



K19 is a four piece double acting heavy duty compact seal which consists of one PTFE bronze profile ring, one elastomeric nitrile rubber pre-load sealing element and two thermoplastic back-up rings.

#### PRODUCT ADVANTAGES

- High sliding speed
- Low friction, free of stick-slip
- Simple groove design
- Long service life
- Very good sealing performance even with pressure peaks
- High resistance to abrasion
- Increased clearance possible

#### APPLICATION

Mining equipment, construction machinery and earth moving equipment.

MATERIAL		CODE
NBR	80 SHORE A	NB8001
PTFE		PT6003
POM		PM9901

#### OPERATING CONDITIONS

<b>MEDIA</b>	Mineral oils (DIN 51524)	HFA and HFB	HFC
<b>TEMPERATURE</b>	-30°C +105°C	+5°C +60°C	-30°C +60°C
<b>PRESSURE</b>	≤400 Bar	≤400 Bar	≤400 Bar
<b>SPEED</b>	≤1.5 m/sec	≤1.5 m/sec	≤1.5 m/sec

*Note: The above data are maximum values and cannot be used at the same time.*

#### SURFACE ROUGHNESS

		Ra	Rmax
<b>Sliding Surface</b>	∅D	≤0.2 μm	≤2.0 μm
<b>Groove Base</b>	∅d	≤1.6 μm	≤6.3 μm
<b>Groove Flanks</b>	B	≤3.2 μm	≤15 μm

*Note: It is recommended to have 50% to 90% of the working surface material contact area value.*

#### INSTALLATION

The elastomeric ring should be assembled into the one-piece piston firstly, and then special mixture PTFE should be assembled with a special assembly tool (See section; Hydraulic Sealing Elements General Installation Information) finally the split guide rings should be installed. The required insertion chamfers on the piston and cylinder bore should be de-burred and rounded. It is very important that the assembly tools must be of soft material and have no sharp edges. Before installation the sealing element must be oiled with system oil.

#### NOTES

For special applications that require high temperatures, piston seal can be manufactured with FKM pre-load component, pure PTFE back-up rings and special mixture PTFE profile ring. Thanks to the design, K19 can be used up to shock pressures of 600 bar safely. The permissible sealing gap values of K19 heavy duty piston seal is given in the below table.

#### PERMISSIBLE SEALING GAP

PRESSURE (Bar)	Smax (mm)
P≤350	0.45
350<P≤600	0.25