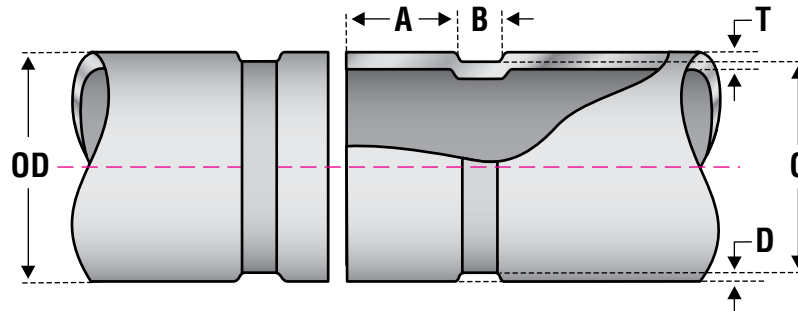




Standard Roll Groove Specifications



Column 1

Nominal IPS pipe size.
Nominal metric pipe size.

Column 2

IPS outside diameter.
Metric outside diameter.

Column 3 & 4

For IPS pipe, the maximum allowable tolerance from square cut ends is 0.030" for 1 – 3-1/2", 0.045" for 4 – 6" and 0.060" for sizes 8" and above, measured from a true square line. For metric size pipe, the maximum allowable tolerance from square cut ends is 0.75mm for sizes 25 – 80mm, 1.15mm for sizes 100 – 150mm and 1.50mm for sizes 200mm and above, measured from a true square line.

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.

1 Nominal IPS Pipe Size IN / mm	2 Pipe Outside Diameter (OD) Tolerance			3 Gasket Seat (A) ± 0.03 IN ± 0.77 mm IN / mm	4 Groove Width (B) ± 0.03 IN ± 0.77 mm IN / mm	5 Groove Diameter (C)		6 Groove Depth (D) (Ref.) IN / mm	7 Min. Wall Thick. (T) IN / mm	8 Max Flare Dia. IN / mm
	Actual IN / mm	+	-			Actual IN / mm	Tolerance +0.0000 IN / mm			
1	1.315	+0.015	-0.015	0.625	0.281	1.190	-0.015	0.062	0.065	1.360
25	33.7	+0.381	-0.381	15.875	7.137	30.226	-0.381	1.575	1.575	34.5
1-1/4	1.660	+0.015	-0.015	0.625	0.281	1.535	-0.015	0.062	0.065	1.705
32	42.4	+0.381	-0.381	15.875	7.137	38.989	-0.381	1.575	1.575	43.3
1-1/2	1.900	+0.015	-0.015	0.625	0.281	1.775	-0.015	0.062	0.065	1.945
40	48.3	+0.381	-0.381	15.875	7.137	45.085	-0.381	1.575	1.575	49.4
2	2.375	+0.024	-0.024	0.625	0.344	2.250	-0.015	0.062	0.065	2.447
50	60.3	+0.610	-0.610	15.875	8.738	57.150	-0.381	1.575	1.575	62.2
2-1/2	2.875	+0.029	-0.029	0.625	0.344	2.720	-0.018	0.078	0.083	2.962
65	73.0	+0.737	-0.737	15.875	8.738	69.088	-0.457	1.981	2.108	75.2
3	3.500	+0.035	-0.031	0.625	0.344	3.344	-0.018	0.078	0.083	3.566
80	88.9	+0.889	-0.787	15.875	8.738	84.938	-0.457	1.981	2.108	90.6
3-1/2	4.000	+0.040	-0.031	0.625	0.344	3.834	-0.020	0.083	0.083	4.071
90	101.6	+1.016	-0.787	15.875	8.738	97.384	-0.508	2.108	2.108	103.4
4	4.500	+0.045	-0.031	0.625	0.344	4.334	-0.020	0.083	0.083	4.576
100	114.3	+1.143	-0.787	15.875	8.738	110.084	-0.508	2.108	2.108	116.2
5	5.563	+0.056	-0.031	0.625	0.344	5.395	-0.022	0.084	0.109	5.650
125	141.3	+1.422	-0.787	15.875	8.738	137.033	-0.559	2.134	2.769	143.5
6	6.625	+0.063	-0.031	0.625	0.344	6.455	-0.022	0.085	0.109	6.719
150	168.3	+1.600	-0.787	15.875	8.738	163.957	-0.559	2.159	2.769	170.7
8	8.625	+0.063	-0.031	0.750	0.469	8.441	-0.025	0.092	0.109	8.719
200	219.1	+1.600	-0.787	19.050	11.913	214.401	-0.635	2.337	2.769	221.5
10	10.750	+0.063	-0.031	0.750	0.469	10.562	-0.027	0.094	0.134	10.844
250	273.0	+1.600	-0.787	19.050	11.913	268.275	-0.686	2.388	3.404	275.4
12	12.750	+0.063	-0.031	0.750	0.469	12.531	-0.030	0.109	0.156	12.844
300	323.9	+1.600	-0.787	19.050	11.913	318.287	-0.762	2.769	3.962	326.2
14	14.000	+0.063	-0.031	0.938	0.469	13.781	-0.030	0.109	0.156	14.094
350	355.6	+1.600	-0.787	23.825	11.913	350.037	-0.762	2.769	3.962	253.0
16	16.000	+0.063	-0.031	0.938	0.469	15.781	-0.030	0.109	0.165	16.094
400	406.4	+1.600	-0.787	23.825	11.913	400.837	-0.762	2.769	4.191	408.8
18	18.000	+0.063	-0.031	1.000	0.469	17.781	-0.030	0.109	0.165	18.094
450	457.2	+1.600	-0.787	25.400	11.913	451.637	-0.762	2.769	4.191	459.6
20	20.000	+0.063	-0.031	1.000	0.469	19.781	-0.030	0.109	0.188	20.094
500	508.0	+1.600	-0.787	25.400	11.913	502.437	-0.762	2.769	4.775	510.4
24	24.000	+0.063	-0.031	1.000	0.500	23.656	-0.030	0.172	0.218	24.100
600	609.6	+1.600	-0.787	25.400	12.700	600.862	-0.762	4.369	5.53	612.1

* No equivalent metric pipe size.

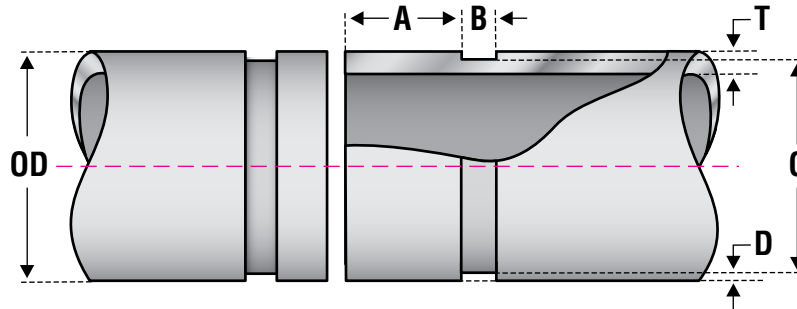
NOTES:

- Gasket seat and groove must be smooth and free from scores, seams, chips, rust or scale which may interfere with proper coupling assembly.
- Out of roundness: Difference between maximum OD and minimum OD measured at 90° must not exceed total OD tolerance listed.





Standard Cut Groove Specifications



Column 1

Nominal IPS pipe size.
Nominal metric pipe size.

Column 2

IPS outside diameter.
Metric outside diameter.

Column 3 & 4

For IPS pipe, the maximum allowable tolerance from square cut ends is 0.030" for 1 – 3-1/2", 0.045" for 4 – 6" and 0.060" for sizes 8" and above, measured from a true square line.
For metric size pipe, the maximum allowable tolerance from square cut ends is 0.75mm for sizes 25 – 80mm, 1.15mm for sizes 100 – 150mm and 1.50mm for sizes 200mm and above, measured from a true square line.

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 cut grooved.

1 Nominal IPS Pipe Size IN / mm	2 Pipe Outside Diameter (OD) Tolerance			3 Gasket Seat (A) ± 0.03 IN ± 0.77 mm	4 Groove Width (B) ± 0.03 IN ± 0.77 mm	5 Groove Diameter (C)		6 Groove Depth (D) (Ref.) IN / mm	7 Min. Wall Thick. (T) IN / mm
	Actual IN / mm	+	-			Actual IN / mm	Tolerance +0.0000 IN / mm		
1	1.315	+0.015	-0.015	0.625	0.312	1.190	-0.015	0.062	0.133
25	33.7	+0.381	-0.381	15.875	7.925	30.226	-0.381	1.575	3.378
1-1/4	1.660	+0.015	-0.015	0.625	0.312	1.535	-0.015	0.062	0.140
32	42.4	+0.381	-0.381	15.875	7.925	38.989	-0.381	1.575	3.556
1-1/2	1.900	+0.015	-0.015	0.625	0.312	1.775	-0.015	0.062	0.145
40	48.3	+0.381	-0.381	15.875	7.925	45.085	-0.381	1.575	3.683
2	2.375	+0.024	-0.024	0.625	0.312	2.250	-0.015	0.062	0.154
50	60.3	+0.610	-0.610	15.875	7.925	57.150	-0.381	1.575	3.912
2-1/2	2.875	+0.029	-0.029	0.625	0.312	2.720	-0.018	0.078	0.187
65	73.0	+0.737	-0.737	15.875	7.925	69.088	-0.457	1.981	4.750
3	3.500	+0.035	-0.031	0.625	0.312	3.344	-0.018	0.078	0.188
80	88.9	+0.889	-0.787	15.875	7.925	84.938	-0.457	1.981	4.775
3-1/2	4.000	+0.040	-0.031	0.625	0.312	3.834	-0.020	0.083	0.188
90	101.6	+1.016	-0.787	15.875	7.925	97.384	-0.508	2.108	4.775
4	4.500	+0.045	-0.031	0.625	0.375	4.334	-0.020	0.083	0.203
100	114.3	+1.143	-0.787	15.875	9.525	110.084	-0.508	2.108	5.156
5	5.563	+0.056	-0.031	0.625	0.375	5.395	-0.022	0.084	0.203
125	141.3	+1.422	-0.787	15.875	9.525	137.033	-0.559	2.134	5.156
6	6.625	+0.063	-0.031	0.625	0.375	6.455	-0.022	0.085	0.219
150	168.3	+1.600	-0.787	15.875	9.525	163.957	-0.559	2.159	5.563
8	8.625	+0.063	-0.031	0.750	0.437	8.441	-0.025	0.092	0.238
200	219.1	+1.600	-0.787	19.050	11.100	214.401	-0.635	2.337	6.045
10	10.750	+0.063	-0.031	0.750	0.500	10.562	-0.027	0.094	0.250
250	273.0	+1.600	-0.787	19.050	12.700	268.275	-0.686	2.388	6.350
12	12.750	+0.063	-0.031	0.750	0.500	12.531	-0.030	0.109	0.279
300	323.9	+1.600	-0.787	19.050	12.700	318.287	-0.762	2.769	7.087
14	14.000	+0.063	-0.031	0.938	0.500	13.781	-0.030	0.109	0.281
350	355.6	+1.600	-0.787	23.825	12.700	350.037	-0.762	2.769	7.137
16	16.000	+0.063	-0.031	0.938	0.500	15.781	-0.030	0.109	0.312
400	406.4	+1.600	-0.787	23.825	12.700	400.837	-0.762	2.769	7.925
18	18.000	+0.063	-0.031	1.000	0.500	17.781	-0.030	0.109	0.312
450	457.2	+1.600	-0.787	25.400	12.700	451.637	-0.762	2.769	7.925
20	20.000	+0.063	-0.031	1.000	0.500	19.781	-0.030	0.109	0.312
500	508.0	+1.600	-0.787	25.400	12.700	502.437	-0.762	2.769	7.925
24	24.000	+0.063	-0.031	1.000	0.563	23.656	-0.030	0.172	0.375
600	609.6	+1.600	-0.787	25.400	14.300	600.862	-0.762	4.369	9.525

NOTES:

- For grooving pipe with wall thickness less than "T" (Column 7), see Roll Groove Specifications on Page 13.
- Gasket seat and groove must be smooth and free from scores, seams, chips, rust or scale which may interfere with proper coupling assembly.
- Out of roundness: Difference between maximum OD and minimum OD measured at 90° must not exceed total OD tolerance listed.
- All tolerances not shown are to comply with latest ASME or ASTM specification applicable to material being used.

* No equivalent metric pipe size.

