

Simrit Product Summary

simrit[®]

The information of this product summary is based on years of experience in the development and manufacture of seals and vibration control components in the Freudenberg group of companies and corresponds with current knowledge.

The sealing effect of many of the products are determined not only by the components themselves: depending on their use, other parameters – such as mounting and counterface, applied pressure, operating temperature, media to be sealed against, lubrication, vibration, and exposure to dirt – also play an important role. These and other unknown factors can have a significant impact on the seals' effectiveness.

It is not, therefore, possible to make general statements about the functions of the products in this product summary. The information herein is intended only to provide general recommended values that may not apply to all applications. We therefore recommend that you contact our customer service to ask about specific applications. Where parts are exposed to increased or specific adverse conditions, such as corrosive media, we will help you choose the right seal. Sometimes it may be necessary to test the seal in a specific application to ensure its reliability.

In view of constant product improvements, we reserve the right to change the product range, production locations, products, production processes and the specifications in this product summary without prior notice.

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Simrit[®], Your Global Technology Specialist for Seals and Vibration Control

Simrit, Your Global Technology Specialist for Seals and Vibration Control offers you a complete service package. A unique range of products and services guarantees you numerous advantages over the competition.

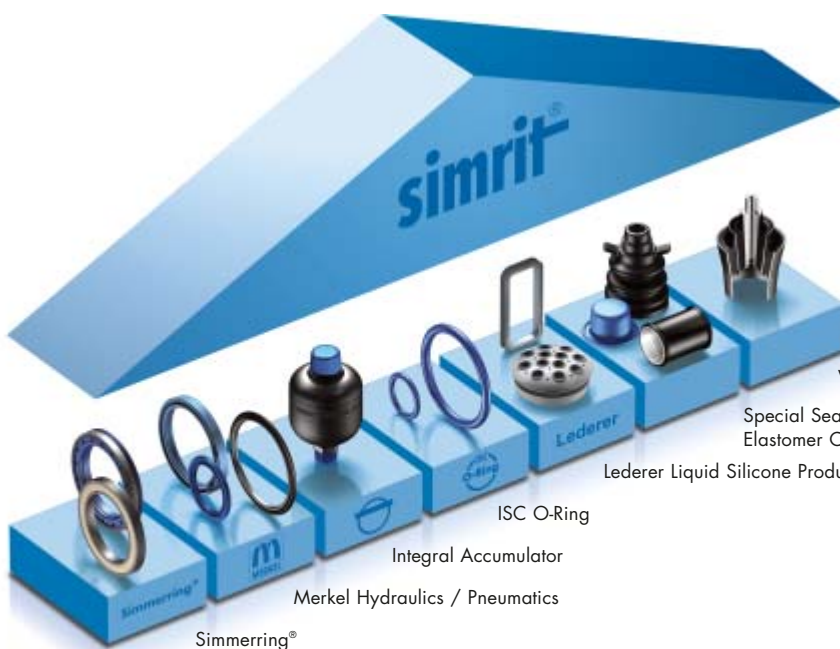
Simrit acts as a partner to general industry. Its position as a market leader is achieved through continuous research, development and manufacture. We have the world's widest range of seals and vibration control products, and can offer you solutions based on the demands of state-of-the-art-technology, solutions which set standards.

This way we secure competitive advantages for you based on experience all around the world: Simrit has a presence throughout Europe, America and Asia, either directly or through its affiliated companies NOK (Japan) or Freudenberg-NOK (USA). The transfer of knowledge between these markets is incorporated directly into the Simrit service package.

With our many Simrit Service Centres and Simrit distribution Partners, we serve and supply more than 100,000 customers worldwide. Our Simrit Partners ensure rapid availability from stock. This means spare parts quickly arrive when and where they are needed. There is a Simrit Partner near you as well.

Make the most of Simrit's service package and give yourself a real competitive edge:

- + Constant innovations
- + Uniquely wide range of products
- + Strong product brands
- + Unique materials expertise
- + A wide range of value added services



Simrit offers a complete package of products and services, including leading brands such as Simmerring[®], Merkel, Integral Accumulator, Lederer and ISC O-Ring.

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Merkel

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Elastomers with Excellent Characteristics – the Basis of Innovative Solutions



Thorough know-how about materials for more than 60 years

Simrit has now been developing innovative branded products at the highest level for more than 60 years. With in-depth experience on materials, well-founded knowledge of processing and extensive product know-how, again and again we create ideal pre-conditions for your success. However, the quality of the elastomer material is decisive for the optimum operation of seals and components used in vibration control. Therefore, we are particularly proud of our pioneering role worldwide in this sector.

Deliberately targeted development of materials guarantees the highest possible quality and long life

More than 250 engineers and chemists worldwide are developing new materials every day for the highest possible functional requirements in joint development ventures with various research institutions plus leading manufacturers of polymers and chemicals. The materials we develop must fulfil the respective customer-specific requirements and withstand all the loadings feasible in their branch of industry – both with regard to temperature, pressure and resistance to media and in the presence of static or dynamic loadings. The length of life of our products is constantly being improved by optimising our materials. Constant monitoring on the road to these products becoming mass-production materials also guarantees you the highest possible quality.



The Individual Materials We have Developed are Leaders Worldwide



Uniquely wide range of standard materials

We produce more than a billion seals annually from a production volume of more than 15,000 tonnes. When considered as a whole, a range of material, which is unique in its quality and quantity, is available to you with more than 1500 mixtures of 850 raw materials for your individual applications in sealing and vibration control. A large proportion of these are standardised mixtures. Of course, our competent team of experts will advise and assist you fully – from the selection of the right materials via the test phase to the start of production.

Comprehensive performance package and much more

Materials manufactured individually to your wishes and requirements are unusually important in the comprehensive performance package from Simrit. The use of polymers, based on our own raw materials and tailored to your requirements, enables Simrit to develop high performance materials which satisfy the highest functional demands. We use our global materials database for the selection of application-specific materials, which groups together the know-how of our experts, working worldwide, to form a network of top technological services which we can call on at any time. Finally, the appropriate material with the optimum characteristics for your application is manufactured



using computer-controlled procedures, from the selection of the raw material to the compounding process. Of course, always adhering to the highest standards in quality and processing and complying with ecological guidelines – in the interests of your success and the environment.



Simrit® Academie – our Services for Your Success

The Simrit® Academy offers you seminars which are tailored to your needs in terms of content and specialisation levels.

Attendance seminars

These seminars are held at the Simrit Academy itself in Weinheim; you can choose between three categories. The Simrit basic seminar is targeted for example at participants without technical knowledge who would like to learn about Simrit's service package. Professional Simrit seminars are for participants who want in-depth knowledge about Simrit's range of products and services. Both technicians and capable "non-specialists" are given the knowledge equipping them to provide technically correct advice and to select the right products for the application in question. Simrit Seminar Specials are geared to providing very specific knowledge.

Live Online Seminars

If you want to take part in Simrit's seminars from your own PC, you can make use of this simple and time-saving innovative seminar course from the Simrit Academy.

Innovation Forums

With this series of events Simrit offers the opportunity to learn about Simrit innovations and exchanging views with other participants during a one-day event.

Services

- Seminars about Simrit's products and materials for everyone from beginners to professionals
- Live Online Seminars directly from your own workstation
- Innovation Forums (at the Simrit Academy or online) with simultaneous translators
- Over 40 experienced specialists are on hand to inform you about state-of-the-art technology
- Seminars for specific target groups: mainly for sales engineers but also for staff employed in production and technology
- Reinforcement of theoretical knowledge through practical exercises
- Small seminar groups
- Visits to production and research facilities (e.g. Technical Development Centre, research services, test rigs, mixing laboratory, raw materials mixing plant)
- Seminars both in German and English
- Detailed seminar documentation
- DIN-ISO-9001-compatible seminar certificates of successful completion

Your benefits

- An edge in terms of knowledge due to information on state-of-the-art technology.
- Successful fast in-depth learning thanks to small seminar groups, practical application examples and exercises
- Efficiency and time-based advantage through complete range of services available at Simrit Academy
- Greater productivity due to appropriate selection of products and materials
- Live Online Seminars make even large distances irrelevant, offering fast and low-cost training
- Online attendance permits participation in seminars at short notice

You will find more information about the Simrit Academy in our Simrit Academy Brochure or on the Internet at www.simrit.de.

A Simple Navigation System Means You Can Make the Most of the Speed of the Internet

Simrit online means: clear structures and rapid orientation for professionals and novices alike

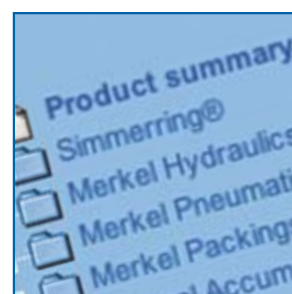
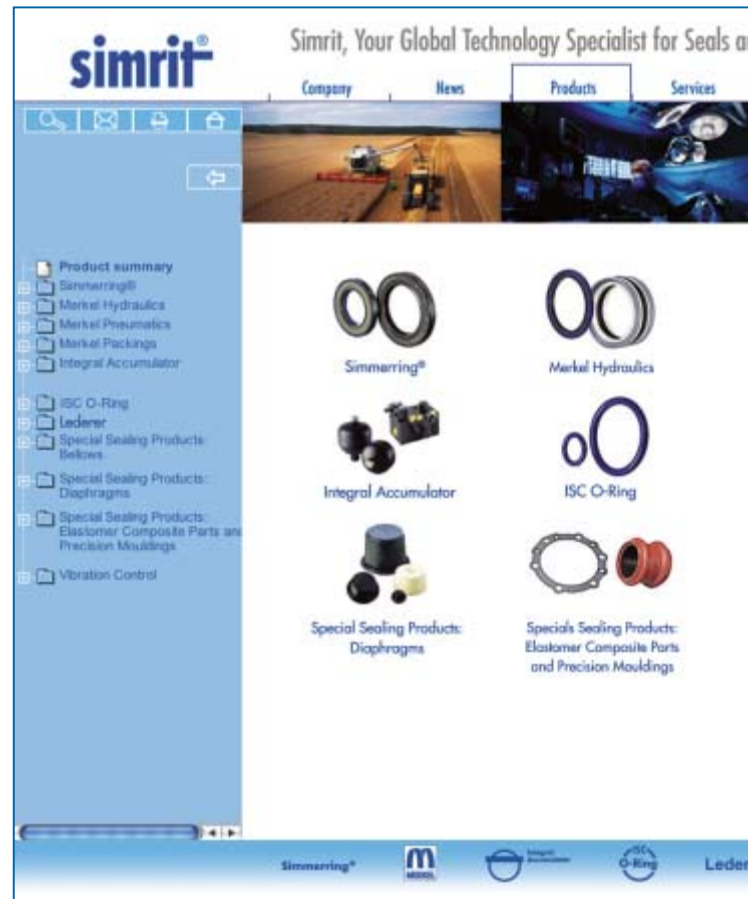
The clearly designed pages and simple navigation system get you where you want to go in the blink of an eye. Company information, status queries, product details and much more – the intuitive terminology makes searching easier and gives a quick overview of the wide range of products and value-added services we offer. This makes www.simrit.de a quick, perfect way of finding information on an efficient basis.



Target-oriented full text search and simple search screens backed up by a wide range of input parameters. You can communicate directly with Simrit to obtain individual information and answers.

The most important thing: the Simrit products

You can access the latest version of our product range, catalogued by the established product groups. You can find out everything you need to know – from the smallest technical detail through availability to price. And we are also beginning to provide help and problem-solving services online: In the materials search function, Simrit suggests suitable materials for specific requirements.



All Simrit products for all conceivable requirements in seals and vibration control. With technical details and CAD downloads.



Simrit®, Your Global Technology Specialist for Seals and Vibration Control – our profile, your career opportunities, first points of contact.



Show dates, the latest information and up-to-date communications.

The screenshot shows the top navigation bar with 'eShop' and 'Customer service' links. Below this is a grid of product categories: 'Merkal Pneumatics' (blue O-ring), 'Merkal Packings' (textured ring), 'Lederer' (punch tool), and 'Special Sealing Products: Bellows' (bellows). A 'Vibration Control' category is also visible at the bottom left. The top right corner contains a login form with fields for 'Username' and 'Password', and links for 'Forgotten your password?' and 'To register'.



A summary of our extensive services, procurement of information via downloads, brochure service, calculation program for O-rings and vibration control and the online magazine for Simrit customers: Simrit Insight.



24 h ordering service with immediate order confirmation and shortest delivery times.

Simrit® Products

Simrit Standard Range

Seals for stationary surfaces		Seals for oscillating machine components	
Composite Elastomer Parts and Precision Mouldings	P. 50	Composite Elastomer Parts and Precision Mouldings	P. 50
ISC O-Ring	P. 47	Bellows	P. 57
Diaphragms	P. 59	ISC O-Ring	P. 47
■ Rubberised Sheets and Fabrics	P. 59	Diaphragms	P. 59
Merkel Packings	P. 39	Merkel Hydraulics	For rods P. 20 For pistons P. 24
		Merkel Pneumatics	For rods P. 33 For pistons P. 34
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Simrit Standard Range

Seals for rotating and swinging motion		Seals for rotating machine parts		Components for vibration isolation and vibration damping	
Merkel Seals	P. 30	Merkel Packings	P. 39	Integral Accumulator	P. 44
		Simmerring®	P. 14	Vibration Control	P. 63

Other Simrit Products (on request)

Moulded and structural parts for static and dynamic use

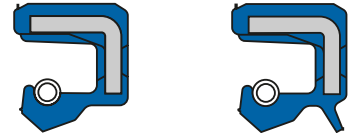
- Precision mouldings made of elastomers or composite materials
- Precision mouldings made of plastics
- ISC O-Rings, special designs
- Integral Accumulator
- Lederer Liquid Silicone Products

Standard range



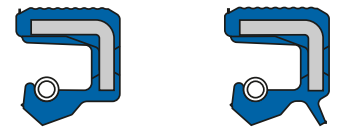
Simmerring BAUX2, BAUSLX2

Standard type to DIN 3760, with rubber-covered O.D., with or without additional dust lip (SL) to protect against light to moderate levels of contamination. Available in various designs and materials.
Standard material: 72 NBR 902.



Simmerring BAUM, BAUMSL

Standard type to DIN 3760 with rubber-covered O.D. and sprung sealing lip made from 75 FKM 585 fluoroelastomer for high thermal stability and chemical resistance. Available with or without additional dust lip (SL) to protect against light to moderate levels of contamination.



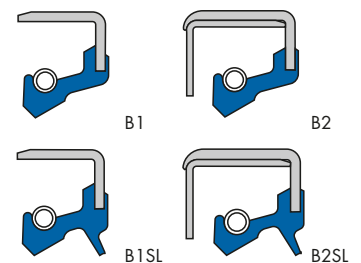
Simmerring BABSL (Classical Pressure Seal)

Pressure seal without additional backup ring, used for sealing pressurised media, e.g. in hydraulic pumps, hydraulic motors and hydrodynamic clutches. With additional dust lip (SL) to protect against contamination.
Standard material: 72 NBR 902. For high thermal stability and chemical resistance: 75 FKM 595.



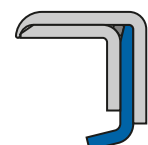
Simmerring B1, B2, B1SL, B2SL

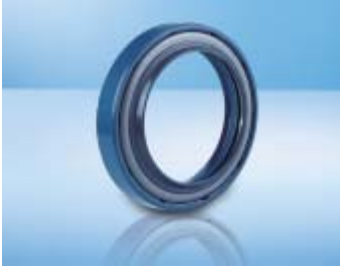
Standard designs with open (B1) or closed (B2) metallic O.D. for simple mounting. With optional dust lip (SL) to prevent contamination. Standard material: 72 NBR 902.



Simmerring B2PT

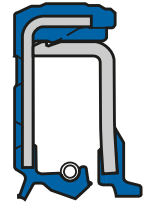
Designed for extreme thermal and chemical stress, dry running, poor lubrication and where non-slip characteristics are required. Stainless steel metal casing. PTFE compound sealing lip: PTFE 10/F56101.





Simmerring MSS 1 (Modular Sealing Solution)

The standard BA...U...SL Simmerring combined with an internal buffer seal with a sine-wave-shaped sealing lip, as a one-part solution, for example for use in drive technology. A tried and tested design with high resistance to dust and material abrasion in the oil cavity. Available in two material combinations as standard: NBR/FKM and FKM/FKM.



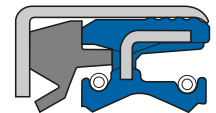
Simmerring Cassette Seal

Complete unit consisting of a Simmerring and a captive wear sleeve. Rational system solution with integrated labyrinth for use in heavily contaminated environments. The built-in counterface meets the exacting requirements of a dynamic seal. For use mainly in agricultural and construction machinery.



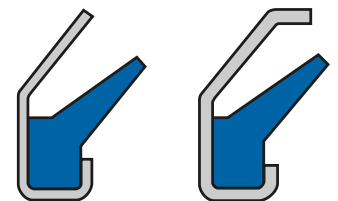
Simmerring Combi Seal

A combination seal consisting of at least two mounted elements, designed mainly for use in agricultural and construction machinery. The PU element in this system also provides effective sealing on slight axial movement.



Simmerring MSC (Modular Sealing Component)

Axial buffer element for moderate to high contamination levels, available in NBR and FKM with sheet steel or stainless steel metal holder section. Can be used as a grease or dust seal.



GA, GSA type sealing caps

Elastomer-coated push-fit sealing caps for static sealing of apertures, e.g. on gearboxes. The elastomer coating protects the seal from bores with rough surfaces, heat expansion and split casings. Standard material: NBR; other materials: FKM, ACM, AEM, etc.



Simmerring®

Standard range



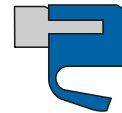
Simmerring Radiamatic® EWDR made of PTFE

Safe at simultaneous high pressure and high speed, low power dissipation, low leakage rate, simple installation.
Application parameters: pressure: 3 MPa;
temperature: -70 to 200 °C; rotary speed: 20 m/s.



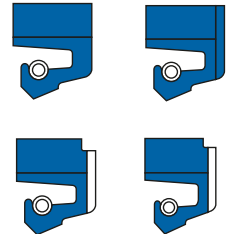
Simmerring Radiamatic® HTS II made of PTFE

Low-friction, excellent sealing characteristics (CIP), easy to clean, leakage-free. Application parameters: Pressure: 0.6 MPa; temperature: -70 to 200 °C; rotary speed: 18 m/s.



Simmerring Radiamatic® R 35, R 36, R 37, R 58

Seal rings for flange bores in mills, large heavy machinery gearboxes and main drives of wind power generators.
Application parameters: pressure: 2.5 MPa; temperature: -30/-10 to 100/180 °C (depending on the material);
speed: 0.5 m/s. Application examples: mills, ship-building, civil engineering, wind power station.



Special designs



Simmerring PPS (Premium Pressure Seal)

Patented pressure-resistant, low-wear sealing lip profile for use in hydrostatic drives such as hydraulic motors and pumps, and hydrodynamic couplings. With additional dust lip against dirt ingress. Available in 75 FKM 595 for high thermal and chemical resistance.



Simmerring BAHDSN for high pressures

Made from special materials, with a very short sealing lip and support of a metal reinforcement pulled down close to the shaft. The design comes with optional lubrication pockets. Primarily used at high pressures and moderate circumferential speeds in pressurised components, such as hydraulic motors and hydraulic pumps.



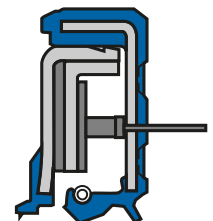
Simmerring HLPS (High – Low Pressure Seal)

The new Simmerring for hydrostatic drives excels with its reliable sealing properties – especially at high pressures up to 20 MPa – and its low friction and power dissipation. The material used – HNBR – is extremely wear-resistant and thermally stable.



Simmerring MSS 1+ (Condition Monitoring)

This is a further development of the Simmerring MSS 1 with additional integrated Condition Monitoring to monitor the sealing function of the sine wave-shaped sealing lip.

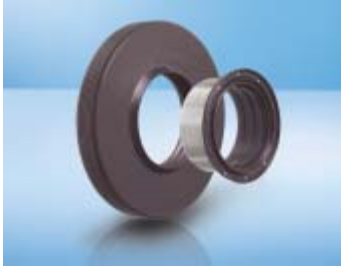


Simmerring MSS 7 (Modular Sealing Solution)

The standard Simmerring BA..U..SL combined with a rubberised wearsleeve with axial dust lip as a one-part solution. Suitable for: drive shafts in industrial gearboxes. A tried and tested sealing system with high resistance to dust, water, external environmental influences and a counterface that is optimally matched to the Simmerring. Available as special-purpose solution in the materials NBR and FKM.

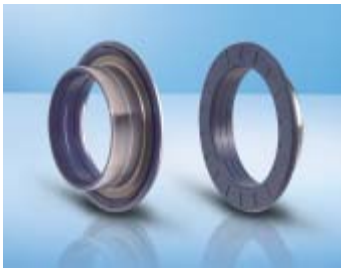


Special designs



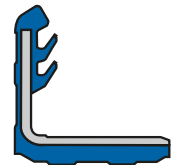
Simmerring washing machine seal

High-performance seal for high durability levels at poor lubrication conditions, high temperatures, high circumferential speeds and high contamination levels.



LR – slip ring for Simmerrings

Universal counter wearsleeve for Simmerrings. Cost-saving alternative to finishing new shafts or repairing worn running surfaces. Also available with rubber-coated I.D. Most versions have no flange.



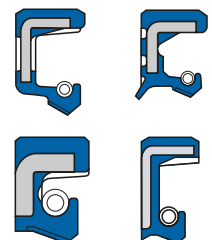
Simmerring PTS (Poly Tech Seal)

Design with PTFE-sealing lip optimised for friction suitable for use in the presence of extreme thermal and chemical stresses, dry-running and poor lubrication. Additional static seal because of partial rubberisation of outside diameter. Excellent static and dynamic sealing performance up to min. 6 bar via reverse flow helix which is dependent on the direction of rotation.



Simmerring AT, ATSL, ATD, ATDSL, BT, BTSL

Simmerring seals with PTFE-coated sealing lip for applications with poor lubrication, high pressure or high circumferential speeds. Optional dust lips to prevent contamination. ATD/ATDSL designs for components under pressure. Other designs available for customer-specific requirements.



Simmerring BAPT

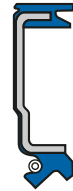
Simmerring with bonded PTFE sealing lip, with or without helix. Suitable for use as an alternative to elastomer seals and for some other applications where high thermal stability and resistance against aggressive mediums are required. Used primarily in engines as a crankshaft seal. Depending on requirements, the dust lip can be made from either elastomer or fleece.





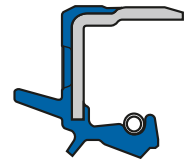
Large diameter Simmerrings

For use in roller bearings, mills, the paper and steel industries, and large gear systems, large diameter, closed Simmerring seals are available in five different designs. The standard materials are NBR and FKM.



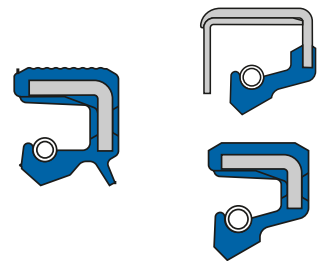
Simmerring B1BA

Simmerring with metal case. Higher retention force thanks to partial elastomer sleeve on the O.D. and the back face. Primarily for use in commercial vehicles and construction machines.



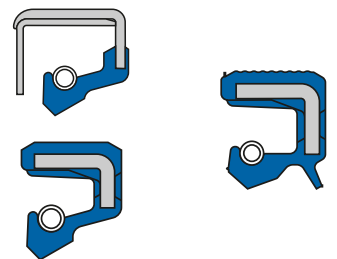
Simmerring in special materials

Many of our standard Simmerring seal types are also available in special materials, such as FKM compounds for high thermal stability or ACM materials for large-volume applications.



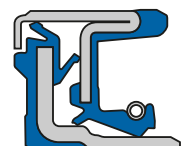
Dual material Simmerring seals

Where different requirements have to be met at the same time, the cost and performance of seals can be optimised economical and technical terms by combining different materials, for example an ACM O.D. and an FKM sealing lip. A third element, such as a PTFE dust lip, can be added for special applications.



Simmerring Cassette Seal HS (High Speed)

The new design for the Simmerring Cassette Seal HS, characterised by a contact surface made of metal (50%) and rubber (50%), enables greater heat dissipation via the metal/metal contact surface on the shaft under the sealing edge. This design feature prevents oil carbonising under the sealing edge and achieves a 25% increase in the permissible operating speed.



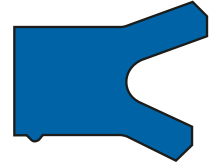
Merkel

Standard range Hydraulics Rod seals



Merkel U-ring NI 300

Polyurethane U-ring with asymmetrical profile, set back inner lip and additional protective and sealing bead on the inner diameter. The NI 300 provides additional protection against dirt ingress. Application parameters: pressure: 40 MPa; temperature: -30 to 110 °C; speed: 0.5 m/s. Example applications: earth-moving equipment, support cylinders, presses.



Merkel U-ring T 20

Asymmetric U-ring with shortened inner lip for sealing piston rods. T 20 is suitable as a secondary seal in sealing systems. Application parameters: pressure: 40 MPa; temperature: -30 to 110 °C; speed: 0.5 m/s. Example applications: earth-moving equipment, floor conveyors, HGV loading cranes, loading platforms, agricultural equipment, presses, injection moulding machines, civil engineering, support cylinders and standard cylinders.



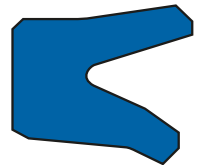
Merkel U-ring LF 300

Polyurethane U-ring with asymmetrical profile and special grooving on the dynamic sealing side. The LF 300 is low-friction and allows smooth movement. Application parameters: pressure: 32 MPa; temperature: -30 to 110 °C; speed: 0.6 m/s. Example applications: mobile hydraulics, injection moulding machines.



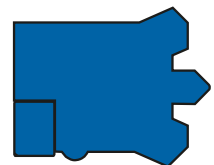
Merkel U-ring TM 20

Rod seal for hydraulic cylinders for use in heavy machinery. Made from wear-resistant polyurethane allows its use under high operating stress. Application parameters: pressure: 40 MPa; temperature: -20 to 110 °C; speed: 0.5 m/s. Example applications: presses, injection moulding machines.



Merkel Compact seal KI 320

Polyurethane compact seal with built-in backup ring, additional support and sealing edge. Reliable function even at high pressures and large gap widths. The additional sealing edge prevents dirt ingress. Application parameters: pressure: 50 MPa; temperature: -30 to 110 °C; speed: 0.5 m/s. Application examples: heavy earth-moving equipment, telescopic cylinders.





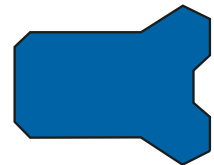
Merkel U-ring Syprim SM

Two-part sealing set for use as a primary rod seal in combination with a U-ring (e.g. T 20) within a sealing system. Application parameters: pressure: 40 MPa; temperature: -30 to 110°C; speed: 0.5 m/s. Example applications: earth-moving equipment, conveyors, agricultural equipment, injection moulding machines, civil engineering, standard cylinders.



Merkel Compact seal KI 310

Polyurethane compact seal with symmetric profile and press-fit O.D. The KI is especially suitable for installation areas with limited radial space. Application parameters: pressure: 40 MPa; temperature: -30 to 110°C; speed: 0.5 m/s. Application examples: conveyors, telescopic cylinders, steering cylinders, agricultural equipment.



Merkel Omegat OMS-MR

OMS-MR consists of a profile ring with an elastomer ring as the pre-tensioning element. The sealing set is normally used within a sealing system. Application parameters: pressure: 40 MPa; temperature: -30/-10 to 100/200°C (depending on the material); speed: 5 m/s. Example applications: earth-moving equipment, agricultural equipment, injection-moulding machines, civil engineering, rolling mills, lorry loading cranes, control and regulating devices.



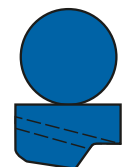
Merkel Omegat OMS-S

Two part sealing set to seal piston rods, consisting of a PTFE-profile ring with an elastomer profile ring as the pre-tensioning element. The Omegat OMS-S is designed specially for larger diameters and heavy hydraulic applications. Application parameters: pressure: 40 MPa, speed: 5m/s. Example applications: injection-moulding machines, civil engineering, rolling mills, presses, manipulators.



Merkel Omegat OMS-MR PR

Primary seal within a sealing system. It has a defined pressure-relief function (patented). Application parameters: pressure: 40 MPa, speed: 5m/s. Example applications: earth-moving equipment, industrial trucks, agricultural equipment, lorry loading cranes, injection moulding machines, control and regulating devices, civil engineering, presses, rolling mills, large cylinders.



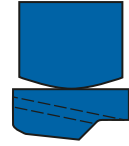
Merkel

Standard range Hydraulics Rod seals



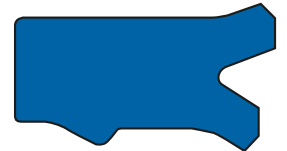
Merkel Omegat OMS-S PR

Primary seal within a sealing system. The seal is specially designed for larger diameters and heavy hydraulic applications. The Omegat OMS-S PR has a defined pressure-relief function (patented). Application parameters: pressure: 40 MPa, speed: 5m/s. Example applications: injection-moulding machines, rolling mills, presses, heavy earth-moving equipment, large cylinders.



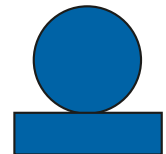
Merkel U-ring T 24

U-ring with asymmetrical profile, set-back inner lip, additional protection and sealing edge and press fit on O.D. Simple rod seal, specially designed for telescopic cylinders and housings with narrow radius. Application parameters: pressure: 40 MPa; temperature: -30 to 100 °C; speed: 0.5 m/s.



Merkel Compact seal TFMI

Two-part compact seal (bi-directional) for lightweight applications, consisting of a profile ring and an ISC O-Ring. For confined spaces and low friction. For new designs, we recommend more modern ranges, such as OMS-MR. Application parameters: pressure: 16 MPa; temperature: -50 to 200 °C (depending on ISC O-Ring material); speed: 2 m/s.



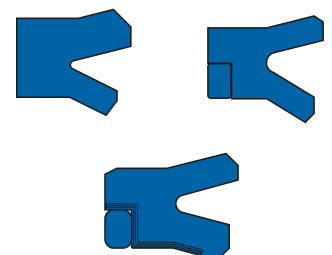
Merkel Compact seal KI 520

Elastomer compact seal with second sealing edge on the dynamic and static sealing face, fabric reinforcement on the dynamic sealing face and backup ring as gap seal element. Application parameters: pressure: 50 MPa; temperature: -30 to 100 °C; speed 0.5 m/s. For new designs, we recommend more modern ranges, such as KI 320.



Merkel U-ring NI 150, NI 250, NI 400

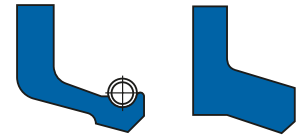
Single-directional elastomer U-rings with asymmetrical sealing lip profile. NI 250/400 with backup ring as gap seal element, NI 400 with fabric reinforcement on the dynamic sealing side. Application parameters: pressure: NI 150 10 MPa, NI 250 25 MPa, NI 400 40 MPa; temperature: -30 to 100 °C; speed 0.5 m/s. For new designs, we recommend the modern ranges LF 300, NI 300 and T 20.





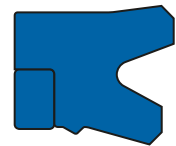
Merkel Hat packing H with or without spring

Simple lip seals, sometimes sprung. For secondary applications and replacement part requirements. For new designs, we recommend the more modern ranges. Pressure 1 MPa; temperature: -30 to 100 °C; speed: 0.5 m/s.



Merkel U-ring set T 23

Rugged, two-part U-ring set with shortened inner lip and active backup for sealing piston rods, especially at high pressures. Application parameters: pressure: 50 MPa; temperature: -30 to 110 °C; speed: 0.5 m/s. Example applications: heavy earth-moving equipment, scrap claws, support cylinders. For new designs, we recommend the KI 320 range.



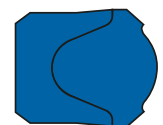
Merkel Chevron Seal Set ES, ESV

Multi-part seal sets for sealing piston rings. The seal sets can be installed into adjustable and non-adjustable sealing chambers. Application parameters: pressure: 40 MPa; temperature: -30/-15 to 100/140 °C (depending on the material), speed: 0.5 m/s. Example applications: rolling mills, presses, scrap claws, civil engineering, rod moulding systems.



Merkel Compact Seal S8

Compact rod seal with excellent sealing action in the low pressure range. Application parameters: Pressure: 25 MPa; temperature: -30 bis 100 °C; speed: 0.5 m/s.

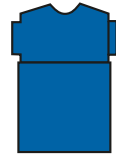


Standard range Hydraulics Piston seals



Merkel Compact seal Simko 300

Two-part compact seal (bidirectional). Benefits: high static and dynamic sealing performance, low friction and no stick-slip. Contact pressure element acts as anti-rotation device. Integrated pressure activation hubs in the sliding element prevent "blow-by" effects. Application parameters: pressure: 40 MPa; temperature: -30 to 100 °C; speed: 0.5 m/s. Example applications: earth-moving equipment, conveyors, agricultural equipment.



Merkel Omegat OMK-MR

Two part sealing set, consisting of a profile ring made of PTFE and an elastomer ring as the pre-tensioning element for use in pistons subject to pressure on both sides. Application parameters: pressure: 40 MPa; temperature -30/-10 to 100/200 °C (depending on the material); speed: 5 m/s. Example applications: presses, agricultural equipment, injection-moulding machines, rolling mills, civil engineering, lorry loading cranes, control and regulating devices, handling equipment.



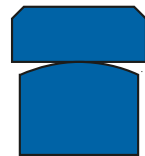
Merkel Omegat OMK-E

Two part sealing set, consisting of a profile ring made of PTFE and an elastomer ring as a pre-tensioning element. The Omegat OMK-E is used in pistons which are subject to pressure on one side only. Application parameters: pressure: 40 MPa; temperature -30 to 100 °C, speed: 5 m/s. Example applications: presses, agricultural equipment, injection-moulding machines, rolling mills, civil engineering, lorry loading cranes, control and regulating devices, handling equipment.



Merkel Omegat OMK-S

Two part sealing set, consisting of a profile ring made of PTFE and an elastomer profile ring as the pre-tensioning element, for use in pistons subject to pressure on both sides. The seal ring is designed for heavy hydraulic applications and large diameters. Application parameters: pressure: 40 MPa; temperature -30 to 100 °C, speed: 5 m/s. Example applications: injection-moulding machines, rolling mills, civil engineering, presses, manipulators.



Merkel Omegat OMK-ES

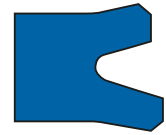
Two part sealing set consisting of a profile ring made of PTFE and a profile ring made of rubber as a pre-tensioning element. Unlike the Omegat OMK-S, the Omegat OMK-ES is mainly used with pistons which are subject to pressure in one direction only. Example applications: injection-moulding machines, rolling mills, civil engineering, presses, manipulators.





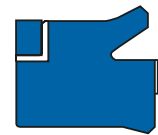
Merkel U-ring NA 300

Unidirectional polyurethane U-ring with asymmetrical profile, set-back outer lip and press fit on ID. Very good static and dynamic seal. Application parameters: pressure: 40 MPa; temperature: -30 to 100 °C; speed: 0.5 m/s. Example applications: earth-moving equipment, support cylinders, presses.



Merkel U-ring T 18

Two-piece U-ring ring with active backup ring for sealing single action and 'back-to-back' dual action pistons. Application parameters: pressure: 40 MPa; temperature: -40 to 110 °C; speed: 0.5 m/s. Example applications: earth-moving equipment, civil engineering, rolling mills, support cylinders.



Merkel Compact seal L 43

Five-piece compact seal for sealing dual-action pistons. Application parameters: pressure: 40 MPa; temperature: -30 to +100 °C; speed: 0.5 m/s. Example applications: earth-moving equipment, agricultural equipment, standard cylinders.



Merkel Compact seal L 27

Four-part seal set with active backup rings for sealing dual-action pistons. This seal can bridge large gaps and possess low friction. They offer high operational reliability in the presence of shock pressures. Application parameters: pressure: 50 MPa; temperature: -30 to +100 °C; speed: 1.5 m/s. Example applications: earth-moving equipment, injection moulding machinery, presses.



Merkel Compact seal Simko 320

Three-piece compact seal (bi-directional), consisting of fabric-reinforced elastomer sealing element and two guide backup rings made from highly wear-resistant polyamide. Application parameters: pressure: 40 MPa; temperature: -30 to +100 °C; speed: 0.5 m/s.



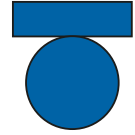
Merkel

Standard range Hydraulics Piston seals



Merkel Compact seal TFMA

Two-piece compact seal (bi-directional) for lightweight applications. For confined spaces and low friction. Application parameters: pressure: 16 MPa; temperature: -50 to 200°C (depending on ISC O-Ring material), speed 2 m/s. For new designs, we recommend more modern ranges, such as OMK-MR.



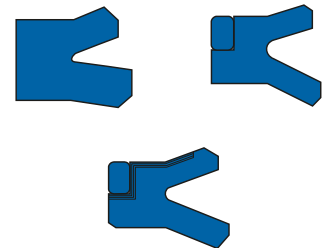
Merkel Compact seal T 19

Three-piece compact seal for dual-action pistons. Application parameters: pressure: 21 MPa; temperature: -30 to 110°C; speed: 1.5 m/s. Example applications: agricultural equipment, standard cylinders.



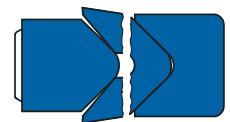
Merkel U-ring NA 150, NA 250, NA 400

Simple elastomer U-rings with asymmetrical sealing lip profile. NA 250/400 with backup ring as gap seal element, NA 400 with fabric reinforcement on the dynamic sealing side. Application parameters: pressure: NA 150 10 MPa, NA 250 25 MPa, NA 400 40 MPa; temperature: -30 to 100°C; speed 0.5 m/s. For new designs, we recommend the modern ranges, e.g. NA 300 and T 18.



Merkel Chevron seal set EK, EKV

Multi-part seal set for sealing single action and 'back-to-back' dual action pistons. Application parameters: pressure: 40 MPa; temperature: -30/-15 to 100/140°C (depending on the material), speed: 0.5 m/s. Example applications: rolling mills, presses, scrap claws, civil engineering, steel hydraulic engineering.

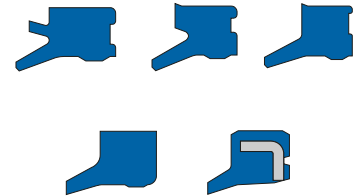


Standard range Hydraulics Wipers



Merkel Dirt Wiper PU 5, PU 6, P 6, PU 7

Simple wiper for protecting cylinders against the intrusion of dirt. Application parameters: temperature: PU 5, PU 6, PU 7: -30 to 100°C, P 6: -30 to 110°C / -10 to 200°C (depending on the material), speed: 2 m/s. All areas of application.



Merkel Double Wiper PRW 1

Double wiper with optimised sealing and wiping effect plus integrated pressure-relief function. Application parameters: Temperature: -30 to 100°C. Example application: mobile hydraulic equipment.



Merkel Wiper AUAS, AUAS R

Polyurethane dirt wiper with metal casing; with sharp, perforated wiper edge (AUAS) or with slightly rounded wiper edge for improved reverse flow capacity (AUAS R). No pressure build-up between the wiper and the seal. Application parameters: Temperature: -30 to 110°C; speed: 2.0 m/s. Example applications: earth-moving equipment, conveyors, support cylinders, agricultural equipment.



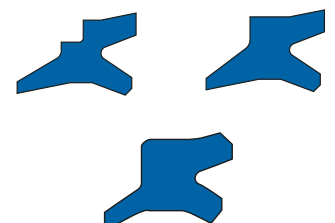
Merkel Wiper AUPS

Dirt wiper for use in hydraulic cylinders, provides a high level of security against the intrusion of dirt and water. Also particularly suitable for use as protection and sealing element for pivot bearings. Application parameters: Temperature: -30 to 100°C (in mineral greases).



Merkel Double wiper P 8, P 9, PU 11

Double wiper for protecting cylinders against the intrusion of dirt and to improve the overall seal. Application parameters: temperature: PU 11 -30 to 110°C, P 8, P 9 -30 to 100°C (depending on the material), speed: 1 m/s. All areas of application.



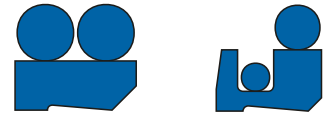
Merkel

Standard range Hydraulics Wipers



Merkel Double Wiper PT 1, PT 2

Quick-assembly double wiper with optimum wiping performance thanks to double ISC O-Ring support. Application parameters: temperature: -30/-10 to 100/200 °C (depending on the material), speed: 5 m/s. Example application: heavy machinery.



Merkel Wiper AS, ASOB

Elastomer dirt wiper for lightweight applications. AS with additional metal casing, projecting wiper lip. Application parameters: temperature: -30 to 100 °C; speed: 2.0 m/s. For new designs, we recommend more modern ranges.



Merkel Wiper AUASOB

Quality polyurethane dirt wiper with support on back face, no metal reinforcement. For slight and moderate mobile Hydraulics and for standard cylinders. Material: T 94 AU 925. We recommend more modern models for new designs.



Standard range Hydraulics Guides



Merkel Guide Ring Guivex SBK, KBK

Convex hard fabric guide ring for Hydraulics, with optimum stress distribution. Application parameters: temperature: -40 to 120°C .



Merkel Guide Ring SB, KB made of Hard Fabric

Guide rings for piston rods (SB) and pistons (KB) under heavy stress. Application parameters: temperature: -40 to 120°C .



Merkel Guide Ring FRI, FRA made of Thermoplastic Material

Guide rings for piston rods (FRI) and pistons (FRA) under moderate stress. Application parameters: temperature: -30 to 100°C .



Merkel Guide Strip FB

Material for producing piston guides (FBA) and piston rod guides (FBI). Made from bronze-filled PTFE (for steel cylinders) PTFE 40/177024, or carbon-filled PTFE (for light and non-ferrous metal cylinders) PTFE 25/177025.

Available by the meter from the warehouse, or cut to a specific length on request.



Merkel

Standard range Hydraulics Static seals



Merkel Cover Seal PU 82, PU 83

Alternative to O-rings where high demands are present. Can be used without back-up ring. Very good operational reliability in the presence of high pressure peaks.



Standard range Hydraulics Seals for reciprocating applications



Merkel Rotomatic M 15, M 16

Dual-action sealing sets for reciprocating movements in hydraulic systems. Application parameters: pressure: 40 MPa; temperature: -10 to 150 °C (depending on the material), speed: 0.5 m/s. Example applications: grabbers, excavators, rotary transmissions.



Merkel Rotomatic M 17, M 19, M 33

Dual-action sealing sets for reciprocating movements in hydraulic systems. Application parameters: pressure: 20/40 MPa; temperature (depending on the material): -30 to 80 °C (depending on the material), speed: 0.1/0.2 m/s (depending on the material). Example applications: grabbers, excavators, rotary transmissions.



Special designs: Hydraulics



Merkel Endless profiles for hydraulic seals

Moulded or extruded endless U-ring profile. Material for the production of simple static or dynamic seals, especially for larger sizes. On request, we can also provide finished batch-vulcanised sealing rings made from such profiles.



Merkel Cup packing T with/without spring

Single-action lip seals, sometimes sprung. For secondary applications and as replacement parts. We recommend more modern components for new designs. Dematerial range: 8 mm – 600 mm. Application parameters: pressure: 1 MPa; temperature: –30 to 100 °C; speed: 0.5 m/s.



Merkel Complete piston T Duo H

Complete, dual-action piston with steel body and bonded sprung sealing lips. For secondary applications and as replacement parts in lightweight hydraulic applications. Dematerial range: 8 mm – 350 mm. Application parameters: pressure: max. 6.0 MPa; temperature: –30 to 100 °C; speed: 0.5 m/s.



Merkel U-rings N 1, N 100

Rod seals or piston seals with symmetrical sealing lip profiles, primarily as replacement parts for old Hydraulics systems. Material: NBR, or T 94 AU 925 for more exacting requirements. For new designs, we recommend more modern components, such as NI 300 or T 20.



Merkel PTFE piston rings

Low-friction, hard-wearing PTFE rings with rectangular cross-section. Some models with notches for pressure activation of contact pressure element (such as O-Ring). Applications include hydraulic power steering systems. Rings with various groove geometries are used mainly in automatic gearboxes as an alternative to metal piston rings. Materials: special compounds with special-purpose filler materials for high tribological loads.

Special designs: Hydraulics



Merkel Forseal FOI, FOA made of PTFE

Single-acting U-ring-like PTFE compound piston or rod seal with a metal spring as static pre-tension element. Extreme media and temperature resistance, good dry running properties and low static and dynamic friction coefficients. Suitable for O-Ring grooves (ARP568, MIL-P5514). Special versions for other groove dimensions available.

Application parameters: max. operating pressure: 30 MPa;
temperature range: -200 to +260 °C.



Merkel U-rings made of PTFE

Matched spring force at low spring displacement. Force distributed across several edges; can be used for dynamic and static applications. Application parameters: pressure: 45 MPa (dyn.)/120 MPa (stat.); temperature: -200 to 200 °C; speed: 10 m/s.



Merkel Chevron Seals made of PTFE

For rod and piston seals, high pressures, high temperatures, wear-resistant, for adjustable seal housings, no spring, high media resistance. Application parameters: pressure: 70 MPa; temperature: -200 to 260 °C; speed: 1.2 m/s.



Merkel Guide Strip SF, KF made of PTFE bronze

Guide strips for piston rods (SF) and pistons (KF) under light stress. Application parameters: temperature: -40 to 200 °C; speed: 5 m/s.



Installation tool for rod seals

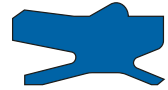
Indispensable tool for easy snap-fitting of U-rings and compact seals. Different pin sizes and variable distance between pins depending on seal diameter and profile cross-section allow damage-free installation of seals ranging from 30 mm to 110 mm Ø.

Standard range Pneumatics Rod seals



Merkel Combination seal AUNIPSL

Rod seal with integrated wiper of wear-resistant polyurethane, without metal reinforcement. Special pneumatic sealing edges provide excellent sealing capabilities with low friction while maintaining an effective lubrication film. Easy fitting without separate maintainer and no need to disassemble the cylinder. Material: 94 AU 925.



Merkel Combination seals NIPSL 300 (PU), NIPSL 310 (PU), NIPSL 200 (NBR), NIPSL 210 (FKM)

Non-metal-reinforced combined seal/wiper element with special pneumatic sealing edges for small cylinders. Combination seal for confined spaces. Material: highly pressure-resistant polyurethane, 80 AU 924, 80 AU 20991, 80 NBR 4005 and 75 FKM 181327.



Merkel Combination seal NIPSL

Metal-reinforced rod seal with integrated wiper. Special pneumatic sealing edges provide excellent sealing capabilities with low friction. Material: 72 NBR 708. Can be fitted from the outside without disassembling the cylinder.



Merkel Combination seal NIPSL SF

Non-metal-reinforced combined seal/wiper element for miniature Pneumatics. Special pneumatic sealing edges provide excellent sealing capabilities with low friction, while maintaining an effective lubrication film. Material: 90 NBR 108.



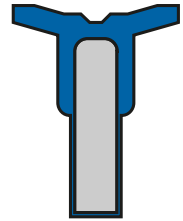
Merkel

Standard range Pneumatics Piston seals



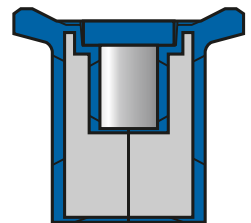
Merkel Complete piston T Duo P

Ready to fit, dual-action complete piston with integrated guide. Simple to fit to the piston rod, without additional sealing elements. The version with radial ventilation channels allows pressure to be transferred safely to the ends. Material: 72 NBR 708, body MuSt to DIN 1624.



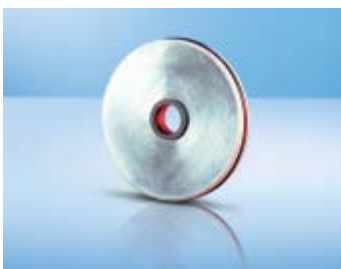
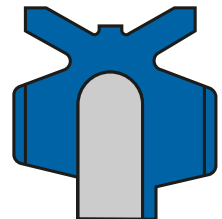
Merkel Complete piston T Duo PM

Ready to fit, dual-action complete piston with integrated magnet to enable precision positioning. Simple to fit to the piston rod, without additional sealing elements. The version with radial ventilation channels allows pressure to be transferred safely to the ends. Material: 72 NBR 708.



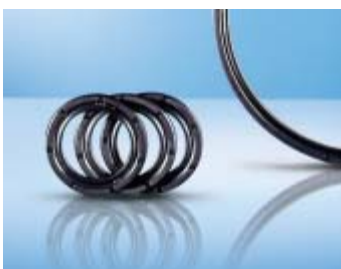
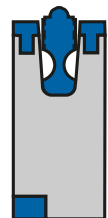
Merkel Complete piston NA Duo P

Ready to fit, dual-action complete piston with steel body, bonded buffers and sealing lips with special pneumatic edges. Radial ventilation channels allows pressure to be transferred safely to the ends. Material: 72 NBR 708.



Merkel Complete piston Pneuko G

Ready to fit, dual-action complete piston with very low installation height. Non-ferrous metal body, snap-on seal and integrated guide. Simple to fit to the piston rod, without additional sealing elements. Seal material: 72 NBR 708.



Merkel Compact seal KDN

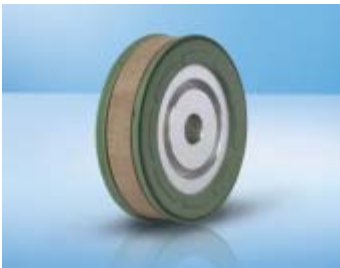
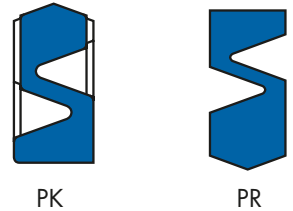
Component of Pneuko G. Dual-action piston seal with grooves on the back face for pressure activation. The compact design allows easy assembly pistons. The rounded sealing profile and the flexible middle section effect a good seal with low friction levels and the maintenance of an effective film of lubrication. Material: 72 NBR 708.





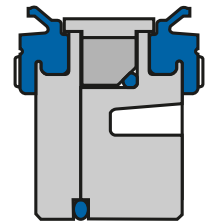
Merkel Compact seal Airzet PR, PK

Dual-action compact seal (PR for rods, PK for pistons) with grooves on the back face for pressure activation (PK only)
Material: 80 NBR 245001.



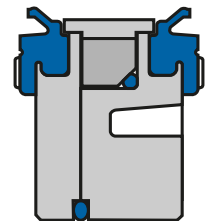
Merkel Complete piston Pneuko M 210

Ready-to-fit, dual-acting complete piston with built-in magnet for precise positioning. Simple mounting on the piston rod without additional sealing elements.
Material: 75 FKM 181327.



Merkel Complete piston Pneuko M 310

Ready-to-fit, dual-acting complete piston with built-in magnet for precise positioning. Simple mounting on the piston rod without additional sealing elements.
Material: 80 AU 21000.



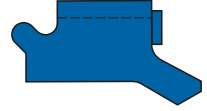
Merkel

Standard range Pneumatics Rod and damper seals



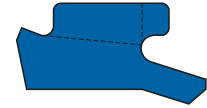
Merkel Rod damper seal DIP

Damper seal with integrated check valve function with axial seal, integral bumpers and overflow channels. Constant reliable damping thanks to self-centring design.
Material: 90 NBR 108.



Merkel Rod damper seal AUDIP

Damper seal of wear-resistant, high-performance polyurethane. With integrated check valve function with axial seal, integral bumpers and overflow channels. Constant reliable damping thanks to self-centring design.
Material: 94 AU 925 and 90 AU 924.



Standard range Pneumatics Wipers



Merkel Wiper AUASOB

High-quality, wear-resistant wiper in non-metal-reinforced polyurethane with support beads on heel side. Simple snap fitting. Material: 94 AU 925.



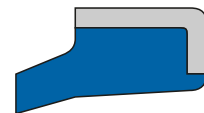
Merkel Wiper ASOB

NBR rod wiper without metal reinforcement for lightweight applications in standard pneumatic cylinders. Easy snap fitting. Material: 90 NBR 101.



Merkel Wiper AS

Metal-reinforced rod wiper. Requires no complicated retention grooves; simple snap fitting. Material: 90 NBR 101.



Merkel

Standard range Pneumatics Guides



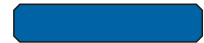
Merkel Guide ring EKF

Made from high-performance polyamide compound for use as piston guide in standard pneumatic cylinders. Easy snap fitting.



Merkel Guide strip FB

Base stock for manufacturing piston guides (FBA) and rod guides (FBI). Material: bronze-filled PTFE compound PTFE 40/177024 for steel cylinders and carbon-filled PTFE compound PTFE 25/177025 for non-ferrous metal cylinders. Available from stock by the metre or cut to size.



Special designs: Pneumatics



Merkel U-rings for special-purpose cylinders

Oval U-rings for use, for example, in pneumatic flat cylinders. U-rings with rectangular profile for standard pneumatic cylinders with rectangular piston rods. Made from wear-resistant polyurethane.



Merkel PU profiles for rodless pneumatic cylinders

Precision profiles made from quality polyurethane with integrated reinforcement wire. For belt and slot cylinders used in Pneumatics, e.g. for transferring power from the drive piston to the work slot, as a drawing and cover strip or as a sealing strip to prevent air loss from inside. PU profiles reduce wear and noise.



Merkel Sealing components for miniature Pneumatics

Precision-made miniature components for use in pneumatic miniature cylinders. Designs and geometry conform to Simrit's standard range of pneumatic seals, U-rings, complete pistons, combination wiper seals and damper seals in both standard and special materials. Special designs for valve engineering.

Standard range Packings



Merkel Ramilon

Ramilon is made from ramie, an extremely stable natural fibre, which does not rot and is approved for food use. Application parameters: centrifugal pumps: pressure: 4 MPa; temperature: -30°C to 120°C ; speed: 12.5 m/s; plunger pumps: pressure: 100 MPa (installation with end rings); temperature: -30 to 120°C ; speed 2 m/s (installation with end rings); pH-value: 5 to 11. Example applications: centrifugal pumps, refiners, mills, plunger pumps, stem tubes.



Merkel Arostat

Arostat is made from extremely fine, wear-resistant aramide yarn. A high level of PTFE impregnation safely seals the creep paths in the fabric and permanently and means that Arostat can be used almost universally in instrumentation panels. Application parameters: instrumentation panels: pressure: 20 MPa; temperature: -50°C to 250°C ; pH-value: 1 to 13. Example applications: instrument panels, container flanges (as a flat strip).



Merkel Arolan II

Arolan II is made from extremely wear-resistant aramide yarn. Its high resistance to wear and the range of thermal and chemical conditions in which it can be used mean that Arolan II is used as a universal packing in some industry sectors. Application parameters: centrifugal pumps: pressure: 2.5 MPa; temperature: -50°C to 280°C ; speed: 26 m/s; instrument panels: pressure: 10 MPa; temperature: -50 to 280°C ; pH-value: 1 to 13. Example applications: centrifugal pumps, refiners, mills, instrumentation panels.

Standard range Packings



Merkel Arochem S

Arochem S is made from extremely low-friction, thermostable PTFE graphite compound yarn. They protect the shaft and enable short periods of dry running without causing damage. The wear-resistant aramide yarns on the edges prevent creeping into the sealing gap. Application parameters: centrifugal pumps: pressure: 2.5 MPa; temperature: -50°C to 280°C ; speed: 25 m/s; plunger pumps: pressure: 25 MPa (installation with end rings); temperature: -50 to 280°C ; speed 2 m/s; pH-value: 1 to 13. Example applications: centrifugal pumps, refiners, mills, defibrillators, plunger pumps.



Merkel Unistat

Unistat is made from graphite-filled PTFE yarn. Pressure-resistant and heat-conductive, its chemical resistance and good sealing effect make the packing particularly suitable for use in the chemicals industry. Application parameters: plunger pumps: pressure: 80 MPa (installation with end rings); temperature: -200 to 280°C ; speed 2 m/s; instrumentation panels: pressure: 25 MPa; temperature: -200 to 280°C ; pH-value: 0 to 14. Example applications: instrumentation panels, control valves, plunger pumps.



Merkel Unichem

Unichem is a highly flexible PTFE compression packing for shaft seals. It is impregnated with PTFE a dispersion and has a highly temperature-resistant silicone running-in lubricant. The packing is plastic, resistant to creep and volumetrically stable. Application parameters: plunger pumps: pressure: 1.5 MPa; temperature: -100 to 250°C ; speed 8 m/s; pH-value: 0 to 14. Example applications: centrifugal pumps, container flanges (as a flat strip).



Merkel Unival

Unival is made from graphite-filled, oiled PTFE yarn. The special structure of the yarn optimises the benefits of the material (low thermal expansion and excellent heat conductivity). Application parameters: plunger pumps: pressure: 2.5 MPa; temperature: -100 to 280°C ; speed 20 m/s; instrumentation panels: pressure: 25 MPa (installation with end rings); temperature: -100 to 280°C ; pH-value: 0 to 14. Example applications: centrifugal pumps, mixers, driers, instrumentation panels.



Merkel Alchem

Alchem is made from pure, impregnated PTFE yarn. The material is very tightly woven, so the packing is only slightly compressible. Alchem is characterised by its low setting characteristics and high form-stability. Application parameters: plunger pumps: pressure: 50 MPa (installation with end rings); temperature: -200 to 280°C ; speed 2 m/s; instrumentation panels: pressure: 25 MPa; temperature: -200 to 280°C ; pH-value: 0 to 14. Example applications: instrumentation panels, spin pumps, plunger pumps, driers.



Merkel Grafiflex®

Graffiflex is characterised by its high resistance levels to chemicals and temperature, as well as its extremely effective sealing capabilities and long-term elasticity. Irrespective of the temperature cycle, the material does not exhibit cold flow, shrinkage or ageing.

Application parameters: pressure: 100 MPa; temperature: –200 to 550 °C (most media and air), –200 to 700 °C (steam), –200 to 2500 °C (inert gas); pH-value: 0 to 14.

Example application: instrumentation panels.



Merkel Grafiflex® cover seals

Graffiflex cover seals are supplied as pre-pressed rings and have proven effective in self-sealing covers, e.g. in large instrumentation panels and high-pressure drinking water warmers. Application parameters: pressure: 100 MPa; temperature: –200 to 550 °C (most media and air), –200 to 700 °C (steam), –200 to 2500 °C (inert gas); pH-value: 0 to 14. Example application: instrumentation panels.



Merkel Carbosteam®

Highly flexible carbon yarn is the basis material for this high-temperature packing for sealing instrumentation panels. Carbosteam has excellent chemical and thermal resistance. The packing has excellent anti-extrusion and wiping characteristics.

Application parameters: pressure: 30 MPa; temperature: –30 to 400 °C (most media and air), –30 to 550 °C (steam). Example application: instrumentation panels.



Merkel G-Spezial S 6565

G-Spezial S is made from highly temperature-resistant, flexible graphite braids. This pressure-resistant braided packing has the same excellent sealing capabilities as the pure graphite rings made from strip material. G-Spezial S has the advantage of being useable for repair and servicing work. This compression packing is used mainly for armatures and pump applications. It is resistant to hot water, steam, gasses, oil, acids and alkalis. With most media, its application parameters are an operating pressure of 450 bar and a temperature of –200 to +450 °C. It is resistant to steam up to +550 °C.



Merkel G-Spezial

G-Spezial is made exclusively from highly temperature-resistant, flexible graphite braids stabilised with a thin Iconel thread in the middle. This braided packing is highly temperature-resistant and has the same excellent sealing capabilities as the pure graphite rings made from strip material. Application parameters: pressure: 45 MPa; temperature: –200 to 450 °C (most media and air), –200 to 550 °C (steam).

Example application: instrumentation panels.

Merkel

Standard range Packings



Merkel Uniflex

Uniflex is made from flexible specialist yarns with a high carbon content and uses an innovative PTFE graphite impregnation method. The packing is characterised by the fact that the impregnation remains in the woven compound, even at high temperatures and throughout the life of the packing. This means that Uniflex can be used in conjunction with dry running, although there are limitations. Application parameters: pressure: 2.5 MPa; temperature: -50 to 280°C ; speed: 25 m/s; pH value: 1 to 13. Example application: centrifugal pumps.



Merkel Kombilon

Kombilon is made from an extremely conductive, elastic DIAPLEX® combination weave of carbon and PTFE yarns. The packing is impregnated with a brightly-coloured, bonded PTFE compound and running-in lubricant. Application parameters: plunger pumps: pressure: 2.5 MPa; temperature: -100 to 280°C ; speed 20 m/s; pH-value: 0 to 14. Example applications: centrifugal pumps, mixers.



Merkel Univerdit®

Univerdit is made from an extruded, fibre oriented PTFE compound and is extremely compact. Its high chemical resistant and volumetric stability are its key characteristics. Generally, Univerdit must be fitted with anti-extrusion rings. Application parameters: plunger pumps: pressure: 2.5 MPa (installation with end rings); temperature: -30 to 250°C ; speed 6 m/s; instrumentation panels: pressure: 16 MPa (installation with end rings); temperature: -30 to 250°C . Example applications: centrifugal pumps, mixers, instrumentation panels, control valves.

Accessories Packings



Packing extractor

Packing extractors have been specially developed to remove gland packing quickly and gently. The spiral-shaped point has a screw thread which allows it to penetrate all types of woven and fabric packing effortlessly. The powerful, flexible shaft can even reach gland packing where access is difficult.



Cutting Gauge for Packing

The Universal Cutting Gauge for Packing has been developed for cutting packing from the roll in practical conditions. Packing can be cut precisely to size and to suit the particular application on this gauge.

Integral Accumulator

Standard range



Diaphragm Accumulator

Rated volume: 0.075 to 5 litres; rated pressure 40 to 500 bar; operating temperature: -15°C to 80°C (standard diaphragm material) or -40°C to $+120^{\circ}\text{C}$ (special diaphragm materials). A special welding process has enabled the accumulator to be produced in a design with an optimised weight. Depending on the liquid used and the operating conditions, the accumulator is available with a variety of membrane materials. It also comes with a service connection on the gas side as standard. Example applications: volume accumulator, pulsation damping, shock pressure damping.



350 bar Accumulator Range

Nominal volume: 0.75 to 3.5 litres; nominal pressure 350 bar. The 350 bar accumulator range is available as standard with a number of different oil connections and diaphragm designs. On request, special designs can also be produced to meet customers' specific requirements.



Diaphragm Accumulator – screw fitting version (standard range)

Rated volume: 1.5 and 2.0 litres

Rated pressure: 100 to 330 bar



Diaphragm Accumulator – stainless steel version

Rated volume: 0.75 litres

Rated pressure: 160 bar



Piston accumulator for mobile use

Rated volume: 16 cm^3 to 5 litres

Rated pressure: 50 to 250 bar

These accumulators are user-optimised for high pressure conditions.



Special designs hydraulic accumulator

For mobile use, hermetically sealed on the gas side, user-optimised design.



Pulsation Damping for Hydraulic Systems

Pulsations cause noise, increased wear and reduced performance figures in hydraulic systems. A pulsation damper can reduce the fluctuations in pressure and fluid which create the pulsations. An optimised adjustment of the damper to the respective system can eliminate the undesirable phenomena. In addition to increases in performance, noises are reduced and the life of the components is increased. Conventional diaphragm accumulators are used as are newly developed spring accumulators and wideband dampers, depending on the specific application. The design of the dampers takes place on a customer-specific basis.



Hydraulic accumulator with hydraulic block and integrated hydraulic valves

For mobile use, user-optimised design.



NG6 accumulator load valve

2/2-way valve with 2 pilot control valves. The upper and lower switching pressures can be adjusted separately. Once the upper switching pressure has been reached, the hydraulic pump is switched to unpressurised circulation and only connected again when the lower switching point is reached. This means that, for example, hydraulic systems which require large oil volumes over only a short period of time can be operated with a small hydraulic pump and a hydraulic accumulator, which saves energy.



Hydropneumatic front axle suspension

Combined use of hydro-accumulators and control blocks for hydropneumatic front axle suspensions on agricultural equipment. The control block adjusts the system's damping characteristics to the actual load and guarantees the longest possible spring travel. Load-dependant spring action and level control speed independent of load ensure ideal suspension characteristics at all times, even at sudden load changes. Benefits: enhanced safety, raised performance, higher vehicle speed, full traction at all operating conditions, vehicle stabilisation and longer component service life.

Integral Accumulator

Standard range



Hydropneumatic cabin suspension

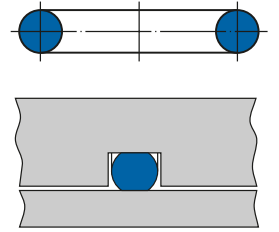
Valve block for use as ride level control in conjunction with hydropneumatic cabin suspensions and other simple suspension systems. Operator comfort is achieved through adjustment of the settings to each individual situation with short up- and down-control times. The cylinder-accumulator combination is designed to meet load and comfort requirements. This suspension system fulfils the increasingly strict legal requirements for comfortable, healthy workplaces, increased machine operating times and operational reliability.

ISC O-Ring



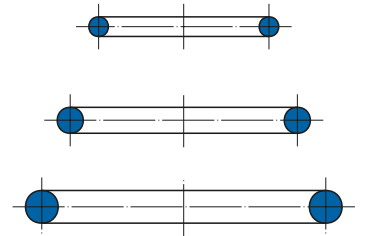
ISC O-Ring

Static, and, in certain circumstances, also dynamic seal for all sectors of industry. The ISC O-Ring is available in all standard sizes and in various materials and material hardness qualities. The ISC O-Ring is supplied with a support ring to prevent gap extrusion, depending on the operating pressure, gap width and material hardness involved. We have numerous approvals by standard organisations (KTW, WRC, NSF, FDA etc.).



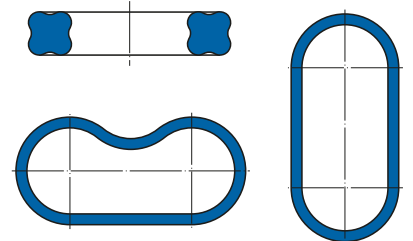
ISC O-Ring, Special Size and Special Material

In addition to the standard sizes and materials stocked, Simrit can also supply a wide range of special dimensions and material mixtures. For example, the ISC O-Ring made of silicone, polyurethane or PTFE-material in standard and special sizes (see also Simriz®).



ISC O-Ring with Function-Based Special Shape

ISC O-Ring developed for special applications. Sealing machine components at rest against liquid and gaseous media. In certain circumstances also suitable for use as a dynamic sealing element in the presence of axial, rotary and oscillating movement. Fabrication in standard materials means that a wide range of possible applications can be covered.



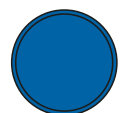
ISC O-Ring and Special Shape Made of Simriz®

The ISC O-Ring made of Simriz® has similar resistance qualities to a PTFE-seal both with reference to aggressive media and wide temperature ranges (heat resistant to +300°C), but is elastic. It is characterised by having length of life many times longer than that of O-Rings made of conventional elastomers. The ISC Simriz® O-Ring can be supplied quickly in standard sizes.



Coated ISC O-Ring

Targeted optimisation of the surface quality of the ISC O-Ring by coating it with powder, special greases, emulsions or varnishes. In addition to providing a reliable seal, the basic elastomer and the upgrading of the surface independently of this ensure that assembly will be economical, require little force and will not cause damage.

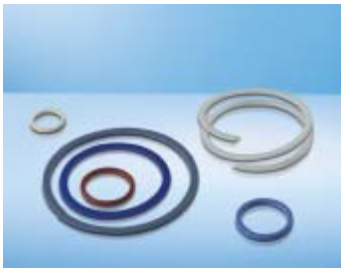
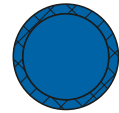


ISC O-Ring



Sheathed Elastomer ISC O-Ring

An elastomer core consisting of FKM or silicone. Together with the FEP or PFA sheath, this guarantees an optimum static seal. In addition to this, the sheath protects the elastomer core from almost all chemical and mechanical influences so that the greatest possible resistance to chemicals is achieved. Excellent thermal stability from -60°C to $+260^{\circ}\text{C}$.



Support Ring SRI, SRA and Spiral Back-up Ring SPR

Depending on the width of the gap, operating pressure and material hardness, the ISC O-Ring is provided with a support ring to prevent gap extrusion. In addition to our standard range, we also supply the support ring in special materials and special sizes.

Lederer Liquid Silicone Products

Customer-specific designs



Cord seals and enclosure seals

The main reasons for making cord seals and enclosure seals from liquid silicone rubber (LSR) are the cost-efficient production and good weather-resistance and ageing properties of all LSR types. A hardness from 10 to 80 Shore can be selected.



Two-component composites

With the self-adhering liquid silicone rubber (LSR) types, we provide a single-source supply of cost-effective yet high-grade composite products. Mechanical connections may become unnecessary or are supported through the composite's cohesion.



Moulded Parts for Sanitary and Medical Technology

In applications where moulded parts are in direct contact with water, two significant criteria are normally most important with regard to the use of liquid silicone (LSR). Reduced lime deposits or the ability to dissolve the deposit off the moulded seal easily and the approval of the materials under KTW, WRAS, BGcW and FDA regulations. Therefore moulded components made of LSR come into question not only for applications in the plumbing sector but also in the food industry and for medical purposes.



Seals for Micro-electronics and Electrical Engineering

As a consequence of their very good electrical insulation in combination with good mechanical fatigue strength and fade-resistance, moulded components are also used in the sector involving fibre-optic connections, microswitches and in medium and high voltage technology. Moulded components made of liquid silicone (LSR) can be used in a wide range of applications where it is necessary to provide a radial seal on switches and plugs. The ability to dye the products in any colour with a high level of manufacturing accuracy and reproducibility in the fabrication process favour their use.

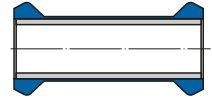
Special Sealing Products

Customer-specific designs: Elastomer Composite Parts and Precision Mouldings



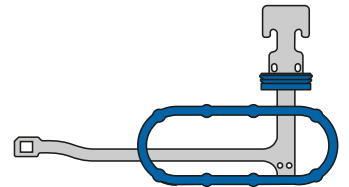
Plug and seal

Used for connecting housings and for fluid transfer, for example water, oil and air. Advantages include: a reduced number of parts, easy installation, acoustic and mechanical decoupling of components, and the ability to compensate for angular and parallel misalignment.



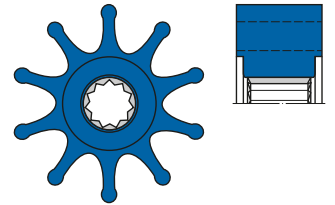
Seal with Sensor, Plug and Flexible Printed Circuit Board

Routing a printed circuit board through an elastomer seal with a wide selection of materials. The unique solution to the provision of the seal whilst at the same time sensing physical dimensions in the medium, providing integrated cabling and a plug connection. The clear reduction in the number of components minimises procurement, testing, handling and assembly costs.



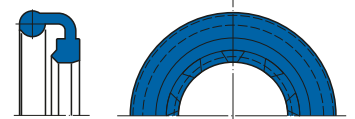
Impeller

Modified impeller designs for impeller pumps, using special elastomers with optimised frictional characteristics. These exhibit much lower wear, and allow smaller more economical drive units to be considered. Materials include CR, NBR, EPDM, FPM or HNBR. Operating conditions: Pressure: 50MPa, Temperature 0 to 100°C.



Precision Mouldings

Precision mouldings for use as sealing and damping elements. Custom designs and high material quality. Simriz® und butyl are ideal materials for resistance to media and gas-tightness.



Micro- or Miniature Parts

Small and extremely small composite elastomer components and moulded components are developed for individual customers. Can be manufactured in a wide range of materials and designs. Composite components made of Simriz® (FFKM) and special support components are particularly useful where high chemical and temperature resistance is required. The multi-functional characteristics of miniature components are advantageous for sealing, damping and magnetic triggering applications.

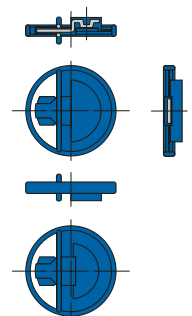
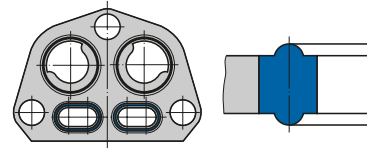




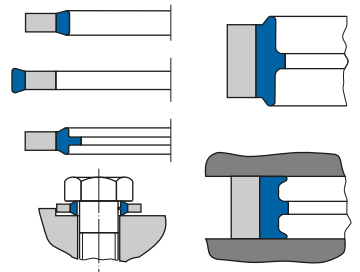
Plate Seals/Rubberised Sheet Seals

Connecting together several sealing points, often of different thicknesses. Use e.g. as a flanged connection for hydraulics control blocks, especially at high pressures. They reduce the number of individual parts and therefore procurement and assembly costs. Mounting bores for O-Rings can be dispensed with. Materials: NBR, EPDM, FKM, HNBR. Support component: aluminium, steel, brass.



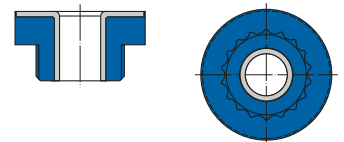
Usit Rings in Special Designs and Made of Special Materials

In addition to the Simrit standard range of Usit rings for static seals e.g. on screwed joints, we also supply special shapes for specific applications, e.g. designs with rubberised side surfaces, with a tapered sealing bead, or with a centring stop on the internal diameter.



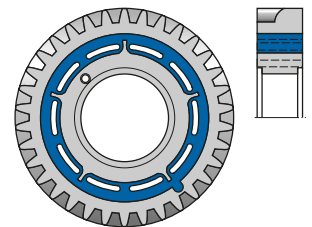
Decoupling elements

Elastomer-metal components for vibration and sound damping, elastic suspension and sealing of metallic components such as oil pan fittings, motor block cylinder head covers and injection valve fittings.



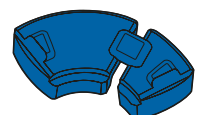
Decoupled Cylindrical Gearing

Cylindrical gearing is used for driving camshafts and other auxiliary components on diesel engines. Undesirable vibration, which causes noise and impairs smooth running, is transmitted into the system through these drive systems. The problem is solved by decoupling the inner and outer parts of the gear with a bonded elastomer layer. Transmitted noise and vibration is then substantially reduced.



Drive elements

Function: reducing the irregularity of drives to ensure a smooth, even concentricity. The elastomer section, which is mostly 80 NR or NHBR, functions as an elastic spring and damper. Functional design using FEM calculation.



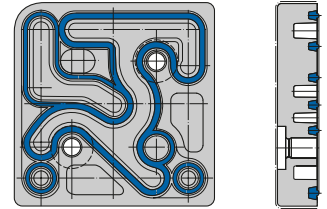
Special Sealing Products

Customer-specific designs: Elastomer Composite Parts and Precision Mouldings



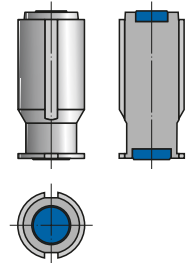
Cover Seal (Plastic/Elastomer Composite)

Load-bearing components made of thermoplastics or thermosetting plastics; economical solution, especially for complex geometries. Example applications: cover seals with multifunctional screw-fastening possibilities/various valve functions are feasible. High economic viability is convincing because of the special fabrication processes used.



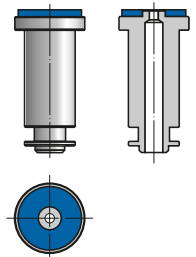
Magnetic inductors and magnetic cores

Bonded parts made from magnetising metal with bonded elastomer, for sealing and damping in magnetic valves and precision mouldings for inductor mounting. Optimisation of nozzle geometry using FEM calculation. Precision mouldings and springs mounted on the carrier body. All conventional elastomers are used as materials. Coatings available on request from the customer.



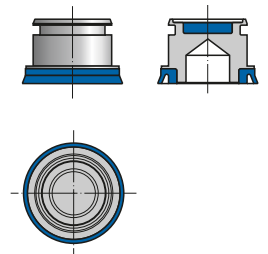
Valve Body with Axial Seal

Elastomer or elastomer composite component with load-bearing component made of metallic material (turned, punched or cast component) or of plastic (injection-moulded component) with opening and closing function in valve. Can be manufactured in almost all material combinations, harmonised with the respective application. Economic solution as a composite component with high reliability of operation and long life.



Valve body, multifunctional

Elastomer bonded component with metal or plastic body and elastomer matched to application. Elastomer and body are mechanically or chemically bonded to each other. Functions: sealing, damping, guiding, centring, positioning. Large scope of layout possibilities through use of plastic carrier parts. Cost-effective through reduced number of components. Reliable operation and long service life.



Intake branches

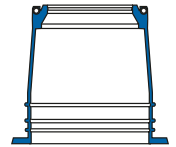
Design: bonded elastomer component consisting of a metallic carrier sheet to ensure secure fitting to and sealing of the cylinder head and a rubber pipe section with optimised flow cross-sections to enable efficient air intake.





Injector Seal

In diesel engines with direct injection, injector seals prevent the penetration of water, dirt and dust into the valve area – but they also prevent oil escaping from the combustion chamber. Simrit injector seals offer our customers high reliability at high temperatures combined with resistance to media and thus guarantee long-lasting, reliable operation.



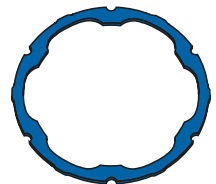
Thermal spacer rings/reaction rings

Function: compensation for differing thermal expansion in aluminium casing and steel shaft when using roller ball bearings. Target group: bearing manufacturers. Materials: FKM and HNBR. Benefit: knowledge of thermal expansion properties and gap extrusion.



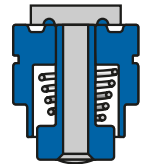
Parts pressed from rolls and sheets

Punched components made from sheet material without machining. With double-sided adhesive tape for fixing during or after fitting.



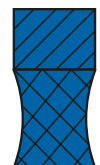
Modules

Assembly of modules around bonded elastomer components and precision mouldings. We can supply assembled, multi-part sealing kits (modules) with integrated elastomer and elastomer composite components.



Elastomer and PTFE Composite as Punched-Out Components

Manufactured as sheets or plates of the composite followed by punching or drilling out. The elastomer takes up the elastic pre-tensioning and static sealing tasks, the PTFE reduces the friction on the dynamic sealing side.



Special Sealing Products

Customer-specific designs: Elastomer Composite Parts and Precision Mouldings



Seals for butterfly valves

Moulded profiles for use in disk valves for the food and water industries. The main materials used are FDA-, BGA- and NWC-approved elastomer compounds based on VMQ, EPDM, FKM and NBR.



PTFE inlet nozzle

Reduces noise, avoids steam surges, distributes media evenly in containers, has a high resistance to materials and temperatures. Application parameters: pressure: 1 MPa; temperature: 180 °C.



PTFE isostatic linings

For instrumentation panels and pipe sections. Application examples: pumps, valves. Material: PTFE.



Cable sleeves

Moulded PTFE components made using the pressure sintering process. For insulating cables, for example in sensors. Low dielectric coefficient and high specific volume resistance. Temperature range: -150 to +220 °C.



Mechanical composite parts

PTFE seal elements, such as piston rings with contact element, are factory-assembled and -calibrated for example on a piston. Benefit: Fewer production stages through readily assembled components.



Lip seals

Embossed lip seals with memory effect. Initial sealing effect, lower friction and lower contact pressure, than seals with contact elements. Wide range of applications.



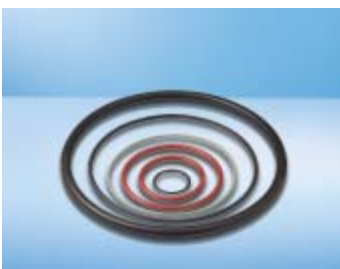
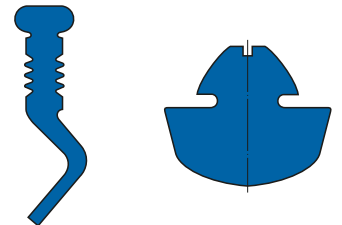
Seal rings with and without support

Special-purpose PTFE seals with elastomer element or metal spring to maintain contact pressure at various temperature ranges. Supplements the standard ranges of hydraulic seals. Materials: special compounds with special-purpose filler materials for high tribological loads. Temperature range depends on elastomer used.



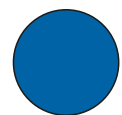
Elastomer profiles

Extruded, continuous profiles, glued joints. Application examples: Live rings of wind turbines, rotary tubular kilns, tunnel drilling machines, large covers and locks, loading hatches; customer-specific profiles for range of functions, operating parameters, media and durability requirements.



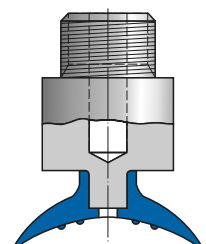
Cord and Cord Rings

Extruded cord available by the metre in all standard diameters, for use as the base material for the manufacture of cord rings bonded with adhesive at the butt joint. For simple static seals, preferably in relatively large sizes.



Pneumatically Actuated Claws and Suction Caps

Moulded parts designed for automated handling systems. Sensitive response claws for handling extremely delicate goods, adhesive suction caps for smooth and air-tight gripping surfaces and vacuum suction caps for workpieces with rough and porous surfaces. In addition to a standardised product range, we provide a large number of types and designs for specific applications and products, available with or without ball valve.



Special Sealing Products

Customer-specific designs: Elastomer Composite Parts and Precision Mouldings



Guide elements

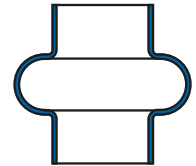
Guide elements with rectangular cross-section, machined or continuous strip. Lengths available for any piston or rod diameter. Due to their thermal expansion, guide elements usually have a tangentially cut joint. Special versions with a step cut joint are available.

Standard range Bellows



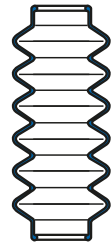
Bellow single convolute

Protective elements for shaft joints primarily performing angular movements. Axial movement is limited. Single convolute bellows prevent loss of lubricant while excluding contaminants. Materials: CR and NBR.



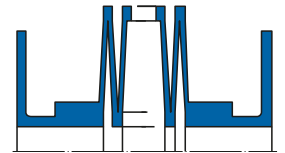
Multiple convolute Bellows

Protective elements available in various geometrical designs for sealing axially moving rods and machine parts against dirt, dust and environmental factors. We have more than 250 different sizes and shapes available from stock. In addition, a further 350 designs are available, which can be ordered at short notice. Material: preferably CR and NBR.



Bellows made of PTFE

Highly flexible, highly expandable; can be fitted in confined spaces. Stable sides, good flexibility, adequate length extension reserves. Application parameters: pressure 0.025 MPa – 0.6 MPa; temperature: –120 to 200 °C.



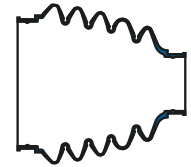
Special Sealing Products

Special designs: Bellows



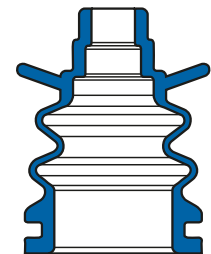
Bellows in special materials

In addition to the large number of standard sizes available from stock, various special materials – such as VMQ, FKM, EPDM, HBR and SBR – are used for the manufacture of bellows for specific operating conditions.



Bellows for Cable Glands

These multiple convolute bellows seal cable glands e.g. in the cab wall of agricultural and construction machinery against dust, moisture and noise. The assembly straps allow the bellows to be fitted very simply and quickly. In this way awkward and unreliable attachment with liquid sealants can be avoided.



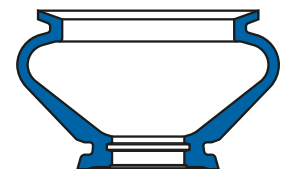
Steering Bellow

Multi convolute bellows of various shapes to protect steering rods in agricultural and construction machinery. Materials: primarily TPE, but sometimes CR.



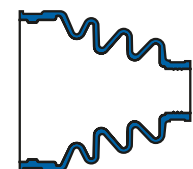
Bellows Seal for Ball-Headed Joints

Bellows seal in the form of a single convolute, primarily in use on ball joints in steering gear and running gear. The connection areas can be reinforced by the inclusion of metal or plastic rings. CR is used as the material.



Joint Shaft Bellow

Mouldings, also known as axle Packings, for use on drive shafts, for example on front or rear wheel drive systems on construction machines, commercial vehicles and in vehicle construction in general. Drive shaft bellows ensure the continuous lubrication of the joint and a long-lasting seal against grease and the intrusion of dirt. Material based on CR and TPE.



Standard range Sheets and Coated Fabrics



Sheets and rolls

Base material for producing flat (pressed or drilled) packings and mouldings for all industry sectors. Sheets and rolls are available in many Simrit elastomers and in various thicknesses and sizes, with and without fabric reinforcement or PTFE coating.



Rubberised Fabrics

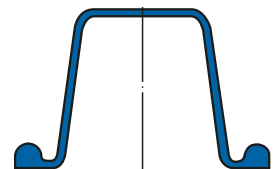
Base material for the manufacture of flat, cup or convoluted diaphragms and flat Packings. Simrit-coated fabrics are made from a special materials which is coated on both sides with elastomers such as NBR, CR, EPDM or FKM. Our standard range includes thicknesses from 0.15 to 1.10 mm and is available from stock by the metre or cut to size.

Standard range Diaphragms



Long-stroke rolling Diaphragms BFA

Thin-walled elastomer diaphragms with fabric reinforcements. For hydraulically or pneumatically operated controlled and pressure switches, measuring instruments and indicators. Material 50 NBR 253 with polyester fibre.



Diaphragms for air brake systems

Fabric-reinforced moulded diaphragms in standardised geometrical moulded design for use in air cylinders for pneumatic brake systems. Depending on the level of the braking force to be transferred and the stroke length, they are divided into three design ranges for different types of cylinders: diaphragm cylinders, diaphragm spring-loaded cylinders and diaphragm tristop cylinders. The diaphragms are operated in the same way for all three cylinder types.



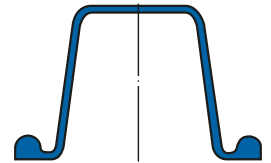
Special Sealing Products

Customer-specific designs: Diaphragms



Long-Stroke Rolling Diaphragm for Actuating and Regulating Valves

In addition to the BFA standard range, we supply long-stroke rolling diaphragms in special designs such as various flange shapes, bead designs with or without a hole on the cover side or special radius dimensions, with or without fabric reinforcement.



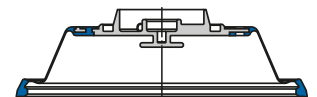
Diaphragms for gas pressure regulators

High-quality moulded diaphragms with or without fabric reinforcement and or bonded valve seats for gas pressure regulators, suitable for both high and low pressure applications. Materials: primarily special NBR rubbers, EPDM and VMQ with DVGW approval.



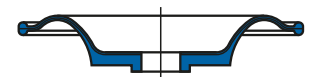
Thin-Walled Sensitive Diaphragms for Actuating and Regulating Valves

Thin-walled diaphragms with or without fabric reinforcement are needed to guarantee extremely light response characteristics in a regulating valve. Special materials based on silicone ensure appropriate operational reliability at low temperatures down to -100°C .



Diaphragms for Solenoid Valves and Pressure Reduction Units

For use in servo-controlled, automatic response or pressure-controlled diaphragm-type regulators with electro-magnetic control systems and in pressure-reduction units in pipeline systems. Advantage: diaphragms as the dividing element with simultaneous valve seat function.



Actuating and regulating Diaphragms

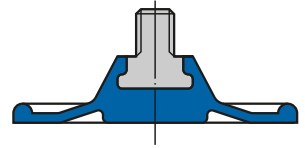
Moulded diaphragms of up to 1000 mm diameter for actuating and regulating fittings in plants and pipeline construction. The material used depends on the pressure and medium: NBR, HNBR, EPDM, CR, VMQ or FKM, and special materials where applicable. With or without fabric reinforcement.





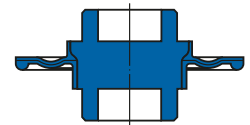
Diaphragms for shut-off valves

Various designs of moulded diaphragms for shut-off valves, made from NBR, CR, EPDM, VMQ and FKM, some with fabric reinforcement, bonded metal components and PTFE or Simriz® coating.



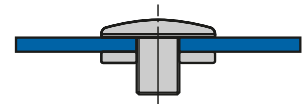
Diaphragms for pressure switches

Sensitive diaphragms for water level control in washing machines, dishwashers, coffee machines, heating systems, and pneumatic systems. Pressure control function up to 0.5 bar with thin, fabric-free diaphragms as the transfer element on electrical switch contacts. Material: NBR, NR, EPDM or – for special applications – VMQ.



Diaphragms made from rubberised fabrics

Diaphragms made from rubberised fabrics for use in industrial control units, fittings, automotive controllers and pumps. Dished diaphragms represent a cost-effective alternative to moulded diaphragms. Rubberised fabrics: NBR, HNBR, CR, EPDM, ECO and FKM, with polyester- and polyamide-based supporting fabrics.



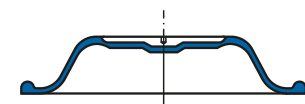
Diaphragms for Diaphragm Pumps and Compressors

Modern technologies use both, pure elastomer diaphragms and also the combination of elastomers with: fabric for reinforcement, PTFE film as protection against aggressive chemicals and metal or plastic insert components for force or path transmission and as support.



Accumulator Diaphragms for Industrial Hydraulics

For use e.g. in pressure reservoirs for supply lines and in power units in industry in general. As a solution to the problem of pressure surges in pipeline systems. Material: NBR with low permeation, HNBR, ECO, IIR, AU, EPDM.



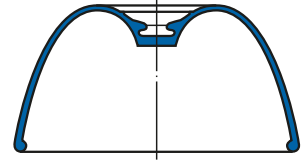
Special Sealing Products

Customer-specific designs: Diaphragms



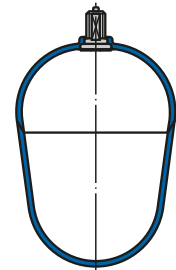
Accumulator Diaphragms

Diaphragms made from NBR, HNBR, ECO, IIR, EPDM and other materials with extremely low gas permeation and high flexibility at low temperatures for use in accumulators within hydraulic systems (e.g. industrial Hydraulics).



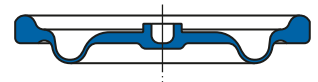
Bladders

Complete bladders, pressed or injection moulded and part-assembled. Low permeation compounds based on NBR, EOC, IIR, EPDM and FKM.



Silicone Diaphragms

Rolling diaphragms and return flow diaphragms consisting partially of oil-resistant solid and liquid silicones with excellent temperature stability (up to 250°C) and flexibility when subject to refrigeration (down to -50°C). Customer-specific designs for e.g. sanitary engineering and other pneumatic applications.



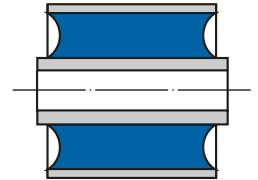
Vibration Control

Standard range



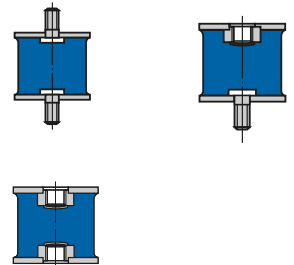
Ultra bushing

Ultra bushings are designed for damping and isolating radial and axial vibrations. They are used as maintenance-free joints to balance torsional and cardianic forces. Their durability relies on the double-sided bonding of the pretensioned elastomer.



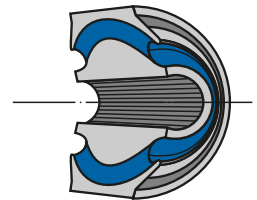
Round mount and buffer

Round mounts damp and isolate vibrations, act as shock-absorbers and balance out stresses or manufacturing deviations between linked construction elements. Round mounts differ from many other products because of their waisted rubber contour, which reduces the high edge loading on the rubber in the presence of radial deflection and thus increases the length of life of the component. Simple round mounts with a cylindrical contour are also available.



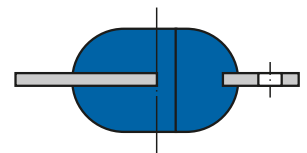
Spherical mount

Construction elements in which an inner sphere and outer cup are tightly connected by a bonded pretensioned elastomer layer. Ideal for use in maintenance-free joints that can be torsionally stressed on all sides. Applications include steering arms, clutches and drive elements in commercial vehicles.



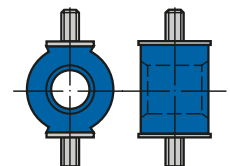
Instrument mount

Suitable for vibration control of electronic components, measuring instruments and precision machinery. Instrument mounts protect sensitive components against shocks from outside in mobile equipment.



O-shaped mount

Because of their relatively soft spring characteristics, o-shaped mounts are also known as low-frequency mounts. Low-shock mounting for instruments and electric or electronic components and fixing of lightweight assemblies and precision machinery.



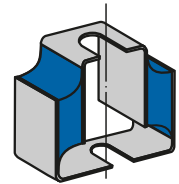
Vibration Control

Standard range



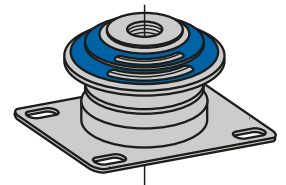
Double U mount

For vibration control and shock damping, with the advantage that the different levels of stiffness allows adjustment to the motor forces in three different directions. For soundproof mounting of instruments and engine units and for balancing tolerances and thermal expansion.



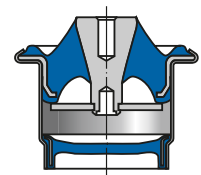
Conical mount

Conical mounts are elastic connection elements which are used in various forms – especially in the automotive industry – to mount fittings and engines. They also damp vertical vibrations, provide soundproofing and can at the same time compensate for large horizontal forces. Suitable for use in commercial vehicles and marine engineering and also in wind power systems.



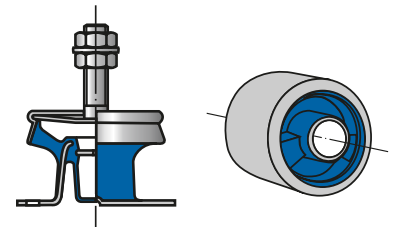
Hydro mount VL

The hydro mounts VL are used for cab and engine mounts, especially in agricultural machinery and in the construction industry. They are also suitable for mounting power units in a wide range of other applications. The hydro mounts VL provide optimum damping, better than comparable rubber-metal mounts, which reduces the amplitude of low frequency vibrations.



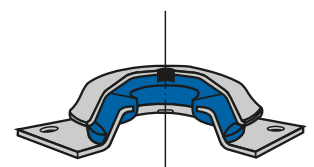
Hydro mount and hydro bushing

Hydro mounts and hydro bushings are elastomer springs with integral hydraulic damping. These components enable supercritical mounting with high damping levels, without any significant impact on soundproofing. Areas of application include engine mounts in commercial vehicles and boats, and vehicle assemblies, especially driver cabins.



V mount

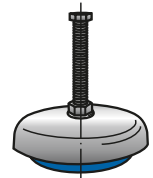
V mounts can be used in various fields of vibration control and sound damping. For mounting internal combustion engines, electric motors, pumps, compressors and machine tools. V mounts with threaded connection and tear-off lock are suitable for mounting motor units and assemblies on commercial vehicles. Some V mounts are used as ship engine mounts and have a type approval from the Lloyds Register of Shipping.





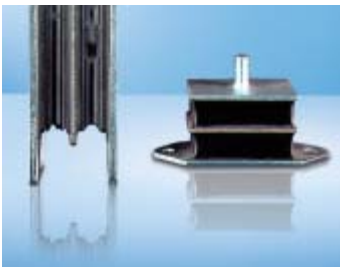
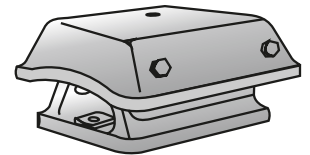
M mount

Non-anchored mounting for heavy power units. Allows levelling of the mounted machine, efficient vibration control and environmental protection through noise reduction. M mounts are easy to fit and facilitate the moving of heavy machines as they do not need foundations and are height-adjustable.



Machine mount

For vibration control and sound damping. Significant reduction of vibration level in the base or casing of heavy machines and compressors when mounted. The combined strain of pressure and shearing loaded onto the fitted flat mounts guarantees durability and good vibration control, even at low interference frequencies.



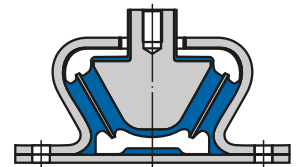
Flat mount

Depending on the assembly level and the level of vibration control required, flat mounts can be pressurised, sheared or both. Here, too, the integral rubber contour provides outstanding durability. Flat mounts are used in machines, engines and assembly units in machine and vehicle construction.



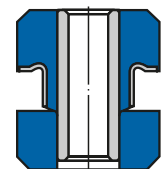
Tapered mount

Tapered mounts for light-, medium- and heavy-weight engines for mobile and stationary machinery. The natural rubber mixture of the engine mount can withstand high temperatures. The applications of this engine mount range from agricultural and construction machinery to mounting generators of wind power and marine generators.



Mo-Bearing

Mo-bearings are two part bearings. They consist of a rubber part and a rubber-metal part. They are supplied factory-assembled. During assembly the rubber part must be fitted with a pressure disk which is installed between the rubber and the respective attachment point. The rubber-metal part can be screwed directly onto the component to be insulated. Suitable for: combustion engines and electric motors, pumps, exhaust lines in motor vehicle and marine engineering.



Simrit Service Centres and contractual partners china

上海聚福物资有限公司

PLEASURE INDUSTRIES SUPPLIES LTD

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You will find all our current brochures as PDF-files on the Internet at www.simrit.de under Service

Brochures can also be ordered by fax: 0 18 03/74 67 48

English

General Information

- Simrit Standard Catalogue
- Simrit CD-ROM Catalogue
- Simrit Product Summary
- Simrit insight Customer Magazine
- Simrit Academy Brochure

Industry Sector Information

- Ground breaking solutions for the
- agricultural machinery industry
 - construction machinery industry
 - power transmission engineering
 - wind turbines

Product Information

- Simmerring®
 - Merkel Hydraulic Components
 - Merkel Pneumatic Components
 - Merkel Packings
 - Integral Accumulator
 - ISC O-Ring
- Special Sealing Products:
- Bellows
 - Diaphragms
 - Elastomer Composite Parts and Precision Mouldings
 - Vibration Control

German

Allgemeine Informationen

- Simrit Standard Katalog
- Simrit CD-ROM Katalog
- Simrit Produktübersicht
- Simrit insight Kundenmagazin
- Simrit Akademie Broschüre

Brancheninformationen

- Zukunftsweisende Lösungen für die
- Landmaschinenindustrie
 - Baumaschinenindustrie
 - Antriebstechnik
 - Windkraft

Produktinformationen

- Simmerring®
 - Merkel Hydraulikkomponenten
 - Merkel Pneumatikkomponenten
 - Merkel Stopfbuchspackungen
 - Integral Accumulator Hydrospeicher
 - ISC O-Ring
- Spezialdichtungsprodukte:
- Faltenbälge
 - Membranen
 - Elastomerverbund- und Präzisionsformteile
 - Schwingungstechnik

Sender:

Company

Town/postcode

Name

Telephone

Department

Fax

Street/post box

e-mail

Simrit® , Your Global Technology Specialist for Seals and Vibration Control

Simrit Services

- ▶ Constant innovations
- ▶ Uniquely wide range of products
- ▶ Strong product brands
- ▶ Unique materials expertise
- ▶ A wide range of value added services

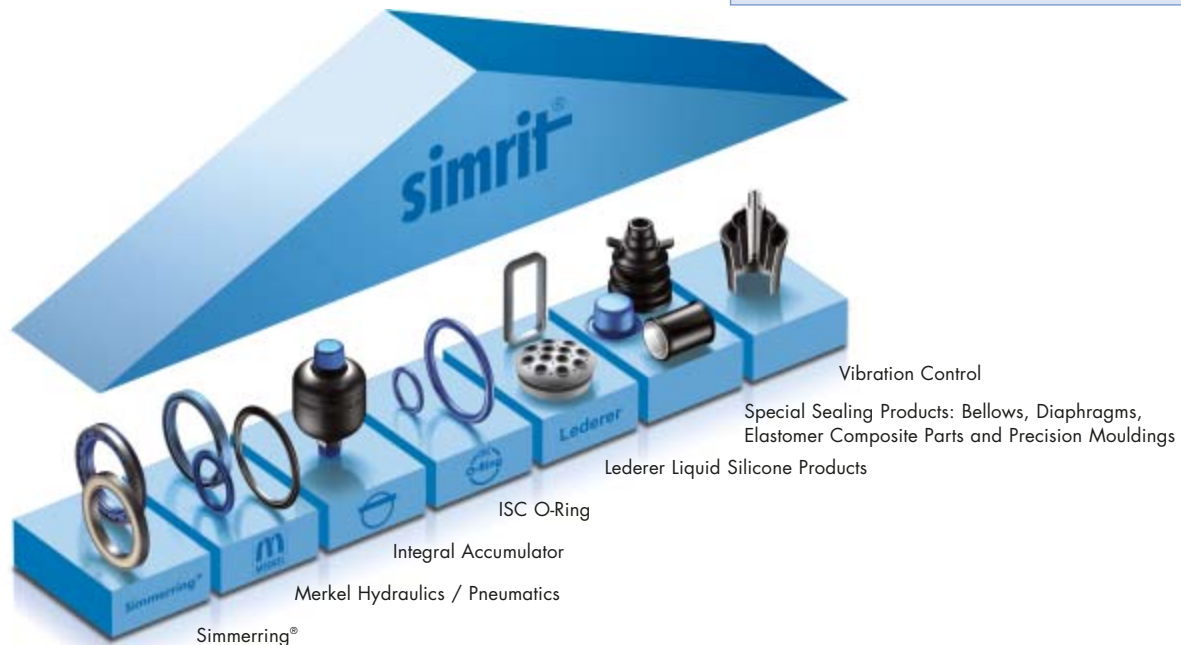
Your Benefits

- ▶ Technological edge
- ▶ All from one source
- ▶ Specialised technological expertise
- ▶ Longer unit service life
- ▶ Competitive advantages, efficiency and lower costs

e.g. Product selection support, e.g. Simrit Product Summary

Your Benefits

- ▶ Wide standard product range available from stock
- ▶ Wide range of special designs
- ▶ Customer-specific developments on request



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