

What Are Spiral-Wound Metal Gasket Used For?

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Fasteners Washers Spiral-Wound Metal Gasket — GB/T 4622 / ASME B16.20 (Series 090) Applications

Washers · GB/T 4622 / ASME B16.20 · Application guide

Typical applications, the industries that specify spiral-wound metal gasket, and how to choose the right size, material and finish for the joint.

Spiral-Wound Metal Gaskets are used for load distribution and anti-loosening under a bolt or nut. They are manufactured to GB/T 4622 / ASME B16.20, and selection is driven by the size designation, the fit and tolerance the assembly requires, and the service environment.

Primary duty

Load distribution and anti-loosening under a bolt or nut

Governing standard

GB/T 4622 / ASME B16.20

Size designation range

15 to 150

Category

Washers

Application notes are general engineering guidance. Verify the property class and any approval requirement against your own design calculation.



Application guide for Spiral-Wound Metal Gaskets to GB/T 4622 / ASME B16.20. The core duty of the type is load distribution and anti-loosening under a bolt or nut. The typical industries, the how-to-specify checklist, assembly practice and the exclusion cases are set out below. Stocked across roughly 15 to 150, they cover heavy and structural work.

Typical Applications for Spiral-Wound Metal Gasket — GB/T 4622 / ASME B16.20 (Series 090)

The most common settings where these are specified:

- **Timber & soft materials:** large-OD types that prevent pull-through.
- **General machine building:** fastening covers, brackets, motors and sub-assemblies on production equipment.
- **Maintenance & repair (MRO):** a stocked size for servicing existing plant where the original fastener spec must be matched.
- **Fabrication & metalwork:** bench and on-site assembly of steel frames, enclosures and weldments.
- **Bolted structural joints:** spreading load over soft or oversized holes and protecting the surface.

How to Specify Spiral-Wound Metal Gasket — GB/T 4622 / ASME B16.20 (Series 090) for Your Application

- **Size:** Match the nominal size to the mating thread or hole. This product spans 15–150; check the full table below for the exact dimensions of each size.
- **Type & OD:** Select flat for load spreading, spring/serrated for anti-loosening, or fender/large-OD for soft or oversized holes.
- **Environment:** For damp, coastal or chemical exposure prefer A4/316 stainless or a suitable coating; indoors, plated steel or A2 is usually sufficient.
- **Standard:** This product is supplied to GB/T 4622 / ASME B16.20. Quoting the standard on your order guarantees interchangeable dimensions between suppliers.

Installation & Assembly Practice

- Place the washer under the rotating element (usually the nut) so tightening does not score the surface.
- Chamfered-hole side of a hardened washer faces the bolt head fillet.
- On serrated-flange hardware, do not add a plain washer — it defeats the serrations.

Common Selection Mistakes with Spiral-Wound Metal Gasket — GB/T 4622 / ASME B16.20 (Series 090)

- Relying on a spring washer for locking on class 8.8+ joints — at high preload it flattens and adds nothing.
- Choosing an OD too small for soft material, so the head pulls through or embeds.

Where Spiral-Wound Metal Gasket — GB/T 4622 / ASME B16.20 (Series 090) Are Not the Right Choice

A washer does not replace a locking feature on its own in severe vibration, and a spring washer adds little clamp on high-strength joints.

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
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

Video: What Are Spiral-Wound Metal Gasket Used For? in use



► Watch video: <https://www.youtube.com/watch?v=aJL1Kvti8k>

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.

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

Are Spiral-Wound Metal Gasket — GB/T 4622 / ASME B16.20 (Series 090) made to a recognized standard?

Yes — they are manufactured to GB/T 4622 / ASME B16.20, so dimensions are interchangeable between suppliers when you quote the standard on your order.

What are Spiral-Wound Metal Gasket — GB/T 4622 / ASME B16.20 (Series 090) used for?

Load distribution and anti-loosening under a bolt or nut. They are supplied to GB/T 4622 / ASME B16.20.

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

They are commonly specified in timber & soft materials, general machine building and maintenance & repair (mro), among other sectors.

How do I choose the right size of Spiral-Wound Metal Gasket — GB/T 4622 / ASME B16.20 (Series 090)?

Match the nominal size to the mating thread or hole. This product is available from 15 to 150; the full dimension table on this page lists each size.

Can I get a quote for Spiral-Wound Metal Gasket — GB/T 4622 / ASME B16.20 (Series 090) in the size and material I need?

Yes. Use the technical drawing and quote form on this page to set the size and options, then send the exact configuration to our team for pricing and lead time.

Related Pages

Product page: [Spiral-Wound Metal Gasket — GB/T 4622 / ASME B16.20 \(Series 090\) — specifications & sizes](#)

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

- [A4 stainless Spiral-Wound Metal Gasket — GB/T 4622 / ASME B16.20 \(Series 090\)](#)

Related Fastener Applications

- [Bearing Lock Washers \(MB Series\) applications](#)
- [Bonded Sealing Washers applications](#)
- [Conical Spring Washers \(HV\) applications](#)
- [Cup Washers applications](#)
- [Disc Springs \(Belleville Washers\) applications](#)
- [EPDM Sealing Washers applications](#)