

AIR POLLUTION RESOURCE



Environmental Solutions
for a Clean Earth



Industries Served

Adhesive Coating
Aerospace Painting
Air Strippers
Automotive
Bakeries/Food Processing
Bio Diesel
Chemical Processing
Converting
Emergency Response
Fiberglass/Composites
Flexographic Printing
Flexible Packing
Graphic Arts
Laminating/Treating
Metal Decorating (Coating)
Microelectronics
Odor Control
Paint Finishing
Petrochemical
Pipeline
Plastics/Expanded Foam
Pharmaceuticals
Pulp and Paper Processing
Refinery
Rotogravure Printing
Spray Coating
Soil/Groundwater Remediation
Tank Farm
Tank Vents
Tape Coating
Wastewater Treatment



Corporate Headquarters,
Menomonie, WI 54751
(715) 233-6115 USA
www.intellishare-env.com

Experience

Since 1987 we have been implementing air pollution control technology for industrial and remedial applications. The core of our expertise is matching the correct design with each application, recognizing that every client has different needs and expectations.

Intellishare offers a full suite of products, with each product suited to solve a specific need or application. This multiproduct platform allows us to provide an unbiased recommendation when solving your specific challenge.

From short lead times to short-term use to reducing a carbon footprint, we have standard products with years of experience and out-of-the-box performance.

We appreciate our clients. Our philosophy is to work smart to earn their trust and work hard to keep it. We look forward to adding you to our growing list of satisfied clients.

All the best,

John Strey
Vice President
Intellishare Environmental



“ Intellishare provided Severson Environmental Services with complete turnkey solutions for the redesign, rebuilding, operation, maintenance, and staff training of the thermal oxidation unit at our Superfund Site.

Intellishare's efforts increased unit on-stream time from 50% to 95% while improving contaminant removal efficiency. Intellishare turned a problem operation into a consistently reliable and effective remedial system.

”

James Russell, Site Manager
Severson Environmental Services

Gas-Fired Catalytic Oxidizer



Intellishare Environmental catalytic oxidizers feature the Intellishare one-touch control system and our exclusive low temperature catalyst. The high efficiency heat exchanger uses the BTUs generated from burning hydrocarbons to preheat the incoming vapors. This means:

- A reduction in operating costs of up to 60% compared to a standard refractory-lined thermal oxidizer operating in catalytic mode.
- A reduction in operating temperatures by 15-20% over traditional catalysts.

Stainless steel construction

Intellishare's gas-fired catalytic oxidizers are made of quality stainless steel construction. Compared to carbon steel, stainless steel is corrosion resistant, has better creep strength and has a longer life span.

Flameless Electric Catalytic Oxidizer

Intellishare manufactures high performance flameless electric catalytic oxidizers. Automatic restart capabilities after electric power outages are just one of the many reasons for our superior uptime.

Low operating cost

Due to its high efficiency design, the flameless electric catalytic oxidizer's power consumption remains low through all modes of operation. Its compact design provides for less radiation loss and lower utility usage. During periods of moderate hydrocarbon input, the electric preheater is automatically turned off.

Systems are available in many configurations and flow ranges. The flameless oxidizers can be provided as stand-alone units or as part of an integrated remediation system.



Catalytic Oxidizer Features and Benefits

One-Touch Control System

- Reduces errors and increases uptime by taking the guesswork out of operation.
- Walks the operator through basic system tasks, such as startup, shutdown and troubleshooting.

Electric Preheat Option

- Reaches operating temperature up to 60% faster than other units.
- Auto restart after power failure increases uptime and reduces the number of required site visits.

Programmable Logic Controller

- PLC offers unlimited programming flexibility without control panel modification.

Monolith Catalyst

- High destruction efficiency and superior temperature rating.

Flame Control Display

(Gas-Fired Catalytic Oxidizer)

- Provides exceptional reliability in display of burner system status and flame strength.



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Thermal Oxidizer Features and Benefits

Modular Construction

- Intellishare's thermal oxidizers are manufactured to accept catalyst, heat exchange, heat exchange by-pass modules and low NOx burners.

One-Touch Control

- Walks the operator through basic system tasks such as start-up and shutdown.
- Features a first-out annunciator and alarm history file.
- Ethernet-ready for remote data functions.

Electric Preheat

- Select models available with electric preheat to comply with NOx regulations.
- Electric units also can be automatically restarted and have a higher run-time percentage when compared to gas-fired systems.

Industrial Quality and

Long-lasting

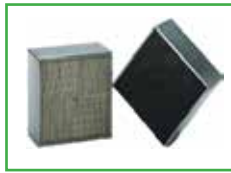
- Intellishare's thermal oxidizers are built to industrial standards and provide years of reliable service.
- Many of our units have been in service for over 20 years.



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Thermal Oxidizer



Catalyst Module

The Intellishare thermal oxidizer was developed on a modular platform allowing for maximum flexibility in system selection. Each system can be configured multiple ways to fit nearly any space requirement.

All units are designed to incorporate our heat recovery and catalyst modules and are built for long-term reliability and performance.

Modular platform allows you to customize the oxidizer for each application

Straight Thermal Oxidizer

The straight thermal oxidizer processes the maximum allowable amount of solvents.

Recuperative Thermal Oxidizer

With the installation of a recuperative heat exchanger, the heat generated during combustion is used to preheat the incoming air to the oxidizer. This reduces the supplemental energy contribution by 50-70%, and makes the carbon footprint smaller.

Catalyst Module

All Intellishare thermal oxidizers can be field-converted to catalytic operation. For remediation sites, solvent concentrations decline to a lower level over time. Once they drop below 25% of the LEL, the catalyst module can be inserted to reduce the supplemental energy by 60%.

Electric Operation

For select applications, smaller thermal oxidizers can be supplied with electric preheat, which has the benefit of reducing the formation of NOx associated with burning natural gas or propane, while not being susceptible to the potential for catalyst poisoning.



High quality stainless
steel tube and shell
heat exchanger



Thermal oxidizer installed at a
petroleum distribution facility.
The modular unit features heat
exchange, heat exchange
by-pass and catalyst module.

Cycle Therm Regenerative Thermal Oxidizer

Our sister company Cycle Therm provides regenerative thermal oxidizers (RTOs) for the destruction of VOCs, HAPs and odorous emissions. Cycle Therm's RTO design is the genesis of over 30 years of development and has emerged as the most economical and efficient system available with its unique, patented technologies.

What is a regenerative thermal oxidizer?

RTO's were first introduced to treat large air volume streams with low levels of contaminants.

The RTO uses ceramic as a heat exchange media, which provides heat regeneration up to 95%. This was a big improvement over what a conventional stainless steel plate or tube and shell heat exchanger could accomplish.

The basic premise of the RTO is truly simple; heat is extracted from the hot purified air and stored in the heat recovery chamber as it leaves the combustion chamber. After a period of time the inlet/outlet valves switch position and now the contaminated process gas is redirected through the hot heat recovery chamber preheating to within 5% of the combustion chamber temperature before it enters the combustion chamber. In the combustion chamber the burner adds the additional 5% heat required to reach the final temperature of 1500 degree F. and converting the VOC to CO₂ and water vapor.

RTOs can be used on a wide variety of applications. They have a very small carbon footprint due to their energy efficiency and can have a significant impact on the life cycle cost of a project.

Patented electromechanical valve drive system

Unlike other RTOs that use problematic pneumatic or hydraulic valve systems, our RTO features a simple electromechanical valve drive system, providing years of trouble-free continuous service.



The patented electromechanical valve drive system provides the highest uptime percentage for RTOs

This patented all-electric system operates the RTO flow control dampers smoothly in both two-chamber and larger multi-chamber designs. Since the drive and valves are mechanically linked, the valve mechanism maintains a high degree of repeatability over the life of the RTO, even in extreme sub-zero conditions.



RTO Features and Benefits

VOC Destruction

- Guaranteed 98% VOC destruction efficiency.
- Global emission regulatory compliance — now and in the future.

Heat Transfer Efficiency

- Up to 95% heat transfer efficiency.
- Lowest operating cost.
- Lower CO₂ emissions.

Patented Electromechanical Variable Valve Drive

- No pneumatics or hydraulics and none of their related problems.
- Greatest reliability and lowest maintenance cost of any RTO.

Modular Design

- Completely modular.
- Quick, 1-day installation.
- State-of-the-art, operator friendly controls.

Exclusive, Lightweight Cell Stone® Ultra Heat Recovery Media

- Lowest pressure drop, highest thermal efficiency.

Industry Patents

- Seven (7) industry patents.
- Leader in pollution equipment technology.



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THERMAL ACCELERATOR



Features and Benefits

High Concentration Processing

- Reduce your remediation time on highly contaminated sites.
- Use one product from start to finish.
- Can process liquid fuels.
- Safe operation.

One-Touch Control

- Walks the operator through basic system tasks such as start-up and shutdown.
- Features a first-out annunciator and alarm history file.
- Ethernet-ready for remote data functions.
- PLC offers unlimited programming flexibility without control panel modification.

Modular Design

- Intellishare's thermal oxidizers are manufactured to accept catalyst modules, heat exchangers, and LEL monitors — all easily inserted at any time.

High Temperature Combustion Chamber

- Low outer skin temperature and greater than 99% destruction efficiency.



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High Concentration Thermal Accelerator

The perfect oxidizer to accelerate clean-up of highly contaminated or free product sites. The thermal accelerator can burn more hydrocarbon vapor than a conventional thermal oxidizer or internal combustion engine (ICE).

Reliable Technology

The Thermal Accelerator solves the operational and reliability problems associated with applying thermal technology to high solvent & loading applications by utilizing a specialty built dual fuel burner system. Extracted vapor is injected directly into the burner and treated as a fuel. The extracted vapor does not require dilution and high velocity within the burner safely processes the high LEL hydrocarbon vapor. Supplemental fuel and combustion air are added to the burner for flame stability and to supplement the heating value as hydrocarbon vapors decline.



Multiple thermal accelerators treating free product vapors from a pipeline break.

The Thermal Accelerator can be applied anywhere free product is present and anytime accelerated site clean up is desired. Processing capabilities vary, however standard sizes are available from 100-2500 CFM. Units are available for emergency response, rental and purchase. Intellishare Environmental can provide complete packages including, extraction, control and remote telemetry.



Thermal accelerator treating vapor from a refinery soil remediation project.

Chlorinated Oxidizers

Destroying chlorinated solvents in an oxidizer can be an effective way to treat air pollutants on site rather than transferring air pollutants onto carbon and then shipping the material off-site for disposal at a reclamation facility.

A by-product of chlorinated solvent oxidation is hydrochloric acid (HCL), which may require secondary scrubber treatment prior to discharge.



Recuperative Thermal with HCL scrubber

Technology Selection

Intellishare offers both catalytic and thermal oxidation solutions for chlorinated solvent destruction. The technology selection has many evaluation factors including;

- Volume of air to be treated
- Required removal efficiency
- Specific solvents
- Treatment of by-products such as hydrochloric acid (HCL)
- In the event of HCL treatment utilities such as make up water, sodium hydroxide and sewerage are required.



Chlorinated Catox with HCL scrubber

Materials of Construction

Special consideration must be given to chlorinated fume streams due to the potential of the formed HCL to corrode materials, especially if allowed to reach the HCL dew point. Intellishare offers a wide selection for materials of construction and can make the right recommendation based upon the projects specific goals and life cycle.

Implementing air pollution control technology for industrial and remedial applications since 1987.



RTO with HCL Wet Scrubber



Features and Benefits

Final solution of chlorinated solvents without off site disposal

- High conversion efficiencies.
- Long life expectancy.
- Multiple oxidizer designs.

Technology Effectiveness

- Chlorinated oxidizers can achieve upper 90 percent conversion of chlorinated materials and HCL scrubbers can remove 99% of the HCL.

Flexible Operation

- Available in both gas fired and electric operation for either thermal or catalytic operation.



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Environmental Remediation Field Services

Regardless of manufacturer, Intellishare Environmental is ready to help. From field inspection/repair, maintenance agreements or full-time equipment operators, we have capabilities to help with your project.

Intellishare offers these services:

- 24/7 phone support
- Troubleshooting
- Field inspection and repair
- Retrofits (heat exchanger, catalyst insert)
- Spare parts
- Installation and start-up
- Staff operator training
- Short and long-term maintenance agreements
- 24/7 equipment operators
- Refurbishment
- Pilot test equipment
- Emergency response



All Intellishare technicians are OSHA 40 Hour HAZWOPER safety certified, meet our stringent drug and alcohol policy and have TWICC clearance. You can be assured our field engineers are highly qualified with many years of experience.

Rental Oxidizers

Intellishare has a large rental fleet of catalytic and thermal oxidizers in a variety of flow ranges and configurations.



“ *Intellishare provided high quality, custom equipment for several remediation projects in New Mexico.*

The staff met tight schedules and continues to provide a high level of customer service years after the equipment was installed.

Tom Golden, Consultant
Daniel B. Stephens & Associates, Inc.

”



Equipment Rental Benefits

Service and Support

- 24/7 emergency response.
- Intellishare's factory-trained service personnel can help train equipment operators.

Top Condition

- Rental equipment is in top condition to ensure the highest quality and reliability for our customers.
- Rental equipment is manufactured by Intellishare, ensuring that Intellishare has the necessary resources to service equipment.



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