

THE REMANUFACTURING PROCESS

Every compressor that arrives in our factory follows an exact procedure;

- Each compressor is given a unique number stamped on the body casting – this number stays with the compressor for its life and is recorded on all relative correspondence. This number also goes into our computer database where the history of the compressor can be recalled at the push of a button.



- The first process is to drain the oil and completely strip down the compressor.
- All components are inspected and measured for size and tolerance using micrometers. Under certain circumstances it may be possible to re-grind the crankshaft and re-bore the cylinder bores which are carried out in-house.



- Components within the manufacturer's specified tolerances are recycled; all other components are replaced - unless contract requirements exist dictating replacement of specific parts.
- Valve reeds and piston rings are discarded regardless of condition. All valve plates are surface ground.

- The stator windings are removed, identified with the compressor and sent to our electrical re-wind department for testing or re-wind.

Each winding is subjected to 2000V-to-earth flash test, ohms readings are taken with a multi-meter and recorded, and then the winding is subjected to a full load test on a transformer. Any winding that fails these tests is rewound.



Rewind Process;

Prior to stripping out any winding, the coils are lifted and measured using a micrometer, and the amount of turns are counted.

The coils of the stator winding are stripped out and the stator & rotor are cleaned. The details of the coil size and turns are entered into our specialist coil winding machine which winds the coils ready for installation.

The stator windings are then wound by hand incorporating Class 'H' insulation, and impregnated with Freon-proof varnish.

Each winding is then subjected to 2000V-to-earth flash test, ohms readings are taken with a multi-meter and recorded, and then the winding is subjected to a full load test on a transformer.



- All cast components, ie body, heads, end covers, are then thoroughly cleaned using a Vaqua wet blaster or degreaser tank.



- The compressor is then reassembled by one of our experienced personnel and checks are made at every stage of the assembly.
- Once assembled the compressor is bench-tested electrically with a flash tester again and ohms readings are recorded.



- The compressor is then transferred to our Test Centre where it is subject to the most rigorous testing procedure on our unique, purpose-built test rig both open and under load. At this stage the compressor performance is recorded on the Rebuild & Test Certificate;
 - Amp readings are taken to ensure that the three phases are balanced
 - Oil pressure is taken whilst the compressor is run clockwise and again when the compressor is run counter clock-wise
 - Oil return is checked via the sight glass
 - Any unloading is checked for correct operation
 - When the compressor has reached a minimum of 7bar head pressure, it is stopped and then restarted.
 - A pump down test is carried out to ensure there is no let back across the discharge valve reeds.



- The test oil will be drained from the compressor and new oil charged in at the correct level.
- The compressor is then charged with 30bar Oxygen-free Dry Nitrogen and submerged under water to ensure that it is leak tight before being dehydrated and evacuated to 2torr or below.
- The compressor is then given a 2bar holding charge of OFN before being spray-painted in manufacturers original colour, unless otherwise specified.

