

# AX8407

## 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 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. NO<sub>x</sub> compounds, is extremely low.

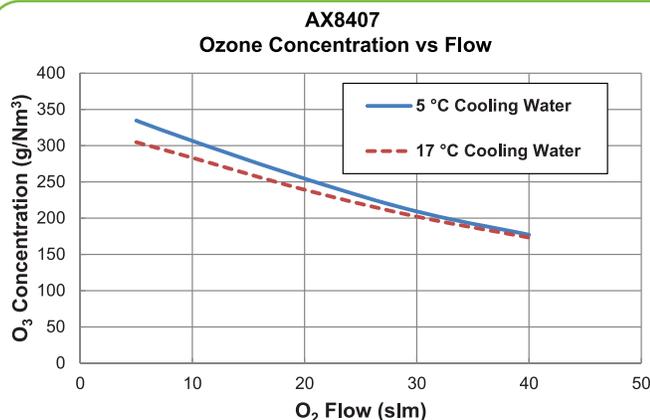
### Product Features

- Ozone concentration up to 335 g/Nm<sup>3</sup> or 21.7 wt% at 5°C
- Patented cell structure design enables production of high concentration ozone
- Closed-loop operation for tighter process control
- High redox potential
- Can be generated at the point of use
- No consumables



### Key Benefits

- O<sub>2</sub> flow rate from 5 slm to 40 slm enables process flexibility
- Green chemical, easily converted back to oxygen
- No chemical disposal costs
- Reliability tested to >100,000 hours

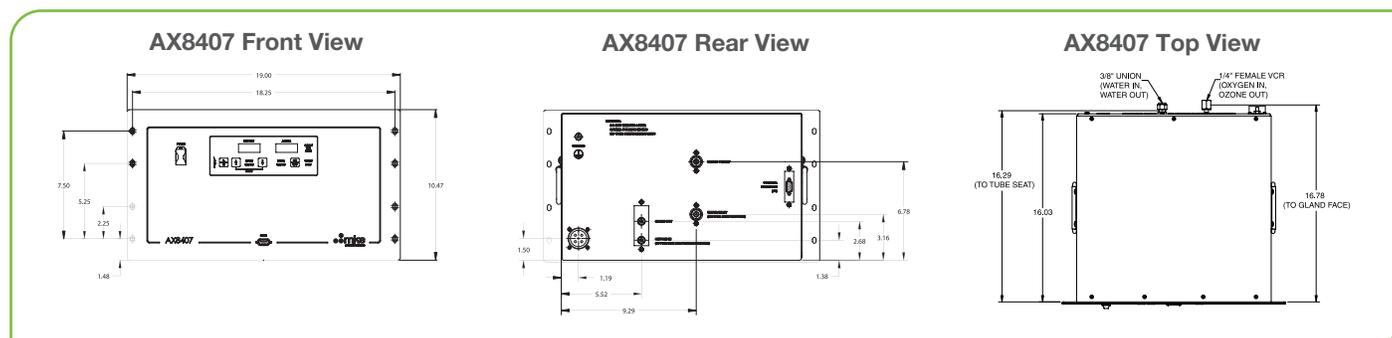


Performance Chart – Typical Ozone Output

### Specifications

<b>Maximum Ozone Output</b>	<b>with 17°C Cooling Water</b> <b>with 5°C Cooling Water</b>	<ul style="list-style-type: none"> <li>• 305 g/Nm<sup>3</sup> (19.6 wt%)</li> <li>• 335 g/Nm<sup>3</sup> (21.7 wt%)</li> </ul>
<b>O<sub>2</sub> Flow Range</b>		5 - 40 slm
<b>Operating Range</b>	<b>Ambient Temperature</b> <b>Nominal Cell Pressure (Delivery)</b>	<ul style="list-style-type: none"> <li>• 10 - 40°C (50 - 104°F)</li> <li>• 15 - 45 psig (100 - 310 kPa)</li> </ul>
<b>Pressure</b>		Maintain process pressure at 20 - 30 psig
<b>Control Interface</b>		Front panel control and remote operation
<b>Feed Gas</b>	<b>Oxygen</b> <b>Nitrogen</b>	<ul style="list-style-type: none"> <li>• Grade 6 or better O<sub>2</sub></li> <li>• 100 - 1000 ppm Grade 5 or better N<sub>2</sub></li> </ul>
<b>Cooling Water</b>	<b>Temperature</b> <b>Filtration</b> <b>Quality</b> <b>Water Flow</b>	<ul style="list-style-type: none"> <li>• 5 - 25°C (41 - 77°F)</li> <li>• 100 microns</li> <li>• Resistivity ≥ 50 KΩ/cm</li> <li>• 7.6 lpm (2.0 gpm) minimum</li> </ul>
<b>AC Power</b>	<b>Voltage</b> <b>Phase</b> <b>Current</b> <b>Frequency</b>	<ul style="list-style-type: none"> <li>• 208 VAC (±10%)</li> <li>• 3Ø &amp; GND, no Neutral</li> <li>• 15 A</li> <li>• 50/60 Hz</li> </ul>
<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.



Dimensional Drawing –

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