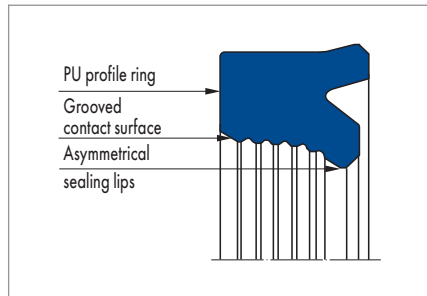


# MERKEL U-RING LF 300



## PRODUCT DESCRIPTION

Merkel U-ring with asymmetrical profile, inner lip set back, grooved contact surface on the inside diameter as well as press fit at the outside diameter.

## PRODUCT ADVANTAGES

Single-acting rod seal for standardised housings, amongst others, according to ISO 5597.

- Very good static and dynamic tightness
- Low friction, smooth movement even at low running speeds, dynamic deformation value
- Use as an individual seal or secondary seal in sealing systems possible

## APPLICATION

- Earth moving equipment
- Industrial vehicles
- Loading platforms
- Agricultural machinery
- Cranes
- Injection moulding machines

## MATERIAL

Material	Code	Hardness
Polyurethane	92 AU 21100	92 Shore A
Polyurethane	94 AU 925	94 Shore A

## OPERATING CONDITIONS

Pressure p	32 MPa
Running speed v	0,6 m/s

Medium/ Temperature	92 AU 21100	94 AU 925
Hydraulic oils HL, HLP	-40 °C ... +100 °C	-30 °C ... +110 °C
HFA fluids	+5 °C ... +50 °C	+5 °C ... +50 °C
HFB fluids	+5 °C ... +50 °C	+5 °C ... +50 °C
HFC fluids	-40 °C ... +40 °C	-30 °C ... +40 °C
HFD fluids	-	-
Water	+5 °C ... +40 °C	+5 °C ... +40 °C
HETG (rapeseed oil)	+40 °C ... +60 °C	-30 °C ... +60 °C
HEES (synthetic ester)	-40 °C ... +80 °C	-30 °C ... +60 °C
HEPG (glycol)	-40 °C ... +40 °C	-30 °C ... +40 °C
Mineral greases	-40 °C ... +100 °C	-30 °C ... +110 °C

## DESIGN NOTES

Please observe our general design notes in → Technical Manual.

### Surface quality

Peak-to-valley heights	$R_a$	$R_{max}$
Sliding surface	0,05 ... 0,3 $\mu\text{m}$	$\leq 2,5 \mu\text{m}$
Groove base	$\leq 1,6 \mu\text{m}$	$\leq 6,3 \mu\text{m}$
Groove flanks	$\leq 3,0 \mu\text{m}$	$\leq 15,0 \mu\text{m}$

Percentage contact area  $M_r$  >50% to max. 90% at cutting depth  $c = R_z/2$  and reference line  $C_{ref} = 0\%$ .

### Admissible gap dimension

The decisive factor for the function of the seal is the largest gap dimension occurring during operation on the non-pressurised side of the seal. → Technical Manual.

Profile dimension	16 MPa	26 MPa	32 MPa
>4,0 mm ... $\leq 5,0$ mm	0,50 mm	0,40 mm	0,35 mm
>5,0 mm ... $\leq 7,5$ mm	0,55 mm	0,45 mm	0,40 mm

### Tolerances

The admissible gap width, tolerances, guide play and deflection of the guide under load are to be taken into account when designing D2. → Technical Manual.

Nominal $\varnothing d$	D	d
$\leq 180$ mm	H11	f8

## FITTING & INSTALLATION

Careful fitting is a prerequisite for the correct function of the seal. → Technical Manual.