SIMCO ION™

An ITW Company

I-VSE 5000

Static Neutralizing Blower

INSTALLATION AND OPERATING INSTRUCTIONS

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1. NOTES AND CAUTIONS

IMPORTANT – Simco-Ion Industrial Static Control recommends that these instructions be read completely before installation or operation of this power unit. Failure to do so could result in personal injury and/or damage to the unit or equipment.

Review the following safety precautions to maintain safety and prevent damage to the instrument or equipment connected to it. The safety features of this instrument may be ineffective if the equipment is not operated in the manner stated in this manual. Refer all maintenance procedures to qualified personnel.

NOTE - If any damage has occurred during shipment, notify the local carrier at once. A report should also be forwarded to Simco-Ion, 2257 North Penn Road, Hatfield PA 19440.

Terms and Symbols

The following terms and symbols appear in this manual:

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 insert objects into the intake or outlet of the ionizing blower.

CAUTION – Electrical Shock Hazard – Always disconnect power supply before connecting or disconnecting static neutralizing equipment. Avoid touching static neutralizing point 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.

CAUTION – Personal Protective Devices Recommended – Always wear safety glasses or goggles when operating ioninzing blower. Also wear hearing protection if the ioninzing blower is operated more than 1½ hours per day.

2. INTRODUCTION

The I-VSE 5000 static neutralizing blower eliminates static charges in demanding industrial environments. The I-VSE 5000 neutralizes areas up to 80 square feet and features a passive ionization circuit that maintains ion balance, even during voltage fluctuations.

The I-VSE 5000 is CE compliant and complies with FCC Part 15 requirements for Class A equipment.

The I-VSE 5000 features

- Passive ionization circuit
- High volume variable speed fan
- Built-in air diffuser
- Optional adjustable-height stand is 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-Ion 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

I-VSE 5000	
Operating Voltage	120 or 230 VAC, 50/60 Hz
Power	45 Watts
Dimensions	10"L x 12"W x 6-1/4"H
Weight	8 lb
Blower Output	100 – 255 CFM (Adjustable)
Airspeed Characteristics	850 FPM at 2-ft (fan speed high)
Noise Level	68 dB at high fan speed (2' from blower)
Typical Discharge Time	0.6 sec at 1-ft (1000V to 100V)

4. INSTALLATION

1. For maximum effectiveness, position the I-VSE 5000 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.
2. Locate blowers after the material has received its static charge. If the material is subject to ongoing friction, additional static control devices may be needed.
3. Blowers may be located above and/or below a web.
4. 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.
5. The blower may also be placed on an OPTIONAL vertically adjustable floor stand that can be moved and positioned as required.
6. The unit MUST be grounded for ionization to occur.

5. OPERATION

Performance Data			
Distance (ft) from Ionizer	Decay Time (sec) [1-ft left of center]	Decay Time (sec) [on centerline]	Decay Time (sec) [1-ft right of center]
1	19.3	0.6	18.3
2	4.4	1.0	4.0
3	2.8	1.4	3.0
4	3.8	2.0	4.2
5	4.3	2.5	5.0
6	4.6	3.6	5.2
7	5.8	4.3	6.3
8	7.0	5.5	7.5
9	8.3	6.8	8.5
10	10.0	8.8	10.3

Decay times represent 90% neutralization of a 1000 VDC Plate (1000 V to 100 V) at specified distances.
Decay times measured per ANSI EOS/ESD Standard 3.1

Start Up:

1. Turn power switch to ON position.
2. Turn fan speed knob to adjust air velocity. Low fan speed should be adequate for most applications. High fan speeds may be used for larger areas.

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 reduce static charges from target surface(s):

1. Deenergize the power supply.
2. Ensure all ground connections are intact.
3. Check that all cable connections are tight.
4. Verify fuse located in the power inlet on the back panel is not blown. If it is, slide out the fuse drawer, remove the fuse and replace with fuse specified in Section-8 of these instructions.
5. Check that the four screws holding the front bezel in place are tight, but not over tightened, and that the word "POWER" is oriented to the right side as you face the bezel.
6. Energize the power supply (if equipped with an ON/OFF switch, ensure that it is in the ON position).
7. IONIZER TEST: To determine if the ionizer bar is functioning properly, place a Static Bar Checker (Simco-Ion p/n 4000004) on each of the ionizing points.

If the Static Bar Checker glows at only some of the points, check the points where it did not glow for metal fragments or other contamination. If found, the contamination should be removed (refer to the Maintenance section of these instructions).

- If the Static Bar Checker glows very brightly at only one of the points, the bar is defective and should be replaced.
- If the Static Bar Checker fails to glow at any of the points, either the bar or the power supply is defective. To identify the fault, perform the following steps:
  a. Turn off power to the Power Supply.
  b. Disconnect all static control equipment from the Power Supply.
  c. Connect one end of an insulated test wire to the power supply's ground stud.
  d. Energize the power supply.
  e. Slowly insert the free end of the test wire into one of the high voltage receptacles.

As the insulated wire approaches the contact within the terminal, a spark should occur and arcing should be heard. If a spark occurs and arcing is heard, then a static bar is the cause of the fault. Otherwise, the power supply is the cause. If either is faulty, contact Simco-Ion Customer Service or your local Simco-Ion Representative.

If the ion balance is greater than +/- 30 volts:

1. Verify line cord is plugged into a properly grounded 3-terminal receptacle.
2. Verify adapters or extension cords used with the I-VSE 5000 are all properly installed, are all of 3-terminal type, and are all properly grounded.
3. Verify that the front bezel is NOT grounded (and that a ground lead from a balance meter, or other instrument, is not attached to the bezel).
4. Verify that a known ground is in use or fan guard on back panel of the I-VSE 5000 is used as a ground point.
5. Verify that all conductive surfaces in the air stream are grounded.

7. MAINTENANCE

NOTE - Only qualified service personnel are to perform maintenance tasks.

CAUTION – Electrical Shock Hazard – Deenergize all power supplies before performing any maintenance tasks.

Ionizing Emitter Points:

1. Frequency of emitter point cleaning should be at least once monthly. If points are extremely dirty when cleaning, increase frequency to weekly. In very dirty environments, it may be necessary to clean points daily or at the end of each shift.
2. Simply turn OFF the unit and press a soft pencil eraser onto each point and gently twist to remove any buildup from the ionization points. To remove inks and resistant coatings, wipe the point with Isopropyl Alcohol (other cleaners may damage parts).
3. Remove dust from the air inlet and outlet with a brush or vacuum.

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

Thorough Cleaning:

1. Frequency of thorough cleanings should be at least once annually. If unit is extremely dirty when cleaning, increase frequency to quarterly. In very dirty environments, it may be necessary to thoroughly clean the unit even more frequently.
2. Simply turn OFF the unit and remove the bezel from the front of the blower by loosening the four cap screws that secure it.
3. Blow out the entire bezel assembly with clean dry compressed air.
4. Perform Ionizer Emitter Point cleaning.
5. Blow out the entire air channel and each fan blade with clean dry compressed air.
6. Wipe the air channel with a soft cloth dampened with a mixture of 50% Isopropyl Alcohol and 50% distilled water.

NOTE - Ordinary glass and household cleaners leave behind a conductive residue that impairs ionizer operation. Never allow such cleaners to contact the bezel or interior of the blower.

7. Allow assembly to air dry completely.
8. Reinstall the bezel assembly onto the front of the ionizer with the word “POWER” on the right side as you face the bezel.
9. Tighten the four cap screws until the bezel is snug against the front of the blower case.

8. ACCESSORIES AND PARTS

Item	Part Number
Emitter assembly	10631-001
Filter Kit	10790
Replacement Air Filters (pkg of 10)	5050974
Portable Floor Stand (optional)	5050975

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.

Information in this publication supercedes that in all previous published material. Specifications are subject to change without notice.

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