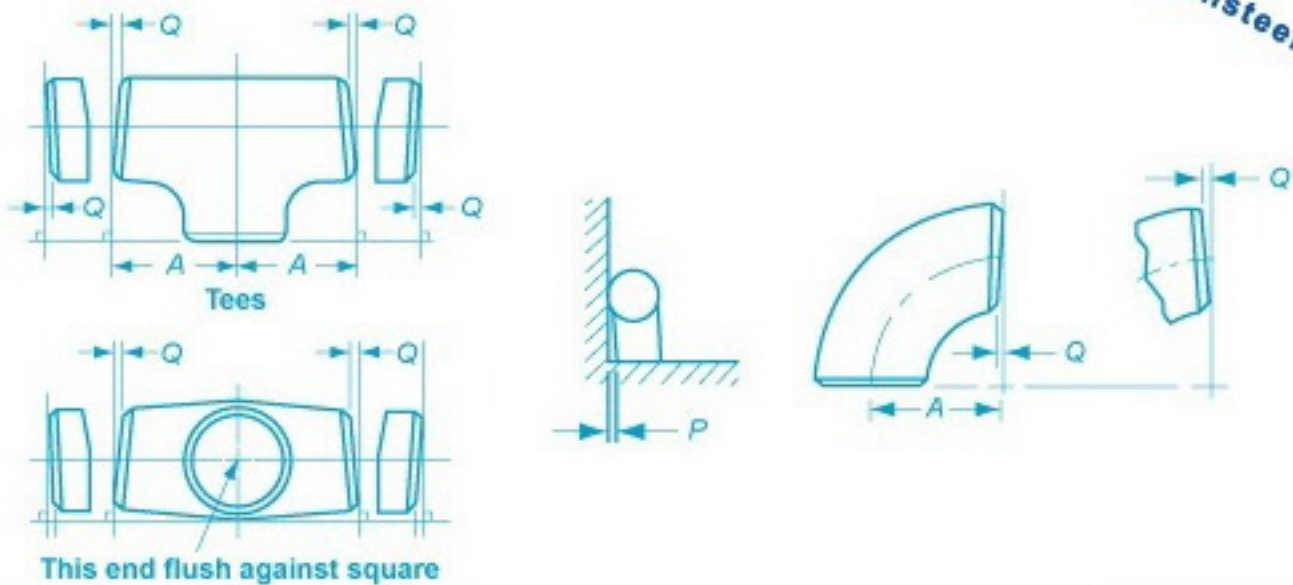


# ASME B16.9

## DIMENSIONAL TOLERANCE

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Nominal Pipe Size (NPS)	All Fittings						90 deg. 45deg Elbows and Tees
	Outside Diameter at Bevel [Notes (1), (2)]	Inside Diameter at End [Notes (1), (3), (4)]	Wall Thickness [Notes (3)]	Overall Length of Cap, E	Angularity		Center-to-End Dimension A
					Off Angle Q	Off Plane P	
1/2 to 2 1/2	+ 1.6 - 0.8	0.8	Not less than 87.5% of nominal thickness marked on fittings	3.0	0.8	1.6	1.6
3	1.6	1.6		3.0	0.8	1.6	1.6
4	1.6	1.6		3.0	0.8	1.6	1.6
5 to 8	2.4 - 1.6	1.6		6.4	1.6	3.2	1.6
10 to 12	+ 4.0 - 3.2	3.2		6.4	2.3	4.8	3.2
14 to 16	+ 4.0 - 3.2	3.2		6.4	2.3	6.3	3.2
18	+ 4.0 - 3.2	3.2		9.7	3.1	9.7	3.2
20 to 24	+ 6.4 - 4.8	4.8		9.7	3.1	9.7	3.2

### GENERAL NOTES:

Dimensions are in millimeters. Tolerances are equal plus and minus except as noted.

### NOTES:

- (1) Out-of-round is the sum of absolute values of plus and minus tolerance.
- (2) The inside diameter and the nominal wall thicknesses at ends are to be specified by the purchaser. Wall thickness tolerance applies throughout the fittings.
- (3) Unless otherwise specified by the purchaser, these tolerances apply to the nominal inside diameter, which equals the difference between the nominal outside diameter and twice the nominal wall thickness.