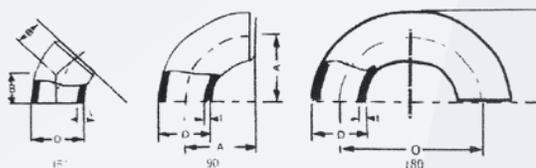


STEEL BUTTWELDING FITTINGS

DIMENSION OF WELDING FITTINGS

ANSI B 16.9 & B16.28



in inches

Nominal Pipe Size	Outside Diameter	LONG				SHORT		TEES		CAPS	REDUCERS	Nominal Pipe Size
		90° ELBOWS	45° ELBOWS	180° RETURNS		90° ELBOWS	Center to End					
		Center to End	Center to End	Center to Center	Back to Face	Center to End	Run	※1 Outlet	※2 Back to Face	End to End		
D	O.D.	A	B	P	K	A	C	M	E	H	D	
1/2	0.84	1.50	0.62	3.00	1.88	-	1.00	1.00	1.00	-	0.84	
3/4	1.05	1.12	0.44	2.25	1.69	-	1.12	1.12	1.00	1.50	1.05	
1	1.32	1.50	0.88	3.00	2.19	1.00	1.50	1.50	1.50	2.00	1	
1-1/4	1.66	1.88	1.00	3.75	2.75	1.25	1.88	1.88	1.50	2.00	1-1/4	
1-1/2	1.90	2.25	1.12	4.50	3.25	1.50	2.25	2.25	1.50	2.50	1-1/2	
2	2.38	3.00	1.38	6.00	4.19	2.00	2.50	2.50	1.50	3.00	2	
2-1/2	2.88	3.75	1.75	7.50	5.19	2.50	3.00	3.00	1.50	3.50	2-1/2	
3	3.50	4.50	2.00	9.00	6.25	3.00	3.38	3.38	2.00	3.50	3	
3-1/2	4.00	5.25	2.25	10.50	7.25	3.50	3.75	3.75	2.50	4.00	3-1/2	
4	4.50	6.00	2.50	12.00	8.25	4.00	4.12	4.12	2.50	4.00	4	
5	5.56	7.50	3.12	15.00	10.31	5.00	4.88	4.88	3.00	5.00	5	
6	6.62	9.00	3.75	18.00	12.31	6.00	5.62	5.62	3.50	5.50	6	
8	8.62	12.00	5.00	24.00	16.31	8.00	7.00	7.00	4.00	6.00	8	
10	10.75	15.00	6.25	30.00	20.38	10.00	8.50	8.50	5.00	7.00	10	
12	12.75	18.00	7.50	36.00	24.38	12.00	10.00	10.00	6.00	8.00	12	
14	14.00	21.00	8.75	42.00	28.00	14.00	11.00	11.00	6.50	13.00	14	
16	16.00	24.00	10.00	48.00	32.00	16.00	12.00	12.00	7.00	14.00	16	
18	18.00	27.00	11.25	54.00	36.00	18.00	13.50	13.50	8.00	15.00	18	
20	20.00	30.00	12.50	60.00	40.00	20.00	15.00	15.00	9.00	20.00	20	
24	24.00	36.00	15.00	72.00	48.00	24.00	17.00	17.00	10.50	20.00	24	

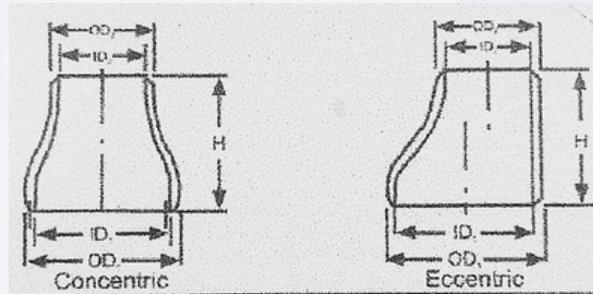
※ 1. Straight Tees

※ 2. Applies for thickness not exceeding "Limiting Wall Thickness"

STEEL BUTTWELDING FITTINGS

DIMENSION OF WELDING FITTINGS

DIMENSION TOLERANCE

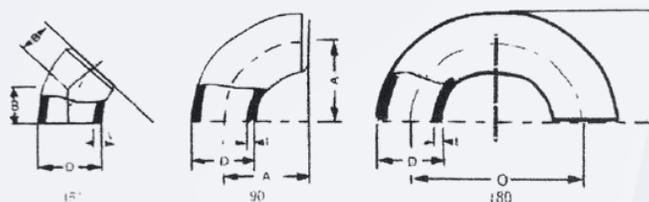


ANSI B16.9 & ANSI B16.28

Nominal Pipe Size	ALL FITTINGS			90°, 45° TEES	REDUCER	180° RETURNS			CAPS
	O.D. at Bevel	I.D. at End	Wall Thickness	Center to End	Overall Length	Center to Center	Back to Face	Alignments of Ends	Overall Length
1/2 - 2-1/2	+0.06 -0.03	±0.03	Not Less Than 87.5 Percent of Nominal Thickness	±0.06	±0.06	±0.25	±0.25	±0.03	±0.12
3 - 4	±0.06	±0.06							
5 - 8	+0.09 -0.06			±0.12	±0.09	±0.09	±0.38	±0.06	±0.25
10 - 18	+0.16 -0.12	±0.19							
20 - 24	+0.25 -0.19								

STEEL BUTTWELDING FITTINGS

WEIGHT

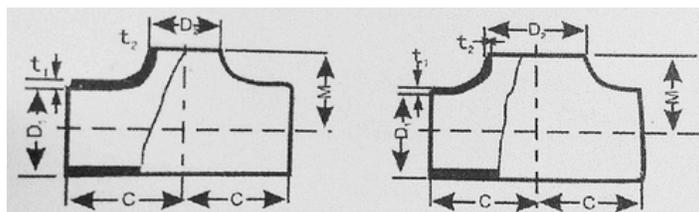


in kg

Nominal Pipe Size	Elbows (Long Radius)								
	STD			S40			S80		
	90°	STD 45°	STD 180°	S40 90°	S40 45°	S40 180°	S80 90°	S80 45°	S80 180°
1/2	0.076	0.038	0.152	0.076	0.038	0.152	0.097	0.048	0.194
3/4	0.075	0.036	0.150	0.075	0.036	0.150	0.098	0.047	0.196
1	0.150	0.106	0.300	0.150	0.106	0.300	0.194	0.137	0.388
1-1/4	0.254	0.163	0.508	0.254	0.163	0.508	0.335	0.215	0.670
1-1/2	0.364	0.218	0.728	0.364	0.218	0.728	0.486	0.292	0.972
2	0.651	0.361	1.30	0.651	0.361	1.30	0.895	0.497	1.79
2-1/2	1.29	0.728	2.58	1.29	0.728	2.58	1.71	0.961	3.42
3	2.03	1.09	4.06	2.03	1.09	4.06	2.74	1.47	5.48
3-1/2	2.84	1.47	5.68	2.84	1.47	5.68	3.90	2.02	7.80
4	3.85	1.94	7.70	3.85	1.94	7.70	5.34	2.69	10.7
5	6.51	3.27	13.0	6.51	3.27	13.0	9.26	4.65	18.5
6	10.1	5.10	20.2	10.1	5.10	20.2	15.3	7.69	30.6
8	20.4	10.2	40.8	20.4	10.2	40.8	30.9	15.6	61.8
10	36.1	18.1	72.2	36.1	18.1	72.2	57.3	28.8	114.
12	53.0	26.7	106.	57.2	28.8	107	94.7	47.6	189.
14	68.1	34.2	136.	79.1	39.8	158	132.	66.6	264.
16	89.2	44.9	178.	118.	59.4	236	195.	97.9	390.
18	113.	56.9	226.	168.	84.5	336	274.	138.	548.
20	140.	70.5	280.	219.	110.	438	372.	187.	744.
24	202.	102.	404.	36.6	184.	732	634.	319.	—

STEEL BUTTWELDING FITTINGS

WEIGHT



in kg

Nominal Pipe Size	Elbows (Short Radius)			Tees		Reducers		Caps	
	STD	S40	S80	STD	XS	STD	XS	STD	XS
	90°	90°	90°						
1/2	-	-	-	0.085	0.107	-	-	0.036	0.044
3/4	-	-	-	0.125	0.162	0.059	0.075	0.049	0.062
1	0.100	0.100	0.129	0.250	0.318	0.116	0.147	0.109	0.144
1-1/4	0.169	0.169	0.223	0.421	0.554	0.157	0.206	0.145	0.197
1-1/2	0.242	0.242	0.324	0.603	0.805	0.243	0.324	0.171	0.236
2	0.434	0.434	0.597	0.872	1.19	0.372	0.508	0.234	0.330
2-1/2	0.861	0.864	1.14	1.74	2.28	0.723	0.945	0.420	0.565
3	1.35	1.35	1.83	2.41	3.25	0.933	1.25	0.664	0.917
3-1/2	1.89	1.87	2.60	3.17	4.39	1.28	1.77	0.958	1.36
4	2.57	2.57	3.56	4.12	5.76	1.53	2.14	1.17	1.68
5	4.34	4.85	6.17	6.53	9.20	2.50	3.51	1.90	2.73
6	6.77	6.77	10.2	9.58	14.5	3.57	5.38	2.83	4.38
8	13.6	14.5	20.6	17.9	27.1	5.70	8.61	5.11	7.91
10	24.1	25.4	38.2	30.4	41.0	9.58	12.9	8.92	12.2
12	35.3	38.2	63.1	43.6	57.7	13.6	18.0	13.0	17.4
14	45.4	52.8	88.3	53.5	70.9	25.4	33.6	15.9	21.2
16	59.5	78.7	130.	66.1	87.7	31.0	41.1	20.0	26.7
18	75.5	112.	183.	83.9	111.	37.8	50.1	25.5	34.1
20	93.4	146.	248.	104.	138.	56.4	74.9	31.8	42.5
24	135.	244.	423	139.	185	65.7	87.1	44.5	60.1