



HALOGENATED HYDROCARBON THERMAL OXIDIZER

COMBUSTION AND ENVIRONMENTAL SOLUTIONS.
PURE AND SIMPLE.®

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No time to waste.

Halogen-based wastes are an unavoidable reality of the petrochemical and plastics industries. You want them to be treated and eliminated efficiently and effectively as possible. As a global authority in thermal oxidizer and incineration solutions, Zeeco is uniquely positioned to help you destroy halogenated hydrocarbons—quickly, smoothly and cost-effectively.

Zeeco engineers have extensive experience designing, installing, and servicing Halogenated Hydrocarbon Thermal Oxidation systems around the world. Halogenated Hydrocarbons are those compounds containing chlorine, bromine, fluorine, and iodine. Our solutions thermally treat gaseous and liquid wastes containing halogenated compounds with a proven removal efficiency of greater than 99.9 percent.

We offer two primary systems for halogenated waste destruction. Using chlorine as an example, both systems begin with direct fired thermal oxidization, followed by downstream removal of the resulting hydrochloric acid (HCl) and free chlorine (Cl₂). For smaller systems, removal can usually be accomplished with a single stage caustic scrubber, while larger systems require a two-stage packed column absorber/scrubber for full environmental compliance.

Dynamic testing, dramatic results.

Zeeco's engineering group goes the extra mile with each and every Halogenated Hydrocarbon System. We use advanced Computational Fluid Dynamics (CFD) to model your specific process conditions against the actual equipment design, allowing us to predict what cannot otherwise be seen or anticipated—rather than relying only on past experience and traditional design rules. The result? A system that performs better and lasts significantly longer.

Our Combustion Research and Testing facility was the first in the world to become ISO 9001-2000 certified, and our staff strives to stay ahead of rapidly changing emission requirements. With 15 full-scale combustion test furnaces, Zeeco is capable of testing a wide variety of combustion systems under simulated field conditions. A multi-stream incineration system allows us to test the most complex situations in a controlled environment.

The Zeeco difference.

Our only business is the combustion business. By concentrating on what we do best, Zeeco has grown into a worldwide leader in combustion solutions. We are a privately held company whose ownership stays highly involved in daily operations, with upper management comprised of the world's leading combustion experts.

When you call Zeeco, we answer. When you make a request, you get a quick and efficient response. Our sales, engineering and purchasing groups work hand-in-hand to deliver highly competitive quotes and heroic turnaround times. We stand ready and willing to travel anywhere in the world to discuss upcoming projects firsthand, and to ensure that every existing project runs seamlessly.

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BURNERS



FLARES



INCINERATORS



PARTS & SERVICE

COMBUSTION AND ENVIRONMENTAL SOLUTIONS.
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Halogen Thermal Oxidizer

Typical Performance

- Residence time = 2.0 seconds
- Operating temperature = 1800 to 2200°F (982 to 1204°C)
- Waste Destruction Efficiency (DRE) > 99.9999%

Design Features

- For small systems involving small amounts of HCl, a single stage caustic scrubber is typically sufficient for environmental compliance.
- For larger systems, Zeeco recommends a two-stage absorber/scrubber, where HCl can be recovered as a liquid byproduct.
- Waste heat recovery can be supplied via a firetube-style boiler integrated between the thermal oxidizer and the packed column.

Typical Applications

- Vinyl Chloride Monomer (VCM) / Ethylene Dichloride (EDC)
- Carbon tetrachloride (CCl4)
- Polyvinyl Chloride Biphenyls (PCB's)
- Brominated waste streams



We are confident that you will thoroughly enjoy the many advantages of working with the flexible, innovative company that is Zeeco. Call or email us today to request a quote or to learn more about our proprietary combustion systems.

CERTIFICATIONS APPLY TO ZEECO HEADQUARTERS ONLY.



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ASME



CERTIFIED
ASME



REGISTERED
ISO 9001: 2008

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