

ASME B16.5



Langfang Dingyang Flange & Pipe Fitting Co., Ltd.
<http://www.fittingflange.com/>



Stainless steel and carbon steel



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<http://www.fittingflange.com/>

FLANGE FORGATE | FORGED FLANGES

GENERAL INFORMATION

FLANGES ARE PROVIDED IN ACCORDING TO THE FOLLOWING STANDARDS:

Norma di raccordo Fitting standard	Norma Standard	Descrizione Description	Grado di acciaio Steel grade	Tipologia di raccordi Fittings types
ASME B16.5	ASTM/ASME A/SA 403	Standard Specification for Piping Fittings of stainless steel austenitic	WP304/304L WP316/316L	Flange forgiate Slip-on Flange forgiate Welding neck Flange forgiate Socket welding Flange forgiate Lap joint Flange forgiate Blind
	ASTM A182	Standard Specification for Forged or Rolled Alloy and Stainless Steel Pipe Flanges, Forged Fittings, and Valves and Parts for High-Temperature		
	ASTM A105	Standard specification for carbon steel forgings		

Tables shown below allow a comparison between the different steel grades according to the chemical composition and mechanical properties:

Grado / Grade		Composizione / Composition %							
Grade WP	C	Mn	P	S	Si	Ni	Cr	Mo	Others
WP304	0.08	2.00	0.045	0.030	1.00	8.0 - 11.0	18.0 - 20.0		
WP304L	0.030	2.00	0.045	0.030	1.00	8.0 - 10.0	18.0 - 20.0		
WP316	0.08	2.00	0.045	0.030	1.00	10.0 - 14.0	16.0 - 18.0	2.00 - 3.00	
WP316L	0.030	2.00	0.045	0.030	1.00	10.0 - 14.0	16.0 - 18.0	2.00 - 3.00	
	0.35 max	0.60 - 1.05	0.035 max	0.040 max	0.10 - 0.35	0.40 max	0.30 max	0.12 max	

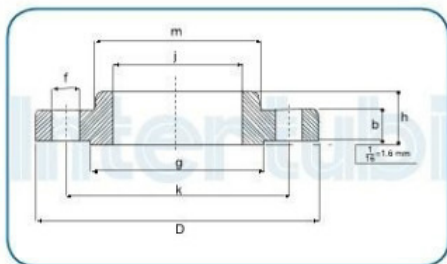
Grado acciaio / Steel grade	Snervamento / Yield Strength min. ksi [MPa]	Rottura / Tensile Streigth min. ksi [MPa]
304, 316	30 [205]	75 [515]
304L, 316L	20 [170]	70 [485]
ASTM A105	36 [250]	70 [485]

TOLERANCES:

Flange Welding Neck			Flange Slip-on Lapped e Blind		
Area	Dimensione Dimension	Tolleranze Tolerances mm	Area	Dimensione Dimension	Tolleranze Tolerances mm
D Diametro Esterno / Outside Diameter	NPS ≤ 5" NPS ≥ 6"	+2,0, -1,0 +4,0, -1,0	D Diametro Esterno / Outside Diameter	NPS ≤ 5" NPS ≥ 6"	+2,0, -1,0 +4,0, -1,0
J Diametro interno / Inside Diameter	NPS ≤ 10" 12" ≤ NPS ≤ 18" NPS ≥ 20"	± 1,0 ± 1,5 + 3,0 - 1,5	J Diametro interno / Inside Diameter	NPS ≤ 10" 12" ≤ NPS ≤ 18" NPS ≥ 20"	± 1,0 ± 1,5 +3,0, -1,5
b Spessore / Thickness	NPS ≤ 18" NPS ≥ 20"	+3,0, -0,0 +5,0, -0,0	b Spessore / Thickness	NPS ≤ 18" NPS ≥ 20"	+3,0, -0,0 +5,0, -0,0

TECHNICAL INFORMATION

METHOD OF MANUFACTURE: forged
MARKING: according to ASTM/ASME B16.5
and MSS SP-25
STEEL: WP 304/304L, WP 316/316L and ASTM A105
Certificates: EN 10204/3.1



150 LBS

Nom. Size	D	b	g	m	j	h	k	Fori Holes	f	Kg
	mm	mm	mm	mm	mm	mm	mm		mm	
1/2"	90	11.2	34.9	30	22.2	14	60.3	4	15.9	0.40
3/4"	100	12.7	42.9	38	27.7	14	68.9	4	15.9	0.70
1"	110	14.3	50.8	44	34.5	16	79.4	4	15.9	0.80
1 1/4"	115	15.9	63.5	59	43.2	19	88.9	4	15.9	1.10
1 1/2"	125	17.5	73.0	65	49.5	21	98.4	4	15.9	1.40
2"	150	19.1	92.1	78	61.9	24	120.7	4	19.0	2.20
2 1/2"	180	22.3	104.8	90	74.7	27	139.7	4	19.0	3.60
3"	190	23.9	127.0	108	90.7	29	152.4	4	19.0	4.10
3 1/2"	215	23.9	139.7	122	103.4	30	177.8	8	19.0	5.20
4"	230	23.9	157.2	135	116.1	32	190.5	8	19.0	5.60
5"	255	23.9	185.7	164	143.8	35	215.9	8	22.2	6.30
6"	280	25.4	215.9	192	170.7	38	241.3	8	22.2	7.50
8"	345	28.6	269.9	246	221.5	43	298.4	8	22.2	12.60
10"	405	30.2	323.8	305	276.3	48	361	12	25.4	18.50
12"	485	31.8	381.0	365	327.1	54	431.8	12	25.4	28.00
14"	535	35.0	412.7	400	359.1	56	476.2	12	28.6	36.00
16"	595	36.6	469.9	457	410.5	62	539.8	16	28.6	46.00
18"	635	39.7	533.4	505	461.8	67	577.9	16	31.7	50.00
20"	700	42.9	584.2	559	513.1	71	635.0	20	31.7	64.00
24"	815	47.7	692.1	663	616.0	81	749.3	20	34.9	89.00

FLANGE SLIP-ON FORGIATE

ASME B 16.5
ASTMA 182
ASTMA 105
ASTMA 403
150 / 300 / 600 LBS

FORGED SLIP-ON FLANGES

ASME B 16.5
ASTMA 182
ASTMA 105
ASTMA 403
150 / 300 / 600 LBS

STAINLESS STEEL AND CARBON STEEL

300 LBS

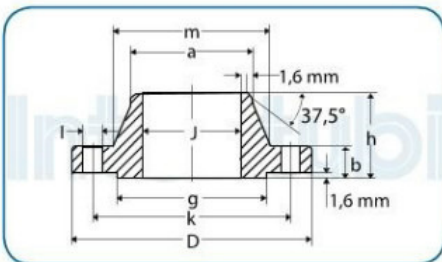
Nom. Size	D	b	g	m	j	h	k	Fori Holes	f	Kg
	mm	mm	mm	mm	mm	mm	mm		mm	
1/2"	95	14.3	34.9	38	22.2	21	66.7	4	15.9	0.70
3/4"	115	15.9	42.9	48	27.7	24	82.6	4	19.0	1.10
1"	125	17.5	50.8	54	34.5	25	88.9	4	19.0	1.40
1 1/4"	135	19.1	63.5	64	43.2	25	98.4	4	19.0	1.80
1 1/2"	155	20.6	73.0	70	49.5	29	114.3	4	22.2	2.60
2"	165	22.2	92.1	84	61.9	32	127.0	8	19.0	3.40
2 1/2"	190	25.4	104.8	100	74.7	37	149.2	8	22.2	4.40
3"	210	28.6	127.0	117	90.7	41	168.3	8	22.2	6.10
3 1/2"	230	30.2	139.7	133	103.4	43	184.2	8	22.2	7.50
4"	255	31.7	157.2	146	116.1	46	200.0	8	22.2	10.10
5"	280	34.9	185.7	178	143.8	49	235.0	8	22.2	12.50
6"	320	36.5	215.9	206	170.7	51	269.9	12	22.2	14.10
8"	380	41.3	269.9	260	221.5	60	330.2	12	25.4	24.80
10"	445	47.6	323.8	321	276.3	65	387.4	16	28.6	37.10
12"	520	50.8	381.0	375	327.1	71	450.8	16	31.7	50.00

600 LBS

Nom. Size	D	b	g	m	j	h	k	Fori Holes	f	Kg
	mm	mm	mm	mm	mm	mm	mm		mm	
1/2"	95	14.3	34.9	38	22.2	22	66.7	4	15.9	0.80
3/4"	115	15.9	42.9	48	27.7	25	82.6	4	19.0	1.40
1"	125	17.5	50.8	54	34.5	27	88.9	4	19.0	1.60
1 1/4"	135	20.7	63.5	64	43.2	29	98.4	4	19.0	2.10
1 1/2"	155	22.3	73.0	70	49.5	32	114.3	4	22.2	3.10
2"	165	25.4	92.1	84	61.9	37	127.0	8	19.0	3.70
2 1/2"	190	28.6	104.8	100	74.7	41	149.2	8	22.2	5.40
3"	210	31.8	127.0	117	90.7	46	168.3	8	22.2	7.30
4"	275	38.1	157.2	152	116.1	54	200.0	8	25.4	11.8
5"	330	44.5	185.7	189	143.8	60	235.0	8	28.6	24.5
6"	355	47.7	215.9	222	170.7	67	269.9	12	28.6	29.5
8"	420	55.6	269.9	273	221.5	76	330.2	12	31.7	43.0
10"	510	63.5	323.8	343	276.3	86	387.4	16	34.9	70.0
12"	560	66.7	381.0	400	327.1	92	450.8	20	34.9	86.0

FLANGE WELDING NECK FORGIATE

ASME B 16.5 ASTM A182
SCH 40S
ASTM A 105
ASTM A 403
150 / 300 / 600 LBS



FORGED WELDING NECK FLANGES

ASME B 16.5 ASTM A182
SCH 40S
ASTM A 105
ASTM A 403
150 / 300 / 600 LBS

STAINLESS STEEL AND CARBON STEEL

300 LBS

Nom. Size	O.D. mm	D mm	J mm	b mm	h mm	a mm	m mm	g mm	l mm	k mm	Fori Holes	kg
1/2"	21.3	95	15.7	14.2	51	21.3	38.1	35.0	15.7	66.7	4	0.75
3/4"	26.7	115	20.8	15.7	56	26.7	47.7	42.9	19.0	82.6	4	1.26
1"	33.4	125	26.7	17.5	60	33.5	53.8	50.8	19.0	88.9	4	1.52
1 1/4"	42.2	135	35.1	19.0	64	42.2	63.5	63.5	19.0	98.4	4	2.03
1 1/2"	48.3	155	40.9	20.6	67	48.3	69.5	73.1	22.3	114.3	4	2.89
2"	60.3	165	52.6	22.3	67	60.4	84.0	91.9	19.0	127.0	8	3.40
2 1/2"	73.0	190	62.7	25.4	75	73.1	100.0	104.6	22.3	149.2	8	5.17
3"	88.9	210	78.0	28.4	78	88.9	117.3	127.0	22.3	168.3	8	6.93
4"	114.3	255	102.4	31.7	84	114.3	146.0	157.2	22.3	200.0	8	11.20
5"	141.3	280	128.3	35.1	97	141.3	177.8	185.7	22.4	235.0	8	15.10
6"	168.3	320	154.2	36.5	97	168.4	206.2	215.9	22.3	269.7	12	19.10
8"	219.1	380	202.7	41.1	110	219.2	260.3	269.7	25.4	330.2	12	29.90
10"	273.0	445	254.5	47.6	116	273.1	320.7	323.8	28.6	387.3	16	44.30
12"	323.8	520	304.8	50.8	129	323.9	374.6	381.0	31.7	450.8	16	64.00

150 LBS

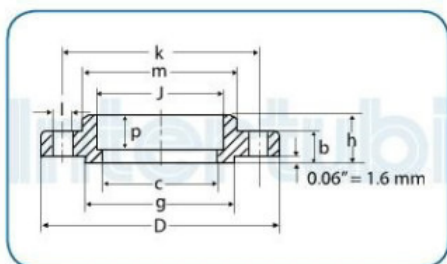
Nom. Size	O.D. mm	D mm	J mm	b mm	h mm	a mm	m mm	g mm	l mm	k mm	Fori Holes	kg
1/2"	21.3	90	15.7	11.2	46	21.3	30	35.1	15.7	60.3	4	0.48
3/4"	26.7	100	20.8	12.7	51	26.7	38	42.9	15.7	69.9	4	0.71
1"	33.4	110	26.7	14.2	54	33.5	49	50.8	15.7	79.4	4	1.01
1 1/4"	42.2	115	35.1	15.7	56	42.2	59	63.5	15.7	88.9	4	1.33
1 1/2"	48.3	125	40.9	17.5	60	48.3	65	73.2	15.7	98.4	4	1.72
2"	60.3	150	52.6	19.1	62	60.5	78	91.9	19.1	120.7	4	2.58
2 1/2"	73.0	160	62.7	22.4	68	73.2	90	104.6	19.1	139.7	4	4.11
3"	88.9	190	78.0	23.9	68	88.9	108	127.0	19.1	152.4	4	4.92
4"	114.3	230	102.4	23.9	75	114.3	135	157.2	19.1	190.5	8	6.84
5"	141.3	255	128.3	23.9	87	141.2	164	185.7	22.4	215.9	8	9.20
6"	168.3	280	154.2	25.4	87	168.4	192	215.9	22.4	241.3	8	10.60
8"	219.1	345	202.7	28.4	100	219.2	246	269.7	22.4	298.5	8	17.60
10"	273.0	405	254.5	30.2	100	273.1	305	323.9	25.4	362.0	12	24.00
12"	323.8	485	304.8	31.8	113	323.9	365	381.0	25.4	431.8	12	36.50
14"	355.6	535	336.5	34.9	125	355.6	400	412.7	28.6	476.2	12	51.00
16"	406.4	595	387.3	36.5	125	406.4	457	469.9	28.6	539.8	16	60.00
18"	457.2	635	438.1	39.6	138	457.2	505	533.4	31.8	577.9	16	68.30
20"	508.0	700	488.9	42.9	143	508.0	559	584.2	31.8	635.0	20	84.50
24"	609.6	815	590.5	47.8	151	609.6	663	692.2	35.1	749.3	20	115.00

SCH 10S/80S SU RICHIESTA / ON REQUEST

600 LBS

Nom. Size	D mm	J mm	b mm	h mm	a mm	m mm	g mm	l mm	k mm	Fori Holes	kg
1/2"	95	15.7	14.2	52	21.3	38.1	35.0	15.7	66.7	4	0.90
3/4"	115	20.8	15.7	57	26.7	47.7	42.9	19.0	82.6	4	1.50
1"	125	26.7	17.5	62	33.5	53.8	50.8	19.0	88.9	4	1.90
1 1/4"	135	35.1	20.6	67	42.2	63.5	63.5	19.0	98.4	4	2.60
1 1/2"	155	40.9	22.2	70	48.3	69.5	73.1	22.2	114.3	4	3.30
2"	165	52.6	25.4	73	60.4	84.0	91.9	19.0	127.0	8	4.70
2 1/2"	190	62.7	28.6	79	73.1	100.0	104.6	22.2	149.2	8	6.50
3"	210	78.0	31.7	83	88.9	117.3	127.0	22.2	168.3	8	8.70
4"	275	102.4	38.1	102	114.3	152	157.2	25.4	215.9	8	18.1
5"	330	128.3	44.4	11	141.3	189	185.7	28.6	266.7	8	30.5
6"	355	154.2	47.6	117	168.4	222	215.9	28.6	292.1	12	36.2
8"	420	202.7	55.6	133	219.2	273	269.7	31.7	349.2	12	56.5
10"	510	254.5	63.5	152	273.1	343	323.8	34.9	431.8	16	91.0
12"	560	304.8	66.7	156	323.9	400	381.0	34.9	488.9	20	105

SCH 10S/80S SU RICHIESTA / ON REQUEST



FLANGE DA SALDARE A TASCA FORGIATE

ASME B 16.5 ASTM A182
SCH. 40S
ASTM A 105
ASTM A 403
150 LBS o 300 LBS

FORGED SOCKET WELDING FLANGES

ASME B 16.5 ASTM A182
SCH. 40S
ASTM A 105
ASTM A 403
150 LBS or 300 LBS

STAINLESS STEEL AND CARBON STEEL

150 LBS

Nom. Size	O.D. mm	D mm	J mm	c mm	p mm	b mm	h mm	m mm	g mm	Fori Holes	I mm	K mm	Kg
1/2"	21.3	90	22.2	15.7	9.7	11.2	14	30	35.1	4	15.7	60.3	0.42
3/4"	26.7	100	27.7	20.8	11.2	12.7	14	38	42.9	4	15.7	69.9	0.59
1"	33.4	110	34.5	26.7	12.7	14.2	16	49	50.8	4	15.7	79.4	0.81
1 1/4"	42.2	115	43.2	35.1	14.2	15.7	19	59	63.5	4	15.7	88.9	1.07
1 1/2"	48.3	125	49.5	40.9	15.7	17.5	21	65	73.2	4	15.7	98.4	1.36
2"	60.3	150	61.9	52.6	17.5	19.1	24	78	91.9	4	19.1	120.7	2.10

300 LBS

Nom. Size	O.D. mm	D mm	J mm	c mm	p mm	b mm	h mm	m mm	g mm	Fori Holes	I mm	K mm	Kg
1/2"	21.3	95	22.2	15.7	9.7	14.2	21	38	35.1	4	15.7	66.7	0.66
3/4"	26.7	115	27.7	20.8	11.2	15.7	24	48	42.9	4	19.1	82.6	1.15
1"	33.4	125	34.5	26.7	12.7	17.5	25	54	50.8	4	19.1	88.9	1.40
1 1/4"	42.2	135	43.2	35.1	14.2	19.1	25	64	63.5	4	19.1	98.4	1.75
1 1/2"	48.3	155	49.5	40.9	15.7	20.6	29	70	73.2	4	22.4	114.3	2.55
2"	60.3	165	61.9	52.6	17.5	22.4	32	84	91.9	8	19.1	127.0	2.93



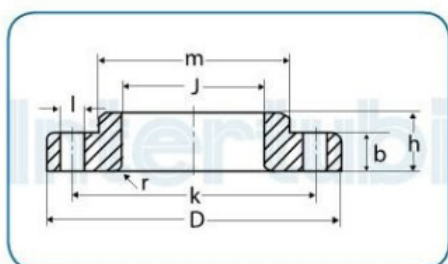
FLANGE LAP JOINT FORGIATE

ASME B 16.5
ASTM A182
ASTM A105
ASTM A403
150 LBS

FORGED LAP JOINT FLANGES

ASME B 16.5
ASTM A182
ASTM A105
ASTM A403
150 LBS

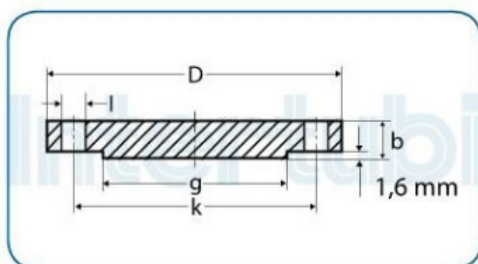
STAINLESS STEEL AND CARBON STEEL



150 LBS

Nom. Size	O.D. mm	D mm	J mm	b mm	h mm	r mm	m mm	l mm	k mm	Fori Holes	kg
1/2"	21.3	90	22.9	11.2	16	3	30	15.7	60.3	4	0.39
3/4"	26.7	100	28.2	12.7	16	3	38	15.7	69.9	4	0.56
1"	33.4	110	34.9	14.2	17	3	49	15.7	79.4	4	0.78
1 1/2"	48.3	125	50.0	17.5	22	6	65	15.7	98.4	4	1.32
2"	60.3	150	62.5	19.1	25	8	78	19.1	120.7	4	2.06
3"	88.9	190	91.4	23.9	30	10	108	19.1	152.4	4	3.20
4"	114.3	230	116.8	23.9	33	11	135	19.1	190.5	8	5.30
6"	168.3	280	171.4	25.4	40	13	192	22.4	241.3	8	7.45





FLANGE CIECHE FORGIATE

ASME B 16.5
ASTM A182
ASTM A105
ASTM A403
150 / 300 / 600 LBS

FORGED BLIND FLANGES

ASME B 16.5
ASTM A182
ASTM A105
ASTM A403
150 / 300 / 600 LBS

STAINLESS STEEL AND CARBON STEEL

300 LBS

Nom. Size	O.D. mm	D mm	b mm	g mm	l mm	k mm	Forl Holes	kg
1/2"	21.3	95	14.3	35.0	15.7	66.7	4	0.64
3/4"	26.7	115	15.9	42.9	19.0	82.6	4	1.11
1"	33.4	125	17.5	50.8	19.0	88.9	4	1.39
1 1/4"	42.2	135	19.1	63.5	19.0	98.4	4	2.00
1 1/2"	48.3	155	20.7	73.1	22.3	114.3	4	2.66
2"	60.3	165	22.3	91.9	19.0	127.0	8	3.18
2 1/2"	73.0	190	25.4	104.8	22.3	149.2	8	5.10
3"	88.9	210	28.6	127.0	22.3	168.3	8	6.81
4"	114.3	255	31.8	157.2	22.3	200.0	8	11.50
5"	141.3	280	35.0	185.7	22.3	235.0	8	14.50
6"	168.3	320	36.6	215.9	22.3	269.9	12	20.90
8"	219.1	380	41.3	269.7	25.4	330.2	12	34.30
10"	273.0	445	47.7	323.8	28.6	387.4	16	57.00
12"	323.8	520	50.8	381.0	31.7	450.8	16	87.00

150 LBS

Nom. Size	O.D. mm	D mm	b mm	g mm	l mm	k mm	Forl Holes	kg
1/2"	21.3	90	11.2	35.1	15.7	60.3	4	0.42
3/4"	26.7	100	12.7	42.9	15.7	69.9	4	0.61
1"	33.4	110	14.3	50.8	15.7	79.4	4	0.86
1 1/4"	42.2	115	15.9	63.5	15.7	88.9	4	1.30
1 1/2"	48.3	125	17.5	73.2	15.7	98.4	4	1.53
2"	60.3	150	19.1	91.9	19.1	120.7	4	2.42
2 1/2"	73.0	180	22.3	104.8	19.1	139.7	4	4.10
3"	88.9	190	23.9	127.0	19.1	152.4	8	4.93
4"	114.3	230	23.9	157.2	19.1	190.5	8	7.00
5"	141.3	255	23.9	185.7	22.4	215.9	8	9.00
6"	168.3	280	25.4	215.9	22.4	241.3	8	11.30
8"	219.1	345	28.6	269.7	22.4	298.5	8	19.69
10"	273.0	405	30.2	323.9	25.4	362.0	12	28.80
12"	323.8	485	31.8	381.0	25.4	431.8	12	43.20
14"	355.6	535	35.0	412.7	25.4	476.2	12	59.00
16"	406.4	595	36.6	469.9	28.4	539.8	16	79.00
18"	457.2	635	39.7	533.4	31.8	577.9	16	93.70
20"	508.0	700	42.9	584.2	31.8	635.0	20	122.00
24"	609.6	815	47.7	692.2	35.1	749.3	20	185.00

600 LBS

Nom. Size	D mm	b mm	g mm	l mm	k mm	Forl Holes	kg
1/2"	95	14.3	35	15.7	66.7	4	0.70
3/4"	115	15.9	42.9	19.0	82.6	4	1.20
1"	125	17.5	50.8	19.0	88.9	4	1.50
1 1/4"	135	20.7	63.5	19.0	98.4	4	2.00
1 1/2"	155	22.3	73.1	22.3	114.3	4	3.20
2"	165	25.4	91.9	19.0	127.0	8	4.30
2 1/2"	190	28.6	104.8	22.2	149.2	8	6.00
3"	210	31.7	127.0	22.2	168.3	8	8.00
4"	275	38.1	157.2	25.4	215.9	8	18.0
5"	330	44.4	185.7	28.6	266.7	8	28.5
6"	355	47.6	215.9	28.6	292.1	12	35.5
8"	420	55.6	269.7	31.7	349.2	12	58.0
10"	510	63.5	323.8	34.9	431.8	16	98.0
12"	560	66.7	381.0	34.9	488.9	20	125