Ionization Systems

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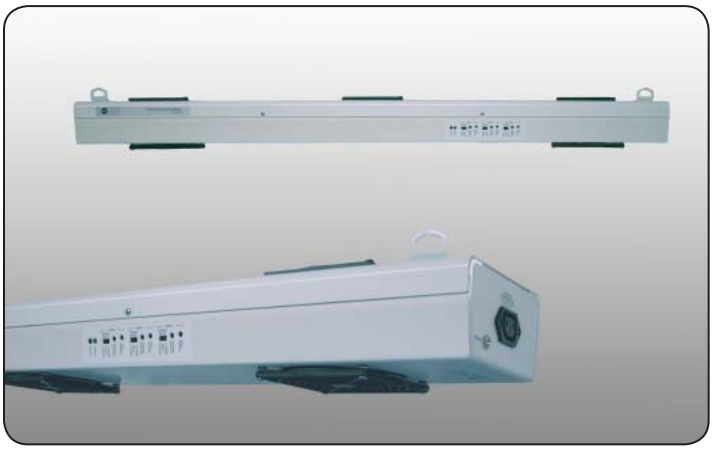

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Ion Systems

Critical Environment Ionizer

MODEL 5810i

The Critical Environment Ionizing Blower Model 5810i is an innovative electrostatics management solution engineered for the needs of today's cleanrooms. Designed and tested to meet Class 10 cleanroom requirements and the tightest balance specifications, the Model 5810i can operate with external sensors to maintain precise balance (better than ±1 volt) by altering ion output and adapting to environment changes. With the reliability of steady-state DC, the established method for eliminating the effects of ESD and ESD-induced electromagnetic interference (EMI) in high-tech facilities, the Model 5810i delivers maximum ion output where and when you need it.

Complete compatibility with the operating conditions in today's cleanrooms is ensured with silicone-free air bearing surfaces. Each fan is engineered for cleanliness, and sealed off from the rest of the chassis to meet critical cleanroom requirements. Ionizers that don't match these quality standards risk contaminating manufacturing processes and possibly reducing product yields.

Features and Benefits

- Better than ±1 volt balance (±3 volts without external sensor)
- Provides the best corona-based ESD protection for maximizing yields
- Aluminum or stainless steel chassis
- Different chassis materials are better suited to match specific workplace environments
- Options for sensor input, FMS connection, alarms, and management control
- Increased control with immediate notification of alarms and the prevention of unauthorized adjustment to power or fan speed
- Alpha upgrade-ready
- Investment security to support continually increasing ESD protection requirements
- Auto-Clean System option
- Patented[1] device reduces emitter point cleanings, keeping points cleaner longer

1. U.S. Patent No. 5,768,087

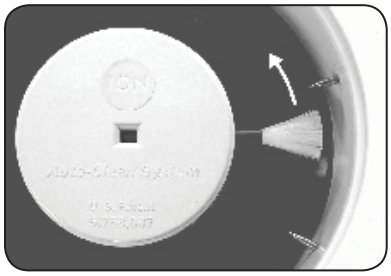
Specifications

Input voltage	100-240 VAC (±10%), 50/60 Hz
Output voltage	100-240 VAC, 50-60 Hz unfused, 5A max.
Chassis	Aluminum chassis with epoxy-polyester powder coat, or Stainless steel
Indicators	Visual: green power on LED, red alarm LED Audible: optional audible alarm
Ion emission	Steady-state DC
Emitter points	Fed Std. 209(e) Class 1 titanium, eight per fan
Airflow	144 cfm per fan, typical
Discharge	±1000V to 100V at less than 3 seconds, taken 18" away (45.7 cm) from the blower at high fan speed
Balance	Better than ±1 volt typical; ±3 volts typical without external sensors
Audible noise	*High fan speed:* 62 dB, typical *Low fan speed:* 51 dB, typical Measurements taken 12" (30.5 cm) below fan
Mounting	Eye-bolts and S-hooks provided; U-shape and L-shape brackets available
Operating environment	*Temperature:* 59–95°F (15-35°C) *Humidity:* 30–70% RH, non-condensing
Controls	Balance adjust trimpot (one per fan), three-position fan control switch (high/low/off) or fixed speed, sensor gain trimpot (optional; one per fan), slide switch for sensor type or no sensor
Dimensions	3.8H x 6.1D x 32L inches (9.6H x 15.5D x 81.3L cm) 3.8H x 6.1D x 40L inches (9.6H x 15.5D x 101.6L cm) 3.8H x 6.1D x 44L inches (9.6H x 15.5D x 111.8L cm)
Weight	*Aluminum 44" unit:* 10.3 lb (4.6 kg) *Stainless steel 44" unit:* 15.3 lb (6.9 kg)
Daisy-chain compatibility	Maximum of 10 units; power cord (18 AWG) between units should not exceed 12" (304 mm) in length
Options	External sensor inputs FMS 4-20 mA RJ-11 output (available with sensor option only) Audible alarm Cord lock Stainless steel chassis Auto-Clean System
Warranty	Two year limited warranty
Certifications	CE

Cleanroom Design

Features for the Model 5810i were carefully developed to be compatible with even the most sensitive cleanroom environments. To minimize disruption of laminar airflow, the unit has a 3-position fan setting that optimizes static discharge performance with the smallest volume and velocity of airflow. A facility monitoring system (FMS) option allows performance integration with your process. The blower operates in any type of environment, including those with higher humidity variances. Additional options include a fixed fan speed (on low or high speed) and a power cord lock.

The blower also features an alarm that indicates a range of possible conditions, including absence of ionization at emitter points, or a stopped fan.



The Auto-Clean System significantly reduces the need for manual cleanings.

Reduced Maintenance

The optional, patented Auto-Clean System is an automated feature that provides reduced operation costs due to lower maintenance. The Auto-Clean System features a brush mechanism that sweeps the emitter points when the blower is turned off and on, allowing the Model 5810i to continually perform at optimum ion output and balance.

Sensor Technology

The Model 5810i can operate with qualified third-party sensors to detect and maintain a better than ± 1 volt maximum offset. Sensors placed in the target area send feedback to the Model 5810i and the blower's internal adjustment system then automatically corrects the ion balance. This ensures that your target area is effectively ionized at all times, no matter what environmental factors exist. One RJ-11 sensor input is provided for each fan to ensure uniform performance.

Ordering Information

91-5810i	Aluminum blower
91-5810iS	Stainless steel blower
91-5801	Alpha Upgrade Kit
25-0660	IEC Power cable, US plug, 8.2 ft (2.5m)
25-0670	IEC Power cable, US plug, 10 ft (3m)
25-0680	IEC power cable, US plug, 15 ft (4.6m)
25-0700	IEC power cable, no plug, 10 ft (3m)
25-0710	IEC power cable, UK plug, 8.2 ft (2.5m)
25-0735	IEC power cable, German-Schuko plug, 8.2 ft (2.5m)
25-20750	IEC Power Cable (China Plug), 8.2 feet (2.5 meters)
25-0720	Daisy chain cable

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