

# ELECTRAFLOW G-4000 IONIZER

## Static Control Ionized Air Blower

### DATA SHEET



**G-4000 Ionizer and Power Supply**

Our G 4000 is a light weight yet robust and powerful handheld point-of-use esd ionizer / static control air blower. This ionizer works in concert with clean compressed air to neutralize and remove static charged particulate making it easy to blow parts clean and control particle reattachment. The G 4000 is **perfect** for providing a focused, controllable, cleansing and ionizing air stream to sensitive and delicate objects as well as larger assemblies and areas where electrostatic attraction causes contamination or handling problems. The G4000 is very popular for use with delicate electronic and medical device manufacturing yet so well built it can handle the nonstop demands of assembly lines, pre paint applications and more.

**How Does the G-4000 Work?** The G-4000 power supply transforms standard 120VAC power into a very high voltage (4 KV) Alternating Current. This high voltage oscillating charge is directly coupled to the emitter pin (the electrode) located in the gun body nozzle. The outer portion of the nozzle is grounded via the high voltage cable. A current flows from the pin to the earthed nozzle producing a cloud of negative and positive ions. When the trigger is pressed a stream of compressed air passes thru this cloud, ionizing the air and neutralizing the static charge on an item placed in the stream.

- ▶ **Light weight yet robust, easy to control.**
- ▶ **Fast discharge time.**
- ▶ **+/- 30 volt offset voltage balance.**
- ▶ **Works with clean water free, filtered air!**
- ▶ **Economical yet long lasting powerful performance.**
- ▶ **Easy to operate, safe, easy to maintain.**
- ▶ **Gun pre wired to power cable for fast deployment.**
- ▶ **Generous 6 foot cable for added mobility!**

The G 4000 meets or exceeds the recommended technical requirements of ANSI/ESD S 20.20-2007 tested in accordance with STM3.1.

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#### Specifications:

Input Voltage	4.0 KV
Current Consumption	0.2A
Operating Temperature	0 ~50° c
Weight with gun, transformer and hoses	11 pounds (air gun only a few ounces)
H.V Cable	6 foot
Air Pressure	15-100 psi
Air Velocity	10m/sec

#### Decay Test Results

Testing Conditions: Operating Voltage @ 4.0KV, Testing Voltage @ 5KV to 500V, Temperature @ 22°C, air pressure 25 PSI.			
Effective distance of operation: up to 900 mm (about 36 inches)			
		300 mm	900 mm
Decay Time	Positive (+)	<2.5 s	<3.8 s
	Negative (-)	<2.3 s	<3.6 s
Offset Voltage	Positive (+)	-23V	-18V
	Negative (-)	-29V	-16V

**Air supply requirements: clean dry air at 15 to 100 PSI.**

**Air supply connection: Gun body accepts 1/4" OD or 6X4 mm Tubing**

**Approximate weight: 0.275 Kgs (9.70 ounces), gun only (less cable).**

**Operating Procedure Overview** (see installation overview and manual for full details): The G-4000 is not intended for use around flammable materials and solvents. Attach yellow ground cable to power supply, attach high voltage cable from gun handle to high voltage power supply. Attach air line (included with your order) to gun handle, attach opposite end of air supply hose to filtered compressed air. Plug unit into AC electrical. The instrument is now ready for operation. For optimum operation clean the part with the nozzle held as close to the part as possible (without touching). Pull the unit away from the part to a distance of 200-300 mm (8 to 12 inches) and lightly mist the part for a period of approximately 2 seconds. When handling the gun grasp only the gun body to prevent undue strain on the cable assembly.

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**Power Supply Overview:** The G-4000 power supply is intended exclusively for use with the G-4000 ionizer. The G-4000 power supply is a single phase unit that operates with an output voltage of 4kV (+/- 7%). Like many ionizer power sources 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 G-4000 power supply is designed for single loading (1 unit per ionizer) and is provided with an indicator lamp and on off switch.

Power Supply

Fuse	Size	Weight
0.2 Amp	165 x 103 x 115 mm (6.500 x 4.060 x 4.53 inches)	9 Lbs

**Maintenance:** Keep the gun clean and free from oil, water and particle contamination. Use air drying and cleansing filter regulator with 5 micron filtration. 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 pipes and hoses. From time to time 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 brass brush. Clean air may be used to blow out debris. Ensure the plastic inner lining is free from grey or black carbonized residue. The point of the electrode pin can be cleaned by pushing a new clean 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 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. Replacement emitter points are available from United SCP. Typical emitter point life is 3 years with clean dry air. Compromised compressed air may shorten the emitter life.