

A4 (316) Stainless Steel O-Ring Seal

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Fasteners/Seals/O-Ring Seal — ISO / DIN (Series 160) A4 (316) Stainless Steel O-Ring Seal

Seals · ISO / DIN

Mechanical properties, corrosion behaviour and the full dimensional range for this grade.

A4 Stainless Steel O-Ring Seal 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 is not a material o-ring seal are supplied in. O-Ring Seal are specified by inside diameter, and this combination does not describe a part that exists.

The materials that do apply are: NBR (Nitrile), FKM (Viton®-type), EPDM, Silicone (VMQ), PTFE.

[See the O-Ring Seal product page for the specifications that do apply →](#)

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: A4 (316) Stainless Steel O-Ring Seal



► Watch video: <https://www.youtube.com/watch?v=jeBSoxE8RaQ>

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

Can A4 Stainless Steel O-Ring Seal — ISO / DIN (Series 160) gall during installation?

Yes — stainless on stainless is prone to thread galling under load, especially at smaller sizes. Use an anti-galling lubricant or wax thread compound, and slow the tightening rate where possible.

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 O-Ring Seal — ISO / DIN (Series 160) 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.

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 O-Ring Seal — ISO / DIN \(Series 160\) page](#)

More O-Ring Seal — ISO / DIN (Series 160) Guides

- [NBR \(Nitrile\) O-Ring Seal — ISO / DIN \(Series 160\)](#)
- [FKM \(Viton®-type\) O-Ring Seal — ISO / DIN \(Series 160\)](#)
- [EPDM O-Ring Seal — ISO / DIN \(Series 160\)](#)
- [Silicone \(VMQ\) O-Ring Seal — ISO / DIN \(Series 160\)](#)
- [PTFE O-Ring Seal — ISO / DIN \(Series 160\)](#)