

Sealing Elements
Dynamic Seals





ERIKS Dynamic Seals: dedicated to the future

#### Quality

Excellent raw materials, process-control, controlled endproducts, well-trained employees and the ISO 9001-2000 quality-system guaranteeing only quality-products. Products, dedicated to your application!

#### **Product development**

Our engineers work in the forefront of development and manufacturing of new compounds and designs.

Due to our worldwide ERIKS network with 43 of our own companies, working in partnership with certified labs, we are always searching for new engineering challenges.

#### **Expertise**

We have been in the front line of dynamic seal development and manufacturing for more than 50 years. We have our own MTC (Material Technology Center) for life time testing and FEA analysis.

#### Range

A total seals and gaskets programme with 60.000 stock items is available.

#### Worldwide

More than 40 companies worldwide, located in Europe, the Far East and in the USA.

#### **Customer service**

Our employees offer individual service in order to find efficient solutions for your specific problems. We give free advice, using our extensive knowledge.

#### Logistics

60.000 seals and gaskets in various dimensions are in stock and complete our wide seal package.

# passion for technology



ERIKS Dynamic Seals: passion for technology!

#### **Total programme**

ERIKS has developed through the years a total programme of dynamic seals: oilseals in all executions, V-seals, Klozures®, hydraulic and pneumatic PTFE lipseals and spring energised seals in all executions, mecanical seals, stuffing box packing, PTFE seals.

Based on own engineering and design at our MTC(material technology center), collaboration with high performance manufacturers, a professional seals repair shop and technical and interactive websites ERIKS is one of the leading companies in this field.





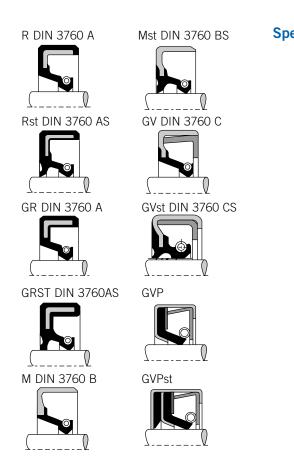


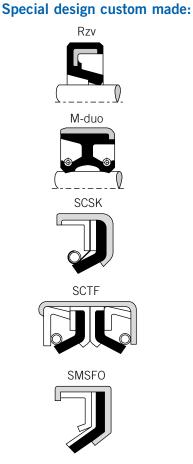


## ERIKS standard Oil seals for general industrial use

ERIKS has during 40 years built up a programme of oilseals in all possible executions from NBR to Viton®. These oilseals are produced following high technical standards on modern machines

- 10.000 dimensions in stock
- active collaboration with the Genuine Viton® programme
- quick supply for certain executions







#### **DuPont Performance Elastomers**

- INNOVATION
- QUALITY
- TECHNOLOGY



**ERIKS** has all Simmering® executions in its programme

#### DIN A/AS -





BAUSLX2



BAFUDX7



BAFUDSLX7









BASL



BAUMX7



BAUMSLX7



BABSL

#### DIN B/BS



B1FUD



B1FUDSL



B1U



B1USL





#### DIN C/CS



B2FUDSL





B2USL





B2SL



B2PT



B2FUD



## Innovative solutions in rotating seals

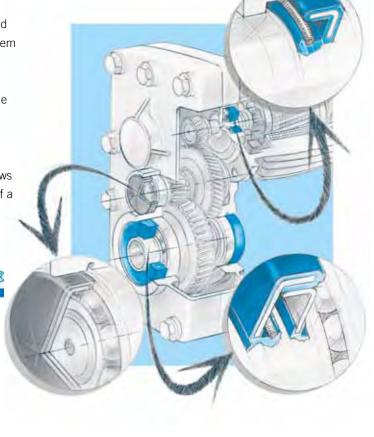
ERIKS has been at the forefront of sealing technology and has enjoyed an enviable reputation with major OEM's for over 50 years.

#### **ERIKS Simmerrings**

Eriks offers you the full range of original Simmerrings in NBR and FPM as well as the new developments as the Energy saving system and the Modulair sealing solution.

The Simmering® Energy saving system (Simmerring ESS) is made with a sealing lip which reduces the friction. Due to this effect energy is saved.

The innovative sealingsystem MSS1(+ condition monitoring) allows the leakage measurement so you can schedule the placement of a new seal.





# High tech specialities for 'heavy duty' applications

For special operational conditions Eriks has many possible solutions for all kind of applications. Extreme conditions can be covered with the Garlock and Merkel Radiamatic® oilseals where excentricity can be tolerated.













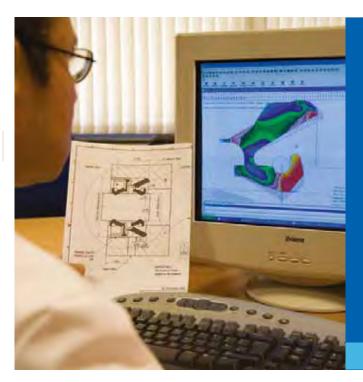












## **ERIKS Design, Engineering and Innovation**

The engineers at our technical centres design seals based upon Best Available Technology and using 3-D Computer Aided Design and Finite Element Analysis software. With the latter program they "predict" the performance of the seal taking in account the properties of the elastomer specified. These properties are identified by using our state of the art equipments in our lab. Prototypes are first put on test on our own test rigs before the seals go into mass production.

The devices in our lab are not only used for product development but with both our TGA and FTIR we do root course analyses to help our customers revolve their sealing problems. In order to make sure that our suggested materials are suitable for the application we do various standardised (ISO or ASTM) and customer test programs.

#### **Design and Innovation**

- 3-D Computer Aided Design;
- Finite Element Analysis;
- Comprehensive Material analyses;
- Multiple dynamic test capabilities (wear, torque, speed, pressure, Environments; mud/slurries/oils)

#### **Materials Laboratory**

- Thermo Gravimetric Analyses;
- FT-IR Spectrometer
- Mechanical properties (Hardness, Specific Weight, Tensile strength, elongation ad break, compression set....)
- Fluid and heat resistance
- 3-D measurement for Quality Control and Prototype measurement.







#### **Pioneer Weston Seals**

Premium quality seals for heavy duty and extreme services. In industries like agriculture and mining seals are exposed to hazardous environments.

#### **Pioneer Weston Unitised Seals**

- Eliminates wear of shaft surface:
- Designed specifically for arduous conditions;
- Multiple wiper lips protecting the sealing element;
- Filled with high quality lubricants for long lifetime;
- Easy to fit & replace, reducing time and cost;
- Exceptional performance, strength and durability.

#### **Typical Applications**

- Axle and wheel seals;
- Transmissions;
- Gearboxes;

#### **Pioneer Weston Paddi Seals**

 Unitised Mechanical Face Seals designed for high speed applications in the most extreme services



#### Manufacturing and Quality:

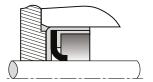
- ISO9001-2008
- Full traceability



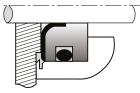


## PTFE Lipseals, PS-Lipseals

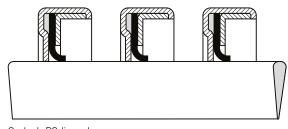
For critical applications the Gylon® PS or the ERIKS PTFE seals is the ideal solution. We engineer for you the right solution. Following PTFE compounds are available: Carbon/graphite; ekonol; Glass/MoS² filled; Fluoroloy®; Gylon® white; Gylon® black.



ERIKS Omnilip seals

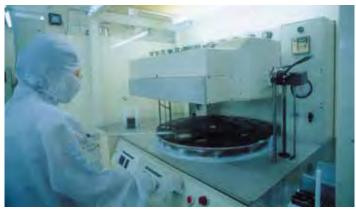


ERIKS Dynalip seals



Garlock PS-lipseals







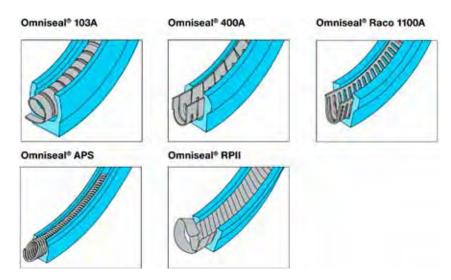
### **Omniseals®**

Omniseal® products are high-performance spring energized PTFE seals that are capable of handling extreme service conditions. Omniseal® products are used where ultra-low friction, chemical compatibility and extreme temperature tolerance is required.

#### **Omniseal® Applications**

Originally developed to meet the severe condtions encountered in rocket and missile applications, today Omniseal® products are accepted for use in a wide range of demaning industrial applications including:

- Gas Turbine Engines
- Aircraft Hydraulic & Pneumatic Systems
- Fuel Control Systems
- HPLC Pumps
- Medical & Laboratory Instruments
- Semiconductor Processing Equipment
- Vacuum Equipment
- Pumps
- Valves
- Coolers
- Filling Machines
- Oil Field Equipment
- Diesel Engines





#### **ERIKS V-seals**

ERIKS disposes of a full range of Vseals in NBR and FKM in all standard executions.

#### **Executions V-seals**

Eriks disposes a full range of V-seals in NBR and FKM in all standard executions:

- Type A
- Type S
- Type L
- Type E
- Alphaseals

We develop special executions in silicone, EPDM, HNBR also in FDA quality.



#### **Erisleeves**

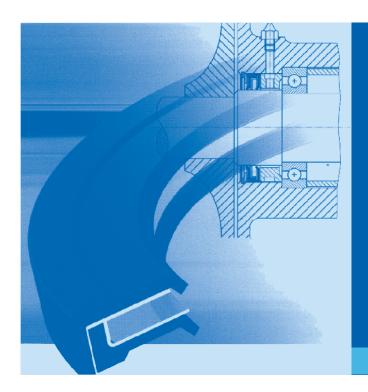
Erisleeves protect the shaft and are mainly used to minimize the wear-out of the shaft.



#### Note:

NBR quality is ozone resistant. To lower the friction, a thin layer of PTFE can be coated as surface treatment.

# passion for technology

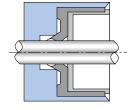


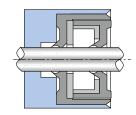
## **Specialities: VR Seals**

VR seals are specially designed to resist higher pressures than a classic oil seal. They are used with shaft velocities of maximum 40 m/s.

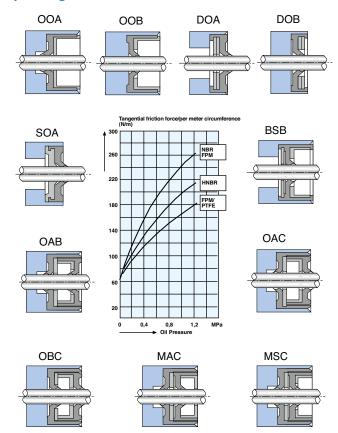
#### **Advantages**

- Available in small quantities
- Radial shaft seal ring with prestretched diaphragm
- Shaft velocity to 40m/s
- Pressure range (vacuum) to 1,5 MPa
- Temperature range: -50°C to +300°C
- Deviation: < 0,4 mm
- Uncoated / Stainless Steel / unsharpened shafts
- Low friction losses
- Long duration of life
- Available in:
  - NBR Perbunan, black
  - FPM (Viton®) Fluorocarbon, green, anthracite
  - FPM-Peroxide, grey
  - FPM-PTFE, white FDA
  - VMQ Silicone, red FDA
  - HNBR Therban/HSN, brown FDA
  - EPDM Etylene-Propylene, blue





#### Lip configurations





# ERIKS-MERKEL Hydraulic Seals

ERIKS has been supplying for more than 50 years the MERKEL/Simrit® quality in rubber/fabric, rubber, PUR, PTFE, hard fabrics.

ERIKS also offers a complete assortment of pneumatic seals.

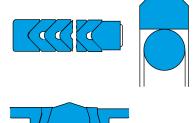
#### **Rod seals**

- Chevron sets
- U-seals
- Omegat seals



#### **Piston Seals**

- Chevron sets
- U-seals
- Omegat seals
- Compact seals



#### **Wipers**

- Single or double acting
- Rubber or spring activated



#### **Guide Strips**





## ERIKS RX® Hydraulic Seals

Next to the MERKEL/Simrit® products, ERIKS supplies a complete range of RX® Hydraulic Seals.

#### **ERIKS RX® Hydraulic Seals**

- Rod and Piston seals in all sorts of materials (also the Eriflon PTFE seals / Some imperial sizes available)
- Wipers (the usual wipers, as well as the 'MES' and 'EHD' wipers)
- Guide Strips (Eriflon PTFE and Powerslide)











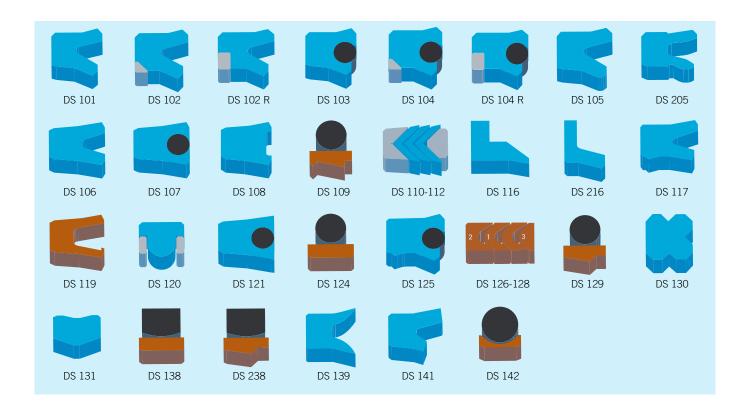






### **ERIKS Seal XPress**

Express service for hydraulic and pneumatic seals. Next to the large assortment of hydraulic and pneumatic seals we offer the possibility to produce 'specific seals', ready while waiting. Ideal for non standard or rush items, many sizes are available.





### **ERIKS Seal XPress**

A large material choice is possible, pre-programmed in our CNC machines. Available in rubber, Polyurethane, PTFE, POM, PA, UMMWPE and other materials.





# Mechanical Seals Single Spring Seals Rubber Bellow Seals

ERIKS Pioneer Weston has been at the forefront of sealing technology for over 50 years and enjoys an enviable reputation with blue chip OEMs.

A complete programme for non heavy duty applications (max 6 bar). The fixation takes place with an elastomeric bellow. These seals are available in different material combinations.



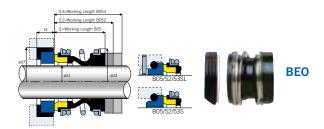
#### **Mechanical seals**

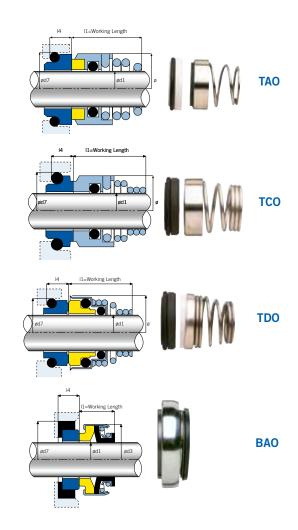
We work in close partnership with our customers to innovate, design and manufacture bespoke solutions to suit a divers range of applications, no matter how arduous the environment.

We are proud to work according to ISO/TS16949:2002 and ISO9001:2000 quality accreditation for dynamic sealing solutions.

#### **Pioneer Weston single spring seals**

Simple but reliable mechanical seals for non heavy duty applications. These seals are available in different material combinations. The fixation on the shaft takes place with a simple spring.







## **Pioneer Weston Multispring Seals**

Multispring seals are the best you can get within the non-cartridge seals.

These seals perform in places with the highest demands.

Available in inner and outer seal combination. The seal is fixated by drive screws.

Most face and elastomer materials are available for these seals.

#### Normaplan 20



- sinus spring
- Viton® scraper
- extra PTFE back-up ring to protect the spring

#### SAITM



- balanced seal
- multi spring
- short internal working length
- available in Metric and Inch version
- from 0.750" (18mm) to 6.000" (155mm)

#### **CSTM**



- external balanced seal
- multi spring
- even available with PTFE seal face
- available in Metric and Inch version
- all metal parts are not in contact with the media being sealed

# passion for technology



## **Single Cartridge Seals**

Eriks also provides cartridge seals, this starting from the most basic ones to special high performance seals.

Our application engineers are willing to search the best sealsolution for your application with a long lifespan and for a better environment. All seals are CAD designed and manufactured on CNC machines.



#### **Convertor II**

- Designed to replace two part mechanical seals and conventional packing.
- Fits directly in the stuffing box chamber
- Easy to install



#### **SCUSI**

- Self aligning faces
- Balanced seal faces
- Flush hole



#### **SMSS**

- Monolithic sealfaces
- · Very short build in length
- Stationary seal



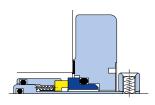
#### **CURC**

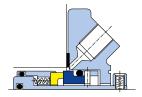
- Flush, guench and drain
- Self alighning stationary
- Also available in mixer version (CSM)

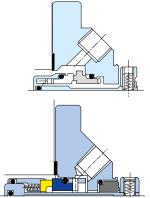


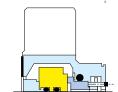
#### **RDS**

- Split mechanical seal in cartridge housing
- Balanced design











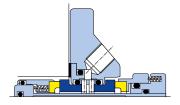
## **Double Cartridge Seals**

The advantages are: easy to install, possibility to aris to state and API610 & 682 versions available.



#### **CDSA**

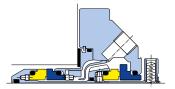
- Selfaligning inner and outer faces.
- Quench and drain possibility
- Also applicable in vacuum
- Also available in mixer version (CDM)





#### **DMSF**

- Stationary monolithic face design
- Equipped with pumping ring for optimal cooling performances
- Designed to withstand barrier and process pressure fluctuations

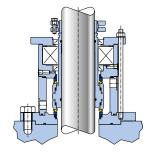


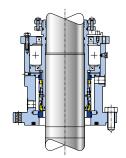


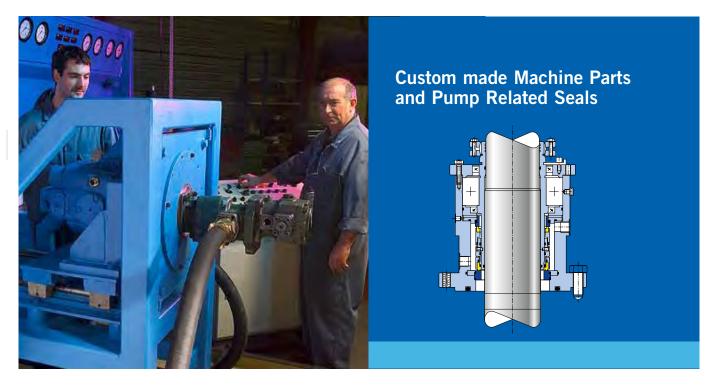
## ERIKS MIXER SEALS MIXMASTER V & VI

Topentry seals without integrated bearing









## **Custom made Machine Parts** and **Pump Related Seals**

Eriks delivers also component seals conform to the pump and machinemanufacturers design:

- Tri-clover
- APV
- Alfa Laval
- KSB
- Flygt
- Johnson
- Tuchenhagen
- Hilge
- Contherm
- Lobbepumps





#### Reliable overhaul of your mechanical seal

Due to the growing demand for overhaul facilities for mechanical seals in the Netherlands, UK, France and Belgium, ERIKS decided to set up a centrally situated and fully equipped repair centre in Hoboken, Antwerp.

Mechanical seals of all designs are repaired, overhauled and modified in accordance with factory specifications. Products from all reputable manufacturers are professionally repaired quickly and in optimum circumstances in our Repair Centre. We are ISO 9002 certified by AESSEAL and Roten. This is audited annually.

The standard time taken for repair runs to a maximum of four weeks, but of course special arrangements are always possible. Save up to 40% of the cost of a new mechanical seal by opting to have it re-manufactured. Benefit from the same performance

and product life and in some circumstances they can be delivered before a replacement unit. Our dedicated 240m² re-manufacturing centre is one of the best equipped in the world, and houses the latest production, control and testing equipment to ensure your seal will match.

















## **HAMAR** stuffing box packings

#### **HAMAR** stuffing box packings

During many years ERIKS experienced an enormous know-how in relation to pump packings. Following the new tendencies, ERIKS is now one of the European leaders in this field.

Next to our stock programme, ERIKS has a fully equipped moulding facility to produce custom made pre-moulded seals.

Our up to date HAMAR production programme covers all standard packings on a basis of Rameh, Graphite, PTFE, Aramid, GFO, Incobraid, etc.

On top of this standard programme, ERIKS also offers the Trapez-packings, the Egraflex pure expanded graphite tape and pre-moulded rings.











## Standard stock O-ring and X-ring compounds for industrial use

- 15.000 different dimensions in stock in our division warehouses.
- Produced according to ERIKS spec's.
- Controlled in our laboratory.
- According to international norms.
- Produced in modern injection and compression moulded machines.

ERIKS COMPOUNDS	HARDNESS IRHD ± 5	COMPR.SET 22H/100°C ON O-R 3.53 mm	TEMP. RANGE °C
NBR 47702	90	Max. 30%	- 30 / + 120
EPDM 55914	70	Max. 30%	- 50 / + 120
EPDM 55914 PC	70	Max. 25% (150°C)	- 50 / + 150
Silicone 714177	70	Max. 40% (200°C)	- 60 / + 220
Neoprene 32906	70	Max. 25%	- 35 / + 110
Viton® black 51414	75	Max. 18% (200°C)	- 20 / + 200
Viton® green 51414	75	Max. 19% (200°C)	- 20 / + 200
Viton® black 514320	90	Max. 18% (200°C)	- 20 / + 200
X-rings in NBR/FPM	70		



# We are part of the genuine Viton® programme

In collaboration with DuPont Performance Elastomers we offer you an extensive range of special Viton® compounds of which we guarantee the best value for your application.

We store 5000 different O-rings in Viton® black and green in compounds 51414 (75 Shore) and 514320 (90 Shore A).

## Alongside our standard industrial Viton® compounds we offer 40 special grades for your specific application. Among these:

Viton® 514625 for gas applications Viton® 514670 FDA 177.2600 black Viton® 514010 USP Class VI Viton® 514676 FDA 177.2600 white Viton® GLT 514115 for low temperatures Viton® GF 514141 for optimal chemical resistance Viton® GFLT 514017 for optimal chemical resistance and low temperatures Extreme ETP 514016 for extreme chemical resistance Viton® 514204 explosive decompression



#### **DuPont Performance Elastomers**

- INNOVATION
- QUALITY
- TECHNOLOGY





## O-rings with homologations/certificates

We developed a whole range of compounds for contact with food and pharma, drinking water and gases. We summarize the main compounds.

Look at our website www.o-ring.info/datasheets to find more than 40 life science compounds!



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