

STEEL FLANGES

Weld Neck

Slip On

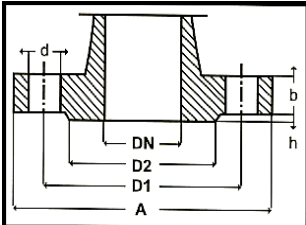
Blind

Lap Joint

Orifice

RTJ

FLANGE DIMENSIONS AND DRILLING TO ANSI B 16.5



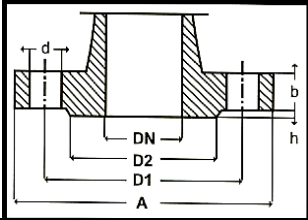
DN = diameter nominal (size)
 A = flange \varnothing
 b = thickness of flange
 D₂ = diameter of raised face \varnothing
 D₁ = diameter of bolt circle \varnothing
 n = number of bolts
 d = diameter of bolt holes \varnothing
 h = height of raised face (RF)

h* = 1/16" = 1.6 mm for ANSI Class 150 - 300
 h* = 1/4" = 6.4 mm for ANSI Class 400 - 2500
 * for steel flanges only

b = raised face included for ANSI Class 150 - 300
 b = raised face not included for ANSI Class 400 - 2500

		150 lbs		300 lbs		400 lbs		600 lbs		900 lbs		1500 lbs		2500 lbs	
DN		inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm
1/2"	A	3.1/2	88.9	3.3/4	95.2	3.3/4	95.2	3.3/4	95.2	4.3/4	121	4.3/4	121	5.1/4	133.4
	b	7/16	11.1	9/16	14.3	9/16	14.3	9/16	14.3	7/8	22.2	7/8	22.2	1.3/16	30.2
	D2	1.3/8	34.9	1.3/8	34.9	1.3/8	34.9	1.3/8	34.9	1.3/8	34.9	1.3/8	34.9	1.3/8	34.9
	D1	2.3/8	60.8	2.5/8	66.7	2.5/8	66.7	2.5/8	66.7	3.1/4	82.6	3.1/4	82.6	3.1/2	88.9
	n	4	4	4	4	4	4	4	4	4	4	4	4	4	4
	d	5/8	15.9	5/8	15.9	5/8	15.9	5/8	15.9	5/8	22.2	7/8	22.2	7/8	22.2
3/4"	A	3.7/8	98.4	4.5/8	117.5	4.5/8	117.5	4.5/8	117.5	5.1/8	130	5.1/8	130	5.1/2	139.7
	b	1/2	12.7	5/8	15.9	5/8	15.9	5/8	15.9	1	25.4	1	25.4	1.1/4	31.8
	D2	1.11/16	42.9	1.11/16	42.9	1.11/16	42.9	1.11/16	42.9	1.11/16	42.9	1.11/16	42.9	1.11/16	42.9
	D1	2.3/4	69.8	3.1/4	82.5	3.1/4	82.5	3.1/4	82.5	3.1/2	88.9	3.1/2	88.9	3.3/4	95.2
	n	4	4	4	4	4	4	4	4	4	4	4	4	4	4
	d	5/8	15.9	3/4	19	3/4	19	3/4	19	7/8	22.2	7/8	22.2	7/8	22.2
1"	A	4.1/4	108	4.7/8	123.8	4.7/8	123.8	4.7/8	123.8	5.7/8	149.2	5.7/8	149.2	6.1/4	159
	b	9/16	14.3	1.1/16	17.5	1.1/16	17.4	1.1/16	17.5	1.1/8	28.6	1.1/8	28.6	1.3/8	34.9
	D2	2	50.8	2	50.8	2	50.8	2	50.8	2	50.8	2	50.8	2	50.8
	D1	3.1/8	79.4	3/2	88.9	3.1/2	88.9	3.1/2	88.9	4	102	4	102	4.1/4	108
	n	4	4	4	4	4	4	4	4	4	4	4	4	4	4
	d	5/8	15.9	3/4	19	3/4	19	3/4	19	1	25.4	1	25.4	1	25.4
1.1/4"	A	4.5/8	117.5	5.1/4	133.4	5.1/4	133.4	5.1/4	133.4	6.1/4	159	6.1/4	159	7.1/4	184.2
	b	5/8	15.9	3/4	19	1.3/16	20.6	1.3/16	20.6	1.1/8	28.6	1.1/8	28.6	1.1/2	38.1
	D2	2.1/2	63.5	2.1/2	63.5	2.1/2	63.5	2.1/2	63.5	2.1/2	63.5	2.1/2	63.5	2.1/2	63.5
	D1	3.1/2	88.9	3.7/8	98.4	3.7/8	98.4	3.7/8	98.4	4.3/8	111	4.3/8	111	5.1/8	130
	n	4	4	4	4	4	4	4	4	4	4	4	4	4	4
	d	5/8	15.9	7/8	22.2	7/8	22.2	7/8	22.2	1.1/8	28.6	1.1/8	28.6	1.1/4	31.8
1.1/2"	A	5	127	6.1/8	155.6	6.1/8	155.6	6.1/8	155.6	7	177.8	7	177.8	8	203
	b	1.1/16	17.5	1.3/16	20.6	7/8	22.2	7/8	22.2	1.1/4	31.8	1.1/4	31.8	1.3/4	44.5
	D2	2.7/8	73	2.7/8	73	2.7/8	73	2.7/8	73	2.7/8	73	2.7/8	73	2.7/8	73
	D1	3.7/8	98.4	4.1/2	114	4.1/2	114	4.1/2	114	4.7/8	124	4.7/8	124	5.3/4	146
	n	4	4	4	4	4	4	4	4	4	4	4	4	4	4
	d	5/8	15.9	7/8	22.2	7/8	22.2	7/8	22.2	1.1/8	28.6	1.1/8	28.6	1.1/4	31.8
2"	A	6	152.4	6.1/2	165.1	6.1/2	165.1	6.1/2	165.1	8.1/2	215.9	8.1/2	215.9	9.1/4	234.9
	b	3/4	19	7/8	22.2	1	25.4	1	25.4	1.1/2	38.1	1.1/2	38.1	2	50.8
	D2	3.5/8	92.1	3.5/8	92.1	3.5/8	92.1	3.5/8	92.1	3.5/8	92.1	3.5/8	92.1	3.5/8	92.1
	D1	4.3/4	121	5	124	5	127	5	127	6.1/2	165.1	6.1/2	165.1	6.3/4	171
	n	4	4	8	8	8	8	8	8	8	8	8	8	8	8
	D	3/4	19	3/4	19	3/4	19	3/4	19	1	25.4	1	25.4	1.1/8	28.6
2.1/2"	A	7	177.8	7.1/2	190.5	7.1/2	190.5	7.1/2	190.5	9.5/8	244	9.5/8	244	10.1/2	266.7
	b	7/8	22.2	1	25.4	1.1/8	28.6	1.1/8	28.6	1.5/8	41.3	1.5/8	41.3	2.1/4	57.2
	D2	4.1/8	104.8	4.1/8	104.8	4.1/8	104.8	4.1/8	104.8	4.1/8	104.8	4.1/8	105	4.1/8	105
	D1	5.1/2	139.7	5.7/8	149.2	5.7/8	149.2	5.7/8	149.2	7.1/2	190.5	7.1/2	190.5	7.3/4	197
	n	4	4	8	8	8	8	8	8	8	8	8	8	8	8
	D	3/4	19	7/8	22.2	7/8	22.2	7/8	22.2	1/18	28.6	1/18	28.6	1/4	31.8

FLANGE DIMENSIONS AND DRILLING TO ANSI B 16.5



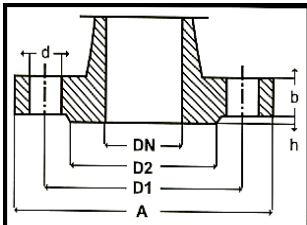
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		150 lbs		300 lbs		400 lbs		600 lbs		900 lbs		1500 lbs		2500 lbs	
DN		inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm
3"	A	7.1/2	190.5	8.1/4	209.6	8.1/4	209.6	8.1/4	209.6	9.1/2	24.1	10.1/2	267	12	305
	b	15/16	23.8	1.1/8	28.6	1.1/4	31.8	1.1/4	31.8	1.1/2	38.1	1.7/8	47.6	2.5/8	66.7
	D2	5	127	5	127	5	127	5	127	5	127	5	127	5	127
	D1	6	152.4	6.5/8	168.3	6.5/8	168.3	6.5/8	168.3	7.1/2	190.5	8	203	9	228.6
	n	4	4	8	8	8	8	8	8	8	8	8	8	8	8
	d	3/4	19	7/8	22.2	7/8	22.2	7/8	22.2	1	25.4	1.1/4	31.8	1.3/8	34.9
3.1/16"	A	8.1/2	215.9	9	228.6	9	228.6	9	228.6						
	b	15/16	23.8	13/16	30.6	1.3/8	34.9	1.3/8	34.9						
	D2	5.1/2	139.7	5.1/2	139.7	5.1/2	139.7	5.1/2	139.7						
	D1	7	177.8	7.1/4	184.2	7.1/4	184.2	7.1/4	184.2						
	n	8	8	8	8	8	8	8	8	8					
	d	3/4	19	7/8	22.2	1	25.4	1	25.4						
4"	A	9	228.6	10	254	10	254	10.3/4	273	11.1/2	292	12.1/4	311	14	356
	b	15/10	23.8	1.1/4	31.7	1.3/8	34.9	1.1/2	38.1	1.3/4	44.4	2.1/8	54	3	76.3
	D2	6.3/16	157.2	6.3/16	157.2	6.3/16	157.2	3.3/16	157.2	6.3/16	157.2	6.3/16	157.2	6.3/16	157.2
	D1	7.1/2	199	7.7/8	200	7.7/8	200	8.1/2	215.9	9.1/4	235	9.1/2	241	10.3/4	273
	n	8	8	8	8	8	8	8	8	8	8	8	8	8	8
	d	3/4	19	1/6	22.2	1	25.4	1	25.4	1.1/4	31.8	1.3/8	34.9	1.5/8	41.3
5"	A	10	254	11	279.4	11	279.4	13	330.2	13.3/4	349	14.3/4	375	16.1/2	419
	b	15/10	23.8	1.3/8	34.9	1.1/2	38.1	1.3/4	44.4	2	50.8	2.7/8	73	3.5/8	92.1
	D2	7.5/16	185.7	7.5/16	185.7	7.5/16	185.7	7.5/16	185.7	7.5/16	185.7	7.5/16	185.7	7.5/16	185.7
	D1	8.11/2	215.9	9.1/4	234.9	9.1/4	234.9	10.1/2	266.7	11	279	11.1/2	292	12.3/4	324
	n	8	8	8	8	8	8	8	8	8	8	8	8	8	8
	d	7/8	22.2	7/8	22.2	1	25.4	1.1/8	28.6	1.3/8	34.9	1.5/8	41.3	1.7/8	47.6
6"	A	11	279	12.1/2	317.5	1.1/2	317.5	14	355.6	15	381	15.1/2	394	19	483
	b	1	25.4	1.7/16	36.5	1.5/8	41.3	1.7/8	47.6	2.3/16	55.6	3.1/4	82.6	4.1/4	108
	D2	8.1/2	216	8.1/2	215.9	8.1/2	215.9	8.1/2	215.9	8.1/2	215.9	8.1/2	215.9	8.1/2	216
	D1	9.1/2	241	10.5/8	269.9	10.5/8	269.9	11.1/2	292.1	12.1/2	318	12.1/2	318	14.1/2	368
	n	8	8	12	12	12	12	12	12	12	12	12	12	8	8
	d	7/8	22.2	7/8	22.2	1	25.4	1.1/8	28.6	1.1/4	31.8	1.1/2	38.1	2.1/8	54
8"	A	13.1/2	342.9	15	381	15	381	16.1/2	419	18.1/2	470	19	482.6	21.3/4	552
	b	1.1/8	28.6	1.5/8	41.3	1.7/8	47.6	2.3/16	55.6	2.1/2	63.5	3.5/8	92.1	5	127
	D2	10.5/8	269.9	10.5/8	269.9	10.5/8	269.9	10.5/8	269.9	10.5/8	269.9	10.5/8	269.9	10.5/8	269.9
	D1	11.3/4	298.4	13	330.2	13	330.2	13.3/4	349.9	15.1/2	394.2	15.1/2	394.2	17.1/4	438
	n	8	8	12	12	12	12	12	12	12	12	12	12	12	12
	d	7/8	22.2	1	25.4	1.1/8	28.6	1.1/4	31.8	1.1/2	38.1	1.3/4	44.5	2.1/8	54
10"	A	16	406.4	17.1/2	444.5	17.1/2	444.5	20	508	21.1/2	546	23	584	26.1/2	673
	b	1.3/16	30.2	1.7/8	47.6	2.1/8	54	2.1/2	63.5	2.3/4	69.8	4.1/4	108	6.1/2	165
	D2	12.3/4	323.8	12.3/4	323.8	12.3/4	323.8	12.3/4	323.8	12.3/4	323.8	12.3/4	323.8	12.3/4	323.8
	D1	14.1/4	361.9	15.1/4	387.4	15.1/4	387.4	17	431.8	18.1/2	470	19	482.6	21.1/4	540
	n	12	12	16	16	16	16	16	16	16	16	16	12	12	12
	d	1	25.4	1.1/8	28.6	1.1/4	31.8	1.3/8	34.9	1.1/2	38.1	2	50.8	2.5/8	66.7

FLANGE DIMENSIONS AND DRILLING TO ANSI B 16.5



DN = diameter nominal (size)
 A = flange \varnothing
 b = thickness of flange
 D₂ = diameter of raised face \varnothing
 D₁ = diameter of bolt circle \varnothing
 n = number of bolts
 d = diameter of bolt holes \varnothing
 h = height of raised face (RF)

h* = 1/16" = 1.6 mm for ANSI Class 150 - 300
 h* = 1/4" = 6.4 mm for ANSI Class 400 - 2500
 * for steel flanges only

b = raised face included for ANSI Class 150 - 300
 b = raised face not included for ANSI Class 400 - 2500

		150 lbs		300 lbs		400 lbs		600 lbs		900 lbs		1500 lbs		2500 lbs	
DN		inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm
12"	A	19	482.6	20.1/2	520.7	20.1/2	520.7	22	558.8	24	610	26.1/2	673	30	762
	b	1.1/4	31.7	2	50.8	2.1/4	57.2	2.5/8	66.7	3.1/8	79.4	4.7/8	127	7.1/4	184
	D2	15	381	15	381	15	381	15	381	15	381	15	381	15	381
	D1	17	431.8	17.3/4	450.9	17.3/4	450.9	19.1/2	488.9	21	533.4	22.1/2	571.5	24.3/8	619
	n	12	12	16	16	16	16	20	20	20	20	20	20	20	20
	d	1	25.4	1/14	31.8	1.3/8	34.9	1.3/8	34.9	1.1/4	38.1	2.1/8	54	2.7/8	73
14"	A	21	533.4	23	584	23	584	23.3/4	603	25.1/4	641	29.1/2	749		
	b	1.3/9	34.9	2.1/8	54	2.3/8	60.3	2.3/4	69.8	3.3/8	85.7	5.1/4	133		
	D2	16.1/4	412.7	16.1/4	412.7	16.1/4	412.7	16.1/4	412.7	16.1/4	412.7	16.1/4	412.7		
	D1	18.3/4	476.2	20.1/4	514.4	20.1/4	514.4	20.1/4	527	22	558.8	25	635		
	n	12	12	20	20	20	20	20	20	20	20	16	16		
	d	1.1/8	28.6	1.1/4	31.8	1.3/8	34.9	1.1/2	38.1	1.5/8	41.3	2.3/8	60.3		
16"	A	23.1/2	596.9	25.1/2	647.7	25.1/2	647.7	27	686	27.3/4	705	32.1/2	826		
	b	1.7/16	36.5	2.1/4	57.2	2.1/2	63.5	3	76.2	3.1/2	88.9	5.3/4	146		
	D2	18.1/2	470	18.1/2	470	18.1/2	470	18.1/2	470	18.1/2	470	18.1/2	470		
	D1	21.1/4	539.8	21.1/4	571.5	21.1/4	571.5	23.3/4	603.3	24.1/2	616	27.3/4	705		
	n	16	16	20	20	20	20	20	20	20	20	16	26		
	d	1.1/8	28.6	1.3/8	34.9	1.1/2	39.10	1.5/8	41.3	1.3/4	44.4	2.5/8	66.7		
18"	A	25	635	28	711	28	711	29.1/4	743	31	787	36	914		
	b	1.9/16	39.7	2.3/8	60.3	2.5/8	66.7	3.1/4	82.6	4	102	6.3/8	162		
	D2	21	533.4	21	533.4	21	533.4	21	533.4	21	533.4	21	533.4		
	D1	22.1/4	577.9	24.3/4	628.7	24.3/4	628.7	25.3/4	654.1	27	685.8	30.1/2	775		
	n	16	16	24	24	24	24	20	20	20	20	16	16		
	d	1.1/4	31.8	1.3/8	34.9	1.1/2	38.1	1.3/4	44.5	2	50.8	2.7/8	73		
20"	A	27.1/2	698.5	30.1/2	774.7	30.1/2	774.7	32	813	33.3/4	857	38.3/4	984		
	b	11.1/16	42.9	2.1/2	63.5	2.3/4	69.8	3.1/2	88.9	4.1/4	108	7	178		
	D2	23	584.2	23	584.2	23	584.2	23	584.2	23	584.2	23	584.2		
	D1	25	635	27	685.8	27	685.8	28.1/2	724	29.1/2	749.3	32.3/4	832		
	n	20	20	24	24	24	24	24	24	20	20	16	16		
	d	1.1/4	31.8	1.3/8	34.9	1.5/8	41.3	1.3/4	44.4	2.1/8	54	3.1/8	79.4		
24"	A	32	812.8	36	914	36	914	37	940	41	1041	46	1168		
	b	1.7/8	47.6	2.3/4	69.8	3	76.2	4	102	5.1/2	140	8	203		
	D2	24.1/4	692.2	27.1/4	692.2	27.1/4	692.2	27.1/4	692.2	27.1/4	692.2	27.1/4	692.2		
	D1	29.1/2	749.3	32	812.8	32	812.8	33	838.2	35.1/2	902	39	991		
	n	20	20	24	24	24	24	24	24	20	20	16	16		
	D	1.3/8	34.9	1.5/8	41.3	1.7/8	47.6	2	50.8	2.5/8	66.7	3.5/8	92.1		

WN Flanges available in Sch. 40, 80, 160 or any other special thickness.

We can also supply Slip-On, Blind, Threaded, Socket welded, Lapped, Reducing flange in various coating and in galvanized condition.

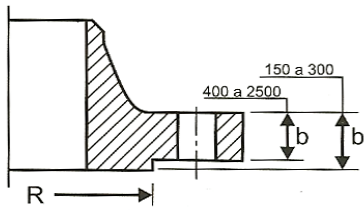
WN & Blind Flanges higher than 24" will be as per ANSI/ASME B 16.47 series A or B.

Slip-On Flanges higher than 24" will be as per BS 3293

Flanges also available as per DIN Design & Dimensions.

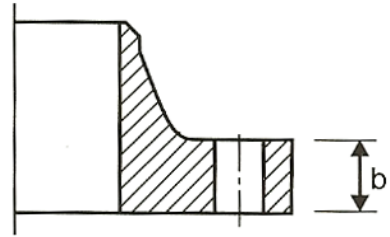
FLANGE FACINGS

RAISED
FACE

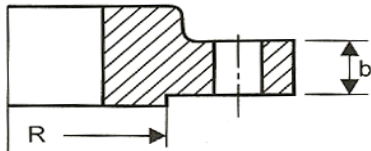


LARGE MALE—FEMALE

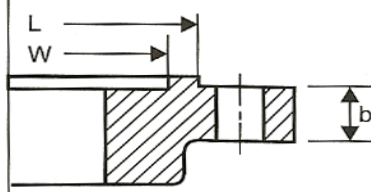
FLAT
FACE



MALE

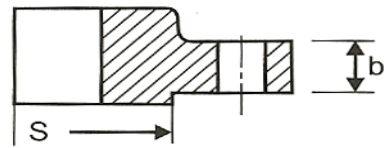


FEMALE

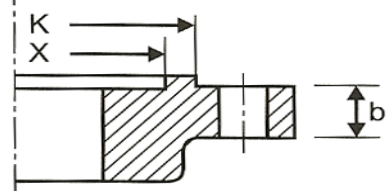


LARGE TONGUE GROOVE

MALE

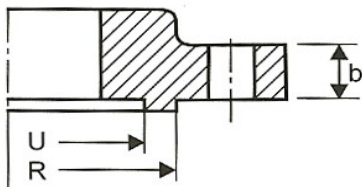


FEMALE

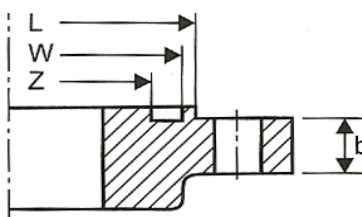


SMALL TONGUE GROOVE

TONGUE

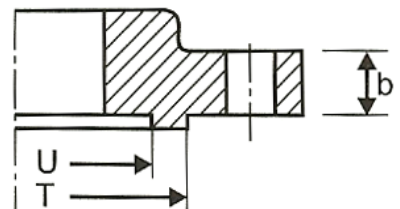


GROOVE

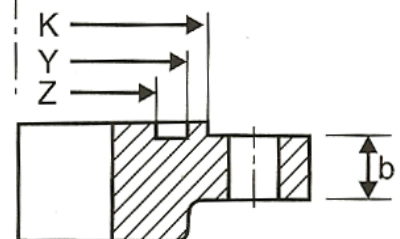


RING JOINT

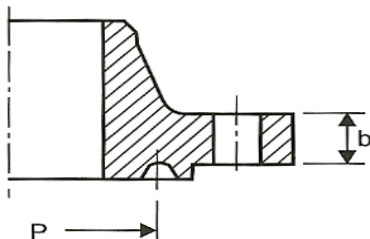
TONGUE



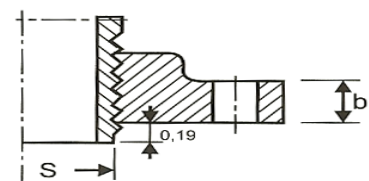
GROOVE



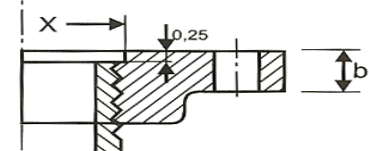
SMALL MALE & FEMALE



MALE



FEMALE



MATERIALS SPECIFICATIONS

Mechanical Properties

MATERIALS	Tensile Strength N/mm ²	Yield Strength N/mm ²	Elongation %	Area Reduction %	Impact Test Joules	MATERIALS	Tensile Strength N/mm ²	Yield Strength N/mm ²	Elongation %	Area Reduction %
A 105	485 min	250 min	22 min	30 min	–	A 182 9	585 min	380 min	20 min	40 min
C 21	480-630	250 min	20 min	45 min	31 min	A 182 11	485 min	275 min	20 min	30 min
BF 48	470-600	250 min	23 min	–	–	A 182 F 22	515 min	310 min	20 min	30 min
UNE 36204B	490-630	250 min	25 min	45 min	40 min	A 182 304	515 min	205 min	30 min	50 min
A350 LF2	485-655	260 min	22 min	30 min	20 min	A 182 F 304 L	485 min	170 min	30 min	50 min
A350 LF3	485-655	260 min	22 min	35 min	20 min	A 182 F 316	515 min	205 min	30 min	50 min
A 182 F 1	485 min	275 min	20 min	30 min	–	A 182 F 316L	485 min	170 min	30 min	50 min
A 182 F 5	485 min	275 min	20 min	35 min	–	A 182 F 321	515 min	205 min	30 min	50 min
A 182 F 6	485 min	275 min	18 min	35 min	–					

SPECIAL FLANGES

- Spectacle blind flange as per ANSI B 16.48
- Swivel Ring flange up to 48” (with design calculations—as per ASME VIII Div 1 & 2
- Anchor flange up to 100” (with design calculations) - as per ASME VIII Div. 1&2
- Compact flange up to 24” (with design calculations) as per ASME VIII Div 1&2
- Studded flange as per API 6A
- Orifice flange as per ANSI B 16.36
- WN flange as per API 6A
- Clamp connectors
- Long Welding Neck flange with or without reinforcement