



Gas Jet AeroBar

MODEL 5290

The Gas Jet AeroBar functions with a continuous flow of clean dry air (CDA) or nitrogen (N2) around the emitter points, isolating and protecting them from contamination. The points can be cleaned much less frequently than with conventional ionizers, because molecular contaminants in the air stream are entrained and do not collect on the emitter points.





The 5290 operates at a fraction of the airflow of competitive systems, with an airflow so gentle it is virtually undetectable. Aerodynamically-designed nozzles enable the unit to provide excellent static discharge and ion balance performance, even at extremely low flow rates. Intrinsic airflow regulation means no flowmeters or correction factors are needed, and critical orifices provide high ionization uniformity over the work surface. The reduced CDA and N2 usage also dramatically decreases the facility's costs of supplying semiconductor-grade gases.

Features and Benefits

- Emitter points sheathed in low flow of CDA or N2
- Ultra-low maintenance; low CDA or N2 usage costs
- Available with single crystal silicon emitter points
- Exceeds Class 1 requirements
- Intrinsic airflow regulation with critical orifices at each nozzle
- High ion uniformity over work area; no need for flowmeters or correction factors
- Alarm output to FMS or process tool controller
- Ensures immediate notification of any system failure
- Low voltage power distribution (24 VAC)
- Safe, reliable operation



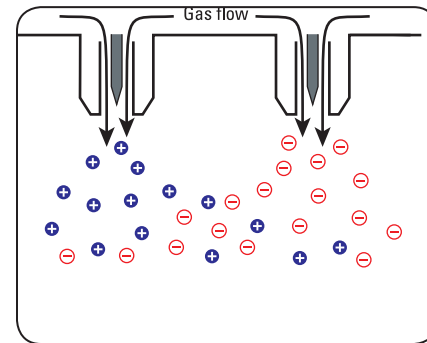
Specifications

Input	24 VAC max., 50/60 Hz, 1 watt delivered from controller
Output voltage	0-15 kVDC, $\pm 10\%$ for each polarity
Output current	2.5 microamps, current limited to eliminate shock hazard
Connectors	Telephone-type RJ-11 modular jack receptacle on each end of the AeroBar; fittings for either 1/4" (6 mm) OD flexible tubing supplied at either end connection of CDA or N2 supply.
Regulation	Output and balance stability is achieved by independently regulating the ion emission voltage of each polarity.
Output control	Positive and negative output levels adjusted centrally at controller and locally at AeroBar
Timing	Precise timing (0.1-10 sec.) is supplied by the controller. Two red LEDs on each AeroBar indicate the polarity of the ion emission
Ion emission	Pulsed DC
Emitter points	Single crystal silicon or machined titanium; all emitter points are replaceable; estimated emitter point life varies from 2-3 years, depending on material used; cleaning requirements vary depending on gas purity
Air supply	CDA at regulated pressure range of 5-60 psi (.35-4.22 kg/cm ²); 100 psi over pressure limit; setting of 15 psi (1.05 kg/cm ²) provides 0.035 cfm (1 lpm) of airflow through each nozzle
Alarm	Red LED lights when the ionizer is no longer able to maintain preset ion output regulation; optional audible alarm available.
Mounting	A variety of mounting methods and clips are available for any environment
Dimensions	<i>Four nozzle bar:</i> 2.1"H x 1.2"W x 24"L (5.3H x 3.0W x 60.9L cm) <i>Eight nozzle bar:</i> 2.1"H x 1.2"W x 36"L (5.3H x 3.0W x 91.4L cm)
Weight	<i>Four nozzle bar:</i> 1.26 lb (.57 kg) <i>Eight nozzle bar:</i> 1.72 lb (.78 kg)
Warranty	Two year limited warranty
Certifications	   

Cleanroom Compatibility

Ion developed the Model 5290 AeroBar to be the cleanest ionizer of its kind. Available with machined titanium or single crystal silicon emitter points, which produce 40 times fewer particles than the tungsten emitter points used in many similar ionizers, the Model 5290 AeroBar meets or exceeds Class 1 cleanliness standards.

A gas handling system isolates the air stream from the internal electronics, eliminating particle entrainment from inside the chassis. Low airflow minimizes the potential for contamination because it does not disrupt the laminar flow field.



Gas flow around the 5290's emitter points prevents contamination from accumulating and prolongs maintenance periods.

Ordering Information

91-5290EC-2-0	Model 5290 Gas Jet AeroBar with • 24" length • 4 nozzles • Titanium emitter points
91-5290EU-2-0	Model 5290 Gas Jet AeroBar with • 24" length • 4 nozzles • Single crystal silicon emitter points
91-5290EC-3-0	Model 5290 Gas Jet AeroBar • 36" length • 8 nozzles • Titanium emitter points
91-5290EU-3-0	Model 5290 Gas Jet AeroBar • 36" length • 8 nozzles • Titanium emitter points
91-5024-CE	Model 5024 Controller, supports up to 4 AeroBars
91-5024E-CE	Model 5024 Controller with alarm, supports up to 20 AeroBars
91-5024E-CE-ALM	Model 5024 Controller with audible alarm, supports up to 20 AeroBars



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