

Spiral Wound Gasket Dimensions (ASME B16.20, Class 150, NPS 1/2 to NPS 24)

Dimensions for ASME B16.20 Class 150 spiral wound gaskets used with ASME B16.5 raised-face flanges: inner-ring inside diameter, sealing element (winding) inside and outside diameter, and centering (outer) ring outside diameter.

A spiral wound gasket seals between two raised-face flanges. ASME B16.20 sets its dimensions so that the gasket matches the ASME B16.5 flange it seats in. A typical Class 150 gasket has three parts: a solid metal inner ring that locates the inner edge of the winding and resists inward buckling; the spiral winding itself (alternating metal strip and filler) which does the sealing; and a solid metal centering (outer) ring that locates the gasket inside the flange bolts and acts as a compression stop. The four diameters below define those parts. The values are ASME B16.20 Class 150, cross-checked across three independent reference tables.

NPS	Inner ring ID d1 (mm)	Winding ID d2 (mm)	Winding OD d3 (mm)	Centering ring OD d4 (mm)
NPS 1/2	14.2	19.1	31.8	47.8
NPS 3/4	20.6	25.4	39.6	57.2
NPS 1	26.9	31.8	47.8	66.8
NPS 1 1/4	38.1	47.8	60.5	76.2
NPS 1 1/2	44.5	54.1	69.9	85.9
NPS 2	55.6	69.9	85.9	104.9
NPS 2 1/2	66.5	82.6	98.6	124.0
NPS 3	81.0	101.6	120.7	136.7
NPS 4	106.4	127.0	149.4	174.8
NPS 5	131.8	155.7	177.8	196.9
NPS 6	157.2	182.6	209.6	222.3
NPS 8	215.9	233.4	263.7	279.4
NPS 10	268.2	287.3	317.5	339.9
NPS 12	317.5	339.9	374.7	409.7
NPS 14	349.3	371.6	406.4	450.9
NPS 16	400.1	422.4	463.6	514.4
NPS 18	449.3	474.7	527.1	549.4
NPS 20	500.1	525.5	577.9	606.6
NPS 24	603.3	628.7	685.8	717.6

d1 is the inside diameter of the inner ring (the spiral winding begins; d3 is the outside diameter of the inner ring, which seats the gasket against the flange of the matching ASME B16.5 Class 150 flange. The FlangeBoltChart independently confirms the values.

Reading the dimensions

- Inner ring ID (d1) — the inside diameter of the inner ring, stops the winding from buckling, the inner ring standard for Class 150 spiral wound gaskets.
- Winding ID (d2) — the inside diameter of the winding, column FlangeBoltChart lists as the gasket ID.
- Winding OD (d3) — the outside diameter of the winding, d2 and d3 is the part that actually seals.
- Centering ring OD (d4) — the outside diameter of the centering ring, locates the gasket inside the flange bolt holes and acts as a compression stop, against the bolts, d4 is tied to the matching flange.

Gasket thickness, winding metal and filler are standard for a 4.5 mm nominal gasket with a 316 stainless steel winding. Change the four diameters above. Contact your supplier for details.

the service before ordering.

Selecting and matching

A spiral wound gasket matches a flange if you confirm all four before ordering. The diameter of the flange; a Class 300 gasket of the same diameter as the flange has a larger bolt circle. The gasket bore to the flange bore and the gasket outer diameter so the centering ring seats and the windings

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