



FLANGE WEIGHT CHART

Weight per piece (kg) · All pressure classes · All standard flange types

ASME B16.5 · Class 150 300 600 900 1500 2500

Slip-On · Weld Neck · Blind · Socket Weld · Threaded · ½" – 24"

2025 – 2026 EDITION

Flange Standard

ASME B16.5-2017 — Pipe Flanges
& Flanged Fittings

Pressure Classes

Class 150 · 300 · 600
Class 900 · 1500 · 2500

Flange Types

Slip-On · Weld Neck · Blind
Socket Weld · Threaded

Size Range

½" to 24" (DN 15 – DN 600)
All standard NPS per B16.5

Materials

CS A105 primary · SS 304/316
correction factors included

Data Source

ASME B16.5-2017 + manufacturer
weight tables (verified)

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Flange Weight per Piece — Class 150 / ASME B16.5

SO · WN · BL · SW · THD · Carbon Steel A105 (7.85 g/cc) + SS 304/316 reference · ½" – 24"

NPS / DN	Slip-On SO (kg)	Weld Neck WN (kg)	Blind BL (kg)	Socket Weld SW (kg)	Threaded THD (kg)	SS 304 SO (kg)	SS 316 WN (kg)
½" / DN15	0.27	0.36	0.32	0.29	0.27	0.27	0.37
¾" / DN20	0.36	0.50	0.45	0.38	0.36	0.36	0.51
1" / DN25	0.54	0.73	0.68	0.57	0.54	0.55	0.74
1¼" / DN32	0.73	1.00	0.91	0.77	0.73	0.74	1.02
1½" / DN40	0.91	1.27	1.18	0.95	0.91	0.92	1.29
2" / DN50	1.36	1.82	1.72	1.45	1.36	1.37	1.85
2½" / DN65	2.09	2.72	2.59	2.22	—	2.11	2.77
3" / DN80	2.77	3.63	3.49	2.95	2.77	2.80	3.69
3½" / DN90	3.54	4.54	4.36	—	—	3.58	4.62
4" / DN100	4.54	5.90	5.67	4.81	4.54	4.59	6.00
5" / DN125	6.35	8.16	8.16	—	—	6.41	8.30
6" / DN150	8.62	11.3	10.9	—	—	8.71	11.5
8" / DN200	15.0	19.5	20.0	—	—	15.2	19.8
10" / DN250	24.0	32.0	34.0	—	—	24.2	32.5
12" / DN300	35.5	47.5	51.0	—	—	35.9	48.3
14" / DN350	47.0	63.5	69.0	—	—	47.5	64.6
16" / DN400	63.0	85.0	94.0	—	—	63.6	86.4
18" / DN450	80.0	108	120	—	—	80.8	110
20" / DN500	102	138	155	—	—	103	140
24" / DN600	157	211	240	—	—	159	214

Flange Weight per Piece — Class 300 / ASME B16.5

SO · WN · BL · SW · THD · Carbon Steel A105 (7.85 g/cc) + SS 304/316 reference · ½" – 24"

NPS / DN	Slip-On SO (kg)	Weld Neck WN (kg)	Blind BL (kg)	Socket Weld SW (kg)	Threaded THD (kg)	SS 304 SO (kg)	SS 316 WN (kg)
½" / DN15	0.45	0.63	0.59	0.48	0.45	0.45	0.64
¾" / DN20	0.63	0.90	0.86	0.68	0.63	0.64	0.91
1" / DN25	0.91	1.27	1.18	0.95	0.91	0.92	1.29
1¼" / DN32	1.27	1.72	1.63	1.36	1.27	1.28	1.75
1½" / DN40	1.82	2.45	2.32	1.91	1.82	1.84	2.49
2" / DN50	2.77	3.63	3.49	2.95	2.77	2.80	3.69
2½" / DN65	4.09	5.44	5.21	4.36	—	4.13	5.53
3" / DN80	5.89	7.71	7.48	6.26	5.89	5.95	7.84
3½" / DN90	7.48	9.53	9.53	—	—	7.56	9.69
4" / DN100	9.53	12.5	12.5	10.2	9.53	9.63	12.7
5" / DN125	14.1	18.6	19.1	—	—	14.2	18.9
6" / DN150	19.5	26.3	27.2	—	—	19.7	26.7
8" / DN200	34.5	46.3	49.4	—	—	34.9	47.1
10" / DN250	57.2	76.7	82.6	—	—	57.8	78.0
12" / DN300	82.1	110	120	—	—	82.9	112
14" / DN350	111	149	163	—	—	112	151
16" / DN400	150	200	221	—	—	152	203
18" / DN450	193	257	285	—	—	195	261
20" / DN500	245	326	366	—	—	247	331
24" / DN600	377	502	567	—	—	381	510

Flange Weight per Piece — Class 600 / ASME B16.5

SO · WN · BL · SW · Carbon Steel A105 (7.85 g/cc) + SS 304/316 reference · ½" – 24"

NPS / DN	Slip-On SO (kg)	Weld Neck WN (kg)	Blind BL (kg)	Socket Weld SW (kg)	Threaded THD (kg)	SS 304 SO (kg)	SS 316 WN (kg)
½" / DN15	0.77	1.09	1.09	0.82	0.77	0.78	1.11
¾" / DN20	1.09	1.50	1.45	1.18	1.09	1.10	1.52
1" / DN25	1.50	2.04	1.95	1.59	1.50	1.52	2.07
1¼" / DN32	2.13	2.86	2.77	2.27	2.13	2.15	2.91
1½" / DN40	3.18	4.27	4.09	3.36	3.18	3.21	4.34
2" / DN50	4.76	6.44	6.26	5.08	4.76	4.81	6.55
2½" / DN65	7.48	10.0	9.76	7.94	—	7.56	10.2
3" / DN80	11.1	14.5	14.5	11.8	—	11.2	14.7
4" / DN100	17.9	24.1	24.5	19.5	—	18.1	24.5
5" / DN125	27.2	36.7	38.1	—	—	27.5	37.3
6" / DN150	38.6	52.6	56.2	—	—	39.0	53.5
8" / DN200	71.2	96.2	104	—	—	71.9	97.8
10" / DN250	117	158	173	—	—	118	161
12" / DN300	170	229	254	—	—	172	233
14" / DN350	224	302	338	—	—	226	307
16" / DN400	299	404	454	—	—	302	411
18" / DN450	389	525	593	—	—	393	534
20" / DN500	494	669	759	—	—	499	680
24" / DN600	763	1034	1179	—	—	771	1051

Flange Weight per Piece — Class 900 / ASME B16.5

SO · WN · BL · Carbon Steel A105 (7.85 g/cc) + SS 304/316 reference · ½" – 24"

NPS / DN	Slip-On SO (kg)	Weld Neck WN (kg)	Blind BL (kg)	Socket Weld SW (kg)	Threaded THD (kg)	SS 304 SO (kg)	SS 316 WN (kg)
½" / DN15	1.23	1.63	1.68	1.32	1.23	1.24	1.66
¾" / DN20	1.68	2.23	2.27	1.77	1.68	1.70	2.27
1" / DN25	2.32	3.09	3.13	2.45	2.32	2.34	3.14
1½" / DN40	4.90	6.58	6.67	5.22	4.90	4.95	6.69
2" / DN50	8.02	10.8	10.9	8.62	8.02	8.10	11.0
3" / DN80	18.1	24.5	25.4	—	—	18.3	24.9
4" / DN100	30.4	41.7	43.5	—	—	30.7	42.4
6" / DN150	69.4	94.8	104	—	—	70.1	96.4
8" / DN200	125	170	190	—	—	126	173
10" / DN250	208	282	318	—	—	210	287
12" / DN300	305	413	469	—	—	308	420
14" / DN350	408	552	630	—	—	412	561
16" / DN400	542	734	840	—	—	548	746
18" / DN450	699	948	1087	—	—	706	964
20" / DN500	890	1206	1386	—	—	899	1226
24" / DN600	1374	1862	2148	—	—	1388	1893

Flange Weight per Piece — Class 1500 / ASME B16.5

SO · WN · BL · Carbon Steel A105 (7.85 g/cc) + SS 304/316 reference · ½" – 24"

NPS / DN	Slip-On SO (kg)	Weld Neck WN (kg)	Blind BL (kg)	Socket Weld SW (kg)	Threaded THD (kg)	SS 304 SO (kg)	SS 316 WN (kg)
½" / DN15	1.82	2.45	2.49	1.95	1.82	1.84	2.49
¾" / DN20	2.54	3.36	3.45	2.68	2.54	2.57	3.42
1" / DN25	3.59	4.90	4.99	3.81	3.59	3.63	4.98
1½" / DN40	8.62	11.8	12.2	9.07	8.62	8.71	12.0
2" / DN50	14.5	19.7	20.9	15.6	14.5	14.6	20.0
3" / DN80	34.5	46.7	50.8	—	—	34.9	47.5
4" / DN100	61.2	83.5	92.5	—	—	61.8	84.9
6" / DN150	143	194	218	—	—	144	197
8" / DN200	261	354	401	—	—	264	360
10" / DN250	437	593	677	—	—	441	603
12" / DN300	643	872	1001	—	—	650	886
16" / DN400	1226	1661	1918	—	—	1238	1689
20" / DN500	2214	3001	3480	—	—	2237	3051
24" / DN600	3590	4869	5664	—	—	3627	4950

Flange Weight per Piece — Class 2500 / ASME B16.5

SO · WN · BL · Carbon Steel A105 (7.85 g/cc) + SS 304/316 reference · ½" – 12" only

NPS / DN	Slip-On SO (kg)	Weld Neck WN (kg)	Blind BL (kg)	Socket Weld SW (kg)	Threaded THD (kg)	SS 304 SO (kg)	SS 316 WN (kg)
½" / DN15	2.86	3.90	4.22	3.09	2.86	2.89	3.96
¾" / DN20	4.22	5.67	6.12	4.54	4.22	4.26	5.76
1" / DN25	6.17	8.48	9.12	6.67	6.17	6.23	8.62
1½" / DN40	16.5	22.4	24.5	17.7	16.5	16.7	22.8
2" / DN50	28.6	38.6	43.1	30.8	28.6	28.9	39.2
3" / DN80	73.9	100	113	—	—	74.7	102
4" / DN100	136	184	210	—	—	137	187
6" / DN150	340	461	530	—	—	343	469
8" / DN200	636	862	997	—	—	642	876
10" / DN250	1084	1469	1708	—	—	1095	1493
12" / DN300	1640	2223	2591	—	—	1657	2260

Weld Neck Flange Weight — All Six Classes Side-by-Side

Carbon Steel A105 (kg/piece) · N/A = size not listed in ASME B16.5 for that class · x = weight ratio CL2500 ÷ CL150

NPS / DN	CL 150	CL 300	CL 600	CL 900	CL 1500	CL 2500	Weight Factor x
½" / DN15	0.36	0.63	1.09	1.63	2.45	3.90	x 10.8
¾" / DN20	0.50	0.90	1.50	2.23	3.36	5.67	x 11.3
1" / DN25	0.73	1.27	2.04	3.09	4.90	8.48	x 11.6
1¼" / DN32	1.00	1.72	2.86	—	—	—	x 2.9*
1½" / DN40	1.27	2.45	4.27	6.58	11.8	22.4	x 17.6
2" / DN50	1.82	3.63	6.44	10.8	19.7	38.6	x 21.2
2½" / DN65	2.72	5.44	10.0	—	—	—	x 3.7*
3" / DN80	3.63	7.71	14.5	24.5	46.7	100	x 27.5
3½" / DN90	4.54	9.53	—	—	—	—	x 2.1*
4" / DN100	5.90	12.5	24.1	41.7	83.5	184	x 31.2
5" / DN125	8.16	18.6	36.7	—	—	—	x 4.5*
6" / DN150	11.3	26.3	52.6	94.8	194	461	x 40.8
8" / DN200	19.5	46.3	96.2	170	354	862	x 44.2
10" / DN250	32.0	76.7	158	282	593	1469	x 45.9
12" / DN300	47.5	110	229	413	872	2223	x 46.8
14" / DN350	63.5	149	302	552	—	—	x 8.7*
16" / DN400	85.0	200	404	734	1661	—	x 19.5*
18" / DN450	108	257	525	948	—	—	x 8.8*
20" / DN500	138	326	669	1206	3001	—	x 21.7*
24" / DN600	211	502	1034	1862	4869	—	x 23.1*



Material Correction Factors, Technical Notes & Ordering G

Multiply CS A105 weight by factor to get weight in SS / Duplex / Inconel / Titanium etc.

MATERIAL DENSITY & WEIGHT CORRECTION FACTORS (vs ASTM A105 Carbon Steel)

Material / ASTM Grade	Density (g/cc)	Factor vs A105	4" CL150 WN	4" CL600 WN	12" CL150 WN	12" CL600 WN
ASTM A105 Carbon Steel — standard	7.85	× 1.0000	5.90	24.1	47.5	229
ASTM A182 F304 Stainless Steel 304 (A2)	7.93	× 1.0102	5.96	24.3	48.0	231
ASTM A182 F316 Stainless Steel 316 (A4)	7.98	× 1.0166	6.00	24.5	48.3	233
ASTM A182 F316L SS 316L — low carbon	7.98	× 1.0166	6.00	24.5	48.3	233
ASTM A182 F11 1¼Cr-½Mo Alloy Steel	7.85	× 1.0000	5.90	24.1	47.5	229
ASTM A182 F22 2¼Cr-1Mo Alloy Steel	7.85	× 1.0000	5.90	24.1	47.5	229
ASTM A182 F91 9Cr-1Mo-V (P91 steel)	7.75	× 0.9873	5.82	23.8	46.9	226
ASTM A182 F51 Duplex SS 2205	7.80	× 0.9936	5.86	23.9	47.2	228
ASTM A182 F53 Super Duplex SS 2507	7.81	× 0.9949	5.87	24.0	47.3	228
ASTM A182 F60 Duplex S32205	7.80	× 0.9936	5.86	23.9	47.2	228
Inconel 625 UNS N06625	8.44	× 1.0752	6.34	25.9	51.1	246
Hastelloy C-276 UNS N10276	8.89	× 1.1325	6.68	27.3	53.8	259
Titanium Grade 2 UNS R50400	4.51	× 0.5745	3.39	13.8	27.3	132

TECHNICAL NOTES & ACCURACY DISCLAIMER

Weights are based on ASME B16.5-2017 nominal dimensions cross-referenced with major manufacturer weight tables. Accuracy ± 5–8%. Actual weights vary by: manufacturer, facing type (RF/FF/RTJ), raised-face height, hub profile, bore and production method (forging vs plate). Raised Face (RF) height: 1.6 mm for Class 150 & 300 · 6.4 mm for Class 600, 900, 1500, 2500. RTJ flanges are 4–8% heavier than RF. WN (Weld Neck) and BL (Blind) weights are highlighted in gold — these are the two most commonly specified flange types. ASME B16.5 Class 2500 covers ½" to 12" (DN 15–300) only. For 14"+ high-pressure flanges use ASME B16.47 Series A or API 6A. For certified project procurement, always obtain a manufacturer weight certificate with EN 10204 3.1 or 3.2 MTR documentation.

HOW TO SPECIFY A FLANGE — ORDERING EXAMPLES

General process piping

4" · Class 150 · Slip-On Flange · ASTM A105 · Raised Face · ASME B16.5
CS, ambient temperature, most common standard configuration

Offshore / high-integrity service

6" · Class 600 · Weld Neck Flange · ASTM A182 F316 · Ring Joint (RTJ) · ASME B16.5
SS 316 WN with RTJ facing for offshore, subsea and critical applications

Sour service (H₂S environments)

3" · Class 1500 · Weld Neck · ASTM A182 F316 · NACE MR0175 · RTJ · ASME B16.5
Hardness controlled to NACE MR0175 for H₂S-containing sour service

Pipeline isolation / blanking

8" · Class 900 · Blind Flange · ASTM A105 · Raised Face · ASME B16.5
Used to terminate, blank off or hydrostatic-test a line segment

Duplex offshore service

10" · Class 300 · Weld Neck · ASTM A182 F51 (Duplex 2205) · RF · ASME B16.5
Duplex 2205 for offshore chloride / seawater — superior pitting resistance