

Victaulic® PGS-300 Grooved End Fittings for CPVC/PVC Pipe



PGS™-300

1.0 PRODUCT DESCRIPTION

Available Sizes

- 2 – 12"/DN50 – DN300

Operating Temperature

- +32°F to +200°F/0°C to +93°C

Maximum Working Pressure

- See section 5.0 for pressure ratings and temperature reduction factors.

Function

- Connects pipe sections, provides change in direction, and adapts sizes or components.
- All fittings are supplied with grooved ends in accordance with Victaulic PGS-300 Cut Grooving Specifications for direct use on chlorinated polyvinyl chloride (CPVC) pipe joined with Victaulic couplings (see section 7.0 for Reference Materials).

NOTES

- Contact Victaulic for additional fitting configurations.
- Contact Victaulic for use on Schedule 40 CPVC pipe or Schedules 40 and 80 PVC pipe.

2.0 CERTIFICATION/LISTINGS



NSF pw

Certified to NSF International Special Engineered Specification NSF SE 17304 (CPVC Fittings for Use with Gasketed Grooved Couplings)

NOTES

- Fittings are constructed from NSF-certified materials.
- Certified to ANSI/NSF 61 at a commercial hot rating of 180°F/82°C. See [publication 02.06](#): Victaulic Potable Water Approvals ANSI/NSF for potable water approvals, if applicable.

3.0 SPECIFICATIONS - MATERIAL

Fittings & Nipples: Chlorinated polyvinyl chloride (CPVC) conforming to a minimum cell class of 23447 according to ASTM D1784.

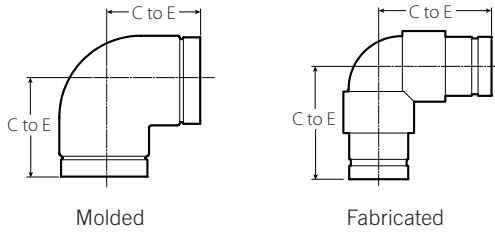
ALWAYS REFER TO ANY NOTIFICATIONS AT THE END OF THIS DOCUMENT REGARDING PRODUCT INSTALLATION, MAINTENANCE OR SUPPORT.

System No.		Location	
Submitted By		Date	

Spec Section		Paragraph	
Approved		Date	

4.0 DIMENSIONS

No. 350 90° Elbow

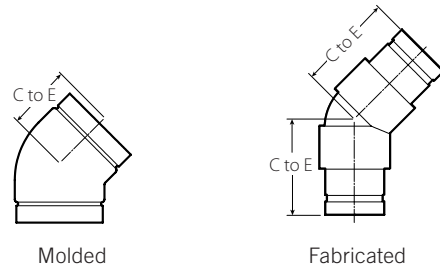


Size		Dimensions	Weight
Nominal inches DN	Actual Outside Diameter inches mm	C to E inches mm	Approximate (Each) lb kg
2	2.375	5.00 (f)	1.3
DN50	60.3	127	0.6
2½	2.875	3.75	0.8
	73.0	95	0.4
3	3.500	4.25	1.4
DN80	88.9	108	0.6
4	4.500	5.00	2.1
DN100	114.3	127	1.0
6	6.625	6.50	6.0
DN150	168.3	165	2.7
8	8.625	7.75	10.8
DN200	219.1	197	4.9
10	10.750	13.50 (f)	46.1
DN250	273.0	343	20.9
12	12.750	15.50 (f)	75.8
DN300	323.9	394	34.4

(f) = Fabricated fitting

4.1 DIMENSIONS

No. 351 45° Elbow

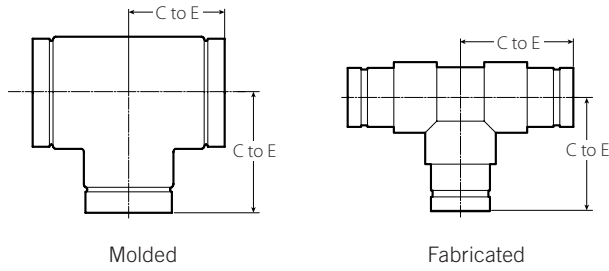


Size		Dimensions	Weight
Nominal inches DN	Actual Outside Diameter inches mm	C to E inches mm	Approximate (Each) lb kg
2	2.375	4.50 (f)	1.2
DN50	60.3	114	0.5
2½	2.875	2.25	0.6
	73.0	57	0.3
3	3.500	2.50	0.8
DN80	88.9	64	0.4
4	4.500	3.00	1.3
DN100	114.3	76	0.6
6	6.625	3.50	3.4
DN150	168.3	89	1.5
8	8.625	4.25	6.2
DN200	219.1	108	2.8
10	10.750	10.20 (f)	39.6
DN250	273.0	259	18.0
12	12.750	11.62 (f)	50.7
DN300	323.9	295	23.0

(f) = Fabricated fitting

4.2 DIMENSIONS

No. 352 Tee

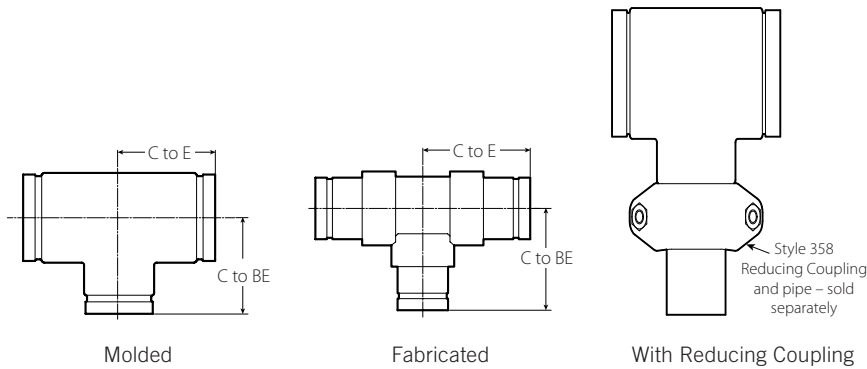


Size		Dimensions	Weight
Nominal inches DN	Actual Outside Diameter inches mm	C to E inches mm	Approximate (Each) lb kg
2 DN50	2.375 60.3	5.00 (f) 127	1.9 0.9
2½	2.875 73.0	3.75 95	1.3 0.6
3 DN80	3.500 88.9	4.25 108	1.9 0.9
4 DN100	4.500 114.3	5.00 127	2.8 1.3
6 DN150	6.625 168.3	6.50 165	7.8 3.5
8 DN200	8.625 219.1	7.75 197	13.8 6.3
10 DN250	10.750 273.0	13.50 (f) 343	68.0 30.8
12 DN300	12.750 323.9	15.50 (f) 394	89.4 40.6

(f) = Fabricated fitting

4.3 DIMENSIONS

No. 353 Reducing Tee (Groove x Groove x Groove)



Size			Actual Outside Diameter			Dimensions		Weight			
Nominal inches DN			inches	mm		C to E inches mm	C to BE (Branch) inches mm	Approximate (Each) lb kg			
2 1/2 x 2 1/2 x 2		DN50	2.875	2.875	2.375	Use 2 1/2" Style 352 Tee with 2 1/2" x 2" Style 358 Reducing Coupling					
3 x 3 x 2		DN80	3.500	3.500	2.375	Use 3" Style 352 Tee with 3" x 2" Style 358 Reducing Coupling					
						2 1/2	2.875	73.0	Use 3" Style 352 Tee with 3" x 2 1/2" Style 358 Reducing Coupling		
4 x 4 x 2		DN100	4.500	4.500	2.375	Use 4" Style 352 Tee with 4" x 2" Style 358 Reducing Coupling					
						2 1/2	2.875	73.0	Use 4" Style 352 Tee with 4" x 2 1/2" Style 358 Reducing Coupling		
						3	3.500	88.9	Use 4" Style 352 Tee with 4" x 3" Style 358 Reducing Coupling		
6 x 6 x 2		DN150	6.625	6.625	2.375	Use 6" x 3" Style 353 Reducing Tee with 3" x 2" Style 358 Reducing Coupling					
						2 1/2	2.875	73.0	Use 6" x 3" Style 353 Reducing Tee with 3" x 2 1/2" Style 358 Reducing Coupling		
						3	3.500	88.9	6.50	6.50	7.1
						4	4.500	114.3	165	165	3.2
8 x 8 x 4		DN200	8.625	8.625	4.500	Use 6" Style 352 Tee with 6" x 4" Style 358 Reducing Coupling					
						6	7.75	7.75	12.6		
						DN150	114.3	197	197	5.7	
10 x 10 x 4		DN250	10.750	10.750	4.500	Use 8" Style 352 Tee with 8" x 6" Style 358 Reducing Coupling					
						6	6.625	168.3	Use 10" x 6" Style 353 Reducing Tee with 6" x 4" Style 358 Reducing Coupling		
						DN150	114.3	14.75 (f)	15.00	54.5	
						8	8.625	375	381	24.7	
12 x 12 x 6		DN300	12.750	12.750	6.625	Use 10" Style 352 Tee with 10" x 8" Style 358 Reducing Coupling					
						8	8.625	168.3	Use 12" x 8" Style 353 Reducing Tee with 8" x 6" Style 358 Reducing Coupling		
						DN200	219.1	16.76 (f)	17.25	72.4	
						10	10.750	429	438	32.8	
DN250	273.0	17.76 (f)	18.56	104.5							
					273.0	454	473	47.4			

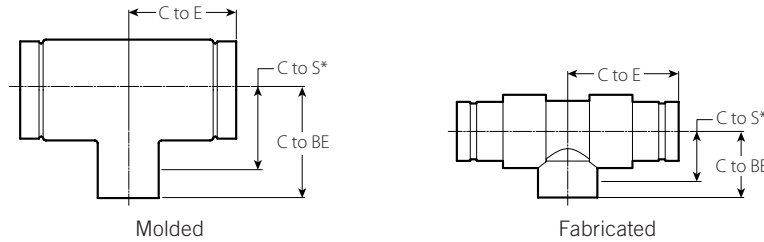
(f) = Fabricated fitting

NOTES

- Style 358 Reducing Couplings can be used to create additional fitting configurations not shown here. Consideration should be given when conducting system designs. Contact Victaulic for more information.
- Contact Victaulic for additional sizes.

4.4 DIMENSIONS

No. 354 Reducing Tee (Groove x Groove x Socket)



Size			Actual Outside Diameter			Dimensions			Weight
Nominal inches DN			inches	mm	inches	mm	C to E (Socket)	C to BE (Branch)	Approximate (Each)
							inches	inches	lb
							mm	mm	kg
2 x 2 x 1 DN50 x DN50 x DN25		1.315	2.375	60.3	33.7	4.80 (f)	122	2.44	1.7
		1.660	2.375	60.3	33.7	4.80 (f)	122	2.99	1.9
		1.900	2.375	60.3	33.7	4.80 (f)	122	2.69	1.7
		2.375	2.375	60.3	60.3	4.80 (f)	122	2.82	1.5
		2.375	2.375	60.3	60.3	4.80 (f)	122	2.82	1.5
2½ x 2½ x 1 DN50 x DN50 x DN25		1.315	2.875	73.0	33.7	3.75	95	4.06	1.7
		1.660	2.875	73.0	33.7	3.75	95	4.07	1.6
		1.900	2.875	73.0	33.7	3.75	95	4.05	1.6
		2.375	2.875	73.0	73.0	3.75	95	3.75	1.4
		2.375	2.875	73.0	73.0	3.75	95	3.75	1.4
3 x 3 x 1 DN80 x DN80 x DN25		1.315	3.500	88.9	33.7	4.25	108	4.56	2.3
		1.660	3.500	88.9	33.7	4.25	108	4.57	2.2
		1.900	3.500	88.9	33.7	4.25	108	4.55	2.2
		2.375	3.500	88.9	88.9	4.25	108	4.25	2.0
		2.375	3.500	88.9	88.9	4.25	108	4.25	2.0
4 x 4 x 1 DN100 x DN100 x DN25		1.315	4.500	114.3	33.7	5.00	127	5.31	3.5
		1.660	4.500	114.3	33.7	5.00	127	5.32	3.5
		1.900	4.500	114.3	33.7	5.00	127	5.30	3.5
		2.375	4.500	114.3	114.3	5.00	127	5.00	3.3
		2.375	4.500	114.3	114.3	5.00	127	5.00	3.3
6 x 6 x 1 DN150 x DN150 x DN25		1.315	6.625	168.3	33.7	6.50	165	6.81	8.1
		1.660	6.625	168.3	33.7	6.50	165	6.82	8.0
		1.900	6.625	168.3	33.7	6.50	165	6.80	8.0
		2.375	6.625	168.3	168.3	6.50	165	6.50	7.8
		2.375	6.625	168.3	168.3	6.50	165	6.50	7.8

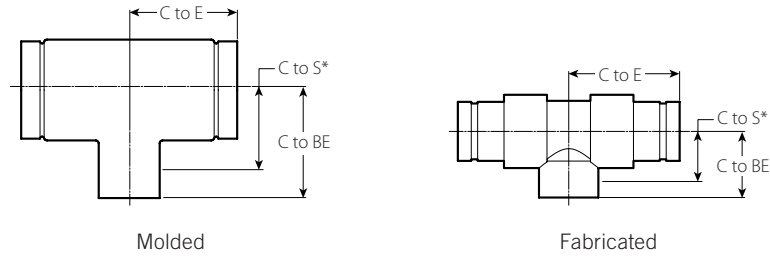
(f) = Fabricated fitting
(b) = Bushing

NOTES

- *C to S (Socket) is the distance from the center to the branch end minus the socket depth.
- All socket sizes shown are supplied to IPS dimensions
- Style 358 Reducing Couplings can be used to create additional fitting configurations not shown here. Consideration should be given when conducting system designs. Contact Victaulic for more information.
- Contact Victaulic for additional sizes.

4.5 DIMENSIONS

No. 354 Reducing Tee (Groove x Groove x Socket)



Size			Dimensions			Weight
Nominal inches DN	Actual Outside Diameter inches mm		C to E inches mm	C to S* (Socket) inches mm	C to BE (Branch) inches mm	Approximate (Each) lb kg
8 x 8 x 1 DN200 DN200 DN25	8.625 x 8.625 x 1.315 219.1 219.1 33.7	1.660	7.75	6.91 (b)	8.06	14.0
		42.4	197	176	205	6.4
		1.900	7.75	6.81 (b)	8.07	13.9
		48.3	197	173	205	6.3
		2.375	7.75	6.65 (b)	8.05	13.9
10 x 10 x 2 DN250 DN250 DN50	10.750 x 10.750 x 2.375 273.0 273.0 60.3	60.3	27.12 (f)	9.50	11.50	41.2
		60.3	689	241	292	18.7
12 x 12 x 2 DN300 DN300 DN50	12.750 x 12.750 x 2.375 323.9 323.9 60.3	60.3	29.26 (f)	10.75	12.75	55.0
			743	273	324	25.0

(f) = Fabricated fitting
(b) = Bushing

NOTES

- *C to S (Socket) is the distance from the center to the branch end minus the socket depth.
- All socket sizes shown are supplied to IPS dimensions
- Style 358 Reducing Couplings can be used to create additional fitting configurations not shown here. Consideration should be given when conducting system designs. Contact Victaulic for more information.
- Contact Victaulic for additional sizes.

4.6 DIMENSIONS

No. 359F Flange Adapter (Groove x Flange)



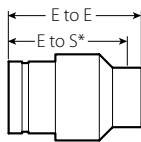
Size		Dimensions						Weight
Nominal inches DN	Actual Outside Diameter inches mm	End to End inches mm	Flange Thickness inches mm	Bolt Circle Diameter inches mm	Flange Diameter inches mm	Number of Holes	Bolt Diameter inches mm	Approximate (Each) lb kg
2 DN50	2.375 60.3	4.00 102	0.88 22	4.75 121	6.00 152	4	5/8 M16	1.0 0.5
2½	2.875 73.0	4.25 108	1.00 25	5.50 140	7.00 178	4	5/8 M16	1.5 0.7
3 DN80	3.500 88.9	4.50 114	1.13 29	6.00 152	7.50 191	4	5/8 M16	1.8 0.8
4 DN100	4.500 114.3	5.13 130	1.13 29	7.50 191	9.00 229	8	5/8 M16	3.0 1.4
6 DN150	6.625 168.3	6.00 152	1.38 35	9.50 241	11.00 279	8	3/4 M20	4.8 2.2
8 DN200	8.625 219.1	7.00 178	1.75 44	11.75 298	13.50 343	8	3/4 M20	7.0 3.2
10 DN250	10.750 273.0	8.38 213	1.75 44	14.25 362	16.00 406	12	7/8 M22	12.0 5.4
12 DN300	12.750 323.9	9.25 235	1.75 44	17.00 432	19.00 483	12	7/8 M22	18.5 8.4

NOTE

- The maximum working pressure for the No. 359F Flange Adapter at +73°F/+23°C is 150 psi/1034 kPa.

4.7 DIMENSIONS

No. 361 Reducing Adapter (Groove x Socket)



Fabricated

Size		Dimensions		Weight
Nominal (Groove x Socket) inches DN	Actual Outside Diameter inches mm	E to E inches mm	E to S* (End to Socket) inches mm	Approximate (Each) lb kg
2½ x 2 DN50	2.875 x 2.375 73.0 x 60.3	6.37 (f) 162	4.87 124	0.7 0.3
3 x 2 DN80 DN50	3.500 x 2.375 88.9 x 60.3	5.87 (f) 149	4.40 112	1.0 0.5

(f) = Fabricated fitting

NOTES

- *E to S (Socket) is the distance from end to end minus the socket depth.
- All socket sizes shown are supplied to IPS dimensions
- Contact Victaulic for additional sizes.

5.0 PERFORMANCE

Maximum Working Pressure For Victaulic Schedule 80 CPVC Fittings At +73°F/+23°C

Size		Maximum Working Pressure
Nominal inches DN	Actual Outside Diameter inches mm	
2 DN50	2.375 60.3	300 2068
2½	2.875 73.0	300 2068
3 DN80	3.500 88.9	300 2068
4 DN100	4.500 114.3	300 2068
6 DN150	6.625 168.3	280 1931
8 DN200	8.625 219.1	250 1724
10 DN250	10.750 273.0	175 1207
12 DN300	12.750 323.9	175 1207

NOTES

- The pressure rating of reducing fittings is based on the lowest diameter rating.
- The maximum working pressure for the No. 359F Flange Adapter at +73°F/+23°C is 150 psi/1034 kPa.

Maximum Working Pressure For Victaulic Schedule 80 CPVC Fittings At Elevated Temperature

For the maximum working pressure rating of the joint at elevated temperature, multiply the working pressure rating of the coupling at +73°F/+23°C by the appropriate derating factor in the chart below.

Pressure capacity derating factors for operating temperatures above 73°F/23°C		
At 80°F/27°C	Multiply By	1.00
At 90°F/32°C	Multiply By	0.91
At 100°F/37°C	Multiply By	0.82
At 110°F/43°C	Multiply By	0.72
At 120°F/49°C	Multiply By	0.65
At 130°F/54°C	Multiply By	0.57
At 140°F/60°C	Multiply By	0.50
At 150°F/66°C	Multiply By	0.42
At 160°F/71°C	Multiply By	0.40
At 170°F/77°C	Multiply By	0.29
At 180°F/82°C	Multiply By	0.25
At 200°F/93°C	Multiply By	0.20

NOTE

- Derating factors are typical per the pipe manufacturers recommendation in accordance with ASTM D-2837 and PPI TR-3.

6.0 NOTIFICATIONS

WARNING

Handling of Victaulic CPVC Fittings

- **DO NOT impact or drop Victaulic CPVC fittings. Avoid damage, such as abrasions, scratches, gouging, and cracks, particularly across the fitting's gasket sealing surfaces.**
- **Prior to installation, it is the installer's responsibility to inspect Victaulic CPVC fittings for any abrasions, scratches, gouging, and cracks.**
- **DO NOT attempt to install Victaulic CPVC fittings that show signs of damage. Damaged fittings shall be discarded immediately.**

Storage of Victaulic CPVC Fittings

- **To prevent distortion of Victaulic CPVC fittings, DO NOT store next to heaters, boilers, steam lines, engines, etc.**
- **DO NOT subject Victaulic CPVC fittings to temperatures above the maximum operating temperature of 200°F/93°C.**
- **When storing Victaulic CPVC fittings outdoors, protect from direct sunlight exposure by covering with a non-transparent material.**

Exposed Installations

- **Victaulic CPVC fittings that are installed in an area exposed to direct sunlight may be painted with a light-colored acrylic or latex paint that is chemically-compatible with CPVC material. Always confirm material compatibility by contacting the paint manufacturer.**
- **DO NOT use oil-based paints on Victaulic CPVC fittings.**

Failure to follow these instructions could cause system failure, resulting in death or serious personal injury and property damage.

7.0 REFERENCE MATERIALS

- [24.09: Victaulic Cut Grooving Tool for CPVC/PVC Pipe: Model CG1100](#)
- [25.18: Victaulic PGS-300 Cut Groove Specifications](#)
- [33.06: Victaulic Transition Coupling for CPVC Style 356](#)
- [33.07: Victaulic Rigid Coupling for CPVC Style 357](#)
- [33.08: Victaulic Reducing Coupling for CPVC Style 358](#)
- [I-350: Victaulic Field Installation Handbook: CPVC Piping Products](#)

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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