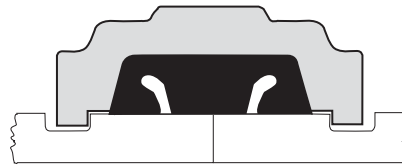
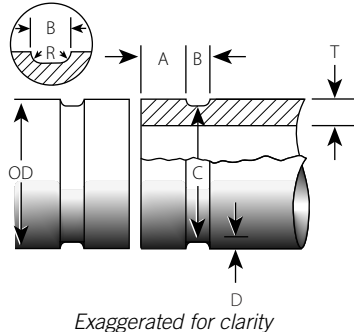


DIMENSIONS

RIGID RADIUS CUT GROOVE SPECIFICATIONS – DUCTILE IRON PIPE



Rigid Radius Cut Groove

Size	Pipe Outside Diameter ¹			Gasket Seat A ² +0.000 -0.020 inches mm	Groove Width "B" ³ +0.031 -0.016 inches mm	Groove Diameter "C" ⁴		Radius "R" ⁵ inches mm	Minimum Allowable Nominal Wall Thickness "T" ⁶	
	Nominal inches	Actual inches mm	Tolerance + inches mm - inches mm			Actual inches mm	Tolerance +0.000 inches mm		Cast Iron inches mm	Ductile Iron ⁶ inches mm
3	3.96	3.96	+0.045 -0.045	0.840	0.375	3.723	-0.020	0.120	0.32	0.31
		100.6	+1.14 -1.14	21.34	9.53	94.56	-0.51	3.05	8.1	7.9
4	4.80	4.80	+0.045 -0.045	0.840	0.375	4.563	-0.020	0.120	0.35	0.32
		121.9	+1.14 -1.14	21.34	9.53	115.9	-0.51	3.05	8.9	8.1
6	6.90	6.90	+0.060 -0.060	0.840	0.375	6.656	-0.020	0.120	0.38	0.34
		175.3	+1.52 -1.52	21.34	9.53	169.06	-0.51	3.05	9.7	8.6
8	9.05	9.05	+0.060 -0.060	0.950	0.500	8.781	-0.025	0.145	0.41	0.36
		229.9	+1.52 -1.52	24.13	12.70	223.04	-0.64	3.68	10.4	9.1
10	11.10	11.10	+0.060 -0.060	1.015	0.500	10.813	-0.025	0.145	0.44	0.38
		281.9	+1.52 -1.52	25.78	12.70	274.65	-0.64	3.68	11.2	9.7
12	13.20	13.20	+0.060 -0.060	1.015	0.500	12.906	-0.030	0.145	0.48	0.40
		335.3	+1.52 -1.52	25.78	12.70	327.81	-0.76	3.68	12.2	10.2

- ¹ **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"; 0.045"/1.1 mm for 4 – 6" and 0.060"/1.524 mm for sizes 8" and above measured from true square line.
- ² **Gasket seat "A":** 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.
- ³ **Groove width "B":** The bottom of the groove shall be free of loose dirt, chips, rust and scale that may interfere with proper coupling assembly.
- ⁴ **Groove diameter "C":** The groove shall be uniform depth for the entire circumference. The groove shall be maintained within the "C" diameter tolerance listed.
- ⁵ **Radius "R":** Radius required at groove bottom.
- ⁶ **Minimum allowable nominal wall thickness "T":** This is the minimum nominal wall thickness which may be cut grooved. Tolerances are to conform to Class 53 ANSI/AWWA C151/A21.51.

NOTES

- Maximum coating thickness shall be +0.010"/0.25 mm. When measuring pipe end dimensions of coated (non-bare) pipe and comparing them to the dimensions in the above table, coating thickness will affect measurements and must be considered. Nominal dimensions shown in table above will be adjusted as follows, tolerances will not change. Pipe Outside Diameter, Gasket Seat "A", Groove Diameter "C", and Minimum Allowable Nominal Wall Thickness "T" shall increase by +0.020"/+0.50 mm. Groove Width "B" will be reduced by -0.020"/-0.50 mm.

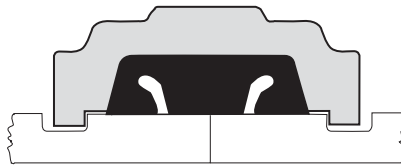
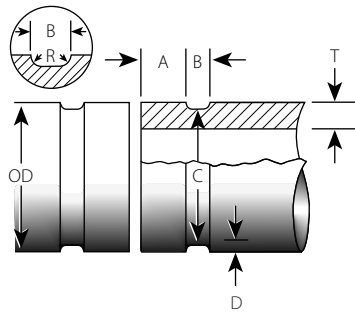
ALWAYS REFER TO ANY NOTIFICATIONS AT THE END OF THIS DOCUMENT REGARDING PRODUCT INSTALLATION, MAINTENANCE OR SUPPORT.

System No.		Location	
Submitted By		Date	

Spec Section		Paragraph	
Approved		Date	

DIMENSIONS (CONTINUED)

RIGID RADIUS CUT GROOVE SPECIFICATIONS – DUCTILE IRON PIPE



Rigid Radius Cut Groove

Size	Pipe Outside Diameter ¹			Gasket Seat "A" ² +0.000 -0.020 inches mm	Groove Width "B" ³ +0.031 -0.016 inches mm	Groove Diameter "C" ⁴		Radius "R" ⁵ inches mm	Minimum Allowable Nominal Wall Thickness "T"	
	Nominal inches	Actual inches mm	Tolerance + inches mm - inches mm			Actual inches mm	Tolerance +0.000 inches mm		Cast Iron inches mm	Ductile Iron ⁶ inches mm
14	15.30	388.6	+0.050 +1.27	1.015 25.78	0.625 15.88	14.969 380.21	-0.030 -0.76	0.165 4.19	0.55 14.0	0.42 10.7
	16	17.40 442.0	+0.050 +1.27	1.340 34.04	0.625 15.88	17.063 433.40	-0.030 -0.76	0.165 4.19	0.58 14.7	0.43 10.9
18	19.50	495.3	+0.050 +1.27	1.340 34.04	0.625 15.88	19.125 485.78	-0.030 -0.76	0.185 4.70	0.63 16.0	0.44 11.2
	20	21.60 548.6	+0.050 +1.27	1.340 34.04	0.625 15.88	21.219 538.96	-0.030 -0.76	0.185 4.70	0.67 17.0	0.45 11.4
24	25.80	655.3	+0.050 +1.27	1.340 34.04	0.625 15.88	25.406 645.31	-0.030 -0.76	0.185 4.70	0.73 18.5	0.47 11.9
	30	32.00 812.8	-0.080 +2.03	1.625 41.28	0.750 19.05	31.550 801.37	-0.035 -0.89	0.215 5.46	0.92 23.4	0.51 13.0
36	38.30	972.8	+0.080 +2.03	1.625 41.28	0.750 19.05	37.850 961.39	-0.035 -0.89	0.215 5.46	1.02 25.9	0.58 14.7

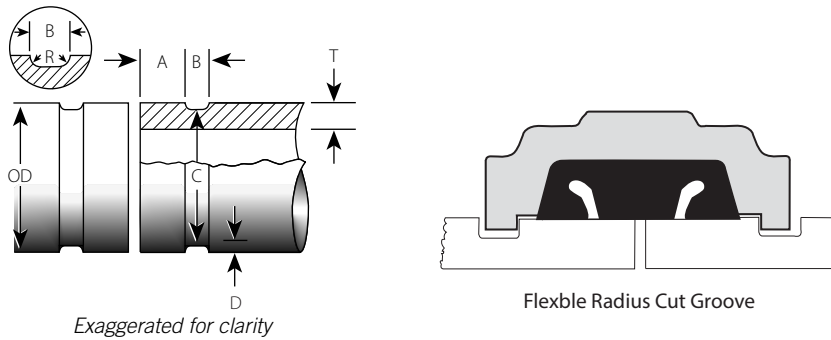
- ¹ **Outside diameter:** The outside diameter shall not vary more than the tolerance listed. The maximum allowable tolerance from square cut ends is 0.030"/0.8mm for 3"; 0.045"/1.1 mm for 4 – 6" and 0.060"/1.524 mm for sizes 8" and above measured from true square line.
- ² **Gasket seat "A":** The pipe 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.
- ³ **Groove width "B":** The bottom of the groove shall be free of loose dirt, chips, rust and scale that may interfere with proper coupling assembly.
- ⁴ **Groove diameter "C":** The groove shall be uniform depth for the entire circumference. The groove shall be maintained within the "C" diameter tolerance listed.
- ⁵ **Radius "R":** Radius required at groove bottom.
- ⁶ **Minimum allowable nominal wall thickness "T":** This is the minimum nominal wall thickness which may be cut grooved. Tolerances are to conform to Class 53 ANSI/AWWA C151/A21.51.

NOTES

- Maximum coating thickness shall be +0.010"/0.25 mm. When measuring pipe end dimensions of coated (non-bare) pipe and comparing them to the dimensions in the above table, coating thickness will affect measurements and must be considered. Nominal dimensions shown in table above will be adjusted as follows, tolerances will not change. Pipe Outside Diameter, Gasket Seat "A", Groove Diameter "C", and Minimum Allowable Nominal Wall Thickness "T" shall increase by +0.020"/+0.50 mm. Groove Width "B" will be reduced by -0.020"/-0.50 mm.

DIMENSIONS (CONTINUED)

FLEXIBLE RADIUS CUT GROOVE SPECIFICATIONS – DUCTILE IRON PIPE



Size	Pipe Outside Diameter ¹			Gasket Seat A ² +0.016 -0.047 inches mm	Groove Width B ³ +0.031 -0.016 inches mm	Groove Diameter C ⁴		Radius R ⁵ inches mm	Minimum Allowable Nominal Wall Thickness T ⁶		
	Nominal inches	Actual inches mm	Tolerance + inches mm			- inches mm	Actual inches mm		Tolerance +0.000 inches mm	Cast Iron inches mm	Ductile Iron ⁶ inches mm
3	3.96	3.96	+0.045	-0.045	0.750	0.375	3.723	-0.020	0.120	0.32	0.31
	100.6	100.6	+1.14	-1.14	19.05	9.53	94.56	-0.51	3.05	8.1	7.9
4	4.80	4.80	+0.045	-0.045	0.750	0.375	4.563	-0.020	0.120	0.35	0.32
	121.9	121.9	+1.14	-1.14	19.05	9.53	115.9	-0.51	3.05	8.9	8.1
6	6.90	6.90	+0.060	-0.060	0.750	0.375	6.656	-0.020	0.120	0.38	0.34
	175.3	175.3	+1.52	-1.52	19.05	9.53	169.06	-0.51	3.05	9.7	8.6
8	9.05	9.05	+0.060	-0.060	0.875	0.500	8.781	-0.025	0.145	0.41	0.36
	229.9	229.9	+1.52	-1.52	22.23	12.70	223.04	-0.64	3.68	10.4	9.1
10	11.10	11.10	+0.060	-0.060	0.938	0.500	10.813	-0.025	0.145	0.44	0.38
	281.9	281.9	+1.52	-1.52	23.83	12.70	274.65	-0.64	3.68	11.2	9.7
12	13.20	13.20	+0.060	-0.060	0.938	0.500	12.906	-0.030	0.145	0.48	0.40
	335.3	335.3	+1.52	-1.52	23.83	12.70	327.81	-0.76	3.68	12.2	10.2
14	15.30	15.30	+0.050	-0.080	0.938	0.625	14.969	-0.030	0.165	0.55	0.42
	388.6	388.6	+1.27	-2.03	23.83	15.88	380.21	-0.76	4.19	14.0	10.7
16	17.40	17.40	+0.050	-0.080	1.188	0.625	17.063	-0.030	0.165	0.58	0.43
	442.0	442.0	+1.27	-2.03	30.18	15.88	433.40	-0.76	4.19	14.7	10.9
18	19.50	19.50	+0.050	-0.080	1.188	0.625	19.125	-0.030	0.185	0.63	0.44
	495.3	495.3	+1.27	-2.03	30.18	15.88	485.78	-0.76	4.70	16.0	11.2
20	21.60	21.60	+0.050	-0.080	1.188	0.625	21.219	-0.030	0.185	0.67	0.45
	548.6	548.6	+1.27	-2.03	30.18	15.88	538.96	-0.76	4.70	17.0	11.4
24	25.80	25.80	+0.050	-0.080	1.340	0.625	25.406	-0.030	0.185	0.73	0.47
	655.3	655.3	+1.27	-2.03	30.18	15.88	645.31	-0.76	4.70	18.5	11.9
30	32.00	32.00	-0.080	-0.060	1.375	0.750	31.550	-0.035	0.215	0.92	0.51
	812.8	812.8	+2.03	-1.52	34.93	19.05	801.37	-0.89	5.46	23.4	13.0
36	38.30	38.30	+0.080	-0.060	1.375	0.750	37.850	-0.035	0.215	1.02	0.58
	972.8	972.8	+2.03	-1.52	34.93	19.05	961.39	-0.89	5.46	25.9	14.7

- 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"; 0.045"/1.1 mm for 4 – 6" and 0.060"/1.524 mm for sizes 8" and above measured from true square line.
- Gasket seat "A":** 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.
- Groove width "B":** The bottom of the groove shall be free of loose dirt, chips, rust and scale that may interfere with proper coupling assembly.
- Groove diameter "C":** The groove shall be uniform depth for the entire circumference. The groove shall be maintained within the "C" diameter tolerance listed.
- Radius "R":** Radius required at groove bottom.
- Minimum allowable nominal wall thickness "T":** This is the minimum nominal wall thickness which may be cut grooved. Tolerances are to conform to Class 53 ANSI/AWWA C151/A21.51.

NOTES

- Maximum coating thickness shall be +0.010"/0.25 mm. When measuring pipe end dimensions of coated (non-bare) pipe and comparing them to the dimensions in the above table, coating thickness will affect measurements and must be considered. Nominal dimensions shown in table above will be adjusted as follows, tolerances will not change. Pipe Outside Diameter, Gasket Seat "A", Groove Diameter "C", and Minimum Allowable Nominal Wall Thickness "T" shall increase by +0.020"/+0.50 mm. Groove Width "B" will be reduced by -0.020"/-0.50 mm.

NOTIFICATIONS

- Victaulic groove specifications for cast ductile iron pipe conform to requirements of ANSI/AWWA standard C606.
 - 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 shall 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 C606).
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REFERENCE MATERIALS

[I-300: Field Installation Handbook](#)

[24.01: Victaulic® Pipe Preparation Tool Specifications](#)

[29.01: Victaulic® Terms and Conditions of Sale](#)

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