



ODS P Series Destruct Units

Models ODS-3P, ODS-2P, ODS-1P



OSD-3P, 2P, 1P

Installation and Operation Manual

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Cautions, Warnings and Hazards Concerning Exposure To The Catalyst

NOTE: The catalyst is sealed inside of the ODS units. The catalyst will not be in contact with you if the container has not been broken or opened up.

EFFECTS OF ACUTE EXPOSURE TO THE CATALYST INSIDE THE ODS DESTRUCT UNITS

(AGAIN, Only if the ODS container has been broken or has been opened up, the following list applies.)

1. Inhalation
 - May cause nose, throat and lung irritation.
2. Skin Contact
 - May cause skin irritation or dehydrating of skin.
3. Eye Contact
 - May cause eye irritation.
4. Ingestion
 - Irritating to mouth, throat, and stomach.

EMERGENCY AND FIRST AID PROCEDURES FOR HAVING BEEN EXPOSED TO THE CATALYST

(If the ODS container has been broken or has been opened up, the following list applies.)

1. Eyes:
 - Immediately flush eyes with large amounts of water for at least 15 minutes holding lids apart to ensure flushing of the entire surface. Seek medical attention if irritation persists.
2. Skin
 - Flush contaminated areas with large amounts of water. Remove contaminated clothing. Wash clothing before reuse.
3. Inhalation
 - Remove person to fresh air. If breathing is difficult, administer oxygen. Seek medical attention.
4. Ingestion
 - Never give anything by mouth to an unconscious or convulsing person. If conscious, give large quantities of water. Do not induce vomiting. Seek medical attention. The material itself inside the ODS Series Destruct Units is noncombustible but may accelerate the burning of combustible material.

Introduction and Application of the ODS Destruct Models

These ODS units are to be used in a dry process application, which means that the ozone being destroyed cannot have previously contacted water. A typical dry application would consist of a container designed for the purpose of testing the effects of ozone (being injected into the container) on substances, materials, or measurement instruments, etc. The main function of the ODS destruct device is to then neutralize (return the ozone gas to a safe level) the ozone gas that is exiting the testing container.

Theory of Operation

The ODS series Ozone Destruct Units utilize a thermal-catalytic method to remove excess ozone. The catalyst is a transition metal manganese dioxide copper oxide material. It is not consumed by the ozone and acts as a true catalyst. The ODS series are designed to have a maximum level of 0.05 PPM ozone concentration at their exits. The ODS units cannot move the air or gas through them on their own. The gas must be moved through the ODS units by some other force.

These Ozone Destruct Units are designed to have the ozone gas pass through the catalyst contained inside the destruct unit. This catalyst breaks down the ozone gas which can then be readmitted to the atmosphere.

Installation

After removing the product or caps which are sealing both ends of the unit, and then while handling the unit, you might experience some small fragments of the catalyst media coming out of the unit. This small amount of “dusting” is okay and expected.

The ODS Destruct Unit must be mounted VERTICLY from end to end, and never in a HORIZONTAL method. This ensures that the ozone gas being forced through the ODS destruct unit will have to make its way through all of the internal catalyst media. If the ODS Destruct Unit were placed in a horizontal method, the ozone gas being admitted might just follow a path of less resistance and not be forced to flow through all of the contained catalyst media.

The exit of the ODS series can be left open to an indoor atmosphere or can be piped to an outside area, away from personnel. Be sure that the ozone flow rate does not exceed the specifications for the specific ODS series unit. If the flow rate is too high, complete ozone destruction will not take place.

In the event that the catalyst inside the sealed ODS series becomes wet, such as if any process water accidentally flows into the unit, the ODS series unit must be replaced.

IMPORTANT: The ODS destruct units are not considered weather proof nor water proof. They are designed to be operated indoors and to be placed in a non-condensing environment. If the unit is placed in a wet environment, the presence of moisture will affect the life span of the enclosed catalyst media.

For all questions, contact Ozone Solutions.

Start-Up

Make sure the ODS unit is properly connected to any hoses, etc. before operating any Ozone Generator.

Maintenance

There is no maintenance needed for the ODS-1P, or ODS-2P. They are sealed units and so the ozone destruct catalyst is not replaceable in these models.

For the ODS-3P, the catalyst can be replaced since it has larger fittings which can be removed for this process. You would replace the catalyst, or destruct unit when it is no longer able to destruct the ozone to a safe level being .05 PPM.

Service Parts

Service parts listed below can be obtained directly from Ozone Solutions. Please contact Ozone Solutions directly for further information on other parts.

| ODS Model | Catalyst Media | Qty. Oz. |
|------------------|---------------------------------------|-----------------|
| ODS-1P | Non replaceable media | 1.8 oz. |
| ODS-2P | Non replaceable media | 11 oz. |
| ODS-3P | ODS-Catalyst 4x8 Mesh | 38 oz. |

Mechanical Specifications

| Model | Ozone Flow rate | Pressure Drop | Max. Ozone Concentration | Efficiency | Connections | Construction Materials | Dimensions (Body only, not including the fittings) | Weight |
|---------------|------------------|--|--|------------|---------------------|------------------------------|--|--------------------|
| ODS-1P | 9-SCFH (4 lpm) | Max. of 0.25 psig @ 8 SCFH (4 lpm) | 1% dry ozone gas (14.3 g/m ³) | 99.9% | 1/4- in Kynar barb | Clear & White PVC, Kynar | 5-in. X 1.8-in. (4.6-cm x 13-cm) | 1-lbs (0.45 kg) |
| ODS-2P | 30-SCFH (14 lpm) | Max. of 0.25 psig at rated flow (30-SCFH) (14 lpm) | 1% dry ozone gas (14.3 g/m ³) | 99.9% | 1/4- in Kynar barb | PVC, Stainless Steel & Kynar | 2.75-in diameter x 9-in long (7-cm x 22.86-cm) | 2-lbs (1 kg) |
| ODS-3P | 3-SCFM (85 lpm) | Max. of 0.5 psig at rated flow (3-SCFM) (85 lpm) | 3% Max. dry ozone gas at 0.5 CFM, 1% Max. at 3 CFM | 99.9% | 3/8-inch Female NPT | PVC, Stainless Steel | 4-in. dia. X 18-in. length (10-cm x 46-cm) | 6.5- lbs (2.10 kg) |

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