

Flanges for data center cooling

Flange handbook: dimensions, bolting and weights

Every ASME B16.5 class from 150 to 2500, NPS 1/2 to 24, and every EN 1092-1 rating from PN 6 to PN 100, with approximate weights in carbon steel and stainless steel 316L. Millimetres and kilograms.

Rajendra Industrial Corporation, Umbergaon, India. Edition of 8 November 2026. A drawing of every flange in these tables, 2509 in all, is free at rajendradatacenter.com.

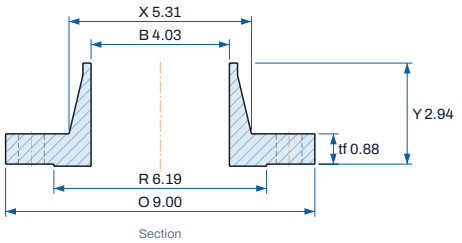
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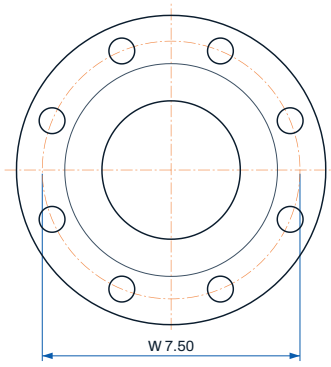
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How to read these tables



Section



Face view

O	Outside diameter of the flange	**tf**	Flange thickness, minimum, as ASME B16.5 gives it: without the raised face
R	Raised face diameter	**X**	Hub diameter at the back of the flange
A	Hub diameter at the weld end (weld neck)	**Y**	Length through hub, without the raised face
B	Bore (slip-on); a weld neck's bore matches the pipe	**W**	Bolt circle diameter

ASME B16.5 has measured tf and Y without the raised face since 2003, so a flange is 1.5 mm (0.06 in) thicker over the face in Class 150 and 300, and 6.4 mm (0.25 in) thicker in Class 400 and above. Catalogs t

Dimensions are those of ASME B16.5 and EN 1092-1:2018 (D, K, L, C, H2, N1, S, d1 and B1 as the standard names them), as published on rajendradatacenter.com and checked value by value against independent tables; the standard governs. ASME millimetres are converted from the standard's inches. Weights are calculated from the section of each flange, less the bolt holes, with the ASME thickness at the top of its tolerance (+3 mm, 0.12 in, to NPS 18; +5 mm, 0.19 in, from NPS 20) and the EN dimensions as given; carbon steel 7.85 g/cm³, stainless 316L 8.0 g/cm³ (304L weighs about 1% less than 316L). Blank cells: the type is not made in that class and size.

ASME B16.5

Class 150

Class 150 dimensions, mm; raised face 1.5 mm high, not included in tf or Y

NPS	DN	O	tf	R	X	A	Y WN	Y SO	Y LJ	B SO	W	Holes	Bolt, in
1/2	15	89	9.7	35.1	30	21.3	46	14	16	22.4	60.5	4	1/2
3/4	20	99	11.2	42.9	38	26.7	51	14	16	27.7	69.8	4	1/2
1	25	108	12.7	50.8	49	33.5	54	16	18	34.5	79.2	4	1/2
1-1/4	32	117	14.2	63.5	59	42.2	56	19	21	43.2	88.9	4	1/2
1-1/2	40	127	15.9	73	65	48.3	60	21	22	49.5	98.6	4	1/2
2	50	152	17.5	91.9	78	60.5	62	24	25	61.9	120.6	4	5/8
2-1/2	65	178	20.6	104.6	90	73.2	68	27	28	74.7	139.7	4	5/8
3	80	190	22.4	127	108	88.9	68	28	30	90.7	152.4	4	5/8
4	100	229	22.4	157.2	135	114.3	75	32	33	116.1	190.5	8	5/8
5	125	254	22.4	185.7	164	141.2	87	35	37	143.8	215.9	8	3/4
6	150	279	23.9	215.9	192	168.4	87	38	40	170.7	241.3	8	3/4
8	200	343	26.9	269.7	246	219.2	100	43	44	221.5	298.4	8	3/4
10	250	406	28.4	323.8	305	273	100	48	49	276.4	362	12	7/8
12	300	483	30.2	381	365	323.8	113	54	56	327.2	431.8	12	7/8
14	350	533	33.3	412.8	400	355.6	125	56	79	359.2	476.2	12	1
16	400	597	35.1	469.9	457	406.4	125	62	87	410.5	539.8	16	1
18	450	635	38.1	533.4	505	457.2	138	67	97	461.8	577.8	16	1 1/8
20	500	698	41.1	584.2	559	508	143	71	103	513.1	635	20	1 1/8
24	600	813	46	692.2	663	609.6	151	81	111	616	749.3	20	1 1/4

Class 150 approximate weights, kg per flange, carbon steel and stainless steel 316 and 316L

NPS	DN	Weld neck, STD bore		Slip-on		Blind		Lap joint	
		CS	316L	CS	316L	CS	316L	CS	316L
1/2	15	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.5
3/4	20	0.7	0.7	0.6	0.6	0.6	0.6	0.6	0.6
1	25	1.0	1.0	0.8	0.8	0.9	0.9	0.8	0.9
1-1/4	32	1.3	1.4	1.0	1.0	1.2	1.2	1.1	1.1
1-1/2	40	1.7	1.8	1.3	1.3	1.5	1.5	1.4	1.4
2	50	2.6	2.7	2.1	2.1	2.4	2.5	2.1	2.2
2-1/2	65	4.1	4.2	3.3	3.3	3.9	4.0	3.4	3.5
3	80	5.0	5.1	3.9	3.9	5.0	5.0	3.9	4.0
4	100	7.0	7.1	5.3	5.4	7.0	7.2	5.3	5.4
5	125	8.8	9.0	6.1	6.2	8.7	8.8	6.0	6.1
6	150	10.8	11.0	7.5	7.6	11.3	11.6	7.2	7.4
8	200	17.9	18.2	12.1	12.3	19.5	19.9	11.8	12.0
10	250	24.4	24.9	16.5	16.8	28.6	29.1	16.2	16.5
12	300	37.6	38.3	26.2	26.7	43.3	44.2	26.0	26.5
14	350	49.6	50.6	34.6	35.2	58.0	59.1	38.7	39.4
16	400	61.7	62.8	45.0	45.8	76.2	77.7	50.8	51.7
18	450	69.9	71.3	48.8	49.8	93.6	95.4	55.8	56.8
20	500	86.1	87.8	61.7	62.9	122	124	70.2	71.6
24	600	118	120	86.9	88.5	185	188	97.9	99.8

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Class 300

Class 300 dimensions, mm; raised face 1.5 mm high, not included in tf or Y

NPS	DN	O	tf	R	X	A	Y WN	Y SO	Y LJ	B SO	W	Holes	Bolt, in
1/2	15	95	12.7	35.1	38	21.3	51	21	22	22.4	66.5	4	1/2
3/4	20	117	14.2	42.9	48	26.7	56	24	25	27.7	82.6	4	5/8
1	25	124	15.7	50.8	54	33.5	60	25	27	34.5	88.9	4	5/8
1-1/4	32	133	17.5	63.5	64	42.2	64	25	27	43.2	98.6	4	5/8
1-1/2	40	155	19	73	70	48.3	67	29	30	49.5	114.3	4	3/4
2	50	165	20.6	91.9	84	60.5	68	32	33	62	127	8	5/8
2-1/2	65	190	23.9	104.6	100	73.2	75	37	38	74.7	149.4	8	3/4
3	80	210	26.9	127	117	88.9	78	41	43	90.7	168.1	8	3/4
4	100	254	30.2	157.2	146	114.3	84	46	48	116.1	200.2	8	3/4
5	125	279	33.3	185.7	178	141.2	97	49	51	143.8	235	8	3/4
6	150	318	35.1	215.9	206	168.4	97	51	52	170.7	269.7	12	3/4
8	200	381	39.6	269.7	260	219.2	110	60	62	221.5	330.2	12	7/8
10	250	444	46	323.8	321	273	116	65	95	276.4	387.4	16	1
12	300	521	49.3	381	375	323.8	129	72	102	327.2	450.8	16	1 1/8
14	350	584	52.3	412.8	425	355.6	141	75	111	359.2	514.4	20	1 1/8
16	400	648	55.6	469.9	483	406.4	145	81	121	410.5	571.5	20	1 1/4
18	450	711	58.7	533.4	533	457.2	157	87	130	461.8	628.6	24	1 1/4
20	500	775	62	584.2	587	508	161	94	140	513.1	685.8	24	1 1/4
24	600	914	68.3	692.2	702	609.6	167	105	152	616	812.8	24	1 1/2

Class 300 approximate weights, kg per flange, carbon steel and stainless steel 316 and 316L

NPS	DN	Weld neck, STD bore		Slip-on		Blind		Lap joint	
		CS	316L	CS	316L	CS	316L	CS	316L
1/2	15	0.8	0.8	0.6	0.7	0.6	0.7	0.7	0.7
3/4	20	1.3	1.3	1.1	1.1	1.1	1.1	1.2	1.2
1	25	1.6	1.6	1.3	1.4	1.4	1.4	1.5	1.5
1-1/4	32	2.1	2.1	1.7	1.7	1.8	1.8	1.8	1.8
1-1/2	40	2.9	3.0	2.5	2.5	2.7	2.7	2.6	2.7
2	50	3.4	3.5	2.9	2.9	3.2	3.2	3.0	3.0
2-1/2	65	5.3	5.4	4.3	4.4	4.9	5.0	4.4	4.5
3	80	7.0	7.2	5.8	5.9	6.8	6.9	5.9	6.0
4	100	11.4	11.7	9.7	9.8	11.5	11.7	9.7	9.9
5	125	15.3	15.6	12.2	12.4	15.5	15.8	12.3	12.5
6	150	19.6	20.0	15.7	16.0	20.9	21.3	15.6	15.9
8	200	30.4	31.0	24.2	24.7	34.3	34.9	24.1	24.6
10	250	43.7	44.5	34.0	34.7	53.3	54.3	38.5	39.3
12	300	63.1	64.3	49.9	50.9	78.8	80.3	55.6	56.6
14	350	87.9	89.6	69.5	70.9	105	107	80.8	82.4
16	400	109	111	88.3	90.0	138	140	104	106
18	450	134	137	109	111	175	178	127	130
20	500	163	166	134	137	221	226	156	159
24	600	236	240	202	205	340	346	235	239

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Class 400

Class 400 dimensions, mm; raised face 6.3 mm high, not included in tf or Y

NPS	DN	O	tf	R	X	A	Y WN	Y SO	Y LJ	B SO	W	Holes	Bolt, in
1/2	15	95	14.2	35.1	38	21.3	52	22	22	22.4	66.5	4	1/2
3/4	20	117	15.7	42.9	48	26.7	57	25	25	27.7	82.6	4	5/8
1	25	124	17.5	50.8	54	33.5	62	27	27	34.5	88.9	4	5/8
1-1/4	32	133	20.6	63.5	64	42.2	67	28	28	43.2	98.6	4	5/8
1-1/2	40	155	22.4	73	70	48.3	70	32	32	49.5	114.3	4	3/4
2	50	165	25.4	91.9	84	60.5	73	37	37	62	127	8	5/8
2-1/2	65	190	28.4	104.6	100	73.2	79	41	41	74.7	149.4	8	3/4
3	80	210	31.8	127	117	88.9	83	46	46	90.7	168.1	8	3/4
4	100	254	35.1	157.2	146	114.3	89	51	51	116.1	200.2	8	7/8
5	125	279	38.1	185.7	178	141.2	102	54	54	143.8	235	8	7/8
6	150	318	41.1	215.9	206	168.4	103	57	57	170.7	269.7	12	7/8
8	200	381	47.8	269.7	260	219.2	117	68	68	221.5	330.2	12	1
10	250	444	53.8	323.8	321	273	124	73	102	276.4	387.4	16	1 1/8
12	300	521	57.2	381	375	323.8	137	79	108	327.2	450.8	16	1 1/4
14	350	584	60.5	412.8	425	355.6	149	84	117	359.2	514.4	20	1 1/4
16	400	648	63.5	469.9	483	406.4	152	94	127	410.5	571.5	20	1 3/8
18	450	711	66.5	533.4	533	457.2	165	99	137	461.8	628.6	24	1 3/8
20	500	775	69.8	584.2	587	508	168	102	146	513.1	685.8	24	1 1/2
24	600	914	76.2	692.2	702	609.6	175	114	159	616	812.8	24	1 3/4

Class 400 approximate weights, kg per flange, carbon steel and stainless steel 316 and 316L

NPS	DN	Weld neck, STD bore		Slip-on		Blind		Lap joint	
		CS	316L	CS	316L	CS	316L	CS	316L
1/2	15	0.9	0.9	0.7	0.8	0.8	0.8	0.7	0.7
3/4	20	1.4	1.5	1.3	1.3	1.3	1.3	1.2	1.2
1	25	1.8	1.8	1.5	1.6	1.6	1.6	1.5	1.5
1-1/4	32	2.4	2.5	2.0	2.1	2.2	2.3	1.9	2.0
1-1/2	40	3.5	3.5	3.0	3.0	3.3	3.3	2.8	2.9
2	50	4.3	4.3	3.6	3.7	4.1	4.2	3.4	3.4
2-1/2	65	6.3	6.4	5.3	5.4	6.1	6.2	4.9	5.0
3	80	8.3	8.5	7.0	7.1	8.5	8.6	6.5	6.6
4	100	13.1	13.3	11.1	11.3	13.8	14.1	10.4	10.6
5	125	17.2	17.6	13.9	14.1	18.5	18.8	13.0	13.2
6	150	22.5	22.9	18.2	18.6	25.4	25.9	17.0	17.3
8	200	35.6	36.2	28.7	29.3	42.7	43.5	27.1	27.6
10	250	49.7	50.7	39.1	39.9	64.3	65.6	41.6	42.4
12	300	71.4	72.7	57.0	58.1	94.3	96.1	60.1	61.3
14	350	98.4	100	79.2	80.7	125	127	86.9	88.5
16	400	121	124	101	103	162	165	111	113
18	450	149	152	123	125	204	208	135	138
20	500	177	180	147	149	254	259	163	167
24	600	255	260	219	224	386	393	245	250

ASME B16.5

Class 600

Class 600 dimensions, mm; raised face 6.3 mm high, not included in tf or Y

NPS	DN	O	tf	R	X	A	Y WN	Y SO	Y LJ	B SO	W	Holes	Bolt, in
1/2	15	95	14.2	35.1	38	21.3	52	22	22	22.4	66.5	4	1/2
3/4	20	117	15.7	42.9	48	26.7	57	25	25	27.7	82.6	4	5/8
1	25	124	17.5	50.8	54	33.5	62	27	27	34.5	88.9	4	5/8
1-1/4	32	133	20.6	63.5	64	42.2	67	28	28	43.2	98.6	4	5/8
1-1/2	40	155	22.4	73	70	48.3	70	32	32	49.5	114.3	4	3/4
2	50	165	25.4	91.9	84	60.5	73	37	37	62	127	8	5/8
2-1/2	65	190	28.4	104.6	100	73.2	79	41	41	74.7	149.4	8	3/4
3	80	210	31.8	127	117	88.9	83	46	46	90.7	168.1	8	3/4
4	100	273	38.1	157.2	152	114.3	102	54	54	116.1	215.9	8	7/8
5	125	330	44.4	185.7	189	141.2	114	60	60	143.8	266.7	8	1
6	150	356	47.8	215.9	222	168.4	117	67	67	170.7	292.1	12	1
8	200	419	55.6	269.7	273	219.2	133	76	76	221.5	349.2	12	1 1/8
10	250	508	63.5	323.8	343	273	152	86	111	276.2	431.8	16	1 1/4
12	300	559	66.5	381	400	323.8	155	92	117	327	489	20	1 1/4
14	350	603	69.8	412.8	432	355.6	165	94	127	359.2	527	20	1 3/8
16	400	686	76.2	469.9	495	406.4	178	106	140	410.5	603.2	20	1 1/2
18	450	743	82.6	533.4	546	457.2	184	117	152	461.8	654	20	1 5/8
20	500	813	88.9	584.2	610	508	190	127	165	513.1	723.9	24	1 5/8
24	600	940	101.6	692.2	718	609.6	203	140	184	616	838.2	24	1 7/8

Class 600 approximate weights, kg per flange, carbon steel and stainless steel 316 and 316L

NPS	DN	Weld neck, STD bore		Slip-on		Blind		Lap joint	
		CS	316L	CS	316L	CS	316L	CS	316L
1/2	15	0.9	0.9	0.7	0.8	0.8	0.8	0.7	0.7
3/4	20	1.4	1.5	1.3	1.3	1.3	1.3	1.2	1.2
1	25	1.8	1.8	1.5	1.6	1.6	1.6	1.5	1.5
1-1/4	32	2.4	2.5	2.0	2.1	2.2	2.3	1.9	2.0
1-1/2	40	3.5	3.5	3.0	3.0	3.3	3.3	2.8	2.9
2	50	4.3	4.3	3.6	3.7	4.1	4.2	3.4	3.4
2-1/2	65	6.3	6.4	5.3	5.4	6.1	6.2	4.9	5.0
3	80	8.3	8.5	7.0	7.1	8.5	8.6	6.5	6.6
4	100	17.1	17.4	14.5	14.8	17.3	17.6	13.8	14.1
5	125	28.6	29.2	24.5	24.9	29.4	30.0	23.5	24.0
6	150	34.0	34.6	28.8	29.3	36.2	36.9	27.6	28.1
8	200	52.0	53.0	43.4	44.3	58.9	60.1	41.8	42.6
10	250	85.2	86.8	70.3	71.6	97.5	99.4	74.6	76.0
12	300	102	104	84.0	85.6	124	126	89.5	91.2
14	350	121	123	98.7	101	151	154	107	110
16	400	169	172	142	145	214	218	154	157
18	450	202	206	173	177	272	277	187	191
20	500	252	257	220	225	349	356	240	245
24	600	355	362	313	319	533	543	344	351

ASME B16.5

Class 900

Class 900 dimensions, mm; raised face 6.3 mm high, not included in tf or Y

NPS	DN	O	tf	R	X	A	Y WN	Y SO	Y LJ	B SO	W	Holes	Bolt, in
1/2	15	121	22.4	35.1	38	21.3	60	32	32	22.4	82.6	4	3/4
3/4	20	130	25.4	42.9	44	26.7	70	35	35	27.7	88.9	4	3/4
1	25	149	28.4	50.8	52	33.5	73	41	41	34.5	101.6	4	7/8
1-1/4	32	159	28.4	63.5	64	42.2	73	41	41	43.2	111.1	4	7/8
1-1/2	40	178	31.8	73	70	48.3	83	44	44	49.5	124	4	1
2	50	216	38.1	91.9	105	60.5	102	57	57	62	165.1	8	7/8
2-1/2	65	244	41.1	104.6	124	73.2	105	64	64	74.7	190.5	8	1
3	80	241	38.1	127	127	88.9	102	54	54	90.7	190.5	8	7/8
4	100	292	44.5	157.2	159	114.3	114	70	70	116.1	235	8	1 1/8
5	125	349	50.8	185.7	190	141.2	127	79	79	143.8	279.4	8	1 1/4
6	150	381	55.6	215.9	235	168.4	140	86	86	170.7	317.5	12	1 1/8
8	200	470	63.5	269.7	298	219.2	162	102	114	221.5	393.7	12	1 3/8
10	250	546	69.8	323.8	368	273	184	108	127	276.4	469.9	16	1 3/8
12	300	610	79.2	381	419	323.8	200	117	143	327.2	533.4	20	1 3/8
14	350	641	85.9	412.8	451	355.6	213	130	155	359.2	558.8	20	1 1/2
16	400	705	88.9	469.9	508	406.4	216	133	165	410.5	616	20	1 5/8
18	450	787	101.6	533.4	565	457.2	229	152	190	461.8	685.8	20	1 7/8
20	500	857	108	584.2	622	508	248	159	210	513.1	749.3	20	2
24	600	1041	139.7	692.2	749	609.6	292	203	267	616	901.7	20	2 1/2

Class 900 approximate weights, kg per flange, carbon steel and stainless steel 316 and 316L

NPS	DN	Weld neck, STD bore		Slip-on		Blind		Lap joint	
		CS	316L	CS	316L	CS	316L	CS	316L
1/2	15	1.9	1.9	1.7	1.8	1.8	1.8	1.7	1.7
3/4	20	2.5	2.6	2.3	2.4	2.4	2.5	2.3	2.3
1	25	3.7	3.8	3.4	3.5	3.6	3.6	3.4	3.4
1-1/4	32	4.3	4.3	3.9	4.0	4.1	4.2	3.8	3.9
1-1/2	40	5.9	6.0	5.4	5.5	5.8	5.9	5.2	5.3
2	50	10.8	11.0	9.9	10.0	10.1	10.3	9.6	9.8
2-1/2	65	14.9	15.1	13.6	13.9	13.9	14.2	13.3	13.6
3	80	13.5	13.7	11.6	11.8	13.1	13.3	11.1	11.3
4	100	22.1	22.6	19.8	20.1	22.1	22.6	19.0	19.4
5	125	35.6	36.3	32.0	32.6	36.5	37.2	31.0	31.6
6	150	46.7	47.5	41.2	42.0	47.5	48.4	39.9	40.7
8	200	79.7	81.3	70.7	72.1	82.5	84.1	72.2	73.5
10	250	118	120	101	103	123	125	105	107
12	300	156	159	133	135	173	176	141	143
14	350	179	183	153	156	206	210	162	165
16	400	216	220	185	188	259	264	199	203
18	450	292	297	259	263	367	374	279	284
20	500	362	369	317	323	464	473	350	357
24	600	665	678	606	617	876	893	672	685

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Class 1500

Class 1500 dimensions, mm; raised face 6.3 mm high, not included in tf or Y

NPS	DN	O	tf	R	X	A	Y WN	Y SO	Y LJ	B SO	W	Holes	Bolt, in
1/2	15	121	22.4	35.1	38	21.3	60	32	32	22.4	82.6	4	3/4
3/4	20	130	25.4	42.9	44	26.7	70	35	35	27.7	88.9	4	3/4
1	25	149	28.4	50.8	52	33.5	73	41	41	34.5	101.6	4	7/8
1-1/4	32	159	28.4	63.5	64	42.2	73	41	41	43.2	111.1	4	7/8
1-1/2	40	178	31.8	73	70	48.3	83	44	44	49.5	124	4	1
2	50	216	38.1	91.9	105	60.5	102	57	57	62	165.1	8	7/8
2-1/2	65	244	41.1	104.6	124	73.2	105	64	64	74.7	190.5	8	1
3	80	267	47.8	127	133	88.9	117		73		203.2	8	1 1/8
4	100	311	53.8	157.2	162	114.3	124		90		241.3	8	1 1/4
5	125	375	73.2	185.7	197	141.2	155		105		292.1	8	1 1/2
6	150	394	82.6	215.9	229	168.4	171		119		317.5	12	1 3/8
8	200	483	91.9	269.7	292	219.2	213		143		393.7	12	1 5/8
10	250	584	108	323.8	368	273	254		178		482.6	12	1 7/8
12	300	673	124	381	451	323.8	282		219		571.5	16	2
14	350	749	133.4	412.8	495	355.6	298		241		635	16	2 1/4
16	400	826	146	469.9	552	406.4	311		260		704.8	16	2 1/2
18	450	914	162.1	533.4	597	457.2	327		276		774.7	16	2 3/4
20	500	984	177.8	584.2	641	508	356		292		831.8	16	3
24	600	1168	203.2	692.2	762	609.6	406		330		990.6	16	3 1/2

Class 1500 approximate weights, kg per flange, carbon steel and stainless steel 316 and 316L

NPS	DN	Weld neck, STD bore		Slip-on		Blind		Lap joint	
		CS	316L	CS	316L	CS	316L	CS	316L
1/2	15	1.9	1.9	1.7	1.8	1.8	1.8	1.7	1.7
3/4	20	2.5	2.6	2.3	2.4	2.4	2.5	2.3	2.3
1	25	3.7	3.8	3.4	3.5	3.6	3.6	3.4	3.4
1-1/4	32	4.3	4.3	3.9	4.0	4.1	4.2	3.8	3.9
1-1/2	40	5.9	6.0	5.4	5.5	5.8	5.9	5.2	5.3
2	50	10.8	11.0	9.9	10.0	10.1	10.3	9.6	9.8
2-1/2	65	14.9	15.1	13.6	13.9	13.9	14.2	13.3	13.6
3	80	19.7	20.1			19.2	19.6	17.4	17.8
4	100	29.5	30.0			29.9	30.4	27.0	27.5
5	125	56.3	57.3			58.5	59.6	50.9	51.9
6	150	67.0	68.2			71.8	73.2	59.8	60.9
8	200	114	116			121	124	101	103
10	250	198	202			211	215	180	183
12	300	296	302			316	322	283	289
14	350	390	398			420	428	383	390
16	400	497	506			558	569	492	502
18	450	647	659			761	776	636	648
20	500	791	806			965	983	764	778
24	600	1258	1282			1559	1589	1221	1244

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Class 2500

Class 2500 dimensions, mm; raised face 6.3 mm high, not included in tf or Y

NPS	DN	O	tf	R	X	A	Y WN	Y SO	Y LJ	B SO	W	Holes	Bolt, in
1/2	15	133	30.2	35.1	43	21.3	73		40		88.9	4	3/4
3/4	20	140	31.8	42.9	51	26.7	79		43		95.2	4	3/4
1	25	159	35.1	50.8	57	33.5	89		48		108	4	7/8
1-1/4	32	184	38.1	63.5	73	42.2	95		52		130	4	1
1-1/2	40	203	44.4	73	79	48.3	111		60		146	4	1 1/8
2	50	235	50.8	91.9	95	60.5	127		70		171.4	8	1
2-1/2	65	267	57.2	104.6	114	73.2	143		79		196.8	8	1 1/8
3	80	305	66.5	127	133	88.9	168		92		228.6	8	1 1/4
4	100	356	76.2	157.2	165	114.3	190		108		273	8	1 1/2
5	125	419	91.9	185.7	203	141.2	229		130		323.8	8	1 3/4
6	150	483	108	215.9	235	168.4	273		152		368.3	8	2
8	200	552	127	269.7	305	219.2	318		178		438.2	12	2
10	250	673	165.1	323.8	375	273	419		229		539.8	12	2 1/2
12	300	762	184.2	381	441	323.8	464		254		619.3	12	2 3/4

Class 2500 approximate weights, kg per flange, carbon steel and stainless steel 316 and 316L

NPS	DN	Weld neck, STD bore		Slip-on		Blind		Lap joint	
		CS	316L	CS	316L	CS	316L	CS	316L
1/2	15	3.1	3.2			3.0	3.1	2.9	3.0
3/4	20	3.7	3.8			3.5	3.6	3.4	3.5
1	25	5.2	5.3			5.0	5.1	4.8	4.9
1-1/4	32	7.7	7.8			7.4	7.5	7.0	7.2
1-1/2	40	10.8	11.0			10.4	10.6	9.9	10.1
2	50	16.1	16.4			15.6	15.9	14.6	14.8
2-1/2	65	23.5	24.0			22.6	23.1	21.1	21.5
3	80	35.8	36.5			34.7	35.4	32.0	32.6
4	100	54.8	55.9			54.0	55.0	49.0	50.0
5	125	91.5	93.3			90.6	92.4	82.0	83.5
6	150	141	144			141	144	127	129
8	200	213	217			214	219	186	190
10	250	405	413			411	419	353	359
12	300	575	586			592	604	501	511

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PN 6

PN 6 dimensions, mm: type 01 plate, type 05 blind and type 11 weld neck flanges. D, K, d1 and the thicknesses are shared by every type

DN	Pipe A	D	K	Holes n × L	Bolt	d1	C1 (01)	C4 (05)	C2 (11)	H2 (11)	N1 (11)	S (11)	B1 (01)
10	17.2	75	50	4 × 11	M10	35	12	12	12	28	26	2	18
15	21.3	80	55	4 × 11	M10	40	12	12	12	30	30	2	22
20	26.9	90	65	4 × 11	M10	50	14	14	14	32	38	2.3	27.5
25	33.7	100	75	4 × 11	M10	60	14	14	14	35	42	2.6	34.5
32	42.4	120	90	4 × 14	M12	70	16	14	14	35	55	2.6	43.5
40	48.3	130	100	4 × 14	M12	80	16	14	14	38	62	2.6	49.5
50	60.3	140	110	4 × 14	M12	90	16	14	14	38	74	2.9	61.5
65	76.1	160	130	4 × 14	M12	110	16	14	14	38	88	2.9	77.5
80	88.9	190	150	4 × 18	M16	128	18	16	16	42	102	3.2	90.5
100	114.3	210	170	4 × 18	M16	148	18	16	16	45	130	3.6	116
125	139.7	240	200	8 × 18	M16	178	20	18	18	48	155	4	141.5
150	168.3	265	225	8 × 18	M16	202	20	18	18	48	184	4.5	170.5
200	219.1	320	280	8 × 18	M16	258	22	20	20	55	236	6.3	221.5
250	273	375	335	12 × 18	M16	312	24	22	22	60	290	6.3	276.5
300	323.9	440	395	12 × 22	M20	365	24	22	22	62	342	7.1	327.5
350	355.6	490	445	12 × 22	M20	415	26	22	22	62	385	7.1	359.5
400	406.4	540	495	16 × 22	M20	465	28	22	22	65	438	7.1	411
450	457	595	550	16 × 22	M20	520	30	24	22	65	492	7.1	462
500	508	645	600	20 × 22	M20	570	30	24	24	68	538	7.1	513.5
600	610	755	705	20 × 26	M24	670	32	30	30	70	640	7.1	616.5

PN 6 approximate weights, kg per flange, carbon steel and stainless steel 316 and 316L

DN	Type 01 plate		Type 05 blind		Type 11 weld neck	
	CS	316L	CS	316L	CS	316L
10	0.4	0.4	0.4	0.4	0.3	0.3
15	0.4	0.4	0.4	0.4	0.4	0.4
20	0.6	0.6	0.7	0.7	0.6	0.6
25	0.7	0.7	0.8	0.8	0.7	0.8
32	1.2	1.2	1.2	1.2	1.1	1.1
40	1.3	1.4	1.4	1.4	1.2	1.2
50	1.5	1.5	1.6	1.7	1.4	1.4
65	1.9	1.9	2.1	2.2	1.7	1.7
80	3.0	3.0	3.4	3.5	2.7	2.8
100	3.3	3.3	4.2	4.3	3.2	3.3
125	4.3	4.4	6.1	6.2	4.4	4.5
150	4.8	4.8	7.5	7.6	5.0	5.1
200	6.9	7.0	12.3	12.5	8.1	8.2
250	8.9	9.1	18.5	18.9	10.9	11.1
300	11.9	12.1	25.5	26.0	14.3	14.5
350	16.8	17.2	31.8	32.4	18.5	18.9
400	19.8	20.2	38.5	39.2	21.3	21.7
450	24.6	25.0	51.2	52.2	24.7	25.2
500	26.4	26.9	60.1	61.3	28.7	29.2
600	34.8	35.5	103	105	40.9	41.7

PN 6 other types, mm: type 02 loose plate, type 12 hubbed slip-on, type 13 hubbed threaded, type 21 integral. F is the thickness of the collar a type 02 or 04 loose plate turns on

DN	B2 (02)	E (02, 04)	F (32, 34)	H1 (12, 13)	N2 (12, 13)	C3 (21)	N3 (21)	Thread (13)
10	21	3	10	20	25	12	20	
15	25	3	10	20	30	12	26	Rp 1/2
20	31	4	10	24	40	14	34	Rp 3/4
25	38	4	10	24	50	14	44	Rp 1
32	46	5	10	26	60	14	54	Rp 1 1/4
40	53	5	10	26	70	14	64	Rp 1 1/2
50	65	5	12	28	80	14	74	Rp 2
65	81	6	12	32	100	14	94	Rp 2 1/2
80	94	6	12	34	110	16	110	Rp 3
100	120	6	14	40	130	16	130	Rp 4
125	145	6	14	44	160	18	160	Rp 5
150	174	6	14	44	185	18	182	Rp 6
200	226	6	16	44	240	20	238	
250	281	8	18	44	295	22	284	
300	333	8	18	44	355	22	342	
350	365	8	18			22	392	
400	416	8	20			22	442	
450	467	8	20			22	494	
500	519	8	22			24	544	
600	622	8	22			30	642	

PN 6 collars, mm: type 35 weldring neck, type 36 pressed collar with long neck, type 37 pressed collar. F is the collar thickness, H4 and H5 the overall length; the outside diameter is d1 above. The pressed collars are austenitic steel only

DN	F (35)	H4 (35)	F (36)	H4 (36)	F (37)	H5 (37)
10	5	28	2	35	2.5	7
15	5	30	2	38	2.5	7
20	6	32	2.5	40	3	8
25	7	35	2.5	40	3	10
32	8	35	3	42	3	12

DN	F (35)	H4 (35)	F (36)	H4 (36)	F (37)	H5 (37)
40	8	38	3	45	3	15
50	8	38	3	45	3	20
65	8	38	3	45	3	20
80	10	42	3	50	3	25
100	10	45	4	52	4	25
125	10	48	4	55	4	25
150	10	48	5	55	4	25
200	11	55	5	62	5	30
250	12	60	8	68		
300	12	62	8	68		
350	13	62	8	68		
400	14	65	8	72		
450	15	72	8	72		
500	16	75	8	75		
600	16	70				

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PN 10

PN 10 dimensions, mm: type 01 plate, type 05 blind and type 11 weld neck flanges. D, K, d1 and the thicknesses are shared by every type

DN	Pipe A	D	K	Holes n × L	Bolt	d1	C1 (01)	C4 (05)	C2 (11)	H2 (11)	N1 (11)	S (11)	B1 (01)
10	17.2	90	60	4 × 14	M12	40	14	16	16	35	28	2	18
15	21.3	95	65	4 × 14	M12	45	14	16	16	38	32	2	22
20	26.9	105	75	4 × 14	M12	58	16	18	18	40	40	2.3	27.5
25	33.7	115	85	4 × 14	M12	68	16	18	18	40	46	2.6	34.5
32	42.4	140	100	4 × 18	M16	78	18	18	18	42	56	2.6	43.5
40	48.3	150	110	4 × 18	M16	88	18	18	18	45	64	2.6	49.5
50	60.3	165	125	4 × 18	M16	102	20	18	18	45	74	2.9	61.5
65	76.1	185	145	8 × 18	M16	122	20	18	18	45	92	2.9	77.5
80	88.9	200	160	8 × 18	M16	138	20	20	20	50	105	3.2	90.5
100	114.3	220	180	8 × 18	M16	158	22	20	20	52	131	3.6	116
125	139.7	250	210	8 × 18	M16	188	22	22	22	55	156	4	141.5
150	168.3	285	240	8 × 22	M20	212	24	22	22	55	184	4.5	170.5
200	219.1	340	295	8 × 22	M20	268	24	24	24	62	234	6.3	221.5
250	273	395	350	12 × 22	M20	320	26	26	26	68	292	6.3	276.5
300	323.9	445	400	12 × 22	M20	370	26	26	26	68	342	7.1	327.5
350	355.6	505	460	16 × 22	M20	430	30	26	26	68	385	7.1	359.5
400	406.4	565	515	16 × 26	M24	482	32	26	26	72	440	7.1	411
450	457	615	565	20 × 26	M24	532	36	28	28	72	488	7.1	462
500	508	670	620	20 × 26	M24	585	38	28	28	75	542	7.1	513.5
600	610	780	725	20 × 30	M27	685	42	34	30	82	642	8	616.5

PN 10 approximate weights, kg per flange, carbon steel and stainless steel 316 and 316L

DN	Type 01 plate		Type 05 blind		Type 11 weld neck	
	CS	316L	CS	316L	CS	316L
10	0.6	0.6	0.7	0.7	0.7	0.7
15	0.7	0.7	0.8	0.8	0.8	0.8
20	0.9	1.0	1.1	1.2	1.1	1.1
25	1.1	1.1	1.4	1.4	1.3	1.3
32	1.8	1.9	2.0	2.1	1.9	1.9
40	2.1	2.1	2.4	2.4	2.1	2.1
50	2.7	2.8	2.9	2.9	2.5	2.5
65	3.2	3.2	3.5	3.6	2.9	3.0
80	3.6	3.7	4.6	4.7	3.8	3.9
100	4.4	4.5	5.6	5.8	4.4	4.5
125	5.4	5.5	8.1	8.3	6.1	6.2
150	7.1	7.3	10.5	10.7	7.4	7.5
200	9.3	9.4	16.5	16.8	11.2	11.4
250	11.8	12.1	24.1	24.5	14.9	15.2
300	13.6	13.9	30.8	31.4	17.4	17.7
350	21.8	22.3	39.6	40.4	23.7	24.2
400	27.5	28.0	49.4	50.4	28.7	29.3
450	33.6	34.2	63.0	64.2	33.1	33.7
500	40.2	41.0	75.2	76.6	38.3	39.0
600	54.5	55.5	124	126	50.5	51.5

PN 10 other types, mm: types 02 and 04 loose plate, type 12 hubbed slip-on, type 13 hubbed threaded, type 21 integral. F is the thickness of the collar a type 02 or 04 loose plate turns on

DN	B2 (02)	B3 (04)	E (02, 04)	F (32, 34)	H1 (12, 13)	N2 (12, 13)	C3 (21)	N3 (21)	Thread (13)
10	21	31	3	12	22	30	16	28	
15	25	35	3	12	22	35	16	32	Rp 1/2
20	31	42	4	14	26	45	18	40	Rp 3/4
25	38	49	4	14	28	52	18	50	Rp 1
32	47	59	5	14	30	60	18	60	Rp 1 1/4
40	53	67	5	14	32	70	18	70	Rp 1 1/2
50	65	77	5	16	28	84	18	84	Rp 2
65	81	96	6	16	32	104	18	104	Rp 2 1/2
80	94	108	6	16	34	118	20	120	Rp 3
100	120	134	6	18	40	140	20	140	Rp 4
125	145	162	6	18	44	168	22	170	Rp 5
150	174	188	6	20	44	195	22	190	Rp 6
200	226	240	6	20	44	246	24	246	
250	281	294	8	22	46	298	26	298	
300	333	348	8	22	46	350	26	348	
350	365	400	8	22	53	400	26	408	
400	416	450	8	24	57	456	26	456	
450	467	498	8	24	63	502	28	502	
500	519	550	8	26	67	559	28	559	
600	622	650	8	26	75	658	34	658	

PN 10 collars, mm: type 35 weldring neck, type 36 pressed collar with long neck, type 37 pressed collar. F is the collar thickness, H4 and H5 the overall length; the outside diameter is d1 above. The pressed collars are austenitic steel only

DN	F (35)	H4 (35)	F (36)	H4 (36)	F (37)	H5 (37)
10	5	35	2	35	2.5	7
15	5	38	2	38	2.5	7
20	6	40	2.5	40	3	8
25	7	40	2.5	40	3	10
32	8	42	3	42	3	12

DN	F (35)	H4 (35)	F (36)	H4 (36)	F (37)	H5 (37)
40	8	45	3	45	3	15
50	8	45	3	45	3	20
65	8	45	3	45	3	20
80	10	50	3	50	3	25
100	10	52	4	52	4	25
125	10	55	4	55	4	25
150	10	55	5	55	4	25
200	11	62	5	62	5	30
250	12	68	8	68		
300	12	68	8	68		
350	13	68	8	68		
400	14	72	8	72		
450	15	72				
500	16	75				
600	18	80				

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PN 16

PN 16 dimensions, mm: type 01 plate, type 05 blind and type 11 weld neck flanges. D, K, d1 and the thicknesses are shared by every type

DN	Pipe A	D	K	Holes n × L	Bolt	d1	C1 (01)	C4 (05)	C2 (11)	H2 (11)	N1 (11)	S (11)	B1 (01)
10	17.2	90	60	4 × 14	M12	40	14	16	16	35	28	2	18
15	21.3	95	65	4 × 14	M12	45	14	16	16	38	32	2	22
20	26.9	105	75	4 × 14	M12	58	16	18	18	40	40	2.3	27.5
25	33.7	115	85	4 × 14	M12	68	16	18	18	40	46	2.6	34.5
32	42.4	140	100	4 × 18	M16	78	18	18	18	42	56	2.6	43.5
40	48.3	150	110	4 × 18	M16	88	18	18	18	45	64	2.6	49.5
50	60.3	165	125	4 × 18	M16	102	20	18	18	45	74	2.9	61.5
65	76.1	185	145	8 × 18	M16	122	20	18	18	45	92	2.9	77.5
80	88.9	200	160	8 × 18	M16	138	20	20	20	50	105	3.2	90.5
100	114.3	220	180	8 × 18	M16	158	22	20	20	52	131	3.6	116
125	139.7	250	210	8 × 18	M16	188	22	22	22	55	156	4	141.5
150	168.3	285	240	8 × 22	M20	212	24	22	22	55	184	4.5	170.5
200	219.1	340	295	12 × 22	M20	268	26	24	24	62	235	6.3	221.5
250	273	405	355	12 × 26	M24	320	29	26	26	70	292	6.3	276.5
300	323.9	460	410	12 × 26	M24	378	32	28	28	78	344	7.1	327.5
350	355.6	520	470	16 × 26	M24	438	35	30	30	82	390	8	359.5
400	406.4	580	525	16 × 30	M27	490	38	32	32	85	445	8	411
450	457	640	585	20 × 30	M27	550	42	40	34	83	490	8.8	462
500	508	715	650	20 × 33	M30	610	46	44	36	84	548	8.8	513.5
600	610	840	770	20 × 36	M33	725	55	54	40	88	670	11	616.5

PN 16 approximate weights, kg per flange, carbon steel and stainless steel 316 and 316L

DN	Type 01 plate		Type 05 blind		Type 11 weld neck	
	CS	316L	CS	316L	CS	316L
10	0.6	0.6	0.7	0.7	0.7	0.7
15	0.7	0.7	0.8	0.8	0.8	0.8
20	0.9	1.0	1.1	1.2	1.1	1.1
25	1.1	1.1	1.4	1.4	1.3	1.3
32	1.8	1.9	2.0	2.1	1.9	1.9
40	2.1	2.1	2.4	2.4	2.1	2.1
50	2.7	2.8	2.9	2.9	2.5	2.5
65	3.2	3.2	3.5	3.6	2.9	3.0
80	3.6	3.7	4.6	4.7	3.8	3.9
100	4.4	4.5	5.6	5.8	4.4	4.5
125	5.4	5.5	8.1	8.3	6.1	6.2
150	7.1	7.3	10.5	10.7	7.4	7.5
200	9.7	9.9	16.2	16.6	11.0	11.2
250	14.2	14.5	25.0	25.5	15.9	16.2
300	19.0	19.3	35.1	35.8	21.2	21.6
350	28.1	28.7	48.0	48.9	31.4	32.0
400	35.9	36.5	63.5	64.7	39.3	40.0
450	46.1	47.0	96.6	98.4	47.3	48.2
500	64.0	65.3	133	135	61.7	62.9
600	102	104	226	231	92.4	94.2

PN 16 other types, mm: types 02 and 04 loose plate, type 12 hubbed slip-on, type 13 hubbed threaded, type 21 integral. F is the thickness of the collar a type 02 or 04 loose plate turns on

DN	B2 (02)	B3 (04)	E (02, 04)	F (32, 34)	H1 (12, 13)	N2 (12, 13)	C3 (21)	N3 (21)	Thread (13)
10	21	31	3	12	22	30	16	28	
15	25	35	3	12	22	35	16	32	Rp 1/2
20	31	42	4	14	26	45	18	40	Rp 3/4
25	38	49	4	14	28	52	18	50	Rp 1
32	47	59	5	14	30	60	18	60	Rp 1 1/4
40	53	67	5	14	32	70	18	70	Rp 1 1/2
50	65	77	5	16	28	84	18	84	Rp 2
65	81	96	6	16	32	104	18	104	Rp 2 1/2
80	94	108	6	16	34	118	20	120	Rp 3
100	120	134	6	18	40	140	20	140	Rp 4
125	145	162	6	18	44	168	22	170	Rp 5
150	174	188	6	20	44	195	22	190	Rp 6
200	226	240	6	20	44	246	24	246	
250	281	294	8	22	46	298	26	296	
300	333	348	8	24	46	350	28	350	
350	365	400	8	26	57	400	30	410	
400	416	454	8	28	63	456	32	458	
450	467	500	8	30	68	502	40	516	
500	519	556	8	32	73	559	44	576	
600	622	660	8	32	83	658	54	690	

PN 16 collars, mm: type 35 weldring neck, type 36 pressed collar with long neck, type 37 pressed collar. F is the collar thickness, H4 and H5 the overall length; the outside diameter is d1 above. The pressed collars are austenitic steel only

DN	F (35)	H4 (35)	F (36)	H4 (36)	F (37)	H5 (37)
10	5	35	2	35	2.5	7
15	5	38	2	38	2.5	7
20	6	40	2.5	40	3	8
25	7	40	2.5	40	3	10
32	8	42	3	42	3	12

DN	F (35)	H4 (35)	F (36)	H4 (36)	F (37)	H5 (37)
40	8	45	3	45	3	15
50	8	45	3	45	3	20
65	8	45	3	45	3	20
80	10	50	3	50	3	25
100	10	52	4	52	4	25
125	10	55	4	55	4	25
150	10	55	5	55	5	25
200	11	62	6	62	6	30
250	12	70	10	68		
300	14	78	10	68		
350	18	82	10	68		
400	20	85	10	72		
450	22	87				
500	22	90				
600	24	95				

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PN 25

PN 25 dimensions, mm: type 01 plate, type 05 blind and type 11 weld neck flanges. D, K, d1 and the thicknesses are shared by every type

DN	Pipe A	D	K	Holes n × L	Bolt	d1	C1 (01)	C4 (05)	C2 (11)	H2 (11)	N1 (11)	S (11)	B1 (01)
10	17.2	90	60	4 × 14	M12	40	14	16	16	35	28	2	18
15	21.3	95	65	4 × 14	M12	45	14	16	16	38	32	2	22
20	26.9	105	75	4 × 14	M12	58	16	18	18	40	40	2.3	27.5
25	33.7	115	85	4 × 14	M12	68	16	18	18	40	46	2.6	34.5
32	42.4	140	100	4 × 18	M16	78	18	18	18	42	56	2.6	43.5
40	48.3	150	110	4 × 18	M16	88	18	18	18	45	64	2.6	49.5
50	60.3	165	125	4 × 18	M16	102	20	20	20	48	75	2.9	61.5
65	76.1	185	145	8 × 18	M16	122	22	22	22	52	90	2.9	77.5
80	88.9	200	160	8 × 18	M16	138	24	24	24	58	105	3.2	90.5
100	114.3	235	190	8 × 22	M20	162	26	24	24	65	134	3.6	116
125	139.7	270	220	8 × 26	M24	188	28	26	26	68	162	4	141.5
150	168.3	300	250	8 × 26	M24	218	30	28	28	75	192	4.5	170.5
200	219.1	360	310	12 × 26	M24	278	32	30	30	80	244	6.3	221.5
250	273	425	370	12 × 30	M27	335	35	32	32	88	298	7.1	276.5
300	323.9	485	430	16 × 30	M27	395	38	34	34	92	352	8	327.5
350	355.6	555	490	16 × 33	M30	450	42	38	38	100	398	8	359.5
400	406.4	620	550	16 × 36	M33	505	48	40	40	110	452	8.8	411
450	457	670	600	20 × 36	M33	555	54	50	46	110	500	8.8	462
500	508	730	660	20 × 36	M33	615	58	51	48	125	558	10	513.5
600	610	845	770	20 × 39	M36	720	68	66	48	125	660	12.5	616.5

PN 25 approximate weights, kg per flange, carbon steel and stainless steel 316 and 316L

DN	Type 01 plate		Type 05 blind		Type 11 weld neck	
	CS	316L	CS	316L	CS	316L
10	0.6	0.6	0.7	0.7	0.7	0.7
15	0.7	0.7	0.8	0.8	0.8	0.8
20	0.9	1.0	1.1	1.2	1.1	1.1
25	1.1	1.1	1.4	1.4	1.3	1.3
32	1.8	1.9	2.0	2.1	1.9	1.9
40	2.1	2.1	2.4	2.4	2.1	2.1
50	2.7	2.8	3.2	3.3	2.8	2.8
65	3.5	3.5	4.3	4.4	3.6	3.7
80	4.3	4.4	5.5	5.6	4.6	4.7
100	6.1	6.2	7.6	7.7	6.3	6.4
125	8.2	8.4	10.8	11.0	8.6	8.8
150	10.3	10.5	14.6	14.9	11.3	11.5
200	14.3	14.6	22.5	22.9	16.6	16.9
250	20.1	20.5	33.5	34.1	23.5	23.9
300	26.6	27.1	46.3	47.2	30.7	31.3
350	41.8	42.6	68.1	69.4	47.2	48.1
400	57.6	58.7	89.7	91.4	61.7	62.9
450	69.8	71.1	130	133	74.1	75.5
500	87.0	88.7	159	162	95.1	96.9
600	127	130	278	283	121	123

PN 25 other types, mm: types 02 and 04 loose plate, type 12 hubbed slip-on, type 13 hubbed threaded, type 21 integral. F is the thickness of the collar a type 02 or 04 loose plate turns on

DN	B2 (02)	B3 (04)	E (02, 04)	F (32, 34)	H1 (12, 13)	N2 (12, 13)	C3 (21)	N3 (21)	Thread (13)
10	21	31	3	12	22	30	16	28	
15	25	35	3	12	22	35	16	32	Rp 1/2
20	31	42	4	14	26	45	18	40	Rp 3/4
25	38	49	4	14	28	52	18	50	Rp 1
32	47	59	5	14	30	60	18	60	Rp 1 1/4
40	53	67	5	14	32	70	18	70	Rp 1 1/2
50	65	77	5	16	34	84	20	84	Rp 2
65	81	96	6	16	38	104	22	104	Rp 2 1/2
80	94	114	6	18	40	118	24	120	Rp 3
100	120	138	6	20	44	145	24	142	Rp 4
125	145	166	6	22	48	170	26	162	Rp 5
150	174	194	6	24	52	200	28	192	Rp 6
200	226	250	6	26	52	256	30	252	
250	281	302	8	26	60	310	32	304	
300	333	356	8	28	67	364	34	364	
350	365	408	8	32	72	418	38	418	
400	416	462	8	34	78	472	40	472	
450	467	510	8	36	84	520	46	520	
500	519	568	8	38	90	580	48	580	
600	622	670	8	40	100	684	58	684	

PN 25 collars, mm: type 35 weldring neck, type 36 pressed collar with long neck, type 37 pressed collar. F is the collar thickness, H4 and H5 the overall length; the outside diameter is d1 above. The pressed collars are austenitic steel only

DN	F (35)	H4 (35)
10	5	35
15	5	38
20	6	40
25	7	40
32	8	42

DN	F (35)	H4 (35)
40	8	45
50	10	48
65	11	52
80	12	58
100	14	65
125	16	68
150	18	75
200	18	80
250	18	88
300	20	92
350	22	100
400	24	110
450	26	110
500	28	125
600	30	125

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PN 40

PN 40 dimensions, mm: type 01 plate, type 05 blind and type 11 weld neck flanges. D, K, d1 and the thicknesses are shared by every type

DN	Pipe A	D	K	Holes n × L	Bolt	d1	C1 (01)	C4 (05)	C2 (11)	H2 (11)	N1 (11)	S (11)	B1 (01)
10	17.2	90	60	4 × 14	M12	40	14	16	16	35	28	2	18
15	21.3	95	65	4 × 14	M12	45	14	16	16	38	32	2	22
20	26.9	105	75	4 × 14	M12	58	16	18	18	40	40	2.3	27.5
25	33.7	115	85	4 × 14	M12	68	16	18	18	40	46	2.6	34.5
32	42.4	140	100	4 × 18	M16	78	18	18	18	42	56	2.6	43.5
40	48.3	150	110	4 × 18	M16	88	18	18	18	45	64	2.6	49.5
50	60.3	165	125	4 × 18	M16	102	20	20	20	48	75	2.9	61.5
65	76.1	185	145	8 × 18	M16	122	22	22	22	52	90	2.9	77.5
80	88.9	200	160	8 × 18	M16	138	24	24	24	58	105	3.2	90.5
100	114.3	235	190	8 × 22	M20	162	26	24	24	65	134	3.6	116
125	139.7	270	220	8 × 26	M24	188	28	26	26	68	162	4	141.5
150	168.3	300	250	8 × 26	M24	218	30	28	28	75	192	4.5	170.5
200	219.1	375	320	12 × 30	M27	285	36	36	34	88	244	6.3	221.5
250	273	450	385	12 × 33	M30	345	42	38	38	105	306	7.1	276.5
300	323.9	515	450	16 × 33	M30	410	52	42	42	115	362	8	327.5
350	355.6	580	510	16 × 36	M33	465	58	46	46	125	408	8.8	359.5
400	406.4	660	585	16 × 39	M36	535	65	50	50	135	462	11	411
450	457	685	610	20 × 39	M36	560		57	57	135	500	12.5	
500	508	755	670	20 × 42	M39	615		57	57	140	562	14.2	
600	610	890	795	20 × 48	M45	735		72	72	150	666	16	

PN 40 approximate weights, kg per flange, carbon steel and stainless steel 316 and 316L

DN	Type 01 plate		Type 05 blind		Type 11 weld neck	
	CS	316L	CS	316L	CS	316L
10	0.6	0.6	0.7	0.7	0.7	0.7
15	0.7	0.7	0.8	0.8	0.8	0.8
20	0.9	1.0	1.1	1.2	1.1	1.1
25	1.1	1.1	1.4	1.4	1.3	1.3
32	1.8	1.9	2.0	2.1	1.9	1.9
40	2.1	2.1	2.4	2.4	2.1	2.1
50	2.7	2.8	3.2	3.3	2.8	2.8
65	3.5	3.5	4.3	4.4	3.6	3.7
80	4.3	4.4	5.5	5.6	4.6	4.7
100	6.1	6.2	7.6	7.7	6.3	6.4
125	8.2	8.4	10.8	11.0	8.6	8.8
150	10.3	10.5	14.6	14.9	11.3	11.5
200	17.9	18.3	28.8	29.4	20.5	20.9
250	29.3	29.8	44.4	45.2	33.3	34.0
300	45.1	45.9	64.2	65.4	46.6	47.4
350	66.7	67.9	89.5	91.2	67.7	69.0
400	97.1	99.0	127	129	96.7	98.6
450			154	157	103	105
500			188	192	129	131
600			331	337	207	211

PN 40 other types, mm: types 02 and 04 loose plate, type 12 hubbed slip-on, type 13 hubbed threaded, type 21 integral. F is the thickness of the collar a type 02 or 04 loose plate turns on

DN	B2 (02)	B3 (04)	E (02, 04)	F (32, 34)	H1 (12, 13)	N2 (12, 13)	C3 (21)	N3 (21)	Thread (13)
10	21	31	3	12	22	30	16	28	
15	25	35	3	12	22	35	16	32	Rp 1/2
20	31	42	4	14	26	45	18	40	Rp 3/4
25	38	49	4	14	28	52	18	50	Rp 1
32	47	59	5	14	30	60	18	60	Rp 1 1/4
40	53	67	5	14	32	70	18	70	Rp 1 1/2
50	65	77	5	16	34	84	20	84	Rp 2
65	81	96	6	16	38	104	22	104	Rp 2 1/2
80	94	114	6	18	40	118	24	120	Rp 3
100	120	138	6	20	44	145	24	142	Rp 4
125	145	166	6	22	48	170	26	162	Rp 5
150	174	194	6	24	52	200	28	192	Rp 6
200	226	250	6	28	52	260	34	254	
250	281	312	8	30	60	312	38	312	
300	333	368	8	34	67	380	42	378	
350	365	418	8	36	72	424	46	432	
400	416	472	8	42	78	478	50	498	
450	467	510	8	46	84	522	57	522	
500	519	572	8	50	90	576	57	576	
600	622	676	8	54	100	686	72	686	

PN 40 collars, mm: type 35 weldring neck, type 36 pressed collar with long neck, type 37 pressed collar. F is the collar thickness, H4 and H5 the overall length; the outside diameter is d1 above. The pressed collars are austenitic steel only

DN	F (35)	H4 (35)
10	5	35
15	5	38
20	6	40
25	7	40
32	8	42

DN	F (35)	H4 (35)
40	8	45
50	10	48
65	11	52
80	12	58
100	14	65
125	16	68
150	18	75
200	20	88
250	22	105
300	25	115
350	28	125
400	32	135

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PN 63

PN 63 dimensions, mm: type 01 plate, type 05 blind and type 11 weld neck flanges. D, K, d1 and the thicknesses are shared by every type

DN	Pipe A	D	K	Holes n × L	Bolt	d1	C1 (01)	C4 (05)	C2 (11)	H2 (11)	N1 (11)	S (11)	B1 (01)
10	17.2	100	70	4 × 14	M12	40	20	20	20	45	32	2	18
15	21.3	105	75	4 × 14	M12	45	20	20	20	45	34	2	22
20	26.9	130	90	4 × 18	M16	58	22	22	22	48	42	2.6	27.5
25	33.7	140	100	4 × 18	M16	68	24	24	24	58	52	2.6	34.5
32	42.4	155	110	4 × 22	M20	78	24	24	24	60	62	2.9	43.5
40	48.3	170	125	4 × 22	M20	88	26	26	26	62	70	2.9	49.5
50	60.3	180	135	4 × 22	M20	102	26	26	26	62	82	2.9	61.5
65	76.1	205	160	8 × 22	M20	122	26	26	26	68	98	3.2	77.5
80	88.9	215	170	8 × 22	M20	138	30	28	28	72	112	3.6	90.5
100	114.3	250	200	8 × 26	M24	162	32	30	30	78	138	4	116
125	139.7	295	240	8 × 30	M27	188	34	34	34	88	168	4.5	141.5
150	168.3	345	280	8 × 33	M30	218	36	36	36	95	202	5.6	170.5
200	219.1	415	345	12 × 36	M33	285	48	42	42	110	256	7.1	221.5
250	273	470	400	12 × 36	M33	345	55	46	46	125	316	8.8	276.5
300	323.9	530	460	16 × 36	M33	410	65	52	52	140	372	11	327.5
350	355.6	600	525	16 × 39	M36	465	72	56	56	150	420	12.5	359.5
400	406.4	670	585	16 × 42	M39	535	80	60	60	160	475	14.2	411

PN 63 approximate weights, kg per flange, carbon steel and stainless steel 316 and 316L

DN	Type 01 plate		Type 05 blind		Type 11 weld neck	
	CS	316L	CS	316L	CS	316L
10	1.1	1.1	1.1	1.2	1.1	1.1
15	1.2	1.2	1.3	1.3	1.2	1.2
20	2.0	2.1	2.1	2.2	2.0	2.0
25	2.5	2.6	2.7	2.8	2.6	2.7
32	3.0	3.0	3.3	3.3	3.1	3.2
40	3.9	4.0	4.3	4.4	4.0	4.1
50	4.3	4.4	4.9	5.0	4.4	4.5
65	5.2	5.3	6.1	6.2	5.5	5.6
80	6.3	6.4	7.3	7.5	6.5	6.6
100	8.6	8.8	10.6	10.8	9.1	9.2
125	12.5	12.8	16.7	17.1	14.2	14.5
150	18.0	18.4	24.5	25.0	20.9	21.3
200	31.8	32.5	40.6	41.3	33.6	34.2
250	43.7	44.5	58.2	59.4	47.3	48.2
300	61.3	62.4	83.4	85.0	66.4	67.7
350	91.6	93.4	116	118	96.2	98.1
400	124	127	156	159	128	130

PN 63 other types, mm: type 12 hubbed slip-on, type 13 hubbed threaded, type 21 integral

DN	H1 (12, 13)	N2 (12, 13)	C3 (21)	N3 (21)	Thread (13)
10	28	40	20	40	
15	28	43	20	45	Rp 1/2
20	30	52	22	50	Rp 3/4
25	32	60	24	61	Rp 1
32	32	68	26	68	Rp 1 1/4
40	34	80	28	82	Rp 1 1/2
50	36	90	26	90	Rp 2
65	40	112	26	105	Rp 2 1/2
80	44	125	28	122	Rp 3
100	52	152	30	146	Rp 4
125	56	185	34	177	Rp 5
150	60	215	36	204	Rp 6
200			42	264	
250			46	320	
300			52	378	
350			56	434	
400			60	490	

EN 1092-1:2018

PN 100

PN 100 dimensions, mm: type 01 plate, type 05 blind and type 11 weld neck flanges. D, K, d1 and the thicknesses are shared by every type

DN	Pipe A	D	K	Holes n × L	Bolt	d1	C1 (01)	C4 (05)	C2 (11)	H2 (11)	N1 (11)	S (11)	B1 (01)
10	17.2	100	70	4 × 14	M12	40	20	20	20	45	32	2	18
15	21.3	105	75	4 × 14	M12	45	20	20	20	45	34	2	22
20	26.9	130	90	4 × 18	M16	58	22	22	22	48	42	2.6	27.5
25	33.7	140	100	4 × 18	M16	68	24	24	24	58	52	2.6	34.5
32	42.4	155	110	4 × 22	M20	78	24	24	24	60	62	2.9	43.5
40	48.3	170	125	4 × 22	M20	88	26	26	26	62	70	2.9	49.5
50	60.3	195	145	4 × 26	M24	102	28	28	28	68	90	3.2	61.5
65	76.1	220	170	8 × 26	M24	122	30	30	30	76	108	3.6	77.5
80	88.9	230	180	8 × 26	M24	138	34	32	32	78	120	4	90.5
100	114.3	265	210	8 × 30	M27	162	36	36	36	90	150	5	116
125	139.7	315	250	8 × 33	M30	188	42	40	40	105	180	6.3	141.5
150	168.3	355	290	12 × 33	M30	218	48	44	44	115	210	7.1	170.5
200	219.1	430	360	12 × 36	M33	285	60	52	52	130	278	10	221.5
250	273	505	430	12 × 39	M36	345	72	60	60	157	340	12.5	276.5
300	323.9	585	500	16 × 42	M39	410	84	68	68	170	400	14.2	327.5
350	355.6	655	560	16 × 48	M45	465	95	74	74	189	460	16	359.5

PN 100 approximate weights, kg per flange, carbon steel and stainless steel 316 and 316L

DN	Type 01 plate		Type 05 blind		Type 11 weld neck	
	CS	316L	CS	316L	CS	316L
10	1.1	1.1	1.1	1.2	1.1	1.1
15	1.2	1.2	1.3	1.3	1.2	1.2
20	2.0	2.1	2.1	2.2	2.0	2.0
25	2.5	2.6	2.7	2.8	2.6	2.7
32	3.0	3.0	3.3	3.3	3.1	3.2
40	3.9	4.0	4.3	4.4	4.0	4.1
50	5.4	5.5	6.1	6.2	5.7	5.8
65	6.8	7.0	8.0	8.1	7.4	7.6
80	8.2	8.4	9.4	9.5	8.6	8.7
100	11.0	11.2	14.0	14.3	12.8	13.0
125	18.3	18.6	22.3	22.7	20.7	21.1
150	24.8	25.3	30.6	31.2	27.8	28.3
200	44.5	45.3	54.3	55.3	49.4	50.3
250	71.2	72.5	87.6	89.3	80.1	81.6
300	107	109	132	134	116	118
350	154	157	179	182	166	169

PN 100 other types, mm: type 12 hubbed slip-on, type 13 hubbed threaded, type 21 integral

DN	H1 (12, 13)	N2 (12, 13)	C3 (21)	N3 (21)	Thread (13)
10	28	40	20	40	
15	28	43	20	45	Rp 1/2
20	30	52	22	50	Rp 3/4
25	32	60	24	61	Rp 1
32	32	68	26	68	Rp 1 1/4
40	34	80	28	82	Rp 1 1/2
50	36	95	30	96	Rp 2
65	40	118	34	118	Rp 2 1/2
80	44	130	36	128	Rp 3
100	52	158	40	150	Rp 4
125	56	188	40	185	Rp 5
150	60	225	44	216	Rp 6
200			52	278	
250			60	340	
300			68	407	
350			74	460	

ASME B36.10M and B36.19M

Pipe walls by schedule

The bore of a weld neck flange matches the pipe: B = A minus twice the wall. Stainless schedules end in S.

Pipe wall thickness, mm, ASME B36.10M and B36.19M

NPS	Sch 5S	Sch 5	Sch 10S	Sch 10	Sch 20	Sch 30	Sch 40S	STD	Sch 40
1/2	1.70	1.70	2.10	2.10		2.40	2.80	2.80	2.80
3/4	1.70	1.70	2.10	2.10		2.40	2.90	2.90	2.90
1	1.70	1.70	2.80	2.80		2.90	3.40	3.40	3.40
1-1/4	1.70	1.70	2.80	2.80		3.00	3.60	3.60	3.60
1-1/2	1.70	1.70	2.80	2.80		3.20	3.70	3.70	3.70
2	1.70	1.70	2.80	2.80		3.20	3.90	3.90	3.90
2-1/2	2.10	2.10	3.00	3.00		4.80	5.20	5.20	5.20
3	2.10	2.10	3.00	3.00		4.80	5.50	5.50	5.50
4	2.10	2.10	3.00	3.00		4.80	6.00	6.00	6.00
5	2.80	2.80	3.40	3.40			6.60	6.60	6.60
6	2.80	2.80	3.40	3.40			7.10	7.10	7.10
8	2.80	2.80	3.80	3.80	6.40	7.00	8.20	8.20	8.20
10	3.40	3.40	4.20	4.20	6.40	7.80	9.30	9.30	9.30
12	4.00	4.00	4.60	4.60	6.40	8.40	9.50	9.50	10.30
14	4.00	4.00	4.80	6.40	7.90	9.50	9.50	9.50	11.10
16	4.20	4.20	4.80	6.40	7.90	9.50	9.50	9.50	12.70
18	4.20	4.20	4.80	6.40	7.90	11.10	9.50	9.50	14.30
20	4.80	4.80	5.50	6.40	9.50	12.70	9.50	9.50	15.10
24	5.50	5.50	6.40	6.40	9.50	14.30	9.50	9.50	17.50

Pipe wall thickness, mm, ASME B36.10M and B36.19M

NPS	Sch 60	Sch 80S	XS	Sch 80	Sch 100	Sch 120	Sch 140	Sch 160	XXS
1/2		3.70	3.70	3.70				4.80	7.50
3/4		3.90	3.90	3.90				5.60	7.80
1		4.50	4.50	4.50				6.40	9.10
1-1/4		4.90	4.90	4.90				6.40	9.70
1-1/2		5.10	5.10	5.10				7.10	10.20
2		5.50	5.50	5.50				8.70	11.10
2-1/2		7.00	7.00	7.00				9.50	14.00
3		7.60	7.60	7.60				11.10	15.20
4		8.60	8.60	8.60		11.10		13.50	17.10
5		9.50	9.50	9.50		12.70		15.90	19.10
6		11.00	11.00	11.00		14.30		18.30	21.90
8	10.30	12.70	12.70	12.70	15.10	18.30	20.60	23.00	22.20
10	12.70	12.70	12.70	15.10	18.30	21.40	25.40	28.60	25.40
12	14.30	12.70	12.70	17.50	21.40	25.40	28.60	33.30	25.40
14	15.10	12.70	12.70	19.10	23.80	27.80	31.80	35.70	
16	16.70	12.70	12.70	21.40	26.20	31.00	36.50	40.50	
18	19.10	12.70	12.70	23.80	29.40	34.90	39.70	45.20	
20	20.60	12.70	12.70	26.20	32.50	38.10	44.50	50.00	
24	24.60	12.70	12.70	31.00	38.90	46.00	52.40	59.50	

About Rajendra Industrial Corporation

Rajendra Industrial Corporation (RIC) has made stainless steel and carbon steel flanges and forged fittings since 2000, at its works in Umbergaon, Gujarat, India. For data center cooling RIC supplies flanges for facility water, technology cooling and heat rejection loops.

Flanges	Weld neck, slip-on, blind, lap joint, socket weld, threaded and ring type joint flanges to ASME B16.5 (NPS 1/2 to 24, Class 150 to 2500), ASME B16.47 Series A and B, EN 1092-1 and AWWA C207 and C228
Materials	Stainless steel ASTM A182 F304, F304L, F316 and F316L; duplex UNS S32205 and super duplex UNS S32750; carbon steel ASTM A105 and A350 LF2
Works	Forging, heat treatment, pickling, machining on CNC lathes, vertical machining centers and conventional lathes, marking and testing in house at Umbergaon, Gujarat, India
Testing	Tensile, hardness, PMI, dye penetrant and dimensional checks in house; chemical, intergranular corrosion, impact and ultrasonic testing at outside laboratories
Documents	Mill test certificates to EN 10204 3.1 or 3.2; third-party inspection by TÜV, Gulf Lloyds, IRClass, Bureau Veritas or SGS
Certificates	ISO 9001:2015, PED 2014/68/EU, NORSOK M-650, ISO 45001:2018, ISO 29001:2020

Ask for a quote or a drawing

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