M24 Stud Bolt, Double-End Dimensions

M24 Stud Bolt, Double-End dimensions to GB/T 15389 / DIN 938: coarse thread pitch 3 mm, clearance hole (ISO 273 medium) 26 mm, tapping drill 21 mm. Tighten to approximately 726 Nm at property class 8.8 in a dry, as-supplied condition.

Coarse thread pitch

3 mm

Clearance hole (ISO 273 medium)

26 mm

Tapping drill

21 mm

Tightening torque (class 8.8)

726 Nm

Figures are nominal values from the governing standard. Confirm against the tolerance class for your application before machining or ordering.

The M24 size of Stud Bolt, Double-End is dimensioned by GB/T 15389 / DIN 938. The tables below give the dimensional row from the standard, the drill and spanner sizes that go with it, and the assembly torque per property class. The technical drawing on this page redraws to the exact values selected.

M24 Dimensional Row (GB/T 15389 / DIN 938)

Thread size	Pitch (mm)	Length L (mm)	Engagement depth bm (mm)	Material
M24	3.0	200	36	Cl. 8.8 alloy steel

Hole Sizes for M24

Coarse-thread pitch (ISO 724)	3 mm
Through-hole / clearance (ISO 273 medium)	26 mm
Tapping drill, coarse thread	21 mm

Tightening Torque for M24

Class 8.8 (dry, ~μ 0.125)	≈ 726 Nm
Class 10.9 (dry, ~μ 0.125)	≈ 1034 Nm
Class 12.9 (dry, ~μ 0.125)	≈ 1210 Nm

Indicative dry-joint values. Lubrication can lower the required torque by 15–25%. Always confirm against the joint design, especially when going up a strength class.

Proof Load & Strength for M24

Tensile stress area As (ISO 724)	353 mm²
Proof load, class 8.8	212 kN
Proof load, class 10.9	293 kN
Proof load, class 12.9	342 kN
Min. ultimate tensile load, class 8.8	293 kN

Proof load = tensile stress area × the proof stress Sp of the class, per ISO 898-1 — Sp is a lower figure than the yield stress Rp0.2 and the two are not interchangeable. The stress area is computed from this size's own diameter and pitch, so a fine-pitch designation gives the fine-pitch figure. Design the joint so the working preload stays below the proof load of the class selected.

Mating Parts for M24

For M24, pair with a M24 hex nut (ISO 4032 / DIN 934) and, where used, a M24 flat washer (ISO 7089 / DIN 125A) under the head and under the nut.

Custom manufacturing · Made to drawing

Need stud bolt, double-end in a size this table does not list?

This page covers M24 stud bolt, double-end. Dimensions, material, finish and form are specified from the drawing — a bolt outside the standard range is a variation on existing tooling rather than a new design. Made by cold heading or hot forging.

Minimum order from 2,000 pieces; samples within 7 days of drawing approval.

Custom bolt manufacturing (https://engineeringhardware.com/custom/bolts/)

Send a drawing (https://engineeringhardware.com/custom/bolts/#rfq)

Technical Drawing

Customize the parameters below — every spec field is editable, and the drawing redraws to match the values you choose. Changing the size will snap the other fields to that size's standard values; you can then override any individual value.

Dimensioned line drawing of M24 Stud Bolt, Double-End — GB/T 15389 / DIN 938 (Series 092) to GB/T 15389 / DIN 938. Side view and top view, drawn to the dimensions in the table below and redrawn for any size selected.

Opens a short step to confirm the exact specification before you enter contact details.

Request a Quote

Click “Request this configuration” under the drawing to confirm the exact specification, then add your contact details. You can also send the request without a specification — but only an accurate selection gets an accurate quote.

Dimensions & Specifications (GB/T 15389 / DIN 938)

Thread size	Pitch (mm)	Length L (mm)	Engagement depth bm (mm)	Material
M6	1.0	50	8	Cl. 8.8 alloy steel
M8	1.25	60	10	Cl. 8.8 alloy steel
M10	1.5	80	15	Cl. 8.8 alloy steel
M12	1.75	100	18	Cl. 8.8 alloy steel
M14	2.0	120	21	Cl. 8.8 alloy steel
M16	2.0	150	24	Cl. 8.8 alloy steel
M20	2.5	180	30	Cl. 8.8 alloy steel
M24	3.0	200	36	Cl. 8.8 alloy steel
M30	3.5	240	45	Cl. 8.8 alloy steel
M36	4.0	280	54	Cl. 8.8 alloy steel

Materials & Grades

Select a material class to see the grades we supply it in. Each designation is listed with its ISO/EN, AISI/SAE, JIS and GB equivalents.

Stainless Steel

Carbon Steel 66

Alloy Steel 41

Bearing Steel 5

Spring Steel 25

Aluminum and Aluminum Alloys 21

Brass 17

Bronze 11

Copper 8

Titanium and Titanium Alloys 18

Nickel and Nickel Alloys 22

Iron-Nickel and High-Temperature Alloys 10

Tool Steel and Specialty Hardened Steel 9

Structural and Construction Steel 9

Stainless Steel

Austenitic Stainless Steel

A1

AISI 303 · SAE 303 · SUS303 · EN 1.4305 · X8CrNiS18-9

A2
AISI 304 · SAE 304 · SUS304 · EN 1.4301 · X5CrNi18-10 · 06Cr19Ni10

304L
AISI 304L · SUS304L · EN 1.4307 · X2CrNi18-9 · 022Cr19Ni10

302
AISI 302 · SUS302 · EN 1.4310

305
AISI 305 · SUS305 · EN 1.4303

A4
AISI 316 · SAE 316 · SUS316 · EN 1.4401 · X5CrNiMo17-12-2 · 06Cr17Ni12Mo2

316L
AISI 316L · SUS316L · EN 1.4404 · X2CrNiMo17-12-2 · 022Cr17Ni12Mo2

321
AISI 321 · SUS321 · EN 1.4541 · X6CrNiTi18-10

310 / 310S
AISI 310 · AISI 310S · SUS310S · EN 1.4845

302HQ
AISI 302HQ

A3

A5

347
AISI 347 · SUS347 · EN 1.4550 · X6CrNiNb18-10

309 / 309S
AISI 309 · AISI 309S · SUS309S

Martensitic Stainless Steel

AISI 410
SUS410 · EN 1.4006 · X12Cr13 · 12Cr13

AISI 420
SUS420J1 · SUS420J2 · EN 1.4021 · EN 1.4028 · 20Cr13 · 30Cr13

AISI 431
SUS431 · EN 1.4057 · X17CrNi16-2

C1

C3

C4

AISI 440A

AISI 440B

AISI 440C
SUS440C · EN 1.4125

Ferritic Stainless Steel

AISI 430
SUS430 · EN 1.4016 · X6Cr17 · 10Cr17

F1

AISI 434

AISI 444

Precipitation-Hardening Stainless Steel

17-4 PH
AISI 630 · UNS S17400 · SUS630 · EN 1.4542 · X5CrNiCuNb16-4

15-5 PH
UNS S15500

17-7 PH
UNS S17700

Duplex and Super Duplex Stainless Steel

Duplex 2205
UNS S31803 · UNS S32205 · EN 1.4462

Super Duplex 2507
UNS S32750 · EN 1.4410

D2

D4

D6

D8

Lean Duplex 2101
UNS S32101

Super Duplex S32760
UNS S32760 · EN 1.4501

Carbon Steel

Low-Carbon Steel

SAE 1006

SAE 1008

SAE 1010

SAE 1018

SAE 1020

Q195

Q235

SAE 1012

SAE 1015

Q215

ML08

ML08Al

ML10

ML15

ML20

SWRCH6A

SWRCH8A

SWRCH10A

SWRCH12A

SWRCH15A
SWRCH18A

Medium-Carbon Steel

SAE 1035
SAE 1045
S45C
C45
SAE 1030
SAE 1040
SAE 1050
30
35
40
45
50
S35C
S40C
S50C
C35
C40

High-Carbon Steel

SAE 1060
SAE 1070
65Mn
SAE 1065

SAE 1075
SAE 1080
SAE 1085
SAE 1090
SAE 1095
60
65
70
75
80
85

Cold-Heading Steel

SWRCH22A
10B21
SWRCH22K
SWRCH25K
SWRCH30K
SWRCH35K
SWRCH40K
ML20Mn
ML25
ML30
ML35
ML40
15B25

Alloy Steel

Chromium Steel

- 40Cr
- 45Cr
- AISI 5140
- SAE 5140
- AISI 5120
- SAE 5120
- SCr420
- SCr440

Chromium-Molybdenum Steel

- 35CrMo
- 42CrMo
- AISI 4140
- SCM435
- SCM440
- 42CrMo4
- 30CrMo
- AISI 4130
- SAE 4130
- SAE 4140
- AISI 4142
- AISI 4145
- SCM415
- SCM420
- SCM445

EN 1.7220
EN 1.7225
25CrMo4
34CrMo4

Nickel-Chromium-Molybdenum Steel

AISI 4340
SAE 4340
40CrNiMo
SNCM439
EN 1.6511
36CrNiMo4

Boron Alloy Steel

10B22
10B21
15B21
15B25
20MnTiB
20Mn2B
35VB
40MnB

Bearing Steel

Bearing Steel

GCr15
AISI 52100

SAE 52100 · UNS G52986
SUJ2
100Cr6 EN 1.3505
GCr15SiMn

Spring Steel

Carbon Spring Steel

SAE 1065
SAE 1070
SAE 1075
SAE 1080
SAE 1095
65
70
75
80
65Mn

Silicon-Manganese Spring Steel

60Si2Mn
60Si2MnA
SUP6
SUP7

Chromium-Vanadium Spring Steel

50CrVA
SAE 6150

AISI 6150
SUP10

Stainless Spring Steel

AISI 301
SUS301
EN 1.4310
AISI 302
AISI 304
AISI 316
17-7 PH

Aluminum and Aluminum Alloys

Commercially Pure Aluminum

1050
1060
1070
1100

2xxx Series Aluminum

2024
2011
2014
2017

5xxx Series Aluminum

5052

5083
5754

6xxx Series Aluminum

6061
6061-T6
6063
6082
6082-T6

7xxx Series Aluminum

7075
7075-T6
7005
7050
7075-T73

Brass

Free-Cutting Brass

C36000
H62
HPb59-1
C3601
C3602
C3604
CuZn36Pb3
CuZn39Pb3

EN CW614N

EN CW617N

H65

Lead-Free Brass

C69300

C27450

CW510L

CW511L

Naval Brass

C46400

CuZn39Sn1

Bronze

Silicon Bronze

C65500

C65100

C65600

Phosphor Bronze

C51000

C52100

CuSn6

CuSn8

Aluminum Bronze

- C95400
- C95500
- C63000
- CuAl10Ni5Fe4

Copper

Copper

- C11000
- T2
- C10100
- C10200
- C12200
- T1
- TU1
- TU2

Titanium and Titanium Alloys

Commercially Pure Titanium

- Grade 2
- Grade 1
- Grade 3
- Grade 4
- TA1
- TA2

TA3

Alpha-Beta Titanium Alloys

Grade 5
Ti-6Al-4V
TC4
UNS R56400

Low-Interstitial Grade

Grade 23
Ti-6Al-4V ELI
UNS R56407

Other Titanium Fastener Alloys

Ti-6Al-6V-2Sn
Ti-6Al-2Sn-4Zr-2Mo
Beta-C titanium
Ti-10V-2Fe-3Al

Nickel and Nickel Alloys

Commercially Pure Nickel

Nickel 200
UNS N02200
Nickel 201
UNS N02201

Inconel Alloys

Inconel 625
UNS N06625

Inconel 718
UNS N07718

Inconel 600
UNS N06600

Inconel 601
UNS N06601

Inconel 686
UNS N06686

Inconel X-750
UNS N07750

Monel Alloys

Monel 400
UNS N04400

Monel K-500
UNS N05500

Hastelloy Alloys

Hastelloy C-276
UNS N10276

Hastelloy C-22
UNS N06022

Hastelloy B-2
UNS N10665

Hastelloy B-3
UNS N10675

Hastelloy X
UNS N06002

Other Nickel Alloys

Alloy 20
UNS N08020

Alloy 625

Alloy 718

Alloy 825
UNS N08825

Alloy 925
UNS N09925

Iron-Nickel and High-Temperature Alloys

A286

A-286

UNS S66286

EN 1.4980

Invar

Invar 36

Alloy 36

UNS K93600

FeNi36

Alloy 42

Alloy 42

UNS K94100

FeNi42

Tool Steel and Specialty Hardened Steel

Tool Steel and Specialty Hardened Steel

AISI D2
AISI H13
SKD11
Cr12MoV
AISI O1
AISI A2
AISI S7
SKD61
9CrSi

Structural and Construction Steel

Structural and Construction Steel

ASTM A36
Q235B
Q355B
S355JR
Q235C
Q355C
S235JR
S275JR
S355J2

Applications & Industries for M24 Stud Bolt

The sectors that buy Stud Bolt to GB/T 15389 / DIN 938, and the duty each one buys them for. Stocked from M6 to M36.

Industries that specify Stud Bolt

Plant & machine installation **Anchoring and levelling machines onto bases and frames.**

Steel fabrication **Hanger rods, tie rods and made-to-length threaded assemblies.**

Building services **Threaded rod suspension for tray, duct and pipework.**

Pressure equipment & flanges **Studs and nuts on flanged joints, where both ends are tightened and the assembly is inspected.**

Typical applications

- **suspending services from a soffit on threaded rod**
- **made-to-length assemblies cut and threaded on site**
- **clamping a joint from both ends where a headed bolt will not fit**

Service conditions to specify against

Marine and coastal

Available in A4 (316) stainless for chloride exposure — coastal structures, pool halls, water treatment and deck hardware, where A2 will eventually pit.

High load

Supplied in ISO 898-1 property classes, so the joint can be designed to a stated proof load and tightened to a calculated torque rather than by feel.

Where to use something else

- **Not for a joint that must be tightened from one side only — there is no head to hold.**

Need help matching Stud Bolt to your application? Send the assembly, the load and the environment with your enquiry and we will specify the size, material and finish against

them.

Video: M24 Stud Bolt, Double-End Dimensions

(https://www.youtube.com/watch?v=B9UjTe9Ai7w)(https://www.youtube.com/watch?v=B9UjTe9Ai7w)

► Watch video: https://www.youtube.com/watch?v=B9UjTe9Ai7w(https://www.youtube.com/watch?v=B9UjTe9Ai7w)

ASTM A320 L7 STUD BOLTS (https://www.youtube.com/watch?v=B9UjTe9Ai7w)

Third-party video, selected automatically for this topic. It is not produced by Engineering Hardware and is not a specification source — use the tables on this page for dimensional data.

Inside the plant

Manufactured in our own plant

This part is cold-formed, threaded, heat-treated and finished in-house. The stages below are where its class and finish are actually decided.

01

Cold heading

Wire rod is drawn to size and cold-formed into blanks. Forming rather than cutting keeps the grain flow continuous around the head, which is where a bolt is most likely to fail.

Head dimensions and under-head radius checked at set-up and per shift.

02

Thread rolling

Threads are rolled between hardened dies rather than cut. Rolled threads are stronger in fatigue than cut threads and hold pitch and flank angle far more consistently across a batch.

Go / no-go ring gauges to ISO 965 tolerance class 6g.

03

Heat treatment

Quench-and-temper brings carbon and alloy steel to the property class ordered — 8.8, 10.9 or 12.9 — with the furnace charge tracked so a finished lot can be traced back to it.

Core hardness and tensile tested per lot to ISO 898-1.

04

Surface treatment

Zinc, zinc-nickel, hot-dip galvanizing, black oxide, phosphate and Dacromet, selected against the service environment rather than against the price list.

Coating thickness and neutral salt spray hours to ISO 9227.

Frequently Asked Questions

What grip range is typical for M24 structural bolts?

Grip ranges are highly application-dependent at M24. As a guide, choose a length that gives at least 1× the thread diameter engagement in the nut plus 2–3 thread pitches projecting.

What is the coarse-thread pitch of M24 for Stud Bolt, Double-End — GB/T 15389 / DIN 938 (Series 092)?

For M24 the standard coarse pitch is 3 mm — this is the value used for Stud Bolt, Double-End — GB/T 15389 / DIN 938 (Series 092).

What torque do M24 class 8.8 Stud Bolt, Double-End — GB/T 15389 / DIN 938 (Series 092) take?

A dry M24 class 8.8 joint takes about 726 Nm (≈ 1034 Nm for 10.9, ≈ 1210 Nm for 12.9). Confirm against your joint design; lubrication reduces these values.

What clearance and tapping drill suit M24?

Use a 26 mm clearance hole (ISO 273 medium) for through-fixing, or a 21 mm tapping drill for a coarse M24 thread.

How do I request a quotation?

Use the technical drawing on this page to pick the exact configuration, then submit it with the quote form. We respond within one business day.

Related Pages

View the full Stud Bolt, Double-End — GB/T 15389 / DIN 938 (Series 092) page (https://engineeringhardware.com/fastener/cad-svg-092-stud/)

More Stud Bolt, Double-End — GB/T 15389 / DIN 938 (Series 092) Guides

- **M6 Stud Bolt, Double-End — GB/T 15389 / DIN 938 (Series 092) (https://engineeringhardware.com/guide/size/m6-cad-svg-092-stud/)**
- **M8 Stud Bolt, Double-End — GB/T 15389 / DIN 938 (Series 092) (https://engineeringhardware.com/guide/size/m8-cad-svg-092-stud/)**
- **M10 Stud Bolt, Double-End — GB/T 15389 / DIN 938 (Series 092) (https://engineeringhardware.com/guide/size/m10-cad-svg-092-stud/)**
- **M12 Stud Bolt, Double-End — GB/T 15389 / DIN 938 (Series 092) (https://engineeringhardware.com/guide/size/m12-cad-svg-092-stud/)**
- **M14 Stud Bolt, Double-End — GB/T 15389 / DIN 938 (Series 092) (https://engineeringhardware.com/guide/size/m14-cad-svg-092-stud/)**
- **M16 Stud Bolt, Double-End — GB/T 15389 / DIN 938 (Series 092) (https://engineeringhardware.com/guide/size/m16-cad-svg-092-stud/)**
- **M20 Stud Bolt, Double-End — GB/T 15389 / DIN 938 (Series 092) (https://engineeringhardware.com/guide/size/m20-cad-svg-092-stud/)**
- **M30 Stud Bolt, Double-End — GB/T 15389 / DIN 938 (Series 092) (https://engineeringhardware.com/guide/size/m30-cad-svg-092-stud/)**