

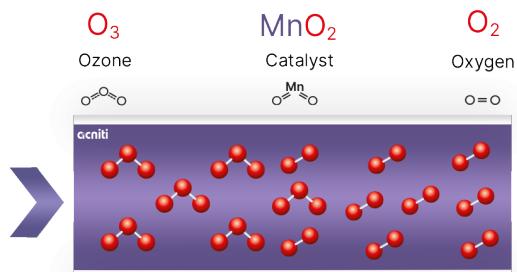


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## **ozone destructor**

The acniti ozone decomposer uses a catalytic method to remove excess ozone. The ozone destructor uses a modular optional approach with a Water trap, Heated chamber, Catalyst Sieve ozone destructor and Vacuum pomp. The modular approach makes ozone destruction possible many environmental conditions.



# ozone destructor

## ozone destructor breaks down ozone in ambient air

- ✓ Modular ozone decomposer
- ✓ Catalytic approach with Manganese Palladium oxide
- ✓ Minimal maintenance ozone decomposer
- ✓ Many sizes possible, contact for requirements

## ozone decomposition

Ozone is an enormously powerful molecule, useful for applications both in air and water treatment. After the ozone treatment process, residual high concentrations of ozone may still be present. When unwanted, this requires ozone destruction. Acniti developed a modular ozone destruction solution based on a catalyst which is scalable for small to large applications.

In research applications producing ozone off gas a small ozone decomposer will be sufficient. For large ozone contact tanks where it is not practical to release ozone into the atmosphere or reintroduce it in the water require a larger ozone destructor.

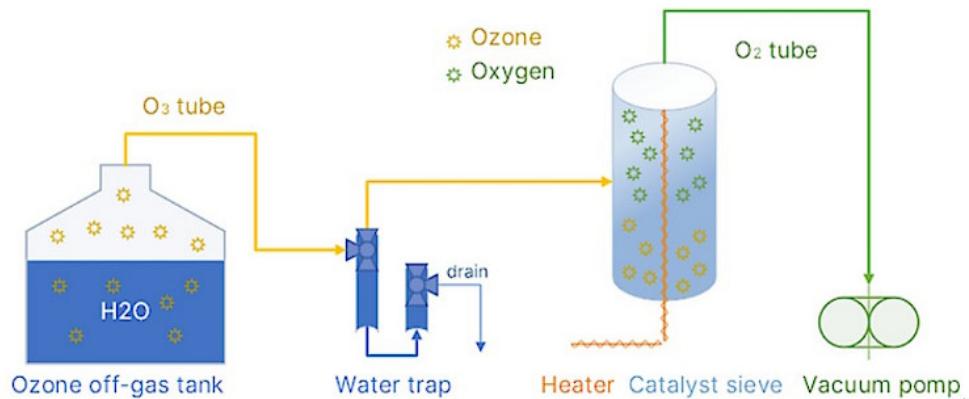
The acniti ozone decomposer uses a catalytic method to remove excess ozone. The catalyst is a transitional metal manganese dioxide in combination with palladium. The benefit of using a catalyst is that ozone does not consume the catalyst. Ozone destruction or decomposing takes place in a catalyst sieve where ozone converts into pure oxygen by the catalyst.

## modular ozone destruction

To put ozone destruction into practice acniti has developed a modular system consisting of four steps. Step 3 is the core step of ozone destruction. The design of the other three steps is to protect equipment and the catalyst. These additional steps are optional depending on the destruction application:

Acniti modular ozone decomposer:

- Water trap
- Heated chamber
- Catalyst Sieve ozone destructor
- Vacuum pump



### the water-trap

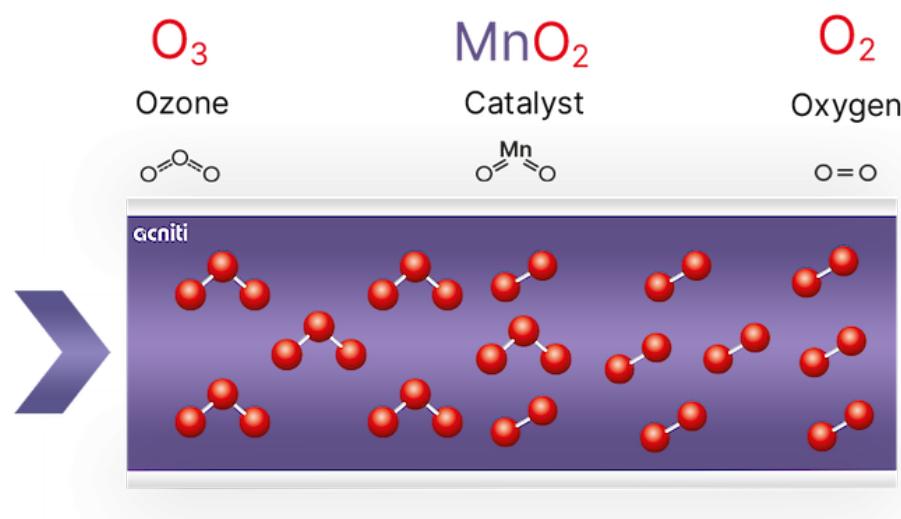
Using the ozone destructor application with the risk of water entering the system, acniti recommends the water trap. In the event water is entering the system, the water trap will drain the water and protect the catalyst sieve en vacuum pump from getting wet.

### heated chamber

When the humidity of the gas is higher than 75% acniti recommends a heater chamber, humidity higher than 85% requires the heater chamber. When the catalyst saturates with moisture it is no longer effectively breaking down ozone and requires regeneration or replacement. The heater has two effects on the ozone destruction process. The first is that warm air can hold more moisture and avoids the catalyst get moisture saturated. The second effect is that the warmer the air the less stable the ozone molecule is and the easier it breaks down to oxygen.

### catalyst sieve

The core component of the ozone destruction system. Converts the ozone to oxygen.



### vacuum pump

When there is no positive pressure on the inlet of the catalyst sieve. The ozone air mixture cannot move through the sieve as it requires force. The vacuum pump can suck the ozone air mixture through the sieve equipped with flow controller and flow indicator. So, it is easy to control the flow.

# ozone destructor 10lpm

Description		Metric	Imperial
1 Model name		Ozone Destructor 10LPM	Ozone Destructor 10LPM
2 Model number		OD-10LPM-SUS-fittings	OD-10LPM-SUS-fittings
Liquid		Metric	Imperial
3 Strainer availability and size			
Ambient		Metric	Imperial
4 Relative humidity maximum		75 %	75 %
Gas		Metric	Imperial
5 Minimum flow / minute		0.1 Liter	0.0 Gallon
6 Maximum flow / minute		10 Liter	2.6 Gallon
7 Minimum flow / hour		6.0 Liter	1.6 Gallon
8 Maximum flow / hour		600 Liter	159 Gallon
9 Gas quality			
10 Gas remark		air or oxygen containing ozone	air or oxygen containing ozone
Connections		Metric	Imperial
11 Water inlet			
12 Water outlet			
13 Gas inlet		Standard 6mm or 1/4"	Standard 6mm or 1/4"

# ozone destructor 25lpm

Description	Metric	Imperial
1 Model name	Ozone Destructor 25LPM	Ozone Destructor 25LPM
2 Model number	OD-25LPM-SUS-fittings	OD-25LPM-SUS-fittings
Liquid	Metric	Imperial
3 Strainer availability and size		
Gas	Metric	Imperial
4 Gas quality		
5 Gas remark		
Connections	Metric	Imperial
6 Water inlet		
7 Water outlet		
8 Gas inlet		

# vacuum pump 10 or 25lpm

Description	Metric	Imperial
1 Model name	vacuum pump 10 or 25LPM	vacuum pump 10 or 25LPM
2 Model number	tool_suction_pump_o3_d ecomposer_10_25lpm	tool_suction_pump_o3_deco mposer_10_25lpm
Liquid	Metric	Imperial
3 Strainer availability and size		
Gas	Metric	Imperial
4 Minimum flow / minute	0.5 Liter	0.1 Gallon
5 Maximum flow / minute	25 Liter	6.6 Gallon
6 Minimum flow / hour	30 Liter	7.9 Gallon
7 Maximum flow / hour	1,500.0 Liter	396 Gallon
8 Gas quality		
9 Gas remark		
Electrical	Metric	Imperial
10 Unit phase Ø voltage	110 volt or 220 volt	110 volt or 220 volt
11 Unit power consumption		
12 Wetted parts		
13 Pump model		
14 Pump phase Ø voltage		
15 Pump motor 50Hz	110 Watt	0.1 hp
16 Pump motor 60Hz	120 Watt	0.2 hp
17 Pump phase Ø voltage 60Hz		
18 Pump pressure setting		
19 Control		

Connections	Metric	Imperial
20 Water inlet		
21 Water outlet		
22 Gas inlet	6mm quick fitting	6mm quick fitting

Dimensions & weight	Metric	Imperial
23 Dim. (w) x (d) x (h)	380 x 272 x 236 mm	15.0 x 10.7 x 9.3 inch