



LDX Solutions supplies state-of-the-art clean air technologies to industry with a complete line of Geoenergy® technologies. This includes the GeoTherm® II RTO, the E-Tube® Wet ESP, and wet scrubber systems. Since 1984, the Geoenergy technologies have solved difficult air emission control issues, while meeting demanding air quality regulations with unmatched availability and low operating costs.

For complete engineering, project management and construction services, as well as comprehensive aftermarket service and spare parts supply, contact LDX Solutions today.

LDX Solutions

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Our Expert and Experienced Staff

For nearly 30 years the Geotherm® RTOs and Geocat® RCOs has been used to destroy VOC and HAP emissions from a wide range of industries including Wood Products, Tire Manufacturing, Ethanol, Chemical Processing, Insulation Manufacturing, Packaging and Printing, to name a few. Being one of the original manufacturers of RTO and RCO systems in North America demonstrates our commitment to our customer and to the reliability of our designs.

Our expert and experienced staff ensures that the customers need's to optimize energy consumption with a robust, reliable system will be met along with our continued efforts of our aftermarket technical team to support installations long after start-up and commissioning have occurred. The advantages of the Geotherm® RTOs and Geocat® RCOs systems go beyond our cost-effective systems. Our optimized design ensures long-term environmental compliance with a track record to prove it.

LDX Solutions is also an Industry Leader with other Clean Air Technologies:

- E-tube® Wet Electrostatic Precipitators (WESP)
- Geoenergy® Wet Scrubbers
- Fabric Filter Dust Collectors (Baghouses)
- Cyclones / Multi-Clones
- Circulating Dry Scrubbers (CDS)
- Ceramic Element and Catalytic Filter
- Activated Carbon (ACI) & Dry Sorbent Injection (DSI) Systems
- Air-to-Air Heat Exchangers
- SCR/SNCR

Dustex®

Geoenergy®

Lundberg®

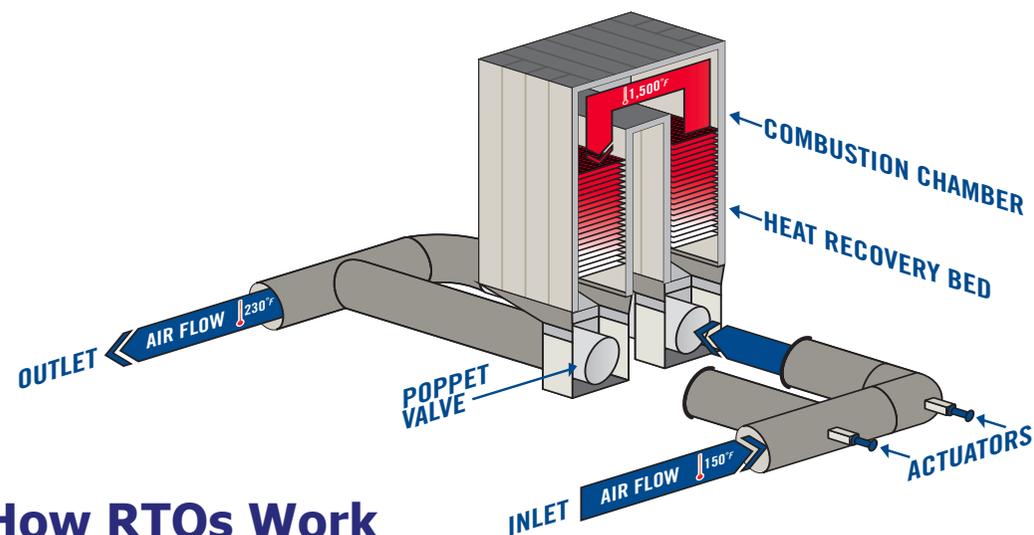
GEOTHERM® II REGENERATIVE THERMAL OXIDIZER (RTO)



REGENERATIVE THERMAL OXIDIZERS (RTO)

Efficient VOC Abatement

Regenerative Thermal Oxidizers (RTOs) destroy Volatile Organic Compounds (VOCs), Hazardous Air Pollutants (HAPs), odors, and other organic substances from a variety of industrial process streams, while minimizing energy use and cost.



How RTOs Work

VOC-laden process gas enters the RTO inlet manifold and then passes upwardly into a heat recovery chamber that contains ceramic media. Here, the incoming gas is preheated before entering a combustion chamber. Inside the combustion chamber the gas is exposed to a high temperature to oxidize and destroy the VOCs. The purified gas then passes downward through the outlet heat recovery chamber where it releases its thermal energy as it passes through the ceramic media. Poppet valves are used to alternate the airflow direction into the heat recovery media beds to continue to store and release the heat added in the combustion chamber. This back and forth regenerative process minimizes the total heat added to the outlet gas stream to maximize thermal efficiency.

Lower Operating Costs

RTO technology is widely used because of its ability to capture and repurpose the thermal energy generated during operation, lowering the units operating costs by reducing energy consumption.

THE GEOTHERM® II RTO

Simplicity Meets Performance

The GeoTherm® II RTO uses a simple, state-of-the-art design to achieve the highest thermal and destruction efficiencies. Our RTOs are available in multi-canister arrangements for air flows ranging from 2,500 scfm to 450,000 scfm. Designs include both forced draft and induced draft fan arrangements depending on the upstream application.

The GeoTherm® RTOs include fast acting poppet valves and can include any arrangement/combination of ceramic heat exchange media (structured, monolith, or random type) selected specifically for the application, the lowest pressure drop, and highest thermal efficiency possible, in order to optimize operating costs. Our RTOs are capable of providing 99%+ VOC destruction and up to 97% thermal efficiencies for environmental compliance, year in and year out.

Fast-Acting Poppet Valves

Fast-acting poppet valves are an ultra-simple and highly efficient feature of the GeoTherm® II RTO. The poppet valve is used to quickly divert process gas flow between the RTO inlet and outlet manifolds with a minimum of gas bypass. Gas leakage across the valve is also greatly minimized by a proprietary disc design that provides a greater than 99% gas seal. The simplicity of this feature also means that maintenance is straightforward and manageable by any operation.

Industries Served

- Carbon Fiber
- Chemical Manufacturing
- Pharmaceutical
- Automotive
- Petrochemical
- Foundry
- Styrene
- Waste Water Treatment
- Printing & Flexography
- Flooring
- Fiber Manufacturing
- Pulp & Paper
- Rendering
- Ethanol
- Engineered Wood Products
- Oil & Gas
- Fiberglass / Mineral Wool Insulation
- Surface Finishing / Coating
- Semiconductor

Particulate Control Pretreatment Systems for RTOs

We design and supply industry-leading devices for this pre-cleaning. Solutions are chosen based upon the application and requirements.



The Geoenergy® Brand

Our RTOs have been operating successfully for over 30 years in some of the harshest process environments in the air pollution control industry.

The LDX Solutions Difference

For over 80 years, our engineers have been proud to analytically apply technologies to industry and helping our clients find solutions and adapt to changing technologies and emissions requirements. Today, we continue that tradition, offering complete engineering, project management, and construction services, as well as comprehensive aftermarket service and spare parts supply.

Contact LDX Solutions today to learn more about our GeoTherm® II RTO and other emissions control solutions.

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