



Large Diameter Seals from SKF reduce maintenance and downtime costs

Benefits

- Multiple designs available to meet the performance needs of industry's most demanding environments
- Longer maintenance service intervals in the harshest operating environments
- Superior operation in highly contaminated environments
- Springless lip profile designs retain lubricants, aggressively pumps contamination away from the lip
- Garter-type springs in the sealing element reinforce lip pressure against shaft
- Split-seal designs allow for fast repair with minimal equipment disassembly
- Made-to-order seals for specialized applications

Typical Industries

- Paper mills
- Food processing
- Steel mills
- Metal/ore crushing operations
- Metal rolling
- Printing plants
- Large gearboxes

Industrial environments such as steel and paper mills can quickly compromise large diameter seals (LDS), resulting in expensive downtime to disassemble machinery and replace the seals.

SKF offers a complete range of LDS products designed to withstand the most hostile environments, whether your application requires a metal clad seal or an easily installed, all rubber design.

Large diameter seals for shafts larger than 8" (203 mm) in diameter are available in two types: HDS metal-clad seals for shafts up to 62" (1,575 mm) and HS all rubber seals for shafts up to 180" (4,572 mm).

HDS seals – the most common metal-clad LDS for a wide range of applications; ideal for general and mill bearing service.

HS seals – all-rubber LDS available in solid and split-designs, held in place by a cover plate, ideal for minimizing downtime.

SKF also offers specialized enhanced performance metal-clad rubber seals as well as a range of PTFE large diameter seals.

HDL seals – the premium metal-clad oil seal designed to operate in severe conditions, including extreme speeds, temperatures and misalignment.



EP-2000 seals – the premium metal-clad grease seal, specially designed with a springless lip that retains lubricants and pumps contamination away from the lip.

PTFE seals – metal-clad PTFE (polytetrafluoroethylene) seals are specially designed for difficult applications, including those involving harsh chemicals.



SKF puts more ROI in your MRO.

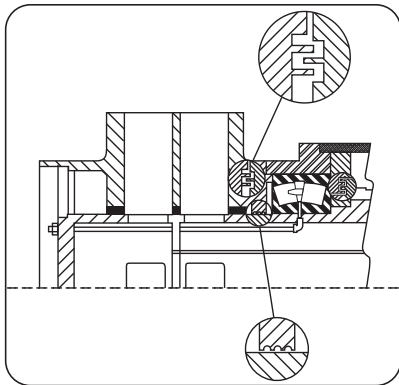
The whole idea behind the SKF 360° Solution is to help you get more out of your plant machinery and equipment investment.

This means lowering your maintenance costs, or raising your productivity, or both! Following is an example of the SKF 360° Solution at work.

EP-2000 (HDS7) in paper mill

Application:
Paper machine pick-up roll

History: A large paper plant experienced frequent bearing failures, resulting in reduced operation time and productivity. The bearings were protected by a machined labyrinth



seal. Bearing life was averaging only 6 months, far below specification potential. The color of the degraded grease lubricant in the open bearing indicated water ingestion into the chocks.



Application conditions:

- Shaft neck speed - 13 M/S (2559 FPM) at the seal diameter
- Temperature - 60° C (140° F)
- MTBF - 6 months

Solution: Initial attempts to add a clamped deflector seal to the outside of the pre-existing labyrinth had only limited success because it could not completely control the water entry path. The SKF sales engineer determined that a positive contacting seal was required. Given the moderate surface speed, he recommended modification of the internal part of the housing to accept a rubber radial shaft seal press-fitted into the bearing chock. Since the available axial space was limited and the critical objective was to exclude water, a single EP-2000 seal was selected as the opti-

mum design. In order for the seal to have effective resistance against condensed steam, Duratemp was specified for the seal compound. It also has excellent abrasion and long term heat resistance.

Post installation analysis: There was no water or contaminant ingestion in the grease. The seal has a normal and even wear pattern on the main lip around the entire circumference. The rubber material itself had no thermal, chemical or mechanical degradation. It remained flexible with no cracks or hardening. The lip and metal case indicated no problems with misalignment or damage during installation or extraction. Next, the bearing was examined and found to be clean and free of corrosion, spalling or other mechanical damage.

Conclusions:

The mill verified that the improved bearing condition resulted in doubling the run time before changes, to 12 months. In addition, it was possible to reduce the amount of grease used during relubrication, lowering costs and improving cleanliness around the bearing housing.

For more information on SKF Sealing Solutions products and services, contact your authorized SKF Sealing Solutions representative or visit us at www.chicago-rawhide.com.

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