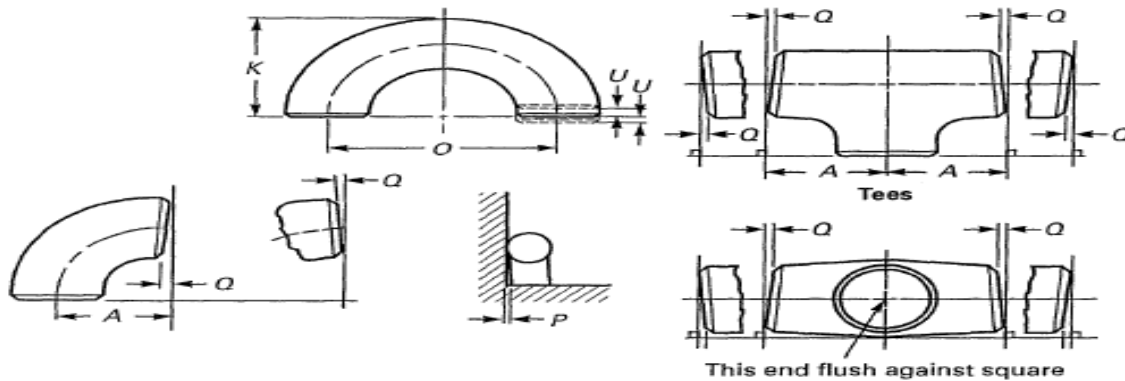


Size (Inch)	Outside Diameter mm	Elbow LR (R=1,5D)				Elbow SR (R=1D)			Tee		Caps		Reducers
		Center to End	Center to End	Center to Center	Back to Face	Center to End	Center to Center	Back to Face	Center to End	Center to End	≤ SCH XS	> SCH XS	End to End
		A	B	O	K	A	O	K	C	M	E	E 1	H
1/2	21.3	38	16	76	48				25	25	25	25	
3/4	26.7	38	19	76	51				29	29	25	25	38
1	33.4	38	22	76	56	25	51	41	38	38	38	38	51
1 1/4	42.2	48	25	95	70	32	64	52	48	48	38	38	51
1 1/2	48.3	57	29	114	83	38	76	62	57	57	38	38	64
2	60.3	76	35	152	106	51	102	81	64	64	38	44	76
2 1/2	73.0	95	44	190	132	64	127	100	76	76	38	51	89
3	88.9	114	51	229	159	76	152	121	86	86	51	64	89
3 1/2	101.6	133	57	267	184	89	178	140	95	95	64	76	102
4	114.3	152	64	305	210	102	203	159	105	105	64	76	102
5	141.3	190	79	381	262	127	254	197	124	124	76	89	127
6	168.3	229	95	457	313	152	305	237	143	143	89	102	140
8	219.1	305	127	610	414	203	406	313	178	178	102	127	152
10	273.0	381	159	762	518	254	508	391	216	216	127	152	178
12	323.8	457	190	914	619	305	610	467	254	254	152	178	203
14	355.6	533	222	1067	711	356	711	533	279	279	165	191	330
16	406.4	610	254	1219	813	406	813	610	305	305	178	203	356
18	457.0	686	286	1372	914	457	914	686	343	343	203	229	381
20	508.0	762	318	1524	1016	508	1016	762	381	381	229	254	508
22	559.0	838	343	1676	1118	559	1118	838	419	419	254	254	508
24	610.0	914	381	1829	1219	610	1219	914	432	432	267	305	508
26	660.0	991	406						495	495	267		610
28	711.0	1067	438						521	521	267		610
30	762.0	1143	470						559	559	267		610
32	813.0	1219	502						597	597	267		610
34	864.0	1295	533						635	635	267		610
36	914.0	1372	565						673	673	267		610
38	965.0	1448	600						711	711	305		610
40	1 016.0	1524	632						749	749	305		610
42	1067.0	1600	660						762	711	305		610
44	1 118.0	1676	695						813	762	343		610
46	1 168.0	1753	727						851	800	343		711
48	1 219.0	1829	759						889	838	343		711

All Dimensions are in mm

TOLERANCES ACCORDING TO ANSI B16.9/2007



ALL FITTINGS			90° / 45° ELBOWS AND TEES	3D ELBOWS	180° RETURNS			REDUCERS	CAPS	ANGULARITY TOLERANCE		
Nominal Pipe Size in.	Outside Diameter at Bevel	Inside Diameter at End	Center to End Dimension			Back-to Face Dimension	Alignment of Ends	Overall Length	Overall Length	Nominal Pipe Size in.	Off Angle	Off Plane
			A, B, C, M	A, B	O	K	U	H	E		Q	P
1/2" to 2.1/2"	+ 1,6 - 0,8	± 0,8	± 2	± 3	± 6	± 6	± 1	± 2	± 3	1/2" to 4"	± 1	± 2
3" to 3.1/2"	± 1,6	± 1,6	± 2	± 3	± 6	± 6	± 1	± 2	± 3	5" to 8"	± 2	± 4
4"	± 1,6	± 1,6	± 2	± 3	± 6	± 6	± 1	± 2	± 3	10" to 12"	± 3	± 5
5" to 8"	+ 2,4 - 1,6	± 1,6	± 2	± 3	± 6	± 6	± 1	± 2	± 6	14" to 16"	± 3	± 6
10" to 18"	+ 4,0 - 3,2	± 3,2	± 2	± 3	± 10	± 6	± 2	± 2	± 6	18" to 24"	± 4	± 10
20" to 24"	+ 6,4 - 4,8	± 4,8	± 2	± 3	± 10	± 6	± 2	± 2	± 6	26" to 30"	± 5	± 10
26" to 30"	+ 6,4 - 4,8	± 4,8	± 3	± 6	-	-	-	± 5	± 10	32" to 42"	± 5	± 13
32" to 48"	+ 6,4 - 4,8	± 4,8	± 5	± 6	-	-	-	± 5	± 10	44" to 48"	± 5	± 19

1. A minimum Wall Thickness of 87.5% applies unless the purchaser specifies a different wall thickness tolerance.
2. Out of round is the sum of absolute values of plus and minus tolerance.
3. The inside diameter at ends and the nominal wall thicknesses are to be specified by the purchaser.
4. All dimensions are in millimetres except nominal pipe sizes which are in inches
5. This tolerance may not apply in localized areas of formed fittings where increased W.th is required to meet design requirements.

TOLERANCES ACCORDING TO MSS SP75/2004

ALL FITTINGS			LR ELBOWS AND TEES	3D ELBOWS	REDUCERS	CAPS	ANGULARITY TOLERANCE		
Nominal Pipe Size in.	Inside Diameter at End	Wall Thickness	Center to End Dimension		Overall Length	Overall Length	Nominal Pipe Size in.	Off Angle	Off Plane Elbows
			A, B, C, M	A, B	H	E		Q	P
16" to 24"	± 2,4	Nominal	± 2,4	± 3,2	± 2,4	± 6,8	16" to 24"	± 1,6	± 6,4
26" to 36"	± 2,4	-0,25	± 3,2	± 6,4	± 4,8	± 9,5	26" to 36"	± 2,4	± 12,7
38" to 48"	± 3,2		± 4,8	± 9,5	± 9,5	± 9,5	38" to 48"	± 3,2	± 19

1. Out-of-roundness tolerances shall be the difference between the maximum diameters measured on any radial cross-section.
2. Out-of-roundness tolerance at ends of elbows shall be 1% of diameter.
3. Minus 0,25 mm except that isolated non-continuous reductions are permitted in accordance with subsection of MSS-SP75 Specification.
4. Outside diameter may be tapered at angle up to 30° beyond weld bevel.