

STEEL BUTT-WELDING PIPE FITTING



90° ELBOW LR 90° ELBOW SR 45° ELBOW LR 90° ELBOW SR



STRAIGHT TEE REDUCING TEE ECCENTRIC REDUCER CONCENTRIC REDUCER

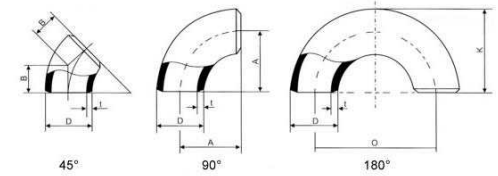


CAP 180° ELBOW SR 180° ELBOW LR



S.S ELBOW S.S. REDUCER S.S. TEE

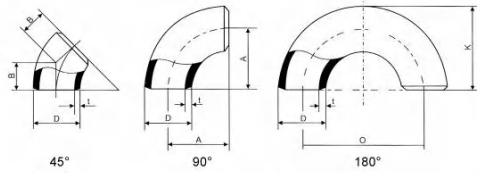
Elbows
Long Radius
ASME/ANSI B16.9



Nominal Pipe Size	Dimensions		
	Outside Diameter at Bevel: D		Center to End: A/B Center to Center: O Back to Face: K
	inch	mm	mm
1/2	0.840	21.3	A=38.1 B=15.7 O=76.2 K=47.8
3/4	1.050	26.7	A=38.1 B=19.1 O=76.2 K=50.8
1	1.315	33.4	A=38.1 B=22.4 O=76.2 K=55.6
1 1/4	1.660	42.2	A=47.8 B=25.4 O=95.3 K=69.9
1 1/2	1.900	48.3	A=57.2 B=28.4 O=114.3 K=82.6
2	2.375	60.3	A=76.2 B=35.1 O=152.4 K=106.4
2 1/2	2.875	73.0	A=95.3 B=44.5 O=190.5 K=131.8
3	3.500	88.9	A=114.3 B=50.8 O=228.6 K=158.8

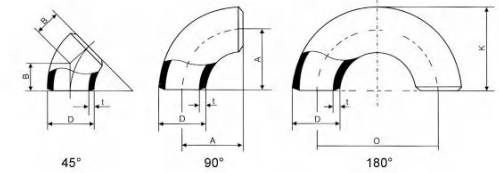
Sch. No.	Wall Thickness: t		Approx. Weight		
	t		45° kg	90° kg	180° kg
	Inch	mm			
Std/40 XS/80	0.109	2.77	0.04	0.08	0.16
	0.147	3.73	0.05	0.10	0.20
Std/40 XS/80	0.113	2.87	0.04	0.08	0.16
	0.154	3.91	0.05	0.10	0.20
Std/40 XS/80 160	0.133	3.38	0.08	0.15	0.30
	0.179	4.55	0.10	0.19	0.38
	0.250	6.35	0.13	0.25	0.50
Std/40 XS/80 160	0.140	3.56	0.13	0.25	0.25
	0.191	4.85	0.17	0.33	0.66
	0.250	6.35	0.21	0.42	0.84
Std/40 XS/80 160 XXS	0.145	3.68	0.18	0.36	0.72
	0.200	5.08	0.25	0.49	0.98
	0.281	7.14	0.33	0.65	1.30
	0.400	10.15	0.43	0.86	1.72
Std/40 XS/80 160 XXS	0.154	3.91	0.33	0.65	1.30
	0.218	5.54	0.45	0.90	1.80
	0.344	8.74	0.67	1.33	2.66
	0.436	11.07	0.81	1.61	3.22
Std/40 XS/80 160 XXS	0.203	5.16	0.65	1.29	2.58
	0.276	7.01	0.86	1.71	3.42
	0.375	9.53	1.12	2.23	4.46
	0.552	14.02	1.53	3.05	6.10
Std/40 XS/80 160 XXS	0.216	5.49	1.02	2.03	4.06
	0.300	7.62	1.37	2.74	5.48
	0.438	11.13	1.92	3.83	7.66
	0.600	15.24	2.49	4.97	9.94

Elbows
Long Radius
ASME/ANSI B16.9



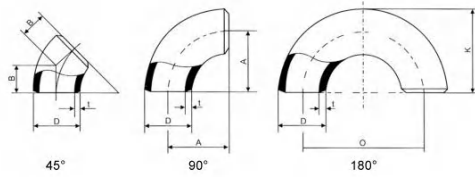
Nominal Pipe Size Inch	Dimensions		Center to End A/B Center to Center: O Back to Face: K mm	Wall Thickness: t		Approx. Weight			
	Outside Diameter at Bevel: D			Sch. No.	t		45° kg	90° kg	180° kg
	inch	mm			Inch	mm			
4	4.500	114.3	A=152.4 B=63.5 O=304.8 K=209.6	Std/40 XS/80 120 160 XXS	0.237 0.337 0.438 0.531 0.674	6.02 8.56 11.13 13.49 17.12	1.93 2.67 3.39 4.02 4.91	3.85 5.34 6.78 8.03 9.82	7.70 10.7 13.6 16.1 19.6
5	5.563	141.3	A=190.5 B=79.2 O=381.0 K=261.9	Std/40 XS/80 120 160 XXS	0.258 0.375 0.500 0.625 0.750	6.55 9.53 12.70 15.88 19.05	3.26 4.64 6.05 7.35 8.60	6.51 9.27 12.1 14.7 17.2	13.0 18.5 24.2 29.4 34.4
6	6.625	168.3	A=228.6 B=95.3 O=457.2 K=312.7	Std/40 XS/80 120 160 XXS	0.280 0.432 0.562 0.719 0.864	7.11 10.97 14.27 18.26 21.95	5.05 7.65 9.75 12.1 14.2	10.1 15.3 19.5 24.2 28.4	20.2 30.6 39.0 48.4 56.4
8	8.625	219.1	A=304.8 B=127.0 O=609.6 K=414.3	20 30 Std/40 60 XS/80 100 120 140 XXS 160	0.250 0.277 0.322 0.406 0.500 0.594 0.719 0.812 0.875 0.906	6.35 7.04 8.18 10.31 12.70 15.09 18.26 20.62 22.23 23.01	7.95 8.80 10.2 12.7 15.5 18.2 21.7 24.2 25.9 26.7	15.9 17.6 20.4 25.4 30.9 36.3 43.3 48.3 51.7 53.3	31.8 35.2 40.8 50.8 61.8 72.6 86.6 96.6 103 107
10	10.750	273.0	A=381.0 B=158.8 O=762.0 K=517.7	20 30 Std/40 XS/80 80 100 120 140/XXS 160	0.250 0.307 0.365 0.500 0.594 0.719 0.844 1.000 1.125	6.35 7.80 9.27 12.70 15.09 18.26 21.44 25.40 28.58	12.5 15.3 18.1 24.4 28.7 34.3 39.8 46.4 51.5	25.0 30.5 36.1 48.8 57.3 68.6 79.5 92.8 103	50.0 61.0 72.2 97.6 115 137 159 186 206

Elbows
Long Radius
ASME/ANSI B16.9



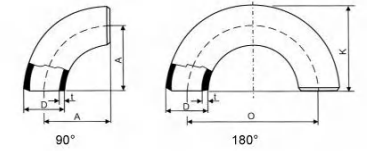
Nominal Pipe Size Inch	Dimensions		Center to End A/B Center to Center: O Back to Face: K mm	Wall Thickness: t		Approx. Weight			
	Outside Diameter at Bevel: D			Sch. No.	t		45° kg	90° kg	180° kg
	inch	mm			Inch	mm			
12	12.750	323.9	A=457.2 B=190.5 O=914.4 K=619.3	20 30 Std 40 XS 60 80 100 120/XXS 140 160	0.250 0.330 0.375 0.406 0.500 0.562 0.688 0.844 1.000 1.125 1.312	6.35 8.38 9.53 10.31 12.70 14.27 17.48 21.44 25.40 28.58 33.32	17.9 23.4 26.6 28.7 35.0 39.1 47.4 57.5 67.0 74.5 85.5	35.7 46.8 53.1 57.8 70.0 78.2 94.7 115 134 149 171	71.4 93.6 106 115 140 156 189 230 268 298 342
14	14.000	355.6	A=533.4 B=222.3 O=1066.8 K=711.2	10 20 Std/30 40 XS 60 80 100 120 140 160	0.250 0.312 0.375 0.438 0.500 0.594 0.750 0.938 1.094 1.250 1.406	6.35 7.92 9.53 11.13 12.70 15.09 19.05 23.83 27.79 31.75 35.71	22.9 28.5 34.1 39.6 45.0 53.0 66.0 81.5 94.0 106 118	45.8 56.9 68.1 79.2 90.0 106 132 163 188 212 236	91.6 114 136 158 180 212 264 326 376 424 472
16	16.000	406.4	A=609.6 B=254.0 O=1219.2 K=812.8	10 20 Std/30 XS/40 60 80 100 120 140 160	0.250 0.312 0.375 0.500 0.656 0.844 1.031 1.219 1.438 1.594	6.35 7.92 9.53 12.70 16.66 21.44 26.19 30.96 36.53 40.49	30.0 37.3 44.7 59.0 76.5 97.5 118 137 160 175	60.0 74.5 89.3 118 153 195 235 274 319 350	120 149 179 236 306 390 470 548 638 700

Elbows
Long Radius
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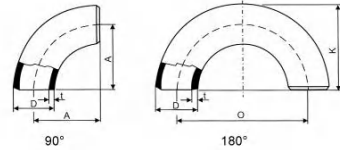
Nominal Pipe Size Inch	Dimensions		Center to End:A/B Center to Center:O Back to Face:K mm	Wall Thickness:t		Approx.Weight			
	Outside Diameter at Bevel:D			Sch.No.	t Inch mm	45° kg	90° kg	180° kg	
	inch	mm							
18	18.000	457.0	A=685.8 B=285.8 O=1371.6 K=914.4	10 20 Std 30 XS 40 60 80 100 120 140 160	0.250 0.312 0.375 0.438 0.500 0.562 0.750 0.938 1.156 1.375 1.562 1.781	6.35 7.92 9.53 11.13 12.70 14.27 19.05 23.83 29.36 34.93 39.67 45.24	38.1 47.3 56.5 66.0 75.0 84.0 111 137 167 196 220 246	76.1 94.5 113 132 150 168 222 274 334 392 440 492	152 189 226 264 300 336 444 548 668 784 880 984
20	20.000	508.0	A=762.0 B=317.5 O=1524.0 K=1016.0	10 Std/20 XS/30 40 60 80 100 120 140 160	0.250 0.375 0.500 0.594 0.812 1.031 1.281 1.500 1.750 1.969	6.35 9.53 12.70 15.09 20.62 26.19 32.54 38.10 44.54 50.01	47.0 70.0 93.0 110 149 186 229 264 305 338	94.0 140 186 219 297 372 457 528 609 676	188 280 372 438 594 744 914 1056 1218 1352
22	22.000	559.0	A=838.2 B=342.9 O=1676.4 K=1117.6	10 Std/20 XS/30 60 80 100 120 140 160	0.250 0.375 0.500 0.875 1.125 1.375 1.625 1.875 2.125	6.35 9.54 12.70 22.23 28.58 34.93 41.28 47.63 53.98	57.0 85.0 113 194 246 297 347 395 443	114 170 225 387 492 594 694 790 885	228 340 450 774 984 1188 1388 1580 1770

Elbows
Long Radius
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Nominal Pipe Size Inch	Dimensions		Center to End:A/B Center to Center:O Back to Face:K mm	Wall Thickness:t		Approx.Weight				
	Outside Diameter at Bevel:D			Sch.No.	t Inch mm	45° kg	90° kg	180° kg		
	inch	mm								
24	24.000	610.0	A=914.4 B=381.0 O=1828.8 K=1219.2	10 Std/20 XS 30 40 60 80 100 120 140 160	0.250 0.375 0.500 0.562 0.688 0.969 1.219 1.531 1.812 2.062 2.344	6.35 9.53 12.70 14.27 17.48 24.61 30.96 38.89 46.02 52.37 59.54	68 101 135 151 183 255 317 393 460 515 580	136 202 269 301 366 510 634 786 919 1033 1160	272 404 538 602 732 1020 1268 1572 1838 2060 2320	
26	26.000	660.0	A=990.6 B=406.4	10 Std XS/20	0.312 0.375 0.500	7.92 9.53 12.70	99 199 158	198 238 316		
28	28.000	711.0	A=1066.8 B=438.2	10 Std XS/20 30	0.312 0.375 0.500 0.625	7.92 9.53 12.70 15.88	115 138 184 228	230 276 367 456		
30	30.000	762.0	A=1143.0 B=469.9	10 Std XS/20 30	0.312 0.375 0.500 0.625	7.92 9.53 12.70 15.88	132 159 211 262	264 318 421 524		
32	32.000	813.0	A=1219.2 B=501.7	10 Std XS/20 30 40	0.312 0.375 0.500 0.625 0.688	7.92 9.53 12.70 15.88 17.48	151 181 240 299 328	301 362 480 597 656		
34	34.000	864.0	A=1295.4 B=533.4	10 Std XS/20 30 40	0.312 0.375 0.500 0.625 0.688	7.92 9.53 12.70 15.88 17.48	170 204 271 338 371	340 408 542 675 742		
36	36.000	914.0	A=1371.6 B=565.2	10 Std XS/20 30 40	0.312 0.375 0.500 0.625 0.750	7.92 9.53 12.70 15.88 19.05	191 229 304 379 453	381 458 608 758 906		

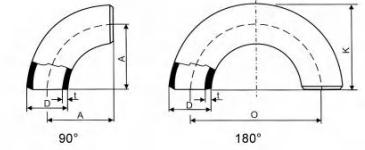
Elbows
Short Radius
ASME/ANSI B16.28



Nominal Pipe Size Inch	Dimensions		
	Outside Diameter at Bevel:D		Center to End:A/B Center to Center:O Back to Face:K
	inch	mm	mm
1	1.315	33.4	A=25.4 O=50.8 K=41.1
1 1/4	1.660	42.2	A=31.8 O=63.5 K=52.3
1 1/2	1.900	48.3	A=38.1 O=76.2 K=62.0
2	2.375	60.3	A=50.8 O=101.6 K=81.0
2 1/2	2.875	73.0	A=63.5 O=127.0 K=100.1
3	3.500	88.9	A=76.2 O=152.4 K=120.7
4	4.500	114.3	A=101.6 O=203.2 K=158.8
5	5.563	141.3	A=127.0 O=254.0 K=196.9

Sch. No.	Wall Thickness:t		Approx.Weight	
	t		90° kg	180° kg
	Inch	mm		
Std/40 XS/80 160 XXS	0.133	3.38	0.10	0.20
	0.179	4.55	0.13	0.26
	0.250	6.35	0.17	0.34
	0.358	9.09	0.22	0.44
Std/40 XS/80 160 XXS	0.140	3.56	0.17	0.34
	0.191	4.85	0.22	0.44
	0.250	6.35	0.28	0.56
	0.382	9.70	0.39	0.78
Std/40 XS/80 160 XXS	0.145	3.68	0.24	0.48
	0.200	5.08	0.32	0.64
	0.281	7.14	0.43	0.86
	0.400	10.15	0.57	1.14
Std/40 XS/80 160 XXS	0.154	3.91	0.43	0.86
	0.218	5.54	0.60	1.20
	0.344	8.74	0.89	1.78
	0.436	11.07	1.07	2.14
Std/40 XS/80 160 XXS	0.203	5.16	0.86	1.72
	0.276	7.01	1.14	2.28
	0.375	9.53	1.49	2.98
	0.552	14.02	2.03	4.06
Xtd/40 XS/80 160 XXS	0.216	5.49	1.35	2.70
	0.300	7.62	1.83	3.66
	0.438	11.13	2.56	5.12
	0.600	15.24	3.31	6.62
Std/40 XS/80 120 160 XXS	0.237	6.02	2.57	5.14
	0.337	8.56	3.56	7.12
	0.438	11.13	4.52	9.04
	0.531	13.49	5.35	10.70
0.674	17.12	6.54	13.08	
Std/40 XS/80 120 160 XXS	0.258	6.55	4.34	8.68
	0.375	9.53	6.18	12.40
	0.500	12.70	8.04	16.10
	0.625	15.88	9.80	19.60
	0.750	19.05	11.45	22.90

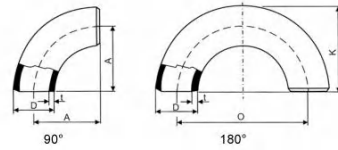
Elbows
Short Radius
ASME/ANSI B16.28



Nominal Pipe Size Inch	Dimensions		
	Outside Diameter at Bevel:D		Center to End:A Center to Center:O Back to Face:K
	inch	mm	mm
6	6.625	168.3	A=152.4 O=304.8 K=236.5
8	8.625	219.1	A=203.2 O=406.4 K=312.7
10	10.750	273.0	A=254.0 O=508.0 K=390.7
12	12.750	323.9	A=304.8 O=609.6 K=466.9

Sch. No.	Wall Thickness:t		Approx.Weight	
	t		90° kg	180° kg
	Inch	mm		
Std/40 XS/80 120 160 XXS	0.280	7.11	6.77	13.5
	0.432	10.97	10.2	20.4
	0.562	14.27	13.0	26.0
	0.719	18.26	16.2	32.4
0.864	21.95	19.0	38.0	
20 30 Std/40 60 XS/80 100 120 140 160 XXS	0.250	6.35	10.6	21.2
	0.277	7.04	11.8	23.6
	0.322	8.18	13.6	27.2
	0.406	10.31	16.9	33.8
	0.500	12.70	20.9	41.8
	0.594	15.09	24.2	48.4
	0.719	18.26	28.8	57.6
	0.812	20.62	32.2	64.4
	0.906	23.01	35.5	71.0
	0.875	22.23	34.4	68.8
20 30 Std/40 XS/60 80 100 120 140/XXS 160	0.250	6.35	16.7	33.4
	0.307	7.80	20.4	40.8
	0.365	9.27	24.1	48.2
	0.500	12.70	32.5	65.0
	0.594	15.09	38.2	76.4
	0.719	18.26	45.7	91.4
	0.844	21.44	53.0	106.0
	1.000	25.40	61.9	124.0
	1.125	28.58	68.7	137.0
	20 30 Std 40 60 XS 80 100 120/XXS 140 160	0.250	6.35	23.8
0.330		8.38	31.2	62.4
0.375		9.53	35.4	70.8
0.406		10.31	38.2	76.4
0.562		14.27	52.2	104.0
0.500		12.70	46.7	93.4
0.688		17.48	63.1	126.0
0.844		21.44	76.5	153.0
1.000		25.40	89.5	179.0
1.125		28.58	99.6	199.0
1.312		33.32	114.0	228.0

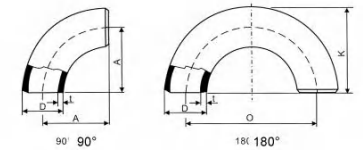
Elbows
Short Radius
ASME/ANSI B16.28



Nominal Pipe Size Inch	Dimensions		
	Outside Diameter at Bevel: D		Center to End: A/B Center to Center: O Back to Face: K
	inch	mm	mm
14	14.000	355.6	A=355.6 O=711.2 K=533.4
16	16.000	406.4	A=406.4 O=812.8 K=609.6
18	18.000	457.0	A=457.2 O=914.4 K=685.8
20	20.000	508.0	A=508.0 O=1016.0 K=762.0

Sch. No.	Wall Thickness: t		Approx. Weight	
	Inch	mm	90° kg	180° kg
10	0.250	6.35	30.6	61.2
20	0.312	7.92	37.9	75.8
Std/30	0.375	9.53	45.4	90.8
40	0.438	11.13	52.8	106
XS	0.500	12.70	60.0	120
60	0.594	15.09	70.6	141
80	0.750	19.05	88.3	177
100	0.938	23.83	109	218
120	1.094	27.79	125	250
140	1.250	31.75	142	284
160	1.406	35.71	157	314
10	0.250	6.35	40.0	80.0
20	0.312	7.92	49.7	99.0
Std/30	0.375	9.53	59.5	119
XS/40	0.500	12.70	78.7	157
60	0.656	16.66	102	204
80	0.844	21.44	130	260
100	1.031	26.19	157	314
120	1.219	30.96	183	366
140	1.438	36.53	213	426
160	1.594	40.49	233	466
10	0.250	6.35	50.7	101
20	0.312	7.92	63.0	126
Std	0.375	9.53	75.6	151
30	0.438	11.13	87.9	176
40	0.562	14.27	112	224
60	0.750	19.05	148	296
XS	0.500	12.70	100	200
80	0.938	23.83	183	366
100	1.156	29.36	222	444
120	1.375	34.93	261	522
140	1.562	39.67	293	586
160	1.781	45.24	330	660
10	0.250	6.35	62.7	123
Std/20	0.375	9.53	93.4	187
XS/30	0.500	12.70	124	248
40	0.594	15.09	146	292
60	0.812	20.62	198	396
80	1.031	26.19	248	496
100	1.281	32.54	304	608
120	1.500	38.10	352	704
140	1.750	44.45	405	810
160	1.969	50.01	451	902

Elbows
Short Radius
ASME/ANSI B16.28



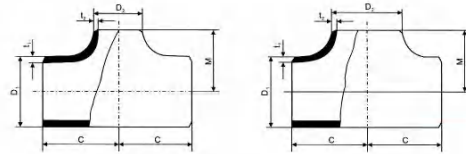
Nominal Pipe Size Inch	Dimensions		
	Outside Diameter at Bevel: D		Center to End: A/B Center to Center: O Back to Face: K
	inch	mm	mm
22	22.000	559	A=558.8 O=1117.6 K=838.2
24	24.000	610	A=609.6 O=1219.2 K=914.4

Sch. No.	Wall Thickness: T		Approx. Weight	
	Inch	mm	90° kg	180° kg
10	0.250	6.35	75.9	152
Std/20	0.375	9.53	113	226
XS/30	0.500	12.70	150	300
60	0.875	22.23	258	516
80	1.125	28.58	328	656
100	1.375	34.93	396	792
120	1.625	41.28	462	924
140	1.875	47.63	527	1054
160	2.125	53.98	590	1180
10	0.250	6.35	90.5	181
Std/20	0.375	9.53	135	270
30	0.562	14.27	201	402
40	0.688	17.48	244	488
60	0.969	24.61	340	680
XS	0.500	12.70	179	358
80	1.219	30.96	423	846
100	1.531	38.89	524	1048
120	1.812	46.02	612	1224
140	2.062	52.37	689	1378
160	2.344	59.54	773	1546

Nominal Pipe Size Inch	Outside Diameter at Bevel: D (mm)	Center to End: A (mm)
38	965	A=1443 A1=965
40	1016	A=1524 A1=1016
42	1067	A=1601 A1=1067
44	1118	A=1677 A1=1118
46	1168	A=1752 A1=1168
48	1219	A=1829 A1=1219
52	1321	A=1982 A1=1321
58	1473	A=2209.8 A1=1473

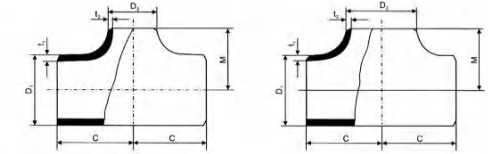
Sch. No.	Wall Thickness: T		Nonstandard Elbows	
	t		LR	SR
	Inch	mm		
Std	0.375	9.53	536	357
XS	0.5	12.7	680.7	453.4
Std	0.375	9.53	594	396
XS	0.5	12.7	754.4	502.9
Std	0.375	9.53	656	437
XS	0.5	12.7	833	554.99
Std	0.375	9.53	720	480
XS	0.5	12.7	914.4	609.6
Std	0.375	9.53	786	524
XS	0.5	12.7	998.2	665.5
Std	0.375	9.53	857	571
XS	0.5	12.7	1088.3	725
Std	0.375	9.53	1520.3	1013.5
XS	0.5	12.7	1286.9	857.9
Std	0.375	9.53	1890.1	1260.1
XS	0.5	12.7	1600.1	1066.7

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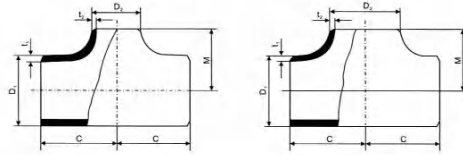
Nominal Pipe Size	Dimensions				Wall Thickness - Approx. Weight														
	Outside Diameter at Bevel: D1/D2		Center to End		Sch.20			Sch.30			Std			Sch.40			Sch.60		
	D1 mm	D2 mm	C mm	M mm	t1 mm	t2 mm	kg	t1 mm	t2 mm	kg	t1 mm	t2 mm	kg	t1 mm	t2 mm	kg	t1 mm	t2 mm	kg
1 1/2 x 1 1/2	48.3	48.3	57.2	57.2	-	-	-	-	-	-	3.68	3.68	0.92	3.68	3.68	0.92	-	-	-
2 x 3/4	60.3	26.7	63.5	44.5	-	-	-	-	-	-	3.91	2.87	1.49	3.91	2.87	1.49	-	-	-
x1		33.4	63.5	50.8	-	-	-	-	-	-	3.38	1.49		3.38	1.49		-	-	-
x1 1/4		42.2	63.5	57.2	-	-	-	-	-	-	3.56	1.49		3.56	1.49		-	-	-
x1 1/2		48.3	63.5	60.5	-	-	-	-	-	-	3.68	1.49		3.68	1.49		-	-	-
x2		60.3	63.5	63.5	-	-	-	-	-	-	3.91	1.49		3.91	1.49		-	-	-
2 1/2 x 1	73.0	33.4	76.2	57.2	-	-	-	-	-	5.16	3.38	2.68	5.16	3.38	2.68		-	-	-
x1 1/4		42.2	76.2	63.5	-	-	-	-	-	-	3.56	2.68		3.56	2.68		-	-	-
x1 1/2		48.3	76.2	66.5	-	-	-	-	-	-	3.68	2.68		3.68	2.68		-	-	-
x2		60.3	76.2	69.9	-	-	-	-	-	-	3.91	2.68		3.91	2.68		-	-	-
x2 1/2		73.0	76.2	76.2	-	-	-	-	-	-	5.16	2.68		5.16	2.68		-	-	-
3 x 1 1/4	88.9	42.2	85.9	69.9	-	-	-	-	-	5.49	3.56	3.75	5.49	3.56	3.75		-	-	-
x1 1/2		48.3	85.9	73.2	-	-	-	-	-	-	3.68	3.75		3.68	3.75		-	-	-
x2		60.3	85.9	76.2	-	-	-	-	-	-	3.91	3.75		3.91	3.75		-	-	-
x2 1/2		73.0	85.9	82.6	-	-	-	-	-	-	5.16	3.75		5.16	3.75		-	-	-
x3		88.9	85.9	85.9	-	-	-	-	-	-	5.49	3.75		5.49	3.75		-	-	-
4 x 1 1/2	114.3	48.3	104.6	85.9	-	-	-	-	-	6.02	3.68	6.50	6.02	3.68	6.50		-	-	-
x2		60.3	104.6	88.9	-	-	-	-	-	-	3.91	6.50		3.91	6.50		-	-	-
x2 1/2		73.0	104.6	95.3	-	-	-	-	-	-	5.16	6.50		5.16	6.50		-	-	-
x3		88.9	104.6	98.6	-	-	-	-	-	-	5.49	6.50		5.49	6.50		-	-	-
x4		114.3	104.6	104.6	-	-	-	-	-	-	6.02	6.50		6.02	6.50		-	-	-
5 x 2	141.3	60.3	124.0	104.6	-	-	-	-	-	6.55	3.91	10.00	6.55	3.91	10.00		-	-	-
x2 1/2		73.0	124.0	108.0	-	-	-	-	-	-	5.16	10.00		5.16	10.00		-	-	-
x3		88.9	124.0	111.3	-	-	-	-	-	-	5.49	10.00		5.49	10.00		-	-	-
x4		114.3	124.0	117.3	-	-	-	-	-	-	6.02	10.00		6.02	10.00		-	-	-
x5		141.3	124.0	124.0	-	-	-	-	-	-	6.55	10.00		6.55	10.00		-	-	-
6 x 2 1/2	168.3	73.0	142.7	120.7	-	-	-	-	-	7.11	5.16	13.50	7.11	5.16	13.50		-	-	-
x3		88.9	142.7	124.0	-	-	-	-	-	-	5.49	13.50		5.49	13.50		-	-	-
x4		114.3	142.7	130.0	-	-	-	-	-	-	6.02	13.50		6.02	13.50		-	-	-
x5		141.3	142.7	136.7	-	-	-	-	-	-	6.55	14.00		6.55	14.00		-	-	-
x6		168.3	142.7	142.7	-	-	-	-	-	-	7.11	14.00		7.11	14.00		-	-	-
8 x 4	219.1	114.3	177.8	155.4	-	-	-	-	-	8.18	6.02	24.50	8.18	6.02	24.50		-	-	-
x5		141.3	177.8	162.1	-	-	-	-	-	-	6.55	24.50		6.55	24.50		-	-	-
x6		168.3	177.8	168.1	-	-	-	-	-	-	7.11	24.50		7.11	24.50		-	-	-
x8		219.1	177.8	177.8	6.35	6.35	23.00	7.04	7.04	24.00	8.18	24.50		8.18	24.50	10.31	10.31	31.80	

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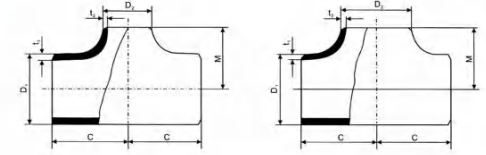
Nominal Pipe Size (NPS)	Wall Thickness - Approx. Weight																					
	XS			Sch.80			Sch.100			Sch.120			Sch.140			Sch.160			XXS			
	t1 mm	t2 mm	kg	t1 mm	t2 mm	kg	t1 mm	t2 mm	kg	t1 mm	t2 mm	kg	t1 mm	t2 mm	kg	t1 mm	t2 mm	kg	t1 mm	t2 mm	kg	
1 1/2 x 1 1/2	5.08	5.08	1.27	5.08	5.08	1.27	-	-	-	-	-	-	-	-	-	-	-	7.14	7.14	1.79	10.15	2.54
2 x 3/4	5.54	3.91	2.15	5.54	3.91	2.15	-	-	-	-	-	-	-	-	-	-	-	8.74	5.56	3.18	11.07	7.82
x1		4.55	2.15		4.55	2.15	-	-	-	-	-	-	-	-	-	-	-		6.35	3.18		9.09
x1 1/4		4.85	2.15		4.85	2.15	-	-	-	-	-	-	-	-	-	-	-		6.35	3.18		9.70
x1 1/2		5.08	2.15		5.08	2.15	-	-	-	-	-	-	-	-	-	-	-		7.14	3.18		10.15
x2		5.54	2.15		5.54	2.15	-	-	-	-	-	-	-	-	-	-	-		8.74	3.18		11.07
2 1/2 x 1	7.01	4.55	2.95	7.01	4.55	2.95	-	-	-	-	-	-	-	-	-	-	-	9.53	6.35	3.58	14.02	9.09
x1 1/4		4.85	2.95		4.85	2.95	-	-	-	-	-	-	-	-	-	-	-		6.35	3.58		9.70
x1 1/2		5.08	2.95		5.08	2.95	-	-	-	-	-	-	-	-	-	-	-		7.14	3.58		10.15
x2		5.54	2.95		5.54	2.95	-	-	-	-	-	-	-	-	-	-	-		8.74	3.58		11.07
x2 1/2		7.01	2.95		7.01	2.95	-	-	-	-	-	-	-	-	-	-	-		9.53	3.58		14.02
3 x 1 1/4	7.62	4.85	4.29	7.62	4.85	4.29	-	-	-	-	-	-	-	-	-	-	-	11.13	6.35	5.65	15.24	9.70
x1 1/2		5.08	4.29		5.08	4.29	-	-	-	-	-	-	-	-	-	-	-		7.14	5.75		10.15
x2		5.54	4.29		5.54	4.29	-	-	-	-	-	-	-	-	-	-	-		8.74	5.85		11.07
x2 1/2		7.01	4.29		7.01	4.29	-	-	-	-	-	-	-	-	-	-	-		9.53	6.15		14.02
x3		7.62	4.29		7.62	4.29	-	-	-	-	-	-	-	-	-	-	-		11.13	6.58		15.24
4 x 1 1/2	8.56	5.08	7.65	8.56	5.08	7.65	-	-	-	-	-	-	-	-	-	-	-	13.49	7.14	10.80	17.12	10.15
x2		5.54	7.65		5.54	7.65	-	-	-	-	-	-	-	-	-	-	-		8.74	10.80		11.07
x2 1/2		7.01	7.65		7.01	7.65	-	-	-	-	-	-	-	-	-	-	-		9.53	10.80		14.02
x3		7.62	7.65		7.62	7.65	-	-	-	-	-	-	-	-	-	-	-		11.13	11.10		15.24
x4		8.56	7.65		8.56	7.65	-	-	-	11.13	11.13	9.0	-	-	-	-	-		13.49	11.80		17.12
5 x 2	9.53	5.54	13.50	9.53	5.54	13.50	-	-	-	-	-	-	-	-	-	-	-	15.88	8.74	23.00	19.05	11.07
x2 1/2		7.01	13.50		7.01	13.50	-	-	-	-	-	-	-	-	-	-	-		9.53	23.00		14.02
x3		7.62	13.50		7.62	13.50	-	-	-	-	-	-	-	-	-	-	-		11.13	23.00		15.24
x4		8.56	13.50		8.56	13.50	-	-	-	12.70	11.13	17.50	-	-	-	-	-		13.49	23.00		17.12
x5		9.53	13.50		9.53	13.50	-	-	-	12.70	17.50	-	-	-	-	-	-		15.88	23.00		19.05
6 x 2 1/2	10.97	7.01	19.30	10.97	7.01	19.30	-	-	-	-	-	-	-	-	-	-	-	18.26	9.53	30.90	21.95	14.02
x3		7.62	19.30		7.62	19.30	-	-	-	-	-	-	-	-	-	-	-		11.13	30.90		15.24
x4		8.56	19.30		8.56	19.30	-	-	-	14.27	11.13	24.00	-	-	-	-	-		13.49	32.70		17.12
x5		9.53	19.30		9.53	19.30	-	-	-	12.70	24.00	-	-	-	-	-	-		15.88	32.70		19.05
x6		10.97	19.30		10.97	19.30	-	-	-	14.27	24.00	-	-	-	-	-	-		18.26	39.50		21.95
8 x 4	12																					

Straight and Reducing Outlet Tees
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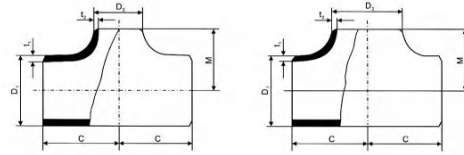
Nominal Pipe Size (NPS)	Dimensions				Wall Thickness - Approx Weight															Nominal Pipe Size (NPS)
	Outside Diameter at Bevel: D1/D2		Center to End		Sch.20			Sch.30			Std			Sch.40			Sch.60			
	D1 mm	D2 mm	C mm	M mm	t1 mm	t2 mm	kg	t1 mm	t2 mm	kg	t1 mm	t2 mm	kg	t1 mm	t2 mm	kg	t1 mm	t2 mm	kg	
10X4	237.0	114.3	215.9	184.2	-	-	-	-	-	-	9.27	6.02	39.60	9.27	6.02	39.60	-	-	-	
X5		141.3	215.9	190.5	-	-	-	-	-	-	6.55	39.60	6.55	39.60	-	-	-	-	-	
X6		168.3	215.9	193.5	-	-	-	-	-	-	7.11	39.60	7.11	39.60	-	-	-	-	-	
X8		219.1	215.9	203.2	6.35	6.35	33.20	7.80	7.04	38.60	8.18	39.60	8.18	39.60	12.70	10.31	53.80	-	-	
X10		273.0	215.9	215.9	6.35	34.70	-	7.80	38.60	9.27	41.30	9.27	41.00	-	12.70	58.40	-	-	-	
12X5	323.9	141.3	254.0	215.9	-	-	-	-	-	-	9.53	6.55	63.00	10.31	6.55	67.20	-	-	-	
X6		168.3	254.0	218.9	-	-	-	-	-	-	7.11	63.00	7.11	67.20	-	-	-	-	-	
X8		219.1	254.0	228.6	6.35	6.35	41.20	8.38	7.04	54.80	8.18	63.00	8.18	67.20	14.27	10.31	77.50	-	-	
X10		273.0	254.0	241.3	6.35	43.40	-	7.80	56.60	9.27	63.00	9.27	70.00	-	12.70	95.00	-	-	-	
X12		323.9	254.0	254.0	6.35	43.40	-	8.38	56.60	9.53	65.00	10.31	70.50	-	14.27	95.00	-	-	-	
14X6	355.6	168.3	279.4	238.3	-	-	-	-	-	-	9.53	7.11	82.80	11.13	7.11	100.00	-	-	-	
X8		219.1	279.4	247.7	7.92	6.35	78.30	9.53	7.04	82.60	8.18	82.80	8.18	100.00	15.09	10.31	127.10	-	-	
X10		273.0	279.4	257.0	6.35	78.30	-	7.80	82.60	9.27	82.80	9.27	100.00	-	12.70	127.10	-	-	-	
X12		323.9	279.4	269.7	6.35	80.60	-	8.38	85.00	9.53	85.00	10.31	105.00	-	14.27	135.00	-	-	-	
X14		355.6	279.4	279.4	7.92	80.60	-	9.53	85.00	9.53	85.00	11.31	105.00	-	15.09	135.00	-	-	-	
16X6	406.4	168.3	304.8	263.7	-	-	-	-	-	-	9.53	7.11	106.50	12.70	7.11	125.50	-	-	-	
X8		219.1	304.8	273.1	7.92	6.35	98.00	9.53	7.04	106.50	8.18	106.50	8.18	125.50	16.66	10.31	160.30	-	-	
X10		273.0	304.8	282.4	6.35	98.00	-	7.80	106.50	9.27	106.50	9.27	125.50	-	12.70	162.80	-	-	-	
X12		323.9	304.8	295.1	6.35	100.00	-	8.38	106.50	9.53	106.50	10.31	129.80	-	14.27	172.90	-	-	-	
X14		355.6	304.8	304.8	7.92	100.00	-	9.53	110.00	9.53	110.00	11.13	129.80	-	15.09	172.90	-	-	-	
X16		406.4	304.8	304.8	7.92	100.00	-	9.53	110.00	9.53	110.00	12.70	129.80	-	16.66	180.50	-	-	-	

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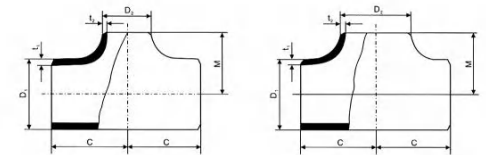
Wall Thickness - Approx Weight																				Nominal Pipe Size (NPS)	
XS			Sch.80			Sch.100			Sch.120			Sch.140			Sch.160			XXS			
t1 mm	t2 mm	kg	t1 mm	t2 mm	kg	t1 mm	t2 mm	kg	t1 mm	t2 mm	kg	t1 mm	t2 mm	kg	t1 mm	t2 mm	kg	t1 mm	t2 mm		kg
12.70	8.56	53.50	15.09	8.56	59.70	-	-	-	21.44	11.13	71.30	-	-	-	28.58	13.49	85.00	25.40	17.12	79.30	10X4
	9.53	53.50		9.53	59.70	-	-	-		12.70	71.30	-	-	-		15.88	91.30		19.05	79.30	X5
	10.97	54.50		10.97	59.70	-	-	-		14.27	81.70	-	-	-		18.26	102.20		21.95	90.90	X6
	12.70	58.40		12.70	65.80	18.26	15.09	73.50		18.26	88.50	25.40	20.62	95.00		23.01	113.00		22.23	90.90	X8
	12.70	58.40		15.09	67.50		18.26	74.00		21.44	93.00		25.40	98.50		28.58	129.3		25.40	98.50	X10
12.70	9.53	74.80	17.48	9.53	85.40	-	-	-	25.40	12.70	102.60	-	-	-	33.32	15.88	140.30	25.40	19.05	119.50	12X5
	10.97	74.80		10.97	85.40	-	-	-		14.27	102.60	-	-	-		18.26	140.30		21.95	119.50	X6
	12.70	74.80		12.70	85.40	21.44	15.09	122.50		18.26	131.20	28.58	20.62	140.00		23.01	152.30		22.23	129.10	X8
	12.70	78.00		15.09	106.20		18.26	124.90		21.44	140.90		25.40	158.00		28.58	163.50		25.40	150.00	X10
	12.70	78.00		17.48	115.00		21.44	136.20		25.40	150.00		28.58	176.50		33.32	183.80		25.40	150.00	X12
12.70	10.97	103.80	19.05	10.97	141.90	-	-	-	27.79	14.27	205.00	-	-	-	35.71	18.26	250.00	-	-	-	14X6
	12.70	103.80		12.70	141.90	23.83	15.09	195.00		18.26	220.00	31.75	20.62	230.00		23.01	250.00	-	-	-	X8
	12.70	103.80		15.09	160.00		18.26	195.00		21.44	220.00		25.40	245.00		28.58	265.00	-	-	-	X10
	12.70	108.90		17.48	162.30		21.44	206.00		25.40	235.00		28.58	255.00		33.32	270.00	-	-	-	X12
	12.70	108.90		19.05	162.30		23.83	206.00		27.79	235.00		31.75	255.00		35.71	270.00	-	-	-	X14
12.70	10.97	130.50	21.44	10.97	163.90	-	-	-	30.96	14.27	265.40	-	-	-	40.49	18.26	320.80	-	-	-	16X6
	12.70	130.50		12.70	163.90	26.19	15.09	229.80		18.26	265.40	36.53	20.62	295.00		23.01	322.00	-	-	-	X8
	12.70	130.50		15.09	163.90		18.26	229.00		21.44	280.00		25.40	300.00		28.58	330.50	-	-	-	X10
	12.70	134.00		17.48	181.60		21.44	258.20		25.40	280.00		28.58	310.00		33.32	340.00	-	-	-	X12
	12.70	135.50		19.05	195.00		23.83	266.50		27.79	295.00		31.75	340.00		35.71	360.00	-	-	-	X14
	12.70	138.50		21.44	195.00		26.19	270.80		30.96	295.00		36.53	360.00		40.49	389.00	-	-	-	X16

Straight and Reducing Outlet Tees ASME/ANSI B16.9



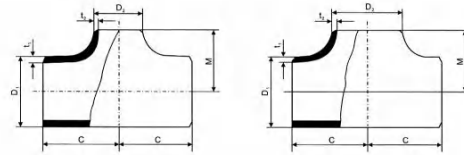
Nominal Size Inch	Dimensions		Sch. No.	Approx Weight (kg)	Sch. No.	Approx Weight (kg)
	Outside Diameter at Bevel D1 D2(mm)	Center to End C M(mm)				
18x18	457x457	343X343	Std	105.4	XS	130.8
X16	X406	X330	Std	102.1	XS	126.8
X14	X356	X330	Std	100.6	XS	124.9
X12	X321	X321	Std	98.7	XS	122.6
X10	X270	X308	Std	96.4	XS	119.6
X8	X217	X295	Std	94.3	XS	117.1
20X20	508X508	381X381	Std	130.4	XS	159.7
X18	X457	X368	Std	126.8	XS	157.5
X16	X406	X356	Std	123.7	XS	153.6
X14	X356	X356	Std	122.2	XS	151.8
X12	X324	X346	Std	120.3	XS	149.4
X10	X273	X333	Std	119.3	XS	148.2
X8	X219	X324	Std	118.3	XS	146.9
22x22	559X559	419X419	Std	158.2	XS	196.6
X20	X508	X406	Std	154.1	XS	191.6
X18	X457	X394	Std	150.7	XS	187.3
X16	X406	X381	Std	147.4	XS	183.2
X14	X356	X381	Std	145.9	XS	181.3
X12	X324	X371	Std	144.0	XS	179.0
X10	X237	X359	Std	141.7	XS	178.7
24x24	610X610	432X432	Std	175.3	XS	218.0
X22	X559	X432	Std	173.4	XS	215.6
X20	X508	X419	Std	168.8	XS	210.8
X18	X457	X406	Std	166.1	XS	206.6

Straight and Reducing Outlet Tees ASME/ANSI B16.9



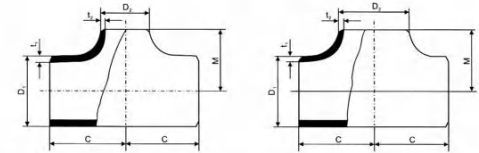
Nominal Size Inch	Dimensions		Sch. No.	Approx Weight (kg)	Sch. No.	Approx Weight (kg)
	Outside Diameter at Bevel D1 D2(mm)	Center to End C M(mm)				
24X16	610X406	432X406	Std	164.6	XS	204.7
X14	X356	X406	Std	163.1	XS	202.8
X12	X324	X397	Std	161.3	XS	200.6
X10	X273	X384	Std	158.9	XS	187.6
26X26	660X660	495X495	Std	221.8	XS	275.9
X24	X610	X483	Std	217.2	XS	270.2
X22	X559	X470	Std	212.8	XS	264.7
X20	X508	X457	Std	208.8	XS	257.3
X18	X457	X444	Std	205.1	XS	255.2
X16	X406	X432	Std	202.0	XS	251.3
X14	X356	X432	Std	200.5	XS	249.4
X12	X324	X422	Std	198.6	XS	247.1
28X28	711X711	521X521	Std	249.7	XS	310.7
X26	X660	X521	Std	247.2	XS	307.6
X24	X610	X508	Std	242.4	XS	301.7
X22	X559	X495	Std	238.0	XS	296.2
X20	X508	X483	Std	234.1	XS	291.4
X18	X451	X470	Std	230.5	XS	286.9
X16	X406	X457	Std	227.3	XS	282.8
X14	X356	X457	Std	225.8	XS	280.9
X12	X324	X448	Std	224.0	XS	278.7
30X30	762X762	559X559	Std	287.5	XS	357.9
X28	X711	X546	Std	282.1	XS	351.2
X26	X660	X546	Std	279.6	XS	348.1

Straight and Reducing Outlet Tees
ASME/ANSI B16.9



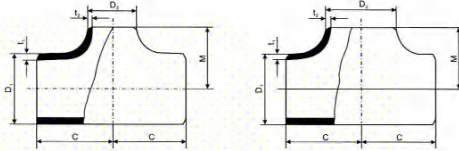
Nominal Size Inch	Dimensions		Sch No.	Approx Weight (kg)	Sch No.	Approx Weight (kg)
	Outside Diameter at Bevel D1 D2(mm)	Center to End C M(mm)				
30X24	762X610	559X533	Std	274.9	XS	342.2
X22	X559	X521	Std	270.7	XS	336.9
X20	X508	X508	Std	266.7	XS	331.9
X18	X457	X495	Std	263.0	XS	327.4
X16	X406	X483	Std	259.9	XS	323.5
X14	X356	X483	Std	258.4	XS	321.6
X12	X324	X473	Std	256.5	XS	319.3
X10	X273	X460	Std	249.0	XS	316.3
32X32	813X813	597X597	Std	328.0	XS	408.5
X30	X762	X584	Std	322.3	XS	401.3
X28	X711	X572	Std	317.1	XS	394.9
X26	X660	X572	Std	314.6	XS	391.8
X24	X610	X559	Std	309.9	XS	385.8
X22	X559	X546	Std	305.5	XS	380.3
X20	X508	X533	Std	301.4	XS	375.3
X18	X457	X521	Std	297.9	XS	371.0
X16	X406	X508	Std	294.7	XS	367.0
X14	X356	X508	Std	293.2	XS	365.1
34X34	864X864	635X635	Std	371.2	XS	462.4
X32	X813	X622	Std	365.1	XS	454.7
X30	X762	X610	Std	359.5	XS	447.8
X28	X711	X597	Std	354.2	XS	441.1
X26	X660	X597	Std	351.7	XS	438.0
X24	X610	X584	Std	348.9	XS	432.1

Straight and Reducing Outlet Tees
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Nominal Size Inch	Outside Diameter at Bevel D1 D2(mm)	Center to End C M(mm)	Sch No.	Approx Weight (kg)	Sch No.	Approx Weight (kg)	Nominal Size Inch	Outside Diameter at Bevel D1 D2(mm)	Center to End C M(mm)	Sch No.	Approx Weight (kg)	Sch No.	Approx Weight (kg)
X20	X508	X559	Std	338.7	XS	421.8	X18	X457	X597	Std	415.9	XS	419.6
X18	X457	X546	Std	335.1	XS	417.3	40X40	1016X1016	749X749	Std	516.4	XS	643.6
X16	X406	X533	Std	331.8	XS	413.3	X38	X965	X749	Std	512.8	XS	639.1
36X36	914X914	673X673	Std	416.7	XS	519.2	X36	X914	X737	Std	502.6	XS	620.5
X34	X864	X660	Std	410.3	XS	511.1	X34	X864	X724	Std	499.3	XS	612.2
X32	X813	X648	Std	404.4	XS	503.8	X32	X813	X711	Std	489.9	XS	604.3
X30	X762	X635	Std	398.6	XS	496.6	X30	X762	X698	Std	487.0	XS	596.9
X28	X711	X622	Std	393.2	XS	519.9	X28	X711	X673	Std	479.0	XS	586.9
X26	X660	X622	Std	390.7	XS	516.7	X26	X660	X673	Std	476.5	XS	583.8
X24	X610	X610	Std	386.2	XS	511.1	X24	X610	X660	Std	471.7	XS	577.9
X22	X559	X597	Std	381.8	XS	502.9	X22	X559	X648	Std	467.5	XS	572.6
X20	X508	X584	Std	377.7	XS	500.5	X20	X508	X635	Std	463.5	XS	567.6
X18	X457	X572	Std	374.2	XS	496.2	X18	X457	X622	Std	459.9	XS	563.1
X16	X406	X559	Std	371.0	XS	492.1	42X42	1067X1067	762X762	Std	546.9	XS	681.7
38X38	965X965	711X711	Std	465.3	XS	579.7	X40	X1016	X711	Std	528.3	XS	658.5
X36	X914	X711	Std	461.8	XS	575.4	X38	X968	X711	Std	525.8	XS	655.3
X34	X864	X698	Std	455.1	XS	568.3	X36	X914	X711	Std	522.9	XS	651.8
X32	X813	X666	Std	449.1	XS	559.5	X34	X864	X711	Std	520.3	XS	648.1
X30	X762	X673	Std	443.1	XS	552.1	X32	X813	X711	Std	517.6	XS	645.2
X28	X711	X648	Std	435.1	XS	542.1	X30	X762	X711	Std	514.9	XS	641.8
X26	X660	X648	Std	432.6	XS	538.9	X28	X711	X698	Std	509.6	XS	635.1
X24	X610	X635	Std	427.8	XS	533.0	X26	X660	X698	Std	507.1	XS	632.0
X22	X559	X622	Std	423.4	XS	527.5	X24	X610	X660	Std	497.9	XS	620.6

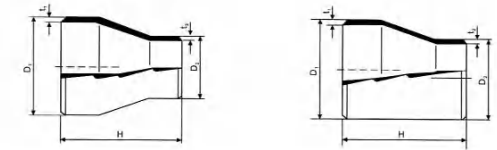
Straight and Reducing Outlet Tees ASME/ANSI B16.9



Nominal Size	Outside Diameter at Bevel	Center to End	Sch.No.	Approx Weight	Sch.No.	Approx Weight
Inch	D1 D2(mm)	C M(mm)		(kg)		(kg)
42X22	1067X559	762X660	Std	496.0	XS	618.2
X20	X508	X660	Std	494.1	XS	615.8
X18	X457	X648	Std	490.6	XS	611.5
X16	X406	X635	Std	487.4	XS	607.5
44X44	1118X1118	813X762	Std	598.3	XS	745.9
X42	X1067	X762	Std	595.3	XS	742.1
X40	X1016	X749	Std	588.4	XS	733.4
X38	X965	X737	Std	582.1	XS	725.6
X36	X914	X724	Std	576.0	XS	720.0
X34	X864	X724	Std	573.5	XS	714.9
X32	X813	X711	Std	567.9	XS	708.0
X30	X762	X711	Std	565.6	XS	705.1
X28	X711	X698	Std	560.7	XS	698.9
X26	X660	X698	Std	558.6	XS	696.3
X24	X610	X698	Std	556.5	XS	693.7
X22	X559	X686	Std	552.5	XS	688.7
X20	X508	X686	Std	550.6	XS	686.3
46X46	1168X1168	851X800	Std	655.8	XS	817.7
X44	X1118	X800	Std	652.6	XS	813.7
X42	X1067	X787	Std	645.3	XS	804.5
X40	X1016	X775	Std	638.7	XS	796.3
X38	X965	X762	Std	632.1	XS	788.1
X36	X914	X762	Std	629.5	XS	784.7
X34	X864	X749	Std	623.6	XS	777.4

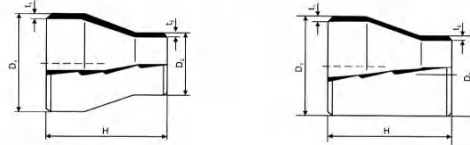
Nominal Size	Outside Diameter at Bevel	Center to End	Sch.No.	Approx Weight	Sch.No.	Approx Weight
Inch	D1 D2(mm)	C M(mm)		(kg)		(kg)
46X32	1168X813	851X749	Std	638.4	XS	774.3
X30	X762	X737	Std	615.9	XS	767.8
X28	X711	X737	Std	613.6	XS	764.9
X26	X660	X737	Std	611.3	XS	762.1
X24	X610	X724	Std	606.7	XS	756.4
X22	X559	X724	Std	604.6	XS	753.7
48X48	1219X1219	889X838	Std	716.3	XS	893.2
X46	X1168	X838	Std	712.9	XS	888.9
X44	X1118	X838	Std	709.5	XS	884.7
X42	X1067	X813	Std	698.3	XS	870.6
X40	X1067	X813	Std	698.3	XS	870.6
X38	X965	X813	Std	692.1	XS	863.0
X36	X914	X787	Std	682.1	XS	850.5
X34	X864	X787	Std	679.5	XS	847.2
X32	X813	X787	Std	676.8	XS	843.9
X30	X762	X762	Std	668.8	XS	833.9
X28	X711	X762	Std	666.5	XS	831.0
X26	X660	X762	Std	664.2	XS	828.1
X24	X610	X737	Std	657.5	XS	819.8
X22	X610	X737	Std	655.6	XS	817.3

Concentric & Eccentric Reducers ASME/ANSI B16.9



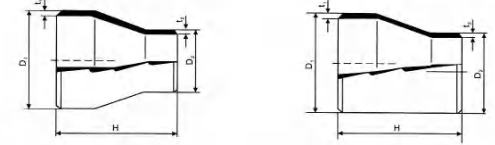
Nominal Pipe Size (NPS)	Dimensions			Wall Thickness-Approx.Weight														
	Outside Diameter at Bevel: D1 / D2		End to End	Sch.20			Sch.30			Std			Sch.40			Sch.60		
	D1 mm	D2 mm	H mm	t1 mm	t2 mm	kg	t1 mm	t2 mm	kg	t1 mm	t2 mm	kg	t1 mm	t2 mm	kg	t1 mm	t2 mm	kg
inch	D1 mm	D2 mm	H mm	t1 mm	t2 mm	kg	t1 mm	t2 mm	kg	t1 mm	t2 mm	kg	t1 mm	t2 mm	kg	t1 mm	t2 mm	kg
1X3/4	33.4	26.7	50.8	-	-	-	-	-	-	3.38	2.87	0.14	3.38	2.87	0.14	-	-	-
1 1/2X3/4	48.3	26.7	63.5	-	-	-	-	-	-	3.68	2.87	0.22	3.68	2.87	0.22	-	-	-
X1		33.4	63.5	-	-	-	-	-	-	3.38	0.24		3.38	0.24		-	-	-
X1 1/4		42.2	63.5	-	-	-	-	-	-	3.56	0.26		3.56	0.26		-	-	-
2X1	60.3	33.4	76.2	-	-	-	-	-	-	3.91	3.38	0.37	3.91	3.38	0.37	-	-	-
X1 1/4		42.2	76.2	-	-	-	-	-	-	3.56	0.39		3.56	0.39		-	-	-
X1 1/2		48.3	76.2	-	-	-	-	-	-	3.68	0.41		3.68	0.41		-	-	-
2 1/2X1 1/4	73.0	42.2	88.9	-	-	-	-	-	-	5.16	3.56	0.67	5.16	3.56	0.67	-	-	-
X1 1/2		48.3	88.9	-	-	-	-	-	-	3.68	0.68		3.68	0.68		-	-	-
X2		60.3	88.9	-	-	-	-	-	-	3.91	0.73		3.91	0.73		-	-	-
3X1 1/2	88.9	48.3	88.9	-	-	-	-	-	-	5.49	3.68	0.86	5.49	3.68	0.86	-	-	-
X2		60.3	88.9	-	-	-	-	-	-	3.91	0.91		3.91	0.91		-	-	-
X2 1/2		73.0	88.9	-	-	-	-	-	-	5.16	0.98		5.16	0.98		-	-	-
4X2	114.3	60.3	101.6	-	-	-	-	-	-	6.02	3.91	1.44	6.02	3.91	1.44	-	-	-
X2 1/2		73.0	101.6	-	-	-	-	-	-	5.16	1.52		5.16	1.52		-	-	-
X3		88.9	101.6	-	-	-	-	-	-	5.49	1.59		5.49	1.59		-	-	-
5X2 1/2	141.3	73.0	127.0	-	-	-	-	-	-	6.55	5.16	2.51	6.55	5.16	2.51	-	-	-
X3		88.9	127.0	-	-	-	-	-	-	5.49	2.60		5.49	2.60		-	-	-
X4		114.3	127.0	-	-	-	-	-	-	6.02	2.72		6.02	2.72		-	-	-
6X3	168.3	88.9	139.7	-	-	-	-	-	-	7.11	5.49	3.63	7.11	5.49	3.63	-	-	-
X4		114.3	139.7	-	-	-	-	-	-	6.02	3.72		6.02	3.72		-	-	-
X5		141.3	139.7	-	-	-	-	-	-	6.55	3.93		6.55	3.93		-	-	-
8X4	219.1	114.3	152.4	-	-	-	-	-	-	8.18	6.02	5.95	8.18	6.02	5.95	-	-	-
X5		141.3	152.4	-	-	-	-	-	-	6.55	6.08		6.55	6.08		-	-	-
X6		168.3	152.4	-	-	-	-	-	-	7.11	6.31		7.11	6.31		-	-	-
10X5	273.0	141.3	177.8	-	-	-	-	-	-	9.27	6.55	9.90	9.27	6.55	9.90	-	-	-
X6		168.3	177.8	-	-	-	-	-	-	7.11	10.10		7.11	10.10		-	-	-
X8		219.1	177.8	6.35	6.35	7.89	7.80	7.04	9.62	8.18	10.50		8.18	10.50		12.70	10.31	-
12X6	323.9	168.3	203.2	-	-	-	-	-	-	9.53	7.11	14.10	10.31	7.11	16.50	-	-	-
X8		219.1	203.2	6.35	6.35	10.70	8.38	7.04	14.00	8.18	14.60		8.18	17.20	14.27	10.31	23.50	-
X10		273.0	203.2	6.35	6.35	11.10	7.80	7.04	14.60	9.27	15.20		9.27	17.80		12.70	24.30	-
14X8	355.6	219.1	330.2	7.92	6.35	23.10	9.53	7.04	27.60	9.53	8.18	26.00	11.13	8.18	32.10	15.90	10.31	43.10
X10		273.0	330.2	6.35	6.35	24.20	7.80	7.04	29.00	9.27	27.40		9.27	33.70		12.70	45.10	-
X12		323.9	330.2	6.35	6.35	25.60	8.38	7.04	30.60	9.53	28.80		10.31	35.60		14.27	47.70	-
16X8	406.4	219.1	355.6	7.92	6.35	27.70	9.53	7.04	33.20	9.53	8.18	31.90	12.70	8.18	43.90	16.66	10.31	56.80
X10		273.0	355.6	6.35	6.35	28.80	7.80	7.04	34.50	9.27	33.10		9.27	45.70		12.70	59.00	-
X12		323.9	355.6	6.35	6.35	29.90	8.38	7.04	35.80	9.53	34.30		10.31	47.40		14.27	61.40	-
X14		355.6	355.6	7.92	6.35	30.50	9.53	7.04	36.50	9.53	35.20		11.13	48.30		15.90	62.50	-

Concentric & Eccentric Reducers
ASME/ANSI B16.9



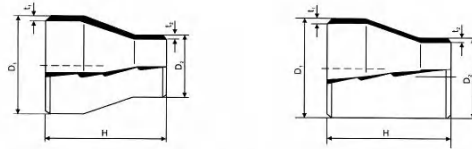
Wall Thickness-Approx.Weight																				Nominal Pipe Size (NPS)
XS			Sch.80			Sch.100			Sch.120			Sch.140			Sch.160			XXS		
t1 mm	t2 mm	kg	t1 mm	t2 mm	kg	t1 mm	t2 mm	kg	t1 mm	t2 mm	kg	t1 mm	t2 mm	kg	t1 mm	t2 mm	kg	t1 mm	t2 mm	kg
4.55	3.91	0.17	4.55	3.91	0.17	-	-	-	-	-	-	-	-	6.35	5.56	0.22	-	-	-	1X3/4
5.08	3.91	0.27	5.08	3.91	0.27	-	-	-	-	-	-	-	-	7.14	5.56	0.51	10.15	7.82	0.67	1 1/2X3/4
4.55	0.31		4.55	0.31		-	-	-	-	-	-	-	-	6.35	0.55		9.09	0.73		X1
4.85	0.33		4.85	0.33		-	-	-	-	-	-	-	-	6.35	0.60		9.70	0.79		X1 1/4
5.54	4.55	0.45	5.54	4.55	0.45	-	-	-	-	-	-	-	-	8.74	6.35	0.94	11.07	9.09	1.14	2X1
4.85	0.53		4.85	0.53		-	-	-	-	-	-	-	-	6.35	0.99		9.70	1.20		X1 1/4
5.08	0.54		5.08	0.54		-	-	-	-	-	-	-	-	7.14	1.04		10.15	1.26		X1 1/2
7.01	4.85	0.79	7.01	4.85	0.79	-	-	-	-	-	-	-	-	9.53	6.35	1.52	14.02	9.70	2.07	2 1/2X1 1/4
5.08	0.86		5.08	0.86		-	-	-	-	-	-	-	-	7.14	1.53		10.15	2.10		X1 1/2
5.54	0.94		5.54	0.94		-	-	-	-	-	-	-	-	8.74	1.65		11.07	2.25		X2
7.62	5.08	1.04	7.62	5.08	1.04	-	-	-	-	-	-	-	-	11.13	7.14	2.12	15.24	10.15	2.76	3X1 1/2
5.54	1.18		5.54	1.18		-	-	-	-	-	-	-	-	8.74	2.23		11.07	2.90		X2
7.01	1.29		7.01	1.29		-	-	-	-	-	-	-	-	9.53	2.40		14.02	3.12		X2 1/2
8.56	5.54	1.78	8.56	5.54	1.78	-	-	-	-	-	-	-	-	13.49	8.74	3.97	17.12	11.07	4.85	4X2
7.01	2.01		7.01	2.01		-	-	-	-	-	-	-	-	9.53	4.21		14.02	5.14		X2 1/2
7.62	2.13		7.62	2.13		-	-	-	-	-	-	-	-	11.13	4.38		15.24	5.35		X3
9.53	7.01	3.30	9.53	7.01	3.30	-	-	-	-	-	-	-	-	15.88	9.53	6.68	19.05	14.02	8.02	5X2 1/2
7.62	3.55		7.62	3.55		-	-	-	-	-	-	-	-	11.13	7.10		15.24	8.31		X3
8.56	3.78		8.56	3.78		-	-	-	12.70	11.13	6.09	-	-	13.49	7.14		17.12	8.68		X4
10.97	7.62	5.04	10.97	7.62	5.04	-	-	-	-	-	-	-	-	18.26	11.13	9.93	21.95	15.24	11.60	6X3
8.56	5.45		8.56	5.45		-	-	-	14.27	11.13	8.20	-	-	13.49	10.22		17.12	12.00		X4
9.53	5.72		9.53	5.72		-	-	-	12.70	8.65	-	-	-	15.88	10.78		19.05	12.60		X5
12.70	8.56	8.44	12.70	8.56	8.44	-	-	-	18.26	11.13	14.00	-	-	23.01	13.49	17.30	22.23	17.12	16.70	8X4
9.53	8.85		9.53	8.85		-	-	-	12.70	14.40	-	-	-	15.88	17.80		19.05	17.20		X5
10.97	9.26		10.97	9.26		-	-	-	14.27	15.00	-	-	-	18.26	18.40		21.95	17.90		X6
12.70	9.53	13.00	15.09	9.53	17.60	-	-	-	21.44	12.70	24.40	-	-	28.58	15.88	31.60	25.40	19.05	28.40	10X5
10.97	13.50		10.97	17.90		-	-	-	14.27	24.90	-	-	-	18.26	32.20		21.95	29.00		X6
12.70	14.20		12.70	18.10	18.26	15.09	21.70	-	18.26	25.10	25.40	20.62	29.30	23.01	32.50		22.23	29.30		X8
12.70	10.97	18.40	17.48	10.97	27.30	-	-	-	25.40	14.27	38.70	-	-	33.32	18.26	49.40	25.40	21.95	38.70	12X6
12.70	19.10		12.70	28.40	21.44	15.09	34.40	-	18.26	40.20	28.58	20.62	44.80	23.01	51.40		22.23	40.20		X8
12.70	19.80		15.09	29.50	18.26	35.70	-	-	21.44	41.70	-	-	-	25.40	46.30		28.58	53.30		X10
12.70	12.70	34.90	19.05	12.70	53.70	23.83	15.09	66.30	27.79	18.26	76.30	31.75	20.62	86.70	35.71	23.01	95.70	-	-	14X8
12.70	36.10		15.09	56.30		18.26	69.50	-	21.44	80.10	-	-	-	25.40	90.40		28.58	100.40		X10
12.70	37.70		17.48	59.50		21.44	73.30	-	25.40	84.50	-	-	-	28.58	95.40		33.32	106.00		X12
12.70	42.60	21.44	12.70	72.40	26.19	15.09	87.20	30.96	18.26	101.80	36.53	20.62	118.60	40.49	23.01	130.10	-	-	-	16X8
12.70	43.70		15.09	75.30		18.26	90.60	-	21.44	105.80	-	-	-	25.40	123.30		28.58	135.30		X10
12.70	45.00		17.48	78.20		21.44	94.10	-	25.40	109.90	-	-	-	28.58	128.10		33.32	140.50		X12
12.70	46.30		19.05	79.70		23.83	95.90	-	27.79	111.90	-	-	-	31.75	130.50		35.71	143.10		X14

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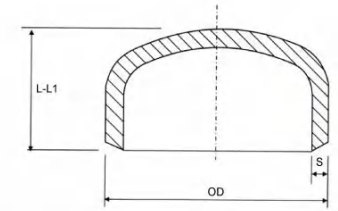
Nominal Size	Outside Diameter of Bevel	End to End	Sch.No.	Approx Weight	Sch.No.	Approx Weight
inch	D1 D2(mm)	H(mm)		(kg)		(kg)
18X16	457X406	381	Std	40.5	XS	51.5
X14	X356	381	Std	38.12	XS	48.5
X12	X324	381	Std	36.7	XS	46.6
X10	X273	381	Std	34.3	XS	43.5
20X18	508X457	508	Std	60.4	XS	76.7
X16	X406	508	Std	57.2	XS	72.67
X14	X356	508	Std	54.1	XS	68.7
X12	X324	508	Std	52.0	XS	66.2
22X20	559X508	508	Std	66.8	XS	84.8
X18	X457	508	Std	63.6	XS	80.8
X16	X406	508	Std	60.4	XS	76.7
X14	X356	508	Std	57.3	XS	72.8
24X22	610X559	508	Std	73.2	XS	93.0
X20	X508	508	Std	70.0	XS	88.9
X18	X457	508	Std	66.8	XS	84.8
X16	X406	508	Std	63.6	XS	80.8
26X24	660X610	610	Std	95.4	XS	121.2
X22	X559	610	Std	91.6	XS	116.4
X20	X508	610	Std	87.8	XS	111.5
X18	X457	610	Std	84.0	XS	106.6
28X26	711X660	610	Std	103.1	XS	130.9
X24	X610	610	Std	99.3	XS	126.1
X20	X508	610	Std	91.6	XS	116.4
X18	X457	610	Std	87.8	XS	111.5
30X28	762X711	610	Std	108.0	XS	137.2
X26	X660	610	Std	106.9	XS	135.8
X24	X610	610	Std	103.1	XS	131.0
X20	X508	610	Std	95.5	XS	121.3
32X30	813X762	610	Std	118.4	XS	150.4
X28	X711	610	Std	114.6	XS	145.5
X26	X660	610	Std	110.7	XS	140.6
X24	X610	610	Std	101.0	XS	135.9
34X32	864X813	610	Std	126.1	XS	160.1
X30	X762	610	Std	122.3	XS	155.2
X26	X660	610	Std	114.6	XS	145.5
X24	X610	610	Std	110.8	XS	140.7
36X34	914X864	610	Std	133.7	XS	169.8
X32	X813	610	Std	129.8	XS	164.9
X30	X762	610	Std	126.0	XS	160.1
X26	X660	610	Std	118.3	XS	150.3

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Nominal Size inch	Outside Diameter of Bevel D1 D2(mm)	End to End H(mm)	Sch No.	Approx Weight (kg)	Sch No.	Approx Weight (kg)
38X36	965X914	610	Std	141.3	XS	179.4
X34	X864	610	Std	137.5	XS	174.6
X32	X813	610	Std	133.7	XS	169.8
X30	X762	610	Std	129.8	XS	164.9
X28	X711	610	Std	126.0	XS	160.0
X26	X667	610	Std	122.7	XS	155.8
40 X38	1016X965	610	Std	148.9	XS	189.1
X36	X914	610	Std	145.1	XS	184.3
X34	X864	610	Std	141.3	XS	179.5
X32	X813	610	Std	137.5	XS	174.6
X30	X762	610	Std	133.7	XS	169.8
42X40	1067X1016	610	Std	156.6	XS	198.9
X38	X965	610	Std	152.8	XS	194.0
X36	X914	610	Std	148.9	XS	189.1
X34	X864	610	Std	145.1	XS	184.4
X32	X813	610	Std	141.3	XS	179.5
X30	X762	610	Std	137.5	XS	174.6
44X42	1118X1067	610	Std	164.3	XS	208.6
X40	X1016	610	Std	160.4	XS	203.7
X38	X965	610	Std	156.6	XS	198.9
X36	X914	610	Std	152.8	XS	194.0
46X44	1168X1118	610	Std	171.9	XS	218.3
X42	X1067	711	Std	195.8	XS	248.7
X40	X1016	711	Std	191.4	XS	243.0
X38	X965	711	Std	188.9	XS	237.4
48X46	1219X1168	711	Std	209.1	XS	265.6
X44	X1118	711	Std	204.8	XS	260.1
X42	X1067	711	Std	200.3	XS	254.4
X40	X1016	711	Std	195.8	XS	248.7

CAPS
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OD	L	L1	DIA	S=SCHEDULE													
				STD	XS	10	20	30	40	60	80	100	120	140	160	XXS	
21.3	25.9	25.9	1/2"	2.77	3.73	-	-	-	2.77	-	3.73	-	-	-	4.75	7.47	
26.7	31.7	31.7	3/4"	2.87	3.91	-	-	-	2.87	-	3.91	-	-	-	5.54	7.82	
33.4	38.1	38.1	1"	3.38	4.55	-	-	-	3.38	-	4.55	-	-	-	6.35	9.09	
42.4	38.1	38.1	1-1/4"	3.56	4.85	-	-	-	3.56	-	4.85	-	-	-	6.35	9.70	
48.3	38.1	38.1	1-1/2"	3.68	5.08	-	-	-	3.68	-	5.08	-	-	-	7.14	10.16	
60.3	38.1	44.4	2"	3.91	5.54	-	-	-	3.91	-	5.54	-	-	-	8.71	11.07	
73.0	38.1	50.8	2-1/2"	5.16	7.01	-	-	-	5.16	-	7.01	-	-	-	9.52	14.02	
88.9	50.8	63.5	3"	5.49	7.62	-	-	-	5.49	-	7.62	-	-	-	11.12	15.24	
101.6	63.5	76.2	3-1/2"	5.74	8.08	-	-	-	5.74	-	8.08	-	-	-	-	-	
114.3	63.5	76.2	4"	6.02	8.56	-	-	-	6.02	-	8.56	-	11.12	-	13.49	17.12	
141.3	76.2	88.9	5"	6.55	9.52	-	-	-	6.55	-	9.52	-	12.70	-	15.87	19.05	
168.3	88.9	101.6	6"	7.11	10.97	-	-	-	7.11	-	10.97	-	14.27	-	18.24	21.94	
219.1	101.6	127.0	8"	8.18	12.70	-	6.35	7.04	8.18	10.30	12.70	15.06	18.24	20.62	23.01	22.22	
273.0	127.0	152.4	10"	9.27	12.70	-	6.35	7.80	9.27	12.70	15.06	18.24	21.41	25.40	28.57	26.40	
323.8	152.4	177.8	12"	9.52	12.70	-	6.35	8.38	10.31	14.30	17.45	21.41	25.40	28.57	33.32	26.40	
355.6	165.1	190.5	14"	9.52	12.70	6.35	7.92	9.52	11.12	15.10	19.05	23.80	27.76	31.75	35.71	-	
406.4	177.8	203.2	16"	9.52	12.70	6.35	7.92	9.52	12.70	16.70	21.41	26.19	30.94	36.52	40.46	-	
457.2	203.2	228.6	18"	9.52	12.70	6.35	7.92	11.12	14.27	19.05	23.80	29.36	34.92	39.67	45.24	-	
508.0	228.6	254.0	20"	9.52	12.70	6.35	9.52	12.70	15.06	20.60	26.19	32.54	38.10	44.45	49.99	-	
558.8	254.0	279.4	22"	9.52	12.70	6.35	9.52	12.70	-	-	-	-	-	-	-	-	
609.6	266.7	304.8	24"	9.52	12.70	6.35	9.52	14.25	17.45	24.60	30.94	38.89	46.2	52.37	59.51	-	
660.4	266.7	266.7	26"	9.52	12.70	7.92	12.70	-	-	-	-	-	-	-	-	-	
711.2	266.7	266.7	28"	9.52	12.70	7.92	12.70	15.88	-	-	-	-	-	-	-	-	
762.0	266.7	266.7	30"	9.52	12.70	7.92	12.70	15.88	-	-	-	-	-	-	-	-	
812.8	266.7	266.7	32"	9.52	12.70	7.92	12.70	15.88	17.45	-	-	-	-	-	-	-	
863.6	266.7	266.7	34"	9.52	12.70	7.92	12.70	15.88	17.45	-	-	-	-	-	-	-	
914.4	266.7	266.7	36"	9.52	12.70	7.92	12.70	15.88	19.05	-	-	-	-	-	-	-	