

A4 (316) Stainless Steel Wing Nut

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A4 Stainless Steel Wing Nut are supplied to ISO 3506 group A4 (316 / 1.4401), commonly supplied A4-80. Corrosion behaviour is superior, including marine and chloride environments, the material is largely non-magnetic, and the usable service range is approx. -200 °C to +400 °C, subject to the property class and the joint. In practice this grade is specified for marine, coastal and chemical applications.

Grade

ISO 3506 group A4 (316 / 1.4401), commonly supplied A4-80

Corrosion resistance

Superior, including marine and chloride environments

Magnetic response

Largely non-magnetic

Service temperature

approx. -200 °C to +400 °C, subject to the property class and the joint

Property values are typical for the grade. Certified mechanical test data is available on request for production orders.



A4 Stainless Steel (ISO 3506 group A4 (316 / 1.4401), commonly supplied A4-80) is specified for marine, coastal and chemical applications. When wing nut are specified in this grade, the dimensions remain per GB/T 62 / DIN 315; the material determines corrosion behavior (superior, including marine and chloride environments) and the service temperature range (approx. -200 °C to +400 °C, subject to the property class and the joint). Both are covered below with the size table.

Why Choose A4 Stainless Steel for Wing Nut — GB/T 62 / DIN 315 (Series 077)

Specified for marine, coastal and chemical applications. For wing nut — gb/t 62 / din 315 (series 077), this matters when superior, including marine and chloride environments is the primary requirement.

Mechanical & Physical Properties

Grade designation	ISO 3506 group A4 (316 / 1.4401), commonly supplied A4-80
Magnetic response	Largely non-magnetic
Service temperature	approx. -200 °C to +400 °C, subject to the property class and the joint
Corrosion characteristic	Superior, including marine and chloride environments

Galvanic & Galling Considerations

Two important notes for stainless wing nut — gb/t 62 / din 315 (series 077): (1) stainless can gall on stainless threads under load — use a thread lubricant or anti-galling compound, especially for M6 and below; (2) when joined to aluminum or galvanized steel, stainless can drive galvanic corrosion of the less-noble metal in wet service — isolate with a coating or sleeve where appropriate.

Comparable Grades

For Wing Nut — GB/T 62 / DIN 315 (Series 077), the alternative stainless grade is A2 (304). A2 (304) covers general indoor and outdoor service. A4 (316) adds molybdenum,

which is what buys the chloride resistance for marine and de-icing-salt exposure. Where strength matters more than corrosion, plated alloy steel in class 8.8 or 10.9 is the swap to make.

Using Stainless Fasteners in Aluminum

Stainless steel is more noble than aluminum, so with an electrolyte present — rain, condensation, salt spray — the aluminum becomes the anode and corrodes at the joint. Area ratio decides how bad it gets: a small stainless fastener in a large aluminum section is normally acceptable, a large stainless fastener in thin aluminum is not. Where the joint gets wet, isolate the metals with a coated or nylon washer and a sealant, or specify an aluminum or coated fastener instead.

Sizes of Wing Nut — GB/T 62 / DIN 315 (Series 077) Available in A4 Stainless Steel

Size	Pitch (mm)	Wing width A (mm)	Wing height h (mm)	Nut height m (mm)	Ref
M3	0.5	12	8	5	GB/T
M4	0.7	16	10	7	GB/T
M5	0.8	20	12	8	GB/T
M6	1.0	24	14	10	GB/T
M8	1.25	32	18	13	GB/T
M10	1.5	40	22	16	GB/T
M12	1.75	48	26	19	GB/T
M16	2.0	60	32	24	GB/T

Dimensions are independent of the material: every size above is available in A4 Stainless Steel.

Custom manufacturing · Made to drawing

Need this nut in a grade that is not listed?

A4 Stainless Steel is one of the grades the catalog describes. Dimensions, material, finish and form are specified from the drawing — a nut outside the standard range is a variation on existing tooling rather than a new design. 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 M3 Wing Nut — GB/T 62 / DIN 315 (Series 077) to GB/T 62 / DIN 315. 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 62 / DIN 315)

Size	Pitch (mm)	Wing width A (mm)	Wing height h (mm)	Nut height m (mm)	Ref
M3	0.5	12	8	5	GB/T
M4	0.7	16	10	7	GB/T
M5	0.8	20	12	8	GB/T
M6	1.0	24	14	10	GB/T
M8	1.25	32	18	13	GB/T
M10	1.5	40	22	16	GB/T
M12	1.75	48	26	19	GB/T
M16	2.0	60	32	24	GB/T

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 Steels5

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

What Wing Nut are specified for, industry by industry. Stocked from M3 to M16.

Industries that specify Wing Nut

Consumer & sports equipment **Adjustments the end user makes themselves.**

Machine guarding & covers **Panels removed by hand for cleaning or access.**

Exhibition & temporary structures **Assemblies built and struck without tools.**

Typical applications

- **tool-free assembly and adjustment**
- **joints opened and closed many times a day**

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.

Full application guide: where Wing Nut are used, how to specify them, and the cases they are wrong for (<https://engineeringhardware.com/applications/cad-svg-077-wingnut/>)

Video: A4 (316) Stainless Steel Wing Nut



<https://www.youtube.com/watch?v=G4fkeeCA9-k>(<https://www.youtube.com/watch?v=G4fkeeCA9-k>)

► Watch video: <https://www.youtube.com/watch?v=G4fkeeCA9-k>(<https://www.youtube.com/watch?v=G4fkeeCA9-k>)

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

Can A4 Stainless Steel replace plated alloy steel structurally?

Only at the standard strength classes — A2-70 / A4-80 are roughly equivalent to class 7 steel; A4-100 reaches class 8.8. For class 10.9 or 12.9 strength, plated alloy steel is required.

Are A4 Stainless Steel Wing Nut — GB/T 62 / DIN 315 (Series 077) magnetic?

A4 Stainless Steel Wing Nut — GB/T 62 / DIN 315 (Series 077) are largely non-magnetic.

What corrosion resistance do A4 Stainless Steel Wing Nut — GB/T 62 / DIN 315 (Series 077) offer?

A4 Stainless Steel Wing Nut — GB/T 62 / DIN 315 (Series 077) provide superior, including marine and chloride environments with a service range of approx. -200 °C to +400 °C, subject to the property class and the joint.

Should I choose A4 Stainless Steel or A2 (304) for Wing Nut — GB/T 62 / DIN 315 (Series 077)?

For Wing Nut — GB/T 62 / DIN 315 (Series 077), A4 Stainless Steel suits general indoor and outdoor use; A2 (304) is preferred for marine, coastal and chemical environments. Choose by corrosion exposure first.

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 Wing Nut — GB/T 62 / DIN 315 \(Series 077\) page](https://engineeringhardware.com/fastener/cad-svg-077-wingnut/)
(<https://engineeringhardware.com/fastener/cad-svg-077-wingnut/>)

More Wing Nut — GB/T 62 / DIN 315 (Series 077) Guides

- **A2 Stainless Steel Wing Nut — GB/T 62 / DIN 315 (Series 077)** (<https://engineeringhardware.com/guide/material/a2-stainless-steel-cad-svg-077-wingnut/>)