NEW PRODUCT

Sealing system Servoseal
for cover and piston.

The Servoseal is a dynamically sealing synthetic ring. The integrated retaining ring made of H-CFRP® prevents excessive pressure build-up on the sealing surface due to hydraulic pressure.

There is no wear at low amplitudes and no scoring on the counterface due to insufficient lubrication, which tends to be a problem with conventional seals.

+ Advantages for test actuator series 320

- Low-friction solution without leakage via the piston and in the cover
- Reduction of the volumetric flow rate compared to gap seals
- Allows for using smaller valve sizes and hydraulic components

+ Advantages for servo actuator series 120/300

- Can also be used with small amplitudes
- “Light” cylinders as an alternative to classic test actuators
- For testing tasks with longer strokes or pivoting motion

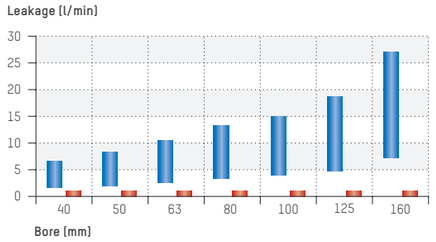
Convert power loss **into drive power.**

Details on these and other features can be found in our book “Hydraulic Systems”.

The Servoseal can be used for temperatures up to 80°C, rod from 25 mm to 100 mm and bore of 40 mm to 300 mm (depending on the series). The permitted speed for the Servoseal sealing system is 2 m/s for the cover type and 4 m/s for the piston type.

+ No leakage via the piston

The Servoseal at the piston provides a contact seal on both sides of the chamber. Compared to a gap seal, it provides for very low piston leakage.

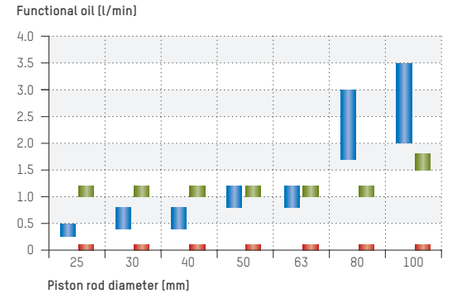


Rectangular compact seal, Servoseal

Gap seal
Reference values apply to 210 bar differential pressure at the piston, fluid ISO VG 46 at 55°C

+ No functional oil on the cover

Servoseal is a contacting sealing system. Contrary to no-contact systems, sealing takes place without functional oil flow.

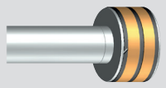
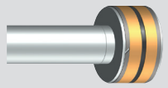
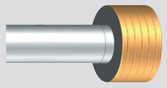


Servocop®, Servoseal

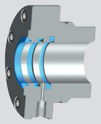
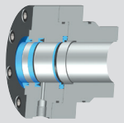
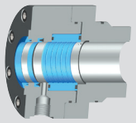
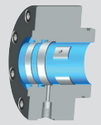
Servofloat®

Servobear®
Reference values apply to 210 bar chamber pressure [working pressure], for Servobear® 280 bar supply pressure [system pressure], fluid ISO VG 46 at 55°C

Features at a glance

SEALING SYSTEM PISTON TYPE	**Rectangular compact seal**	**Servoseal**	**Throttle gap** fitted piston
			
Leakage	none	minimal	1 to 40 l/min
Wear	present	minimal	none
Friction	pressure-dependent	minimal, pressure-independent	none
Amplitude	min. 6 mm	unlimited	unlimited

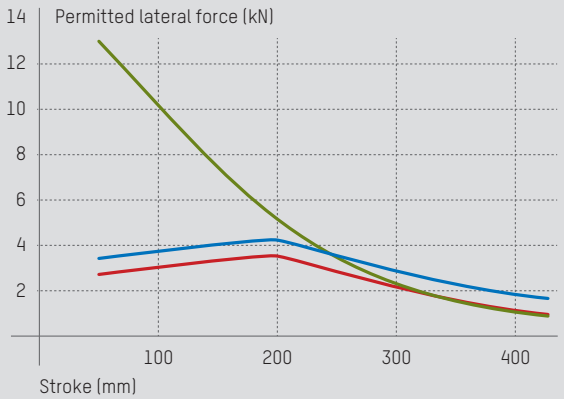
Features at a glance

SEALING SYSTEM COVER TYPE	**Servocop®** Compact seal, lip seal, wiper ring	**Servoseal** Servoseal, lip seal, wiper ring	**Servofloat®** Floating gap seal, functional oil seal, wiper ring	**Servobear®** Functional oil seal, wiper ring
				
Functional oil	none	minimal	0.5 to 10 l/min	1 to 5 l/min
Wear	present	minimal	none	none
Friction	pressure-dependent	minimal, pressure-independent	none	none
Amplitude	min. 6 mm	unlimited	unlimited	unlimited

SERVOSEAL FEATURES

+ Lateral forces

The amount of permitted lateral force is mainly determined by the rod diameter, the guiding system and the cylinder stroke. For cylinders with longer strokes, the selection of the sealing and guiding systems are of little consequence in regard to resistance to lateral forces.

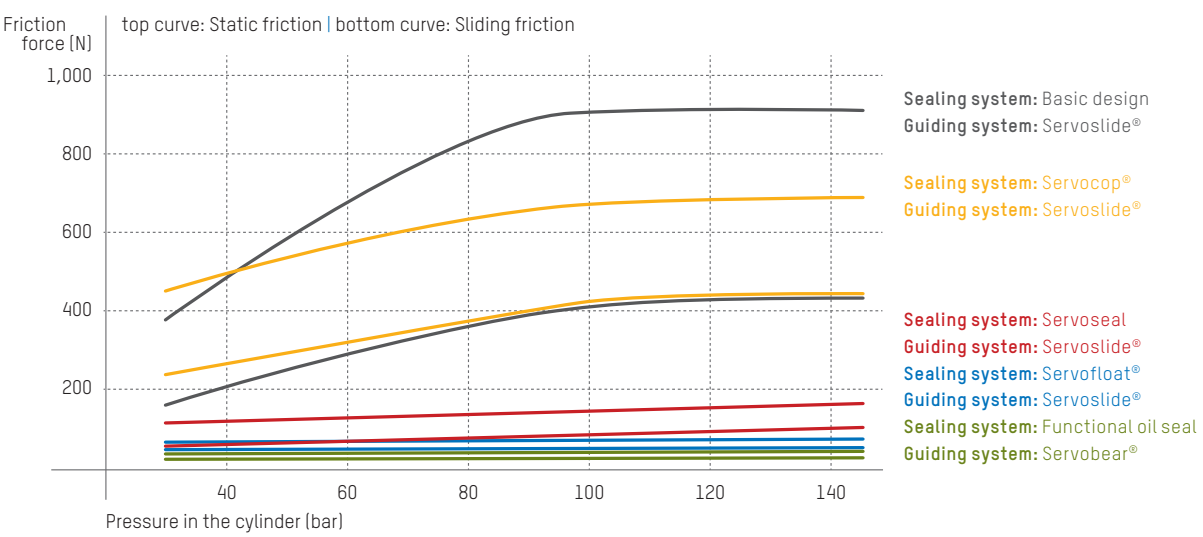


Servoseal — Servofloat® — Servobear®

Reference values apply to rod Ø of 63 mm at the middle of the stroke

+ Energy efficiency – Low friction and leakage

Using the H-CFRP® retaining ring prevents excessive hydraulic pressure of the seal on the counterface, meaning that the Servoseal sealing system has very low friction forces. As a result and due to the very low leakage, power loss is reduced to a minimum.



Values measured at the double-rod cylinder (seal less bore 46 mm, piston rod Ø 40 mm) in sine operation according to VDMA 24577 at 50° C/HLPD46. The friction force curves are at a lower level than is customary in the market.

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