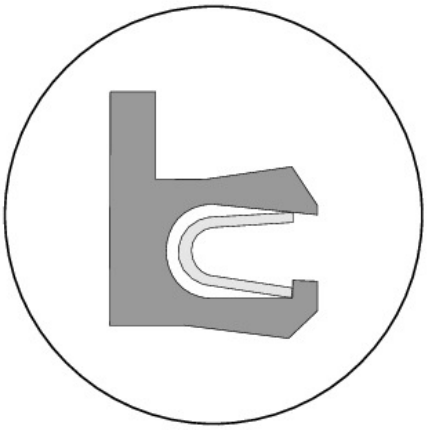
This is meant for applications where conventional elastomer seals cannot be used due to their limited thermal and chemical resistance. Here the HR 187 type offers an optimal solution to the sealing problem.

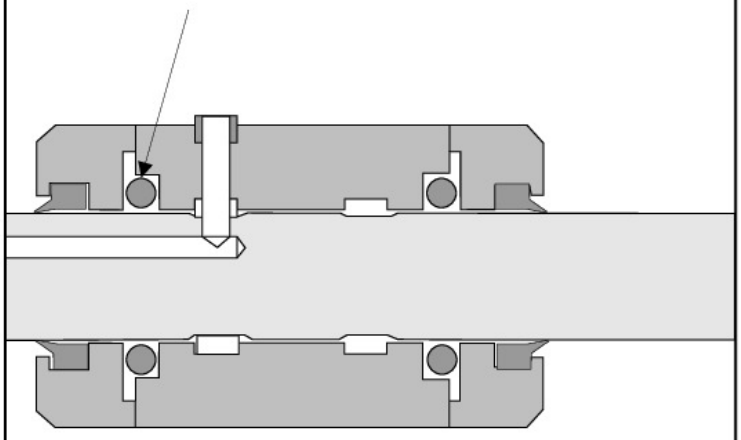
HR 187 is a single acting rotary seal with spring prestressing and collar for resistance to torsion. Different materials for profile gasket and spring make the range of applications as wide as chemicals, pharmaceuticals, foodstuffs and equipment constructin.

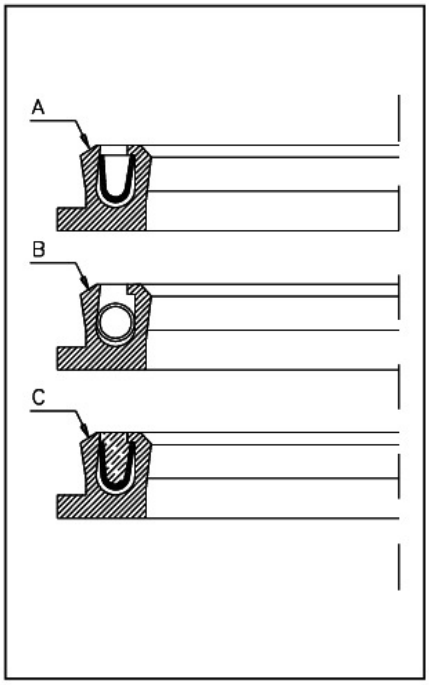
Special Features:

- High chemical resistance, and resistance to most fluid gases and other chemicals
- Very good shear characteristics, no stick slip effekt
- Low frictional values and good resistance to galling.
- Very wide temperature range of application
- Available for all shaft diameters up to 2500 mm



Material	: PTFE-Compound
Operational pressure	: up to 10 MPa (100 bar)
Velocity	: rotary to bis 4 m/s
Temperature	: -150 up to +225 °C





Profile Gasket with spring:

The seal consists of a U-shaped profile gasket in which a metallic ring is incorporated as a prestressing element. To enhance sealing characteristics and service life, the (internal) dynamic sealing lip is designed as somewhat more robust than the (external) static lip. The presence of a collar on the outer edge prevents the seal from rotating along with the shaft. A

All profile gaskets are made form modified PTFE materials. The standard material for all general purpose applications is Compound 31 in comination with a pre-stressing spring from stainless steel.

Material - overwiew: Profile gaskets

31: Modified PTFE and 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, can withstand a large range of temperatures special purpose light to medium stress applications.

67: Modified PTFE: Very high abrasion resistance, very good shear characteristics and inherent stability, high compressive strenght, good chemical and thermal resistance, used in very heavy duty applications.

Spring constructions:

0: Stainless Steel for general applications (A).

1: Stainless Steel for aggressive media (B).

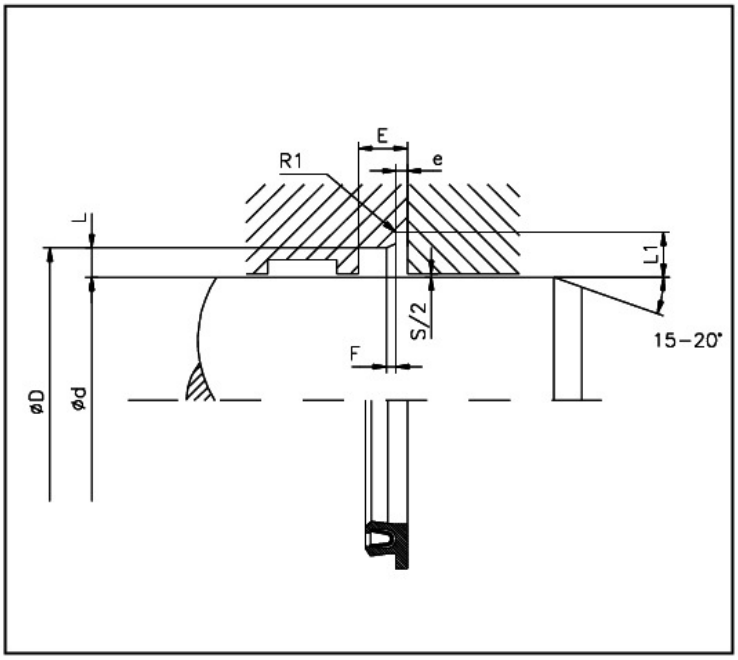
2: Stainless Steel for general applications, but cast in silicon (C).

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

In types 2 and 3, the space around the spring (spring groove or slot) is filled with silicon. Since the seals can be sterilized, they are preferentiallz used in the foodstuffs industry.

ROTATION SEALS

HR 187



Limitations of Use

Operational pressure	:	up to 10 MPa (100 bar)
Velocity	:	rotary to 4 m/s
Temperature	:	-150 up to +255 °C

Media for Use

Mineral based and synthetic pressure fluids, water, air, steam, acids and various chemicals depending on sealing and O-ring material

Surface Finish

Surface	Rmax	Rz	Ra
Faces	1,5 µm	0,8 µm	0,2 µm
Groove root	5,0 µm	3,2 µm	0,8 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

Preferred assembly dimensions

Section	O-Ring Äquivalent mm	Recommend Diameter Standard **D** mm	Groove Width **E** mm	Groove Depth **L** mm	Flange Width **e** mm	Flange Depth **L1** mm	Phase **F** mm	Max. Diameter Clearancel **S** mm	Radius **R1** max. mm
2	2,62	8 - 19,9	3,60	2,50 + 0,05	0,85 - 0,10	4,50 + 0,08	0,80	0,13	0,3
3	3,53	20 - 39,9	4,80	3,50 + 0,08	1,35 - 0,15	6,25 + 0,10	1,10	0,15	0,4
4	5,33	40 - 399,9	7,10	5,25 + 0,10	1,80 - 0,20	8,75 + 0,15	1,40	0,17	0,5
5	6,99	400 - 699,9	9,50	7,00 + 0,10	2,80 - 0,20	11,00 + 0,15	1,60	0,25	0,5

Futher and intermediate sizes upt to Ø 2500 mm available on request.

Example for ordering:

HR 187 0360 - 03 - 31P - ...

- HR 187 — Profile
- 0360 — Nominal diameter x 10
- 03 — spring design (Standard)
- Cross section
- 31P — Material profile gasket (Standard)
- ... — HME internal code

Material Key:

Profile gasket :
31 - PTFE carbon
12 - modifiziertes PTFE
67 - modifiziertes PTFE

spring construction:
0 - Standard
1 - for aggressive media
2 - Standard silicon cast
3 - for aggressive Medien silicon cast

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