



An ITW Company

# **COBRA**

## **Static Neutralizing Blow-off Gun with G165 and G255 Power Supplies**

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**INSTALLATION AND OPERATING INSTRUCTIONS**

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## 1. INTRODUCTION

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COBRA Static Neutralizing Blow-off Guns are lightweight, ergonomic compressed air guns designed for cleaning large surfaces. The COBRA Gun uses airflow amplification in conjunction with ionization to produce an air blast that neutralizes static electricity and cleans at the same time. Included with the gun is a convenient hook for storing the COBRA Static Neutralizing Blow-off Gun and an accessory nozzle that produces a fan-shaped air blast.

Simco-Ion's G165 (120 Volt) and G255 (230 Volt) power supplies are designed as power sources for the COBRA Static Neutralizing Blow-off Guns. Each power unit can energize one or two guns and features an on/off switch with a power indicator light.

### **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.

## 2. SAFETY

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**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 gun.



**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 blow-off gun. Also wear hearing protection if the blow-off gun is operated more than 1½ hours per day.

### 3. SPECIFICATIONS

	<b>COBRA Static Neutralizing Blow-off Gun</b>
Operating Voltage	5 kV AC (5 mA Max. Short Circuit Current)
Operating Temperature	110 F (43 C) Maximum
Operating Humidity	70% RH maximum, no dewing permissible
Dimensions	6-1/8" L x 1-7/8" W x 6" H (Gun) 5-3/8" L x 3-7/8" W x 4-1/2" H
Weight	1.5 lb (Gun w/ 20' cable) 6.6 lb (Power Supply)
Materials of Construction	High Impact Plastic Gun Body Stainless Steel (Type 302) Ionizing Point
Compressed Air Supply Pressure (1/4" NPT Connection)	100 PSIG Maximum Note: Gun body includes OSHA pressure relief feature
Air Consumption	9 SCFM at 30 PSIG 22 SCFM at 100 PSIG
Ion Balance	+/- 100 V at 6"
Noise Level	92 dB at 30 psig (2' from gun) 101 dB at 30 psig (2' from gun)
Discharge Time	0.6 seconds at 6", 30 psig (1000V to 100V) 0.5 seconds at 6", 100 psig (5000V to 500V)
Discharge Time (w/ accessory nozzle)	0.7 seconds at 6", 30 psig (1000V to 100V) 0.6 seconds at 6", 100 psig (5000V to 500V)

	<b>G165</b>	<b>G265</b>
Input Voltage:	120 V	230 V
Frequency:	50 / 60 Hz	50 / 60 Hz
Qty of Output Ports:	2	2
Capacity:	2 Guns	2 Guns
[COBRA Gun]		

## 4. INSTALLATION

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### Power Supply Mounting:

1. Mount the power supply to a secure flat surface such as a wall, bench or machine frame (preferably away from operator contact). Secure with screws or bolts using the mounting flanges at the base of the unit.

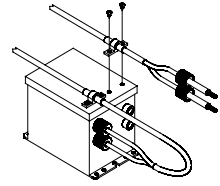
### Electrical Connections:

1. Ensure that the power supply is deenergized.
2. Center a plastic strain relief over the short length of clear tubing near the connector end of the gun cable. Locate the strain relief over the mounting holes on the power supply's lid and secure with the two screws provided.
3. Guide spring loaded cable connectors, on the end of the gun cable, into the output terminals of the power supply and tighten.



#### **NOTE - FINGER TIGHTEN ONLY.**

Both connectors must use terminals on the same side of the power unit (see illustration below).



4. The power supply is grounded when plugged into a 3-prong electrical outlet. If a grounded outlet is not available, connect a heavy copper wire from the ground terminal of the power supply to a well-grounded electrical conduit or water pipe. The 230-volt power supply will require installation of an appropriate plug onto the end of the line cord. The 230-volt connections are: Black-Line; White-Line; Green-Ground.

### Compressed Air Connections:

1. Connect a 3/8" ID flexible airline to the base of the gun handle. If a quick connect coupler is used, a 1/4" internal orifice or larger is recommended to supply adequate air to the COBRA gun. Performance will be reduced if connectors with inadequate orifice size are used.
2. The airline should be run adjacent to the gun's electrical cable and linked together at 12" intervals to provide easier handling of the gun unit.
3. Connect the flexible airline to a source of compressed air of no greater than 100 psi. The source should be filtered to remove dirt, oils, and moisture.

## Hook Installation:

A mounting hook is included for hanging the COBRA gun against a wood or sheet metal surface when not in use. Locate the hook at the desired mounting level and mark hole locations. Drill 1/8" pilot holes and secure the hook with the screws and spacers provided. Note that spacers should be placed between the hook and the mounting surface before installing screws.

## 5. OPERATION

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Before energizing any power supply:

1. Ensure that all power supplies are properly grounded.
2. Ensure that all static control devices are properly grounded.
3. Ensure that all static control devices have been properly located, positioned and installed.

After the above checks have been performed, simply energize each power supply to operate the static control device.

For optimal performance, first blow off the target surface with the gun held as close to the surface as required to remove dirt and dusts. Then, use a broad sweeping motion with the gun 12" to 24" from the surface. Be sure that the ionized air stream from the gun contacts all areas of the target surface to ensure thorough static neutralization.

The COBRA gun is supplied with an accessory nozzle that produces a fan-shaped ionized air blast. The accessory nozzle may be used to increase the area covered for cleaning purposes.

Switch the power supply unit off during prolonged periods of non-use such as plant shutdowns and overnight. This will ensure a long ionizer life with optimum ion output.



**CAUTION** – Personal Protective Devices Recommended – Always wear safety glasses or goggles when operating blow-off gun. The purchaser is responsible for providing effective chip guarding to protect personnel in the area from blown debris. Also, wear hearing protection if the blow-off gun is operated more than 1½ hours per day.

## 6. TROUBLESHOOTING

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**NOTE** – Only qualified service personnel are to perform troubleshooting tasks.

### Operational Check:

1. Rub a small strip of plastic film until a static charge is developed (cellophane works well). The charge will be evident by the film's attraction to your hand.
2. Pass the film in front of the gun while depressing the trigger. Hold the film to see if it is still attracted to your hand.
3. If the film is no longer attracted to your hand, the static charge has been neutralized and the gun is working properly.

### Cable Retermination:

If the cable becomes damaged, it can be shortened to remove the damage and reterminated.



**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.

1. Disconnect and remove damaged cable from the power supply.
2. Cut off damaged cable, remove 2" clear tubing and slide approximately 10" onto gun cable.
3. Strip 4½" from the black outer jacket.



**NOTE** – Use extreme caution not to damage or nick the white wire insulation.

4. Strip the white wire insulation 1" and bend the conductor to form a double thickness ½" long.
5. Remove the spring loaded cable connectors (SLCC) from the damaged cable and install them onto the prepared cable.
6. Secure the cable to the power supply using a strain relief fitting and install the SLCC's into the power supply's output terminals.



If equipment fails to function properly:

1. Deenergize the power supply.
2. Ensure all ground connections are intact.
3. Check that all cable connections are tight.



**NOTE – FINGER TIGHTEN ONLY.**

4. Energize the power supply (if equipped with an ON/OFF switch, ensure that it is in the ON position).
5. Use a static bar checker (Simco-Ion # 4000004) to verify the presence of high voltage at the ionization point. If the point is not working, check the area for metallic fragments or other contamination.
6. If no contamination is found, either the gun or the power supply is defective. To identify which is not working:
  - Deenergize the power supply.
  - Disconnect all static control devices from the power supply by unscrewing the knurled plugs and gently pulling out each high voltage cable.
  - Connect an insulated test wire to the power supply's ground stud.
  - Energize the power supply.
  - 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 the gun is faulty. Otherwise, the power supply is faulty. If either is faulty, contact Simco-Ion Customer Service or your local Simco-Ion Representative.

## 7. MAINTENANCE

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**NOTE** – Only qualified service personnel are to perform maintenance tasks.



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



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



**CAUTION** – Fire Hazard – Never energize a power supply with any trace of alcohol remaining on the equipment.

Dust or dirt around the ionization point will reduce the effectiveness of the static bar. The ionization points must be cleaned periodically to prevent deposits from accumulating:

1. Deenergize all power supplies before performing any maintenance tasks.
2. Allow a gentle flow (5-10 psig) of compressed air through the gun during maintenance.
3. Use dry compressed air to remove loose particulate from the gun. A soft brush with plastic bristles may be used as well.
4. Press a soft pencil eraser onto the ionization point and gently twist to remove any buildup.
5. Wipe ionization point with isopropyl alcohol applied to a clean dry cloth to remove ink or resistant coatings.



**NOTE** – The alcohol must not contain additives.



**NOTE** – Do not pour alcohol directly onto the gun, and do not soak the gun or any of its components in alcohol.



**CAUTION** – Fire Hazard – Ensure all traces of alcohol have been removed and the gun is completely dry before energizing the power supply.

## 8. REPLACEMENT PARTS/ADDITIONAL ITEMS

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<b>Part Description</b>	<b>Part Number</b>
Accessory Nozzle	4530287
Full Grip Lever Trigger	4530329
Mounting Kit (contains mounting hook and hardware)	5050316
SLCC HV Connector Kit	5050002
Cleaning Brush	4670204
Static Bar Checker	4000004

## 9. WARRANTY

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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.

**Simco-Ion**

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