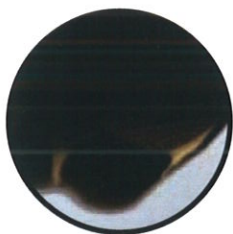


REDUCTION

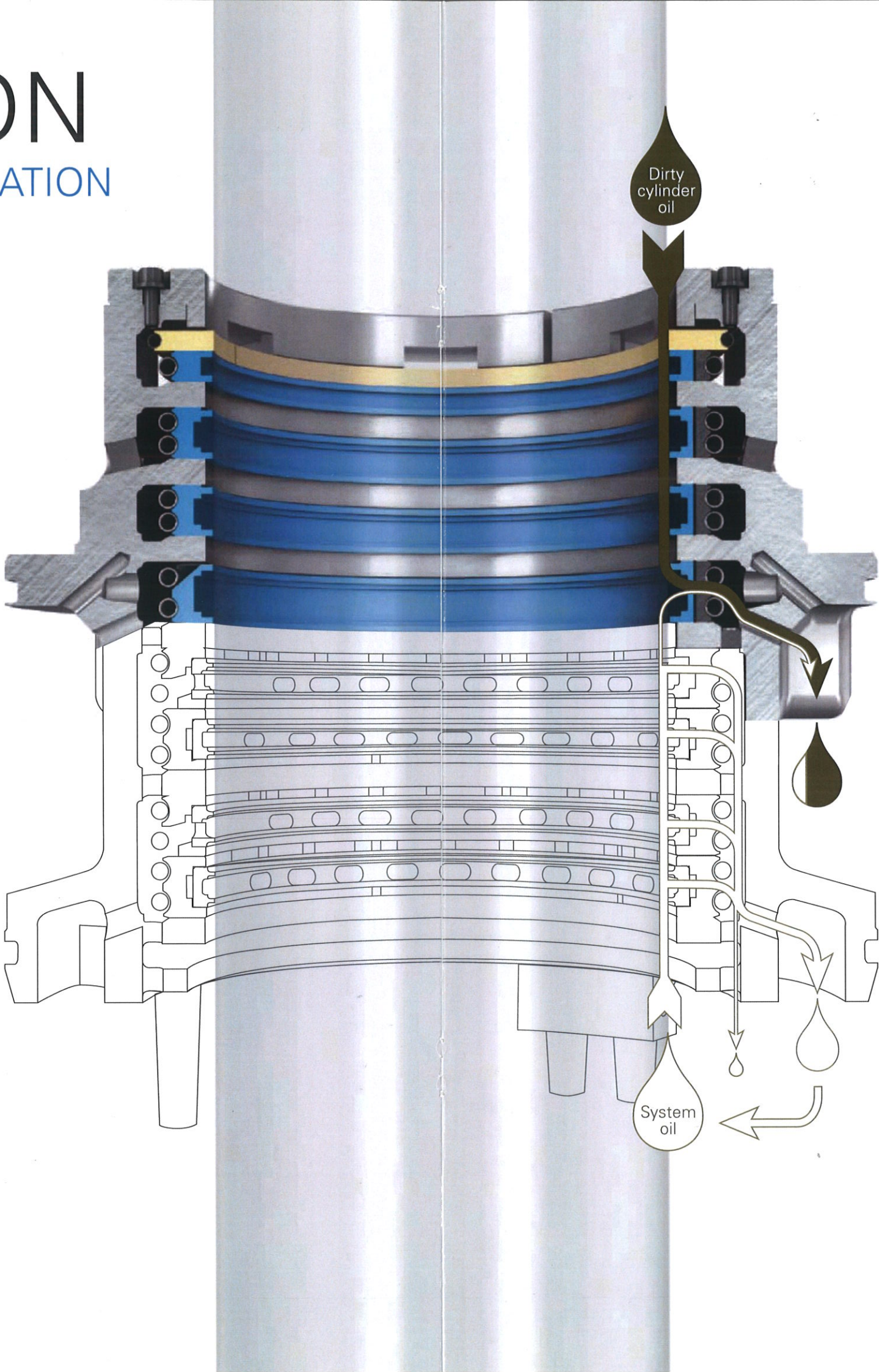
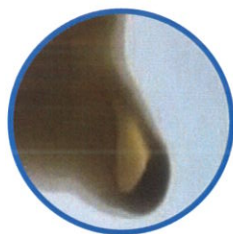
LESS LUBOIL CONTAMINATION

MINIMAL
CONTAMINATION
WITH HERSS®
SEALING SYSTEM

CONTAMINATED
LUBE OIL WITH USE
OF OEM RINGS



USED, BUT CLEAN
LUBE OIL
WITH HERSS®



HERSS® POLYMER GAS-TIGHT SINGLE PIECE
SCRAPER AND SEAL RINGS REDUCE SYSTEM
OIL CONTAMINATION.

Flexible, gas-tight seal and scraper rings create an
efficient barrier between the scavenge space and
crank case. The leak oil is forced into the neutral
space by our unique scraper seal.

ADVANTAGES:

- Overlapped ring joints (gas-tight)
- Flexible rings adapt to worn and oval piston rods
of up to 2 mm



IMPROVE THE EFFICIENCY OF YOUR PISTON ROD STUFFING BOX.

Piston rod stuffing boxes are the key parts of every 2-stroke engine. However, thousands of dollars are lost through contamination and high consumption of system oil, caused primarily by inefficient scrapers and seals.

Traditional metal rings allow cylinder oil, combustion products and carbon residues to enter the crankcase and system oil to be carried up into the scavenging air space. These contaminants negatively affect a lubricant's BN and viscosity, and reduce heat transfer in engine parts, such as bearings, crossheads and piston crowns.

Cylinder oil and combustion residues carried down into the sump are the worst enemies of system oil. As a result, the indication section is an extremely important part of every stuffing box: it is designed to create a barrier between the scavenge space and the crank case, and to attract attention in the event of a malfunction of the scrapers and/or the seal rings. The efficiency of the indication section depends largely on the design and material of the ring.

A5P OIL SCRAPER

Advanced 5-piece scraper for improved scraping efficiency even on worn piston rods.

Consists of:

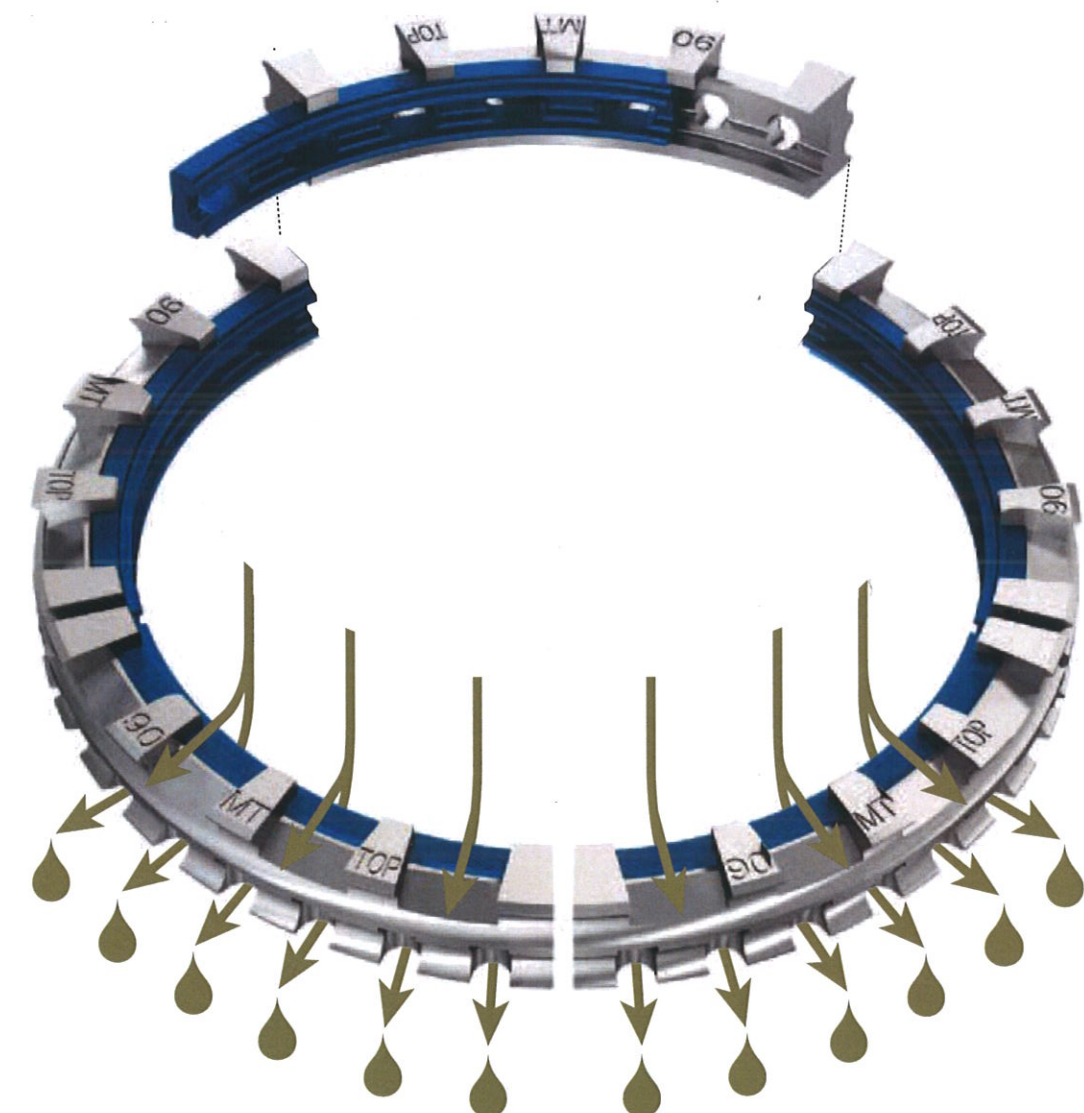
ONE 5-PIECE RETAINER

Reusable, made of cast iron

ONE 5-PIECE SCRAPER INSERT

Replaceable wear part, made of high performance polymer with special lubricants for low friction coefficient. Material is designed to run lubricated or oil-free.

- Easy to fit
- Scraper insert cannot be installed upside down





MODERN STUFFING BOXES MUST MEET THE FOLLOWING CRITERIA:

- Reliable separation of dirty cylinder oil from clean crank case oil
- Minimal wear on piston rods
- Low consumption of system oil
- High scraping efficiency on worn rods
- Safe performance in the event of scavenge fires
- Seal rings to prevent leakage of scavenge air into crank case
- Separate drain line and easy access for each stuffing box

The first signs of high system oil consumption are usually observed during the annual bunkering statistics. On average, there is a loss of system oil of 140 – 400 l/day, depending on the engine size and condition of the piston rods.

REASON FOR HIGH SYSTEM OIL CONSUMPTION:

Experience has shown that most system oil is lost via the stuffing box – it bypasses the stuffing box seals and is dragged up into scavenge space.

GAS-TIGHT SINGLE PIECE SEAL AND SCRAPER-SEAL RINGS.

Advanced single piece seal and scraper-seal rings with overlapped ring joints (gas-tight) for improved sealing efficiency even on worn and oval piston rods of up to 2 mm.

The use of modern polymer materials ensures the flexibility of the seals and creates an efficient barrier between the scavenge space and crank case. The leak oil is forced into the neutral space, where it can be collected.

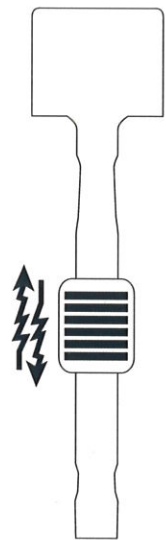


PROTECTION

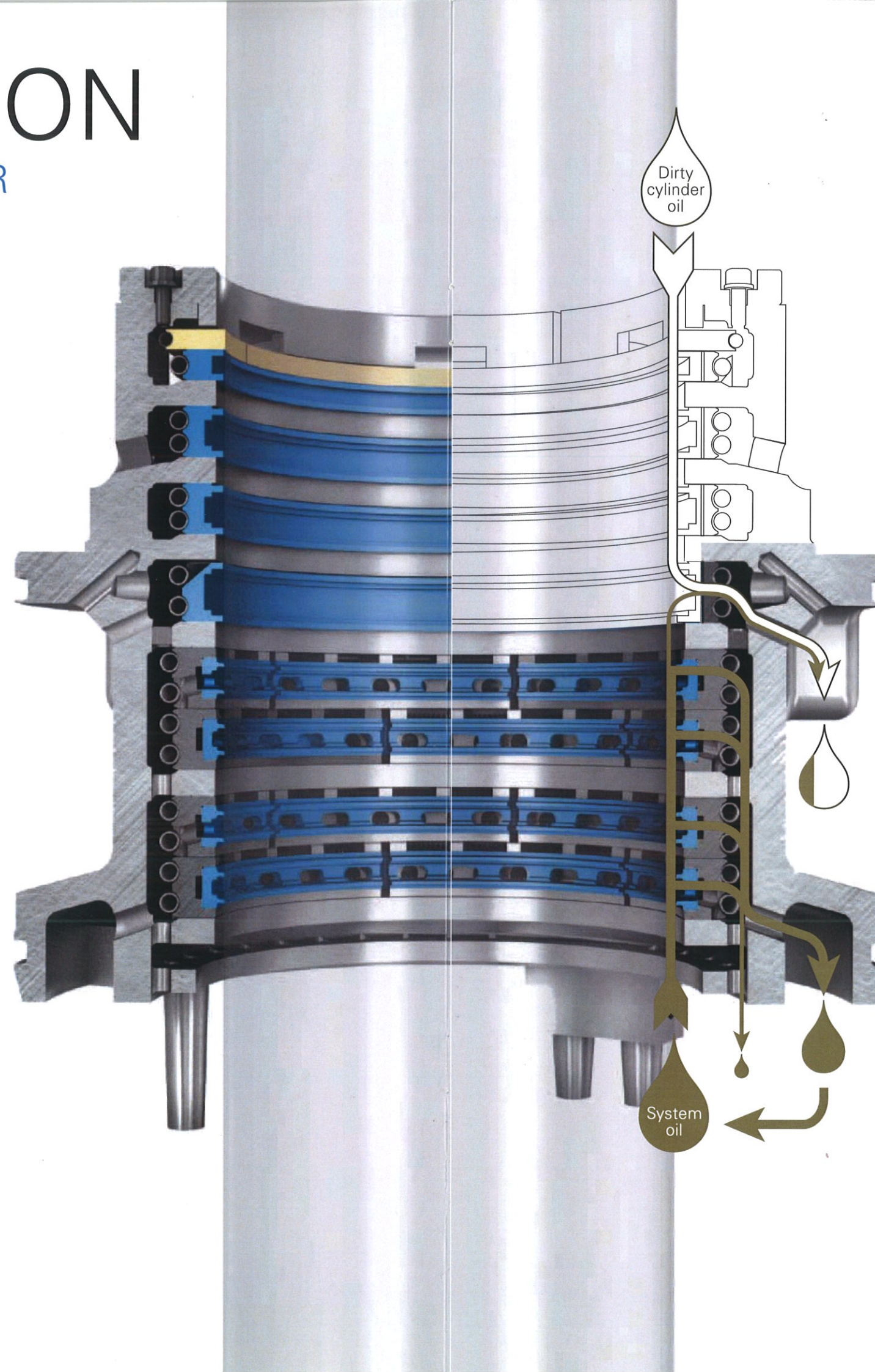
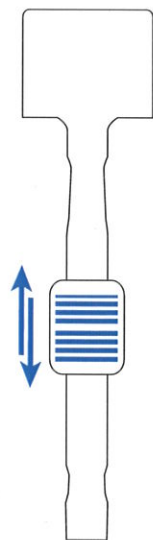
LESS PISTON ROD WEAR

MINIMAL WEAR WITH HERSS® SEALING SYSTEM

HIGH FRICTION
WITH OEM RINGS



LOW FRICTION
WITH HERSS®



HERSS® POLYMER A5P OIL SCRAPER REDUCES SYSTEM OIL CONSUMPTION

High performance, multi-segmented A5P scraper combined with a polymer scraper insert efficiently scrapes system oil from the running surface.

ADVANTAGES OF THE 5-PIECE POLYMER SCRAPER INSERT:

- Greater conformability than 3 or 4 piece metal scrapers
- High scraping efficiency
- Lower leakage of system oil even when fitted to worn rods

SAVINGS

LESS LUBOIL CONSUMPTION

WITH THE HERSS®
POLYMER STUFFING
BOX SYSTEM, YOU
CAN SAVE UP TO
USD 400/DAY IN OIL
COSTS

DAILY CONSUMPTION
WITH OEM

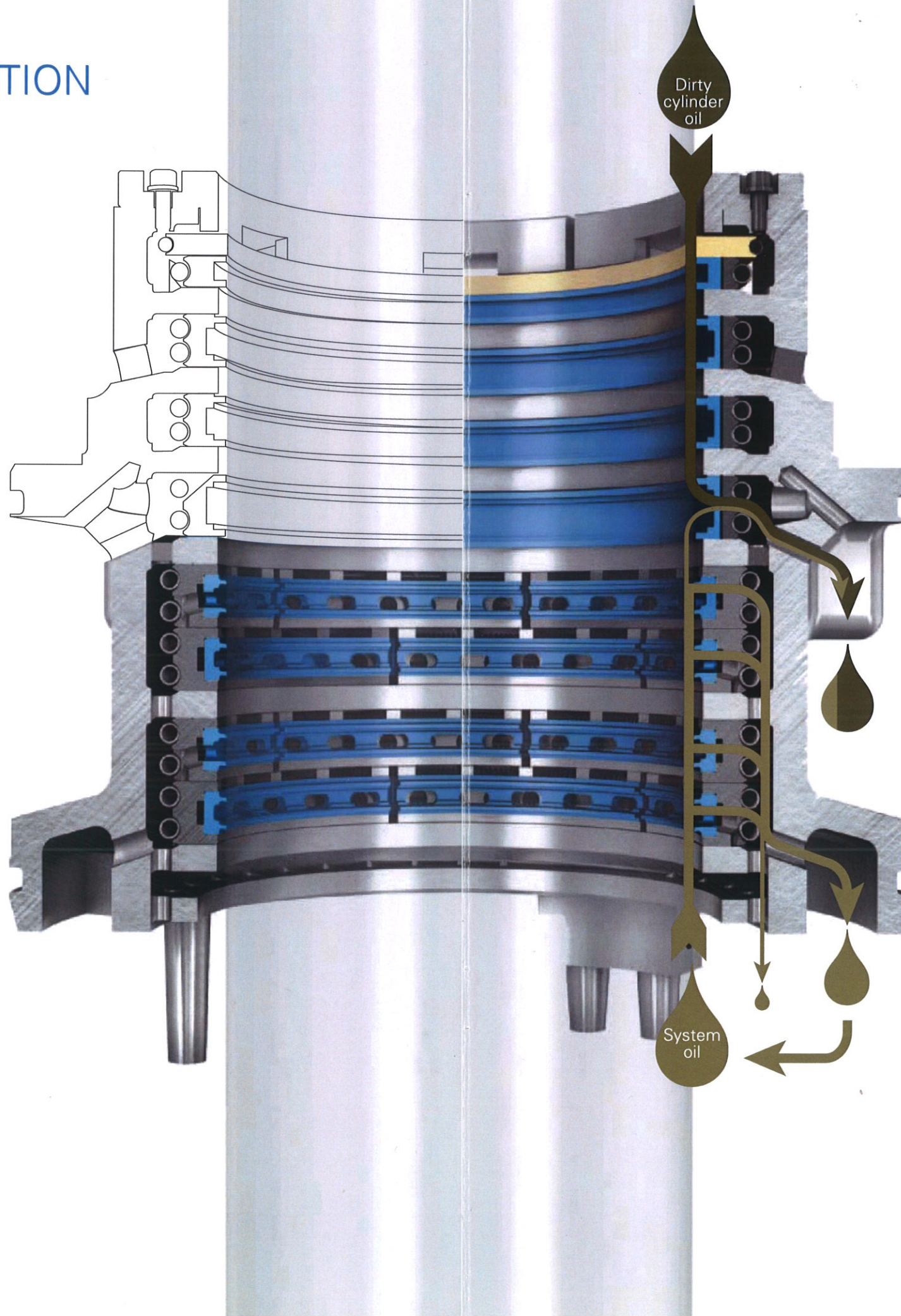


300 LITERS DAILY

REDUCED
CONSUMPTION
WITH HERSS®



100 LITRES DAILY



MODERN POLYMER MATERIALS

These days, modern materials with solid lubricants are replacing the more traditional metals in all kind of sealing applications, due to the following advantages:

- No lubrication required
- High strength and load carrying ability
- Low friction coefficient
- Good dimensional stability
- Long life

MATERIAL PROPERTIES

Solid lubricant fillers produce an impressive spectrum of mechanical and tribological properties, combining outstanding performance with considerable design freedom.

Polymeric-reinforced PTFEs exhibit low wear rates even in non-lubricated applications. Depending on the added fillers, many of these materials are non-abrasive and are recommended for use with soft surfaces.

The addition of MOS_2 increases hardness and lowers wear rate and friction coefficient.

Bronze-filled PTFE has good creeping resistance and excellent bearing properties. The bronze content increases thermal conductivity, which in turn allows higher running velocities.

With PEEK as the base resin, mechanical properties are retained even in the range of 260°C / 550°F operating temperature, making it highly suitable for high temperature applications. Bearing grade materials are obtained by a compound of carbon, carbon fibers, graphite, PTFE, etc. with PEEK.

HERSS® HIGH EFFICIENCY PISTON ROD SEALING AND SCRAPING SYSTEM

- Highly efficient cost-effective piston rod sealing system for marine and stationary diesel engines
- Unique non-metallic sealing system, approved by Lloyd's Register, London
- All components designed for easy installation
- Parts in stock for MAN B&W, SULZER and MITSUBISHI 2-stroke engines

ADVANTAGES:

- Reduction in oil consumption due to better sealing and scraping performance
- Longer life-cycle of the system oil due to efficient barrier between scavenge space and crankcase
- Use of high-end polymer materials with solid lubricant ensure minimal piston rod wear
- Short investment pay-back period
- No modification to stuffing box housing

SERVICES:

- Trouble shooting
- Technical support on board ships
- Worldwide supply of spare parts
- Deliveries from stock
- Tailor-made solutions to specific problems
- Vast experience in design and manufacture of sealing components for diesel engines, compressors, pumps and blowers

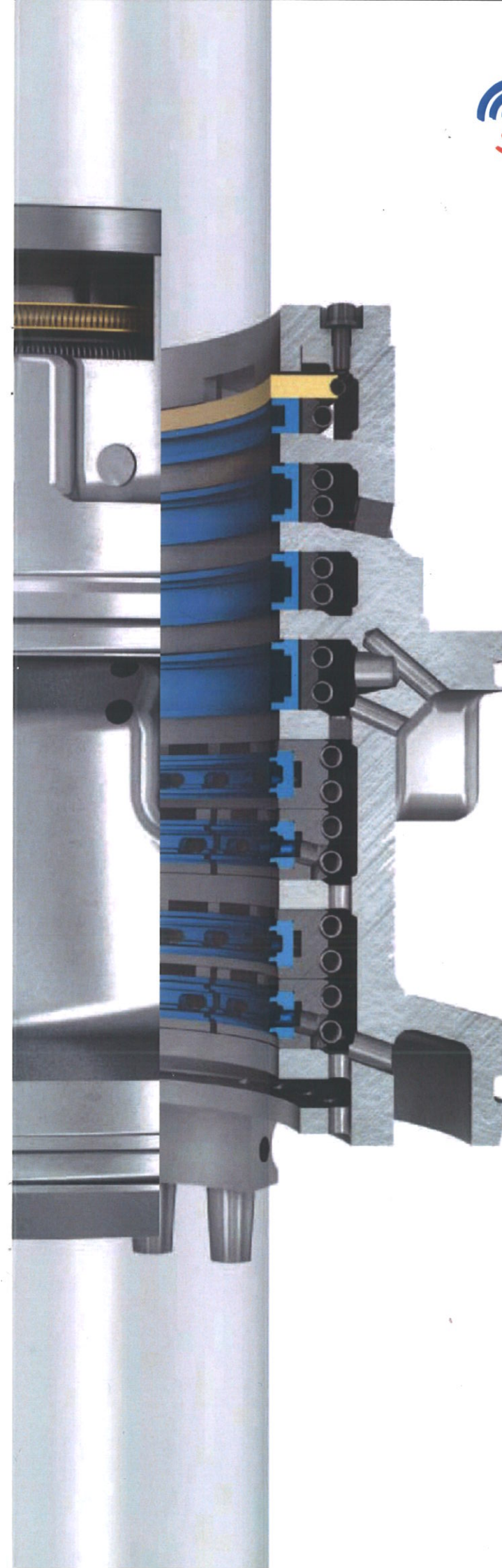
Swiss services and technology – a worldwide reputation

MT SEALING TECHNOLOGY WAS FOUNDED IN 1988 AND BECAME WELL KNOWN AS AN INNOVATIVE DESIGNER AND MANUFACTURER OF SEALING COMPONENTS FOR SLOW-SPEED DIESEL ENGINES AND COMPRESSORS.

In 2008, it merged with Burckhardt Components, part of Burckhardt Compression, a global market leader in reciprocating compressors and the only manufacturer to cover a complete range of reciprocating compressor technologies.



BURCKHARDT COMPONENTS AG
MT Sealing Technology
Im Link 11 / P.O. Box 3068
CH-8404 Winterthur / Switzerland
Tel.: +41 52 262 81 00
Fax: +41 52 262 81 99
www.burckhardtcompression.com



MT HERSS®
HIGH EFFICIENCY
PISTON ROD
SEALING AND
SCRAPING SYSTEM

Swiss sealing technology – perfection