

AMERICAN STANDARD PIPE FITTING

BUTT-WELDING PIPE FITTING ANSI B16.9/16.28

Standard: ANSI/ASME B16.9/ B16.28

Wall thickness SCH5, SCH10S, SHC10, SCH20, SCH30,
STD, SCH40, XS, SCH60, SCH80, SCH100
SCH120, SCH140, SCH160, XXS

Size : 1/2" --24" Seamless
4"--48" Seam-welded

Material: CS ASTM A234 WBP, A420, A106

Product range: Elbow LR/SR, 45/90/180DEG,
Tee Stright/ Reducing
Reducer Concentric/Eccentric
Cap
Cross

Coating: Shining black paint



GERMAN STANDARD PIPE FITTING

BUTT-WEDLING PIPE FITTING DIN2605-2617

Standard: DIN2605, 2615, 2616, 2617

Wall thickness 2mm---25mm

Size : 1/2" --24" Seamless
4"--48" Seam-welded

Material: CS ST37.0, S235JR

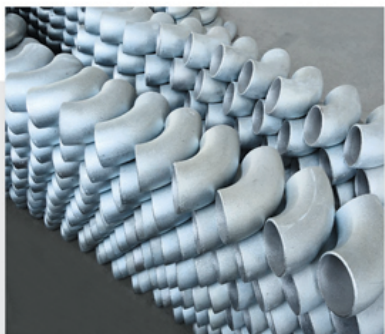
Product range: DIN2605 Elbow 2D/3D/5D, 45/90/180DEG,
DIN2615 Tee Stright/ Reducing
DIN2616 Reducer Concentric/Eccentric
DIN2617 Cap

Coating: Rust-proof oil, galvanized



JAPANESE STANDARD PIPE FITTING

BUTT-WEDLING PIPE FITTING JIS B2311



Standard: JIS2311

Wall thickness FSGP, LG, STD, XS

Size : 1/2" --24" Seamless
4"--48" Seam-welded

Material: CS JIS G3452, SS400



Product range: Elbow LR/SR, 45/90/180DEG,
Tee Stright/ Reducing
Reducer Concentric/Eccentric
Cap, Cross

Coating: Rust-proof oil, galvanized



RUSSIAN STANDARD PIPE FITTING

BUTT-WEDLING PIPE FITTING GOST



Standard: GOST17375-2001, GOST17378-2001

Wall thickness

Size : 1/2" --24" Seamless
4"--48" Seam-welded

Material: CS ct20, 16Mn



Product range: Elbow LR/SR, 45/90/180DEG,
Tee Stright/ Reducing
Reducer Concentric/Eccentric
Cap, Cross

Coating: Rust-proof oil,

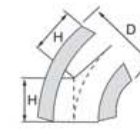


WROUGHT CARBON STEEL WALL THICKNESS STANDARDS

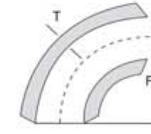
NOMINAL PIPE SIZE		OUTSIDE DIAMETER				NOMINAL WALL THICKNESS																NOMINAL PIPE SIZE	
A	B	ASME	JIS	DIN	JIS(I)	DIN(2)	SCH10	SCH20	SCH30	STD	SCH40	SCH60	XS	SCH80	SCH100	SCH120	SCH140	SCH160	XXS	A	B		
15	1/2"	21.3	21.7	21.3	2.8	2.0	2.11	-	2.41	2.77	2.77	-	3.73	3.73	-	-	-	4.78	7.47	15	1/2"		
20	3/4"	26.7	27.2	26.9	2.8	2.3	2.11	-	2.41	2.87	2.87	-	3.91	3.91	-	-	-	5.56	7.82	20	3/4"		
25	1"	33.4	34.0	33.7	3.2	2.6	2.77	-	2.90	3.38	3.38	-	4.55	4.55	-	-	-	6.35	9.09	25	1"		
32	1 1/4"	42.2	42.7	42.4	3.5	2.6	2.77	-	2.97	3.56	3.56	-	4.85	4.85	-	-	-	6.35	9.70	32	1 1/4"		
40	1 1/2"	48.3	48.6	48.3	3.5	2.6	2.77	-	3.18	3.68	3.68	-	5.08	5.08	-	-	-	7.14	10.15	40	1 1/2"		
50	2"	60.3	60.5	60.3	3.8	2.9	2.77	-	3.18	3.91	3.91	-	5.54	5.54	-	-	-	8.74	11.07	50	2"		
65	2 1/2"	73.0	76.3	76.1	4.2	2.9	3.05	-	4.78	5.16	5.16	-	7.01	7.01	-	-	-	9.53	14.02	65	2 1/2"		
80	3"	88.9	89.1	88.9	4.2	3.2	3.05	-	4.78	5.49	5.49	-	7.62	7.62	-	-	-	11.13	15.24	80	3"		
90	3 1/2"	101.6	101.6	-	4.2	-	3.05	-	4.78	5.74	5.74	-	8.08	8.08	-	-	-	-	-	90	3 1/2"		
100	4"	114.3	114.3	114.3	4.5	3.6	3.05	-	4.78	6.02	6.02	-	8.56	8.56	-	11.13	-	13.49	17.12	100	4"		
125	5"	141.3	139.8	139.7	4.5	4.0	3.40	-	-	6.55	6.55	-	9.53	9.53	-	12.70	-	15.99	19.05	125	5"		
150	6"	168.3	168.3	168.3	5.0	4.5	3.40	4.5	-	7.11	7.11	-	10.97	10.97	-	14.27	-	18.26	21.95	150	6"		
200	8"	219.1	219.3	219.1	5.8	6.3	3.76	6.35	7.04	8.18	10.31	12.70	12.70	12.70	15.09	18.26	20.62	23.01	22.23	200	8"		
250	10"	273.1	273.1	273.0	6.6	6.3	4.19	6.35	7.80	9.27	9.27	12.70	12.70	12.70	15.09	18.26	21.44	25.40	28.58	25.40	250	10"	
300	12"	323.9	328.9	323.9	6.9	7.1	4.57	6.35	8.38	9.53	10.31	14.27	12.70	12.70	17.48	21.44	25.40	28.58	33.32	25.40	300	12"	
350	14"	355.6	355.6	355.6	7.9	8.0	6.35	7.92	9.53	9.53	11.13	15.09	12.70	12.70	19.05	23.83	27.79	31.75	35.71	-	350	14"	
400	16"	406.4	406.4	406.4	7.9	8.8	6.35	7.92	9.53	9.53	12.70	16.66	12.70	12.70	21.44	26.19	30.96	36.53	40.49	-	400	16"	
450	18"	457.2	457.2	457.0	7.9	10.0	6.35	7.92	9.53	9.53	14.27	19.05	12.70	12.70	23.83	29.36	34.93	39.67	45.24	-	450	18"	
500	20"	508.0	508.0	508.0	7.9	11.0	6.35	9.53	1.70	9.53	15.09	20.62	12.70	12.70	26.19	32.54	38.10	44.45	50.01	-	500	20"	
550	22"	558.8	558.8	-	-	-	6.35	9.53	12.70	9.53	-	22.23	12.70	12.70	28.58	34.93	41.28	47.63	53.98	-	550	22"	
600	24"	609.6	609.6	610.0	-	12.5	6.35	9.53	14.27	9.53	17.48	24.61	12.70	12.70	30.96	38.89	46.02	52.37	59.54	-	600	24"	
650	26"	660.4	660.4	-	-	-	7.92	12.70	-	9.53	-	-	12.70	-	-	-	-	-	-	-	650	26"	
700	28"	711.1	711.2	711.0	-	12.5	7.92	12.70	15.88	9.53	-	-	12.70	-	-	-	-	-	-	-	700	28"	
750	30"	762.0	762.0	-	-	-	7.92	12.70	15.88	9.53	-	-	12.70	-	-	-	-	-	-	-	750	30"	
800	32"	812.8	812.8	813.0	-	12.5	7.92	12.70	15.88	9.53	17.48	-	12.70	-	-	-	-	-	-	-	800	32"	
850	34"	863.6	863.6	-	-	-	7.92	12.70	15.88	9.53	17.48	-	12.70	-	-	-	-	-	-	-	850	34"	
900	36"	914.34	914.4	914.0	-	12.5	7.92	12.70	15.88	9.53	19.05	-	12.70	-	-	-	-	-	-	-	900	36"	
950	38"	965.2	965.2	-	-	-	-	-	-	9.53	-	-	12.70	-	-	-	-	-	-	-	950	38"	
1000	40"	1016.0	1016.0	1016.0	-	12.5	-	-	-	9.53	-	-	12.70	-	-	-	-	-	-	-	1000	40"	
1050	42"	1066.8	1066.8	-	-	-	-	-	-	9.53	-	-	12.70	-	-	-	-	-	-	-	1050	42"	
1100	44"	1117.6	1117.6	-	-	-	-	-	-	9.53	-	-	12.70	-	-	-	-	-	-	-	1100	44"	
1150	46"	1168.4	1168.4	-	-	-	-	-	-	9.53	-	-	12.70	-	-	-	-	-	-	-	1150	46"	
1200	48"	1219.2	1219.2	1220.0	-	-	-	-	-	9.53	-	-	12.70	-	-	-	-	-	-	-	1200	48"	

Note: The bevel can be made according to the special requirements of the customers.

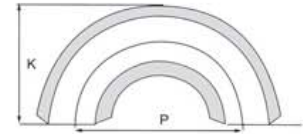
Elbows



45° BW Elbows



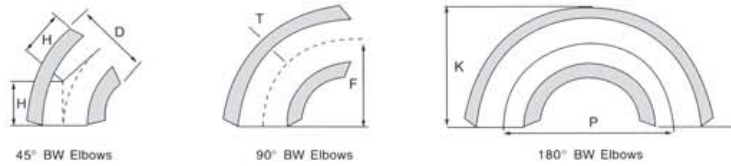
90° BW Elbows



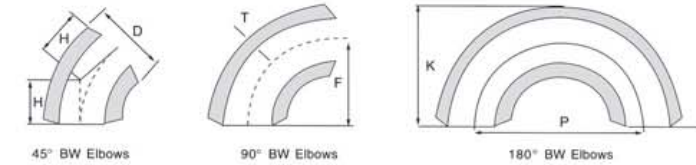
180° BW Elbows

ASME B16.9

Nominal Pipe Size inch	Dimensions			Wall Thickness			Approx.Weight
	Outside Diameter at Bevel:D		Center to End :A/B Center to Center :O Base to Face:k mm	Sch.NO.	t		
	Inch	mm			Inch	mm	
1/2	0.840	21.3	A=38.1 B=15.7 O=76.2 K=47.8	5S	0.065	1.65	0.05
				10S	0.083	2.11	0.06
				Std/40 40S	0.109	2.77	0.08
				XS/80 80S	0.147	3.73	0.10
				160	0.188	4.78	0.12
				XXS	0.294	7.47	0.15
3/4	1.050	26.7	A=38.1 B=19.1 O=76.2 K=50.8	5S	0.065	1.65	0.06
				10S	0.083	2.11	0.08
				Std/40 40S	0.113	2.87	0.11
				XS/80 80S	0.154	3.91	0.14
				160	0.219	5.56	0.17
				XXS	0.308	7.82	0.22
1	1.315	33.4	A=38.1 B=22.4 O=76.2 K=55.6	5S	0.065	1.65	0.08
				10S	0.109	2.77	0.13
				Std/40 40S	0.133	3.38	0.16
				XS/80 80S	0.179	4.55	0.20
				160	0.250	6.35	0.25
				XXS	0.358	9.09	0.26
1 1/4	1.660	42.2	A=47.8 B=25.4 O=95.3 K=69.9	5S	0.065	1.65	0.21
				10S	0.109	2.77	0.24
				Std/40 40S	0.140	3.56	0.26
				XS/80 80S	0.191	4.85	0.35
				160	0.250	6.35	0.42
				XXS	0.385	9.70	0.64
1 1/2	1.900	48.3	A=57.2 B=28.4 O=114.3 K=82.6	5S	0.065	1.65	0.17
				10S	0.109	2.77	0.26
				Std/40 40S	0.145	3.68	0.37
				XS/80 80S	0.200	5.08	0.50
				160	0.281	7.14	0.65
				XXS	0.400	10.15	0.93
2	3.375	60.3	A=76.2 B=35.1 O=152.4 K=106.4	5S	0.065	1.65	0.28
				10S	0.109	2.77	0.45
				Std/40 40S	0.154	3.91	0.66
				XS/80 80S	0.218	5.54	0.90
				160	0.344	8.74	1.33
				XXS	0.436	11.07	1.61
2 1/2	2.875	73.0	A=95.3 B=44.5 O=190.5 K=131.8	5S	0.083	2.11	0.55
				10S	0.120	3.05	0.80
				Std/40 40S	0.203	5.16	1.29
				XS/80 80S	0.276	7.01	1.79
				160	0.375	9.53	2.33
				XXS	0.552	14.02	3.43
3	3.500	88.9	A=114.3 B=50.8 O=228.6 K=158.8	5S	0.083	2.11	0.80
				10S	0.120	3.05	1.17
				Std/40 40S	0.216	5.49	2.04
				XS/80 80S	0.300	7.62	2.74
				160	0.438	11.13	3.83
				XXS	0.600	15.24	5.25
4	4.500	114.3	A=152.4 B=63.5 O=304.8 K=209.6	5S	0.083	2.11	1.39
				10S	0.120	3.05	2.03
				Std/40 40S	0.237	6.02	3.85
				XS/80 80S	0.337	8.56	5.36
				120	0.438	11.13	6.78
				160	0.531	13.49	8.03
XXS	0.674	17.12	10.2				
5	5.563	141.3	A=190.5 B=79.2 O=381.0 K=261.9	5S	0.109	2.79	2.82
				10S	0.134	3.40	3.45
				Std/40 40S	0.258	6.55	6.51
				XS/80 80S	0.375	9.53	9.27
				120	0.500	12.70	12.1
				160	0.625	15.88	14.7
XXS	0.750	19.05	17.6				

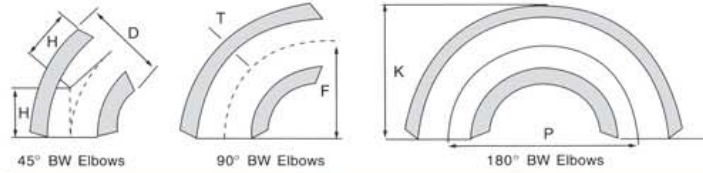


Elbows



ASME B16.9

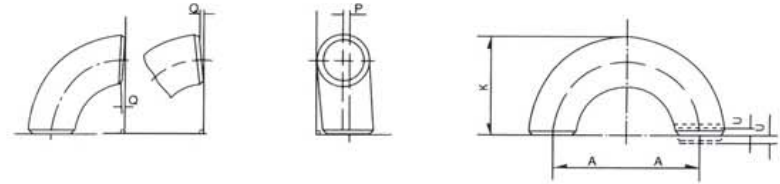
Nominal Pipe Size inch	Dimersins			Wall Thickness			Approx.Weight
	Outside Diameter at Bevel:D		Center to End :A/B Center to Center :o Face to Face:k mm	Sch.NO.	t		
					Inch	mm	
6	6.625	168.3	A=228.6 B=95.3 O= 475.2 K=312.7	5S 10S Std/40 40S XS/80 80S 120 160 XXS	0.109 0.134 0.280 0.432 0.562 0.719 0.864	2.77 3.40 7.11 10.97 14.27 18.26 21.95	4.10 4.96 10.10 15.30 19.50 24.20 29.10
8	8.625	219.1	A=304.8 B=127.0 O=609.6 K=414.3	5S 10S 20 30 Std/40 40S 60 XS/80 80S 100 120 140 160 XXS	0.109 0.148 0.250 0.277 0.322 0.406 0.500 0.594 0.719 0.812 0.906 0.875	2.77 3.76 6.35 7.04 8.18 10.31 12.70 15.09 18.26 20.62 23.01 22.23	7.15 9.65 15.90 17.60 20.40 25.40 30.90 36.30 43.30 48.30 53.30 51.70
10	10.750	273.0	A=381.0 B=158.8 O=762.0 K=517.7	5S 10S 20 30 Std/40 40S XS/80 80S 80 100 120 140/XXS 160	0.134 0.165 0.250 0.307 0.365 0.500 0.594 0.719 0.844 1.000 1.125	3.40 4.19 6.35 7.80 9.27 12.70 15.09 18.26 21.44 25.40 28.58	13.70 16.70 25.00 30.50 36.10 48.80 57.30 68.60 79.50 92.80 103.00
12	12.750	323.9	A=457.8 B=190.5 O=914.4 K=619.3	5S 10S 20 30 Std/40S 40 XS/80S 60 80 100 120/XXS 140 160	0.156 0.180 0.250 0.330 0.375 0.406 0.500 0.562 0.688 0.844 1.000 1.125 1.312	3.96 4.57 6.35 8.38 9.53 10.31 12.70 14.27 17.48 21.44 25.40 28.58 33.32	23.00 26.10 35.70 46.80 53.10 57.80 70.00 78.20 94.70 115.00 134.00 149.00 171.00
14	14.000	355.6	A=533.4 B=222.3 O=1066.8 K=711.2	5S 10S 10 20 Std/30 40 xs 60 80 100 120 140 160	0.156 0.188 0.250 0.312 0.375 0.438 0.500 0.594 0.750 0.938 1.094 1.250 1.406	3.96 4.78 6.35 7.92 9.53 11.13 12.70 15.09 19.05 23.83 27.79 31.75 35.71	30.80 36.90 45.80 56.90 68.10 79.20 90.00 106.00 132.00 163.00 188.00 212.00 236.00



Nominal Pipe Size inch	Dimensions			Center to End A/B Center to Center o Base to Face k mm	Wall Thickness			Approx.Weight 90° Kg
	Outside Diameter at Bevel D		Sch.NO.		t			
	Inch	mm			Inch	mm		
24	24.000	610.0	A=914.4 B=381.0 O=1828.8 K=1219.2	5S	0.218	5.54	118.00	
				10S	0.250	6.35	137.00	
				10	0.250	6.35	136.00	
				Std/20	0.375	9.53	202.00	
				XS	0.500	12.00	269.00	
				30	0.562	14.27	301.00	
				40	0.688	17.48	366.00	
				60	0.969	24.61	510.00	
				80	1.219	30.96	634.00	
				100	1.531	38.89	786.00	
				120	1.812	46.02	919.00	
				140	2.062	52.37	1033.00	
				160	2.344	59.34		
26	26.000	660.0	A=990.6 B=406.4	10	0.312	7.92	198.00	
				Std	0.375	9.53	238.00	
				XS/20	0.500	12.70	316.00	
28	28.000	711.0	A=1066.8 B=469.9	10	0.312	7.92	230.00	
				Std	0.375	9.53	276.00	
				XS/20	0.500	12.70	367.00	
30				30	0.625	15.88	456.00	
30	30.000	762.0	A=1143.0 B=469.9	5S	0.250	6.35	264.00	
				10S	0.312	7.92	318.00	
				10	0.312	7.92	318.00	
				Std	0.375	9.53	421.00	
				XS/20	0.500	12.70	524.00	
				30	0.625	15.88		
32	32.000	813.0	A=1219.2 B=501.7	10	0.312	7.92	301.00	
				Std	0.375	9.53	362.00	
				XS/20	0.500	12.70	480.00	
				30	0.625	15.88	597.00	
40				40	0.688	17.48	656.00	
32	32.000	813.0	A=1219.2 B=501.7	10	0.312	7.92	301.00	
				Std	0.375	9.53	362.00	
				XS/20	0.500	12.70	480.00	
				30	0.625	15.88	597.00	
40				40	0.688	17.48	656.00	
34	34.000	864.0	A=1295.4 B=533.4	10	0.312	7.92	340.00	
				Std	0.375	9.53	408.00	
				XS/20	0.500	12.70	543.00	
				30	0.625	15.88	675.00	
				40	0.688	17.48	742.00	
36	36.000	914.0	A=1371.6 B=565.2	10	0.312	7.92	381.00	
				Std	0.375	9.53	458.00	
				XS/20	0.500	12.70	608.00	
				30	0.625	15.88	758.00	
				40	0.750	19.05	906.00	
38	38.000	965.0	A=1147.8 B=600.0	Std/40	0.375	9.53	510.00	
				XS/80	0.500	12.70	679.00	
40	40.000	1016.0	A=1524 B=632.0	Std/40	0.312	9.53	570.00	
				XS/80	0.375	12.70	757.00	
42	42.000	1067.0	A=1600.0 B=660.0	Std/40	0.312	9.53	629.00	
				XS/80	0.375	12.70	836.00	
44	44.000	1118.0	A=1676.4 B=695.0	Std/40	0.312	9.53	691.00	
				XS/40	0.375	12.70	918.00	
46	46.000	1168.4	A=1752.6 B=717.1	Std/40	0.312	9.53	753.00	
				XS/80	0.375	12.70	1003.00	
48	48.000	1219.2	A=1828.8 B=756.8	Std/40	0.312	9.53	822.00	
				XS/80	0.375	12.70	1092.00	

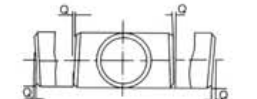
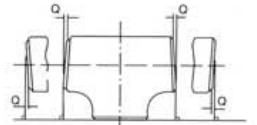
Nominal Pipe Size (in) Kinds inspection contents		JIS B2311					ASME/ANSIB 16.9 B16.28				
			3-4	5-8	10-18	20-24		3-4	5-8	10-18	20-24
All Filings	坡口处外径 Outside diameter at bevalD	± 2.0	± 2.5	± 3.5	± 5.0 -4.5	+6.4 -4.8	+1.52 -0.76	± 1.52	+2.29 -1.52	+4.06 -3.05	+6.35 -4.83
	端面的内径 inside diameter at end	± 2.0	± 2.5	± 3.5	± 4.5	± 4.8	± 0.76	± 1.52	± 1.52	± 3.05	± 4.83
	壁厚 Wall thickness (T)	-15%					-12.5%				
Elbows Tees	中心至端面的距离 Center to face (ABCM)	± 2.0	± 3.2			± 1.52		± 2.29			
Reducers	长度 Length (H)	± 2.0	± 3.2								
Caps	Overall length (E)	± 3.2	± 6.5			± 3.05		± 6.35			
Returns	Center to center (P)	± 6.4	± 9.5			± 6.35		± 9.65			
	Back to face (K)	± 6.4					± 6.35				
	Deflection of face to face (U)	1.6	3.2			± 0.76		± 1.52			

Tolerances:mm



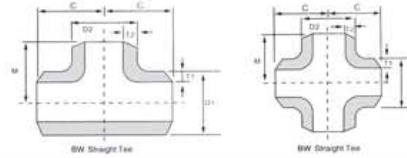
ASME/ANSI B16.9 B16.28 JIS B2311

Angularity Tolerance			Angularity Tolerance		
Nominal Pipe Size	Off Angle	Off Plane	Nominal Pipe Size	Off Angle	Off Plane
(in)	Q	P	(in)	Q	P
1/2 to 4	0.76	1.52	1/2 to 4	0.8	1.6
5 to 8	1.52	3.05	5 to 8	1.6	3.2
10 to 12	2.29	4.83	10 to 12	2.4	4.8
14 to 16	2.29	6.35	14 to 16	2.4	6.4
18 to 24	3.05	9.65	18 to 24	3.2	9.5



Tees

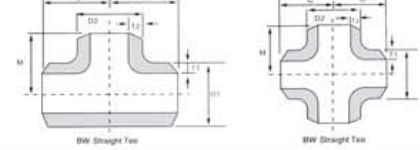
ASME B16.9



Nominal Pipe Size inch	Dimensions				Wall Thickness Approx. Weight																	
	Outside Diameter at Bevel D.O.D		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	557.2	57.2	-	-	-	-	-	-	2.77	2.77	0.74	2.77	2.77	0.74	-	-	-			
2 x 3/4	60.3	26.8	63.5	44.5	-	-	-	-	-	-	3.91	2.87	0.85	3.91	2.87	0.85	-	-	-			
x 1	-	33.4	63.5	50.8	-	-	-	-	-	-	-	3.38	0.90	-	3.38	0.90	-	-	-			
x 1 1/4	-	42.2	63.5	57.2	-	-	-	-	-	-	-	3.56	0.95	-	3.56	0.95	-	-	-			
x 1 1/2	-	48.3	63.5	60.5	-	-	-	-	-	-	-	3.68	0.99	-	3.68	0.99	-	-	-			
x 2	-	60.3	63.5	63.5	-	-	-	-	-	-	-	3.91	1.06	-	3.91	1.06	-	-	-			
2 1/2 x 1	73.0	33.4	76.2	57.2	-	-	-	-	-	-	5.16	3.38	-	5.16	3.38	-	-	-	-			
x 1 1/4	-	42.2	76.2	63.5	-	-	-	-	-	-	-	3.56	1.78	-	3.56	1.78	-	-	-			
x 1 1/2	-	48.3	76.2	66.5	-	-	-	-	-	-	-	3.68	1.81	-	3.68	1.81	-	-	-			
x 2	-	60.3	76.2	69.9	-	-	-	-	-	-	-	3.91	1.87	-	3.19	1.87	-	-	-			
x 2 1/2	-	73.0	76.2	76.2	-	-	-	-	-	-	-	5.16	2.09	-	5.16	2.09	-	-	-			
3 x 1 1/4	88.9	42.2	85.9	69.9	-	-	-	-	-	-	5.49	3.56	-	5.49	3.56	-	-	-	-			
x 1 1/2	-	48.3	85.9	73.2	-	-	-	-	-	-	-	3.68	2.47	-	3.68	2.47	-	-	-			
x 2	-	60.3	85.9	76.2	-	-	-	-	-	-	-	3.91	2.54	-	3.91	2.54	-	-	-			
x 2 1/2	-	73.0	85.9	82.6	-	-	-	-	-	-	-	5.16	2.75	-	5.16	2.75	-	-	-			
x 3	-	88.9	85.9	85.9	-	-	-	-	-	-	-	5.49	2.89	-	5.49	2.89	-	-	-			
4 x 1 1/2	114.3	48.3	104.6	85.9	-	-	-	-	-	-	6.02	3.68	-	6.02	3.68	-	-	-	-			
x 2	-	60.3	104.6	88.9	-	-	-	-	-	-	-	3.91	4.24	-	3.91	4.24	-	-	-			
x 2 1/2	-	73.0	104.6	95.3	-	-	-	-	-	-	-	5.16	4.45	-	5.16	4.45	-	-	-			
x 3	-	88.9	104.6	98.6	-	-	-	-	-	-	-	5.49	4.60	-	5.49	4.60	-	-	-			
x 4	141.3	114.3	104.6	104.6	-	-	-	-	-	-	-	6.02	4.94	-	6.02	4.94	-	-	-			
5 x 2	-	60.3	124.0	104.6	-	-	-	-	-	-	6.55	3.91	-	6.55	3.91	-	-	-	-			
x 2 1/2	-	73.0	124.0	108.0	-	-	-	-	-	-	-	5.16	6.85	-	5.16	6.85	-	-	-			
x 3	-	88.9	124.0	111.3	-	-	-	-	-	-	-	5.49	7.00	-	5.49	7.00	-	-	-			
x 4	-	114.3	124.0	117.3	-	-	-	-	-	-	-	6.02	7.36	-	6.02	7.36	-	-	-			
x 5	-	141.3	124.0	124.0	-	-	-	-	-	-	-	6.55	7.83	-	6.55	7.83	-	-	-			
6 x 2 1/2	168.3	73.0	142.7	120.7	-	-	-	-	-	-	7.11	5.16	-	7.11	5.16	-	-	-	-			
x 3	-	88.9	142.7	124.0	-	-	-	-	-	-	-	5.49	10.06	-	5.49	10.06	-	-	-			
x 4	-	114.3	142.7	130.0	-	-	-	-	-	-	-	6.02	10.40	-	6.02	10.40	-	-	-			
x 5	-	141.3	142.7	136.7	-	-	-	-	-	-	-	6.55	10.90	-	6.55	10.00	-	-	-			
x 6	-	168.3	142.7	142.7	-	-	-	-	-	-	-	7.11	11.50	-	7.11	11.50	-	-	-			
8 x 4	219.1	114.3	177.8	155.4	-	-	-	-	-	-	8.18	6.02	18.84	8.18	6.02	18.84	-	-	-			
x 5	-	141.3	177.8	162.1	-	-	-	-	-	-	-	6.55	19.32	-	6.55	19.32	-	-	-			
x 6	-	168.3	177.8	168.1	-	-	-	-	-	-	-	7.11	19.92	-	7.11	19.92	-	-	-			
x 8	-	219.1	177.8	177.8	6.35	6.35	19.78	7.04	7.04	20.64	-	8.18	21.48	-	8.18	21.48	10.31	10.31	27.35			
10 x 4	273.0	114.3	215.9	184.2	-	-	-	-	-	-	9.27	6.02	-	9.27	6.02	-	-	-	-			
x 5	-	141.3	215.9	190.5	-	-	-	-	-	-	-	6.55	32.16	-	6.55	32.16	-	-	-			
x 6	-	168.3	215.9	193.5	-	-	-	-	-	-	-	7.11	32.64	-	7.11	32.64	-	-	-			
x 8	-	219.1	215.9	203.2	6.35	6.35	28.55	7.80	7.04	33.20	-	8.18	34.20	-	8.18	34.20	2.70	10.31	46.10			
x 10	-	273.0	215.9	215.9	-	6.35	29.84	-	7.80	33.20	9.53	9.27	36.48	-	9.27	36.48	-	12.70	50.22			
12 x 5	323.9	141.3	254.0	215.9	-	-	-	-	-	-	-	6.55	-	10.31	6.55	-	-	-	-			
x 6	-	168.3	254.0	218.9	-	-	-	-	-	-	-	7.11	46.08	-	7.11	61.44	-	-	-			
x 8	-	219.1	254.0	228.6	6.35	6.35	35.43	8.38	7.04	47.13	-	8.18	47.64	-	8.18	63.72	14.27	10.31	66.65			
x 10	-	273.0	254.0	241.3	-	6.35	37.32	-	7.80	48.68	-	9.27	49.92	-	9.27	66.24	-	12.70	81.70			
x 12	-	323.9	254.0	254.0	-	6.35	37.32	-	8.38	48.68	9.53	9.53	52.32	-	10.31	70.08	-	14.27	81.70			
14 x 6	355.6	168.3	279.4	238.3	-	-	-	-	-	-	-	7.11	-	11.13	7.11	-	-	-	-			
x 8	-	219.1	279.4	247.7	7.92	6.35	67.34	9.53	7.04	71.04	-	8.18	57.84	-	8.18	76.40	15.09	10.31	109.31			
x 10	-	273.0	279.4	257.0	-	6.35	67.34	-	7.80	71.04	-	9.27	59.88	-	9.27	91.32	-	12.70	109.31			
x 12	-	323.9	279.4	269.7	-	6.35	69.32	-	8.38	73.10	-	9.53	62.28	-	10.31	95.78	-	14.27	116.10			
x 14	-	355.6	279.4	279.4	-	7.92	69.32	-	9.53	73.10	9.53	9.53	64.20	-	11.13	99.84	-	15.09	116.10			
16 x 6	406.4	168.3	304.8	263.7	-	-	-	-	-	-	-	7.11	-	12.70	7.11	-	-	-	-			
x 8	-	219.1	304.8	273.1	7.92	6.35	84.28	9.53	7.04	91.59	-	8.18	-	-	8.18	-	16.66	10.31	137.86			
x 10	-	273.0	304.8	282.4	-	6.35	84.28	-	7.80	91.59	-	9.27	73.56	-	9.27	105.72	-	12.70	137.86			
x 12	-	323.9	304.8	295.1	-	6.35	86.00	-	8.38	91.59	-	9.53	75.72	-	10.31	109.24	-	14.27	148.70			
x 14	-	355.6	304.8	304.8	-	7.92	86.00	-	9.53	94.60	-	9.53	77.88	-	11.13	114.24	-	15.09	148.70			
x 16	-	406.4	304.8	304.8	-	7.92	86.00	-	9.53	94.60	9.53	9.53	79.32	-	12.70	132.00	-	16.66	155.23			
18 x 12	457.0	323.9	342.9	320.7	7.92	6.35	-	-	-	-	-	9.53	93.96	14.27	10.31	153.60	19.05	14.27	-			
x 14	-	355.6	342.9	330.2	-	7.92	-	-	-	-	-	9.53	96.24	-	11.13	158.40	-	15.09	-			
x 16	-	406.4	342.9	330.2	-	7.92	-	-	-	-	-	9.53	97.68	-	12.70	162.00	-	16.66	-			
x 18	-	457.0	342.9	342.9	-	7.92	-	-	-	-	-	9.53	100.68	-	-	187.20	-	190.5	-			

Tees

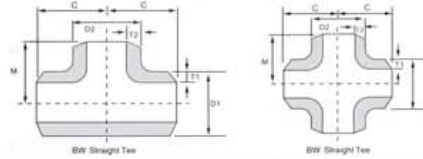
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Nominal Pipe Size inch	Wall Thickness Approx. Weight																				
	xs			Sch.80			Sch.100			Sch.120			Sch.140			Sch.60			XXS		
	t1 mm	t2 mm	Kg	t1 mm	t2 mm	Kg	t1 mm	t2 mm	Kg	t1 mm	t2 mm	Kg	t1 mm	t2 mm	Kg	t1 mm	t2 mm	Kg	t1 mm	t2 mm	Kg
1 1/2 x 1 1/2	5.08	5.08	1.09	5.08	5.08	1.09	-	-	-	-	-	-	-	-	-	7.14	7.14	1.54	10.15	1015	1.32
2 x 3/4	5.54	3.91	1.85	5.54	3.91	1.85	-	-	-	-	-	-	-	-	-	8.74	5.56	2.73	11.07	7.82	3.44
x 1	-	4.55	1.85	-	4.55	1.85	-	-	-	-	-	-	-	-	-	-	6.35	2.73	-	9.09	3.44
x 1 1/4	-	4.85	1.85	-	4.85	1.85	-	-	-	-	-	-	-	-	-	-	6.35	2.73	-	9.70	3.44
x 1 1/2	-	5.08	1.85	-	5.08	1.85	-	-	-	-	-	-	-	-	-	-	7.14	2.73	-	10.15	3.44
x 2	-	5.54	1.85	-	5.54	1.85	-	-	-	-	-	-	-	-	-	-	8.74	2.73	-	11.07	3.44
2 1/2 x 1 1/2	7.01	4.55	2.54	7.01	4.55	2.54	-	-	-	-	-	-	-	-	9.53	6.35	3.08	14.02	9.09	3.44	
x 1 1/4	-	4.85	2.54	-	4.85	2.54	-	-	-	-	-	-	-	-	-	-	6.35	3.08	-	9.70	3.57
x 1 1/2	-	5.08	2.54	-	5.08	2.54	-	-	-	-	-	-	-	-	-	-	7.14	3.08	-	10.15	3.61
2	-	5.54	2.54	-	5.54	2.54	-	-	-	-	-	-	-	-	-	-	8.74	3.08	-	11.07	3.61
x 2 1/2	-	7.01	2.54	-	7.01	2.54	-	-	-	-	-	-	-	-	-	-	9.53	3.08	-	9.09	3.81
3 x 1/4	7.62	4.85	3.69	7.62	4.85	3.69	-	-	-	-	-	-	-	-	11.13	6.35	4.86	15.24	9.70	5.38	
x 1 1/2	-	5.08	3.69	-	5.08	3.69	-	-	-	-	-	-	-	-	-	-	7.14	4.95	-	10.15	5.42
x 2	-	5.54	3.69	-	5.54	3.69	-	-	-	-	-	-	-	-	-	-	7.14	5.03	-	11.07	5.46
x 2 1/2	-	7.01	3.69	-	7.01	3.69	-	-	-	-	-	-	-	-	-	-	9.53	5.29	-	14.02	5.68
x 3	-	7.62	3.69	-	7.62	3.69	-	-	-	-	-	-	-	-	-	-	11.13	5.55	-	9.70	6.11
4 x 1 1/2	8.56	5.08	6.58	8.56	5.08	6.58	-	-	-	-	-	-	-	-	13.49	7.14	9.29	17.12	10.15	12.47	
x 2	-	5.54	6.58	-	5.54	6.58	-	-	-	-	-	-	-	-	-	-	8.74	9.29	-	11.07	12.47
x 2 1/2	-	7.01	6.58	-	7.01	6.58	-	-	-	-	-	-	-	-	-	-	9.53	9.29	-	14.02	12.47
x 3	-	7.62	6.58	-	7.62	6.58	-	-	-	-	-	-	-	-	-	-	11.13	9.55	-	15.24	12.47
x 4	-	8.56	6.58	-	8.56	6.58	-	-	-	11.13	11.13	7.74	-	-	-	-	13.49	10.15	-	17.12	12.90
5 x 2	9.53	5.54	11.61	9.53	5.54	11.61	-	-	-	-	-	-	-	-	15.88	8.74	19.78	19.05	11.07	23.39	
x 2 1/2	-	7.01	11.61	-	7.01	11.61	-	-	-	-	-	-	-	-	-	-	9.53	19.78	-	14.02	23.39
x 3	-	7.62	11.61	-	7.62	11.61	-	-	-	-	-	-	-	-	-	-	11.13	19.78	-	15.24	23.39
x 4	-	8.56	11.61	-	8.56	11.61	-	-	-	12.70	11.13	15.05	-	-	-	-	13.49	19.78	-	17.12	24.77
x 5	-	9.53	11.61	-	9.53	11.61	-	-	-	-	12.70	15.05	-	-	-	-	15.88	19.78	-	19.05	25.71
6 x 2 1/2	10.97	7.01	16.60	10.97	7.01	16.60	-	-	-	-	-	-	-	-	18.26	9.53	26.57	21.95	14.02	29.93	
x 3	-	7.62	16.60	-	7.62	16.60	-	-	-	-	-	-	-	-	-	-	11.13	26.57	-	15.24	29.93
x 4	-	8.56	16.60	-	8.56	16.60	-	-	-	14.27	11.13	20.64	-	-	-	-	13.49	28.12	-	17.12	29.93
x 5	-	9.53	16.60	-	9.53	16.60	-	-	-	-	12.70	-	-	-	-	-	15.88	28.12	-	19.05	30.62
x 6	-	10.97	16.60	-	10.97	16.60	-	-	-	-	14.27	-	-	-	-	-	18.26	33.97	-	21.95	30.62
8 x 4	12.70	8.56	29.84	12.70	8.56	29.84	-	-	-	-	18.26	11.13	37.15	-	23.01	13.49	43.86	22.23	17.12	43.34	
x 5	-	9.53	29.84	-	9.53	29.84	-	-	-	-	12.70	37.15	-	-	-	-	15.88	47.80	-	19.05	43.34
x 6	-	10.97	29.84	-	10.97	29.84	-	-	-	-	14.27	42.14	-	-	-	-	18.26	47.80	-	21.95	44.12
x 8	-	12.70	29.84	-	12.70	29.84	15.09	15.09	43.50	-	18.26	12.14	20.62	20.62	-	23.01	49.88	-	22.23	47.73	
10 x 4	12.70	8.56	46.01	15.09	8.56	51.34	-	-	-	21.44	11.13	61.32	-	-	28.58	13.49	73.10	25.40	17.12	68.20	
x 5	-	9.53	46.01	-	9.53	51.34	-	-	-	-	12.70	61.32	-	-	-	-	15.88	78.52	-	19.05	68.20
x 6	-	10.97	46.01	-	10.97	51.34	-	-	-	-	14.27	70.26	-	-	-	-	18.26	87.90	-	21.95	78.17
x 8	-	12.70	50.22	-	12.70	56.59	18.26	15.09	63.21	-	18.26	76.11	25.40	20.62	81.70	-	23.01	97.18	-	22.23	78.17
x 10	-	12.70	50.22	-	15.09	58.05	-	18.26	63.64	-	21.44	79.98	-	25.40	84.71	-	28.58	111.20	-	25.40	84.71
12 x 5	12.70	9.53	64.33	17.48	9.53	73.44	-	-	-	25.40	12.70	88.24	-	-	33.32	15.88	120.66	25.40	19.05	102.73	
x 6	-	10.97	64.33	-	10.97	73.44	-	-	-	-	14.27	88.24	-	-	-	-	18.26	120.66	-	21.95	102.73
x 8	-	12.70	64.33	-	12.70	73.44	21.44	15.09	96.75	-	18.26	112.83	28.58	20.62	12.04	-	23.01	130.98	-	22.23	110.94
x 10	-	12.70	67.08	-	15.09	91.33	-	18.26	107.41	-	21.44	121.17	-	25.40	135.88	-	28.58	140.61	-	25.40	129.00
x 12	-	12.70	67.08	-	17.48	98.90	-	21.44	117.13	-	25.40	129.00	-	28.58	151.79	-	33.32	158.07	-	25.40	129.00
14 x 6	12.70	10.97	89.27	19.05	10.97	122.03	-	-	-	27.79	14.27	176.30	-	-	35.71	18.26	215.00	-	-	-	
x 8	-	12.70	89.27	-	12.70	122.03	23.83	15.09	167.70	-	18.26	189.20	31.75	20.62	197.80	-	23.01	215.00	-	-	
x 10	-	12.70	89.27	-	15.09	137.06	-	18.26	167.70	-	21.44	189.20	-	25.40	210.70	-	28.58	227.90	-	-	
x 12	-	12.70	93.65	-	17.48	139.58	-	21.00	177.16	-	25.40	202.10	-	28.58	219.30	-	33.32	232.20	-	-	
x 14	-	12.70	93.65	-	19.05	138.58	-	23.83	177.16	-	27.79	202.10	-	31.75	219.30	-	35.71	232.20	-	-	
16 x 6	12.70	10.97	112.23	21.44	10.97	140.95	-	-	-	30.96	14.27	227.90	-	-	40.49	18.26	275.20	-	-	-	
x 8	-	12.70	112.30	-	12.70	141.95	-	15.09	197.63	-	18.26	227.90	36.53	20.62	253.70	-	23.01	276.92	-	-	
x 10	-	12.70	112.30	-	15.09	140.81	26.19	18.26	197.63	-	21.44	240.80	-	25.40	258.00	-	28.58	283.80	-	-	
x 12	-	12.70	115.24	-	17.48	156.18	-	21.44	222.05	-	25.40	240.80	-	28.58	266.60	-	33.32	292.40	-	-	
x 14	-	12.70	116.53	-	19.05	167.70	-	23.83	229.19	-	27.79	253.70	-	31.75	292.40	-	35.71	309.60	-	-	
x 16	-	12.70	119.11	-	21.44	167.70	-	26.19	232.71	-	30.96	253.70	-	36.53	309.60	-	40.49	334.51	-	-	
18 x 12	12.70	12.70	124.80	23.83	17.48	260.40	-	21.44	-	34.93	25.40	-	39.6	28.58	-	44.45	33.32	441.60	-	-	
x 14	-	12.70	127.20	-	19.05	267.60	29.36	23.83	-	-	27.89	-	-	31.75	-	44.45	35.71	450.00	-	-	
x 16	-	12.70	129.60	-	21.44	273.60	-	26.19	-	-	30.96	-	-	36.53	-	-	40.49	499.20	-	-	
x 18	-	12.70	133.20	-	23.83	303.60	-	29.36	-	-	34.93	-	-	39.67	-	-	45.04	564.00	-	-	

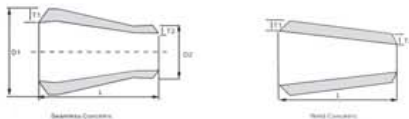
Tees

ASME B16.9



Nominal Pipe Size inch	Dimensions				Wall Thickness Approx.Weight																	
	Outside Diameter at Bevel,D ₁ / D ₂		Center to end		Sch.20			Sch.30			STD			Sch.40			Sch.60					
					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			
	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			
20 x 14	508.0	355.6	381.0	355.6	9.53	7.90	–	–	–	–	9.53	9.53	116.64	15.09	11.13	213.6	20.62	15.09	–			
× 16	508.0	406.4	381.0	355.6	–	7.90	–	–	–	–	–	–	118.08	–	12.70	217.2	–	16.66	–			
× 18	508.0	457.0	381.0	368.3	–	7.90	–	–	–	–	–	–	121.2	–	14.27	225.6	–	19.05	–			
× 20	508.0	508.0	381.0	381.0	–	9.53	–	–	–	–	–	–	124.8	–	–	244.8	–	20.62	–			
22 x 16	559.0	406.4	419.1	381.0	9.53	7.90	–	–	–	–	9.53	9.53	140.4	15.09	–	–	22.23	16.66	–			
× 18	559.0	457.0	419.1	393.7	–	7.90	–	–	–	–	–	–	144.0	–	–	–	–	19.05	–			
× 20	559.0	508.0	419.1	406.4	–	9.53	–	–	–	–	–	–	147.6	–	–	–	–	20.62	–			
× 22	559.0	559.0	419.1	419.1	–	9.53	–	–	–	–	–	–	151.2	–	–	–	–	22.23	–			
24 x 18	610.0	457.0	431.8	419.1	9.53	7.90	–	–	–	–	9.53	9.53	159.6	17.48	15.09	298.8	24.61	19.05	–			
× 20	610.0	508.0	431.8	431.8	–	9.53	–	–	–	–	–	–	163.2	–	–	321.6	–	20.62	–			

Nominal Pipe Size inch	Wall Thickness Approx.Weight																				
	XS			Sch.80			Sch.100			Sch.120			Sch.140			Sch.180			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
20 x 14	12.70	12.70	154.8	26.19	19.05	346.8	32.54	23.83	-	38.10	27.79	-	44.45	31.75	-	44.93	35.71	589.2	-	-	-
× 16	-	-	157.2	-	21.44	352.8	-	26.19	-	-	30.96	-	-	36.53	-	-	40.49	609.6	-	-	-
× 18	-	-	160.8	-	23.83	367.2	-	29.36	-	-	34.93	-	-	39.67	-	-	44.45	633.6	-	-	-
× 20	-	-	165.6	-	26.19	423.6	-	32.54	-	41.28	38.10	-	-	44.45	-	-	44.93	756.0	-	-	-
22 x 16	12.70	12.70	187.2	28.58	21.44	424.8	34.93	26.19	-	-	30.96	-	47.63	36.53	-	53.98	40.49	787.2	-	-	-
× 18	-	-	190.8	-	23.89	447.6	-	29.36	-	-	34.93	-	-	39.67	-	-	44.45	835.2	-	-	-
× 20	-	-	195.6	-	26.19	463.2	-	32.54	-	46.02	38.10	-	-	44.45	-	-	44.93	888.0	-	-	-
× 22	12.70	-	200.4	-	28.58	543.6	-	34.93	-	-	41.28	-	-	47.63	-	-	53.98	1002.0	-	-	-
24 x 18	-	12.70	212.4	30.96	23.83	501.6	38.89	29.36	-	-	34.93	-	52.37	39.67	-	59.54	44.45	922.8	-	-	-
× 20	-	-	217.2	-	26.19	560.4	-	32.54	-	-	38.10	-	-	44.45	-	-	44.93	1011.6	-	-	-
× 22	-	-	219.6	-	28.58	603.6	-	34.93	-	-	41.28	-	-	47.63	-	-	53.98	1106.4	-	-	-
× 24	-	-	222.0	-	30.96	657.6	-	38.89	-	-	46.02	-	-	52.37	-	-	59.54	1214.4	-	-	-



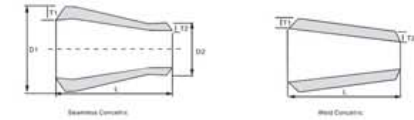
Reducers

ASME B16.9

Nominal Pipe Size inch	Dimensions			Wall Thickness Approx.Weight																	
	Outside Diameter at Bevel D ₁ / D ₂		Center 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			
18 x 12	457.20	323.9	381	7.92	6.38	-	-	-	-	9.53	9.53	33.2	14.27	10.31	51.0	19.05	14.27	-			
× 14	-	355.6	381	-	7.92	-	-	-	-	-	9.53	35.7	-	11.13	53.0	-	15.09	-			
× 16	-	406.4	381	-	7.92	-	-	-	-	-	9.53	37.8	-	12.70	56.2	-	16.66	-			
20 x 14	508.00	355.6	508	9.53	7.90	-	-	-	-	9.53	9.53	50.8	15.09	11.13	79.6	20.62	15.09	-			
× 16	-	406.4	508	-	7.92	-	-	-	-	-	9.53	53.5	-	12.70	83.9	-	16.66	-			
× 18	-	457.2	508	-	7.92	-	-	-	-	-	9.53	56.4	-	14.27	88.4	-	19.05	-			
22 x 16	559.00	406.4	508	9.53	7.92	-	-	-	-	9.53	9.53	56.4	-	-	-	22.23	16.99	-			
× 18	-	457.2	508	-	7.92	-	-	-	-	-	9.53	59.4	-	-	-	-	19.05	-			
× 20	-	508.0	508	-	7.92	-	-	-	-	-	9.53	62.4	-	-	-	-	20.62	-			
24 x 18	610.00	457.2	508	9.53	9.53	-	-	-	-	9.53	9.53	63.0	17.49	14.27	114.0	24.61	19.05	-			
× 20	-	508.0	508	-	-	-	-	-	-	-	9.53	65.7	-	15.09	119.0	-	20.62	-			
× 22	-	559.0	508	-	-	-	-	-	-	-	9.53	68.4	-	-	-	-	22.23	-			

Reducers

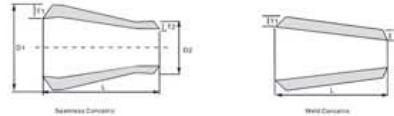
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Nominal Pipe Size (NPS) inch	Dimensions			Wall Thickness Approx.Weight																	
	Outside Diameter at Bevel D ₁ / D ₂		END to end	Sch.20			Sch.30			STD			Sch.40			Sch.60					
	D1 mm	D2 mm		H mm	t1 mm	t2 mm	Kg	t1 mm	t2 mm	Kg	t1 mm	t2 mm	Kg	t1 mm	t2 mm	Kg	t1 mm	t2 mm	Kg		
1 × 3/4	33.4	26.7	50.8	—	—	—	—	—	—	3.38	2.87	0.14	3.38	2.87	0.14	—	—	—			
1 1/2 × 3/4	48.3	26.7	63.5	—	—	—	—	—	—	3.68	2.87	0.22	3.68	2.87	0.22	—	—	—			
× 1	—	33.4	63.5	—	—	—	—	—	—	—	3.38	0.24	—	3.38	0.24	—	—	—			
× 1 1/4	—	42.2	63.5	—	—	—	—	—	—	—	3.56	0.26	—	3.56	0.26	—	—	—			
2 × 1	60.3	33.4	76.2	—	—	—	—	—	—	3.91	3.38	0.37	3.91	3.38	0.37	—	—	—			
× 1 1/4	—	42.2	76.2	—	—	—	—	—	—	—	3.56	0.39	—	3.56	0.39	—	—	—			
× 1 1/2	—	48.3	76.2	—	—	—	—	—	—	—	3.68	0.41	—	3.68	0.41	—	—	—			
2 1/2 × 1 1/4	73.0	42.2	88.9	—	—	—	—	—	—	5.16	3.56	0.67	5.16	3.56	0.67	—	—	—			
× 1 1/2	—	48.3	88.9	—	—	—	—	—	—	—	3.68	0.68	—	3.68	0.68	—	—	—			
× 2	—	60.3	88.9	—	—	—	—	—	—	—	3.91	0.73	—	3.91	0.73	—	—	—			
3 × 1 1/2	88.9	48.3	88.9	—	—	—	—	—	—	5.49	3.68	0.86	5.49	3.68	0.86	—	—	—			
× 2	—	60.3	88.9	—	—	—	—	—	—	—	3.91	0.91	—	3.91	0.91	—	—	—			
× 2 1/2	—	73.0	88.9	—	—	—	—	—	—	—	5.16	0.98	—	5.16	0.98	—	—	—			
4 × 2	114.3	60.3	101.6	—	—	—	—	—	—	6.02	3.91	1.44	6.02	3.91	1.44	—	—	—			
× 2 1/2	—	73.0	101.6	—	—	—	—	—	—	—	5.16	1.52	—	5.16	1.52	—	—	—			
× 3	—	88.9	101.6	—	—	—	—	—	—	—	5.49	1.59	—	5.49	1.59	—	—	—			
5 × 2 1/2	141.3	73.0	127.0	—	—	—	—	—	—	6.55	5.16	2.51	6.55	5.16	2.51	—	—	—			
× 3	—	88.9	127.0	—	—	—	—	—	—	—	5.49	2.60	—	5.49	2.60	—	—	—			
× 4	—	114.3	127.0	—	—	—	—	—	—	—	6.02	2.72	—	6.02	2.72	—	—	—			
6 × 3	168.3	88.9	139.7	—	—	—	—	—	—	7.11	5.49	3.63	7.11	5.49	3.63	—	—	—			
× 4	—	114.3	139.7	—	—	—	—	—	—	—	6.02	3.72	—	6.02	3.72	—	—	—			
× 5	—	141.3	139.7	—	—	—	—	—	—	—	6.55	3.93	—	6.55	3.93	—	—	—			
8 × 4	219.1	114.3	152.4	—	—	—	—	—	—	8.18	6.02	5.95	8.18	6.02	5.95	—	—	—			
× 5	—	141.3	152.4	—	—	—	—	—	—	—	6.55	6.08	—	6.55	6.08	—	—	—			
× 6	—	168.3	152.4	—	—	—	—	—	—	—	7.11	6.31	—	7.11	6.31	—	—	—			
10 × 5	273.0	141.3	177.8	—	—	—	—	—	—	9.27	6.55	9.90	9.27	6.55	13.60	—	—	—			
× 6	—	168.3	177.8	—	—	—	—	—	—	—	7.11	10.10	—	7.11	14.20	—	—	—			
× 8	—	219.1	177.8	6.35	6.35	7.89	7.80	7.04	9.62	—	8.18	10.50	—	8.18	15.50	12.70	10.31	1—			
12 × 6	323.9	168.3	203.2	—	—	—	—	—	—	9.53	7.11	14.10	10.31	7.11	16.50	—	—	—			
× 8	—	219.1	203.2	6.35	6.35	10.70	6.38	7.04	14.00	—	8.18	14.60	—	8.18	17.20	14.27	10.31	23.50			
× 10	—	273.0	203.2	—	6.35	11.10	—	7.80	14.00	—	9.27	15.20	—	9.27	17.80	—	12.70	24.30			
14 × 8	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	15.09	10.31	43.10			
× 10	—	273.0	330.2	—	6.35	24.20	—	7.80	29.00	—	9.27	27.40	—	9.27	33.70	—	12.70	45.10			
× 12	—	323.9	330.2	—	6.35	25.60	—	8.83	30.60	—	9.53	28.80	—	10.31	35.60	—	14.27	47.70			
16 × 8	4.06.4	219.1	355.6	7.92	6.35	27.70	9.53	7.04	33.20	9.53	9.18	31.90	12.70	8.18	43.90	16.66	10.31	56.80			
× 10	—	273.0	355.6	—	6.35	28.80	—	7.80	34.50	—	9.27	33.10	—	9.27	45.70	—	12.70	59.00			
× 12	—	323.9	355.6	—	6.35	29.90	—	8.38	35.80	—	9.53	34.30	—	10.31	47.40	—	14.27	61.40			
× 14	—	355.6	355.6	—	7.92	30.50	—	9.53	36.50	—	9.53	35.20	—	11.13	48.30	—	15.09	62.50			

Reducers

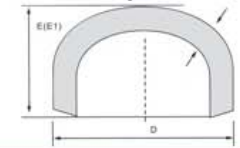
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Nominal Pipe Size inch	Wall Thickness Approx.Weight																				
	xs			Sch.80			Sch.100			Sch.120			Sch.140			Sch.160			XXS		
	t1 mm	t2 mm	Kg	t1 mm	t2 mm	Kg	t1 mm	t2 mm	Kg	t1 mm	t2 mm	Kg	t1 mm	t2 mm	Kg	t1 mm	t2 mm	Kg	t1 mm	t2 mm	Kg
1 x 3/4	4.55	3.91	0.17	4.55	3.91	0.17	-	-	-	-	-	-	-	-	-	6.35	5.56	0.22	-	-	-
1 1/2 x 3/4	5.08	3.91	0.27	5.08	3.91	0.27	-	-	-	-	-	-	-	-	-	7.14	5.56	0.51	10.15	7.82	0.67
x 1	-	4.55	0.31	-	4.55	0.31	-	-	-	-	-	-	-	-	-	-	6.35	0.55	-	9.09	0.73
x 1 1/4	-	4.85	0.33	-	4.85	0.33	-	-	-	-	-	-	-	-	-	-	6.34	0.60	-	9.70	0.79
2 x 1	5.54	4.85	0.45	5.54	4.85	0.45	-	-	-	-	-	-	-	-	-	8.74	6.35	0.94	11.07	9.09	1.14
x 1 1/4	-	4.85	0.53	-	4.85	0.53	-	-	-	-	-	-	-	-	-	-	6.35	0.99	-	9.70	1.20
x 1 1/2	-	5.08	0.54	-	5.08	0.54	-	-	-	-	-	-	-	-	-	-	7.14	1.04	-	10.15	1.26
2 1/2 x 1 1/4	7.01	4.85	0.79	7.01	4.85	0.79	-	-	-	-	-	-	-	-	-	9.53	6.35	1.52	14.02	9.70	2.07
x 1 1/2	-	5.08	0.86	-	5.08	0.86	-	-	-	-	-	-	-	-	-	-	7.14	1.53	-	10.15	2.10
x 2	-	5.54	0.94	-	5.54	0.94	-	-	-	-	-	-	-	-	-	-	8.74	1.65	-	11.07	2.25
3 x 1 1/2	7.62	5.08	7.05	7.62	5.08	7.05	-	-	-	-	-	-	-	-	-	11.13	7.14	2.12	15.24	10.15	2.76
x 2	-	5.54	1.18	-	5.54	1.18	-	-	-	-	-	-	-	-	-	-	8.74	2.23	-	11.07	2.90
x 2 1/2	-	7.01	1.29	-	7.01	1.29	-	-	-	-	-	-	-	-	-	-	9.53	2.40	-	14.02	3.12
4 x 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
x 2 1/2	-	7.01	2.01	-	7.01	2.01	-	-	-	-	-	-	-	-	-	-	9.53	4.21	-	14.02	5.14
x 3	-	7.62	2.13	-	7.62	2.13	-	-	-	-	-	-	-	-	-	-	11.13	4.38	-	15.24	5.35
5 x 2 1/2	9.53	7.01	3.30	9.53	7.01	3.30	-	-	-	-	-	-	-	-	-	15.88	9.53	6.68	19.05	14.02	8.02
x 3	-	7.62	3.55	-	7.62	3.55	-	-	-	-	-	-	-	-	-	-	11.13	7.10	-	15.24	8.31
x 4	-	8.56	3.78	-	8.56	3.78	-	-	-	12.70	11.13	6.09	-	-	-	-	13.49	7.14	-	17.12	8.62
6 x 3	10.97	7.62	5.04	10.97	7.62	5.04	-	-	-	-	-	-	-	-	-	18.26	11.13	9.93	21.95	15.24	11.60
x 4	-	8.56	5.45	-	8.56	5.45	-	-	-	14.27	11.13	8.20	-	-	-	-	13.49	10.22	-	17.12	12.00
x 5	-	9.53	5.72	-	9.53	5.72	-	-	-	-	12.70	8.65	-	-	-	-	15.88	10.78	-	19.05	12.60
8 x 4	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
x 5	-	9.53	8.85	-	9.53	8.85	-	-	-	-	12.70	14.40	-	-	-	-	15.88	17.80	-	19.05	17.20
x 6	-	10.97	9.26	-	10.97	9.26	-	-	-	-	14.27	15.00	-	-	-	-	18.26	18.40	-	21.95	17.90
10 x 5	12.70	9.53	13.60	15.09	9.53	17.6	-	-	-	21.44	12.70	24.40	-	-	-	28.58	15.88	31.60	25.40	19.05	28.40
x 6	-	10.97	14.20	-	1.97	17.90	-	-	-	-	14.27	24.90	-	-	-	-	18.26	32.20	-	21.95	29.00
x 8	-	12.70	15.50	-	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
12 x 6	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
x 8	-	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
x 10	-	12.70	19.80	-	15.09	29.50	-	18.26	35.70	-	21.44	41.70	-	25.40	46.30	-	28.58	53.30	-	25.40	41.70
14 x 8	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	35.71	-	-
x 10	-	12.70	36.10	-	15.09	56.30	-	18.26	69.50	-	21.44	80.10	-	25.40	90.40	-	28.58	100.40	-	-	-
x 12	-	12.70	37.70	-	17.48	59.50	-	21.44	73.30	-	25.40	84.50	-	28.58	95.40	-	33.32	106.00	-	-	-
16 x 8	12.70	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	40.49	-	-
x 10	-	12.70	43.70	-	15.09	75.30	-	18.26	90.60	-	21.44	105.50	-	25.40	123.30	-	28.58	135.30	-	-	-
x 12	-	12.70	45.00	-	17.48	78.20	-	21.44	94.10	-	25.40	109.90	-	28.58	128.10	-	33.32	140.50	-	-	-
x 14	-	12.70	46.30	-	19.05	79.70	-	23.83	95.90	-	27.79	111.90	-	31.75	130.50	-	35.71	143.10	-	-	-
18 x 12	12.70	12.70	44.0	23.83	17.48	83.0	29.36	21.44	-	34.93	25.40	-	39.67	28.58	-	45.23	33.32	-	-	-	-
x 14	-	12.70	47.4	-	19.05	86.4	-	23.83	-	34.93	27.79	-	31.75	-	-	35.71	-	-	-	-	-
x 16	-	12.70	50.1	-	21.44	91.60	-	26.19	-	-	30.96	-	-	36.53	-	40.49	-	-	-	-	-
20 x 14	12.70	12.70	67.4	26.19	19.05	136.0	32.40	23.83	-	38.10	27.79	-	44.45	31.75	-	50.01	35.71	-	-	-	-
x 16	-	12.70	71.1	26.19	21.44	142.0	-	26.19	-	-	30.96	-	-	36.53	-	40.41	-	-	-	-	-
x 18	-	12.70	74.9	-	23.83	150.0	-	29.36	-	-	34.93	-	-	39.67	-	45.23	-	-	-	-	-
22 x 16	12.70	12.70	75.70	28.58	21.44	165.0	34.93	26.19	-	41.28	30.96	-	47.63	36.53	-	53.98	40.49	-	-	-	-
x 18	-	12.70	79.70	-	23.83	174.0	-	29.36	-	-	34.93	-	-	39.67	-	45.23	-	-	-	-	-
x 20	-	12.70	78.30	-	26.19	182.0	-	32.54	-	-	38.10	-	-	44.45	-	50.01	-	-	-	-	-
24 x 18	12.70	12.70	83.90	30.96	23.83	197.0	38.89	29.36	-	46.02	34.93	-	52.37	39.67	-	59.64	45.23	-	-	-	-
x 20	-	12.70	87.90	-	26.19	206.0	-	32.54	-	-	38.10	-	-	44.45	-	50.01	-	-	-	-	-
x 22	-	12.70	91.20	-	28.58	215.0	-	34.93	-	-	41.28	-	-	47.63	-	53.98	-	-	-	-	-

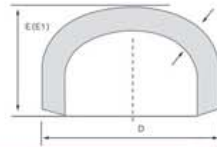
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Nominal Pipe Size inch	Dimensions					Wall Thickness			Approx.Weight
	Outside Diameter at Bevel D		Lenght:E mm	Limit of thickness mm	Lenght:E mm	Sch.NO	t		
	Inch	mm					Inch	mm	kg
1/2	0.840	21.34	25.4	4.57	25.4	5s	0.065	1.65	0.030
						10s	0.083	2.11	0.032
						STD/40 40S	0.109	2.77	0.040
						XS/80 80S	0.147	3.73	0.050
						160	0.188	4.78	-
						XXS	0.294	7.47	-
3/4	1.050	26.67	25.4	3.81	25.4	5s	0.065	1.65	0.040
						10s	0.083	2.11	0.040
						STD/40 40S	0.133	3.38	0.050
						XS/80 80S	0.154	3.91	0.070
						160	0.219	5.56	-
						XXS	0.308	7.82	-
1	1.315	33.40	38.1	4.57	38.1	5s	0.065	1.65	0.053
						10s	0.109	2.77	0.090
						STD/40 40S	0.133	3.38	0.110
						XS/80 80S	0.179	4.55	0.15
						160	0.250	6.35	-
						XXS	0.358	9.09	-
1 1/4	1.660	42.20	38.1	4.83	38.1	5s	0.065	1.65	0.066
						10s	0.109	2.77	0.110
						STD/40 40S	0.140	3.56	0.141
						XS/80 80S	0.191	4.85	0.200
						160	0.250	6.35	-
						XXS	0.382	9.70	-
1 1/2	1.900	48.30	38.1	5.08	38.1	5s	0.065	1.65	0.078
						10s	0.109	2.77	0.140
						STD/40 40S	0.145	3.68	0.170
						XS/80 80S	0.200	5.08	0.240
						160	0.281	7.14	0.350
						XXS	0.400	10.16	0.500
2	2.375	60.30	38.1	5.59	44.5	5s	0.065	1.65	0.099
						10s	0.109	2.77	0.190
						STD/40 40S	0.154	3.91	0.240
						XS/80 80S	0.218	5.54	0.330
						160	0.344	8.74	0.540
						XXS	0.436	11.07	0.680
2 1/2	2.870	73.00	38.1	7.11	50.8	5s	0.083	2.11	0.169
						10s	0.120	3.05	0.240
						STD/40 40S	0.203	5.16	0.420
						XS/80 80S	0.276	7.01	0.570
						160	0.375	9.53	0.770
						XXS	0.552	14.02	1.130
3	3.500	89.00	50.8	7.62	63.5	5s	0.083	2.11	0.254
						10s	0.120	3.05	0.400
						STD/40 40S	0.216	5.49	0.670
						XS/80 80S	0.300	7.62	0.920
						160	0.438	11.25	1.400
						XXS	0.600	15.24	1.920
4	4.500	114.30	63.5	8.64	76.2	5s	0.083	2.11	0.410
						10s	0.120	3.05	0.594
						STD/40 40S	0.237	6.02	1.170
						XS/80 80S	0.367	8.56	1.680
						120	0.438	11.13	2.160
						160	0.531	13.49	2.760
XXS	0.674	17.12	3.510						
5	5.563	141.30	76.2	9.65	88.9	5s	0.109	2.77	0.817
						10s	0.134	3.40	1.000
						STD/40 40S	0.258	6.55	1.930
						XS/80 80S	0.375	9.53	2.810
						120	0.500	12.70	3.740
						160	0.625	15.88	4.850
XXS	0.750	19.05	5.820						
6	6.625	168.30	88.9	10.92	101.6	5s	0.109	2.77	1.130
						10s	0.134	3.40	1.600
						STD/40 40S	0.280	7.11	2.900
						XS/80 80S	0.432	10.97	4.470
						120	0.562	14.27	5.820
						160	0.719	18.26	7.810
XXS	0.864	21.95	9.380						

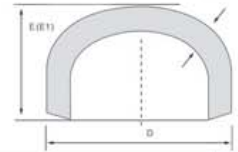
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Nominal Pipe Size inch	Dimensins					WallThickness			Approx.Weight
	Outside Diameter at Bevel : D		Length: mm	Limit of thickness mm	Length: E mm	Sch. NO.	t		
							inch	mm	
	Inch	mm					kg		
8	8.625	219.1	101.6	12.7	127.0	5S	0.109	2.77	1.76
						10S	0.148	3.76	2.50
						STD/40 40S	0.322	8.18	5.19
						XS80 80S	0.500	12.70	8.05
						20	0.250	6.35	
						60	0.406	10.31	
						100	0.594	15.09	
						120	0.719	18.26	11.60
						140	0.812	20.62	15.20
						160	0.906	23.01	14.70
XXS	0.875								
10	10.75	273	127.0	12.7	152.4	5S	0.134	3.404	3.36
						10S	0.165	4.191	4.14
						80/80S 60	0.500	12.70	16.8
						STD/40 40S	0.365	9.271	9.15
						xs	0.594	15.09	12.50
						20	0.250	6.35	
						100	0.719	18.26	
						120	0.844	21.44	23.90
						140/XXS	1.000	25.40	25.70
						160	1.125	28.58	28.90
12	12.750	323.9	152.4	12.7	177.8	5S	0.156	3.96	5.47
						10S	0.180	4.572	6.50
						STD/40S	0.375	9.53	13.30
						XS/80S	0.500	12.70	17.70
						20	0.250	6.35	9.43
						40	0.406	10.31	14.00
						80	0.688	14.27	26.40
						100	0.844	17.48	
						120	1.000	21.44	
						140	1.125	28.58	36.40
160	1.312	33.32	47.70						
14	14.000	355.6	165.1	12.7	190.5	5S	0.156	3.96	5.66
						10S	0.188	4.78	15.90
						STD	0.375	9.53	15.90
						20	0.312	7.92	18.60
						40	0.438	11.13	21.20
						XS	0.500	12.70	26.70
						60	0.594	15.09	34.90
						80	0.750	19.05	35.20
						100	0.938	23.825	99.00
						120	1.094	27.79	
140	1.250	31.75							
160	1.406	35.71	61.20						
16	16.000	406.4	177.8	12.7	203.2	5S	0.165	4.19	6.60
						10S	0.188	4.78	7.53
						STD	0.375	9.53	20.00
						XS/40	0.500	12.70	26.70
						20	0.312	7.92	12.50
						60	0.656	16.66	49.00
						80	0.844	21.44	49.10
						100	1.031	26.19	111.00
						120	1.219	30.96	
						140	1.438	36.53	130.00
160	1.594	40.48							
18	18.000	457.0	203.2	12.7	228.6	5s	0.165	4.19	7.52
						10S	0.188	4.78	8.58
						STD	0.375	9.53	25.60
						xs	0.500	12.70	34.10
						20	0.312	7.92	21.20
						40	0.562	14.27	41.40
						60	0.750	19.05	
						80	0.938	23.83	69.10
						100	1.156	29.36	
						120	1.375	34.93	125.00
140	1.562	39.67							
160	1.781	45.24							

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Nominal Pipe Size inch	Dimensins					WallThickness			Approx.Weight
	Outside Diameter at Bevel : D		Length: E mm	Limit of thickness mm	Length: E mm	Sch. NO.	t		
	Inch 英寸	mm					inch 英寸	mm	kg
20	20.000	508.0	228.6	12.7	254.0	5S	0.168	4.27	10.10
						10S	0.218	5.54	11.70
						STD/20	0.375	9.53	31.90
						XS	0.500	12.70	42.50
						40	0.594	15.09	54.10
						60	0.812	20.62	54.10
						80	1.031	26.19	93.70
						100	1.281	32.54	136.00
						120	1.500	38.10	
						140	1.750	44.45	
160	1.969	50.01	179.00						
22	22.000	559.0	254.0	12.7	254.0	5S	0.188	4.78	12.10
						10S	0.218	5.54	22.60
						STD/20	0.375	9.53	38.80
						XS	0.500	12.70	51.70
						60	0.875	22.23	
						80	1.125	28.58	116.00
						100	1.375	34.93	
						120	1.625	41.28	168.00
						140	1.875	47.63	
						160	2.125	53.98	219.00
24	24.000	610.0	266.7	12.7	304.8	5S	0.218	5.54	
						10S	0.250	6.34	
						SDP/20	0.375	9.53	45.10
						xs	0.500	12.70	60.10
						40	0.688	17.48	90.10
						60	0.969	24.61	
						80	1.219	30.96	160.00
						100	1.531	38.89	
						120	1.812	46.02	
						140	2.062	52.37	
160	2.344	59.54	307.00						
26	26.000	660.0	266.7	—	—	STD	0.375	9.53	50.50
						XS	0.500	12.70	67.30
28	28.000	711.0	266.7	—	—	STD	0.375	9.53	56.20
						XS	0.500	12.70	74.90
30	30.000	762.0	266.7	—	—	5S	0.250	6.35	
						10S	0.312	7.92	
						STD	0.375	9.53	62.10
						XS	0.500	12.70	82.80
32	32.000	813.0	266.7	—	—	STD	0.375	9.53	68.40
						XS	0.688	17.48	126.00
						40	0.500	12.70	91.20
34	34.000	864.0	266.7	—	—	STD	0.375	9.53	75.00
						XS	0.500	12.70	100.00
						40	0.688	17.48	138.00
36	36.000	914.0	266.7	—	—	STD	0.375	9.53	81.90
						XS	0.500	12.70	109.00
						40	0.750	19.05	164.00
38	38.000	965.2	304.8	—	—	STD	0.375	9.53	94.70
						XS	0.500	12.70	126.00
40	40.000	1016.0	304.8	—	—	STD	0.375	9.53	102.00
						XS	0.500	12.70	137.00
42	42.000	1066.8	304.8	—	—	STD	0.375	9.53	110.00
						XS	0.500	12.70	147.00
44	44.000	1117.6	342.9	—	—	STD	0.375	9.53	126.00
						XS	0.500	12.70	167.00
46	46.000	1168.4	342.9	—	—	STD	0.375	9.53	134.00
						XS	0.500	12.70	179.00
48	48.000	1219.2	342.9	—	—	STD	0.375	9.53	143.00
						XS	0.500	12.70	191.00