

Howden WRV Oil-Injected Screw Compressors

Maintenance and Spare Schedules

The following are the recommendations of Howden Compressors Limited for the maintenance of the Howden WRV Range Oil-Injected Screw Compressors.

Commissioning, there are no requirements for commissioning spares, however it may be prudent to have an Annual Inspection Kit and a Spare Shaft Seal Kit available during commissioning process.

Annual Inspection: All compressors should be checked once a year; all parts required for this inspection are supplied in the Annual Inspection Kit available for each model. The results of the annual inspection will dictate any further work required. The following general timetable should be expected:

Every two years, replace Shaft Seal.

Every four years, replace Thrust Bearings (regardless of condition) This would be considered as a major overhaul. Journal bearings should be replaced if bearing diametrical clearance exceeds the maximum allowable clearance (as per service manual). However, the advantages of a further period of trouble free running with new journal bearings should be considered before deciding to re-use the existing bearings.

All of the above work can be completed at site within a clean area, although it is recommended that where possible Major Overhauls are carried out in our factory. Factory Overhauled units would be fully re-built with new bearings, seals and fasteners etc, re-tested and painted as per the original specifications, and returned with a one year warranty.

If the above procedures are employed it is not expected that any major parts or components of the compressor will require to be replaced.

However, it may be that a compressor will be damaged through the failure of some supporting equipment (oil pump, motor etc.) and some parts other than standard spares will require to be replaced. We would recommend that in this instance that the unit be returned to Howden Compressors where a complete survey of the compressor condition can be carried out to determine the serviceability of the unit. When economically viable a Factory Repair can be completed. The compressor would be completely re-engineered and returned as per a Major Overhaul above.

Logistically it may be difficult to return compressors for Factory Repair, to this end we supply slide valve and rotor sub-assembly kits, and these can be used with other kits to carry out major re-works @ site, within suitable workshop conditions.

Definitions of Replacement kits

Replacement Shaft Seal Kit – Contains Mechanical shaft Seal Assembly and the O'Ring for the seal cover. Can be used independently when changing shaft seal only.

Annual Inspection Kit – Contains all parts required to carry out an annual inspection as detailed in the service manual.

Replacement Thrust Bearing Kit – Contains a complete set of thrust bearings for the compressor, should be used with an Annual Inspection Kit.

Replacement Journal Bearing Kit – Contains a complete set of inlet end and outlet end journal bearings complete with new locating dowel pins, should be used with an Annual Inspection Kit. It is also recommended that when replacing journal bearings, thrust bearings are also replaced.

Replacement Slide Valve Assembly – Contains piston rod, slide valve, locknuts, washers and guide block etc., should be used with an Annual Inspection Kit.

Replacement Rotor Assembly – Contains rotor pair (male & female) and all associated rotating parts (balance pistons, locknuts and washers etc). Replacing rotors represents a major overhaul and a Seal kit, Annual Inspection kit, thrust Bearing kit and Journal Bearing kit should be used.