

Sealing problems as a result of deployment in highly polluted and extremely harsh conditions?

The "heavy duty seal" offers the solution.



The "heavy duty seal" is a seal which typically consists of two geometrically identical metallic seal rings and two o-rings. Because of the simple and robust form and because of the specific choice of the used materials, this seal is extremely suitable for deployment in highly polluted and abrasive conditions, like for instance dust, sand, mud, sweet- and seawater. Some applications are tracked vehicles, earthmoving and agricultural machines, dredging installations, pumps, etc.

These mechanical face seals can be delivered in various dimensions. Shaftsizes of $\varnothing 38,0$ up to > 1000 mm are available. The largest mechanical face seal that is currently operating has an outside diameter of 1425 mm and is being used in the drive of TEREX and LIEBHERR, who build the largest dump trucks and excavators of the World.

The seals should preferably be treated with oil, during which the oil acts as a drain for the generated friction heat, more than the lubrication of the seal.

At the deployment of this seal, the differential pressure between the inner space in the seal and the outer medium should not exceed 3 bar. When the differential pressure exceeds 3 bar, one should ensure pressure compensation.



The elastomeric materials that should be used, can be chosen through operating temperatures. The standard material NBR is used for temperatures of -37°C to $+100^{\circ}\text{C}$, the silicone version from -50°C to $+200^{\circ}\text{C}$.

Out of experience we can say that the operating hours of the seal is as long as the operating hours of the part in which the seal is built into. The special cast iron parts have a hardness of 60 HRC. The elastomeric materials are of such high quality, that these last a long time as well.

If you are interested in more detailed information, do not hesitate to contact us at IPAR Industrial Partners b.v., telephone 0031-773879600 or info@ipar.nl.

