

# Installation / Operation / Maintenance

## Staticmaster<sup>®</sup> Industrial Corona Ionizing Gun Model 6406



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Please Observe The Following

**NOTICE**

Please review the information in this manual prior to installing and operating the ionizer in a work environment.

**NOTICE**

Please keep this document in a convenient place to refer to as a guide.

**\*WARNING**

If the Staticmaster® is used in a manner not specified in this manual, the protection provided by its design may be impaired.

**+\*WARNING**

This product is designed to be used by manufacturers for electronic industry applications and generates high voltage. Do not open and modify it, or operate without being completely assembled. High voltage internal parts can cause electrical shock.

**+\*WARNING**

Before performing maintenance, turn the Staticmaster® off, disconnect from the power source, and do not wear a wrist strap. High voltage internal parts can cause electrical shock.

**\*WARNING**

Do not use this product in a flammable atmosphere.

**\*WARNING**

Do not submerge in water. If liquid enters product, disconnect power cord and allow to thoroughly dry before using again.

**\*WARNING**

If there is any damage on power cable or communication cable, replace these prior to use.

**\*WARNING**

This product will generate ozone along with ions, if the user smells ozone, please refresh the air in working environment.



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## **Features**

1. Forceful blast of ionizing air flow to eliminate dust and static charges
2. Light touch switch control
3. Adjustable air flow, Ergonomic and light weight design
4. With a replaceable filter 0.1 micron
5. Suitable to use in class 100 cleanroom
6. Optional foot pedal

The Staticmaster Industrial Corona Ionizing Gun is a static neutralizing gun which provides superior static elimination and targeted particulate removal for a wide variety of industrial applications. It satisfies the needs of strict demand for micro-electronic industry. It is ideally used in Class 100 clean-room. It has an effective distance of 1000mm. It requires its high voltage transformer for operation, which is included.

## **Operation**

The power supply transforms the regular electricity supply into an A.C. high voltage. This high voltage is directly coupled to the ionizing pin (electrode), whilst the outer nozzle of the air gun is connected to earth. A current flow from the pin to the earthed nozzle produces a cloud of positive and negative ions.

When the trigger is pressed, a stream of compressed air will pass through this cloud of ions, this air will become charged and can be used to neutralize static charges and remove contamination.

## **Installation**

### **Air**

Always supply Staticmaster Industrial Corona Ionizing Gun with filtered, dry no combustible gases, such as compressed shop air or nitrogen. If the air is not dry, damage to the equipment may result and the warranty will be voided. Dirty air can introduce moisture and oil, contamination the units' emitter assembly along with the materials to be cleaned or neutralized. Filters must therefore be used at all times upstream on the air nozzle. A water trap-type filter should be used in conjunction with an oil coalescing-type filter.

Also drain all moisture trains regularly to prevent moisture in the line. Several drains per day may be necessary, especially in high humidity environment.

Staticmaster Industrial Corona Ionizing Gun may be operated over a range of 50 PSI to 100 PSI. The specific pressure needed will depend upon the application. Pressures exceeding 100 PSI are not recommended since these pressures are detrimental to executive ion production. An air pressure setting of 60 PSI is recommended.

The Staticmaster Industrial Corona Ionizing Gun comes with a quick release air connector; simply connect it to a standard 8mm air hose. To connect tubing to quick connect fitting: Cut end of plastic tubing square and clean. While holding collar in, push tubing into the fitting until it bottoms out completely.

### **High voltage**

The Staticmaster Industrial Corona Ionizing Gun is designed to work with the power supply at 4.6kv A.C. output.

- Must not connect to a voltage other than the 4.6kv specified, otherwise permanent damage to the product may occur.
- Do not operate in flammable or explosive atmospheres.

Please ensure that the H.V. cable securing gland is firmly tightened. This insures a good earth connection.

Failure to fit securely will prevent ionization and may result in the pistol becoming live, which can cause a harmful experience for the operator.



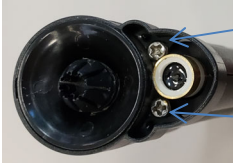
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## **Maintenance**

- Keep the gun clean and free from oil, water and particle contamination.
- Based on supply air condition an air filter regulator with 5 micron filter and water trap may be required.
- Ensure that all connections, pipe work and filter regulators will allow minimum 15 CFM of air flow.
- Clean and purge filter regulators periodically and check for contamination in the air delivery pipe. From time to time remove the front nozzle cap by unscrewing anti-clockwise, disconnect from H.V. electric supply before removing the nozzle cap.
- Clean around the electrode pin with a pipe cleaner or cylindrical soft brass brush. Ensure the plastic inner lining is free from gray or black carbonized residue. The point of the electrode pin can be cleaned by pushing a pencil end eraser on to the electrode pin and rotating. Blow out the loose debris and re-fit the nozzle cap before re-connecting the high voltage supply and operating.

### **Replacing filter:**



- 1) Remove the two screws on the front cover of the gun under the filter.
- 2) Remove the cover by pull at the bottom first.
- 3) Slide the flat head screw driver into the slot on the top of the gun. Push the screw driver towards the hose connector while pulling the filter out.



- 4) Remove the filter and replace it with a new one. Make sure the filter is sitting fully back against the hose connector. As shown in the picture.



- 5) Place cover on the top groove and then push lightly on the bottom of cover and tighten the screws back in.



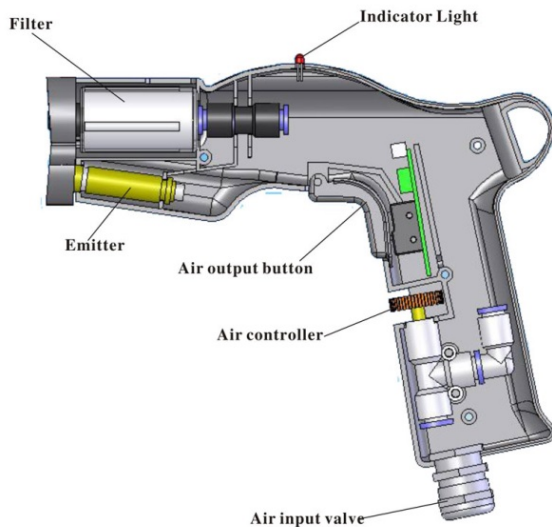
## **Specification**

Operating voltage	110V/220V
Current consumption	Max 0.8A or 0.4A
Size of H.V Transformer (LxWxH)	7.87 in x 5.31 in x 3.50 in / 200 mm x 135 mm x 89 mm
Weight	10 (lbs) / 4.5 (kg) (including the gun, 3M of wire and transformer)
Maximum pressure	70 (psi) / 4.9 (kg/cm <sup>2</sup> )
Air consumption (Low)	1.38 (CFM) / 38 (L/m)
Air consumption (Med)	1.59 (CFM) / 45 (L/m)
Air consumption (High)	2.22 (CFM) / 63 (L/m)
Discharge time	<1.3 sec
Ion balance	0V±10V



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### Limited Warranty

NRD expressly warrants that for a period of one (1) year from the time of purchase, the ionizer will be free of defects in material (parts) and workmanship (labor). Within the warranty period, the Ionizer will be tested, repaired, or replaced at discretion of NRD, free of charge. Any ionizer under warranty should be shipped prepaid to the NRD factory. Call Customer Service at (716) 773-7634 for a Return Authorization number and shipping instructions. Include a copy of your original packing slip, invoice, or other proof of purchase date.

If the ionizer is out of warranty, NRD LLC will quote repair charges necessary to bring your ionizer up to factory standards.

### Warranty Exclusions

The forgoing express warranty is made in lieu of all other product warranties, expressed and implied, including merchantability and fitness for a particular purpose that is specifically disclaimed. The express warranty will not apply to defects or damage due to accidents, neglect, misuse, alterations, operator error, or failure to properly maintain, clean or repair products.

### Limit of Liability

The user shall determine the suitability of the product for their intended use, and the user assumes all risk and liability whatsoever in connection therein.

### Device disposal



This device should not be placed in household waste bins. Please check local regulations for information about the disposal of electronic products in your area.



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