

What Are O-Ring Seal Used For?

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[Fasteners/Seals O-Ring Seal — ISO / DIN \(Series 159\)/Applications](#)

[Seals · ISO / DIN · Application guide](#)

Typical applications, the industries that specify o-ring seal, and how to choose the right size, material and finish for the joint.

O-Ring Seals are used for containing fluid or excluding contamination at a static or dynamic interface. They are manufactured to ISO / DIN, and selection is driven by the inside diameter, the fit and tolerance the assembly requires, and the service environment.

Primary duty

Containing fluid or excluding contamination at a static or dynamic interface

Governing standard

ISO / DIN

Inside diameter range

5 mm to 100 mm

Category

Seals

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



O-Ring Seals are selected when an assembly calls for containing fluid or excluding contamination at a static or dynamic interface. This application guide to the ISO / DIN type covers concrete end-uses, the specification checklist, correct installation, and where an alternative fastener performs better. Stocked across roughly 5 mm to 100 mm, they cover general to heavy-duty work.

Typical Applications for O-Ring Seal — ISO / DIN (Series 159)

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 O-Ring Seal — ISO / DIN (Series 159) for Your Application

- **Size:** Select on inside diameter, and confirm it against the mating feature in the assembly. This product spans 5 mm–100 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 ISO / DIN. Quoting the standard on your order guarantees interchangeable dimensions between suppliers.

Where O-Ring Seal — ISO / DIN (Series 159) 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 (ISO / DIN)

Inner diameter d1 (mm)	Outer diameter d2 (mm)	Wire dia (mm)	Material	Working temp range	Reference standard
5	9	2	NBR 70	-30 to +110 C	ISO 3601 / GB/T 3452
8	12	2	NBR 70	-30 to +110 C	ISO 3601 / GB/T 3452
10	16	3	NBR 70	-30 to +110 C	ISO 3601 / GB/T 3452
15	21	3	NBR 70	-30 to +110 C	ISO 3601 / GB/T 3452
20	26	3	NBR 70	-30 to +110 C	ISO 3601 / GB/T 3452
25	33	4	NBR 70	-30 to +110 C	ISO 3601 / GB/T 3452
30	38	4	NBR 70	-30 to +110 C	ISO 3601 / GB/T 3452
40	50	5	NBR 70	-30 to +110 C	ISO 3601 / GB/T 3452
50	60	5	NBR 70	-30 to +110 C	ISO 3601 / GB/T 3452
60	72	6	NBR 70	-30 to +110 C	ISO 3601 / GB/T 3452
80	92	6	NBR 70	-30 to +110 C	ISO 3601 / GB/T 3452
100	114	7	NBR 70	-30 to +110 C	ISO 3601 / GB/T 3452

Video: What Are O-Ring Seal Used For? in use



► Watch video: <https://www.youtube.com/watch?v=aweDWuNkPw0>

O-Rings? O-Yeah! How to Select, Design, and Install O-Ring Seals

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

What are O-Ring Seal — ISO / DIN (Series 159) used for?

Containing fluid or excluding contamination at a static or dynamic interface. They are supplied to ISO / DIN.

Which industries use O-Ring Seal — ISO / DIN (Series 159)?

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 O-Ring Seal — ISO / DIN (Series 159)?

Select on inside diameter and on the fit the assembly requires. This product is available from 5 mm to 100 mm; the full dimension table on this page lists each size.

Are O-Ring Seal — ISO / DIN (Series 159) made to a recognized standard?

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

Can I get a quote for O-Ring Seal — ISO / DIN (Series 159) 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: [O-Ring Seal — ISO / DIN \(Series 159\) — specifications & sizes](#)

O-Ring Seal — ISO / DIN (Series 159) Specification Guides

- [A4 stainless O-Ring Seal — ISO / DIN \(Series 159\)](#)

Related Fastener Applications

- [AS568 O-Rings \(Inch Series\) applications](#)
- [O-Ring Seal — ISO / DIN \(Series 160\) applications](#)