

DN150 U-Bolt Dimensions Chart (for 168.3 mm Pipe)

pipe OD 168.3 mm	DIN 3570 series	g per piece · kg / 1000 pcs	carbon steel 7.85 g/cm³
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DN150

168.3 mm OD · M20

Matching pipe OD (nominal DN)	168.3 mm (DN150)
Inside width A (mm)	192 mm
Leg length (mm)	96 mm
Overall height H (mm)	217 mm
Matching thread size	M20 (pitch P=2.5 mm) · Catalog pairing
Thread length (per leg)	60 mm
Rod diameters available	M20
Bend centreline length (mm)	333 mm
Developed length (mm)	525 mm

Thread pairing source tags: "Catalog pairing" means the value was extracted size by size from the spec_json of U-bolt SKUs in the product catalog (same source as the product pages; the extraction script ops/tools/gen-ubolt-dims.py can be re-run to verify). "Assumed" would mean the catalog has no SKU covering that pipe-OD band and a conventional pairing was assumed and flagged here. All 11 bands in this chart are catalog pairings; none is assumed.

DN150 Unit Weight by Configuration (per available rod diameter)

A U-bolt's unit weight moves with rod diameter and developed length together: developed length = 2 x leg length + bend centreline length (a semicircle of radius (inside width + rod diameter)/2), so the bend grows with the rod too and each step up in diameter adds weight faster than the square of the diameter alone.

Rod diameter	Bend centreline length (mm)	Developed length (mm)	Unit weight (g/pc) g / piece	Bulk (kg/1,000 pcs) kg / 1000 pcs
M20Default pairing	333	525	1300	1300

Unit weight = developed length x pi/4 x d^2 x 7.85 g/cm3 for carbon steel, rounded to avoid false precision (whole g below 100 g, 10 g steps below 1,000 g, 100 g steps above). Matching nuts and washers are counted separately; see the related charts at the foot of the page.

Calculation Basis and Assumptions Disclosed

Dimensions come from fastenerCalc: inside width, leg length and overall height are mapped from UB_PIPES (DIN 3570 series geometry, same source as the product catalog SKUs); the matching thread size comes from UB_THREAD (extracted size by size from the live prd_sku.spec_json, see the source tag in the table above); pitches follow the GB/T 196 metric coarse table. Unit weights are all computed from geometry: developed length = 2 x leg length + bend centreline length, the bend taken as a semicircle on the centreline (radius = (inside width + rod diameter)/2), rod at nominal full diameter, 7.85 g/cm3 for carbon steel, base metal only, coating excluded. This developed-length convention matches the catalog spec_json developedLengthMm for every size.

Boundary: unit weights are theoretical geometry estimates for quotation, freight and packing budgets; actual weight varies with bend radius, thread accuracy and coating (hot-dip galvanizing roughly +4.5%), and trade settlement is against actual measurement. Inside width, leg length and overall height are catalog-modelled dimensions; square bends, extended legs, inch pipe (NPS) and special thread forms are made to drawing, and this chart is not an acceptance basis.

Rolled-thread allowance disclosed: the main table is computed at nominal full diameter (the same basis as the catalog unit_weight_g, so it reconciles row by row). The threaded portions of both legs are roll formed and lose a little material; applying the 0.97 rolled-thread allowance (THREAD_ROLL_ALLOWANCE) puts this size at roughly {rolled} g/pc, about {factor}% lower. Either basis can be used for batch costing; the main table stays unadjusted so it matches the catalog.

References

- Dimensions and matching thread extracted size by size from U-bolt SKU spec_json in the product catalog (DIN 3570 series, same source as product pages)
- GB/T 1047 nominal pipe size DN against the metric pipe outside-diameter series (National Public Service Platform for Standards Information) — https://openstd.samr.gov.cn/bzgk/gb/std?std_no=GB%2FT%201047-2019
- GB/T 196-2003 General Purpose Metric Screw Threads — Basic Dimensions, coarse pitches (same table as fastenerCalc.pitchOf) — https://openstd.samr.gov.cn/bzgk/gb/std?std_no=GB%2FT%20196-2003

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 convert by density ratio: weight x factor (geometry unchanged).

Material	Density (g/cm3) g/cm³	Conversion Factor
Carbon Steel	7.85	×1.000
304 Stainless Steel	7.93	×1.010

Material	Density (g/cm3) g/cm³	Conversion Factor
316 Stainless Steel	7.98	×1.017
Brass	8.5	×1.083

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