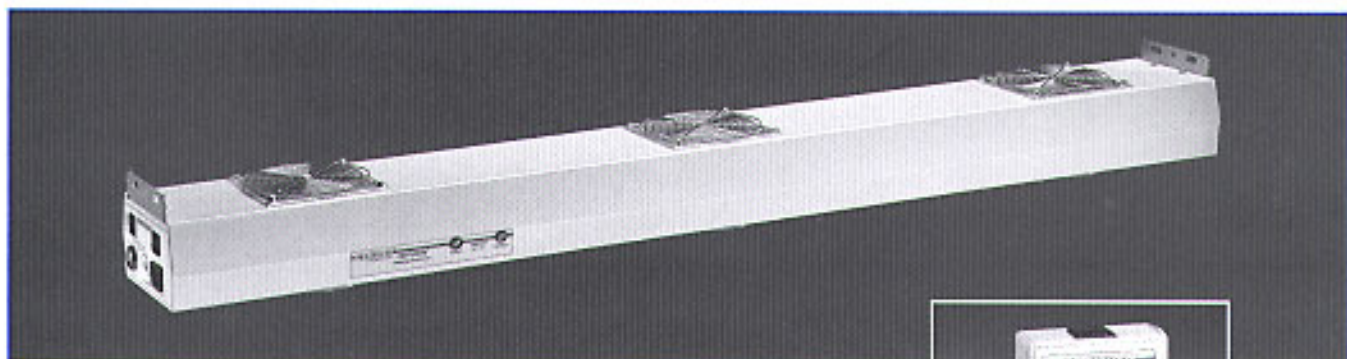


Centurion™ DC Overhead Ionizer



Patent pending

SIMCO's Centurion DC Ionizer is a Class 100 cleanroom-compatible overhead ionizer that provides total coverage and superior protection for even the most ESD-sensitive components. The Centurion features microcontroller intelligence for active self-monitoring and automatic system correction. This closed-loop feedback system ensures continuous ion balance of $0\pm 5V$. The Centurion features an outlet to allow power supply connection (daisy-chain) of up to 10 units in series. SIMCO's patented built-in emitter point cleaners are available as an option.

Designed specifically for use in cleanrooms, the Centurion has sophisticated monitoring circuitry (patent pending) which triggers alarms if the unit is not ionizing or exceeds the balance sensitivity setting. It can be easily adjusted via a hand-held remote control. Air ducts enclose the emitters and each fan. Fans are tested for cleanliness to ensure that only clean air exits the unit.

Ion balance for each ionizing element can be adjusted by the using the Ion Balance Remote Control, allowing the user to stand clear of the unit while making adjustments. Each ionizing element is easily accessible for cleaning and service by removing the quick-release inlet guards so emitter pins and the interior of the ionizing element may be cleaned. Emitter pins are mounted in sockets for easy replacement.

Installation of the Centurion is easy and clean with its non-particle generating stainless steel mounting brackets and hardware. Power is supplied through a standard international power inlet and the unit operates on 100 to 240 VAC, 50/60 Hz for operation anywhere in the world. A power outlet is located at the opposite end of the Centurion for interconnecting power through several units. The Centurion features an ionizer status panel on both sides of the unit so the Centurion may be mounted in either direction.

Typical Applications

- Disk Drive Manufacturing,
- Semiconductor Manufacturing
- Storage Media Manufacturing
- Electronics Assembly
- Medical Device Assembly



Ion balance remote control allows easy adjustments.

Features

- Closed-loop balance control to $0\pm 5V$
- Microcontroller Intelligence for active self-monitoring of operating parameters
- Ion balance and ion output monitor lamps
- Remote balance control
- Extended coverage area
- Patented emitter point cleaners

Benefits

- Protects even the most sensitive components
- Rapid decay of static charges
- Assurance that the unit is ionizing and in balance
- Maintains a low offset voltage
- Helps maintain desired ionization performance level
- Fast, easy maintenance and calibration

Centurion™ DC Overhead Ionizer

Specifications

Part Number

4008121

Nominal Line Voltage

100-240 VAC (±10%); 50/60 Hz

Maximum Current Draw

100 VAC	120 VAC	240 VAC
0.4 amps	0.3 amps	0.2 amps

Maximum Daisy Chain

10 units

Power Inlet/Outlet

IEC320

Size

44" L X 3.1" H x 6" D
(112 cm L x 8 cm H x 15 cm D)

Weight

12.6 lbs. (5.7 kg.)

Air Volume Output

140 CFM — 280 CFM (low to high)
Combined three-fan output

Effective Coverage

2' x 4' Area

Ion Balance (offset voltage)

0V ±5V

Discharge Time

3.0 seconds (1000 V to 100 V) at 18" directly
under center of unit; fan speed on high

Operating Temperature

32° F (0° C) to 122° F (50° C)

Ozone Production

0.01 ppm

Measured 12" (30 cm) in front of unit
operating in still air

(Test conducted in accordance with EPA
EQQA-0577-019 using Dashibi Ozone
Monitor Model 1003AH)

Audible Noise

Fan Speed Low: 50 dB(A)

Fan Speed High: 60 dB(A)

Measured 18" (46 cm) from unit

Ionizing Elements

Acrylic Ducts, Titanium Ion Emitter Points

Enclosure

Aluminum

Mounting Hardware

Stainless steel

Finish

Gloss Polyester Enamel

Agency Approvals

UL and CUL pending; CE compliant

How the Centurion Works

The Centurion ionizing air blower produces an airflow that is rich in positive and negative air ions. Directing the airflow onto items that are electrostatically charged will quickly neutralize the charges. If an item has a negative static charge, it will attract positive ions from the airflow. Conversely, if an item has a positive static charge, it will attract negative ions from the airflow. The air ions are attracted to the opposite charges on the item and neutralize the charges.

The volume of airflow is controlled by variable speed control of three fans, which provides a wide range of airflow settings. The airflow can also be locked on high with a keyswitch. Airflow is drawn through ionizing elements that produce air ions. These ionizing elements have integral ducts to eliminate airflow within the unit's chassis.

The ionizing elements are energized with low-current, high-voltage DC power supplies. High-voltage DC is applied to an "X" shaped arrangement of ion emitter points, resulting in an intense electric field at the tip of the points which creates both polarities of air ions in the airflow. The airflow exiting the Centurion carries these ions to the work area to provide static neutralization.

A sensor located downstream from the ionizing element monitors ion balance. Ion balance and ion output current are monitored and controlled by a microcontroller. To ensure that the unit is working properly, the microcontroller indicates ion balance and output status with two bi-color (green/red) LEDs on each side of the unit.



Static Control and Cleanroom Products

SIMCO

Static Control and Cleanroom Products

2257 North Penn Road

Hatfield, PA 19440

Tel: 215.822.2171

800.538.0750

Fax: 215.997.3450

<http://www.simco-static.com>

e-mail: simco@itw.com



YOUR LOCAL REPRESENTATIVE

Specifications subject to change without notice. June 1999 Copyright © 1999 SIMCO

SPEED11 Printed in USA

Printed on Recycled Paper