



Energy • Technology • Control



ETC6000 Series Burner Control System

ETC6081 Oxygen Trim System

The ETC6081 Oxygen Trim interface and software is a versatile solution that maximises combustion efficiency and enhances combustion control by enabling the integration of an oxygen probe to ETC Controllers

Features:

- Intuitive automatic trim set-up reduces commissioning time.
- Assignable oxygen and temperature alarm limits.
- Boiler efficiency & calculated CO₂ can be displayed and retransmitted when 6086 Air Temperature Sensor is included in the peripheral configuration.

ETC6083 Probe

- No moving parts.
- No pumped reference air is required.
- Stainless steel construction.
- 6 micron sintered stainless steel filter.
- Suitable for flue gas temperatures up to 540°C/1000°F.

Benefits:

- Achieve up to 3.5% reduction in fuel usage with precise oxygen trim adjustments.
- Reduced CO₂ emissions.
- Optimisation of fuel:air ratio to compensate for variables such as barometric pressure, humidity, gas pressure.
- Improved boiler efficiency and reduced maintenance and downtime (due to less deposits on boiler tubes).
- Extended boiler lifespan.
- Adaptive trim algorithm can cope with continually modulating burners.

ETC6083 Probe

- Integrated thermocouple.
- Range of probe sizes covering flue sizes from 0.3m to 4.0m across.
- Exceptionally quick response time.

The ETC6081 Oxygen Trim System is a sophisticated and highly efficient solution designed to optimise combustion efficiency in industrial and commercial settings. By continuously monitoring and dynamically adjusting the fuel:air ratio in real time, the ETC system ensures that boilers and burners operate at their maximum efficiency. This not only reduces fuel consumption but also minimises harmful emissions and enhances overall system performance. The result is a highly reliable and effective system that is perfect for facilities seeking to improve fuel efficiency, lower operating costs, and reduce their environmental impact.

The system works by incorporating an oxygen sensor placed in the flue gas outlet. This sensor continuously measures the oxygen concentration in the exhaust gases, feeding this data to the system's controller. With this real-time feedback, the system automatically adjusts the burner's fuel:air ratio to maintain optimal combustion at all times. Whether the load conditions are steady or fluctuating, the ETC system adjusts dynamically, ensuring the correct balance of air and fuel. This responsiveness guarantees that combustion is always efficient, preventing issues such as over-firing or under-firing, both of which can lead to wasted fuel and increased emissions.

One of the key benefits of the ETC6081 Oxygen Trim System is its flexibility. The system is compatible with multiple fuels, including natural gas, oil, and LPG, which allows it to adapt to different operational environments and energy requirements.

The precise control that the ETC6081 Oxygen Trim System offers over oxygen levels directly translates into fuel savings and reduced operational costs. Even small deviations in the fuel:air mixture can lead to significant increases in fuel consumption, so the ETC6000 Series Oxygen Trim System's ability to maintain the optimal oxygen level at all times is a major factor in reducing waste. This, in turn, results in a substantial decrease in energy costs, while also enhancing the longevity and reliability of the equipment.

Additionally, maintaining optimal combustion not only reduces fuel consumption but also leads to a significant reduction in harmful emissions, supporting compliance with environmental regulations and promoting sustainability. The improved combustion efficiency lowers the carbon footprint of the facility, contributing to a greener, more sustainable operation. The result is a reduction in greenhouse gas emissions, improved air quality, and a more environmentally responsible approach to energy consumption.

Overall, the ETC6081 Oxygen Trim System provides a comprehensive solution for businesses looking to maximise their operational efficiency while reducing fuel costs and minimising their environmental impact. Whether for new installations or as part of a retrofit project, this system is an invaluable tool for those who are committed to achieving the highest standards of efficiency and sustainability in their combustion processes. By eliminating inefficiencies, lowering emissions, and driving fuel savings, the ETC Oxygen Trim System plays a pivotal role in modernising combustion control and ensuring long-term cost-effectiveness.

For further information on the ETC6081 Oxygen Trim System contact ETC today for bespoke solutions tailored to your needs.

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