A4 (316) Stainless Steel Spring Toggle Anchors

A4 Stainless Steel Spring Toggle Anchors 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.



Material page for spring toggle anchors in A4 Stainless Steel (ISO 3506 group A4 (316 / 1.4401), commonly supplied A4-80). The sizes below are the ones we supply; there is no published dimensional standard for this article, so the table rather than a standard number is what to quote. Corrosion behaviour is superior, including marine and chloride environments and the service range is approx. -200 °C to +400 °C, subject to the property class and the joint.

Why Choose A4 Stainless Steel for Spring Toggle Anchors

Specified for marine, coastal and chemical applications. For spring toggle anchors, 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

Corrosion Behavior in Service

A4 (316) adds 2–3% molybdenum to the A2 (304) composition, which dramatically improves resistance to chloride-pitting corrosion. For Spring Toggle Anchors in marine, coastal, swimming-pool or food-processing environments, A4 is the default selection.

Comparable Grades

For Spring Toggle Anchors, the alternative stainless grade is A2 (304). Choose A2 (304) for general use and A4 (316) wherever chlorides are present; the molybdenum in A4 is the whole difference. Remember that stainless is the corrosion answer, not the strength answer — for load, look at class 8.8 or 10.9 instead.

Using Stainless Fasteners in Aluminum

The galvanic couple here runs the wrong way: aluminum is the less noble metal, so it corrodes and the fastener does not. What governs the rate is the ratio of areas — a large

anode and a small cathode is a tolerable combination, the reverse concentrates the attack into thin material around the hole. An isolating washer plus sealant breaks the circuit; where that is impractical, match the fastener to the substrate.

Sizes of Spring Toggle Anchors Available in A4 Stainless Steel

Screw size	Drill hole diameter (mm)	Open span (mm)	Wall thickness range (mm)	Mi
M4	13	55	9~25	45
M5	16	70	9~35	55
M6	19	85	9~50	70
M8	22	100	12~60	85

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

Custom manufacturing · Made to drawing

Need this anchor & concrete fixing in a grade that is not listed?

A4 Stainless Steel is one of the grades the catalog describes. Embedment depth, thread size, body length and corrosion protection are the variables; capacity remains a concrete design value, not a property of the anchor alone.

Made by hot forging or thread rolling.

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

Custom anchor & concrete fixing manufacturing (https://engineeringhardware.com/custom/anchors/)

Send a drawing (https://engineeringhardware.com/custom/anchors/#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 M4 Spring Toggle Anchors to Trade series (spring toggle). Side view and top view, drawn to the dimensions in the table below and redrawn for any size selected.

Sends the selected values to the quote form below.

Request a Quote

The form below follows the current technical drawing configuration. Change the drawing values above and the request details update automatically.

Dimensions & Specifications (Trade series (spring toggle))

Screw size	Drill hole diameter (mm)	Open span (mm)	Wall thickness range (mm)	Mi
M4	13	55	9~25	45
M5	16	70	9~35	55
M6	19	85	9~50	70
M8	22	100	12~60	85

Product catalog

Related Hollow Wall & Toggle Anchors products



(https://engineeringhardware.com/product/bolt-type-hollow-wall-anchor-carbon-steel-plasterboard-fixing-anchor-expansion/)

Hollow-Wall & Toggle Anchors

Bolt Type Hollow Wall Anchor Carbon Steel Plasterboard Fixing Anchor Expansion Anchor Drywall Anchor Molly Bolt Galvanized Bolt

(https://engineeringhardware.com/product/bolt-type-hollow-wall-anchor-carbon-steel-plasterboard-fixing-anchor-expansion/)

Countersunk Head · ANSI, BSW, DIN, GB, JIS

US$0.0984MOQ 1,000 pieces



(https://engineeringhardware.com/product/din-gb-iso-ansi-astm-jis-standard-silver-yellow-bolts-hollow-wall-expansion-anchor/)

Hollow-Wall & Toggle Anchors

DIN, GB, ISO, ANSI/ASTM/JIS Standard Silver Yellow Bolts Hollow Wall Expansion Anchor (https://engineeringhardware.com/product/din-gb-iso-ansi-astm-jis-standard-silver-yellow-bolts-hollow-wall-expansion-anchor/)

Expansion Anchor · DIN, ANSI, GB, JIS, GOST, ASTM

US$0.012 – 0.60 MOQ 1,000 pieces



(https://engineeringhardware.com/product/gravity-spring-toggle-anchor/)

Hollow-Wall & Toggle Anchors

Gravity/Spring Toggle Anchor

(https://engineeringhardware.com/product/gravity-spring-toggle-anchor/)

Triangle · DIN, GB, ANSI, BSW, JIS, GOST

US$1.44 – 3.24 MOQ 900 kilograms



(https://engineeringhardware.com/product/china-manufacture-heavy-duty-m4-m5-m6-m8-zinc-plated-toggle-bolt-with-hook-factory/)

Hollow-Wall & Toggle Anchors

China Manufacture Heavy Duty M4 M5 M6 M8 Zinc Plated Toggle Bolt with Hook Factory OEM Good Quality
(https://engineeringhardware.com/product/china-manufacture-heavy-duty-m4-m5-m6-m8-zinc-plated-toggle-bolt-with-hook-factory/)
(https://engineeringhardware.com/product/china-manufacture-heavy-duty-m4-m5-m6-m8-zinc-plated-toggle-bolt-with-hook-factory/)

Mushroom Head · DIN, ANSI, GB, BSW, GOST

US$0.12 – 1.20 MOQ 1,000 pieces



(https://engineeringhardware.com/product/galvanized-spring-toggle-anchor-wing-anchor/)

Hollow-Wall & Toggle Anchors

Galvanized Spring Toggle Anchor Wing Anchor

(https://engineeringhardware.com/product/galvanized-spring-toggle-anchor-wing-anchor/)

GB · Carbon Steel

US$0.12 – 0.60MOQ 1,000 pieces



(https://engineeringhardware.com/product/zinc-plated-steel-round-head-drywall-spring-toggle-bolt-and-wing-nut-for/)

Hollow-Wall & Toggle Anchors

Zinc Plated Steel Round Head Drywall Spring Toggle Bolt and Wing Nut for Construction Project (https://engineeringhardware.com/product/zinc-plated-

steel-round-head-drywall-spring-toggle-bolt-and-wing-nut-for/)

Round Head · DIN, ANSI, GB

US$0.36 – 6.00 MOQ 500 pieces

View all Hollow-Wall & Toggle Anchors → (https://engineeringhardware.com/fastener-products/anchors-construction-fixings/hollow-wall-toggle-anchors/)

Full product catalog (https://engineeringhardware.com/products/)

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

The sectors that buy Spring Toggle Anchors, and the duty each one buys them for. Stocked from M4 to M8.

Industries that specify Spring Toggle Anchors

Drylining & partitions **Rails, brackets and fittings fixed to plasterboard.**

Fit-out & shopfitting **Loads spread behind a board where there is no stud.**

Domestic & light commercial **TV brackets, cabinets and grab rails.**

Building services **Suspending tray, duct, pipe and sprinkler runs from a soffit.**

Plant installation **Machines and equipment held down to a concrete floor.**

Fit-out & drylining **Fixings into board, block and hollow wall.**

Typical applications

- **toggles for the highest load, sleeve anchors where the fixture is removed**
- **spreading the load behind a hollow board**
- **making a load-bearing threaded fixing in concrete or masonry**
- **fixing a steel fixture through to a solid substrate**
- **suspended services on threaded rod**

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.

Hole preparation

Drilled diameter, depth and cleanliness are part of the specification; an uncleaned hole is the single most common cause of a failed anchor.

The concrete governs

Capacity is a property of the base material and the geometry — grade, edge distance, spacing and cracked or uncracked — not of the anchor alone. Work to the anchor manufacturer's ETA or ICC-ES report.

Where to use something else

- **Not for a substrate the type is not qualified in — an expansion anchor near an edge or in hollow block will split it.**

Full application guide: where Spring Toggle Anchors are used, how to specify them, and the cases they are wrong for (https://engineeringhardware.com/applications/spring-toggle-anchors/)

Video: A4 (316) Stainless Steel Spring Toggle Anchors



(https://www.youtube.com/watch?v=WO55oYoqIxA)https://www.youtube.com/watch?v=WO55oYoqIxA)

► Watch video: https://www.youtube.com/watch?v=WO55oYozlxA (https://www.youtube.com/watch?v=WO55oYozlxA)

Spring toggles (https://www.youtube.com/watch?v=WO55oYozlxA)

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

Is A4 Stainless Steel food-grade?

A4 (316) is the standard food-contact stainless grade in most jurisdictions, particularly where chloride exposure (brines, dairy CIP) is present.

Can A4 Stainless Steel Spring Toggle Anchors be used with aluminum?

Yes, but stainless drives mild galvanic corrosion of aluminum in wet service — isolate with a coating, sleeve or paint, or accept the trade-off if the joint is dry and indoor.

What's the service temperature limit for A4 Stainless Steel?

The practical service range is approx. -200 °C to +400 °C, subject to the property class and the joint.

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.

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 Spring Toggle Anchors page (https://engineeringhardware.com/fastener/spring-toggle-anchors/)

More Spring Toggle Anchors Guides

- **A2 Stainless Steel Spring Toggle Anchors (https://engineeringhardware.com/guide/material/a2-stainless-steel-spring-toggle-anchors/)**