K31 is a three piece single acting sealing set which consist of one elastomeric main sealing element with additional sealing lip, one special profile elastomer nitrile rubber that goes into the main sealing component and one thermoplastic back-up ring.

PRODUCT ADVANTAGES
- Able to work in high pressures
- Superior sealing effect in low pressures
- Easy assembly into closed grooves
- Superior sealing effect with the secondary lip
- Secondary sealing lip provides extra protection against the ingress of dirt particles.
- Highly wear resistant
- Improved sealing gap due to the active back-up ring

APPLICATION
Mining equipment, iron and steel industry, metal injection machines, scrap cutters, marine hydraulics, cranes and mobile hydraulics.

MATERIAL		CODE
NBR	70 SHORE A	NB7001
PU	94 SHORE A	PU9401
POM		PM9901

OPERATING CONDITIONS			
MEDIA	Mineral oils (DIN 51524)	HFA and HFB	HFC
TEMPERATURE	-30°C +100°C	+5°C +50°C	-30°C +40°C
PRESSURE	≤630 Bar	≤630 Bar	≤630 Bar
SPEED	≤0.5 m/sec	≤0.5 m/sec	≤0.5 m/sec

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

SURFACE ROUGHNESS		Ra	Rmax
Sliding Surface	Ød	≤0.4 µm	≤3.2 µm
Groove Base	ØD	≤1.6 µm	≤10 µm
Groove Flanks	B	≤3.2 µm	≤16 µm

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

INSTALLATION
Easily assembled into closed grooves according to the minimum diameter values that are given in the below table. Open grooves or special assembly tools should be used for the values that are outside this table. It is very important that the assembly tools must be of soft material and have no sharp edges. Before installation the rod seal must be oiled with system oil.

MINUMUM DIAMETER VALUES FOR CLOSED TYPE OF GROOVES				
(D-d)/2 (mm)	≤7.5	10	12.5	15
d min (mm)	50	80	100	105

NOTES
K31 can be used in all type of cylinders safely due to the reason of perfect adaptation to the pressure changes.

PERMISSIBLE SEALING GAP	
Pressure (Bar)	**Smax (mm)**
150	1.0
250	0.8
400	0.6
630	0.4

Note: The largest sealing gap value occurring on the non-pressurized side of the seal does have a vital importance for the function of the seal and in this respect it is quite important to use the S value lower than the above indicated numbers.