



Ionization Systems

W W W . I O N . C O M

Critical Environment In-tool Ionizer

MODEL 5822I

The compact design of the Critical Environment In-tool Ionizing Blower, Model 5822i is designed to meet small-footprint ionizer requirements in automated process tools, offering exceptional performance in hard disk drive manufacturing and back-end semiconductor environments. The ionizer maintains a $\pm 3V$ or better balance standard and exceptional $\pm 1V$ with the optional external feedback system. An internal, automatic balance correction system ensures your target is ionized accurately, presenting significant reduction in calibration and maintenance time resulting in cost savings. A collimator installed over the fan directs precisely balanced ionized air to the target without taking up valuable room in your environment. Internal circuitry suited for high humidity applications and 24 VDC input voltage makes the Model 5822i the standard choice for processes that need reliable, quality ESD protection in sensitive environments.

Features and Benefits

- $\pm 3V$ or better balance ($\pm 1V$ with the optional external feedback system)
- Facility Monitoring System (FMS) connection and audible alarm
- The remote Control Box allows greater flexibility in mounting while maintaining excellent performance
- Directed airflow method improves ionization delivery and static elimination
- Faster response to ionization failure with notification through tool or FMS
- Unique, high reliability Hydro Wave¹ bearing fan optimized to provide long service intervals while minimizing any particle generation

1. Hydro Wave bearing fan developed by Panasonic (NMB-Mat branded DC axial fans).



Specifications

Input Voltage	24 VDC @ 400 mA from external power supply (100-240 VAC 50/60 Hz) or from tool power
Chassis	Stainless steel
Indicators	Control Box (green LED power on, red LED alarm)
Ion Emission	Steady-state DC
Emitter Points	Tungsten alloy, 8 per blower; Titanium emitter points optional
Airflow	20.5 cfm, typical
Discharge	Between 2-2.5 sec. @ 1 ft (typ), taken in-line from the center of the fan ($\pm 1000V-100V$) ¹
Balance	$\pm 3V$ or better balance ($\pm 1V$ with the optional external feedback system)
Cleanroom Class	Meets ISO 14644-1 Class 4 (Fed Std. 209E Class 10)
Audible Noise	<56 dB, typical measurements taken 12" (30.5 cm) from fan
Mounting	2 mounting screw holes on bottom of blower
Operating Environment	Temperature 50-95°F (10-35°C); humidity 30-65% RH, non-condensing; ISO Cleanroom Class 7 (Federal Class 10) or better
Controls	Balance adjust; sensor gain adjust; fan "Slow, Off, Fast" switch; variable "slow" fan speed
Dimensions	Blower: 4.5H x 3.3W x 2.4D in. (11.5H x 8.3W x 6.1D cm); Control Box: 1.0H x 5.2W x 2.4D in. (2.5H x 13.2W x 6.0D cm)
Weight	Blower 1.14 lb (.51 kg); Control Box 0.56 lb (.25 kg)
Warranty	Two year limited warranty
Certifications	RoHS Compliant    EN 61010-1:2001

1. Tested in accordance with ANSI/ESD STM3.1-2000.

Ordering Information

92-5822i-001	Blower Kit with Tungsten Emitter Points (includes fan unit, control box, external power supply and all interface cables)
92-5822iC-001	Blower Kit with Titanium Emitter Points (includes fan unit, control box, external power supply and all interface cables)
Kit Contents (may be ordered separately)	91-5822i Fan Unit with Tungsten Emitter Points
	91-5822iC Fan Unit with Titanium Emitter Points
	91-5822i-CTRL Control Box
	25-20500-8 Fan Unit to Control Box CAT-5 Cable
	14-21106 External Power Supply
	33-1720-8 4-pin Cable, Fan Unit to Control Box
33-1740-1 6-pin Cable, FMS Out to Novx Feedback System	
25-20660	US Plug Power Cord, 8.2 ft (2.5m)
25-20710	UK Plug Power Cord, 8.2 ft (2.5m)
25-20735	German Schuko Plug Power Cord, 8.2 ft (2.5m)
25-20750	China Plug Power Cord, 8.2 ft (2.5m)
33-25822i	Tungsten Emitter Point Replacement Kit
33-25822iC	Titanium Emitter Point Replacement Kit

Optional Feedback

The Model 5822i ionizer's optional external feedback sensor operates with the Novx Process Monitor Series 7000, Novx Single-fan Ionizer Controller Series 3150, Novx Passive/Active Field Voltage Detection Systems Series 3350/Series 3360, or other industry-standard ionization feedback systems to detect and automatically correct the balance. With the antenna placed at the target area, feedback is sent to the Model 5822i blower's internal control system. This ensures that your target maintains a $\pm 1V$ or better balance at all times, no matter what environmental variables exist.

Directed Airflow

The patented collimator fits over the air outlet of the blower and directs ionized air straight to the target. This means that the blower can be placed further away from the target with continued excellent discharge times and good performance at extended distances. This faster, directed airflow method improves ionization delivery and static elimination, significantly minimizing ion recombination.

Control Box



The modular remote Control Box was developed to accommodate limited tool footprints. The Control Box connects to the optional Novx Process Monitor Series 7000, Novx Single-fan Ionizer Controller Series 3150, Novx Passive/Active Field Voltage Detection Systems Series 3350/Series 3360, or other industry-standard feedback systems, and common FMS (facility monitoring system) interfaces. This allows the ionizer to be installed into tight, hard-to-reach spaces without fitting additional connections or wiring into the area.



An ITW Company

ION Systems

1750 North Loop Road
Alameda, CA 94502

Tel: 800.367.2452 (in USA)

Tel: 510.217.0600

Email: info@ion.com