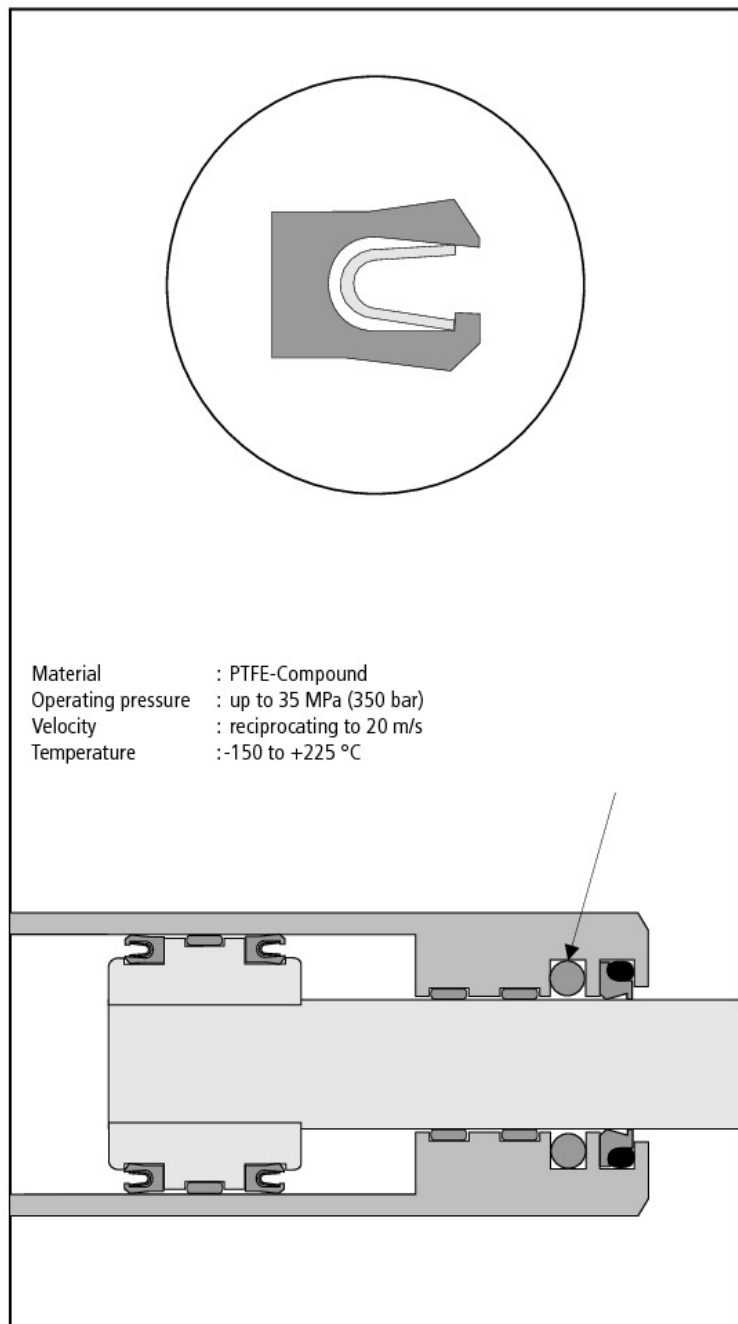


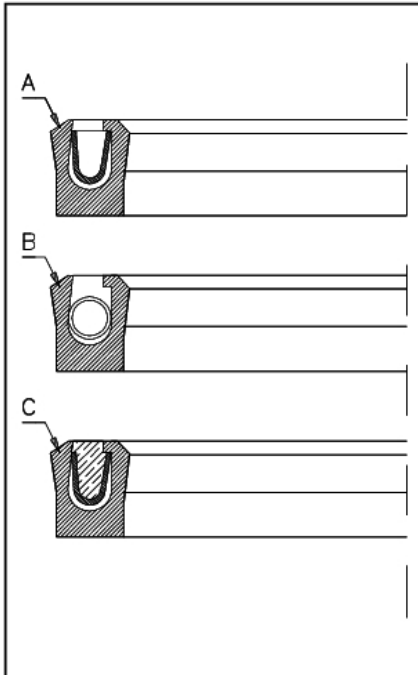
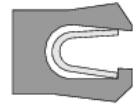
In applications where normal elastomer materials fail to be acceptable due to limited thermal and chemical resistance, Flexi seals provide a solution to the selection of seals.

Flexiseal HS 270 and HS 271 is a spring pre-stressed single acting rod seal. Different materials for profile gasket and spring widen the range of application to cover the chemical, pharmaceutical, foodstuffs and equipment constructing industries.

Special Features:

- High chemical resistance to most fluids, gases and other chemicals
- Very good shear characteristics, no stick-slip effect
- Low frictional values and good anti-galling behaviour
- Very wide temperature range
- Suitable to O-ring grooves as per DIN ISO 3771 and MIL-G-5514F
- Available for every rod diameter up to approx. 2500 mm.





Profile Gasket with Spring

The seal consists of a U-shaped profile gasket in which a metallic ring is incorporated as a pre-stressing element. To enhance sealing characteristics and service life, the (internal) dynamic sealing lip is designed as somewhat more robust than the (external) static sealing lip.

All profile gaskets are made from modified PTFE materials. The standard material for all applications is compound 31 in combination with a pre-stressing spring from stainless steel.

Materials Overview - Profile Gasket:

31: Modified PTFE + carbon fiber - Good chemical and thermal resistance. Used in intermediate-stress applications against hard surfaces. Also used in water-oil emulsions.

12: Modified PTFE - Very good chemical resistance, abrasion resistance, inherent stability, outstanding shear characteristics, special purpose and intermediate-stress applications.

67: Modified PTFE - High abrasion resistance, very good shear characteristics and inherent stability, high compressive strength, good chemical and thermal resistance, used in hydraulics and demanding applications. Other materials available on request.

Andere Werkstoffe werden auf Anfrage geliefert.

Spring Construction

0: Stainless steel for general applications (A).

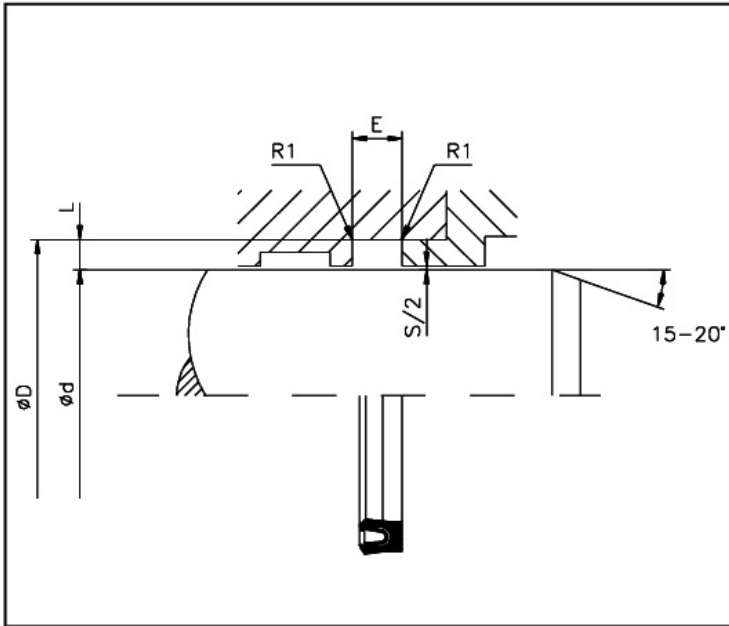
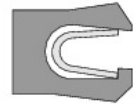
1: Stainless steel for aggressive media (B).

2: Stainless steel for general applications, but cast in silicon (C).

3: Stainless steel for aggressive media, but cast in silicon.

In types 2 and 3, the space around the spring is filled with silicon. Since the seals can be sterilized, they are preferentially used in the foodstuffs industry.

Flexiseal is often used instead of O-rings. In this case care must be taken to ensure that an open resp. undivided groove is available for ease and security of mounting.



Limitations on Use	
Operating pressure	: up to 35 MPa (350 bar)
Velocity	: reciprocating to 20 m/s
Temperature	: -150 to +255 °C

Media for Use	
Mineral and synthetic pressure fluids, water, air, steam, acids, caustic solutions, various chemicals, depending on sealing and spring material.	

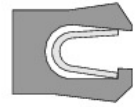
Surface Finish			
Surfaces	Rmax	Rz	Ra
Faces	2,5 μm	1,6 μm	0,4 μm
Groove root	10,0 μm	6,3 μm	1,6 μm
Groove flanks	16,0 μm	10,0 μm	3,2 μm

Tolerances	
Nominal diameter	d f8/h9
Groove root diameter	D H11
Groove width	E +0,2 -0

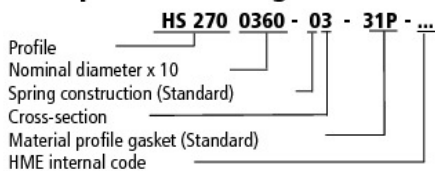
Recommended Sizes of Installation for HS 270 (O-Ring Grooves without Thrust Ring)						
Section	O-Ring Equivalent mm	Recommended Diameter Standard D mm	Groove Width E mm	Groove Depth L mm	Max. Diameter Clearance S mm	Radius R1 max. mm
1	1,78	4 - 9,9	2,40	1,45	0,13	0,4
2	2,62	10 - 19,9	3,60	2,25	0,13	0,4
3	3,53	20 - 39,9	4,80	3,10	0,15	0,6
4	5,33	40 - 119,9	7,10	4,70	0,17	0,8
5	7,00	120 - 700,0	9,50	6,10	0,25	0,8

Recommended Sizes of Installation for HS 271 (O-Ring Grooves with Thrust Ring)						
Section	O-Ring Equivalent mm	Recommended Diameter Standard D mm	Groove Width E mm	Groove Depth L mm	Max. Diameter Clearance S mm	Radius R1 max. mm
1	1,78	4 - 9,9	3,80	1,45	0,13	0,4
2	2,62	10 - 19,9	4,65	2,25	0,13	0,4
3	3,53	20 - 39,9	5,70	3,10	0,15	0,6
4	5,33	40 - 119,9	8,50	4,70	0,17	0,8
5	7,00	120 - 700,0	11,20	6,10	0,25	0,8

Further sizes available up to ϕ 2500 mm on request.



Example for ordering Rod Seal:



Material Key:

Profile Gasket:

31 - PTFE carbon
12 - modified PTFE
67 - modified PTFE

Spring construction:

0 - Standard
1 - for aggressive media
2 - standard silicon cast
3 - for aggressive media silicon cast

Issue

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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.