



Colt Technologies

Air Quality Control Group

**High Performance
Industrial Emission
Control Technologies
and
Technical Field Services**

Colt's MAXIM RTO

Regenerative Thermal Oxidizer

Colt's MAXIM RTO™ Regenerative Thermal Oxidizer is simple to operate, simple to maintain, and so energy efficient that it can run self-sustaining, without the need for auxiliary natural gas fuel, for many industrial applications. The MAXIM RTO utilizes the energy contained in the heat of combustion from the Volatile Organic Compounds (VOC) in the process exhaust to maintain the mandated minimum combustion chamber temperature.

The MAXIM RTO's twin vertical heat recovery chambers contain high temperature ceramic media that recovers up to 96% of the energy generated from the high temperature oxidation process. Twin poppet style flow diverter valves located under each of the twin vertical heat recovery chambers alternate the direction of flow (clockwise or counterclockwise) into and out of the MAXIM RTO, thereby maintaining peak heat recovery efficiency and optimal VOC destruction performance.

The MAXIM RTO is available in skid mounted systems for process volumes ranging from 1,500 to 15,000 scfm. Field erected systems are available up to 90,000 scfm for a single unit. Multiple chamber units (3,4,5,6,7) are available to handle large process exhaust volumes, from 50,000 to 300,000 scfm, and to meet other process considerations.

The high performance MAXIM RTO meets stringent State and Federal regulatory requirements for VOC, Odor, and Air Toxics destruction, while generating very low NOx, CO, and other combustion by-products.

Up to 99% Destruction Efficiency

Up to 96% Heat Recovery

Simple Automatic Operation

Easy to Maintain

Meets Regulatory Requirements



SIMPLICITY, EFFICIENCY AND COST EFFECTIVENESS...



MATERIALS OF CONSTRUCTION FOR THE MAXIM RTO AND SYSTEM COMPONENTS RANGE FROM MILD STEEL TO TITANIUM OR OTHER EXOTIC ALLOYS. THE MATERIALS SELECTED FOR EACH APPLICATION IS BASED ON PROCESS CHEMISTRY AND OPERATING CHARACTERISTICS.



Colt's MAXIM RTO™ Regenerative Thermal Oxidizer is so energy efficient that it can run self-sustaining, without the need for auxiliary fuel, for many industrial applications. The type and quantity of ceramic heat transfer media is specially selected for your application based on the characteristics and chemistry of your processes. Our typical media is structured media (pictured), but random packed saddles and other specialty medias are also available.



Process exhaust fans and combustion air blowers are selected from leading manufacturers for long term reliability. The MAXIM RTO is designed to operate in either a forced draft or induced draft mode, with the fan on the outlet of the MAXIM RTO.



Colt's MAXIM RTO systems are provided with Allen-Bradley programmable logic controllers, and Honeywell burner controllers as standard equipment. As a trend today, many of our systems have been provided with a network interface, to allow monitoring and control of the MAXIM RTO from remote locations - on or off the plant site.

The control panels are typically NEMA 4, mild steel, but can be provided in virtually any enclosure rating or materials of construction.



Combustion air blowers are provided with inlet silencers and air filters to minimize ambient noise, and protect the blower from dust and particulates.



Natural gas burners, controls, and fuel trains are selected from industry leading suppliers. Typical applications are single fuel, with natural gas being the most common fuel. However, multi-fuel systems can be provided allowing the system to operate on Propane, Butane, LNG, or virtually any combination of commercially available fuels.



System exhaust stacks are available in any material of construction, any height, and any platform and ladder arrangement. Colt engineers will design the stack to meet your seismic zone and wind load requirements, and provide you with foundation and anchor bolt drawings.



The dual Poppet style diverter valves located under each recovery chamber are a zero leakage design, and are the best choice for overall performance, reliability, and maintainability. The valves are pneumatically actuated, and require a minimum of 80 psig of clean and dry air. Inspection or preventative maintenance does not require a confined space permit, and all components are easily replaced. The standard materials of construction is 304 stainless steel, with other alloys available for more demanding applications.



Total turnkey systems are available for single source project management, start to finish.





Colt's experienced personnel are ready to assist you with all your pollution abatement needs through our sales, technical services, and representative's offices.

Administration Headquarters

P.O. Box 1840
Rockwall, TX 75087

(972) 385-7770
Sales@colttechnolgies.net

Manufacturing Headquarters

9710 U.S. Highway 271
North Powderly, TX 75473

(903) 732-3646
HSutton@colttechnologies.net

www.colttechnologies.net