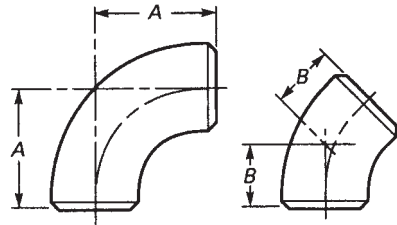
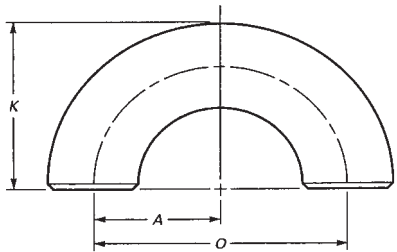


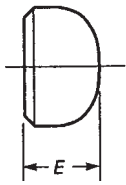
CARBON & STAINLESS STEEL BUTTWELDING FITTINGS • Dimensions



ELBOW



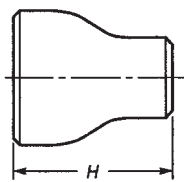
RETURN



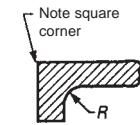
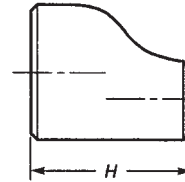
CAP

Nominal size		OD	Buttwelding Fittings to ASME B16.9												
			Elbows			Returns				Caps	Reducers Note 1	Stub Ends			
			Long	Short		Long		Short				Long	Short	Radius of Fillet	Diam of Lap
DN	NPS	D	A	B	A	O	K	O	K	E	H	F	F	R	G
15	1/2	21.3	38	16		76	48			25		76	51	3	35
20	3/4	26.7	38	19		76	51			25	38	76	51	3	43
25	1	33.4	38	22	25	76	56	51	41	38	51	102	51	3	51
32	1 1/4	42.2	48	25	32	95	70	64	52	38	51	102	51	5	64
40	1 1/2	48.3	57	29	38	114	83	76	62	38	64	102	51	6	73
50	2	60.3	76	35	51	152	106	102	81	38	76	152	64	8	92
65	2 1/2	73.0	95	44	64	190	132	127	100	38	89	152	64	8	106
80	3	88.9	114	51	76	229	159	152	121	51	89	152	64	10	127
90	3 1/2	101.6	133	57	89	267	184	178	140	64	102	152	76	10	140
100	4	114.3	152	64	102	305	210	203	159	64	102	152	76	11	157
125	5	141.3	190	79	127	381	262	254	197	76	127	203	76	11	185
150	6	168.3	229	95	152	457	313	305	237	89	140	203	89	13	218
200	8	219.1	305	127	203	610	414	406	313	102	152	203	102	13	270
250	10	273.0	381	159	254	762	518	508	391	127	178	254	127	13	324
300	12	323.8	457	190	305	914	619	610	467	152	203	254	152	13	381
350	14	355.6	533	222	356	1067	711	711	533	165	330	305	152	13	413
400	16	406.4	610	254	406	1219	813	813	610	178	356	305	152	13	470
450	18	457	686	286	457	1372	914	914	686	203	381	305	152	13	533
500	20	508	762	318	508	1524	1016	1016	762	229	508	305	152	13	584
550	22	559	838	343	559	1676	1118	1118	838	254	508	305	152	13	641
600	24	610	914	381	610	1829	1219	1219	914	267	508	305	152	13	692
650	26	660	991	405						267	610				
700	28	711	1067	438						267	610				
750	30	762	1143	470						267	610				
800	32	813	1219	502						267	610				
850	34	864	1295	533						267	610				
900	36	914	1372	565						267	610				
950	38	965	1448	600						305	610				
1000	40	1016	1524	632						305	610				
1050	42	1067	1600	660						305	610				
1100	44	1118	1676	695						343	610				
1150	46	1168	1753	727						343	711				
1200	48	1219	1829	759						343	711				

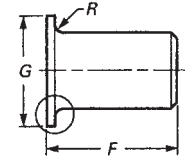
Note 1: Reducer dimension "H" is based on large end nominal size



REDUCER



Enlarged Section of Lap



STUB END

CARBON & STAINLESS STEEL BUTTWELDING FITTINGS • Weights

Buttwelding Fittings (kgs per unit)																												
Standard Weight												XS								Sch 160								
Nominal size		OD	Elbows			Returns		Caps	Reducers	Stub Ends		Tees	Elbows			Returns		Caps	Reducers	Stub Ends		Tees	Elbows			Caps	Reducers	Tees
			Long		Short	Long	Short			MSS	ASME		Long	Short	Long	Short	Long			Short	Long		Short	Long	Short			
DN	NPS	mm	90 deg	45 deg	90 deg	Long	Short					90 deg	45 deg	90 deg	Long	Short						90 deg	45 deg	90 deg				
15	1/2	21.3	0.08	0.04		0.16		0.04		0.12	0.14	0.09	0.10	0.05		0.20		0.05		0.13	0.12	0.11	0.12			0.06		0.12
20	3/4	26.7	0.11	0.06		0.21		0.05	0.06	0.15	0.18	0.13	0.14	0.70		0.21		0.07	0.08	0.17	0.2	0.17	0.13			0.09		0.21
25	1	33.4	0.16	0.08	0.11	0.31	0.21	0.11	0.12	0.19	0.3	0.25	0.20	0.10	0.14	0.41	0.26	0.15	0.15	0.24	0.38	0.32	0.25	0.13	0.17	0.2	0.19	0.41
32	1 1/4	42.2	0.26	0.13	0.18	0.52	0.35	0.14	0.16	0.26	0.41	0.43	0.35	0.18	0.23	0.70	0.46	0.20	0.21	0.35	0.55	0.56	0.42	0.21	0.28	0.25	0.25	0.69
40	1 1/2	48.3	0.37	0.19	0.25	0.74	0.49	0.17	0.25	0.38	0.55	0.61	0.50	0.25	0.33	1.02	0.66	0.24	0.33	0.46	0.68	0.81	0.65	0.33	0.43	0.35	0.43	1.07
50	2	60.3	0.66	0.33	0.44	1.3	0.87	0.24	0.38	0.54	0.99	0.88	0.90	0.45	0.6	1.88	1.19	0.33	0.51	0.74	1.36	1.2	1.33	0.67	0.89	0.54	0.75	1.78
65	2 1/2	73.0	1.29	0.69	0.91	2.73	1.82	0.42	0.73	0.8	1.56	1.74	1.79	0.90	1.19	3.56	2.38	0.57	0.95	1.06	2.08	2.28	2.33	1.17	1.49	0.77	1.2	2.86
80	3	88.9	2.04	1.02	1.36	4.07	2.71	0.67	0.94	1.13	2.13	2.41	2.74	1.37	1.83	5.74	3.65	0.92	1.25	1.51	2.84	3.25	3.83	1.92	2.55	1.4	1.71	4.55
90	3 1/2	101.6	2.94	1.47	1.97	5.65	3.77	0.92	1.19	1.47	2.58	3.26	4.05	2.02	2.07	12.72	5.21	1.3	1.64	2.01	3.51	4.51	5.92	2.96	3.95	2.1	2.35	6.52
100	4	114.3	3.84	1.92	2.56	7.67	5.11	1.17	1.45	1.81	3.04	4.12	5.36	2.68	3.58	15.76	7.15	1.68	2.02	2.52	4.23	5.77	8.02	4.01	5.35	2.76	3	8.5
125	5	141.3	6.48	3.24	4.32	13	8.64	1.9	2.5	2.53	5.3	6.54	9.13	4.57	6.09	19.39	12.2	2.73	3.52	3.6	7.52	9.2	14.7	7.35	9.79	4.85	5.59	14.8
150	6	168.3	9.94	4.97	6.63	19.9	13.3	2.83	3.6	3.73	6.89	9.58	15	7.50	10	31.98	20	4.38	5.38	5.57	10.42	14.5	24.2	12.1	16.2	7.81	8.63	23.3
200	8	219.1	20.1	10.1	13.4	40.3	26.8	5.11	5.7	5.89	10.42	17.9	30.5	15.3	20.3	64.33	40.7	7.91	8.63	10.12	15.86	27.1	53.2	26.6	35.5	15.2	15	47.2
250	10	273.0	35.4	17.7	23.6	70.8	47.2	8.92	9.6	10.42	18.12	30.4	47.7	23.9	31.8	99.66	74.9	12.2	12.9	13.95	24.28	41	103	51.5	68.6	28.9	27.5	88
300	12	323.8	52	26	34.6	112	71.9	13.1	13.6	14.9	22.2	43.6	68.7	34.4	45.8	144.96	94.9	17.4	18	19.93	29.81	57.7	171	85.5	114	47.7	44.6	143
350	14	355.6	67.9	34	45.3			15.9	25.4	15.5	28.3	53.5	89.9	15	60			21.2	33.6	21	38	70.9	236	118	158	61.2	88.5	186
400	16	406.4	89	44.5	59.1			20	31	18	32.7	66.1	118	59	78.3			26.7	41.1	24	44	87.7	350	175	234	92.8	121	260
450	18	457	113	56.5	75.3			25.5	37.8	21	37.5	83.9	150	75.5	100			34.1	50.1	28	50	111	495	247	330	131	165	356
500	20	508	140	70	93.1			31.8	55.4	23.3	41.7	104	186	93	124			42.5	74.9	31	56	138	676	338	451	179	233	502
550	22	559	169	84.5	113			38.8	62.4	25.8	46.3	126	225	113	150			51.7	82.9	33	61	167	886	443	591	219		657
600	24	610	202	101	135			45.1	68.4	28.4	50.5	139	268	134	179			60.1	91	37	67	186	1160	580	773	307		800
650	26	660	237	119	158			50.5	89.4			176	315	158	210			67.3	119			234						
700	28	711	276	138	184			56.2	96.6			198	367	184	245			74.9	129			264						
750	30	762	316	158	211			62.1	104			228	421	211	281			82.8	138			304						
800	32	813	361	180	241			68.4	111			259	480	240	320			91.2	148			347						
850	34	864	406	204	272			75.4	116			295	543	272	362			100	158			393						
900	36	914	457	228	304			81.9	125			331	608	304	405			109	167			441						
950	38	965	510	255	340			94.7	133			370	679	339	453			126	177			493						
1000	40	1016	565	282	377			102	140			411	753	376	502			137	187			547						
1050	42	1067	622	311	416			110	147			422	828	414	554			147	196			562						
1100	44	1118	684	342	456			126	155			475	912	456	608			167	206			633						
1150	46	1168	748	374	499			134	189			521	997	498	665			179	252			695						
1200	48	1219	814	407	543			143	197			569	1085	542	724			191	263			759						

Note 1: All weights are approximate

Note 2: Weights shown are based on carbon steel.

Note 3: As a guide to stainless steel fittings weight use carbon steel Standard Weight for Sch 40S and carbon steel XS for Sch 80S