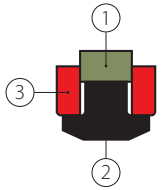
# KHD

The Aston Seals KHD is a double acting piston seal for high pressure operation and is composed of:

- A dynamic seal element which assures exceptional low friction and high speed performance, high compatibility with nearly all media due to the chemical resistance which exceeds that of all other thermoplastics and elastomers
- A rubber element with low permanent deformation as energizing component on the static side
- Two backup rings which offset large gaps or structural deflections without extrusion and assure high longevity

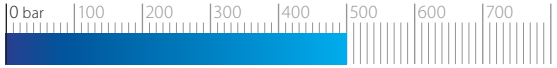
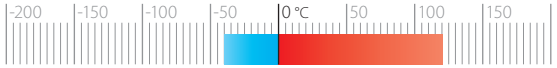
- Low static and dynamic friction
- No tendency of stick-slip
- Space-saving construction and simple groove design
- High resistance against extrusion
- Extended service life

## MATERIAL




| | | |
|---|---|---|
| ① | Type | Polytetrafluoroethylene PTFE + Bronze |
| | Designation | SEALFLON + Bronze |
| ② | Type | Nitril Rubber NBR |
| | Designation | RUBSEAL 80 |
| | Hardness | 80 °ShA |
| ③ | Type | Acetal resin |
| | Designation | BEARITE |

## FIELD OF APPLICATION

| | |
|---|---|
| Pressure<br>≤ 500 bar |  |
| Speed<br>≤ 1.5 m/s |  |
| Temperature<br>–40°C ÷ +120°C |  |
| Fluids | Hydraulic oils (mineral oil based)<br>For other fluids contact our technical department |

## SURFACE ROUGHNESS

| | | |
|---|---|---|
| Dynamic surface | Ra ≤ 0.3 µm | Rt ≤ 2.5 µm |
| Static surface | Ra ≤ 1.6 µm | Rt ≤ 6.3 µm |

## GAP DIMENSION "g"

The largest gap dimension appearing in operation on the non-pressurised side:

| | | | |
|---|---|---|---|
| 300 bar | 1.0 mm | 500 bar | 0.6 mm |

NB: for the Gap calculation, it is necessary to consider the elastic deformation of metal elements under pressure loads.

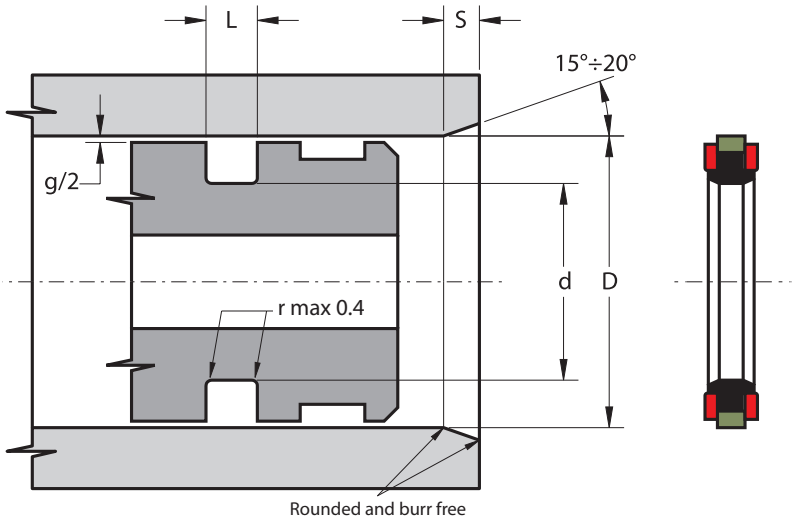
## LEAD-IN CHAMFERS

| d | Smin |
|---|---|
| 0 ÷ 60 | 4.5 mm |
| 70 ÷ 120 | 5.0 mm |
| 125÷200 | 6.5 mm |

To avoid damaging the sealing lips during installation, housing must have rounded chamfers. Sharp edges and burrs within the installation area of the seal must be removed.

The above data are maximum values, they may be maintained for short periods and can not be used at the same time simultaneously.

# KHD




| Part. | D H9 | d ±0.1 | L +0.2 |
|---|---|---|---|
| **KHD 50 36 9** | 50 | 36 | 9 |
| **KHD 55 41 9** | 55 | 41 | 9 |
| **KHD 60 46 9** | 60 | 46 | 9 |
| **KHD 65 50 11** | 65 | 50 | 11 |
| **KHD 70 55 11** | 70 | 55 | 11 |
| **KHD 75 60 11** | 75 | 60 | 11 |
| **KHD 80 65 11** | 80 | 65 | 11 |
| **KHD 85 70 11** | 85 | 70 | 11 |
| **KHD 90 75 11** | 90 | 75 | 11 |
| **KHD 95 80 11** | 95 | 80 | 11 |
| **KHD 100 85 12.5** | 100 | 85 | 12.5 |
| **KHD 105 90 12.5** | 105 | 90 | 12.5 |
| **KHD 110 95 12.5** | 110 | 95 | 12.5 |
| **KHD 115 100 12.5** | 115 | 100 | 12.5 |

| Part. | D H9 | d ±0.1 | L +0.2 |
|---|---|---|---|
| **KHD 120 105 12.5** | 120 | 105 | 12.5 |
| **KHD 125 102 16** | 125 | 102 | 16 |
| **KHD 130 107 16** | 130 | 107 | 16 |
| **KHD 135 112 16** | 135 | 112 | 16 |
| **KHD 140 117 16** | 140 | 117 | 16 |
| **KHD 145 122 16** | 145 | 122 | 16 |
| **KHD 150 127 16** | 150 | 127 | 16 |
| **KHD 160 137 16** | 160 | 137 | 16 |
| **KHD 165 142 16** | 165 | 142 | 16 |
| **KHD 170 147 16** | 170 | 147 | 16 |
| **KHD 180 157 16** | 180 | 157 | 16 |
| **KHD 185 162 16** | 185 | 162 | 16 |
| **KHD 200 177 16** | 200 | 177 | 16 |
| **KHD 225 202 16** | 225 | 202 | 16 |