



# Ex Machines

## IECEx certified service facilities using approved Explosion Protection Techniques

Ex design concepts have enabled the safe use of electrical equipment in hazardous areas of production. However, as with all electrical equipment, regular maintenance is essential to ensure peak performance but working on Ex Machines comes with an added challenge which is to ensure that all unique Ex safety features included in the design and manufacturing of Ex equipment are not comprised during the removal, installation and overhaul / repair process.

### IECEx Certified Service Facilities Scheme

Quartzelec have been awarded the international standard IEC 60079-19 under the IECEx certified service facilities scheme which is an internationally recognised compliance Certification Scheme that covers the assessment and the on-site audit of organisations that provide services such as repair, overhaul and modification of plant used by the Ex industry ([www.iecex.com](http://www.iecex.com)). Organisations certified under this scheme provide industry with the assurance that repairs and overhaul to Ex equipment will be undertaken according to the strict requirements of the IECEx Scheme to the International Standard IEC 60079-19

### Key Capabilities

- Fully equipped facilities to work on Ex Machines
- In house purging and pressurisation systems
- Competent personnel, trained under the requirements of the IECEx scheme
- In depth analysis on the condition of the equipment
- Range of service and maintenance options
- Thorough testing and Quartzelec assurance that the product can be returned safely to service
- 24/7 support service

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## Types of Ex Protection

Quartzelec are fully equipped and capable of working on machines based on the following protection concepts:

- Ex n Machines: Non Sparking and not capable of igniting an Ex environment
- Ex d Machines: Flameproof, withstanding internal explosion and preventing transmission to the external environment
- Ex e Machines: Increased Safety, preventing excessive temperatures and occurrence of arcs and sparks
- Ex p Machines: Purged and Pressurised, preventing entry of hazardous atmosphere into the apparatus

## Service and Maintenance Options

Based on the priorities of the machine and the requirements of the customer, Quartzelec can provide a tailored scope, suggesting various maintenance and refurbishment solutions including:

- Design and machine engineering
- Repair and refurbishment
- Installation and commissioning
- Site service
- Major overhauls
- Replacement machines

## Purging and Pressurisation Systems for Hazardous Areas

The LCP51 and QuartzPurge Electronic purge system have been specifically designed for larger rotating machines to be used in potentially explosive atmospheres, where other 'standard' forms of protection such as flameproof machine enclosures are unsuitable. Due to the flexibility of these systems, they can be used for most equipment requiring purging and pressurising. The QuartzPurge Electronic system fully compensates for leakage variations which may occur through either sealing degradation or temperature change, is of rugged construction and can either be locally or remotely operated.

## Terminal Boxes

We are able to offer a full range of Ex certified terminal boxes and parts to suit new machines or replacement terminal boxes and parts for pre-ATEX machines.

## Rotoguard

Rotoguard systems, for detecting rotor earth faults and other Ex certified equipment, such as over-voltage protection devices, can be serviced and/or replaced as required.

**You can rely on Quartzelec to deliver a quality, robust, cost effective service. Contact us to discuss your next project or to find out more about our range of services.**

