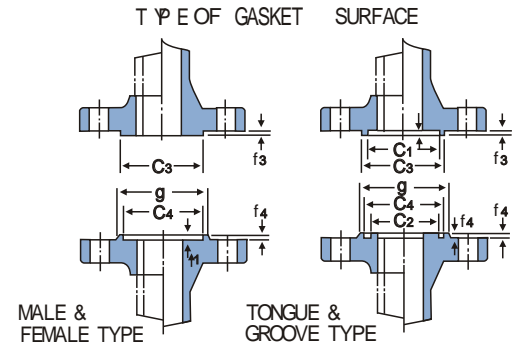
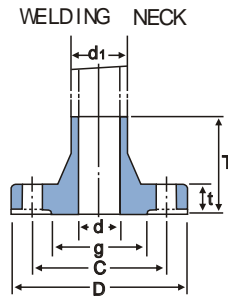
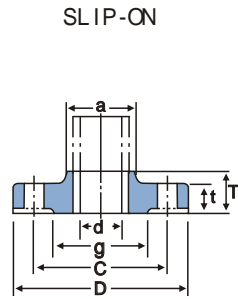
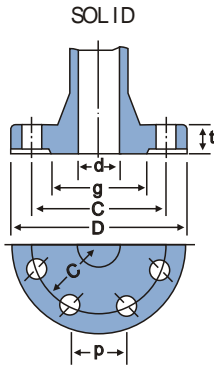




# TOLERANCE FOR PIPE FLANGES

KS B1502 JIS B2203



Unit:mm

Flange Section		Surface Condition	Basic Size	Dimensional Tolerance
Outside Dia	As Forged (1)		300 & below	+Not Specified
			over 300 thru 600	-2.0
			over 300 thru 1000	
			over 1000 thru 1500	+Not Specified
	Finish		300 & below	± 1
			over 300 thru 600	± 1.5
			over 600 thru 1000	± 2
			over 1000 thru 1500	± 2.5
Inside Dia	Solid Flange d(2)	As Forged (1)	16 & below	± 1
			over 16 thru 63	± 1.5
			over 63 thru 125	± 2
			over 125 thru 150	± 2.5
			over 250 thru 500	± 3
			over 500 thru 1000	± 4
	Slip-on Flange do	Finish	100 & below	+0.5
			over 100 thru 400	+1.0
			over 400 thru 600	+1.5
			over 600 thru 800	+2.0
			over 800 thru 1000	+2.5
			over 1000	+3.0
Welding Neck Flange d	Finish	100 & below	-0.5	
		over 100 thru 400	-1.0	
		over 400 thru 600	-1.5	
		over 600 thru 800	-2.0	
		over 800 thru 1000	-2.5	
		over 1000	-3.0	
Bolt Hble	Bolt Circle Dia c		250 & below	± 0.5
			over 250 thru 550	± 0.6
			over 550 thru 950	± 0.8
			over 950 thru 1350	± 1
			over 1350	± 1.5

Flange Section		Surface Condition	Basic Size	Dimensional Tolerance
Bolt Hole	Pitch of Hole	Dir l in h	—	± 0.5
Dia. of Hub	Slip-on Flange(a) and Welding Neck Flange (d1)	As Forged	220 & below	+2
			over 220 thru 450	+3
			over 450 thru 650	+4
			over 650 thru 850	+6
			over 850 thru 1000	+7
			over 1000 thru 1500	+8
		Finish	20 & below	+1
			over 20 thru 40	+1.5
			over 40 thru 60	+2
			over 60 thru 100	+2.5
Gasket Seat	C1, C2, C3, C4	Finish	50 & below	± 0.3
			over 50 thru 1000	± 0.5
			over 1000 thru 1500	± 0.4
	f4, f3	Finish	8 & below	± 0.2
			over 8	± 0.25
			g	± 0.25
Thickness t	One-side Finish	200 & below	± 0.8	
		over 200 thru 650	± 0.9	
		over 650 thru 1000	± 1	
	Both-side Finish	20 & below	± 1.5	
		over 20 thru 50	± 2	
		over 50 thru 100	± 3	
Hub Height T	Flange with Pipe Inserted	Finish	50 & below	± 1
			over 50 thru 100	± 1.5
	Flange with But-welded Pipe	Finish	over 100 thru 200	± 2
			over 200 & below	± 2
			over 200 thru 300	± 3

**Notes**

- (1) This dimensional tolerance applies to the machined surface, as required.
- (2) This dimension d has been specified only for the flange, of which the bore part is cylindrical in shape.

**Remarks**

- (1) This dimension d of bore part of the solid flanges with surface, as forged of valves, pumps, etc, are allowed up to plus 100% of the above dimensional tolerance. Provided that the required thickness shall be free from its influence.
- (2) The thickness of flange of valve and the like, of which the dimension between flange faces is limited to a fixed value, are allowed up to plus 100% of the above dimensional tolerance in the column of thickness.
- (3) In the case of spot facing of the single surface finishing, the thickness of spot facing is allowed up to 70% of the dimensional tolerance in the above column of thickness in negative side.
- (4) The chain double-dashed lines in the figures of solid flange and socket welding type flange illustrate the cases of large raised face flange.