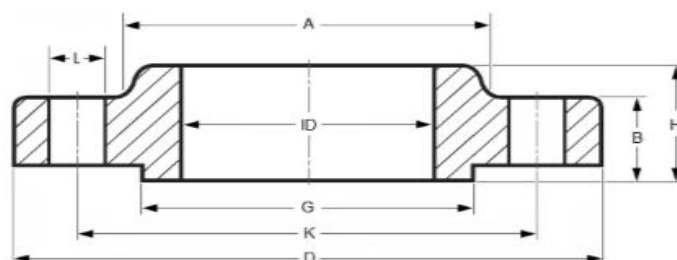
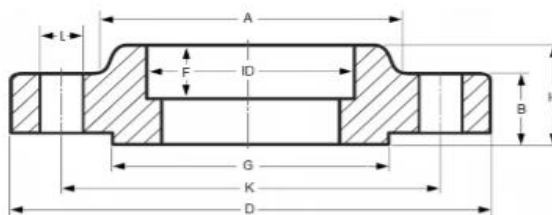


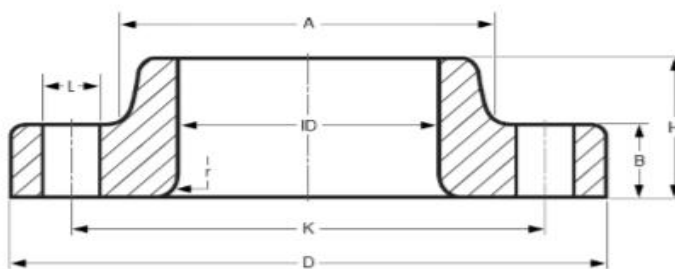
DIMENSIONAL TOLERANCES WELDING NECK FLANGES ACC. TO ASME B16.5	
Outside Diameter ≤ 24 = ± 1.6 mm > 24 = ± 3.2 mm	Inside Diameter ≤ 10 = ± 0.8 mm 12 thru 18 = ± 1.6 mm ≥ 20 = + 3.2 mm / - 1.6 mm
Diameter of Contact Face 1.6 mm Raised Face = ± 0.8 mm 6.35 mm Raised Face, Tongue & Groove / Male-Female = ± 0.4 mm	Diameter of Hub at Base ≤ 24 = ± 1.6 mm > 24 = ± 3.2 mm
Diameter of Hub at Point of Welding ≤ 5 = + 2.4 mm / - 0.8 mm ≥ 6 = + 4.0 mm / - 0.8 mm	Drilling Bolt Circle = ± 1.6 mm Bolt Hole Spacing = ± 0.8 mm Eccentricity of Bolt Circle with Respect to Facing ≤ 2½ = 0.8 mm max. ≥ 3 = 1.6 mm max.
Thickness ≤ 18 = + 3.2 mm / - 0 ≥ 20 = + 4.8 mm / - 0	Length thru Hub ≤ 10 = ± 1.6 mm ≥ 12 = ± 3.2 mm
Dimensional tolerances are in millimeters unless otherwise indicated.	



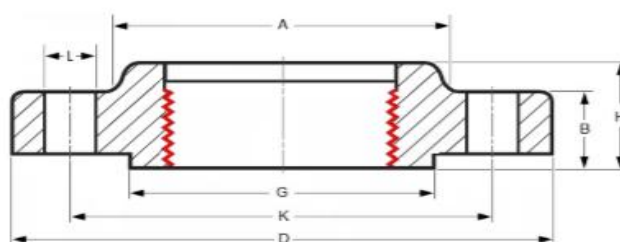
DIMENSIONAL TOLERANCES OF SLIP ON FLANGES ACCORDING TO ASME B16.5	
Outside Diameter ≤ 24 = ± 1.6 mm > 24 = ± 3.2 mm	Inside Diameter ≤ 10 = ± 0.8 mm ≥ 12 = + 1.6 mm / - 0 mm
Diameter of Contact Face 1.6 mm Raised Face = ± 0.8 mm 6.35 mm Raised Face, Tongue & Groove / Male-Female = ± 0.4 mm	Outside Diameter of Hub ≤ 12 = + 2.4 mm / - 1.6 mm ≥ 14 = ± 3.2 mm
Diameter of Counterbore Same as for Inside Diameter	Drilling Bolt Circle = ± 1.6 mm Bolt Hole Spacing = ± 0.8 mm Eccentricity of Bolt Circle with Respect to Facing ≤ 2½ = 0.8 mm max. ≥ 3 = 1.6 mm max.
Thickness ≤ 18 = + 3.2 mm / - 0 ≥ 20 = + 4.8 mm / - 0	Length thru Hub ≤ 18 = + 3.2 mm / - 0.8 mm ≥ 20 = + 4.8 mm / - 1.6 mm
Dimensional tolerances are in millimeters unless otherwise indicated.	



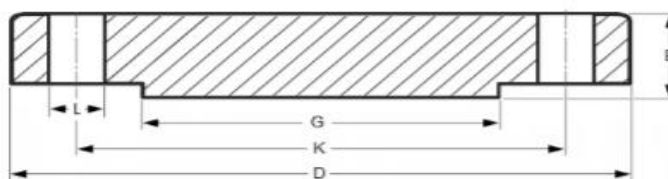
DIMENSIONAL TOLERANCES OF SOCKET WELD FLANGES ACCORDING TO ASME B16.5	
Outside Diameter ≤ 24 = 1.6 mm > 24 = ± 3.2 mm	Inside Diameter ≤ 10 = ± 0.8 mm ≥ 12 = + 1.6 mm / - 0 mm
Diameter of Contact Face 1.6 mm Raised Face = ± 0.8 mm 6.35 mm Raised Face, Tongue & Groove / Male-Female = ± 0.4 mm	Outside Diameter of Hub ≤ 12 = + 2.4 mm / - 1.6 mm ≥ 14 = ± 3.2 mm
Diameter of Counterbore Same as for Inside Diameter	Drilling Bolt Circle = 1.6 mm Bolt Hole Spacing = ± 0.8 mm Eccentricity of Bolt Circle with Respect to Facing ≤ 2½ = 0.8 mm max. ≥ 3 = 1.6 mm max.
Thickness ≤ 18 = + 3.2 mm / - 0 ≥ 20 = + 4.8 mm / - 0	Length thru Hub ≤ 18 = + 3.2 mm / - 0.8 mm ≥ 20 = + 4.8 mm / - 1.6 mm
Dimensional tolerances are in millimeters unless otherwise indicated.	



DIMENSIONAL TOLERANCES OF LAP JOINT FLANGES ACCORDING TO ASME B16.5	
Outside Diameter ≤ 24 = 1.6 mm > 24 = ± 3.2 mm	Inside Diameter ≤ 10 = ± 0.8 mm ≥ 12 = + 1.6 mm / - 0 mm
Diameter of Contact Face 1.6 mm Raised Face = ± 0.8 mm 6.35 mm Raised Face, Tongue & Groove / Male-Female = ± 0.4 mm	Outside Diameter of Hub ≤ 12 = + 2.4 mm / - 1.6 mm ≥ 14 = ± 3.2 mm
Diameter of Counterbore Same as for Inside Diameter	Drilling Bolt Circle = 1.6 mm Bolt Hole Spacing = ± 0.8 mm Eccentricity of Bolt Circle with Respect to Facing ≤ 2½ = 0.8 mm max. ≥ 3 = 1.6 mm max.
Thickness ≤ 18 = + 3.2 mm / - 0 ≥ 20 = + 4.8 mm / - 0	Length thru Hub ≤ 18 = + 3.2 mm / - 0.8 mm ≥ 20 = + 4.8 mm / - 1.6 mm
Dimensional tolerances are in millimeters unless otherwise indicated.	



DIMENSIONAL TOLERANCES OF THREADED FLANGES ACCORDING TO ASME B16.5	
Outside Diameter $\leq 24 = 1.6 \text{ mm}$ $> 24 = \pm 3.2 \text{ mm}$	Inside Diameter Within Limits on Boring Gauge
Diameter of Contact Face 1.6 mm Raised Face = $\pm 0.8 \text{ mm}$ 6.35 mm Raised Face, Tongue & Groove / Male-Female = $\pm 0.4 \text{ mm}$	Drilling Bolt Circle = 1.6 mm Bolt Hole Spacing = $\pm 0.8 \text{ mm}$ Eccentricity of Bolt Circle with Respect to Facing $\leq 2\frac{1}{2} = 0.8 \text{ mm max.}$ $\geq 3 = 1.6 \text{ mm max.}$
Outside Diameter of Hub $\leq 12 = + 2.4 \text{ mm} / - 1.6 \text{ mm}$ $\geq 14 = \pm 3.2 \text{ mm}$	Diameter of Counterbore Same as for Inside Diameter
Thickness $\leq 18 = + 3.2 \text{ mm} / - 0$ $\geq 20 = + 4.8 \text{ mm} / - 0$	Length thru Hub $\leq 18 = + 3.2 \text{ mm} / - 0.8 \text{ mm}$ $\geq 20 = + 4.8 \text{ mm} / - 1.6 \text{ mm}$
Dimensional tolerances are in millimeters unless otherwise indicated.	



DIMENSIONAL TOLERANCES OF BLIND FLANGES ACCORDING TO ASME B16.5	
Outside Diameter $\leq 24 = 1.6 \text{ mm}$ $> 24 = \pm 3.2 \text{ mm}$	Inside Diameter not applicable
Diameter of Contact Face 1.6 mm Raised Face = $\pm 0.8 \text{ mm}$ 6.35 mm Raised Face, Tongue & Groove / Male-Female = $\pm 0.4 \text{ mm}$	Outside Diameter of Hub $\leq 12 = + 2.4 \text{ mm} / - 1.6 \text{ mm}$ $\geq 14 = \pm 3.2 \text{ mm}$
Diameter of Counterbore not applicable	Drilling Bolt Circle = 1.6 mm Bolt Hole Spacing = $\pm 0.8 \text{ mm}$ Eccentricity of Bolt Circle with Respect to Facing $\leq 2\frac{1}{2} = 0.8 \text{ mm max.}$ $\geq 3 = 1.6 \text{ mm max.}$
Thickness $\leq 18 = + 3.2 \text{ mm} / - 0$ $\geq 20 = + 4.8 \text{ mm} / - 0$	Length thru Hub $\leq 18 = + 3.2 \text{ mm} / - 0.8 \text{ mm}$ $\geq 20 = + 4.8 \text{ mm} / - 1.6 \text{ mm}$
Dimensional tolerances are in millimeters unless otherwise indicated.	