

WROUGHT CARBON STEEL WALL THICKNESS STANDARDS

TABLE 1

ASME B36.10M-1996

NOMINAL PIPE SIZE		OUTSIDE DIAMETER	NOMINAL WALL THICKNESS													NOMINAL PIPE SIZE	
A	B	ASME	SCH10	SCH20	SCH30	STD	SCH40	SCH60	XS	SCH80	SCH100	SCH120	SCH140	SCH160	XXS	A	B
15	1/2"	0.840	0.083	—	0.095	0.109	0.109	—	0.147	0.147	—	—	—	0.188	0.294	15	1/2"
20	3/4"	1.050	0.083	—	0.095	0.113	0.113	—	0.154	0.154	—	—	—	0.219	0.308	20	3/4"
25	1"	1.315	0.109	—	0.114	—	—	—	0.179	0.179	—	—	—	0.250	0.358	25	1"
32	1 1/4"	1.660	0.109	—	0.117	0.140	0.140	—	0.191	0.191	—	—	—	0.250	0.382	32	1 1/4"
40	1 1/2"	1.900	0.109	—	0.125	0.145	0.145	—	0.200	0.200	—	—	—	0.281	0.400	40	1 1/2"
50	2"	2.375	0.109	—	0.155	0.154	0.154	—	0.218	0.218	—	—	—	0.344	0.436	50	2"
65	2 1/2"	2.875	0.120	—	0.188	0.203	0.203	—	0.276	0.276	—	—	—	0.375	0.552	65	2 1/2"
80	3"	3.500	0.120	—	0.188	0.216	0.216	—	0.300	0.300	—	—	—	0.438	0.600	80	3"
90	3 1/2"	4.000	0.120	—	0.188	0.226	0.226	—	0.318	0.318	—	—	—	—	—	90	3 1/2"
100	4"	4.500	0.120	—	0.188	0.237	0.237	—	0.337	0.337	—	0.438	—	0.531	0.674	100	4"
125	5"	5.563	0.134	—	—	0.258	0.258	—	0.375	0.375	—	0.500	—	0.625	0.750	125	5"
150	6"	6.625	0.134	—	—	0.280	0.280	—	0.432	0.432	—	0.562	—	0.719	0.864	150	6"
200	8"	8.625	0.148	0.250	0.277	0.322	0.322	0.406	0.500	0.500	0.594	0.719	0.812	0.906	0.875	200	8"
250	10"	10.750	0.165	0.250	0.307	0.365	0.365	0.500	0.500	0.594	0.719	0.844	1.000	1.125	1.000	250	10"
300	12"	12.750	0.180	0.250	0.330	0.375	0.406	0.562	0.500	0.688	0.844	1.000	1.125	1.312	1.000	300	12"
350	14"	14.000	0.250	0.312	0.375	0.375	0.438	0.594	0.500	0.750	0.938	1.094	1.250	1.406	—	350	14"
400	16"	16.000	0.250	0.312	0.375	0.375	0.500	0.656	0.500	0.844	1.031	1.219	1.438	1.594	—	400	16"
450	18"	18.000	0.250	0.312	0.438	0.375	0.562	0.750	0.500	0.938	1.156	1.375	1.562	1.781	—	450	18"
500	20"	20.000	0.250	0.375	0.500	0.375	0.594	0.812	0.500	1.031	1.281	1.500	1.750	1.969	—	500	20"
550	22"	22.000	0.250	0.375	0.500	0.375	—	0.875	0.500	1.125	1.375	1.625	1.875	2.125	—	550	22"
600	24"	24.000	0.250	0.375	0.562	0.375	0.688	0.969	0.500	1.219	1.531	1.812	2.062	2.344	—	600	24"
650	26"	26.000	0.312	0.500	—	0.375	—	—	0.500	—	—	—	—	—	—	650	26"
700	28"	28.000	0.312	0.500	0.625	0.375	—	—	0.500	—	—	—	—	—	—	700	28"
750	30"	30.000	0.312	0.500	0.625	0.375	—	—	0.500	—	—	—	—	—	—	750	30"
800	32"	32.000	0.312	0.500	0.625	0.375	0.688	—	0.500	—	—	—	—	—	—	800	32"
850	34"	34.000	0.312	0.500	0.625	0.375	0.688	—	0.500	—	—	—	—	—	—	850	34"
900	36"	36.000	0.312	0.500	0.625	0.375	0.750	—	0.500	—	—	—	—	—	—	900	36"
950	38"	38.000	—	—	—	0.375	—	—	0.500	—	—	—	—	—	—	950	38"
1000	40"	40.000	—	—	—	0.375	—	—	0.500	—	—	—	—	—	—	1000	40"
1050	42"	42.000	—	—	—	0.375	—	—	0.500	—	—	—	—	—	—	1050	42"
1100	44"	44.000	—	—	—	0.375	—	—	0.500	—	—	—	—	—	—	1100	44"
1150	46"	46.000	—	—	—	0.375	—	—	0.500	—	—	—	—	—	—	1150	46"
1200	48"	48.000	—	—	—	0.375	—	—	0.500	—	—	—	—	—	—	1200	48"

ALL DIMENSIONS ARE IN INCHES

LONG RADIUS RETURNS

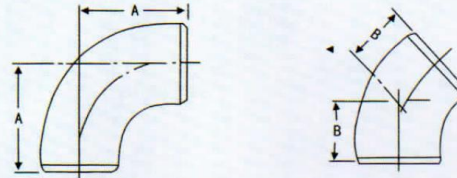


TABLE 3

ASME B16.9-1993

Nominal Pipe Size (NPS)	Outside Diameter at Bevel D		Center-to-End						Approx. Weight (kg)					
			90 deg. Elbows A		45 deg. Elbows B				90deg. Elbows			45deg. Elbows		
			INCH	MM	INCH	MM	INCH	MM	STD	XS	XXS	STD	XS	XXS
1/2	0.84	21	1.50	38	0.62	16	0.078	0.099	—	0.039	0.049	—	—	—
3/4	1.05	27	1.12	29	0.44	11	0.103	0.134	—	0.052	0.067	—	—	—
1	1.32	33	1.50	38	0.88	22	0.154	0.196	—	0.077	0.089	—	—	—
1 1/4	1.66	42	1.88	48	1.00	25	0.260	0.341	0.589	0.130	0.170	0.295	—	—
1 1/2	1.90	48	2.25	57	1.12	29	0.368	0.492	0.868	0.184	0.246	0.434	—	—
2	2.38	60	3.00	76	1.38	35	0.652	0.891	1.62	0.326	0.445	0.808	—	—
2 1/2	2.88	73	3.75	95	1.75	44	1.37	1.79	3.22	0.683	0.895	1.61	—	—
3	3.50	89	4.50	114	2.00	51	2.04	2.74	4.97	1.02	1.37	2.49	—	—
3 1/2	4.00	102	5.25	133	2.25	57	2.82	3.91	—	1.41	1.95	—	—	—
4	4.50	114	6.00	152	2.50	64	3.84	5.36	9.81	1.92	2.68	4.90	—	—
5	5.56	141	7.50	190	3.12	79	6.48	9.13	16.9	3.24	4.57	8.46	—	—
6	6.62	168	9.00	229	3.75	95	9.94	15.0	27.8	4.97	7.50	13.9	—	—
8	8.62	219	12.00	305	5.00	127	20.1	30.5	50.8	10.1	15.3	25.4	—	—
10	10.75	273	15.00	381	6.25	159	35.4	47.7	—	17.7	23.9	—	—	—
12	12.75	324	18.00	457	7.50	190	52.0	68.7	—	26.0	34.4	—	—	—
14	14.00	356	21.00	533	8.75	222	67.9	89.9	—	34.0	45.0	—	—	—
16	16.00	406	24.00	610	10.00	254	89.0	118	—	44.5	59.0	—	—	—
18	18.00	457	27.00	686	11.25	286	113	150	—	56.5	74.9	—	—	—
20	20.00	508	30.00	762	12.50	318	140	186	—	69.9	92.8	—	—	—
22	22.00	559	33.00	838	13.50	343	169	225	—	84.7	113	—	—	—
24	24.00	610	36.00	914	15.00	381	202	268	—	101	134	—	—	—
26	26.00	660	39.00	991	16.00	406	237	315	—	1149	158	—	—	—
28	28.00	711	42.00	1067	17.25	438	275	366	—	138	183	—	—	—
30	30.00	762	45.00	1143	18.50	470	316	421	—	158	211	—	—	—
32	32.00	813	48.00	1219	19.75	502	360	480	—	180	240	—	—	—
34	34.00	864	51.00	1295	21.00	533	407	542	—	203	271	—	—	—
36	36.00	914	54.00	1372	22.25	565	457	608	—	228	304	—	—	—
38	38.00	965	57.00	1448	23.62	600	509	678	—	254	339	—	—	—
40	40.00	1016	60.00	1524	24.88	632	564	752	—	282	376	—	—	—
42	42.00	1067	63.00	1600	26.00	660	622	828	—	311	414	—	—	—
44	44.00	1118	66.00	1676	27.38	695	683	911	—	342	455	—	—	—
46	46.88	1168	69.00	1753	28.62	727	—	—	—	—	—	—	—	—
48	48.00	1219	72.00	1829	29.88	759	814	1085	—	407	542	—	—	—

GENERAL NOTE: For Wall Thickness see Table 1 & Table 2.

LONG RADIUS RETURNS

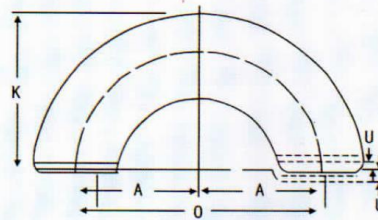


TABLE 4

ASME B16.9-1993

Nominal Pipe Size (NPS)	Outside Diameter at Bevel D		Center-to- Center O		Back-to- Face K		Approx. Weight (kg)		
	INCH	MM	INCH	MM	INCH	MM	STD	XS	-
1/2	0.84	21	3.00	76	1.88	48	0.159	0.204	-
3/4	1.05	27	2.25	57	1.69	43	0.159	0.204	-
1	1.32	33	3.00	76	2.19	56	0.313	0.400	-
1 1/4	1.66	42	3.75	95	2.75	70	0.527	0.690	-
1 1/2	1.90	48	4.50	114	3.25	83	0.758	1.00	-
2	2.38	60	6.00	152	4.19	106	1.36	1.85	-
2 1/2	2.88	73	7.50	191	5.19	132	2.67	3.50	-
3	3.50	89	9.00	229	6.25	159	4.19	5.63	-
3 1/2	4.00	102	10.50	267	7.25	184	5.90	7.99	-
4	4.50	114	12.00	305	8.25	210	7.95	11.0	-
5	5.56	141	15.00	381	10.31	262	13.5	19.0	-
6	6.62	168	18.00	457	12.31	313	20.9	31.3	-
8	8.62	219	24.00	610	16.31	414	41.9	63.6	-
10	10.75	273	30.00	762	20.38	518	74.0	99.7	-
12	12.75	324	36.00	914	24.38	619	108.7	143.6	-
14	14.00	356	42.00	1067	28.00	711	141.9	187.9	-
16	16.00	406	48.00	1219	32.00	813	186.0	246.6	-
18	18.00	457	54.00	1372	36.00	914	236.2	313.5	-
20	20.00	508	60.00	1524	40.00	1016	292.6	388.7	-
22	22.00	559	66.00	1676	44.00	1118	353.2	470.3	-
24	24.00	610	72.00	1829	48.00	1219	422.2	560.1	-

GENERAL NOTE: For Wall Thickness see Table 1 & Table 2.

SHORT RADIUS ELBOWS & 180 deg RETURNS

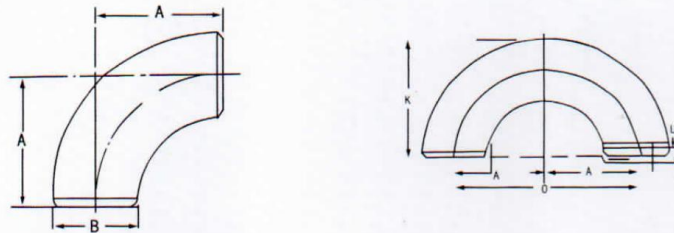


TABLE 5

ASME B16.28-1994

Nominal Pipe Size	Outside Diameter at Bevel D		90 deg Elbows		180 deg Returns				Approx. Weight (kg)					
			Center-to- End A		Center-to- Center O		Back-to- Face K		90 deg ELBOWS			180 deg RETURNS		
(NPS)	INCH	MM	INCH	MM	INCH	MM	INCH	MM	STD	XS	XXS	STD	XS	XXS
1	1.32	33	1.00	25	2.00	51	1.62	41	0.102	-	-	0.209	-	-
1 1/4	1.66	42	1.25	32	2.50	64	2.06	52	0.174	-	-	0.350	-	-
1 1/2	1.90	48	1.50	38	3.00	76	2.44	62	0.245	0.328	-	0.504	0.663	-
2	2.38	60	2.00	51	4.00	102	3.19	81	0.434	0.594	1.08	0.899	1.23	-
2 1/2	2.88	73	2.50	64	5.00	127	3.94	100	0.909	1.19	2.14	1.78	2.32	-
3	3.50	89	3.00	76	6.00	152	4.75	121	1.36	1.83	3.31	2.78	3.69	-
3 1/2	4.00	102	3.50	89	7.00	178	5.50	140	1.88	2.61	-	3.90	5.31	-
4	4.50	114	4.00	102	8.00	203	6.25	159	2.56	3.58	6.54	5.27	7.31	-
5	5.56	141	5.00	127	10.00	254	7.75	197	4.32	6.09	11.3	8.94	12.6	-
6	6.62	168	6.00	152	12.00	305	9.31	237	6.63	10.0	18.5	13.9	20.7	-
8	8.62	219	8.00	203	16.00	406	12.31	313	13.4	20.3	35.5	28.0	42.0	-
10	10.75	273	10.00	254	20.00	508	15.38	391	23.6	31.8	63.6	49.5	66.7	-
12	12.75	324	12.00	305	24.00	610	18.38	467	34.6	45.8	91.6	70.5	91.8	-
14	14.00	356	14.00	356	28.00	711	21.00	533	45.3	60.0	-	90.6	122.8	-
16	16.00	406	16.00	406	32.00	813	24.00	610	59.1	78.3	-	118.4	160	-
18	18.00	457	18.00	457	36.00	914	27.00	686	75	99.9	-	142	200	-
20	20.00	508	20.00	508	40.00	1016	30.00	762	93.1	124	-	186	248	-
22	22.00	559	22.00	559	44.00	1118	33.00	838	113	150	-	226	298	-
24	24.00	610	24.00	610	48.00	1219	36.00	914	135	179	-	270	358	-

GENERAL NOTE: For Wall Thickness see Table 1 & Table 2.

STRAIGHT TEES & CAPS

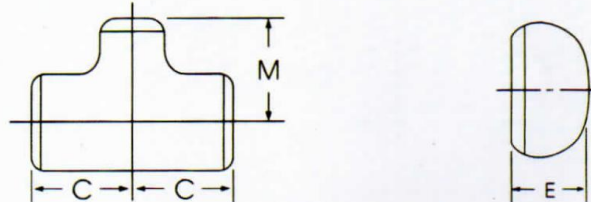


TABLE 6

ASME B16.9-1993

Nominal Pipe Size (NPS)	Outside Diameter at Bevel D	Center-to-End						Approx. Weight (kg)						
		Run C		Outlet M		Length E		STRAIGHT TEES			CAPS			
		INCH	MM	INCH	MM	INCH	MM	STD	XS	X/S	STD	XS	XXS	
1/2	0.84	21	1.00	25	1.00	25	1.00	25	0.114	0.163	-	0.047	0.062	XXS
3/4	1.05	27	1.12	29	1.12	29	1.00	25	0.168	0.209	-	0.059	0.073	-
1	1.32	33	1.50	38	1.50	38	1.50	38	0.345	0.422	-	0.104	0.127	-
1 1/4	1.66	42	1.88	48	1.88	48	1.50	38	0.608	0.745	-	0.141	0.177	-
1 1/2	1.90	48	2.25	57	2.25	57	1.50	38	0.917	1.126	-	0.168	0.218	-
2	2.38	60	2.50	64	2.50	64	1.50	38	1.34	1.693	-	0.232	0.304	-
2 1/2	2.88	73	3.00	76	3.00	76	1.50	38	2.37	2.92	4.54	0.368	0.463	-
3	3.50	89	3.38	86	3.38	86	2.00	51	3.38	4.29	7.63	0.640	0.835	-
3 1/2	4.00	102	3.75	95	3.75	95	2.50	64	4.47	5.72	9.63	0.962	1.29	-
4	4.50	114	4.12	105	4.12	105	2.50	64	5.72	7.45	15.5	1.16	1.55	-
5	5.56	141	4.88	124	4.88	124	3.00	76	8.99	12.0	23.9	1.91	2.61	-
6	6.62	168	5.62	143	5.62	143	3.50	89	13.3	19.1	38.6	2.91	4.20	-
8	8.62	219	7.00	178	7.00	178	4.00	102	24.4	34.7	69.0	5.13	7.40	-
10	10.75	273	8.50	216	8.50	216	5.00	127	41.4	53.6	-	9.08	11.9	-
12	12.75	324	10.00	254	10.00	254	6.00	152	53.6	69.5	-	13.4	17.3	-
14	14.00	356	11.00	279	11.00	279	6.50	165	61.7	80.8	-	16.0	20.8	-
16	16.00	406	12.00	305	12.00	305	7.00	178	66.7	87.7	-	20.1	26.2	-
18	18.00	457	13.50	343	13.50	343	8.00	203	83.9	111	-	25.9	33.9	-
20	20.00	508	15.00	381	15.00	381	9.00	229	104	138	-	32.6	42.6	-
22	22.00	559	16.50	419	16.50	419	10.00	254	126	167	-	38.7	51.7	-
24	24.00	610	17.00	432	17.00	432	10.50	267	139	185	-	45.0	60.1	-
26	26.00	660	19.50	495	19.50	495	10.50	267	176	234	-	50.3	67.3	-
28	28.00	711	20.50	521	20.50	521	10.50	267	192	256	-	56.0	74.9	-
30	30.00	762	22.00	559	22.00	559	10.50	267	228	304	-	62.0	82.9	-
32	32.00	812	23.50	597	23.50	597	10.50	267	249	331	-	68.3	91.2	-
34	34.00	864	25.00	635	25.00	635	10.50	267	295	393	-	74.8	100	-
36	36.00	914	26.50	673	26.50	673	10.50	267	334	441	-	81.7	109	-
38	38.00	965	28.00	711	28.00	711	12.00	305	358	549	-	84	126	-
40	40.00	1016	29.50	749	29.50	749	12.00	305	383	511	-	102	137	-
42	42.00	1067	30.00	762	30.00	762	12.00	305	416	557	-	110	147	-
44	44.00	1118	32.00	813	30.00	762	13.50	343	448	597	-	125	167	-
46	46.00	1168	33.50	851	31.50	800	13.50	343	483	646	-	134	179	-
48	48.00	1219	35.00	889	33.00	838	13.50	343	518	691	-	143	191	-

GENERAL NOTE: For Wall Thickness see Table 1 & Table 2.

REDUCING OUTLET TEES & REDUCERS

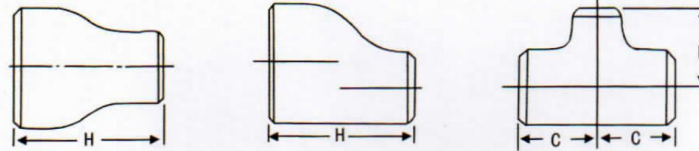


TABLE 7

ASME B16.9-1993

Nominal Pipe Size (NPS)	Outside Diameter at Bevel				Center-to-End				End-to-End		Approx. Weight (kg)					
	D1		D2		Run C		Outlet M		H		Reducing Outlet Tees			Reducers		
	INCH	MM	INCH	MM	INCH	MM	INCH	MM	INCH	MM	STD	XS	XSS	STD	XS	XSS
1/2X1/2	1.05	27	0.84	21	1.12	29	1.12	29	1.50	38	0.16	0.20	-	0.059	0.075	-
1X1/2	1.32	33	1.05	27	1.50	38	1.50	38	2.00	51	0.32	0.40	-	0.116	0.147	0.24
1X1/2	1.32	33	0.84	21	1.50	38	1.50	38	2.00	51	0.30	0.39	-	0.105	0.133	0.21
1 1/2X1	1.66	42	1.32	33	1.88	48	1.88	48	2.00	51	0.57	0.71	-	0.157	0.206	0.35
1 1/2X1/2	1.66	42	1.05	27	1.88	48	1.88	48	2.00	51	0.54	0.67	-	0.143	0.187	0.31
1 1/2X1/2	1.66	42	0.84	21	1.88	48	1.88	48	2.00	51	0.51	0.65	-	0.130	0.170	-
1 1/2X1 1/4	1.90	48	1.66	42	2.25	57	2.25	57	2.50	64	0.82	1.10	-	0.243	0.324	0.56
1 1/2X1	1.90	48	1.32	33	2.25	57	2.25	57	2.50	64	0.79	1.06	-	0.219	0.291	0.50
1 1/2X1/2	1.90	48	1.05	27	2.25	57	2.25	57	2.50	64	0.75	1.00	-	0.201	0.266	0.44
1 1/2X1/2	1.90	48	0.84	21	2.25	57	2.25	57	2.50	64	0.72	0.95	-	0.191	0.249	-
2X1 1/2	2.38	60	1.90	48	2.50	64	2.38	60	3.00	76	1.19	1.63	-	0.372	0.508	0.90
2X1 1/2	2.38	60	1.66	42	2.50	64	2.25	57	3.00	76	1.11	1.52	-	0.352	0.479	0.85
2X1	2.38	60	1.32	33	2.50	64	2.00	51	3.00	76	1.07	1.46	-	0.322	0.438	0.76
2X1/2	2.38	60	1.05	27	2.50	64	1.75	44	3.00	76	1.01	1.38	-	0.290	0.412	-
2 1/2X2	2.88	73	2.38	60	3.00	76	2.75	70	3.50	89	2.13	2.81	5.62	0.724	0.946	1.68
2 1/2X1 1/2	2.88	73	1.90	48	3.00	76	2.62	67	3.50	89	2.05	2.70	5.40	0.661	0.861	1.51
2 1/2X1 1/4	2.88	73	1.66	42	3.00	76	2.50	64	3.50	89	2.01	2.64	-	0.630	0.820	1.42
2 1/2X1	2.88	73	1.32	33	3.00	76	2.25	57	3.50	89	1.96	2.57	-	0.582	0.759	-
3X2 1/2	3.50	89	2.88	73	3.38	86	3.25	83	3.50	89	3.28	4.19	8.38	0.933	1.25	2.25
3X2	3.50	89	2.38	60	3.38	86	3.00	76	3.50	89	3.12	3.89	7.78	0.846	1.13	2.01
3X1 1/2	3.50	89	1.90	48	3.38	86	2.88	73	3.50	89	2.88	3.78	-	0.783	1.04	1.83
3X1 1/4	3.50	89	1.66	42	3.38	86	2.75	70	3.50	89	2.81	3.73	-	0.750	1.00	-
3 1/2X3	4.00	102	3.50	89	3.75	95	3.62	92	4.00	102	4.32	5.66	-	1.28	1.77	-
3 1/2X2 1/2	4.00	102	2.88	73	3.75	95	3.50	89	4.00	102	4.14	5.47	-	1.23	1.65	-
3 1/2X2	4.00	102	2.38	60	3.75	95	3.25	83	4.00	102	3.98	5.18	-	1.10	1.51	-
3 1/2X1 1/2	4.00	102	1.90	48	3.75	95	3.12	79	4.00	102	3.74	5.07	-	1.02	1.41	-
3 1/2X1 1/4	4.00	102	1.66	42	-	-	-	-	4.00	102	-	-	-	0.98	1.35	-
4X3 1/2	4.50	114	4.00	102	4.12	105	4.00	102	4.00	102	5.62	7.26	-	1.54	2.14	-
4X3	4.50	114	3.50	89	4.12	105	3.88	98	4.00	102	5.40	7.03	14.06	1.45	2.02	3.65
4X2 1/2	4.50	114	2.88	73	4.12	105	3.75	95	4.00	102	5.22	6.73	13.46	1.37	1.90	3.41
4X2	4.50	114	2.38	60	4.12	105	3.50	89	4.00	102	5.05	6.62	13.24	1.27	1.76	3.11
4X1 1/2	4.50	114	1.90	48	4.12	105	3.38	86	4.00	102	4.81	6.51	-	1.19	1.65	-
5X4	5.56	141	4.50	114	4.88	124	4.62	117	5.00	127	8.36	11.8	23.6	2.50	3.52	6.47
5X3 1/2	5.56	141	4.00	102	4.88	124	4.50	114	5.00	127	8.13	11.4	-	2.38	3.34	-
5X3	5.56	141	3.50	89	4.88	124	4.38	111	5.00	127	7.95	11.2	22.4	2.27	3.18	5.78
5X2 1/2	5.56	141	2.88	73	4.88	124	4.25	108	5.00	127	7.79	10.9	-	2.16	3.02	5.46
5X2	5.56	141	2.38	60	4.88	124	4.12	105	5.00	127	7.58	10.7	-	2.02	2.82	-

GENERAL NOTE: For Wall Thickness see Table 1 & Table 2.

REDUCING OUTLET TEES & REDUCERS

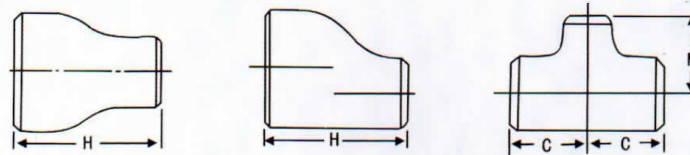


TABLE 7 (CONT'D)

ASME B16.9-1993

Nominal Pipe Size (NPS)	Outside Diameter at Bevel				Center-to-End				End-to-End H		Approx. Weight (kg)					
	D ₁		D ₂		Run C		Outlet M				Reducing Outlet Tees			Reducers		
	INCH	MM	INCH	MM	INCH	MM	INCH	MM	INCH	MM	STD	XS	XXS	STD	XS	XXS
6X5	6.62	168	5.56	141	5.62	143	5.38	137	5.50	140	12.4	18.5	37.0	3.57	5.38	9.89
6X4	6.62	168	4.50	114	5.62	143	5.12	130	5.50	140	11.8	17.7	35.4	3.30	4.96	8.98
6X3 1/2	6.62	168	4.00	102	5.62	143	5.00	127	5.50	140	11.6	17.4	—	3.17	4.76	—
6X3	6.62	168	3.50	89	5.62	143	4.88	124	5.50	140	11.4	17.2	34.4	3.04	4.56	8.21
6X2 1/2	6.62	168	2.88	73	5.62	143	4.75	121	5.50	140	11.3	16.9	—	2.91	4.36	7.83
6X2	8.62	219	6.62	168	7.00	178	6.62	168	6.00	152	22.7	30.2	60.4	5.71	8.61	14.3
6X1 1/2	8.62	219	5.56	141	7.00	178	6.38	162	6.00	152	22.0	29.3	58.6	5.40	8.13	13.4
6X1	8.62	219	4.50	114	7.00	178	6.12	156	6.00	152	21.4	28.5	57.0	5.10	7.67	12.6
6X3/4	8.62	219	4.00	102	7.00	178	6.00	152	6.00	152	21.0	27.9	—	4.96	7.45	—
10X8	10.75	273	8.62	219	8.50	216	8.00	203	7.00	178	38.8	51.6	—	9.58	12.9	—
10X6	10.75	273	6.62	168	8.50	216	7.62	194	7.00	178	37.1	49.3	—	8.78	11.8	—
10X5	10.75	273	5.56	141	8.50	216	7.50	191	7.00	178	36.5	48.5	—	8.42	11.3	—
10X4	10.75	273	4.50	114	8.50	216	7.25	184	7.00	178	35.9	47.7	—	8.05	10.71	—
12X10	12.75	324	0.75	273	10.00	254	9.50	241	8.00	203	50.5	67.7	—	13.6	18.0	—
12X8	12.75	324	8.62	219	10.00	254	9.00	229	8.00	203	48.3	64.7	—	12.7	16.7	—
12X6	12.75	324	6.62	168	10.00	254	8.62	219	8.00	203	46.6	62.4	—	11.8	15.6	—
12X5	12.75	324	5.56	141	10.00	254	8.50	216	8.00	203	46.0	61.6	—	11.3	15.0	—
14X12	14.00	356	12.75	324	11.00	279	10.62	270	13.00	330	58.4	78.3	—	25.4	33.6	—
14X10	14.00	356	10.75	273	11.00	279	10.12	257	13.00	330	55.0	73.7	—	23.6	31.2	—
14X8	14.00	356	8.62	219	11.00	279	9.75	248	13.00	330	52.6	70.5	—	21.8	28.9	—
14X6	14.00	356	6.62	168	11.00	279	9.38	238	13.00	330	50.8	68.1	—	19.8	26.3	—
16X14	16.00	406	14.00	356	12.00	305	12.00	305	14.00	356	63.3	84.8	—	31.0	41.1	—
16X12	16.00	406	12.75	324	12.00	305	11.62	295	14.00	356	61.1	81.9	—	29.6	39.2	—
16X10	16.00	406	10.75	273	12.00	305	11.12	283	14.00	356	59.2	79.3	—	27.8	36.8	—
16X8	16.00	406	8.62	219	12.00	305	10.75	273	14.00	356	58.0	77.7	—	24.7	32.9	—
16X6	16.00	406	6.62	168	12.00	305	10.38	264	—	—	56.6	75.8	—	—	—	—
18X16	18.00	457	16.00	406	13.50	343	13.00	330	15.00	381	78.9	105	—	37.8	50.1	—
18X14	18.00	457	14.00	356	13.50	343	13.00	330	15.00	381	78.4	105	—	35.7	47.4	—
18X12	18.00	457	12.75	324	13.50	343	12.62	321	15.00	381	78.1	104	—	34.3	45.5	—
18X10	18.00	457	10.75	273	13.50	343	12.12	308	15.00	381	78.1	104	—	31.2	42.3	—
18X8	18.00	457	8.62	219	13.50	343	11.75	298	—	—	—	—	—	—	—	—
20X18	20.00	508	18.00	457	15.00	381	14.50	368	20.00	508	93.5	125	—	56.4	74.9	—
20X16	20.00	508	16.00	406	15.00	381	14.00	356	20.00	508	93.0	124	—	53.5	71.1	—
20X14	20.00	508	14.00	356	15.00	381	14.00	356	20.00	508	92.4	123	—	50.8	67.4	—
20X12	20.00	508	12.75	324	15.00	381	13.62	346	20.00	508	92.4	123	—	47.6	63.3	—
20X10	20.00	508	10.75	273	15.00	381	13.12	333	—	—	92.4	123	—	—	—	—
20X8	20.00	508	8.62	219	15.00	381	12.75	324	—	—	—	—	—	—	—	—
22X20	22.00	559	20.00	508	16.50	419	16.00	406	20.00	508	123	163	—	62.4	83.0	—
22X18	22.00	559	18.00	457	16.50	419	15.50	394	20.00	508	120	159	—	59.6	79.2	—
22X16	22.00	559	16.00	406	16.50	419	15.00	381	20.00	508	117	156	—	56.9	75.6	—
22X14	22.00	559	14.00	356	16.50	419	15.00	381	20.00	508	117	156	—	53.2	70.8	—
22X12	22.00	559	12.75	324	16.50	419	14.62	371	—	—	117	156	—	—	—	—
22X10	22.00	559	10.75	273	16.50	419	14.12	359	—	—	—	—	—	—	—	—

GENERAL NOTE: For Wall Thickness see Table 1 & Table 2.

REDUCING OUTLET TEES & REDUCERS

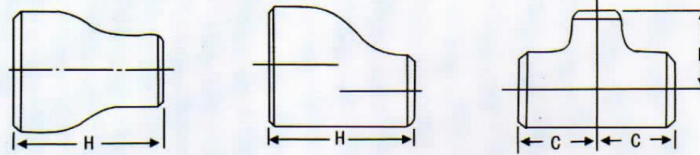


TABLE 7 (CONT'D)

ASME B16.9-1993

Nominal Pipe Size (NPS)	Outside Diameter at Bevel				Center-to-End				End-to-End H				Approx. Weight (kg)					
	D ₁		D ₂		Run C		Outlet M		End-to-End H		End-to-End H		Reducing Outlet Tees			Reducers		
	INCH	MM	INCH	MM	INCH	MM	INCH	MM	INCH	MM	INCH	MM	STD	XS	XXS	STD	XS	XXS
	INCH	MM	INCH	MM	INCH	MM	INCH	MM	INCH	MM	INCH	MM	STD	XS	XXS	STD	XS	XXS
24X22	24.00	610	22.00	559	17.00	432	17.00	432	20.00	508	138	183	—	—	—	68.5	91.1	—
24X20	24.00	610	20.00	408	17.00	432	17.00	432	20.00	508	136	181	—	—	—	65.7	87.3	—
24X18	24.00	610	18.00	457	17.00	432	16.50	419	20.00	508	133	177	—	—	—	63.0	83.8	—
24X16	24.00	610	16.00	406	17.00	432	16.00	406	20.00	508	133	177	—	—	—	63.0	83.8	—
24X14	24.00	610	14.00	356	17.00	432	16.00	406	—	—	133	177	—	—	—	—	—	—
24X12	24.00	610	12.75	324	17.00	432	15.62	397	—	—	133	177	—	—	—	—	—	—
24X10	24.00	610	10.75	273	17.00	432	15.12	384	—	—	—	—	—	—	—	—	—	—
26X24	26.00	660	24.00	610	19.50	495	19.00	483	24.00	610	172	229	—	—	—	89.4	119	—
26X22	26.00	660	22.00	559	19.50	495	18.50	470	24.00	610	169	225	—	—	—	86.1	114	—
26X20	26.00	660	20.00	508	19.50	495	18.00	457	24.00	610	166	221	—	—	—	82.7	110	—
26X18	26.00	660	18.00	457	19.50	495	17.50	444	24.00	610	166	221	—	—	—	82.7	110	—
26X16	26.00	660	16.00	406	19.50	495	17.00	432	—	—	166	221	—	—	—	—	—	—
26X14	26.00	660	14.00	356	19.50	495	17.00	432	—	—	166	221	—	—	—	—	—	—
26X12	26.00	660	12.75	324	19.50	495	16.62	422	—	—	—	—	—	—	—	—	—	—
28X26	28.00	711	26.00	660	20.50	521	20.50	521	24.00	610	188	251	—	—	—	96.7	129	—
28X24	28.00	711	24.00	610	20.50	521	20.00	508	24.00	610	183	244	—	—	—	93.3	124	—
28X22	28.00	711	22.00	559	20.50	521	19.50	495	24.00	610	182	242	—	—	—	90.1	120	—
28X20	28.00	711	20.00	508	20.50	521	19.00	483	24.00	610	182	242	—	—	—	90.1	120	—
28X18	28.00	711	18.00	457	20.50	521	18.50	470	—	—	—	—	—	—	—	—	—	—
28X16	28.00	711	16.00	406	20.50	521	18.00	457	—	—	—	—	—	—	—	—	—	—
28X14	28.00	711	14.00	356	20.50	521	18.00	457	—	—	—	—	—	—	—	—	—	—
28X12	28.00	711	12.75	324	20.50	521	17.62	448	—	—	—	—	—	—	—	—	—	—
30X28	30.00	762	28.00	711	22.00	559	21.50	546	24.00	610	226	301	—	—	—	104	138	—
30X26	30.00	762	26.00	660	22.00	559	21.50	546	24.00	610	222	296	—	—	—	101	134	—
30X24	30.00	762	24.00	610	22.00	559	21.00	533	24.00	610	218	291	—	—	—	97.4	130	—
30X22	30.00	762	22.00	559	22.00	559	20.50	521	24.00	610	218	291	—	—	—	97.4	130	—
30X20	30.00	762	20.00	508	22.00	559	20.00	508	—	—	—	—	—	—	—	—	—	—
30X18	30.00	762	18.00	457	22.00	559	19.50	495	—	—	—	—	—	—	—	—	—	—
30X16	30.00	762	16.00	406	22.00	559	19.00	483	—	—	—	—	—	—	—	—	—	—
30X14	30.00	762	14.00	356	22.00	559	19.00	483	—	—	—	—	—	—	—	—	—	—
30X12	30.00	762	12.75	324	22.00	559	18.62	473	—	—	—	—	—	—	—	—	—	—
30X10	30.00	762	10.75	273	22.00	559	18.12	460	—	—	—	—	—	—	—	—	—	—
32X30	32.00	813	30.00	762	23.50	597	23.00	584	24.00	610	247	324	—	—	—	111	148	—
32X28	32.00	813	28.00	711	23.50	597	22.50	572	24.00	610	240	319	—	—	—	108	144	—
32X26	32.00	813	26.00	660	23.50	597	22.50	572	24.00	610	238	317	—	—	—	105	139	—
32X24	32.00	813	24.00	610	23.50	597	22.00	559	24.00	610	238	317	—	—	—	105	139	—
32X22	32.00	813	22.00	559	23.50	597	21.50	546	—	—	—	—	—	—	—	—	—	—
32X20	32.00	813	20.00	508	23.50	597	21.00	533	—	—	—	—	—	—	—	—	—	—
32X18	32.00	813	18.00	457	23.50	597	20.50	521	—	—	—	—	—	—	—	—	—	—
32X16	32.00	813	16.00	406	23.50	597	20.00	508	—	—	—	—	—	—	—	—	—	—
32X14	32.00	813	14.00	356	23.50	597	20.00	508	—	—	—	—	—	—	—	—	—	—
34X32	34.00	864	32.00	813	25.00	635	24.50	622	24.00	610	292	389	—	—	—	119	158	—
34X30	34.00	864	30.00	762	25.00	635	24.00	610	24.00	610	290	380	—	—	—	115	153	—
34X28	34.00	864	28.00	711	25.00	635	23.50	597	24.00	610	288	377	—	—	—	112	149	—
34X26	34.00	864	26.00	660	25.00	635	23.50	597	24.00	610	288	377	—	—	—	112	149	—
34X24	34.00	864	24.00	610	25.00	635	23.00	584	—	—	—	—	—	—	—	—	—	—
34X22	34.00	864	22.00	559	25.00	635	22.50	572	—	—	—	—	—	—	—	—	—	—
34X20	34.00	864	20.00	508	25.00	635	22.00	559	—	—	—	—	—	—	—	—	—	—
34X18	34.00	864	18.00	457	25.00	635	21.50	546	—	—	—	—	—	—	—	—	—	—
34X16	34.00	864	16.00	406	25.00	635	21.00	533	—	—	—	—	—	—	—	—	—	—

GENERAL NOTE: For Wall Thickness see Table 1 & Table 2.

REDUCING OUTLET TEES & REDUCERS

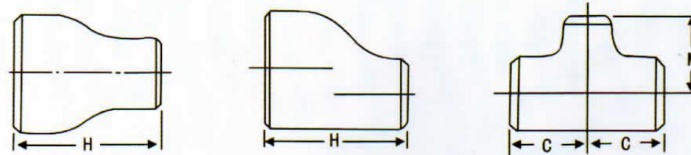


TABLE 7 (CONT'D)

ASME B16.9-1993

Nominal Pipe Size (NPS)	Outside Diameter at Bevel				Center-to-End				End-to-End				Approx. Weight (kg)					
	D ₁		D ₂		Run C		Outlet M		H		H		Reducing Outlet Tees			Reducers		
	INCH	MM	INCH	MM	INCH	MM	INCH	MM	INCH	MM	INCH	MM	STD	XS	XXS	STD	XS	XXS
36X34	36.00	914	34.00	864	26.50	673	26.00	660	24.00	610	329	434	-	126	168	-	-	-
36X32	36.00	914	32.00	813	26.50	673	25.50	648	24.00	610	326	431	-	122	163	-	-	-
36X30	36.00	914	30.00	762	26.50	673	25.00	635	24.00	610	323	422	-	199	159	-	-	-
36X28	36.00	914	28.00	711	26.50	673	24.50	622	24.00	610	323	422	-	199	159	-	-	-
36X26	36.00	914	26.00	660	26.50	673	24.50	622	24.00	610	-	-	-	-	-	-	-	-
36X24	36.00	914	24.00	610	26.50	673	24.00	610	24.00	610	-	-	-	-	-	-	-	-
36X22	36.00	914	22.00	559	26.50	673	23.50	597	-	-	-	-	-	-	-	-	-	-
36X20	36.00	914	20.00	508	26.50	673	23.00	584	-	-	-	-	-	-	-	-	-	-
36X18	36.00	914	18.00	457	26.50	673	22.50	572	-	-	-	-	-	-	-	-	-	-
36X16	36.00	914	16.00	406	26.50	673	22.00	559	-	-	-	-	-	-	-	-	-	-
38X36	38.00	965	36.00	914	28.00	711	28.00	711	24.00	610	-	-	-	-	-	-	-	-
38X34	38.00	965	34.00	864	28.00	711	27.50	698	24.00	610	-	-	-	-	-	-	-	-
38X32	38.00	965	32.00	813	28.00	711	27.00	686	24.00	610	-	-	-	-	-	-	-	-
38X30	38.00	965	30.00	762	28.00	711	26.50	673	24.00	610	-	-	-	-	-	-	-	-
38X28	38.00	965	28.00	711	28.00	711	25.50	648	24.00	610	-	-	-	-	-	-	-	-
38X26	38.00	965	26.00	660	28.00	711	25.50	648	24.00	610	-	-	-	-	-	-	-	-
38X24	38.00	965	24.00	610	28.00	711	25.00	635	-	-	-	-	-	-	-	-	-	-
38X22	38.00	965	22.00	559	28.00	711	24.50	622	-	-	-	-	-	-	-	-	-	-
38X20	38.00	965	20.00	508	28.00	711	24.00	610	-	-	-	-	-	-	-	-	-	-
38X18	38.00	965	18.00	457	28.00	711	23.50	597	-	-	-	-	-	-	-	-	-	-
40X38	40.00	1016	38.00	965	29.50	749	29.50	749	24.00	610	-	-	-	-	-	-	-	-
40X36	40.00	1016	36.00	914	29.50	749	29.00	737	24.00	610	378	486	-	137	183	-	-	-
40X34	40.00	1016	34.00	864	29.50	749	28.50	724	24.00	610	376	484	-	134	179	-	-	-
40X32	40.00	1016	32.00	813	29.50	749	28.00	711	24.00	610	374	482	-	131	175	-	-	-
40X30	40.00	1016	30.00	762	29.50	749	27.50	698	24.00	610	374	482	-	131	175	-	-	-
40X28	40.00	1016	28.00	711	29.50	749	26.50	673	-	-	-	-	-	-	-	-	-	-
40X26	40.00	1016	26.00	660	29.50	749	26.50	673	-	-	-	-	-	-	-	-	-	-
40X24	40.00	1016	24.00	610	29.50	749	26.00	660	-	-	-	-	-	-	-	-	-	-
40X22	40.00	1016	22.00	559	29.50	749	25.50	648	-	-	-	-	-	-	-	-	-	-
40X20	40.00	1016	20.00	508	29.50	749	25.00	635	-	-	-	-	-	-	-	-	-	-
40X18	40.00	1016	18.00	457	29.50	749	24.50	622	-	-	-	-	-	-	-	-	-	-
42X40	42.00	1067	40.00	1016	30.00	762	28.00	711	24.00	610	-	-	-	-	-	-	-	-
42X38	42.00	1067	38.00	968	30.00	762	28.00	711	24.00	610	-	-	-	-	-	-	-	-
42X36	42.00	1067	36.00	914	30.00	762	28.00	711	24.00	610	-	-	-	-	-	-	-	-
42X34	42.00	1067	34.00	864	30.00	762	28.00	711	24.00	610	-	-	-	-	-	-	-	-
42X32	42.00	1067	32.00	813	30.00	762	28.00	711	24.00	610	-	-	-	-	-	-	-	-
42X30	42.00	1067	30.00	762	30.00	762	28.00	711	24.00	610	-	-	-	-	-	-	-	-
42X28	42.00	1067	28.00	711	30.00	762	27.50	698	-	-	-	-	-	-	-	-	-	-
42X26	42.00	1067	26.00	660	30.00	762	27.50	698	-	-	-	-	-	-	-	-	-	-
42X24	42.00	1067	24.00	610	30.00	762	26.00	660	-	-	-	-	-	-	-	-	-	-
42X22	42.00	1067	22.00	559	30.00	762	26.00	660	-	-	-	-	-	-	-	-	-	-
42X20	42.00	1067	20.00	508	30.00	762	26.00	660	-	-	-	-	-	-	-	-	-	-
42X18	42.00	1067	18.00	457	30.00	762	25.50	648	-	-	-	-	-	-	-	-	-	-
42X16	42.00	1067	16.00	406	30.00	762	25.00	635	-	-	-	-	-	-	-	-	-	-

GENERAL NOTE: For Wall Thickness see Table 1 & Table 2.

TOLERANCES

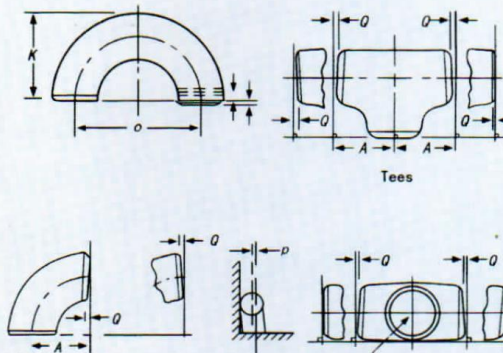
TABLE 8A

ASME B16.9-1993
ASME B16.28-1994

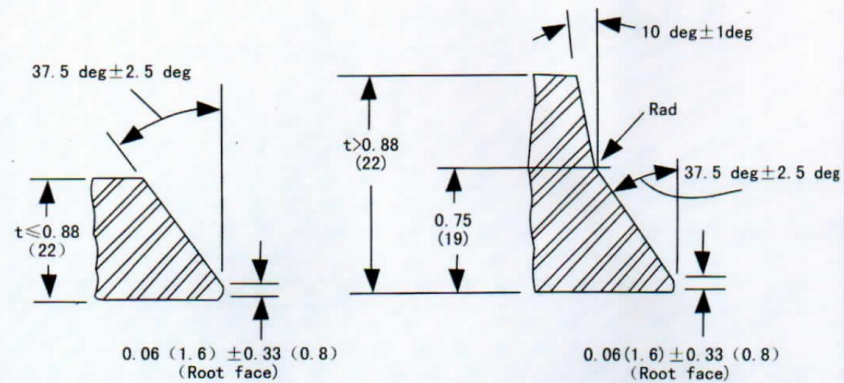
	All Fittings			90 deg. and 45 deg. Elbows and Tees	Reducers	Caps	180 deg. Returns		
Nominal Pipe Size (NPS)	Outside Diameter at Bevel D	Inside Diameter at End	Wall Thick- ness t	Center-to- End Dimension A, B, C, M	Overall Length H	Overall Length E	Center- to-Center Dimension O	Back-to- Face Dimension K	Align- ment of Ends U
1/2 to 2 1/2	+0.06 -0.03	0.03	Not less than 87.5% of nominal thickness	0.06	0.06	0.12	0.25	0.25	0.03
3 to 2 1/2	0.06	0.06		0.06	0.06	0.12	0.25	0.25	0.03
4	0.06	0.06		0.06	0.06	0.12	0.25	0.25	0.03
5 to 8	+0.09 -0.06	0.06		0.06	0.06	0.25	0.25	0.25	0.03
10 to 18	+0.16 -0.12	0.12		0.09	0.09	0.25	0.38	0.25	0.06
20 to 24	+0.2 -0.19	0.19		0.09	0.09	0.25	0.38	0.25	0.06
26 to 30	+0.25 0.19	0.19		0.12	0.12	0.38			
32 to 48	+0.25 0.19	0.19		0.19	0.19	0.38			

TABLE 8B

Nominal Pipe Size (NPS)	Angularity Tol.	
	Off Angle Q	Off Plane P
1/2 to 4	0.03	0.06
5 to 8	0.06	0.12
10 to 12	0.09	0.19
14 to 16	0.09	0.25
18 to 24	0.12	0.38
26 to 30	0.19	0.38
32 to 42	0.19	0.50
44 to 48	0.19	0.75



GENERAL NOTE: Dimensions are in inches. Tolerances are equal plus and minus except as noted.



Nominal Wall Thickness t	End Preparation
Less than X [Note(1)]	Cut square slightly or chamfer, at manufacture's option
X to 0.88 incl. (22) [Note (1)]	Plain bevel as in sketch(a) above.
More than 0.88 (22)	Compound bevel as in sketch (b) above.

GENERAL NOTES:

- (a) See ASME B16.25 for transitions from bevel and root face into body of fitting and backing ring preparations.
(b) Dimensions in parentheses are in millimeters.

NOTE:

- (1) X=0.19(5) for carbon steel or ferritic alloy steel and 0.12(3) for austenitic alloy steel

**FIG.1 WELDING BEVEL AND ROOT FACE
FOR FITTING
(Without Backing Ring, or With Split
Backing Ring)**

**Outside and Inside Diameters, and
Thicknesses of Pipe Fittings FSGP and PY 400**

TABLE 9

Unit:mm

Nominal diameter		Outside diameter	FSGP		LG		STD		XS	
A	B		Inside diameter	Thickness	Inside diameter	Thickness	Inside diameter	Thickness	Inside diameter	Thickness
15	1/2	21.7	16.1	2.8	—	—	—	—	—	—
20	3/4	27.2	21.6	2.8	—	—	—	—	—	—
25	1	34.0	27.6	3.2	—	—	—	—	—	—
32	1 1/4	42.7	35.7	3.5	—	—	—	—	—	—
40	1 1/2	48.6	41.6	3.5	—	—	—	—	—	—
50	2	60.5	52.9	3.8	—	—	—	—	—	—
65	2 1/2	76.3	67.9	4.2	—	—	—	—	—	—
80	3	89.1	80.7	4.2	—	—	—	—	—	—
90	3 1/2	101.6	93.2	4.2	—	—	—	—	—	—
100	4	114.3	105.3	4.5	—	—	—	—	—	—
125	5	139.8	130.8	4.5	—	—	—	—	—	—
150	6	165.2	155.2	5.0	155.2	5.0	—	—	—	—
200	8	216.3	204.7	5.8	204.7	5.8	—	—	—	—
250	10	267.4	254.2	6.6	254.2	6.6	—	—	—	—
300	12	318.5	304.7	6.9	304.7	6.9	—	—	—	—
350	14	355.6	339.8	7.9	339.8	7.9	—	—	—	—
400	16	406.4	390.6	7.9	390.6	7.9	—	—	—	—
450	18	457.2	441.4	7.9	441.4	7.9	—	—	—	—
500	20	508.0	492.2	7.9	492.2	7.9	489.0	9.5	—	—
550	22	558.8	—	—	543.0	7.9	539.8	9.5	533.4	12.7
600	24	609.6	—	—	593.8	7.9	590.6	9.5	584.2	12.7
650	26	660.4	—	—	644.6	7.9	641.4	9.5	635.0	12.7
700	28	711.2	—	—	695.4	7.9	692.2	9.5	685.8	12.7
750	30	762.0	—	—	746.2	7.9	743.0	9.5	736.6	12.7
800	32	812.8	—	—	797.0	7.9	793.8	9.5	787.4	12.7
850	34	863.6	—	—	847.8	7.9	844.6	9.5	838.2	12.7
900	36	914.4	—	—	898.6	7.9	895.4	9.5	889.0	12.7
950	38	965.2	—	—	949.4	7.9	946.2	9.5	939.8	12.7
1000	40	1016.0	—	—	1000.2	7.9	997.0	9.5	990.6	12.7
1050	42	1066.8	—	—	—	—	1047.8	9.5	1041.4	12.7
1100	44	1117.6	—	—	—	—	1098.6	9.5	1092.2	12.7
1150	46	1168.4	—	—	—	—	1149.4	9.5	1143.0	12.7
1200	48	1219.2	—	—	—	—	1200.2	9.5	1193.8	12.7

45° & 90° EIBOWS FSGP/LG

JIS B2311-1997

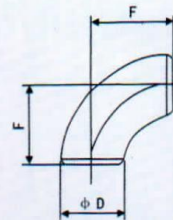
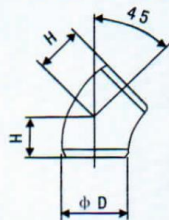


TABLE 10

Unit:mm

Nominal diameter		Outside diameter D	Dimension from the center line to the end face			Approx. Weight (kg)		
			45° Elbows H	90° Elbows F		45° Elbows	90° Elbows	
			Long	Long	Short	Long	Long	Short
15	1/2	21.7	15.8	38.1	—	0.039	0.078	—
20	3/4	27.2	15.8	38.1	—	0.050	0.100	—
25	1	34.0	15.8	38.1	25.4	0.073	0.146	0.097
32	1 1/4	42.7	19.7	47.6	31.8	0.126	0.252	0.168
40	1 1/2	48.6	23.7	57.2	38.1	0.175	0.350	0.233
50	2	60.5	31.6	76.2	50.8	0.317	0.634	0.423
65	2 1/2	76.3	39.5	95.3	63.5	0.56	1.12	0.75
80	3	89.1	47.3	114.3	76.2	0.79	1.58	1.05
90	3 1/2	101.6	55.3	133.4	88.9	1.06	2.11	1.41
100	4	114.3	63.1	152.4	101.6	1.46	2.91	1.94
125	5	139.8	78.9	190.5	127.0	2.25	4.49	2.99
150	6	165.2	94.7	228.6	152.4	3.55	7.09	4.73
200	8	216.3	126.3	304.8	203.2	7.20	14.40	9.60
250	10	267.4	157.8	381.0	254.0	12.70	25.40	16.93
300	12	318.5	189.4	457.2	304.8	19.05	38.10	25.40
350	14	355.6	220.9	533.4	355.6	28.35	56.70	37.80
400	16	406.4	252.5	609.6	406.4	37.15	74.30	49.53
450	18	457.2	284.1	685.8	457.2	47.10	94.20	62.79
500	20	508.0	315.6	762.0	508.0	59	117	78
550	22	558.8	347.2	838.2	558.8	71	141	94
600	24	609.6	378.7	914.4	609.6	84	168	112
650	26	660.4	410.3	990.6	660.4	99	198	132
700	28	711.2	441.9	1066.8	711.2	115	229	153
750	30	762.0	473.4	1143.0	762.0	132	264	176
800	32	812.8	505.0	1219.2	812.8	150	300	200
850	34	863.6	536.6	1295.4	863.6	169	338	225
900	36	914.4	568.1	1371.6	914.4	180	360	240
950	38	965.2	599.7	1447.8	965.2	212	424	283
1000	40	1016.0	631.2	1524.0	1016.0	235	470	313
1050	42	1066.8	662.8	1600.2	1066.8	259	518	345
1100	44	1117.6	694.4	1676.4	1117.6	284	569	379
1150	46	1168.4	725.9	1752.6	1168.4	311	622	415
1120	48	1219.2	757.5	1828.8	1219.2	339	677	451

GENERAL NOTE:For Wall Thickness see Table 9.

180° EIBOWS & CAPS FSGP/LG

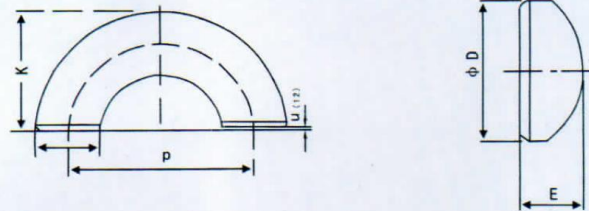


TABLE 11

Unit: mm

Nominal diameter		Outside diameter D	Centerline dimension		Dimension from the back to the end face		Approx. Weight (kg)			
			180° Elbows p		180° Elbows K		Caps E		180° Elbows K	
A	B		Long	Short	Long	Short			Long	Short
15	1/2	21.7	76.2	—	49.0	—	25.4	—	0.156	—
20	3/4	27.2	76.2	—	51.7	—	25.4	—	0.200	—
25	1	34.0	76.2	50.8	55.1	42.4	38.1	—	0.292	0.195
32	1 1/4	42.7	95.2	63.6	69.0	53.2	38.1	—	0.504	0.336
40	1 1/2	48.6	114.4	76.2	81.5	62.4	38.1	—	0.700	0.467
50	2	60.5	152.4	101.6	106.5	81.1	38.1	—	1.268	0.845
65	2 1/2	76.3	190.6	127.0	133.5	101.7	38.1	—	2.24	1.49
80	3	89.1	228.6	152.4	158.9	120.8	50.8	—	3.16	2.11
90	3 1/2	101.6	266.8	177.8	184.2	139.7	63.5	—	4.22	2.81
100	4	114.3	304.8	203.2	209.6	158.8	63.5	—	5.83	3.88
125	5	139.8	381.0	254.0	260.4	196.9	76.2	—	8.98	5.99
150	6	165.2	457.2	304.8	311.2	235.0	88.9	—	14.18	9.45
200	8	216.3	609.6	406.4	413.0	311.4	101.6	—	28.80	19.20
250	10	267.4	762.0	508.0	514.7	387.7	127.0	—	50.80	33.86
300	12	318.5	914.4	609.6	616.5	464.1	152.4	—	76.20	50.79
350	14	355.6	1066.8	711.2	711.2	533.4	165.1	—	113.40	75.59
400	16	406.4	1219.2	812.8	812.8	609.6	177.8	—	148.60	99.06
450	18	457.2	—	—	—	—	203.2	—	—	—
500	20	508.0	—	—	—	—	228.6	—	—	—

GENERAL NOTE: For Wall Thickness see Table 9.

STRAIGHT TEES FSGP/LG

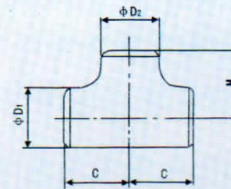


TABLE 12

Unit:mm

Nominal diameter		Outside diameter		Dimension from the centerline to the end face		Approx. Weight (kg)
A	B	D1	D2	C	C	
15	1/2	21.7	21.7	25.4	25.4	0.12
20	3/4	27.2	27.2	28.6	28.6	0.17
25	1	34.0	34.0	38.1	38.1	0.32
32	1 1/4	42.7	42.7	47.6	47.6	0.56
40	1 1/2	48.6	48.6	57.2	57.2	0.78
50	2	60.5	60.5	63.5	63.5	1.16
65	2 1/2	76.3	76.3	76.2	76.2	1.94
80	3	89.1	89.1	85.7	85.7	2.55
90	3 1/2	101.6	101.6	95.3	95.3	3.23
100	4	114.3	114.3	104.8	104.8	4.27
125	5	139.8	139.8	123.8	123.8	6.17
150	6	165.2	165.2	142.9	142.9	9.32
200	8	216.3	216.3	177.8	177.8	17.5
250	10	267.4	267.4	215.9	215.9	29.7
300	12	318.5	318.5	254.0	254.0	32.0
350	14	355.6	355.6	279.4	279.4	44.7
400	16	406.4	406.4	304.8	304.8	55.2
450	18	457.2	457.2	342.9	342.9	70.0
500	20	508.0	508.0	381.0	381.0	86.6
550	22	558.8	558.8	419.1	419.1	106
600	24	609.6	609.6	431.8	431.8	116
650	26	660.4	660.4	495.3	495.3	147
700	28	711.2	711.2	520.7	520.7	165
750	30	762.0	762.0	558.8	558.8	190
800	32	812.8	812.8	596.9	596.9	217
850	34	863.6	863.6	635.0	635.0	245
900	36	914.4	914.4	673.1	673.1	276
950	38	965.2	965.2	711.2	711.2	308
1000	40	1016.0	1016.0	749.3	749.3	342
1050	42	1066.8	1066.8	782.0	782.0	351
1100	44	1117.6	1117.6	812.8	812.8	395
1150	46	1168.4	1168.4	850.9	850.9	433
1200	48	1219.2	1219.2	889.0	889.0	474

Remarks: The dimension M of 350 A(14B) or over in nominal diameter may be altered to smaller than that as given in the table above, subject to the agreement between the parties concerned with delivery.

GENERAL NOTE: For Wall Thickness see Table 9.

REDUCING TEES & REDUCERS FSGP/LG

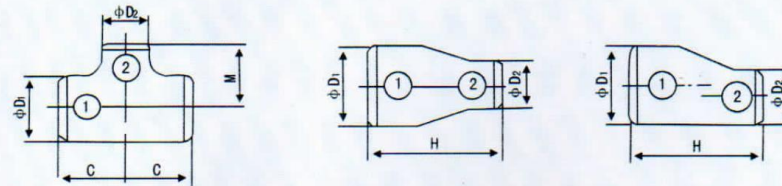


TABLE 13

Unit:mm

Nominal diameter①×②		Outside diameter		Overall Length H	Dimension from the centerline to the end face		Approx. Weight (kg)	
A	B	D1	D2		C	M	Tees	Reducers
20×15	3/4×1/2	27.2	21.7	38.1	28.6	28.6	0.16	0.057
25×20	1×3/4	34.0	27.2	50.8	38.1	38.1	0.30	0.110
25×15	1×1/2	34.0	21.7	50.8	38.14	38.14	0.29	0.100
32×25	1 1/4×1	42.7	34.0	50.8	47.6	47.6	0.53	0.154
32×20	1 1/4×3/4	42.7	27.2	50.8	47.6	47.6	0.50	0.140
32×15	1 1/4×1/2	42.7	21.7	50.8	47.6	47.6	0.49	0.130
40×32	1 1/2×1 1/4	48.6	42.7	63.5	57.2	57.2	0.76	0.232
40×25	1 1/2×1	48.6	34.0	63.5	57.2	57.2	0.72	0.209
40×20	1 1/2×3/4	48.6	27.2	63.5	57.2	57.2	0.68	0.191
40×15	1 1/2×1/2	48.6	21.7	63.5	57.2	57.2	0.67	0.180
50×40	2×1 1/2	60.5	48.6	76.2	63.5	60.3	1.08	0.364
50×32	2×1 1/4	60.5	42.7	76.2	63.5	57.2	1.04	0.344
50×25	2×1	60.5	34.0	76.2	63.5	50.8	0.99	0.315
50×20	2×3/4	60.5	27.2	76.2	63.5	44.5	0.95	0.290
65×50	2 1/2×2	76.3	60.5	88.9	76.2	69.9	1.78	0.594
65×40	2 1/2×1 1/2	76.3	48.6	88.9	76.2	66.7	1.70	0.543
65×32	2 1/2×1 1/4	76.3	42.7	88.9	76.2	63.5	1.67	0.518
65×25	2 1/2×1	76.3	34.0	88.9	76.2	57.2	1.61	0.480
80×65	3×2 1/2	89.1	76.3	88.9	85.7	82.6	2.44	0.725
80×50	3×2	89.1	60.5	88.9	85.7	76.2	2.28	0.658
80×40	3×1 1/2	89.1	48.6	88.9	85.7	73.0	2.21	0.611
80×32	3×1 1/4	89.1	42.7	88.9	85.7	69.9	2.17	0.590
90×80	3 1/2×3	101.6	89.1	101.6	95.3	92.1	3.12	0.961
90×65	3 1/2×2 1/2	101.6	76.3	101.6	95.3	88.9	3.01	0.899
90×50	3 1/2×2	101.6	60.5	101.6	95.3	82.6	2.85	0.826
90×40	3 1/2×1 1/2	101.6	48.6	101.6	95.3	79.4	2.77	0.771
90×32	3 1/2×1 1/4	101.6	42.7	101.6	-	-	-	0.740
100×90	4×3 1/2	114.3	101.6	101.6	104.8	101.6	4.09	1.17
100×80	4×3	114.3	89.1	101.6	104.8	98.4	3.98	1.10

GENERAL NOTE:For Wall Thickness see Table 9.

REDUCING TEES & REDUCERS FSGP/LG

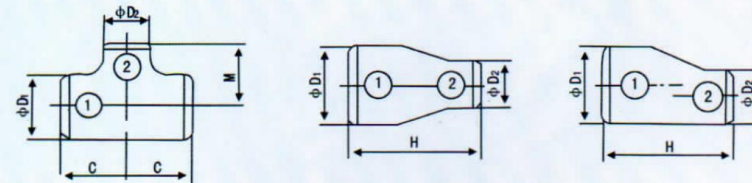


TABLE 13 (CONT'D)

Unit: mm

Nominal diameter①×②		Outside diameter		Overall Length	Dimension from the centerline to the end face		Approx. Weight (kg)	
A	B	D1	D2		C	M	Tees	Reducers
100×65	4×2½	114.3	76.3	101.6	104.8	95.3	3.87	1.04
100×50	4×2	114.3	60.5	101.6	104.8	88.9	3.71	0.967
100×40	4×1½	114.3	48.6	101.6	104.8	85.7	3.63	0.910
125×100	5×4	139.8	114.3	127.0	123.8	117.5	5.86	1.74
125×90	5×3½	139.8	101.6	127.0	123.8	114.3	5.68	1.65
125×80	5×3	139.8	89.1	127.0	123.8	111.1	5.56	1.58
125×65	5×2½	139.8	76.3	127.0	123.8	108.0	5.45	1.50
125×50	5×2	139.8	60.5	127.0	123.8	104.8	5.32	1.41
150×125	6×5	165.2	139.8	139.7	142.9	136.5	8.80	2.55
150×100	6×4	165.2	114.3	139.7	142.9	130.2	8.49	2.36
150×90	6×3½	165.2	101.6	139.7	142.9	127.0	8.31	2.27
150×80	6×3	165.2	89.1	139.7	142.9	123.8	8.19	2.18
150×65	6×2½	165.2	76.3	139.7	142.9	120.7	8.08	2.09
200×150	8×6	216.3	165.2	152.4	177.8	168.3	16.2	4.17
200×125	8×5	216.3	139.8	152.4	177.8	161.9	15.7	3.87
200×100	8×4	216.3	114.3	152.4	177.8	155.6	15.4	3.67
200×90	8×3½	216.3	101.6	152.4	177.8	152.4	15.2	3.56
250×200	10×8	267.4	216.3	177.8	215.9	203.2	27.8	6.87
250×150	10×6	267.4	165.2	177.8	215.9	193.7	26.6	6.32
250×125	10×5	267.4	139.8	177.8	215.9	190.5	26.1	6.06
250×100	10×4	267.4	114.3	177.8	215.9	184.2	25.8	5.80
300×250	12×10	318.5	267.4	203.2	254.0	241.3	41.5	9.97
300×200	12×8	318.5	216.3	203.2	254.0	228.6	39.6	9.29
300×150	12×6	318.5	165.2	203.2	254.0	219.1	38.3	8.69
300×125	12×5	318.5	139.8	203.2	254.0	215.9	37.9	8.39
350×300	14×12	355.6	318.5	330.2	279.4	269.9	42.7	21.2
350×250	14×10	355.6	267.4	330.2	279.4	257.2	41.2	19.7
350×200	14×8	355.6	216.3	330.2	279.4	247.7	40.0	18.3
350×150	14×6	355.6	165.2	330.2	279.4	238.1	39.0	16.9

GENERAL NOTE: For Wall Thickness see Table 1 & Table 2.

REDUCING TEES & REDUCERS FSGP/LG

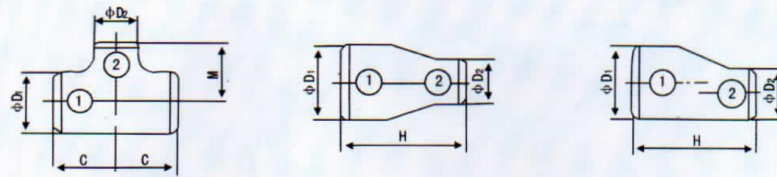


TABLE 13 (CONT'D)

Unit:mm

Nominal diameter ①X②		Outside diameter		Overall Length	Dimension from the centerline to the end face		Approx. Weight (kg)	
A	B	D1	D2	H	C	M	Tees	Reducers
400X350	16X14	406.4	355.6	355.6	304.8	304.8	54.2	25.9
400X300	16X12	406.4	318.5	355.6	304.8	295.3	52.2	24.7
400X250	16X10	406.4	267.4	355.6	304.8	282.6	50.7	23.2
400X200	16X8	406.4	216.3	355.6	304.8	273.1	49.4	21.7
400X150	16X6	406.4	165.2	—	304.8	263.5	48.5	—
450X400	18X16	457.2	406.4	381.0	342.9	330.2	67.9	31.5
450X350	18X14	457.2	355.6	381.0	342.9	330.2	66.9	29.8
450X300	18X12	457.2	318.5	381.0	342.9	320.7	64.9	28.6
450X250	18X10	457.2	267.4	381.0	342.9	308.0	63.4	27.1
500X450	20X18	508.0	457.2	508.0	381.0	368.3	84.2	47.0
500X400	20X16	508.0	406.4	508.0	381.0	355.6	82.1	44.7
500X350	20X14	508.0	355.6	508.0	381.0	355.6	81.1	42.4
500X300	20X12	508.0	318.5	508.0	381.0	346.1	79.1	40.8
500X250	20X10	508.0	267.4	—	381.0	333.4	77.6	—
500X200	20X8	508.0	216.3	—	381.0	323.9	76.3	—
550X500	22X20	558.8	508.0	508.0	419.1	406.4	103	52.0
550X450	22X18	558.8	457.2	508.0	419.1	393.7	101	49.7
550X400	22X16	558.8	406.4	508.0	419.1	381.0	98.9	47.5
550X350	22X14	558.8	355.6	508.0	—	—	—	45.3
600X550	24X22	609.6	558.8	508.0	431.8	431.8	115	57.1
600X500	24X20	609.6	508.0	508.0	431.8	431.8	114	54.8
600X450	24X18	609.6	457.2	508.0	431.8	419.1	111	52.6
600X400	24X16	609.6	406.4	508.0	—	—	—	50.4
650X600	26X24	660.4	609.6	609.6	495.3	482.6	144	74.5
650X550	26X22	660.4	558.8	609.6	495.3	469.9	141	71.7
650X500	26X20	660.4	508.0	609.6	495.3	457.2	138	68.9
650X450	26X18	660.4	457.2	609.6	—	—	—	66.3
700X650	28X26	711.2	660.4	609.6	520.7	520.7	164	80.5
700X600	28X24	711.2	609.6	609.6	520.7	508.0	161	77.7
700X550	28X22	711.2	558.8	609.6	520.7	495.3	158	75.0
700X500	28X20	711.2	508.0	609.6	—	—	—	72.4
750X700	30X28	762.0	711.2	609.6	558.8	546.1	188	86.6
750X650	30X26	762.0	660.4	609.6	558.8	546.1	185	83.8
750X600	30X24	762.0	609.6	609.6	558.8	533.4	182	81.1
750X550	30X22	762.0	558.8	609.6	—	—	—	78.5
800X750	32X30	812.8	762.0	609.6	596.9	584.2	213	92.6
800X700	32X28	812.8	711.2	609.6	596.9	571.5	210	89.8

GENERAL NOTE: For Wall Thickness see Table 9.

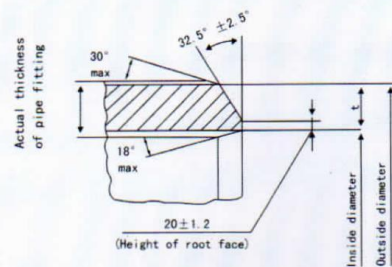


Fig.2 Shape and dimensions of bevel end

Dimensional Tolerances and Permissible Values

TABLE 14

Unit:mm

Item	Types of pipe fittings	Nominal diameter								
		A	15 to 65	80 to 100	125 to 200	250 to 450	500 to 600	650 to 750	800 to 1200	
		B	1/2 to 2 1/2	3 to 4	5 to 8	10 to 18	20 to 24	28 to 30	32 to 48	
Tolerance										
Outside diameter at end	All types of pipe fittings	±2.0	±2.5	±3.5	±5.0 -4.5	±5.0 -4.5				
Inside diameter at end face		±2.0	±2.5	±3.5	±4.5	±4.8				
Thickness		*not specified -15%								
Bevel angle		See fig. 2								
Height of root face		See fig. 2								
Dimension from center line to end face (H F)	45° elbows 90° elbows	±2.0		±3.2				±4.8		
Centerline dimension (P)	180° elbows	±6.4		±9.5		-				
Dimension from back to end face (K)		±6.4				-				
Alignment of end faces (U) (max)		1.6		3.2		-				
Overall length (H)	Reducers	±2.0		±3.2		±4.8				
Dimension from centerline to end face (C, M)	Tees	±2.0		±3.2		±4.8				
Dimension from back to end face (E)	Caps	±3.2		±6.4				-		
Outer peripheral length at end	All types of pipe fittings	-							±0.5%	

Remarks 1 For the dimensional tolerances for H of reducers and M of reducing tees, the tolerances specified for the larger diameter side shall apply.
 2 For the galvanized part of white pipe fittings, the above-mentioned tolerances shall be applicable before galvanizing.

Tolerances on Alignment of Pipe Fittings

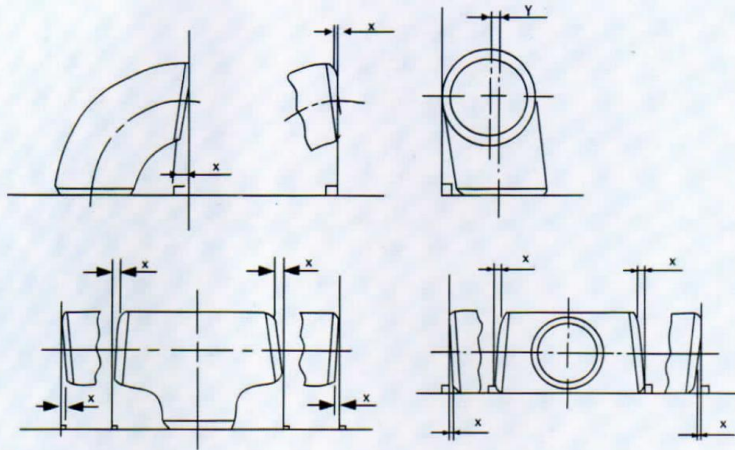


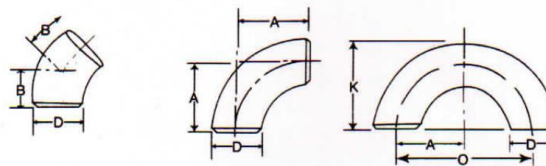
TABLE 15

Unit:mm

Item	Types of pipe fittings	Nominal diameter								
		A	15to	125to	250to	350to	450to	650to	800to	1100to
			100	200	300	400	600	750	1050	1200
		B	1/2to4	5to8	10to12	14to16	18to24	28to30	32to42	44to48
		Tolerance								
Off angle(x)	Elbows, reducers, tees	0.8	1.6	2.4		3.2	4.8			
Off plane(y)	Elbows, tees	1.6	3.2	4.8	6.4	9.5		12.7	19.1	

Remarks 1 For the tolerances on alignment of reducers and reducing tees the tolerances specified for larger diameter side shall apply.

2 For the galvanized part of white pipe fittings, the above-mentioned tolerances shall be applied before galvanizing.

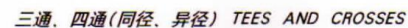


45° 弯头 90° 弯头 180° 弯头尺寸 mm (GB12459, GB/T13401)
45° Elbow 90° Elbow 180° Elbow mm

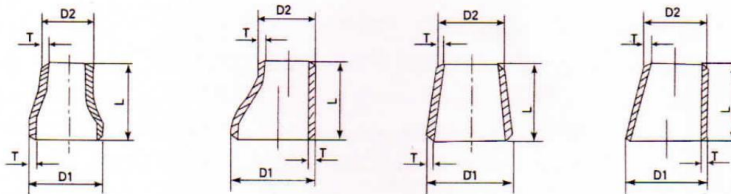
公称 通径 Nominal Dia DN	端部外径 Overall Dia. of End D		中心至端面尺寸 Size From Center to End Surface			中心至中心尺寸 Size From Center to Center		背面至端面尺寸 Size From Back Surface to End Surface	
			45° 弯头 45° Elbow B			180° 弯头 180° Elbow o		180° 弯头 180° Elbow K	
	A 系列 A Series	B 系列 B Series	长半径 Long Radius	长半径 Long Radius	短半径 Short Radius	长半径 Long Radius	短半径 Short Radius	长半径 Long Radius	短半径 Short Radius
15	21.3	18	16	38	—	76	—	48	—
20	26.9	25	16	38	—	76	—	51	—
25	33.7	32	16	38	25	76	51	56	41
32	42.4	38	20	48	32	95	64	70	52
40	48.3	45	24	57	38	114	76	83	62
50	60.3	57	32	76	51	152	102	106	81
65	76.1(73)	76	40	95	64	191	127	132	100
80	88.9	89	47	114	76	229	152	159	121
90	101.6	—	55	133	89	267	178	184	140
100	114.3	108	63	152	102	305	203	210	159
125	139.7	133	79	190	127	381	254	262	197
150	168.3	159	95	229	152	457	305	313	237
200	219.1	219	126	305	203	610	406	414	313
250	273	273	158	381	254	762	508	518	391
300	323.9	325	189	457	305	914	610	619	467
350	355.6	377	221	533	356	1067	711	711	533
400	406.4	426	253	610	406	1219	813	813	610
450	457.0	478	284	686	457	1372	914	914	686
500	508.0	529	316	762	508	1524	1016	1016	762
600	610.0	630	379	914	610				
700	711.0	720	442	1067	711				
800	813.0	820	505	1219	813				
900	914	920	568	1372	914				
1000	1016	1020	631	1524	1016				
1100	1118	1120	694	1676	1118				
1200	1219	1220	758	1829	1219				
1300	1320.8	1320	825	1981	1320				
1400	1422.4	1420	888	2134	1420				

无缝弯头区 Area for seamless elbow

钢板制对焊弯头区 Area for steel-plate-welded elbow



公称通径 Nominal Diameter		外径 Outside Diameter	中心至端面 Center To end		公称通径 Nominal Diameter		外径 Outside Diameter	中心至端面 Center To end	
Mm	In	D1 × D2	C	M	Mm	In	D1 × D2	C	M
20 × 20	3/4 × 3/4	25 ± 0.25 26.7 ± 0.25	29	29	350 × 350	14 × 14	377 ± 0.377 395.6 ± 0.395.6	279	279
20 × 15	3/4 × 1/2	25 ± 0.25 26.7 ± 0.25	29	29	350 × 200	14 × 8	377 ± 0.377 395.6 ± 0.395.6	279	248
25 × 25	1 × 1	32 ± 0.32 33.4 ± 0.33.4	38	38	400 × 400	16 × 16	426 ± 0.426 444.4 ± 0.444.4	305	305
25 × 20	1 × 3/4	32 ± 0.25 33.4 ± 0.26.7	38	38	400 × 250	16 × 10	426 ± 0.273 446.4 ± 0.273.1	305	283
32 × 32	1.1/4 × 1.1/4	38 ± 0.38 42.2 ± 0.42.2	48	48	450 × 450	18 × 18	478 ± 0.478 497 ± 0.497	343	343
32 × 25	1.1/4 × 1	38 ± 0.32 42.2 ± 0.33.4	48	48	450 × 250	18 × 10	478 ± 0.273 497 ± 0.273.1	343	308
40 × 40	1.1/2 × 1.1/2	45 ± 0.45 48.3 ± 0.48.3	57	57	500 × 500	20 × 20	523 ± 0.523 549 ± 0.549	381	381
40 × 25	1.1/2 × 1	45 ± 0.32 48.3 ± 0.33.4	57	57	500 × 300	20 × 12	523 ± 0.325 549 ± 0.323.9	381	346
50 × 50	2 × 2	57 ± 0.57 60.3 ± 0.60.3	64	64	550 × 550	22 × 22	559 ± 0.559	419	419
50 × 25	2 × 1	57 ± 0.32 60.3 ± 0.33.4	64	51	550 × 200	22 × 16	559 ± 0.406.4	419	381
65 × 65	2.1/2 × 2.1/2	76 ± 0.76 73 ± 0.73	76	76	600 × 600	24 × 24	630 ± 0.630 610 ± 0.610	432	432
65 × 40	2.1/2 × 1.1/2	76 ± 0.45 73 ± 0.46.3	76	67	600 × 400	24 × 16	630 ± 0.426 610 ± 0.406.4	432	406
80 × 80	3 × 3	89 ± 0.89	86	86	650 × 650	25 × 26	660 ± 0.660	495	495
80 × 50	3 × 2	89 ± 0.57 86.3 ± 0.60.3	86	76	700 × 700	28 × 28	722 ± 0.722 711 ± 0.711	521	521
100 × 100	4 × 4	108 ± 0.108 114 ± 0.114.3	105	105	700 × 400	28 × 16	722 ± 0.426 711 ± 0.406.4	521	457
100 × 50	4 × 2	108 ± 0.57 114 ± 0.60.3	105	89	750 × 750	30 × 30	762 ± 0.762	559	559
125 × 125	5 × 5	132 ± 0.132 141 ± 0.141.3	124	124	750 × 500	30 × 20	762 ± 0.508	559	508
125 × 80	5 × 3	133 ± 0.89 141 ± 0.88.9	124	111	800 × 800	32 × 32	820 ± 0.820 813 ± 0.813	597	597
150 × 150	6 × 6	159 ± 0.159 166 ± 0.166.3	143	143	800 × 500	32 × 20	820 ± 0.523 813 ± 0.508	597	533
150 × 100	6 × 4	159 ± 0.108 166 ± 0.114.3	143	130	850 × 850	34 × 34	864 ± 0.864	635	635
200 × 200	8 × 8	219 ± 0.219	178	178	850 × 600	34 × 24	864 ± 0.610	635	584
200 × 100	8 × 4	219 ± 0.108 219 ± 0.114.3	178	156	900 × 900	36 × 36	920 ± 0.920 914 ± 0.914	673	673
250 × 250	10 × 10	273 ± 0.273	216	216	900 × 500	36 × 20	920 ± 0.523 914 ± 0.508	673	548
250 × 125	10 × 5	273 ± 0.125 273 ± 0.141.3	216	191	950 × 950	38 × 38	965 ± 0.965	711	711
300 × 300	12 × 12	325 ± 0.325 323.9 ± 0.323.9	254	254	950 × 600	38 × 24	965 ± 0.813	711	635
300 × 200	12 × 8	325 ± 0.219 323.9 ± 0.219.1	254	229	1000 × 1000	40 × 40	1020 ± 0.1020 1018 ± 0.1018	749	749
					1100 × 700	44 × 28	1020 ± 0.700 1118 ± 0.711	813	698
					1150 × 1150	46 × 46	1168 ± 1168	851	800
					1150 × 800	46 × 32	1168 ± 813	851	749
					120 × 1200	48 × 4 × 48	1220 ± 1220 1219 ± 1219	889	838
					1200 × 650	48 × 26	1219 ± 660	889	762



异径接头尺寸 (mm) (GB12459 GB/T13401)(SH3408 SH3409)
Size of Template joints(mm) (GB12459 GB/T13401)(SH3408 SH3409)

公称口径 Nominal Dia DN	D1		D2		长度 Length
	A 系列 A series	B 系列 B series	A 系列 A series	B 系列 B series	
25 x 20	33.7	32	26.9	25	51
25 x 15	33.7	32	21.3	18	
32 x 25	42.2	38	33.7	32	
32 x 20	42.2	38	26.9	25	51
32 x 15	42.2	38	21.3	18	
40 x 32	48.3	45	42.4	38	
40 x 25	48.3	45	33.7	32	64
40 x 20	48.3	45	26.9	25	
50 x 40	60.3	57	48.3	45	
50 x 32	60.3	57	42.4	38	76
50 x 25	60.3	57	33.7	32	
65 x 50	76.1	76	60.3	57	
65 x 40	76.1	76	48.3	45	89
65 x 32	76.1	76	42.4	38	
80 x 65	88.9	88	76.1	76	
80 x 50	88.9	88	60.3	57	89
80 x 40	88.9	88	48.3	45	
100 x 80	108.9	108	88.9	88	
100 x 65	114.3	108	76.1	76	102
100 x 50	114.3	108	60.3	57	
125 x 100	114.3	133	114.3	108	
125 x 80	138.7	133	88.9	88	127
125 x 60	138.7	133	76.1	76	
150 x 125	138.7	159	138.7	133	
150 x 100	168.3	159	114.3	108	140
150 x 80	168.3	159	88.9	88	
200 x 150	168.3	219	168.3	159	
200 x 125	219.1	219	138.7	133	152
200 x 100	219.1	219	114.3	108	
250 x 200	219.1	273	219.1	219	
250 x 125	273	273	168.3	159	178
250 x 150	273	273	138.7	133	
300 x 250	273	325	273	273	
300 x 200	323.9	325	219.1	219	203
300 x 150	323.9	325	168.3	159	
350 x 300	323.9	377	323.9	325	
350 x 250	355.6	377	273	273	330
350 x 200	355.6	377	219.1	219	
400 x 350	355.6	426	355.6	377	
400 x 300	406.4	426	323.9	325	356
400 x 250	406.4	426	273	273	
400 x 400	406.4	478	406.4	426	
450 x 350	457.0	478	355.6	377	381
450 x 300	457.0	478	323.9	325	
500 x 450	457.0	529	457.0	478	
500 x 400	508	529	406.4	426	508
500 x 350	508	529	355.6	377	

公称口径 Nominal Dia DN	D1		D2		长度 Length
	A 系列 A series	B 系列 B series	A 系列 A series	B 系列 B series	
550 x 550	559	—	508	529	508
550 x 450	559	—	457	478	
550 x 400	559	—	406	426	
600 x 500	610	630	508	529	508
600 x 450	610	630	457	478	
600 x 400	610	630	406	426	
650 x 600	660	—	610	630	610
650 x 500	660	—	508	529	
650 x 450	660	—	457	478	
700 x 600	711	720	610	630	610
700 x 500	711	720	508	529	
700 x 450	711	720	457	478	
750 x 700	762	—	711	720	610
750 x 600	762	—	610	630	
750 x 500	762	—	508	529	
800 x 700	813	820	711	720	610
800 x 600	813	820	610	630	
800 x 500	813	820	508	529	
850 x 700	864	—	711	720	610
850 x 600	864	—	610	630	
850 x 500	864	—	508	529	
900 x 800	914	920	813	820	610
900 x 700	914	920	711	720	
900 x 600	914	920	610	630	
1000 x 900	1016	1020	914	920	610
1000 x 800	1016	1020	813	820	
1000 x 700	1016	1020	711	720	
1050 x 1000	1067	—	1016	1020	610
1050 x 900	1067	—	914	920	
1050 x 800	1067	—	813	820	
1100 x 1000	1118	1120	1016	1020	610
1100 x 900	1118	1120	914	920	
1100 x 800	1118	1120	813	820	
1200 x 1100	1220	1220	1118	1120	711
1200 x 1000	1220	1220	1016	1020	
1200 x 900	1220	1220	914	920	
1300 x 1200	1321	1320	1220	1220	711
1300 x 1100	1321	1320	1118	1120	
1300 x 1000	1321	1320	1016	1020	
1400 x 1300	1420	1420	1321	1320	711
1400 x 1200	1420	1420	1220	1220	
1400 x 1100	1420	1420	1118	1120	
1500 x 1400	1524	1520	1420	1420	711
1500 x 1300	1524	1520	1321	1320	
1500 x 1200	1524	1520	1220	1220	