USIT Rings (Self-Centring Bonded Seals)

USIT Rings (Self-Centring Bonded Seals) to Trade series (self-centring bonded washers, USIT type): the full dimensional table is reproduced below. 10 sizes are held in the table below, and the technical drawing redraws to whichever row you select.

Standard

Trade series (self-centring bonded washers, USIT type)

Catalogued sizes

10

Dimensions are nominal values from the governing standard. Confirm the tolerance class for your application before ordering.



Product catalog

Related Bonded Seal Rings products



(https://engineeringhardware.com/product/china-factory-oem-premium-75-15mm-nail-hidden-pvc-skirting-board-fix-with-nails/)

Common, Ring-Shank & Specialty Nails

China Factory OEM Premium 75*15mm Nail-Hidden PVC Skirting Board Fix with Nails (https://engineeringhardware.com/product/china-factory-oem-premium-75-15mm-nail-hidden-pvc-skirting-board-fix-with-nails/)

Flat · PVC

US$0.70 – 1.12MOQ 2,400 meters



(https://engineeringhardware.com/product/5-382mm-hot-dipped-nail-galvanized-nail-double-head-nail-duplex-head-nail-for/)

Common, Ring-Shank & Specialty Nails

5.3×82mm Hot Dipped Nail Galvanized Nail Double Head Nail Duplex Head Nail for Outdoor Construction Use

(https://engineeringhardware.com/product/5-382mm-hot-dipped-nail-galvanized-nail-double-head-nail-duplex-head-nail-for/)

Duplex Head Nail · ANSI, DIN, GB, ISO, JIS

US$504.00 – 540.00MOQ 3 tons



(https://engineeringhardware.com/product/china-factory-quality-guaranteed-ce-iso-Intertan-Intramedullary-foot-nail-made/)

Common, Ring-Shank & Specialty Nails

China Factory Quality Guaranteed CE/ISO Lntertan Lntramedullary Foot Nail Made (https://engineeringhardware.com/product/china-factory-quality-guaranteed-ce-iso-lntertan-lntramedullary-foot-nail-made/)

Splint Fixation · Titanium

US$142.80 MOQ 1 piece



(https://engineeringhardware.com/product/china-supplier-wholesale-private-label-customized-luxury-fancy-clear-crystal-empty/)

Common, Ring-Shank & Specialty Nails

China Supplier Wholesale Private Label Customized Luxury Fancy Clear Crystal Empty Nail Varnish Polish Glass Bottle with Brushes
(https://engineeringhardware.com/product/china-supplier-wholesale-private-label-customized-luxury-fancy-clear-crystal-empty/)
(https://engineeringhardware.com/product/china-supplier-wholesale-private-label-customized-luxury-fancy-clear-crystal-empty/)

Glass · Screw Cap

US$0.0252 – 0.22 MOQ 10,000 pieces



(https://engineeringhardware.com/product/stainless-steel-hardware-nails-flat-head-nails-for-hanging-pictures/)

Common, Ring-Shank & Specialty Nails

Stainless Steel Hardware Nails, Flat Head Nails for Hanging Pictures

(https://engineeringhardware.com/product/stainless-steel-hardware-nails-flat-head-

nails-for-hanging-pictures/)

Round Head, Round Head · DIN, GB, ANSI, BSW, JIS, GOST, DIN, GB, ANSI,...

US$0.012 – 0.036 MOQ 1,000 pieces



(https://engineeringhardware.com/product/color-galvanized-1-2-3-4-water-pipe-hook-nail-fixed-water-pipe-nails/)

Common, Ring-Shank & Specialty Nails

Color Galvanized 1/2 3/4 Water Pipe Hook Nail Fixed Water Pipe Nails

(https://engineeringhardware.com/product/color-galvanized-1-2-3-4-water-pipe-hook-nail-fixed-water-pipe-nails/)(https://engineeringhardware.com/product/color-galvanized-1-2-3-4-water-pipe-hook-nail-fixed-water-pipe-nails/)

Common Nail · ANSI, DIN, GB, ISO, JIS

US$0.0012 MOQ 10,000 pieces

View all Common, Ring-Shank & Specialty Nails →
(https://engineeringhardware.com/fastener-products/nails-staples-tacks/common-ring-shank-specialty-nails/)

Full product catalog (https://engineeringhardware.com/products/)

Applications & Industries

USIT Rings are bought for a small number of well-defined jobs. These are the ones we ship them for. Stocked from M6 to M27.

Industries that specify USIT Rings

Machine tools Coolant and hydraulic ports.

Hydraulics Port plugs and fittings.

Mobile plant Vibration-prone joints.

Compressors Sealing under pressure cycling.

Process & food equipment Sealing at joints that are cleaned and inspected.

Hydraulics & pneumatics Static and dynamic sealing in cylinders and valve bodies.

Typical applications

- seating the ring square before tightening
- choosing the self-centring form where the seat is imperfect
- matching the thread size exactly
- selecting FKM where the fluid or temperature demands it
- excluding dust and moisture from a housing
- sealing a joint against fluid or air pressure

Service conditions to specify against

Sealed joints

Used where the fixing has to keep water or air out as well as hold — the elastomer, not the fastener, decides service life.

Where to use something else

Do not reuse a bonded or USIT seal after it has been compressed; the elastomer has taken a set and will not seal a second time.

Full application guide: where USIT Rings are used, how to specify them, and the cases they are wrong for (https://engineeringhardware.com/applications/usit-rings/)

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.

Dimensioned line drawing of M6 USIT Rings (Self-Centring Bonded Seals) to Trade series (self-centring bonded washers, USIT type). Side view and top view, drawn to the dimensions in the table below and redrawn for any size selected.

Sends the selected values to the quote form below.

Request a Quotation for USIT Rings (Self-Centring Bonded Seals)

The form below follows the current technical drawing configuration. Change the drawing values above and the request details update automatically.

Dimensions & Specifications (Trade series (self-centring bonded washers, USIT type))

Every row below is a starting point for the customizer above — pick any size and the drawing will redraw to that row.

Thread	Seal element	Metal carri
M6 (https://engineeringhardware.com/guide/size/m6-usit-rings/)	NBR inner lip	zinc-plated s
M8 (https://engineeringhardware.com/guide/size/m8-usit-rings/)	NBR inner lip	zinc-plated s
M10 (https://engineeringhardware.com/guide/size/m10-usit-rings/)	NBR inner lip	zinc-plated s
M12 (https://engineeringhardware.com/guide/size/m12-usit-rings/)	NBR inner lip	zinc-plated s
M14 (https://engineeringhardware.com/guide/size/m14-usit-rings/)	NBR or FKM inner lip	zinc-plated c
M16 (https://engineeringhardware.com/guide/size/m16-usit-rings/)	NBR or FKM inner lip	zinc-plated c
M18 (https://engineeringhardware.com/guide/size/m18-usit-rings/)	NBR or FKM inner lip	zinc-plated c
M20 (https://engineeringhardware.com/guide/size/m20-usit-rings/)	NBR or FKM inner lip	zinc-plated c
M22 (https://engineeringhardware.com/guide/size/m22-usit-rings/)	NBR inner lip	zinc-plated s
M27 (https://engineeringhardware.com/guide/size/m27-usit-rings/)	NBR inner lip	zinc-plated s

USIT Rings (Self-Centring Bonded Seals) are seals manufactured to Trade series (self-centring bonded washers, USIT type). This page lists the full dimensional range with the

key specifications engineers need to select and specify them.

What Are USIT Rings (Self-Centring Bonded Seals)?

USIT Rings (Self-Centring Bonded Seals) are seals defined by Trade series (self-centring bonded washers, USIT type). They are selected by thread size and the dimensional characteristics shown below, and are available in a range of materials and finishes to suit the application and environment.

Materials & Finishes

O-rings and seals are specified by elastomer, not by steel grade: NBR (nitrile) for mineral oil and hydraulic service, FKM for higher temperature and aggressive chemistry, EPDM for water, steam and weathering, silicone for a wide temperature range in static duty, and PTFE where chemical resistance outweighs elastic recovery. Specify the compound, the hardness in Shore A and the temperature range alongside the dimensions.

Specification Guides

Each size, material and standard of USIT Rings (Self-Centring Bonded Seals) has its own reference page with the figures for that one configuration.

Goes With

Hardware commonly specified alongside USIT Rings (Self-Centring Bonded Seals).

Pricing

USIT Rings (Self-Centring Bonded Seals) are supplied to order. Pricing starts from approximately US$0.14 per piece for standard sizes in standard nitrile (NBR) 70 Shore A; final pricing depends on size, material, finish and order quantity (MOQ applies). Submit your exact configuration with the quote form above.

Custom manufacturing · Made to drawing

Need a USIT rings (self-centring bonded seals) outside the standard range?

Inside diameter, cross-section and compound are the three that matter, and the compound is chosen against the fluid and the temperature rather than the dimensions.

Minimum order from 2,000 pieces; samples within 7 days of drawing approval.

Custom seal manufacturing (https://engineeringhardware.com/custom/seals/)

Send a drawing (https://engineeringhardware.com/custom/seals/#rfq)

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.



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.



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.



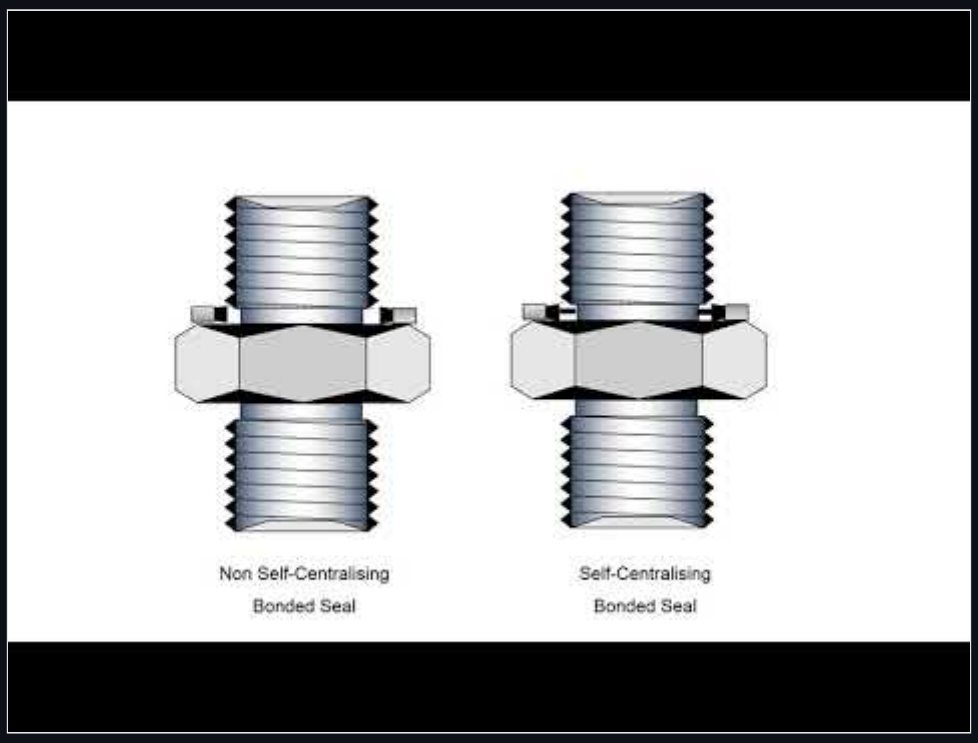
04

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.

Video: USIT Rings (Self-Centring Bonded Seals)



https://www.youtube.com/watch?v=ro1MixJkK18

► Watch video: https://www.youtube.com/watch?v=r6YMixjRKt8 (https://www.youtube.com/watch?v=r6YMixjRKt8)

Self Centralising Bonded Seals (https://www.youtube.com/watch?v=r6YMixjRKt8)

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.

Frequently Asked Questions

What is the controlling standard for USIT Rings (Self-Centring Bonded Seals)?

USIT Rings (Self-Centring Bonded Seals) are manufactured to Trade series (self-centring bonded washers, USIT type). The dimensional values on this page follow that standard.

Which sizes of USIT Rings (Self-Centring Bonded Seals) does Engineering Hardware supply?

The table on this page lists 10 sizes for USIT Rings (Self-Centring Bonded Seals), ranging from M6 to M27. Sizes outside the table can be quoted on request.

In which materials are USIT Rings (Self-Centring Bonded Seals) supplied?

USIT Rings (Self-Centring Bonded Seals) are supplied in NBR (nitrile), FKM, EPDM, silicone and PTFE, selected by fluid and temperature, with finishes including zinc plating, hot-dip galvanizing and black oxide. Choose material and finish to suit the load and the service environment for USIT Rings (Self-Centring Bonded Seals).

How do I request a quotation?

Use the parametric drawing on this page to set the exact configuration (size, material, finish) and click "Request this configuration" — a specialist from Engineering Hardware will respond within one business day.