Sealing Arrangements

Any bearing, housing and support unit that is not suitably sealed against its surrounding environment is unlikely to achieve its full potential, either in terms of performance or life span. The prevention of ingress of foreign materials and contaminants is of paramount importance and should be considered as early in the selection process as possible.

A wide variety of sealing solutions are available to users of SRB products as "off the shelf" arrangements. This range will cover the vast majority of operating environments found throughout all industries. To cover those situations where a proprietary arrangement is not suitable, SRB Technical Services are able to work closely with designers and end users to develop and manufacture bespoke solutions tailored to specific applications.

SRB units have inherent advantages over traditional solid bearing arrangements when considering sealing. The spherical location between housing and support ensures that whichever type of seal is used, it will always remain concentric to the shaft.
Felt Seal

This type of seal is supplied as standard with all SRB housings up to a bore size of 300mm. Consisting of felt strips made from blended fibres. Seals are supplied dry and need to be soaked in oil prior to fitting.

Max Speed  \( dN(\text{mm}) \leq 150000 \)
Temp Range  \(-60^\circ\text{C} \text{ to } +100^\circ\text{C}\)
Shaft Finish  1.6µm Ra

Labyrinth Grease Groove

For shaft sizes over 300mm, housings are supplied with a close fitting labyrinth groove machined into the housing. No additional seal is added. For harsh environments, alternative sealing arrangements are available.

Max Speed  As Bearing
Temp Range  As Bearing
Shaft Finish  3.2µm Ra

Aluminium Triple Labyrinth

A precision machined, non-contacting seal suitable for both high speed and general applications. Once fitted the seal revolves with the shaft. The seal grips the shaft via two split O-rings fitted to the bore of the seal. SRB Triple Labyrinth seals are fitted with high temperature Viton cord as standard.

Max Speed  As Bearing
Temp Range  \(-20^\circ\text{C} \text{ to } +175^\circ\text{C}\)
Shaft Finish  3.2µm Ra
Suffix Letters  ATL

Neoprene Triple Labyrinth

The seal is moulded from Neoprene rubber and incorporates a steel centre band. This steel pressing has ends which form an interlocking arrangement and hence secure the seal to the shaft. The seal can be used where restrictions prevent the use of Aluminium (e.g. Mining).

Max Speed  \( dN(\text{mm}) \leq 150000 \)
Temp Range  \(-20^\circ\text{C} \text{ to } +100^\circ\text{C}\)
Shaft Finish  3.2µm Ra
Suffix Letters  NTL
Nitrile Single Lip

For environments involving moderate liquid splashing but not submersion. Should be avoided where abrasive particles are also present as this can lead to shaft wear in the seal area. High temperature versions are also available.

Max Speed \( dN (\text{mm}) \leq 150000 \)
Temp Range \(-20^\circ\text{C} \text{ to } +100^\circ\text{C}\)
Shaft Finish 3.2\(\mu\text{m} \) Ra
Suffix Letters RSS (RSSHT for high temperature)

High Temperature Packing

A self-lubricating seal based around PTFE and graphite. In order to utilise the highest quality materials available, SRB housings for high temperature applications are machined to suit the High Temperature Packing used.

Max Speed \( dN (\text{mm}) \leq 150000 \)
Temp Range \(-60^\circ\text{C} \text{ to } +300^\circ\text{C}\)
Shaft Finish 1.2\(\mu\text{m} \) Ra
Suffix Letters HTPS

Single Lip with Garter Spring and Retaining Plate

A more specialised seal for very wet environments with heavy splash. This type of seal is NOT suitable for continuous submersion without due consideration being given to sealing of the housing joint and any other possible points of liquid entry. Please consult SRB Technical Services for more information.

Max Speed \( dN (\text{mm}) \leq 150000 \)
Temp Range \(-20^\circ\text{C} \text{ to } +100^\circ\text{C}\)
Shaft Finish 0.8\(\mu\text{m} \) Ra
Suffix Letters WSRP

Laminar Seal Rings

This recent addition to the sealing range has proved highly effective in areas having the potential for fine particle contaminants such as Cement or ash. The rings can be arranged in a number of configurations to suit a particular application. Please consult SRB Technical Services for more information.

Max Speed \( dN (\text{mm}) \leq 190000 \)
Temp Range \(-60^\circ\text{C} \text{ to } +300^\circ\text{C}\)
Shaft Finish 3.2\(\mu\text{m} \) Ra
Suffix Letters LRS