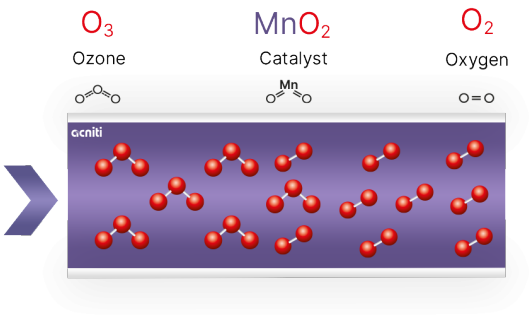


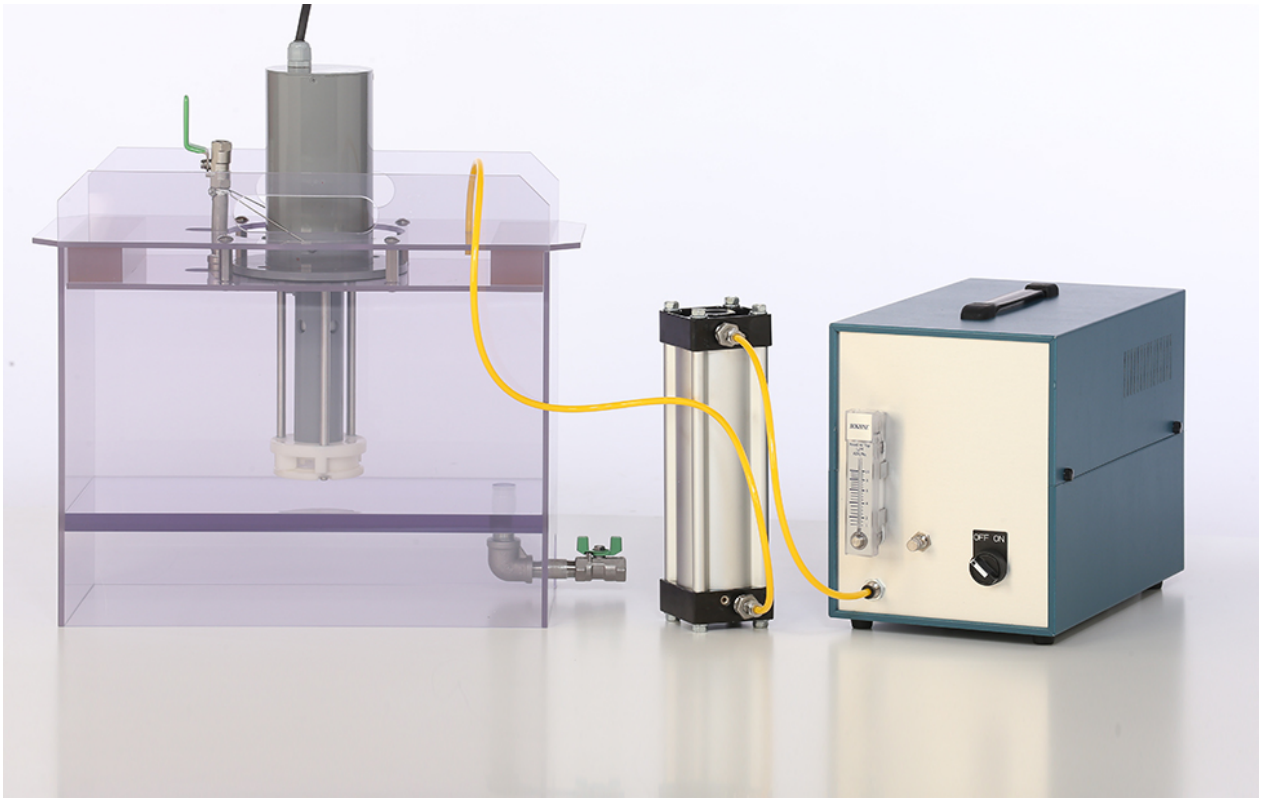
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Japan

ozone destructor: catalytic o3 removal system | acniti

The Acniti ozone destructor safely eliminates residual ozone after treatment processes in water and air applications. Using a manganese-palladium catalyst, it converts excess O3 to pure oxygen with minimal maintenance. The modular design scales from small lab setups to large ozone contact tanks - ideal for ozone system operators who need a reliable, low-hassle off-gas solution.







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ozone destructor: catalytic o3 removal system | acniti

catalytic ozone destructor for air and water treatment

- 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 catalysator which is scalable for small to large applications.

In research applications, producing ozone off-gassing, 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 into the water, a larger ozone destructor is required.

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 decomposition occurs in a catalyst sieve, where ozone is converted to pure oxygen by the catalyst.

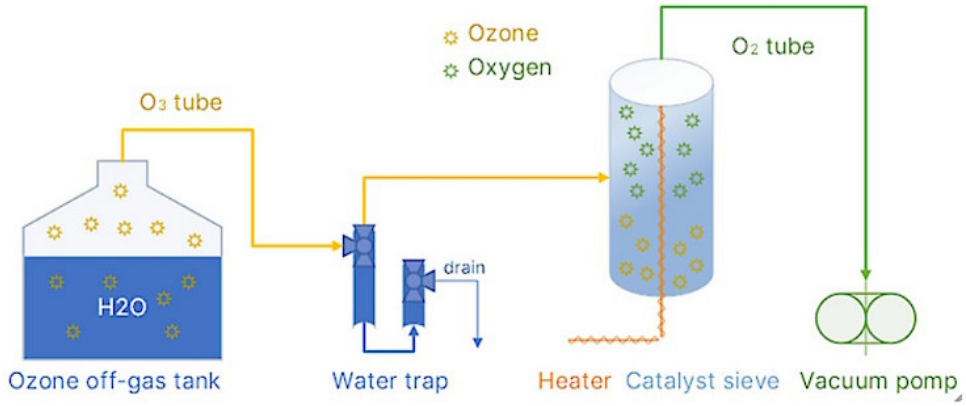
modular ozone destruction

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 the 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

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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.

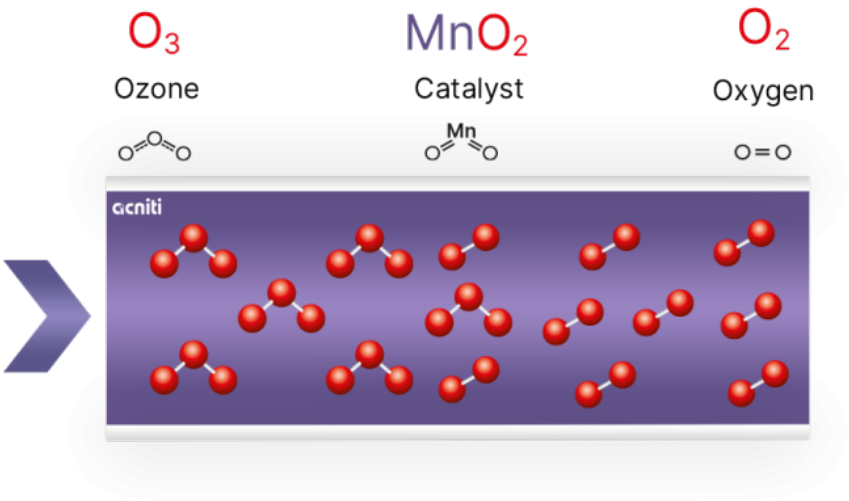
heated chamber

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 from getting 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.

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vacuum pump

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

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ozone destructor 10lpm: catalytic o3 removal unit | acniti

	General		
1	Model name	Catalytic Ozone Destructor for Air and Water Treatment	
2	Model number	O3_waste_ozone_decomposer-10lpm	
	Liquid	**Metric**	**Imperial**
3	Strainer availability and size		
	Ambient	**Metric**	**Imperial**
4	Ambient temperature minimum	-10 °C	14 °F
5	Ambient temperature maximum	40 °C	104 °F
6	Relative humidity maximum	75 %	
	Gas	**Metric**	**Imperial**
7	Minimum flow / minute	0.1 Liter	0.0 Gallon
8	Maximum flow / minute	10 Liter	2.6 Gallon
9	Minimum flow / hour	6.0 Liter	1.6 Gallon
10	Maximum flow / hour	600 Liter	159 Gallon
11	Gas quality		
12	Gas remark	air or oxygen containing ozone	
	Connections		
13	Water inlet		
14	Water outlet		
15	Gas inlet	Standard 6mm or 1/4"	
	Dimensions & weight	**Metric**	**Imperial**
16	Dim. (w) x (d) x (h)	8 x 8 x 14 mm	0.3 x 0.3 x 0.6 inch

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	Dimensions & weight	Metric	Imperial
17	weight	1.7 Kg	3.7 lbs.
18	HS code	8421.2190	
19	Shipping dim. (w)x(d)x(h)	15 x 33 x 15 cm	6 x 13 x 6 inch
20	Shipping weight	2 Kg	4 lbs.

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od-10lm-sus-h230d: heated catalyst ozone destructor | acniti

	General		
1	Model name	Catalytic Ozone Destructor for Air and Water Treatment	
2	Model number	O3_waste_ozone_decomposer_heated-10lpm_dt_230 V	
	Liquid	**Metric**	**Imperial**
3	Strainer availability and size		
	Ambient	**Metric**	**Imperial**
4	Ambient temperature minimum	-10 °C	14 °F
5	Ambient temperature maximum	40 °C	104 °F
6	Relative humidity maximum	75 %	
	Gas	**Metric**	**Imperial**
7	Minimum flow / minute	0.1 Liter	0.0 Gallon
8	Maximum flow / minute	10 Liter	2.6 Gallon
9	Minimum flow / hour	6.0 Liter	1.6 Gallon
10	Maximum flow / hour	600 Liter	159 Gallon
11	Gas quality		
12	Gas remark	air or oxygen containing ozone	
	Electrical	**Metric**	**Imperial**
13	Unit phase Ø voltage	220/230V - 50/60Hz	
14	Unit power consumption	75W	
15	Wetted parts		
16	Pump model		

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	Electrical	Metric	Imperial
17	Pump phase Ø voltage		
18	Pump phase Ø voltage 60Hz		
19	Pump pressure setting		
20	Control		
	Connections		
21	Water inlet		
22	Water outlet		
23	Gas inlet	Standard 6mm or 1/4"	
	Dimensions & weight	**Metric**	**Imperial**
24	Dim. (w) x (d) x (h)	345 x 245 x 132 mm	13.6 x 9.6 x 5.2 inch
25	weight	5.5 Kg	12.1 lbs.
26	HS code	8421.2190	
27	Shipping dim. (w)x(d)x(h)	40 x 26 x 42 cm	16 x 10 x 17 inch
28	Shipping weight	8 Kg	18 lbs.

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od-10lm-sus-h115d: heated catalyst ozone destructor | acniti

	General		
1	Model name	Catalytic Ozone Destructor for Air and Water Treatment	
2	Model number	O3_waste_ozone_decomposer_heated-10lpm_dt_115V	
	Liquid	**Metric**	**Imperial**
3	Strainer availability and size		
	Ambient	**Metric**	**Imperial**
4	Ambient temperature minimum	-10 °C	14 °F
5	Ambient temperature maximum	40 °C	104 °F
6	Relative humidity maximum	75 %	
	Gas	**Metric**	**Imperial**
7	Minimum flow / minute	0.1 Liter	0.0 Gallon
8	Maximum flow / minute	10 Liter	2.6 Gallon
9	Minimum flow / hour	6.0 Liter	1.6 Gallon
10	Maximum flow / hour	600 Liter	159 Gallon
11	Gas quality		
12	Gas remark	air or oxygen containing ozone	
	Electrical	**Metric**	**Imperial**
13	Unit phase Ø voltage	220/230V - 50/60Hz	
14	Unit power consumption	75W	
15	Wetted parts		
16	Pump model		

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	Electrical	Metric	Imperial
17	Pump phase Ø voltage		
18	Pump phase Ø voltage 60Hz		
19	Pump pressure setting		
20	Control		
	Connections		
21	Water inlet		
22	Water outlet		
23	Gas inlet	Standard 6mm or 1/4"	
	Dimensions & weight	**Metric**	**Imperial**
24	Dim. (w) x (d) x (h)	345 x 245 x 132 mm	13.6 x 9.6 x 5.2 inch
25	weight	5.5 Kg	12.1 lbs.
26	HS code	8421.2190	
27	Shipping dim. (w)x(d)x(h)	40 x 26 x 42 cm	16 x 10 x 17 inch
28	Shipping weight	8 Kg	18 lbs.

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ozone destructor 25lpm: catalytic o3 removal unit | acniti

	General		
1	Model name	Catalytic Ozone Destructor for Air and Water Treatment	
2	Model number	O3_waste_ozone_decomposer-24lpm	
	Liquid	**Metric**	**Imperial**
3	Strainer availability and size		
	Ambient	**Metric**	**Imperial**
4	Ambient temperature minimum	-10 °C	14 °F
5	Ambient temperature maximum	40 °C	104 °F
6	Relative humidity maximum	75 %	
	Gas	**Metric**	**Imperial**
7	Minimum flow / minute	0.1 Liter	0.0 Gallon
8	Maximum flow / minute	25 Liter	6.6 Gallon
9	Minimum flow / hour	6.0 Liter	1.6 Gallon
10	Maximum flow / hour	1,500.0 Liter	396 Gallon
11	Gas quality		
12	Gas remark	air or oxygen containing ozone	
	Connections		
13	Water inlet		
14	Water outlet		
15	Gas inlet	Standard 10mm or 3/8"	
	Dimensions & weight	**Metric**	**Imperial**
16	Dim. (w) x (d) x (h)	80 x 80 x 465 mm	3.1 x 3.1 x 18.3 inch

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	Dimensions & weight	Metric	Imperial
17	weight	3.9 Kg	8.6 lbs.
18	HS code	8421.2190	
19	Shipping dim. (w)x(d)x(h)	16 x 55 x 16 cm	6 x 22 x 6 inch
20	Shipping weight	4.5 Kg	10 lbs.

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suction pump o3 decomposer: 10-25 lpm 110/220v | acniti

	General		
1	Model name	Catalytic Ozone Destructor for Air and Water Treatment	
2	Model number	tool_suction_pump_o3_decomposer_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	
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		

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	Electrical	Metric	Imperial
19	Control		
	Connections		
20	Water inlet		
21	Water outlet		
22	Gas inlet	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
24	HS code	8413.7096	

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