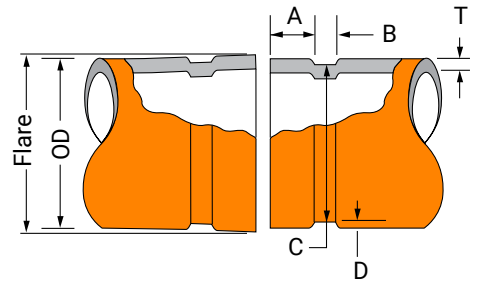


Roll Groove Specifications

Gruvlok Standard Roll Groove Specification For Steel & Other IPS Or ISO Size Pipe

Nominal Size	-1-		-2-		-3-	-4-	-5-		-6-	-7-	-8-
	Outside Diameter		Gasket Seat "A" ±0.030/ ±0.76	Groove Width "B" ±0.030/ ±0.76	Groove Diameter "C" Actual	Groove Diameter "C" Tolerance +0.000	"D" (Ref. Only)	"T" Min. Allow. Wall Thick	Max. Flare Dia.		
	Actual	Tolerance									
Inches DN (mm)	Inches mm	Inches mm	Inches mm	Inches mm	Inches mm	Inches mm	Inches mm	Inches mm	Inches mm	Inches mm	
1	1.315	+0.013	-0.013	0.625	0.281	1.190	-0.015	0.063	0.065	1.430	
25	33.7	+0.33	-0.33	15.88	7.14	30.23	-0.38	1.60	1.7	36.3	
1¼	1.660	+0.016	-0.016	0.625	0.281	1.535	-0.015	0.063	0.065	1.770	
32	42.4	+0.41	-0.41	15.88	7.14	38.99	-0.38	1.60	1.7	45.0	
1½	1.900	+0.019	-0.019	0.625	0.281	1.775	-0.015	0.063	0.065	2.010	
40	48.3	+0.48	-0.48	15.88	7.14	45.09	-0.38	1.60	1.7	51.1	
2	2.375	+0.024	-0.024	0.625	0.344	2.250	-0.015	0.063	0.065	2.480	
50	60.3	+0.61	-0.61	15.88	8.74	57.15	-0.38	1.60	1.7	63.0	
2½	2.875	+0.029	-0.029	0.625	0.344	2.720	-0.018	0.078	0.083	2.980	
65	73.0	+0.74	-0.74	15.88	8.74	69.09	-0.46	1.98	2.1	75.7	
3 O.D.	2.996	+0.030	-0.030	0.625	0.344	2.845	-0.018	0.076	0.083	3.100	
76.1	76.1	+0.76	-0.76	15.88	8.74	72.26	-0.46	1.93	2.1	78.7	
3	3.500	+0.035	-0.031	0.625	0.344	3.344	-0.018	0.078	0.083	3.600	
80	88.9	+0.89	-0.79	15.88	8.74	84.94	-0.46	1.98	2.1	91.4	
3½	4.000	+0.040	-0.031	0.625	0.344	3.834	-0.020	0.083	0.083	4.100	
90	101.6	+1.02	-0.79	15.88	8.74	97.38	-0.51	2.11	2.1	104.1	
4¼ O.D.	4.250	+0.042	-0.031	0.625	0.344	4.084	-0.020	0.083	0.083	4.350	
108.0	108.0	+1.07	-0.79	15.88	8.74	103.73	-0.51	2.11	2.1	110.5	
4	4.500	+0.045	-0.031	0.625	0.344	4.334	-0.020	0.083	0.083	4.600	
100	114.3	+1.14	-0.79	15.88	8.74	110.08	-0.51	2.11	2.1	116.8	
5¼ O.D.	5.236	+0.052	-0.031	0.625	0.344	5.084	-0.020	0.076	0.109	5.350	
133.0	133.0	+1.32	-0.79	15.88	8.74	129.13	-0.51	1.93	2.8	135.9	
5½ O.D.	5.500	+0.055	-0.031	0.625	0.344	5.334	-0.020	0.083	0.109	5.600	
139.7	139.7	+1.40	-0.79	15.88	8.74	135.48	-0.51	2.11	2.8	142.2	
5	5.563	+0.056	-0.031	0.625	0.344	5.395	-0.022	0.084	0.109	5.660	
125	141.3	+1.42	-0.79	15.88	8.74	137.03	-0.56	2.13	2.8	143.8	
6¼ O.D.	6.259	+0.063	-0.031	0.625	0.344	6.084	-0.022	0.088	0.109	6.350	
159.0	159.0	+1.60	-0.79	15.88	8.74	154.53	-0.56	2.24	2.8	161.3	
6½ O.D.	6.500	+0.063	-0.031	0.625	0.344	6.334	-0.022	0.085	0.109	6.600	
165.1	165.1	+1.60	-0.79	15.88	8.74	160.88	-0.56	2.16	2.8	167.6	
6	6.625	+0.063	-0.031	0.625	0.344	6.455	-0.022	0.085	0.109	6.730	
150	168.3	+1.60	-0.79	15.88	8.74	163.96	-0.56	2.16	2.8	170.9	
8	8.625	+0.063	-0.031	0.750	0.469	8.441	-0.025	0.092	0.109	8.800	
200	219.1	+1.60	-0.79	19.05	11.91	214.40	-0.64	2.34	2.8	223.5	
10	10.750	+0.063	-0.031	0.750	0.469	10.562	-0.027	0.094	0.134	10.920	
250	273.0	+1.60	-0.79	19.05	11.91	268.27	-0.69	2.39	3.4	277.4	
12	12.750	+0.063	-0.031	0.750	0.469	12.531	-0.030	0.109	0.156	12.920	
300	323.9	+1.60	-0.79	19.05	11.91	318.29	-0.76	2.77	4.0	328.2	
14 O.D.	14.000	+0.063	-0.031	0.938	0.469	13.781	-0.030	0.109	0.156	14.100	
355.6	355.6	+1.60	-0.79	23.83	11.91	350.04	-0.76	2.77	4.0	358.1	
16 O.D.	16.000	+0.063	-0.031	0.938	0.469	15.781	-0.030	0.109	0.165	16.100	
406.4	406.4	+1.60	-0.79	23.83	11.91	400.84	-0.76	2.77	4.2	408.9	
18 O.D.	18.000	+0.063	-0.031	1.000	0.469	17.781	-0.030	0.109	0.165	18.160	
457.2	457.2	+1.60	-0.79	25.40	11.91	451.64	-0.76	2.77	4.2	461.3	
20 O.D.	20.000	+0.063	-0.031	1.000	0.469	19.781	-0.030	0.109	0.188	20.160	
508.0	508.0	+1.60	-0.79	25.40	11.91	502.44	-0.76	2.77	4.8	512.1	
24 O.D.	24.000	+0.063	-0.031	1.000	0.500	23.656	-0.030	0.172	0.218	24.200	
609.6	609.6	+1.60	-0.79	25.40	12.70	600.86	-0.76	4.37	5.5	614.7	
30 O.D.	30.000	+0.093	-0.031	1.750 ▼	0.625	29.500	-0.063	0.250	0.250	30.200	
762.0	762.0	2.36	0.79	44.45	15.88	749.30	1.60	6.35	6.35	761.1	



COLUMN 1 – Nominal IPS Pipe size. Nominal ISO Pipe size.

COLUMN 2 – IPS outside diameter. ISO outside diameter.

COLUMN 3 – Gasket Seat "A": Must be free from scores, seams, chips, rust or scale which may interfere with proper sealing of the gasket. Gasket seat width "A" is to be measured from the pipe end to the vertical flank in the groove wall.

COLUMN 4 – Groove Width "B": Measured between the vertical flank of the groove side walls. Must be free of loose dirt, chips, and scale.

COLUMN 5 – Groove Diameter "C": The groove must be uniform depth for the entire pipe circumference. The groove must be maintained within the tolerance listed in Column 6.

COLUMN 6 – Groove Depth "D": For reference only.

COLUMN 7 Minimum allowable wall thickness which may be roll grooved.

COLUMN 8 Maximum allowable pipe end flare diameter. Measured at the most extreme pipe end diameter of the gasket seat area.

Out of roundness: Difference between maximum O.D. and minimum O.D. measured at 90° must not exceed total O.D. tolerance listed (reference column 2).

For IPS pipe, the maximum allowable tolerance from square cut ends is 0.03" for 1" thru 3½"; 0.045" for 4" thru 6"; and 0.060" for sizes 8" and above measured from a true square line.

For ISO size pipe, the maximum allowable tolerance from square cut ends is 0.75mm for sizes 25mm– 80mm; 1.15mm for sizes 100mm–150mm; and 1.50mm for sizes 200mm and above, measured from a true square line.

Beveled-End Pipe in conformance with ASME B16.25 (37½%) is acceptable, however square cut is preferred. Seams must be ground flush with the pipe O.D. and ID prior to roll grooving. Failure to do so may result in damage to the roll grooving machine and unacceptable roll grooves may be produced.

Weld Seams must be ground flush with the pipe O.D. and ID prior to roll grooving. Failure to do so may result in damage to the roll grooving machine and unacceptable roll grooves may be produced.

▼ "A" tolerance +0.030" / -0.060" (+0.77 / -1.54 mm)

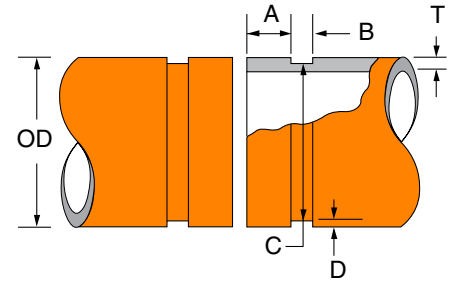
Notes:

VdS – Roll Grooving Approval Specifications, see the Technical Data/Install Instructions section on ASC Engineered Solutions' website – www.asc-es.com.

Cut Groove Specifications

Gruvlok Standard Cut Groove Specification For Steel & Other IPS Or ISO Size Pipe

Nominal Size	-1-		-2-		-3- Gasket Seat "A" ±0.030/ ±0.76	-4- Groove Width "B"		-5- Groove Diameter "C"		-6- Actual Groove Depth "D" (Ref. Only)	-7- Min. Allow. Wall Thick. "T"
	O.D.		O.D.			Groove Diameter "C"		Groove Diameter "C"			
	Actual	Tolerance	Actual	Tolerance		Actual	Tolerance	Actual	Tolerance		
	Inches DN (mm)	Inches mm	Inches mm	Inches mm	Inches mm	Inches mm	Inches mm	Inches mm	Inches mm	Inches mm	Inches mm
1	1.315	+0.015	-0.015	0.625	0.312	1.190	-0.015	0.062	0.133		
25	33.4	+0.38	-0.38	15.88	7.92	30.23	-0.38	1.6	3.4		
1¼	1.660	+0.016	-0.016	0.625	0.312	1.535	-0.015	0.062	0.140		
32	42.2	+0.41	-0.41	15.88	7.92	38.99	-0.38	1.6	3.6		
1½	1.900	+0.019	-0.019	0.625	0.312	1.775	-0.015	0.062	0.145		
40	48.3	+0.48	-0.48	15.88	7.92	45.09	-0.38	1.6	3.7		
2	2.375	+0.024	-0.024	0.625	0.312	2.250	-0.015	0.062	0.154		
50	60.3	+0.61	-0.61	15.88	7.92	57.15	-0.38	1.6	3.9		
2½	2.875	+0.029	-0.029	0.625	0.312	2.720	-0.018	0.078	0.187		
65	73.0	+0.74	-0.74	15.88	7.92	69.09	-0.46	2.0	4.8		
3 O.D.	2.996	+0.030	-0.030	0.625	0.312	2.845	-0.018	0.076	0.188		
76.1	76.1	+0.76	-0.76	15.88	7.92	72.26	-0.46	1.9	4.8		
3	3.500	+0.035	-0.031	0.625	0.312	3.344	-0.018	0.078	0.188		
80	88.9	+0.89	-0.79	15.88	7.92	84.94	-0.46	2.0	4.8		
3½	4.000	+0.040	-0.031	0.625	0.312	3.834	-0.020	0.083	0.188		
90	101.6	+1.02	-0.79	15.88	7.92	97.38	-0.51	2.1	4.8		
4¼ O.D.	4.250	+0.042	-0.031	0.625	0.375	4.084	-0.020	0.083	0.203		
108.0	108.0	+1.07	-0.79	15.88	9.53	103.73	-0.51	2.1	5.2		
4	4.500	+0.045	-0.031	0.625	0.375	4.334	-0.020	0.083	0.203		
100	114.3	+1.14	-0.79	15.88	9.53	110.08	-0.51	2.1	5.2		
5¼ O.D.	5.236	+0.052	-0.031	0.625	0.375	5.084	-0.020	0.076	0.203		
133.0	133.0	+1.32	-0.79	15.88	9.53	129.13	-0.51	1.9	5.2		
5½ O.D.	5.500	+0.055	-0.031	0.625	0.375	5.334	-0.020	0.083	0.203		
139.7	139.7	+1.40	-0.79	15.88	9.53	135.48	-0.51	2.1	5.2		
5	5.563	+0.056	-0.031	0.625	0.375	5.395	-0.022	0.084	0.203		
125	141.3	+1.42	-0.79	15.88	9.53	137.03	-0.56	2.1	5.2		
6¼ O.D.	6.259	+0.063	-0.031	0.625	0.375	6.084	-0.022	0.088	0.249		
159.0	159.0	+1.60	-0.79	15.88	9.53	154.53	-0.56	2.2	6.3		
6½ O.D.	6.500	+0.063	-0.031	0.625	0.375	6.334	-0.022	0.085	0.219		
165.1	165.1	+1.60	-0.79	15.88	9.53	160.88	-0.56	2.2	5.6		
6	6.625	+0.063	-0.031	0.625	0.375	6.455	-0.022	0.085	0.219		
150	168.3	+1.60	-0.79	15.88	9.53	163.96	-0.56	2.2	5.6		
8	8.625	+0.063	-0.031	0.750	0.437	8.441	-0.025	0.092	0.238		
200	219.1	+1.60	-0.79	19.05	11.10	214.40	-0.64	2.3	6.1		
10	10.750	+0.063	-0.031	0.750	0.500	10.562	-0.027	0.094	0.250		
250	273.0	+1.60	-0.79	19.05	12.70	268.27	-0.69	2.4	6.4		
12	12.750	+0.063	-0.031	0.750	0.500	12.531	-0.030	0.109	0.279		
300	323.9	+1.60	-0.79	19.05	12.70	318.29	-0.76	2.8	7.1		
14 O.D.	14.000	+0.063	-0.031	0.938	0.500	13.781	-0.030	0.109	0.281		
355.6	355.6	+1.60	-0.79	23.83	12.70	350.04	-0.76	2.8	7.1		
16 O.D.	16.000	+0.063	-0.031	0.938	0.500	15.781	-0.030	0.109	0.312		
406.4	406.4	+1.60	-0.79	23.83	12.70	400.84	-0.76	2.8	7.9		
18 O.D.	18.000	+0.063	-0.031	1.000	0.500	17.781	-0.030	0.109	0.312		
457.2	457.2	+1.60	-0.79	25.40	12.70	451.64	-0.76	2.8	7.9		
20 O.D.	20.000	+0.063	-0.031	1.000	0.500	19.781	-0.030	0.109	0.312		
508.0	508.0	+1.60	-0.79	25.40	12.70	502.44	-0.76	2.8	7.9		
24 O.D.	24.000	+0.063	-0.031	1.000	0.563	23.656	-0.030	0.172	0.375		
609.6	609.6	+1.60	-0.79	25.40	14.30	600.86	-0.76	4.4	9.5		
28 I.D.	28.875	+0.063	-0.031	1.000	0.563	28.531	-0.030	0.172	0.437		
733.4	733.4	+1.60	-0.79	25.40	14.30	724.69	-0.76	4.4	11.1		
30 I.D.	31.000	+0.063	-0.031	1.250	0.625	30.594	-0.030	0.203	0.500		
787.4	787.4	+1.60	-0.79	31.75	15.88	777.09	-0.76	5.2	12.7		
30 O.D.	30.000	+0.093	-0.031	1.750▼	0.625	29.500	0.063	0.250	0.500		
762.0	762.0	2.36	0.79	44.45	15.88	749.30	1.60	6.35	12.7		



COLUMN 1 – Nominal IPS Pipe size. Nominal ISO Pipe size.

COLUMN 2 – IPS outside diameter. ISO outside diameter.

COLUMN 3 – Gasket Seat "A": Must be free from scores, seams, chips, rust or scale which may interfere with proper sealing of the gasket. Gasket seat width "A" is to be measured from the pipe end to the vertical flank in the groove wall.

COLUMN 4 – Groove Width "B": Measured between the vertical flank of the groove side walls. Must be free of loose dirt, chips, and scale.

COLUMN 5 – Groove Diameter "C": The groove must be uniform depth for the entire pipe circumference. The groove must be maintained within the tolerance listed in Column 6.

COLUMN 6 – Groove Depth "D": For reference only.

COLUMN 7 Minimum allowable wall thickness which may be roll grooved.

Out of roundness: Difference between maximum O.D. and minimum O.D. measured at 90° must not exceed total O.D. tolerance listed.

For IPS pipe, the maximum allowable tolerance from square cut ends is 0.03" for 1" thru 3½"; 0.045" for 4" thru 6"; and 0.060" for sizes 8" and above measured from a true square line.

For ISO size pipe, the maximum allowable tolerance from square cut ends is 0.75mm for sizes 25mm–80mm; 1.15mm for sizes 100mm– 150mm; and 1.50mm for sizes 200mm and above, measured from a true square line.

Beveled-End Pipe in conformance with ASME B16.25 (37½°) is acceptable, however square cut is preferred.

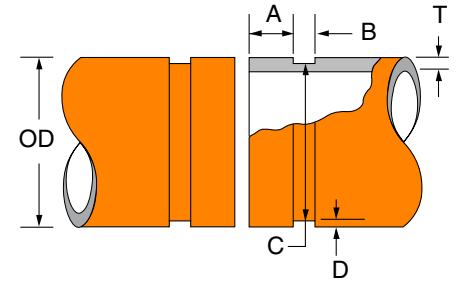
Not to be used with End Guard gaskets.

▼ "A" tolerance +0.030" / -0.060" (+0.77 / -1.54 mm)

Cut Groove End Guard® Specification

End Guard (EG) Cut Groove Specifications*

Nominal IPS Pipe Size	Pipe Outside Diameter			Gasket Seat "A"		Groove Width "B"		Groove Dia. "C"		Groove Depth (Ref. Only) "D"	Min. Allow. Wall Thick. "T"
	Actual	Tolerance		Actual	Tol. +/-	Actual	Tol. (+0.010)	Actual	Tol.		
Inches DN (mm)	Inches mm	Inches mm	Inches mm	Inches mm	Inches mm	Inches mm	Inches mm	Inches mm	Inches mm	Inches mm	Inches mm
2 50	2.375 60.3	+0.024 +0.61	-0.024 -0.61	0.562 14.27	+0.010 0.25	0.255 6.48	-0.005 -0.13	2.250 57.15	-0.015 -0.38	0.062 1.6	0.154 4.0
2½ 65	2.875 73.0	+0.029 +0.74	-0.029 -0.74	0.562 14.27	+0.010 0.25	0.255 6.48	-0.005 -0.13	2.720 69.09	-0.018 -0.46	0.078 2.0	0.188 4.8
3 80	3.500 88.9	+0.035 +0.89	-0.031 -0.79	0.562 14.27	+0.010 0.25	0.255 6.48	-0.005 -0.13	3.344 84.94	-0.018 -0.46	0.078 2.0	0.188 4.8
4 100	4.500 114.3	+0.045 +1.14	-0.031 -0.79	0.605 15.37	+0.015 0.38	0.305 7.75	-0.005 -0.13	4.334 110.08	-0.020 -0.51	0.083 2.1	0.203 5.2
5 125	5.563 141.3	+0.056 +1.42	-0.031 -0.79	0.605 15.37	+0.015 0.38	0.305 7.75	-0.005 -0.13	5.395 137.03	-0.022 -0.56	0.084 2.1	0.203 5.2
6 150	6.625 168.3	+0.063 +1.60	-0.031 -0.79	0.605 15.37	+0.015 0.38	0.305 7.75	-0.005 -0.13	6.455 163.96	-0.022 -0.56	0.085 2.2	0.219 5.6
8 200	8.625 219.1	+0.063 +1.60	-0.031 -0.79	0.714 18.14	+0.015 0.38	0.400 10.16	-0.010 -0.254	8.441 214.40	-0.025 -0.64	0.092 2.3	0.238 6.1
10 250	10.750 273.0	+0.063 +1.60	-0.031 -0.79	0.714 18.14	+0.015 0.38	0.400 10.16	-0.010 -0.25	10.562 268.27	-0.027 -0.69	0.094 2.4	0.250 6.4
12 300	12.750 323.9	+0.063 +1.60	-0.031 -0.79	0.714 18.14	+0.015 0.38	0.400 10.16	-0.010 -0.25	12.531 318.29	-0.030 -0.76	0.109 2.8	0.279 7.1



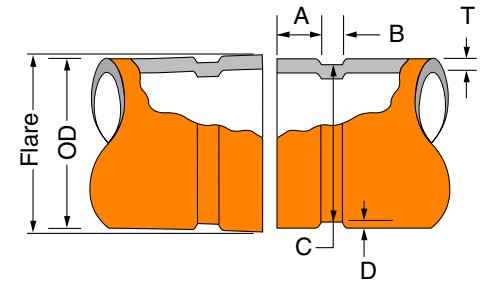
End Guard (EG) cut groove is designed for standard or heavier wall thickness pipe to be joined by the Fig. 7004 or Fig. 770 coupling with an EG Gasket. Gruvlok EG fittings are grooved in accordance with these dimensions.

*Refer to additional notes on previous page.

Roll Groove End Guard® Specification

End Guard (EG) Roll Groove Specifications*

Nominal IPS Pipe Size	Pipe Outside Diameter			Gasket Seat "A"		Groove Width "B"		Groove Dia. "C"		Groove Depth (Ref. Only) "D"	Min. Allow. Wall Thick. "T"
	Actual	Tolerance		Actual	Tol. +/-	Actual	Tol. (+0.010)	Actual	Tol.		
Inches DN (mm)	Inches mm	Inches mm	Inches mm	Inches mm	Inches mm	Inches mm	Inches mm	Inches mm	Inches mm	Inches mm	Inches mm
2 50	2.375 60.3	+0.024 +0.61	-0.024 -0.61	0.572 14.53	-0.020 -0.51	0.250 6.35	+0.015 0.38	2.250 57.15	-0.015 -0.38	0.062 1.6	0.065 1.7
2½ 65	2.875 73.0	+0.029 +0.74	-0.029 -0.74	0.572 14.53	-0.020 -0.51	0.250 6.35	+0.015 0.38	2.720 69.09	-0.018 -0.46	0.078 2.0	0.083 2.1
3 80	3.500 88.9	+0.035 +0.89	-0.031 -0.79	0.572 14.53	-0.020 -0.51	0.250 6.35	+0.015 0.38	3.344 84.94	-0.018 -0.46	0.078 2.0	0.083 2.1
4 100	4.500 114.3	+0.045 +1.14	-0.031 -0.79	0.610 15.49	-0.020 -0.51	0.300 7.62	+0.020 0.51	4.334 110.08	-0.020 -0.51	0.083 2.1	0.083 2.1
5 125	5.563 141.3	+0.056 +1.42	-0.031 -0.79	0.610 15.49	-0.020 -0.51	0.300 7.62	+0.020 0.51	5.395 137.03	-0.022 -0.56	0.084 2.1	0.109 2.8
6 150	6.625 168.3	+0.063 +1.60	-0.031 -0.79	0.610 15.49	-0.020 -0.51	0.300 7.62	+0.020 0.51	6.455 163.96	-0.022 -0.56	0.085 2.2	0.109 2.8
8 200	8.625 219.1	+0.063 +1.60	-0.031 -0.79	0.719 18.26	-0.020 -0.51	0.390 9.91	+0.020 0.51	8.441 214.40	-0.025 -0.64	0.092 2.3	0.109 2.8
10 250	10.750 273.0	+0.063 +1.60	-0.031 -0.79	0.719 18.26	-0.020 -0.51	0.390 9.91	+0.020 0.51	10.562 268.27	-0.027 -0.69	0.094 2.4	0.134 3.4
12 300	12.750 323.9	+0.063 +1.60	-0.031 -0.79	0.719 18.26	-0.020 -0.51	0.390 9.91	+0.020 0.51	12.531 318.29	-0.030 -0.76	0.109 2.8	0.156 4.0



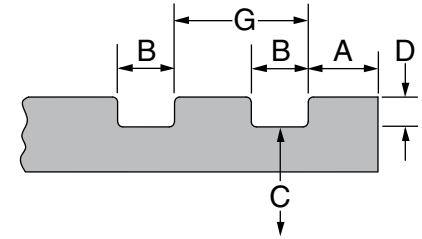
End Guard (EG) roll groove is designed for standard or heavier wall thickness pipe to be joined by Fig. 7004 with EG® gasket couplings.

*Refer to additional notes on previous page.

Double Cut Groove Specifications

Gruvlok Standard Double Cut Groove Specification For Steel & Other IPS Or ISO Size Pipe

-1- Nominal IPS Pipe Size	-2- O.D.		-3- Gasket Seat "A" ±0.030/ ±0.76	-4- Groove Sep "G" ±0.005/ ±0.127	-5- Groove Width "B" ±0.030/ ±0.76	-6- Groove Diameter "C"		-7- Actual Groove Depth "D" (Ref. Only)	-8- Min. Allowable Bolt Torque Required for Assembly	
	Actual	Tolerance				Actual	Tol. +0.000			
Inches DN (mm)	Inches mm	Inches mm	Inches mm	Inches mm	Inches mm	Inches mm	Inches mm	Inches mm	Ft.-Lbs. N-m	
6 150	6.625 168.3	+0.063 +1.60	-0.031 -0.79	0.625 15.88	0.785 20.0	0.375 9.53	6.340 161.0	-0.022 -0.56	0.142 3.6	450 610.2
8 200	8.625 219.1	+0.063 +1.60	-0.031 -0.79	0.750 19.05	0.855 21.7	0.500 12.70	8.240 209.3	-0.022 -0.56	0.192 4.9	500 678.0
10 250	10.750 273.0	+0.063 +1.60	-0.031 -0.79	0.750 19.05	0.855 21.7	0.500 12.70	10.350 262.9	-0.022 -0.56	0.200 5.1	500 678.0



COLUMN 1 – Nominal IPS Pipe size.
Nominal ISO Pipe size.

COLUMN 2 – IPS outside diameter. ISO outside diameter.

COLUMN 3, 4 & 5 – Gasket seat must be free from scores, seams, chips, rust or scale which may interfere with proper coupling assembly.

COLUMN 6 – The groove must be of uniform depth around the entire pipe circumference. (See column 7).

COLUMN 7 – Groove depth: for reference only. Groove must conform to the groove diameter "C" listed in column 6.

COLUMN 8 – Minimum allowable bolt torque required for complete assembly.

Out of roundness: Difference between maximum O.D. and minimum O.D. measured at 90° must not exceed total O.D. tolerance listed.

For IPS pipe, the maximum allowable tolerance from square cut ends is 0.03" for 1" thru 3½"; 0.045" for 4" thru 6"; and 0.060" for sizes 8" and above measured from a true square line.

For ISO size pipe, the maximum allowable tolerance from square cut ends is 0.75mm for sizes 25mm–80mm; 1.15mm for sizes 100mm– 150mm; and 1.50mm for sizes 200mm and above, measured from a true square line.

Beveled-End Pipe in conformance with ASME B16.25 (37½°) is acceptable, however square cut is preferred.

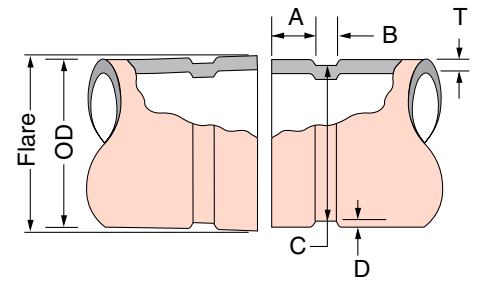
Gruvlok "End Guard" Double Cut Groove Specification For Steel & Other IPS Or ISO Size Pipe

-1- Nominal IPS Pipe Size	-2- O.D.		-3- Gasket Seat "A" ±0.030/ ±0.76	-4- Groove Sep "G" ±0.005/ ±0.127	-5- Groove Width "B" ±0.030/ ±0.76	-6- Groove Diameter "C"		-7- Actual Groove Depth "D" (Ref. Only)	-8- Min. Allowable Bolt Torque Required for Assembly	
	Actual	Tolerance				Actual	Tol. +0.000			
Inches DN (mm)	Inches mm	Inches mm	Inches mm	Inches mm	Inches mm	Inches mm	Inches mm	Inches mm	Ft.-Lbs. N-m	
6 150	6.625 168.3	+0.063 +1.60	-0.031 -0.79	0.605 15.4	0.785 20.0	0.375 9.53	6.340 161.0	-0.022 -0.56	0.142 3.6	450 610.2
8 200	8.625 219.1	+0.063 +1.60	-0.031 -0.79	0.714 18.1	0.855 21.7	0.500 12.70	8.240 209.3	-0.022 -0.56	0.192 4.9	500 678.0
10 250	10.750 273.0	+0.063 +1.60	-0.031 -0.79	0.714 18.1	0.855 21.7	0.500 12.70	10.350 262.9	-0.022 -0.56	0.200 5.1	500 678.0

Gruvlok CTS Copper Sytem Specifications Roll Groove Specifications

Gruvlok CTS Copper System – Roll Groove Specifications

Nominal Size	Tubing Outside Diameter		Gasket Seat "A" +/- 0.03 in. +/- 0.76 mm	Groove Width "B" +0.03/-0.00 in. +0.76/-0.00mm	Groove Diameter "C"		Nominal Groove Depth "D"	Min. Wall "T"	Max. Flare Diam.	
	Actual	Tolerance			Actual	Tolerance +0.000				
	Inches DN (mm)	Inches mm			Inches mm	Inches mm				
2	2.125 54.0	0.002 0.05	0.002 0.05	0.610 15.5	0.300 7.6	2.029 51.54	-0.020 -0.51	0.048 1.2	0.058 1.6	2.220 56.4
2½	2.625 66.7	0.002 0.05	0.002 0.05	0.610 15.5	0.300 7.6	2.525 64.14	-0.020 -0.51	0.050 1.3	0.065 1.7	2.720 69.1
3	3.125 79.4	0.002 0.05	0.002 0.05	0.610 15.5	0.300 7.6	3.025 76.84	-0.020 -0.51	0.050 1.3	DWV	3.220 81.8
4	4.125 104.8	0.002 0.05	0.002 0.05	0.610 15.5	0.300 7.6	4.019 102.08	-0.020 -0.51	0.053 1.3	DWV	4.220 107.2
5	5.125 130.2	0.002 0.05	0.002 0.05	0.610 15.5	0.300 7.6	4.999 126.97	-0.020 -0.51	0.053 1.3	DWV	5.220 132.6
6	6.125 155.6	0.002 0.05	0.002 0.05	0.610 15.5	0.300 7.6	5.999 152.37	-0.020 -0.51	0.063 1.6	DWV	6.220 158.0
8	8.125 206.4	0.002 0.05	0.004 0.10	0.610 15.5	0.300 7.6	7.959 202.16	-0.020 -0.51	0.083 2.1	DWV	8.220 208.8



COLUMN 1 – Nominal tubing size ASTM B88

COLUMN 2 – Outside diameter of copper tubing per ASTM B88. Allowable tolerance from square cut ends is 0.030"/0.76mm for sizes 2"-3"; 0.045"/1.14mm for sizes 4-8".

COLUMN 3 – Gasket seat must be free from scores, roll marks, indentations, grease and dirt which may interfere with gasket sealing.

COLUMN 4 – Groove width is to be free from chips, dirt, etc. which may interfere with proper coupling assembly.

COLUMN 5 – Groove diameter must be of uniform depth for the entire circumference of the tubing. See column 6.

COLUMN 6 – Groove depth is for reference only; the groove diameter must conform to column 5.

COLUMN 7 – DWV (Drain, Waste and Vent Piping) per ASTM B306.

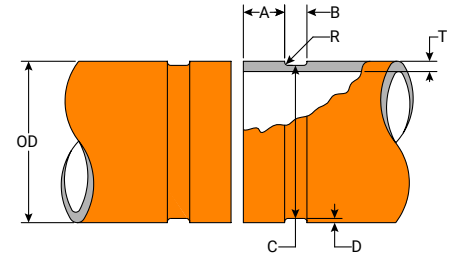
COLUMN 8 – Maximum flare diameter is the OD at the most extreme tubing diameter.

CPVC Cut Groove Specification

CPVC Cut Groove is designed for use on Schedule 80
CPVC Corzan Pipe (ASTM F441)

CPVC Cut Groove Specifications

Nominal Pipe Size	Pipe Outside Diameter				Gasket Seat "A" ±0.03/ ± 0.76	Groove Width "B" ±0.030/ ±0.76	Groove Diameter "C"		Actual Groove Depth "D" (Ref Only)	Min. Allow Wall Thick. "T"	Groove Radius "R"
	Actual	Tolerance					Actual	Tolerance +0.000			
Inches DN (mm)	Inches mm	Inches mm	Inches mm	Inches mm	Inches mm	Inches mm	Inches mm	Inches mm	Inches mm	Inches mm	
2 50	2.375 60.3	+0.006 +0.15	-0.006 -0.15	0.625 15.8	0.312 7.92	2.250 57.15	-0.015 -0.38	0.062 1.6	0.218 5.54	0.045 1.14	
2½ 65	2.875 72.0	+0.007 +0.18	-0.007 -0.18	0.625 15.8	0.312 7.92	2.720 69.09	-0.018 -0.46	0.078 2.0	0.276 7.01	0.045 1.14	
3 80	3.500 88.9	+0.008 +0.20	-0.008 -0.20	0.625 15.8	0.312 7.92	3.344 84.94	-0.018 -0.46	0.078 2.0	0.300 7.62	0.045 1.14	
4 100	4.500 114.3	+0.009 +0.23	-0.009 -0.23	0.625 15.8	0.375 9.53	4.334 110.08	-0.020 -0.51	0.083 2.2	0.337 8.56	0.045 1.14	
6 150	6.625 168.3	+0.011 +0.28	-0.011 -0.28	0.625 15.8	0.375 9.53	6.455 163.96	-0.022 -0.56	0.085 2.2	0.432 10.97	0.045 1.14	
8 200	8.625 219.1	+0.015 +0.38	-0.015 -0.38	0.750 19.05	0.437 11.10	8.441 214.40	-0.025 -0.64	0.092 2.3	0.500 12.70	0.078 1.98	



Notes:

1. ASC Recommended Groover: Rex Wheeler 6950 Plastic Cut Groover.
2. CPVC pipe manufactured per ASTM F441. Minimum cell class "23447" per ASTM D1784