centurION™ 9E

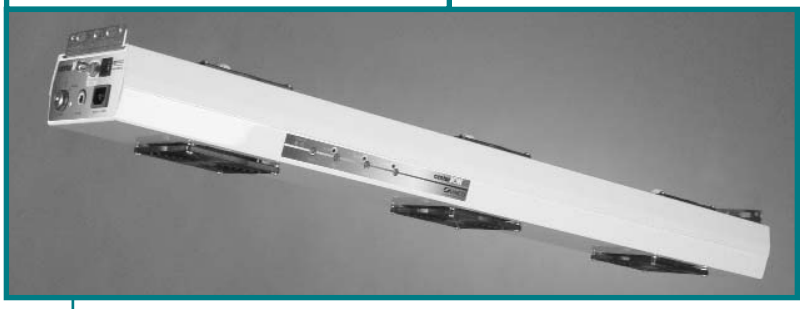
Single-Fan
Two-Fan
Three-Fan

Ionizing Air Blower

- ***Rapid Static Charge Control***
- ***+/- 3V Offset Voltage (balance)***
- ***Class 10 Cleanroom Compatible***
- ***Fan Speed Control***
- ***Patented Emitter Design***
- ***Patented Integrated Emitter Cleaning Brush***

The centurION 9E DC Ionizer is designed specifically for use in critical cleanroom applications. It offers superior balance performance with its novel emitter array design and high-gain dual feedback circuitry (US patent #6717792). Using corona ion technology, the centurION eliminates charges cleanly, quickly and reliably in cleanroom workstation applications where electrostatic discharge (ESD) is a concern. It is designed for applications where even low levels of static charge can damage sensitive components.

centurION™ 9E DC



centurION™ Single Fan DC Ionizer

(US patent #6717792)

Ion balance is maintained with a high-gain dual feedback circuit. This circuit, combined with the unit's patented emitter array design, offers superior offset voltage performance. The unit is capable of maintaining +/-3V balance performance. If the unit becomes unable to track its setpoint or some other atypical condition occurs, the built-in monitoring circuit indicates a fault.

Specially selected components ensure cleanliness of the centurION's output air to meet or exceed Class 10 particle limits. All fans feature a specially designed bearing system and use silicone-free lubricants. All other air bearing surfaces in the ionizer are manufactured free of silicone. Fan assemblies are run-in and particle tested to Class 10 (FS209E; ISO Class 4) particle limits. The centurION's final assembly, final test, and packaging take place in a Class 100 cleanroom to minimize risk of contamination.

Operation

The centurION produces ionized air with balanced ion content. Ion offset voltage is continuously monitored and corrected through the combination of the unique emitter array design and control circuit. Directing the airflow onto an object or work surface eliminates existing static charges and prevents accumulation of additional charge. Charged objects attract the charge of the opposite polarity from the ion-rich air stream and the charge is neutralized.

The centurION features a fan speed control to adjust the amount of air delivered to the work surface. The patented ion emitter design provides superior delivery of ions to the air stream through the use of a unique geometry which controls airflow over the emitters. Adjustments to the output of the emitter array are seen quickly as ion output changes in the air. The resulting balanced stream of ionized air is delivered to the work area to control static charge.

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Ionization for Electronics Manufacture

Specifications:

Line Voltage: 100-240 VAC, 50/60 Hz

Offset Voltage:* ± 3V from set point, adjustable set point to 0V

Offset Balance: Adjustable to zero, using potentiometer adjustment tool

Operating Temperature: 32°F (0°C) to 122°F (50°C)

Ozone: Unit run in closed 1000-cubic-ft chamber. Ozone equilibrium concentration due to unit: 0.02 ppm

Emitters: Machined tungsten or titanium

Enclosure: Aluminum

Finish: Gloss white polyester

Audible Noise:

Fan Speed	
Low	48 dB(A)
High	58 dB(A)

Measured 2 ft. (61 cm) from unit

Air Velocity:

Fan Speed	V at 18" (46cm)
Low	200 FPM (1.0 m/s)
High	400 FPM (2.0 m/s)

Fan Speed	V at 24" (61cm)
Low	150 FPM (.75 m/s)
High	300 FPM (1.5 m/s)

Adjusted using screwdriver

Indicators: A green light indicates power on. Fault light is normally off. A red light indicates an error condition. (optional: audible signal)

Reset: Automatic

Maintenance: Rotate emitter cleaner knob clockwise one revolution and release

Mount: Stainless steel

Approvals: c UL us CE** IECEE CB SCHEME 2 fan, 3 fan only. **1 fan

**Tested in accordance with ESD-STM3.1-2000, IONIZATION*

	Single-Fan	Two-Fan	Three-Fan
Part Numbers	4009408 (N. AM./Japan) 4009409 (Cont. Europe) 4009410 (UK)	4009430 (N. AM./Japan) 4009431 (Cont. Europe) 4009432 (UK)	4009423 (N. AM./Japan) 4009424 (Cont. Europe) 4009425 (UK)
Max. Power Consumption	15W	45W	45W
*Discharge Time**	at 12": 1,000 - 100V <3 sec	at 18": 1,000 - 100V <3 sec	at 18": 1,000 - 100V <3 sec
Air Volume Output			
Fan Speed Low	50 CFM (23 l/s)	100 CFM (40 l/s)	150 CFM (60 l/s)
Fan Speed High	90 CFM (42 l/s)	230 CFM (80 l/s)	345 CFM (120 l/s)
Air Flow Coverage	1' x 4'	2' x 3'	2' x 4'
Weight	3.55 lbs. (1.61 kg)	8 lbs. (3.62 kg)	11 lbs. (5 kg)
Size (Overall)	9 3/8"W x 8" H x 3 3/8 "L 24 cm x 20.8 cm x 8.6 cm	6"W x 3" H x 26"L 15.25 cm x 7.62 cm x 66 cm	6"W x 3" H x 40"L 15.25 cm x 7.62 cm x 102 cm

In Ionization technology, *SIMCO® clearly has the leadership role. Our research and manufacturing facilities are worldwide...our technical expertise is second to none...and our products simply inspire the competition. For a no-hassle assessment and quote call 800-538-0750 (in USA) or log on to www.simco.biz.*

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