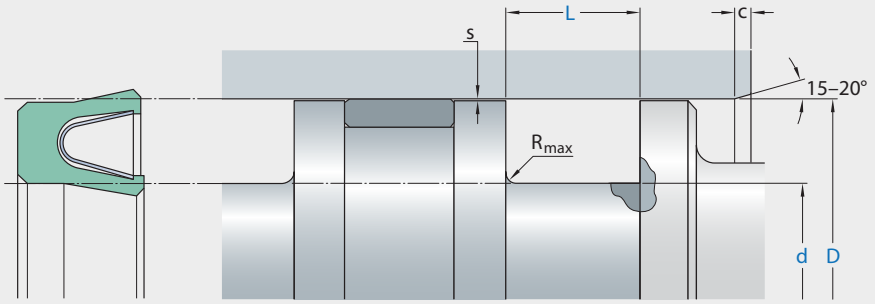
K19-F



Ordering dimensions in blue

Surface roughness	R_{tmax}	R_a
Sliding surface	≤ 2 µm	0,05–0,2 µm
Bottom of groove	≤ 6,3 µm	≤ 1,6 µm
Groove face	≤ 15 µm	≤ 3 µm

Bearing area: 50–95% and a cutting depth of 0,5 R_z based on C_{ref} = 0%

Standard dimensions D H9 over	incl.	d h10	L +0,2	R_{max}	c	Maximal radial extrusion gap s* 20 bar	100 bar	200 bar	300 bar	400 bar
mm						mm				
10	18	D – 4,5	3,6	0,3	1,13	0,25	0,12	0,10	0,08	0,07
18	50	D – 6,2	4,8	0,3	1,55	0,35	0,17	0,12	0,1	0,08
50	120	D – 9,4	7,1	0,3	2,35	0,45	0,22	0,17	0,12	0,1
120	630	D – 12,2	9,5	0,3	3,05	0,6	0,31	0,25	0,15	0,12
630	1 600	D – 19	15	0,3	4,75	0,87	0,48	0,38	0,28	0,2

* Extrusion gap values shown above are valid fora temperature of 80 °C, higher temperatures require lower values.

application

not bolded symbols; please consult our technical for application limitations

operating parameters & material

diameter range: up to 600 mm

material		temperature	max. surface speed	max. pressure [1]	hydrolysis	dry running	wear resistance
sealing element	spring						
Ecoflon 1	14.310	-200 °C ... +260 °C	15 m/s	100 bar (10 MPa)	++	++	+
Ecoflon 2	14.310	-200 °C ... +260 °C	15 m/s	160 bar (16 MPa)	++	++	+
Ecoflon 3	14.310	-200 °C ... +260 °C	15 m/s	160 bar (16 MPa)	++	++	+
Ecowear	14.310	-200 °C ... +260 °C	15 m/s	200 bar (20 MPa)	++	+	+

the stated operation conditions represent general indications. it is recommended not to use all maximum values simultaneously.
surface speed limits apply only to the presence of adequate lubrication film.

[1] pressure ratings are dependent on the size of the extrusion gap.

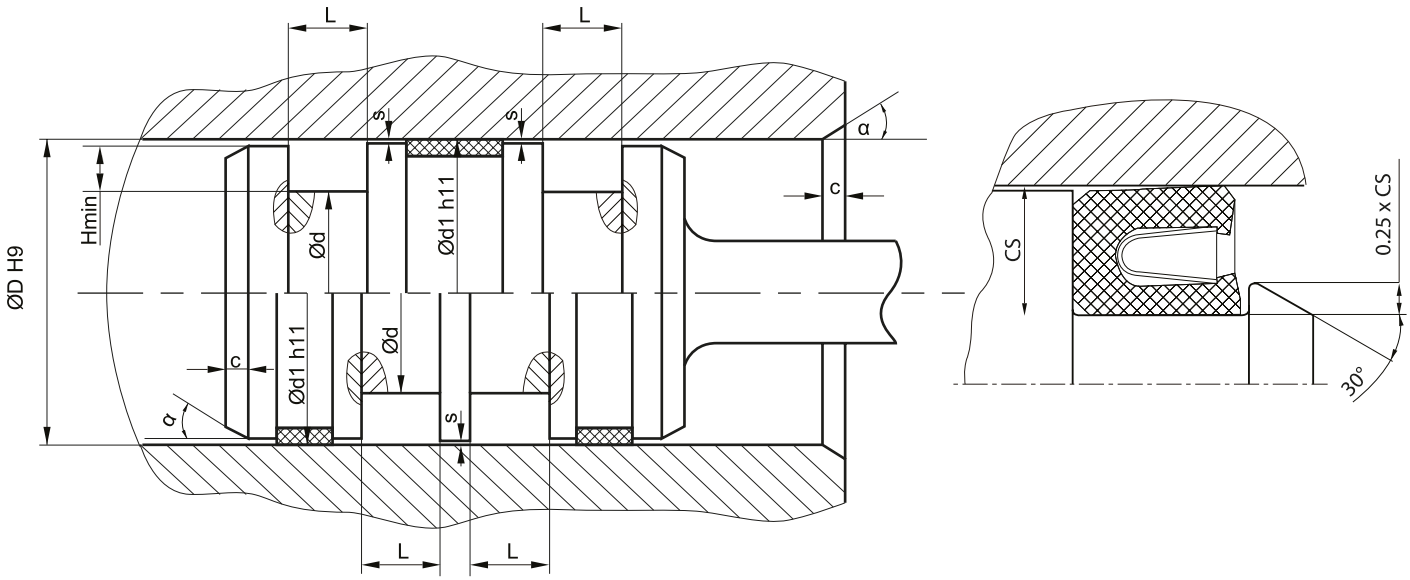
++ ... particularly suitable o ... conditional suitable
+ ... suitable - ... not suitable

for detailed information regarding chemical resistance please refer to our "list of resistance". for decreased leackage rates elastomer materials (polyurethane or rubber) in other sealing systems are to be preferred.

mode of installation

normally a open housing should be designed. the profile should not be snaped in, the spring may be damaged and a faultless function can not be ensured. in special cases a snap-in installation is possible, therefore the housing has to be designed accordingly. the seal can only be held by a retaining housing step, having a width of 0.25·CS and a distinctive 30° chamfer, all edges must be rounded. the smallest possible diameter for such a snap-in installation is 10·CS.

recommended mounting space:



plastic guiderings (wearbands) have to feature a adequate cutting gap (recommendation: 2-5% of D). if metalic guides are used, spiral grooves shall be provided. small values for Hmin allow slipping the seal over the piston, but the height of the retaining collar has to be sufficient to assure a stable fit in the housing (see "mode of installation"). in order to avoid drag pressure built up in case of back-to-back arrangement, the distance between the seals should be as small as possible.

insertion chamfer:

in order to avoid damage to the piston seal during installation, the piston and the housing is to be chamfered and rounded as shown in the "recommended mounting space" drawing. the size of chamfer depends on the seal type and profile width.

cs (mm)	c (mm)	
	$\alpha = 15^{o} ... 20^{o}$	$\alpha = 20^{o} ... 30^{o}$
2	2	1
3	3	1,5
4	3,5	2
5	4	2,5
6	4,5	3
7,5	5	4
10	6	5

instead of a chamfer, the piston can also be designed with a radius. recommended size of the radius is equal to size of chamfer (R=c).