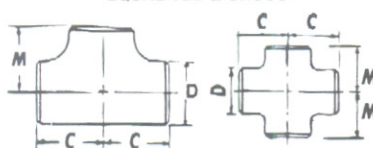


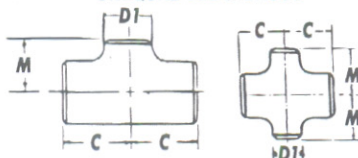


DIMENSIONS OF BUTT WELDING FITTINGS TO ANSI B 16.9 (upto 48") / MSS SP 43 (upto 24")

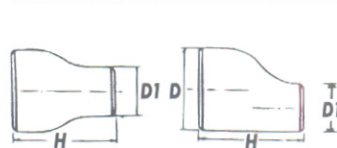
EQUAL TEE & CROSS



UNEQUAL TEE & CROSS



CONCENTRIC & ECCENTRIC REDUCERS



Nominal Pipe Size	Center to End Run	Center to End Branch	Length	Nominal Pipe Size	Center to End Run	Center to End Branch	Length	Nominal Pipe Size	Center to End Run	Center to End Branch	Length	Nominal Pipe Size	Center to End Run	Center to End Branch	Length	Nominal Pipe Size	Center to End Run	Center to End Branch	Length
D x D1	C	M	H	D x D1	C	M	H	D x D1	C	M	H	D x D1	C	M	H	D x D1	C	M	H
1 x 1	38	38	--	5 x 5	124	124	--	18 x 18	343	343	--	30 x 30	559	559	--	38 x 38	711	711	--
1 x 1/2	38	38	51	5 x 2	124	105	127	18 x 16	343	330	381	30 x 28	559	546	610	38 x 36	711	711	610
1 x 3/4	38	38	51	5 x 2 1/2	124	108	127	18 x 14	343	330	381	30 x 26	559	546	610	38 x 34	711	698	610
1 1/4 x 1 1/4	48	48	51	5 x 3	124	111	127	18 x 12	343	321	381	30 x 24	559	533	610	38 x 32	711	686	610
1 1/4 x 1 1/2	48	48	51	5 x 3 1/2	124	114	127	18 x 10	343	308	381	30 x 22	559	521	610	38 x 30	711	673	610
1 1/4 x 3/4	48	48	51	5 x 4	124	117	127	18 x 8	343	298	(381)	30 x 20	559	(508)	(610)	38 x 28	711	648	610
1 1/4 x 1	48	48	51	6 x 6	143	143	--	20 x 20	381	381	--	30 x 18	559	(495)	(610)	38 x 26	711	648	610
1 1/2 x 1 1/2	57	57	--	6 x 2 1/2	143	121	140	20 x 18	381	368	508	30 x 16	559	(483)	(610)	38 x 24	711	635	(610)
1 1/2 x 1 1/4	57	57	64	6 x 3	143	124	140	20 x 16	381	356	508	30 x 14	559	(483)	(610)	38 x 22	711	622	(610)
1 1/2 x 3/4	57	57	64	6 x 3 1/2	143	127	140	20 x 14	381	356	508	30 x 12	559	(473)	(610)	38 x 20	711	610	(610)
1 1/2 x 1	57	57	64	6 x 4	143	130	140	20 x 12	381	346	508	30 x 10	559	460	(610)	38 x 18	711	597	(610)
1 1/2 x 1 1/4	57	57	64	6 x 5	143	137	140	20 x 10	381	333	(508)	32 x 32	597	597	--	40 x 40	749	749	--
2 x 2	64	64	--	8 x 8	178	178	--	20 x 8	381	324	(508)	32 x 30	597	584	610	40 x 38	749	749	610
2 x 3/4	64	44	76	8 x 6	178	168	152	22 x 22	419	419	--	32 x 28	597	572	610	40 x 36	749	737	610
2 x 1	64	51	76	8 x 5	178	162	152	22 x 20	419	406	508	32 x 26	597	572	610	40 x 34	749	724	610
2 x 1 1/4	64	57	76	8 x 4	178	156	152	22 x 18	419	384	508	32 x 24	597	559	610	40 x 32	749	711	610
2 x 1 1/2	64	60	76	8 x 3 1/2	178	152	152	22 x 16	419	381	508	32 x 22	597	546	(610)	40 x 30	749	698	610
2 1/2 x 2 1/2	76	76	--	10 x 10	216	216	--	22 x 14	419	381	508	32 x 20	597	533	(610)	40 x 28	749	673	(610)
2 1/2 x 1	76	57	89	10 x 8	216	203	178	22 x 12	419	371	(508)	32 x 18	597	521	(610)	40 x 26	794	673	(610)
2 1/2 x 1 1/4	76	64	89	10 x 6	216	194	178	22 x 10	419	359	(508)	32 x 16	597	508	(610)	40 x 24	749	660	(610)
2 1/2 x 1 1/2	76	67	89	10 x 5	216	191	178	24 x 24	432	432	--	32 x 14	597	508	(610)	40 x 22	749	648	(610)
2 1/2 x 2	76	70	89	10 x 4	216	184	178	24 x 22	432	432	508	34 x 34	635	635	--	40 x 20	749	635	(610)
3 x 3	86	86	--	12 x 12	254	254	--	24 x 20	432	432	508	34 x 32	635	622	610	40 x 18	749	622	(610)
3 x 1 1/4	86	70	89	12 x 10	254	241	203	24 x 18	432	419	508	34 x 30	635	610	610	42 x 42	762	711	--
3 x 1 1/2	86	73	89	12 x 8	254	229	203	24 x 16	432	406	508	34 x 28	635	597	610	42 x 40	762	711	610
3 x 2	86	76	89	12 x 6	254	219	203	24 x 14	432	406	(508)	34 x 26	635	597	610	42 x 38	762	711	610
3 x 2 1/2	86	83	89	12 x 5	254	216	203	24 x 12	432	397	(508)	34 x 24	635	584	(610)	42 x 36	762	711	610
3 1/2 x 3 1/2	95	95	--	14 x 14	279	279	--	24 x 10	432	384	(508)	34 x 22	635	572	(610)	42 x 34	762	711	610
3 1/2 x 1 1/2	95	79	102	14 x 12	279	270	330	26 x 26	495	495	--	34 x 20	635	559	(610)	42 x 32	762	711	610
3 1/2 x 2	95	83	102	14 x 10	279	257	330	26 x 24	495	483	610	34 x 18	635	546	(610)	42 x 30	762	711	610
3 1/2 x 2 1/2	95	89	102	14 x 8	279	248	330	26 x 22	495	470	610	34 x 16	635	533	(610)	42 x 28	762	698	(610)
3 1/2 x 3	95	92	102	14 x 6	279	238	330	26 x 20	495	457	610	36 x 36	673	673	--	42 x 26	762	698	(610)
4 x 4	105	105	--	16 x 16	305	305	--	26 x 18	495	444	610	36 x 34	673	660	610	42 x 24	762	660	(610)
4 x 1 1/2	105	86	102	16 x 14	305	305	356	26 x 16	495	432	(610)	36 x 32	673	648	610	42 x 22	762	660	(610)
4 x 2	105	89	102	16 x 12	305	295	356	26 x 14	495	432	(610)	36 x 30	673	635	610	42 x 20	762	660	(610)
4 x 2 1/2	105	95	102	16 x 10	305	283	356	26 x 12	495	422	(610)	36 x 28	673	622	610	42 x 18	762	648	(610)
4 x 3	105	98	102	16 x 8	305	273	356	28 x 28	521	521	--	36 x 26	673	622	610	42 x 16	762	635	(610)
4 x 3 1/2	105	102	102	16 x 6	305	264	(356)	28 x 26	521	521	610	36 x 24	673	610	(610)				
								28 x 24	521	508	610	36 x 22	673	597	(610)				
								28 x 22	521	495	610	36 x 20	673	584	(610)				
								28 x 20	521	483	610	36 x 18	673	572	(610)				
								28 x 18	521	470	(610)	36 x 16	673	559	(610)				
								28 x 16	521	457	(610)								
								28 x 14	521	457	(610)								
								28 x 12	521	448	(610)								

1. Figures in brackets are as per the manufacturer's standard

2. Outlet dimension M for run sizes NPS 14 (DN 350) and large is recommended but not required

All dimensions are in mm