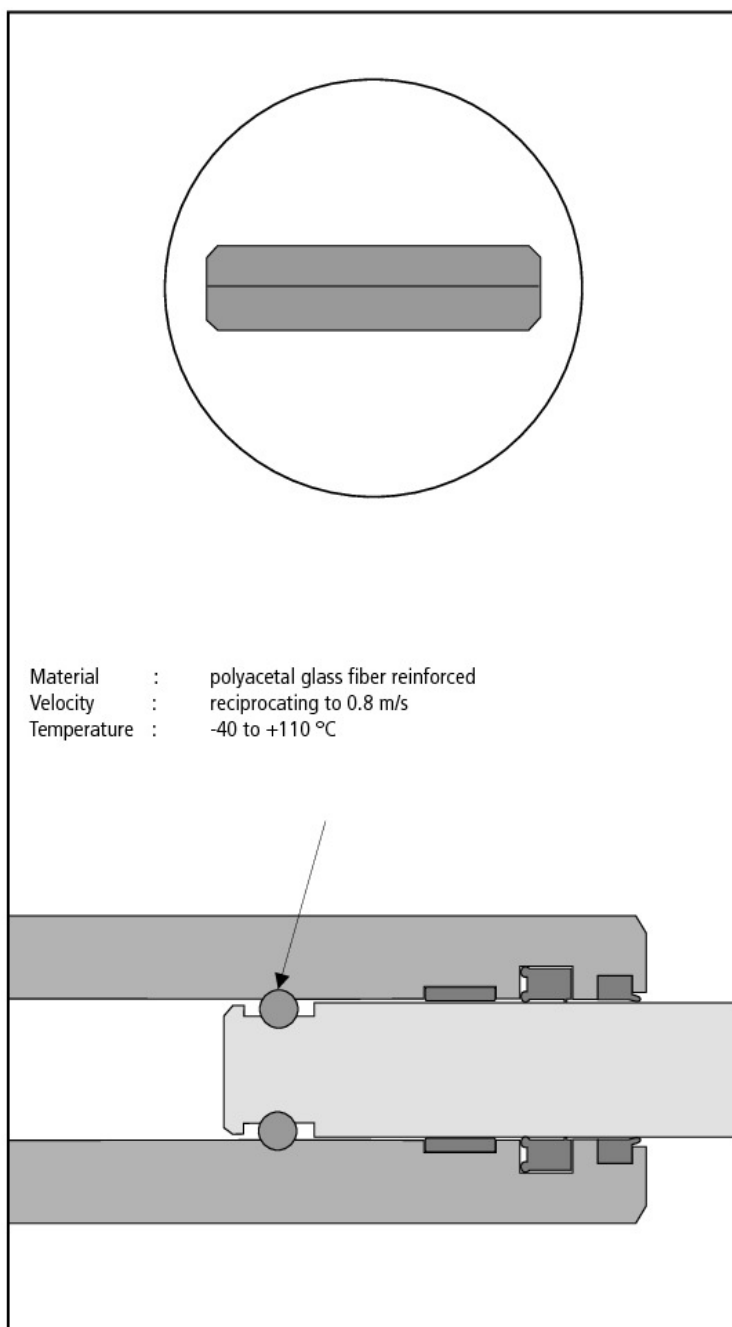
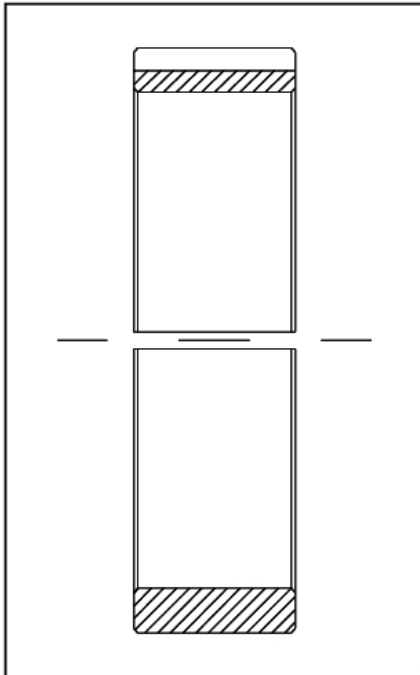


Slide ring HF 455 is ideally suited for so called plunger cylinders.

Special Features:

- Highly wear resistant material from glass reinforced polyacetal
- Easy snap-on assembly through slanted slotting
- Smooth flow-over of hydraulic medium through multiple channels is guaranteed
- Special sizes possible.





Slide Ring

Slide ring has a rectangular cross-section and multiple oil grooves on the dynamic surface to simplify the return flow of the pressure medium. All edges are chamfered to avoid build up of edge pressure and simplify assembly.

Slide rings are fundamentally produced as preformed rings.

Materials Overview

Fiber glass reinforced polyacetal excels in wear resistance and high load bearing capacity over the entire temperature range of application. Good media compatibility and low frictional coefficient of the material make it suitable for both hydraulics and pneumatics.

Material Data

Max. compression strength static	[N/mm ²]	40
Max. compression strength dynamic	[N/mm ²]	20

Calculation

Designing and sizing of slide ring for dynamic application is dependent to a large extent on the radial force and the associated deformation of slide ring, slide gap and service temperature. The value of the dynamic compression strength is to be considered, taking the above factors into account. In practise, it is advantageous to include a factor of safety.

The approximate width of slide which is necessary can be calculated in accordance with the following formula:

$$B_{min} \geq \frac{F_R \cdot S}{\sigma_{zul.dyn} \cdot D_n} [mm]$$

Where:

B_{min} = min. width of slide ring [mm]

F_R = max. radial load [N]

$\sigma_{zul.dyn}$ = permissible dynamic compression strength [N/mm²]

S = safety factor

Example:

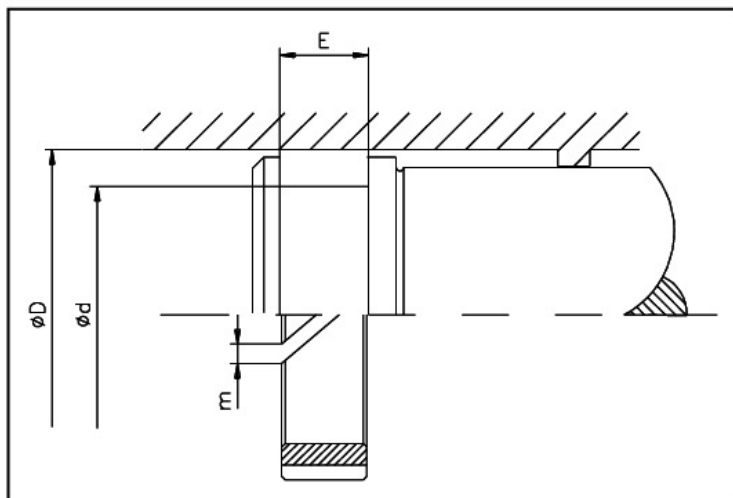
$$B_{min} \geq \frac{5000 \cdot 2}{20 \cdot 63} \approx 8,3$$

Piston diameter $D_n = 63$ mm

Max. radial load $F_R = 4$ kN

dyn. compress. strength $\sigma_{zul.dyn} = 15$ N/mm²

Safety factor $S = 2$



Limitations on Use

Velocity	: reciprocating to 0.8 m/s
Temperature	: -40 to +110 °C
Compress. strength, dyn.	: up to 20 N/mm ²
Compress. strength, stat.	: up to 40 N/mm ²

Media for Use

Mineral oil based pressure fluids, flame resistant fluids (HFA, HFB, HFC), non-polluting pressure fluids (Bio Oils), water, air etc.

Surface Finish

Surfaces	Rz	Ra
Faces	4,0 µm	0,8 µm
Groove root	10,0 µm	3,2 µm
Groove flanks	10,0 µm	3,2 µm

D H9	d h9	E +0,2	m	Part N°.
30,00	20,00	12,00	2,00	HF455 0300-01-520
35,00	25,00	12,00	2,00	HF455 0350-01-520
40,00	30,00	12,00	2,00	HF455 0400-01-520
45,00	35,00	12,00	2,00	HF455 0450-01-520
55,00	45,00	15,00	2,00	HF455 0550-01-520
60,00	50,00	15,00	2,00	HF455 0600-01-520
60,00	51,00	12,00	2,00	HF455 0600-02-520
65,00	55,00	15,00	2,00	HF455 0650-01-520
65,00	56,00	12,00	2,00	HF455 0650-02-520
70,00	60,00	15,00	2,00	HF455 0700-01-520
75,00	65,00	15,00	2,00	HF455 0750-01-520
80,00	70,00	24,00	0,50	HF455 0800-01-520
85,00	76,00	15,00	2,00	HF455 0850-01-520

The series of dimensions is constantly being extended. Please enquire for additional informations.
Extensive range of inch measurement diagrams available on request.

Example for ordering:

HF 455 0600 - 01 - 520 - ...

Profile _____
 Nominal diameter x 10 _____
 Dimension variant _____
 Standard material _____
 HME internal code _____

Issue

01 05

WARNING: Limits of application stated herein are standard values. They could be individually transgressed with due consideration to respective service conditions. In the event of a large duty cycle, pulsating operation and other complex operational conditions, simultaneous transgression of these values is not recommended. Due to a large variety of service conditions that may arise in course of actual use, the company does not take responsibility of or guarantee the functional accuracy of the individual components. Rights for changes are reserved.