

Critical Environment Multi-fan Overhead Ionizer

MODEL 5842

SIMCO ION™
An ITW Company



Simco-Ion's latest Critical Environment Overhead Ionizer Model 5842 is designed to provide industry-leading balanced ionization performance in cleanroom environments. The 5842 has the Novx System and Novx Inside versions; it can operate with Novx antennas to maintain precise balance (better than $\pm 1V$) by altering ion output and adapting to environmental changes. With the reliability of Steady-state DC technology, the established method for eliminating the effects of ESD and ESD-induced electromagnetic interference (EMI) in high-tech facilities, the Model 5842 delivers maximum ion output where and when you need it.

Designed with the overall ease of use features and built-in Auto-clean System for each fan, effectively reducing maintenance time and cost. The 5842 multi-fan overhead blower is available in 2-3-4 fan configuration and is the lightest overhead blower available in the industry—the ideal tool for today's stringent manufacturing process.

FEATURES

- ✓ $\pm 3V$ or better balance ($\pm 1V$ with the Novx Inside or Novx System versions)
- ✓ Cleanliness rated at ISO 14644-1 Class 3
- ✓ Novx antenna input, FMS connection, alarms, and management control
- ✓ Built-in Auto-clean System with each fan
- ✓ Available in 2-3-4 fans; each with four fan speeds (high, med-high, med-low, low)

BENEFITS

- ✓ Provides the best ESD protection for maximizing yields
- ✓ Designed for use in an environment with a controlled level of contamination
- ✓ Increased control with immediate notification of alarms and the prevention of unauthorized adjustment to power or fan speed
- ✓ Automated emitter point cleaning for reduced maintenance cost and time
- ✓ Numerous options for flexibility and ease of use

invisible problems
visible results™
Tackling Static & Particulate Contamination

Model 5842	
Input Voltage	2 fan: 24 VDC, 1.0A max; 3 fan: 24 VDC, 1.5A max; 4 fan: 24 VDC, 2A max (supplied by P/N 14-1710-01 or 24 VDC tool power line)
Discharge¹	<2 sec @ 18" (45.7 cm) overhead (± 1000 -100V)
Balance	$\pm 3V$ or better balance; $\pm 1V$ with the Novx Inside or Novx System versions
Ion Emission	Steady-state DC Technology
Emitter	Titanium, 8 per fan
Cleanroom Class	ISO 14644-1 Class 3
LED Indicator	Green POWER on, red FAN stall, red FAULT with optional AUDIBLE ALARM
Control	Power/fan speed DIP switch with 4 speed/velocity settings, balance adjustment, FMS connections
Audible Noise	High fan speed 61 db (typ), low fan speed 52 db (typ); measurements taken 12" (30.5 cm) from fan
Airflow	Per Fan: High 125 cfm, Med-hi 117 cfm, Med-low 76 cfm, Low 41 cfm
Ozone	0.005 ppm (typ)
Operating Env	50-90°F (10-32°C); 30-60% RH, non-condensing
Option	Audible alarm
Enclosure	Aluminum chassis with epoxy-polyester powder coat
Dimension	2-fan: 32"L x 2.75"H x 5.44"W (81.3 x 6.99 x 13.8 cm) 3-fan: 42"L x 2.75"H x 5.44"W (106.68 x 6.99 x 13.8 cm) 4-fan: 52"L x 2.75"H x 5.44"W (132.08 x 6.99 x 13.8 cm)
Weight	2-fan: 5.5 lb (2.49 kg), 3-fan: 7.8 lb (3.55 kg), 4-fan: 10 lb (4.55 kg)
Warranty	Two year limited warranty
Certification	    

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

Ordering Information

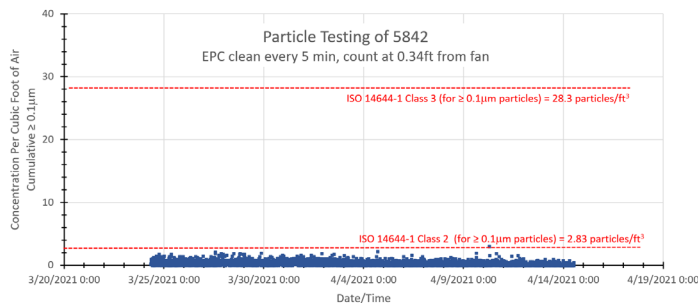
91-5842-32-NX01	5842 Blower 32" 2-Fan (Standalone), RoHS*
91-5842-42-NX01	5842 Blower 42" 3-Fan (Standalone), RoHS*
91-5842-52-NX01	5842 Blower 52" 4-Fan (Standalone), RoHS*
91-5842A-32-NX01	5842 Blower 32" 2-Fan (Novx Inside), RoHS*
91-5842A-42-NX01	5842 Blower 42" 3-Fan (Novx Inside), RoHS*
91-5842A-52-NX01	5842 Blower 52" 4-Fan (Novx Inside), RoHS*
91-5842N-32-NX01	5842 Blower 32" 2-Fan (Novx System), RoHS*
91-5842N-42-NX01	5842 Blower 42" 3-Fan (Novx System), RoHS*
91-5842N-52-NX01	5842 Blower 52" 4-Fan (Novx System), RoHS*
14-1710-01	24 VDC 65W Power Adapter [†]
33-0504	Passive Antenna, 1.75" x 4" Tall with SMA-to-SMA Cable (5 ft)
33-0521-5	Passive Antenna, 1.75" x 1" Tall with SMA-to-SMA Cable (5 ft)
33-1620-xx	IC, Novx feedback/Control Interface Cable

Note: For Audible Alarm option, add suffix "A" to the above part numbers.

* Power Adapter P/N 14-1710-01 is not included and sold separately.

1. IEC power cord required, contact Sales Services for detail.

Particle Test



$\pm 1V$ Balance Performance with Novx

For ultra-tight ion balance performance of $\pm 1V$, the Model 5842 Overhead Ionizing Blower is available in Novx System and Novx Inside versions. Both configurations utilize the Novx antenna positioned in the target area to continuously detect ion balance and automatically correct deviations. Real time feedback is transmitted to the blower's internal control circuitry, ensuring the work surface consistently maintains a balance of $\pm 1V$ or better.

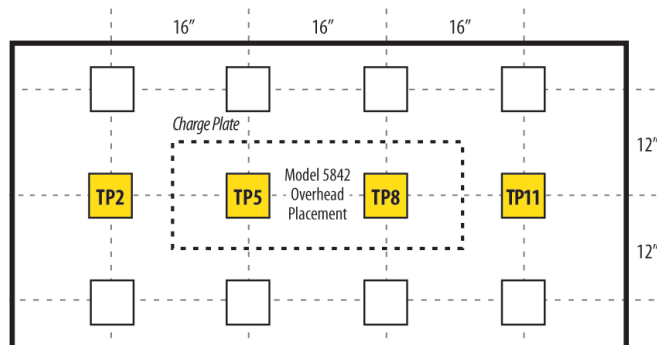
Factory Monitoring System

The 5842 features an LED alarm indicator that alerts operators to several fault conditions, including loss of ionization at the emitter points or a stopped fan. An optional Audible Alarm can be added for enhanced notification. For integrated process control, the Facility Monitoring System (FMS) output provides an industry standard 4-20 mA signal, enabling your work cell controller to remotely monitor system status and error conditions.

Auto-clean System

The 5842's Auto clean System keeps performance sharp without extra labor. Each time the unit powers turned ON or in 1-week intervals (if enabled), a precision brush cleans the emitter points, preserving peak ion output and balance while cutting maintenance demands.

Performance



Test Point	TP2	TP5	TP8	TP11
+Decay Time (s)	2.52	1.06	1.05	2.50
-Decay Time (s)	3.46	1.44	1.52	3.26
Balance (+Vp) (V)	2	1	2	0
Balance (+Vavg) (V)	0	0	1	0
Balance (-Vp) (V)	-1	-1	-1	-1

Test performed in Simco-Ion Laboratory accordance to ESDA 3.1 Standards.

Balance (V) and decay time (s) (1000-100V) test results employing high fan speed and overhead 18" from CPM measuring plate.



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