

DN50 Flange Weight & Dimension Quick Reference

DN50	PN10 / PN16	WNF + PLF	carbon steel/304/316L
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DN50

Weld Neck WNF (GB/T 9115) · Plate Slip-On PLF (GB/T 9119) · kg/pc

OD D	165	OD D	165
Bolt Circle K	125	Bolt Circle K	125
Bolt Holes n×L	4×18	Bolt Holes n×L	4×18
Stud Size	M16	Stud Size	M16
Flange Thickness C	18	Flange Thickness C	20
Raised Face OD d4	102		
Raised Face Height f	3		
Weld Neck Length H	45		
Neck OD N1	74		

Letters correspond to GB/T 9124.1/GB/T 9115 series dimension codes: D OD, K bolt circle diameter, L bolt hole diameter, n number of holes, C flange thickness, d4 raised face (RF) OD, f raised face height, H weld neck length, N1 neck OD; plate slip-on PLF has no raised face/neck columns.

PN16 · kg per piece

Type · PN16	Carbon Steel kg/pc	304 Stainless Steel kg/pc	316L Stainless Steel kg/pc
Weld Neck WNF (GB/T 9115)	2.53	2.56	2.57
Plate Slip-On PLF (GB/T 9119)	2.72	2.75	2.77

PN10 · kg per piece

Type · PN10	Carbon Steel kg/pc	304 Stainless Steel kg/pc	316L Stainless Steel kg/pc
Weld Neck WNF (GB/T 9115)	2.53	2.56	2.57
Plate Slip-On PLF (GB/T 9119)	2.46	2.49	2.5

Dimensions and unit weights are taken directly from product catalog flange SKU spec values (same source as WNF/PLF product pages under /products/pipe-flanges-and-gaskets/): dimension columns follow GB/T 9115 (weld neck) / GB/T 9119 (plate slip-on) PN series nominal sizes, whose dimensions/weights are from EN 1092-1 published tables (dual-source cross-checked from hsflange/marcelforged/tesco, row-by-row URLs archived in catalog spec); carbon steel 7.85 g/cm³ table values are catalog values, 304/316L converted by density ratio 7.93/7.98 ÷ 7.85 (estimate). Weld neck flange small-size shared rating rules follow EN 1092-1 (PN10/PN16 DN≤40 use PN40 dimension class, PN10 DN50–150 use PN16 dimension class, PN10 dedicated series from DN200), and this table matches each class.

Cell shows unit weight (kg/pc): WNF/PLF × carbon steel/304/316L. PN10/PN16 column values differ where applicable, calculated cell by cell; theoretical estimate, settlement subject to actual measurement.

Data Basis and Source Disclosure

Dimensions and unit weights are taken directly from product catalog flange SKU spec values (same source as WNF/PLF product pages under /products/pipe-flanges-and-gaskets/): dimension columns follow GB/T 9115 (weld neck) / GB/T 9119 (plate slip-on) PN series nominal sizes, whose dimensions/weights are from EN 1092-1 published tables (dual-source cross-checked from hsflange/marcelforged/tesco, row-by-row URLs archived in catalog spec); carbon steel 7.85 g/cm³ table values are catalog values, 304/316L converted by density ratio 7.93/7.98 ÷ 7.85 (estimate). Weld neck flange small-size shared rating rules follow EN 1092-1 (PN10/PN16 DN≤40 use PN40 dimension class, PN10 DN50–150 use PN16 dimension class, PN10 dedicated series from DN200), and this table matches each class.

Boundary: This table is a theoretical unit weight estimate (excluding gaskets/bolts/nuts and coating allowance), for quotation, freight and lifting budget reference; actual table values and unit weights for the same DN×PN vary with manufacturing standard version, sealing face type (RF/FF etc.) and material tolerance, trade settlement subject to actual measurement.

References

- GB/T 9115-2010 Pipe Flanges – Weld Neck Steel Flanges series (National Public Service Platform for Standards Information) — https://openstd.samr.gov.cn/bzgk/gb/std?std_no=GB%2FT%209115-2010
- GB/T 9119-2010 Pipe Flanges – Plate Flat Steel Flanges (National Public Service Platform for Standards Information) — https://openstd.samr.gov.cn/bzgk/gb/std?std_no=GB%2FT%209119-2010
- EN 1092-1 PN series flange dimension/weight published tables (hsflange / marcelforged / tesco dual-source, row-by-row archived in catalog spec) — <https://www.hsflange.com/en1092-1-type-11-weld-neck-flange.php>
- Dimensions and weights cross-checked against 60 flange SKU spec_json in product catalog (same source as product pages)

Disclaimer: This table is engineering estimate data for selection, quotation and freight estimation reference only, not a design basis or acceptance standard.

Material Density Conversion

Table values are for carbon steel (7.85 g/cm³); other materials converted by density ratio: weight × factor.

Material	Density (g/cm ³) g/cm ³	Conversion Factor
Carbon Steel	7.85	×1.000
304 Stainless Steel	7.93	×1.010
316	7.98	×1.017
Brass	8.5	×1.083

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