

ElectraFlow HDG-600

Hand Held Static Neutralizing Air Blow-Off Ionizer

Specifications and Installation

PRODUCT OVERVIEW: The HDG-600 Hand Held Ionizing Air Blower is an instrument that provides a concentrated flow of balanced ions in conjunction with compressed air to eliminate static, remove dust or dry a targeted area or object. The instrument is ISO manufactured to exacting specifications issued by United Static Control Products Inc. The HDG-600 is robust, well made and suitable for a multitude of applications including delicate electronic products, electronic assembly line items, medical manufacturing, and more. The HDG-600 includes the gun assembly, hoses and a heavy duty high voltage transformer designed to be powered by a standard, grounded 120 VAC (USA style) plug. Note: 220 volt models are available as an option. This high voltage power source is used to create a balanced stream of negative and positive ions from the emitter pin inside the nozzle (located on the hand held gun assembly). The flow of the balanced ions overwhelms and neutralizes electrostatic accumulation. The HDG-600 should be used by trained personnel only.

Uses include:

- Eliminating static from items that are used in or near static sensitive products.
- Eliminating dust or dirt due to static attraction
- The misalignment of small parts due to electrostatic charging
- The undesirable adhesion of plastic films, dirt, and debris due to electrostatic charging

Mechanical Properties

Operating Voltage	110V / 60Hz standard, 220V / 50Hz optional
Current Consumption	< 0.8 Amp
Operating Temperature	32° F. - 122° F. (0 ~50°c)
Construction	Cast aluminum handle, steel nozzle, tungsten emitter
Air pressure	15 to 100 psi
Effective distance from target	4 to 36 inches
Weight: gun, power supply, hoses	11 lbs.
RoHS Compliant	EC directive 2015/863 RoHS 3

Decay Test Results / Other Pertinent Data

Testing Condition @ <30% rH and 71.2° F. @ 40 PSI. Testing per ANSI / ESD SP.3.3				
Operating Voltage: 110V/220V, Testing Voltage: 1kV to 100 V				
Distance		6"	12"	24"
Decay time	positive	1.2s	2.4s	3.8s
	negative	1.3s	2.4s	3.9s
Offset voltage	< +/- 35 volts typical			

Installation

NOTE: This unit is not for use in explosive environments or around flammable liquids or vapors. The HDG-600 depends on clean, dry, oil and particulate free compressed air for its outstanding performance. Should the compressed air become compromised or if the hand held blower is allowed to come into contact with liquids the unit may become permanently damaged. Although the power supply is protected with a fuse, a high voltage failure detect circuit is not incorporated into the power supply. Hence, the high voltage output is not interrupted even in some abnormal conditions. Abnormal conditions include water in the air supply, getting the gun assembly wet, dropping the unit in water or a short circuit or sparking caused by insulation degradation. Regular inspection and keeping the gun assembly away from liquids is essential for efficient and problem free operation of ALL hand held ionizers. The HDG-600 should be used by trained personnel only.



WHAT'S INCLUDED WITH YOUR ORDER:

The HDG-600 includes the hand held air gun, power supply, 6 foot high voltage cable, 6 foot clear airline, hose barbs, a yellow ground wire and manual.

POWER SUPPLY: Mount the power supply / transformer to a sturdy structure close to a reliable grounded AC Power outlet. Do not attach the Power cord to the outlet at this time.

ATTACH SECONDARY GROUND WIRE: Attach the yellow and green ground wire to the front post of the transformer as is shown in figure 2. Tighten in place using knurled steel nut. Attach opposite end of yellow / green ground wire to a reliable AC Electrical ground such as the [center screw of an AC faceplate cover](#), a grounded machine tool or a ground point designated by your electrician.

ATTACH HIGH VOLTAGE CABLE: Red and black high voltage cables have been preinstalled into the handle of the HDG 600. The black wire is terminated in a ring eyelet. Attach this ring eyelet to the ground post located on the front of the power supply as shown in figure 2. Remove one of the 2 yellow protective covers and screw the red power supply coupling onto the threaded male connector (see figure 2).

ATTACHMENT TO COMPRESSED AIR: Attach the clear airline (included with your order) to the gun

handle by pressing the clear airline firmly into the air inlet located on the handle. It will lock into place. [Example](#). Attach the opposite end of the air supply hose to filtered, compressed, and regulated air. Note: Two of the most popular couplings are included with your order. However, due to the variety of couplings this part may need to be replaced with what is used in your facility. Note: For best results use an air drying and cleansing regulator with 5 to 10 micron filtration.

OPERATION: Plug power supply into AC electrical. Adjust the air pressure using an air regulator (not included with your order) from 15 to 100 PSI. NOTE: Maintain the air pressure at 15 PSI minimum at all times. The instrument is now ready for operation.

HOW TO USE: For optimum static control performance set the air regulator as low as possible but with sufficient pressure to remove the contaminants etc. Holding the gun close to the target, pull the trigger to remove particulate and neutralize the accumulated static from the target. Then, pull the gun away from the target to a distance of approximately 8 to 12 inches and lightly mist the part for approximately 3 seconds. Note: When handling the gun grasp only the gun body to prevent undue strain on the cable assembly.

MAINTENANCE: Keep the gun clean and free from oil, water and dust. Insure that all connections, pipe work and filter regulators will provide a minimum of 15 PSI of air flow. Clean and purge regulators periodically and check for contamination in the air delivery pipes and hoses.

Visually inspect the ionizer pin located inside the gun nozzle assembly. It should be sharp and free of carbon buildup and debris. To clean the pin: Disconnect the power source from AC electrical. The point of the electrode pin may be cleaned by pushing a new, clean pencil end eraser through the nozzle on to the electrode pin while rotating it. Blow out any loose debris.

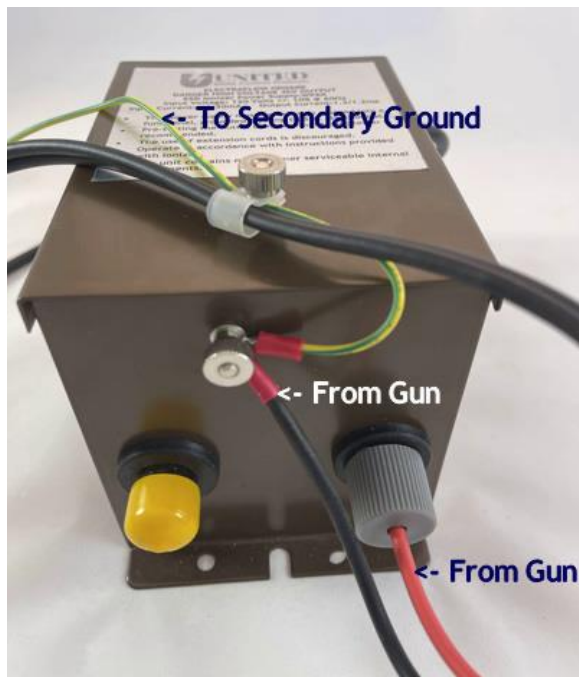


Figure 2

As Needed: Remove the front nozzle cap by unscrewing counter-clockwise. NOTE: Disconnect power supply from 120VAC and disconnect gun hose assembly from H. V. electric supply before removing the nozzle cap.

Clean around the electrode pin with a pipe cleaner or cylindrical soft brush. Insure the plastic inner lining is free from grey or black carbonized residue. Blow out the loose debris with compressed air and re-fit the nozzle cap before re-connecting the high voltage power supply and operating the unit.

NOTE: Do not attempt to scrape the point of the emitter pin with any hard or sharp object. The emitter pin must remain as sharp as possible for optimum operation. Typical emitter pin life is 3+ years if used in concert with clean dry air. Compromised compressed air will shorten the emitter life.

Power Supply: The HDG-600 power supply is intended exclusively for use with the HDG-600 ionizer. The HDG-600 power supply is a single phase unit that operates with an output voltage of 4kV (+/- 7%). Like

many ionizer power sources whilst equipped with a fuse, a high voltage failure detection circuit is not incorporated into the power unit in order to provide optimum, uninterrupted performance. High voltage output is not interrupted in abnormal conditions such as short circuiting or sparking. To avoid abnormal conditions and premature wear of ionizer components and insulation, a regular inspection and maintenance regime is recommended. The HDG-600 power supply is designed for single loading (1 power supply per ionizer) and is provided with a lighted on off switch.

Transformer

Fuse	Size	Weight
0.2 Amp	6.500 x 4.060 x 4.53 inches	9 Lbs.

Original release: 6.1.21 / Approved SRC