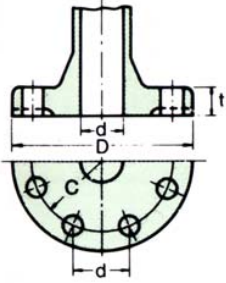


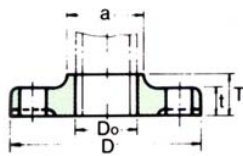
# TOLERANCE

## ANSI B 16.5 FORGED FLANGES

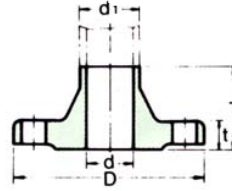
SOLID FLANGE



SLIP-ON FLANGE



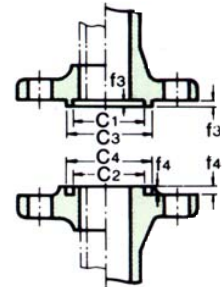
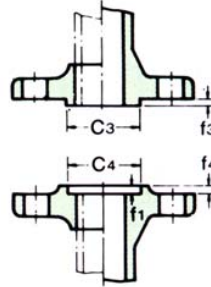
WELDING NECK FLANGE



TYPE OF GASKET SURFACE

MALE & FEMALE TYPE

TONGUE & GROOVE TYPE



### THREADED, SOCKET-WELDING, SLIP-ON, LAP JOINT AND BLIND.

Outside Diameter	When O.D. is 24" or less	$\pm 1/16"$ (1.6mm)*	
	When O.D. is Over 24"	$\pm 1/8"$ (3.2mm)*	
Inside Diameter	Threaded	Within limits on boring gague	
	Socket-Welding, Slip-on and Lap joint	10" & Smaller $+1/32"$ (0.8mm), $-0"$ 12" & Larger $+1/16"$ (1.6mm), $-0"$	
Outside Diameter of Hub	5" and Smaller	$+3/32"$ (2.4mm) $-1/32"$ (0.8mm)	
	6" and Larger	$+5/32"$ (4.0mm) $-1/32"$ (0.8mm)	
Diameter of Contact Face	1/16" Raised Face	$\pm 1/32"$ (0.8mm)	
	1/4" Raised Face Tongue & Groove Male, Female	$\pm 1/64"$ (0.4mm)	
Diameter of Counterbore	Same as for Inside Daimeter		
Drilling	Bolt Circle	$\pm 1/16"$ (1.6mm)	
	Bolt Hole Spacing	$\pm 1/32"$ (0.8mm)	
	Eccentricity of Bolt Circle with Respect to Facing	2 1/2" & Smaller	$1/32"$ (0.8mm) Max.
		3" & Larger	$1/16"$ (1.6mm) Max.
	Eccentricity of Bolt Circle with Respect to Bore	$1/32"$ (0.8mm) Max.*	
	Eccentricity of Facing with Respect to Bore	$1/32"$ (0.8mm) Max.*	
Thickness	18" and Smaller	$+1/8"$ (3.2mm), $-0"$	
	20" and Larger	$+3/16"$ (4.8mm), $-0"$	
Length Thru Hub	10" and Smaller	$\pm 1/16"$ (1.6mm)	
	12" and Larger	$\pm 1/8"$ (3.2mm)	

NOTE : \* This tolerance is not covered in ANSI B16.5, but maker's option.

### WELDING NECK

Outside Diameter	When O.D. is 24" or less	$\pm 1/16"$ (1.6mm)*	
	When O.D. is Over 24"	$\pm 1/8"$ (3.2mm)*	
Inside Diameter	10" and Smaller	$\pm 1/32"$ (0.8mm)	
	12" thru 18"	$\pm 1/16"$ (1.6mm)	
	20" and Larger	$+1/8"$ (3.2mm) $-1/16"$ (1.6mm)	
Diameter of Contact Face	1/16" Raised Face	$\pm 1/32"$ (0.8mm)	
	1/4" Raised Face Tongue & Groove Male, Female	$\pm 1/64"$ (0.4mm)	
Diameter of Hub at Base	When Hub Base is 24" or Smaller	$\pm 1/16"$ (1.6mm)	
	When Hub Base is Over 24"	$\pm 1/8"$ (3.2mm)	
Diameter of Hub at Point of Welding	5" and Smaller	$+3/32"$ (2.4mm) $-1/32"$ (0.8mm)	
	6" and Larger	$+5/32"$ (4.0mm) $-1/32"$ (0.8mm)	
Drilling	Bolt Circle	$\pm 1/16"$ (1.6mm)	
	Bolt Hole Spacing	$\pm 1/32"$ (0.8mm)	
	Eccentricity of Bolt Circle with Respect to Facing	2 1/2" & Smaller	$1/32"$ (0.8mm) Max.
		3" & Larger	$1/16"$ (1.6mm) Max.
	Eccentricity of Bolt Circle with Respect to Bore	$1/32"$ (0.8mm) Max.*	
	Eccentricity of Facing with Respect to Bore	$1/32"$ (0.8mm) Max.*	
Thickness	18" and Smaller	$+1/8"$ (3.2mm), $-0"$	
	20" and Larger	$+3/16"$ (4.8mm), $-0"$	
Length Thru Hub	10" and Smaller	$\pm 1/16"$ (1.6mm)	
	12" and Larger	$\pm 1/8"$ (3.2mm)	

NOTE : \* This tolerance is not covered in ANSI B16.5, but maker's option.