

# AGS Grooved End Fittings



Victaulic offers a line of AGS (Advanced Groove System) fittings in sizes from 14 – 24”/350 – 600mm in a variety of straight and reducing styles. Fittings are cast of durable ductile iron or fabricated from steel pipe to precise tolerances. Victaulic AGS fittings are pressure rated to conform to the pressure ratings of Victaulic Style W77/W07 AGS couplings.

All fittings are supplied with AGS grooves to permit fast installation without field preparation. The AGS design permits increased pipe end/component end separation for easy alignment. *These fittings are designed for use with Victaulic W07 (rigid) and W77 (flexible) AGS couplings.*

Fittings are painted orange enamel with a galvanized finish available as an option. Contact Victaulic for details.



**WARNING**

## WARNING

- Victaulic AGS products use a patent-pending groove profile that requires the use of special AGS rolls. AGS products must not be used on pipe that has been grooved using standard grooving rolls.

Failure to use AGS products on AGS grooved pipe could result in serious personal injury, property damage, joint leakage or joint separation.

### FLOW DATA

(Frictional Resistance)

The chart expresses the frictional resistance of various Victaulic fittings as equivalent feet/meters of straight pipe. Fittings not listed can be estimated from the data given, for example, a 22 ½° elbow is approximately one-half the resistance of a 45° elbow.

Size		Frictional Resistance- Equivalent Feet/meters					
Nominal Dia. In./mm	Actual Outside Dia. In./mm	Elbows				Tees	
		90° Elbows		45° Elbows		Branch	Run
		No. W10 Std. Radius	No. W100 1 1/2 D Long Radius	No. W11 Std. Radius	No. W110 1 1/2 D Long Radius		
14 350	14.000 355.6	24.5 7.5	15.8 4.8	18.5 5.6	11.0 3.4	70.0 21.3	23.0 7.0
16 400	16.000 406.4	28.0 8.5	18.0 5.5	21.0 6.4	13.0 4.0	80.0 24.4	27.0 8.2
18 450	18.000 457.0	31.0 9.5	20.0 6.1	23.5 7.2	14.0 4.3	90.0 27.4	30.0 9.1
20 500	20.000 508.0	34.0 10.4	22.5 6.9	25.5 7.8	16.0 4.9	100.0 30.5	33.0 10.1
24 600	24.000 610.0	42.0 12.8	27.0 8.2	29.5 9.0	19.0 5.8	120.0 36.6	40.0 12.2

† The flow data listed is based upon the pressure drop of standard wall pipe.

**JOB/OWNER**

System No. \_\_\_\_\_  
Location \_\_\_\_\_

**CONTRACTOR**

Submitted By \_\_\_\_\_  
Date \_\_\_\_\_

**ENGINEER**

Spec Sect \_\_\_\_\_ Para \_\_\_\_\_  
Approved \_\_\_\_\_  
Date \_\_\_\_\_

## AGS Grooved End Fittings

### MATERIAL SPECIFICATIONS

**Cast Fittings:** 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.

**Segmentally Welded Fittings:** Fabricated from standard wall (.375" thick) carbon steel pipe conforming to ASTM A-53, Type E or S, Grade B

**Nipples:** Standard wall (.375" thick) carbon steel pipe conforming to ASTM A-53, Type E or S, Grade B

**Flanged Adapter Nipples:**

- **Flange:** ASME/ANSI B-16.5 raised face carbon steel slip-on flange
- **Pipe:** Standard wall (.375" thick) carbon steel pipe conforming to ASTM A-53, Type E or S, Grade B

**Wrought Fittings:** Constructed per ASME/ANSI B16.9 from pipe as shown for segmentally welded fittings

**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)

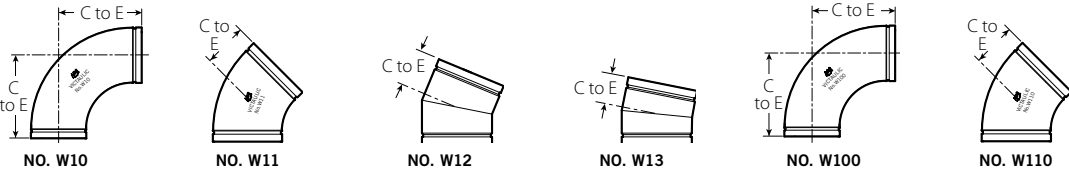
- **Optional:** Orange enamel, hot dip galvanized and others.

# AGS Grooved End Fittings

## DIMENSIONS

### Elbows

- NO. W10** 90° Elbow
- NO. W11** 45° Elbow
- NO. W12** 22½° Elbow
- NO. W13** 11¼° Elbow
- NO. W100** 90° Long Radius
- NO. W110** 45° Long Radius (Ductile Iron#)

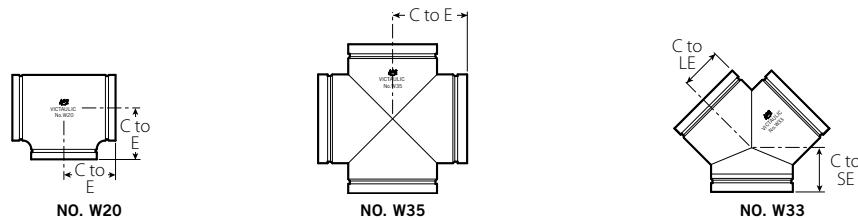


Size		No. W10 90° Elbow		No. W11 45° Elbow		No. W12 22½° Elbow (sw)		No. W13 11¼° Elbow (sw)		No. W100 90° Long Radius Elbow		No. W110 45° Long Radius Elbow	
Nominal Size Inches mm	Actual Outside Dia. Inches mm	C to E Inches mm	Approx. Wgt. Each Lbs. kg	C to E Inches mm	Approx. Wgt. Each Lbs. kg	C to 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
14 350	14.000 355.6	14.00 355.6	150.8 68.4	5.80 147	63.0 28.7	5.00 127	46.0 20.9	3.50 89	32.0 14.5	21.00 533	158.0 71.7	8.75 222	83.0 37.6
16 400	16.000 406.4	16.00 406.4	184.3 83.6	6.63 168	93.8 42.5	5.00 127	52.1 23.6	4.00 102	42.0 19.1	24.00 610	204.3 92.7	10.00 254	101.0 45.8
18 450	18.000 457.0	18.00 457.2	272.3 123.5	7.46 189	129.0 58.5	5.50 140	65.0 29.5	4.50 114	53.2 24.1	27.00 686	260.0 118.0	11.25 286	127.0 57.6
20 500	20.000 508.0	20.00 508.0	312.0 141.5	8.28 210	165.3 75.0	6.00 152	78.6 36.0	5.00 127	65.0 29.5	30.00 762	328.5 149.0	12.50 318	167.0 75.7
24 600	24.000 610.0	24.00 609.6	559.8 253.9	9.94 252	264.5 120.0	7.00 178	110.3 50.0	6.00 152	94.5 42.9	36.00 914	490.0 222.3	15.00 381	244.8 110.1

#Ductile iron except those marked (sw) which are segmentally welded steel.

### Tees, Crosses and Wyes

- NO. W20** Tee
- NO. W35** Cross
- NO. W33** True Wye
- (Ductile Iron#)



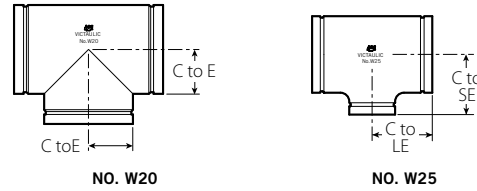
Size		No. W20 Tee		No. W35 Cross (sw)		No. W33 True Wye (sw)		
Nominal Size Inches mm	Actual Outside Diameter Inches mm	C to E Inches mm	Approx. Weight Each Lbs. kg	C to E Inches mm	Approx. Weight Each Lbs. kg	C to LE Inches mm	C to SE Inches mm	Approx. Weight Each Lbs. kg
14 350	14.000 355.6	11.00 279	102.0 46.3	11.00 279	121.0 54.9	11.00 279	7.50 191	98.0 44.4
16 400	16.000 406.4	12.00 305	123.5 56.0	12.00 305	146.4 66.4	12.00 305	8.00 203	119.3 54.1
18 450	18.000 457.0	13.50 343	281.0 127.5	13.50 343	185.4 84.1	13.50 343	8.50 216	148.3 67.3
20 500	20.000 508.0	15.00 381	350.0 158.7	15.00 381	229.1 103.9	15.00 381	9.00 229	180.4 81.8
24 600	24.000 610.0	17.00 432	503.7 228.5	17.00 432	298.7 135.5	17.00 432	10.00 254	238.3 108.1

# Ductile iron except those marked (sw) which are segmentally welded steel.

# AGS Grooved End Fittings

## Tees

**NO. W20 TEE**  
**NO. W25 REDUCING TEE**  
 (Segmentally Welded Steel)



Size	No. W20 Tee		No. W25 Reducing Tee		Approx. Weight Each
	Nominal Size Inches mm	C to E Inches mm	C to LE Inches mm	C to SE Inches mm	Lbs. kg
14 350 × 14 350 × 6 150	8 200	—	11.00 279	9.38 238	101.4 46.0
	10 250	—	11.00 279	10.12 257	102.5 46.5
	12 300	—	11.00 279	10.62 270	105.1 47.7
	14 350	11.00 279	—	—	108.1 49.0
	16 400	12.00 305	—	—	110.0 50.1
16 400 × 16 400 × 6 150	8 200	—	12.00 305	10.38 264	126.2 57.2
	10 250	—	12.00 305	10.75 273	127.4 57.8
	12 300	—	12.00 305	11.12 282	129.8 58.9
	14 350	—	12.00 305	11.62 295	132.5 60.1
	16 400	12.00 305	—	—	134.6 61.1
	18 450	13.50 343	—	—	135.7 61.6
18 450 × 18 450 × 6 150	8 200	—	13.50 343	11.38 289	160.0 72.6
	10 250	—	13.50 343	11.75 298	161.0 73.0
	12 300	—	13.50 343	12.12 308	163.1 74.0
	14 350	—	13.50 343	12.62 321	165.6 75.1
	16 400	—	13.50 343	13.00 330	167.6 76.0
	18 450	13.50 343	—	—	168.2 76.3
	20 500	15.00 381	—	—	172.1 78.1
	24 600	17.00 432	—	—	172.1 78.1

Size	No. W20 Tee		No. W25 Reducing Tee		Approx. Weight Each
	Nominal Size Inches mm	C to E Inches mm	C to LE Inches mm	C to SE Inches mm	Lbs. kg
20 500 × 20 500 × 6 150	8 200	—	15.00 381	12.38 314	197.0 89.5
	10 250	—	15.00 381	12.75 324	198.5 90.0
	12 300	—	15.00 381	13.12 333	200.5 90.9
	14 350	—	15.00 381	13.62 346	202.9 92.0
	16 400	—	15.00 381	14.00 356	204.7 92.9
	18 450	—	15.00 381	14.50 368	205.0 93.0
	20 500	15.00 381	—	—	208.4 94.5
24 600 × 24 600 × 6 150	8 200	—	17.00 432	14.38 365	260.9 122.0
	10 250	—	17.00 432	14.75 375	270.0 123.0
	12 300	—	17.00 432	15.12 384	271.7 123.2
	14 350	—	17.00 432	15.62 397	273.8 124.2
	16 400	—	17.00 432	16.00 406	275.4 125.0
	18 450	—	17.00 432	16.50 419	275.3 125.0
	20 500	—	17.00 432	16.00 406	278.1 127.1
	24 600	17.00 432	—	—	282.1 128.0
	20 500	—	17.00 432	17.00 432	283.2 128.5
	24 600	17.00 432	—	—	283.2 128.5

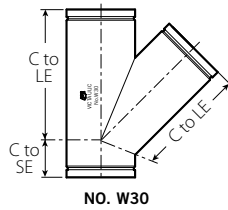
**IMPORTANT NOTE:**

Outlets 12"/300 mm and smaller will be provided with standard Victaulic roll or cut grooves, suitable for use with standard Victaulic grooved couplings in that size range.

# AGS Grooved End Fittings

## 45° Lateral

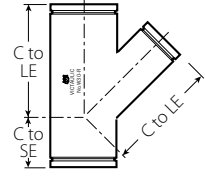
**NO. W30**  
(Segmentally Welded Steel)



NO. W30

## 45° Reducing Lateral

**NO. W30-R**  
(Segmentally Welded Steel)



NO. W30-R

Size		No. W30 45° Lateral		
Nominal Size Inches mm	Actual Outside Diameter Inches mm	C to LE Inches mm	C to SE Inches mm	Approx. Weight Each Lbs. kg
14 350	14.000 355.6	26.50 673	7.50 191	219.1 99.4
16 400	16.000 406.4	29.00 737	8.00 203	270.5 122.7
18 450	18.000 457.0	32.00 813	8.50 216	332.7 150.9
20 500	20.000 508.0	35.00 889	9.00 229	401.3 182.0
24 600	24.000 610.0	40.00 1016	10.00 254	541.3 245.5

Size		No. W30-R Reducing Lateral			
Nominal Size Inches mm		C to LE Inches mm	C to SE Inches mm	Approx. Weight Each Lbs. kg	
14 350	× 14 350 ×	4 100	26.50 673	7.50 191	175.9 79.8
		6 150	26.50 673	7.50 191	185.9 84.3
		8 200	26.50 673	7.50 191	195.0 88.4
		10 250	26.50 673	7.50 191	204.4 92.7
		12 300	26.50 673	7.50 191	213.3 96.8
16 400	× 16 400 ×	6 150	29.00 737	8.00 203	226.4 102.7
		8 200	29.00 737	8.00 203	236.0 107.1
		10 250	29.00 737	8.00 203	246.0 111.6
		12 300	29.00 737	8.00 203	255.1 115.7
		14 350	29.00 737	8.00 203	260.9 118.4
18 450	× 18 450 ×	6 150	32.00 813	8.50 216	274.8 124.6
		8 200	32.00 813	8.50 216	285.3 129.4
		12 300	32.00 813	8.50 216	306.2 138.9
		14 350	32.00 813	8.50 216	312.4 141.7
		16 400	32.00 813	8.50 216	322.4 146.2
20 500	× 20 500 ×	12 300	35.00 889	9.00 229	362.1 164.3
		14 350	35.00 889	9.00 229	368.7 167.2
		16 400	35.00 889	9.00 229	379.4 172.1
24 600	× 24 600 ×	16 400	40.00 1016	10.00 254	494.9 224.5
		20 600	40.00 1016	10.00 254	517.7 254.8

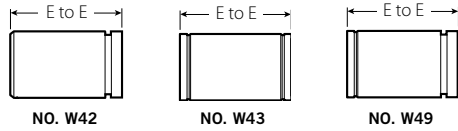
**IMPORTANT NOTE:**

Outlets 12"/300 mm and smaller will be provided with standard Victaulic roll or cut groove, suitable for use with standard Victaulic grooved couplings in that size range.

# AGS Grooved End Fittings

## Adapter Nipple

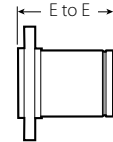
- NO. W42** AGS Grv. x Bev.
- NO. W43** AGS Grv. x AGS Grv.
- NO. W49** AGS Grv. x Non-AGS Grv. (Steel)



Size		No. W42, W43, W49 Adapter Nipple (sw)	
Nominal Size Inches mm	Actual Outside Diameter Inches mm	E to E Inches mm	Approx. Weight Each Lbs. kg
14	14.000	8.00	36.0
350	355.6	203	16.3
16	16.000	8.00	42.0
400	406.4	203	19.1
18	18.000	8.00	47.0
450	457.0	203	21.3
20	20.000	8.00	52.0
500	508.0	203	23.6
24	24.000	8.00	63.0
600	610.0	203	28.6

## Flanged Adapter Nipple

- NO. W45R** ANSI Class 150 Raised Face (Steel)



Size		No. W45R Flanged Adapter Nipple	
Nominal Size Inches mm	Actual Outside Diameter Inches mm	E to E Inches mm	Approx. Weight Each Lbs. kg
14	14.000	8.00	122.0
350	355.6	203	55.3
16	16.000	8.00	136.0
400	406.4	203	61.7
18	18.000	8.00	168.0
450	457.0	203	76.2
20	20.000	8.00	208.0
500	508.0	203	94.3
24	24.000	8.00	274.0
600	610.0	203	124.3

## Cap

- NO. W60** (Steel)



NO. W60

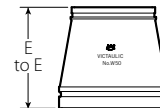
Size		No. W60 Cap	
Nominal Size Inches mm	Actual Outside Diameter Inches mm	T Thickness Inches mm	Approx. Weight Each Lbs. kg
14	14.000	6.50	33.2
350	355.6	165	15.1
16	16.000	7.00	41.2
400	406.4	178	18.7
18	18.000	8.00	54.6
450	457.0	203	24.8
20	20.000	9.00	67.5
500	508.0	229	30.6
24	24.000	10.50	96.0
600	610.0	267	43.5

# AGS Grooved End Fittings

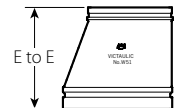
## Concentric/Eccentric Reducer

**NO. W50** Concentric

**NO. W51** Eccentric



NO. W50



NO. W51

Size	No. W50 Concentric Reducer		No. W51 Eccentric Reducer	
	Nominal Size Inches mm	E to E Inches mm	Approx. Weight Each Lbs. kg	Approx. Weight Each Lbs. kg
14 350 ×	6 150	13.00 330	68.0 30.8	68.0 30.8
	8 200	13.00 330	70.0 31.8	70.0 31.8
	10 † 250	13.00 330	72.0 32.7	72.0 32.7
	12 † 300	13.00 330	74.0 33.6	74.0 33.6
	16 400 ×	8 200	14.00 356	88.0 39.9
10 250	10 250	14.00 356	91.0 41.3	91.0 41.3
	12 † 300	14.00 356	93.0 42.2	93.0 42.2
	14 † 350	14.00 356	95.0 43.1	95.0 43.1
	18 450 ×	10 250	15.00 381	112.0 50.8
12 300	12 300	15.00 381	115.0 52.2	115.0 52.2

Size	No. W50 Concentric Reducer		No. W51 Eccentric Reducer	
	Nominal Size Inches mm	E to E Inches mm	Approx. Weight Each Lbs. kg	Approx. Weight Each Lbs. kg
18 450 ×	14 † 350	15.00 381	118.0 53.5	118.0 53.5
	16 † 400	15.00 381	121.0 54.9	121.0 54.9
	20 500 ×	12 300	20.00 508	160.0 72.6
14 350	14 350	20.00 508	164.0 74.4	164.0 74.4
	16 † 400	20.00 508	168.0 76.2	168.0 76.2
	18 † 450	20.00 508	172.0 78.0	172.0 78.0
	24 600 ×	16 400	20.00 508	198.0 89.8
18 450	18 † 450	20.00 508	200.0 90.7	200.0 90.7
	20 † 500	20.00 508	204.0 92.5	204.0 92.5

† Standard as cast ductile iron. Contact Victaulic for details.

**IMPORTANT NOTE:**

Outlets 12"/300mm and smaller will be provided with standard Victaulic roll or cut grooves, suitable for use with standard Victaulic grooved couplings in that size range.

## AGS Grooved End Fittings

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**WARRANTY**

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

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**NOTE**

This product shall be manufactured by Victaulic or to Victaulic specifications. All products to be installed in accordance with current Victaulic installation/assembly instructions. Victaulic reserves the right to change product specifications, designs and standard equipment without notice and without incurring obligations.

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For complete contact information, visit [www.victaulic.com](http://www.victaulic.com)

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