



No. 20 Tee



No. 10 Elbow

Certifications/Listings



When supplied as “hot dip galvanized” the following fittings are UL Classified in accordance with ANSI/NSF 61 and for use on cold +86°F/+30°C potable water service and ANSI/NSF 372: No. 10 90° Elbow, No. 11 45° Elbow, No. 12 22 1/2° Elbow, No. 13 11 1/4° Elbow, No. 100 90° Long Radius Elbow, No. 110 45° Long Radius Elbow, No. 20 Tee, No. 25 Tee with Grooved Branch, No. 30 45° Lateral, No. 60 Cap, No. 50 Concentric Reducers, No. 51 Eccentric Reducers.

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.

Product Description

- Wide range of fittings from ¾ – 60”/20 – 1500 mm
- Fittings conform to the pressure ratings of the Style 77 coupling
- Fittings are provided with grooved or shouldered ends.

Note: These fittings are not intended for use with Victaulic plain end couplings.

- Fittings are intended for use in grooved piping systems only

Note: When connecting wafer or lug type butterfly valves directly to Victaulic fittings using Style 741 or 743 flange adapters, be sure to check disc clearance dimensions with I.D. dimension of fitting.

Job/Owner

System No.	
Location	

Contractor

Submitted By	
Date	

Engineer

Spec Section	
Paragraph	
Approved	
Date	

Material Specifications

Fitting: (specify choice)

Standard: Ductile iron conforming to ASTM A-536, Grade 65-45-12.

Optional: Segmentally welded steel as shown under nipples

Nipples: (specify choice)

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, Schedule 30 or 40, conforming to ASTM A-53, Type E or S, Gr. B

Flanged Adapter Nipples: (specify choice)

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 Coating: (specify choice)

Standard: Orange enamel.

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

Flanged Adapter Nipple Coating: (specify choice)

Standard: None (Unfinished)

Optional: Orange enamel, hot dip galvanized and others.

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		Dimensions					
Nominal Size inches mm	Actual Outside Diameter inches mm	90° Elbows		45° Elbows		Tees	
		No. 10 Std. Radius feet meters	No. 100 1½ D Long Radius feet meters	No. 11 Std. Radius feet meters	No. 110 1½ D Long Radius feet meters	Branch feet meters	Run feet meters
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 ¹	15.8	18.5 ¹	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 ¹	18.0	21.0 ¹	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 ¹	20.0	23.5 ¹	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 ¹	22.5	25.5 ¹	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 ¹	27.0	29.5 ¹	19.0	120.0	40.0
600	610.0	12.8	8.2	9.0	5.8	36.6	12.2

AGS fittings available up to 60"/1500 mm. Contact Victaulic for details.



1 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 [publication 20.05](#).

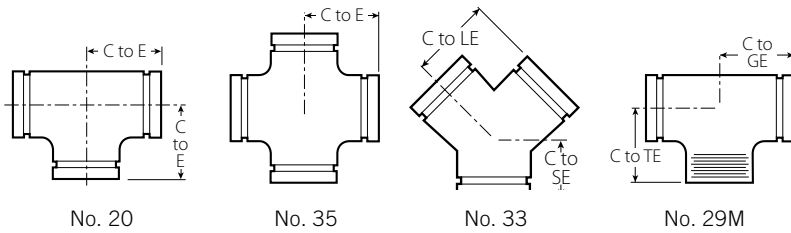
Tees, Crosses and True Wyes

No. 20 Tee

No. 35 Cross

No. 33 True Wye

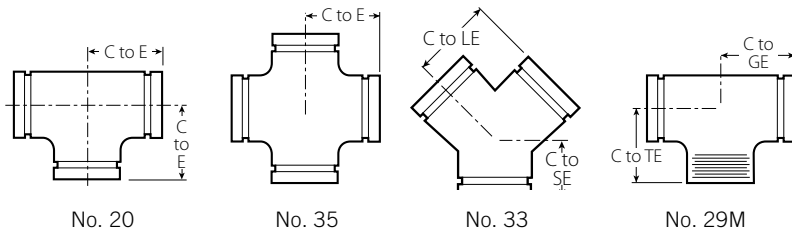
No. 29M Tee with Threaded Branch



Size		No. 20 Tee		No. 35 Cross (sw)		No. 33 True Wye (sw)			No. 29M Tee with Threaded Branch		
Nominal Size	Actual Outside Diameter	C to E	Approx. Weight Each	C to E	Approx. Weight Each	C to LE	C to SE	Approx. Weight Each	C to GE	C to TE	Approx. Weight Each
inches mm	inches mm	inches mm	lbs. kg	inches mm	lbs. kg	inches mm	inches mm	lbs. kg	inches mm	inches mm	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	0.7 0.3	2.25 57	2.25 (sw) 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
1¼ 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
1½ 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	3.0 1.4
2½ 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 (sw) 95	5.2 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
3½ 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 (sw) 114	7.9 3.6
108.0 mm	4.250 108.0	5.00 127	15.5 7.0	—	—	—	—	—	5.00 127	5.00 (sw) 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	9.8 4.4	5.00 127	7.25 184	11.9 5.4
4½ 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 (sw) 133	15.0 6.8
133.0 mm	5.250 133.0	5.50 140	17.8 8.1	—	—	—	—	—	5.50 140	5.50 (sw) 140	17.8 8.1
139.7 mm	5.500 139.7	5.50 140	17.8 8.1	—	—	—	—	—	5.50 140	5.50 (sw) 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 (sw) 140	17.8 8.1
159.0 mm	6.250 159.0	6.50 165	27.1 12.3	—	—	—	—	—	6.50 165	6.50 (sw) 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 (sw) 165	22.0 10.0

6 For 14"/350 mm and larger 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 representative.

7 Chinese standard sizes



Size		No. 20 Tee		No. 35 Cross (sw)		No. 33 True Wye (sw)			No. 29M Tee with Threaded Branch		
Nominal Size	Actual Outside Diameter	C to E	Approx. Weight Each	C to E	Approx. Weight Each	C to LE	C to SE	Approx. Weight Each	C to GE	C to TE	Approx. Weight Each
inches	inches	inches	lbs.	inches	lbs.	inches	inches	lbs.	inches	inches	lbs.
mm	mm	mm	kg	mm	kg	mm	mm	kg	mm	mm	kg
6	6.625	6.50	25.7	6.50	28.0	6.50	4.50	22.3	6.50	6.50(sw)	25.7
150	168.3	165	11.7	165	12.7	165	114	10.1	165	165	11.7
8	8.625	7.75	47.6	7.75	48.0	7.75	6.00	36.0	7.75	7.75	47.6
200	219.1	197	21.6	197	21.8	197	152	16.3	197	197	21.6
10	10.750	9.00	99.0	9.00	121.5	9.00	6.50	69.9	9.00	9.00	99.0
250	273.0	229	44.9	229	55.1	229	155	31.7	229	229	44.9
12	12.750	10.00	133.0	10.00	110.0	10.00	7.00	80.0	10.00	10.00	133.0
300	323.9	254	60.3	254	49.9	254	178	36.3	254	254	60.3
14 ⁶	14.000	11.00 (sw)	145.0	11.00	198.0	11.00	7.50	134.2	—	—	—
350	355.6	279	65.8	279	89.8	279	191	60.8	—	—	—
377.0 mm	377.0	11.50 292	145.0 65.8	—	—	—	—	—	—	—	—
16 ⁶	16.000	12.00 (sw)	186.0	12.00	250.0	12.00	8.00	167.0	—	—	—
400	406.4	305	84.4	305	113.4	305	203	75.7	—	—	—
426.0 mm ⁷	426.0	13.00 300	186.0 84.4	—	—	—	—	—	—	—	—
18 ⁶	18.000	15.50 (sw)	260.0	15.50	350.0	15.50	8.50	234.0	—	—	—
450	457.0	394	117.9	394	158.8	394	216	106.1	—	—	—
480.0 mm ⁷	480.0	14.63 372	256.0 116.1	—	—	—	—	—	—	—	—
20 ⁶	20.000	17.25 (sw)	336.0	17.25	452.0	17.25	9.00	281.0	—	—	—
500	508.0	438	152.4	438	205.0	438	229	127.5	—	—	—
530.0 mm ⁷	530.0	15.38 (sw) 391	339.0 153.8	—	—	—	—	—	—	—	—
24 ⁶	24.000	20.00 (sw)	592.0	20.00	795.0	20.00	10.00	523.0	—	—	—
600	610.0	508	268.5	508	360.6	508	254	237.2	—	—	—
630.0 mm ⁷	630.0	17.38 (sw) 441	473.0 214.5	—	—	—	—	—	—	—	—
14 – 60 350 – 1500	For AGS fitting information, see publication 20.05										



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7 Chinese standard sizes

General Notes

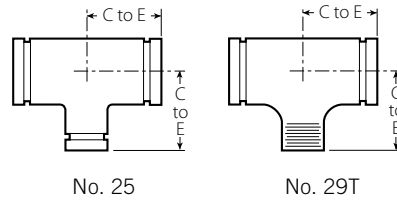
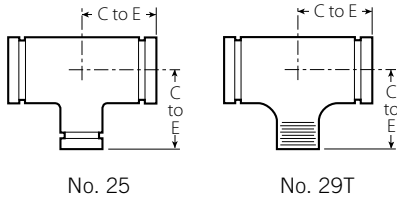
Note: All fittings are ductile iron unless otherwise noted with an (sw) or (s).

(s) = Carbon Steel Direct Roll Groove (OGS)

(sw) = Carbon Steel Segmentally Welded

Reducing Tee

No. 25 Grooved Branch
No. 29T Threaded Branch



Size				No. 25 Std.	No. 29T w/ Thd. Branch	Approx. Weight Each
Nominal Size				C to E	C to E	
inches mm				inches mm	inches mm	lbs. kg
1	x	1	x	2.25 (sw)	2.25 (sw)	1.0
25		25		57	57	0.5
1 1/4	x	1 1/4	x	2.75 (sw)	2.75 (sw)	1.3
32		32		70	70	0.6
1 1/2	x	1 1/2	x	2.75 (sw)	2.75 (sw)	1.5
40		40		70	70	0.7
				2.75 (sw)	2.75 (sw)	1.5
				70	70	0.7
				2.75 (sw)	2.75 (sw)	1.7
				70	70	0.8
2	x	2	x	3.25	3.25	2.5
50		50		83	83	1.1
				3.25	3.25	2.7
				83	83	1.2
				3.25 (sw)	3.25 (sw)	1.8
				83	83	0.8
				3.25	3.25 (sw)	3.0
				83	83	1.4
2 1/2	x	2 1/2	x	3.75 (sw)	3.75 (sw)	3.9
65		65		95	95	1.8
				3.75	3.75 (sw)	3.8
				95	95	1.7
				3.75	3.75	4.2
				95	95	1.7
				3.75	3.75	3.9
				95	95	1.8
				3.75	3.75 (sw)	4.5
				95	95	2.0
3	x	3	x	4.25 (sw)	4.25 (sw)	5.7
80		80		108	108	2.6
				4.25	4.25	6.1
				108	108	2.8
				4.25	4.25	8.0
				108	108	3.6
				4.25	4.25 (sw)	6.5
				108	108	2.9
				4.25	4.25 (sw)	6.2
				108	108	2.8
				4.25	4.25 (sw)	6.4
				108	108	2.9

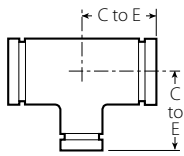
Size				No. 25 Std.	No. 29T w/ Thd. Branch	Approx. Weight Each
Nominal Size				C to E	C to E	
inches mm				inches mm	inches mm	lbs. kg
4	x	4	x	5.00 (sw)	5.00 (sw)	8.0
100		100		127	127	3.6
				1	5.00	7.8
				25	127	3.5
				1 1/4	5.00 (sw)	9.6
				32	127	4.4
				1 1/2	5.00	10.2
				40	127	4.6
				2	5.00	11.2
				50	127	5.1
				2 1/2	5.00	11.4
				65	127	5.2
				3	5.00	11.6
				80	127	5.3
5	x	5	x	5.50 (sw)	5.50 (sw)	14.0
125		125		140	140	6.4
				1 1/2	5.50 (sw)	14.3
				40	140	6.5
				2	5.50 (sw)	14.5
				50	140	6.6
				2 1/2	5.50	15.2
				65	140	6.9
				3	5.50	16.6
				80	140	7.5
				4	5.50	16.7
				100	140	7.6
6	x	6	x	6.50 (sw)	6.50 (sw)	23.0
150		150		165	165	10.4
				1 1/2	6.50 (sw)	24.0
				40	165	10.9
				2	6.50	21.6
				50	165	9.8
				2 1/2	6.50	21.4
				65	165	11.7
				3	6.50	26.5
				80	165	12.0
				4	6.50	25.0
				100	165	11.3
				5	6.50	23.2
				125	165	10.5
6 1/2	x	6 1/2	x	6.50	6.50 (sw)	24.0
165.1		165.1		80	165	10.9
				4	6.50	25.0
				100	165	11.3

8 For 14"/350 mm and larger 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 representative.

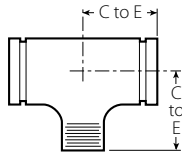
9 Cast fitting available. Contact Victaulic for details.

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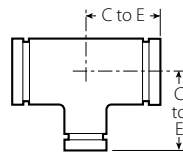
9 Cast fitting available. Contact Victaulic for details.



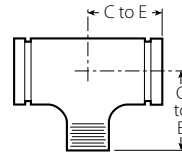
No. 25



No. 29T



No. 25



No. 29T

Size			No. 25 Std.	No. 29T w/ Thd. Branch	Approx. Weight Each lbs. kg			
Nominal Size inches mm			C to E inches mm	C to E inches mm				
8 200	x	8 200	1 1/2 40	7.75 (sw) 197	33.0 15.0			
			2 50	7.75 (sw) 197	33.5 15.2			
			2 1/2 65	7.75 (sw) 197	39.0 17.7			
			3 80	7.75 (sw) 197	33.6 15.2			
			4 100	7.75 197	41.8 19.0			
			5 125	7.75 (sw) 197	34.0 15.4			
			6 150	7.75 197	42.3 19.2			
			165.1	7.75 (sw) 197	48.0 21.8			
			10 250	x	10 250	1 1/2 40	9.00 229	62.0 28.1
						2 50	9.00 (sw) 229	62.0 28.1
2 1/2 65	9.00 (sw) 229	62.4 28.3						
3 80	9.00 (sw) 229	60.0 27.2						
4 100	9.00 (sw) 229	61.0 27.7						
5 125	9.00 (sw) 229	52.0 23.6						
6 150	9.00 (sw) 229	59.0 26.8						
8 200	9.00 (sw) 229	64.7 29.3						
12 300	x	12 300				1 25	10.00 (sw) 254	77.0 34.9
						2 50	10.00 (sw) 254	80.0 36.3
			2 1/2 65	10.00 (sw) 254	78.0 35.4			
			3 80	10.00 (sw) 254	82.0 37.2			
			4 100	10.00 (sw) 254	80.0 36.3			
			5 125	10.00 (sw) 254	75.0 34.0			
			6 150	10.00 (sw) 254	75.0 34.0			
			8 200	10.00 (sw) 254	80.0 36.3			
			10 250	10.00 (sw) 254	84.0 38.1			

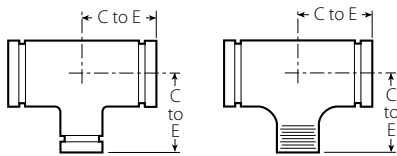
Size			No. 25 Std.	No. 29T w/ Thd. Branch	Approx. Weight Each lbs. kg			
Nominal Size inches mm			C to E inches mm	C to E inches mm				
14 ⁸ 350	x	14 350	4 100	11.00 (sw) 279	102.0 46.3			
			6 150	11.00 (sw) 279	108.2 49.1			
			8 200	11.00 279	112.0 50.8			
			10 250	11.00 279	120.0 54.4			
			12 300	11.00 279	129.1 58.6			
			16 ⁸ 400	x	16 400	4 100	12.00 305	130.0 59.0
						6 150	12.00 (sw) 305	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
18 ⁸ 450	x	18 450	4 100	15.50 (sw) 394	194.0 88.0			
			6 150	15.50 (sw) 394	200.0 90.7			
			8 200	15.50 (sw) 394	202.0 91.6			
			10 250	15.50 394	212.0 96.2			
			12 300	15.50 394	222.6 101.0			
			14 350	12.00 (sw) 305	— 75.8			
			16 400	15.50 394	—			
			20 ⁸ 500	x	20 500	6 150	17.25 438	240.0 108.9
						8 200	17.25 438	244.0 110.7
						10 250	17.25 438	256.0 116.1
12 300	17.25 438	264.0 119.8						
14 350	17.25 438	275.0 124.7						
16 400	17.25 438	— 288.6 130.9						
18 450	17.25 438	— 297.0 134.7						

8 For 14"/350 mm and larger 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 representative.

9 Cast fitting available. Contact Victaulic for details.


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No. 25

No. 29T

Size			No. 25 Std.	No. 29T w/ Thd. Branch	Approx. Weight Each lbs. kg	
Nominal Size inches mm			C to E inches mm	C to E inches mm		
24 ⁸ 600	x	24	20.00 508	20.00 508	340.0	
		600			154.2	
14 – 60 350 – 1500	x	8	20.00 508	20.00 508	343.9	
		10			156.0	
		12			352.8	
		14 ⁹			160.0	
		350			—	360.0
		16			—	163.3
		400			—	378.0
		18 ⁹			—	171.5
		450			—	380.0
		20			—	172.4
500	—	373.0				
					169.2	
			For AGS fitting information, see publication 20.05 			

8 For 14"/350 mm and larger 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 representative.

9 Cast fitting available. Contact Victaulic for details.

General Notes

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

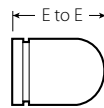
Note: All fittings are ductile iron unless otherwise noted with an (sw) or (s).

(s) = Carbon Steel Direct Roll Groove (OGS)

(sw) = Carbon Steel Segmentally Welded

Bull Plug

No. 61



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	2.375 60.3	4.00 102	2.5 1.1
2 ½	2.875 73.0	5.00 127	3.0 1.4
3	3.500 88.9	6.00 152	4.5 2.0
4	4.500 114.3	7.00 178	7.5 3.4
5	5.563 141.3	8.00 203	12.0 5.4
6	6.625 168.5	10.00 254	17.0 7.7

General Notes

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

(s) = Carbon Steel Direct Roll Groove (OGS)

(sw) = Carbon Steel Segmentally Welded