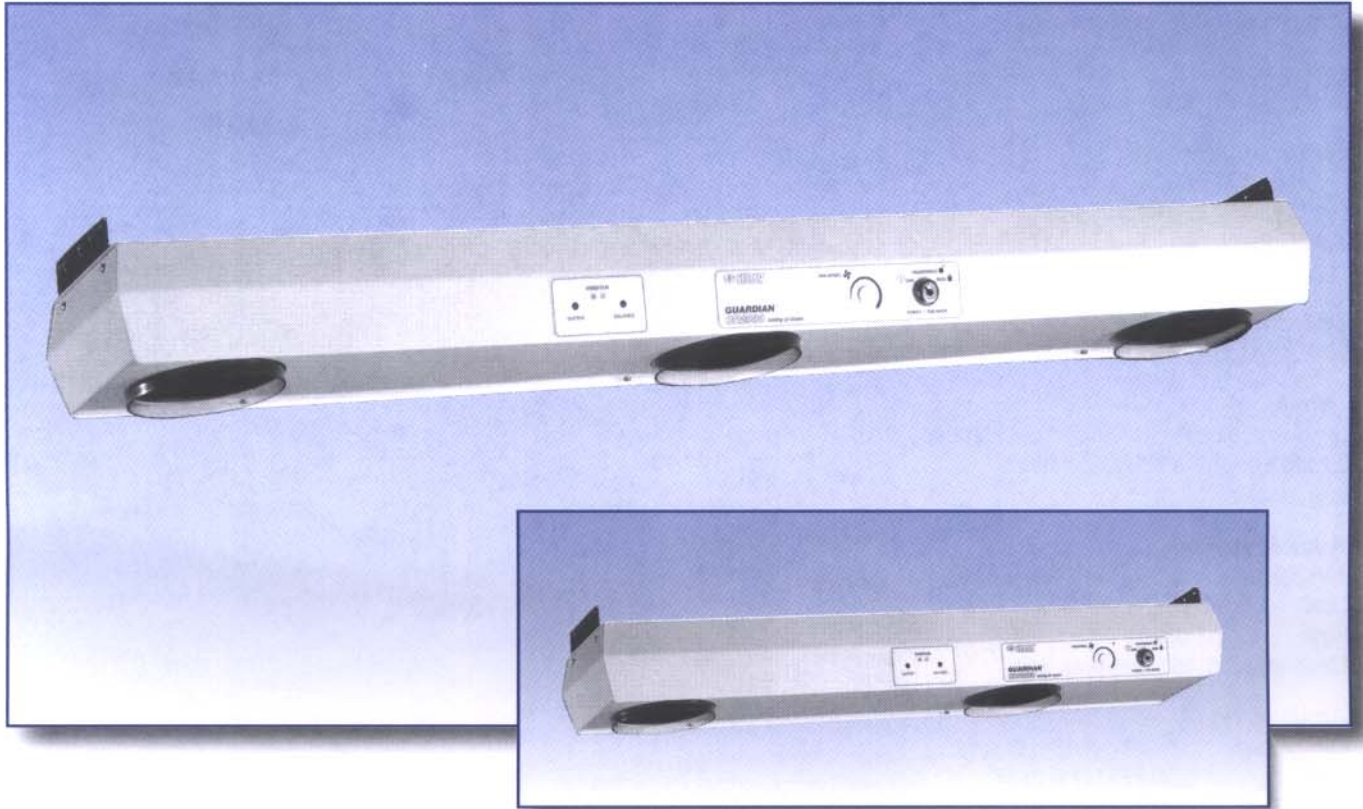




Ionization for Electronics Manufacture

## Guardian CR2000 Overhead Ionizing Air Blower



The Guardian CR2000 is available as a three-fan or a two-fan unit.

**SIMCO's Guardian CR2000 Overhead Ionizing Air Blower is designed specifically for use in critical cleanroom applications.**

The Guardian CR2000 features a patented circuit that results in balanced delivery of positive and negative ions, which ensures that the unit will maintain an ion balance of  $0 \pm 5$  V. Balance stability is further enhanced by use of SIMCO's unique "ion shields" at the fan outputs to reduce parasitic ion loss.

The Guardian CR2000 ensures cleanroom compatibility using specially chosen components and materials. All fan and air bearing surfaces are manufactured free of silicones. Fan assemblies are particle-tested to Class 10 (209E; ISO class 4) particle limits.

The Guardian CR 2000 is also equipped with SIMCO's patented built-in emitter point cleaners and a lockout switch to prevent tampering with the desired performance level. Built-in monitor and an outlet to daisy-chain up to 10 units are also standard.

Unlike some overhead ionizers which link to an external device to provide realtime monitoring, the Guardian CR2000 has sophisticated internal monitoring circuitry which provides assurance that the unit is ionizing and that the balance circuit is functioning.

### Features

- Inherently balanced to  $0 \pm 5$  V
- Ion balance and ion output monitors
- Lockout key switch
- Silicone-free surfaces
- Patented emitter point cleaner

### Benefits

- Protects even the most sensitive electronic components
- Verifies that the unit is ionizing and balanced
- Helps maintain desired ionization performance level
- Supports Class 10 compatibility
- Provides fast, easy maintenance

# Guardian CR2000 Overhead Ionizing Air Blower

## Specifications

### Discharge Time:\*

3 seconds, 1,000-100 V  
5 seconds, 1,000-10 V

### Offset Voltage:\*

0±5 V; ±3 V typical

### Power Connections:

Input: IEC 320  
Output: IEC 320; allows power connection (daisy chain) of up to 10 units in series from one power source

### 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

### Audible Noise:

Fan Speed

Low 48 dB(A)

High 58 dB(A)

Measured 2 ft. (61 cm) from unit

### Air Velocity:

Fan Speed Velocity at 18" (46 cm)

Low 200 FPM (1.0 m/s)

High 400 FPM (2.0 m/s)

### OFF/ON:

Three-position key switch with OFF/ADJUSTABLE/HIGH positions. The key can be removed in any position.

### Indicators:

Bi-color LED. A green ION OUTPUT and ION BALANCE light indicates normal condition. Red light indicates maintenance condition.

### Indicator Reset:

Automatic

### Maintenance:

Rotate point cleaner knob at each air outlet clockwise one revolution and release.

### Mounting:

Stainless Steel hardware; hanger brackets. S-hooks provided for chain mount and L-brackets provided for rigid mount.

### Enclosure:

Aluminum

### Finish:

Gloss white polyester

### Approvals Pending:

UL, CUL and CE



### 3-Fan Unit

Part No.	Line Voltage	Max. Current Draw
4008630	120 VAC, 50/60 Hz	0.3 Amp
4008705	230 VAC, 50/60 Hz	0.15 Amp
4008704	100 VAC, 50/60 Hz	0.3 Amp

### Air Volume Output:

Fan Speed	Flow
Low	135 CFM (60 l/s)
High	270 CFM (120 l/s)

### Coverage:

2' x 4' Area

### Weight:

15 lbs. (6.8 kg.)

### Dimensions:

42-3/4" W x 4" H x 6-3/4" D  
(109 cm W x 10 cm H x 17 cm D)



### 2-Fan Unit

Part No.	Line Voltage	Max. Current Draw
4008729	120 VAC, 50/60 Hz	0.2 Amp
4008730	230 VAC, 50/60 Hz	0.1 Amp
4008731	100 VAC, 50/60 Hz	0.2 Amp

### Air Volume Output:

Fan Speed	Flow
Low	90 CFM (40 l/s)
High	180 CFM (80 l/s)

### Coverage:

2' x 3' Area

### Weight:

12 lbs. (5.5 kg.)

### Dimensions:

31-3/4" W x 4" H x 6-3/4" D  
(81 cm W x 10 cm H x 17 cm D)

\* Tested in accordance with ESD STM3.1-2000, IONIZATION. Unit positioned in 100 FPM unidirectional airflow, 18 inches above test plate. Charge Plate Monitor (CPM) test plate 2" above test surface.



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