

# ASME B16.47 Series A Class 300 Flange Dimensions (NPS 26 to NPS 60)

Mounting dimensions for ASME B16.47 Series A Class 300 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 with more, smaller bolts). 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 A Class 300 dimensions for the weld-neck flange, cross-checked across two independent reference tables.

NPS	Flange OD O (mm)	Bolt circle (mm)	No. of bolts	Bolt hole (mm)	Stud size
NPS 26	970	876.3	28	44.5	1 5/8 in
NPS 28	1035	939.8	28	44.5	1 5/8 in
NPS 30	1090	997.0	28	47.6	1 3/4 in
NPS 32	1150	1054.1	28	50.8	1 7/8 in
NPS 34	1205	1104.9	28	50.8	1 7/8 in
NPS 36	1270	1168.4	32	54	2 in
NPS 38	1170	1092.2	32	41.3	1 1/2 in
NPS 40	1240	1155.7	32	44.5	1 5/8 in
NPS 42	1290	1206.5	32	44.5	1 5/8 in
NPS 44	1355	1263.6	32	47.6	1 3/4 in
NPS 46	1415	1320.8	28	50.8	1 7/8 in
NPS 48	1465	1371.6	32	50.8	1 7/8 in
NPS 50	1530	1428.8	32	54	2 in
NPS 52	1580	1479.6	32	54	2 in
NPS 54	1660	1549.4	28	60.3	2 1/4 in
NPS 56	1710	1600.2	28	60.3	2 1/4 in
NPS 58	1760	1651.0	32	60.3	2 1/4 in
NPS 60	1810	1701.8	32	60.3	2 1/4 in

Bolt holes are drilled on the bolt circle, starting with the 44.5 mm (1 3/4 in) hole takes a 1 5/8 in stud. For NPS 38 the Series A Class 300 outside diameter is 1170 mm across both reference tables, not a typo. The bolt count for every NPS.

## Reading the dimensions

- Flange OD O — the overall diameter of the flange.
- Bolt circle — the diameter of the bolt circle. This is the figure to lay out or check on the flange.
- Number of bolts — equally spaced bolts and studs across the range.
- Bolt hole — the drilled hole diameter for the flanges up.
- Stud size — the diameter of the studs. Use the full set; do not part-populate.

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

## Selecting and

## matching

Two flanges bolt together only when they match. Before ordering, check the flange's outside diameter, bolt circle and bolt size. A larger bolt circle and bigger studs than the flange's bolt circle and bolt size. Series A is the common choice when the flange is for heavy duty; Series B saves weight and bolt size. The rating (Class 300 heavy duty) is the same throughout. The rating (Class 300 heavy duty) is the same throughout. The dimensions above are for the same outside diameter, bolt circle and bolt size.

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Reference compiled by cBallast from ASME B16.47 reference tables. Dimensions are nominal and may vary from the specific flange maker's current data sheets. © 2010 cBallast owners.