ETC

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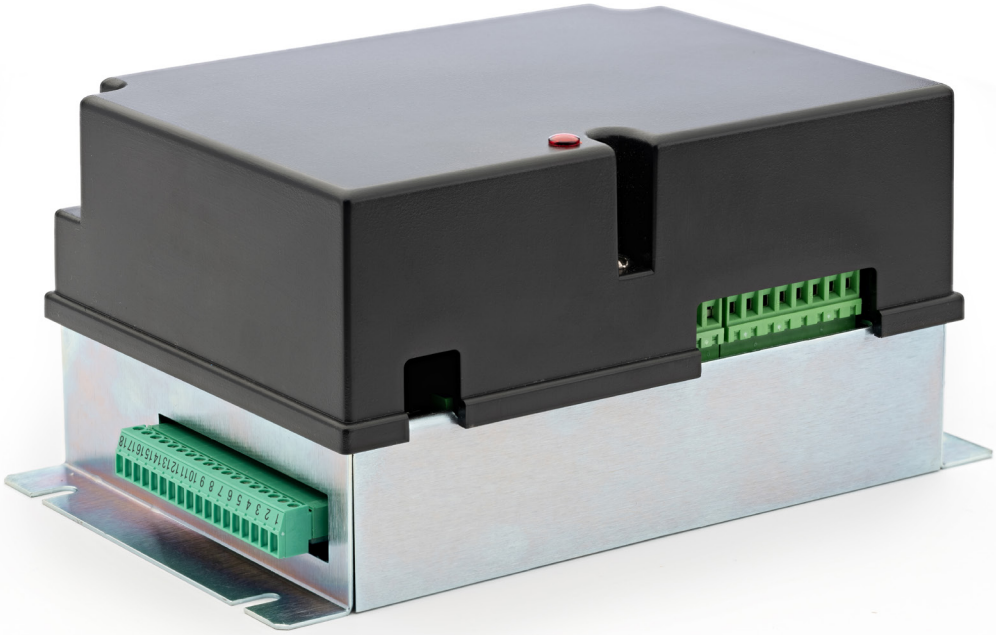

ETC6000 Series Burner Control System

# ETC6100 Electronic Ratio Control

**The ETC6100 Electronic Ratio Control (ERC) sets a new standard in combustion optimisation. Designed for smart systems, it integrates with IoT frameworks and supports advanced analytics to deliver precise, efficient, and environmentally responsible performance.**

## Features:

- **Extensive actuator support:** Up to 10 rotary actuators can be assigned allowing complex applications to be addressed.
- **Dual drive management:** Control of two variable speed drives for combustion air and fuel pump control.
- **Advanced sensor integration:** Local modulation using ETC or third party boiler temperature or pressure sensors and two internal PID controllers.
- **Multi-curve configuration:** Up to 4 fuel:air ratio profiles can be programmed.
- **CANBus communications:** Between controllers, actuators, displays and peripherals simplifies wiring.
- **IoT connectivity:** Choice of communications protocols including RS-485, Profibus and Modbus RTU.
- **Comprehensive application support:** Versatile programming options allow most applications to be addressed.
- **Integrated oxygen trimming:** Oxygen trim option using dedicated ETC oxygen probe and interface.
- **External system connectivity:** Interfaces to third party flame safeguards.
- **Flexible user interface:** Multilingual text or graphical display options available.
- **Advanced combustion control:** Provides precise fuel:air ratio adjustments to optimise burner performance.

## Benefits:

- **Sustainable energy savings:** Improved combustion and turndown saves up to 5% on fuel costs and significantly reduces harmful CO2 and other flue gas emissions
- **Reduced downtime:** Prolongs boiler life and reduces maintenance downtime.
- **Enhanced positioning accuracy:** Rotary actuators with a positioning accuracy of ±0.1° replace conventional characterising cams and linkages and eliminate backlash and hysteresis.
- **Energy-saving strategy:** Using a second setpoint during periods of low demand save up to 10% in fuel usage.
- **Efficient oxygen control:** Oxygen trim saves up to 3.5% fuel usage.
- **Secure system operation:** Passcode protection prevents untrained/unauthorised changes to combustion set-up.
- **Streamlined system integration:** Integration of PID modulation and air fuel ratio control into a single unit simplifies wiring and interconnection and improves reliability.
- **Scalable control solutions:** Compatible with ETC621x expansion modules for boiler water control.
- **Regulatory compliance:** Ensures adherence to strict emissions standards, including low NOx requirements.
- **Energy efficiency:** Reduces fuel consumption while maintaining optimal burner operation.

**The ETC6100 Electronic Ratio Controller (previously referred to as a FARC or GARC) represents a significant advancement in combustion control technology, designed to enhance the performance and efficiency of various burner control systems. This innovative controller excels in managing both single point and multi-element combustion processes, offering precise control over the air-fuel mixture. The integration of advanced monitoring and control capabilities is critical for optimising combustion efficiency, thereby reducing fuel consumption and emissions.**

One of the standout features of the ETC6100 is its compatibility with Variable Frequency Drive (VFD) technology, which allows for dynamic control of fan speed. This capability enables the controller to adjust fuel and air flow in real time, based on the combustion demand. By optimising the air-fuel ratio, the ETC6100 ensures that the burner operates at its peak efficiency, leading to improved fuel economy and reduced greenhouse gas emissions. This is particularly important in today's regulatory environment, where facilities are increasingly held accountable for their environmental impact.

In addition to VFD integration, the ETC6100 supports oxygen trim functionality. This advanced feature continuously monitors the combustion process, adjusting the fuel-air ratio to maintain optimal conditions. By ensuring that the burner operates with the correct mixture, the oxygen trim function not only enhances efficiency but also helps to minimise the production of harmful emissions, making it easier for facilities to comply with stringent environmental regulations.

The compact and versatile design of the ETC6100 is another key advantage. Its small footprint allows for easy installation within burner enclosures, making it an ideal solution for both new installations and retrofit applications. This space-saving design simplifies the installation process, reducing labour costs and minimising disruption to existing operations. Furthermore, the controller's compatibility with both single and dual-fuel boilers provides flexibility to accommodate a wide range of systems and operational requirements, making it a valuable addition to any facility.

The ETC6100 is particularly well-suited for managing low NOx emissions through techniques such as flue gas recirculation. As environmental regulations become more stringent, the ability to effectively manage emissions is essential for many industries. The ETC6100's advanced control functions ensure that facilities can meet these requirements without compromising on performance. Additionally, the controller is capable of handling more complex or 'exotic' fuels, making it a robust solution for industries that rely on diverse fuel sources.

With its focus on high performance and reliability, the ETC6100 is engineered to deliver precise control even in the most demanding applications. Its ability to seamlessly integrate with existing burner control systems enhances its utility across a variety of industries. By providing efficient combustion management, the ETC6100 not only contributes to reduced fuel consumption and lower operating costs but also enhances overall burner performance.

In summary, the ETC6100 Electronic Ratio Controller is an essential tool for facilities looking to improve combustion control and system efficiency. Its advanced features, compact design, and adaptability to various fuel types make it a standout choice for optimising burner operations. By leveraging the capabilities of the ETC6100, facilities can achieve significant improvements in efficiency, environmental compliance, and operational performance, positioning themselves for success in an increasingly competitive landscape.

**For further information on the ETC6100 Electronic Ratio Control contact ETC today for bespoke solutions tailored to your needs.**

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