



Plasma &

Reactive Gas  
Solutions

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## SEMZOZON<sup>®</sup> AX8407 HIGH CONCENTRATION, HIGH FLOW OZONE GENERATOR

Ozone is an environmentally friendly alternative to many chemical processes. It has a high redox potential, can be generated at the point of use and is easily converted back to oxygen. Typical semiconductor ozone applications include TEOS/Ozone CVD, Ta<sub>2</sub>O<sub>5</sub> CVD, photoresist strip, wafer cleaning, contaminant removal, surface conditioning, oxide growth, and ALD. Ozone is also ideally suited for use in pharmaceutical and water processing applications including cleaning, sterilization and disinfection, as well as Clean-In-Place (CIP).

The SEMZOZON AX8407 generator converts pure oxygen into ozone through silent electrical discharge and achieves high output and high concentration level. It requires only minute levels of dopant nitrogen gas, far below the levels required for competitive ozone generators. As a result, the presence of contaminants, e.g. NOx compounds, is extremely low.

### Features & Benefits

#### High Ozone Concentration and Flow

- Ozone concentration up to 335 g/Nm<sup>3</sup> or 21.7 wt% at 5°C
- O<sub>2</sub> flow rate from 5 slm to 40 slm enables process flexibility
- Patented cell structure design enables production of high concentration ozone
- Closed-loop operation for tighter process control

#### Clean, Safe Alternative to Conventional Chemical Processing

- High redox potential
- Can be generated at the point of use
- Green chemical, easily converted back to oxygen

#### Low Cost of Ownership

- No consumables
- No chemical disposal costs

#### Designed for Reliability

- Reliability tested to >100,000 hours

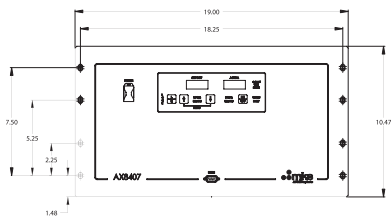


# Specifications and Ordering Information

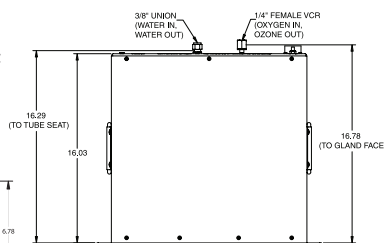
<b>Model</b>	<b>AX8407</b>
<b>Maximum Ozone Output with 17°C Cooling Water</b>	305 g/Nm <sup>3</sup> (19.6 wt%)
<b>Maximum Ozone Output with 5°C Cooling Water</b>	335 g/Nm <sup>3</sup> (21.7 wt%)
<b>O<sub>2</sub> Flow Range</b>	5 - 40 slm
<b>Operating Range</b>	
Ambient Temperature	10 - 40°C (50 - 104°F)
Nominal Cell Pressure (Delivery)	15 - 45 psig (100 - 310 kPa)
<b>Pressure</b>	Maintain process pressure at 20 - 30 psig
<b>Control Interface</b>	Front panel control and remote operation
<b>Feed Gas</b>	
Oxygen	Grade 6 or better O <sub>2</sub>
Nitrogen	100-1000 ppm Grade 5 or better N <sub>2</sub>
<b>Cooling Water</b>	
Temperature	5 - 25°C (41 - 77°F)
Filtration	100 microns
Quality	Resistivity ≥ 50 KΩ/cm
Water Flow	7.6 lpm (2.0 gpm) minimum
<b>AC Power</b>	
Voltage	208 VAC (±10%)
Phase	3Ø & GND, no Neutral
Current	15 A
Frequency	50/60 Hz
<b>Weight</b>	59 kg (130 lb)
<b>Dimensions (W x D x H)</b>	483 x 445 x 267 mm (19.0 x 17.5 x 10.5 in)
<b>Compliance</b>	SEMI S2-0302, SEMI F47, UL 61010-1, CAN/CSA-61010-1

Please contact your local MKS office for price and availability information.

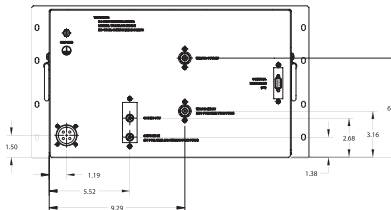
**AX8407 Front View**



**AX8407 Top View**

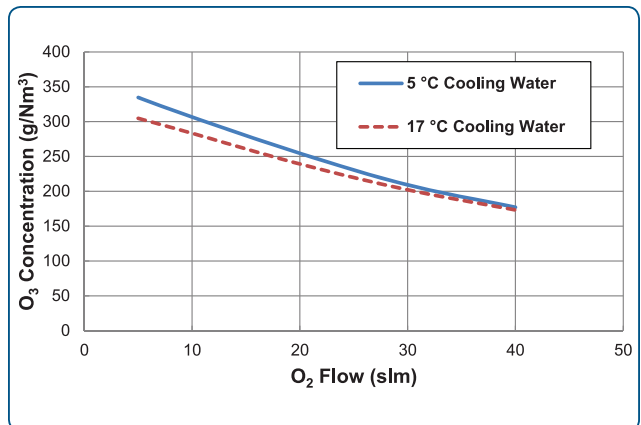


**AX8407 Rear View**



**Dimensional Drawing —**

Note: Unless otherwise specified, dimensions are nominal values in inches.



**Performance Chart —**

Typical Ozone Output



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