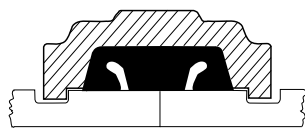
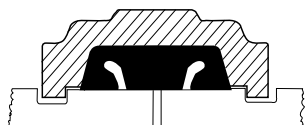


Radius Cut Groove Specifications

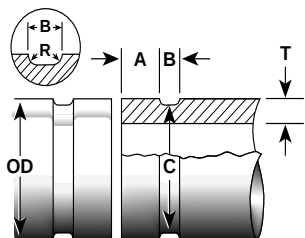


Rigid Radius Cut Groove



Flexible Radius Cut Groove

Exaggerated for clarity.



NOTES:

COLUMN 1 – Nominal AWWA Pipe Size

COLUMN 2[†] – AWWA outside diameter: The outside diameter shall not vary more than the tolerance listed. The maximum allowable tolerance from square cut ends is 0.030" (0.8 mm) for 3" - 80 mm; 0.045" (1.1 mm) for 4" - 6" (100 - 150 mm) and 0.060" (1.524 mm) for sizes 8" O.D. and above measured from true square line.

COLUMN 3[†] – Gasket seat: The pipe surface shall be free from indentations and projections from the end of the pipe to the groove, to provide a leak-tight seat for the gasket.

COLUMN 4 – Groove width.

COLUMN 5[†] – Groove outside diameter: The groove must be uniform depth for the entire circumference. Groove must be maintained within the "C" diameter tolerance listed.

COLUMN 6 – Groove depth: For reference only. Groove must conform to the groove diameter "C" listed.

COLUMN 7 – Minimum allowable wall thickness. This is the minimum wall thickness which may be cut grooved.

[†] Coatings applied to the interior surfaces, including bolt pad mating surfaces, of our bolted grooved and bolted plain end couplings should not exceed 0.010" (0.25 mm). Also, the coating thickness applied to the gasket seating surface and within the groove on the pipe exterior should not exceed 0.010" (0.25 mm).

Victaulic groove specifications for cast pipe (gray and ductile) conform to requirements of ANSI/AWWA standard C-606.

For cast pipe, the groove is cut with a radius ("R" dimension) at the corners of the groove base to reduce stress concentration. Grooving dimensions are the same for any one pipe O.D. regardless of pipe class and pressure.

Standard preparation is with a rigid radius groove. Flexible radius groove dimensions may be used to provide expansion/contraction or angular movement allowance at the joint.

The outside surface of the pipe between the groove and pipe end must be smooth and free from deep pits or swells to provide a leak-tight seat for the Victaulic gasket. All rust, loose scale, oil, grease and dirt shall be removed. Peened surfaces may require corrective action to provide leak-tight gasket seal (refer to ANSI/AWWA C-606).

Rigid Radius Cut Groove Specifications – Ductile Iron Pipe

1	2			3	4	5		6	7	
						Dimensions – Inches/millimeters				
	Nom. Size Inches mm	Pipe Outside Dia. O.D. Inches/mm		Gasket Seat A+ +0.000 –0.020	Groove Width B +0.031 –0.016	Groove Dia. C **		Radius R	Min. Allow. Wall Thick. T#	
Basic		Tolerance* + –				Basic	Tol. +0.000		Cast Iron	Ductile Iron
	3	3.96	+0.045	–0.045	0.840			0.375		
80	100.6	+1.14	–1.14	21.34	9.53	94.56	–0.51	3.05	8.1	7.9
4	4.80	+0.045	–0.045	0.840	0.375	4.563	–0.020	0.120	0.35	0.32
100	121.9	+1.14	–1.14	21.34	9.53	115.90	–0.51	3.05	8.9	8.1
6	6.90	+0.060	–0.060	0.840	0.375	6.656	–0.020	0.120	0.38	0.34
150	175.3	+1.52	–1.52	21.34	9.53	169.06	–0.51	3.05	9.7	8.6
8	9.05	+0.060	–0.060	0.950	0.500	8.781	–0.025	0.145	0.41	0.36
200	229.9	+1.52	–1.52	24.13	12.70	223.04	–0.64	3.68	10.4	9.1
10	11.10	+0.060	–0.060	1.015	0.500	10.813	–0.025	0.145	0.44	0.38
250	281.9	+1.52	–1.52	25.78	12.70	274.65	–0.64	3.68	11.2	9.7
12	13.20	+0.060	–0.060	1.015	0.500	12.906	–0.030	0.145	0.48	0.40
300	335.3	+1.52	–1.52	25.78	12.70	327.81	–0.76	3.68	12.2	10.2
14	15.30	+0.050	–0.080	1.015	0.625	14.969	–0.030	0.165	0.55	0.42
350	388.6	+1.27	–2.03	25.78	15.88	380.21	–0.76	4.19	14.0	10.7
16	17.40	+0.050	–0.080	1.340	0.625	17.063	–0.030	0.165	0.58	0.43
400	442.0	+1.27	–2.03	34.04	15.88	433.40	–0.76	4.19	14.7	10.9
18	19.50	+0.050	–0.080	1.340	0.625	19.125	–0.030	0.185	0.63	0.44
450	495.3	+1.27	–2.03	34.04	15.88	485.78	–0.76	4.70	16.0	11.2
20	21.60	+0.050	–0.080	1.340	0.625	21.219	–0.030	0.185	0.67	0.45
500	548.6	+1.27	–2.03	34.04	15.88	538.96	–0.76	4.70	17.0	11.4
24	25.80	+0.050	–0.080	1.340	0.625	25.406	–0.030	0.185	0.73	0.47
600	655.3	+1.27	–2.03	34.04	15.88	645.31	–0.76	4.70	18.5	11.9
30	32.00	+0.080	–0.060	1.625	0.750	31.550	–0.035	0.215	0.92	0.51
750	812.8	+2.03	–1.52	41.28	19.05	801.37	–0.89	5.46	23.4	13.0
36	38.30	+0.080	–0.060	1.625	0.750	37.850	–0.035	0.215	1.02	0.58
900	972.8	+2.03	–1.52	41.28	19.05	961.39	–0.89	5.46	25.9	14.7

* Must be smooth and free of deep pits or swells.

** Groove must be of uniform depth for entire pipe circumference. Groove must conform to "C" diameter shown.

Ovality, or out-of-roundness, must lie within specified tolerances.

Min. standard wall thickness that should be grooved. Tolerances are to conform to Class 53 ANSI/AWWA C151/A21.51. For 18 - 36" (450 - 950 mm) ductile iron Class 53 pipe may be used. Contact Victaulic for details.

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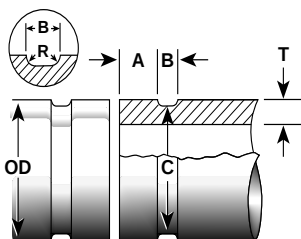
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NOTES:

COLUMN 1 – Nominal AWWA Pipe Size

COLUMN 2 – AWWA outside diameter: The outside diameter shall not vary more than the tolerance listed. The maximum allowable tolerance from square cut ends is 0.030" (0.8 mm) for 3" - 80 mm; 0.045" (1.1 mm) for 4" - 6" (100 - 150 mm) and 0.060" (1.524 mm) for sizes 8" O.D. and above measured from true square line.

COLUMN 3 – Gasket seat: The pipe surface shall be free from indentations and projections from the end of the pipe to the groove, to provide a leak-tight seat for the gasket.

COLUMN 4 – Groove width.

COLUMN 5 – Groove outside diameter: The groove must be uniform depth for the entire circumference. Groove must be maintained within the "C" diameter tolerance listed.

COLUMN 6 – Groove depth: For reference only. Groove must conform to the groove diameter "C" listed.

COLUMN 7 – Minimum allowable wall thickness. This is the minimum wall thickness which may be cut grooved.

Flexible Radius Cut Groove Specifications – Ductile Iron Pipe

1	2			3	4	5		6	7	
						Dimensions – Inches/millimeters				
	Pipe Outside Dia. O.D. Inches/mm			Gasket Seat A+ +0.000 –0.020	Groove Width B +0.031 –0.016	Groove Dia. C **		Radius R	Min. Allow. Wall Thick. T#	
	Nom. Size Inches mm	Basic	Tolerance* + –			Basic	Tol. +0.000		Cast Iron	Ductile Iron
3	3.96	+0.045	–0.045	0.750	0.375	3.723	–0.020	0.120	0.32	0.31
80	100,6	+1,14	–1,14	19,05	9,53	94,56	–0,51	3,05	8,1	7,9
4	4.80	+0.045	–0.045	0.750	0.375	4.563	–0.020	0.120	0.35	0.32
100	121,9	+1,14	–1,14	19,05	9,53	115,90	–0,51	3,05	8,9	8,1
6	6.90	+0.060	–0.060	0.750	0.375	6.656	–0.020	0.120	0.38	0.34
150	175,3	+1,52	–1,52	19,05	9,53	169,06	–0,51	3,05	9,7	8,6
8	9.05	+0.060	–0.060	0.875	0.500	8.781	–0.025	0.145	0.41	0.36
200	229,9	+1,52	–1,52	22,23	12,70	223,04	–0,64	3,68	10,4	9,1
10	11.10	+0.060	–0.060	0.938	0.500	10.813	–0.025	0.145	0.44	0.38
250	281,9	+1,52	–1,52	23,83	12,70	274,65	–0,64	3,68	11,2	9,7
12	13.20	+0.060	–0.060	0.938	0.500	12.906	–0.030	0.145	0.48	0.40
300	335,3	+1,52	–1,52	23,83	12,70	327,81	–0,76	3,68	12,2	10,2
14	15.30	+0.050	–0.080	0.938	0.625	14.969	–0.030	0.165	0.55	0.42
350	388,6	+1,27	–2,03	23,83	15,88	327,81	–0,76	4,19	14,0	10,7
16	17.40	+0.050	–0.080	1.188	0.625	17.063	–0.030	0.165	0.58	0.43
400	442,0	+1,27	–2,03	30,18	15,88	433,40	–0,76	4,19	14,1	10,9
18	19.50	+0.050	–0.080	1.188	0.625	19.125	–0.030	0.185	0.63	0.44
450	495,3	+1,27	–2,03	30,18	15,88	485,78	–0,76	4,70	16,0	11,2
20	21.60	+0.050	–0.080	1.188	0.625	21.219	–0.030	0.185	0.67	0.45
500	548,6	+1,27	–2,03	30,18	15,88	538,96	–0,76	4,70	17,0	11,4
24	25.80	+0.050	–0.080	1.188	0.625	25.406	–0.030	0.185	0.73	0.47
600	655,3	+1,27	–2,03	30,18	15,88	645,31	–0,76	4,70	18,5	11,9
30	32.00	+0.080	–0.060	1.375	0.750	31.550	–0.035	0.215	0.92	0.51
750	812,8	+2,03	–1,52	34,93	19,05	801,37	–0,89	5,46	23,4	13,0
36	38.30	+0.080	–0.060	1.375	0.750	37.850	–0.035	0.215	1.02	0.58
900	972,8	+2,03	–1,52	34,93	19,05	961,39	–0,89	5,46	25,9	14,7

+ Must be smooth and free of deep pits or swells.

** Groove must be of uniform depth for entire pipe circumference. Groove must conform to "C" diameter shown.

* Ovality, or out-of-roundness, must lie within specified tolerances.

Min. standard wall thickness that should be grooved. Tolerances are to conform to Class 53 ANSI/AWWA C151/A21.51. For 18-36" (450 - 950 mm) ductile iron Class 53 pipe may be used. 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.