K22 is a single acting rod seal designed to have inner lip shorter than the outer lip in order to be used for rod 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 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) | 4 | 5 | 6 | 7.7 | 10 | 12.5 | 15 |
| d min (mm) | 25 | 30 | 40 | 50 | 80 | 100 | 105 |

**NOTES**
For special applications that require high temperatures, K22 can be produced in FKM material. The permissible sealing gap values of K22 is given below.

**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.*