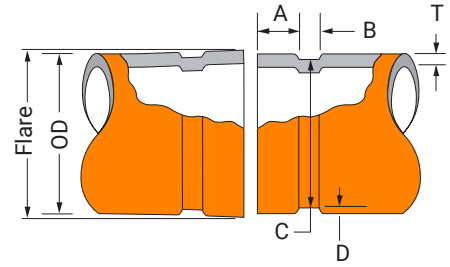


Roll Groove Specifications

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

Nominal Pipe Size In./DN(mm)	-1-		-2-		-3-	-4-	-5-		-6-	-7-	-8-
	O.D.		Tolerance		"A" ±0.030/ ±0.76	"B" ±0.030/ ±0.76	"C" Actual	"C" Tol. +0.000	"D" (Ref. Only)	"T" Min. Allow. Wall Thick	Max. Flare Dia.
	Actual				In./mm	In./mm	In./mm	-In./mm	In./mm	In./mm	In./mm
1	1.315	+0.015	-0.015		0.625	0.281	1.190	-0.015	0.063	0.065	1.430
25	33.4	+0.38	-0.38		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	42.2	+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	273.1	+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 must be free from scores, seams, chips, rust or scale which may interfere with proper sealing of the gasket. Gasket seat width (Dimension A) is to be measured from the pipe end to the vertical flank in the groove wall.

COLUMN 4 – Groove width (Dimension B) is to be measured between vertical flank of the groove size walls.

COLUMN 5 – The groove must be of uniform depth around the entire pipe circumference. (See column 6).

COLUMN 6 – Groove depth: for reference only. Groove must conform to the groove diameter "C" listed in column 5.

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 ANSI 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)

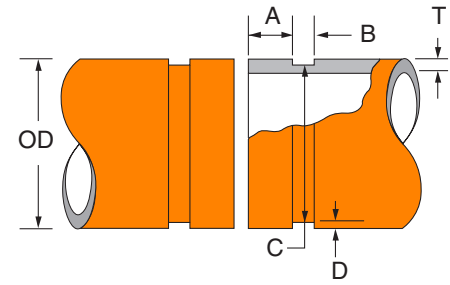
Notes:

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

Cut Groove Specifications

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

Nominal IPS Pipe Size	-1-		-2-		-3-		-4-		-5-		-6-		-7-	
	O.D.				Gasket Seat "A"	Groove Width "B"	Groove Diameter "C"		Actual Groove Depth "D"		Min. Allow. Wall Thick. "T"			
	Actual	Tolerance			±0.030/ ±0.76	±0.030/ ±0.76	Actual	Tol. +0.000	Actual	Ref. Only				
In./DN(mm)	In./mm	+In./mm	-In./mm	In./mm	In./mm	In./mm	-In./mm	In./mm	-In./mm	In./mm	-In./mm	In./mm	In./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	273.1	+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.

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

COLUMN 5 – The groove must be of uniform depth around the entire pipe circumference. (See column 6).

COLUMN 5 – The groove must be of uniform depth around the entire pipe circumference. (See column 6).

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

COLUMN 7 – Minimum allowable wall thickness which may be cut 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 ANSI B16.25 (37½") is acceptable, however square cut is preferred.

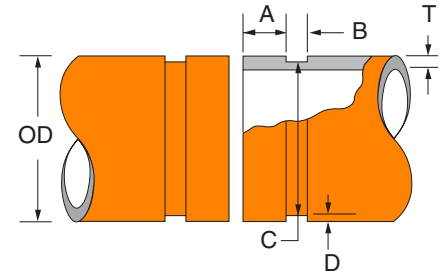
Not to be used with End Guard gaskets..

▼ "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.			
In./DN (mm)	In./mm	+In./mm	-In./mm	In./mm	In./mm	In./mm	-In./mm	In./mm	In./mm	In./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	10.750 273.1	+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



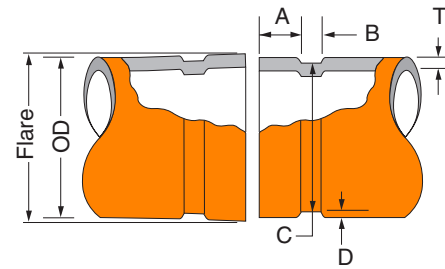
End Guard (EG) cut groove is designed for standard or heavier wall thickness pipe to be joined by Fig. 7004 with EG® gasket couplings. Gruvlok EG fittings are grooved in accordance with these dimensions.

*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.			
In./DN (mm)	In./mm	+In./mm	-In./mm	In./mm	In./mm	In./mm	-In./mm	In./mm	In./mm	In./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	10.750 273.1	+0.063 +1.60	-0.031 -0.79	0.719 +18.26	-0.020 -0.51	0.390 9.91	+0.020 0.51	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



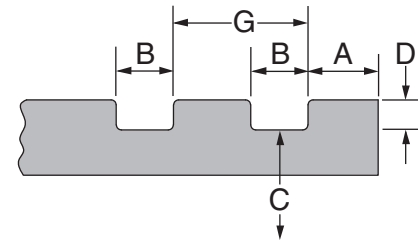
End Guard (EG) roll groove is designed for standard or heavier wall thickness pipe to be joined by Fig. 7004 with EG® gasket couplings.

*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			
In./DN(mm)	In./mm	+In./mm	-In./mm	In./mm	In./mm	In./mm	In./mm	-In./mm	In./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	10.750 273.1	+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 ANSI B16.25 (37½°) is acceptable, however square cut is preferred.

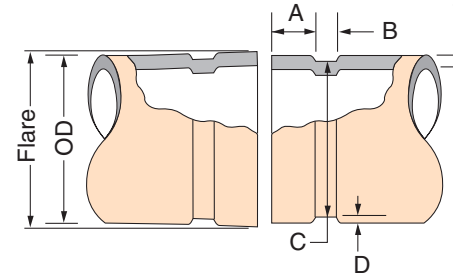
Gruvlok "End Guard" Double Cut Groove Specification For Steel & Other Ips Or Iso Size Pipe

-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			
In./DN(mm)	In./mm	+In./mm	-In./mm	In./mm	In./mm	In./mm	In./mm	-In./mm	In./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	10.750 273.1	+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	-1- Tubing Outside Diameter				-3- Gasket Seat "A" +/- 0.03 in. +/- 0.76 mm	-4- Groove Width "B"		-5- Groove Diameter "C"		-6- Nominal Groove Depth "D"	-7- Min. Wall "T"	-8- Max. Flare Diam.						
	Actual		Tolerance			Actual	Tolerance +0.000	Actual	Tolerance -0.020									
	In.	In./mm	+ In./mm	- In./mm									In./mm	In./mm	In./mm	In./mm		
2	2.125	54.0	0.002	0.05	0.002	0.05	0.610	15.5	0.300	7.6	2.029	-0.020	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	-0.020	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	-0.020	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	-0.020	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	-0.020	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	-0.020	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	-0.020	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.

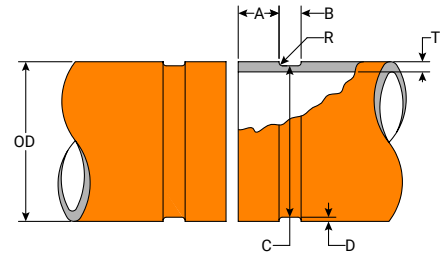
COLUMN 8 – Maximum flare diameter is the OD at the most extreme tubing diameter.

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				
In./DN	In./mm	+ In./mm	- In./mm	In./mm	In./mm	In./mm	- In./mm	In./mm	In./mm	In./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