



MEGTEC

CleanSwitch[®] Regenerative Thermal Oxidizer (RTO)

Environmental Compliance for the Ethanol Industry



www.durr-megtec.com

CleanSwitch® RTO: Environmental Compliance for the Ethanol Industry

The Dürr Megtec CleanSwitch® regenerative thermal oxidizer is engineered specifically for high particulate moisture-laden streams coming from the DDGS drying process. Typical RTOs available today are subject to corrosive streams and increasing operating costs associated with frequent bake-out cycles. The CleanSwitch RTO requires fewer bake-out cycles compared to single- and multiple-chamber RTOs, and is biomass compatible. Additional operating savings are realized with our patented air-gas ratio control, which can yield savings of up to 18% on natural gas usage.

Combining these features and benefits with heat-recovery systems, along with the ability to process syngas, makes the Dürr Megtec CleanSwitch RTO the most efficient, cost-effective and trouble-free VOC removal system available for the biofuels industry.

Simple, Modular Design

Designed to reduce complexity, the CleanSwitch RTO provides cost benefits of modular design, coupled with improved performance. In addition, the CleanSwitch design retains the flexibility needed to adapt easily to the drying process. When combined with multiple DDGS dryers, the CleanSwitch modular design can easily accommodate larger volumes within a single RTO.

Thermal Efficiency

The CleanSwitch RTO offers thermal efficiencies of 95% to 97%. Increasing the thermal efficiency brings additional gas savings to your plant, as well as improves your bottom line.

99+% VOC Removal

The CleanSwitch RTO takes its name from the Dürr Megtec patented valve that keeps cleaned air totally separate from dirty process exhaust. The valve utilizes a double-air seal and is the only moving part in the unit. The oscillating design promotes uniform air distribution and results in a maintenance-friendly unit.



20,000 SCFM unit



30,000 SCFM unit

Smooth Process Integration & Operation

The valve design in the CleanSwitch RTO virtually eliminates pressure spikes typical of poppet valve systems. Smooth flow transition between heat-recovery chambers eliminates process upsets from pressure changes during a valve switch. This allows for a smooth transition without upsetting the DDGS dryers.



Quality Assurance

Dürr Megtec directly controls the quality and performance of all its units. We pre-assemble and pre-test modular components in our factory, which provides significant savings of time and money during installation and start-up.

Design Features and Performance Benefits

- Biomass-, methane-, and syngas-compatible designs
- Effective regulatory compliance with 99+% VOC destruction efficiency
- Standard 95% thermal efficiency minimizes fuel costs; options for 97% are also available
- On-line bake-out capabilities
- Plug-resistant media designs
- Natural gas savings of up to 18% compared to conventional RTOs
- Engineered and constructed from corrosion-resistant materials
- Up to 20% lower electrical costs
- Sizes up to 90,000 SCFM (142,000 Nm³/hr)
- Trouble-free operation for low maintenance costs
- Pre-piped and pre-wired, for reduced installation time
- State-of-the-art control system
- Skid-mounted control house with HVAC unit and power distribution
- Air-gas ratio control
- Induced- or forced-draft arrangements

Optional Equipment

- Secondary heat recovery
- 97% thermal efficiency
- Natural gas injection (NGI)
- Syngas upgrades



50,000 SCFM unit



60,000 SCFM unit



65,000 SCFM unit



90,000 SCFM unit



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