



DIMENSIONAL TOLERANCES - ASME B16.5

Welding Neck Flanges				
O	Outside Diameter**	When O is 24" or less.	±0.06"	±1.6 mm
		When O is over 24"	±0.12"	±3.2 mm
R	Diameter of Contact Face	0.06" (1.6 mm) raised face.	±0.03"	±0.8 mm
		0.25" (6.4 mm) raised face.	±0.02"	±0.5 mm
A	Diameter of Hub at Point of Welding	NPS 5 and smaller.	+0.09", -0.03"	+2.4 mm, -0.8mm
		NPS 6 and larger	+0.16", -0.03"	+4.0 mm, -0.8 mm
(1)	Inside Diameter	NPS 10 and smaller	±0.03"	±0.8 mm
		NPS 12 to 18, inclusive	±0.06"	±1.6 mm
		NPS 20 and larger	+0.12", -0.06"	+3.2 mm, -1.6 mm
X	Diameter of Hub at Base*	When Hub Base is 24" or less	±0.06"	±1.6 mm
		When Hub Base is over 24"	±0.12"	±3.2 mm
C	Thickness	18" and smaller	+0.13, -0	+3.2 mm, -0
		20" and larger	+0.19, -0	+4.8 mm, -0
		Where allowance has been left on face for finish: All sizes* for finish: All sizes**	+0.13, -0.06	+3.2 mm, -1.6mm
	Drilling	Bolt circle diameter	±0.06"	
		Bolt hole spacing	±0.03"	±0.8 mm
	Eccentricity of Bolt Circle and Facing with respect to Bore*	2 1/2" and smaller	0.03 Max	0.8 mm Max
		3" and larger	0.06 Max	1.6 mm Max
Y	Length Through Hub	10" and smaller	±0.06"	±1.6 mm
		12" and larger	±0.12"	±3.2 mm

*Tolerance for these dimensions are not covered by ANSI B16.5
 ‡ Actual Flange OD, other size references mean Nominal Pipe Size.