

ASME B16.47 Series B Class 150 Flange Dimensions (NPS 26 to NPS 60)

Mounting dimensions for ASME B16.47 Series B Class 150 large-diameter weld-neck flanges: flange outside diameter, bolt-circle diameter, number of bolts, bolt-hole size and stud size.

ASME B16.47 covers steel pipe flanges from NPS 26 to NPS 60, the range above the NPS 24 ceiling of ASME B16.5. It defines two non-interchangeable series: Series A (the larger, more robust flange, formerly MSS SP-44) and Series B (a more compact flange that carries more, smaller bolts on a smaller bolt circle, formerly API 605). The two series share neither the outside diameter nor the bolt pattern at a given NPS and rating, so the series must be confirmed before a flange is ordered or matched. The values below are the Series B Class 150 dimensions for the weld-neck flange, cross-checked across two independent reference tables.

NPS	Flange OD (mm)	Bolt circle (mm)	No. of bolts	Bolt hole (mm)	Stud size
NPS 26	785	744.5	36	22.2	3/4 in
NPS 28	835	795.3	40	22.2	3/4 in
NPS 30	885	846.1	44	22.2	3/4 in
NPS 32	940	900.1	48	22.2	3/4 in
NPS 34	1005	957.3	40	25.4	7/8 in
NPS 36	1055	1009.6	44	25.4	7/8 in
NPS 38	1125	1070.0	40	28.6	1 in
NPS 40	1175	1120.8	44	28.6	1 in
NPS 42	1225	1171.6	48	28.6	1 in
NPS 44	1275	1222.4	52	28.6	1 in
NPS 46	1340	1284.3	40	31.8	1 1/8 in
NPS 48	1390	1335.1	44	31.8	1 1/8 in
NPS 50	1445	1385.9	48	31.8	1 1/8 in
NPS 52	1495	1436.7	52	31.8	1 1/8 in
NPS 54	1550	1492.2	56	31.8	1 1/8 in
NPS 56	1600	1543.0	60	31.8	1 1/8 in
NPS 58	1675	1611.3	48	34.9	1 1/4 in
NPS 60	1725	1662.1	52	34.9	1 1/4 in

Bolt holes are drilled on the bolt circle, starting with the 22.2 mm (7/8 in) hole takes a 3/4 in stud. The bolt count steps DOWN at NPS 34, 38, 46. The two tables agree exactly on the outside diameter.

Reading the dimensions

- Flange OD — the overall diameter of the flange, which is larger than the outside diameter than Series A at the same NPS.
- Bolt circle — the diameter of the circle that passes through the center of the bolts. This is the figure to lay out or check when ordering a flange.
- Number of bolts — equally spaced bolts around the bolt circle. The number of studs across the range — many more bolts on a smaller bolt circle.
- Bolt hole — the drilled hole diameter. The bolt hole size is the same for all flanges up to NPS 40.
- Stud size — the diameter of the studs. The stud size is the same for all Series B flanges up to NPS 40. Series B keeps the studs small (3/4 in) for all flanges up to NPS 40.

Flange thickness and hub dimension are not shown in this table. The flange thickness and the published columns differ between ASME B16.47 Series B table or the ASME B16.47 Series A table.

Selecting and

matching

Two flanges bolt together only when before ordering. A B16.47 Series B flange outside diameter, bolt circle and bolt weight and bolt-up effort and suits a where a Series A flange is already in studs, the bolting and the spanner wrench (here) sets the bolt circle and the face above are for the weld-neck flange; the bolt circle, bolt hole, bolt count and stud

Reference compiled by cBallast from ASME reference tables (mm and inch), which agree provided for identification and cross-reference before manufacture or procurement. All trac