



AX8560 fully integrated ozone delivery sub-system designed for ALD applications.

Plasma &

Reactive Gas Solutions

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SEMOZON[®] AX8560

COMPACT, INTEGRATED OZONE DELIVERY SUBSYSTEM

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 ozone applications include atomic layer deposition (ALD), TEOS/Ozone chemical vapor deposition (CVD), Ta₂O₅ CVD, photoresist strip, wafer cleaning, contaminant removal, surface conditioning, and oxide growth.

The SEMOZON AX8560 ozone delivery subsystem is a fully integrated ozone generator complete with internal ozone monitoring and control. The AX8560 is designed specifically for low flow, high ozone concentration applications such as ALD. The AX8560 incorporates MKS's field proven, high concentration, ultra clean ozone generation technology, an integrated ozone concentration monitor, flow control, and all necessary gauges and regulators for stand alone operation. The subsystem is compact and lightweight and may be stand alone, rack mounted or integrated into an AX8555 multi channel ozone delivery system.

The patented MKS ozone generator cell technology converts pure oxygen into ozone through silent electrical discharge and achieves the highest ozone concentration levels available. MKS ozone generators are the highest purity ozone generators on the market. The combination of generator design, high purity wetted materials and extremely minute levels of dopant nitrogen gas (far below the levels required for competitive ozone generators), result in ultra-clean ozone and the lowest levels of contaminants, such as NO_x compounds.

Features & Benefits

Highest Ozone Concentration

- Uniquely suited to low flow, high concentration applications such as ALD
- Concentration $\geq 20\text{wt}\%$
- Flow rates from 0.5 to 5 slm
- Patented, welded cells with advanced cooling

Ultra Clean Ozone

- Extremely low levels of dopant gas reduce contaminants
- Lowest levels of NO_x compounds

Compact Footprint

- Reduced volume
- Smaller footprint
- No maintenance shadow footprint

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 elastomer seals
- No chemical disposal costs



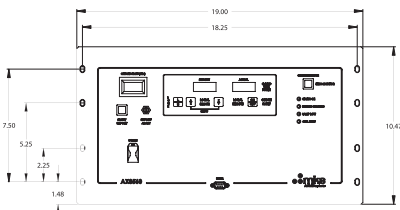
Specifications and Ordering Information

Model	AX8560
Maximum Ozone Output*	26 - 180 g/hr (configuration dependent)
Flow Range	0.5 to 5 slm
Operating Range	
Ambient Temperature	20 – 40°C (68 – 104°F)
Nominal Cell Pressure (Delivery)	0.7 – 3.1 bar _{gauge} (10 – 45 psig)
Control Interface	Front Panel Control and Remote Operation
Feed Gas	
Oxygen	Grade 6 or better O ₂
Nitrogen	20 – 100 ppm grade 5 or better N ₂
Cooling Water	
Temperature	17 – 23°C (63 – 73°F)
Filtration	100 microns
Quality	Resistivity ≥50 KΩ/cm
Minimum flow @ 20°C	
L/min	0.95 - 6.65 l/min minimum (configuration dependent)
Gpm	0.25 - 1.75 gpm minimum (configuration dependent)
AC Power	
VAC (± 10%)	208 VAC
Phase	3Ø
Amps	Nominal Current 5A - 12A max (configuration dependent)
Hz	50/60 Hz
Weight (approximate)	40 kg (88 lb)
Dimensions (W x D x H)	482 x 429 x 267 mm (19 x 16.89 x 10.5 in)
Compliance	SEMI S2-0302, SEMI F47, UL 61010-1, CAN/CSA-61010-1

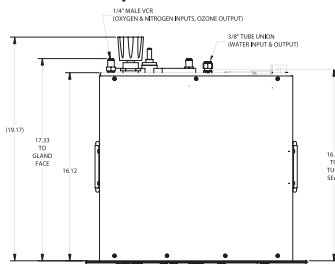
*@ 25 psi ozone delivery pressure and 17°C cooling water

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

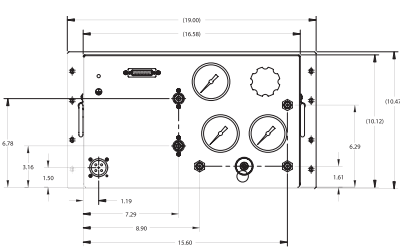
AX8560 Front View



AX8560 Top View



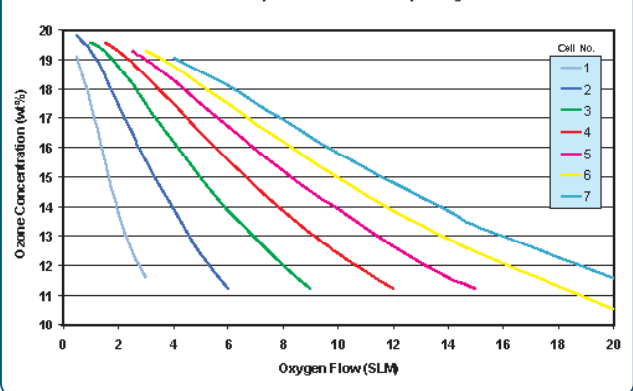
AX8560 Rear View



Dimensional Drawing —

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

AX8560 Performance Specification- Nominal Operating Conditions



AX8560 Performance Graph



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