



Static Eliminator

Models IVSE-5000 & IVSE-500H

IMS #104453 / #122533

INSTRUCTION MANUAL

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Safety Overview

This manual uses the following signal words to call attention to the safety sign and to designate a degree or level of hazard seriousness.

1. **DANGER:** Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury. This signal word is limited to the most extreme situations.
2. **WARNING:** Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.
3. **CAUTION:** Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. Also used to alert against unsafe practices or property damage only accidents.
4. **NOTE:** Indicates general safe practices, machine use instructions and information, property damage only hazards, temporary hazards, precautions to avoid a hazard, results of not avoiding a hazard, or any combination of these messages.
5. **SYMBOL/PICTORIAL:** Conveys a message without words.
6. **SAFETY ALERT SYMBOL:** Indicates a potential personal injury hazard; an exclamation point inside a triangle.





Specifications

Line Voltage.....115 VAC or 230 VAC 50/60 Hz

Power:

Without Heater (Model IVSE-5000).....45 Watts

With Heater (Model IVSE-5000H).....445 Watts

Fuse.....1 Amp

Ion Balance.....Self balancing unit will maintain volt
balance at all normal operating conditions

Air Volume.....Adjustable 100 to 255 cfm (48 to 120 Liters/sec)

Air Velocity.....850 ft/min at 2 ft (4.3 m/sec at 0.6 m) maximum

Sound Pressure Level.....Maximum 68 dbA at 2 ft (max fan speed)

Weight.....8 lbs (3.6 kg)

Dimensions.....10" x 12" x 6.25" (254 mm x 305 mm x 159 mm)

EMI/RFI.....Complies with FCC Part 15
requirements for Class A equipment



Description

Thank you for purchasing an IMS Model IVSE-5000 or IVSE-5000H (includes heater) Static Eliminator. The IVSE-5000 Static Eliminator is an ionizer used in the plastics industry to prevent static charge problems. It is able to neutralize static charges quickly in a demanding environment, with the following features and capabilities:

- High volume variable speed fan
- Passive ionization circuit
- Effective neutralization for areas up to 80 square feet (7.43 square meters)
- Built-in air diffuser
- Optional adjustable floor stand available

Static charge is a matter of having too few or too many electrons. Too many creates a negative charge; too few creates a positive charge. To balance the charge, the Model IVSE-5000 sends out a cloud of charged atoms called ions – some negative and some positive. As ionized air flows over the statically charged parts, the parts with extra electrons (negative charge) give up their excess electrons to the positive ions, and the parts with too few ions take the necessary electrons from the negative ions. Once the parts reach their balance of electrons, the ionized air has no more effect on them.

The IMS Model IVSE-5000H works identically to the Model IVSE-5000, but also includes a small heater to warm the output air for operator comfort.

NOTE

The positive and negative ions from the IVSE-5000 do not immediately neutralize each other because they are under air pressure from the fan. As the effect from the fan fades, they do combine.

Installation

1. Install the filter and the filter retainer
 - a. Make sure the housing is clean and grease-free around fan grating.
 - b. With no filter in the filter retainer, remove paper backing from the retainer's Velcro[®] fasteners.
 - c. Press the retainer into position over the fan grating. Press firmly on the corners to set the adhesive on the Velcro[®].
 - d. Remove the retainer. Half of each Velcro[®] fastener should stick to the retainer. The other half should stick to the housing. Press the fastener halves firmly to make sure the adhesive is set.
 - e. Insert the filter into the retainer. Install onto the housing.
2. Mechanically install the unit
 - a. The unit mounts by a bracket to a wall, ceiling, or frame of a machine, such as a parts conveyor. The housing can rotate up to 270 degrees from the surface that the bracket is mounted on.

NOTE

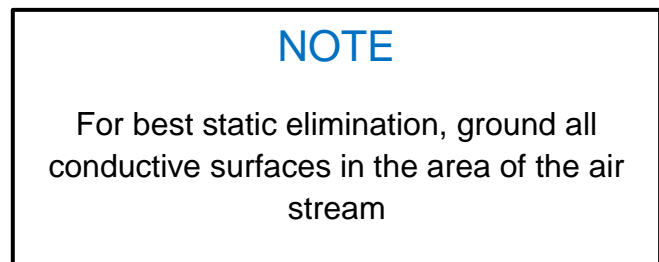
This equipment can emit radio frequency energy. If not installed and used according to this manual, it may cause radio interference.

Used in a commercial area, it complies with the limits for a Class A computing device pursuant to Subpart J of FCC rules.

Used in residential area, it is likely to cause interference. In that case, you will be responsible to correct the interference.

Installation (continued)

- b. Select an area that meets the following:
 - i. Not in the path of a machine's moving parts
 - ii. Not near the control portion of any machine
 - iii. Unit will be able to remain dry
 - iv. Easy to run an electrical cord to the location, it is best to avoid long wiring runs
 - v. As close as possible to the area that is to be treated
 - vi. Within a range of about 80 square feet (7.43 square meters); the center of the air stream has a much longer range; as the stream fans out, the effectiveness drops off
 - c. Mount the bracket securely
3. Connect to the power source
- a. Make sure the ground prong on the electrical plug is connected to the ground; do not ground from any other point for the following reasons:
 - i. It is much safer if the ground is connected to the ground, as opposed to anywhere else
 - ii. The unit uses the ground as a reference, and it is therefore better that the ground prong is connected to the ground





Normal Operation

1. The eliminator must have been installed according to the installation instructions in this manual.
2. Aim unit to send air stream directly at are to be treated. Factors that affect the process include:
 - a. Amount of time the parts are in the ionized air stream
 - b. The part's distance from the ionized air stream
 - c. The angle at which the stream hits the part: at an indirect angle from a far distance, the air stream will be less effective
 - d. Part configuration: hidden nooks and crannies can be shielded from the air stream
3. Turn power switch ON (the controls are on the back of the back panel of the unit)
4. Adjust the fan by turning the fan speed knob; use the lowest speed that works for your application; the farther from the are to be treated, the faster the fan must be

Turn the knob clockwise to increase speed

5. Heated model only (Model IVSE-5000H, IMS #122533): The heater will warm the output air for operator comfort ; to turn on the heater, flip the heater control lever up
6. To turn the unit off, turn the power switch OFF

NOTE

This static eliminator has been tested safe to operators when properly installed. There is no need to avoid contact with the unit if it has been properly grounded and all covers are in place. There is no known danger to personnel from the air stream of this unit.

Maintenance

1. Checking and changing the filter

- a. Check filter often; the more dust and oil there is in the air, the more often it will need to be checked. Clean or change the filter when you can see it is coated with dust or dirt.
- b. To change the filter:
 - i. Remove the filter retainer
 - ii. If needed, clean the fan grating and blade; to do this:
 - a) Unplug the unit
 - b) Use a vacuum cleaner to clean the grating and blades
 - iii. Install a new filter in the retainer
 - iv. Install the retainer

2. General Cleaning

- a. Clean Housing with clean cloth and either distilled water or clean, technical grade isopropyl alcohol
- b. Use a vacuum cleaner to clean the fan grating and fan without removing the grating

DANGER

Live electric parts could cause **death** or **shock**

Do not insert anything through the slots in the bezel; lock out and tag out power before removing the bezel

Only qualified electricians are to do electrical work





Maintenance (continued)

3. Cleaning the emitter points

- a. The emitter points are the points on the two plates behind the front bezel. When they are dirty or dusty the unit is unable to function efficiently. They are to be cleaned as follows:
 - i. Turn the power switch OFF, and then unplug the static eliminator.
 - ii. Remove the four socket-head screws from the bezel (see parts identification on page 13) on the front of the unit (The top right screw triggers the electrical interlock).
 - iii. Remove the bezel.
 - iv. Use clean, dry, compressed air to clean the bezel, the air channel and the fan blades. If the bezel is very dirty, use a fine bristle brush (soft toothbrush) and a 70/30 mixture of clean, technical grade, isopropyl alcohol and distilled water to clean it. Allow it to air dry.
 - v. Clean the emitter points using a fine-bristle brush.
 - vi. Install the bezel on the ionizer. Then, tighten (but not over-tighten) the socket head screws. **Remember, the top right screw triggers the electrical interlock. If that screw is not snug, the high voltage ionizing circuit of the static eliminator will not work.**

4. Fuse check and replacement

- a. The fuse housing is in the power block on the back of the unit. With the unit unplugged from the power source, gently use a screwdriver as a lever to slide the fuse housing out. Do this to ensure the fuse is still functional and does not need to be replaced. If the fuse does need to be replaced, call IMS at 1-(440)-543-1615 to order a replacement fuse.



Troubleshooting

Problem: Fan working, but de-ionized parts still have static charge:

1. Use an electrostatic meter (available from IMS) to verify that the parts have a static charge.
2. Check to see if there is any ionization; to do this:
 - a. Turn the fan on to its lowest setting and listen for a hissing sound (corona discharge) from the emitter points.

Or

 - b. Make an area around the static eliminator relatively dark, and look for a blue discharge from the ends of the emitter points.
3. If there is no ionization, see if the top right bezel screw is loose (this screw acts as a trigger for the electrical interlock).
4. If there is still too much static remaining on the treated parts, try the following:
 - a. See if the emitter points are dirty. If so, clean them according to the *Cleaning the emitter points* instructions on page 10.
 - b. Is the fan speed too low? The fan speed being too low could cause parts to remain charged.
 - c. Is the unit aimed properly? The eliminator not being aimed at the designated parts could cause them to remain charged.
 - d. Make sure all conductive surfaces in the ionized air stream are grounded.
 - e. If the designated parts are still holding a static charge, contact IMS for assistance at 1-(440) 543-1615.



Replacement Parts

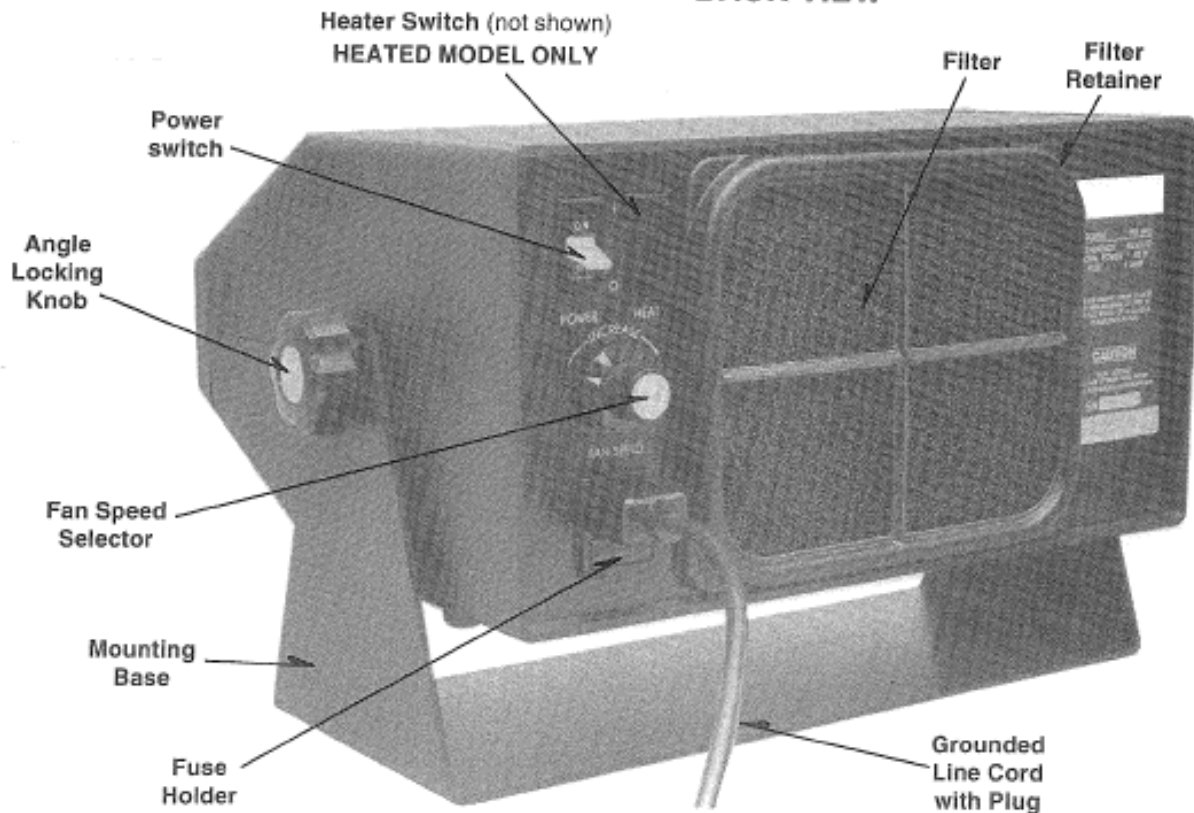
<u>Description</u>	<u>IMS Item Number</u>
Adjustable Stand.....	112718
Air Filters (Pack of 10).....	123198
Filter Housing Only.....	111582
Clip for Filter Retainer.....	137928
Filter Kit (5 filters, filter housing and 4 clips).....	126551
Bezel Assembly with Screws.....	134345
Emitter Assembly (Bezel, metal emitter and internal parts).....	134369
Line Cord with Plug.....	114368
Fan Cover Grill.....	124674
Fan Speed Selector.....	125457
Fan Motor.....	130003

Part Identification Photos

FRONT VIEW



BACK VIEW





Notes and Maintenance Record

