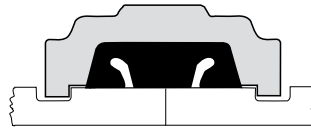
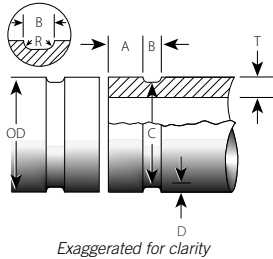


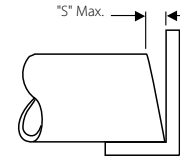
Radius Cut Groove Specifications

DIMENSIONS

RIGID RADIUS CUT GROOVE SPECIFICATIONS – DUCTILE IRON PIPE



Rigid Radius Cut Groove



Square Cut

Size	Pipe Outside Diameter ¹			Gasket Seat	Groove Width		Groove Diameter		Radius	Minimum Wall Thickness		Squareness	Groove Depth "D" ⁸	
	Nominal inches	Actual inches mm	Tolerance + inches mm	Tolerance - inches mm	"A" ² +0.000 -0.020 inches mm	"B" ³ +0.031 -0.016" inches mm	"C" ⁴ Actual inches mm	Tolerance +0.000 inches mm	"R" ⁵ inches mm	Ductile Iron Nominal "T" ⁶ inches mm	Ductile Iron Minimum inches mm	"S" Max ⁷ inches mm	Min inches mm	Max inches mm
3	3.96	100.6	0.045 1.14	0.045 1.14	0.840 21.34	0.375 9.53	3.723 94.56	-0.020 -0.51	0.120 3.05	0.310 7.87	0.260 6.60	0.020 0.51	0.096 2.44	0.151 3.84
4	4.8	121.9	0.045 1.14	0.045 1.14	0.840 21.34	0.375 9.53	4.563 115.90	-0.020 -0.51	0.120 3.05	0.320 8.13	0.270 6.86	0.020 0.51	0.096 2.44	0.151 3.84
6	6.9	175.3	0.060 1.52	0.060 1.52	0.840 21.34	0.375 9.53	6.656 169.06	-0.020 -0.51	0.120 3.05	0.340 8.64	0.290 7.37	0.020 0.51	0.100 2.54	0.154 3.91
8	9.05	229.9	0.060 1.52	0.060 1.52	0.950 24.13	0.500 12.70	8.781 223.04	-0.025 -0.64	0.145 3.68	0.360 9.14	0.310 7.87	0.020 0.51	0.104 2.64	0.177 4.50
10	11.1	281.9	0.060 1.52	0.060 1.52	1.015 25.78	0.500 12.70	10.813 274.65	-0.025 -0.64	0.145 3.68	0.380 9.65	0.320 8.13	0.020 0.51	0.114 2.90	0.186 4.72
12	13.2	335.3	0.060 1.52	0.060 1.52	1.015 25.78	0.500 12.70	12.906 327.81	-0.030 -0.76	0.145 3.68	0.400 10.16	0.340 8.64	0.020 0.51	0.117 2.97	0.192 4.88
14	15.3	388.6	0.050 1.27	0.080 2.03	1.015 25.78	0.625 15.88	14.969 380.21	-0.030 -0.76	0.165 4.19	0.420 10.67	0.350 8.89	0.020 0.51	0.126 3.20	0.206 5.23
16	17.4	442	0.050 1.27	0.080 2.03	1.340 34.04	0.625 15.88	17.063 433.40	-0.030 -0.76	0.165 4.19	0.430 10.92	0.360 9.14	0.020 0.51	0.128 3.25	0.208 5.28
18	19.5	495.3	0.050 1.27	0.080 2.03	1.340 34.04	0.625 15.88	19.125 485.78	-0.030 -0.76	0.185 4.70	0.440 11.18	0.370 9.40	0.020 0.51	0.148 3.76	0.228 5.79
20	21.6	548.6	0.050 1.27	0.080 2.03	1.340 34.04	0.625 15.88	21.219 538.96	-0.030 -0.76	0.185 4.70	0.450 11.43	0.380 9.65	0.020 0.51	0.150 3.81	0.230 5.84
24	25.8	655.3	0.050 1.27	0.080 2.03	1.340 34.04	0.625 15.88	25.406 645.31	-0.030 -0.76	0.185 4.70	0.470 11.94	0.400 10.16	0.020 0.51	0.157 3.99	0.237 6.02
30	32	812.8	0.080 2.03	0.060 1.52	1.625 41.28	0.750 19.05	31.550 801.37	-0.035 -0.89	0.215 5.46	0.510 12.95	0.440 11.18	0.020 0.51	0.195 4.95	0.282 7.16
36	38.3	972.8	0.080 2.03	0.060 1.52	1.625 41.28	0.750 19.05	37.850 961.39	-0.035 -0.89	0.215 5.46	0.580 14.73	0.510 12.95	0.020 0.51	0.195 4.95	0.282 7.16

- Outside diameter:** The outside diameter shall not vary more than the tolerance listed. Ovality, or out-of-roundness must lie within the specified limits of outside diameter.
- Gasket seat "A":** The pipe surface shall be free from deep scores, marks, or ridges that would prevent a positive seal. All rust, loose scale, oil, grease, and dirt shall be removed.
- 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 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.
- Squareness "S" Max:** Victaulic requires square-cut pipe. S is the maximum allowable deviation from square.
- Groove depth "D":** The "D" dimension is the groove depth, which shall be uniform within the limits listed in the table above.

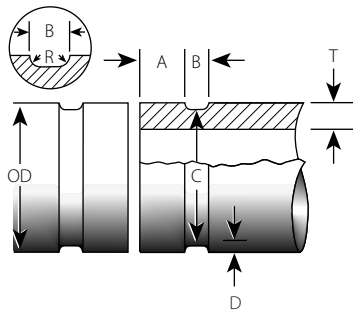
NOTES

- 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.
- For grooving of cast iron pipe, contact Victaulic.

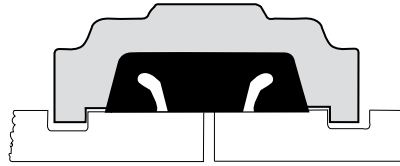
ALWAYS REFER TO ANY NOTIFICATIONS AT THE END OF THIS DOCUMENT REGARDING PRODUCT INSTALLATION, MAINTENANCE OR SUPPORT.

DIMENSIONS (CONTINUED)

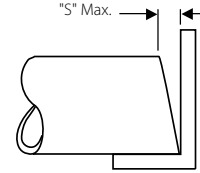
FLEXIBLE RADIUS CUT GROOVE SPECIFICATIONS – DUCTILE IRON PIPE



Exaggerated for clarity



Flexible Radius Cut Groove



Square Cut

Size	Pipe Outside Diameter ¹			Gasket Seat "A" ² +0.016 -0.047	Groove Width "B" ³ +0.031 -0.016"	Groove Diameter		Radius	Minimum Wall Thickness		Squareness "S" Max ⁷	Groove Depth "D" ⁸		
	Nominal inches	Actual inches mm	Tolerance + inches mm			Tolerance - inches mm	"C" ⁴ Actual inches mm		Tolerance +0.000 inches mm	Ductile Iron Nominal "T" ⁶ inches mm		Ductile Iron Minimum inches mm	Min inches mm	Max inches mm
3	3.96	100.6	0.045 1.14	0.045 1.14	0.750 19.05	0.375 9.53	3.723 94.56	-0.020 -0.51	0.120 3.05	0.310 7.87	0.260 6.60	0.063 1.60	0.096 2.44	0.151 3.84
4	4.8	121.9	0.045 1.14	0.045 1.14	0.750 19.05	0.375 9.53	4.563 115.90	-0.020 -0.51	0.120 3.05	0.320 8.13	0.270 6.86	0.063 1.60	0.096 2.44	0.151 3.84
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10	11.1	281.9	0.060 1.52	0.060 1.52	0.938 23.83	0.500 12.70	10.813 274.65	-0.025 -0.64	0.145 3.68	0.380 9.65	0.320 8.13	0.063 1.60	0.114 2.90	0.186 4.72
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- 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 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.
- ⁷ **Squareness "S" Max:** Victaulic requires square-cut pipe. S is the maximum allowable deviation from square.
- ⁸ **Groove depth "D":** The "D" dimension is the groove depth, which shall be uniform within the limits listed in the table above.

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- 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.
- For grooving of cast iron pipe, contact Victaulic.

NOTIFICATIONS

- Victaulic groove specifications for cast ductile iron pipe meet or exceed the requirements of ANSI/AWWA standard C606.
 - Grooving dimensions are the same for any one pipe O.D. regardless of pipe class.
 - 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.
-

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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