



K23 is a single acting piston seal designed to have outer lip shorter than the inner lip in order to be used for piston applications.

#### PRODUCT ADVANTAGES

- Superior static and dynamic sealing effect
- Wide range of dimensions
- Easy assembly into closed grooves
- Simple groove design
- Economical sealing solution

#### APPLICATION

Construction machinery, fork-lift trucks, injection moulding machines, agricultural machinery, loading platforms and standard cylinders.

MATERIAL		CODE
NBR	90 SHORE A	NB9001
PU	92 SHORE A	PU9201

#### OPERATING CONDITIONS

NBR			
MEDIA	Mineral oils (DIN 51524)	HFA and HFB	HFC
TEMPERATURE	-30°C +105°C	+5°C +60°C	-30°C +60°C
PRESSURE	≤150 Bar	≤150 Bar	≤150 Bar
SPEED	≤0.5 m/sec	≤0.5 m/sec	≤0.5 m/sec

PU			
MEDIA	Mineral oils (DIN 51524)	HFA and HFB	HFC
TEMPERATURE	-30°C +100°C	+5°C +50°C	-30°C +40°C
PRESSURE	≤400 Bar	≤400 Bar	≤400 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 installation 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 sealing element must be oiled with system oil.

#### MINIMUM DIAMETER VALUES FOR CLOSED TYPE OF GROOVES

(D-d)/2 (mm)	4	5	6	7.7	10	12.5	15
D min	25	30	40	50	80	100	105

#### NOTES

For special applications that require high temperatures, K23 can be produced in FKM material. The permissible sealing gap values of K23 piston seal is given in the below table.

#### PERMISSIBLE SEALING GAP

NBR		Smax (mm)		
t=(D-d)/2 (mm)	50 Bar	100 Bar	150 Bar	
t≤5	0.40	0.20	0.10	
t>5	0.45	0.25	0.15	

PU		Smax (mm)		
t=(D-d)/2 (mm)	150 Bar	250 Bar	400 Bar	
t≤5	0.30	0.20	0.15	
t>5	0.35	0.25	0.20	

*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.*