

Grooved End Fittings



Victaulic offers a broad line of fittings in sizes through 48"/1200mm in a variety of straight and reducing styles. Most standard fittings are cast of durable ductile iron to precise tolerances. Victaulic standard fittings pressure ratings conform to the ratings of Victaulic Style 77 couplings. All fittings are supplied with grooves or shoulders to permit fast installation without field preparation. The grooved design permits flexibility for easy alignment. *These fittings are not intended for use with Victaulic couplings for plain end pipe (refer to Section 14.04 for fittings available for plain end applications).*

Fittings are provided in various materials including ductile iron, steel or segmentally welded steel depending on styles and size. Fittings are painted orange enamel with a galvanized finish available as an option, contact Victaulic for details.

Victaulic fittings are designed specifically for use in grooved piping systems. Fittings are provided grooved or with shoulders conforming to standard steel pipe outside diameters. When connecting wafer or lug-type butterfly valves directly to Victaulic fittings with 741 or 743 Vic-Flange® adapters, check disc clearance dimensions with I.D. dimension of fitting.

Note: The following Victaulic fittings are VdS approved: NO.10 90° Elbow, NO.11 45° Elbow, NO.20 Tee and NO.60 Cap.

Note: The following Victaulic fittings are LPCB approved: NO.10 90° Elbow, NO.11 45° Elbow, NO.12 22 1/2° Elbow, NO.13 11 1/4° Elbow, NO.30 45° Lateral, NO.30-R Reducing Lateral, NO.100 Long Radius Elbow, NO.110 Long Radius Elbow, NO.20 Tee, NO.35 Cross, NO.60 Cap, NO.25 Reducing Tee, NO.33 True Wye, NO.50 Concentric Reducer, NO.51 Eccentric Reducer and NO.29M Tee with Threaded Branch.



NO. 20 TEE



NO. 10 ELBOW



AGS - ADVANCED GROOVE SYSTEM

Advanced Groove System – For 14 – 24"/350 – 600mm piping systems, Victaulic now offers the Advanced Groove System (AGS). Refer to Section 20.05 for AGS fitting details.

Stainless Steel – Grooved end fittings are available in Schedule 10 Type 316 stainless steel (Schedule 5, 40 and Type 304 available as an option) in various sizes. Fitting center-to-end dimensions will vary depending upon type and schedule. Refer to Section 17.04 and 17.16 for details.

Aluminum – Grooved end fittings are available in aluminum alloy 356 T6, in sizes from 1 – 8"/25 – 200mm. Refer to Section 21.03 or contact Victaulic for details.

ALTERNATE STYLES



Extra Heavy EndSeal® "ES" Fittings – EndSeal fittings are available in 2 – 12"/50 – 300mm for use with "ES" grooved pipe and HP-70ES EndSeal couplings. "ES" fittings are painted black for easy identification. EndSeal (and standard) fittings may be easily internally coated (by others) for severe service requirements. Always specify "ES EndSeal fittings" when ordering. See Section 07.03 for information on EndSeal fittings.

Fittings Machined for Rubber or Urethane Lining (MRL) – For severe abrasive services, Victaulic fittings may be rubber or urethane lined (by others). Lining may be inside diameter/end (abrasion resistance) or wrap-around (corrosion and/or abrasion) machined. Refer to Section 25.03 or contact Victaulic for specific details.

Note: Fittings are available with a variety of coatings upon request such as hot dip galvanized, epoxy, glass lined and others.

JOB/OWNER

System No. _____
Location _____

CONTRACTOR

Submitted By _____
Date _____

ENGINEER

Spec Sect _____ Para _____
Approved _____
Date _____

Grooved End Fittings

MATERIAL SPECIFICATIONS

Fitting: Ductile iron conforming to ASTM A-536, grade 65-45-12. Ductile iron conforming to ASTM A-395, grade 65-45-15, is available upon special request.

- **Or:** Segmentally welded steel as shown under nipples

Nipples: (adapter, swaged & hose)

- ¾ – 4"/20 – 100mm: Carbon steel, Schedule 40, conforming to ASTM A-53, Type F
- 5 – 6"/125 – 150mm: Carbon steel, Schedule 40, conforming to ASTM A-53, Type E or S, Gr. B
- 8 – 12"/200 – 300mm: Carbon steel, Schedule 30 or 40, conforming to ASTM A-53, Type E or S, Gr. B

Flanged Adapter Nipples: (Nipple – see above)

- Class 125 Flange: Cast iron conforming to ANSI B-16.1
- Class 150 Flange: Carbon steel conforming to ANSI B-16.5, raised or flat face
- Class 300 Flange: Carbon steel conforming to ANSI B-16.5, raised or flat face

Fitting Coatings: Orange enamel

- **Optional:** Hot dip galvanized and others. Some fittings supplied electroplated as standard – see product specifications.

Flanged Adapter Nipple Coating: None (Unfinished)

- **Optional:** Orange enamel, hot dip galvanized and others.

Grooved End Fittings

FLOW DATA

(Frictional Resistance)

The chart expresses the frictional resistance of various Victaulic fittings as equivalent feet of straight pipe. Fittings not listed can be estimated from the data given, for example, a 22½° elbow is approximately one-half the resistance of a 45° elbow. Values of mid-sizes can be interpolated.

Size		Dimension – Feet/meters					
Nominal Size In./mm	Actual Outside Dia. In./mm	Elbows				Tees	
		90° Elbows		45° Elbows		Branch	Run
		No. 10 Std. Radius	No. 100 1½ D Long Radius	No. 11 Std. Radius	No. 110 1½ D Long Radius		
1	1.315	1.7	—	0.8	—	4.2	1.7
25	33.7	0.5	—	0.2	—	1.3	0.5
2	2.375	3.5	2.5	1.8	1.1	8.5	3.5
50	60.3	1.1	0.8	0.5	0.3	2.6	1.1
76.1 mm	3.000	4.3	—	2.1	—	10.8	4.3
	76.1	1.3	—	0.7	—	3.3	1.3
3	3.500	5.0	3.8	2.6	1.6	13.0	5.0
80	88.9	1.5	1.2	0.8	0.5	4.0	1.5
108.0 mm	4.250	6.4	—	3.2	—	15.3	6.4
	108.0	2.0	—	0.9	—	4.7	2.0
4	4.500	6.8	5.0	3.4	2.1	16.0	6.8
100	114.3	2.1	1.5	1.0	0.6	4.9	2.1
133.0 mm	5.250	8.1	—	4.1	—	20.0	8.1
	133.0	2.5	—	1.2	—	6.2	2.5
139.7 mm	5.500	8.5	—	4.2	—	21.0	8.5
	139.7	2.6	—	1.3	—	6.4	2.6
5	5.563	8.5	—	4.2	—	21.0	8.5
125	141.3	2.6	—	1.3	—	6.4	2.6
159.0 mm	6.250	9.4	—	4.9	—	25.0	9.6
	159.0	2.9	—	1.5	—	7.6	2.9
165.1 mm	6.500	9.6	—	5.0	—	25.0	10.0
	165.1	2.9	—	1.5	—	7.6	3.0
6	6.625	10.0	7.5	5.0	3.0	25.0	10.0
150	168.3	3.0	2.3	1.5	0.9	7.6	3.0
8	8.625	13.0	9.8	6.5	4.0	33.0	13.0
200	219.1	4.0	3.0	2.0	1.2	10.1	4.0
10	10.750	17.0	12.0	8.3	5.0	41.0	17.0
250	273.0	5.2	3.7	2.5	1.5	12.5	5.2
12	12.750	20.0	14.5	10.0	6.0	50.0	20.0
300	323.9	6.1	4.4	3.0	1.8	15.2	6.1
14	14.000	24.5 §	15.8	18.5 §	11.0	70.0	23.0
350	355.6	7.5	4.8	5.6	3.4	21.3	7.0
16	16.000	28.0 §	18.0	21.0 §	13.0	80.0	27.0
400	406.4	8.5	5.5	6.4	4.0	24.4	8.2
18	18.000	31.0 §	20.0	23.5 §	14.0	90.0	30.0
450	457.0	9.5	6.1	7.2	4.3	27.4	9.1
20	20.000	34.0 §	22.5	25.5 §	16.0	100.0	33.0
800	508.0	10.4	6.9	7.8	4.9	30.5	10.1
24	24.000	42.0 §	27.0	29.5 §	19.0	120.0	40.0
600	610.0	12.8	8.2	9.0	5.8	36.6	12.2
26	26.000	—	28.0	—	20.5	130.0	43.0
650	660.4	—	8.5	—	6.3	39.6	13.1
30	30.000	—	34.0	—	24.0	150.0	50.0
750	762.0	—	10.4	—	7.3	45.7	15.2
36	36.000	—	40.5	—	28.5	180.0	60.0
900	914.0	—	12.3	—	8.7	54.9	18.3
42	42.000	—	47.0	—	33.0	210.0	70.0
1050	1067.0	—	14.3	—	10.1	64.0	21.3

Contact Victaulic for details.

For roll grooved systems, Victaulic offers the Advanced Groove System (AGS). For pricing and availability of cut groove fittings in this size, contact your nearest Victaulic sales office.

§ Fitting flow data for 14-24"/350-600 mm size NO. 10 and NO. 11 Elbows is based on fittings for Style 07 and 77 couplings. For flow data on AGS fittings (NO. W10 and NO. W11 Elbows), refer to submittal 20.05.

Note: All fittings are ductile iron unless otherwise noted with an "sw" or "s". SW= Segmentally Welded. S= Carbon Steel

Grooved End Fittings

DIMENSIONS

Elbows

NO. 10 90° Elbow

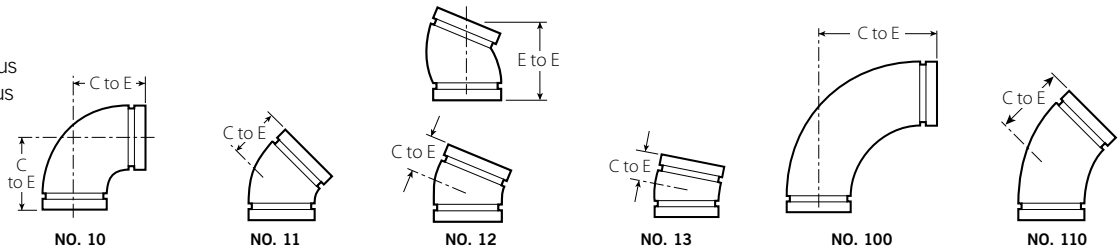
NO. 11 45° Elbow

NO. 12 22½° Elbow

NO. 13 11¼° Elbow

NO. 100 90° Long Radius

NO. 110 45° Long Radius



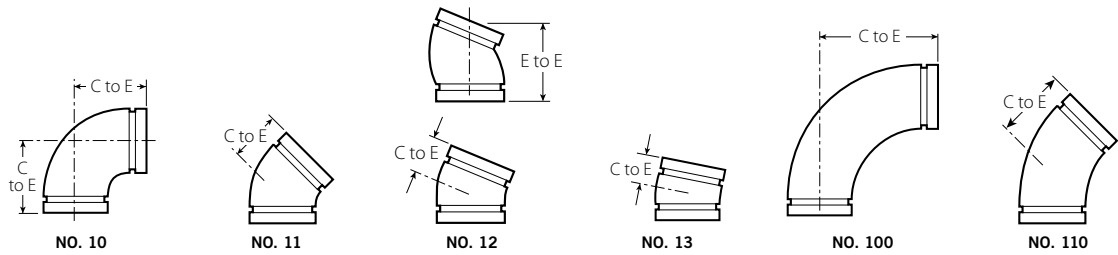
Size		No. 10 90° Elbow		No. 11 45° Elbow		No. 12 22½° Elbow		No. 13 11¼° Elbow		No. 100† 90° Long Radius Elbow (S)		No. 110† 45° Long Radius Elbow (S)	
Nominal Size Inches mm	Actual Outside Dia. Inches mm	C to E Inches mm	Approx. Wgt. Each Lbs. kg	C to E Inches mm	Approx. Wgt. Each Lbs. kg	C to E Inches mm	Approx. Wgt. Each Lbs. kg	C to E Inches mm	Approx. Wgt. Each Lbs. kg	C to E Inches mm	Approx. Wgt. Each Lbs. kg	C to E Inches mm	Approx. Wgt. Each Lbs. kg
¾ 20	1.050 26.9	2.25 57	0.5 0.2	1.50 38	0.5 0.2	1.63sw 41	—	1.38sw 35	—	—	—	—	—
1 25	1.315 33.7	2.25 57	0.6 0.3	1.75 44	0.6 0.3	3.25 @ 83	0.6 0.3	1.38sw 35	0.3 0.1	—	—	—	—
1¼ 32	1.660 42.4	2.75 70	1.0 0.5	1.75 44	0.9 0.4	1.75 44	0.8 0.4	1.38sw 35	0.5 0.2	—	—	—	—
1½ 40	1.900 48.3	2.75 70	1.2 0.5	1.75 44	0.9 0.4	1.75 44	0.8 0.4	1.38sw 35	0.5 0.2	—	—	—	—
2 50	2.375 60.3	3.25 83	1.8 0.8	2.00 51	1.3 0.6	3.75 @ 95	1.4 0.6	1.38 35	1.0 0.5	4.38 111	2.5 1.1	2.75 70	1.8 0.8
2½ 65	2.875 73.0	3.75 95	3.2 1.5	2.25 57	2.2 1.0	4.00 @ 102	2.3 1.0	1.50 38	1.1 0.5	5.13 130	3.4 1.5	3.00 76	2.8 1.3
76.1 mm	3.000 76.1	3.75 95	3.7 1.7	2.25 57	3.4 1.5	2.24 57	—	1.50 38	—	—	—	—	—
3 80	3.500 88.9	4.25 108	4.5 2.0	2.50 64	3.1 1.4	4.50 @ 114	3.1 1.4	1.50 38	2.1 1.0	5.88 149	6.0 2.7	3.38 86	4.9 2.2
3½ 90	4.000 101.6	4.50 114	5.6 2.5	2.75 70	4.3 2.0	2.50sw 64	4.0 1.8	1.75sw 44	2.7 1.2	—	—	—	—
4 100	4.500 114.3	5.00 127	7.1 3.2	3.00 76	5.6 2.5	2.88 73	5.6 2.5	1.75 44	3.6 1.6	7.50 191	12.3 5.6	4.00 102	7.3 3.3
108.0 mm	4.250 108.0	5.00 127	11.0 5.0	3.00 76	5.6 2.5	—	—	—	—	—	—	—	—
4½ 120	5.000 127.0	5.25 sw 133	10.0 4.5	3.13 sw 79	6.0 2.7	3.50 89	6.6 3.0	1.88sw 48	4.2 1.9	—	—	—	—
5 125	5.563 141.3	5.50 140	11.7 5.3	3.25 83	8.3 3.8	2.88sw 73	7.8 3.5	2.00sw 51	5.0 2.2	+	18.2 8.3	+	14.8 6.7
133.0 mm	5.250 133.0	5.50 140	11.7 5.3	3.25 83	8.3 3.8	—	—	—	—	—	—	—	—
139.7 mm	5.500 139.7	5.50 140	11.7 5.3	3.25 83	8.3 3.8	2.87 73	—	2.00 51	—	—	—	—	—
6 150	6.625 168.3	6.50 165	17.2 7.8	3.50 89	10.8 4.9	6.25 @ 159	12.2 5.5	2.00 51	7.0 3.2	10.75 273	30.4 13.8	5.50 140	17.4 7.9
159.0 mm	6.250 159.0	6.50 165	18.6 8.4	3.50 89	10.8 4.9	—	—	—	—	—	—	—	—
165.1 mm	6.500 165.1	6.50 165	15.5 7.0	3.50 89	9.8 4.4	3.13 79	11.4 5.2	2.00 51	7.4 3.4	10.75 273	29.0 13.2	5.50 140	19.0 8.6

@ Gooseneck design- end-to-end dimension fittings in this size- contact your nearest Victaulic sales office

† Chinese standard sizes

Note: All fittings are ductile iron unless otherwise noted with an "sw" or "s". SW= Segmentally Welded- S= Carbon Steel

Grooved End Fittings



Size		No. 10 90° Elbow		No. 11 45° Elbow		No. 12 22½° Elbow		No. 13 11¼° Elbow		No. 100† 90° Long Radius Elbow (S)		No. 110† 45° Long Radius Elbow (S)	
Nominal Size Inches mm	Actual Outside Dia. Inches mm	C to E Inches mm	Approx. Wgt. Each Lbs. kg	C to E Inches mm	Approx. Wgt. Each Lbs. kg	C to E Inches mm	Approx. Wgt. Each Lbs. kg	C to E Inches mm	Approx. Wgt. Each Lbs. kg	C to E Inches mm	Approx. Wgt. Each Lbs. kg	C to E Inches mm	Approx. Wgt. Each Lbs. kg
8 200	8.625 219.1	7.75 197	29.9 13.6	4.25 108	20.4 9.3	7.75 @ 197	20.0 9.1	2.00 51	10.1 4.6	14.25 362	66.0 30.0	7.25 184	36.0 16.3
10 250	10.750 273.0	9.00 229	63.3 28.7	4.75 121	37.5 17.0	4.38 111	30.0 13.6	2.13 54	11.8 5.3	15.00 381	107.0 48.5	6.25 159	57.0 25.9
12 300	12.750 323.9	10.00 254	74.0 33.6	5.25 133	66.7 30.3	4.88 124	40.0 18.1	2.25 57	29.3 13.3	18.00 457	156.0 70.8	7.50 191	90.0 40.8
14 # 350	14.000 355.6	14.00 355.6	136.0 61.7	5.75 146	65.0 29.5	5.00sw 127	46.0 20.9	3.50sw 89	32.0 14.5	21.00 s 533	164.0 74.4	8.75 s 222	82.0 37.2
377.0mm †	14.843 377.0	14.84 376.9	149.3 67.7	6.15 156.2	82.0 37.2	—	—	—	—	—	—	—	—
16 # 400	16.000 406.4	16.00 406.4	171.0 77.6	6.63 168	88.0 39.9	5.00sw 127	58.0 26.3	4.00sw 102	42.0 19.1	24.00 s 610	210.0 95.3	10.00 s 254	100.0 45.4
426.0mm †	16.772 426.0	16.77 426.0	198.6 90.1	6.95 176.5	101.3 45.9	—	—	—	—	—	—	—	—
18 # 450	18.000 457.0	18.00 457.2	228.0 103.4	7.46 189	108.0 50.0	5.50sw 140	65.0 29.5	4.50sw 114	53.2 24.1	27.00 s 686	273.0 123.8	11.25 s 286	135.0 61.2
480.0mm †	18.898 480.0	18.90 480.0	291.0 132.0	7.83 198.8	141.7 64.3	—	—	—	—	—	—	—	—
20 # 500	20.000 508.0	20.00 508.0	298.0 135.2	8.28 210	138.0 62.6	6.00sw 152	78.6 36.0	5.00sw 127	65.0 29.5	30.00 s 762	343.0 155.6	12.50 s 318	174.0 78.9
530.0mm †	20.866 530.0	20.87 530.0	355.0 161.0	8.64 219.4	179.0 81.2	—	—	—	—	—	—	—	—
24 # 600	24.000 610.0	24.00 609.6	438.0 198.7	9.94 252	221.0 100.2	7.00sw 178	140.0 63.5	6.00sw 152	60.0 27.2	36.00 s 914	516.0 234.1	15.00 s 381	251.0 113.9
630.0mm †	24.803 630.0	24.80 630.0	545.0 247.2	10.27 261.0	255.2 115.7	—	—	—	—	—	—	—	—
14 – 24 350 – 600	For AGS fitting information, see publication 20.05												

@ Gooseneck design, end-to-end dimension

For roll grooved systems, Victaulic offers the Advanced Groove System (AGS). For pricing and availability of cut groove fittings in this size, contact your nearest Victaulic sales office.

† Chinese standard sizes

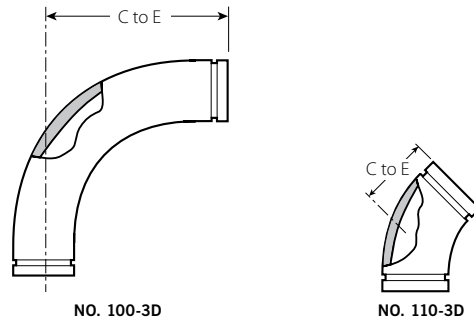
Note: All fittings are ductile iron unless otherwise noted with an "sw" or "s" SW= Segmentally Welded; S= Carbon Steel

Grooved End Fittings

Long Radius Elbow 3D

With added wall thickness at bend for abrasive services.

- NO. 100-3D** 90° Long Radius Elbow 3D
- NO. 110-3D** 45° Long Radius Elbow 3D

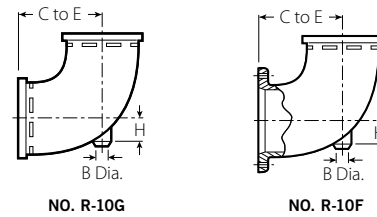


Size		Wall Thickness – Inches/mm			No. 100-3D 90° Long Radius Elbow		No. 110-3D 45° Long Radius Elbow	
Nominal Size Inches mm	Actual Outside Diameter Inches mm	In Non-critical Area	At Back Wear Area	Extra	C to E Inches mm	Approx. Weight Each Lbs. kg	C to E Inches mm	Approx. Weight Each Lbs. kg
2 50	2.375 60.3	0.184 4.67	0.309 7.85	0.125 3.18	10.00 254	5.0 2.3	6.50 165	4.7 2.1
3 80	3.500 88.9	0.246 6.25	0.371 9.42	0.125 3.18	13.00 330	16.0 7.3	7.75 197	10.4 4.7
4 100	4.500 114.3	0.267 6.78	0.455 11.56	0.188 4.78	16.00 406	25.5 11.6	9.00 229	17.2 7.8
6 150	6.625 168.3	0.310 7.87	0.560 14.22	0.250 6.35	24.00 610	70.0 31.8	13.50 343	45.0 20.4

Note: All fittings are ductile iron unless otherwise noted with an "sw" or "s". SW= Segmentally Welded- S= Carbon Steel

Reducing Base Support Elbow

- NO. R-10G** Grv. x Grv.
- NO. R-10F** Grv. x Flange



Size		No. R-10 Reducing Base Support Elbow			Approx. Weight Each	
Nominal Size Inches mm		C to E Inches mm	H Inches mm	B Diameter Inches mm	Grv. x Grv. Lbs. kg	Grv. x Flange Lbs. kg
6 150	4 100	9.00 229	1.25 32	1.50 38	19.0 8.6	33.0 15.0
	5 125	9.00 229	1.50 38	1.50 38	23.0 10.4	38.0 17.2
8 200	6 150	10.50 267	2.13 54	1.50 38	33.0 15.0	52.0 23.6
10 250	8 200	12.00 305	2.40 61	1.50 38	61.0 27.7	88.0 39.9

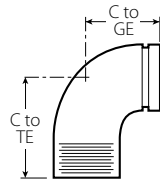
Note: All fittings are ductile iron unless otherwise noted with an "sw" or "s". SW= Segmentally Welded- S= Carbon Steel

Grooved End Fittings

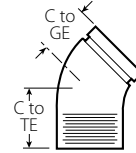
Adapter Elbow

NO. 18 90° Adapter Elbow

NO. 19 45° Adapter Elbow



NO. 18



NO. 19

Size		No. 18 90° Adapter Elbow @			No. 19 45° Adapter Elbow @		
Nominal Size Inches mm	Actual Outside Diameter Inches mm	C to GE Inches mm	C to TE Inches mm	Approx. Weight Each Lbs. kg	C to GE Inches mm	C to TE Inches mm	Approx. Weight Each Lbs. kg
¾ 20	1.050 26.9	2.25 57	2.25 57	0.5 0.2	1.50 38	1.50 38	0.5 0.2
1 25	1.315 33.7	2.25 57	2.25 57	0.5 0.2	—	—	—
1¼ 32	1.660 42.4	2.75 70	2.75 70	0.9 0.4	—	—	—
1½ 40	1.900 48.3	2.75 70	2.75 70	1.1 0.5	1.75 44	1.75 44	0.9 0.4
2 50	2.375 60.3	3.25 83	4.25 108	2.5 1.1	—	—	—
2½ 65	2.875 73.0	3.75 95	3.75 95	3.0 1.4	2.25 57	2.25 57	2.3 1.0
3 80	3.500 88.9	4.25 108	6.00 152	5.8 2.6	2.50 64	4.25 108	5.0 2.3
3½ 90	4.000 101.6	4.50 114	6.25 159	8.0 3.6	5.25 133	5.25 133	8.8 4.0
6 150	6.625 168.3	6.50 165	6.50 165	17.6 8.0	3.50 89	3.50 89	12.7 5.8

@ Available with British Standard Pipe Threads- specify "BSP" clearly on order

Note: All fittings are ductile iron unless otherwise noted with an "sw" or "s" SW= Segmentally Welded- S= Carbon Steel

Grooved End Fittings

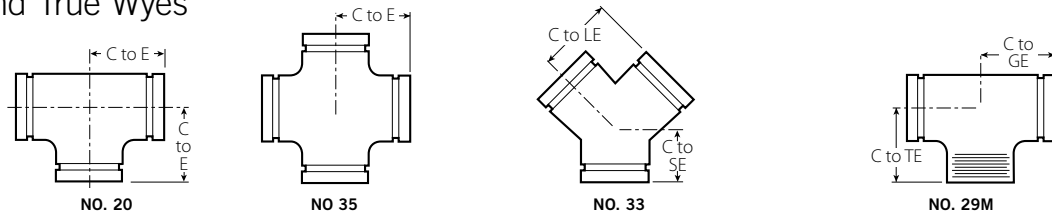
Tees, Crosses and True Wyes

NO. 20 Tee

NO. 35 Cross

NO. 33 True Wye

NO. 29M Tee with Threaded Branch



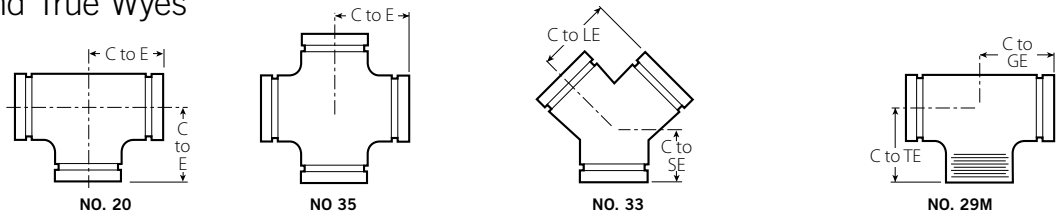
Size		No. 20 Tee		No. 35 Cross (sw)		No. 33 True Wye (sw)			No. 29M Tee with Threaded Branch		
Nominal Size Inches mm	Actual Outside Dia. Inches mm	C to E Inches mm	Approx. Weight Each Lbs. kg	C to E Inches mm	Approx. Weight Each Lbs. kg	C to LE Inches mm	C to SE Inches mm	Approx. Weight Each Lbs. kg	C to GE Inches mm	C to TE Inches mm	Approx. Weight Each Lbs. kg
3/4 20	1.050 26.9	2.25 57	0.6 0.3	2.25 57	0.9 0.4	—	—	—	2.25 57	2.25 57	0.6 0.3
1 25	1.315 33.7	2.25 57	1.0 0.5	2.25 57	1.3 0.6	2.25 57	2.25 57	1.1 0.5	2.25 57	2.25 57	1.0 0.5
1 1/4 32	1.660 42.4	2.75 70	1.5 0.7	2.75 70	2.1 1.0	2.75 70	2.50 64	1.5 0.7	2.75 70	2.75 70	1.5 0.7
1 1/2 40	1.900 48.3	2.75 70	2.0 0.9	2.75 70	2.5 1.1	2.75 70	2.75 70	1.8 0.8	2.75 70	2.75 70	2.0 0.9
2 50	2.375 60.3	3.25 83	3.0 1.4	3.25 83	3.8 1.7	3.25 83	2.75 70	2.5 1.1	3.25 83	4.25 108	3.00 1.4
2 1/2 65	2.875 73.0	3.75 95	4.3 2.0	3.75 95	6.1 2.8	3.75 95	3.00 76	4.3 2.0	3.75 95	3.75 95	4.3 2.0
76.1 mm	3.000 76.1	3.75 95	5.2 2.4	—	—	—	—	—	3.75 95	3.75 95	5.2 (sw) 2.4
3 80	3.500 88.9	4.25 108	6.8 3.0	4.25 108	10.5 4.8	4.25 108	3.25 83	6.1 2.8	4.25 108	6.00 152	6.8 3.1
3 1/2 90	4.000 101.6	4.50 (sw) 114	7.9 3.6	4.50 114	11.5 5.2	4.50 114	3.50 89	9.6 4.4	4.50 114	4.50 114	7.9 (sw) 3.6
108.0 mm	4.250 108.0	5.00 127	15.5 7.0	—	—	—	—	—	5.00 127	5.00 127	15.5 7.0
4 100	4.500 114.3	5.00 127	11.9 5.4	5.00 127	15.8 7.2	5.00 127	3.75 95	10.0 4.5	5.00 127	7.25 184	11.9 5.4
4 1/2 120	5.000 127.0	5.25 (sw) 133	15.0 6.8	5.25 133	18.5 8.4	—	—	—	5.25 133	5.25 133	15.0 (sw) 6.8
133.0 mm	5.250 133.0	5.50 140	17.8 8.1	—	—	—	—	—	5.50 140	5.50 140	17.8 8.1
139.7 mm	5.500 139.7	5.50 140	17.8 8.1	—	—	—	—	—	5.50 140	5.50 140	17.8 8.1
5 125	5.563 141.3	5.50 140	17.8 8.1	5.50 140	20.0 9.1	5.50 140	4.00 102	15.0 6.8	5.50 140	5.50 140	17.8 (sw) 8.1
159.0 mm	6.250 159.0	6.50 165	27.1 12.3	—	—	—	—	—	6.50 165	6.50 165	27.1 12.3
165.1 mm	6.500 165.1	6.50 165	22.0 10.0	6.50 165	28.0 12.7	—	—	—	6.50 165	6.50 165	22.0 10.0
6 150	6.625 168.3	6.50 165	25.7 11.7	6.50 165	28.0 12.7	6.50 165	4.50 114	22.3 10.1	6.50 165	6.50 165	25.7 (sw) 11.7
8 200	8.625 219.1	7.75 197	47.6 21.6	7.75 197	48.0 21.8	7.75 197	6.00 152	36.0 16.3	7.75 197	7.75 197	47.6 (sw) 21.6
10 250	10.750 273.0	9.00 229	99.0 44.9	9.00 229	121.5 55.1	9.00 229	6.50 155	69.9 31.7	9.00 229	9.00 229	73.0 33.1
12 300	12.750 323.9	10.00 254	133.0 60.3	10.00 254	110.0 49.9	10.00 254	7.00 178	80.0 36.3	10.00 254	10.00 254	99.0 44.9

Note: All fittings are ductile iron unless otherwise noted with an "sw" or "s". SW= Segmentally Welded S= Carbon Steel

Grooved End Fittings

Tees, Crosses and True Wyes

- NO. 20** Tee
- NO. 35** Cross
- NO. 33** True Wye
- NO. 29M** Tee with Threaded Branch



Size		No. 20 Tee		No. 35 Cross (sw)		No. 33 True Wye (sw)			No. 29M Tee with Threaded Branch		
Nominal Size Inches mm	Actual Outside Dia. Inches mm	C to E Inches mm	Approx. Weight Each Lbs. kg	C to E Inches mm	Approx. Weight Each Lbs. kg	C to LE Inches mm	C to SE Inches mm	Approx. Weight Each Lbs. kg	C to GE Inches mm	C to TE Inches mm	Approx. Weight Each Lbs. kg
14 # 350	14.000 355.6	11.00 279	145.0 65.8	11.00 279	198.0 89.8	11.00 279	7.50 191	134.2 60.8	—	—	—
377.0mm	14.000 355.6	11.00 279	145.0 65.8	—	—	—	—	—	—	—	—
16 # 400	16.000 406.4	12.00 305	186.0 84.4	12.00 305	250.0 113.4	12.00 305	8.00 203	167.0 75.7	—	—	—
426.0mm †	16.000 406.4	12.00 305	186.0 84.4	—	—	—	—	—	—	—	—
18 # 450	18.000 457.0	14.00 356	256.0 116.1	15.50 394	350.0 158.8	15.50 394	8.50 216	234.0 106.1	—	—	—
480.0mm †	18.000 457.0	14.00 356	256.0 116.1	—	—	—	—	—	—	—	—
20 # 500	20.000 508.0	15.00 381	339.0 153.8	17.25 438	452.0 205.0	17.25 438	9.00 229	281.0 127.5	—	—	—
530.0mm †	20.000 508.0	15.00 381	339.0 153.8	—	—	—	—	—	—	—	—
24 # 600	24.000 610.0	17.00 432	473.0 214.5	20.00 508	795.0 360.6	20.00 508	10.00 254	523.0 237.2	—	—	—
630.0mm †	24.000 610.0	17.00 432	473.0 214.5	—	—	—	—	—	—	—	—
14 – 24 350 – 600	For AGS fitting information, see publication 20.05										

For roll grooved systems, Victaulic offers the Advanced Groove System (AGS). For pricing and availability of cut groove fittings in this size, contact your nearest Victaulic sales office.

† Chinese standard sizes

Note: All fittings are ductile iron unless otherwise noted with an "sw" or "s" SW= Segmentally Welded S= Carbon Steel

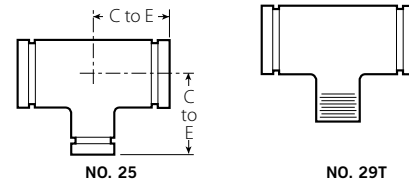
IMPORTANT NOTE:

Fittings size 26 – 48"/650 – 1050mm are available roll grooved for installation with Style 770 large diameter pipe couplings, Contact Victaulic for details.

Grooved End Fittings

Reducing Tee

NO. 25 Grooved Branch
NO. 29T Threaded Branch



Size	No. 25 Std.	No. 29T w/ Thd. Branch	Approx. Weight Each
Nominal Size Inches mm	C to E Inches mm	C to E Inches mm	Lbs. kg
1 25 × 1 × 3/4 20	+	+	1.0 0.5
1 1/4 32 × 1 1/4 32 × 1 25	+	+	1.3 0.6
1 1/2 40 × 1 1/2 40 × 3/4 20	+	+	1.5 0.7
	+	+	1.5 0.7
	+	+	1.7 0.8
2 50 × 2 50 × 3/4 20	3.25 83	3.25 83	2.5 1.1
	+	+	2.7 1.2
	+	+	1.8 0.8
	3.25 83	3.25 (sw) 83	3.0 1.4
2 1/2 65 × 2 1/2 65 × 3/4 20	+	+	3.9 1.8
	3.75 95	3.75 (sw) 95	3.8 1.7
	+	+	4.2 1.7
	3.75 95	3.75 95	3.9 1.8
	3.75 95	3.75 (sw) 95	4.5 2.0
3 80 × 3 80 × 3/4 20	+	+	5.7 2.6
	4.25 108	4.25 108	6.1 2.8
	+	+	8.0 3.6
	4.25 108	4.25 (sw) 108	6.5 2.9
	4.25 108	4.25 (sw) 108	6.2 2.8
	4.25 108	4.25 (sw) 108	6.4 2.9
	4.25 108	4.25 (sw) 108	6.4 2.9
4 100 × 4 100 × 3/4 20	+	+	8.0 3.6
	5.00 127	5.00 127	7.8 3.5
	5.00 127	5.00 127	7.8 3.5

Size	No. 25 Std.	No. 29T w/ Thd. Branch	Approx. Weight Each
Nominal Size Inches mm	C to E Inches mm	C to E Inches mm	Lbs. kg
4 100 × 4 100 × 1 1/4 32	+	+	9.6 4.4
	5.00 127	5.00 127	10.2 4.6
	5.00 127	5.00 127	11.2 5.1
	5.00 127	5.00 127	11.4 5.2
	5.00 127	5.00 127	11.6 5.3
5 125 × 5 125 × 1 25	+	+	14.0 6.4
	+	+	14.3 6.5
	5.50 (sw) 140	5.50 (sw) 140	14.5 6.6
	5.50 140	5.50 (sw) 140	15.2 6.9
	5.50 140	5.50 (sw) 140	16.6 7.5
	5.50 140	5.50 (sw) 140	16.7 7.6
	5.50 140	5.50 (sw) 140	16.7 7.6
6 150 × 6 150 × 1 1/2 40	+	+	23.0 10.4
	+	+	24.0 10.9
	6.50 165	6.50 165	21.6 9.8
	6.50 165	6.50 165	21.4 11.7
	6.50 165	6.50 165	21.4 11.7
14 - 24 350 - 600	AGS For AGS fitting information, see publication 20.05		

+ Contact Victaulic for details.

Note: All fittings are ductile iron unless otherwise noted with an "sw" or "s".
 SW= Segmentally Welded; S= Carbon Steel

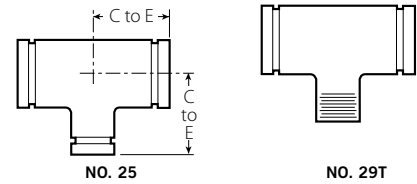
IMPORTANT NOTE:

No. 29T Threaded Outlet Reducing Tees are supplied NPT and are available with British Standard threads. For British Standard specify "BSP" clearly on order.

Grooved End Fittings

Reducing Tee

NO. 25 Grooved Branch
NO. 29T Threaded Branch



Size	No. 25 Std.	No. 29T w/ Thd. Branch	Approx. Weight Each
Nominal Size Inches mm	C to E Inches mm	C to E Inches mm	Lbs. kg
6 150 × 6 150 × 3 80	6.50 165	6.50 165	26.5 12.0
	6.50 165	6.50 165	25.0 11.3
	6.50 165	6.50 165	23.2 10.5
6½ 165.1 × 6½ 165.1 × 3 80	6.50 165	6.50 (sw) 165	24.0 10.9
	6.50 165	6.50 (sw) 165	25.0 11.3
8 200 × 8 200 × 1½ 40	+	+	33.0 15.0
	7.75 (sw) 197	7.75 (sw) 197	33.5 15.2
	+	+	39.0 17.7
	7.75 (sw) 197	7.75 (sw) 197	33.6 15.2
	7.75 197	7.75 197	41.8 19.0
	7.75 (sw) 197	7.75 (sw) 197	34.0 15.4
	7.75 197	7.75 197	42.3 19.2
	7.75 (sw) 197	7.75 (sw) 197	48.0 21.8
	165.1	165.1	
10 250 × 10 250 × 1½ 40	+	+	62.0 28.1
	9.00 (sw) 229	9.00 (sw) 229	62.0 28.1
	+	+	62.4 28.3
	+	+	60.0 27.2
	9.00 (sw) 229	9.00 (sw) 229	61.0 27.7
	9.00 (sw) 229	9.00 (sw) 229	52.0 23.6
	9.00 (sw) 229	9.00 (sw) 229	59.0 26.8
	9.00 (sw) 229	9.00 (sw) 229	64.7 29.3
	200	200	

Size	No. 25 Std.	No. 29T w/ Thd. Branch	Approx. Weight Each
Nominal Size Inches mm	C to E Inches mm	C to E Inches mm	Lbs. kg
12 300 × 12 300 × 1 25	+	+	77.0 34.9
	+	+	80.0 36.3
	+	+	78.0 35.4
	10.00 (sw) 254	10.00 (sw) 254	82.0 37.2
	10.00 (sw) 254	10.00 (sw) 254	80.0 36.3
	10.00 (sw) 254	10.00 (sw) 254	75.0 34.0
	10.00 (sw) 254	10.00 (sw) 254	75.0 34.0
	10.00 (sw) 254	10.00 (sw) 254	80.0 36.3
	10.00 (sw) 254	10.00 (sw) 254	84.0 38.1
	10 250	10 250	
# 14 350 × 14 350 × 4 100	+	+	102.0 46.3
	+	+	108.2 49.1
	11.00 279	11.00 279	112.0 50.8
	11.00 279	11.00 279	120.0 54.4
	11.00 279	11.00 279	129.1 58.6
# 16 400 × 16 400 × 4 100	+	+	130.0 59.0
	14 - 24 350 - 600	AGS For AGS fitting information, see publication 20.05	

+ Contact Victaulic for details.

Note: All fittings are ductile iron unless otherwise noted with an "sw" or "s".
 SW= Segmentally Welded; S= Carbon Steel

IMPORTANT NOTE:

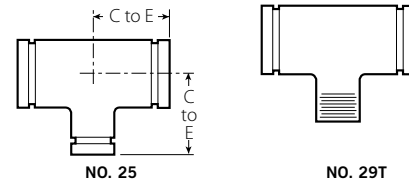
No. 29T Threaded Outlet Reducing Tees are supplied NPT and are available with British Standard threads. For British Standard specify "BSP" clearly on order.

For roll grooved systems, Victaulic offers the Advanced Groove System (AGS). For pricing and availability of cut groove fittings in this size, contact your nearest Victaulic sales office.

Grooved End Fittings

Reducing Tee

NO. 25 Grooved Branch
NO. 29T Threaded Branch



Size	No. 25 Std.	No. 29T w/ Thd. Branch	Approx. Weight Each
Nominal Size Inches mm	C to E Inches mm	C to E Inches mm	Lbs. kg
# 16 400 × 16 400 × 6 150	+	+	133.5 60.6
	8 200	12.00 305	145.0 65.8
	10 250	12.00 305	149.5 67.8
	12 300	12.00 305	154.0 69.9
	14 350	+	167.0 75.8
	# 18 450 × 18 450 × 4 100	+	+
6 150		+	200.0 90.7
8 200		+	202.0 91.6
10 250		15.50 394	212.0 96.2
12 300		15.50 394	222.6 101.0
14 350		15.50 394	230.1 104.4
16 400		15.50 394	247.6 112.3
# 20 500 × 20 500 × 6 150		+	+
	8 200	+	244.0 110.7
	10 250	+	256.0 116.1
	12 300	+	264.0 119.8
	14 350	17.25 438	—

Size	No. 25 Std.	No. 29T w/ Thd. Branch	Approx. Weight Each	
Nominal Size Inches mm	C to E Inches mm	C to E Inches mm	Lbs. kg	
# 20 500 × 20 500 × 16 400	17.25 438	—	288.6 130.9	
	18 450	—	297.0 134.7	
	20.00 508	20.00 508	340.0 154.2	
# 24 600 × 24 600 × 8 200	10 250	20.00 508	343.9 156.0	
	12 300	20.00 508	352.8 160.0	
	14 § 350	20.00 508	360.0 163.3	
	16 400	20.00 508	378.0 171.5	
	18 § 450	20.00 508	380.0 172.4	
	20 500	20.00 508	373.0 169.2	
	14 – 24 350 – 600		AGS For AGS fitting information, see publication 20.05	

+ Contact Victaulic for details.

Note: All fittings are ductile iron unless otherwise noted with an "sw" or "s".
 SW= Segmentally Welded- S= Carbon Steel

IMPORTANT NOTE:

No. 29T Threaded Outlet Reducing Tees are supplied NPT and are available with British Standard threads. For British Standard specify "BSP" clearly on order.

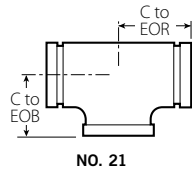
For roll grooved systems, Victaulic offers the Advanced Groove System (AGS). For pricing and availability of cut groove fittings in this size, contact your nearest Victaulic sales office.

§ Cast fitting available. Contact Victaulic for details.

Grooved End Fittings

Bullhead Tee

NO. 21

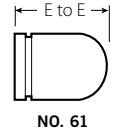


No. 21 Bullhead Tee				
Size		C to EOR Inches mm	C to EOB Inches mm	Approx. Weight Each Lbs. kg
5 125	5 125 × 8 200	7.75 197	5.50 140	28.7 13.0
6 150	6 150 × 8 200	7.75 197	6.50 165	37.5 17.0

Note: All fittings are ductile iron unless otherwise noted with an "sw" or "s".
SW= Segmentally Welded S= Carbon Steel

Bull Plug

NO. 61



Size		No. 61 Bull Plug (S)	
Nominal Size Inches mm	Actual Outside Diameter Inches mm	E to E Inches mm	Approx. Weight Each Lbs. kg
2 50	2.375 60.3	4.00 102	2.5 1.1
2½ 65	2.875 73.0	5.00 127	3.0 1.4
3 80	3.500 88.9	6.00 152	4.5 2.0
4 100	4.500 114.3	7.00 178	7.5 3.4
5 125	5.563 141.3	8.00 203	12.0 5.4
6 150	6.625 168.3	10.00 254	17.0 7.7

IMPORTANT NOTES:

Steel dish caps available through 24"/600mm, contact Victaulic.

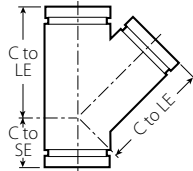
No. 61 Bull Plugs should be used in vacuum service with Style 72 or 750 couplings

Note: All fittings are ductile iron unless otherwise noted with an "sw" or "s".
SW= Segmentally Welded S= Carbon Steel

Grooved End Fittings

45° Lateral

NO. 30



NO. 30

Size		No. 30 45° Lateral (SW)		
Nominal Size Inches mm	Actual Outside Diameter Inches mm	C to LE Inches mm	C to SE Inches mm	Approx. Weight Each Lbs. kg
¾ 20	1.050 26.9	4.50 114	2.00 51	1.0 0.5
1 25	1.315 33.7	5.00 127	2.25 57	1.7 0.8
1¼ 32	1.660 42.4	5.75 146	2.50 64	2.5 (d) 1.1
1½ 40	1.900 48.3	6.25 159	2.75 70	3.5 1.6
2 50	2.375 60.3	7.00 178	2.75 70	4.6 (d) 2.1
2½ 65	2.875 73.0	7.75 197	3.00 76	9.0 94.1
76.1 mm	3.000 76.1	8.50 216	3.25 83	11.0 5.0
3 80	3.500 88.9	8.50 216	3.25 83	11.7 (d) 5.4
3½ 90	4.000 101.6	10.00 254	3.50 89	17.8 8.1
4 100	4.500 114.3	10.50 267	3.75 95	22.2 (d) 10.1
5 125	5.563 141.3	12.50 318	4.00 102	21.8 9.9
165.1 mm	6.500 165.1	14.00 356	4.50 114	43.6 19.8

Size		No. 30 45° Lateral (SW)		
Nominal Size Inches mm	Actual Outside Diameter Inches mm	C to LE Inches mm	C to SE Inches mm	Approx. Weight Each Lbs. kg
6 150	6.625 168.3	14.00 356	4.50 114	43.6 19.8
8 200	8.625 219.1	18.00 457	6.00 152	72.0 32.7
10 250	10.750 273.0	20.50 521	6.50 165	105.0 47.6
12 300	12.750 323.9	23.00 584	7.00 178	165.0 74.8
14 # 350	14.000 355.6	26.50 673	7.50 191	276.0 125.2
16 # 400	16.000 406.4	29.00 737	8.00 203	344.2 156.1
18 # 450	18.000 457.0	32.00 813	8.50 216	429.0 194.6
20 # 500	20.000 508.0	35.00 889	9.00 229	500.0 226.8
24 # 600	24.000 610.0	40.00 1016	10.00 254	715.0 324.3
14 – 24 350 – 600	AGS For AGS fitting information, see publication 20.05			

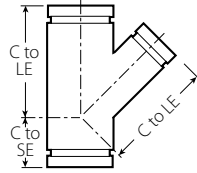
For roll grooved systems, Victaulic offers the Advanced Groove System (AGS). For pricing and availability of cut groove fittings in this size, contact your nearest Victaulic sales office.

Note: All fittings are ductile iron unless otherwise noted with an "sw" or "s".
SW= Segmentally Welded; S= Carbon Steel

Grooved End Fittings

45° Reducing Lateral

NO. 30-R



NO. 30-R

Size			No. 30-R 45° Reducing Lateral (SW)				
Nominal Size Inches mm			C to LE Inches mm	C to SE Inches mm	Approx. Weight Each Lbs. kg		
3 80	x	3 80	x	2 50	8.50 216	3.25 83	9.8 4.4
					2½ 65	8.50 216	3.25 83
4 100	x	4 100	x	2 50	10.50 267	3.75 95	10.0 4.5
					2½ 65	10.50 267	3.75 95
				3 80	10.50 267	3.75 95	18.3 8.3
					4 100	12.50 318	4.00 102
5 125	x	5 125	x	3 80	12.50 318	4.00 102	27.0 12.2
					4 100	12.50 318	4.00 102
				5 125	14.00 356	4.50 114	37.0 16.8
6 150	x	6 150	x	4 100	14.00 356	4.50 114	36.0 16.3
					5 125	14.00 356	4.50 114
				6 150	18.00 457	6.00 152	62.0 28.1
					5 125	18.00 457	6.00 152
8 200	x	8 200	x	6 150	18.00 457	6.00 152	82.0 37.2
					8 200	20.50 521	6.50 165
				5 125	20.50 521	6.50 165	99.0 44.9
					6 150	20.50 521	6.50 165
10 250	x	10 250	x	8 200	20.50 521	6.50 165	118.0 53.5
					10 250	23.00 584	7.00 178
				6 150	23.00 584	7.00 178	137.0 62.1
					8 200	23.00 584	7.00 178
12 300	x	12 300	x	10 250	23.00 584	7.00 178	167.0 75.8
					12 300	23.00 584	7.00 178
				8 200	23.00 584	7.00 178	
					10 250	23.00 584	7.00 178

Size			No. 30-R 45° Reducing Lateral (SW)				
Nominal Size Inches mm			C to LE Inches mm	C to SE Inches mm	Approx. Weight Each Lbs. kg		
# 14 350	x	14 350	x	4 100	26.50 673	7.50 191	172.0 78.0
				6 150	26.50 673	7.50 191	187.0 84.8
				8 200	26.50 673	7.50 191	205.8 93.4
				10 250	26.50 673	7.50 191	235.0 106.6
				12 300	26.50 673	7.50 191	250.0 113.4
				14 350	26.50 673	7.50 191	
# 16 400	x	16 400	x	6 150	29.00 737	8.00 203	215.0 97.5
				8 200	29.00 737	8.00 203	252.5 114.5
				10 250	29.00 737	8.00 203	265.0 120.2
				12 300	29.00 737	8.00 203	295.0 133.8
				14 350	29.00 737	8.00 203	305.0 138.3
				16 400	29.00 737	8.00 203	
# 18 450	x	18 450	x	6 150	32.00 813	8.50 216	274.0 124.3
				8 200	32.00 813	8.50 216	275.0 124.7
				12 300	32.00 813	8.50 216	347.0 157.4
				14 350	32.00 813	8.50 216	350.0 158.8
				16 400	32.00 813	8.50 216	362.0 164.2
				18 450	32.00 813	8.50 216	
# 20 500	x	20 500	x	12 300	35.00 889	9.00 229	415.0 188.2
				14 350	35.00 889	9.00 229	420.0 190.5
				16 400	35.00 889	9.00 229	425.0 192.8
				18 450	35.00 889	9.00 229	
# 24 600	x	24 600	x	16 400	40.00 1016	10.00 254	425.0 192.8
				20 600	40.00 1016	10.00 254	570.0 258.6
				24 600	40.00 1016	10.00 254	
14 – 24 350 – 600			AGS For AGS fitting information, see publication 20.05				

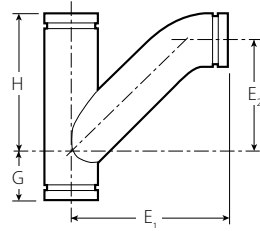
For roll grooved systems, Victaulic offers the Advanced Groove System (AGS). For pricing and availability of cut groove fittings in this size, contact your nearest Victaulic sales office.

Note: All fittings are ductile iron unless otherwise noted with an "sw" or "s". SW= Segmentally Welded; S= Carbon Steel

Grooved End Fittings

Tee Wye

NO. 32



NO. 32

Size			No. 32 Tee Wye (SW)				Approx. Wgt. Each Lbs. kg
Nominal Size Inches mm	G Inches mm	H Inches mm	E ₁ Inches mm	E ₂ Inches mm			
2 50 × 2 50 × 2 50	2.75 70	7.00 178	9.00 229	4.63 118	6.4 2.9		
2½ 65 × 2½ 65 × 2½ 65	3.00 76	7.75 197	10.50 267	5.75 146	11.5 5.2		
3 80 × 3 80 × 3 80	3.25 83	8.50 216	11.50 292	6.50 165	14.3 6.5		
3½ 90 × 3½ 90 × 3½ 90	3.25 89	10.00 254	13.00 330	7.75 197	22.9 10.4		
4 100 × 4 100 × 4 100	3.75 95	10.50 267	13.63 346	8.13 207	26.0 11.8		

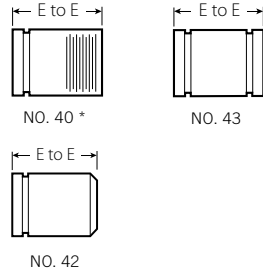
Size			No. 32 Tee Wye (SW)				Approx. Wgt. Each Lbs. kg
Nominal Size Inches mm	G Inches mm	H Inches mm	E ₁ Inches mm	E ₂ Inches mm			
5 125 × 5 125 × 5 125	4.00 102	12.50 318	16.13 410	10.00 254	48.0 21.8		
6 150 × 6 150 × 6 150	4.50 114	14.00 356	18.25 464	11.50 292	60.5 27.4		
8 200 × 8 200 × 8 200	6.00 152	18.00 457	23.25 591	15.25 387	127.1 57.7		
10 250 × 10 250 × 10 250	6.50 165	20.50 521	27.25 692	18.00 457	190.0 86.2		
12 300 × 12 300 × 12 300	7.00 178	23.00 584	31.00 787	20.50 521	240.0 108.9		

Note: All fittings are ductile iron unless otherwise noted with an "sw" or "s".
SW= Segmentally Welded S= Carbon Steel

Grooved End Fittings

Adapter Nipple

- NO. 40** Grv. × Thd.
- NO. 42** Grv. × Bev.
- NO. 43** Grv. × Grv.



Size		No. 40, 42, 43 Adapter Nipple (s)	
Nominal Size Inches mm	Actual Outside Diameter Inches mm	E to E Inches mm	Approx. Weight Each Lbs. kg
3/4	1.050	3.00	0.3
20	26.9	76	0.1
1	1.315	3.00	0.4
25	33.7	76	0.2
1 1/4	1.660	4.00	0.8
32	42.4	102	0.4
1 1/2	1.900	4.00	0.9
40	48.3	102	0.4
2	2.375	4.00	1.2
50	60.3	102	0.5
2 1/2	2.875	4.00	1.9
65	73.0	102	0.9
3	3.500	4.00	2.5
80	88.9	102	1.1
3 1/2	4.000	4.00	2.1
90	101.6	102	0.9
4	4.500	6.00	5.5
100	114.3	152	2.5
5	5.563	6.00	7.4
125	141.3	152	3.4

Size		No. 40, 42, 43 Adapter Nipple (s)	
Nominal Size Inches mm	Actual Outside Diameter Inches mm	E to E Inches mm	Approx. Weight Each Lbs. kg
6	6.625	6.00	9.5
150	168.3	152	4.3
8	8.625	6.00	14.2
200	219.1	152	6.4
10	10.750	8.00	27.0
250	273.0	203	12.2
12	12.750	8.00	33.0
300	323.9	203	15.0

* Available with British Standard Pipe Threads, specify "BSP" clearly on order.

IMPORTANT NOTES:

For pump package nipples with 1 1/2"/40 mm hole cut to receive Style 923 Vic-Let or Style 924 Vic-O-Well request special No. 40, 42 or 43 nipples and specify No. 40-H, 42-H or 43-H on order. NOTE: 4 – 12"/100 – 300 mm diameter – 8"/200 mm minimum length required.

For roll grooved systems, Victaulic offers the Advanced Groove System (AGS). For pricing and availability of cut groove fittings in this size, contact your nearest Victaulic sales office.

Note: All fittings are ductile iron unless otherwise noted with an "sw" or "s". SW= Segmentally Welded S= Carbon Steel

Grooved End Fittings

Cap

NO. 60



NO. 60

Size		No. 60 Cap	
Nominal Size Inches mm	Actual Outside Diameter Inches mm	T Thickness Inches mm	Approx. Weight Each Lbs. kg
¾	1.050	0.88	0.2
20	26.9	22	0.1
1	1.315	0.88	0.3
25	33.7	22	0.1
1¼	1.660	0.88	0.3
32	42.4	22	0.1
1½	1.900	0.88	0.5
40	48.3	22	0.2
2	2.375	0.88	0.6
50	60.3	22	0.3
2½	2.875	0.88	1.0
65	73.0	22	0.5
76.1 mm	3.000	0.88	1.2
	76.1	22	0.5
3	3.500	0.88	1.2
80	88.9	22	0.5
3½	4.000	0.88	2.5
90	101.6	22	1.1
108.0 mm	4.250	1.00	2.3
	108.0	25	1.0
4	4.500	1.00	2.5
100	114.3	25	1.1
133.0 mm	5.250	1.00	4.5
	133.0	25	2.0
139.7 mm	5.500	1.00	4.5
	139.7	25	2.0
5	5.563	1.00	4.6
125	141.3	25	2.1
159.0 mm	6.250	1.00	6.8
	159.0	25	3.1
165.1 mm	6.500	1.00	7.3
	165.1	25	3.3

Size		No. 60 Cap	
Nominal Size Inches mm	Actual Outside Diameter Inches mm	T Thickness Inches mm	Approx. Weight Each Lbs. kg
6	6.625	1.00	6.1
150	168.3	25	2.8
8	8.625	1.19	13.1
200	219.1	30	5.9
10	10.750	1.25	21.0
250	273.0	32	9.5
12	12.750	1.25	35.6
300	323.9	32	16.2
14 # (s)	14.000	9.50	*
350	355.6	241	
16 # (s)	16.000	10.00	*
400	406.4	254	
18 # (s)	18.000	11.00	*
450	457.0	279	
20 # (s)	20.000	12.00	*
500	508.0	305	
24 # (s)	24.000	13.50	*
600	610.0	343	
14 – 24 350 – 600	AGS For AGS fitting information, see publication 20.05		

IMPORTANT NOTES:

* Steel dish caps available through 24"/600 mm, contact Victaulic.

No. 60 cap is not suitable for use in vacuum service with Style 72 or 750 couplings. No. 61 bull plugs should be used, see pg. 35.

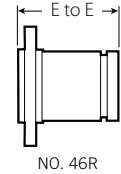
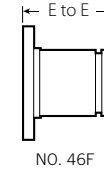
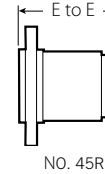
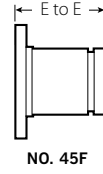
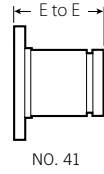
For roll grooved systems, Victaulic offers the Advanced Groove System (AGS). For pricing and availability of cut groove fittings in this size, contact your nearest Victaulic sales office.

Note: All fittings are ductile iron unless otherwise noted with an "sw" or "s". SW= Segmentally Welded- S= Carbon Steel

Grooved End Fittings

Flanged Adapter Nipple

- NO. 41** ANSI Class 125 (Cast Iron)
- NO. 45F** ANSI Class 150 Flat Face
- NO. 45R** ANSI Class 150 Raised Face
- NO. 46F** ANSI Class 300 Flat Face
- NO. 46R** ANSI Class 300 Raised Face



Size		No. 41 ANSI 125 Flange Adapter Nipple		No. 45F and No. 45R ANSI 150 Flange Adapter Nipple (S)		No. 46F and No. 46R ANSI 300 Flange Adapter Nipple (S)	
Nominal Size Inches mm	Actual Outside Diameter Inches mm	E to E Inches mm	Approx. Weight Each Lbs. kg	E to E Inches mm	Approx. Weight Each Lbs. kg	E to E Inches mm	Approx. Weight Each Lbs. kg
¾	1.050	3	—	3	2.3	3	3.3
20	26.9	76	—	76	1.0	76	1.5
1	1.315	3	2.5	3	2.7	3	3.9
25	33.7	76	1.1	76	1.2	76	1.8
1¼	1.660	4	3.0	4	3.3	4	4.8
32	42.4	102	1.4	102	1.5	102	2.2
1½	1.900	4	3.5	4	3.9	4	6.9
40	48.3	102	1.6	102	1.8	102	3.1
2	2.375	4	5.5	4	6.2	4	8.2
50	60.3	102	2.5	102	2.8	102	3.7
2½	2.875	4	8.0	4	9.9	4	11.9
65	73.0	102	3.6	102	4.5	102	5.4
3	3.500	4	9.5	4	11.4	4	16.5
80	88.9	102	4.3	102	5.2	102	7.5
3½	4.00	4	12.0	4	15.1	4	20.1
90	101.6	102	5.4	102	6.8	102	9.1
4	4.500	6	16.7	6	18.4	6	27.4
100	114.3	152	7.6	152	8.3	152	12.4
5	5.563	6	21.5	6	21.3	6	35.3
125	141.3	152	9.8	152	9.7	152	16.0
6	6.625	6	26.5	6	27.5	6	47.5
150	168.3	152	12.0	152	12.5	152	21.5
8	8.625	6	39.0	6	41.3	6	70.3
200	219.1	152	17.7	152	18.8	152	31.9
10	10.750	8	57.0	8	59.8	8	100.8
250	273.0	203	25.9	203	27.1	203	45.7
12	12.750	8	41.0	8	88.2	8	146.2
300	323.9	203	18.6	203	40.0	203	66.3
14 #	14.000	8	—	8	+	8	+
350	355.6	203	—	203	+	203	+
16 #	16.000	8	—	8	+	8	+
400	406.4	203	—	203	+	203	+
18 #	18.000	8	—	8	+	8	+
450	457.0	203	—	203	+	203	+
20 #	20.000	8	—	8	+	8	+
500	508.0	203	—	203	+	203	+
24 #	24.000	8	—	8	+	8	+
600	610.0	203	—	203	+	203	+
14 – 24 350 – 600	AGS For AGS fitting information, see publication 20.05						

IMPORTANT NOTES:

+ Contact Victaulic for details.

Flanged adapter nipples are supplied with standard rolled grooves.

Standard cut grooves or machining for rubber lining are optionally available. Contact Victaulic for details.

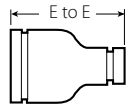
For roll grooved systems, Victaulic offers the Advanced Groove System (AGS). For pricing and availability of cut groove fittings in this size, contact your nearest Victaulic sales office.

Note: All fittings are ductile iron unless otherwise noted with an "sw" or "s". SW= Segmentally Welded. S= Carbon Steel

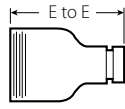
Grooved End Fittings

Swaged Nipple

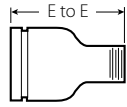
NO. 53 Grv. x Grv.
NO. 54 Grv. x Thd.
NO. 55 Thd. x Grv.



NO. 53



NO. 55



NO. 54

Size		No. 53, 54 and 55 Swaged Nipples (S)	
Nominal Size Inches		E to E Inches	Approx. Weight Each Lbs.
mm		mm	kg
2 50	× 1 25	6.50	2.0
		165	0.9
		6.50	2.0
1 ¼	32	6.50	2.0
		165	0.9
		6.50	2.0
1 ½	40	6.50	2.0
		165	0.9
		7.00	3.0
2 ½	× 1 25	7.00	1.4
		178	1.4
		7.00	3.0
1 ¼	32	7.00	3.0
		178	1.4
		7.00	3.0
1 ½	40	7.00	3.0
		178	1.4
		7.00	3.0
2	50	7.00	3.0
		178	1.4
		8.00	4.5
3	× 1 25	8.00	2.0
		203	2.0
		8.00	4.5
1 ¼	32	8.00	4.5
		203	2.0
		8.00	4.4
1 ½	40	8.00	2.0
		203	2.0
		8.00	4.5
2 ½	× 3 80	8.00	6.8
		203	3.1
		9.00	7.5
4	× 1 25	9.00	3.4
		229	3.4
		9.00	7.5
1 ¼	32	9.00	7.5
		229	3.4
		9.00	7.5
1 ½	40	9.00	7.5
		229	3.4
		9.00	7.5
2	50	9.00	7.5
		229	3.4
		9.00	7.5
4	× 2 ½ 65	9.00	7.5
		229	3.4
		9.00	7.5

Size		No. 53, 54 and 55 Swaged Nipples (S)	
Nominal Size Inches		E to E Inches	Approx. Weight Each Lbs.
mm		mm	kg
4 100	× 3 80	9.00	7.5
		229	3.4
		9.00	7.5
3 ½	90	9.00	7.5
		229	3.4
		11.00	11.5
5 125	× 2 50	11.00	5.2
		279	5.2
		11.00	11.3
3	80	11.00	5.1
		279	5.1
		11.00	11.5
4	100	11.00	5.2
		279	5.2
		12.00	17.0
6 150	× 1 25	12.00	7.7
		305	7.7
		12.00	17.0
1 ¼	32	12.00	17.0
		305	7.7
		12.00	17.2
1 ½	40	12.00	7.8
		305	7.8
		12.00	17.4
2	50	12.00	7.9
		305	7.9
		12.00	17.4
2 ½	65	12.00	7.9
		305	7.9
		12.00	17.4
3	80	12.00	17.4
		305	7.9
		12.00	17.4
3 ½	90	12.00	17.4
		305	7.9
		12.00	17.5
4	100	12.00	17.5
		305	7.9
		12.00	17.5
4 ½	120	12.00	17.5
		305	7.9
		12.00	17.5
5	125	12.00	17.5
		305	7.9
		12.00	20.0
8 200	× 6 150	+	9.1

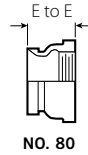
+ Contact Victaulic for details.

Note: All fittings are ductile iron unless otherwise noted with an "sw" or "s".
 SW= Segmentally Welded· S= Carbon Steel

Grooved End Fittings

Female Threaded Adapter

NO. 80



NO. 80

Size		No. 80 Female Threaded Adapter	
Nominal Size Inches mm	Actual Outside Diameter Inches mm	E to E Inches mm	Approx. Weight Each Lbs. kg
¾ 20	1.050 26.9	2.00 51	1.0 0.5
1 25	1.315 33.7	2.06 52	1.0 0.5
1¼ 32	1.660 42.4	2.31 (sw) 59	1.5 0.7
1½ 40	1.900 48.3	2.31 (sw) 59	1.5 0.7
2 50	2.375 60.3	2.50 64	1.4 0.6
2½ 65	2.875 73.0	2.75 70	1.5 0.7
3 80	3.500 88.9	2.75 70	2.9 1.3
4 100	4.500 114.3	3.25 83	4.5 2.0

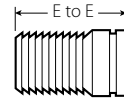
Note: All fittings are ductile iron unless otherwise noted with an "sw" or "s".
SW= Segmentally Welded; S= Carbon Steel

IMPORTANT NOTE:

Available with British Standard Pipe threads, specify "BSP" clearly on order.

Hose Nipple

NO. 48



NO. 48

Size		No. 48 Hose Nipple (s)	
Nominal Size Inches mm	Actual Outside Diameter Inches mm	E to E Inches mm	Approx. Weight Each Lbs. kg
¾ 20	1.050 26.9	3.12 79	0.3 0.1
1 25	1.315 33.7	3.38 86	0.4 0.2
1¼ 32	1.660 42.4	3.88 98	0.6 0.3
1½ 40	1.900 48.3	3.88 98	0.8 0.4
2 50	2.375 60.3	4.50 114	1.1 0.5
2½ 65	2.875 73.0	5.38 137	2.0 0.9
3 80	3.500 88.9	5.75 146	3.2 1.5
4 100	4.500 114.3	7.00 178	4.9 2.2
5 125	5.563 141.3	8.75 222	8.0 3.6
6 150	6.625 168.3	10.12 257	14.3 6.5
8 200	8.625 219.1	11.88 302	24.7 11.2
10 250	10.750 273.0	12.50 318	40.1 18.2
12 300	12.750 323.9	14.50 368	62.0 28.1

Note: All fittings are ductile iron unless otherwise noted with an "sw" or "s".
SW= Segmentally Welded; S= Carbon Steel

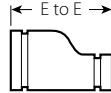
Grooved End Fittings

Concentric/Eccentric Reducer

NO. 50 Concentric
NO. 51 Eccentric



NO. 50



NO. 51

Size	No. 50 Concentric Reducer		No. 51 Eccentric Reducer			
	Nominal Size Inches mm	E to E Inches mm	Approx. Weight Each Lbs. kg	E to E Inches mm	Approx. Weight Each Lbs. kg	
1 1/4 32	x 3/4 20	+	1.9 0.9	—	—	
		1 25	+	1.9 0.9	—	—
1 1/2 40	x 3/4 20	+	1.4 0.6	—	—	
		1 25	2.50 64	0.8 0.4	8.50 (SW) 216	4.5 2.0
		1 1/4 32	2.50 64	1.0 0.5	—	—
2 50	x 3/4 20	2.50 64	0.9 0.3	9.00 (SW) 229	2.0 0.9	
		1 25	2.50 64	0.7 0.3	9.00 (SW) 229	2.3 1.0
		1 1/4 32	2.50 64	1.2 0.5	9.00 (SW) 229	4.6 2.1
		1 1/2 40	3.50 89	1.0 0.5	3.50 89	1.1 0.5
2 1/2 65	x 3/4 20	+	1.3 0.6	+	3.3 1.5	
		1 25	2.50 64	1.1 0.5	9.50 241	3.5 1.6
		1 1/4 32	3.50 89	3.3 1.5	3.50 89	1.4 0.6
		1 1/2 40	2.50 64	3.6 1.6	9.50 (SW) 241	3.7 1.7
		2 50	2.50 64	3.9 1.8	3.50 89	4.3 2.0
3 80	x 3/4 20	+	1.5 0.7	+	4.5 2.0	
		1 25	2.50 241	1.3 0.6	9.50 (SW) 241	4.8 2.2
		1 1/4 32	2.50 64	1.4 0.6	+	4.8 2.2
		1 1/2 40	2.50 64	5.1 2.3	9.50 (SW) 241	5.1 2.3
		2 50	2.50 64	1.6 0.7	3.50 89	6.0 2.7
		2 1/2 65	2.50 64	1.8 0.8	3.50 89	7.0 3.2
		76.1	2.50 64	2.1 1.0	—	—

Size	No. 50 Concentric Reducer		No. 51 Eccentric Reducer			
	Nominal Size Inches mm	E to E Inches mm	Approx. Weight Each Lbs. kg	E to E Inches mm	Approx. Weight Each Lbs. kg	
3 1/2 90	x 3 80	2.50 64	2.0 0.9	9.50 (SW) 241	7.0 3.2	
		4 100	1 25	3.00 76	3.0 1.4	13.00 (SW) 330
4 100	x 1 1/4 32	+	4.6 2.1	—	—	
		1 1/2 40	3.00 (SW) 76	2.6 1.2	10.00 (SW) 254	8.1 3.7
		2 50	3.00 76	2.4 1.1	4.00 102	3.3 1.5
		2 1/2 65	3.00 76	2.7 1.2	4.00 102	3.4 1.5
		3 80	3.00 76	3.2 1.4	4.00 102	3.5 1.6
		3 1/2 90	3.00 76	2.9 1.3	10.00 (SW) 254	8.0 3.6
		5 125	x 2 50	11.00 (SW) 279	9.0 4.1	11.00 (SW) 279
5 125	x 2 1/2 65	4.00 102	4.3 2.0	11.00 (SW) 279	10.8 4.9	
		3 80	4.00 102	5.5 2.5	11.00 (SW) 279	11.1 5.0
		4 100	3.50 89	4.3 1.9	5.00 127	12.0 5.4
		6 150	x 1 25	4.00 102	5.0 2.3	11.50 (SW) 292
6 150	x 1 1/2 40	+	5.5 2.5	+	+	
		2 50	4.00 102	6.6 3.0	11.50 (SW) 292	14.5 6.6
		2 1/2 65	4.00 102	6.4 2.9	11.50 (SW) 292	14.2 6.4
		3 80	4.00 102	6.4 2.9	5.50 140	15.0 6.8
		4 100	4.00 102	6.5 2.9	5.50 140	17.0 7.7
		5 125	4.00 102	6.4 2.9	5.50 140	17.0 7.7
8 200	x 2 1/2 65	16.00 406	7.9 3.6	12.00 (SW) 305	26.1 11.8	
		3 80	5.00 127	9.3 4.2	12.00 (SW) 305	22.0 10.0

Note: All fittings are ductile iron unless otherwise noted with an "sw" or "s".
 SW= Segmentally Welded; S= Carbon Steel

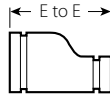
Grooved End Fittings

Concentric/Eccentric Reducer

NO. 50 Concentric
NO. 51 Eccentric



NO. 50



NO. 51

Size	No. 50 Concentric Reducer		No. 51 Eccentric Reducer		
	Nominal Size Inches mm	E to E Inches mm	Approx. Weight Each Lbs. kg	E to E Inches mm	Approx. Weight Each Lbs. kg
8 200 ×	4 100	5.00 127	10.4 4.8	12.00 (SW) 305	23.0 10.4
	5 125	5.00 127	11.6 5.2	12.00 (SW) 305	23.0 10.4
	6 150	5.00 127	11.9 5.4	6.00 152	24.0 10.9
10 250 ×	4 100	6.00 152	19.7 8.9	13.00 (SW) 330	32.0 14.5
	5 125	+	34.3 15.6	+	34.6 15.7
	6 150	6.00 152	20.0 9.1	13.00 (SW) 330	36.9 16.7
	8 200	6.00 152	22.0 10.0	7.00 178	21.6 9.8
12 300 ×	4 100	+	44.0 20.0	14.00 (SW) 356	48.0 21.8
	6 150	7.00 178	24.6 11.2	14.00 (SW) 356	50.0 22.7
	8 200	7.00 178	52.0 23.6	14.00 (SW) 356	53.5 24.3
	10 250	7.00 178	39.0 17.7	14.00 (SW) 356	57.0 25.9
# 14 350 ×	6 150	13.00 330	65.0 29.5	13.00 330	60.0 27.2
	8 200	13.00 330	65.0 29.5	13.00 330	60.0 27.2
	10 250	13.00 330	66.0 29.9	13.00 330	65.0 29.5
	12 300	13.00 330	68.0 30.8	13.00 330	66.0 29.9
# 16 400 ×	8 200	14.00 356	73.0 33.1	14.00 355	73.0 33.1
	10 § 250	14.00 356	73.0 33.1	14.00 355	73.0 33.1
	12 300	14.00 356	73.0 33.1	14.00 355	73.0 33.1
	14 350	14.00 356	73.0 33.1	14.00 355	73.0 33.1
# 18 450 ×	10 250	15.00 381	91.0 41.3	15.00 381	91.0 41.3

Size	No. 50 Concentric Reducer		No. 51 Eccentric Reducer		
	Nominal Size Inches mm	E to E Inches mm	Approx. Weight Each Lbs. kg	E to E Inches mm	Approx. Weight Each Lbs. kg
# 18 450 ×	12 300	15.00 381	91.0 41.3	15.00 381	91.0 41.3
	14 350	15.00 381	91.0 41.3	15.00 381	91.0 41.3
	16 400	15.00 381	91.0 41.3	15.00 381	91.0 41.3
# 20 500 ×	10 250	20.00 508	110.0 49.9	20.00 508	177.0 80.3
	12 300	20.00 508	120.0 54.4	20.00 508	120.0 54.4
	14 350	20.00 508	149.0 67.9	20.00 508	149.0 67.9
	16 400	20.00 508	120.0 54.4	20.00 508	120.0 54.4
	18 450	20.00 508	136.0 61.7	20.00 508	136.0 61.7
	20 500	20.00 508	151.0 68.5	20.00 508	190.0 86.2
14 – 24 350 – 600	AGS For AGS fitting information, see publication 20.05				

+ Contact Victaulic for details.

* Available with male threaded small end No. 52.

Note: All fittings are ductile iron unless otherwise noted with an "sw" or "s". SW= Segmentally Welded; S= Carbon Steel

IMPORTANT NOTE:

Steel eccentric reducers available through 30"/750mm, contact Victaulic for dimensions.

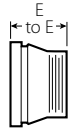
For roll grooved systems, Victaulic offers the Advanced Groove System (AGS). For pricing and availability of cut groove fittings in this size, contact your nearest Victaulic sales office.

§ Cast fitting available for JIS size. Contact Victaulic for details.

Grooved End Fittings

Small Threaded Reducer

NO. 52



NO. 52



NO. 52F

Size	No. 52 Small Threaded Reducer		No. 52F Concentric Reducer with BSPT Female Threaded End		
	Nominal Size Inches mm	E to E Inches mm	Approx. Weight Each Lbs. kg	E to E Inches mm	Approx. Weight Each Lbs. kg
1 1/2 40	x 1 25	2.50	0.8	—	—
		64	0.4		
		2.50	0.9	—	—
		64	0.4		
2 50	x 3/4 20	2.50	0.9	—	—
		64	0.4		
		2.50	0.7	—	—
		64	0.3		
		2.50	1.2	—	—
		64	0.5		
		2.50	1.0	—	—
		64	0.5		
2 1/2 65	x 1 25	2.50	1.1	—	—
		64	0.5		
		2.50 (sw)	1.2	—	—
		64	0.5		
		2.50 (sw)	1.3	—	—
		64	0.6		
		3.00	1.4	—	—
		76	0.6		
76.1	x 48.3	63.5	0.8	63.5	0.77
		60	—		
3 80	x 3/4 20	+(sw)	1.5	—	—
			0.7		
		2.50	1.3	—	—
		64	0.6		
		2.50	1.5	—	—
		64	0.7		
		2.50 (sw)	1.5	—	—
		64	0.7		
		2.50	1.5	—	—
		64	0.7		
		2.50	2.4	—	—
		64	1.1		
88.9	x 42.4	63.5	0.9	63.5	0.82
		48.3	0.9		
		60	—	63.5	0.89
			—	—	—
4 100	x 1 25	3.00	2.3	—	—
		76	1.0		
		3.00	2.7	—	—
		76	1.2		
		3.00	2.6	—	—
		76	1.2		

Size	No. 52 Small Threaded Reducer		No. 52F Concentric Reducer with BSPT Female Threaded End		
	Nominal Size Inches mm	E to E Inches mm	Approx. Weight Each Lbs. kg	E to E Inches mm	Approx. Weight Each Lbs. kg
4 100	x 2 1/2 65	3.00	2.6	—	—
		76	1.2		
		3.00	2.5	—	—
		76	1.1		
108	x 42.4	76.2	1.3	76.2	1.32
		48.3	1.3		
		60	—	76.2	1.39
			—	—	76.2
114.3	x 42.4	76.2	1.3	76.2	1.30
		48.3	1.3		
		60	—	76.2	1.40
			—	—	76.2
5 125	x 4 100	+	4.5	—	—
			2.0		
133	x 60	—	—	114.3	2.17
139	x 60	—	—	114.3	2.26
6 150	x 1 25	4.00	5.5	—	—
		102	2.5		
		4.00	5.7	—	—
		102	2.6		
		4.00	5.8	—	—
		102	2.6		
		4.00	5.8	—	—
		102	2.6		
		4.00	6.5	—	—
		100	2.9		
		4.00	2.0	—	—
		125	0.9		
159	x 42.4	114.3	2.2	114.3	2.45
		48.3	2.2		
		60	—	114.3	2.60
			—	—	114.3
165.1	x 42.4	101.6	2.4	101.6	2.90
		48.3	2.6		
		60	—	101.6	3.00
			—	—	101.6
8 200	x 2 50	16.00	1.5	—	—
		406	0.7		
		16.00	1.7	—	—
		406	0.8		

+ Contact Victaulic for details.

Note: All fittings are ductile iron unless otherwise noted with an "sw" or "s".
SW= Segmentally Welded- S= Carbon Steel

IMPORTANT NOTE:

Available with British Standard Pipe Threads, specify "BSP" clearly on order

Grooved End Fittings

INSTALLATION

Reference should always be made to the I-100 Victaulic Field Installation Handbook for the product you are installing. Handbooks are included with each shipment of Victaulic products for 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.

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.

Long Radius Steel Elbows

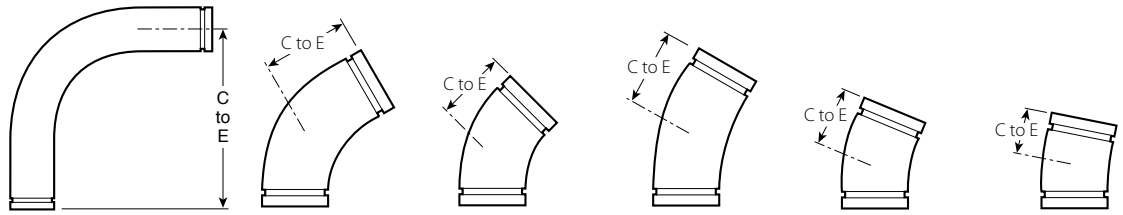
3D, 5D and 6D

Victaulic long radius elbows are formed from standard wall steel pipe to ASTM A-53 Grade B. Fittings are painted orange enamel with galvanized optionally available.

Elbows are supplied with standard cut grooves unless otherwise requested. They are also available with plain ends by request.

DIMENSIONS

Long Radius Steel Elbows - 3D



NO. 100 - 3D

NO. 14 - 3D

NO. 110 - 3D

NO. 15 - 3D

NO. 12 - 3D

NO. 13 - 3D

Fitting Size		No. 100 - 3D 90°		No. 14 - 3D 60°		No. 110 - 3D 45°		No. 15 - 3D 30°		No. 12 - 3D 22½°		No. 13 - 3D 11¼°	
Nominal Outside Dia. Inches mm	Actual Outside Dia. Inches mm	C to E Inches mm	Approx. Weight Each Lbs. kg	C to E Inches mm	Approx. Weight Each Lbs. kg	C to E Inches mm	Approx. Weight Each Lbs. kg	C to E Inches mm	Approx. Weight Each Lbs. kg	C to E Inches mm	Approx. Weight Each Lbs. kg	C to E Inches mm	Approx. Weight Each Lbs. kg
2 50	2.375 60.3	10.00 254	5.3 2.4	7.50 191	4.3 2.0	6.50 165	3.9 1.8	5.75 146	3.4 1.5	5.25 133	3.2 1.5	4.50 114	2.8 1.3
2½ 65	2.875 73.0	11.50 292	9.5 4.3	8.25 210	7.7 3.5	7.25 184	6.7 3.0	6.00 152	5.8 2.6	5.50 140	5.3 2.4	4.75 121	4.6 2.1
3 80	3.500 88.9	13.00 330	14.0 6.4	9.25 235	11.0 5.0	7.75 197	9.5 4.3	6.50 165	8.0 3.6	5.75 146	7.3 3.3	5.00 127	6.2 2.8
3½ 90	4.000 101.6	14.50 368	18.6 8.4	10.00 254	14.4 6.5	8.50 216	12.3 5.6	6.75 172	10.2 4.6	6.00 152	9.2 4.2	5.00 127	7.6 3.4
4 100	4.500 114.3	16.00 407	24.1 10.9	11.00 279	18.5 8.4	9.00 229	15.7 7.1	7.25 184	12.8 5.8	6.50 165	11.4 5.2	5.25 133	9.3 4.2
4½ 120	5.000 127.0	18.00 457	31.6 14.3	12.25 311	24.2 11.0	10.00 254	20.5 9.3	8.25 210	16.8 7.6	7.25 184	14.9 6.8	5.75 146	12.2 5.5
5 125	5.563 141.3	20.00 508	40.9 18.6	13.75 349	31.3 14.2	11.25 286	26.5 12.0	9.00 229	21.8 9.9	8.00 203	19.4 8.8	6.50 165	15.8 7.2
6 150	6.625 168.3	24.00 610	63.7 28.9	16.50 419	48.8 22.1	13.50 343	41.3 18.7	10.75 273	33.9 15.4	9.50 241	30.1 13.7	7.75 197	24.6 11.2
8 200	8.625 219.1	32.00 813	127.8 58.0	22.00 559	97.9 44.4	18.00 457	82.9 37.6	14.50 368	68.0 30.8	12.75 324	60.5 27.4	10.50 267	49.3 22.4
10 250	10.750 273.0	40.00 1016	226.4 102.7	27.25 692	173.4 78.7	22.50 572	146.9 66.6	18.00 457	120.5 54.7	16.00 406	107.2 48.6	13.00 330	87.3 39.6
12 300	12.750 323.9	48.00 1219	332.7 150.9	32.75 832	254.8 115.6	27.00 686	215.9 97.9	21.75 553	177.0 80.3	19.25 489	157.5 71.4	15.50 394	128.3 58.2
14 350	14.000 355.6	56.00 1422	427.3 193.8	38.25 972	327.3 148.5	31.50 800	277.3 125.8	25.25 641	227.3 103.1	22.50 572	202.3 91.8	18.25 464	164.8 74.8
15 375	15.000 381.0	60.00 1524	480.8 218.1	41.00 1041	368.3 167.1	33.75 857	312.0 141.5	27.00 656	255.8 116.0	24.00 610	227.6 103.2	19.50 495	185.4 84.1
16 400	16.000 406.4	64.00 1626	560.1 254.1	43.75 1111	429.0 194.6	36.00 914	363.5 164.9	29.00 737	297.9 135.1	25.50 648	265.2 120.3	20.75 527	216.0 98.0
18 450	18.000 457.2	72.00 1829	710.7 322.4	49.25 1251	544.4 246.9	40.50 1029	461.3 209.2	32.50 826	378.1 171.5	28.75 730	336.5 152.6	23.25 591	274.1 124.3
20 500	20.000 508.0	80.00 2032	879.3 398.9	54.75 1391	673.5 305.5	45.00 1143	540.7 245.3	36.00 914	467.8 212.2	32.00 813	416.3 188.8	26.00 660	339.2 153.9
22 550	22.000 559.0	88.00 2235	1067.7 484.3	60.25 1530	817.9 371.0	49.25 1251	692.9 314.3	39.75 1010	568.0 257.6	35.25 895	505.2 229.2	28.50 724	411.8 186.8
24 600	24.000 609.6	96.00 2438	1270.3 576.2	65.50 1664	973.0 441.4	53.75 1365	824.4 373.9	43.25 1099	675.7 306.5	38.25 972	601.4 272.8	31.00 787	490.0 222.3

Refer to notes on page 3

JOB/OWNER

System No. _____

Location _____

CONTRACTOR

Submitted By _____

Date _____

ENGINEER

Spec Sect _____ Para _____

Approved _____

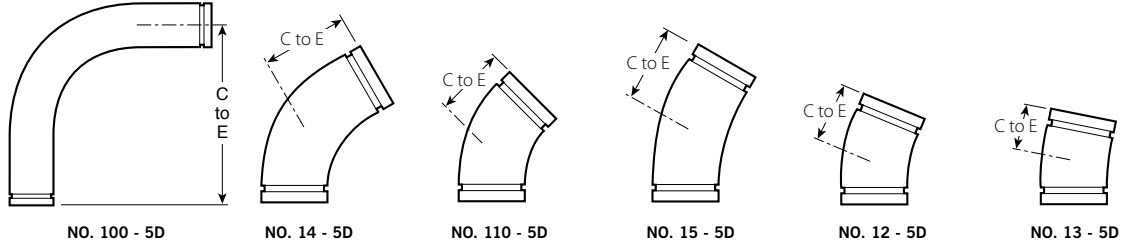
Date _____

Long Radius Steel Elbows

3D, 5D and 6D

DIMENSIONS

Long Radius
Steel Elbows - 5D



Fitting Size		No. 100 - 5D 90°		No. 14 - 5D 60°		No. 110 - 5D 45°		No. 15 - 5D 30°		No. 12 - 5D 22½°		No. 13 - 5D 11¼°	
Nominal Outside Dia. Inches mm	Actual Outside Dia. Inches mm	C to E Inches mm	Approx. Weight Each Lbs. kg	C to E Inches mm	Approx. Weight Each Lbs. kg	C to E Inches mm	Approx. Weight Each Lbs. kg	C to E Inches mm	Approx. Weight Each Lbs. kg	C to E Inches mm	Approx. Weight Each Lbs. kg	C to E Inches mm	Approx. Weight Each Lbs. kg
2	2.375	14.00	7.2	9.75	5.6	8.25	4.8	6.75	4.0	6.00	3.6	5.00	3.0
50	60.3	356	3.3	248	2.5	210	2.2	172	1.8	152	1.6	127	1.4
2 ½	2.875	16.50	13.3	11.25	10.2	9.25	8.6	7.50	7.0	6.50	6.2	5.25	5.0
65	73.0	419	6.0	286	4.6	235	3.9	191	3.2	165	2.8	133	2.3
3	3.500	19.00	19.9	12.75	15.0	10.25	12.5	8.00	10.0	7.00	8.8	5.50	6.9
80	88.9	488	9.0	324	6.8	260	5.7	203	4.5	178	4.0	140	3.1
3 ½	4.000	21.50	26.9	14.25	20.0	11.25	16.5	8.75	13.0	7.50	11.3	5.75	8.7
90	101.6	546	12.2	362	9.1	286	7.5	222	5.9	191	5.1	146	3.9
4	4.500	24.00	35.4	15.50	26.0	12.50	21.3	9.50	16.6	8.00	14.3	6.00	10.7
100	114.3	610	16.1	394	11.8	318	9.7	241	7.5	203	6.5	152	4.9
4 ½	5.000	27.00	46.3	17.50	34.0	13.75	27.9	10.50	21.7	9.00	18.6	6.75	14.0
120	127.0	686	21.0	445	15.4	349	12.7	267	9.8	229	8.4	172	6.4
5	5.563	30.00	60.0	19.50	44.1	15.50	36.1	11.75	28.1	10.00	24.1	7.50	18.2
125	141.3	762	27.2	495	20.0	394	16.4	299	12.7	254	10.9	191	8.3
6	6.625	36.00	93.5	23.25	68.6	18.50	56.2	14.00	43.8	12.00	37.6	9.00	28.3
150	168.3	914	42.4	591	31.1	470	25.5	356	19.9	305	17.1	229	12.8
8	8.625	48.00	187.6	31.00	137.7	24.50	112.8	18.75	87.9	16.00	75.4	12.00	56.8
200	219.1	1219	85.1	787	62.5	622	51.2	476	39.9	406	34.2	305	25.8
10	10.750	60.00	332.4	39.00	244.1	30.75	199.9	23.50	155.8	20.00	133.7	15.00	100.6
250	273.0	1524	150.8	991	110.7	781	90.7	597	70.7	5008	60.6	381	45.6
12	12.750	72.00	488.4	46.75	358.6	37.00	293.7	28.00	228.9	24.00	196.4	18.00	147.8
300	323.9	1829	221.5	1188	162.7	940	133.2	711	103.8	610	89.1	457	67.0
14	14.000	84.00	627.4	54.50	460.7	43.00	377.3	32.75	294.0	28.00	252.3	21.00	189.8
350	355.6	2134	284.6	1384	209.0	1092	171.1	832	133.4	711	114.4	533	86.1
15	15.000	90.00	705.8	58.25	518.3	46.00	424.6	35.25	330.8	30.00	283.9	22.50	213.6
375	381.0	2286	320.2	1498	235.1	1168	192.6	895	150.1	762	128.8	572	96.6
16	16.000	96.00	822.2	62.25	603.8	49.25	494.5	37.50	385.3	32.00	330.7	24.00	248.8
400	406.4	2438	372.9	1581	273.9	1251	224.3	953	174.8	813	150.0	610	112.9
18	18.000	108.00	1043.4	70.00	766.2	55.25	627.6	42.25	489.0	36.00	419.7	27.00	315.7
450	457.2	2743	473.3	1778	347.5	1403	284.7	1073	221.8	914	190.4	686	143.2
20	20.000	120.00	1290.9	77.75	947.9	61.50	776.4	46.75	605.0	40.00	519.2	30.00	390.6
500	508.0	3048	585.6	1975	430.0	1562	352.2	1188	274.4	1016	235.5	762	177.2
22	22.000	132.00	1567.4	85.50	1150.9	67.50	942.7	51.50	734.6	44.00	630.5	32.75	474.3
550	559.0	3353	711.0	2172	522.0	1715	427.6	1308	333.2	1118	286.0	832	215.1
24	24.000	144.00	1864.8	93.25	1369.3	73.75	1121.6	56.25	873.9	48.00	750.1	35.75	564.3
600	609.6	3658	845.9	2369	621.1	1873	508.8	1429	396.4	1219	340.2	908	256.0

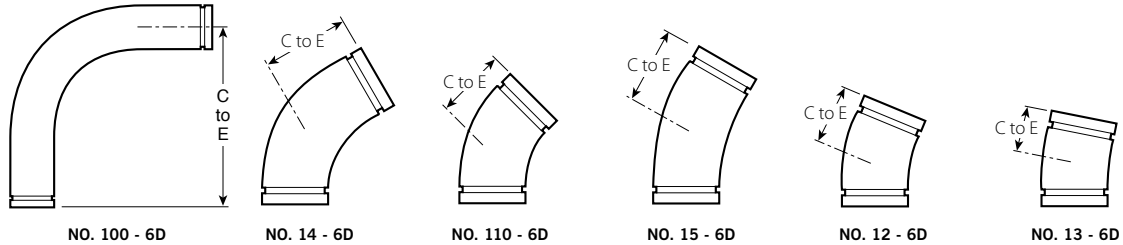
Refer to notes on page 3

Long Radius Steel Elbows

3D, 5D and 6D

DIMENSIONS

Long Radius Steel Elbows - 6D



Fitting Size		No. 100 - 5D 90°		No. 14 - 5D 60°		No. 110 - 5D 45°		No. 15 - 5D 30°		No. 12 - 5D 22½°		No. 13 - 5D 11¼°	
Nominal Outside Dia. Inches mm	Actual Outside Dia. Inches mm	C to E Inches mm	Approx. Weight Each Lbs. kg	C to E Inches mm	Approx. Weight Each Lbs. kg	C to E Inches mm	Approx. Weight Each Lbs. kg	C to E Inches mm	Approx. Weight Each Lbs. kg	C to E Inches mm	Approx. Weight Each Lbs. kg	C to E Inches mm	Approx. Weight Each Lbs. kg
2	2.375	16.00	8.2	11.00	6.3	9.00	5.3	7.25	4.3	6.50	3.9	5.25	3.2
50	60.3	406	3.7	279	2.9	229	2.4	184	2.0	165	1.8	133	1.5
2½	2.875	19.00	15.2	12.75	11.4	10.25	9.5	8.00	7.7	7.00	6.7	5.50	5.3
65	73.0	483	6.9	324	5.2	260	4.3	203	3.5	178	3.0	140	2.4
3	3.500	22.00	22.9	14.50	17.0	11.50	14.0	8.75	11.0	7.50	9.5	5.75	7.3
80	88.9	559	10.4	368	7.7	292	6.4	222	5.0	191	4.3	146	3.3
3½	4.000	25.00	31.1	16.25	22.8	12.75	18.6	9.75	14.4	8.25	12.3	6.00	9.2
90	101.6	635	14.1	413	10.3	324	8.4	248	6.5	210	5.6	152	4.2
4	4.500	28.00	41.1	18.00	29.8	14.00	24.1	10.50	18.5	8.75	15.7	6.50	11.4
100	114.3	711	18.6	457	13.5	356	10.9	267	8.4	222	7.1	165	5.2
4½	5.000	31.50	53.7	20.00	39.0	15.75	31.6	11.75	24.2	10.00	20.5	7.25	14.9
120	127.0	800	24.4	508	17.7	400	14.3	299	11.0	254	9.3	184	6.8
5	5.563	35.00	69.6	22.25	50.5	17.50	40.9	13.00	31.3	11.00	26.5	8.00	19.4
125	141.3	889	31.6	565	22.9	445	18.6	330	14.2	279	12.0	203	8.8
6	6.625	42.00	108.4	26.75	78.6	21.00	63.7	15.75	48.8	13.25	41.3	9.50	30.1
150	168.3	1067	49.2	680	35.7	533	28.9	400	22.1	337	18.7	241	13.7
8	8.625	56.00	217.5	35.75	157.7	28.00	127.8	21.00	97.9	17.50	82.9	12.75	60.5
200	219.1	1422	98.7	908	71.5	711	58.0	533	44.4	445	37.6	324	27.4
10	10.750	70.00	385.4	44.75	279.4	35.00	226.4	26.00	173.4	22.00	146.9	16.00	107.2
250	273.0	1778	174.8	1137	126.7	889	102.7	660	78.7	559	66.6	406	48.6
12	12.750	84.00	566.2	53.50	410.5	41.75	332.7	31.25	254.8	26.25	215.9	19.00	157.5
300	323.9	2134	256.8	1359	186.2	1061	150.9	794	115.6	667	97.9	483	71.4
14	14.000	98.00	727.4	62.50	527.3	48.75	427.3	36.50	327.3	30.75	277.3	22.25	202.3
350	355.6	2489	329.9	1588	239.2	1238	193.8	927	148.5	781	125.8	565	91.8
15	15.000	105.00	818.4	67.00	593.3	52.25	480.2	39.25	386.3	33.00	312.0	24.00	227.6
375	381.0	2667	371.2	1702	269.1	1327	217.8	997	167.1	838	141.5	609	103.2
16	16.000	112.00	953.3	71.50	691.1	55.75	560.1	41.75	429.0	35.25	363.5	25.50	265.2
400	406.4	2845	432.4	1816	313.5	1416	254.1	1061	194.6	895	164.9	648	120.3
18	18.000	126.00	1209.7	80.50	877.1	62.75	710.7	47.00	544.4	39.50	461.3	28.75	336.5
450	457.2	3200	548.7	2045	397.9	1594	322.4	1194	246.9	1003	209.2	730	152.6
20	20.000	140.00	1496.6	89.25	1085.1	69.75	879.3	52.25	673.5	44.00	570.7	31.75	416.3
500	508.0	3556	678.9	2267	492.2	1772	398.9	1327	305.5	1118	258.9	807	188.8
22	22.000	154.00	1817.3	98.25	1317.5	76.75	1067.7	57.50	817.9	48.25	693.0	35.00	505.5
550	559.0	3912	824.3	2496	597.6	1950	484.3	1461	371.0	1256	314.3	889	229.3
24	24.000	168.00	2162.0	107.25	1567.5	83.75	1270.3	62.50	973.0	52.75	824.4	38.25	601.4
600	609.6	4267	980.7	2724	711.0	2127	576.2	1588	441.4	1340	373.9	972	272.8

Refer to notes below.

NOTES:

1. Long radius elbows (3D, 5D and 6D) in sizes up to and including 4" are provided with 4" integral tangent; remaining sizes provided with integral tangents with lengths equal to nominal pipe size.
2. Grooved or plain end available. Specify choice on order.
3. Material: standard wall steel pipe to ASTM A-53 grade B (other materials available on request).
4. Bends to conform to above radii.
5. C to E tolerances: 2 - 6" ± 1/8"; 8 - 16" ± 1/4"; 18 - 24" ± 3/8"
6. All weights are approximate based on calculated weight of pipe.

Long Radius Steel Elbows

3D, 5D and 6D

INSTALLATION

Reference should always be made to the I-100 Victaulic Field Installation Handbook for the product you are installing. Handbooks are included with each shipment of Victaulic products for 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.

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.

For complete contact information, visit www.victaulic.com

07.02 1863 REV E UPDATED 06/2011

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07.02



Extra Heavy “ES” EndSeal® Fittings

PRODUCT DESCRIPTION

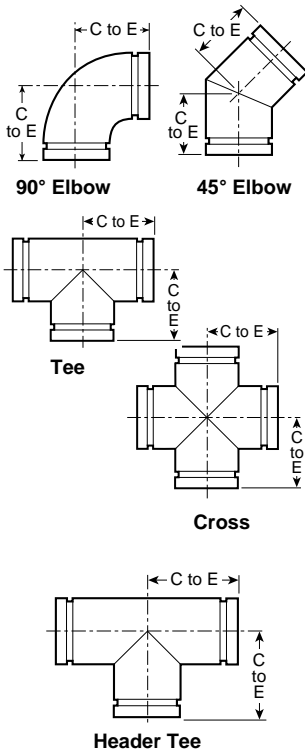


Victaulic offers fittings with an extra-heavy (Schedule 80) wall thickness and “ES” EndSeal grooves especially for use with HP-70ES couplings. These fittings must be used in high pressure systems with HP-70ES couplings where the system pressure exceeds the published rating for Style HP-70 or Style 77 couplings.

Header Tees are especially useful in oil production headers where the top (test) line is 2” (50 mm) and the bottom production line is 3 or 4” (80 or 100 mm). The 2” (50 mm) tees have center to end dimensions identical to Victaulic 3” (80 mm) or 4” (100 mm) No. 20 (or No. 64) tees. The special tee center-to-end dimension permits direct alignment with the larger 3” (80 mm) or 4” (100 mm) C to E.

For fitting sizes and styles not listed, contact Victaulic for details.

DIMENSIONS



Fitting Size		90° Elbow No. 62 - ES		45° Elbow *No. 63 - ES		Tee *No. 64 - ES		Cross *No. 35 - ES	
Nominal Diameter Inches/mm	Actual Outside Diameter Inches/mm	Center to End Inches mm	Approx. Wgt. Lbs. kg	Center to End Inches mm	Approx. Wgt. Lbs. kg	Center to End Inches mm	Approx. Wgt. Lbs. kg	Center to End Inches mm	Approx. Wgt. Lbs. kg
2 50	2,375 60,3	3,25 83	2,5 1,1	2,00 51	1,8 0,8	3,25 83	4,2 1,9	3,25 83	3,9 1,8
2½ 65	2,875 73,0	3,75 95	5,0 2,3	2,25 57	2,9 1,3	3,75 95	7,9 3,6	3,75 95	6,6 3,0
3 80	3,500 88,9	4,25 108	6,0 2,7	2,50 64	4,3 1,9	4,25 108	16,0 7,3	4,25 108	14,2 6,4
4 100	4,500 114,3	5,00 127	10,3 4,7	3,00 76	8,5 3,9	5,00 127	23,5 10,7	5,00 127	15,8 7,2
6 † 150	6,625 168,3	6,50 165	27,2 12,3	3,50 89	16,5 7,5	6,50 165	27,0 12,2	6,50 165	46,0 20,9

* Steel Fabricated - Cast Full Flow

† For sizes to 12” (300 mm) consult Victaulic.

Steel Full Flow elbows available with longer center to end dimensions. Contact Victaulic for details.

Header Tee No. 22			
Fitting Size Mated C to E		C to E Inches/mm	Approx. Weight Each Lbs./kg
Nominal Diameter Inches/mm	Actual Outside Diameter Inches/mm		
2 to 3 50 to 80	2,375 60,3	4,25 108	3,4 1,5
2 to 4 50 to 100	2,375 60,3	5,00 127	4,1 1,9

MATERIAL SPECIFICATIONS

Housing: Ductile iron conforming to ASTM A-536 or pearlitic malleable iron conforming to ASTM A-220 or segmentally welded Schedule 80 steel pipe, per ASTM A-53 Schedule 80.

For fitting sizes and styles not listed, contact Victaulic for details.

This product shall be manufactured by Victaulic Company. 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.



Fabricated Steel Fittings

Victaulic® offers a broad line of segmentally welded fittings in sizes through 24"/600mm in a variety of straight and reducing styles. Fittings are fabricated of ASTM A-53 carbon steel, or other materials by special order. Victaulic segmentally welded fittings pressure ratings conform to the ratings of Victaulic Style 77 couplings.

All fittings are grooved to permit fast installation without field preparation. The grooved design permits flexibility for easy alignment.

These fittings are not intended for use with Victaulic couplings for plain end pipe (refer to Section 14.04 for fittings available for plain end applications).

Fittings are painted orange enamel with galvanized optionally available, contact Victaulic for details.

Victaulic fittings are designed specifically for use in grooved piping systems. Fittings are provided grooved or with shoulders conforming to standard steel pipe outside diameters. When connecting wafer or lug-type butterfly valves directly to Victaulic fittings with 741 or 743 Vic-Flange® adapters, check disc clearance dimensions with I.D. dimension of fitting.

MATERIAL SPECIFICATIONS

Fitting:

¾ – 4"/20 – 100 mm: Carbon steel, Schedule 40, conforming to ASTM A-53, Type F.

5 – 6"/125 – 150 mm: Carbon steel, Schedule 40, conforming to ASTM A-53, Type E or S, Gr. B.

8 – 12"/200 – 300 mm: Carbon steel, standard wall, conforming to ASTM A-53, Type E or S, Gr. B.

14 – 24"/350 – 600 mm: Carbon steel, standard wall, conforming to ASTM A-53, Type E or S, Gr. B.

Fitting Coating: Orange enamel

- **Optional:** Hot dip galvanized and others. Some fittings supplied electroplated as standard – see product specifications.

JOB/OWNER

System No. _____

Location _____

CONTRACTOR

Submitted By _____

Date _____

ENGINEER

Spec Sect _____ Para _____

Approved _____

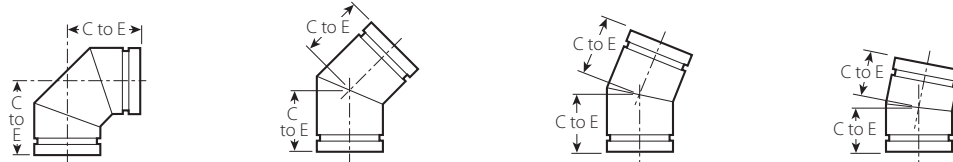
Date _____

Fabricated Steel Fittings

DIMENSIONS

Elbows

- 90° ELBOW
- 45° ELBOW
- 22 ½° ELBOW
- 11 ¼° ELBOW



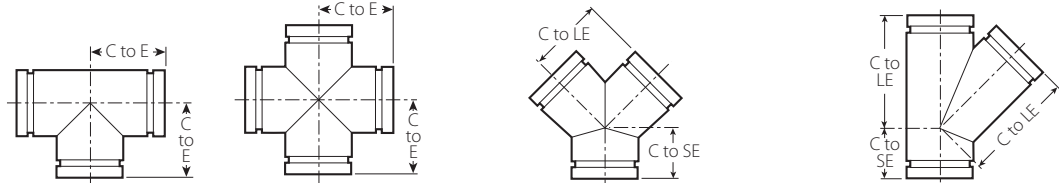
Size		90° Elbow		45° Elbow		22 ½° Elbow		11 ¼° Elbow	
Nominal Size Inches mm	Actual Outside Dia. Inches mm	C to E Inches mm	Approx. Weight Each Lbs. kg	C to E Inches mm	Approx. Weight Each Lbs. kg	C to E Inches mm	Approx. Weight Each Lbs. kg	C to E Inches mm	Approx. Weight Each Lbs. kg
¾ 20	1.050 26.9	2.25 * 57	0.6 0.3	1.50 * 38	0.4 0.2	1.63 41	0.5 0.2	1.38 35	0.4 0.2
1 25	1.315 33.4	2.25 * 57	0.6 0.3	1.75 * 44	0.5 0.2	1.63 41	0.5 0.2	1.38 35	0.4 0.2
1 ¼ 32	1.660 42.4	2.75 * 70	1.0 0.5	1.75 * 44	0.8 0.4	1.75 44	0.8 0.4	1.38 35	0.5 0.2
1 ½ 40	1.900 48.3	2.75 * 70	1.1 0.5	1.75 * 44	1.0 0.5	1.75 44	1.0 0.5	1.38 35	0.5 0.2
2 50	2.375 60.3	3.25 * 83	2.0 0.9	2.00 * 51	1.4 0.6	1.88 48	1.5 0.7	1.38 * 35	1.0 0.5
2 ½ 65	2.875 73.0	3.75 * 95	3.2 1.5	2.25 * 57	2.5 1.1	2.00 * 51	2.5 1.1	1.50 38	1.5 0.7
3 80	3.500 88.9	4.25 * 108	4.5 2.0	2.50 * 64	3.1 1.4	2.25 * 57	3.1 1.4	1.50 * 38	2.0 0.9
3 ½ 90	4.000 101.6	4.50 * 114	6.5 2.9	2.75 * 70	4.3 2.0	2.50 64	4.0 2.0	1.75 44	2.8 1.3
4 100	4.500 114.3	5.00 * 127	8.0 3.6	3.00 * 76	5.5 2.5	2.88 73	5.6 2.5	1.75 * 44	3.6 1.6
5 125	5.563 141.3	5.50 * 140	12.5 5.7	3.25 * 83	9.0 4.1	2.88 73	7.8 3.5	2.00 51	5.0 2.3
6 150	6.625 168.3	6.50 * 165	17.1 7.8	3.50 * 89	11.7 5.3	3.13 80	12.2 5.5	2.00 * 51	7.0 3.2
8 200	8.625 219.1	7.75 * 197	28.5 12.9	4.25 * 108	21.5 9.8	3.88 99	20.0 9.1	2.00 51	10.0 4.5
10 250	10.750 273.0	9.00 * 229	45.5 20.6	4.75 * 121	37.5 17.0	4.38 111	30.0 13.6	2.13 54	14.4 6.5
12 300	12.750 323.9	10.00 * 254	73.5 33.3	5.25 * 133	43.3 19.6	4.88 124	40.0 18.1	2.25 57	29.3 13.3
14 350	14.000 355.6	11.00 * 279	100.0 45.4	6.00 * 152	54.5 24.7	5.00 127	45.9 20.8	3.50 89	32.1 14.6
16 400	16.000 406.4	12.00 * 305	180.0 81.6	7.25 * 184	75.5 34.2	5.00 127	58.0 26.3	4.00 102	42.0 19.1
18 450	18.000 457.2	15.50 394	273.0 123.8	8.00 203	94.0 42.6	5.50 140	65.1 29.5	4.50 114	53.2 24.1
20 500	20.000 508.0	17.25 438	343.0 155.6	9.00 229	117.8 53.4	6.00 152	79.0 35.8	5.00 127	65.7 29.8
24 600	24.000 609.6	20.00 508	516.0 234.1	11.00 279	173.8 78.8	7.00 178	110.3 50.1	6.00 152	94.5 42.9

*Available in Victaulic Full Flow cast design.

Fabricated Steel Fittings

Tee, Cross, True Wye, and Cap

TEE
CROSS
TRUE WYE
45° LATERAL



Size		Tee		Cross		90° True Wye			45° Lateral		
Nominal Size Inches mm	Actual Outside Dia. Inches mm	C to E Inches mm	Approx. Wgt. Each Lbs. kg	C to LE Inches mm	Approx. Wgt. Each Lbs. kg	C to E Inches mm	C to SE Inches mm	Approx. Wgt. Each Lbs. kg	C to LE Inches mm	C to SE Inches mm	Approx. Wgt. Each Lbs. kg
¾ 20	1.050 26.9	2.25 * 57	0.6 0.3	2.25 57	0.9 0.4	2.25 57	2.00 51	0.8 0.4	4.50 114	2.00 51	1.0 0.5
1 25	1.315 33.4	2.25 * 57	0.9 0.4	2.25 57	1.3 0.6	2.25 * 57	2.25 * 57	1.1 0.5	5.00 127	2.25 57	1.7 0.8
1 ¼ 32	1.660 42.4	2.75 * 70	1.5 0.7	2.75 70	2.1 1.0	2.75 70	2.50 64	1.5 0.7	5.75 146	2.50 64	2.5 1.1
1 ½ 40	1.900 48.3	2.75 * 70	1.7 0.8	2.75 70	2.5 1.1	2.75 70	2.75 70	1.8 0.8	6.25 159	2.75 70	3.5 1.6
2 50	2.375 60.3	3.25 * 83	2.9 1.3	3.25 * 83	3.8 1.7	3.25 83	2.75 70	2.3 1.0	7.00 178	2.75 70	5.0 2.3
2 ½ 65	2.875 73.0	3.75 * 95	4.5 2.0	3.75 95	6.1 2.8	3.75 95	3.00 76	5.1 2.3	7.75 197	3.00 76	9.0 4.1
3 80	3.500 88.9	4.25 * 108	6.8 3.1	4.25 * 108	7.0 3.2	4.25 108	3.25 83	6.0 2.7	8.50 * 216	3.25 * 83	10.3 4.7
3 ½ 90	4.000 101.6	4.50 * 114	7.9 3.6	4.50 114	11.5 5.2	4.50 114	3.50 89	9.6 4.4	10.00 254	3.50 89	22.0 10.0
4 100	4.500 114.3	5.00 * 127	13.5 6.1	5.00 * 127	12.5 5.7	5.00 127	3.75 95	10.0 4.5	10.50 * 267	3.75 * 95	22.2 10.1
5 125	5.563 141.3	5.50 * 140	17.8 8.1	5.50 140	20.0 9.1	5.50 140	4.00 102	15.0 6.8	12.50 318	4.00 102	30.0 13.6
6 150	6.625 168.3	6.50 * 165	27.3 12.4	6.50 165	28.0 12.7	6.50 165	4.50 114	22.3 10.1	14.00 356	4.50 114	42.0 19.1
8 200	8.625 219.1	7.75 * 197	45.0 20.4	7.75 197	48.0 21.8	7.75 197	6.00 152	39.6 18.0	18.00 457	6.00 152	82.0 37.2
10 250	10.750 273.0	9.00 * 229	68.7 31.2	9.00 229	76.7 34.8	9.00 229	6.50 165	62.2 28.2	20.50 521	6.50 165	128.6 58.3
12 300	12.750 323.9	10.00 * 254	91.3 41.4	10.00 254	100.0 45.4	10.00 254	7.00 178	81.7 37.1	23.00 584	7.00 178	172.7 78.3
14 350	14.000 355.6	11.00 279	110.5 50.1	11.00 279	121.0 54.9	11.00 279	7.50 191	98.0 44.4	26.50 673	7.50 191	219.1 99.4
16 400	16.000 406.4	12.00 305	135.7 61.6	12.00 305	146.4 66.4	12.00 305	8.00 203	119.3 54.1	29.00 737	8.00 203	270.5 122.7
18 450	18.000 457.2	15.50 394	207.3 94.0	15.50 394	232.4 105.4	15.50 394	8.50 216	171.8 77.9	32.00 813	8.50 216	332.7 150.9
20 500	20.000 508.0	17.25 438	256.8 116.5	17.25 438	288.0 130.6	17.25 438	9.00 229	209.9 95.2	35.00 889	9.00 229	401.3 182.0
24 600	24.000 609.6	20.00 508	354.1 160.6	20.00 508	393.2 178.4	20.00 508	10.00 254	285.5 129.5	40.00 1016	10.00 254	541.3 245.5

*Available in Victaulic Full Flow cast design.

Fabricated Steel Fittings

INSTALLATION

Reference should always be made to the I-100 Victaulic Field Installation Handbook for the product you are installing. Handbooks are included with each shipment of Victaulic products for 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.

NOTE

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WCAS-6RUGYB

For complete contact information, visit www.victaulic.com

07.04 1945 REV B UPDATED 10/2006

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07.04



IPS Size 1D Cast Ductile Iron Fitting

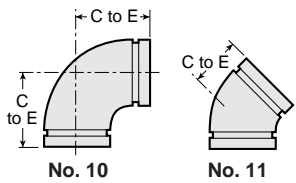
PRODUCT DESCRIPTION



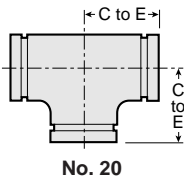
Victaulic offers short radius (1D) 90° and 45° elbows and short center-to-end tees manufactured from ductile iron in accordance with ASTM A-536, grade 65-45-12. They are available in sizes 350 mm (14") through 600 mm (24"). The fittings are constructed to ANSI Standard wall thicknesses.

DIMENSIONS

Short Radius Elbows



Tees



SIZE		No. 10 – 90° Elbow		No. 11 – 45° Elbow		No. 20 – Tee	
Nominal Diameter mm/Inches	Actual Outside Diameter mm/Inches	Center to End mm/Inch	Approx. Weight kg/lb.	Center to End mm/Inch	Approx. Weight kg/lb.	Center to End mm/Inch	Approx. Weight kg/lb.
350 14	355,6 14.0	355,6 14.00	61,7 136	146,1 5.75	29,5 65	279,4 11.00	65,8 145
400 16	406,4 16.0	406,4 16.00	77,6 171	168,4 6.63	39,9 88	304,8 12.00	84,4 186
450 18	457,2 18.0	457,2 18.00	103,4 228	189,5 7.46	50,0 108	355,6 14.00	116,1 256
500 20	508,0 20.0	508,0 20.00	135,2 298	210,3 8.28	62,6 138	381,0 15.00	153,8 339
600 24	609,6 24.0	609,6 24.00	198,7 438	252,5 9.94	100,2 221	431,8 17.00	214,5 473

FLOW DATA

(Frictional Resistance)

The chart expresses the frictional resistance of the subject Victaulic fittings as equivalent feet of straight ANSI standard wall pipe.

SIZE		Dimension – meters/Feet			
		Elbows		Tees	
		90° Elbows	45° Elbows	Branch	Run
Nominal Diameter mm/Inches	Actual Outside Diameter mm/Inches	No. 10 Std. Radius	No. 11 Std. Radius		
350 14	355,6 14.0	7,3 24.0	5,5 18.0	21,3 70.0	7,0 23.0
400 16	406,4 16.0	8,2 27.0	6,1 20.0	24,4 80.0	8,2 27.0
450 18	457,2 18.0	9,4 31.0	7,0 23.0	27,4 90.0	9,1 30.0
500 20	508,0 20.0	10,4 34.0	7,9 26.0	30,5 100.0	10,1 33.0
600 24	609,6 24.0	12,8 42.0	9,8 32.0	36,6 120.0	12,2 40.0

MATERIAL SPECIFICATIONS

Fittings: Ductile iron conforming to ASTM A-536, grade 65-45-12

Fitting Coatings: Orange Enamel

- Optional: Hot dip galvanized to ASTM A-153. Others as specified on order.

Mechanical-T[®] Bolted Branch Outlets



STYLES 920 AND 920N

Victaulic Mechanical-T[®] Outlet provides a direct branch connection at any location a hole can be cut in pipe. The hole is cut oversize to receive a “holefinder” locating collar which secures the outlet in position permanently. A pressure responsive gasket seals on the pipe O.D.

Cross-type connections can be achieved by utilizing two upper housings of the same style and size, with the same or differing branch size connections. NOTE: Style 920 and Style 920N housings cannot be mated to each other to achieve a cross connection.

Style 920 and Style 920N Mechanical-T outlets are available with grooved or female threaded outlet. Specify choice on order. Units are supplied painted with plated bolts. Galvanized housings are available, supplied with plated bolts.

All sizes of Style 920 and 920N are rated at 500 psi/3450 kPa working pressure on Schedule 10 and 40 carbon steel pipe. They may also be used on high density polyethylene or polybutylene (HDPE) pipe. Pressure ratings on HDPE are dependent on the pipe rating. Contact Victaulic for ratings on other pipe. **Style 920 and 920N are not recommended for use on PVC plastic pipe.**

Standard piping practices dictate that the Mechanical-T Styles 920 and 920N must be installed so that the main and branch connections are a true 90° angle when permanently attached to the pipeline surface.

Additionally, the Vic-Tap II[®] hole cutting tool, which allows for hole cutting capabilities on pressurized systems, utilizes the Style 920 Mechanical-T in conjunction with the Series 726 Vic-Ball Valve to create the Style 931 Vic-Tap II Mechanical-T unit. See page 8 for further information.



STYLES 920 AND 920N



STYLE 920 CROSS

PATENTED

MATERIAL SPECIFICATIONS

Housing/Coating: Ductile iron conforming to ASTM A-536, grade 65-45-12, with orange enamel coating. Ductile iron conforming to ASTM A-395, grade 65-45-15, is available upon special request.

- **Optional:** Hot dipped galvanized

Gasket: (Specify choice*)

- **Grade “E” EPDM**
EPDM (Green color code). Temperature range -30°F to +230°F/-34°C to +110°C. Recommended 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 +86°F/+30°C and hot +180°F/+82°C. NOT RECOMMENDED FOR PETROLEUM SERVICES.
- **Grade “T” nitrile**
Nitrile (Orange color code). Temperature range -20°F to +180°F/-29°C to +82°C. Recommended for petroleum products, air with oil vapors, vegetable and mineral oils within the specified temperature range. Not recommended for hot water services over +150°F/+66°C or for hot dry air over +140°F/+60°C.

*Services listed are General Service Recommendations only. It should be noted that there are services for which these gaskets are not recommended. Reference should always be made to the latest Victaulic Gasket Selection Guide for specific gasket service recommendations and for a listing of services which are not recommended.

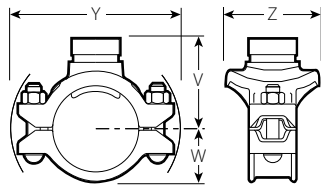
Bolts/Nuts: Heat-treated plated carbon steel, trackhead meeting the physical and chemical requirements of ASTM A-449 and physical requirements of ASTM A-183.

JOB/OWNER	CONTRACTOR	ENGINEER
System No. _____	Submitted By _____	Spec Sect _____ Para _____
Location _____	Date _____	Approved _____
		Date _____

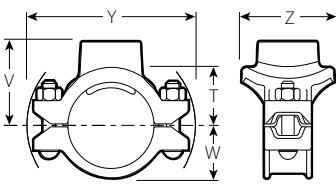
Mechanical-T[®] Bolted Branch Outlets

STYLES 920 AND 920N

DIMENSIONS



GROOVED OUTLET



FEMALE THREADED OUTLET

- Provides a direct branch connection at any location where a hole can be cut in the pipe
- A pressure responsive gasket provides the seal
- Request Publication 11.03 for Mechanical-T cross assemblies
- Pressure rated up to 500 psi/3450 kPa on steel pipe; also available for use with HDPE pipe
- Sizes from 2 × ½"/50 × 15 mm through 8 × 4"/200 × 100 mm

IMPORTANT NOTES:

Style 920 and Style 920N housings cannot be mated to one another to achieve cross connections.

Size Run × Branch Nominal Size Inches mm	Style No. 920 or 920N	Max. Work Pressure@ psi kPa	Dimensions							Approx. Weight Each	
			Hole Diameter +0.13 -0.00 Inches mm	T** Inches mm	V ‡ # Thd. Inches mm	V ‡ Grv. Inches mm	W Inches mm	Y Inches mm	Z Inches mm	Female Thd. Lbs. kg	Grv. Lbs. kg
2 50 × ½ (a) □ 15	920N	500 3450	1.50 38.1	2.00 51	2.53 64	—	1.61 41	5.35 136	2.75 70	3.1 1.5	—
	920N	500 3450	1.50 38.1	1.97 50	2.53 64	—	1.61 41	5.35 136	2.75 70	3.1 1.5	—
	920N	500 3450	1.50 38.1	1.85 47	2.53 64	—	1.61 41	5.35 136	2.75 70	3.0 1.4	—
	920N	500 3450	1.75 44.5	2.05 52	2.75 70	3.00 76	1.61 41	5.35 136	3.00 76	3.5 1.7	3.2 1.5
	920N	500 3450	1.75 44.5	2.03 52	2.75 70	3.12 79	1.61 41	5.35 136	3.25 83	3.6 1.7	3.2 1.5
2½ 65 × ½ (a) § □ 15	920N	500 3450	1.50 38.1	2.21 56	2.74 70	—	1.82 46	5.64 143	2.75 70	3.0 1.4	—
	920N	500 3450	1.50 38.1	2.18 55	2.74 70	—	1.82 46	5.64 143	2.75 70	3.0 1.4	—
	920N	500 3450	1.50 38.1	2.06 52	2.74 70	—	1.82 46	5.64 143	2.75 70	2.9 1.4	—
	920N	500 3450	1.75 44.5	2.30 58	3.00 76	3.25 83	1.82 46	6.29 160	3.00 76	3.5 1.7	3.2 1.5
	920N	500 3450	2.00 50.8	2.28 58	3.00 76	3.25 83	1.82 46	6.26 159	3.25 83	3.6 1.7	3.3 1.6
76.1 × ½ (a) □ 15	920N	300 2065	1.50 38.1	2.22 56	2.75 70	—	2.25 57	6.46 164	3.18 81	3.9 1.8	—
	920N	300 2065	1.50 38.1	2.19 56	2.75 70	—	2.25 57	6.46 164	3.18 81	3.9 1.8	—
	920N	300 2065	1.50 38.1	2.07 53	2.75 70	—	2.25 57	6.46 164	3.18 81	3.8 1.7	—
	920N	500 3450	1.75 44.5	2.30 58	3.00 76	3.31 84	1.92 49	6.29 160	3.00 76	3.5 1.6	3.2 1.5
	920N	500 3450	2.00 50.8	2.28 58	3.00 76	3.31 84	1.92 49	6.29 160	3.25 83	3.5 1.6	3.3 1.5
3 80 × ½ (a) □ 15	920N	500 3450	1.50 38.1	2.52 64	3.05 78	—	2.28 58	6.15 156	2.75 70	3.4 1.6	—
	920N	500 3450	1.50 38.1	2.49 63	3.05 78	—	2.28 58	6.15 156	2.75 70	3.4 1.6	—
	920N	500 3450	1.50 38.1	2.38 61	3.06 78	—	2.28 58	6.15 156	2.75 70	3.3 1.6	—
	920N	500 3450	1.75 44.5	2.55 65	3.25 83	3.56 90	2.28 58	6.15 156	3.00 76	3.8 1.8	3.7 1.8
	920N	500 3450	2.00 50.8	2.78 71	3.50 89	3.56 90	2.28 58	6.15 156	3.25 83	4.1 1.9	3.8 1.8
	920N	500 3450	2.50 63.5	2.75 70	3.50 89	3.56 90	2.28 58	6.75 172	3.88 99	4.9 2.3	4.6 2.1
3½ 90 × 2 50	920N	500 3450	2.50 63.5	3.00 76	—	3.75 95	2.44 62	6.72 171	3.88 99	—	3.8 1.8

TABLE CONTINUED ON PG. 3

** Center of run to engaged pipe end, female threaded outlet only (dimensions approximate).

† Available with grooved or female threaded outlet. Specify choice on order.

‡ Center of run to end of fitting.

Female threaded outlets are available to NPT and BSPT specifications.

@ See page 7 for Fire Protection approvals and pressure ratings.

(a) British Standard female pipe threaded outlet is available as listed. Specify "BSPT" clearly on order.

(b) For 76.1 mm threaded outlet, specify 2½" BSPT clearly on order.

§ Vds approved for fire protection services

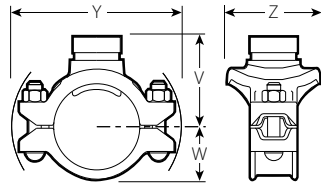
□ LPCB approved for fire protection services

∅ Approved for use in China by Tianjin Approvals Company.

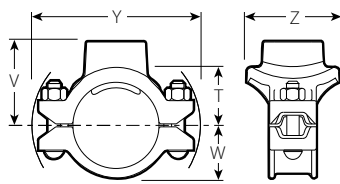
Mechanical-T[®] Bolted Branch Outlets

STYLES 920 AND 920N

DIMENSIONS



GROOVED OUTLET



FEMALE THREADED OUTLET

- Provides a direct branch connection at any location where a hole can be cut in the pipe
- A pressure responsive gasket provides the seal
- Request Publication 11.03 for Mechanical-T cross assemblies
- Pressure rated up to 500 psi/3450 kPa on steel pipe; also available for use with HDPE pipe
- Sizes from 2 × ½"/50 × 15 mm through 8 × 4"/200 × 100 mm

Size	Style No.	Max. Work Pressure@	Dimensions							Approx. Weight Each		
			Run × Branch Nominal Size Inches mm	920 or 920N	psi kPa	Hole Diameter +0.13 -0.00	T** Inches mm	V ‡ # Thd. Inches mm	V ‡ Grv. Inches mm	W Inches mm	Y Inches mm	Z Inches mm
TABLE CONTINUED FROM PAGE 2												
4 100	½ (a) □	920N	500 3450	1.50 38.1	3.03 77	3.56 90	—	2.69 68	7.01 178	2.75 70	3.7 1.8	—
	¾ (a) □	920N	500 3450	1.50 38.1	3.00 76	3.56 90	—	2.69 68	7.01 178	2.75 70	3.7 1.8	—
	1 (a) □	920N	500 3450	1.50 38.1	2.88 73	3.56 90	—	2.69 68	7.01 178	2.75 70	3.6 1.8	—
	1 ¼ (a) †		500 3450	1.75 44.5	3.08 78	3.78 96	4.00 102	2.69 68	7.01 178	3.00 76	4.0 1.9	3.6 1.8
	1 ½ (a) †	920N	500 3450	2.00 50.8	3.28 83	4.00 102	4.00 102	2.69 68	7.01 178	3.25 83	4.2 2.0	3.9 1.9
	2 (a) †	920N	500 3450	2.50 63.5	3.25 83	4.00 102	4.00 102	2.69 68	7.01 178	3.88 99	5.0 2.3	4.6 2.1
	2 ½ (a) †		500 3450	2.75 69.9	2.88 73	4.00 102	4.00 102	2.69 68	7.34 186	4.63 118	5.8 2.6	5.0 2.3
	76.1 mm	920	500 3450	2.75 69.9	2.88 73	—	4.00 102	2.69 68	7.34 186	4.63 118	—	6.4 2.9
	3 (a) †	920	500 3450	3.50 88.9	3.31 84	4.50 114	4.12 105	2.69 68	7.73 196	5.12 130	8.4 3.8	6.4 2.9
	108.0	1 ¼ (a) □	920N	500 3450	1.75 44.5	3.08 78	3.78 96	—	2.63 67	7.64 194	3.05 78	5.0 2.3
1 ½ (a) □		920N	500 3450	2.00 50.8	3.28 83	4.00 102	—	2.63 67	7.64 194	3.25 83	5.0 2.3	—
2 (a)		920N	500 3450	2.50 63.5	3.25 83	4.00 102	—	2.63 67	7.64 194	4.00 102	4.0 1.9	—
76.1 mm		920	500 3450	2.75 69.9	2.88 73	4.00 102	4.00 102	2.63 67	7.64 194	4.29 109	8.0 3.6	7.8 3.5
3 (a)		920	500 3450	3.50 88.9	3.31 84	4.50 114	4.50 114	2.63 67	7.63 194	4.88 124	6.8 3.1	6.5 3.0
5 125		1 ½ (a) †	920	500 3450	2.00 50.8	4.03 102	4.75 121	4.75 121	3.16 80	9.70 246	3.69 94	7.4 3.4
	2 (a) †	500 3450		2.50 63.5	4.00 102	4.75 121	4.75 121	3.16 80	9.70 246	4.38 111	8.2 3.7	8.0 3.6
	2 ½ (a) †	920	500 3450	2.75 69.9	3.63 92	4.75 121	4.75 121	3.16 80	9.70 246	4.63 118	8.3 3.8	7.9 3.6
	76.1 mm □	920	500 3450	2.75 69.9	3.75 95	—	4.75 121	3.16 80	9.70 246	4.63 118	—	8.0 3.6
	3 (a) †	920	500 3450	3.50 88.9	3.81 97	5.00 127	4.63 118	3.16 80	9.70 246	5.31 135	8.4 3.8	8.8 4.0
	133.0	2 50	920N	500 3450	2.50 63.5	3.75 95	4.50 114	—	3.17 81	8.00 203	3.88 99	8.0 3.6
3 80		920	500 3450	3.50 88.9	3.81 97	5.00 127	—	3.00 76	9.46 240	5.31 135	8.0 3.6	—

TABLE CONTINUED ON PG. 4

IMPORTANT NOTES:

Style 920 and Style 920N housings cannot be mated to one another to achieve cross connections.

** Center of run to engaged pipe end, female threaded outlet only (dimensions approximate).

† Available with grooved or female threaded outlet. Specify choice on order.

‡ Center of run to end of fitting.

Female threaded outlets are available to NPT and BSPT specifications.

@ See page 7 for Fire Protection approvals and pressure ratings.

(a) British Standard female pipe threaded outlet is available as listed. Specify "BSPT" clearly on order.

(b) For 76.1 mm threaded outlet, specify 2½" BSPT clearly on order.

§ Vds approved for fire protection services

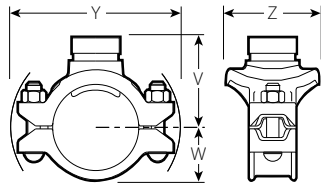
□ LPCB approved for fire protection services

∅ Approved for use in China by Tianjin Approvals Company.

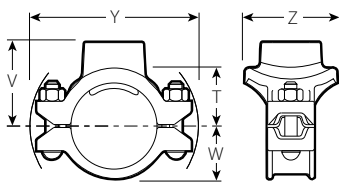
Mechanical-T[®] Bolted Branch Outlets

STYLES 920 AND 920N

DIMENSIONS



GROOVED OUTLET



FEMALE THREADED OUTLET

- Provides a direct branch connection at any location where a hole can be cut in the pipe
- A pressure responsive gasket provides the seal
- Request Publication 11.03 for Mechanical-T cross assemblies
- Pressure rated up to 500 psi/3450 kPa on steel pipe; also available for use with HDPE pipe
- Sizes from 2 × ½"/50 × 15 mm through 8 × 4"/200 × 100 mm

IMPORTANT NOTES:

Style 920 and Style 920N housings cannot be mated to one another to achieve cross connections.

Size Run × Branch Nominal Size Inches mm	Style No. 920 or 920N	Max. Work Pressure@ psi kPa	Dimensions							Approx. Weight Each		
			Hole Diameter +0.13 -0.00 Inches mm	T** Inches mm	V † # Thd. Inches mm	V † Grv. Inches mm	W Inches mm	Y Inches mm	Z Inches mm	Female Thd. Lbs. kg	Grv. Lbs. kg	
TABLE CONTINUED FROM PAGE 3												
139.7 ×	1 ½ †	920N	500 3450	2.00 50.8	3.78 96	4.50 114	—	3.30 84	8.23 209	3.25 83	7.0 3.2	—
	2 †	920N	500 3450	2.50 63.5	3.75 95	4.50 114	—	3.30 84	8.23 209	3.88 99	9.0 4.1	—
6 150 ×	1 ½ (a)	920N	500	1.75	4.43	5.13	5.13	3.79	9.15	3.25	5.1	4.8
	32 (b)		3450	44.5	112	130	130	96	232	83	2.3	2.2
	1 ½ (a) †	920N	500	2.00	4.40	5.13	5.13	3.79	9.15	3.25	5.4	5.1
	40 (b)		3450	50.8	112	130	130	96	232	83	2.4	2.3
	2 (a) †	920N	500	2.50	4.38	5.13	5.13	3.79	9.15	3.88	6.0	5.6
	50		3450	63.5	111	130	130	96	232	99	2.7	2.5
76.1 mm	920	500 3450	2.75 69.9	4.15 105	—	5.21 132	3.69 94	10.51 267	4.63 118	—	8.4 3.8	
3 (a) †	920	500	3.50	4.31	5.50	5.13	3.69	10.51	5.31	9.9	8.4	
80		3450	88.9	110	140	130	94	267	135	4.5	3.8	
4 (a) †	920	500	4.50	3.81	5.75	5.38	3.69	10.51	6.25	10.1	10.1	
100		3450	114.3	97	146	137	94	267	159	4.6	4.6	
159.0 ×	1 ½ (a)	920N	500	2.00	4.41	5.13	—	3.63	9.40	3.25	7.8	—
	40		3450	50.8	112	130	—	92	239	83	3.5	—
	2 (a)	920N	500	2.50	4.38	5.13	—	3.63	9.40	3.88	8.0	—
	50		3450	63.5	111	130	—	92	239	99	3.6	—
	76.1 mm	920	500 3450	2.75 69.9	4.38 111	5.50 140	5.13 130	3.63 92	9.40 239	4.63 118	9.5 4.3	9.5 4.3
	3	920	500	3.50	4.31	5.50	5.13	3.63	9.40	5.31	8.1	14.0
80	3450		88.9	110	140	130	92	239	135	3.7	6.4	
108.0 mm	920	500 3450	4.50 114.3	4.45 113	—	5.38 137	3.63 92	9.40 239	6.12 155	—	10.0 4.5	
4	920	500	4.50	3.81	5.75	—	3.63	9.40	6.25	18.0	—	
100		3450	114.3	96.80	146	—	92	239	159	8.2	—	

TABLE CONTINUED ON PG. 5

** Center of run to engaged pipe end, female threaded outlet only (dimensions approximate).

† Available with grooved or female threaded outlet. Specify choice on order.

‡ Center of run to end of fitting.

Female threaded outlets are available to NPT and BSPT specifications.

@ See page 7 for Fire Protection approvals and pressure ratings.

(a) British Standard female pipe threaded outlet is available as listed. Specify "BSPT" clearly on order.

(b) For 76.1 mm threaded outlet, specify 2½" BSPT clearly on order.

§ Vds approved for fire protection services

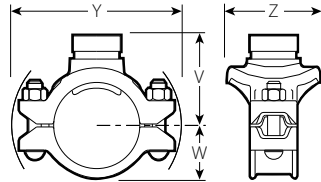
▣ LPCB approved for fire protection services

⊙ Approved for use in China by Tianjin Approvals Company.

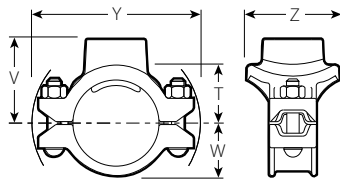
Mechanical-T[®] Bolted Branch Outlets

STYLES 920 AND 920N

DIMENSIONS



GROOVED OUTLET



FEMALE THREADED OUTLET

- Provides a direct branch connection at any location where a hole can be cut in the pipe
- A pressure responsive gasket provides the seal
- Request Publication 11.03 for Mechanical-T cross assemblies
- Pressure rated up to 500 psi/3450 kPa on steel pipe; also available for use with HDPE pipe
- Sizes from 2 × 1/2"/50 × 15 mm through 8 × 4"/200 × 100 mm

Size	Style No.	Max. Work Pressure@	Dimensions							Approx. Weight Each		
			Run × Branch Nominal Size Inches mm	920 or 920N	psi kPa	Hole Diameter +0.13 -0.00 Inches mm	T** Inches mm	V ‡ # Thd. Inches mm	V ‡ Grv. Inches mm	W Inches mm	Y Inches mm	Z Inches mm
TABLE CONTINUED FROM PAGE 4												
165.1 ×	1 25	920N	500 3450	1.50 38.1	3.88 99	4.56 116	—	3.79 96	9.34 237	2.75 70	8.0 3.6	—
	1 1/4 □ 32	920N	500 3450	1.75 44.5	4.43 113	5.13 130	—	3.79 96	9.34 237	3.25 83	8.4 3.8	—
	1 1/2 (a) †□ 40	920N	500 3450	2.00 50.8	4.41 112	5.13 130	5.13 130	3.79 96	9.34 237	3.25 83	8.4 3.8	5.4 2.4
	2 (a) † 50	920N	500 3450	2.50 63.5	4.38 111	5.13 130	5.13 130	3.79 96	9.34 237	3.88 99	8.5 3.9	6.0 2.7
	76.1 mm	920	500 3450	2.75 69.9	4.01 110	5.13 130	5.21 132	3.63 92	10.51 267	4.63 118	8.6 3.9	7.6 3.4
	3 (a) † ∅ 80	920	500 3450	3.50 88.9	4.31 110	5.50 140	5.13 130	3.63 92	10.51 267	5.31 135	10.2 4.6	8.4 3.8
	4 (a) †□ 100	920	500 3450	4.50 114.3	3.81 97	5.75 146	5.38 137	3.63 92	10.51 267	6.25 159	10.5 4.8	8.4 3.8
	8 200 ×	2 (a) † 50	920	500 3450	2.75 69.9	5.44 138	6.19 157	6.25 159	4.81 122	12.42 316	4.50 114	11.6 5.3
2 1/2 (a) † 65		920	500 3450	2.75 69.9	5.07 129	6.19 157	6.19 157	4.81 122	12.42 316	4.50 114	11.6 5.3	11.6 5.3
76.1 mm □		920	500 3450	2.75 69.9	5.25 133	—	6.25 159	4.81 122	12.42 316	4.56 116	—	11.6 5.3
3 (a) †□ 80		920	500 3450	3.50 88.9	5.31 135	6.50 165	6.50 165	4.81 122	12.42 316	5.31 135	12.6 5.7	11.6 5.3
4 (a) †□ 100		920	500 3450	4.50 114.3	4.81 122	6.75 171	6.38 162	4.81 122	12.42 316	6.25 159	15.3 6.9	12.5 5.7

** Center of run to engaged pipe end, female threaded outlet only (dimensions approximate).

† Available with grooved or female threaded outlet. Specify choice on order.

‡ Center of run to end of fitting.

Female threaded outlets are available to NPT and BSPT specifications.

@ See page 7 for Fire Protection approvals and pressure ratings.

(a) British Standard female pipe threaded outlet is available as listed. Specify "BSPT" clearly on order.

(b) For 76.1 mm threaded outlet, specify 2 1/2" BSPT clearly on order.

§ Vds approved for fire protection services

□ LPCB approved for fire protection services

∅ Approved for use in China by Tianjin Approvals Company.

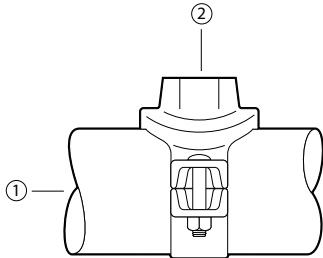
IMPORTANT NOTES:

Style 920 and Style 920N housings cannot be mated to **each other** to achieve cross connections.

Mechanical-T[®] Bolted Branch Outlets

STYLES 920 AND 920N

FLOW DATA



Exaggerated for clarity

Flow test data has shown that the total head loss between point (1) and (2) for the Style 920, 920N and 929 Mechanical-T[®] fittings can best be expressed in terms of the pressure difference across the inlet and branch. The pressure difference can be obtained from the relationship below.

C_v and K_v Values

Values for flow of water at +60°F/+16°C are shown in the table below.

Formulas for C_v, 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

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

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

Where:

Q = Flow (m³/h)

ΔP = Pressure Drop (bar)

K_v = Flow Coefficient

OUTLET SIZE		Equivalent Length of Outlet Size Schedule 40 Carbon Steel Pipe (per UL 213, Sec. 16) (C = 120)† FT		C _v /K _v Values	
NOMINAL DIAMETER In/mm	ACTUAL O.D. In/mm	GROOVED	THREADED	GROOVED	THREADED
½	0.840	-	2	-	11
15	21.3	-	-	-	9.4
¾	1.050	-	4	-	16
20	26.7	-	-	-	13.7
1	1.315	-	8	-	21
25	33.7	-	-	-	1.8
1 ¼	1.660	5 ½	6	50	48
32	42.7	-	-	42.9	41.1
1 ½	1.900	11	11	53	53
40	98.3	-	-	45.4	45.4
2	2.375	9	10 ½	112	104
50	60.3	-	-	96	89.1
2 ½	2.875	20	12 ½	119	150
65	73.0	-	-	102	128.5
76.1 mm	3.000	16*	-	161	-
	76.1	-	-	138.1	-
3	3.500	14	15 ½	249	237
80	88.9	-	-	213.4	203.1
4	4.500	20	22	421	401
100	114.3	-	-	360.8	343.6

† Hazen-Williams coefficient of friction is 120.

* Pipe with a wall thickness of 0.165in./4.2mm.

Mechanical-T[®] Bolted Branch Outlets

STYLES 920 AND 920N

FIRE PROTECTION APPROVALS AND PRESSURE RATINGS

The information provided below is based on the latest listing and approval data at the time of publication. Listings/Approvals are subject to change and/or additions by the approvals agencies. Contact Victaulic for performance on other pipe and the latest listings and approvals.

Run Size		Outlet Size Inches/mm	Pipe Schedule	Approval Agency Rated Working Pressures – psi/kPa				Vds	
Nominal Size Inches/mm	Actual Outside Diameter Inches/mm			UL	ULC	FM	LPCB	(Style 920)	(Style 920N)
2 1/2 - 6 65 - 150	2.875 - 6.625 73.0 - 168.3	All	10, 40	400 2755	400 2755	400 2755	290 1999	232 1599	362 2496
2 1/2 - 4 65 - 100	2.875 - 4.500 73.0 - 114.3	All	DF	300 2065	300 2065	300 2065	290 1999	232 1599	362 2496
2 1/2 - 4 65 - 100	2.875 - 4.500 73.0 - 114.3	All	SF	300 2065	300 2065	300 2065	290 1999	232 1599	362 2496
6 150	6.625 168.3	3, 4	10	300 2065	300 2065	250 1724	290 1999	232 1599	362 2496
6 150	6.625 168.3	3,4	30, 40	300 2065	300 2065	300 2065	290 1999	232 1599	362 2496
8 200	8.625 219.1	2 1/2	10, 40	400 2755	—	—	—	145 1000	—
8 200	8.625 219.1	3,4	10	300 2065	—	250 1724	—	145 1000	—
8 200	8.625 219.1	3,4	30, 40	300 2065	—	300 2065	—	145 1000	—

NOTES:

10 refers to Listed/Approved Schedule 10 steel sprinkler pipe.

40 refers to Listed/Approved Schedule 40 steel sprinkler pipe.

DF refers to Listed/Approved Dyna-Flow steel sprinkler pipe manufactured by American Tube Company.

SF refers to Listed/Approved Super-Flo steel sprinkler pipe manufactured by Allied Tube and Conduit Corporation.

VIC-TAP II HOLE CUTTING TOOL FOR 4 - 8"/100 - 200MM CARBON STEEL PIPE



The Vic-Tap II hole cutting tool is designed for use with the Style 931 Vic-Tap II Mechanical-T unit, which is a combination of the Style 920 Mechanical-T and Series 726 Vic-Ball Valve. The Vic-Tap II is capable of tapping into carbon steel pipe systems under pressures up to 500 psi/3450 kPa.

The Style 931 Vic-Tap II Mechanical-T unit is a full port ball valve which can be mounted on 4"/100mm, 5"/125mm, 6"/150mm and 8"/200mm diameter pipe. The Style 931 comes with a 2 1/2"/65mm grooved outlet.

The drill motor is an electric motor with ground fault circuit interrupter (GFCI) in accordance with safety codes.

For more information, refer to publication 24.01.

Mechanical-T[®] Bolted Branch Outlets

STYLES 920 AND 920N

INSTALLATION

Reference should always be made to the I-100 Victaulic Field Installation Handbook for the product you are installing. Handbooks are included with each shipment of Victaulic products for 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.

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.

For complete contact information, visit www.victaulic.com

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