

Transmission Seals Product Information

Transmission Seals



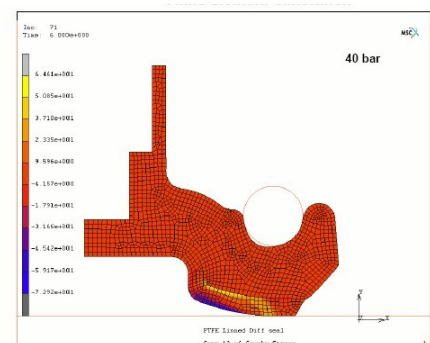
- > **PTFE lined lip**
- > **Compact designs**
- > **Low friction**
- > **Bonded directly to transmission housing**

Race-Tec Sealing has developed a number of low friction, high performance PL(PTFE Lined) seal design variants to cope with the various demands of gearbox and axle applications, whether it be high speeds or high pressure conditions, eccentricity, or a combination of these.

The majority of seals are designed to be a press fit into housings, however, where space is a premium the seals can be bonded directly to flanged housing components. This also allows easy seal fitting and removal, which is particularly useful where gearboxes are designed to have a multiple race life.

Finite Element Simulation

For the more demanding application the design can be modelled using FEA considering parameters such as pressure, eccentricity, assembly etc. All models are run with material data based on operating temperatures to allow for the change of physical properties.



Race-Tec Motorsport race proven custom sealing

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Performance Features

Materials

Dependent on fluid type and operating temperature range, any of the following compounds may be used: nitrile (NBR), hydrogenated nitrile (HNBR), fluoroelastomers (FKM / FFKM), or silicone (VMQ). The PTFE grade selected may be a basic “virgin” grade through a range of filled and specially developed grades, which are designed and selected according to specific application requirements. Seal housings/bodies may be supplied using aluminium alloy, titanium, stainless or mild steel.

Technical Features

Compared with standard seals, our bespoke high performance seals can offer the following benefits:

- Low friction, thus reducing running temperature, and wear of both seal and shaft.
 - Performance can be tuned to balance life with power loss.
 - Ability to cope with high eccentricity and pressure.
- For very demanding applications where dirt ingress is a problem a third axial “gutter” lip may be added
 - Space and weight saving

Space & weight saving over standard seals

