Oil Seals for higher pressures

An Oil Seal is principally intended for operating under normal atmospheric conditions. If however the peripheral speed does not exceed 8 metres per second, the Oil Seal can cope with a pressure of ca. 0.5 bar. In the case of large shaft diameters (500 mm,) the permissible pressure which the Oil Seal may be exposed to is 0.1 bar.

The permissible pressure greatly depends on the operating conditions such as shaft speed, temperature and lubrication.

If the actual pressure exceeds the permissible maximum, the lip of the Oil Seal is forced against the shaft, resulting in a higher radial load, a higher level of friction and excessive wear of shaft and seal. To balance the pressure, Oil Seals can be provided with a supported sealing lip by using an easily fabricated metal support ring.

Oil Seals with a supported sealing lip can be used on small diameter shafts for pressures up to 6 bar if conditions are favourable (low temperatures, relatively low speed, good lubrication).

Due to the small size and the strengthened hinge point, Oil Seal type RST-D can, under favourable circumstances, be used up to a maximum of 10 bar (depending on speed).

The metal case of the ERIKS-type GVP is dished under the sealing lip, providing a built-in supporting ring (especially for shaft diameters >80mm).

The type RD has an encapsulated metal support ring. This type is extremely suitable for smaller shaft diameters. This design is only available on demand.