

# Victaulic® Refuse-to-Fuse™ Coupling for Double Grooved HDPE Pipe Style 908



8 – 18" IPS &  
250 – 450 mm ISO



20 – 36" IPS &  
500 – 900 mm ISO

## 1.0 PRODUCT DESCRIPTION

### Available Sizes

- 8 – 36" IPS high-density polyethylene (HDPE)
- 250 – 900 mm ISO high-density polyethylene (HDPE)

### Pipe Material

- HDPE pipe conforming to ASTM D3035 and ASTM F714 or ISO 4427-2 (SDR 7 – 21)

### Maximum Working Pressure

- Meets the pressure rating of the pipe from full vacuum (29" of Hg/760mm Hg) up to full working pressure, in accordance with the specifications and limitations in section 5.0 of this document

### Operating Temperature

- Dependent upon pipe manufacturer rating and gasket selection
- Reference section 3.0 for gasket performance options
- Consult pipe manufacturer for pipe material performance limitations

### Function

- Joins double grooved HDPE pipe

### Pipe Preparation

- Prepare pipe ends in accordance with [Publication 25.16](#): High Density Polyethylene (HDPE) Cut Groove Specifications.

## 2.0 CERTIFICATION/LISTINGS



### NOTES

- See [Publication 10.01](#): Victaulic Fire Protection Approval Reference Guide for details.
- See [Publication 02.06](#): Victaulic Approvals for Potable Water Products – ANSI/NSF 61 and ANSI/NSF 372 if applicable.
- WaterMark™ certification applies to fusion bonded epoxy-coated couplings with Grade "E" EPDM gaskets. Contact Victaulic for further details.

**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 SPECIFICATIONS – MATERIALS

#### Housing:

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

#### Housing Coating: (specify choice)

Standard: Orange enamel.

Optional: Fusion bonded epoxy, galvanized and other coatings are available.

#### Coupling Gasket: (specify choice<sup>1</sup>)

##### 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, 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.

##### 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 “EF” EPDM

EPDM (Green “X” color code). Temperature range -30°F to +230°F/-34°C to +110°C. May be specified for hot and cold water service within the specified temperature range plus a variety of dilute acids, oil-free air and many chemical services. Also meets hot and cold potable water requirements per DVGW, KTW, ÖVGW, SVGW, and French ACS (Crecep), approved for W534, approved for EN681-1 Type WA cold potable, and Type WB hot potable water service. NOT COMPATIBLE FOR USE WITH PETROLEUM SERVICES OR STEAM SERVICES.

<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 Gasket Selection Guide](#) for specific gasket service guidelines and for a listing of services which are not compatible.

#### NOTE

- The maximum temperature ratings shown exceed the temperature ratings for HDPE pipe. Consult individual pipe manufacturers for specific temperature

#### Hardware:

##### 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), with fluoropolymer top coat. Hardened steel washers conforming to ASTM F436 Type 3 (weathering steel).

Optional<sup>2</sup>: Stainless steel oval neck track bolts meeting the mechanical property requirements of ASTM A193 Class 2, Grade B8M. Stainless steel heavy hex nuts meeting the mechanical property requirements of ASTM A194 Grade 8M Heavy Hex, with galling reducing coating. Hardened steel washers conforming to ASTM F436 Type 3 (weathering steel).

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

##### Pipe End Stiffener (Optional)

**Material:** Type 316 stainless steel

**Length:** 7.4"/188mm

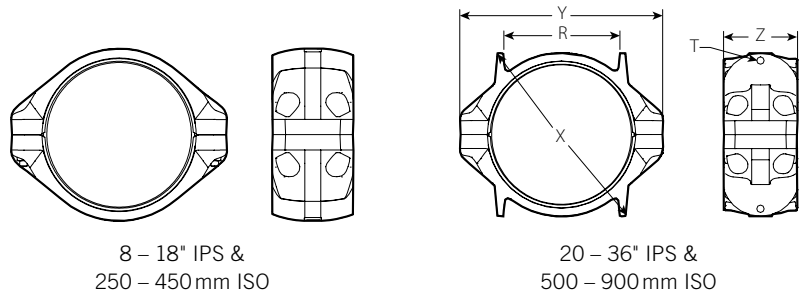
**Outside Diameter:** OD of stiffener based on pipe size and DR/SDR. Contact Victaulic for details.

#### NOTE

- Contact Victaulic for alternate materials or lengths.

## 4.0 DIMENSIONS

### Style 908 – IPS Standard

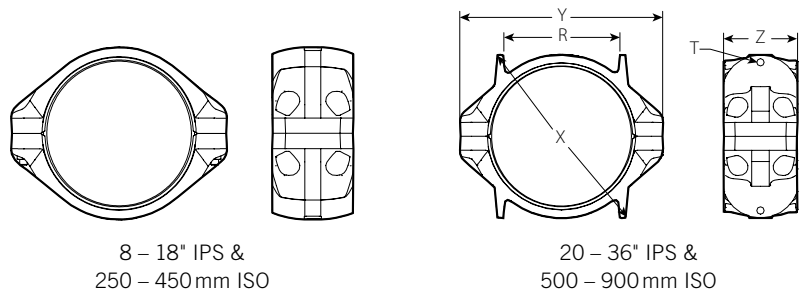


IPS Size		Pipe End Separation <sup>3</sup>	Bolt/Nut		Joint Assembled					Weight
Nominal inches	Actual Outside Diameter inches mm	Allowable inches mm	Qty.	Size inches	R	T (dia.)	X	Y	Z	Approximate (Each) lb kg
					inches mm	inches mm	inches mm	inches mm	inches mm	
8	8.625	0.18 4.6	4	5/8 x 5	–	–	10.13	14.50	6.50	55.0
	219.1				–	–	257	368	165	25.0
10	10.750	0.18 4.6	4	3/4 x 5	–	–	12.63	17.36	7.00	73.0
	273.1				–	–	321	441	178	33.0
12	12.750	0.18 4.6	4	3/4 x 5	–	–	14.50	18.88	7.00	77.0
	323.9				–	–	368	480	178	35.0
14	14.000	0.18 4.6	4	7/8 x 5 1/2	–	–	16.38	21.38	8.38	117.0
	355.6				–	–	416	543	213	53.0
16	16.000	0.20 5.1	4	7/8 x 5 1/2	–	–	18.25	23.38	9.50	158.0
	406.4				–	–	464	594	241	72.0
18	18.000	0.20 5.1	4	7/8 x 5 1/2	–	–	20.13	25.63	9.50	178.0
	457.2				–	–	511	651	241	81.0
20	20.000	0.20 5.1	4	7/8 x 5 1/2	15.8	1.0	28.00	27.88	10.00	247.0
	508.0				400.3	25.4	711	708	254	112.0
22	22.000	0.20 5.1	4	7/8 x 5 1/2	17.3	1.0	30.25	29.50	10.50	277.0
	558.8				438.4	25.4	768	749	267	125.6
24	24.000	0.25 6.4	4	1 x 6	18.0	1.0	32.25	32.25	12.00	366.0
	609.6				457.2	25.4	819	819	305	166.0
28	28.000	0.25 6.4	4	1 x 6	20.0	1.0	36.63	36.50	13.00	455.0
	711.2				508.0	25.4	930	927	330	206.4
30	30.000	0.25 6.4	4	1 1/8 x 7	22.0	1.0	38.63	38.75	13.63	525.0
	762.0				558.8	25.4	981	984	346	238.1
32	32.000	0.25 6.4	4	1 1/8 x 7	24.0	1.0	40.63	40.75	14.00	594.0
	812.8				609.6	25.4	1032	1035	356	269.4
36	36.000	0.25 6.4	4	1 1/4 x 7	22.3	1.0	44.00	44.75	15.25	726.0
	914.4				565.4	25.4	1118	1137	387	329.3

<sup>3</sup> The allowable pipe end separation dimension is for system layout purposes only.

## 4.1 DIMENSIONS

### Style 908 – ISO Standard



ISO Size		Pipe End Separation <sup>3</sup>	Bolt/Nut		Joint Assembled					Weight
Nominal mm	Actual Outside Diameter <sup>5</sup> mm inches	Allowable mm inches	Qty.	Size <sup>4</sup> mm inches	R mm inches	T (dia.) mm inches	X mm inches	Y mm inches	Z mm inches	Approximate (Each) kg lb
250	251.2	4.60	4	M20 x 127	–	–	294	404	173	29.0
	9.888	0.18		¾ x 5.00	–	–	11.63	16.00	6.88	63.0
280	281.3	4.60	4	M20 x 127	–	–	315	457	178	35.0
	11.075	0.18		¾ x 5.00	–	–	12.40	18.00	7.00	77.0
315	316.5	4.60	4	M20 x 127	–	–	357	476	178	36.0
	12.459	0.18		¾ x 5.00	–	–	14.13	18.88	7.00	79.0
355	356.6	4.60	4	M22 x 140	–	–	415	541	211	53.0
	14.039	0.18		7/8 x 5.50	–	–	16.38	21.38	8.38	117.0
400	401.6	5.10	4	M22 x 140	–	–	467	592	241	73.0
	15.819	0.2		7/8 x 5.50	–	–	18.38	23.38	9.50	161.0
450	452	5.10	4	M22 x 140	–	–	511	639	241	74.0
	17.797	0.2		7/8 x 5.50	–	–	20.13	25.25	9.50	164.0
500	502.3	5.10	4	M22 x 140	400.3	25.4	705	706	254	116.0
	19.774	0.2		7/8 x 5.50	15.8	1.0	27.75	27.88	10.00	255.0
560	562.5	5.10	4	M22 x 140	438.4	25.4	768	749	267	119.0
	22.146	0.2		7/8 x 5.50	17.3	1.0	30.25	29.50	10.50	262.0
630	632.8	6.40	4	M24 x 152	444.5	25.4	826	819	305	165.0
	24.915	0.25		1 x 6.00	17.5	1.0	32.50	32.25	12.00	364.0
710	713.2	6.40	4	M24 x 152	508.0	25.4	930	926	330	202.0
	28.079	0.25		1 x 6.00	20.0	1.0	36.63	36.50	13.00	445.0
800	803.6	6.40	4	M27 x 178	609.6	25.4	1021	1015	348	255.0
	31.638	0.25		1 1/8 x 7.00	24.0	1.0	40.25	40.00	13.75	562.0
900	904.1	6.40	4	M30 x 178	565.4	25.4	1118	1124	387	320.0
	35.593	0.25		1 1/4 x 7.00	22.3	1.0	44.00	44.25	15.25	705.0

<sup>3</sup> The allowable pipe end separation dimension is for system layout purposes only.

<sup>4</sup> Metric bolt/nuts standard, with the exception of North American, South America and Australian shipments, where imperial sizes are standard.

<sup>5</sup> Actual Outside Diameter shown is the average of the minimum OD and the maximum of the given Nominal Pipe Diameter as designated in ISO 4427-2.

## 5.0 PERFORMANCE

### Style 908 – IPS Standard

PE4710	PE4710 Pipe Pressure Rating <sup>4</sup>					
	psi					
	DR7 333	DR9 250	DR11 200	DR13.5 160	DR17 125	DR21 100
Nominal Size inches	Maximum Joint Working Pressure					
	psi kPa					
8 – 10	333 2295	250 1725	200 1380	160 1100	125 860	100 690
12 – 24	250* 1725*	250 1725	200 1380	160 1100	125 860	100 690
28	200* 1380*	200* 1380*	160* 1100*	160 1100	125 860	100 690
30	– –	200* 1380*	160* 1100*	138* 952*	125 860	100 690
32	– –	160* 1100*	160* 1100*	138* 952*	125 860	100 690
36	– –	160* 1100*	160* 1100*	138* 952*	125 860	100 690

<sup>4</sup> HDPE pipe conforming to ASTM D3035 and F714 at 73°F/23°C. Reference plastic pipe manufacture data for derating factors at other temperatures.

\* Maximum joint working pressure may be increased to full pipe pressure rating with the use of pipe end stiffeners. Contact Victaulic for details.

#### NOTE

- Victaulic Coupling gaskets have been demonstrated to seal under full (29" of Hg/760mm Hg) vacuum requirements. Consult specific HDPE pipe manufacturer for their recommended limitations regarding maximum vacuum as well as the effects of temperature and pipe ovality.

## 5.1 PERFORMANCE

### Style 908 – ISO Standard

PE100	PE100 Pipe Pressure Rating <sup>5</sup>					
	psi					
	SDR7.4 PN25	SDR9 PN20	SDR11 PN16	SDR13.6 PN12.5	SDR17 PN10	SDR21 PN8
Nominal Size mm	Maximum Joint Working Pressure <sup>5</sup>					
	Bar kPa psi					
250 – 280	25 2500 363	20 2000 290	16 1600 232	12.5 1250 182	10 1000 145	8 800 116
315 – 630	20* 2000* 290*	20 2000 290	16 1600 232	12.5 1250 182	10 1000 145	8 800 116
710	– – –	16* 1600* 232*	12.5* 1250* 182*	12.5 1250 182	10 1000 145	8 800 116
800	– – –	12.5* 1250* 182*	10* 1000* 145*	10* 1000* 145*	10 1000 145	8 800 116
900	– – –	10* 1000* 145*	10* 1000* 145*	10* 1000* 145*	10 1000 145	8 800 116

<sup>5</sup> HDPE pipe conforming to ISO 4427-2 at 68°F/20°C. Reference plastic pipe manufacture data for derating factors at other temperatures.

\* Maximum joint working pressure may be increased to full pipe pressure rating with the use of pipe end stiffeners. Contact Victaulic for details.

#### NOTE

- Victaulic Coupling gaskets have been demonstrated to seal under full (29" of Hg/760mm Hg) vacuum requirements. Consult specific HDPE pipe manufacturer for their recommended limitations regarding maximum vacuum as well as the effects of temperature and pipe ovality.

## 5.2 PERFORMANCE

### Style 908 – IPS Standard

Allowable Tensile Load (ATL): joints made with Style 908 couplings can sustain tensile loads noted below.

PE4710  Nominal Size inches	PE4710 Pipe Allowable Tensile Load <sup>6</sup>					
	DR7	DR9	DR11	DR13.5	DR17	DR21
	lb N	lb N	lb N	lb N	lb N	lb N
8	31,200	25,200	21,100	17,500	14,100	11,500
	138,784	112,095	93,857	77,844	62,720	51,155
10	48,500	39,100	32,800	27,200	21,900	17,900
	215,738	173,926	145,901	120,991	97,416	79,623
12	68,300	55,100	46,100	38,300	30,900	25,200
	303,814	245,096	205,062	170,366	137,449	112,095
14	72,000	64,000	55,600	46,100	37,200	30,400
	320,270	284,686	247,320	205,062	165,473	135,226
16	100,100	86,700	72,600	60,200	48,600	39,800
	445,267	385,659	322,939	267,782	216,183	177,039
18	132,000	109,800	91,900	76,200	61,500	50,400
	587,165	488,412	408,790	338,953	273,564	224,190
20	165,200	135,500	113,400	94,100	76,000	62,200
	734,846	602,731	504,426	418,576	338,063	276,679
22	201,800	164,000	137,200	113,900	91,900	75,300
	897,651	729,505	610,293	506,650	408,790	334,951
24	242,000	195,200	163,300	135,500	109,400	89,600
	1,076,470	868,289	726,391	602,731	486,633	398,561
28	–	235,000	210,700	180,079	148,900	121,900
	–	1,045,332	937,240	801,031	662,340	542,238
30	–	254,000	234,400	204,929	170,900	140,000
	–	1,129,848	1,042,663	911,567	760,201	622,751
32	–	–	258,000	231,269	194,500	159,300
	–	–	1,147,641	1,028,734	865,179	708,602
36	–	–	305,400	280,700	246,100	197,100
	–	–	1,358,486	1,248,615	1,094,707	876,745

<sup>6</sup> Allowable tensile loads shown are for straight pulling for a maximum period of one half hour at ambient temperature (68°F/20°C).

### 5.3 PERFORMANCE

#### Style 908 – ISO Standard

Allowable Tensile Load (ATL): joints made with Style 908 couplings can sustain tensile loads noted below.

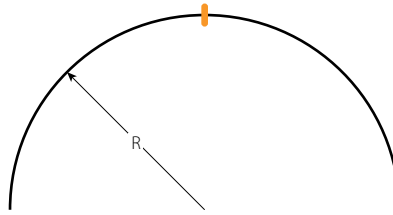
PE100  Nominal Size mm	PE100 Pipe Allowable Tensile Load <sup>7</sup>					
	SDR7.4	SDR9	SDR11	SDR13.6	SDR17	SDR21
	N lb	N lb	N lb	N lb	N lb	N lb
250	173,925 39,100	146,791 33,000	122,770 27,600	101,419 22,800	82,292 18,500	67,613 15,200
280	218,408 49,100	184,601 41,500	154,576 34,750	127,219 28,600	103,421 23,250	84,516 19,000
315	276,679 62,200	233,531 52,500	195,721 44,000	161,025 36,200	130,777 29,400	107,202 24,100
355	351,410 79,000	296,695 66,700	248,565 55,880	204,617 46,000	166,363 37,400	136,116 30,600
400	446,157 100,300	376,763 84,700	315,377 70,900	259,775 58,400	211,290 47,500	173,036 38,900
450	564,924 127,000	477,292 107,300	399,004 89,700	329,167 74,000	267,337 60,100	218,853 49,200
500	– –	588,942 132,400	492,861 110,800	406,121 91,300	330,056 74,200	270,452 60,800
560	– –	738,846 166,100	618,300 139,000	509,764 114,600	414,127 93,100	339,399 76,300
630	– –	907,437 204,000	782,887 176,000	644,992 145,000	524,445 117,900	429,253 96,500
710	– –	1,076,469 242,000	951,919 214,000	796,231 179,000	665,899 149,700	545,352 122,600
800	– –	1,249,950 281,000	1,129,848 254,000	987,505 222,000	845,607 190,100	692,588 155,700
900	– –	– –	1,338,914 301,000	1,223,261 275,000	1,070,242 240,600	876,745 197,100

<sup>7</sup> Allowable tensile loads shown are for straight pulling for a maximum period of one half hour at ambient temperature (68°F/20°C).

## 5.4 PERFORMANCE

### Style 908 – IPS Standard

Bend Radius: joints made with Style 908 couplings can sustain a bending radius as recommended by the Plastic Pipe Institute (PPI) in the Handbook of PE Pipe (2nd ed, Chapter 7, Table 4)



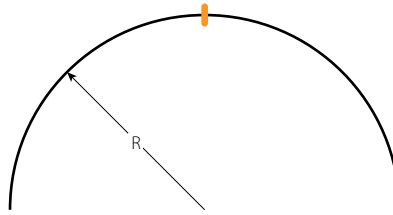
PE4710	PE4710 Pipe Minimum Recommended Bend Radius					
	DR7	DR9	DR11	DR13.5	DR17	DR21
Nominal Size inches	inches mm	inches mm	inches mm	inches mm	inches mm	inches mm
8	173 4382	173 4382	216 5477	216 5477	233 5915	233 5915
10	215 5461	215 5461	269 6826	269 6826	290 7372	290 7372
12	255 6477	255 6477	319 8096	319 8096	344 8744	344 8744
14	280 7112	280 7112	350 8890	350 8890	378 9601	378 9601
16	320 8128	320 8128	400 10160	400 10160	432 10,973	432 10,973
18	360 9144	360 9144	450 11,430	450 11,430	486 12,344	486 12,344
20	400 10,160	400 10,160	500 12,700	500 12,700	540 13,716	540 13,716
22	440 11,176	440 11,176	550 13,970	550 13,970	594 15,088	594 15,088
24	480 12,192	480 12,192	600 15,240	600 15,240	648 16,459	648 16,459
28	– –	560 14,224	700 17,780	700 17,780	756 19,202	756 19,202
30	– –	600 15,240	750 19,050	750 19,050	810 20,574	810 20,574
32	– –	640 16,256	800 20,320	800 20,320	864 21,946	864 21,946
36	– –	720 18,288	900 22,860	900 22,860	972 24,689	972 24,689



## 5.5 PERFORMANCE







### Style 908 – ISO Standard

Bend Radius: joints made with Style 908 couplings can sustain a bending radius as recommended by the Plastic Pipe Institute (PPI) in the Handbook of PE Pipe (2nd ed, Chapter 7, Table 4)



PE100	PE100 Pipe Minimum Recommended Bend Radius					
	SDR7.4	SDR9	SDR11	SDR13.6	SDR17	SDR21
Nominal Size mm	mm inches	mm inches	mm inches	mm inches	mm inches	mm inches
250	5000 197	5000 197	6250 246	6250 246	6750 266	6750 266
280	5600 220	5600 220	7000 276	7000 276	7560 298	7560 298
315	6300 248	6300 248	7875 310	7875 310	8505 335	8505 335
355	7100 280	7100 280	8875 349	8875 349	9585 377	9585 377
400	8000 315	8000 315	10,000 394	10,000 394	10,800 425	10,800 425
450	9000 354	9000 354	11,250 443	11,250 443	12,150 478	12,150 478
500	10,000 394	10,000 394	12,500 492	12,500 492	13,500 531	13,500 531
560	11,200 441	11,200 441	14,000 551	14,000 551	15,120 595	15,120 595
630	12,600 496	12,600 496	15,750 620	15,750 620	17,010 670	17,010 670
710	14,200 559	14,200 559	17,750 699	17,750 699	19,170 755	19,170 755
800	– –	16,000 630	20,000 787	20,000 787	21,600 850	21,600 850
900	– –	18,000 709	22,500 886	22,500 886	24,300 957	24,300 957

## 6.0 NOTIFICATIONS

 <b>WARNING</b>				
				
<ul style="list-style-type: none"> <li>• Read and understand all instructions before attempting to install, remove, adjust, or maintain any Victaulic piping products.</li> <li>• Depressurize and drain the piping system before attempting to install, remove, adjust, or maintain any Victaulic piping products.</li> <li>• Wear safety glasses, hardhat, and foot protection.</li> </ul> <p>Failure to follow these instructions may cause joint failure, resulting in death or serious personal injury and property damage.</p>				

## 7.0 REFERENCE MATERIALS

- [I-900: HDPE Products Installation and Assembly Manual](#)
- [I-908: Style 908 Coupling Installation Manual](#)
- [05.01: Gasket Selection Guide](#)
- [11.07 Style 926 Mechanical-T Spigot Outlet](#)
- [19.07: Style 905 Coupling for HDPE Pipe](#)
- [19.10: Style 907 Transition Coupling Carbon Steel to HDPE Pipe](#)
- [19.11: HDPE Plain End Fittings](#)
- [19.12: Style 904 Flange Adapter for HDPE-to-Flanged Pipe Submittal](#)
- [24.06: Refuse-to-Fuse™ Cut Grooving Tools for HDPE](#)
- [25.16: High Density Polyethylene \(HDPE\) Cut Groove Specifications](#)
- [29.01: Terms and Conditions/Warranty](#)

### 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](http://www.victaulic.com).

### Warranty

Refer to the Warranty section of the current Price List or contact Victaulic for details.

### Trademarks

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