

PN100 Flange Dimensions (EN 1092-1 Type 11, DN10 to DN350)

Mounting dimensions for PN100 weld-neck flanges to EN 1092-1: flange outside diameter, bolt-circle diameter, bolt-hole size, number of bolts, bolt size and flange thickness.

PN100 is the EN 1092-1 pressure rating for a nominal 100 bar flange. The PN number fixes the bolt pattern, so a PN100 DN100 flange from any maker shares the same 265 mm outside diameter, 210 mm bolt circle and eight M27 bolts. The values below are the EN 1092-1 nominal dimensions for the Type 11 raised-face weld-neck flange across the common DN10 to DN350 range, cross-checked across three independent sources.

DN	Flange OD D (mm)	Bolt circle K (mm)	Bolt hole (mm)	No. of bolts	Bolt size	Flange thick C (mm)
DN10	100	70	14	4	M12	20
DN15	105	75	14	4	M12	20
DN20	130	90	18	4	M16	22
DN25	140	100	18	4	M16	24
DN32	155	110	22	4	M20	24
DN40	170	125	22	4	M20	26
DN50	195	145	26	4	M24	28
DN65	220	170	26	8	M24	30
DN80	230	180	26	8	M24	32
DN100	265	210	30	8	M27	36
DN125	315	250	33	8	M30	40
DN150	355	290	33	12	M30	44
DN200	430	360	36	12	M33	52
DN250	505	430	39	12	M36	60
DN300	585	500	42	16	M39	68
DN350	655	560	48	16	M45	74

Bolt holes are drilled on the bolt circle K, straddling the hole diameter (hole = thread + clearance): 14 mm holes take M12, 18 mm holes take M16, 22 mm holes take M20, 26 mm holes take M24, 30 mm holes take M27, 33 mm holes take M30, 36 mm holes take M33, 39 mm holes take M36, 42 mm holes take M39 and 48 mm holes take M45.

Reading the dimensions

- D (flange outside diameter) — the overall diameter of the flange including the gasket retainer envelope.
- K (bolt circle diameter) — the diameter of the circle through the centers of the bolt holes. This figure to lay out or check the drilling again.
- Bolt hole — the drilled hole diameter. This figure to check the drilling on the flanges up.
- Number of bolts — always a multiple of 4. Flanges of the same size and mating flanges share the same count.
- Bolt size — the metric thread of the bolts used.
- C (flange thickness) — the thickness of the flange.

Selecting and matching

Two flanges bolt together only when the dimensions match. Check the dimensions before ordering. A PN100 flange will mate with a flange of the same size if the bore is the same — the bolt circle and the flange thickness (the flange face is the common PN100 facing) and the operating temperature and pressure. The dimensions for the common PN100 flanges to EN 1092-1 share the same

Reference compiled by cBallast from EN 1092-1
Dimensions are nominal and provided for identification
maker's current data sheet before manufacture