

A4 (316) Stainless Steel Spiral-Wound Metal Gasket

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Fasteners/Washers Spiral-Wound Metal Gasket — GB/T 4622 / ASME B16.20 (Series 090) A4 (316) Stainless Steel Spiral-Wound Metal Gasket
Washers — GB/T 4622 / ASME B16.20
Mechanical properties, corrosion behaviour and the full dimensional range for this grade.

A4 Stainless Steel Spiral-Wound Metal Gasket 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 Spiral-Wound Metal Gasket are supplied to GB/T 4622 / ASME B16.20. The grade provides superior, including marine and chloride environments and is largely non-magnetic; the practical service range is approx. -200 °C to +400 °C, subject to the property class and the joint. Property data, grade comparison and the full size table follow.

Why Choose A4 Stainless Steel for Spiral-Wound Metal Gasket — GB/T 4622 / ASME B16.20 (Series 090)

Specified for marine, coastal and chemical applications. For spiral-wound metal gasket — gb/t 4622 / asme b16.20 (series 090), 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 Spiral-Wound Metal Gasket — GB/T 4622 / ASME B16.20 (Series 090) in marine, coastal, swimming-pool or food-processing environments, A4 is the default selection.

Galvanic & Galling Considerations

For stainless spiral-wound metal gasket — gb/t 4622 / asme b16.20 (series 090) the compatibility question is galvanic rather than galling: joined to aluminum or galvanized steel in wet service, stainless drives corrosion of the less-noble metal. Isolate with a coating, sleeve or non-conductive washer where the joint sees moisture. Note also that stainless is softer than hardened carbon steel, so where the part carries a wear or shear duty, check the load against the grade before substituting.

Using Stainless Fasteners in Aluminum

Stainless steel is more noble than aluminum, so in the presence of an electrolyte — rain, condensation, salt spray — the aluminum becomes the anode and corrodes at the joint. The effect is driven by the area ratio: a small stainless fastener in a large aluminum section is normally acceptable, while a large stainless fastener in thin aluminum is not. Where the joint is wet, isolate the two metals with a coated or nylon washer and a sealant, or specify an aluminum or coated fastener instead.

Sizes of Spiral-Wound Metal Gasket — GB/T 4622 / ASME B16.20 (Series 090)

Available in A4 Stainless Steel

Nominal pipe size	Inner diameter d1 (mm)	Outer diameter d2 (mm)	Thickness t (mm)	Winding material	Reference standard
DN15	22	42	4.5	304SS + flexible graphite	GB/T 4622 / ASME B16.20
DN20	27	49	4.5	304SS + flexible graphite	GB/T 4622 / ASME B16.20
DN25	34	59	4.5	304SS + flexible graphite	GB/T 4622 / ASME B16.20
DN32	43	69	4.5	304SS + flexible graphite	GB/T 4622 / ASME B16.20
DN40	49	75	4.5	304SS + flexible graphite	GB/T 4622 / ASME B16.20
DN50	61	87	4.5	304SS + flexible graphite	GB/T 4622 / ASME B16.20
DN65	77	109	4.5	304SS + flexible graphite	GB/T 4622 / ASME B16.20
DN80	89	121	4.5	304SS + flexible graphite	GB/T 4622 / ASME B16.20
DN100	115	149	4.5	304SS + flexible graphite	GB/T 4622 / ASME B16.20
DN150	169	205	4.5	304SS + flexible graphite	GB/T 4622 / ASME B16.20

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.

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 (GB/T 4622 / ASME B16.20)

Nominal pipe size	Inner diameter d1 (mm)	Outer diameter d2 (mm)	Thickness t (mm)	Winding material	Reference standard
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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.



1.

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.



2.

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.

3.



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.

4.



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 Spiral-Wound Metal Gasket — GB/T 4622 / ASME B16.20 (Series 090) magnetic?

A4 Stainless Steel Spiral-Wound Metal Gasket — GB/T 4622 / ASME B16.20 (Series 090) are largely non-magnetic.

What corrosion resistance do A4 Stainless Steel Spiral-Wound Metal Gasket — GB/T 4622 / ASME B16.20 (Series 090) offer?

A4 Stainless Steel Spiral-Wound Metal Gasket — GB/T 4622 / ASME B16.20 (Series 090) 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 Spiral-Wound Metal Gasket — GB/T 4622 / ASME B16.20 (Series 090)?

For Spiral-Wound Metal Gasket — GB/T 4622 / ASME B16.20 (Series 090), 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 Spiral-Wound Metal Gasket — GB/T 4622 / ASME B16.20 \(Series 090\) page](#)

More Spiral-Wound Metal Gasket — GB/T 4622 / ASME B16.20 (Series 090) Guides

- [A2 Stainless Steel Spiral-Wound Metal Gasket — GB/T 4622 / ASME B16.20 \(Series 090\)](#)