 64	3.11 79	3.11 79	1.9 0.9
1 1/4 x 3/4 DN32 DN20	1.660 x 1.050 42.4 x 26.9	0.06 2	2	3/8 x 2 M10 x 51	4.76 121	2.41 61	3.24 82	3.24 82	2.6 1.2
1 DN25	1.315 33.7	0.06 2	2	3/8 x 2 M10 x 51	4.55 116	2.39 61	3.38 86	3.38 86	2.3 1.0
1 1/2 x 3/4 DN40 DN20	1.900 x 1.050 48.3 x 26.9	0.06 2	2	3/8 x 2 M10 x 51	4.90 125	2.77 70	3.52 89	3.52 89	3.1 1.4
1 DN25	1.315 33.7	0.06 2	2	3/8 x 2 M10 x 51	4.90 125	2.77 70	3.51 89	3.51 89	3.0 1.4
1 1/4 DN32	1.660 42.4	0.06 2	2	3/8 x 2 M10 x 51	4.90 125	2.76 70	3.52 89	3.52 89	3.0 1.4
2 x 1 DN50 DN25	2.375 x 1.315 60.3 x 33.7	0.06 2	2	7/16 x 2 3/4 M11 x 70	5.31 135	2.80 71	4.03 102	3.73 95	3.8 1.7
1 1/4 DN32	1.660 42.4	0.06 2	2	7/16 x 2 3/4 M11 x 70	5.31 135	2.80 71	4.03 102	3.73 95	3.8 1.7
1 1/2 DN40	1.900 48.3	0.06 2	2	7/16 x 2 3/4 M11 x 70	5.27 134	3.19 81	4.00 102	3.69 94	4.1 1.9

4.5 DIMENSIONS

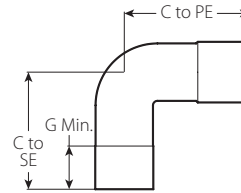
No. P47 Straight Dielectric Adapter (Plain End x Sweat)



Size		Dimensions			Weight
Nominal	Actual Outside Diameter	G Min (Sweat Depth)	E End to End	Approx. (Each)	
inches DN	inches mm	inches mm	inches mm	lb kg	
1/2 DN15	0.840 21.3	0.50 13	4.50 114	0.3 0.1	
3/4 DN20	1.050 26.9	0.75 19	4.75 121	0.5 0.2	
1 DN25	1.315 33.7	0.91 23	4.91 125	0.7 0.3	
1 1/4 DN32	1.660 42.4	0.97 25	4.97 126	0.9 0.4	

4.6 DIMENSIONS

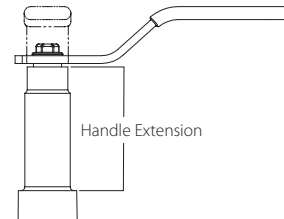
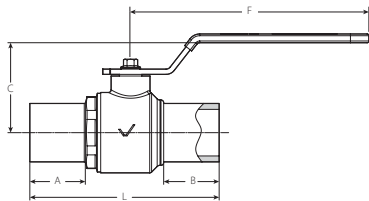
No. P97 90° Elbow Dielectric Adapter (Plain End x Sweat)



Size		Dimensions			Weight
Nominal	Actual Outside Diameter	G Min (Sweat Depth)	C to SE (Center at Sweat End)	C to PE (Center to Plain End)	Approx. (Each)
inches DN	inches mm	inches mm	inches mm	inches mm	lb kg
1/2 DN15	0.840 21.3	0.50 13	1.84 47	2.59 66	0.3 0.1
3/4 DN20	1.050 26.9	0.75 19	2.09 53	2.59 66	0.4 0.2
1 DN25	1.315 33.7	0.91 23	2.54 65	2.72 69	0.7 0.3
1 1/4 DN32	1.660 42.4	0.97 25	2.82 72	2.88 73	1.0 0.5

4.7 DIMENSIONS

Series P89 Full Port Ball Valve

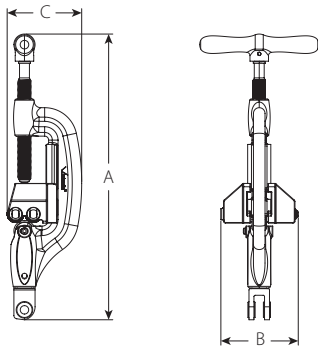


Size		Dimensions					Weight
Nominal	Actual Outside Diameter	A	B	C	L	F	Approximate (Each)
inches DN	inches mm	inches mm	inches mm	inches mm	inches mm	inches mm	lb kg
1/2 DN15	0.840 21.3	1.25 32	1.25 32	2.50 64	4.00 101	4.25 108	0.6 0.3
3/4 DN20	1.050 26.9	1.25 32	1.25 32	2.63 67	4.15 105	4.25 108	0.9 0.4
1 DN25	1.315 33.7	1.25 32	1.25 32	2.75 70	4.45 113	5.30 135	1.4 0.6
1 1/4 DN32	1.660 42.4	1.25 32	1.25 32	2.88 73	4.75 121	5.30 135	2.0 0.9
1 1/2 DN40	1.900 48.3	1.63 41	1.63 41	3.00 76	6.10 155	6.10 155	3.7 1.7
2 DN50	2.375 60.3	1.63 41	1.63 41	3.63 92	6.40 163	6.10 155	5.4 2.5

Valve Inlet Size	Handle Extension	
	2" Handle Extension	4" Handle Extension
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

4.8 DIMENSIONS

PC3110 Cut & Mark Tool



Dimensions			Weight
A	B	C	Approx. (Each)
inches	inches	inches	lb
mm	mm	mm	kg
17.00	4.61	4.44	10.3
432	117	113	4.7

NOTE

- Carriage not included with PC3110 Cut & Mark Tool.

4.9 UPCOMING PRODUCTS

The following QuickVic™ SD Installation-Ready™ System products are currently in development:

- No. P11 45° Elbow
- No. P25 Reducing Tee
- No. P27 Reduce-On-The-Run Tee
- No. P60 Cap
- No. P40 Threaded Adapter (Plain End x Male NPT)
- No. P80 Threaded Adapter (Plain End x Female NPT)

Please contact Victaulic for more information on these products.

5.0 PERFORMANCE

Maximum Working Pressure for QuickVic™ SD Installation-Ready™ System

Size		Maximum Joint Working Pressure psi kPa
Nominal inches DN	Actual Outside Diameter inches mm	
½ DN15	0.840 21.3	300 2068
¾ DN20	1.050 26.9	300 2068
1 DN25	1.315 33.7	300 2068
1 ¼ DN32	1.660 42.4	300 2068
1 ½ DN40	1.900 48.3	300 2068
2 DN50	2.375 60.3	300 2068

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

Frictional Resistance

Size		Equivalent Lengths Based on Sched. 40 Pipe (C=120) ²	
Nominal inches DN	Actual Outside Diameter inches mm	No. P10 90° Elbow	No. P20 Tee
		ft m	ft m
½ DN15	0.840 21.3	1.0 0.3	2.0 0.6
¾ DN20	1.050 26.9	1.5 0.5	2.5 0.8
1 DN25	1.315 33.7	2.0 0.6	3.0 0.9
1 ¼ DN32	1.660 42.4	2.5 0.8	3.5 1.1
1 ½ DN40	1.900 48.3	3.0 0.9	4.0 1.2
2 DN50	2.375 60.3	5.0 1.5	6.0 1.8

² Rounded to the nearest half foot.

5.2 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 DN	Actual Outside Diameter inches mm	C_v K_v
1/2 DN15	0.840 21.3	14.7 12.7
3/4 DN20	1.050 26.9	28.5 24.7
1 DN25	1.315 33.7	56.3 48.7
1 1/4 DN32	1.660 42.4	114.0 98.6
1 1/2 DN40	1.900 48.3	162.0 140.1
2 DN50	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.

7.0 REFERENCE MATERIALS

- [05.01: Victaulic Seal Selection Guide](#)
- [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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