



**Leaders in Providing
Innovative Air Quality
Solutions for over
50 Years.**

ENVIRONMENTAL DIVISION



**C A T A L Y T I C
C O M B U S T I O N**



WWW.CATALYTICCOMBUSTION.COM



Express Catalytic Oxidizer

The Express Catalytic Oxidizer is available from 100-3000 SCFM and can be operated on either propane or natural gas. It is our most economical offering and provides a good balance between capital investment and operating cost. The Express features a stainless steel reactor, 5% heat exchanger, high efficiency catalyst module and state-of-the-art controls. The system is extremely user friendly, with single touch operation. An optional secondary air-to-water heat exchanger is available to pre-heat contaminated groundwater prior to treatment.

Most Companies Offer Only One Solution for Remediation Off-Gas Treatment
We Offer Choices For The Right Solution!

SERVICE & SUPPORT GROUP PROVIDES

- **Start up and Operator Training**
- **Service and Maintenance Contracts**
- **Refurbishing and Repair of Used or Existing Oxidizers**

Catalytic Combustion has been engineering and manufacturing remediation oxidizers for the clean up of contaminated sites since 1980. To date we have manufactured over 500 systems worldwide, offering the most comprehensive product line available, including both off-the-shelf solutions and custom designed systems to meet your site-specific requirements. With over 50 years of air pollution control experience we have the staying power to service and support our clients now and in the future.

“At Catalytic Combustion we take an unbiased approach to solving air pollution problems. We don’t try to sell you on one system but look at the total picture and recommend the best solution – out of several possible – to solve the problem.”

Electric Catalytic Oxidizer

The Electric Catox is our most popular system for the destruction of gasoline contaminated air streams. Models are available from 100 to 1000 SCFM, with a destruction efficiency of >99%. The Electric Catox has the best uptime percentage of any oxidizer on the market today. Its overall design is compact and extremely efficient and requires only minimal electrical input to maintain operation. The system can be manufactured with an integrated vacuum extraction system or can be coupled to an existing system.



SRCO Catalytic Oxidizer

Our High Efficiency Self Recuperative Catalytic Oxidizer is the top-of-the-line in remediation oxidizers. Its high efficiency heat exchanger provides for the lowest operating costs long term in the industry, with some units in operation for almost 20 years. The system features heavy duty stainless steel construction, state-of-the-art temperature control, and PLC operation. The systems are available from 250-5,000 SCFM with larger units engineered upon request. The unit can be operated on either propane or natural gas; electric pre-heat is optional. Catalysts to destroy chlorinated or fluorinated components are also available.

3-in-1 Flame-Ox Multimode System

The Flame-Ox was developed specifically for severely contaminated sites, safely processing significantly higher concentration (up to 80,000 ppm) of hydrocarbon vapor than a traditional thermal oxidizer — without high temperature shut-downs. The 3-in-1 design allows the unit to be operated in Flame or Thermal or Catalytic mode as site conditions change. This allows one system to be used for the full life cycle of the remediation project. The system is an excellent choice for a rapid response project.



Vertical Gas Thermal Oxidizer (VGTO)

The VGTO offers the flexibility of a thermal oxidizer with the option of field-converting to catalytic mode at any time. With its very efficient design, it is built to take the high temperature shock associated with high concentration remediation systems. Available from 250-1500 SCFM, the VGTO can be operated on propane or natural gas and features either a primary or secondary air burner. The optional catalyst module can be quickly field inserted with minimal equipment. A Horizontal version (HGTO) is available in sizes to 4000 SCFM and can be fitted with a heat exchanger.



**RENTAL/LEASE/USED
SYSTEMS AVAILABLE**

**Call 715-568-2882
For More Information!**

Chlorinated/Fluorinated Catalytic or Thermal Oxidizer

The HD-Cat is the final solution when it comes to chlorinated and fluorinated cleanups. No need to transport hazardous materials, such as soil or carbon, off-site for disposal. The HD-Cat converts the hazardous materials into carbon dioxide, water vapor and salt water. We design and manufacture complete scrubbing packages ensuring seamless integration. The system can also be integrated with a concentrator wheel for large volume air streams with low concentration levels, allowing the oxidation equipment to be considerably smaller.



Remediation Air Pollution Systems Analysis

Technology Equipment	Equipment Type	Recommended Applications	Application Advantages	Application Disadvantages
Express Catalytic Oxidizer	Catalytic oxidizer system with gas pre-heat. Stainless steel reactor with a 5% efficient heat exchanger and precious metal catalyst to destroy 95-99% of VOCs.	<ul style="list-style-type: none"> • Vacuum extraction systems • Dual phase extraction systems • Groundwater air strippers • Air flow rates from 100-3,000 SCFM 	<ul style="list-style-type: none"> • Low capital cost • High destruction efficiency • Compact footprint • Can process varying hydrocarbon loads • Air/water heat exchanger can be utilized 	<ul style="list-style-type: none"> • Low heat exchange efficiency • 5-7 year life expectancy • Air flow turndown 4:1
SRCO Self Recuperative Catalytic Oxidizer (High Efficiency)	Gas or electric pre-heat Catalytic oxidizer system equipped with a high efficiency heat exchanger and precious metal catalyst to destroy 99% of VOCs.	<ul style="list-style-type: none"> • Vacuum extraction systems • Groundwater air strippers • Air flow rates from 250-5,000 SCFM 	<ul style="list-style-type: none"> • Low operating cost • 10-15 year life expectancy • High destruction efficiency • High heat exchange efficiency 0-2500 ppmv process capability 	<ul style="list-style-type: none"> • Higher capital cost • Not for high LEL fume streams
Thermal Oxidizer VGTO HGTO	Direct gas-fired thermal oxidizer with a high temperature oxidation chamber	<ul style="list-style-type: none"> • Vacuum extraction systems • Dual phase extraction systems • Air flow rates from 250-4,000 SCFM • Projects with catalyst poisons 	<ul style="list-style-type: none"> • 10-15 year life expectancy • High destruction efficiency • Can handle high LEL fume streams (25-40%) • Convertible to catalytic • Compact footprint • Can be modified for chlorinated and fluorinated projects 	<ul style="list-style-type: none"> • Medium capital cost • Higher operating cost
Flameless Electric Catalytic Oxidizer	Electric pre-heat catalytic oxidizer with high efficiency heat exchanger and precious metal catalyst.	<ul style="list-style-type: none"> • Vacuum extraction systems • Groundwater air stripping • Air flow rates from 100-1000 SCFM 	<ul style="list-style-type: none"> • Very reliable • Convenient • Easily permitted • 10-year life expectancy • High destruction efficiency • Compact footprint 	<ul style="list-style-type: none"> • Medium capital cost • LEL levels <20%
Chlorinated/Fluorinated Catalytic Oxidizer	Electric or gas pre-heat catalytic oxidizer with high efficiency heat exchanger and special precious metal catalyst.	<ul style="list-style-type: none"> • Vacuum extraction systems • Groundwater air stripping • Air flow rates from 100-2000 SCFM 	<ul style="list-style-type: none"> • Final solution • Reliable • 10-year life expectancy • High destruction efficiency (95-99%) • No dioxin furan formation • Scrubbers easily added • Proven technology 	<ul style="list-style-type: none"> • High capital cost • Susceptible to catalyst poisons such as heavy metals
Flame-Ox	Burner utilizes the process exhaust as a secondary fuel. The stream is directed through the burner for safety reasons and achieves >99% DRE.	<ul style="list-style-type: none"> • Vacuum extraction systems • Multi-phase extraction • Landfills • Ideal for air streams containing over 25% LEL of VOCs without the need for adding significant amounts of dilution air 	<ul style="list-style-type: none"> • Will successfully pass Project Hazardous Operations Review • Can process high LEL fume streams • High destruction efficiency • Low capital cost • Does not require LEL sensor 	<ul style="list-style-type: none"> • Limited turndown 4:1 • High operating cost on low LEL fume streams • High pressure drop through system

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