

Critical Environment Multi-fan Overhead Ionizer

MODEL 5842

Simco-Ion's latest Critical Environment Overhead Ionizer Model 5842 is designed to provide industry-leading balanced ionization performance in cleanroom environments. The 5842 can operate with Novx sensors 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.

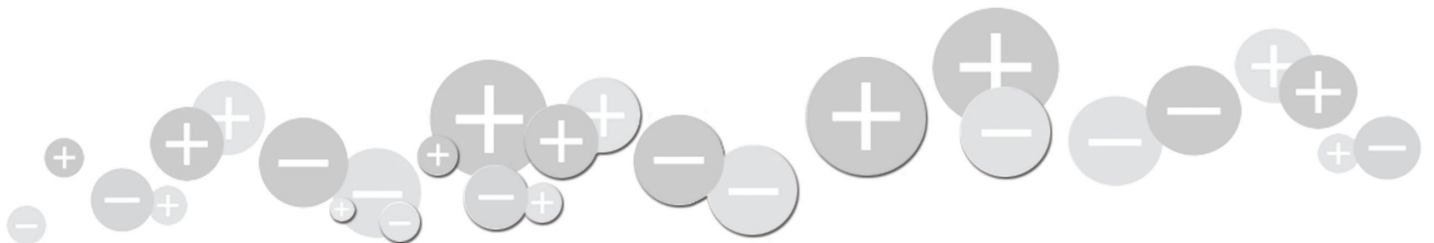
Designed with the overall ease of use features and built-in Auto-clean System for each fan, effectively reducing maintenance time and cost. The 5842 multi-fan overhead blower is available in 2-3-4 fan configuration and is the lightest overhead blower available in the industry—the ideal tool for today's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

Features

- $\pm 3V$ or better balance or $\pm 1V$ with the optional Novx feedback system
- Cleanliness rated at ISO 14644 Class 4 (Fed. Std. 209e Class 10)
- Sensor input, FMS connection, alarms and management control
- Built-in Auto-clean System with each fan
- Available in 2-3-4 fan; each with 4-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



Model 5842 Ionizer	
Input Voltage	2 fan: 24 VDC, 1.0A mA max; 3 fan: 24 VDC, 1.5A mA max; 4 fan: 24 VDC, 2A mA max
Discharge¹	Better than 2 sec @ 1 ft (typ) taken in-line from the center of the fan ($\pm 1000-100V$);
Balance	Better than $\pm 1V$ (typ) with Novx sensor; $\pm 3V$ (typ) without sensor
Technology	Steady-state DC
Emitters	Titanium emitter points, 8 per fan
Airflow	129 cfm (typ) per fan
Cleanroom Class	Meets ISO 14644-1 Class 4 (Fed Std. 209E Class 10)
Operating Env.	Temperature 50-90°F (10-32°C), humidity 30-70% RH, non-condensing
Ozone	0.005 ppm (typ)
Indicators	Green POWER on, red FAN stall, red FAULT LEDs with optional AUDIBLE ALARM
Audible Noise	High fan speed 61 dB (typ), low fan speed 52 dB (typ); measurements taken 12" (30.5 cm) from fan
Controls	Power/fan speed DIP switch with 4 speed/velocity settings, balance adjustment, FMS connections
Options	Audible alarm
Enclosure	Aluminum chassis with epoxy-polyester powder coat
Dimensions	2-fan: 32"L x 3.8"H x 6.1"W (81.3 x 9.6 x 15.5 cm) 3-fan: 42"L x 3.8"H x 6.1"W (106.7 x 9.6 x 15.5 cm) 4-fan: 52"L x 3.8"H x 6.1"W (132.7 x 9.6 x 15.5 cm)
Weight	2-fan: 5.5 lbs (2.5kg), 3-fan: 7.8 lbs (3.5kg), 4-fan: 10 lb (4.5 kg)
Warranty	Two year limited warranty
Certifications	pending
Power Adapter 14-xxxxx	
Input Voltage	90-264 VAC 50/60 Hz
Output Voltage	24 VDC, 65W
Dimensions	4.5"L x 1.5"H x 2.1"W (115 x 38 x 53 mm)
Weight	7 oz (200g)
Certifications	

1. Tested in accordance with ANSI/ESD STM3.1-2015.

Ordering Information

91-5842-01	5842 Blower, Standard
91-5842-01A	5842 Blower, Standard with Audible Alarm
91-5842A-01	5842 Blower with Antenna Connection
91-5842A-01A	5842 Blower, Standard with Antenna Connection & Audible Alarm
91-5842N-01	5842 Blower with Novx Connection
91-5842N-01A	5842 Blower, Standard with Novx Connection & Audible Alarm
91-5842-NX01	5842 Blower, Standard (No Power Adapter)
91-5842-NX01A	5842 Blower, Standard with Audible Alarm (No Power Adapter)
91-5842A-NX01	5842 Blower with Antenna Connection (No Power Adapter)
91-5842A-NX01A	5842 Blower with Antenna Connection & Audible Alarm (No Power Adapter)
91-5842N-NX01	5842 Blower with Novx Connection (No Power Adapter)
91-5842N-NX01A	5842 Blower with Novx Connection & Audible Alarm (No Power Adapter)
14-21328	100-240 VAC to 24 VDC Power Adapter (Power Cord Required)
25-20660	IEC power cord, US plug, 8.2 ft (2.5m)
25-20710	IEC power cord, UK plug, 8.2 ft (2.5m)
25-20735	IEC power cord, German-Schuko plug, 8.2 ft (2.5m)
25-20750	IEC power cord (China Plug), 8.2 ft (2.5m)
22-1000	Emitter Point Cleaner solution
22-0430-01	Emitter Point, Titanium
33-1620-xx	IC, Novx feedback/Control Interface Cable
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)

$\pm 1V$ Balance Performance

For $\pm 1V$ balance performance, Model 5842 is available with Novx closed-loop feedback or with Novx inside antenna assembly. Both options operate with the Novx to detect and automatically correct the balance. With the antenna placed at the target area, feedback is sent to the Model 5842 blower's internal control system, ensuring that your target maintains a $\pm 1V$ or better balance at all times.

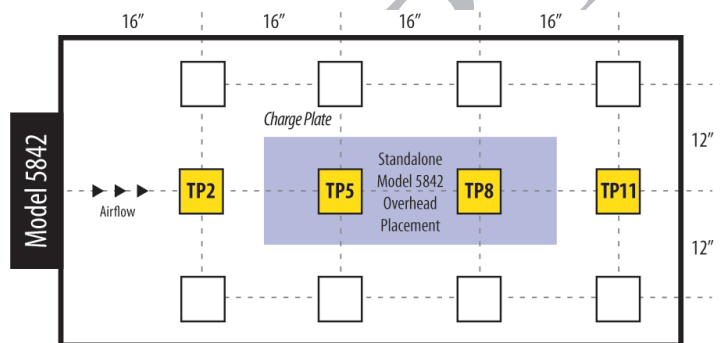
Factory Monitoring System

The blower includes an LED alarm light that indicates a range of possible conditions, including the absence of ionization at the emitter points or a stopped fan. An optional Audible Alarm is available. The Facility Monitoring System (FMS) feature provides an industry-standard 4-20 mA signal to your work cell controller for remotely monitoring error detection.

Auto-clean System

The built-in Auto-clean System features a brush mechanism that sweeps the emitter points when the blower is turned OFF and ON, allowing the Model 5842 to perform at optimum ion output and balance continuously, reducing maintenance time and cost.

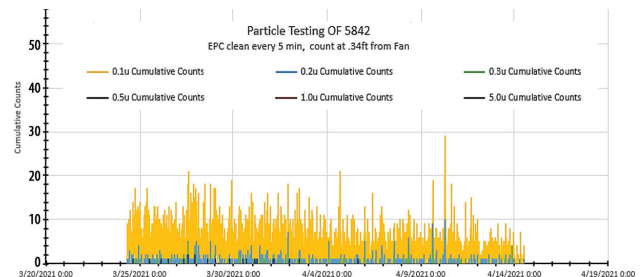
Performance



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.

Particle Test



SIMCO IONTM

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