

## Thermal Oxidizer

Purify exhaust air with high-temperature oxidation

Zenviro Tech's thermal oxidizers have proven to be robust, reliable and ubiquitous in many applications. More than 1,200 engineered and fabricated thermal oxidizers have been installed successfully in our institutional history with satisfied customers around the world.

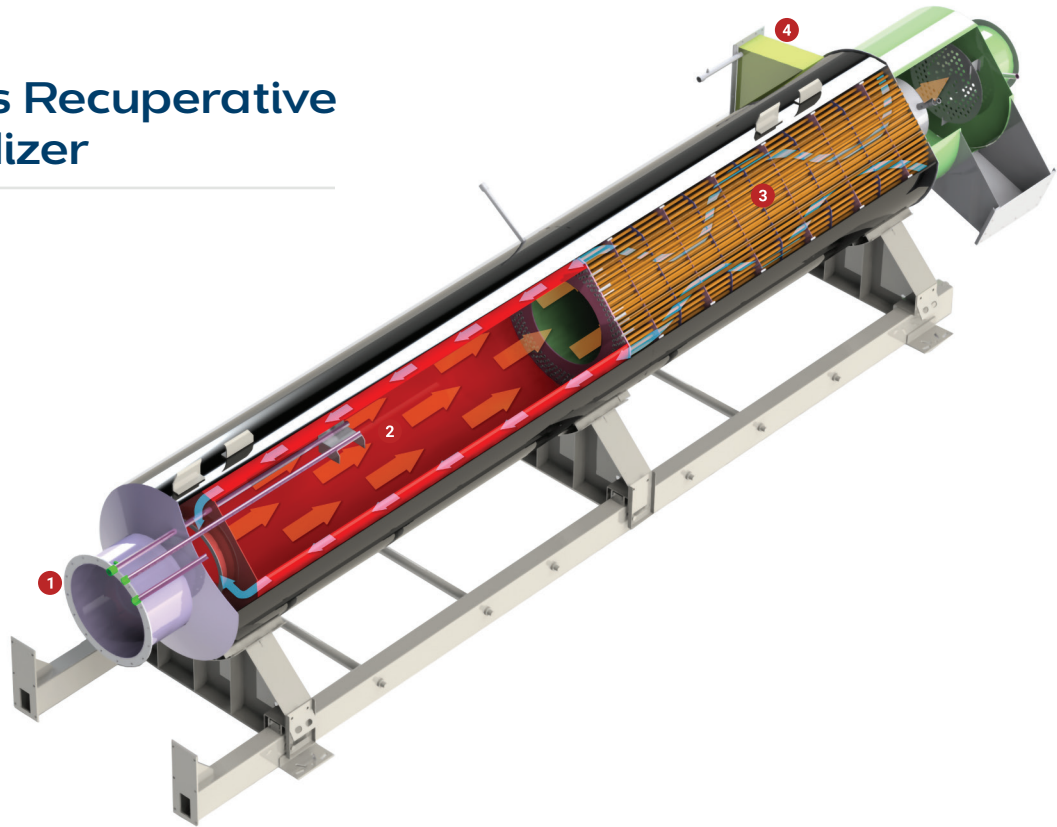
Thermal oxidation achieves gas purity conversion well above 99% for VOCs, with some trade-offs in thermal NO<sub>x</sub> and CO. Based on clever process designs, Zenviro Tech is able to offer solutions that cost effectively mitigate NO<sub>x</sub>, CO and total carbon footprint through our thermal oxidizer designs.

Zenviro Tech has unique and established expertise in providing customized exhaust air pollution treatment systems to process industries around the world. We provide fit-to-purpose air pollution control systems that meet required emission mandates as well as specific customer specifications in a wide variety of industries all over the world.

- **Trusted and Proven**  
40+ years of experience and know-how where our customer needs it most. Provides ease of mind for our customers.
- **Two designs with specific advantages for custom tailored solutions**
- **Compact and Easy to Install**  
Heavily pre-fabricated and pre-assembled system that can be skid-mounted for quick installation at site.
- **ECO-friendly and energy-efficient thermal oxidation**  
Utilize internal heat recovery, and/or downstream catalysts to mitigate thermal NO<sub>x</sub>, CO, and carbon footprint
- **Minimal Utility Requirements**  
Operates without hydraulic or compressed air, water, or steam, leading to low operating costs.
- **24/7/365 Technical Response Service**  
Emergency Line: +1 (888) 711-6660

# Zenviro Tech's Recuperative Thermal Oxidizer

1. Burner System
2. Combustion Chamber
3. Primary Heat Exchanger
4. Exhaust Air Blower



## Comparison:

## Which Thermal Oxidizer Best Suits Your Needs?

### Zenviro Tech Thermal Oxidizer (ZTTO)


- 99-99.99% DRE Dual "Hourglass" Thermal Oxidizer designed to Minimize NOx Emissions
- Designed for Applications 1,000–20,000 SCFM with LEL's >10%
- Well suited to achieve high rates of oxidation with challenging bad actors such as CO, HCN, cyclical hydrocarbons, ketones, aldehydes
- Integrated Selective Non-Catalytic (SNCR) zone for additional NOx control
- Available with Honeywell Maxon burners for low NOx applications
- Easy to add on external heat recovery for making medium pressure steam or hot oil
- Modular, horizontal design, ships to site pre-insulated ready for mechanical interconnections

### Recuperative Thermal Oxidizer (RCU)

- 98–99.5% DRE with Internal Heat Recovery allowing 20–60% TE
- Designed for applications 1,000 - 20,000 SCFM with 5–25% operating LEL's
- Highly modular, pre-assembled, skid mounted, horizontal design that can install in 2–3 days
- Operates well with variable composition and VOC loading applications, can vary native thermal efficiency in seconds via actuated baffles
- Very quick startup/shutdown capability due to its MOC and no refractory
- Instead of refractory, utilizes high temperature corrosion resistant steel/alloys and externally insulated and clad for personnel protection



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