

# Mobile Regenerative Thermal Oxidizer



## On-Site Testing and Performance Verification

Before you invest in a regenerative thermal oxidizer (RTO) system, you should feel confident that it will meet your volatile organic compound (VOC) emission control needs. McGill AirClean's mobile RTO can give you that confidence by proving the effectiveness of a ThermaGrid™ RTO system on your actual process. We can transport our mobile RTO to your facility and run a complete pilot test program on your emissions.

Our mobile unit is a self-contained RTO system capable of handling a representative amount of your process gas flow (up to 2,000 scfm). It enables us to collect the data necessary to optimize a full-scale RTO system for your application and to demonstrate that it will comply with your emission regulations.

The mobile RTO is fully equipped with the

instrumentation and controls necessary to monitor and record system parameters. Its control system allows us to continuously monitor VOC destruction efficiency, thermal efficiency, process gas flow, and differential pressure across the RTO system. By varying combustion temperature, regeneration cycle time, system flow, and the configuration of the ceramic grid-block media, we can determine the best operating conditions for your process. This enables us to engineer a full-scale RTO system that will combine effective VOC destruction with economical and dependable operation.

McGill AirClean's air pollution control technicians will run your mobile RTO test program, handling setup, testing, data collection, and analysis. We provide an air conditioned control room that encloses our power panel, control panel, and PC-based operator interface control system (PC-SAM). The PC-SAM interface

### Mobile RTO: Three-bed system with hot bypass



State-of-the-art instrumentation and control system

Single-burner combustion chamber with access door and sight glass



Fold-up walkway

enables us to record and trend data which is used to produce a detailed report of the mobile RTO's performance throughout the test program.

Our mobile RTO is mounted on a trailer so that it can be easily transported to any location. Because it stays on the trailer, no crane or lay-down area is needed. In most cases, the equipment can be set up and ready to begin testing within 1 day with no downtime for your plant.

We can use our mobile RTO in conjunction with our mobile electrostatic precipitator (wet or dry) or mobile dry scrubber to engineer a complete air pollution control system that will reduce particulate, acid gas, and VOC emissions.

### Specifications

- Gas Volume Flow: 2,000 scfm maximum
- Design Temperature: 1,800°F maximum
- Burner Size: 200,000 Btu/hr
- Offtake Pressure: ±5 inches water column maximum
- VOC Loading: 0 to 50 lb/hr

### Physical Characteristics

- Height: 13 feet, 6 inches
- Width: 8 feet, 6 inches
- Length: 45 feet
- Total Weight: Approximately 60,000 pounds
- Tandem-axle, air-cushion suspension trailer
- Four-position hydraulic leveling system

### Energy Requirements

#### Electrical

- 480 volts
- 150 amps
- Three phase, 60 Hz

#### Fuel

- Propane or Natural Gas
- 200,000 Btu/hr
- 5 psig minimum



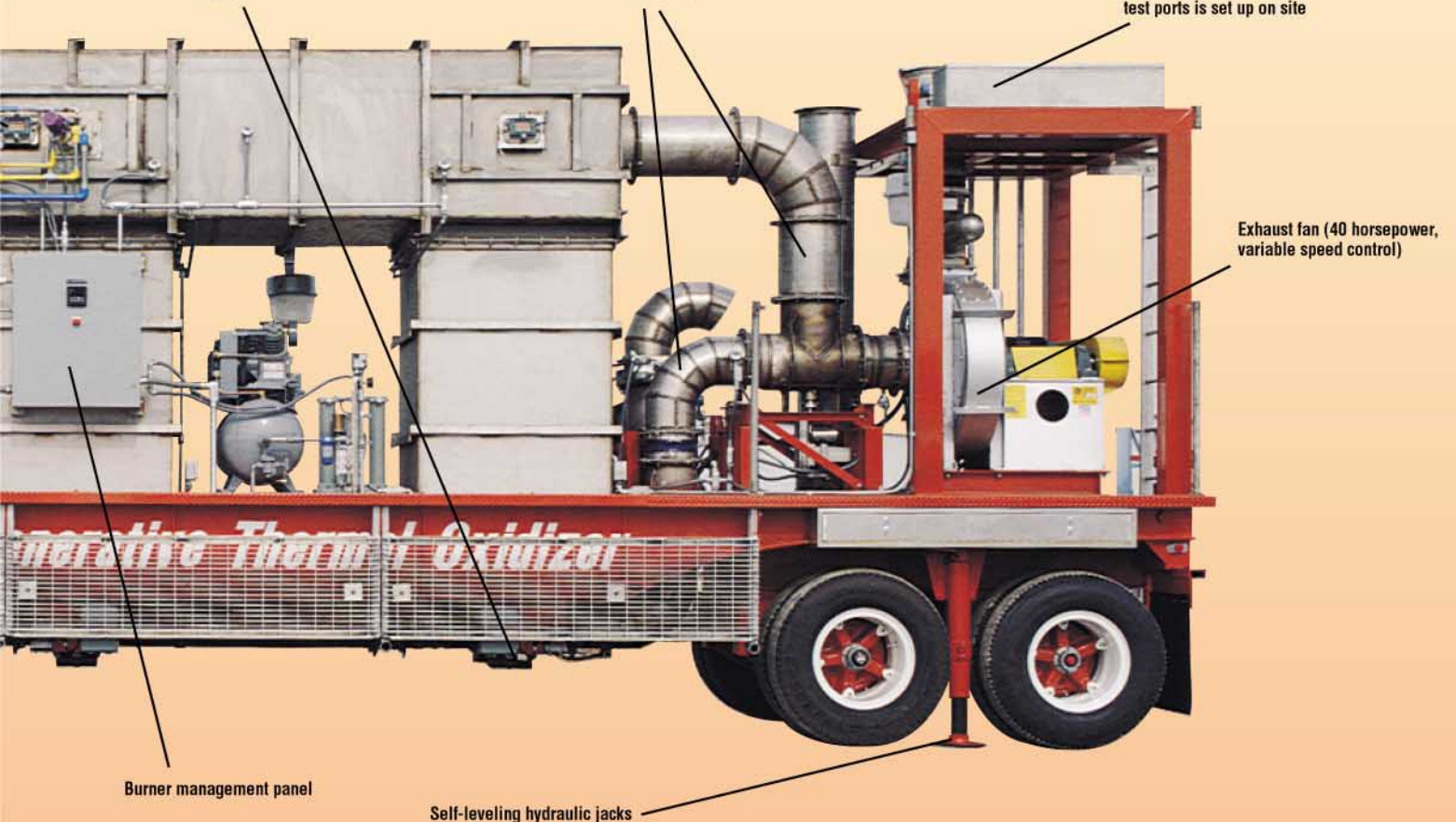
Pneumatic poppet valves



Inlet/outlet duct and connection port for plant's process gas flow



Removable exhaust stack with test ports is set up on site



Exhaust fan (40 horsepower, variable speed control)

Burner management panel

Self-leveling hydraulic jacks

## Setup is Quick and Easy

Once the mobile RTO is on site, McGill AirClean can set it up quickly with little or no downtime for your process. All you need to supply is electrical power, propane or natural gas, inlet duct tie-in, and telephone service for the control system's modem.



1. Very little room is needed for the mobile RTO trailer. It is equipped with self-leveling hydraulic jacks so that it can be set up on a variety of surfaces.



4. Ductwork is run from your process exhaust duct or stack to the RTO's inlet.



2. Walkways, stairs, and handrails are put into position to provide easy access to the RTO and its controls.



5. An exhaust stack is bolted into place on the mobile RTO platform.

ThermaGrid™ regenerative thermal oxidizers are designed, manufactured, and installed by McGill AirClean Corporation under license from Chemisch Thermische Prozesstechnik GmbH, Graz, Austria.



3. The RTO's burner management panel and electrical system is connected to your plant's power supply. Propane or natural gas supply is also hooked up.



6. The mobile RTO is ready to begin testing your process emissions.

McGill AirClean Corporation products depicted in this brochure were current at the time of publication. As a quality-conscious manufacturer, McGill AirClean continually seeks ways to improve its products to better serve its customers. Therefore, all designs, specifications, and product features are subject to change without notice.

To find out more about setting up a mobile RTO test program, contact:

**McGill AirClean Corporation**

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Founded in 1951

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