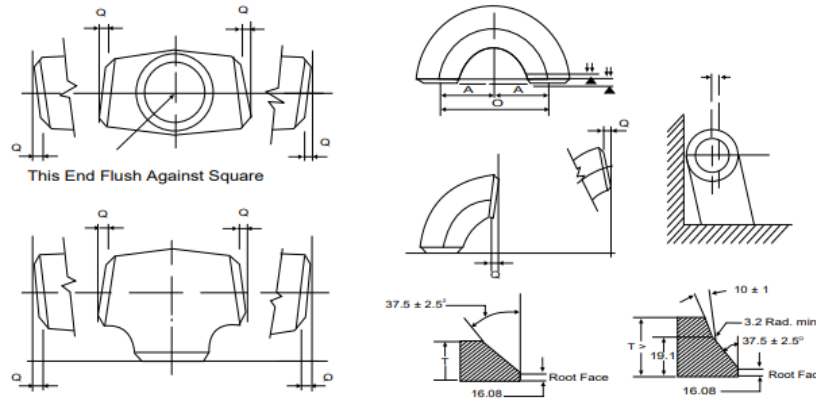


DIMENSIONAL TOLERANCES AS PER ANSI B 16.9 / B 16.28 / MSS SP -43

BUTT WELD FITTING

ALL FITTINGS				90/60/4.5/30- ELBOWS & TEES		REDUCERS		180-RETURNS				CAPS		ANGULARITY TOLERANCE ± 1/6" (1.6mm)										
Nominal Pipe Size Inch/mm	Outside Diameter at Level	Inside Diameter	Wall Thickness at End	Centre to End		Overall Length Dimensions		Centre to End		Back Face Dimensions	Alignment of End Dimensions		Overall length	Nominal Pipe Size	Off Angle Inch/mm	Off Plane								
	D		T		A,B,C,M		H		O		K		U		E		Q		P					
	(1) B16.9	MS SP43	(2) B16.9	B16.9	MS SP43	B16.9	MS SP43	B16.9	MSS SP43	B16.9	MS SP43	B16.9	MS SP43	B16.9	MSS SP43		B16.9	MS SP43	B16.9					
1/2" TO 2 1/2" 15 TO 65	±1.0		±0.8			FROM 1/2" TO 10" 15 TO 50 ±2	FROM 3/4" ±1.59	FROM 1/2" TO 10" 15 TO 50 ±2	FROM 10" TO 200 ±1.59					±4	±3.17	1/2" TO 4" 15 TO 100	1	1						
3" TO 3 1/2" 80 TO 90						±0.79	±1.6														5" TO 8" 125 TO 200	2	4	
4" 100						+2 -1																		
5" TO 6" 125 TO 150	+3 -1	+1.59													±7	±6.35	14" TO 16" 350 TO 400	3	16" TO 24"	7				
8" 200	±2	-0.79		Not Less Than	Not Less Than			FROM 12" TO 30" ±3	300 TO 750											of Contact Face	18" TO 24" 450 TO 600	4	400 TO 600 1.6	10
10" TO 18" 250 TO 450	+4 -3	+2.38 -0.79	±3.2	87.5% Nominal Thk	87.5% Nominal Thk	FROM 12" TO 30" ±3	±2.38		10" TO 24" +2.38												26" TO 30" 650 TO 750	5	26" TO 36" 650 TO	10
20" TO 24" 500 TO 600	+6 -5	3.17 -0.79				300 TO 750			250 TO 600	±10	±9.53		±2.0	±1.59							32" TO 42" 800 TO 1050	5	900 TO 2.4	13
26" TO 30" 650 TO 750	+7 -5		±4.8												±10						44" TO 48" 1100 TO 1200	5	38" TO 48"	20
32" TO 48" 800 TO 1200	+7 -5					±5															42" TO 48" 1050 TO 1200	±5	950 TO 1200 3.2	±20



1. Out of round is the sum of absolute values of plus and minus tolerance.
2. The inside diameter at ends and the nominal wall thickness are to be specified by the purchaser.
3. Out of roundness tolerances shall be the difference between the Max. dia measured on any radial cross-section.
4. All dimensions are in millimeters except nominal pipe sizes which are in inches