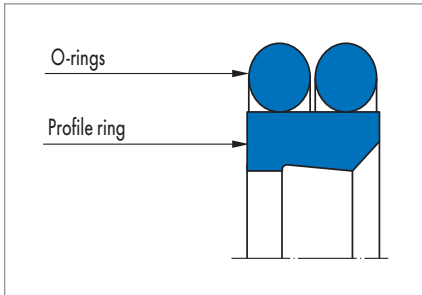


Merkel Double Wiper PT 1



Product description

Merkel Double Wiper PT 1 consisting of one profile ring made of PTFE with a sealing edge and a wiper edge, as well as two O-rings as sealing and pre-load components.

Product advantages

Double wiper for improvement of total tightness. Merkel Double Wiper PT 1 is preferably fitted in combination with our rod seals Merkel Omegat OMS-MR, Merkel Compact Seal T 20 or Merkel U-Ring LF 300

- Low friction, free of stick-slip
- Excellent regulation and positioning in operation
- Material variants for short stroke and high frequency; available on enquiry
- High reliability, can accept the full operating pressure for short periods.

We recommend a pressure relieving bore. With buffer seals with good deformation value, pressure relief is not necessary. In any case, on the combination of seals without sufficient deformation value, e.g. Merkel Compact Seal NI 300, KI 310 and KI 320, a pressure relieving bore is required.

Application

- Industrial vehicles
- Large cylinders
- Handling equipment
- Agricultural machinery
- Presses
- Injection moulding machines
- Control and regulation equipment
- Rolling mills

Material

Profile ring

Material	Code	Hardness
PTFE bronze compound	PTFE B602	-
PTFE glass/MoS ₂ - compound	PTFE GM201	-

O-ring

Material	Code	Hardness
Nitrile rubber NBR	NBR	70 Shore A
Fluoro rubber	FKM	70 Shore A

Operating conditions

Running speed v	5 m/s
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Medium/ Temperature	PTFE B602/NBR	PTFE GM201/NBR
Hydraulic oils HL, HLP	-30 °C ... +100 °C	-30 °C ... +100 °C
HFA fluids	-	+5 °C ... +60 °C
HFB fluids	-	+5 °C ... +60 °C
HFC fluids	-	-30 °C ... +60 °C
HFD fluids	-	-
Water	-	+5 °C ... +100 °C
HETG (rapeseed oil)	-30 °C ... +80 °C	-30 °C ... +80 °C
HEES (synthetic ester)	-30 °C ... +80 °C	-30 °C ... +60 °C
HEPG (glycol)	-30 °C ... +60 °C	-30 °C ... +60 °C
Mineral greases	-30 °C ... +100 °C	-30 °C ... +100 °C

Medium/ Temperature	PTFE GM201/FKM	PTFE B602/FKM
Hydraulic oils HL, HLP	-10 °C ... +150 °C	-10 °C ... +200 °C
HFA fluids	+5 °C ... +60 °C	-
HFB fluids	+5 °C ... +60 °C	-
HFC fluids	-10 °C ... +40 °C	-
HFD fluids	-10 °C ... +150 °C	-10 °C ... +20 °C
Water	+5 °C ... +100 °C	-
HETG (rapeseed oil)	-10 °C ... +80 °C	-10 °C ... +80 °C
HEES (synthetic ester)	-10 °C ... +100 °C	-10 °C ... +100 °C
HEPG (glycol)	-10 °C ... +80 °C	-10 °C ... +80 °C
Mineral greases	-10 °C ... +150 °C	-10 °C ... +200 °C

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Design notes

Please observe our general design notes in → Technical Manual.

Surface quality

Peak-to-valley heights	R_a	R_{max}
Sliding surface	* μm	* μm
Groove base	$\leq 1,6 \mu\text{m}$	$\leq 6,3 \mu\text{m}$
Groove flanks	$\leq 3,0 \mu\text{m}$	$\leq 15,0 \mu\text{m}$

* Surface roughness of the sliding surface to suit the sealing component used.

Tolerances

Nominal $\varnothing d$	D	D_1
20 ... 800 mm	H9	H10

The tolerance for the $\varnothing d$ is defined by the buffer seal.

Fitting & installation

Careful fitting is a prerequisite for the correct function of the Merkel Double Wiper PT 1. Generally, wipers can be quickly and easily fitted by deforming into a kidney shape. → Technical Manual.

Lead-in chamfers

Length and angle are to be designed to suit the rod seal used.