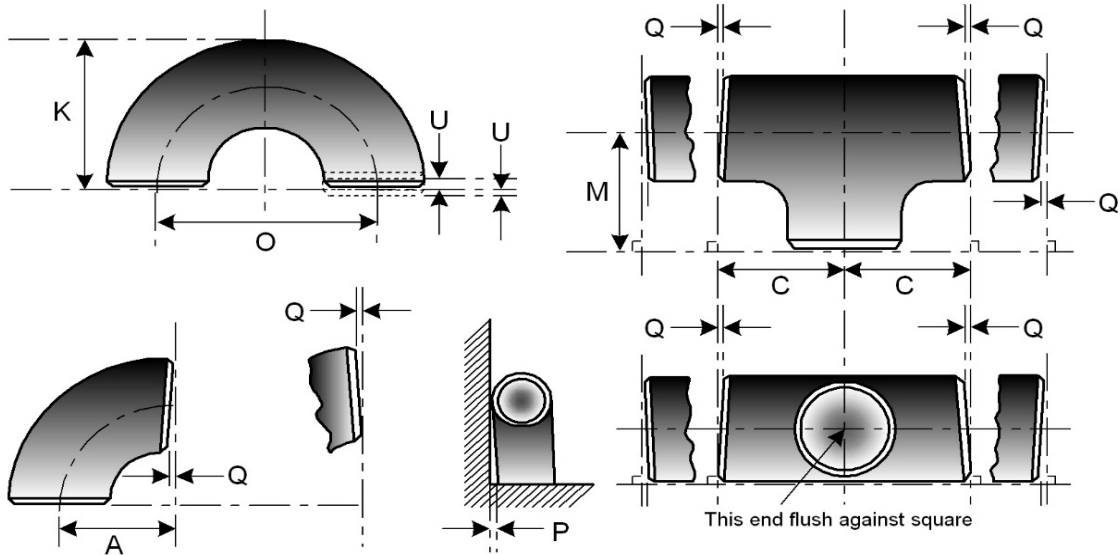


Tolerances of BW Fittings to ASME B16.9



These drawings are for illustration purposes. Please also refer to the drawings with each dimensional chart.

Nominal Pipe Size NPS	All Fittings			LR and SR Elbows and Tees Centre-to-End A,B,C,M	3D Elbows Centre-to-End A,B	180 Deg Return Bends			Reducers Overall Length H	Caps Overall Length E
	O.D. at Bevel ^{(1), (2)}	I.D. at End ^{(1), (3), (4)}	Wall Thickness ⁽³⁾			Centre-to-Centre O	Back-to-Face K	Alignment of Ends U		
1/2 to 2 1/2	+0.06 -0.03	0.03	Not less than 87.5% of nominal thickness	0.06	0.09	0.25	0.25	0.03	0.06	0.12
3 to 3 1/2	0.06	0.06		0.06	0.09	0.25	0.25	0.03	0.06	0.12
4	0.06	0.06		0.06	0.09	0.25	0.25	0.03	0.06	0.12
5 to 8	+0.09 -0.06	0.06		0.06	0.09	0.25	0.25	0.03	0.06	0.25
10 to 18	+0.16 -0.12	0.12		0.09	0.12	0.38	0.25	0.06	0.09	0.25
20 to 24	+0.25 -0.19	0.19		0.09	0.12	0.38	0.25	0.06	0.09	0.25
26 to 30	+0.25 -0.19	0.19		0.12	0.25	...	...	...	0.19	0.38
32 to 48	+0.25 -0.19	0.19		0.19	0.38	...	...	...	0.19	0.38

All dimensions are given in inches. 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) This tolerance may not apply in localized areas of formed fittings where increased wall thickness is required to meet design requirements of ASME B16.9.
- (3) The inside diameter and the nominal wall thicknesses at ends are to be specified by the purchaser.
- (4) 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.

Nominal Pipe Size NPS	Angularity Tolerances	
	Off Angle Q	Off Plane P
1/2 to 4	0.03	0.06
5 to 8	0.06	0.12
10 to 12	0.09	0.19
14 to 16	0.09	0.25
18 to 24	0.12	0.38
26 to 30	0.19	0.38
32 to 42	0.19	0.50
44 to 48	0.19	0.75

Trans Am

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