

M24 Hex Nut Dimensions

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M24 Hex Nut dimensions to GB/T 41 / ISO 4034: width across flats (spanner size) 36 mm, nut height 21.5 mm, coarse thread pitch 3 mm. Tighten to approximately 726 Nm at property class 8.8 in a dry, as-supplied condition.

Width across flats (spanner size)

36 mm

Nut height

21.5 mm

Coarse thread pitch

3 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.



M24 Hex Nut are manufactured to GB/T 41 / ISO 4034. This page lists the controlling dimensions for the M24 size together with the drive and the installation notes for this type.

Values are taken from the governing standard rather than from a general machine-thread table, because this type is not selected on one.

M24 Dimensional Row (GB/T 41 / ISO 4034)

Size	Pitch (mm)	Width across flats s (mm)	Width across corners e (mm)	Nut height
M24	3.0	36.0	39.98	21.5

Spanner & Drive for M24 Hex Nut — GB/T 41 / ISO 4034 (Series 060)

M24 Hex Nut — GB/T 41 / ISO 4034 (Series 060) have a width across flats of 36.0 mm — fit a 36.0 mm open-ended spanner or socket. In tight access a 6-point socket on the 36.0 mm flats gives the most engagement per degree of swing. Where the joint is torqued to a figure, a click wrench is the only way to reproduce it across a batch.

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

Nuts are graded to ISO 898-2 by the proof load the nut itself will hold (classes 04, 05, 5, 6, 8, 10 and 12), not by the 8.8 / 10.9 / 12.9 scale used for bolts. A class-8 nut is the correct mate for a class-8.8 bolt, and the joint is designed on the bolt, so no bolt-tension figure is quoted here.

Installation Tips for M24 Hex Nut — GB/T 41 / ISO 4034 (Series 060)

- Use a 6-point socket where access allows — 12-point sockets are more prone to rounding the corners on smaller sizes.
- Serrated flanges need to sit directly on the joint face. A washer between the two removes the bite and leaves an ordinary bolted joint that is believed to be a locking one.
- At M24 the stretch in the bolt becomes the controlling factor — for critical joints, use angle-controlled or stretch-controlled tightening instead of pure torque.

Mating Parts for M24

Pair M24 with the matching M24 bolt or screw, plus a M24 flat washer where required to distribute load on softer materials.

Custom manufacturing · Made to drawing

Need hex nut in a size this table does not list?

This page covers M24 hex nut. Locking method is specifiable independently of the rest: nylon insert, all-metal deformed thread, serrated flange, or none.

Made by cold heading or tapping.

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

Custom nut manufacturing (<https://engineeringhardware.com/custom/nuts/>)

Send a drawing (<https://engineeringhardware.com/custom/nuts/#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 Hex Nut — GB/T 41 / ISO 4034 (Series 060) to GB/T 41 / ISO 4034. 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 41 / ISO 4034)

Size	Pitch (mm)	Width across flats s (mm)	Width across corners e (mm)	Nut height
M3	0.5	5.5	6.01	2.4
M4	0.7	7.0	7.66	3.2
M5	0.8	8.0	8.79	4.7
M6	1.0	10.0	11.05	5.2
M8	1.25	13.0	14.38	6.8
M10	1.5	16.0	17.77	8.4
M12	1.75	18.0	20.03	10.8
M14	2.0	21.0	23.36	12.8
M16	2.0	24.0	26.75	14.8
M18	2.5	27.0	30.14	15.8
M20	2.5	30.0	33.53	18.0
M24	3.0	36.0	39.98	21.5
M30	3.5	46.0	50.85	25.6
M36	4.0	55.0	60.79	31.0

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 Steel66

Alloy Steel41

Bearing Steel5

Spring Steel25

Aluminum and Aluminum Alloys21

Brass17

Bronze11

Copper8

Titanium and Titanium Alloys18

Nickel and Nickel Alloys22

Iron-Nickel and High-Temperature Alloys10

Tool Steel and Specialty Hardened Steel9

Structural and Construction Steel9

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

ML08AI**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 Hex Nut

The sectors that buy Hex Nut to GB/T 41 / ISO 4034, and the duty each one buys them for. Stocked from M3 to M36.

Industries that specify Hex Nut

Maintenance & MRO **Replacements matched to the existing bolt class, thread and finish.**

Building services **Threaded rod, channel and suspension assemblies.**

Machine building & OEM **The clamping counter-face on studs and bolts throughout an assembly.**

Steel fabrication **Bolted structural and frame connections.**

Automotive & transport **Vibration-prone joints where the locking type is specified on the drawing.**

Typical applications

- **completing a bolted joint on a stud, rod or bolt**
- **locking an adjustment so it cannot drift**
- **joints re-torqued at a service interval**

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.

Match the class

A nut below the bolt property class strips before the bolt reaches its own limit — pair class 8 nuts with 8.8 bolts, class 10 with 10.9.

Need help matching Hex Nut 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 Hex Nut Dimensions



<https://www.youtube.com/watch?v=iQEoDMz-HUA>

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► Watch video: <https://www.youtube.com/watch?v=iQEoDMz-HUA>(<https://www.youtube.com/watch?v=iQEoDMz-HUA>)

M1.4 M1.6 M2 M2.5 M3 M4 M5 M6 M8 M10 M12 M14 M16 M18 M20 M22 M24 Brass Nut
Copper Hexagonal Nuts Bra (<https://www.youtube.com/watch?v=iQEoDMz-HUA>)

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.



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

Should M24 Hex Nut — GB/T 41 / ISO 4034 (Series 060) be tightened by torque or by angle?

For critical structural joints at M24, angle-controlled or stretch-controlled tightening is more repeatable than pure torque — the friction scatter at large diameters can dominate the torque signal.

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 $1\times$ the thread diameter engagement in the nut plus 2–3 thread pitches projecting.

What is the height of an M24 nut?

The nominal height of a style-1 ISO 4032 M24 nut is in the spec table on this page. Style-2 (thick) is approximately $1.1\times$ this height; thin (ISO 4035 / DIN 439) is approximately $0.5\times$.

What spanner size fits M24 Hex Nut — GB/T 41 / ISO 4034 (Series 060)?

The width across flats for M24 Hex Nut — GB/T 41 / ISO 4034 (Series 060) is 36.0 mm, so a 36.0 mm spanner or 6-point socket fits.

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 Hex Nut — GB/T 41 / ISO 4034 \(Series 060\) page](https://engineeringhardware.com/fastener/cad-svg-060-hexnut/)

(<https://engineeringhardware.com/fastener/cad-svg-060-hexnut/>)

More Hex Nut — GB/T 41 / ISO 4034 (Series 060) Guides

- **M3 Hex Nut — GB/T 41 / ISO 4034 (Series 060)** (<https://engineeringhardware.com/guide/size/m3-cad-svg-060-hexnut/>)
- **M4 Hex Nut — GB/T 41 / ISO 4034 (Series 060)** (<https://engineeringhardware.com/guide/size/m4-cad-svg-060-hexnut/>)
- **M5 Hex Nut — GB/T 41 / ISO 4034 (Series 060)** (<https://engineeringhardware.com/guide/size/m5-cad-svg-060-hexnut/>)
- **M6 Hex Nut — GB/T 41 / ISO 4034 (Series 060)** (<https://engineeringhardware.com/guide/size/m6-cad-svg-060-hexnut/>)
- **M8 Hex Nut — GB/T 41 / ISO 4034 (Series 060)** (<https://engineeringhardware.com/guide/size/m8-cad-svg-060-hexnut/>)
- **M10 Hex Nut — GB/T 41 / ISO 4034 (Series 060)** (<https://engineeringhardware.com/guide/size/m10-cad-svg-060-hexnut/>)
- **M12 Hex Nut — GB/T 41 / ISO 4034 (Series 060)** (<https://engineeringhardware.com/guide/size/m12-cad-svg-060-hexnut/>)
- **M14 Hex Nut — GB/T 41 / ISO 4034 (Series 060)** (<https://engineeringhardware.com/guide/size/m14-cad-svg-060-hexnut/>)