



Electric Motors



Houghton International
Electro mechanical innovation

Houghton International is a high-quality electro mechanical repair facility that specialises in the monitoring, maintenance and repair of electric motors. With over 30 years specialist engineering experience, in house coil manufacture facilities and a large machine repair shop with up to 40 tonne craneage, we are confident that we can deliver high quality, cost effective electric motor repairs.

Our electric motor repair and motor rewind services cover a wide range of AC and DC electric motors, including random wound stators and armatures, and non-standard soft coil and preformed high voltage coils for a range of applications. From standard to more specialist motors, our facility is IECEx certified and we have experience in the repair and overhaul of Ex hazardous area equipment, as well as experience with submersible pump motors, water and oil filled motors.



Services Include:

- AC & DC electric motors (up to 50MW and 40 tonne)
- Motors operating in explosive environments (Ex)
- Spindle motors
- Permanent magnet motors
- Special purpose motors
- Gear motors
- Synchronous motors
- Brake motors
- Hoist motors

We provide a fast and efficient service with the objective of maximising plant efficiency and reliability whilst minimising costs and machine downtime. Specialists in life extension, obsolescence management and overall system efficiency we work alongside maintenance engineers to maximise maintenance budgets and reduce the total lifetime cost of motors.

Work is carried out by an experienced team of multi-skilled electro mechanical engineers on customer's premises or in-house in our fully equipped workshop. We operate a 24 hour call out 365 days of the year and offer an emergency repair service, with engineers working around the clock to restore functionality of critical motors.

We also offer condition monitoring and preventative maintenance services which include electric motor management, condition monitoring, vibration analysis, laser alignment and thermographic imaging helping to prevent costly breakdowns that result in emergency repairs.

Our research and development and engineering teams work with customers to solve complex engineering problems and improve the performance of a wide range of electric motors.



Motor Repair and Rewind

At Houghton International we comply with, and in some areas exceed, IEEE 1068 specification for electric motor rewind and have controlled processes and records in place to manage the rewind process. All motors are wound to Class F or higher thermal class, upgrading the insulation quality where beneficial to our HiFLEX coil design.

Work is carried out by an experienced team of multi-skilled electro mechanical engineers on customer's premises or in-house in our purpose-built workshop. We have burn off, Vacuum Pressure Impregnation (VPI) facilities and in-house coil manufacturing capabilities for absolute control over quality and lead-times.

Our workshop is EASA accredited, meaning that Houghton International has successfully demonstrated that it complies with EASA AR100 and follows the prescribed good practices to consistently deliver quality electro mechanical repairs that maintain or improve AC electric motor repair and electric motor rewind efficiency and reliability.

Fully experienced in the rewind of a wide variety of electric motors in a range of voltages, with both soft and preformed coils, we routinely rewind more complex motors such as oil and water filled motors and large machines.

Testing

We carry out extensive electrical and mechanical light-run testing of the overhauled assemblies using 415 to 1000V to rotate the motors, while taking measurements of vibration analysis and alignment checks. This is to ensure the serviced/overhauled motors meet a high-quality standard.

Additionally, during electric motor rewinds, we individually test all windings using Baker Test equipment to verify all electrical components for Megger (IR), resistance of connections, Hipot/Flash, interturn surge test, polarisation index, phase line-to-line, and line-to-ground testing.

Load testing can also be carried out either in house or in conjunction with our approved partners to fully test the motor and reassure the customer that the electric motor will perform on reinstallation. This is of particular benefit for critical assets or difficult to access locations.

A comprehensive test report is provided to the customer and we also video record all testing and save this electronically on our ERP system for future reference.

Ex Hazardous Area Electric Motors

As specialists in Ex hazardous area electric motor repairs, we have experience in the repair and overhaul of hazardous area equipment. Our workshop facility has been authorised by SGS to carry out repair and overhaul services to ATEX Ex rated motors for use in potentially explosive atmospheres.

Our IECEx certification provides independent assurance to ensure all instruments used are calibrated, all personnel are competently trained and all jobs completed are properly documented, with highly controlled processes in place to ensure a high quality repair.

New Motors

Where a motor cannot be repaired or where this is not the most economical option, we offer support to customers by helping to specify the most suitable motor for application.

We work with a range of suppliers of both off the shelf and custom built motors to offer cost effective solutions in the shortest lead-times possible.

Contact us on +44 (0)191 234 3000 to find out more
or visit www.houghton-international.com

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