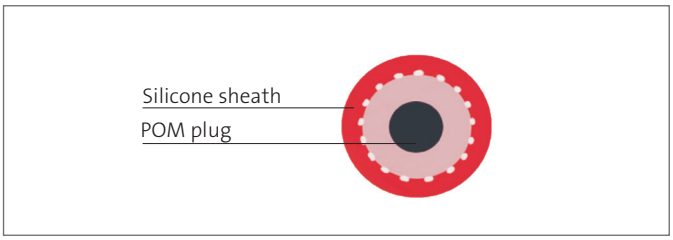
MERKEL VOCOMATIC

Merkel Vocomatic is a storage element for the compensation of drag oil within rod sealing systems.
Patented under AK 05019423.2



Applications
The Merkel Vocomatic is an ideal completion of the Omegat pressure-relief sealing system OMS-MR PR or OMS-S PR. Particularly with regard to newly designed long-stroke cylinders above 1.000 mm working stroke. Even 6.000 mm stroke-length and more can be realized without any external oil recovery system.
In addition, the Merkel Vocomatic is highly recommended in applications with unfavorable parameters like varying inward and outward movement of the rod respectively high stroke speeds in general.
Easy integration in sealing systems also applies for retrofitting.

Material

Material	Code
Silicone/POM	70 VMQ 10801/PO 202

VALUES FOR THE CUSTOMER

- Easy integration in sealing systems
- Eliminates a cost-intensive, external oil recovery system
- Offers an ideal pressure range for the secondary seal
- Assures low friction, minimum of heat build-up and wear & tear of secondary seal
- Avoids stick-slip due to drawn-out secondary seal
- Supports the pressure relief function of the Omegat primary seal
- Increases operational safety
- Stands for a stable long-term behaviour and extended service intervals

TECHNICAL PROPERTIES

Operating Conditions

Media	Temperature Range
Hydraulic oils HL, HLP	–30 ... +100 °C
HFA fluids	+5 ... +60 °C
HFB fluids	+5 ... +60 °C
HFC fluids	–30 ... +60 °C
HFD fluids	–
Water	+5 ... +100 °C
HETG (rapeseed oil)	–30 ... +80 °C
HEES (synthetic ester)	–30 ... +80 °C
HEPG (glycol)	–30 ... +60 °C
Mineral greases	–30 ... +100 °C

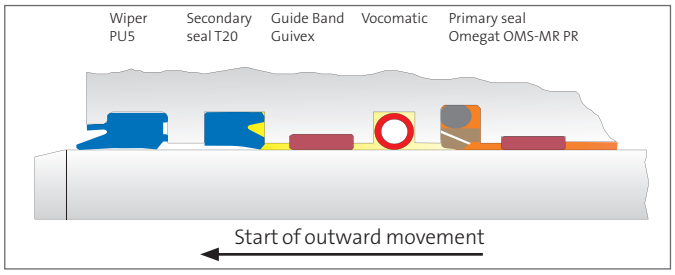
Surface Finish

Peak-to-valley Heights	R_a	R_{max}
Groove base	<1,6 µm	<6,3 µm
Groove sides	<3,0 µm	<15,0 µm

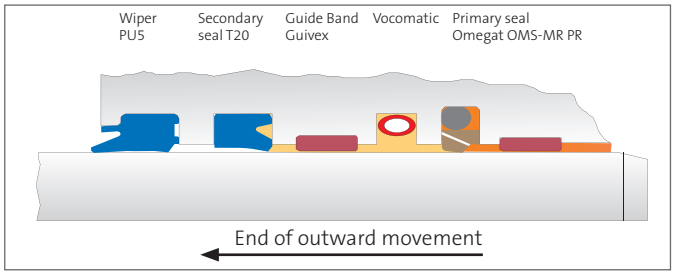
Tolerances

Diameter [mm]	Tolerance
<360	H11

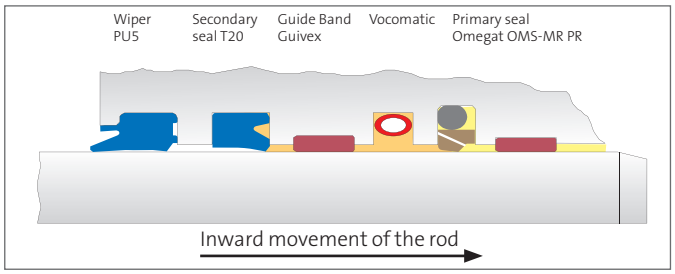
Functional Description



The primary seal covers the sealing function completely. The Merkel Vocomatic is relaxed.



The Merkel Vocomatic has completely absorbed the volume of the drag oil. The pressure in the inter-space remains low compared to the pressure in the working area of the cylinder. The secondary seal is slightly activated only.



The pressure relief bore in the Merkel Omegat primary seal enables a flow of the drag oil back into the working area of the cylinder. This flow is supported by the restoring force of the compressed Vocomatic.

GLAND DESIGN

Installation Diagram