SKF SPEEDI-SLEEVE new generation

SKF SPEEDI-SLEEVE new generation + SKF radial shaft seal

Enhanced sealing system solution

To seal effectively, radial shaft seals must run against a smooth, round counterface, most often a shaft. If the shaft becomes worn, the seal will no longer be able to retain lubricant and to exclude contaminants.

Typically, the shaft becomes scored when a contaminant particle is caught under the sealing lip and abrades a track as the shaft rotates. As this continues, the seal will enable more particles to pass or get stuck eventually leading to malfunction of the component that the sealing system is meant to protect. A simple seal replacement will not be sufficient and to repair the shaft, it is usually necessary to disassemble the machine in order to be able to grind down the shaft until it is within its specification again. Otherwise the sealing system will not function properly.

SKF SPEEDI-SLEEVE is a well-proven solution to overcome problems with worn shafts, without having to disassemble the shaft or specifying a new size of the replacement seal, while offering an excellent sealing surface. Now, SKF has developed a new generation SKF SPEEDI-SLEEVE with features providing an even further enhanced sealing system performance.

Features

SKF SPEEDI-SLEEVE new generation combines a proprietary stainless steel material and manufacturing process, resulting in an optimized seal counterface surface that minimizes wear on both the sleeve and sealing lip. The proprietary material provides increased strength and excellent ductility properties of the sleeve. Imperceptible lubricant pockets enable the lubricant to reside on the sleeve and thereby prevent dry running of the sealing lip that otherwise can create excessive wear. The sleeves are thin-walled [0,28 mm *(0.011 in.)*] and the contact surface is wear resistant and manufactured to minimize directionality (0° ±0,05) with a finish of Ra 0,25 to 0,5 µm *(10 to 20 µin.)*. This is, in fact, a better counterface than can often be achieved on a shaft.

Removable flange

SKF SPEEDI-SLEEVE has a removable flange to simplify installation (→ **fig. 1**). The flange can most often be left intact, but in applications where the flange will interfere with other system components, it should be removed so it does not cause friction heat and wear debris. The flange should also be removed in applications where it may reduce the supply of lubricant to the seal. This would cause a reduced cooling effect of the lubricant, resulting in elevated underlip temperature and premature ageing of the seal material.

If the flange is to be removed, it should be cut from the outside diameter into the radius in one location prior to installation. The flange can then be twisted and raised up after installation and grasped with a pair of pliers and twisted into a coil.

SKF SPEEDI-SLEEVE Gold

The new generation of SKF SPEEDI-SLEEVE is also available in the Gold version, designed for highly abrasive applications. A thin, metallic coating applied to the base stainless steel imparts a gold colour and significantly increases durability. SKF SPEEDI-SLEEVE Gold is particularly effective in environments where there are abrasive contaminants, especially when combined with a seal manufactured from the SKF fluoro rubber material SKF Duralife. This sealing system solution lasted 2 500 hours in a contamination test.

The installation procedure is identical to both SKF SPEEDI-SLEEVE versions and the original seal size can still be used.

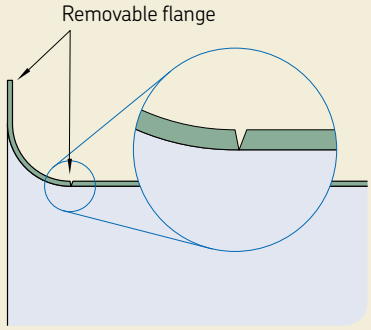
Size range

The standard size range covers sleeves for shaft diameters from 11,99 to 203,33 mm *(0.472 to 8 in.)*. Depending on production quantities, non-standard sizes can be manufactured. For additional information, contact SKF. Each sleeve is designed to fit a specific shaft range, usually above and below the nominal shaft diameter. This permits some flexibility to accommodate variations in the actual shaft diameter.

Selecting the sleeve size

To determine the appropriate sleeve size, it is first necessary to clean the shaft carefully. The diameter of an undamaged section of the seal counterface should then be measured on at least three different planes. The arithmetical mean of these measurements determines the size of SKF SPEEDI-SLEEVE. If the value lies within the permissible range, SKF SPEEDI-SLEEVE will have an adequate tight fit on the shaft and will not require an adhesive.

Fig. 1



SKF SPEEDI-SLEEVE removable flange

SKF SPEEDI-SLEEVE new generation, Gold version

www.skf.com/SPEEDI-SLEEVE

PUB SE/P8 11338 EN · February 2011

Printed in Sweden on environmentally friendly paper.