

CCSI™ OZONE DESTRUCT UNIT

FEATURES

- For Use on CCSI OREC 0500 and 0900 Series Ozone Ovens
- Fully Automatic Operation
- Long Life Proprietary Metal Oxide Catalyst
- Integrated Heater to Remove Moisture
- Automatic Temperature Control
- High Flow Fan
- LED Power Indicator
- 15 Amp Fuse
- 0-250 PPHM Operation Range
- Over 99% Destruct Efficiency



DESCRIPTION

Ozone in the upper atmosphere protects us from harmful radiation. Excess ozone in the air we breathe can pose serious health risk. Ozone also has negative effects on most metals, plastics, and rubber compounds.

The CCSI Inc. Ozone Destruct Unit turns ozone back into oxygen and eliminates the need for complicated and costly external ducting. They are completely integral, self-contained units.

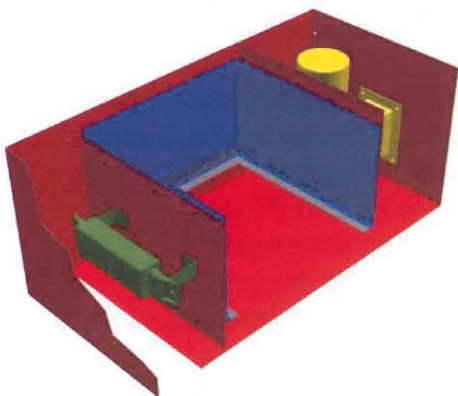
Utilizing a bed of proprietary metal oxide catalyst the unit is able to achieve over 99% destruct efficiency for concentrations up to 250 PPHM. Activated carbon, an alternate technology, chemically reacts with ozone. A disadvantage of this reaction is that it generates carbon dioxide and small amounts of carbon monoxide. Unlike activated carbon, which requires continual replacement, the CCSI Catalyst is not consumed by ozone. Destruction of ozone takes $\frac{1}{5}$ of the reaction time required by thermal destruction

The Destruct Unit is constructed completely of high-grade stainless steel. It sits on 4 rubber feet to ensure stability and reduce effects of vibration. A blue, industrial, epoxy based finish is applied to match CCSI OREC Ovens. A stainless steel mesh screen covers the exhaust port. It is internally sealed for maximum efficiency.

OPERATION

Ozonated air enters the process through an opening on the bottom of the unit. The blower, which draws in approximately 5 times the oven exhaust volume, generates a low-pressure area above the oven exhaust. The air is then pulled past a small heater used to reduce ambient moisture, which decreases catalyst efficiency. After the heater the air is routed down through a filter to prevent particulate matter from entering the catalyst bed. It is then drawn through the catalyst bed. It is at this point that the ozone is catalyzed. Flow rate, bed volume, and shape have all been carefully calculated and tested to provide maximum residence time and thus efficiency. The de-ozonated air then enters the blower and is finally exhausted into the atmosphere. By using an "S" shaped air path the overall package size has been minimized.

CUTAWAY VIEW



This illustration shows a cutaway of the destruct unit. The primary structural pieces are shown in red. Green represents the heater and brackets. Catalyst is contained within the blue structure in the middle. Yellow identifies the blower. Air enters through the opening in the bottom just below the heater.

CONTACT INFORMATION

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OZONE CONTROL STANDARDS

- **Current EPA 1-Hour Standard:** 0.12 PPM
- **Proposed EPA 8-Hour Standard:** 0.08 PPM
- **OSHA 8-Hour Standard:** 0.10 PPM
- **Health Effects Of Ozone:**
 - 0.03 PPM; Perceivable Through Smell
 - 0.10 PPM; Probability of Headaches
 - 0.16-0.20 PPM; Lung Function Impairment
 - 0.24-0.7 PPM; Reduced Physical Power
 - 0.8 PPM; Inflammatory Reaction of Tissue
 - 1.0 PPM; After 6-10 Hours Initial Chromosome Damage Begins

SPECIFICATIONS

Full Operation Range: 0-250 PPHM

Efficiency: >99%

Air Flow: 750 CFM

Heater Power: 250 Watt

Expected Catalyst Life: 18-24 Months

Catalyst Volume: 0.5 Ft³

Catalyst Weight: 12.5 Kg

Weight: 60 lbs. (28 Kg)

Dimensions: (In.) 24W x 13³/₄D x 11¹/₄H
(Cm.) 61Wx35Dx29H

Fuse: 15 Amps

Power Requirements: 115VAC, 60Hz

Warranty: 1-Year On Parts and Against Defects In
Manufacture

•Specifications Subject To Change Without Notice•

A2LA Accredited Calibration Laboratory #1424.01
ISO/IEC 17025 Registered

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