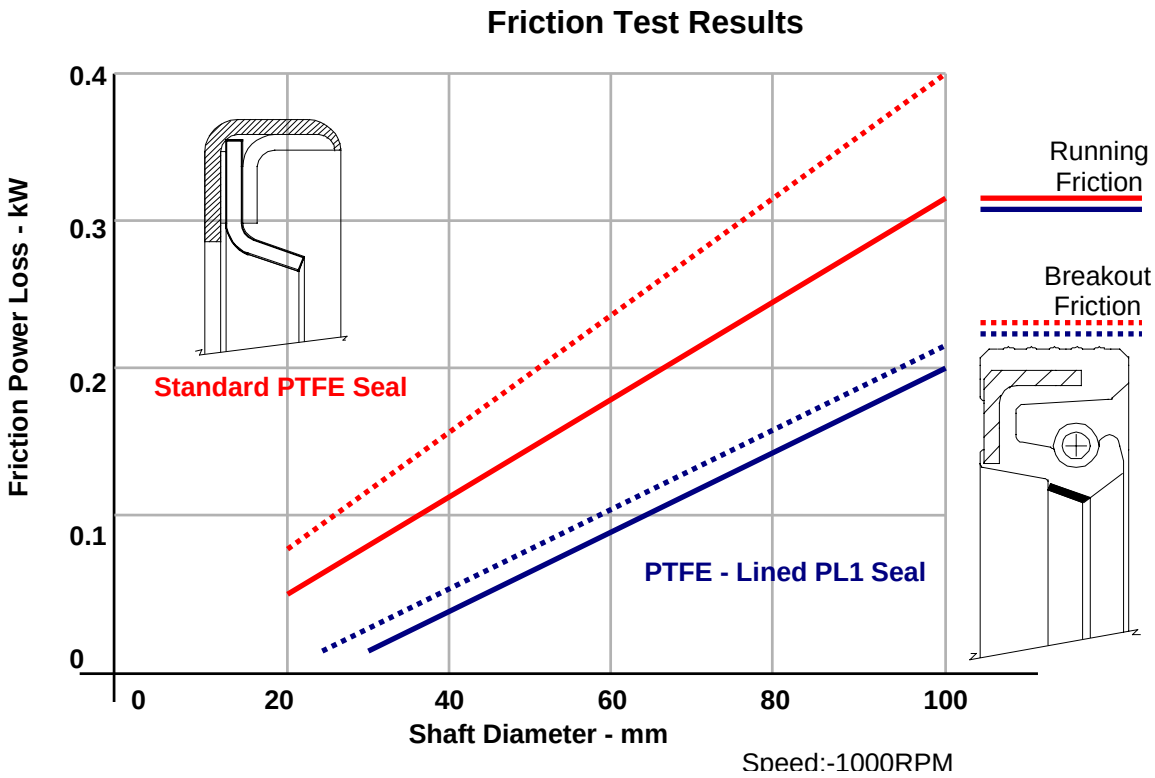
Race-Tec Motorsport
Gearbox Seal Technology

- Low friction
- Ultra compact design
- Ptfe-Lined Lip
- Spring-less designs

Race-Tec NAK has developed a number of low friction, high performance PL Seal design variants to cope with the various demands of gearbox applications, whether it be high speeds or high pressure conditions, eccentricity, or a combination of these.

The majority of seal are designed to press fit into housings, however, were space is premium, the seals can be bonded directly to flanged housing components.

PL Seals can be designed with uni-directional hydrodynamic features, alternatively, low friction W16 bi-directional rubber lip designs can be offered.



Race-Tec Motorsport race proven custom sealing

race-tec NAK limited
Rolwey House, School Close, Chandlers Ford, Eastleigh Hampshire, SO53 4BY England
Tel: +44 (0)23 8024 6986 ~ Fax: +44 (0)23 8027 5544
Email: logistics@race-tec.com ~ Website: www.race-tec.com

Ref.	PDS005
Issue	D
Date	16/03/2006

race-tec motorsport

Performance Features

Materials

The elastomer used may be any of the common compounds, Nitrile (NBR), Polyacrylate (ACM), Hydrogenated Nitrile (HNBR), Silicone (VMQ) or Fluoroelastomers (FKM & FFKM).

The PTFE grade selected may be basic “virgin” PTFE through a range of filled and special grades, which are designed and selected according to the application requirements.

Seal housings/bodies may be supplied using Aluminium Alloy, Titanium, Stainless Steel, or Mild steel.

Technical Features

The standard PL1 Seals for have been developed to offer the lowest running friction; consistently 40-60% less power loss than most other seal types, and are also more forgiving of the manufacturing variations found in adjacent components.

Through the extensive use of non-linear finite element simulation, and in-house testing, Output Flange Seals have been developed to cope with high eccentricity and pressure up to 5 bar.

The PL6 Seal spring-less design was developed as an output seal to offer compact seals with radial section < 4.0 mm. This design offers further friction reduction over first generation PL1 Seals and is capable of operating with eccentricity up to 0.40mm

For very demanding applications, where dirt ingress is a problem, a third axial “gutter” lip may be added.

Applications

Race-tec NAK seals are used in all forms of top motorsport i.e. F1, sportcars, WRC, Nascar, production supercars, where the seal is custom designed to meet the performance demands of the application, whether it be ultra-low friction qualifying, low friction dirt exclusion, etc.

race-tec NAK limited
Rolwey House, School Close, Chandlers Ford, Eastleigh Hampshire, SO53 4BY England
Tel: +44 (0)23 8024 6986 ~ Fax: +44 (0)23 8027 5544
Email: logistics@race-tec.com ~ Website: www.race-tec.com

Ref.	PDS005
Issue	D
Date	16/03/2006

race-tec motorsport