

TESHI GROUP · TECHNICAL REFERENCE · TG-DS-200

Flange & Fitting Dimensions and Weights

Dimensions and weight in kg of every flange and butt-weld / forged fitting size in ASME B16.5, B16.47, B16.36, MSS SP-44, EN 1092-1, IS 6392, BS 10, AS 2129, JIS B2220, AWWA C207, ASME B16.9, EN 10253-2, MSS SP-75 and ASME B16.11.

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How the weights are worked out. Weights are for carbon steel (density 7.85 g/cm³) in kg per piece. Values without an asterisk are published catalogue weights (ASME B16.5). Values marked * are calculated by Teshi Group from the tabulated dimensions — flanges from their disc, hub and raised face less bore and bolt holes (calibrated against published ASME B16.5 weights, typically within ±10 %); butt-weld fittings from the fitting centreline length and the pipe mass per metre for the wall schedule shown; forged fittings approximately (±15 %). For stainless steel multiply by 1.02, for duplex by 0.99, for nickel alloys by about 1.07. Weights are for estimating freight and loads — the despatch weight is confirmed on the packing list.

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ASME B16.5 flanges — Class 150 to 2500

Weld neck, slip-on, socket weld, threaded, lap joint and blind flanges, NPS ½"–24". Weights without an asterisk are published catalogue values; weights marked * are calculated. Weld neck weights are for standard-weight bore.

ASME B16.5 Class 150 — dimensions (mm) and weight per flange (kg)

NPS	DN	O OD	tf thk	R RF dia	W PCD	Holes no. × dia	Weld neck kg	Slip-on kg	Socket weld kg	Threaded kg	Lap joint kg	Blind kg
½"	15	90	9.6	34.9	60.3	4 × 15.9	0.54*	0.50	0.46*	0.45*	0.42*	0.50
¾"	20	100	11.2	42.9	69.9	4 × 15.9	0.80*	0.62*	0.66*	0.64*	0.62*	0.68*
1"	25	110	12.7	50.8	79.4	4 × 15.9	1.10	0.90	0.91*	0.89*	0.85*	0.90
1¼"	32	115	14.3	63.5	88.9	4 × 15.9	1.40	1.10	1.12*	1.08*	1.02*	1.20
1½"	40	125	15.9	73.0	98.4	4 × 15.9	1.80	1.40	1.46*	1.40*	1.32*	1.60
2"	50	150	17.5	92.1	120.7	4 × 19.1	2.60	2.30	2.28*	2.19*	2.08*	2.60
2½"	65	180	20.7	104.8	139.7	4 × 19.1	4.30	3.40	3.87*	3.69*	3.55*	4.29*
3"	80	190	22.3	127.0	152.4	4 × 19.1	5.20	3.90	4.48*	4.22*	4.03*	5.21*
3½"	90	215	22.3	139.7	177.8	8 × 19.1	5.50	5.00	—	5.21*	5.01*	5.90
4"	100	230	22.3	157.2	190.5	8 × 19.1	7.30	5.80	—	5.93*	5.65*	7.40
5"	125	255	22.3	185.7	215.9	8 × 22.2	8.90	6.20	—	6.85*	6.48*	8.80
6"	150	280	23.9	215.9	241.3	8 × 22.2	11.3	7.40	—	8.35*	7.92*	11.3
8"	200	345	27.0	269.9	298.5	8 × 22.2	17.7	12.4	—	13.6*	12.9*	19.9
10"	250	405	28.6	323.8	362.0	12 × 25.4	24.8	17.1	—	18.2*	17.2*	29.4
12"	300	485	30.2	381.0	431.8	12 × 25.4	39.0	27.7	—	29.2*	28.1*	43.7
14"	350	535	33.4	412.8	476.3	12 × 28.6	51.7	35.2	—	38.3*	41.0*	59.4
16"	400	595	35.0	469.9	539.8	16 × 28.6	64.4	42.2	—	48.6*	52.7*	77.1
18"	450	635	38.1	533.4	577.9	16 × 31.8	74.8	49.7	—	54.1*	59.4*	94.8
20"	500	700	41.3	584.2	635.0	20 × 31.8	89.4	65.5	—	68.8*	75.6*	123
24"	600	815	46.1	692.2	749.3	20 × 34.9	120	90.5	—	97.3*	105*	188

ASME B16.5 Class 300 — dimensions (mm) and weight per flange (kg)

NPS	DN	O OD	tf thk	R RF dia	W PCD	Holes no. × dia	Weld neck kg	Slip-on kg	Socket weld kg	Threaded kg	Lap joint kg	Blind kg
½"	15	95	12.7	34.9	66.7	4 × 15.9	0.81*	0.60	0.71*	0.70*	0.66*	0.67*
¾"	20	115	14.3	42.9	82.6	4 × 19.1	1.30	1.10	1.17*	1.15*	1.11*	1.11*
1"	25	125	15.9	50.8	88.9	4 × 19.1	1.60	1.40	1.53*	1.49*	1.44*	1.40
1¼"	32	135	17.5	63.5	98.4	4 × 19.1	2.10	1.81*	1.93*	1.87*	1.81*	1.95*
1½"	40	155	19.1	73.0	114.3	4 × 22.2	3.10	2.60*	2.76*	2.68*	2.58*	2.80*
2"	50	165	20.7	92.1	127.0	8 × 19.1	3.40	2.80	3.26*	3.14*	3.00*	3.37*
2½"	65	190	23.9	104.8	149.2	8 × 22.2	5.30	4.20	4.94*	4.69*	4.50*	4.80
3"	80	210	27.0	127.0	168.3	8 × 22.2	7.30	5.80	6.73*	6.37*	6.13*	6.80
3½"	90	230	28.6	139.7	184.2	8 × 22.2	8.20	7.70	—	8.08*	7.76*	9.50
4"	100	255	30.2	157.2	200.0	8 × 22.2	11.3	10.1	—	10.5*	10.2*	12.0
5"	125	280	33.4	185.7	235.0	8 × 22.2	15.1	12.6	—	13.3*	12.9*	16.0

NPS	DN	O OD	tf thk	R RF dia	W PCD	Holes no. × dia	Weld neck kg	Slip-on kg	Socket weld kg	Threaded kg	Lap joint kg	Blind kg
6"	150	320	35.0	215.9	269.9	12 × 22.2	19.7	16.0	—	17.4*	16.8*	21.2
8"	200	380	39.7	269.9	330.2	12 × 25.4	30.5	24.5	—	26.0*	25.2*	34.6
10"	250	445	46.1	323.8	387.4	16 × 28.6	43.7	34.2	—	37.3*	40.6*	55.3
12"	300	520	49.3	381.0	450.8	16 × 31.8	64.4	51.3	—	53.7*	58.1*	78.9
14"	350	585	52.4	412.8	514.4	20 × 31.8	88.3	72.1	—	75.2*	84.2*	107
16"	400	650	55.6	469.9	571.5	20 × 34.9	113	90.4	—	96.2*	109*	139
18"	450	710	58.8	533.4	628.6	24 × 34.9	138	109	—	116*	132*	177
20"	500	775	62.0	584.2	685.8	24 × 34.9	167	136	—	145*	164*	223
24"	600	915	68.3	692.2	812.8	24 × 41.3	235	204	—	218*	245*	342

ASME B16.5 Class 600 — dimensions (mm) and weight per flange (kg)

NPS	DN	O OD	tf thk	R RF dia	W PCD	Holes no. × dia	Weld neck kg	Slip-on kg	Socket weld kg	Threaded kg	Lap joint kg	Blind kg
½"	15	95	14.3	34.9	66.7	4 × 15.9	0.90	0.90	0.82*	0.80*	0.75*	0.80*
¾"	20	115	15.9	42.9	82.6	4 × 19.1	1.80	1.40	1.33*	1.30*	1.24*	1.40
1"	25	125	17.5	50.8	88.9	4 × 19.1	1.80	1.80	1.73*	1.69*	1.60*	1.80
1¼"	32	135	20.7	63.5	98.4	4 × 19.1	2.70	2.30	2.35*	2.28*	2.16*	2.30
1½"	40	155	22.3	73.0	114.3	4 × 22.2	3.60	3.20	3.30*	3.20*	3.05*	3.60
2"	50	165	25.4	92.1	127.0	8 × 19.1	5.40	4.10	4.10*	3.95*	3.75*	4.50
2½"	65	190	28.6	104.8	149.2	8 × 22.2	8.10	5.90	6.00*	5.70*	5.43*	6.80
3"	80	210	31.8	127.0	168.3	8 × 22.2	10.4	7.30	8.13*	7.68*	7.31*	9.10
3½"	90	230	35.0	139.7	184.2	8 × 25.4	11.8	9.50	—	9.72*	9.28*	13.2
4"	100	275	38.1	157.2	215.9	8 × 25.4	19.0	16.8	—	15.9*	15.4*	18.6
5"	125	330	44.5	185.7	266.7	8 × 28.6	31.0	29.0	—	26.2*	25.5*	31.0
6"	150	355	47.7	215.9	292.1	12 × 28.6	37.0	36.0	—	30.8*	29.9*	39.0
8"	200	420	55.6	269.9	349.2	12 × 31.8	52.0	52.0	—	46.9*	45.5*	63.0
10"	250	510	63.5	323.8	431.8	16 × 34.9	86.0	77.0	—	76.4*	80.6*	104
12"	300	560	66.7	381.0	489.0	20 × 34.9	102	97.0	—	91.0*	96.4*	134
14"	350	605	69.9	412.8	527.0	20 × 38.1	130*	111	—	107*	116*	166
16"	400	685	76.2	469.9	603.2	20 × 41.3	179*	157	—	152*	164*	231
18"	450	745	82.6	533.4	654.0	20 × 44.5	217*	184*	—	188*	201*	293
20"	500	815	88.9	584.2	723.9	24 × 44.5	271*	235*	—	239*	258*	376
24"	600	940	101.6	692.2	838.2	24 × 50.8	377*	331*	—	337*	366*	565

ASME B16.5 Class 900 — dimensions (mm) and weight per flange (kg)

NPS	DN	O OD	tf thk	R RF dia	W PCD	Holes no. × dia	Weld neck kg	Slip-on kg	Socket weld kg	Threaded kg	Lap joint kg	Blind kg
½"	15	120	22.3	34.9	82.6	4 × 22.2	1.96*	1.80	1.87*	1.85*	1.79*	1.80
¾"	20	130	25.4	42.9	88.9	4 × 22.2	2.69*	2.30	2.53*	2.50*	2.41*	2.70

NPS	DN	O OD	tf thk	R RF dia	W PCD	Holes no. × dia	Weld neck kg	Slip-on kg	Socket weld kg	Threaded kg	Lap joint kg	Blind kg
1"	25	150	28.6	50.8	101.6	4 × 25.4	4.10	3.40	3.79*	3.72*	3.60*	3.70
1¼"	32	160	28.6	63.5	111.1	4 × 25.4	4.50	4.30	4.37*	4.28*	4.12*	4.10
1½"	40	180	31.8	73.0	123.8	4 × 28.6	6.40	5.50	6.05*	5.93*	5.74*	5.90
2"	50	215	38.1	92.1	165.1	8 × 25.4	11.3	10.0	10.6*	10.4*	10.1*	10.1
2½"	65	245	41.3	104.8	190.5	8 × 28.6	16.3	16.3	15.1*	14.7*	14.3*	15.9
3"	80	240	38.1	127.0	190.5	8 × 25.4	13.6	12.0*	—	12.3*	11.9*	13.2
4"	100	290	44.5	157.2	235.0	8 × 31.8	24.0	24.0	—	20.8*	20.2*	24.0
5"	125	350	50.8	185.7	279.4	8 × 34.9	39.0	38.0	—	34.3*	33.4*	39.0
6"	150	380	55.6	215.9	317.5	12 × 31.8	50.0	50.0	—	43.7*	42.5*	52.0
8"	200	470	63.5	269.9	393.7	12 × 38.1	84.0	78.0	—	75.3*	76.2*	90.0
10"	250	545	69.9	323.8	469.9	16 × 38.1	121	111	—	107*	111*	132
12"	300	610	79.4	381.0	533.4	20 × 38.1	167*	148	—	142*	149*	188
14"	350	640	85.8	412.8	558.8	20 × 41.3	190*	181	—	162*	170*	235
16"	400	705	88.9	469.9	616.0	20 × 44.5	229*	200	—	197*	210*	276
18"	450	785	101.6	533.4	685.8	20 × 50.8	307*	282	—	273*	292*	391
20"	500	855	108.0	584.2	749.3	20 × 54.0	381*	344	—	336*	367*	493
24"	600	1040	139.7	692.2	901.7	20 × 66.7	700*	651	—	642*	702*	932

ASME B16.5 Class 1500 — dimensions (mm) and weight per flange (kg)

NPS	DN	O OD	tf thk	R RF dia	W PCD	Holes no. × dia	Weld neck kg	Slip-on kg	Socket weld kg	Threaded kg	Lap joint kg	Blind kg
½"	15	120	22.3	34.9	82.6	4 × 22.2	1.96*	1.80*	1.87*	1.85*	1.79*	1.80
¾"	20	130	25.4	42.9	88.9	4 × 22.2	2.69*	2.43*	2.53*	2.50*	2.41*	2.70
1"	25	150	28.6	50.8	101.6	4 × 25.4	4.10	3.63*	3.79*	3.72*	3.60*	3.70
1¼"	32	160	28.6	63.5	111.1	4 × 25.4	4.50	4.16*	4.37*	4.28*	4.12*	4.10
1½"	40	180	31.8	73.0	123.8	4 × 28.6	6.40	5.79*	6.05*	5.93*	5.74*	5.90
2"	50	215	38.1	92.1	165.1	8 × 25.4	11.3	10.2*	10.6*	10.4*	10.1*	10.1
2½"	65	245	41.3	104.8	190.5	8 × 28.6	16.3	14.4*	15.1*	14.7*	14.3*	15.9
3"	80	265	47.7	127.0	203.2	8 × 31.8	21.8	18.4*	—	18.9*	18.3*	21.8
4"	100	310	54.0	157.2	241.3	8 × 34.9	33.1	28.7*	—	29.4*	28.5*	33.0
5"	125	375	73.1	185.7	292.1	8 × 41.3	59.9	54.5*	—	55.5*	54.2*	64.0
6"	150	395	82.6	215.9	317.5	12 × 38.1	74.8	64.6*	—	65.8*	64.2*	75.0
8"	200	485	92.1	269.9	393.7	12 × 44.5	125	109*	—	111*	109*	136
10"	250	585	108.0	323.8	482.6	12 × 50.8	206	184*	—	187*	190*	232
12"	300	675	123.9	381.0	571.5	16 × 54.0	313	278*	—	281*	298*	314
14"	350	750	133.4	412.8	635.0	16 × 60.3	426	—	—	—	400*	443
16"	400	825	146.1	469.9	704.8	16 × 66.7	567	—	—	—	513*	591
18"	450	915	162.0	533.4	774.7	16 × 73.0	737	—	—	—	668*	795
20"	500	985	177.8	584.2	831.8	16 × 79.4	930	—	—	—	805*	1022

NPS	DN	O OD	tf thk	R RF dia	W PCD	Holes no. x dia	Weld neck kg	Slip-on kg	Socket weld kg	Threaded kg	Lap joint kg	Blind kg
24"	600	1170	203.2	692.2	990.6	16 × 92.1	1508	—	—	—	1287*	1648

ASME B16.5 Class 2500 — dimensions (mm) and weight per flange (kg)

NPS	DN	O OD	tf thk	R RF dia	W PCD	Holes no. x dia	Weld neck kg	Slip-on kg	Socket weld kg	Threaded kg	Lap joint kg	Blind kg
½"	15	135	30.2	34.9	88.9	4 × 22.2	3.60	—	—	3.24*	3.16*	3.20
¾"	20	140	31.8	42.9	95.2	4 × 22.2	4.10	—	—	3.71*	3.60*	3.71*
1"	25	160	35.0	50.8	108.0	4 × 25.4	5.90	—	—	5.26*	5.12*	5.00
1¼"	32	185	38.1	63.5	130.2	4 × 28.6	9.10	—	—	7.68*	7.49*	7.80
1½"	40	205	44.5	73.0	146.0	4 × 31.8	12.7	—	—	10.9*	10.6*	10.5
2"	50	235	50.9	92.1	171.4	8 × 28.6	19.1	—	—	15.8*	15.5*	18.0
2½"	65	265	57.2	104.8	196.8	8 × 31.8	23.6	—	—	22.5*	22.0*	25.5
3"	80	305	66.7	127.0	228.6	8 × 34.9	42.6	—	—	34.7*	34.0*	39.0
4"	100	355	76.2	157.2	273.0	8 × 41.3	66.2	—	—	52.7*	51.7*	61.5
5"	125	420	92.1	185.7	323.8	8 × 47.6	111	—	—	88.6*	87.1*	102
6"	150	485	108.0	215.9	368.3	8 × 54.0	171	—	—	137*	135*	157
8"	200	550	127.0	269.9	438.2	12 × 54.0	261	—	—	197*	194*	241
10"	250	675	165.1	323.8	539.8	12 × 66.7	484	—	—	379*	374*	470
12"	300	760	184.2	381.0	619.1	12 × 73.0	729	—	—	530*	523*	619*

Large-diameter and orifice flanges — ASME B16.47, MSS SP-44, ASME B16.36

Weld neck and blind flanges NPS 26"–60" (Series A and B), MSS SP-44 pipeline flanges and ASME B16.36 orifice flanges. All weights calculated (*), weld necks with standard-weight bore.

ASME B16.47 Series A Class 150 — dimensions (mm) and weight (kg)

NPS	DN	O OD	tf WN	tf blind	W PCD	Holes no. × dia	Weld neck kg	Blind kg
26"	650	870	66.7	66.7	806.4	24 × 34.9	150*	314*
28"	700	925	69.9	69.9	863.6	28 × 34.9	170*	372*
30"	750	985	73.1	73.1	914.4	28 × 34.9	202*	443*
32"	800	1060	79.4	79.4	977.9	28 × 41.3	251*	553*
34"	850	1110	81.0	81.0	1028.7	32 × 41.3	268*	617*
36"	900	1170	88.9	88.9	1085.8	32 × 41.3	321*	756*
38"	950	1240	85.8	85.8	1149.4	32 × 41.3	358*	824*
40"	1000	1290	88.9	88.9	1200.2	36 × 41.3	384*	922*
42"	1050	1345	95.3	95.3	1257.3	36 × 41.3	438*	1078*
44"	1100	1405	100.1	100.1	1314.4	40 × 41.3	492*	1235*
46"	1150	1455	101.6	101.6	1365.2	40 × 41.3	525*	1348*
48"	1200	1510	106.4	106.4	1422.4	44 × 41.3	577*	1519*
50"	1250	1570	109.6	109.6	1479.6	44 × 47.6	627*	1678*
52"	1300	1625	114.3	114.3	1536.7	44 × 47.6	688*	1880*
54"	1350	1685	119.1	119.1	1593.8	44 × 47.6	766*	2112*
56"	1400	1745	122.3	122.3	1651.0	48 × 47.6	842*	2325*
58"	1450	1805	127.0	127.0	1708.2	48 × 47.6	931*	2589*
60"	1500	1855	130.2	130.2	1759.0	52 × 47.6	977*	2801*

ASME B16.47 Series A Class 300 — dimensions (mm) and weight (kg)

NPS	DN	O OD	tf WN	tf blind	W PCD	Holes no. × dia	Weld neck kg	Blind kg
26"	650	970	77.8	82.6	876.3	28 × 44.5	286*	473*
28"	700	1035	84.2	88.9	939.8	28 × 44.5	347*	585*
30"	750	1090	90.5	93.7	997.0	28 × 47.6	398*	682*
32"	800	1150	96.9	98.5	1054.1	28 × 50.8	462*	797*
34"	850	1205	100.1	103.2	1104.9	28 × 50.8	517*	922*
36"	900	1270	103.2	109.6	1168.4	32 × 54.0	577*	1078*
38"	950	1170	106.4	106.4	1092.2	32 × 41.3	321*	905*
40"	1000	1240	112.8	112.8	1155.7	32 × 44.5	390*	1077*
42"	1050	1290	117.5	117.5	1206.5	32 × 44.5	424*	1218*
44"	1100	1355	122.3	122.3	1263.6	32 × 47.6	485*	1396*
46"	1150	1415	127.0	127.0	1320.8	28 × 50.8	552*	1587*
48"	1200	1465	131.8	131.8	1371.6	32 × 50.8	587*	1761*
50"	1250	1530	138.2	138.2	1428.8	32 × 54.0	670*	2011*

NPS	DN	O OD	tf WN	tf blind	W PCD	Holes no. x dia	Weld neck kg	Blind kg
52"	1300	1580	142.9	142.9	1479.6	32 × 54.0	718*	2223*
54"	1350	1660	150.9	150.9	1549.4	28 × 60.3	878*	2592*
56"	1400	1710	152.4	152.4	1600.2	28 × 60.3	924*	2784*
58"	1450	1760	157.2	157.2	1651.0	32 × 60.3	968*	3034*
60"	1500	1810	162.0	162.0	1701.8	32 × 60.3	1028*	3314*

ASME B16.47 Series A Class 600 — dimensions (mm) and weight (kg)

NPS	DN	O OD	tf WN	tf blind	W PCD	Holes no. x dia	Weld neck kg	Blind kg
26"	650	1015	108.0	125.5	914.4	28 × 50.8	452*	778*
28"	700	1075	111.2	131.8	965.2	28 × 54.0	512*	916*
30"	750	1130	114.3	139.7	1022.4	28 × 54.0	578*	1081*
32"	800	1195	117.5	147.7	1079.5	28 × 60.3	649*	1268*
34"	850	1245	120.7	154.0	1130.3	28 × 60.3	711*	1444*
36"	900	1315	123.9	162.0	1193.8	28 × 66.7	806*	1683*
38"	950	1270	152.4	155.0	1162.0	28 × 60.3	678*	1516*
40"	1000	1320	158.8	162.0	1212.8	32 × 60.3	727*	1705*
42"	1050	1405	168.3	171.5	1282.7	28 × 66.7	907*	2053*
44"	1100	1455	173.1	177.8	1333.5	32 × 66.7	960*	2273*
46"	1150	1510	179.4	185.8	1390.6	32 × 66.7	1059*	2571*
48"	1200	1595	189.0	195.3	1460.5	32 × 73.0	1266*	3001*
50"	1250	1670	196.9	203.2	1524.0	28 × 79.4	1473*	3436*
52"	1300	1720	203.2	209.6	1574.8	32 × 79.4	1542*	3740*
54"	1350	1780	209.6	217.5	1632.0	32 × 79.4	1704*	4177*
56"	1400	1855	217.4	225.5	1695.4	32 × 85.7	1917*	4680*
58"	1450	1905	222.3	231.8	1746.2	32 × 85.7	2029*	5093*
60"	1500	1995	233.4	242.9	1822.4	28 × 92.1	2447*	5885*

ASME B16.47 Series B Class 150 — dimensions (mm) and weight (kg)

NPS	DN	O OD	tf WN	tf blind	W PCD	Holes no. x dia	Weld neck kg	Blind kg
26"	650	785	39.8	43.0	744.5	36 × 22.2	61.0*	167*
28"	700	835	43.0	46.2	795.3	40 × 22.2	70.1*	203*
30"	750	885	43.0	49.3	846.1	44 × 22.2	75.8*	243*
32"	800	940	44.6	52.5	900.1	48 × 22.2	87.8*	292*
34"	850	1005	47.7	55.7	957.3	40 × 25.4	107*	355*
36"	900	1055	50.9	57.3	1009.6	44 × 25.4	120*	402*
38"	950	1125	52.5	62.0	1070.0	40 × 28.6	144*	495*
40"	1000	1175	54.1	65.2	1120.8	44 × 28.6	156*	568*

NPS	DN	O OD	tf WN	tf blind	W PCD	Holes no. × dia	Weld neck kg	Blind kg
42"	1050	1225	57.3	66.8	1171.6	48 × 28.6	171*	632*
44"	1100	1275	58.9	70.0	1222.4	52 × 28.6	182*	717*
46"	1150	1340	60.4	73.1	1284.3	40 × 31.8	215*	831*
48"	1200	1390	63.6	76.3	1335.1	44 × 31.8	233*	932*
50"	1250	1445	66.8	79.5	1385.9	48 × 31.8	256*	1050*
52"	1300	1495	68.4	82.7	1436.7	52 × 31.8	271*	1168*
54"	1350	1550	70.0	85.8	1492.2	56 × 31.8	295*	1303*
56"	1400	1600	71.6	89.0	1543.0	60 × 31.8	312*	1440*
58"	1450	1675	73.1	91.9	1611.3	48 × 34.9	373*	1634*
60"	1500	1725	74.7	95.4	1662.1	52 × 34.9	395*	1799*

ASME B16.47 Series B Class 300 — dimensions (mm) and weight (kg)

NPS	DN	O OD	tf WN	tf blind	W PCD	Holes no. × dia	Weld neck kg	Blind kg
26"	650	865	87.4	87.4	803.3	32 × 34.9	185*	401*
28"	700	920	87.4	87.4	857.2	36 × 34.9	203*	454*
30"	750	990	92.1	92.1	920.8	36 × 38.1	247*	553*
32"	800	1055	101.6	101.6	977.9	32 × 41.3	306*	696*
34"	850	1110	101.6	101.6	1031.9	36 × 41.3	330*	770*
36"	900	1170	101.6	101.6	1089.0	32 × 44.5	365*	859*
38"	950	1220	109.6	109.6	1139.8	36 × 44.5	406*	1005*
40"	1000	1275	114.3	114.3	1190.6	40 × 44.5	448*	1144*
42"	1050	1335	117.5	117.5	1244.6	36 × 47.6	498*	1294*
44"	1100	1385	125.5	125.5	1295.4	40 × 47.6	548*	1485*
46"	1150	1460	127.0	128.6	1365.2	36 × 50.8	644*	1697*
48"	1200	1510	127.0	133.4	1416.0	40 × 50.8	661*	1880*
50"	1250	1560	136.6	138.2	1466.8	44 × 50.8	727*	2076*
52"	1300	1615	141.3	142.6	1517.6	48 × 50.8	787*	2293*
54"	1350	1675	135.0	147.7	1578.0	48 × 50.8	817*	2564*
56"	1400	1765	152.4	155.4	1651.0	36 × 60.3	1093*	3002*
58"	1450	1825	152.4	160.4	1712.9	40 × 60.3	1161*	3307*
60"	1500	1880	149.3	165.1	1763.7	40 × 60.3	1196*	3622*

MSS SP-44 Class 150 — dimensions (mm, converted from inches) and weight (kg)

NPS	O OD	tf thk	W PCD	Holes no. × dia	Weld neck kg	Blind kg
12"	483	31.8	431.8	12 × 25.4	41.1*	46.3*
14"	533	35.1	476.2	12 × 28.4	54.3*	62.4*
16"	597	36.6	539.8	16 × 28.4	67.2*	81.3*

NPS	O OD	tf thk	W PCD	Holes no. x dia	Weld neck kg	Blind kg
18"	635	39.6	577.9	16 × 31.8	75.7*	99.3*
20"	698	42.9	635.0	20 × 31.8	93.6*	130*
22"	749	46.0	692.1	20 × 35.1	107*	160*
24"	813	47.8	749.3	20 × 35.1	127*	197*
26"	870	68.3	806.4	24 × 35.1	152*	322*
28"	927	71.4	863.6	28 × 35.1	173*	381*
30"	984	74.7	914.4	28 × 35.1	202*	452*
32"	1060	81.0	977.9	28 × 41.1	254*	565*
34"	1111	82.5	1028.7	32 × 41.1	271*	631*
36"	1168	90.4	1085.8	32 × 41.1	321*	767*
38"	1238	87.4	1149.3	32 × 41.1	358*	837*
40"	1289	90.4	1200.1	36 × 41.1	386*	937*
42"	1346	96.8	1257.3	36 × 41.1	442*	1097*
44"	1403	101.6	1314.4	40 × 41.1	492*	1251*
46"	1454	103.1	1365.2	40 × 41.1	526*	1366*
48"	1511	107.9	1422.4	44 × 41.1	582*	1544*
50"	1568	111.3	1479.5	44 × 47.8	625*	1699*
52"	1626	115.8	1536.7	44 × 47.8	692*	1906*
54"	1683	120.6	1593.8	44 × 47.8	764*	2133*
58"	1803	128.5	1708.1	48 × 47.8	930*	2615*
60"	1854	131.8	1758.9	52 × 47.8	978*	2833*

MSS SP-44 Class 300 — dimensions (mm, converted from inches) and weight (kg)

NPS	O OD	tf thk	W PCD	Holes no. x dia	Weld neck kg	Blind kg
12"	521	50.8	450.8	16 × 31.8	68.4*	83.9*
14"	584	53.8	514.4	20 × 31.8	95.3*	112*
16"	648	57.1	571.5	20 × 35.1	118*	146*
18"	711	60.5	628.6	24 × 35.1	146*	186*
20"	775	63.5	685.8	24 × 35.1	175*	235*
22"	838	66.5	742.9	24 × 41.1	204*	285*
24"	914	69.8	812.8	24 × 41.1	254*	360*
26"	972	79.2	876.3	28 × 44.4	290*	456*
28"	1035	85.9	939.8	28 × 44.4	351*	565*
30"	1092	91.9	996.9	28 × 47.8	404*	672*
32"	1149	98.6	1054.1	28 × 50.8	465*	797*
34"	1206	101.6	1104.9	28 × 50.8	523*	910*
36"	1270	104.6	1168.4	32 × 53.8	581*	1030*
38"	1168	107.9	1092.2	32 × 41.1	321*	916*

NPS	O OD	tf thk	W PCD	Holes no. x dia	Weld neck kg	Blind kg
40"	1238	114.3	1155.7	32 × 44.4	389*	1088*
42"	1289	119.1	1206.5	32 × 44.4	425*	1233*
44"	1353	124.0	1263.6	32 × 47.8	483*	1409*
46"	1416	128.5	1320.8	28 × 50.8	558*	1608*
48"	1467	133.3	1371.6	32 × 50.8	595*	1786*
50"	1530	139.7	1428.8	32 × 53.8	674*	2034*
52"	1581	144.5	1479.5	32 × 53.8	725*	2252*
54"	1657	152.4	1549.4	28 × 60.5	872*	2609*
56"	1708	153.9	1600.2	28 × 60.5	921*	2805*
58"	1759	158.8	1651.0	32 × 60.5	968*	3059*
60"	1810	163.6	1701.8	32 × 60.5	1032*	3344*

MSS SP-44 Class 400 — dimensions (mm, converted from inches) and weight (kg)

NPS	O OD	tf thk	W PCD	Holes no. x dia	Weld neck kg	Blind kg
12"	521	57.1	450.8	16 × 35.1	73.8*	93.0*
14"	584	60.5	514.4	20 × 35.1	102*	124*
16"	648	63.5	571.5	20 × 38.1	126*	161*
18"	711	66.5	628.6	24 × 38.1	155*	203*
20"	775	69.8	685.8	24 × 41.1	184*	253*
22"	838	73.2	742.9	24 × 44.4	216*	310*
24"	914	76.2	812.8	24 × 47.8	266*	385*
26"	972	88.9	876.3	28 × 47.8	317*	506*
28"	1035	95.2	939.8	28 × 50.8	378*	616*
30"	1092	101.6	996.9	28 × 53.8	435*	731*
32"	1149	107.9	1054.1	28 × 53.8	502*	866*
34"	1206	111.3	1104.9	28 × 53.8	564*	990*
36"	1270	114.3	1168.4	32 × 53.8	634*	1125*
38"	1206	124.0	1117.6	32 × 47.8	430*	1109*
40"	1270	130.0	1174.8	32 × 50.8	495*	1288*
42"	1321	133.3	1225.5	32 × 50.8	537*	1435*
44"	1384	139.7	1282.7	32 × 53.8	612*	1649*
46"	1441	146.0	1339.8	36 × 53.8	678*	1866*
48"	1511	152.4	1403.3	28 × 60.5	803*	2152*
50"	1568	157.2	1460.5	32 × 60.5	874*	2385*
52"	1619	162.1	1511.3	32 × 60.5	938*	2628*
54"	1702	169.9	1581.1	28 × 66.5	1135*	3049*
56"	1753	174.8	1631.9	32 × 66.5	1196*	3315*
58"	1803	177.8	1682.8	32 × 66.5	1264*	3580*

NPS	O OD	tf thk	W PCD	Holes no. x dia	Weld neck kg	Blind kg
60"	1886	185.7	1752.6	32 × 73.2	1478*	4069*

MSS SP-44 Class 600 — dimensions (mm, converted from inches) and weight (kg)

NPS	O OD	tf thk	W PCD	Holes no. x dia	Weld neck kg	Blind kg
12"	559	66.5	488.9	20 × 35.1	106*	124*
14"	603	69.8	527.0	20 × 38.1	126*	151*
16"	686	76.2	603.2	20 × 41.1	177*	215*
18"	743	82.5	654.0	20 × 44.4	211*	274*
20"	813	88.9	723.9	24 × 44.4	264*	353*
22"	870	95.2	777.7	24 × 47.8	309*	433*
24"	940	101.6	838.2	24 × 50.8	372*	540*
26"	1016	107.9	914.4	28 × 50.8	446*	671*
28"	1073	111.3	965.2	28 × 53.8	502*	771*
30"	1130	114.3	1022.3	28 × 53.8	570*	885*
32"	1194	117.3	1079.5	28 × 60.5	637*	1005*
34"	1245	120.6	1130.3	28 × 60.5	699*	1130*
36"	1314	124.0	1193.8	28 × 66.5	794*	1287*
38"	1270	152.4	1162.0	28 × 60.5	668*	1490*
40"	1321	158.8	1212.8	32 × 60.5	717*	1673*
42"	1403	168.1	1282.7	28 × 66.5	890*	2009*
44"	1454	173.0	1333.5	32 × 66.5	944*	2209*
46"	1511	179.3	1390.6	32 × 66.5	1050*	2487*
48"	1594	189.0	1460.5	32 × 73.2	1246*	2898*
50"	1670	196.8	1524.0	28 × 79.2	1458*	3330*
52"	1721	203.2	1574.8	32 × 79.2	1530*	3631*
54"	1778	209.5	1631.9	32 × 79.2	1677*	4016*
56"	1854	217.4	1695.4	32 × 85.9	1893*	4507*
58"	1905	222.2	1746.2	32 × 85.9	2007*	4882*
60"	1994	233.4	1822.4	28 × 91.9	2420*	5650*

MSS SP-44 Class 900 — dimensions (mm, converted from inches) and weight (kg)

NPS	O OD	tf thk	W PCD	Holes no. x dia	Weld neck kg	Blind kg
12"	610	79.2	533.4	20 × 38.1	164*	176*
14"	641	85.9	558.8	20 × 41.1	188*	210*
18"	787	101.6	685.8	20 × 50.8	305*	374*
20"	857	107.9	749.3	20 × 53.8	380*	473*
24"	1041	139.7	901.7	20 × 66.5	698*	901*

NPS	O OD	tf thk	W PCD	Holes no. × dia	Weld neck kg	Blind kg
26"	1086	139.7	952.5	20 × 73.2	696*	970*
28"	1168	142.7	1022.3	20 × 79.2	821*	1145*
30"	1232	149.4	1085.8	20 × 79.2	949*	1346*
32"	1314	158.8	1155.7	20 × 85.9	1138*	1624*
34"	1397	165.1	1225.5	20 × 91.9	1337*	1905*
36"	1460	171.4	1289.0	20 × 91.9	1510*	2180*
38"	1460	190.5	1289.0	20 × 91.9	1470*	2422*
40"	1511	196.8	1339.8	24 × 91.9	1553*	2652*
42"	1562	206.2	1390.6	24 × 91.9	1694*	2987*
44"	1648	214.4	1463.5	24 × 98.6	1974*	3445*
46"	1734	225.6	1536.7	24 × 104.6	2308*	4004*
48"	1784	233.4	1587.5	24 × 104.6	2481*	4414*

ASME B16.36 Class 300 orifice flange dimensions — weight (kg)

NPS	O OD	T thk	W PCD	Holes no. × dia	One flange kg	Pair with jackscrews kg
1"	125	36.6	81	4 × 19.1	3.63*	7.33*
1½"	155	36.6	84	4 × 22.2	5.57*	11.2*
2"	165	36.6	84	8 × 19.1	6.13*	12.4*
2½"	190	36.6	87	8 × 22.2	8.19*	16.5*
3"	210	36.6	87	8 × 22.2	10.0*	20.3*
4"	255	36.6	90	8 × 22.2	14.9*	30.1*
6"	320	36.6	98	12 × 22.2	22.8*	46.1*
8"	380	39.7	110	12 × 25.4	33.5*	67.6*
10"	445	46.1	116	16 × 28.6	48.4*	97.7*
12"	520	49.3	129	16 × 31.8	69.1*	139*
14"	585	52.4	141	20 × 31.8	96.0*	194*
16"	650	55.6	144	20 × 34.9	120*	243*
18"	710	58.8	157	24 × 34.9	146*	295*
20"	775	62.0	160	24 × 34.9	177*	357*
24"	915	68.3	167	24 × 41.3	256*	517*

ASME B16.36 Class 600 orifice flange dimensions — weight (kg)

NPS	O OD	T thk	W PCD	Holes no. × dia	One flange kg	Pair with jackscrews kg
1"	125	36.6	81	4 × 19.1	3.63*	7.33*
1½"	155	36.6	84	4 × 22.2	5.57*	11.2*
2"	165	36.6	84	8 × 19.1	6.13*	12.4*
2½"	190	36.6	87	8 × 22.2	8.19*	16.5*

NPS	O OD	T thk	W PCD	Holes no. x dia	One flange kg	Pair with jackscrews kg
3"	210	36.6	87	8 × 22.2	10.0*	20.3*
4"	275	38.1	102	8 × 25.4	18.5*	37.4*
6"	355	47.7	117	12 × 28.6	36.1*	73.0*
8"	420	55.6	133	12 × 31.8	55.6*	112*
10"	510	63.5	152	16 × 34.9	91.6*	185*
12"	560	66.7	156	20 × 34.9	109*	221*
14"	605	69.9	165	20 × 38.1	130*	262*
16"	685	76.2	178	20 × 41.3	179*	362*
18"	745	82.6	184	20 × 44.5	217*	438*
20"	815	88.9	190	24 × 44.5	271*	547*
24"	940	101.6	203	24 × 50.8	377*	762*

EN 1092-1 flanges — PN 6 to PN 100

Plate flanges (Type 01) and blind flanges (Type 05). Weights calculated (*), raised face not included.

EN 1092-1 PN 6 — dimensions (mm) and weight (kg)

Size	D OD	K PCD	Holes no. × dia	C plate	C blind	Plate Type 01 kg	Blind kg
10	75	50	4 × 11	12.0	12.0	0.37*	0.40*
15	80	55	4 × 11	12.0	12.0	0.42*	0.46*
20	90	65	4 × 11	14.0	14.0	0.62*	0.69*
25	100	75	4 × 11	14.0	14.0	0.75*	0.86*
32	120	90	4 × 14	16.0	14.0	1.21*	1.23*
40	130	100	4 × 14	16.0	14.0	1.41*	1.46*
50	140	110	4 × 14	16.0	14.0	1.55*	1.71*
65	160	130	4 × 14	16.0	14.0	1.95*	2.25*
80	190	150	4 × 18	18.0	16.0	3.10*	3.60*
100	210	170	4 × 18	18.0	16.0	3.43*	4.43*
125	240	200	8 × 18	20.0	18.0	4.54*	6.41*
150	265	225	8 × 18	20.0	18.0	5.02*	7.88*
200	320	280	8 × 18	22.0	20.0	7.28*	12.9*
250	375	335	12 × 18	24.0	22.0	9.54*	19.5*
300	440	395	12 × 22	24.0	22.0	12.7*	26.7*
350	490	445	12 × 22	26.0	22.0	18.0*	33.4*
400	540	495	16 × 22	28.0	22.0	21.3*	40.4*
450	595	550	16 × 22	30.0	24.0	26.4*	53.8*
500	645	600	20 × 22	30.0	24.0	28.5*	63.1*
600	755	705	20 × 26	32.0	30.0	37.8*	108*
700	860	810	24 × 26	—	40.0	—	187*
800	975	920	24 × 30	—	44.0	—	265*
900	1075	1020	24 × 30	—	48.0	—	352*
1000	1175	1120	28 × 30	—	52.0	—	456*
1200	1405	1340	32 × 33	—	60.0	—	753*
1400	1630	1560	36 × 36	—	68.0	—	1149*
1600	1830	1760	40 × 36	—	76.0	—	1622*
1800	2045	1970	44 × 39	—	84.0	—	2238*
2000	2265	2180	48 × 42	—	92.0	—	3005*
2200	2475	2390	52 × 42	—	—	—	—
2400	2685	2600	56 × 42	—	—	—	—
2600	2905	2810	60 × 48	—	—	—	—
2800	3115	3020	64 × 48	—	—	—	—
3000	3315	3220	68 × 48	—	—	—	—

Size	D OD	K PCD	Holes no. × dia	C plate	C blind	Plate Type 01 kg	Blind kg
3200	3525	3430	72 × 48	—	—	—	—
3400	3735	3640	76 × 48	—	—	—	—
3600	3970	3860	80 × 56	—	—	—	—

EN 1092-1 PN 10 — dimensions (mm) and weight (kg)

Size	D OD	K PCD	Holes no. × dia	C plate	C blind	Plate Type 01 kg	Blind kg
10	90	60	4 × 14	—	—	—	—
15	95	65	4 × 14	—	—	—	—
20	105	75	4 × 14	—	—	—	—
25	115	85	4 × 14	—	—	—	—
32	140	100	4 × 18	—	—	—	—
40	150	110	4 × 18	—	—	—	—
50	165	125	4 × 18	—	—	—	—
65	185	145	8 × 18	—	—	—	—
80	200	160	8 × 18	—	—	—	—
100	220	180	8 × 18	—	—	—	—
125	250	210	8 × 18	—	—	—	—
150	285	240	8 × 22	—	—	—	—
200	340	295	8 × 22	—	—	—	—
250	395	350	12 × 22	—	—	—	—
300	445	400	12 × 22	—	—	—	—
350	505	460	16 × 22	—	—	—	—
400	565	515	16 × 26	—	—	—	—
450	615	565	20 × 26	—	—	—	—
500	670	620	20 × 26	—	—	—	—
600	780	725	20 × 30	—	—	—	—

EN 1092-1 PN 16 — dimensions (mm) and weight (kg)

Size	D OD	K PCD	Holes no. × dia	C plate	C blind	Plate Type 01 kg	Blind kg
10	90	60	4 × 14	14.0	14.0	0.63*	0.66*
15	95	65	4 × 14	14.0	14.0	0.70*	0.75*
20	105	75	4 × 14	14.0	14.0	0.86*	0.93*
25	115	85	4 × 14	16.0	16.0	1.16*	1.29*
32	140	100	4 × 18	18.0	16.0	1.91*	1.90*
40	150	110	4 × 18	18.0	16.0	2.18*	2.20*
50	165	125	4 × 18	19.0	18.0	2.72*	3.02*
65	185	145	8 × 18	20.0	18.0	3.32*	3.69*

Size	D OD	K PCD	Holes no. × dia	C plate	C blind	Plate Type 01 kg	Blind kg
80	200	160	8 × 18	20.0	20.0	3.79*	4.84*
100	220	180	8 × 18	22.0	20.0	4.61*	5.93*
125	250	210	8 × 18	22.0	22.0	5.69*	8.53*
150	285	240	8 × 22	24.0	22.0	7.54*	11.0*
200	340	295	12 × 22	26.0	24.0	10.3*	17.1*
250	405	355	12 × 26	29.0	26.0	15.1*	26.2*
300	460	410	12 × 26	32.0	28.0	20.2*	36.9*
350	520	470	16 × 26	35.0	30.0	29.9*	50.4*
400	580	525	16 × 30	38.0	32.0	38.3*	66.7*
450	640	585	20 × 30	42.0	40.0	49.3*	101*
500	715	650	20 × 33	46.0	44.0	68.4*	139*
600	840	770	20 × 36	52.0	54.0	103*	238*

EN 1092-1 PN 25 — dimensions (mm) and weight (kg)

Size	D OD	K PCD	Holes no. × dia	C plate	C blind	Plate Type 01 kg	Blind kg
10	90	60	4 × 14	14.0	14.0	0.63*	0.66*
15	95	65	4 × 14	14.0	14.0	0.70*	0.75*
20	105	75	4 × 14	14.0	14.0	0.86*	0.93*
25	115	85	4 × 14	16.0	16.0	1.16*	1.29*
32	140	100	4 × 18	18.0	16.0	1.91*	1.90*
40	150	110	4 × 18	18.0	16.0	2.18*	2.20*
50	165	125	4 × 18	20.0	20.0	2.86*	3.36*
65	185	145	8 × 18	22.0	22.0	3.65*	4.51*
80	200	160	8 × 18	24.0	24.0	4.54*	5.81*
100	235	190	8 × 22	26.0	24.0	6.39*	7.98*
125	270	220	8 × 26	28.0	26.0	8.62*	11.4*
150	300	250	8 × 26	30.0	28.0	10.8*	15.3*
200	360	310	12 × 26	32.0	30.0	15.1*	23.6*
250	425	370	12 × 30	35.0	32.0	21.4*	35.2*
300	485	430	16 × 30	38.0	34.0	28.3*	48.6*
350	555	490	16 × 33	42.0	38.0	44.3*	71.5*
400	620	550	16 × 36	46.0	40.0	58.7*	94.2*
450	670	600	20 × 36	50.0	46.0	68.9*	126*
500	730	660	20 × 36	56.0	48.0	89.7*	158*
600	845	770	20 × 39	68.0	58.0	136*	257*

EN 1092-1 PN 40 — dimensions (mm) and weight (kg)

Size	D OD	K PCD	Holes no. × dia	C plate	C blind	Plate Type 01 kg	Blind kg
10	90	60	4 × 14	14.0	14.0	0.63*	0.66*
15	95	65	4 × 14	14.0	14.0	0.70*	0.75*
20	105	75	4 × 14	14.0	14.0	0.86*	0.93*
25	115	85	4 × 14	16.0	16.0	1.16*	1.29*
32	140	100	4 × 18	18.0	16.0	1.91*	1.90*
40	150	110	4 × 18	18.0	16.0	2.18*	2.20*
50	165	125	4 × 18	20.0	20.0	2.86*	3.36*
65	185	145	8 × 18	22.0	22.0	3.65*	4.51*
80	200	160	8 × 18	24.0	24.0	4.54*	5.81*
100	235	190	8 × 22	26.0	24.0	6.39*	7.98*
125	270	220	8 × 26	28.0	26.0	8.62*	11.4*
150	300	250	8 × 26	30.0	28.0	10.8*	15.3*
200	375	320	12 × 30	36.0	34.0	18.9*	28.6*
250	450	385	12 × 33	42.0	38.0	31.0*	46.6*
300	515	450	16 × 33	48.0	42.0	44.1*	67.4*
350	580	510	16 × 36	54.0	46.0	65.8*	94.0*
400	660	585	16 × 39	60.0	50.0	95.1*	133*
450	685	610	20 × 39	66.0	57.0	97.7*	162*
500	755	670	20 × 42	72.0	57.0	128*	197*
600	890	795	20 × 48	84.0	72.0	202*	348*

EN 1092-1 PN 63 — dimensions (mm) and weight (kg)

Size	D OD	K PCD	Holes no. × dia	C plate	C blind	Plate Type 01 kg	Blind kg
10	100	70	4 × 14	20.0	20.0	1.15*	1.19*
15	105	75	4 × 14	20.0	20.0	1.26*	1.33*
20	130	90	4 × 18	22.0	22.0	2.11*	2.22*
25	140	100	4 × 18	24.0	24.0	2.65*	2.84*
32	155	110	4 × 22	24.0	24.0	3.13*	3.43*
40	170	125	4 × 22	26.0	26.0	4.12*	4.54*
50	180	135	4 × 22	26.0	26.0	4.48*	5.13*
65	205	160	8 × 22	26.0	26.0	5.41*	6.42*
80	215	170	8 × 22	30.0	28.0	6.64*	7.68*
100	250	200	8 × 26	32.0	30.0	9.05*	11.1*
125	295	240	8 × 30	34.0	34.0	13.2*	17.6*
150	345	280	8 × 33	36.0	36.0	19.0*	25.7*
200	415	345	12 × 36	46.0	42.0	32.2*	42.6*
250	470	400	12 × 36	54.0	46.0	45.4*	61.2*

Size	D OD	K PCD	Holes no. x dia	C plate	C blind	Plate Type 01 kg	Blind kg
300	530	460	16 × 36	62.0	52.0	61.9*	87.6*
350	600	525	16 × 39	72.0	56.0	97.0*	122*
400	670	585	16 × 42	78.0	60.0	128*	163*

EN 1092-1 PN 100 — dimensions (mm) and weight (kg)

Size	D OD	K PCD	Holes no. x dia	C plate	C blind	Plate Type 01 kg	Blind kg
10	100	70	4 × 14	20.0	20.0	1.15*	1.19*
15	105	75	4 × 14	20.0	20.0	1.26*	1.33*
20	130	90	4 × 18	22.0	22.0	2.11*	2.22*
25	140	100	4 × 18	24.0	24.0	2.65*	2.84*
32	155	110	4 × 22	24.0	24.0	3.13*	3.43*
40	170	125	4 × 22	26.0	26.0	4.12*	4.54*
50	195	145	4 × 26	28.0	28.0	5.71*	6.40*
65	220	170	8 × 26	30.0	30.0	7.18*	8.35*
80	230	180	8 × 26	34.0	32.0	8.65*	9.84*
100	265	210	8 × 30	36.0	36.0	11.6*	14.7*
125	315	250	8 × 33	42.0	40.0	19.2*	23.4*
150	355	290	12 × 33	48.0	44.0	26.1*	32.2*
200	430	360	12 × 36	60.0	52.0	46.9*	57.0*
250	505	430	12 × 39	72.0	60.0	75.2*	92.0*
300	585	500	16 × 42	84.0	68.0	113*	138*
350	655	560	16 × 48	95.0	74.0	163*	188*
400	715	620	16 × 48	106.0	—	211*	—
500	870	760	20 × 56	128.0	—	360*	—

IS 6392 flanges — PN 2.5 to PN 100

Indian Standard plate (slip-on) and blind flanges. Weights calculated (*).

IS 6392 PN 2.5 — dimensions (mm) and weight (kg)

Size	D OD	K PCD	Holes no. × dia	C plate	C blind	Plate (slip-on) kg	Blind kg
1200	1375	1320	32 × 30	36.0	—	86.2*	—
1400	1575	1520	36 × 30	42.0	—	116*	—
1600	1790	1730	40 × 30	46.0	—	160*	—
1800	1990	1930	44 × 30	52.0	—	203*	—
2000	2190	2130	48 × 30	58.0	—	250*	—

IS 6392 PN 6 — dimensions (mm) and weight (kg)

Size	D OD	K PCD	Holes no. × dia	C plate	C blind	Plate (slip-on) kg	Blind kg
10	75	50	4 × 11	12.0	12.0	0.37*	0.40*
15	80	55	4 × 11	12.0	12.0	0.42*	0.46*
20	90	65	4 × 11	14.0	—	0.62*	—
25	100	75	4 × 11	14.0	—	0.75*	—
32	120	90	4 × 14	16.0	14.0	1.21*	1.23*
40	130	100	4 × 14	16.0	14.0	1.41*	1.46*
50	140	110	4 × 14	16.0	14.0	1.55*	1.71*
65	160	130	4 × 14	16.0	14.0	1.95*	2.25*
80	190	150	4 × 18	18.0	16.0	3.10*	3.60*
100	210	170	4 × 18	18.0	16.0	3.43*	4.43*
125	240	200	8 × 18	20.0	18.0	4.54*	6.41*
150	265	225	8 × 18	20.0	18.0	5.02*	7.88*
200	320	280	8 × 18	22.0	20.0	7.28*	12.9*
250	375	335	12 × 18	24.0	22.0	9.54*	19.5*
300	440	395	12 × 22	24.0	22.0	12.7*	26.7*
350	493	445	12 × 22	26.0	22.0	18.5*	33.8*
400	540	495	16 × 22	28.0	22.0	21.3*	40.4*
500	645	600	20 × 22	30.0	24.0	28.5*	63.1*
600	755	705	20 × 26	32.0	—	37.9*	—
700	860	810	24 × 26	34.0	—	47.4*	—
800	975	920	24 × 30	38.0	—	65.4*	—
900	1075	1020	24 × 30	42.0	—	80.2*	—
1000	1175	1120	28 × 30	46.0	—	95.3*	—
1200	1405	1340	32 × 33	56.0	—	162*	—
1400	1630	1560	36 × 36	66.0	—	252*	—
1600	1830	1760	40 × 36	74.0	—	320*	—

Size	D OD	K PCD	Holes no. × dia	C plate	C blind	Plate (slip-on) kg	Blind kg
1800	2045	1970	44 × 39	84.0	—	434*	—
2000	2265	2180	48 × 42	92.0	—	571*	—

IS 6392 PN 10 — dimensions (mm) and weight (kg)

Size	D OD	K PCD	Holes no. × dia	C plate	C blind	Plate (slip-on) kg	Blind kg
200	340	295	8 × 22	24.0	24.0	9.80*	17.4*
250	395	350	12 × 22	26.0	26.0	12.6*	25.3*
300	445	400	12 × 22	26.0	26.0	14.5*	32.4*
350	505	460	16 × 22	28.0	26.0	21.7*	41.6*
400	565	515	16 × 26	32.0	26.0	29.4*	51.9*
500	670	620	20 × 26	38.0	28.0	43.2*	78.9*
600	780	725	20 × 30	42.0	—	59.0*	—
700	895	840	24 × 30	46.0	—	80.8*	—
800	1015	950	24 × 33	52.0	—	115*	—
900	1115	1050	28 × 33	56.0	—	136*	—
1000	1230	1160	28 × 36	62.0	—	177*	—
1200	1455	1380	32 × 39	74.0	—	276*	—

IS 6392 PN 16 — dimensions (mm) and weight (kg)

Size	D OD	K PCD	Holes no. × dia	C plate	C blind	Plate (slip-on) kg	Blind kg
10	90	60	4 × 14	14.0	14.0	0.63*	0.66*
15	95	65	4 × 14	14.0	14.0	0.70*	0.75*
20	105	75	4 × 14	16.0	16.0	0.98*	1.06*
25	115	85	4 × 14	16.0	16.0	1.16*	1.29*
32	140	100	4 × 18	16.0	16.0	1.70*	1.90*
40	150	110	4 × 18	16.0	16.0	1.94*	2.20*
50	165	125	4 × 18	18.0	18.0	2.58*	3.02*
65	185	145	4 × 18	18.0	18.0	3.14*	3.84*
80	200	160	8 × 18	20.0	20.0	3.79*	4.84*
100	220	180	8 × 18	20.0	20.0	4.19*	5.93*
125	250	210	8 × 18	22.0	22.0	5.69*	8.53*
150	285	240	8 × 22	22.0	22.0	6.91*	11.0*
175	315	270	8 × 22	24.0	24.0	8.89*	14.8*
200	340	295	12 × 22	24.0	24.0	9.50*	17.1*
250	405	355	12 × 26	26.0	26.0	13.6*	26.2*
300	460	410	12 × 26	28.0	28.0	17.7*	36.9*
350	520	470	16 × 26	32.0	—	27.4*	—

Size	D OD	K PCD	Holes no. × dia	C plate	C blind	Plate (slip-on) kg	Blind kg
400	580	525	16 × 30	36.0	32.0	36.3*	66.7*
500	715	650	20 × 33	44.0	56.0	65.5*	177*
600	840	770	20 × 36	52.0	—	103*	—
700	910	840	24 × 36	58.0	—	109*	—
800	1025	950	24 × 39	64.0	—	145*	—
900	1125	1050	28 × 39	72.0	—	179*	—
1000	1255	1170	28 × 42	78.0	—	248*	—
1200	1485	1390	32 × 48	94.0	—	389*	—

IS 6392 PN 25 — dimensions (mm) and weight (kg)

Size	D OD	K PCD	Holes no. × dia	C plate	C blind	Plate (slip-on) kg	Blind kg
175	330	280	12 × 26	26.0	28.0	10.6*	18.3*
200	360	310	12 × 26	28.0	30.0	13.2*	23.6*
250	425	370	12 × 30	32.0	32.0	19.6*	35.2*
300	485	430	16 × 30	38.0	34.0	28.3*	48.6*
350	555	490	16 × 33	42.0	38.0	44.3*	71.5*
400	620	550	16 × 36	46.0	40.0	58.7*	94.2*
500	730	660	20 × 36	58.0	45.0	92.9*	148*
600	845	770	20 × 39	66.0	—	133*	—

IS 6392 PN 40 — dimensions (mm) and weight (kg)

Size	D OD	K PCD	Holes no. × dia	C plate	C blind	Plate (slip-on) kg	Blind kg
10	90	60	4 × 14	16.0	16.0	0.72*	0.76*
15	95	65	4 × 14	16.0	16.0	0.80*	0.85*
20	105	75	4 × 14	18.0	18.0	1.10*	1.19*
25	115	85	4 × 14	18.0	18.0	1.31*	1.45*
32	140	100	4 × 18	18.0	18.0	1.91*	2.13*
40	150	110	4 × 18	20.0	18.0	2.42*	2.47*
50	165	125	4 × 18	20.0	20.0	2.86*	3.36*
65	185	145	8 × 18	22.0	22.0	3.65*	4.51*
80	200	160	8 × 18	24.0	24.0	4.54*	5.81*
100	235	190	8 × 22	26.0	24.0	6.39*	7.98*
125	270	220	8 × 26	28.0	26.0	8.62*	11.4*
150	300	250	8 × 26	30.0	28.0	10.8*	15.3*
175	350	295	12 × 30	32.0	32.0	15.2*	23.1*
200	375	320	12 × 30	34.0	—	17.9*	—
250	450	385	12 × 33	42.0	38.0	31.0*	46.6*

Size	D OD	K PCD	Holes no. × dia	C plate	C blind	Plate (slip-on) kg	Blind kg
300	515	450	16 × 33	50.0	42.0	45.9*	67.4*
350	580	510	16 × 36	56.0	—	68.2*	—
400	660	585	16 × 39	64.0	50.0	101*	133*
500	755	670	20 × 42	72.0	56.0	128*	194*

IS 6392 PN 64 — dimensions (mm) and weight (kg)

Size	D OD	K PCD	Holes no. × dia	C plate	C blind	Plate (slip-on) kg	Blind kg
50	180	135	4 × 22	26.0	—	4.48*	—
65	205	160	8 × 22	26.0	—	5.41*	—
80	215	170	8 × 22	30.0	—	6.64*	—
100	250	200	8 × 26	32.0	—	9.05*	—
125	295	240	8 × 30	34.0	—	13.2*	—
150	345	280	8 × 33	36.0	—	19.0*	—
175	375	310	12 × 33	40.0	—	23.2*	—
200	415	345	12 × 36	46.0	—	32.2*	—
250	470	400	12 × 36	54.0	—	45.4*	—
300	530	460	16 × 36	62.0	—	61.9*	—
350	600	525	16 × 39	72.0	—	97.0*	—
400	670	585	16 × 42	78.0	—	128*	—

IS 6392 PN 100 — dimensions (mm) and weight (kg)

Size	D OD	K PCD	Holes no. × dia	C plate	C blind	Plate (slip-on) kg	Blind kg
10	100	70	4 × 14	20.0	—	1.15*	—
15	105	75	4 × 14	20.0	—	1.26*	—
20	130	90	4 × 18	22.0	—	2.11*	—
25	140	100	4 × 18	24.0	—	2.65*	—
32	155	110	4 × 22	24.0	—	3.13*	—
40	170	125	4 × 22	26.0	—	4.12*	—
50	195	145	4 × 26	28.0	—	5.71*	—
65	220	170	8 × 26	30.0	—	7.18*	—
80	230	180	8 × 26	34.0	—	8.65*	—
100	265	210	8 × 30	36.0	—	11.6*	—
125	315	250	8 × 33	42.0	—	19.2*	—
150	355	290	12 × 33	48.0	—	26.1*	—
175	385	320	12 × 33	—	—	—	—
200	430	360	12 × 36	60.0	—	46.9*	—
250	505	430	12 × 39	72.0	—	75.2*	—

Size	D OD	K PCD	Holes no. × dia	C plate	C blind	Plate (slip-on) kg	Blind kg
300	585	500	16 × 42	84.0	—	113*	—
350	655	560	16 × 48	95.0	—	163*	—
400	715	620	16 × 48	106.0	—	211*	—
500	870	760	20 × 56	128.0	—	360*	—

BS 10 flanges — Tables D to T

Plate (slip-on) and blind flanges, steel heavy-series thickness. Weights calculated (*).

BS 10 Table D — dimensions (mm) and weight (kg), steel heavy series

Size	D OD	K PCD	Holes no. × dia	C plate	C blind	Plate / slip-on kg	Blind kg
15	95	67	4 × 14	10.0	10.0	0.50*	0.53*
20	102	73	4 × 14	10.0	10.0	0.57*	0.62*
25	114	83	4 × 14	10.0	10.0	0.71*	0.79*
32	121	87	4 × 14	13.0	13.0	1.01*	1.17*
40	133	98	4 × 14	13.0	13.0	1.21*	1.42*
50	152	114	4 × 17	14.0	14.0	1.64*	1.99*
65	165	127	4 × 17	14.0	14.0	1.86*	2.36*
80	184	146	4 × 17	14.0	14.0	2.22*	2.96*
100	216	178	4 × 17	17.0	17.0	3.53*	5.01*
125	254	210	8 × 17	17.0	17.0	4.60*	6.85*
150	279	235	8 × 17	17.0	17.0	5.14*	8.31*
200	337	292	8 × 17	19.0	19.0	7.70*	13.7*
250	406	356	8 × 22	19.0	19.0	10.5*	19.8*
300	457	406	12 × 22	22.0	22.0	13.8*	28.9*
350	527	470	12 × 25	25.0	25.0	23.1*	43.7*
375	552	495	12 × 25	—	—	—	—
400	578	521	12 × 25	25.0	25.0	25.9*	52.9*
450	641	584	12 × 25	29.0	29.0	36.3*	75.7*
500	705	641	16 × 25	—	—	—	—
600	826	756	16 × 29	35.0	35.0	66.8*	152*

BS 10 Table E — dimensions (mm) and weight (kg), steel heavy series

Size	D OD	K PCD	Holes no. × dia	C plate	C blind	Plate / slip-on kg	Blind kg
15	95	67	4 × 14	10.0	10.0	0.50*	0.53*
20	102	73	4 × 14	10.0	10.0	0.57*	0.62*
25	114	83	4 × 14	10.0	10.0	0.71*	0.79*
32	121	87	4 × 14	13.0	13.0	1.01*	1.17*
40	133	98	4 × 14	13.0	13.0	1.21*	1.42*
50	152	114	4 × 17	14.0	14.0	1.64*	1.99*
65	165	127	4 × 17	14.0	14.0	1.86*	2.36*
80	184	146	4 × 17	14.0	14.0	2.22*	2.96*
100	216	178	8 × 17	17.0	17.0	3.40*	4.88*
125	254	210	8 × 17	17.0	17.0	4.60*	6.85*
150	279	235	8 × 22	17.0	17.0	4.97*	8.14*

Size	D OD	K PCD	Holes no. × dia	C plate	C blind	Plate / slip-on kg	Blind kg
200	337	292	8 × 22	19.0	19.0	7.51*	13.5*
250	406	356	12 × 22	22.0	22.0	11.9*	22.6*
300	457	406	12 × 25	25.0	25.0	15.5*	32.6*
350	527	470	12 × 25	25.0	25.0	23.1*	43.7*
375	552	495	12 × 25	—	—	—	—
400	578	521	12 × 25	25.0	25.0	25.9*	52.9*
450	641	584	16 × 25	29.0	29.0	35.8*	75.3*
500	705	641	16 × 25	32.0	32.0	47.1*	101*
600	826	756	16 × 32	38.0	38.0	71.8*	164*

BS 10 Table F — dimensions (mm) and weight (kg), steel heavy series

Size	D OD	K PCD	Holes no. × dia	C plate	C blind	Plate / slip-on kg	Blind kg
15	95	67	4 × 14	10.0	10.0	0.50*	0.53*
20	102	73	4 × 14	10.0	10.0	0.57*	0.62*
25	121	87	4 × 17	10.0	10.0	0.79*	0.87*
32	133	98	4 × 17	13.0	13.0	1.23*	1.39*
40	140	105	4 × 17	13.0	13.0	1.34*	1.55*
50	165	127	4 × 17	16.0	16.0	2.30*	2.70*
65	184	146	8 × 17	16.0	16.0	2.69*	3.27*
80	203	165	8 × 17	16.0	16.0	3.18*	4.03*
100	229	191	8 × 17	19.0	19.0	4.52*	6.17*
125	279	235	8 × 22	22.0	22.0	7.63*	10.5*
150	305	260	12 × 22	22.0	22.0	8.32*	12.4*
200	368	324	12 × 22	25.0	25.0	13.1*	21.0*
250	432	381	12 × 25	25.0	25.0	16.8*	29.0*
300	489	438	16 × 25	29.0	29.0	23.1*	43.0*
350	552	495	16 × 29	32.0	32.0	33.9*	60.3*
375	578	521	16 × 29	—	—	—	—
400	610	552	20 × 29	32.0	32.0	39.1*	73.6*
450	673	610	20 × 32	35.0	35.0	50.4*	98.0*
500	737	673	24 × 32	38.0	38.0	63.7*	128*
600	851	781	24 × 35	41.0	41.0	85.2*	184*

BS 10 Table H — dimensions (mm) and weight (kg), steel heavy series

Size	D OD	K PCD	Holes no. × dia	C plate	C blind	Plate / slip-on kg	Blind kg
15	114	83	4 × 17	13.0	13.0	0.95*	1.00*
20	114	83	4 × 17	13.0	13.0	0.93*	1.00*

Size	D OD	K PCD	Holes no. × dia	C plate	C blind	Plate / slip-on kg	Blind kg
25	121	87	4 × 17	14.0	14.0	1.11*	1.22*
32	133	98	4 × 17	17.0	17.0	1.61*	1.82*
40	140	105	4 × 17	17.0	17.0	1.76*	2.03*
50	165	127	4 × 17	19.0	19.0	2.74*	3.21*
65	184	146	8 × 17	19.0	19.0	3.20*	3.88*
80	203	165	8 × 17	22.0	22.0	4.38*	5.54*
100	229	191	8 × 17	25.0	25.0	5.94*	8.11*
125	279	235	8 × 22	29.0	29.0	10.1*	13.9*
150	305	260	12 × 22	29.0	29.0	11.0*	16.4*
200	368	324	12 × 22	32.0	32.0	16.8*	26.9*
250	432	381	12 × 25	35.0	35.0	23.5*	40.6*
300	489	438	16 × 25	38.0	38.0	30.3*	56.4*
350	552	495	16 × 29	41.0	41.0	43.5*	77.3*
375	578	521	16 × 29	—	—	—	—
400	610	552	20 × 29	44.0	44.0	53.8*	101*
450	673	610	20 × 32	48.0	48.0	69.1*	134*
500	737	673	24 × 32	51.0	51.0	85.5*	171*
600	851	781	24 × 35	57.0	57.0	118*	256*

BS 10 Table J — dimensions (mm) and weight (kg), steel heavy series

Size	D OD	K PCD	Holes no. × dia	C plate	C blind	Plate / slip-on kg	Blind kg
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BS 10 Table K — dimensions (mm) and weight (kg), steel heavy series

Size	D OD	K PCD	Holes no. × dia	C plate	C blind	Plate / slip-on kg	Blind kg
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BS 10 Table R — dimensions (mm) and weight (kg), steel heavy series

Size	D OD	K PCD	Holes no. × dia	C plate	C blind	Plate / slip-on kg	Blind kg
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BS 10 Table S — dimensions (mm) and weight (kg), steel heavy series

Size	D OD	K PCD	Holes no. × dia	C plate	C blind	Plate / slip-on kg	Blind kg
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BS 10 Table T — dimensions (mm) and weight (kg), steel heavy series

Size	D OD	K PCD	Holes no. × dia	C plate	C blind	Plate / slip-on kg	Blind kg
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AS 2129 flanges — Tables D, E, F and H

Plate (slip-on) and blind flanges in steel. Weights calculated (*).

AS 2129 Table D — dimensions (mm) and weight (kg), steel

Size	D OD	K PCD	Holes no. × dia	C plate	C blind	Plate / slip-on kg	Blind kg
15	95	67	4 × 14	5.0	5.0	0.25*	0.27*
20	100	73	4 × 14	5.0	5.0	0.27*	0.30*
25	115	83	4 × 14	5.0	5.0	0.36*	0.40*
32	120	87	4 × 14	6.0	6.0	0.45*	0.53*
40	135	98	4 × 14	6.0	6.0	0.58*	0.68*
50	150	114	4 × 18	8.0	8.0	0.90*	1.10*
65	165	127	4 × 18	8.0	8.0	1.06*	1.34*
80	185	146	4 × 18	10.0	10.0	1.60*	2.13*
100	215	178	4 × 18	10.0	10.0	2.04*	2.91*
125	255	210	8 × 18	—	—	—	—
150	280	235	8 × 18	13.0	13.0	3.95*	6.38*
200	335	292	8 × 18	13.0	13.0	5.13*	9.23*
250	405	356	8 × 22	16.0	16.0	8.78*	16.6*
300	455	406	12 × 22	—	—	—	—
350	525	470	12 × 26	—	—	—	—
400	580	521	12 × 26	22.0	22.0	23.1*	46.8*
450	640	584	12 × 26	25.0	25.0	31.0*	65.0*
500	705	641	16 × 26	29.0	29.0	42.5*	91.3*
600	825	756	16 × 30	32.0	32.0	60.6*	138*

AS 2129 Table E — dimensions (mm) and weight (kg), steel

Size	D OD	K PCD	Holes no. × dia	C plate	C blind	Plate / slip-on kg	Blind kg
15	95	67	4 × 14	6.0	6.0	0.30*	0.32*
20	100	73	4 × 14	6.0	6.0	0.33*	0.36*
25	115	83	4 × 14	7.0	7.0	0.51*	0.56*
32	120	87	4 × 14	8.0	8.0	0.61*	0.71*
40	135	98	4 × 14	9.0	9.0	0.87*	1.02*
50	150	114	4 × 18	10.0	10.0	1.13*	1.37*
65	165	127	4 × 18	10.0	10.0	1.32*	1.68*
80	185	146	4 × 18	11.0	11.0	1.76*	2.34*
100	215	178	8 × 18	13.0	13.0	2.54*	3.67*
125	255	210	8 × 18	14.0	14.0	3.81*	5.66*
150	280	235	8 × 22	17.0	17.0	5.03*	8.20*
200	335	292	8 × 22	19.0	19.0	7.34*	13.3*

Size	D OD	K PCD	Holes no. × dia	C plate	C blind	Plate / slip-on kg	Blind kg
250	405	356	12 × 22	22.0	22.0	11.8*	22.5*
300	455	406	12 × 26	25.0	25.0	15.1*	32.2*
350	525	470	12 × 26	—	—	—	—
400	580	521	12 × 26	—	—	—	—
450	640	584	16 × 26	35.0	35.0	42.7*	90.4*
500	705	641	16 × 26	38.0	38.0	55.7*	120*
600	825	756	16 × 33	48.0	48.0	89.9*	206*

AS 2129 Table F — dimensions (mm) and weight (kg), steel

Size	D OD	K PCD	Holes no. × dia	C plate	C blind	Plate / slip-on kg	Blind kg
15	95	67	4 × 14	10.0	10.0	0.50*	0.53*
20	100	73	4 × 14	10.0	10.0	0.55*	0.60*
25	120	87	4 × 18	10.0	10.0	0.77*	0.85*
32	135	98	4 × 18	13.0	13.0	1.26*	1.42*
40	140	105	4 × 18	13.0	13.0	1.33*	1.54*
50	165	127	4 × 18	16.0	16.0	2.29*	2.69*
65	185	146	8 × 18	16.0	16.0	2.70*	3.28*
80	205	165	8 × 18	16.0	16.0	3.24*	4.08*
100	230	191	8 × 18	19.0	19.0	4.54*	6.19*
125	280	235	8 × 22	22.0	22.0	7.71*	10.6*
150	305	260	12 × 22	22.0	22.0	8.32*	12.4*
200	370	324	12 × 22	25.0	25.0	13.3*	21.2*
250	430	381	12 × 26	25.0	25.0	16.4*	28.6*
300	490	438	16 × 26	29.0	29.0	23.2*	43.0*
350	550	495	16 × 30	32.0	32.0	33.3*	59.7*
375	578	521	16 × 30	—	—	—	—
400	610	552	20 × 30	32.0	32.0	38.9*	73.4*
450	675	610	20 × 33	—	—	—	—
500	735	673	24 × 33	—	—	—	—
600	850	781	24 × 36	—	—	—	—

AS 2129 Table H — dimensions (mm) and weight (kg), steel

Size	D OD	K PCD	Holes no. × dia	C plate	C blind	Plate / slip-on kg	Blind kg
20	115	83	4 × 18	13.0	13.0	0.94*	1.00*
25	120	87	4 × 18	14.0	14.0	1.08*	1.19*
32	135	98	4 × 18	17.0	17.0	1.65*	1.86*
40	140	105	4 × 18	17.0	17.0	1.74*	2.01*

Size	D OD	K PCD	Holes no. × dia	C plate	C blind	Plate / slip-on kg	Blind kg
50	165	127	4 × 18	19.0	19.0	2.72*	3.19*
65	185	146	8 × 18	19.0	19.0	3.21*	3.89*
80	205	165	8 × 18	22.0	22.0	4.45*	5.62*
100	230	191	8 × 18	25.0	25.0	5.97*	8.14*
125	280	235	8 × 22	29.0	29.0	10.2*	14.0*
150	305	260	12 × 22	29.0	29.0	11.0*	16.4*
200	370	324	12 × 22	32.0	32.0	17.1*	27.2*
250	430	381	12 × 26	35.0	35.0	23.0*	40.1*
300	490	438	16 × 26	—	—	—	—
350	550	495	16 × 30	—	—	—	—
375	578	521	16 × 30	—	—	—	—
400	610	552	20 × 30	—	—	—	—
450	675	610	20 × 33	60.0	60.0	86.9*	169*
500	735	673	24 × 33	67.0	67.0	110*	223*
600	850	781	24 × 36	76.0	76.0	156*	340*

JIS B2220 flanges — 5K to 30K

Slip-on and blind flanges. Weights calculated (*).

JIS B2220 5K — dimensions (mm) and weight (kg)

Size	D OD	K PCD	Holes no. x dia	C plate	C blind	Slip-on kg	Blind kg
10	75	55	4 × 12	9.0	9.0	0.27*	0.29*
15	80	60	4 × 12	9.0	9.0	0.31*	0.34*
20	85	65	4 × 12	10.0	10.0	0.38*	0.43*
25	95	75	4 × 12	10.0	10.0	0.47*	0.55*
32	115	90	4 × 15	12.0	12.0	0.81*	0.96*
40	120	95	4 × 15	12.0	12.0	0.85*	1.05*
50	130	105	4 × 15	14.0	14.0	1.10*	1.45*
65	155	130	4 × 15	14.0	14.0	1.55*	2.10*
80	180	145	4 × 19	14.0	14.0	2.06*	2.81*
(90)	190	155	4 × 19	14.0	14.0	2.18*	3.14*
100	200	165	8 × 19	16.0	16.0	2.46*	3.84*
125	235	200	8 × 19	16.0	16.0	3.35*	5.42*
150	265	230	8 × 19	18.0	18.0	4.61*	7.85*
(175)	300	260	8 × 23	18.0	18.0	5.69*	9.99*
200	320	280	8 × 23	20.0	20.0	6.57*	12.7*
(225)	345	305	12 × 23	20.0	20.0	6.92*	14.6*
250	385	345	12 × 23	22.0	22.0	9.91*	20.2*
300	430	390	12 × 23	22.0	22.0	10.8*	25.4*
350	480	435	12 × 25	24.0	24.0	14.8*	34.6*
400	540	495	16 × 25	24.0	24.0	17.9*	43.8*
450	605	555	16 × 25	24.0	24.0	22.6*	55.3*
500	655	605	20 × 25	24.0	24.0	24.4*	64.7*
(550)	720	665	20 × 27	26.0	26.0	32.0*	84.8*
600	770	715	20 × 27	26.0	26.0	34.5*	97.3*
(650)	825	770	24 × 27	26.0	26.0	37.9*	112*
700	875	820	24 × 27	26.0	26.0	40.4*	126*
(750)	945	880	24 × 33	28.0	28.0	51.5*	157*
800	995	930	24 × 33	28.0	28.0	54.5*	175*
(850)	1045	980	24 × 33	28.0	28.0	57.5*	193*
900	1095	1030	24 × 33	30.0	30.0	64.9*	228*
1000	1195	1130	28 × 33	32.0	32.0	75.0*	290*
1100	1305	1240	28 × 33	32.0	32.0	87.0*	346*
1200	1420	1350	32 × 33	34.0	34.0	108*	436*
1350	1575	1505	32 × 33	34.0	34.0	123*	538*

Size	D OD	K PCD	Holes no. × dia	C plate	C blind	Slip-on kg	Blind kg
1500	1730	1660	36 × 33	36.0	36.0	146*	688*

JIS B2220 10K — dimensions (mm) and weight (kg)

Size	D OD	K PCD	Holes no. × dia	C plate	C blind	Slip-on kg	Blind kg
10	90	65	4 × 15	12.0	12.0	0.53*	0.56*
15	95	70	4 × 15	12.0	12.0	0.59*	0.63*
20	100	75	4 × 15	14.0	14.0	0.75*	0.82*
25	125	90	4 × 19	14.0	14.0	1.17*	1.29*
32	135	100	4 × 19	16.0	16.0	1.54*	1.74*
40	140	105	4 × 19	16.0	16.0	1.62*	1.88*
50	155	120	4 × 19	16.0	16.0	1.94*	2.34*
65	175	140	4 × 19	18.0	18.0	2.70*	3.40*
80	185	150	8 × 19	18.0	18.0	2.70*	3.65*
(90)	195	160	8 × 19	18.0	18.0	2.86*	4.09*
100	210	175	8 × 19	18.0	18.0	3.24*	4.80*
125	250	210	8 × 23	20.0	20.0	4.96*	7.54*
150	280	240	8 × 23	22.0	22.0	6.61*	10.6*
(175)	305	265	12 × 23	22.0	22.0	7.08*	12.3*
200	330	290	12 × 23	22.0	22.0	7.85*	14.6*
(225)	350	310	12 × 23	22.0	22.0	8.11*	16.5*
250	400	355	12 × 25	24.0	24.0	12.5*	23.7*
300	445	400	16 × 25	24.0	24.0	13.3*	29.2*
350	490	445	16 × 25	26.0	26.0	17.3*	38.7*
400	560	510	16 × 27	28.0	28.0	24.6*	54.7*
450	620	565	20 × 27	30.0	30.0	31.0*	71.8*
500	675	620	20 × 27	30.0	30.0	35.2*	85.7*
(550)	745	680	20 × 33	32.0	32.0	45.4*	110*
600	795	730	24 × 33	32.0	32.0	48.2*	126*
(650)	845	780	24 × 33	34.0	34.0	55.0*	151*
700	905	840	24 × 33	34.0	34.0	62.7*	175*
(750)	970	900	24 × 33	36.0	36.0	77.3*	213*
800	1020	950	28 × 33	36.0	36.0	80.8*	235*
(850)	1070	1000	28 × 33	36.0	36.0	85.3*	260*
900	1120	1050	28 × 33	38.0	38.0	94.7*	301*
1000	1235	1160	28 × 39	40.0	40.0	116*	384*
1100	1345	1270	28 × 39	42.0	42.0	140*	480*
1200	1465	1380	32 × 39	44.0	44.0	173*	597*
1350	1630	1540	36 × 45	48.0	48.0	217*	803*

Size	D OD	K PCD	Holes no. × dia	C plate	C blind	Slip-on kg	Blind kg
1500	1795	1700	40 × 45	50.0	50.0	263*	1017*

JIS B2220 16K — dimensions (mm) and weight (kg)

Size	D OD	K PCD	Holes no. × dia	C plate	C blind	Slip-on kg	Blind kg
10	90	65	4 × 15	12.0	12.0	0.53*	0.56*
15	95	70	4 × 15	12.0	12.0	0.59*	0.63*
20	100	75	4 × 15	14.0	14.0	0.75*	0.82*
25	125	90	4 × 19	14.0	14.0	1.17*	1.29*
32	135	100	4 × 19	16.0	16.0	1.54*	1.74*
40	140	105	4 × 19	16.0	16.0	1.62*	1.88*
50	155	120	8 × 19	16.0	16.0	1.79*	2.19*
65	175	140	8 × 19	18.0	18.0	2.53*	3.23*
80	200	160	8 × 23	20.0	20.0	3.57*	4.63*
(90)	210	170	8 × 23	20.0	20.0	3.79*	5.16*
100	225	185	8 × 23	22.0	22.0	4.70*	6.61*
125	270	225	8 × 25	22.0	22.0	6.83*	9.67*
150	305	260	12 × 25	24.0	24.0	8.97*	13.3*
200	350	305	12 × 25	26.0	26.0	11.4*	19.4*
250	430	380	12 × 27	28.0	28.0	18.8*	31.9*
300	480	430	16 × 27	30.0	30.0	22.6*	42.5*
350	540	480	16 × 33	34.0	34.0	32.3*	60.3*
400	605	540	16 × 33	38.0	38.0	44.8*	85.8*
450	675	605	20 × 33	40.0	40.0	57.9*	112*
500	730	660	20 × 33	42.0	42.0	68.4*	139*
(550)	795	720	20 × 39	44.0	44.0	81.9*	171*
600	845	770	24 × 39	46.0	46.0	90.6*	202*
650	895	820	24 × 39	48.0	48.0	101*	238*
700	960	875	24 × 42	50.0	50.0	120*	285*
750	1020	935	24 × 42	52.0	52.0	140*	336*
800	1085	990	24 × 48	54.0	54.0	160*	392*
850	1135	1040	24 × 48	56.0	56.0	176*	447*
900	1185	1090	28 × 48	58.0	58.0	188*	503*
1000	1320	1210	28 × 56	62.0	62.0	249*	664*
1100	1420	1310	32 × 56	66.0	66.0	284*	819*
1200	1530	1420	32 × 56	70.0	70.0	340*	1015*
1300	1645	1530	32 × 62	74.0	74.0	400*	1237*
1350	1700	1590	32 × 62	76.0	76.0	434*	1361*
1400	1755	1640	36 × 62	78.0	78.0	462*	1485*

Size	D OD	K PCD	Holes no. × dia	C plate	C blind	Slip-on kg	Blind kg
1500	1865	1750	36 × 62	80.0	80.0	524*	1730*

JIS B2220 20K — dimensions (mm) and weight (kg)

Size	D OD	K PCD	Holes no. × dia	C plate	C blind	Slip-on kg	Blind kg
10	90	65	4 × 15	14.0	14.0	0.62*	0.65*
15	95	70	4 × 15	14.0	14.0	0.69*	0.74*
20	100	75	4 × 15	16.0	16.0	0.86*	0.94*
25	125	90	4 × 19	16.0	16.0	1.34*	1.47*
32	135	100	4 × 19	18.0	18.0	1.73*	1.96*
40	140	105	4 × 19	18.0	18.0	1.82*	2.12*
50	155	120	8 × 19	18.0	18.0	2.02*	2.46*
65	175	140	8 × 19	20.0	20.0	2.81*	3.59*
80	200	160	8 × 23	22.0	22.0	3.93*	5.09*
(90)	210	170	8 × 23	24.0	24.0	4.54*	6.19*
100	225	185	8 × 23	24.0	24.0	5.12*	7.21*
125	270	225	8 × 25	26.0	26.0	8.07*	11.4*
150	305	260	12 × 25	28.0	28.0	10.5*	15.5*
200	350	305	12 × 25	30.0	30.0	13.1*	22.3*
250	430	380	12 × 27	34.0	34.0	22.9*	38.8*
300	480	430	16 × 27	36.0	36.0	27.1*	51.0*
350	540	480	16 × 33	40.0	40.0	38.0*	71.0*
400	605	540	16 × 33	46.0	46.0	54.3*	104*
450	675	605	20 × 33	48.0	48.0	69.4*	135*
500	730	660	20 × 33	50.0	50.0	81.4*	165*
(550)	795	720	20 × 39	52.0	52.0	96.8*	203*
600	845	770	24 × 39	54.0	54.0	106*	237*
650	945	850	24 × 48	60.0	60.0	155*	325*
700	995	900	24 × 48	64.0	64.0	177*	387*
750	1080	970	24 × 56	68.0	68.0	224*	480*
800	1140	1030	24 × 56	72.0	72.0	262*	571*
850	1200	1090	24 × 56	74.0	74.0	295*	654*
900	1250	1140	28 × 56	76.0	76.0	313*	726*

JIS B2220 30K — dimensions (mm) and weight (kg)

Size	D OD	K PCD	Holes no. × dia	C plate	C blind	Slip-on kg	Blind kg
10	110	75	4 × 19	16.0	16.0	1.07*	1.10*
15	115	80	4 × 19	18.0	18.0	1.31*	1.37*

Size	D OD	K PCD	Holes no. × dia	C plate	C blind	Slip-on kg	Blind kg
20	120	85	4 × 19	18.0	18.0	1.41*	1.51*
25	130	95	4 × 19	20.0	20.0	1.84*	2.00*
32	140	105	4 × 19	22.0	22.0	2.31*	2.59*
40	160	120	4 × 23	22.0	22.0	2.99*	3.34*
50	165	130	8 × 19	22.0	22.0	2.92*	3.47*
65	200	160	8 × 23	26.0	26.0	5.00*	6.02*
80	210	170	8 × 23	28.0	28.0	5.74*	7.23*
90	230	185	8 × 25	30.0	30.0	7.24*	9.30*
100	240	195	8 × 25	32.0	32.0	8.12*	10.9*
125	275	230	8 × 25	36.0	36.0	11.8*	16.5*
150	325	275	12 × 27	38.0	38.0	17.0*	23.8*
200	370	320	12 × 27	42.0	42.0	21.9*	34.8*
250	450	390	12 × 33	48.0	48.0	36.4*	58.9*
300	515	450	16 × 33	52.0	52.0	48.9*	83.4*
350	560	495	16 × 33	54.0	54.0	59.0*	104*
400	630	560	16 × 39	60.0	60.0	80.1*	145*

AWWA C207 waterworks flanges — Classes B, D, E and F

Steel ring (slip-on) flanges. Weights calculated (*). Blind flanges are not tabulated in C207.

AWWA C207 Class B ring flange — dimensions (mm, converted) and weight (kg)

Size	D OD	K PCD	Holes no. x dia	C plate	C blind	Ring flange kg	Blind kg
4	229	190	8 × 19	15.9	—	3.69*	—
5	254	216	8 × 22	15.9	—	4.13*	—
6	279	241	8 × 22	17.5	—	5.12*	—
8	343	298	8 × 22	17.5	—	7.35*	—
10	406	362	12 × 25	17.5	—	9.28*	—
12	483	432	12 × 25	17.5	—	13.5*	—
14	533	476	12 × 29	17.5	—	16.7*	—
16	597	540	16 × 29	17.5	—	20.0*	—
18	635	578	16 × 32	17.5	—	20.0*	—
20	698	635	20 × 32	17.5	—	23.5*	—
22	749	692	20 × 35	19.0	—	27.5*	—
24	813	749	20 × 35	19.0	—	32.3*	—
26	870	806	24 × 35	20.6	—	38.7*	—
28	927	864	28 × 35	22.2	—	45.7*	—
30	984	914	28 × 35	22.2	—	50.6*	—
32	1060	978	28 × 41	23.8	—	63.8*	—
34	1111	1029	32 × 41	23.8	—	66.5*	—
36	1168	1086	32 × 41	25.4	—	77.7*	—
38	1238	1149	32 × 41	25.4	—	89.5*	—
40	1289	1200	36 × 41	25.4	—	92.9*	—
42	1346	1257	36 × 41	28.6	—	113*	—
44	1403	1314	40 × 41	28.6	—	120*	—
46	1454	1365	40 × 41	28.6	—	125*	—
48	1511	1422	44 × 41	31.8	—	148*	—
50	1568	1480	44 × 48	31.8	—	153*	—
52	1626	1537	44 × 48	31.8	—	163*	—
54	1683	1594	44 × 48	34.9	—	191*	—
60	1854	1759	52 × 48	38.1	—	245*	—
66	2032	1930	52 × 48	41.3	—	319*	—
72	2197	2096	60 × 48	44.4	—	386*	—
78	2362	2261	64 × 54	50.8	—	481*	—
84	2534	2426	64 × 54	50.8	—	551*	—
90	2705	2591	68 × 62	57.1	—	675*	—
96	2877	2756	68 × 62	57.1	—	762*	—

Size	D OD	K PCD	Holes no. × dia	C plate	C blind	Ring flange kg	Blind kg
102	3048	2908	72 × 68	63.5	—	919*	—
108	3219	3067	72 × 68	63.5	—	1026*	—
114	3391	3219	76 × 75	69.8	—	1213*	—
120	3562	3372	76 × 75	69.8	—	1342*	—
126	3734	3537	80 × 81	76.2	—	1561*	—
132	3905	3702	80 × 81	76.2	—	1714*	—
138	4077	3861	84 × 87	82.5	—	1968*	—
144	4248	4020	84 × 87	82.5	—	2147*	—

AWWA C207 Class D ring flange — dimensions (mm, converted) and weight (kg)

Size	D OD	K PCD	Holes no. × dia	C plate	C blind	Ring flange kg	Blind kg
4	229	190	8 × 19	15.9	—	3.69*	—
5	254	216	8 × 22	15.9	—	4.13*	—
6	279	241	8 × 22	17.5	—	5.12*	—
8	343	298	8 × 22	17.5	—	7.35*	—
10	406	362	12 × 25	17.5	—	9.28*	—
12	483	432	12 × 25	20.6	—	15.9*	—
14	533	476	12 × 29	23.8	—	22.7*	—
16	597	540	16 × 29	25.4	—	29.1*	—
18	635	578	16 × 32	27.0	—	30.9*	—
20	698	635	20 × 32	28.6	—	38.5*	—
22	749	692	20 × 35	30.2	—	43.5*	—
24	813	749	20 × 35	31.8	—	53.9*	—
26	870	806	24 × 35	33.3	—	62.6*	—
28	927	864	28 × 35	33.3	—	68.5*	—
30	984	914	28 × 35	34.9	—	79.5*	—
32	1060	978	28 × 41	38.1	—	102*	—
34	1111	1029	32 × 41	38.1	—	106*	—
36	1168	1086	32 × 41	41.3	—	126*	—
38	1238	1149	32 × 41	41.3	—	145*	—
40	1289	1200	36 × 41	41.3	—	151*	—
42	1346	1257	36 × 41	44.4	—	175*	—
44	1403	1314	40 × 41	44.4	—	187*	—
46	1454	1365	40 × 41	44.4	—	195*	—
48	1511	1422	44 × 41	47.6	—	222*	—
50	1568	1480	44 × 48	50.8	—	245*	—
52	1626	1537	44 × 48	50.8	—	261*	—
54	1683	1594	44 × 48	54.0	—	296*	—

Size	D OD	K PCD	Holes no. × dia	C plate	C blind	Ring flange kg	Blind kg
60	1854	1759	52 × 48	57.1	—	367*	—
66	2032	1930	52 × 48	63.5	—	492*	—
72	2197	2096	60 × 48	66.7	—	579*	—
78	2362	2261	64 × 54	69.8	—	661*	—
84	2534	2426	64 × 54	73.0	—	791*	—
90	2705	2591	68 × 62	76.2	—	900*	—
96	2877	2756	68 × 62	82.5	—	1101*	—
102	3048	2908	72 × 68	82.5	—	1194*	—
108	3219	3067	72 × 68	85.7	—	1385*	—
114	3391	3219	76 × 75	88.9	—	1543*	—
120	3562	3372	76 × 75	88.9	—	1708*	—
126	3734	3537	80 × 81	95.2	—	1951*	—
132	3905	3702	80 × 81	98.4	—	2214*	—
138	4077	3861	84 × 87	101.6	—	2422*	—
144	4248	4020	84 × 87	104.8	—	2725*	—

AWWA C207 Class E ring flange — dimensions (mm, converted) and weight (kg)

Size	D OD	K PCD	Holes no. × dia	C plate	C blind	Ring flange kg	Blind kg
4	229	190	8 × 19	28.6	—	6.65*	—
5	254	216	8 × 22	30.2	—	7.85*	—
6	279	241	8 × 22	33.4	—	9.78*	—
8	343	298	8 × 22	38.1	—	16.0*	—
10	406	362	12 × 25	39.7	—	21.1*	—
12	483	432	12 × 25	44.4	—	34.3*	—
14	533	476	12 × 29	47.6	—	45.4*	—
16	597	540	16 × 29	50.8	—	58.2*	—
18	635	578	16 × 32	54.0	—	61.8*	—
20	698	635	20 × 32	60.3	—	81.3*	—
22	749	692	20 × 35	63.5	—	91.6*	—
24	813	749	20 × 35	66.7	—	113*	—
26	870	806	24 × 35	69.8	—	131*	—
28	927	864	28 × 35	69.8	—	144*	—
30	984	914	28 × 35	73.0	—	166*	—
32	1060	978	28 × 41	76.2	—	204*	—
34	1111	1029	32 × 41	76.2	—	213*	—
36	1168	1086	32 × 41	79.4	—	243*	—
38	1238	1149	32 × 41	79.4	—	280*	—
40	1289	1200	36 × 41	82.5	—	302*	—

Size	D OD	K PCD	Holes no. × dia	C plate	C blind	Ring flange kg	Blind kg
42	1346	1257	36 × 41	85.7	—	338*	—
44	1403	1314	40 × 41	85.7	—	360*	—
46	1454	1365	40 × 41	87.3	—	383*	—
48	1511	1422	44 × 41	88.9	—	414*	—
50	1568	1480	44 × 48	88.9	—	428*	—
52	1626	1537	44 × 48	92.1	—	473*	—
54	1683	1594	44 × 48	95.2	—	522*	—
60	1854	1759	52 × 48	98.4	—	633*	—
66	2032	1930	52 × 48	107.9	—	836*	—
72	2197	2096	60 × 48	111.1	—	965*	—
78	2362	2261	64 × 54	120.6	—	1142*	—
84	2534	2426	64 × 54	120.6	—	1308*	—
90	2705	2591	68 × 62	130.2	—	1537*	—
96	2877	2756	68 × 62	130.2	—	1737*	—
102	3048	2908	72 × 68	139.7	—	2021*	—
108	3219	3067	72 × 68	139.7	—	2257*	—
114	3391	3219	76 × 75	149.2	—	2591*	—
120	3562	3372	76 × 75	149.2	—	2867*	—
126	3734	3537	80 × 81	158.8	—	3252*	—
132	3905	3702	80 × 81	158.8	—	3571*	—
138	4077	3861	84 × 87	171.4	—	4087*	—
144	4248	4020	84 × 87	171.4	—	4459*	—

AWWA C207 Class F ring flange — dimensions (mm, converted) and weight (kg)

Size	D OD	K PCD	Holes no. × dia	C plate	C blind	Ring flange kg	Blind kg
4	254	200	8 × 22	28.7	—	8.76*	—
5	279	235	8 × 22	30.7	—	10.7*	—
6	318	270	12 × 22	33.3	—	14.2*	—
8	381	330	12 × 25	33.3	—	19.1*	—
10	444	387	16 × 29	38.1	—	26.9*	—
12	521	451	16 × 32	41.4	—	40.0*	—
14	584	514	20 × 32	49.3	—	61.8*	—
16	648	572	20 × 35	54.4	—	80.5*	—
18	711	629	24 × 35	57.1	—	98.5*	—
20	775	686	24 × 35	59.2	—	119*	—
22	838	743	24 × 35	63.5	—	148*	—
24	914	813	24 × 41	68.3	—	186*	—
26	972	876	28 × 48	76.2	—	218*	—

Size	D OD	K PCD	Holes no. × dia	C plate	C blind	Ring flange kg	Blind kg
28	1035	940	28 × 48	79.5	—	257*	—
30	1092	997	28 × 48	80.0	—	283*	—
32	1149	1054	28 × 48	82.5	—	317*	—
34	1206	1105	28 × 48	85.9	—	357*	—
36	1270	1168	32 × 54	87.9	—	388*	—
38	1327	1219	32 × 54	88.9	—	422*	—
40	1378	1276	36 × 54	92.2	—	453*	—
42	1448	1340	36 × 54	96.8	—	532*	—
44	1505	1397	36 × 54	101.6	—	597*	—
46	1562	1454	40 × 54	104.9	—	649*	—
48	1651	1543	40 × 54	114.3	—	828*	—

ASME B16.9 butt-weld fittings

Elbows, returns, tees, reducers, caps and stub ends NPS ½"–48", by wall schedule (ASME B36.10M wall). All weights calculated (*) from the fitting centreline length and the pipe mass per metre.

ASME B16.9 90° long radius elbow — weight (kg)

NPS	DN	OD mm	Radius mm	Sch 10 kg	STD kg	XS kg	Sch 160 kg	XXS kg
½"	15	21.3	38	0.06*	0.08*	0.10*	0.12*	0.16*
¾"	20	26.7	38	0.08*	0.10*	0.14*	0.18*	0.22*
1"	25	33.4	38	0.13*	0.15*	0.20*	0.26*	0.34*
1¼"	32	42.2	48	0.21*	0.26*	0.35*	0.44*	0.60*
1½"	40	48.3	57	0.29*	0.37*	0.50*	0.67*	0.88*
2"	50	60.3	76	0.48*	0.67*	0.92*	1.37*	1.65*
2½"	65	73.0	95	0.81*	1.33*	1.75*	2.29*	3.13*
3"	80	88.9	114	1.19*	2.08*	2.82*	3.94*	5.11*
3½"	90	101.6	133	1.59*	2.92*	4.01*	—	7.32*
4"	100	114.3	152	2.06*	3.95*	5.49*	8.25*	10.1*
5"	125	141.3	190	3.55*	6.69*	9.52*	15.1*	17.7*
6"	150	168.3	229	5.12*	10.5*	15.8*	25.0*	29.4*
8"	200	219.1	305	9.85*	21.0*	31.9*	54.9*	53.3*
10"	250	273.0	381	17.1*	37.2*	50.3*	106*	95.6*
12"	300	323.8	457	26.6*	54.6*	72.0*	176*	138*
14"	350	355.6	533	47.2*	70.1*	92.6*	243*	—
16"	400	406.4	610	61.8*	92.1*	122*	361*	—
18"	450	457.0	686	78.3*	117*	154*	510*	—
20"	500	508.0	762	96.9*	144*	191*	696*	—
22"	550	559.0	838	117*	175*	232*	912*	—
24"	600	610.0	914	140*	209*	277*	1195*	—
26"	650	660.0	991	204*	245*	325*	—	—
28"	700	711.0	1067	237*	285*	378*	—	—
30"	750	762.0	1143	272*	327*	434*	—	—
32"	800	813.0	1219	310*	372*	494*	—	—
34"	850	864.0	1295	350*	421*	559*	—	—
36"	900	914.0	1372	393*	472*	627*	—	—
42"	1050	1067.0	1600	—	643*	855*	—	—
48"	1200	1219.0	1829	—	841*	1118*	—	—

ASME B16.9 45° long radius elbow — weight (kg)

NPS	DN	OD mm	Radius mm	Sch 10 kg	STD kg	XS kg	Sch 160 kg	XXS kg
½"	15	21.3	38	0.03*	0.04*	0.05*	0.06*	0.08*
¾"	20	26.7	38	0.04*	0.05*	0.07*	0.09*	0.11*

NPS	DN	OD mm	Radius mm	Sch 10 kg	STD kg	XS kg	Sch 160 kg	XXS kg
1"	25	33.4	38	0.06*	0.08*	0.10*	0.13*	0.17*
1¼"	32	42.2	48	0.10*	0.13*	0.17*	0.22*	0.30*
1½"	40	48.3	57	0.14*	0.19*	0.25*	0.33*	0.44*
2"	50	60.3	76	0.24*	0.33*	0.46*	0.68*	0.83*
2½"	65	73.0	95	0.40*	0.66*	0.88*	1.15*	1.57*
3"	80	88.9	114	0.60*	1.04*	1.41*	1.97*	2.55*
3½"	90	101.6	133	0.80*	1.46*	2.01*	—	3.66*
4"	100	114.3	152	1.03*	1.98*	2.74*	4.12*	5.05*
5"	125	141.3	190	1.78*	3.35*	4.76*	7.55*	8.83*
6"	150	168.3	229	2.56*	5.24*	7.88*	12.5*	14.7*
8"	200	219.1	305	4.93*	10.5*	15.9*	27.5*	26.6*
10"	250	273.0	381	8.56*	18.6*	25.1*	53.1*	47.8*
12"	300	323.8	457	13.3*	27.3*	36.0*	88.2*	69.1*
14"	350	355.6	533	23.6*	35.1*	46.3*	121*	—
16"	400	406.4	610	30.9*	46.0*	60.8*	180*	—
18"	450	457.0	686	39.2*	58.4*	77.2*	255*	—
20"	500	508.0	762	48.4*	72.2*	95.6*	348*	—
22"	550	559.0	838	58.7*	87.5*	116*	456*	—
24"	600	610.0	914	69.9*	104*	138*	598*	—
26"	650	660.0	991	102*	123*	163*	—	—
28"	700	711.0	1067	119*	142*	189*	—	—
30"	750	762.0	1143	136*	164*	217*	—	—
32"	800	813.0	1219	155*	186*	247*	—	—
34"	850	864.0	1295	175*	210*	279*	—	—
36"	900	914.0	1372	196*	236*	313*	—	—
42"	1050	1067.0	1600	—	322*	427*	—	—
48"	1200	1219.0	1829	—	421*	559*	—	—

ASME B16.9 90° short radius elbow — weight (kg)

NPS	DN	OD mm	Radius mm	Sch 10 kg	STD kg	XS kg	Sch 160 kg	XXS kg
1"	25	33.4	25	0.08*	0.10*	0.13*	0.17*	0.22*
1¼"	32	42.2	32	0.14*	0.18*	0.23*	0.29*	0.40*
1½"	40	48.3	38	0.19*	0.25*	0.33*	0.45*	0.59*
2"	50	60.3	51	0.32*	0.45*	0.62*	0.92*	1.11*
2½"	65	73.0	64	0.54*	0.89*	1.18*	1.54*	2.11*
3"	80	88.9	76	0.79*	1.39*	1.88*	2.63*	3.40*
3½"	90	101.6	89	1.07*	1.95*	2.68*	—	4.90*
4"	100	114.3	102	1.38*	2.65*	3.68*	5.54*	6.77*

NPS	DN	OD mm	Radius mm	Sch 10 kg	STD kg	XS kg	Sch 160 kg	XXS kg
5"	125	141.3	127	2.38*	4.47*	6.36*	10.1*	11.8*
6"	150	168.3	152	3.40*	6.95*	10.5*	16.6*	19.5*
8"	200	219.1	203	6.56*	14.0*	21.2*	36.5*	35.4*
10"	250	273.0	254	11.4*	24.8*	33.5*	70.8*	63.7*
12"	300	323.8	305	17.8*	36.4*	48.1*	118*	92.2*
14"	350	355.6	356	31.5*	46.8*	61.9*	162*	—
16"	400	406.4	406	41.2*	61.3*	81.0*	240*	—
18"	450	457.0	457	52.2*	77.8*	103*	340*	—
20"	500	508.0	508	64.6*	96.3*	128*	464*	—
22"	550	559.0	559	78.3*	117*	155*	608*	—
24"	600	610.0	610	93.3*	139*	185*	798*	—

ASME B16.9 180° long radius return — weight (kg)

NPS	DN	OD mm	O mm	Sch 10 kg	STD kg	XS kg	Sch 160 kg	XXS kg
½"	15	21.3	76	0.12*	0.16*	0.20*	0.24*	0.31*
¾"	20	26.7	76	0.16*	0.21*	0.27*	0.36*	0.45*
1"	25	33.4	76	0.26*	0.31*	0.40*	0.52*	0.67*
1¼"	32	42.2	95	0.41*	0.52*	0.69*	0.86*	1.19*
1½"	40	48.3	114	0.57*	0.75*	1.00*	1.34*	1.76*
2"	50	60.3	152	0.97*	1.34*	1.84*	2.73*	3.31*
2½"	65	73.0	190	1.62*	2.65*	3.51*	4.59*	6.27*
3"	80	88.9	229	2.39*	4.18*	5.66*	7.91*	10.3*
3½"	90	101.6	267	3.20*	5.86*	8.05*	—	14.7*
4"	100	114.3	305	4.13*	7.93*	11.0*	16.6*	20.2*
5"	125	141.3	381	7.13*	13.4*	19.1*	30.3*	35.4*
6"	150	168.3	457	10.2*	20.9*	31.5*	50.0*	58.6*
8"	200	219.1	610	19.7*	42.0*	63.8*	110*	107*
10"	250	273.0	762	34.2*	74.3*	101*	212*	191*
12"	300	323.8	914	53.2*	109*	144*	353*	276*
14"	350	355.6	1067	94.4*	140*	185*	486*	—
16"	400	406.4	1219	124*	184*	243*	721*	—
18"	450	457.0	1372	157*	233*	309*	1020*	—
20"	500	508.0	1524	194*	289*	383*	1393*	—
22"	550	559.0	1676	235*	350*	464*	1823*	—
24"	600	610.0	1829	280*	418*	554*	2392*	—

ASME B16.9 90° 3D elbow — weight (kg)

NPS	DN	OD mm	Radius mm	Sch 10 kg	STD kg	XS kg	Sch 160 kg	XXS kg
¾"	20	26.7	57	0.12*	0.16*	0.20*	0.27*	0.34*
1"	25	33.4	76	0.26*	0.31*	0.40*	0.52*	0.67*
1¼"	32	42.2	95	0.41*	0.52*	0.69*	0.86*	1.19*
1½"	40	48.3	114	0.57*	0.75*	1.00*	1.34*	1.76*
2"	50	60.3	152	0.97*	1.34*	1.84*	2.73*	3.31*
2½"	65	73.0	190	1.62*	2.65*	3.51*	4.59*	6.27*
3"	80	88.9	229	2.39*	4.18*	5.66*	7.91*	10.3*
3½"	90	101.6	267	3.20*	5.86*	8.05*	—	14.7*
4"	100	114.3	305	4.13*	7.93*	11.0*	16.6*	20.2*
5"	125	141.3	381	7.13*	13.4*	19.1*	30.3*	35.4*
6"	150	168.3	457	10.2*	20.9*	31.5*	50.0*	58.6*
8"	200	219.1	610	19.7*	42.0*	63.8*	110*	107*
10"	250	273.0	762	34.2*	74.3*	101*	212*	191*
12"	300	323.8	914	53.2*	109*	144*	353*	276*
14"	350	355.6	1067	94.4*	140*	185*	486*	—
16"	400	406.4	1219	124*	184*	243*	721*	—
18"	450	457.0	1372	157*	233*	309*	1020*	—
20"	500	508.0	1524	194*	289*	383*	1393*	—
22"	550	559.0	1676	235*	350*	464*	1823*	—
24"	600	610.0	1829	280*	418*	554*	2392*	—
26"	650	660.0	1981	408*	490*	650*	—	—
28"	700	711.0	2134	474*	569*	755*	—	—
30"	750	762.0	2286	545*	654*	868*	—	—
32"	800	813.0	2438	620*	745*	989*	—	—
34"	850	864.0	2591	701*	842*	1118*	—	—
36"	900	914.0	2743	785*	943*	1253*	—	—
42"	1050	1067.0	3200	—	1287*	1710*	—	—
48"	1200	1219.0	3658	—	1682*	2236*	—	—

ASME B16.9 45° 3D elbow — weight (kg)

NPS	DN	OD mm	Radius mm	Sch 10 kg	STD kg	XS kg	Sch 160 kg	XXS kg
¾"	20	26.7	57	0.06*	0.08*	0.10*	0.13*	0.17*
1"	25	33.4	76	0.13*	0.15*	0.20*	0.26*	0.34*
1¼"	32	42.2	95	0.21*	0.26*	0.34*	0.43*	0.60*
1½"	40	48.3	114	0.29*	0.37*	0.50*	0.67*	0.88*
2"	50	60.3	152	0.48*	0.67*	0.92*	1.37*	1.65*
2½"	65	73.0	190	0.81*	1.33*	1.75*	2.29*	3.13*

NPS	DN	OD mm	Radius mm	Sch 10 kg	STD kg	XS kg	Sch 160 kg	XXS kg
3"	80	88.9	229	1.20*	2.09*	2.83*	3.96*	5.13*
3½"	90	101.6	267	1.60*	2.93*	4.03*	—	7.35*
4"	100	114.3	305	2.07*	3.97*	5.51*	8.28*	10.1*
5"	125	141.3	381	3.56*	6.71*	9.55*	15.1*	17.7*
6"	150	168.3	457	5.11*	10.4*	15.7*	25.0*	29.3*
8"	200	219.1	610	9.85*	21.0*	31.9*	54.9*	53.3*
10"	250	273.0	762	17.1*	37.2*	50.3*	106*	95.6*
12"	300	323.8	914	26.6*	54.6*	72.0*	176*	138*
14"	350	355.6	1067	47.2*	70.2*	92.7*	243*	—
16"	400	406.4	1219	61.8*	92.0*	122*	360*	—
18"	450	457.0	1372	78.3*	117*	154*	510*	—
20"	500	508.0	1524	96.9*	144*	191*	696*	—
22"	550	559.0	1676	117*	175*	232*	912*	—
24"	600	610.0	1829	140*	209*	277*	1196*	—
26"	650	660.0	1981	204*	245*	325*	—	—
28"	700	711.0	2134	237*	285*	378*	—	—
30"	750	762.0	2286	272*	327*	434*	—	—
32"	800	813.0	2438	310*	372*	494*	—	—
34"	850	864.0	2591	350*	421*	559*	—	—
36"	900	914.0	2743	393*	472*	626*	—	—
42"	1050	1067.0	3200	—	643*	855*	—	—
48"	1200	1219.0	3658	—	841*	1118*	—	—

ASME B16.9 equal tee — weight (kg)

NPS	DN	OD mm	C run	M outlet	Sch 10 kg	STD kg	XS kg	Sch 160 kg	XXS kg
½"	15	21.3	25	25	0.08*	0.10*	0.13*	0.16*	0.21*
¾"	20	26.7	29	29	0.12*	0.16*	0.20*	0.27*	0.34*
1"	25	33.4	38	38	0.25*	0.30*	0.39*	0.52*	0.66*
1¼"	32	42.2	48	48	0.41*	0.52*	0.69*	0.86*	1.19*
1½"	40	48.3	57	57	0.57*	0.74*	0.99*	1.33*	1.75*
2"	50	60.3	64	64	0.80*	1.10*	1.51*	2.25*	2.72*
2½"	65	73.0	76	76	1.26*	2.07*	2.73*	3.57*	4.88*
3"	80	88.9	86	86	1.72*	3.01*	4.08*	5.70*	7.39*
3½"	90	101.6	95	95	2.17*	3.97*	5.46*	—	9.96*
4"	100	114.3	105	105	2.70*	5.18*	7.19*	10.8*	13.2*
5"	125	141.3	124	124	4.35*	8.20*	11.7*	18.5*	21.6*
6"	150	168.3	143	143	5.96*	12.2*	18.3*	29.1*	34.1*
8"	200	219.1	178	178	10.6*	22.6*	34.3*	59.0*	57.3*

NPS	DN	OD mm	C run	M outlet	Sch 10 kg	STD kg	XS kg	Sch 160 kg	XXS kg
10"	250	273.0	216	216	17.8*	38.5*	52.1*	110*	99.2*
12"	300	323.8	254	254	27.0*	55.4*	73.1*	179*	140*
14"	350	355.6	279	279	45.1*	67.0*	88.5*	232*	—
16"	400	406.4	305	305	55.7*	83.0*	110*	325*	—
18"	450	457.0	343	343	70.6*	105*	139*	460*	—
20"	500	508.0	381	381	87.3*	130*	172*	628*	—
22"	550	559.0	419	419	106*	158*	209*	821*	—
24"	600	610.0	432	432	117*	175*	232*	1001*	—
26"	650	660.0	495	495	184*	221*	293*	—	—
28"	700	711.0	521	521	207*	249*	330*	—	—
30"	750	762.0	559	559	239*	286*	380*	—	—
32"	800	813.0	597	597	272*	327*	434*	—	—
34"	850	864.0	635	635	308*	370*	491*	—	—
36"	900	914.0	673	673	346*	415*	551*	—	—
42"	1050	1067.0	762	711	—	529*	702*	—	—
48"	1200	1219.0	889	838	—	713*	948*	—	—

ASME B16.9 reducing tee — weight (kg)

Size run × outlet	C run	M outlet	Sch 10 kg	STD kg	XS kg	Sch 160 kg	XXS kg
½" × ¾"	25	25	0.07*	0.09*	0.12*	—	—
½" × ½"	25	25	0.07*	0.09*	0.12*	—	—
¾" × ½"	29	29	0.11*	0.15*	0.19*	0.25*	0.31*
¾" × ¾"	29	29	0.11*	0.14*	0.18*	—	—
1" × ¾"	38	38	0.23*	0.28*	0.37*	0.48*	0.61*
1" × ½"	38	38	0.23*	0.27*	0.35*	0.45*	0.59*
1¼" × 1"	48	48	0.39*	0.49*	0.65*	0.82*	1.12*
1¼" × ¾"	48	48	0.37*	0.46*	0.61*	0.77*	1.05*
1¼" × ½"	48	48	0.36*	0.45*	0.59*	0.74*	1.02*
1½" × 1¼"	57	57	0.55*	0.72*	0.95*	1.26*	1.68*
1½" × 1"	57	57	0.53*	0.68*	0.90*	1.21*	1.58*
1½" × ¾"	57	57	0.50*	0.65*	0.86*	1.15*	1.51*
1½" × ½"	57	57	0.48*	0.63*	0.84*	1.11*	1.47*
2" × 1½"	64	60	0.74*	1.02*	1.40*	2.05*	2.51*
2" × 1¼"	64	57	0.72*	0.98*	1.35*	1.97*	2.41*
2" × 1"	64	51	0.68*	0.94*	1.28*	1.89*	2.29*
2" × ¾"	64	44	0.65*	0.90*	1.23*	1.83*	2.21*
2½" × 2"	76	70	1.16*	1.87*	2.48*	3.30*	4.44*
2½" × 1½"	76	67	1.12*	1.79*	2.37*	3.11*	4.24*

Size run × outlet	C run	M outlet	Sch 10 kg	STD kg	XS kg	Sch 160 kg	XXS kg
2½" × 1¼"	76	64	1.09*	1.76*	2.32*	3.03*	4.14*
2½" × 1"	76	57	1.05*	1.70*	2.25*	2.94*	4.01*
3" × 2½"	86	83	1.64*	2.84*	3.83*	5.31*	6.93*
3" × 2"	86	76	1.54*	2.64*	3.58*	5.03*	6.48*
3" × 1½"	86	73	1.50*	2.57*	3.48*	4.85*	6.29*
3" × 1¼"	86	70	1.47*	2.54*	3.43*	4.77*	6.20*
3½" × 3"	95	92	2.09*	3.80*	5.21*	—	9.51*
3½" × 2½"	95	89	2.01*	3.63*	4.97*	—	9.06*
3½" × 2"	95	83	1.92*	3.44*	4.73*	—	8.62*
3½" × 1½"	95	79	1.87*	3.37*	4.62*	—	8.42*
4" × 3½"	105	102	2.61*	4.98*	6.90*	—	12.7*
4" × 3"	105	98	2.53*	4.80*	6.64*	9.89*	12.2*
4" × 2½"	105	95	2.45*	4.63*	6.40*	9.51*	11.7*
4" × 2"	105	89	2.35*	4.44*	6.16*	9.25*	11.3*
4" × 1½"	105	86	2.31*	4.37*	6.05*	9.07*	11.1*
5" × 4"	124	117	4.07*	7.68*	10.9*	17.2*	20.2*
5" × 3½"	124	114	3.99*	7.48*	10.6*	—	19.6*
5" × 3"	124	111	3.91*	7.32*	10.4*	16.3*	19.2*
5" × 2½"	124	108	3.83*	7.15*	10.1*	15.9*	18.8*
5" × 2"	124	105	3.75*	6.98*	9.92*	15.7*	18.4*
6" × 5"	143	137	5.71*	11.5*	17.3*	27.4*	32.1*
6" × 4"	143	130	5.42*	11.0*	16.5*	26.1*	30.7*
6" × 3½"	143	127	5.34*	10.8*	16.2*	—	30.1*
6" × 3"	143	124	5.27*	10.7*	16.0*	25.2*	29.7*
6" × 2½"	143	121	5.19*	10.5*	15.7*	24.8*	29.3*
8" × 6"	178	168	9.90*	21.0*	31.9*	54.5*	53.8*
8" × 5"	178	162	9.64*	20.4*	30.8*	52.7*	51.8*
8" × 4"	178	156	9.37*	19.9*	30.1*	51.5*	50.4*
8" × 3½"	178	152	9.28*	19.7*	29.8*	—	49.8*
10" × 8"	216	203	16.7*	36.1*	49.4*	102*	92.7*
10" × 6"	216	194	16.0*	34.6*	47.1*	97.9*	89.4*
10" × 5"	216	191	15.8*	34.0*	46.1*	96.4*	87.7*
10" × 4"	216	184	15.5*	33.5*	45.4*	95.0*	86.2*
12" × 10"	254	241	25.6*	52.9*	69.9*	169*	134*
12" × 8"	254	229	24.5*	50.5*	67.3*	161*	128*
12" × 6"	254	219	23.8*	48.9*	64.9*	156*	124*
12" × 5"	254	216	23.6*	48.4*	64.0*	155*	123*
14" × 12"	279	270	42.3*	65.2*	86.1*	224*	—

Size run × outlet	C run	M outlet	Sch 10 kg	STD kg	XS kg	Sch 160 kg	XXS kg
14" × 10"	279	257	40.9*	62.7*	83.0*	214*	—
14" × 8"	279	248	39.9*	60.5*	80.6*	206*	—
14" × 6"	279	238	39.2*	58.9*	78.1*	202*	—
16" × 14"	305	305	54.7*	81.5*	108*	314*	—
16" × 12"	305	295	51.9*	79.6*	105*	306*	—
16" × 10"	305	283	50.5*	77.1*	102*	296*	—
16" × 8"	305	273	49.5*	74.8*	99.7*	288*	—
16" × 6"	305	264	48.8*	73.3*	97.3*	284*	—
18" × 16"	343	330	68.5*	102*	135*	440*	—
18" × 14"	343	330	67.5*	101*	133*	430*	—
18" × 12"	343	321	64.7*	98.7*	131*	422*	—
18" × 10"	343	308	63.3*	96.2*	127*	411*	—
18" × 8"	343	298	62.2*	93.9*	125*	404*	—
20" × 18"	381	368	84.9*	127*	168*	603*	—
20" × 16"	381	356	82.8*	123*	163*	585*	—
20" × 14"	381	356	81.8*	122*	161*	574*	—
20" × 12"	381	346	79.0*	120*	159*	565*	—
20" × 10"	381	333	77.6*	118*	156*	555*	—
20" × 8"	381	324	76.6*	115*	153*	548*	—
22" × 20"	419	406	103*	154*	204*	794*	—
22" × 18"	419	394	101*	150*	199*	770*	—
22" × 16"	419	381	98.6*	147*	195*	751*	—
22" × 14"	419	381	97.6*	146*	193*	740*	—
22" × 12"	419	371	94.8*	144*	190*	732*	—
22" × 10"	419	359	93.4*	141*	187*	721*	—
24" × 22"	432	432	116*	173*	229*	980*	—
24" × 20"	432	432	115*	171*	227*	963*	—
24" × 18"	432	419	112*	167*	222*	938*	—
24" × 16"	432	406	110*	164*	218*	919*	—
24" × 14"	432	406	109*	163*	216*	908*	—
24" × 12"	432	397	106*	161*	213*	900*	—
24" × 10"	432	384	105*	158*	210*	890*	—

ASME B16.9 concentric / eccentric reducer — weight (kg)

Size large × small	H mm	Sch 10 kg	STD kg	XS kg	Sch 160 kg	XXS kg
¾" × ½"	38	0.05*	0.06*	0.08*	0.10*	0.12*
¾" × ⅜"	38	0.04*	0.05*	0.07*	—	—
1" × ¾"	51	0.09*	0.11*	0.15*	0.19*	0.24*

Size large × small	H mm	Sch 10 kg	STD kg	XS kg	Sch 160 kg	XXS kg
1" × ½"	51	0.08*	0.10*	0.13*	0.17*	0.21*
1¼" × 1"	51	0.13*	0.16*	0.21*	0.26*	0.35*
1¼" × ¾"	51	0.11*	0.14*	0.18*	0.23*	0.31*
1¼" × ½"	51	0.10*	0.12*	0.16*	0.20*	0.28*
1½" × 1¼"	64	0.19*	0.25*	0.33*	0.43*	0.58*
1½" × 1"	64	0.17*	0.22*	0.29*	0.39*	0.50*
1½" × ¾"	64	0.15*	0.19*	0.26*	0.34*	0.44*
1½" × ½"	64	0.14*	0.18*	0.24*	0.31*	0.41*
2" × 1½"	76	0.28*	0.38*	0.51*	0.73*	0.92*
2" × 1¼"	76	0.26*	0.35*	0.48*	0.67*	0.85*
2" × 1"	76	0.24*	0.32*	0.43*	0.61*	0.75*
2" × ¾"	76	0.21*	0.28*	0.39*	0.56*	0.68*
2½" × 2"	89	0.43*	0.66*	0.88*	1.22*	1.58*
2½" × 1½"	89	0.39*	0.59*	0.79*	1.04*	1.40*
2½" × 1¼"	89	0.37*	0.56*	0.74*	0.96*	1.32*
2½" × 1"	89	0.34*	0.52*	0.68*	0.90*	1.21*
3" × 2½"	89	0.55*	0.93*	1.25*	1.69*	2.25*
3" × 2"	89	0.49*	0.78*	1.06*	1.52*	1.92*
3" × 1½"	89	0.45*	0.72*	0.97*	1.34*	1.74*
3" × 1¼"	89	0.43*	0.69*	0.92*	1.26*	1.66*
3½" × 3"	102	0.74*	1.33*	1.82*	—	3.30*
3½" × 2½"	102	0.68*	1.19*	1.61*	—	2.91*
3½" × 2"	102	0.61*	1.02*	1.40*	—	2.54*
3½" × 1½"	102	0.56*	0.94*	1.29*	—	2.33*
3½" × 1¼"	102	0.54*	0.91*	1.24*	—	2.24*
4" × 3½"	102	0.85*	1.59*	2.19*	—	4.02*
4" × 3"	102	0.79*	1.47*	2.01*	2.94*	3.68*
4" × 2½"	102	0.73*	1.32*	1.81*	2.60*	3.29*
4" × 2"	102	0.66*	1.15*	1.60*	2.39*	2.92*
4" × 1½"	102	0.61*	1.08*	1.48*	2.18*	2.71*
5" × 4"	127	1.33*	2.52*	3.55*	5.51*	6.56*
5" × 3½"	127	1.26*	2.36*	3.31*	—	6.10*
5" × 3"	127	1.20*	2.20*	3.08*	4.70*	5.67*
5" × 2½"	127	1.12*	2.03*	2.83*	4.27*	5.19*
5" × 2"	127	1.03*	1.81*	2.56*	4.02*	4.73*
6" × 5"	140	1.87*	3.68*	5.40*	8.58*	10.0*
6" × 4"	140	1.63*	3.26*	4.77*	7.43*	8.84*
6" × 3½"	140	1.56*	3.07*	4.50*	—	8.32*

Size large × small	H mm	Sch 10 kg	STD kg	XS kg	Sch 160 kg	XXS kg
6" × 3"	140	1.49*	2.91*	4.25*	6.54*	7.86*
6" × 2½"	140	1.40*	2.71*	3.97*	6.06*	7.32*
8" × 6"	152	2.70*	5.65*	8.55*	14.3*	14.9*
8" × 5"	152	2.52*	5.13*	7.63*	12.8*	13.2*
8" × 4"	152	2.26*	4.68*	6.94*	11.6*	11.9*
8" × 3½"	152	2.18*	4.48*	6.65*	—	11.3*
10" × 8"	178	4.46*	9.61*	13.7*	26.5*	24.6*
10" × 6"	178	3.89*	8.27*	11.6*	22.4*	21.9*
10" × 5"	178	3.68*	7.67*	10.5*	20.7*	19.9*
10" × 4"	178	3.38*	7.14*	9.70*	19.2*	18.3*
12" × 10"	203	6.80*	14.3*	19.1*	43.8*	36.5*
12" × 8"	203	5.96*	12.4*	17.3*	37.3*	31.4*
12" × 6"	203	5.31*	10.9*	14.9*	32.6*	28.4*
12" × 5"	203	5.07*	10.2*	13.7*	30.7*	26.0*
14" × 12"	330	15.7*	26.9*	35.5*	90.2*	—
14" × 10"	330	14.3*	24.5*	32.7*	78.7*	—
14" × 8"	330	12.9*	21.5*	29.8*	68.1*	—
14" × 6"	330	11.9*	19.0*	26.0*	60.5*	—
16" × 14"	356	21.9*	32.6*	43.1*	121*	—
16" × 12"	356	18.4*	31.2*	41.3*	113*	—
16" × 10"	356	16.9*	28.7*	38.3*	100*	—
16" × 8"	356	15.4*	25.4*	35.1*	89.1*	—
18" × 16"	381	26.6*	39.7*	52.5*	165*	—
18" × 14"	381	25.1*	37.3*	49.3*	148*	—
18" × 12"	381	21.3*	35.8*	47.3*	140*	—
18" × 10"	381	19.7*	33.1*	44.1*	126*	—
20" × 18"	508	39.8*	59.3*	78.5*	273*	—
20" × 16"	508	37.7*	56.1*	74.3*	248*	—
20" × 14"	508	35.5*	52.9*	70.0*	226*	—
20" × 12"	508	30.5*	50.9*	67.4*	214*	—
22" × 20"	508	44.0*	65.7*	87.0*	330*	—
22" × 18"	508	41.9*	62.5*	82.7*	302*	—
22" × 16"	508	39.8*	59.3*	78.5*	277*	—
22" × 14"	508	37.7*	56.1*	74.3*	254*	—
24" × 22"	508	48.3*	72.1*	95.5*	395*	—
24" × 20"	508	46.2*	68.9*	91.3*	366*	—
24" × 18"	508	44.0*	65.7*	87.0*	338*	—
24" × 16"	508	41.9*	62.5*	82.8*	313*	—

Size large × small	H mm	Sch 10 kg	STD kg	XS kg	Sch 160 kg	XXS kg
26" × 24"	610	71.1*	94.2*	125*	—	—
26" × 22"	610	68.5*	90.3*	120*	—	—
26" × 20"	610	65.9*	86.5*	115*	—	—
26" × 18"	610	63.4*	82.6*	109*	—	—
28" × 26"	610	84.8*	102*	135*	—	—
28" × 24"	610	74.2*	98.0*	130*	—	—
28" × 20"	610	69.1*	90.3*	120*	—	—
28" × 18"	610	66.6*	86.5*	115*	—	—
30" × 28"	610	91.1*	109*	145*	—	—
30" × 26"	610	88.0*	106*	140*	—	—
30" × 24"	610	77.4*	102*	135*	—	—
30" × 20"	610	72.3*	94.2*	125*	—	—
32" × 30"	610	97.5*	117*	155*	—	—
32" × 28"	610	94.3*	113*	150*	—	—
32" × 26"	610	91.1*	109*	145*	—	—
32" × 24"	610	80.6*	106*	140*	—	—
34" × 32"	610	104*	125*	166*	—	—
34" × 30"	610	101*	121*	161*	—	—
34" × 26"	610	94.3*	113*	150*	—	—
34" × 24"	610	83.8*	110*	145*	—	—
36" × 34"	610	110*	132*	176*	—	—
36" × 32"	610	107*	129*	171*	—	—
36" × 30"	610	104*	125*	166*	—	—
36" × 26"	610	97.5*	117*	155*	—	—
36" × 24"	610	86.9*	113*	150*	—	—
42" × 36"	610	—	148*	196*	—	—
42" × 34"	610	—	144*	191*	—	—
42" × 32"	610	—	140*	186*	—	—
42" × 30"	610	—	136*	181*	—	—
48" × 42"	711	—	199*	264*	—	—

ASME B16.9 cap — weight (kg)

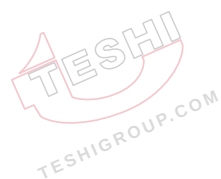
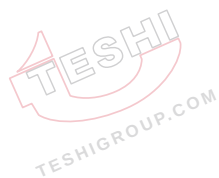
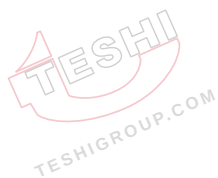
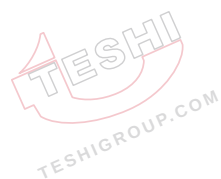
NPS	DN	OD mm	E mm	Sch 10 kg	STD kg	XS kg	Sch 160 kg	XXS kg
½"	15	21.3	25	0.03*	0.04*	0.05*	0.07*	0.11*
¾"	20	26.7	25	0.04*	0.05*	0.07*	0.10*	0.14*
1"	25	33.4	38	0.09*	0.11*	0.15*	0.22*	0.31*
1¼"	32	42.2	38	0.12*	0.16*	0.21*	0.28*	0.42*
1½"	40	48.3	38	0.14*	0.19*	0.26*	0.36*	0.51*

NPS	DN	OD mm	E mm	Sch 10 kg	STD kg	XS kg	Sch 160 kg	XXS kg
2"	50	60.3	38	0.18*	0.25*	0.36*	0.57*	0.72*
2½"	65	73.0	38	0.25*	0.42*	0.57*	0.77*	1.13*
3"	80	88.9	51	0.40*	0.72*	0.99*	1.45*	1.99*
3½"	90	101.6	64	0.56*	1.06*	1.49*	—	2.98*
4"	100	114.3	64	0.64*	1.27*	1.81*	2.85*	3.61*
5"	125	141.3	76	1.06*	2.04*	2.97*	4.95*	5.94*
6"	150	168.3	89	1.48*	3.10*	4.78*	7.96*	9.57*
8"	200	219.1	102	2.50*	5.43*	8.43*	15.3*	14.8*
10"	250	273.0	127	4.31*	9.55*	13.1*	29.4*	26.2*
12"	300	323.8	152	6.67*	13.9*	18.5*	48.6*	37.1*
14"	350	355.6	165	11.1*	16.6*	22.1*	62.3*	—
16"	400	406.4	178	13.8*	20.7*	27.6*	87.9*	—
18"	450	457.0	203	17.6*	26.5*	35.3*	126*	—
20"	500	508.0	229	22.1*	33.1*	44.1*	174*	—
22"	550	559.0	254	26.9*	40.4*	53.8*	229*	—
24"	600	610.0	267	31.0*	46.6*	62.1*	291*	—
26"	650	660.0	267	42.5*	51.1*	68.2*	—	—
28"	700	711.0	267	46.5*	55.9*	74.5*	—	—
30"	750	762.0	267	50.5*	60.8*	81.0*	—	—
32"	800	813.0	267	54.7*	65.8*	87.7*	—	—
34"	850	864.0	267	58.9*	70.9*	94.5*	—	—
36"	900	914.0	267	63.2*	76.0*	101*	—	—
42"	1050	1067.0	305	—	102*	136*	—	—
48"	1200	1219.0	343	—	131*	175*	—	—

ASME B16.9 / MSS SP-43 stub ends — weight (kg)

NPS	DN	OD mm	F long	F short	G lap	Sch 10 long	Sch 10 short	STD long	STD short	XS long	XS short
½"	15	21.3	76	51	35	0.09*	0.06*	0.11*	0.08*	0.14*	0.10*
¾"	20	26.7	76	51	43	0.11*	0.08*	0.15*	0.11*	0.19*	0.14*
1"	25	33.4	102	51	51	0.24*	0.13*	0.29*	0.16*	0.37*	0.21*
1¼"	32	42.2	102	51	64	0.31*	0.18*	0.40*	0.22*	0.52*	0.30*
1½"	40	48.3	102	51	73	0.37*	0.21*	0.48*	0.27*	0.65*	0.37*
2"	50	60.3	152	64	92	0.68*	0.33*	0.94*	0.46*	1.30*	0.64*
2½"	65	73.0	152	64	105	0.91*	0.44*	1.49*	0.73*	1.98*	0.98*
3"	80	88.9	152	64	127	1.14*	0.57*	1.99*	1.00*	2.71*	1.36*
3½"	90	101.6	152	76	140	1.30*	0.74*	2.39*	1.36*	3.29*	1.88*
4"	100	114.3	152	76	157	1.49*	0.85*	2.87*	1.65*	4.00*	2.31*
5"	125	141.3	203	76	186	2.65*	1.19*	5.01*	2.25*	7.15*	3.21*

NPS	DN	OD mm	F long	F short	G lap	Sch 10 long	Sch 10 short	STD long	STD short	XS long	XS short
6"	150	168.3	203	89	216	3.19*	1.61*	6.54*	3.32*	9.88*	5.03*
8"	200	219.1	203	102	270	4.63*	2.61*	9.89*	5.60*	15.1*	8.54*
10"	250	273.0	254	127	324	7.84*	4.31*	17.1*	9.40*	23.1*	12.7*
12"	300	323.8	254	152	381	10.3*	6.60*	21.1*	13.6*	27.9*	18.0*
14"	350	355.6	305	152	413	18.4*	10.0*	27.4*	15.0*	36.2*	19.8*
16"	400	406.4	305	152	470	21.3*	11.7*	31.7*	17.5*	42.0*	23.1*
18"	450	457.0	305	152	533	24.5*	13.7*	36.5*	20.4*	48.3*	27.0*
20"	500	508.0	305	152	584	27.2*	15.2*	40.6*	22.7*	53.8*	30.1*
22"	550	559.0	305	152	641	30.2*	17.0*	45.2*	25.4*	59.9*	33.7*
24"	600	610.0	305	152	692	33.0*	18.5*	49.3*	27.7*	65.4*	36.8*



EN 10253-2 butt-weld fittings

2D, 3D and 5D elbows, tees, reducers and caps. Weights calculated (*) for standard (STD) and extra-strong (XS) wall of the same outside diameter.

EN 10253-2 90° elbows type 2D — weight (kg)

DN	D OD	R mm	90° STD kg	90° XS kg	45° STD kg	45° XS kg
15	21.3	25	0.05*	0.07*	0.03*	0.03*
20	26.9	25	0.07*	0.09*	0.03*	0.04*
25	33.7	25	0.10*	0.13*	0.05*	0.07*
32	42.4	32	0.18*	0.23*	0.09*	0.12*
40	48.3	38	0.25*	0.33*	0.12*	0.17*
50	60.3	51	0.45*	0.62*	0.22*	0.31*
80	88.9	76	1.39*	1.88*	0.69*	0.94*
100	114.3	102	2.65*	3.68*	1.33*	1.84*
150	168.3	152	6.95*	10.5*	3.47*	5.23*
200	219.1	203	14.0*	21.2*	6.99*	10.6*
250	273	254	24.8*	33.5*	12.4*	16.8*
300	323.9	305	36.4*	48.1*	18.2*	24.0*
350	355.6	356	46.8*	61.9*	23.4*	30.9*
400	406.4	406	61.3*	81.0*	30.6*	40.5*
450	457	457	77.8*	103*	38.9*	51.4*
500	508	508	96.3*	128*	48.1*	63.8*
550	559	559	117*	155*	58.4*	77.4*
600	610	610	139*	185*	69.6*	92.3*
650	660	660	163*	216*	81.6*	108*
700	711	711	190*	252*	94.8*	126*
750	762	762	218*	289*	109*	145*
800	813	813	248*	330*	124*	165*
850	864	864	281*	373*	140*	186*
900	914	914	314*	417*	157*	209*
1050	1067	1067	429*	570*	215*	285*
1200	1219	1219	561*	745*	280*	373*

EN 10253-2 90° elbows type 3D — weight (kg)

DN	D OD	R mm	90° STD kg	90° XS kg	45° STD kg	45° XS kg
15	21.3	38	0.08*	0.10*	0.04*	0.05*
20	26.9	38	0.10*	0.14*	0.05*	0.07*
25	33.7	38	0.15*	0.20*	0.08*	0.10*
32	42.4	48	0.26*	0.35*	0.13*	0.17*
40	48.3	57	0.37*	0.50*	0.19*	0.25*

DN	D OD	R mm	90° STD kg	90° XS kg	45° STD kg	45° XS kg
50	60.3	76	0.67*	0.92*	0.33*	0.46*
80	88.9	114	2.08*	2.82*	1.04*	1.41*
—	101.6	133	2.92*	4.01*	1.46*	2.01*
100	114.3	152	3.95*	5.49*	1.98*	2.74*
150	168.3	229	10.5*	15.8*	5.24*	7.88*
200	219.1	305	21.0*	31.9*	10.5*	15.9*
250	273	381	37.2*	50.3*	18.6*	25.1*
300	323.9	457	54.6*	72.0*	27.3*	36.0*
350	355.6	533	70.1*	92.6*	35.1*	46.3*
400	406.4	610	92.1*	122*	46.0*	60.8*
450	457	686	117*	154*	58.4*	77.2*
500	508	762	144*	191*	72.2*	95.6*
550	559	838	175*	232*	87.5*	116*
600	610	914	209*	277*	104*	138*
650	660	990	245*	325*	122*	162*
700	711	1067	285*	378*	142*	189*
750	762	1143	327*	434*	164*	217*
800	813	1219	372*	494*	186*	247*
850	864	1296	421*	559*	211*	280*
900	914	1372	472*	627*	236*	313*
1050	1067	1600	643*	855*	322*	427*
1200	1219	1829	841*	1118*	421*	559*

EN 10253-2 90° elbows type 5D — weight (kg)

DN	D OD	R mm	90° STD kg	90° XS kg	45° STD kg	45° XS kg
15	21.3	42.5	0.09*	0.11*	0.04*	0.06*
20	26.9	57.5	0.16*	0.20*	0.08*	0.10*
25	33.7	72.5	0.29*	0.38*	0.15*	0.19*
32	42.4	92.5	0.51*	0.67*	0.25*	0.33*
40	48.3	109.5	0.72*	0.96*	0.36*	0.48*
50	60.3	137.5	1.21*	1.66*	0.61*	0.83*
80	88.9	207.5	3.79*	5.13*	1.90*	2.56*
—	101.6	235	5.16*	7.09*	2.58*	3.54*
100	114.3	270	7.02*	9.75*	3.51*	4.88*
150	168.3	390	17.8*	26.9*	8.92*	13.4*
200	219.1	515	35.5*	53.9*	17.7*	26.9*
250	273	650	63.4*	85.7*	31.7*	42.9*
300	323.9	770	92.0*	121*	46.0*	60.7*

DN	D OD	R mm	90° STD kg	90° XS kg	45° STD kg	45° XS kg
350	355.6	850	112*	148*	55.9*	73.8*
400	406.4	970	146*	194*	73.2*	96.8*
450	457	1122	191*	253*	95.5*	126*
500	508	1245	236*	312*	118*	156*
550	559	1398	292*	387*	146*	194*
600	610	1525	348*	462*	174*	231*
650	660	1650	408*	541*	204*	271*
700	711	1778	474*	629*	237*	315*
750	762	1905	545*	723*	273*	362*
800	813	2033	621*	824*	311*	412*
850	864	2155	700*	930*	350*	465*
900	914	2285	786*	1044*	393*	522*
1050	1067	2665	1072*	1424*	536*	712*
1200	1219	3050	1403*	1864*	701*	932*

EN 10253-2 equal tee — weight (kg)

DN	D OD	F mm	STD kg	XS kg
15	21.3	25	0.10*	0.13*
20	26.9	29	0.16*	0.20*
25	33.7	38	0.30*	0.39*
32	42.4	48	0.52*	0.69*
40	48.3	57	0.74*	0.99*
50	60.3	64	1.10*	1.51*
80	88.9	86	3.01*	4.08*
90	101.6	95	3.97*	5.46*
100	114.3	105	5.18*	7.19*
150	168.3	143	12.2*	18.3*
200	219.1	178	22.6*	34.3*
250	273	216	38.5*	52.1*
300	323.9	254	55.4*	73.1*
350	355.6	279	67.0*	88.5*
400	406.4	305	83.0*	110*
450	457	343	105*	139*
500	508	381	130*	172*
550	559	419	158*	209*
600	610	432	175*	232*
650	660	495	221*	293*
700	711	521	249*	330*

DN	D OD	F mm	STD kg	XS kg
750	762	559	286*	380*
800	813	597	327*	434*
850	864	635	370*	491*
900	914	673	415*	551*
1050	1067	762	544*	723*
1200	1219	889	731*	972*

EN 10253-2 reducer — weight (kg)

Size	L mm	STD kg	XS kg
DN 20 × 15	38	0.06*	0.08*
DN 25 × 20	51	0.11*	0.15*
DN 25 × 15	51	0.10*	0.13*
DN 32 × 25	51	0.16*	0.21*
DN 32 × 20	51	0.14*	0.18*
DN 32 × 15	51	0.12*	0.16*
DN 40 × 32	64	0.25*	0.33*
DN 40 × 25	64	0.22*	0.29*
DN 40 × 20	64	0.19*	0.26*
DN 50 × 40	76	0.38*	0.51*
DN 50 × 32	76	0.35*	0.48*
DN 50 × 25	76	0.32*	0.43*
DN 50 × 20	76	0.28*	0.39*
DN 80 × 50	89	0.78*	1.06*
DN 80 × 40	89	0.72*	0.97*
DN 80 × 32	89	0.69*	0.92*
DN 100 × 80	102	1.47*	2.01*
DN 100 × 50	102	1.15*	1.60*
DN 100 × 40	102	1.08*	1.48*
DN 150 × 100	140	3.26*	4.77*
DN 150 × 80	140	2.91*	4.25*
DN 200 × 150	152	5.65*	8.55*
DN 200 × 100	152	4.68*	6.94*
DN 200 × 80	152	4.30*	6.38*
DN 250 × 200	178	9.61*	13.7*
DN 250 × 150	178	8.27*	11.6*
DN 250 × 100	178	7.14*	9.70*
DN 300 × 250	203	14.3*	19.1*
DN 300 × 200	203	12.4*	17.3*

Size		L mm	STD kg	XS kg
	DN 300 × 150	203	10.9*	14.9*
	DN 350 × 300	330	26.9*	35.5*
	DN 350 × 250	330	24.5*	32.7*
	DN 350 × 200	330	21.5*	29.8*
	DN 350 × 150	330	19.0*	26.0*
	DN 400 × 350	356	32.6*	43.1*
	DN 400 × 300	356	31.2*	41.3*
	DN 400 × 250	356	28.7*	38.3*
	DN 400 × 200	356	25.4*	35.1*
	DN 450 × 400	381	39.7*	52.5*
	DN 450 × 350	381	37.3*	49.3*
	DN 450 × 300	381	35.8*	47.3*
	DN 450 × 250	381	33.1*	44.1*
	DN 500 × 450	508	59.3*	78.5*
	DN 500 × 400	508	56.1*	74.3*
	DN 500 × 350	508	52.9*	70.0*
	DN 500 × 300	508	50.9*	67.4*
	DN 550 × 500	508	65.7*	87.0*
	DN 550 × 450	508	62.5*	82.7*
	DN 550 × 400	508	59.3*	78.5*
	DN 550 × 350	508	56.1*	74.3*
	DN 600 × 550	508	72.1*	95.5*
	DN 600 × 500	508	68.9*	91.3*
	DN 600 × 450	508	65.7*	87.0*
	DN 600 × 400	508	62.5*	82.8*
	DN 700 × 600	610	98.0*	130*
	DN 700 × 500	610	90.3*	120*
	DN 700 × 450	610	86.5*	115*
	DN 800 × 700	610	113*	150*
	DN 800 × 600	610	106*	140*
	DN 800 × 550	610	102*	135*
	DN 800 × 500	610	98.0*	130*
	DN 900 × 800	610	129*	171*
	DN 900 × 700	610	121*	160*
	DN 900 × 600	610	113*	150*
	DN 1200 × 900	711	185*	246*
	DN 1200 × 800	711	177*	235*

EN 10253-2 cap — weight (kg)

DN	D OD	h mm	STD kg	XS kg
15	21.3	25	0.04*	0.05*
20	26.9	25	0.05*	0.07*
25	33.7	38	0.12*	0.16*
32	42.4	38	0.16*	0.21*
40	48.3	38	0.19*	0.26*
50	60.3	38	0.25*	0.36*
80	88.9	51	0.72*	0.99*
—	101.6	64	1.06*	1.49*
100	114.3	64	1.27*	1.81*
150	168.3	89	3.10*	4.78*
200	219.1	102	5.43*	8.43*
250	273.1	127	9.55*	13.1*
300	323.9	152	13.9*	18.5*
350	355.6	165	16.6*	22.1*
400	406.4	178	20.7*	27.6*
450	457	203	26.5*	35.3*
500	508	229	33.1*	44.1*
550	559	254	40.4*	53.8*
600	610	267	46.6*	62.1*
650	660	267	51.1*	68.2*
700	711	267	55.9*	74.5*
750	762	267	60.8*	81.0*
800	813	267	65.8*	87.7*
850	864	267	70.9*	94.5*
900	914	267	76.0*	101*

MSS SP-75 high-yield butt-weld fittings

Elbows, tees and caps NPS 26"–60" for pipelines. Wall thickness is chosen to suit the line pipe, so weights are given for 9.53, 12.70 and 19.05 mm walls (calculated, *).

MSS SP-75 90° elbow — weight (kg) by wall thickness

NPS	OD mm	A 90°	B 45°	9.53 mm kg	12.70 mm kg	19.05 mm kg
16"	406.4	610	254	92.1*	122*	180*
18"	457	686	286	117*	154*	228*
20"	508	762	318	144*	191*	283*
22"	559	838	343	175*	232*	344*
24"	610	914	381	209*	277*	411*
26"	660	991	406	245*	325*	483*
28"	711	1067	438	285*	378*	561*
30"	762	1143	470	327*	434*	645*
32"	813	1219	502	372*	494*	736*
34"	864	1295	533	421*	559*	832*
36"	914	1372	565	472*	627*	933*
38"	965	1448	600	526*	699*	1041*
40"	1016	1524	632	583*	775*	1155*
42"	1067	1600	660	643*	855*	1274*
44"	1118	1676	695	706*	939*	1400*
46"	1168	1753	727	772*	1026*	1531*
48"	1219	1829	759	841*	1118*	1668*
50"	1270	1905	787	913*	1214*	1811*
52"	1321	1981	819	988*	1313*	1960*
54"	1372	2057	851	1066*	1417*	2115*
56"	1422	2134	883	1146*	1524*	2276*
58"	1473	2210	914	1230*	1635*	2442*
60"	1524	2286	946	1316*	1751*	2615*

MSS SP-75 equal tee — weight (kg) by wall thickness

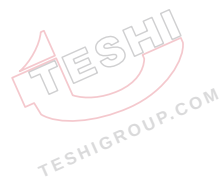
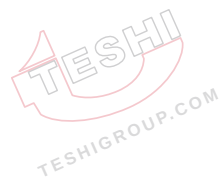
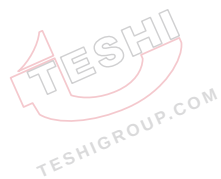
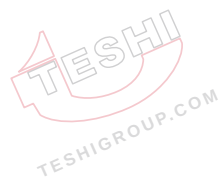
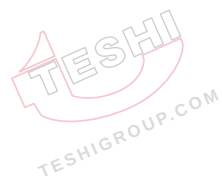
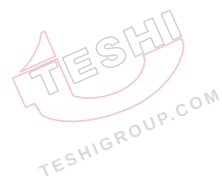
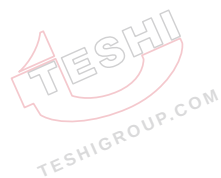
NPS	OD mm	C run	M outlet	9.53 mm kg	12.70 mm kg	19.05 mm kg
16"	406.4	305	305	83.0*	110*	162*
18"	457	343	343	105*	139*	206*
20"	508	381	381	130*	172*	255*
22"	559	419	419	158*	209*	310*
24"	610	432	432	175*	232*	344*
26"	660	495	495	221*	293*	435*
28"	711	521	521	249*	330*	491*
30"	762	559	559	286*	380*	565*

NPS	OD mm	C run	M outlet	9.53 mm kg	12.70 mm kg	19.05 mm kg
32"	813	597	597	327*	434*	646*
34"	864	635	635	370*	491*	731*
36"	914	673	673	415*	551*	821*
38"	965	711	711	463*	615*	917*
40"	1016	749	749	514*	683*	1018*
42"	1067	762	711	529*	702*	1047*
44"	1118	813	762	596*	791*	1180*
46"	1168	851	800	653*	868*	1294*
48"	1219	889	838	713*	948*	1414*
50"	1270	934	876	781*	1038*	1549*
52"	1321	978	908	849*	1129*	1685*
54"	1372	1016	946	917*	1220*	1821*
56"	1422	1054	978	986*	1310*	1957*
58"	1473	1092	1016	1059*	1408*	2103*
60"	1524	1118	1054	1125*	1496*	2234*

MSS SP-75 cap — weight (kg) by wall thickness

NPS	OD mm	H mm	9.53 mm kg	12.70 mm kg	19.05 mm kg
16"	406.4	178	20.7*	27.6*	41.4*
18"	457	203	26.5*	35.3*	52.9*
20"	508	229	33.1*	44.1*	66.2*
22"	559	254	40.4*	53.8*	80.7*
24"	610	267	46.6*	62.1*	93.1*
26"	660	267	51.1*	68.2*	102*
28"	711	267	55.9*	74.5*	112*
30"	762	267	60.8*	81.0*	122*
32"	813	267	65.8*	87.7*	131*
34"	864	267	70.9*	94.5*	142*
36"	914	267	76.0*	101*	152*
38"	965	305	90.0*	120*	180*
40"	1016	305	95.9*	128*	192*
42"	1067	305	102*	136*	204*
44"	1118	343	118*	157*	236*
46"	1168	343	125*	166*	249*
48"	1219	343	131*	175*	263*
50"	1270	368	146*	194*	292*
52"	1321	368	153*	204*	306*
54"	1372	406	173*	230*	346*

NPS	OD mm	H mm	9.53 mm kg	12.70 mm kg	19.05 mm kg
56"	1422	406	181*	241*	362*
58"	1473	419	194*	258*	387*
60"	1524	419	202*	269*	404*



ASME B16.11 forged fittings

Socket weld and threaded elbows, tees and crosses. Forged body shapes vary by maker, so these weights are approximate (*, ±15 %); actual weights are confirmed on the packing list.

ASME B16.11 socket weld fittings — approximate weight (kg)

NPS	DN	3000 90° elbow	3000 tee	3000 cross	6000 90° elbow	6000 tee	6000 cross	9000 90° elbow	9000 tee	9000 cross
1/8"	6	0.06*	0.10*	0.13*	0.07*	0.11*	0.15*	—	—	—
1/4"	8	0.07*	0.11*	0.15*	0.12*	0.18*	0.23*	—	—	—
3/8"	10	0.10*	0.15*	0.20*	0.16*	0.24*	0.32*	—	—	—
1/2"	15	0.14*	0.21*	0.28*	0.26*	0.39*	0.51*	0.59*	0.88*	1.17*
3/4"	20	0.22*	0.33*	0.45*	0.45*	0.67*	0.89*	0.85*	1.28*	1.70*
1"	25	0.32*	0.48*	0.64*	0.67*	1.01*	1.34*	1.23*	1.85*	2.47*
1 1/4"	32	0.39*	0.58*	0.78*	0.85*	1.27*	1.70*	1.55*	2.33*	3.11*
1 1/2"	40	0.50*	0.75*	1.00*	1.25*	1.87*	2.50*	1.85*	2.78*	3.71*
2"	50	0.68*	1.03*	1.37*	1.87*	2.80*	3.74*	3.85*	5.78*	7.71*
2 1/2"	65	0.81*	1.22*	1.62*	—	—	—	—	—	—
3"	80	1.49*	2.23*	2.97*	—	—	—	—	—	—
4"	100	1.11*	1.67*	2.23*	—	—	—	—	—	—

ASME B16.11 threaded fittings — approximate weight (kg)

NPS	DN	2000 90° elbow	2000 tee	3000 90° elbow	3000 tee	6000 90° elbow	6000 tee
1/8"	6	0.07*	0.11*	0.07*	0.11*	0.12*	0.18*
1/4"	8	0.05*	0.08*	0.09*	0.14*	0.21*	0.31*
3/8"	10	0.06*	0.10*	0.18*	0.26*	0.31*	0.47*
1/2"	15	0.12*	0.18*	0.25*	0.38*	0.50*	0.75*
3/4"	20	0.15*	0.22*	0.38*	0.57*	0.80*	1.20*
1"	25	0.20*	0.30*	0.59*	0.89*	1.02*	1.53*
1 1/4"	32	0.24*	0.36*	0.62*	0.92*	1.61*	2.41*
1 1/2"	40	0.28*	0.41*	1.21*	1.81*	1.98*	2.96*
2"	50	0.26*	0.39*	0.97*	1.45*	3.78*	5.67*
2 1/2"	65	0.67*	1.01*	2.07*	3.11*	5.62*	8.43*
3"	80	0.41*	0.62*	2.64*	3.96*	8.17*	12.3*
4"	100	1.49*	2.23*	3.61*	5.41*	3.61*	5.41*

Teshi Group

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