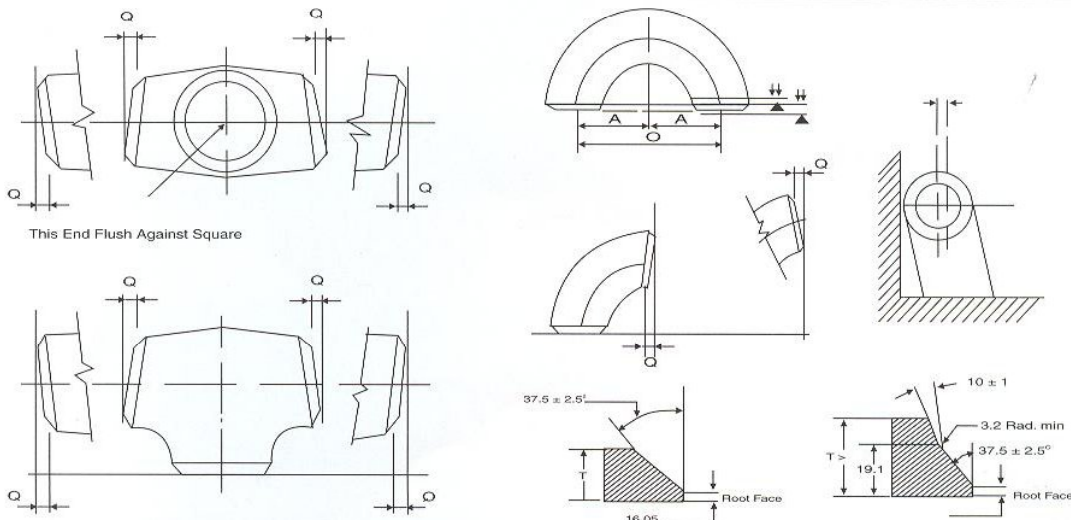


Dimensional Tolerances as Per ANSI B 16.9/B 16.28/ MSS SP-43 Butt Weld Fitting

ALL FITTINGS				90°/60°/45° /30° ELBOWS & TEES		REDUCERS		180° RETURNS				CAPS		ANGULARITY TOLERANCE						
Nominal Pipe Size Inch/mm	Outside Diameter at Level	Inside Dia meter	Wall Thickness at End	Centre to End		Overall Length Dimensions		Centre to End		Back to 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	MSS SP43	(2) B16.9	B16.9	MSS SP43	B16.9	MSS SP43	B16.9	MSS SP43	B16.9	MSS SP43	B16.9	MSS SP43	B16.9	MSS SP43		B16.9	MSS SP43	B16.9	
1/2" TO 2 1/2" 80 TO 90	±1.0		±0.8			FROM 1/2" TO 10" 15 TO 250	FROM 3/4"	FROM 1/2" TO 10" 15 TO 250	FROM 1/2" TO 8" 15 TO 200						±4	±3.17	1/2" TO 4" 15 TO 100	1		1
3" TO 3 1/2" 80 TO 90		±0.79															5" TO 8" 125 TO 200	2		4
4" 100	+2 -1		±1.6			±2	±1.59	±2	±1.59	±7	±6.35	±7	±6.35	±1.0	±0.79		10" TO 12" 250 TO 300	3		5
5" TO 6" 125 TO 150	+3 -1	+1.59													±7	±6.35	14" TO 16" 350 TO 400	3	16" TO 24" 400 TO 600	7
8" 200	±2	-0.79		Not Less Than	Not Less Than												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	FROM 12" TO 30" ±3	10" TO 24" +2.38 250 TO 600	±10"	±9.53			±2.0"	±1.59		26" TO 30" 650 TO 750	5	26" TO 36" 650 TO 900 2.4	10
20" TO 24" 500 TO 600	+6 -5	3.17 0.79				300 TO 750											32" TO 42" 800 TO 1050	5		13
26" TO 30" 550 TO 750	+7 -5		±4.8														44" TO 48" 1100 TO 1200	5	38" TO 48" 950 TO 1200 3.2	20
32" TO 48" 800 TO 1200	+7 -5					±5											42" TO 48" 1050 TO 1200	±5		±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.

WELDING BEVEL STANDARDS ANSI B 16.25