Company Profile

Today we don’t just supply O Rings… we deliver the Total Sealing Solution.

With components available in over 2000 materials with vast chemical compatibilities and operating temperatures from -60°C to +327°C.

Material Approvals to the following standards: FDA (CFR 21.177.2600) & USP VI, WRAS / WRC, ADI-FREE, REACH, 3-A (Sanitary) & AED

Barcoded Warehouse Management System

For more efficient order processing and easier product traceability.

All products are scanned into our system on delivery and labelled with unique bar codes which are scanned again on picking to ensure you receive the correct product.

The Complete Package

Over 40 years of relevant and proven experience.

A vast array of ancillary and complementary products, in a wide variety of materials.

Free Technical support.

A worldwide network of suppliers and contacts.

Individual or kit bagging available

Fully labelled products with bar code, batch number, cure date and full product description

QC procedures available to meet your requirements

Clean room manufacturing available on request

ISO 9001: 2008 approved with dedicated Quality Administrator

Dedicated Account Executives for continuity

Large warehouse with call off facility if required

Products

O Rings

Seals

Specialist

Moulded
Quality & Traceability

Quality

O Rings are committed to providing quality and full traceability of all products we supply. Through our strict adherence to quality procedures throughout our organisation we have achieved full ISO 9001 accreditation in Supply and Distribution.

We have experienced in-house quality assurance engineers to carefully check, and double check, the products we supply.

This offers you further savings in terms of time, money and inconvenience as we can supply pre checked and bagged materials either bulk packed, individually packed or in kit form to your specifications, directly to your production line.

We also have a dedicated Quality Assurance Department to deal with any issues that may arise.

Traceability

O Rings have invested in technology to help us ensure full traceability of products and our warehouse staff use fully integrated, wireless bar code scanners to pick, label and despatch orders ensuring all products show full batch and cure information along with our product codes and descriptions. We also have the facility to add your own in house product codes to the labelling and documentation. Bar coding is also used to check deliveries and confirm bin locations as they arrive in our goods in department.

In House Product Quality Assurance

O Rings Limited have experienced Quality Assurance Engineers on site to check products conform to sizing, material types and examine for any defects. We can provide Certificates of Conformity on request and can carry out specific in house inspection to meet your requirements if required. We regularly carry out quality audits of our suppliers and monitor the performance of suppliers and our own staff on a monthly basis.

Meeting Standards

- FDA (CFR 21.177.2600) Compliant
- FDA U.S. Pharmacopoeia (USP) Class VI
- 3-A (Sanitary) Standards
- WRAS - Water Regulations Advisory Scheme
- WRC Approved
- ADI-FREE (Animal Derived Ingredient free)
- REACH & RoHS
- AED - Anti-Explosion Decompression
- Clean room manufacturing available
Static Seals

Static Seals - Rubber, PTFE, Metal, Bonded and Inflatable

In a static sealing application there is no movement between sealing surfaces or between the seal surface and its mating surface.

The most common seal used in static sealing situations is the O-Ring, but in addition to these, O Rings Limited can offer a range of specialized static seals. The range includes our proprietary metal O-Rings, Wills Rings®, which are ideal for use in extreme temperatures and pressures. Other static seals we offer include inflatable seals (Airseal), various rubber seals, valve seals, quad rings, square rings, rubber - metal bonded seals, polyurethane seals and spring energized Polytetrafluoroethylene (PTFE) seals.

Airseal

Airseal is an inflatable seal, vulcanized to specific customer profiles. Being activated by air, water or other medium, this seal represents an economical alternative to conventional gaskets. The large range of profiles and compounds available allows the use of Airseal in various applications, including doors and locks of autoclaves and sterilizers, in the chemical and semiconductor industries.

Back-up Ring

Back-up Rings are installed together with O-Rings and Quad-Ring® Seals to prevent gap extrusion in applications above 5 MPa / 725 psi. Available in solid, split and spiral PTFE, elastomers and thermoplastics based on ISO 3601, AS 568.

Bonded Seal

Often referred to as Dowty Seals or Washers, these are rectangular section metal washers with a trapezoidal shaped ring of vulcanised rubber bonded to the inside.

You can select the material for the washer and the rubbers to best meet the requirement of each application. The seal is primarily used in high-pressure environments where copper washers are unsuitable. Also available as Self Centralising Bonded Seals, these have an extra lip on the ID of the rubber. As its name suggests the extra lip centralises the seal at its location and this helps eliminate leaks. Extra advantages of easy installation and reduced assembly time.

As a Trelleborg Partner company we can supply genuine Dowty Seals
Static Seals

Kantseal
Kantseal is an elastomer square sectioned ring for static applications. Mostly used on flanges to SAE standards and covers, it has a high sealing efficiency and keeps its shape. Available in nitrile (NBR) and fluorocarbon (FKM).

Quad-Ring® Seal
A double-acting four lip seal for static and dynamic applications. Available in a wide range of elastomer compounds. Provides higher seal efficiency and lower friction than conventional O-Rings.

Turcon® Variseal® H
A single-acting sealing element comprised of a U-shaped Turcon® ring and a coiled metallic energizing spring. The seal has a high specific sealing force and gives gas-tight sealing even at low temperatures. Resistant to most liquids and chemicals it has unlimited shelf life. Used for radial static or slightly dynamic applications, the seal is available in versions for cryogenic service.

Turcon® Variseal® HF
A single-acting face sealing element comprised of a U-shaped Turcon® ring and a coiled metallic energizing spring. The seal has a high specific sealing force and gives gas-tight sealing even at low temperatures. Resistant to most liquids and chemicals it has unlimited shelf life. Used for inside or outside sealing, the seal is available in versions for cryogenic service.

Wills Rings® C
Wills Rings® C are metal C-Rings used for almost any static face sealing applications. They give reliable performance over a large temperature range in liquids and they can also seal high pressures and vacuums. Wills Rings® C exhibits greater spring back and elasticity than Wills Rings® O. This characteristic provides more effective sealing where thermal expansion of the seal housing is found. The seals are available for internal and external seal housing in Inconel® 718 and X750. They can be plated in silver or nickel, or coated with PTFE.
Static Seals

Wills Rings® O

Wills Rings® O are metal O-Rings for static face-sealing applications that give reliable performance over a large temperature range for gases and liquids. Extreme high pressures and vacuums can be sealed with Wills Rings® O. Long life and excellent corrosion resistance are also characteristics of the seals. Available as pressure filled, pressure-actuated, non-pressurized and solid seals, in mild and stainless steel, copper and Inconel® 600 materials. The seals can be plated in silver or nickel, or PTFE coated.

Zurcon® Dualseal

Zurcon® Dualseal is a sealing element for static applications and a highly effective alternative to O-Ring and Back-up Ring combinations. The main advantages are resistance to twisting, stability at pulsating pressures and low contamination risk. Dualseal is easy to install and guarantees long service life. Recommended for heavy duty applications in cylinders and valves.

Zurcon® SAE J 518 Flange Seals

SAE Flange Seals corresponding to SAE J 518 are available in three different variants:

- O-Rings (standard material: NBR 90 ShA)
- Rectangle Seals series DR (standard material: NBR 90 ShA)
- Zurcon® SAE-Seals series DRV3 (standard material: Zurcon® Z20 polyurethane 93 ShA)

All SAE Flange Seals provide high functional security and can easily be mounted and dismounted. They are used in a variety of applications including hydraulics, press manufacturing and materials-handling.
Hydraulic Piston Seals

Piston Seals or Piston Rings are used in hydraulic cylinders for fluid sealing. They are internal to the cylinder head and seal against the cylinder bore, preventing fluid from flowing across the cylinder head. This allows pressure build up on one side of the piston, making the cylinder extend or retract.

A hydraulic piston seal or piston ring is usually manufactured in either Polytetrafluoroethylene (PTFE) based material or Polyurethane. Specially engineered for fluid power applications, these compounds provide exceptional resistance to wear and

**Turcon® Glyd Ring®**

A double-acting O-Ring energized piston seal for dynamic applications, provides low friction with no stick-slip, minimal break out force and high wear resistance. Main application is actuator cylinders. Installed in grooves to ISO 7425.

**Turcon® Glyd Ring® T**

Provides optimum leakage control and good resistance to extrusion. The seal is a double-acting O-Ring energized piston seal for dynamic applications. Installed in grooves to ISO 7425, it has excellent friction characteristics with no stick-slip, minimal break-out force and high wear resistance.

**Zurcon® Glyd Ring® P**

The double-acting Zurcon® Glyd Ring® P is a combination of a Zurcon® based material slipper-seal with a step cut and an energizing rectangular elastomer ring. The high strength of Zurcon® means there can be a two-times larger extrusion gap compared with Turcon® materials. The step cut in the ring is necessary for installation in closed grooves and to give flexibility to this very stiff material.

**Turcon® Stepseal® V**

A single-acting O-Ring energized piston seal with hydrostatic pressure relief channel for dynamic applications. It prevents pressure trapping between seals under all service conditions. Installed in closed grooves, including grooves to ISO 7425, Turcon® Stepseal V offers high sealing efficiency. It also has low friction with no stick-slip, minimal break out force and high wear resistance.
Hydraulic Piston Seals

Turcon® Stepseal® 2K

A single-acting O-Ring energized piston seal for dynamic applications installed in closed grooves including grooves to ISO 7425. Offers high sealing efficiency, low friction with no stick-slip, minimal break out force and high wear resistance. Optimum sealing characteristics are achieved by installing in a tandem Turcon® Stepseal® or Rimseal arrangement together with a double-acting scraper. Available in Turcon® or Zurcon® materials.

Turcon® VL Seal®

The Turcon® VL Seal® is a single-acting L-shaped Turcon® seal with an elastic energizer for dynamic applications. Its design provides low friction, no stick-slip effect, high wear resistance. It features the Turcon® Stepseal® back pumping effect and is also available in Zurcon®. The seal can be installed in a standard O-Ring groove.

Turcon® Variseal® M2

A single-acting sealing element comprised of a U-shaped Turcon® ring and metallic energizing finger spring. It offers low friction with no stick-slip, minimal break out force and high wear resistance. Resistant to most liquids and chemicals, it has an unlimited shelf life.

Turcon® Variseal® W2

Turcon® Variseal® W2 is a single-acting rod seal energized by a special SlantCoil spring. The advantage of the Variseal® W2 lies in its low friction and relatively constant preloading force over a relatively large deformation range. The seal is used wherever friction has to be kept within a narrow tolerance zone.

Turcon® AQ Seal®

A double-acting O-Ring energized seal developed for sealing between two media such as fluid and gas. It incorporates a limited footprint Quad-Ring® Seal inset into the dynamic sealing face. Installed in grooves to ISO 7425.
Hydraulic Piston Seals

VEEPAC

VEEPAC is an assembly of fabric-reinforced, highly wear resistant, chevron sealing rings with a support ring and a pressure energizing ring. VEEPAC seals are designed with preloaded radial lips to provide good sealing results. They are very robust, not sensitive to sealing surface finish and dimensionally adjustable. They are especially suited to applications where there is a risk of damage and contamination.

Zurcon® U-Cup

Zurcon® U-Cup is a single-acting polyurethane piston seal that is available in a wide range of sizes. The seal is suitable for assembly into closed grooves and mainly used in light-duty cylinder applications in mobile equipment.

Zurcon® Wynseal

A double-acting O-Ring energized piston seal in injection molded polyurethane for dynamic applications. Installed in grooves to ISO 7425, Zurcon® Wynseal offers high sealing efficiency, and is tear and abrasion resistant.

Zurcon® Wynseal M

A double-acting O-Ring energized piston seal for dynamic applications in a machined version. All diameters up to 2,700 mm / 105 in. Installed in grooves to ISO 7425. High sealing efficiency in tear and abrasion resistant Zurcon® polyurethane. Also available in Turcon® materials.

PHD / CST Seal

A heavy duty compact double-acting piston seal, the PHD / CST Seal is an elastomer energized PTFE assembly. It gives stability, wear resistance, seal ability, low friction and a maintenance-free long life. HiMod® Back-up Rings are specially designed to protect the seal ring from extrusion, even in the most demanding applications.
Pneumatic Seals

Pneumatic Seals - Rod, Piston, Static and Compact Seals

O Rings Ltd supplies a number of seals, wear rings and scrapers / wiper specifically engineered for pneumatic applications, where cylinders and valves are actuated by air. Pneumatic seals operate in dynamic applications, often at high speeds, generally with rotary or reciprocating motions. In addition, where a standard product type is not suitable, custom solutions can be developed.

The range of pneumatic seals includes:

- Pneumatic rod seals
- Piston seals
- Rod seal - scraper combinations
- Static seals
- Pneumatic scrapers

Wear rings and cushioning seals

Complete Magnet Piston

The Complete Magnet Piston fulfils a large number of technical requirements within the pneumatics industry with its double acting operation, dynamic sealing capability, guidance feature and mechanical end cushioning.

An NBR O-Ring acts as a static seal and seals the rod while an integrated magnet detects position. The dimension, magnet flux and return spring groove can all be customized to specific requirements.

Pneumatic Cushioning Seal

Cushioning seals provide end-of-stroke damping in pneumatic cylinders, eliminating the need for check valves. These polyurethane, high performance seal elements are user-friendly and provide an automatic centering check valve function and easy, snap-in installation.

Pneumatic Glyd Ring® for Pistons and Rods

Double-acting Glyd Ring® is available as piston or rod seal and is comprised of a slipper seal and an energizing O-Ring. This means less installation space is required. Different material combinations provide solutions suitable for special pneumatic applications where minimum static and dynamic friction, low stick-slip, high speed performance or wide temperature range are required.
Pneumatic Piston Seal

The pneumatic product range offers single- and double-acting seals for piston applications. Made from extremely wear resistant material including Zurcon® polyurethane and FKM, these seals fit into small housings and are easily installed. The pneumatic piston seal range is recommended for standard and pneumatic cylinders with dry air.

Pneumatic Rod Seal and Rod Seal - Scraper Combination

Pneumatic rod seals are available as lip seals and rod seal/scraper combinations for closed and open housings. Special materials provide high abrasion resistance and low friction cost-effectively. They are recommended for applications in standard cylinders, installed with a separate scraper or as rod seal/scraper combination for dry air.

Pneumatic Scraper / Scraper for Guiding Units

These two versions of scrapers snap easily into open or semi-open grooves. Their special flexible lip design protects the cylinder from contamination. Where space is at a premium, the 3 mm / .118 in long type AWBB, is recommended (guiding units only).

Pneumatic Wear Rings for Pistons and Rods

A complete range of seals and bearings for pneumatics including the most common dimensions for pistons and rods. The guide rings are made of a specially developed, self-lubricating plastic material to provide low friction, wear resistance, long term compression stability and excellent service life.
Rotary and Shaft Seals

Rotary seals and Shaft Seals are used in components with oscillating or rotating parts to keep lubrication fluids in while preventing ingress of mud and water. Seals help improve components life and long term performance.

O Rings Limited portfolio of rotary seals includes the commonly known radial oil seal, rotary shaft seals, radial and axial lip seals, double-acting O-Ring energized Polytetrafluoroethylene (PTFE) rotary seals for shaft and bore, rubber V-Rings, mechanical face seals / heavy duty seals and many more.

**Extending component life**

Our specialized Rotary and Shaft Seals perform exceptionally well in many different rotary situations. They demonstrate superior low-friction properties and provide excellent resistance to wear.

**Rotary and Shaft Seals for many different application**

With special seals, like the Radial Oil Seal and Radial shaft seals without a tension ring, the range of applications goes beyond fluid sealing. This special form of Rotary Shaft Seals can also serve as a scraper in situations with helical movement.

**Gamma Seal**

The Gamma Seal is an axial rotary seal that excludes contamination, moisture and grease. It consists of an elastomer sealing lip contained in a metal carrier. This design copes with arduous static and dynamic conditions in mobile hydraulics and power transmission applications.

**Mechanical Face Seals**

Mechanical Face Seals are a special form of mechanical seals. They are also known under other designations, such as lifetime seals, floating seals, duo cone seals, toric seals and heavy duty seals. There are two different types of Mechanical Face Seals:

Type DO is the most common form that uses an O-Ring as a secondary sealing element.

Type DF has an elastomer with a diamond-shaped cross section as a secondary sealing element instead of the O-Ring.

Both types consist of two identical metal seal rings mounted in two separate housings face-to-face on a lapped seal face. The metal rings are centred within their housings by an elastomer element. One half of the Mechanical Face Seal remains static in the housing, while the other half rotates with its counter face.

Mechanical Face Seals are predominantly used for sealing the bearings in construction machinery or production plants operating under extremely arduous conditions and subject to severe wear. Mechanical Face Seals are proven for use in gearboxes, mixers, stirrers, wind-driven power stations and other applications with similar conditions or where maintenance-free lifetime sealing is expected.
Rotary and Shaft Seals

Radial Oil Seals

Radial oil seals are designed for sealing shafts and spindles. Providing long-lasting sealing efficiency, they consist of a rubber sealing lip, metal case and a spiralled tensioning spring. Available with or without external dust lip, they are self-retained in an open groove to ISO 6194 and DIN 3760. Versions come without the spring for grease applications, for use as a scraper or for helical movement.

Roto Glyd Ring®

A double-acting O-Ring energized seal designed for rotating, oscillating and helically moving pistons, rods and shafts. It is installed in grooves to ISO 7425 and is available in a single-acting version for higher rotating speeds. Available in both PTFE and Polyurethane.

Roto Variseal®

A single-acting sealing element comprised of a U-shaped Turcon® ring and metallic energizing finger spring. It offers low friction with no stick-slip, minimized break out force and high wear resistance. Its constrained flange eliminates potential seal rotation and it is resistant to most liquids and chemicals. Unlimited shelf life.

V-Ring®

The V-Ring® fits directly onto the shaft and seals axially against a counter face, such as shaft collar, thrust washer or bearing face. Its light lip pressure generates low friction
Rotary and Shaft Seals

Roto VL Seal®

Single-acting seal for rotary, turning and oscillating movements for pistons, rods and shafts in a wide range of machinery. The O-Ring activated L-shaped or seal element gives optimized low frictional static and dynamic sealing performance. Offers high wear and chemical resistance depending on seal and O-Ring material. Installed in closed, standard O-Ring grooves.

Stefa System 500/3000/5000 Cassette Seals

The Stefa System is a completely enclosed seal providing the functions of oil seal, wear sleeve and dust protection in one unit. It has been developed to meet the ever increasing requirements of long service life, high functional reliability, environmental safety and easy installation. STEFA System 500 / 3000 / 5000 Cassette Seals are used in heavy duty vehicle axles, hubs and industrial gearboxes.

Shaft Repair Kit

Suitable for the repair of worn shafts or for original equipment manufacturing to avoid the need to harden the shaft. Shaft repair kits are thin-walled stainless steel sleeves which do not require any modification to the existing seal sizes. Tools for installation on the shaft are included in the kit.

Sealing Cap

Sealing Caps consist of a metal cap which has been rubber coated. They are used to plug seal gaps or holes. They are often used as a substitute for sealing flanges and covers in gear manufacturing.