

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/polyvinyl chloride (CPVC/PVC) pipe joined with Victaulic couplings (see section 7.0 for Reference Materials).

NOTE

- Contact Victaulic for additional fitting configurations.

2.0 CERTIFICATION/LISTINGS



Molded fittings are certified to NSF International Special Engineered Specification NSF SE 17304 (CPVC Fittings for Use with Gasketed Grooved Couplings).

Fabricated fittings are constructed from NSF-certified materials.

Molded & fabricated fittings are UPC Listed to IAPMO PS 53 Industry Standard for Grooved Mechanical Pipe Couplings and Grooved Fittings (not including the No. 359F Flange Adapter).

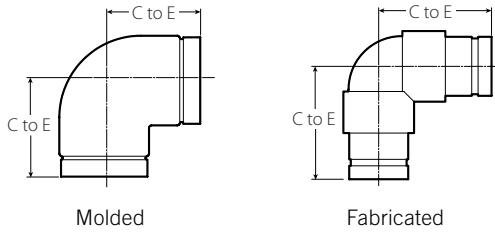
3.0 SPECIFICATIONS – MATERIAL

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.

4.0 DIMENSIONS

No. 350 90° Elbow

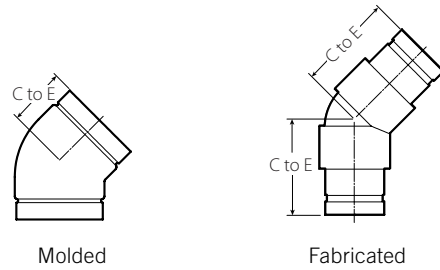


Size		Dimensions	Weight
Nominal inches DN	Actual Outside Diameter inches mm	C to E inches mm	Approximate (Each) lb kg
2	2.375	5.00 (f)	1.5
DN50	60.3	127	0.7
2½	2.875	3.75	1.7
	73.0	95	0.8
3	3.500	4.25	2.5
DN80	88.9	108	1.1
4	4.500	5.00	4.6
DN100	114.3	127	2.1
6	6.625	6.50	8.5
DN150	168.3	165	3.9
8	8.625	7.75	16.0
DN200	219.1	197	7.3
10	10.750	13.50 (f)	49.0
DN250	273.0	343	22.0
12	12.750	15.50 (f)	74.0
DN300	323.9	394	33.5

(f) = Fabricated fitting

4.1 DIMENSIONS

No. 351 45° Elbow

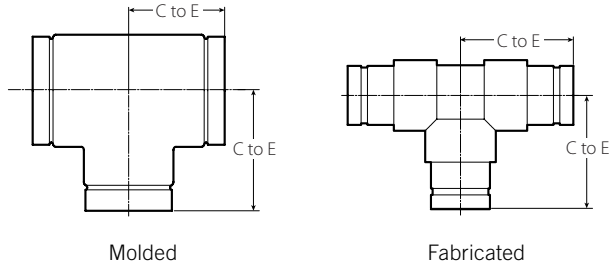


Size		Dimensions	Weight
Nominal inches DN	Actual Outside Diameter inches mm	C to E inches mm	Approximate (Each) lb kg
2	2.375	4.38 (f)	1.3
DN50	60.3	111	0.6
2½	2.875	2.25	1.0
	73.0	57	0.5
3	3.500	2.50	1.5
DN80	88.9	64	0.7
4	4.500	3.00	2.7
DN100	114.3	76	1.2
6	6.625	3.50	3.9
DN150	168.3	89	1.8
8	8.625	4.25	7.1
DN200	219.1	108	3.2
10	10.750	10.20 (f)	43.0
DN250	273.0	259	19.5
12	12.750	11.62 (f)	68.0
DN300	323.9	295	31.0

(f) = Fabricated fitting

4.2 DIMENSIONS

No. 352 Tee

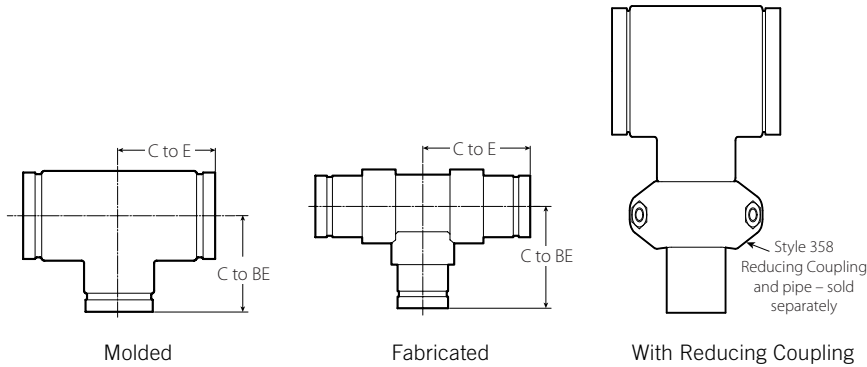


Size		Dimensions	Weight
Nominal inches DN	Actual Outside Diameter inches mm	C to E inches mm	Approximate (Each) lb kg
2 DN50	2.375 60.3	5.00 (f) 127	2.1 1.0
2½	2.875 73.0	3.75 95	2.2 1.0
3 DN80	3.500 88.9	4.25 108	3.0 1.4
4 DN100	4.500 114.3	5.00 127	5.5 2.5
6 DN150	6.625 168.3	6.50 165	13.0 5.9
8 DN200	8.625 219.1	7.75 197	22.0 10.0
10 DN250	10.750 273.0	13.50 (f) 343	69.0 31.5
12 DN300	12.750 323.9	15.50 (f) 394	110.0 50.0

(f) = Fabricated fitting

4.3 DIMENSIONS

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



Size			Dimensions				Weight		Notes
Nominal inches DN		Actual Outside Diameter 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 x 2.875 x 2.375 73.0 x 73.0 x 60.3	±	±	***		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 x 3.500 x 2.375 88.9 x 88.9 x 60.3	±	±	***		Use 3" Style 352 Tee with 3" x 2" Style 358 Reducing Coupling		
			±	±	***	Use 3" Style 352 Tee with 3" x 2 1/2" Style 358 Reducing Coupling			
4 x 4 x 2	DN100	4.500 x 4.500 x 2.375 114.3 x 114.3 x 60.3	±	±	***		Use 4" Style 352 Tee with 4" x 2" Style 358 Reducing Coupling		
			±	±	***	Use 4" Style 352 Tee with 4" x 2 1/2" Style 358 Reducing Coupling			
			±	±	***	Use 4" Style 352 Tee with 4" x 3" Style 358 Reducing Coupling			
6 x 6 x 2	DN150	6.625 x 6.625 x 2.375 168.3 x 168.3 x 60.3	±	±	***		Use 6" x 3" Style 353 Reducing Tee with 3" x 2" Style 358 Reducing Coupling		
			±	±	***	Use 6" x 3" Style 353 Reducing Tee with 3" x 2 1/2" Style 358 Reducing Coupling			
			6.50	6.50	8.0	-			
			165	165	3.6	-			
8 x 8 x 4	DN200	8.625 x 8.625 x 4.500 219.1 x 219.1 x 114.3	±	±	15.0		-		
			±	±	6.8	-			
			±	±	***	Use 8" Style 352 Tee with 8" x 6" Style 358 Reducing Coupling			
10 x 10 x 4	DN250	10.750 x 10.750 x 4.500 273.0 x 273.0 x 114.3	±	±	***		Use 10" x 6" Style 353 Reducing Tee with 6" x 4" Style 358 Reducing Coupling		
			13.59 (f)	13.83	71.0	-			
			345	351	32.2	-			
12 x 12 x 6	DN300	12.750 x 12.750 x 6.625 323.9 x 323.9 x 168.3	±	±	***		Use 10" Style 352 Tee with 10" x 8" Style 358 Reducing Coupling		
			15.57 (f)	16.08	110.0	-			
			219.1	408	49.9	-			
			10.750	16.38	115.0	-			
273.0	396	52.2	-						

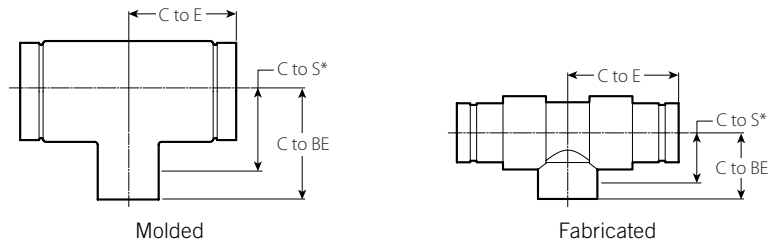
(f) = Fabricated fitting

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.
- ± The C to E and C to BE for this No. 353 configuration is equivalent to the Tee or Reducing Tee referenced in the accompanying Note.
- *** The weight for this No. 353 Reducing Tee can be determined by the weight of the referenced Tee or Reducing Tee in the Note.

4.4 DIMENSIONS

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



Size			Actual Outside Diameter			Dimensions			Weight
Nominal inches DN			inches	mm		C to E inches mm	C to S* (Socket) inches mm	C to BE (Branch) inches mm	Approximate (Each) lb kg
2 x 2 x 1 DN50 DN50 DN25			2.375	60.3	1.315	4.50 (f)	1.26	2.44	1.7
			2.375	60.3	33.7	114	32	62	0.8
		1 ¼			1.660	5.00 (f)	1.84 (b)	3.11	1.9
		DN32			42.4	127	47	79	0.9
		1 ½			1.900	4.80 (f)	1.29	2.69	1.8
	DN40			48.3	122	35	68	0.8	
	2		2.375	60.3		5.00 (f)	1.32	2.82	1.7
	DN50					127	34	72	0.8
2 ½ x 2 ½ x 1 DN25 DN25 DN25			2.875	73.0	1.315	3.75	2.91 (b)	4.06	2.3
			2.875	73.0	33.7	95	74	103	1.0
		1 ¼			1.660	3.75	2.81 (b)	4.07	2.3
		DN32			42.4	95	71	103	1.0
		1 ½			1.900	3.75	2.65 (b)	4.05	2.2
	DN40			48.3	95	67	103	1.0	
	2		2.375	60.3		3.75	2.25	3.75	2.0
	DN50					95	57	95	0.9
3 x 3 x 1 DN80 DN80 DN25			3.500	88.9	1.315	4.25	3.41 (b)	4.56	3.2
			3.500	88.9	33.7	108	87	116	1.5
		1 ¼			1.660	4.25	3.31 (b)	4.57	3.1
		DN32			42.4	108	84	116	1.4
		1 ½			1.900	4.25	3.15 (b)	4.55	3.1
	DN40			48.3	108	80	116	1.4	
	2		2.375	60.3		4.25	2.75	4.25	2.9
	DN50					108	70	108	1.3
4 x 4 x 1 DN100 DN100 DN25			4.500	114.3	1.315	5.00	4.16 (b)	5.31	5.5
			4.500	114.3	33.7	127	106	135	2.5
		1 ¼			1.660	5.00	4.06 (b)	5.32	5.5
		DN32			42.4	127	103	135	2.5
		1 ½			1.900	5.00	3.90 (b)	5.30	5.4
	DN40			48.3	127	99	135	2.4	
	2		2.375	60.3		5.00	3.50	5.00	5.2
	DN50					127	89	127	2.4
6 x 6 x 1 DN150 DN150 DN25			6.625	168.3	1.315	6.50	5.66 (b)	6.81	8.2
			6.625	168.3	33.7	165	144	173	3.7
		1 ¼			1.660	6.50	5.56 (b)	6.82	8.2
		DN32			42.4	165	141	173	3.7
		1 ½			1.900	6.50	5.40 (b)	6.80	8.1
	DN40			48.3	165	137	173	3.7	
	2		2.375	60.3		6.50	5.00	6.50	7.9
	DN50					127	165	165	3.6

(f) = Fabricated fitting

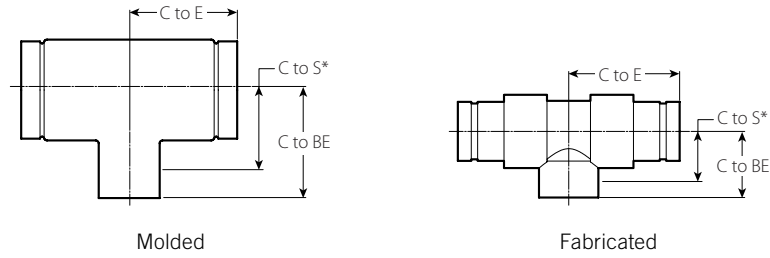
(b) = Bushing

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.
- Custom sizes available. Contact Victaulic.

4.5 DIMENSIONS

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



Size			Actual Outside Diameter			Dimensions			Weight
Nominal inches DN			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 x DN200 x DN25			8.625	219.1	1.315	7.75	6.91 (b)	8.06	15.0 6.8
		1 ¼			1.660	7.75	6.81 (b)	8.07	15.0
		DN32			42.4	197	173	205	6.8
		1 ½			1.900	7.75	6.65 (b)	8.05	15.0
		DN40			48.3	197	169	204	6.8
2 DN50			2.375		60.3	7.75	6.25	7.75	15.0
						197	159	197	6.8
10 x 10 x 2 DN250 x DN250 x DN50			10.750	273.0	2.375	13.56 (f)	10.75	12.00	47.0 21.5
12 x 12 x 2 DN300 x DN300 x DN50			12.750	323.9	2.375	14.63 (f)	11.75	13.25	70.0 32.0
						372	299	337	

(f) = Fabricated fitting

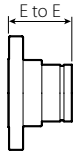
(b) = Bushing

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.
- Custom sizes available. Contact Victaulic.

4.6 DIMENSIONS

No. 359F Class 150 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 (f) 102	0.88 22	4.75 121	6.00 152	4	5/8 M16	1.5 0.7
2½	2.875 73.0	4.25 (f) 108	1.00 25	5.50 140	7.00 178	4	5/8 M16	2.5 1.1
3 DN80	3.500 88.9	4.50 (f) 114	1.00 25	6.00 152	7.50 191	4	5/8 M16	3.1 1.4
4 DN100	4.500 114.3	5.13 (f) 130	1.13 29	7.50 191	9.00 229	8	5/8 M16	4.5 2.0
6 DN150	6.625 168.3	6.00 (f) 152	1.25 32	9.50 241	11.00 279	8	3/4 M20	8.0 3.6
8 DN200	8.625 219.1	7.00 (f) 178	1.75 44	11.75 298	13.50 343	8	3/4 M20	15.0 6.8
10 DN250	10.750 273.0	8.38 (f) 213	1.75 44	14.25 362	16.00 406	12	7/8 M22	24.0 11.0
12 DN300	12.750 323.9	9.25 (f) 235	1.75 44	17.00 432	19.00 483	12	7/8 M22	36.0 16.5

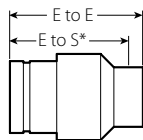
(f) = Fabricated fitting

NOTE

- The maximum working pressure for all sizes of 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	6.28 (f) 160	4.66 118	1.8 0.8	
3 x 2 DN80	3.500 x 2.375 88.9 x 60.3	5.87 (f) 149	4.40 112	1.8 0.8	

(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
- Custom sizes available. Contact Victaulic.

5.0 PERFORMANCE

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

Size		Maximum Working Pressure psi kPa
Nominal inches DN	Actual Outside Diameter inches mm	
2 DN50	2.375 60.3	400 2758
2½	2.875 73.0	400 2758
3 DN80	3.500 88.9	370 2551
4 DN100	4.500 114.3	280 1931
6 DN150	6.625 168.3	190 1310
8 DN200	8.625 219.1	175 1207
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 largest diameter's 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.
- **DO NOT** clamp or compress Victaulic CPVC fittings in a vice or any other device that could cause damage due to over-compression.
- 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](#)

[33.05: Victaulic PGS-300 Expansion Joint Style 355/355P](#)

[33.06: Victaulic Installation-Ready™ Transition Coupling Style 356](#)

[33.07: Victaulic Installation-Ready™ Rigid Coupling Style 357](#)

[33.08: Victaulic Reducing Coupling Style 358](#)

[33.16: Victaulic Installation-Ready™ Transition Coupling for CPVC/PVC Pipe in Potable Water Applications Style 856](#)

[33.17: Victaulic Installation-Ready™ Rigid Coupling for CPVC/PVC Pipe in Potable Water Applications Style 857](#)

[33.18: Victaulic Reducing Coupling for CPVC/PVC Pipe in Potable Water Applications Style 858](#)

[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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