

What Are Precision Round Shims Used For?

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Typical applications, the industries that specify precision round shims, and how to choose the right size, material and finish for the joint.

Precision Round Shims are used for the mechanical function defined by its drawing and dimensional table. They are manufactured to DIN 988, and selection is driven by the bore diameter, the fit and tolerance the assembly requires, and the service environment.

Primary duty

The mechanical function defined by its drawing and dimensional table

Governing standard

DIN 988

Bore diameter range

3 mm to 20 mm

Category

Standoffs & Spacers

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



Precision Round Shims (DIN 988) are specified where the joint requires the mechanical function defined by its drawing and dimensional table. The sections below cover the typical end-uses by industry, the size and material decisions for each, assembly practice, and the applications this fastener type is not suited to. Stocked across roughly 3 mm to 20 mm, they cover general to heavy-duty work.

Typical Applications for Precision Round Shims

The most common settings where these are specified:

- **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.

How to Specify Precision Round Shims for Your Application

- **Size:** Select on bore diameter, and confirm it against the mating feature in the assembly. This product spans 3 mm–20 mm; check the full table below for the exact dimensions of each size.
- **Material:** Choose the material and finish for the service environment — plated steel for general use, stainless for corrosion resistance.

- **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 DIN 988. Quoting the standard on your order guarantees interchangeable dimensions between suppliers.

Where Precision Round Shims Are Not the Right Choice

Match the fastener to the load, environment and whether the joint must be reopened; the wrong class or style is the usual cause of joint failure.

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 (DIN 988)

Bore d1 (mm)	Outer diameter d2 (mm)	Thickness s (mm)	Thickness tolerance (mm)	Material	Reference standard
3	6	0.1	+/-0.01	1.4310 stainless	DIN 988
3	6	0.2	+/-0.01	1.4310 stainless	DIN 988
4	8	0.1	+/-0.01	1.4310 stainless	DIN 988
4	8	0.3	+/-0.02	1.4310 stainless	DIN 988
5	10	0.1	+/-0.01	1.4310 stainless	DIN 988
5	10	0.5	+/-0.02	1.4310 stainless	DIN 988
6	12	0.1	+/-0.01	1.4310 stainless	DIN 988
6	12	0.3	+/-0.02	1.4310 stainless	DIN 988
8	14	0.1	+/-0.01	1.4310 stainless	DIN 988
8	14	0.5	+/-0.02	1.4310 stainless	DIN 988
10	16	0.2	+/-0.01	1.4310 stainless	DIN 988
10	16	0.5	+/-0.02	1.4310 stainless	DIN 988
12	18	0.2	+/-0.01	1.4310 stainless	DIN 988
12	18	0.5	+/-0.02	1.4310 stainless	DIN 988

Bore d1 (mm)	Outer diameter d2 (mm)	Thickness s (mm)	Thickness tolerance (mm)	Material	Reference standard
16	22	0.3	+/-0.02	1.4310 stainless	DIN 988
20	26	0.3	+/-0.02	1.4310 stainless	DIN 988

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.



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

Which industries use Precision Round Shims?

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

How do I choose the right size of Precision Round Shims?

Select on bore diameter and on the fit the assembly requires. This product is available from 3 mm to 20 mm; the full dimension table on this page lists each size.

What material should Precision Round Shims be for outdoor use?

For damp, coastal or chemical environments specify A4 (316) stainless or a suitably coated steel. For indoor or dry use, A2 (304) stainless or zinc-plated steel is normally adequate.

Are Precision Round Shims made to a recognized standard?

Yes — they are manufactured to DIN 988, so dimensions are interchangeable between suppliers when you quote the standard on your order.

Can I get a quote for Precision Round Shims 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: [Precision Round Shims — specifications & sizes](#)

Precision Round Shims Specification Guides

- [A4 stainless Precision Round Shims](#)

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- [Hex Standoffs, Female-Female applications](#)