

Material and Related Standards



ASTM A403 stainless steel butt welding fittings made to ASME B16.9

Materials-Standards for ASME B16.9 Fittings	
ASTM Standards	Material Specification
A234	Wrought Carbon Steel and Alloy Steel for Moderate and High Temperature Service
A403	Wrought Austenitic Stainless Steel Piping Fittings
A420	Wrought Carbon Steel and Alloy Steel for Low Temperature Service
A815	Wrought Ferritic, Ferritic/Austenitic, and Martensitic Stainless Steel Piping Fittings
A361	Wrought Aluminum and Aluminum Alloy Welding Fittings
A363	Seamless and Welded Unalloyed Titanium and Titanium Alloy Welding Fittings
A366	Wrought Nickel and Nickel Alloy Fittings

Products-Dimensions Table

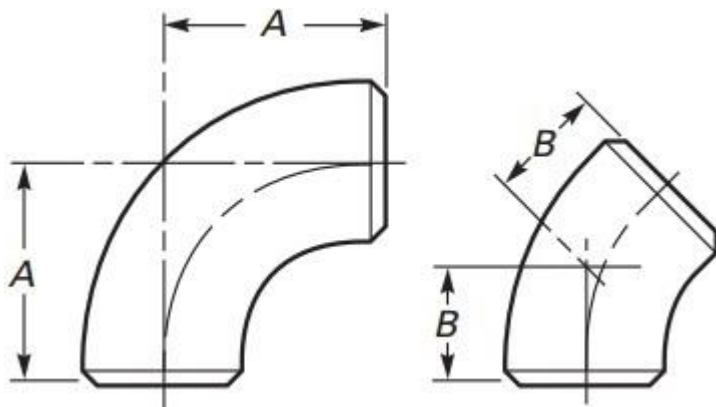
ASME B16.9 Butt Welding Pipe Fittings Dimension Table		
Long Radius Elbows	Long Radius Reducing Elbows	Long Radius Returns
Short Radius 180-deg Returns	3D Elbows	Straight Tees and Crosses
Lap Joint Stub Ends	Caps	Reducers
Short Radius Elbows	Reducing Tees and Reducing Crosses	Induction Bends

ASME B16.9 Long Radius Elbows



ASME B16.9 long radius elbows, 10" SCH40 90°, galvanized.

Dimensions of ASME B16.9 Long Radius Elbows



The technical drawing of ASME B16.9 long radius elbows.

Nominal Size	Outside Diameter at Bevel	Center to End	
		90 deg Elbows, A	45 deg Elbows, B
NPS	mm. in.	mm. in.	mm. in.
1/2	21.3 0.84	38 1.50	16 0.62
3/4	26.7 1.05	38 1.50	19 0.75
1	33.4 1.32	38 1.50	22 0.88
1 1/4	42.2 1.66	48 1.88	25 1.00

Nominal Size	Outside Diameter at Bevel	Center to End	
1 1/2	48.3 1.90	57 2.25	29 1.12
2	60.3 2.38	76 3.00	35 1.38
2 1/2	73.0 2.88	95 3.75	44 1.75
3	88.9 3.50	114 4.50	51 2.00
3 1/2	101.6 4.00	133 5.25	57 2.25
4	114.3 4.50	152 6.00	64 2.50
5	141.3 5.56	190 7.50	79 3.12
6	168.3 6.62	229 9.00	95 3.75
8	219.1 8.62	305 12.00	127 5.00
10	273.0 10.75	381 15.00	159 6.25
12	323.8 12.75	457 18.00	190 7.50
14	355.6 14.00	533 21.00	222 8.75
16	406.4 16.00	610 24.00	254 10.00
18	457.0 18.00	686 27.00	286 11.25
20	508.0 20.00	762 30.00	318 12.50
22	559.0 22.00	838 33.00	343 13.50
24	610.0 24.00	914 36.00	381 15.00

Nominal Size	Outside Diameter at Bevel	Center to End	
26	660.0 26.00	991 39.00	406 16.00
28	711.0 28.00	1067 42.00	438 17.25
30	762.0 30.00	1143 45.00	470 18.50
32	813.0 32.00	1219 48.00	502 19.75
34	864.0 34.00	1295 51.00	533 21.00
36	914.0 36.00	1372 54.00	565 22.25
38	965.0 38.00	1448 57.00	600 23.62
40	1016.0 40.00	1524 60.00	632 24.88
42	1067.0 42.00	1600 63.00	660 26.00
44	1118.0 44.00	1676 66.00	695 27.38
46	1168.0 46.00	1753 69.00	727 28.62
48	1219.0 48.00	1829 72.00	759 29.88

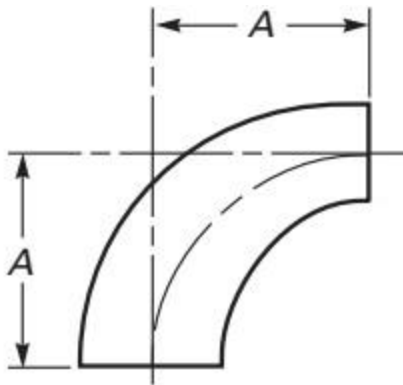
* All dimensions are provided in (mm) .

ASME B16.9 Long Radius Reducing Elbows



ASME B16.9 L/R reducing elbows, 6×3" SCH40.

Dimensions of ASME B16.9 Long Radius Reducing Elbows



The technical drawing of ASME B16.9 long radius reducing elbow

Nominal Size	Outside Diameter at Bevel	Outside Diameter at Bevel	Center to End
NPS mm. in.	Large End mm. in.	Small End mm. in.	A mm. in.
2*1 1/2	60.3 2.38	48.3 1.90	76 3.00
2*1 1/4	60.3 2.38	42.2 1.66	76 3.00
2*1	60.3 2.38	33.4 1.32	76 3.00
2 1/2*2	73.0 2.88	60.3 2.38	95 3.75

Nominal Size	Outside Diameter at Bevel	Outside Diameter at Bevel	Center to End
2 1/2*1 1/2	73.0 2.88	48.3 1.90	95 3.75
2 1/2*1 1/4	73.0 2.88	42.2 1.66	95 3.75
3*2 1/2	88.9 3.50	73.0 2.88	114 4.50
3*2	88.9 3.50	60.3 2.38	114 4.50
3*1 1/2	88.9 3.50	48.3 1.90	114 4.50
3 1/2*3	101.6 4.00	88.9 3.50	133 5.25
3 1/2*2 1/2	101.6 4.00	73.0 2.88	133 5.25
3 1/2*2	101.6 4.00	60.3 2.38	133 5.25
4*3 1/2	114.3 4.50	101.6 4.00	152 6.00
4*3	114.3 4.50	88.9 3.50	152 6.00
4*2 1/2	114.3 4.50	73.0 2.88	152 6.00
4*2	114.3 4.50	60.3 2.38	152 6.00
5*4	141.3 5.56	114.3 4.50	190 7.50
5*3 1/2	141.3 5.56	101.6 4.00	190 7.50
5*3	141.3 5.56	88.9 3.50	190 7.50
5*2 1/2	141.3 5.56	73.0 2.88	190 7.50
6*5	168.3 6.62	141.3 5.56	229 9.00

Nominal Size	Outside Diameter at Bevel	Outside Diameter at Bevel	Center to End
6*4	168.3 6.62	114.3 4.50	229 9.00
6*3 1/2	168.3 6.62	101.6 4.00	229 9.00
6*3	168.3 6.62	88.9 3.50	229 9.00
8*6	219.1 8.62	168.3 6.62	305 12.00
8*5	219.1 8.62	141.3 5.56	305 12.00
8*4	219.1 8.62	114.3 4.50	305 12.00
10*8	273.0 10.75	219.1 8.62	381 15.00
10*6	273.0 10.75	168.3 6.62	381 15.00
10*5	273.0 10.75	141.3 5.56	381 15.00
12*10	323.8 12.75	273.0 10.75	457 18.00
12*8	323.8 12.75	219.1 8.62	457 18.00
12*6	323.8 12.75	168.3 6.62	457 18.00
14*12	355.6 14.00	323.8 12.75	533 21.00
14*10	355.6 14.00	273.0 10.75	533 21.00
14*8	355.6 14.00	219.1 8.62	533 21.00
16*14	406.4 16.00	355.6 14.00	610 24.00
16*12	406.4 16.00	323.8 12.75	610 24.00

Nominal Size	Outside Diameter at Bevel	Outside Diameter at Bevel	Center to End
16*10	406.4 16.00	273.0 10.75	610 24.00
18*16	457.0 18.00	406.4 16.00	686 27.00
18*14	457.0 18.00	355.6 14.00	686 27.00
18*12	457.0 18.00	323.8 12.75	686 27.00
18*10	457.0 18.00	273.0 10.75	686 27.00
20*18	508.0 20.00	457.0 18.00	762 30.00
20*16	508.0 20.00	406.4 16.00	762 30.00
20*14	508.0 20.00	355.6 14.00	762 30.00
20*12	508.0 20.00	323.8 12.75	762 30.00
20*10	508.0 20.00	273.0 10.75	762 30.00
24*22	610.0 24.00	559.0 22.00	914 36.00
24*20	610.0 24.00	508.0 20.00	914 36.00
24*18	610.0 24.00	457.0 18.00	914 36.00
24*16	610.0 24.00	406.4 16.00	914 36.00
24*14	610.0 24.00	355.6 14.00	914 36.00
24*12	610.0 24.00	323.8 12.75	914 36.00

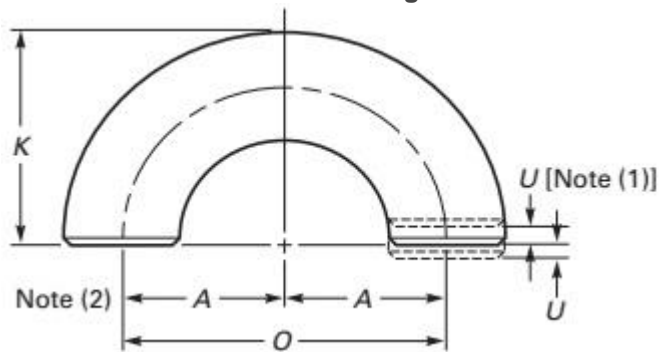
* All dimensions are provided in (mm) .

ASME B16.9 Long Radius Returns



Stainless steel 316L, ASME B16.9 short radius(S/R) return, 180° 3" SCH80

Dimensions of ASME B16.9 Long Radius Returns



The drawing of ASME B16.9 long radius returns (180°).

Nominal Pipe (NPS)	Outside Diameter at Bevel mm. in.	Center to center, O mm. in.	Back to face, K mm. in.
1/2	21.3 0.84	76 3.00	48 1.88
3/4	26.7 1.05	76 3.00	51 2.00
1	33.4 1.32	76 3.00	56 2.19
1 1/4	42.2 1.66	95 3.75	70 2.75
1 1/2	48.3 1.90	114 4.50	83 3.25

Nominal Pipe (NPS)	Outside Diameter at Bevel mm. in.	Center to center, O mm. in.	Back to face, K mm. in.
2	60.3 2.38	152 6.00	106 4.19
2 1/2	73.0 2.88	190 7.50	132 5.19
3	88.9 3.50	229 9.00	159 6.25
3 1/2	101.6 4.00	267 10.50	184 7.25
4	114.3 4.50	305 12.00	210 8.25
5	141.3 5.56	381 15.00	262 10.31
6	168.3 6.62	457 18.00	313 12.31
8	219.1 8.62	610 24.00	414 16.31
10	273.0 10.75	762 30.00	518 20.38
12	323.8 12.75	914 36.00	619 24.38
14	355.6 14.00	1067 42.00	711 28.00
16	406.4 16.00	1219 48.00	813 32.00
18	457.0 18.00	1372 54.00	914 36.00
20	508.0 20.00	1524 60.00	1016 40.00
22	559.0 22.00	1676 66.00	1118 44.00
24	610.0 24.00	1829 72.00	1219 48.00

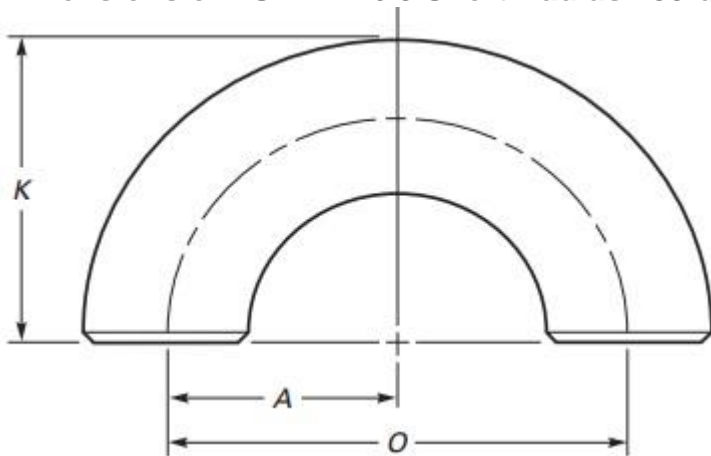
*All dimensions are provided in (mm)

ASME B16.9 Short Radius 180-deg Returns



ASME B16.9 short radius (S/R) 180° returns, 4" SCH40, A234 WP5.

Dimensions of ASME B16.9 Short Radius 180-deg Returns



The technical drawing of ASME B16.9 short radius 180-deg returns

Nominal Size	Outside Diameter at Bevel	Center to Center	Back to Back
NPS	mm. in.	O mm. in.	K mm. in.
1	33.4 1.32	51 2.00	41 1.62
1 1/4	42.2 1.66	64 2.50	52 2.06
1 1/2	48.3 1.90	76 3.00	62 2.44
2	60.3 2.38	102 4.00	81 3.19
2 1/2	73.0 2.88	127 5.00	100 3.94

Nominal Size	Outside Diameter at Bevel	Center to Center	Back to Back
3	88.9 3.50	152 6.00	121 4.75
3 1/2	101.6 4.00	178 7.00	140 5.50
4	114.3 4.50	203 8.00	159 6.25
5	141.3 5.56	254 10.00	197 7.75
6	168.3 6.62	305 12.00	237 9.31
8	219.1 8.62	406 16.00	313 12.31
10	273.0 10.75	508 20.00	391 15.38
12	323.8 12.75	610 24.00	467 18.38
14	355.6 14.00	711 28.00	533 21.00
16	406.4 16.00	813 32.00	610 24.00
18	457.0 18.00	914 36.00	686 27.00
20	508.0 20.00	1016 40.00	762 30.00
22	559.0 22.00	1118 44.00	838 33.00
24	610.0 24.00	1219 48.00	914 36.00

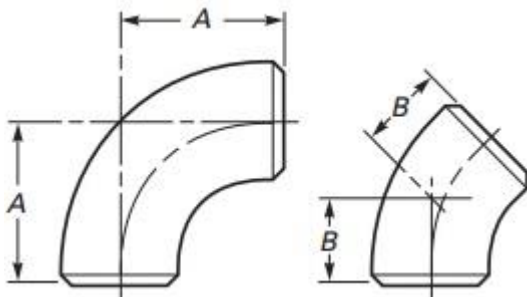
*All dimensions are (metric)

ASME B16.9 3D Elbows



ASME B16.9 3D 90° elbows in stock, 4" SCH 40 WPB.

Dimensions of ASME B16.9 Elbows



The drawing of ASME B16.9 3D elbows, 45° & 90°.

Nominal Size	Outside Diameter at Bevel	Center to End	Center to End
NPS	mm. in,	90-deg Elbows A mm. in.	45-deg Elbows B mm. in.
3/4	26.7 1.05	57 2.25	24 0.94
1	33.4 1.32	76 3.00	31 1.25
1 1/4	42.2 1.66	95 3.75	39 1.56
1 1/2	48.3 1.90	114 4.50	47 1.88
2	60.3 2.38	152 6.00	63 2.50
2 1/2	73.0 2.88	190 7.50	79 3.12
3	88.9 3.50	229 9.00	95 3.75

Nominal Size	Outside Diameter at Bevel	Center to End	Center to End
3 1/2	101.6 4.00	267 10.50	111 4.38
4	114.3 4.50	305 12.00	127 5.00
5	141.3 5.56	381 15.00	157 6.19
6	168.3 6.62	457 18.00	189 7.44
8	219.1 8.62	610 24.00	252 9.94
10	273.0 10.75	762 30.00	316 12.44
12	323.8 12.75	914 36.00	378 14.88
14	355.6 14.00	1067 42.00	441 17.38
16	406.4 16.00	1219 48.00	505 19.88
18	457.0 18.00	1372 54.00	568 22.38
20	508.0 20.00	1524 60.00	632 24.88
22	559.0 22.00	1676 66.00	694 27.31
24	610.0 24.00	1829 72.00	757 29.81
26	660.0 26.00	1981 78.00	821 32.31
28	711.0 28.00	2134 84.00	883 34.75
30	762.0 30.00	2286 90.00	964 37.25
32	813.0 32.00	2438 96.00	1010 39.75

Nominal Size	Outside Diameter at Bevel	Center to End	Center to End
34	864.0 34.00	2591 102.00	1073 42.25
36	914.0 36.00	2743 108.00	1135 44.69
38	965.0 38.00	2896 114.00	1200 47.25
40	1016.0 40.00	3048 120.00	1264 49.75
42	1067.0 42.00	3200 126.00	1326 52.19
44	1118.0 44.00	3353 132.00	1389 54.69
46	1168.0 46.00	3505 138.00	1453 57.19
48	1219.0 48.00	3658 144.00	1516 59.69

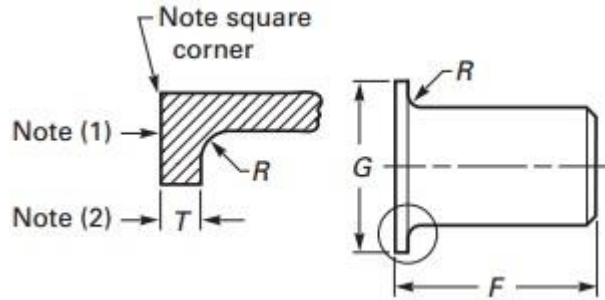
*All dimensions are (metric)

ASME B16.9 Lap Joint Stub Ends



ASME B16.9 ss316 lap joint stub ends.

Dimensions of ASME B16.9 Lap Joint Stub Ends



The technical drawing of ASME B16.9 lap joint stub ends

Nominal Size	Outside Diameter of Barrel		Long Pattern Length, F	Short Pattern Length, F	Radius of Fillet, R	Diameter of Lap, G
	Max. mm. in.	Min. mm. in.	mm. in.	mm. in.	mm. in.	mm. in.
1/2	22.8 0.896	20.5 0.809	76 3.00	51 2.00	3 0.12	35 1.38
3/4	28.1 1.106	25.9 1.019	76 3.00	51 2.00	3 0.12	43 1.69
1	35.0 1.376	32.6 1.284	102 4.00	51 2.00	3 0.12	51 2.00
1 1/4	43.6 1.716	41.4 1.629	102 4.00	51 2.00	5 0.19	64 2.50
1 1/2	49.9 1.965	47.5 1.869	102 4.00	51 2.00	6 0.25	73 2.88
2	62.4 2.456	59.5 2.344	152 6.00	64 2.50	8 0.31	92 3.62
2 1/2	75.3 2.966	72.2 2.844	152 6.00	64 2.50	8 0.31	105 4.12
3	91.3 3.596	88.1 3.469	152 6.00	64 2.50	10 0.38	127 5.00
3 1/2	104.0 4.096	100.8 3.969	152 6.00	76 3.00	10 0.38	140 5.50
4	116.7 4.593	113.5 4.469	152 6.00	76 3.00	11 0.44	157 6.19
5	144.3 5.683	140.5 5.532	203 8.00	76 3.00	11 0.44	186 7.31

Nominal Size	Outside Diameter of Barrel		Long Pattern Length, F	Short Pattern Length, F	Radius of Fillet, R	Diameter of Lap, G
6	171.3 6.743	167.5 6.594	203 8.00	89 3.50	13 0.50	216 8.50
8	222.1 8.743	218.3 8.594	203 8.00	102 4.00	13 0.50	270 10.62
10	277.2 10.913	272.3 10.719	254 10.00	127 5.00	13 0.50	324 12.75
12	328.0 12.913	323.1 12.719	254 10.00	152 6.00	13 0.50	381 15.00
14	359.9 14.170	354.8 13.969	305 12.00	152 6.00	13 0.50	413 16.25
16	411.0 16.180	405.6 15.969	305 12.00	152 6.00	13 0.50	470 18.50
18	462.0 18.190	456.0 17.969	305 12.00	152 6.00	13 0.50	533 21.00
20	514.0 20.240	507.0 19.969	305 12.00	152 6.00	13 0.50	584 23.00
22	565.0 22.240	558.0 21.969	305 12.00	152 6.00	13 0.50	641 25.25
24	616.0 24.240	609.0 23.969	305 12.00	152 6.00	13 0.50	692 27.25

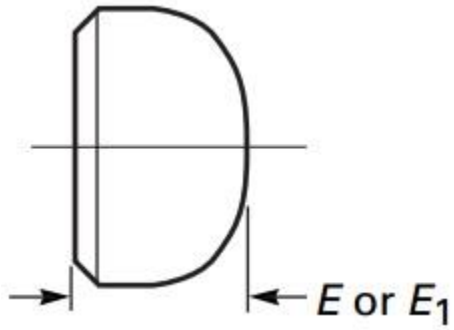
*All dimensions are (metric)

ASME B16.9 Caps



ASME B16.9 end caps, A234 WPB, black painting.

Dimensions of ASME B16.9 Caps



The technical drawing of ASME B16.9 caps

Nominal Size	Outside Diameter at Bevel	Length, E	Limiting Wall Thickness for Length, E	Length, E ₁
NPS	mm. in.	mm. in.	mm. in.	mm. in.
1/2	21.3 0.84	25 1.00	4.57 0.18	25 1.00
3/4	26.7 1.05	25 1.00	3.81 0.15	25 1.00
1	33.4 1.32	38 1.50	4.57 0.18	38 1.50
1 1/4	42.2 1.66	38 1.50	4.83 0.19	38 1.50
1 1/2	48.3 1.90	38 1.50	5.08 0.20	38 1.50
2	60.3 2.38	38 1.50	5.59 0.22	44 1.75
2 1/2	73.0 2.88	38 1.50	7.11 0.28	51 2.00
3	88.9 3.50	51 2.00	7.62 0.30	64 2.50
3 1/2	101.6 4.00	64 2.50	8.13 0.32	76 3.00
4	114.3 4.50	64 2.50	8.64 0.34	76 3.00
5	141.3 5.56	76 3.00	9.65 0.38	89 3.50

Nominal Size	Outside Diameter at Bevel	Length, E	Limiting Wall Thickness for Length, E	Length, E ₁
6	168.3 6.62	89 3.50	10.92 0.43	102 4.00
8	219.1 8.62	102 4.00	12.70 0.50	127 5.00
10	273.0 10.75	127 5.00	12.70 0.50	152 6.00
12	323.8 12.75	152 6.00	12.70 0.50	178 7.00
14	355.6 14.00	165 6.50	12.70 0.50	191 7.50
16	406.4 16.00	178 7.00	12.70 0.50	203 8.00
18	457.0 18.00	203 8.00	12.70 0.50	229 9.00
20	508.0 20.00	229 9.00	12.70 0.50	254 10.00
22	559.0 22.00	254 10.00	12.70 0.50	254 10.00
24	610.0 24.00	267 10.50	12.70 0.50	305 12.00
26	660.0 26.00	267 10.50	...	...
28	711.0 28.00	267 10.50	...	...
30	762.0 30.00	267 10.50	...	...
32	813.0 32.00	267 10.50	...	...
34	864.0 34.00	267 10.50	...	...
36	914.0 36.00	267 10.50	...	...

Nominal Size	Outside Diameter at Bevel	Length, E	Limiting Wall Thickness for Length, E	Length, E ₁
38	965.0 38.00	305 12.00	...	...
40	1016.0 40.00	305 12.00	...	...
42	1067.0 42.00	305 12.00	...	...
44	1118.0 44.00	343 13.50	...	...
46	1168.0 46.00	343 13.50	...	...
48	1219.0 48.00	343 13.50	...	...

*All dimensions are (metric)

ASME B16.9 Straight Tees and Crosses

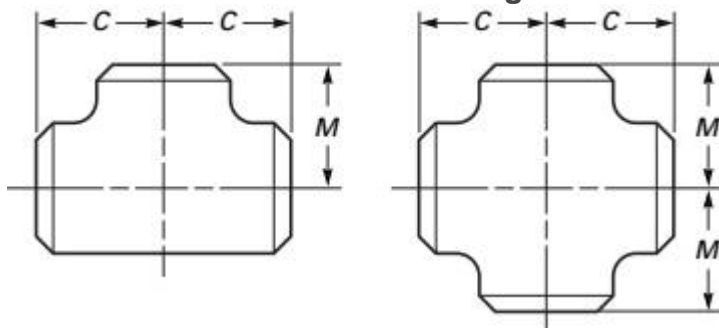


Carbon steel straight tees, 4" SCH160.



Hot-dipped galvanized crosses, 4" STD, A234 WPB.

Dimensions of ASME B16.9 Straight Tee and Crosses



The technical drawing of ASME B16.9 straight tees and crosses

Nominal Pipe Size	Outside Diameter at Bevel	Center to End	Center to End
NPS	mm. in.	Run, C mm. in.	Outlet, M mm. in.
1/2	21.3 0.84	25 1.00	25 1.00
3/4	26.7 1.05	29 1.12	29 1.12
1	33.4 1.32	38 1.50	38 1.50
1 1/4	42.2 1.66	48 1.88	48 1.88
1 1/2	48.3 1.90	57 2.25	57 2.25
2	60.3 2.38	64 2.50	64 2.50

Nominal Pipe Size	Outside Diameter at Bevel	Center to End	Center to End
2 1/2	73.0 2.88	76 3.00	76 3.00
3	88.9 3.50	86 3.38	86 3.38
3 1/2	101.6 4.00	95 3.75	95 3.75
4	114.3 4.50	105 4.12	105 4.12
5	141.3 5.56	124 4.88	124 4.88
6	168.3 6.62	143 5.62	143 5.62
8	219.1 8.62	178 7.00	178 7.00
10	273.0 10.75	216 8.50	216 8.50
12	323.8 12.75	254 10.00	254 10.00
14	355.6 14.00	279 11.00	279 11.00
16	406.4 16.00	305 12.00	305 12.00
18	457.0 18.00	343 13.50	343 13.50
20	508.0 20.00	381 15.00	381 15.00
22	559.0 22.00	419 16.50	419 16.50
24	610.0 24.00	432 17.00	432 17.00

Nominal Pipe Size	Outside Diameter at Bevel	Center to End	Center to End
26	660.0 26.00	495 19.50	495 19.50
28	711.0 28.00	521 20.50	521 20.50
30	762.0 30.00	559 22.00	559 22.00
32	813.0 32.00	597 23.50	597 23.50
34	864.0 34.00	635 25.00	635 25.00
36	914.0 36.00	673 26.50	673 26.50
38	965.0 38.00	711 28.00	711 28.00
40	1016.0 40.00	749 29.50	749 29.50
42	1067.0 42.00	762 30.00	711 28.00
44	1118.0 44.00	813 32.00	762 30.00
46	1168.0 46.00	851 33.50	800 31.50
48	1219.0 48.00	889 35.00	838 33.00

Showing 23 to 34 of 34 entries

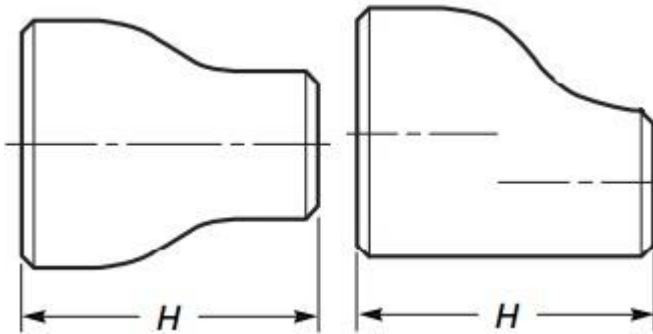
*All dimensions are provided in SI(mm) units and US Customary units.

ASME B16.9 Reducers



Conc. & Ecc. reducers, ASME B16.9, after sandblasting.

Dimensions of ASME B16.9 Reducers



The technical drawing of ASME B16.9 reducers, concentric & eccentric.

Nominal Size	Outside Diameter at Bevel	Outside Diameter at Bevel	End to End
NPS	Large End mm. in.	Small End mm. in.	H mm. in.
3/4 x 1/2	26.7 1.05	21.3 0.84	38 1.50
3/4 x 3/8	26.7 1.05	17.3 0.68	38 1.50
1 x 3/4	33.4 1.32	26.7 1.05	51 2.00
1 x 1/2	33.4 1.32	21.3 0.84	51 2.00
1 1/4 x 1	42.2 1.66	33.4 1.32	51 2.00
1 1/4 x 3/4	42.2 1.66	26.7 1.05	51 2.00

Nominal Size	Outside Diameter at Bevel	Outside Diameter at Bevel	End to End
1 1/4 x 1/2	42.2 1.66	21.3 0.84	51 2.00
1 1/2 x 1 1/4	48.3 1.90	42.2 1.66	64 2.50
1 1/2 x 1	48.3 1.90	33.4 1.32	64 2.50
1 1/2 x 3/4	48.3 1.90	26.7 1.05	64 2.50
1 1/2 x 1/2	48.3 1.90	21.3 0.84	64 2.50
2 x 1 1/2	60.3 2.38	48.3 1.90	76 3.00
2 x 1 1/4	60.3 2.38	42.2 1.66	76 3.00
2 x 1	60.3 2.38	33.4 1.32	76 3.00
2 x 3/4	60.3 2.38	26.7 1.05	76 3.00
2 1/2 x 2	73.0 2.88	60.3 2.38	89 3.50
2 1/2 x 1 1/2	73.0 2.88	48.3 1.90	89 3.50
2 1/2 x 1 1/4	73.0 2.88	42.2 1.66	89 3.50
2 1/2 x 1	73.0 2.88	33.4 1.32	89 3.50
3 x 2 1/2	88.9 3.50	73.0 2.88	89 3.50
3 x 2	88.9 3.50	60.3 2.38	89 3.50
3 x 1 1/2	88.9 3.50	48.3 1.90	89 3.50
3 x 1 1/4	88.9 3.50	42.2 1.66	89 3.50

Nominal Size	Outside Diameter at Bevel	Outside Diameter at Bevel	End to End
3 1/2 x 3	101.6 4.00	88.9 3.50	102 4.00
3 1/2 x 2 1/2	101.6 4.00	73.0 2.88	102 4.00
3 1/2 x 2	101.6 4.00	60.3 2.38	102 4.00
3 1/2 x 1 1/2	101.6 4.00	48.3 1.90	102 4.00
3 1/2 x 1 1/4	101.6 4.00	42.2 1.66	102 4.00
4 x 3 1/2	114.3 4.50	101.6 4.00	102 4.00
4 x 3	114.3 4.50	88.9 3.50	102 4.00
4 x 2 1/2	114.3 4.50	73.0 2.88	102 4.00
4 x 2	114.3 4.50	60.3 2.38	102 4.00
4 x 1 1/2	114.3 4.50	48.3 1.90	102 4.00
5 x 4	141.3 5.56	114.3 4.50	127 5.00
5 x 3 1/2	141.3 5.56	101.6 4.00	127 5.00
5 x 3	141.3 5.56	88.9 3.50	127 5.00
5 x 2 1/2	141.3 5.56	73.0 2.88	127 5.00
5 x 2	141.3 5.56	60.3 2.38	127 5.00
6 x 5	168.3 6.62	141.3 5.56	140 5.50
6 x 4	168.3 6.62	114.3 4.50	140 5.50

Nominal Size	Outside Diameter at Bevel	Outside Diameter at Bevel	End to End
6 x 3 1/2	168.3 6.62	101.6 4.00	140 5.50
6 x 3	168.3 6.62	88.9 3.50	140 5.50
6 x 2 1/2	168.3 6.62	73.0 2.88	140 5.50
8 x 6	219.1 8.62	168.3 6.62	152 6.00
8 x 5	219.1 8.62	141.3 5.56	152 6.00
8 x 4	219.1 8.62	114.3 4.50	152 6.00
8 x 3 1/2	219.1 8.62	101.6 4.00	152 6.00
10 x 8	273.0 10.75	219.1 8.62	178 7.00
10 x 6	273.0 10.75	168.3 6.62	178 7.00
10 x 5	273.0 10.75	141.3 5.56	178 7.00
10 x 4	273.0 10.75	114.3 4.50	178 7.00
12 x 10	323.8 12.75	273.0 10.75	203 8.00
12 x 8	323.8 12.75	219.1 8.62	203 8.00
12 x 6	323.8 12.75	168.3 6.62	203 8.00
12 x 5	323.8 12.75	141.3 5.56	203 8.00
14 x 12	355.6 14.00	323.8 12.75	330 13.00
14 x 10	355.6 14.00	273.0 10.75	330 13.00

Nominal Size	Outside Diameter at Bevel	Outside Diameter at Bevel	End to End
14 x 8	355.6 14.00	219.1 8.62	330 13.00
14 x 6	355.6 14.00	168.3 6.62	330 13.00
16 x 14	406.4 16.00	355.6 14.00	356 14.00
16 x 12	406.4 16.00	323.8 12.75	356 14.00
16 x 10	406.4 16.00	273.0 10.75	356 14.00
16 x 8	406.4 16.00	219.1 8.62	356 14.00
18 x 16	457 18.00	406.4 16.00	381 15.00
18 x 14	457 18.00	355.6 14.00	381 15.00
18 x 12	457 18.00	323.8 12.75	381 15.00
18 x 10	457 18.00	273.0 10.75	381 15.00

*All dimensions are (metric)

*Both concentric & eccentric reducers can be furnished with bell-shaped or conical body. However, the bell-shaped reducer is preferred.

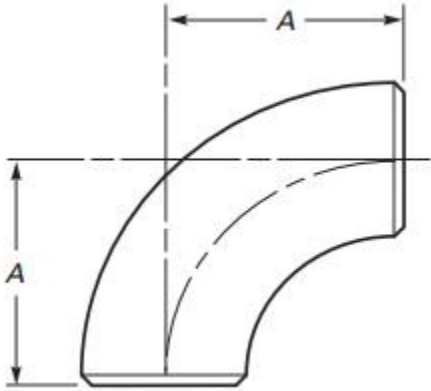
View more specification of [ASME B16.9](#).

ASME B16.9 Short Radius Elbows



Duplex stainless steel 2205, short radius elbow 90°, 4" SCH10S, ASME B16.9

Dimensions of ASME B16.9 Short Radius Elbows



The technical drawing of ASME B16.9 short radius elbows

Nominal Size	Outside Diameter at Bevel	Center to End
NPS	mm. in.	A mm. in.
1	33.4 1.32	25 1.00
1 1/4	42.2 1.66	32 1.25
1 1/2	48.3 1.90	38 1.50
2	60.3 2.38	51 2.00
2 1/2	73.0 2.88	64 2.50
3	88.9 3.50	76 3.00
3 1/2	101.6 4.00	89 3.50
4	114.3 4.50	102 4.00
5	141.3 5.56	127 5.00
6	168.3 6.62	152 6.00

Nominal Size	Outside Diameter at Bevel	Center to End
8	219.1 8.62	203 8.00
10	273.0 10.75	254 10.00
12	323.8 12.75	305 12.00
14	355.6 14.00	356 14.00
16	406.4 16.00	406 16.00
18	457.0 18.00	457 18.00
20	508.0 20.00	508 20.00
22	559.0 22.00	559 22.00
24	610.0 24.00	610 24.00

*All dimensions are (metric)

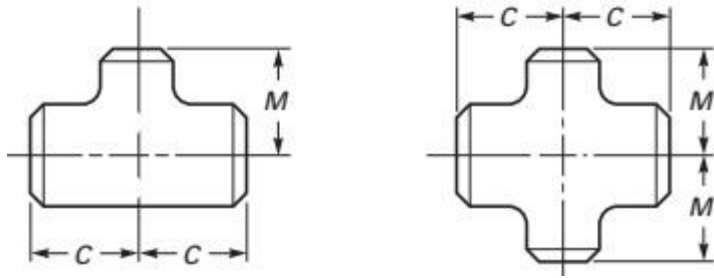
View more specification of [ASME B16.9](#).

ASME B16.9 Reducing Tees and Reducing Crosses



ASTM B16.9 reducing tees, 10×6" / 10×3" SCH40, CS.

Dimensions of ASME B16.9 Reducing Tees and Reducing Crosses



The technical drawing of asme b16.9 reducing tees and reducing crosses

Nominal Pipe Size	Outside Diameter at Bevel	Outside Diameter at Bevel	Center to end	Center to end
NPS	Run mm. in.	Outlet mm. in.	Run, C mm. in.	Outlet, M mm. in.
1/2*1/2*3/8	21.3 0.84	17.3 0.68	25 1.00	25 1.00
1/2*1/2*1/4	21.3 0.84	13.7 0.54	25 1.00	25 1.00
3/4*3/4*1/2	26.7 1.05	21.3 0.84	29 1.12	29 1.12
3/4*3/4*3/8	26.7 1.05	17.3 0.68	29 1.12	29 1.12
1*1*3/4	33.4 1.32	26.7 1.05	38 1.50	38 1.50
1*1*1/2	33.4 1.32	21.3 0.84	38 1.50	38 1.50
1 1/4*1 1/4*1	42.2 1.66	33.4 1.32	48 1.88	48 1.88
1 1/4*1 1/4*3/4	42.2 1.66	26.7 1.05	48 1.88	48 1.88
1 1/4*1 1/4*1/2	42.2 1.66	21.3 0.84	48 1.88	48 1.88

Nominal Pipe Size	Outside Diameter at Bevel	Outside Diameter at Bevel	Center to end	Center to end
1 1/2*1 1/2*1 1/4	48.3 1.90	42.2 1.66	57 2.25	57 2.25
1 1/2*1 1/2*1	48.3 1.90	33.4 1.32	57 2.25	57 2.25
1 1/2*1 1/2*3/4	48.3 1.90	26.7 1.05	57 2.25	57 2.25
1 1/2*1 1/2*1/2	48.3 1.90	21.3 0.84	57 2.25	57 2.25
2*2*1 1/2	60.3 2.38	48.3 1.90	64 2.50	60 2.38
2*2*1 1/4	60.3 2.38	42.2 1.66	64 2.50	57 2.25
2*2*1	60.3 2.38	33.4 1.32	64 2.50	51 2.00
2*2*3/4	60.3 2.38	26.7 1.05	64 2.50	44 1.75
2 1/2*2 1/2*2	73.0 2.88	60.3 2.38	76 3.00	70 2.75
2 1/2*2 1/2*1 1/2	73.0 2.88	48.3 1.90	76 3.00	67 2.62

Nominal Pipe Size	Outside Diameter at Bevel	Outside Diameter at Bevel	Center to end	Center to end
2 1/2*2 1/2*1 1/4	73.0 2.88	42.2 1.66	76 3.00	64 2.50
2 1/2*2 1/2*1	73.0 2.88	33.4 1.32	76 3.00	57 2.25
3*3*2 1/2	88.9 3.50	73.0 2.88	86 3.38	83 3.25

Nominal Pipe Size	Outside Diameter at Bevel	Outside Diameter at Bevel	Center to end	Center to end
3*3*2	88.9 3.50	60.3 2.38	86 3.38	76 3.00
3*3*1 1/2	88.9 3.50	48.3 1.90	86 3.38	73 2.88
3*3*1 1/4	88.9 3.50	42.2 1.66	86 3.38	70 2.75
3 1/2*3 1/2*3	101.6 4.00	88.9 3.50	95 3.75	92 3.62
3 1/2*3 1/2*2 1/2	101.6 4.00	73.0 2.88	95 3.75	89 3.50
3 1/2*3 1/2*2	101.6 4.00	60.3 2.38	95 3.75	83 3.25
3 1/2*3 1/2*1 1/2	101.6 4.00	48.3 1.90	95 3.75	79 3.12
4*4*3 1/2	114.3 4.50	101.6 4.00	105 4.12	102 4.00
4*4*3	114.3 4.50	88.9 3.50	105 4.12	98 3.88
4*4*2 1/2	114.3 4.50	73.0 2.88	105 4.12	95 3.75
4*4*2	114.3 4.50	60.3 2.38	105 4.12	89 3.50
4*4*1 1/2	114.3 4.50	48.3 1.90	105 4.12	86 3.38
5*5*4	141.3 5.56	114.3 4.50	124 4.88	117 4.62
5*5*3 1/2	141.3 5.56	101.6 4.00	124 4.88	114 4.50
5*5*3	141.3 5.56	88.9 3.50	124 4.88	111 4.38

Nominal Pipe Size	Outside Diameter at Bevel	Outside Diameter at Bevel	Center to end	Center to end
5*5*2 1/2	141.3 5.56	73.0 2.88	124 4.88	108 4.25
5*5*2	141.3 5.56	60.3 2.38	124 4.88	105 4.12

Nominal Pipe Size	Outside Diameter at Bevel	Outside Diameter at Bevel	Center to end	Center to end
6*6*5	168.3 6.62	141.3 5.56	143 5.62	137 5.38
6*6*4	168.3 6.62	114.3 4.50	143 5.62	130 5.12
6*6*3 1/2	168.3 6.62	101.6 4.00	143 5.62	127 5.00
6*6*3	168.3 6.62	88.9 3.50	143 5.62	124 4.88
6*6*2 1/2	168.3 6.62	73.0 2.88	143 5.62	121 4.75
8*8*6	219.1 8.62	168.3 6.62	178 7.00	168 6.62
8*8*5	219.1 8.62	141.3 5.56	178 7.00	162 6.38
8*8*4	219.1 8.62	114.3 4.50	178 7.00	156 6.12
8*8*3 1/2	219.1 8.62	101.6 4.00	178 7.00	152 6.00
10*10*8	273.0 10.75	219.1 8.62	216 8.50	203 8.00
10*10*6	273.0 10.75	168.3 6.62	216 8.50	194 7.62

Nominal Pipe Size	Outside Diameter at Bevel	Outside Diameter at Bevel	Center to end	Center to end
10*10*5	273.0 10.75	141.3 5.56	216 8.50	191 7.50
10*10*4	273.0 10.75	114.3 4.50	216 8.50	184 7.25
12*12*10	323.8 12.75	273.0 10.75	254 10.00	241 9.50
12*12*8	323.8 12.75	219.1 8.62	254 10.00	229 9.00
12*12*6	323.8 12.75	168.3 6.62	254 10.00	219 8.62
12*12*5	323.8 12.75	141.3 5.56	254 10.00	216 8.50
14*14*12	355.6 14.00	323.8 12.75	279 11.00	270 10.62
14*14*10	355.6 14.00	273.0 10.75	279 11.00	257 10.12
14*14*8	355.6 14.00	219.1 8.62	279 11.00	248 9.75

Nominal Pipe Size	Outside Diameter at Bevel	Outside Diameter at Bevel	Center to end	Center to end
14*14*6	355.6 14.00	168.3 6.62	279 11.00	238 9.38
16*16*14	406.4 16.00	355.6 14.00	305 12.00	305 12.00
16*16*12	406.4 16.00	323.8 12.75	305 12.00	295 11.62
16*16*10	406.4 16.00	273.0 10.75	305 12.00	283 11.12

Nominal Pipe Size	Outside Diameter at Bevel	Outside Diameter at Bevel	Center to end	Center to end
16*16*8	406.4 16.00	219.1 8.62	305 12.00	273 10.75
16*16*6	406.4 16.00	168.3 6.62	305 12.00	264 10.38
18*18*16	457.0 18.00	406.4 16.00	343 13.50	330 13.00
18*18*14	457.0 18.00	355.6 14.00	343 13.50	330 13.00
18*18*12	457.0 18.00	323.8 12.75	343 13.50	321 12.62
18*18*10	457.0 18.00	273.0 10.75	343 13.50	308 12.12
18*18*8	457.0 18.00	219.1 8.62	343 13.50	298 11.75
20*20*18	508.0 20.00	457.0 18.00	381 15.00	368 14.50
20*20*16	508.0 20.00	406.4 16.00	381 15.00	356 14.00
20*20*14	508.0 20.00	355.6 14.00	381 15.00	356 14.00
20*20*12	508.0 20.00	323.8 12.75	381 15.00	346 13.62
20*20*10	508.0 20.00	273.0 10.75	381 15.00	333 13.12
20*20*8	508.0 20.00	219.1 8.62	381 15.00	324 12.75
22*22*20	559.0 22.00	508.0 20.00	419 16.50	406 16.00
22*22*18	559.0 22.00	457.0 18.00	419 16.50	394 15.50

Nominal Pipe Size	Outside Diameter at Bevel	Outside Diameter at Bevel	Center to end	Center to end
22*22*16	559.0 22.00	406.4 16.00	419 16.50	381 15.00

Nominal Pipe Size	Outside Diameter at Bevel	Outside Diameter at Bevel	Center to end	Center to end
22*22*14	559.0 22.00	355.6 14.00	419 16.50	381 15.00
22*22*12	559.0 22.00	323.8 12.75	419 16.50	371 14.62
22*22*10	559.0 22.00	273.0 10.75	419 16.50	359 14.12
24*24*22	610.0 24.00	559.0 22.00	432 17.00	432 17.00
24*24*20	610.0 24.00	508.0 20.00	432 17.00	432 17.00
24*24*18	610.0 24.00	457.0 18.00	432 17.00	419 16.50
24*24*16	610.0 24.00	406.4 16.00	432 17.00	406 16.00
24*24*14	610.0 24.00	355.6 14.00	432 17.00	406 16.00
24*24*12	610.0 24.00	323.8 12.75	432 17.00	397 15.62
24*24*10	610.0 24.00	273.0 10.75	432 17.00	384 15.12
26*26*24	660.0 26.00	610.0 24.00	495 19.50	483 19.00
26*26*22	660.0 26.00	559.0 22.00	495 19.50	470 18.50

Nominal Pipe Size	Outside Diameter at Bevel	Outside Diameter at Bevel	Center to end	Center to end
26*26*20	660.0 26.00	508.0 20.00	495 19.50	457 18.00
26*26*18	660.0 26.00	457.0 18.00	495 19.50	444 17.50
26*26*16	660.0 26.00	406.4 16.00	495 19.50	432 17.00
26*26*14	660.0 26.00	355.6 14.00	495 19.50	432 17.00
26*26*12	660.0 26.00	323.8 12.75	495 19.50	422 16.62
28*28*26	711 28.00	660.0 26.00	521 20.50	521 20.50
28*28*24	711 28.00	610.0 24.00	521 20.50	508 20.00
28*28*22	711 28.00	559.0 22.00	521 20.50	495 19.50

Nominal Pipe Size	Outside Diameter at Bevel	Outside Diameter at Bevel	Center to end	Center to end
28*28*20	711 28.00	508.0 20.00	521 20.50	483 19.00
28*28*18	711 28.00	457.0 18.00	521 20.50	470 18.50
28*28*16	711 28.00	406.4 16.00	521 20.50	457 18.00
28*28*14	711 28.00	355.6 14.00	521 20.50	457 18.00
28*28*12	711 28.00	323.8 12.75	521 20.50	448 17.62

Nominal Pipe Size	Outside Diameter at Bevel	Outside Diameter at Bevel	Center to end	Center to end
30*30*28	762 30.00	711.0 28.00	559 22.00	546 21.50
30*30*26	762 30.00	660.0 26.00	559 22.00	546 21.50
30*30*24	762 30.00	610.0 24.00	559 22.00	533 21.00
30*30*22	762 30.00	559.0 22.00	559 22.00	521 20.50
30*30*20	762 30.00	508.0 20.00	559 22.00	508 20.00
30*30*18	762 30.00	457.0 18.00	559 22.00	495 19.50
30*30*16	762 30.00	406.4 16.00	559 22.00	483 19.00
30*30*14	762 30.00	355.6 14.00	559 22.00	483 19.00
30*30*12	762 30.00	323.8 12.75	559 22.00	473 18.62
30*30*10	762 30.00	273.0 10.75	559 22.00	460 18.12
32*32*30	813 32.00	762.0 30.00	597 23.50	584 23.00
32*32*28	813 32.00	711.0 28.00	597 23.50	572 22.50
32*32*26	813 32.00	660.0 26.00	597 23.50	572 22.50
32*32*24	813 32.00	610.0 24.00	597 23.50	559 22.00
32*32*22	813 32.00	559.0 22.00	597 23.50	546 21.50

Nominal Pipe Size	Outside Diameter at Bevel	Outside Diameter at Bevel	Center to end	Center to end
32*32*20	813 32.00	508.0 20.00	597 23.50	533 21.00
32*32*18	813 32.00	457.0 18.00	597 23.50	521 20.50
32*32*16	813 32.00	406.4 16.00	597 23.50	508 20.00
32*32*14	813 32.00	355.6 14.00	597 23.50	508 20.00
34*34*32	864 34.00	813.0 32.00	635 25.00	633 24.50
34*34*30	864 34.00	762.0 30.00	635 25.00	610 24.00
34*34*28	864 34.00	711.0 28.00	635 25.00	597 23.50
34*34*26	864 34.00	660.0 26.00	635 25.00	597 23.50
34*34*24	864 34.00	610.0 24.00	635 25.00	584 23.00
34*34*22	864 34.00	559.0 22.00	635 25.00	572 22.50
34*34*20	864 34.00	508.0 20.00	635 25.00	559 22.00
34*34*18	864 34.00	457.0 18.00	635 25.00	546 21.50
34*34*16	864 34.00	406.4 16.00	635 25.00	533 21.00
36*36*34	914 36.00	864.0 34.00	673 26.50	660 26.00
36*36*32	914 36.00	813.0 32.00	673 26.50	648 25.50

Nominal Pipe Size	Outside Diameter at Bevel	Outside Diameter at Bevel	Center to end	Center to end
36*36*30	914 36.00	762.0 30.00	673 26.50	635 25.00
36*36*28	914 36.00	711.0 28.00	673 26.50	622 24.50
36*36*26	914 36.00	660.0 26.00	673 26.50	622 24.50
36*36*24	914 36.00	610.0 24.00	673 26.50	610 24.00
36*36*22	914 36.00	559.0 22.00	673 26.50	597 23.50

Nominal Pipe Size	Outside Diameter at Bevel	Outside Diameter at Bevel	Center to end	Center to end
36*36*20	914 36.00	508.0 20.00	673 26.50	584 23.00
36*36*18	914 36.00	457.0 18.00	673 26.50	572 22.50
36*36*16	914 36.00	406.4 16.00	673 26.50	559 22.00
38*38*36	965 38.00	914.0 36.00	711 28.00	711 28.00
38*38*34	965 38.00	864.0 34.00	711 28.00	698 27.50
38*38*32	965 38.00	813.0 32.00	711 28.00	686 27.00
38*38*30	965 38.00	762.0 30.00	711 28.00	673 26.50
38*38*28	965 38.00	711.0 28.00	711 28.00	648 25.50

Nominal Pipe Size	Outside Diameter at Bevel	Outside Diameter at Bevel	Center to end	Center to end
38*38*26	965 38.00	660.0 26.00	711 28.00	648 25.50
38*38*24	965 38.00	610.0 24.00	711 28.00	635 25.00
38*38*22	965 38.00	559.0 22.00	711 28.00	622 24.50
38*38*20	965 38.00	508.0 20.00	711 28.00	610 24.00
38*38*18	965 38.00	457.0 18.00	711 28.00	597 23.50
40*40*38	1016 40.00	965.0 38.00	749 29.50	749 29.50
40*40*36	1016 40.00	914.0 36.00	749 29.50	737 29.00
40*40*34	1016 40.00	864.0 34.00	749 29.50	724 28.50
40*40*32	1016 40.00	813.0 32.00	749 29.50	711 28.00
40*40*30	1016 40.00	762.0 30.00	749 29.50	698 27.50
40*40*28	1016 40.00	711.0 28.00	749 29.50	673 26.50
40*40*26	1016 40.00	660.0 26.00	749 29.50	673 26.50

Nominal Pipe Size	Outside Diameter at Bevel	Outside Diameter at Bevel	Center to end	Center to end
40*40*24	1016 40.00	610.0 24.00	749 29.50	660 26.00

Nominal Pipe Size	Outside Diameter at Bevel	Outside Diameter at Bevel	Center to end	Center to end
40*40*22	1016 40.00	559.0 22.00	749 29.50	648 25.50
40*40*20	1016 40.00	508.0 20.00	749 29.50	635 25.00
40*40*18	1016 40.00	457.0 18.00	749 29.50	622 24.50
42*42*40	1067 42.00	1016.0 40.00	762 30.00	711 28.00
42*42*38	1067 42.00	965.0 38.00	762 30.00	711 28.00
42*42*36	1067 42.00	914.0 36.00	762 30.00	711 28.00
42*42*34	1067 42.00	864.0 34.00	762 30.00	711 28.00
42*42*32	1067 42.00	813.0 32.00	762 30.00	711 28.00
42*42*30	1067 42.00	762.0 30.00	762 30.00	711 28.00
42*42*28	1067 42.00	711.0 28.00	762 30.00	698 27.50
42*42*26	1067 42.00	660.0 26.00	762 30.00	698 27.50
42*42*24	1067 42.00	610.0 24.00	762 30.00	660 26.00
42*42*22	1067 42.00	559.0 22.00	762 30.00	660 26.00
42*42*20	1067 42.00	508.0 20.00	762 30.00	660 26.00
42*42*18	1067 42.00	457.0 18.00	762 30.00	648 25.50

Nominal Pipe Size	Outside Diameter at Bevel	Outside Diameter at Bevel	Center to end	Center to end
42*42*16	1067 42.00	406.4 16.00	762 30.00	635 25.00
44*44*42	1118 44.00	1067.0 42.00	813 32.00	762 30.00
44*44*40	1118 44.00	1016.0 40.00	813 32.00	749 29.50
44*44*38	1118 44.00	965.0 38.00	813 32.00	737 29.00

Nominal Pipe Size	Outside Diameter at Bevel	Outside Diameter at Bevel	Center to end	Center to end
44*44*36	1118 44.00	914.0 36.00	813 32.00	724 28.50
44*44*34	1118 44.00	864.0 34.00	813 32.00	724 28.50
44*44*32	1118 44.00	813.0 32.00	813 32.00	711 28.00
44*44*30	1118 44.00	762.0 30.00	813 32.00	711 28.00
44*44*28	1118 44.00	711.0 28.00	813 32.00	698 28.00
44*44*26	1118 44.00	660.0 26.00	813 32.00	698 27.50
44*44*24	1118 44.00	610.0 24.00	813 32.00	698 27.50
44*44*22	1118 44.00	559.0 22.00	813 32.00	686 27.00
44*44*20	1118 44.00	508.0 20.00	813 32.00	686 27.00

Nominal Pipe Size	Outside Diameter at Bevel	Outside Diameter at Bevel	Center to end	Center to end
46*46*44	1168 46.00	1118.0 44.00	851 33.50	800 31.50
46*46*42	1168 46.00	1067.0 42.00	851 33.50	787 31.00
46*46*40	1168 46.00	1016.0 40.00	851 33.50	775 30.50
46*46*38	1168 46.00	965.0 38.00	851 33.50	762 30.00
46*46*36	1168 46.00	914.0 36.00	851 33.50	762 30.00
46*46*34	1168 46.00	864.0 34.00	851 33.50	749 29.50
46*46*32	1168 46.00	813.0 32.00	851 33.50	749 29.50
46*46*30	1168 46.00	762.0 30.00	851 33.50	737 29.00
46*46*28	1168 46.00	711.0 28.00	851 33.50	737 29.00
46*46*26	1168 46.00	660.0 26.00	851 33.50	737 29.00
46*46*24	1168 46.00	610.0 24.00	851 33.50	724 28.50

Nominal Pipe Size	Outside Diameter at Bevel	Outside Diameter at Bevel	Center to end	Center to end
46*46*22	1168 46.00	559.0 22.00	851 33.50	724 28.50
48*48*46	1219 48.00	1168.0 46.00	889 35.00	838 33.00

Nominal Pipe Size	Outside Diameter at Bevel	Outside Diameter at Bevel	Center to end	Center to end
48*48*44	1219 48.00	1118.0 44.00	889 35.00	838 33.00
48*48*42	1219 48.00	1067.0 42.00	889 35.00	813 32.00
48*48*40	1219 48.00	1016.0 40.00	889 35.00	813 32.00
48*48*38	1219 48.00	965.0 38.00	889 35.00	813 32.00
48*48*36	1219 48.00	914.0 36.00	889 35.00	787 31.00
48*48*34	1219 48.00	864.0 34.00	889 35.00	787 31.00
48*48*32	1219 48.00	813.0 32.00	889 35.00	787 31.00
48*48*30	1219 48.00	762.0 30.00	889 35.00	762 30.00
48*48*28	1219 48.00	711.0 28.00	889 35.00	762 30.00
48*48*26	1219 48.00	660.0 26.00	889 35.00	762 30.00
48*48*24	1219 48.00	610.0 24.00	889 35.00	737 29.00
48*48*22	1219 48.00	559.0 22.00	889 35.00	737 29.00

*All dimensions are provided in (mm)