

INTRODUCING THE NEW HOWDEN SHAFT SEAL

Howden Compressors' new and improved design of screw compressor shaft seal.

Howden Compressors is pleased to announce a further improvement to the design and construction of our established cushion mount mechanical shaft seals for Howden screw compressors.

Detailed examination of seal failures over the last few years has allowed us to clearly identify the main operational issues resulting in premature seal leakages. The most prevalent failure mode is blistering of the rotating carbon face, this can be caused by low temperature operation, or interrupted lubrication across the seal face, in both instances the resulting high generated temperatures cause the carbon face to blister.

The second most prevalent failure mode is damaged elastomers, either by the high temperatures as above, or by chemical attack from synthetic oil and refrigerant components.

To eliminate the above issues we have developed our existing seals to incorporate new materials, redesigned geometry and reduced pressures.

IMPROVED FEATURES PROVIDE THE FOLLOWING BENEFITS:

- Harder more durable materials
- Reduction in generated heat
- Higher resistance to low temperature start-ups and poor lubrication.

SHAFT SEAL DESIGN FEATURES



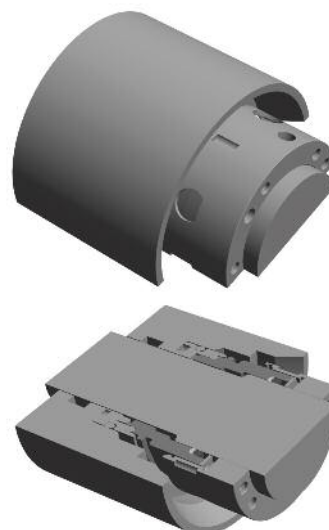
THIS NEW SEAL HAS THE FOLLOWING FEATURES:

- 1 Both mating faces in silicon carbide
- 2 Reduced width of rotating face, reducing face-face contact area
- 3 Re-balanced spring force to compensate for reduced contact area.

THIS IMPROVED DESIGN OF SHAFT SEAL HAS BEEN SUCCESSFULLY FIELD TESTED SINCE MAY 2010, WITH OVER TWO HUNDRED SEALS NOW INSTALLED WITH NO PREMATURE FAILURES EXPERIENCED.

From November 2011 the following Howden screw compressor models will have the new seals fitted as standard, and all spare seal kits will also be based on this new design of shaft seal.

- XRV/WRV163
- WRVi255
- XRV/WRV204
- WRVi321



THE NEW SHAFT SEAL IS AN AMALGAMATION OF NEW MATERIALS AND DESIGN CHARACTERISTICS BEING APPLIED TO OUR EXISTING SEAL ARRANGEMENT AND IS TOTALLY INTERCHANGEABLE WITH PREVIOUSLY INSTALLED SEALS.

Current Howden screw compressors spare shaft seal kits are now designated as follows:

- XRV/WRV163 – KS163
- XRV/WRV204 – KS204
- WRVi255 – KS255-6
- WRVi321 – KS321-6

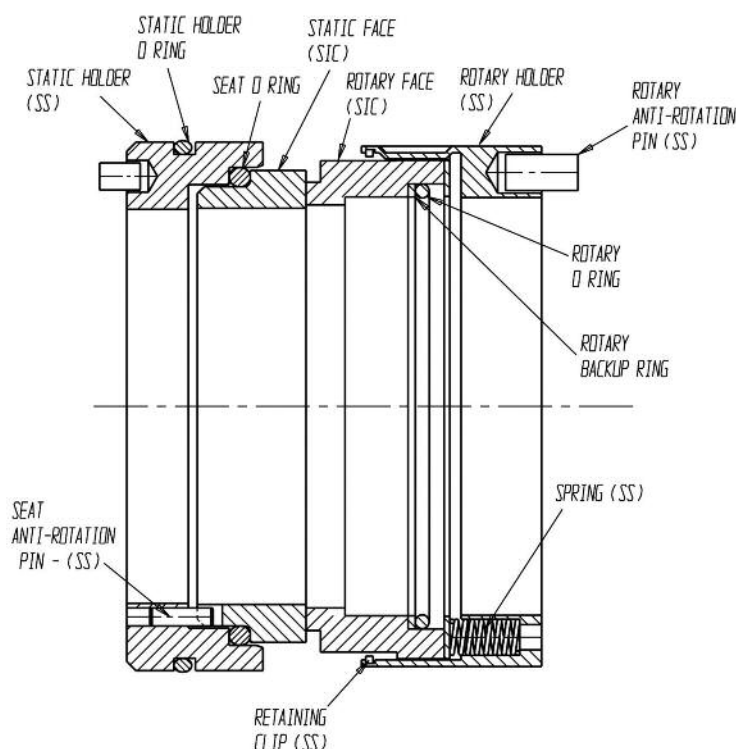
In addition older WRV models are accommodated via the following kits:

- KS204-2/3/4 (All pre Mk5 models)
- KS204-5 (Mk5 models)
- KS255-4 (All pre Mk6 models, inc Mk5)
- KS321-4 (All pre Mk6 models, inc Mk5)

All seal kits are also available with viton or fluorsilicone elastomers.

To find out more about the new shaft seal and to order replacement shaft seals or kits please contact our aftersales team using the contact details at the foot of the page.

SEAL COMPONENTS



LIFETIME AFTERMARKET SUPPORT SERVICES FOR SCREW COMPRESSORS

Throughout the world, Howden Compressors provides expert aftermarket services to enhance the performance and extend the life of Howden Twin Screw Compressors.

- Engineering Support and Advice
- Original Replacement Parts
- Repair and Overhaul Service
- On-Site Servicing
- Warranty Support
- Customer Service

FOR MORE INFORMATION ON SHAFT SEALS, OR ANY OF OUR OTHER SERVICES, PLEASE CONTACT:

Howden Compressors
133 Barfillan Drive
Glasgow, G52 1BE
Scotland, United Kingdom

Telephone: +44 141 882 3346
Fax: +44 141 882 8648
Email: hcl.sales@howden.com
Email: hcl.aftersales@howden.com