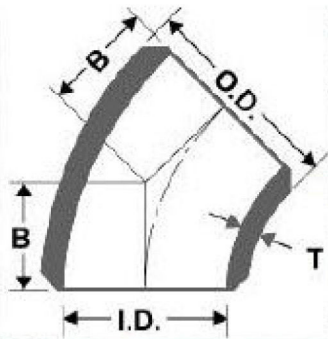


OKI[®]

CARBON STEEL & GALVANIZED SEAMLESS BUTTWELDING PIPE FITTINGS



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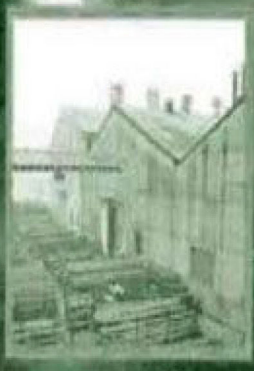
BRAND STEEL BUTTWELDING FITTINGS GO ROUND THE WORLD.



Manufacturing Process of Steel Buttwelding Fitting



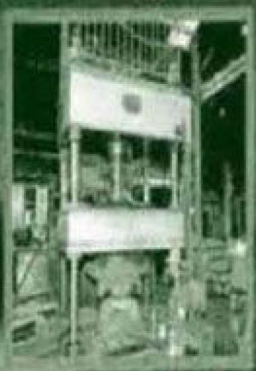
Factory



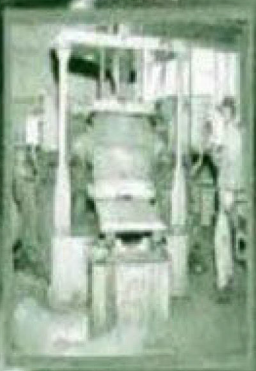
Pipe Test



Cutting



Bending



Pipe Cutting

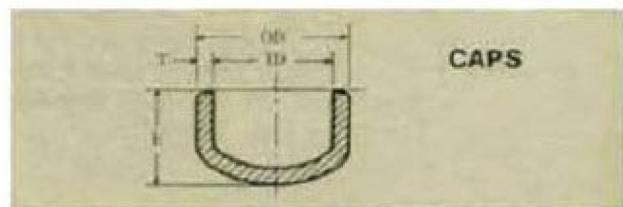
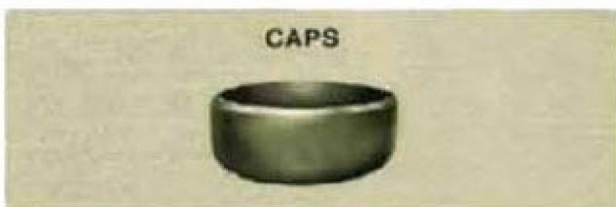
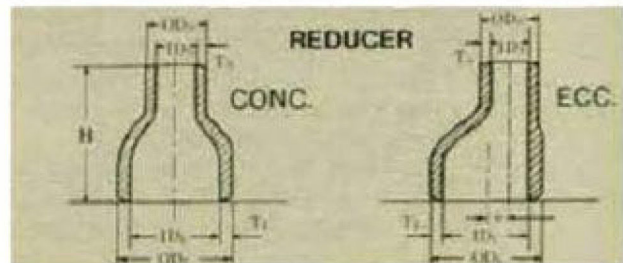
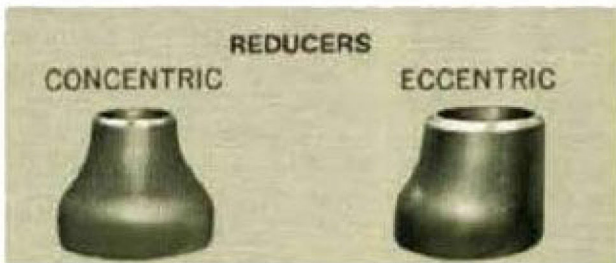
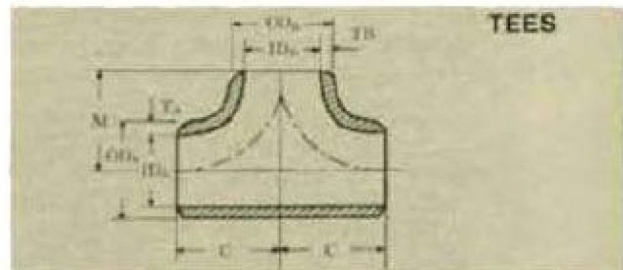
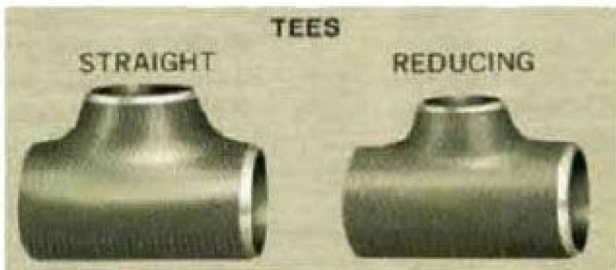
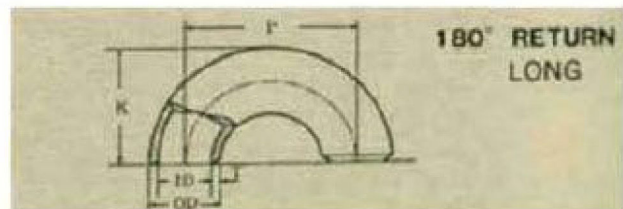
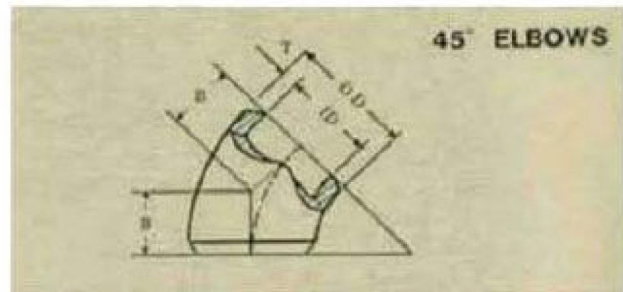
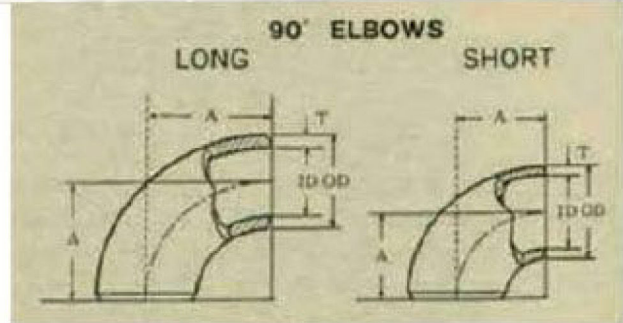
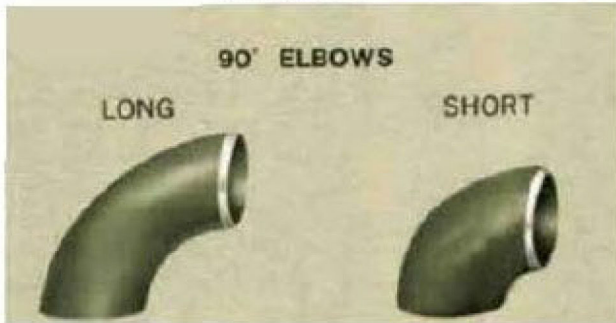
4 STD WPB OKI 54094

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BRAND STEEL BUTTWELDING FITTINGS

FIGURE

SECTION



OKI®

BRAND STEEL BUTTWELDING FITTINGS DIMENSION OF WELDING FITTINGS

ANSI B16.9 & B16.28

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	11
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."

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	±0.06		±0.09	±0.09	±0.38	±0.06	±0.06	
10-18	+0.16 -0.12	±0.12							
20-24	+0.25 -0.19	±0.19							

OKI[®]

BRAND STEEL BUTTWELDING FITTINGS

FUNDAMENTAL DIMENSION OF WELDING FITTINGS

ANSI B36.10

in inches

Nominal Pipe Size	Outside Dia.	Nominal Wall Thickness					
		Std. Wall	Sch. 40	Extra Strong	Sch. 80	Sch. 160	XX. Strong
1/2	0.84	0.109	0.109	0.147	0.147	0.188	0.294
3/4	1.05	0.113	0.113	0.154	0.154	0.219	0.308
1	1.315	0.133	0.133	0.179	0.179	0.250	0.358
1-1/4	1.660	0.140	0.140	0.191	0.191	0.250	0.382
1-1/2	1.900	0.145	0.145	0.200	0.200	0.281	0.400
2	2.375	0.154	0.154	0.218	0.218	0.343	0.436
2-1/2	2.875	0.203	0.203	0.276	0.270	0.375	0.552
3	3.500	0.216	0.216	0.300	0.300	0.438	0.600
3-1/2	4.000	0.226	0.226	0.318	0.318	0.500	0.636
4	4.500	0.237	0.237	0.337	0.337	0.531	0.674
5	5.563	0.258	0.258	0.375	0.375	0.625	0.750
6	6.625	0.280	0.280	0.432	0.432	0.718	0.864
8	8.625	0.322	0.322	0.500	0.500	0.906	0.875
10	10.750	0.365	0.365	0.500	0.593	1.125	1.000
12	12.750	0.375	0.406	0.500	0.687	1.312	1.000
14	14.000	0.375	0.438	0.500	0.750	1.406	
16	16.000	0.375	0.500	0.500	0.843	1.593	
18	18.000	0.375	0.562	0.500	0.937	1.781	
20	20.000	0.375	0.593	0.500	1.031	1.968	
24	24.000	0.375	0.687	0.500	1.218		

in mm

Nominal Pipe Size	Outside Dia.	Nominal Wall Thickness					
		Std. Wall	Sch. 40	Extra Strong	Sch. 80	Sch. 160	XX. Strong
1/2	21.3	2.77	2.77	3.73	3.73	4.78	7.47
3/4	26.7	2.87	2.87	3.91	3.91	5.56	7.82
1	33.40	3.38	3.38	4.55	4.55	6.35	9.09
1-1/4	42.16	3.56	3.56	4.85	4.85	6.35	9.70
1-1/2	48.26	3.68	3.68	5.08	5.08	7.14	10.16
2	60.32	3.91	3.91	5.54	5.54	8.71	11.07
2-1/2	73.02	5.16	5.16	7.01	7.01	9.52	14.02
3	88.90	5.49	5.49	7.62	7.62	11.13	15.24
3-1/2	101.60	5.74	5.74	8.08	8.08	12.70	16.15
4	114.30	6.02	6.02	8.56	8.56	13.49	17.12
5	141.30	6.55	6.55	9.52	9.52	15.87	19.05
6	168.27	7.11	7.11	10.97	10.97	18.24	21.95
8	219.07	8.18	8.18	12.70	12.70	23.01	22.22
10	273.05	9.27	9.27	12.70	15.06	28.57	25.40
12	323.85	9.52	10.31	12.70	17.45	33.32	25.40
14	355.60	9.52	11.12	12.70	19.05	35.71	
16	406.40	9.52	12.70	12.70	21.41	40.46	
18	457.20	9.52	14.27	12.70	23.80	45.24	
20	508.00	9.52	15.06	12.70	26.19	49.99	
24	609.60	9.52	17.45	12.70	30.94		

OKI®

BRAND STEEL BUTTWELDING FITTINGS

WEIGHT

in kg

Nominal Pipe Size	Elbows(Long Radius)								
	STD			S40			S80		
	90°	45°	180°	90°	45°	180°	90°	45°	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	114.	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.	

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	0.861	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	1.89	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	4.34	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	13.6	20.6	17.9	27.1	5.70	8.61	5.11	7.91
10	24.1	24.1	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