JIS B2220 10K Flange Dimensions — DN15 to DN300 (Bolt Circles, Bolting, Thickness)

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Dimension table for JIS B2220 10K slip-on/plate flanges from 15A to 300A: outside diameter, bolt-circle diameter, number and size of bolts, flange thickness, with guidance on mating JIS to EN/PN and ASME class flanges.

JIS 10K dimension table

Nominal (A/DN) | OD (mm) | PCD (mm) | Bolts | Bolt size | Thickness (mm) |
15A | 95 | 70 | 4 | M12 | 12 |
20A | 100 | 75 | 4 | M12 | 14 |
25A | 125 | 90 | 4 | M16 | 14 |
32A | 135 | 100 | 4 | M16 | 16 |
40A | 140 | 105 | 4 | M16 | 16 |
50A | 155 | 120 | 4 | M16 | 16 |
65A | 175 | 140 | 4 | M16 | 18 |
80A | 185 | 150 | 8 | M16 | 18 |
100A | 210 | 175 | 8 | M16 | 18 |
125A | 250 | 210 | 8 | M20 | 20 |
150A | 280 | 240 | 8 | M20 | 22 |
200A | 330 | 290 | 12 | M20 | 22 |
250A | 400 | 355 | 12 | M22 | 24 |
300A | 445 | 400 | 16 | M22 | 24 |

Values for the common JIS B2220 10K slip-on and plate flange pattern with raised face; hub and weld-neck variants share OD, PCD and bolting. Japanese drawings quote nominal bore with the suffix A (50A = DN50 = 2").

JIS against PN and ASME

JIS 10K, EN 1092-1 PN10/PN16 and ASME class 150 flanges do not interchange: at DN50, JIS 10K drills 4 × M16 on a 120 mm circle, PN16 drills 4 × 18 mm holes on 125 mm (PN16 chart), and class 150 drills 4 × 3/4" holes on 120.6 mm — close enough to tempt, far enough to leak or crack. The only safe mixed joint is a purpose-made adapter spool. Japanese-built vessels carry JIS piping throughout, so spares for them (gaskets, bolting, M16 bolts, counter-flanges) must be ordered to JIS tables; European yards follow EN 1092-1 (PN10/PN25) and US-spec plants ASME B16.5 (B16.47 large diameters).

Higher JIS ratings

The same B2220 system defines 5K (lighter, often found on non-critical shipboard lines), 16K and 20K patterns with their own PCDs and bolting — a 10K gasket or counter-flange does not fit a 16K line of the same bore. The rating is cast or stamped on the flange rim together with the nominal size; when it is unreadable, identify by measuring OD, PCD and bolt count against the tables before ordering mating parts.

Frequently asked questions
What are the dimensions of a JIS 10K 50A flange?A JIS B2220 10K 50A (DN50) flange is 155 mm outside diameter with four M16 bolts on a 120 mm bolt circle, 16 mm thick.Are JIS 10K and PN16 flanges interchangeable?No — at most sizes the bolt-circle diameters and hole counts differ (DN50: 120 mm/4 holes vs 125 mm/4 holes), so they neither bolt up correctly nor seal reliably.What does 50A mean on a Japanese drawing?The nominal bore in millimetres with the JIS suffix A: 50A equals DN50 (2 inch nominal).Does JIS 10K match ASME class 150?No. Dimensions are close at some sizes but hole diameters, PCDs and facing differ; use a transition spool where the two systems meet.Which JIS rating is on my flange?JIS flanges are marked with size and rating (5K/10K/16K/20K) on the rim; if unreadable, measure OD, bolt-circle diameter and bolt count and match them to the B2220 tables.

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