



Phoenix Ionizing Blower

CE

INSTALLATION AND OPERATING INSTRUCTIONS

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1. SAFETY WARNINGS

SIMCO-ION RECOMMENDS THAT THESE INSTRUCTIONS BE READ COMPLETELY BEFORE INSTALLATION OR OPERATION OF THIS EQUIPMENT. FAILURE TO DO SO COULD RESULT IN PERSONAL INJURY AND/OR DAMAGE TO THE EQUIPMENT



NOTE – Statements identified with a NOTE indicate precautions necessary to avoid potential equipment failure.



CAUTION – Statements identified with a CAUTION indicate potential safety hazards.



NOTE – This equipment must be correctly installed and maintained. Adhere to the following notes for safe installation and operation.

1. Read instruction manual before installing or operating equipment.
2. Only qualified service personnel are to perform installation and repairs.
3. All equipment must be properly grounded, including the machine frame to which the equipment is mounted.
4. Do not operate device in excess of specifications.



NOTE – Do not attempt to operate at voltages other than those specified.



NOTE – Do not allow dust, dirt or debris to block or obstruct air flow inlets or outlets.



CAUTION – Electrical Shock Hazard

Always disconnect power supply before connecting or disconnecting static neutralizing equipment. Avoid touching static neutralizing points when power supply is energized.



CAUTION – Fire Hazard

Do not install or operate equipment in close proximity to any flammable solvents or in explosive atmospheres

2. INTRODUCTION

The Simco-Ion Phoenix is a highly reliable, extended-range ionizing air blower designed for use in many industrial applications. It is aerodynamically designed to efficiently cover a wide area with an electrically balanced ion stream. The Phoenix is equipped with a variable speed fan control, electronic ion balancing that assures equal quantities of positive and negative ions, self-contained power supply and a built-in emitter point cleaner that removes dust buildup from the tips of the emitter points. The unit is portable, completely self-contained and is equipped with a bench stand to aid in directing the ionized air stream. An optional floor stand with wheels is also available.

Receipt of Equipment

1. Carefully remove the equipment from its carton.
2. Inspect contents for damage that may have occurred during shipment. If any damage has occurred, the local carrier should be notified at once. A report should be forwarded to Simco-Ion, 2257 North Penn Road, Hatfield, PA 19440 and (215) 822-6401.
3. Empty the carton to ensure that small parts are not discarded.

Return Shipments

Prior to returning goods, contact a Simco-on Customer Service Representative for a Return Authorization Number. This number should be included on the packing list. All correspondence should also reference the Return Authorization Number. Any item being returned should be shipped prepaid and packed to provide adequate protection.

3. SPECIFICATIONS

Phoenix Ionizing Air Blower (120 VAC)

Line Voltage	120 VAC, 60 Hz
Current Draw	2.0A (fan speed high)
Operating Temperature	32-100°F max (0-38°C)
Operating Humidity	70% RH max, no dewing permissible
Dimensions	16-3/8L x 13-1/4W x 9-3/4H in
Weight	16.1 lb
Blower Output	110-300 CFM (adjustable)
Air Speed Characteristics	2,000 FPM at 1 ft (fan speed high) 1,250 FPM at 2 ft (fan speed high) 800 FPM at 4 ft (fan speed high)
Noise Level	68 dB at high fan speed (2 ft from blower)
Ionization Indicator	Status lamp illuminates when high voltage is present at the emitter points
Short Circuit Current	0.175 mA max (emitter-point to ground)
Typical Discharge Times	0.5 sec at 1 ft (5000V to 500V) 1.0 sec at 2 ft (5000V to 500V) 2.0 sec at 3 ft (5000V to 500V) 2.5 sec at 4 ft (5000V to 500V) 3.5 sec at 5 ft (5000V to 500V) 12.0 sec at 10 ft (5000V to 500V)

Phoenix Ionizing Air Blower (230 VAC)

Line Voltage	230 VAC, 50/60 Hz (customer supplies line cord plug)
Current Draw	1.5A (fan speed high, 50 Hz)
Operating Temperature	32-100°F max (0-38°C)
Operating Humidity	70% RH max, no dewing permissible
Dimensions	16-3/8L x 13-1/4W x 9-3/4H in
Weight	16.1 lb
Blower Output	100-300 CFM (60 Hz) 100-250 CFM (50 Hz)
Air Speed Characteristics*	2,000 FPM at 1 ft (fan speed high) 1,250 FPM at 2 ft (fan speed high) 800 FPM at 4 ft (fan speed high)
Noise Level	68 dB at high fan speed (2' from blower)
Ionization Indicator	Status lamp illuminates when high voltage is present at the emitter points
Short Circuit Current	0.175 mA max (emitter-point to ground)
Typical Discharge Times*	0.5 sec at 1 ft (5000V to 500V) 1.0 sec at 2 ft (5000V to 500V) 2.0 sec at 3 ft (5000V to 500V) 2.5 sec at 4 ft (5000V to 500V) 3.5 sec at 5 ft (5000V to 500V) 12.0 sec at 10 ft (5000V to 500V)

*Approximate performance for 230 VAC, 60 Hz; 230 VAC 50 Hz performance will be about 20% slower.

4. INSTALLATION

Positioning and Mechanical Requirements

1. For maximum effectiveness, position the Phoenix as close as possible to the charged surface to be neutralized. Direct the air stream longitudinally, and in the same direction as, the target material movement to maximize the time the charged surface remains in the air stream. Ensure that the ionized air stream covers the entire target surface, and that the material to be neutralized is not in direct contact with a background surface.
2. The Phoenix can be placed on any flat, level surface using the built-in bench stand. It can also be wall or ceiling mounted using the tapped mounting holes in the base of the stand. The Phoenix may also be placed on an OPTIONAL vertically adjustable floor stand that can be moved and positioned as required.

Electrical Connections

1. The Phoenix requires 120 VAC, 60 Hz or 230 VAC, 50/60 Hz for operation. Depending on the model, terminate line cord with plug if required. Connect the line cord to a 3-terminal grounded receptacle.
2. The unit **MUST** be grounded for ionization to occur.



NOTE – Do not attempt to operate at voltages other than those specified.



NOTE – For 230 VAC, 50/60 Hz units, performance is slower for 230 VAC 50 Hz operation by approximately 20%.



CAUTION – Fire Hazard

Do not install or operate equipment in close proximity to any flammable solvents or in explosive atmospheres.

5. OPERATION

Before energizing this equipment:

1. Ensure that the unit is properly grounded.
2. Ensure that all static control devices have been properly located, positioned and installed.

After the above checks have been performed, simply turn the fan speed control knob from the OFF position to the desired airflow setting. Use the highest airspeed that the application allows. With the fan speed set to maximum, the Phoenix will neutralize static charges at a distance of ten feet. As the fan speed is decreased, neutralization range will also decrease.



NOTE – Do not allow dust, dirt or debris to block or obstruct the airflow inlets or outlets.



CAUTION – Electrical Shock Hazard

Always disconnect power supply before cleaning static neutralizing equipment. Avoid touching static neutralizing points when power supply is energized.

6. TROUBLESHOOTING

Operational Check

1. Rub a small strip of plastic film until a static charge is developed (cellophane works well). The charge can either be measured with an electrostatic fieldmeter or will be evidenced by the film's attraction to a grounded metal surface.
2. Pass the film in front of the blower for five seconds at a distance of one foot. Check for any charge remaining on the film as in step 1.
3. If the static charge has been neutralized, then the device is working properly.

If equipment fails to function properly, contact Simco-Ion Customer Service or your local Simco-Ion Representative.



NOTE – Never use a “spark test” to check operation. The balancing circuit design of the Phoenix makes the “spark test” inconclusive and can permanently damage the circuit.

Ion Balance Adjustment

1. An electronic balancing circuit in the blower controls the output ration of negative to positive ions. The circuit is preset at the factory and normally requires no further adjustment.
2. Balance may be evaluated using a Simco-Ion EA-3 Electrostatic Analyzer. (Consult the EA-3 Instruction Manual for measurement procedure).
3. The balance adjustment potentiometer is accessible through a small opening on the control panel of the Phoenix, near the fan speed adjustment knob. Using a small screwdriver, carefully adjust the potentiometer until positive and negative ion outputs are equal.

7. MAINTENANCE



NOTE – Never use hard or sharp objects to scrape ionization points.



CAUTION – Electrical Shock Hazard

Turn OFF power before performing any maintenance tasks on the Phoenix.

Front Screen

1. The screen at the air outlet on the front panel should remain clean to prevent restriction of airflow.
2. Turn OFF the unit and clean the outlet screen with a soft brush and/or vacuum cleaner.

Ionizing Emitter Points

1. Dust or dirt around the ionization points will reduce the effectiveness of the blower. The ionization points must be cleaned periodically to prevent deposits from accumulating.
2. Simply turn OFF the unit and slide the built-in Point Cleaner (located on the front face of the blower) from one side to the other and back again.
3. Frequency of cleaning should be at least once monthly, or as determined by inspections based on operating conditions.

Air Intake Filters

1. Filter cleaning or replacement frequency depends upon the cleanliness of the operating environment. Inspect filters weekly, replacing or cleaning as required.
2. Simply turn OFF the unit, slide dirty filters out from under the three fixed retaining clips, and replace with clean filters.

8. REPLACEMENT PARTS/ADDITIONAL ITEMS

Ionizer Assembly (with grill and brush)	5050395
PC Board (120 VAC)	5050396
Speed Control Knob	4671112
Line Cord Assembly	5050397
High Voltage Transformer Kit	5050392
Blower Motor (120 VAC)	5050393
Replacement Air Filters (pkg of 20)	4100642
PC Board (230 VAC)	4110553
Blower Motor (230 VAC)	4110555

9. WARRANTY

This product has been carefully tested at the factory and is warranted to be free from any defects in materials or workmanship. Simco-Ion will, under this warranty, repair or replace any equipment that proves, upon our examination, to have become defective within one year from the date of purchase.

The equipment being returned under warranty should be shipped by the purchaser to Simco-Ion, 2257 North Penn Road, Hatfield PA 19440, transportation prepaid and insured for its replacement cost. Prior to returning any goods for any reason, contact Simco-Ion Customer Service at (215) 822-6401 for a Return Authorization Number. This number must accompany all returned items.

This warranty does not apply when the equipment has been tampered with, misused, improperly installed, altered, has received damage through abuse, carelessness, accident, connected to improper line voltage, or has been serviced anyone other than an authorized factory representative.

The warranty does not apply when Simco-Ion parts and equipment have been energized by other than the appropriate Simco-Ion power supply or generator, or when a Simco-Ion power supply or generator has been used to energize other than Simco-Ion parts and equipment. Simco-Ion makes no warranty, expressed or implied, nor accepts any obligation, liabilities, or responsibility in connection with the use of this product other than the repair or replacement of parts stated herein.

Simco-Ion

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