



Critical Environment In-tool Ionizer

MODEL 5822i

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 backend semiconductor environments.

The ionizer maintains a ± 1 volt or better balance with an optional external sensor or ± 3 volts or better balance without a sensor. An internal automatic balance correction system ensures your target is ionized accurately, presenting a significant time and 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 environments that need reliable, quality ESD protection in sensitive environments.


Features and Benefits

- ± 1 volt or better balance (± 3 volts or better without external sensor)
- Remotely placed control box
- Unique Hydro Wave¹ bearing fan
- Facility Monitoring System (FMS) connection and audible alarm
- Provides the best corona-based ESD protection available for maximizing yields
- Separate control box allows greater flexibility in mounting while maintaining excellent in-tool performance
- Fan is optimized to provide long service while minimizing any particle generation
- Faster response to ionization failure with notification through tool or facility monitoring system

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



Specifications

Input voltage	24 VDC at 400 mA from external power supply (100-240 VAC 50/60 Hz) or from tool power
Chassis	Stainless steel
Indicators	<i>On Control Box:</i> green power on LED, red alarm LED
Ion emission	Steady-state DC
Emitter points	Tungsten alloy; eight per blower
Airflow	20.5 cfm, typical
Discharge	Between 2–2.5 seconds at one foot, typical, taken in-line from the center of the fan ($\pm 1000V$ to $100V$) ¹
Balance	± 1 volt or better, typical, with external sensor; ± 3 volts or better, typical, without sensor
Cleanroom class	Meets ISO 14644-1 Class 4 (Fed Std. 209E Class 10)
Audible noise	Less than 56 dB, typical Measurements taken 12" (30.5 cm) from fan
Mounting	Two mounting screw holes on bottom of blower
Operating environment	<i>Temperature:</i> 50-95°F (10-35°C) <i>Humidity:</i> 30–65% RH, non-condensing ISO Cleanroom Class 7 (Federal Class 10,000) 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 inches (11.5H x 8.3W x 6.1D cm) Control Box: 1.0H x 5.2W x 2.4D inches (2.5H x 13.2W x 6.0D cm)
Weight	Blower: 1.14 lb (.51 kg) Control Box: .56 lb (.25 kg)
Warranty	Two year limited warranty
Certifications	CE, TUV (both pending) 

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

Ordering Information

92-5822i-001	Blower Kit (includes blower, control box, external power supply and all interface cables)
91-5822i	Blower
91-5822i-CTRL	Control Box
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 sensor
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)

Sensor Feedback

The Model 5822i ionizer's optional sensor input operates with the Novx Series 7000 Monitor, Novx Series 3150/3350/3360 Controller, or other industry-standard ionization controllers to detect and automatically correct the offset balance. With the sensor's 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 1V or better balance at all times, no matter what environmental variables exist.

Directed Airflow

The patent-pending collimator fits over the fanstack 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 reach. This faster, directed airflow method improves ionization delivery and static elimination, significantly minimizing ion recombination.



Separate Control Box

The Control Box was developed to accommodate tight tool size definitions. The Control Box connects to the optional Novx Series 7000 Monitor or Series 3150/3350/3360 Controller or other industry-standard sensor, and common FMS (facility monitoring system) interfaces. This allows the blower to be installed into tight, hard-to-reach spaces without fitting additional connections or wiring into the area.



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