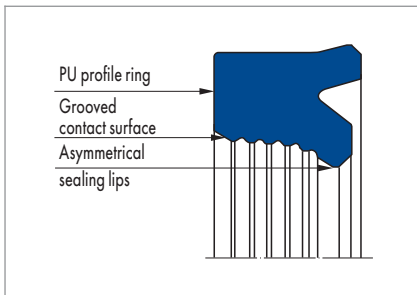


MERKEL U-RING LF 300



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 21 100 | 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 21 100 | 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 µm | ≤2,5 µm |
| Groove base | ≤1,6 µm | ≤6,3 µm |
| Groove flanks | ≤3,0 µm | ≤15,0 µm |

Percentage contact area M, >50% to max. 90% at cutting depth c = Rz/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 ... ≤5,0 mm | 0,50 mm | 0,40 mm | 0,35 mm |
| >5,0 mm ... ≤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 Ø d | D | d |
|-------------|-----|----|
| ≤180 mm | H11 | f8 |

FITTING & INSTALLATION

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