Electro Air Canada Limited
400 Eddystone Avenue
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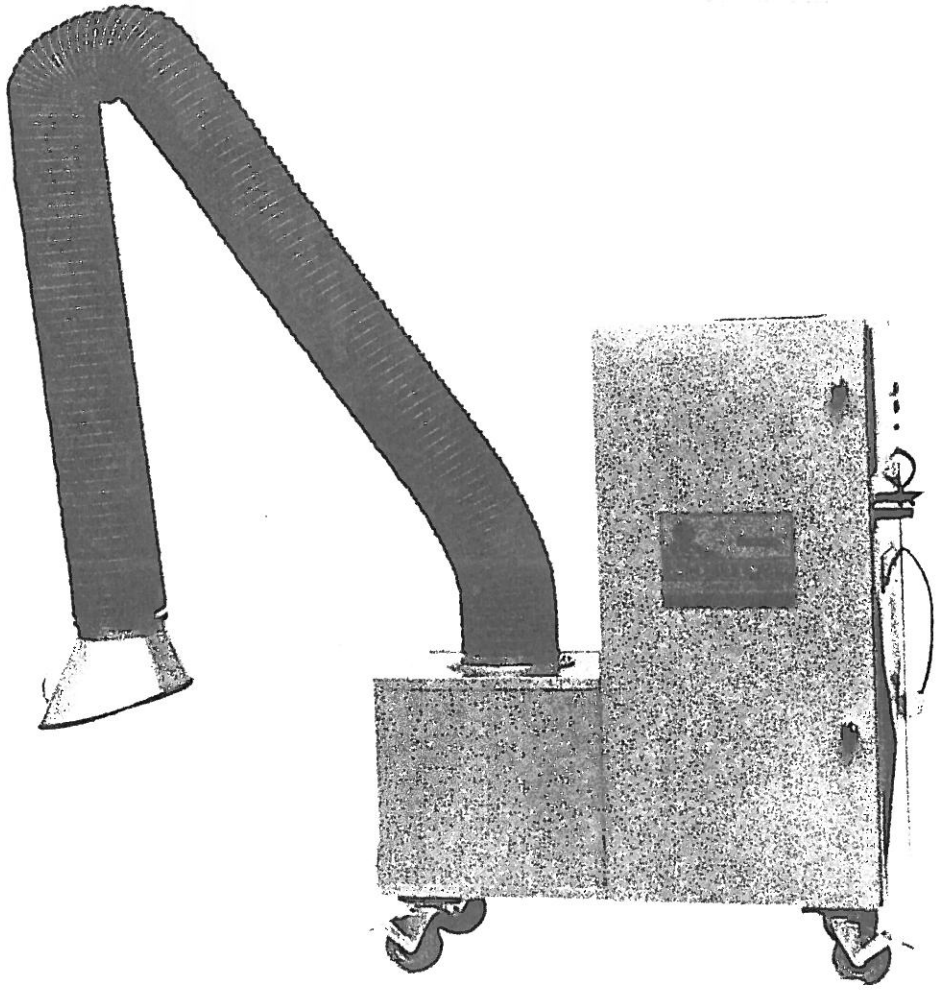
Electronic Air Cleaners

ElectroAir

The Sourcer

Portable Air Cleaning Magic



OWNER'S MANUAL

MAINTENANCE SCHEDULE

Please read these instructions thoroughly before Servicing the Air Cleaner

SP-1 SOURCER

(Owners Manual)

1. Index
2. Major Components
3. Wiring Diagram
4. Flex-Arm
5. Principle of Operation
6. Maintenance Schedule
7. Dimension

MAJOR COMPONENTS

The SP-1 Sourcer by Electro-Air is a self-contained unit comprised of the following:

(a) Two-Part Collecting Cell
(b) Electrical Compartment
(c) Blower and Motor Assembly
(d) Complete Cabinet Housing
(e) Flex Arm - Direct Capture System
(f) Pre and After Filters
(g) Optional Charcoal Filter
(h) Removable dirt Catch Pan

Collecting Cell Features:

1. Support Bracket
2. Collecting Plates
3. Support Tubing
4. Insulator
5. End Plate
6. Electrode
7. Access Handles
8. Separate Ionizing Section
   (a) Ionizing Wires
   (b) Ionizing Wire Support

ELECTRICAL COMPARTMENT

All hi-voltage power supply components are encapsulated in a sealed box with quick disconnect wiring. This system has proven most satisfactory for maintenance free performance. There is a shock protection feature included here by means of a resistor bleed-off, draining all hi-voltage current from the cell. This power supply is manufactured for Electro-Air Canada Limited by one of the foremost manufacturers of Electronic Transformers and Power Supplies. The Air Cleaner is only as efficient as the power supply is reliable. Should a break-down occur, the encapsulated power supply can easily be removed for electrical replacement.

A service indicator light mounted on the unit indicates a short or arcing in the unit. This service light should be ON during normal operation. The simple access door to the electrical compartment is equipped with a Micro-Switch, which cuts power to the unit when the door is opened. The unit is also equipped with two lighted Rocker Switches to control the motor and hi-voltage Power Supply. The SP-1 Sourcer uses normal line voltage 120/60. The electrical compartment can be easily removed by unfastening four screws and a quick disconnect at the motor and hi-voltage supply. Easy removal eliminates expensive shipping for service problems.

CABINET

The Cabinet is built of 1" welded tubular steel and encased in an outer cabinet. There is a single access door on the unit to service the cell and blower-motor section. Discharge is through an expanded metal protective screen or diffusers.

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BLOWER AND MOTOR SECTION

MOTOR	SP-1 SOURCER
	3/4 H.P. 120/1/60 1725 RPM T.E.F.C.

BLOWER	SP-1 SOURCER
	Double Inlet 12 x 9 Ball Bearings Centrifugal

ADDITIONAL EQUIPMENT FEATURES

Pre Filters
- 16" x 20" x 7/8" Aluminum Mesh
- Washable
- Installed to remove large particulate matter, thus avoiding arcing or "pass through".

After Filters
- Same as Pre Filter
- Collects agglomerated dust
- Maintains back pressure
- A carbon filter may be used in some situations
- Please consult your dealer or the factory.

E L E C T R O - A I R A R M A S S E M B L Y

1. The swivel base and base support are in one piece. Items 1 & 2.
2. The intake hood support arm. Item 3.
3. The intake hood. Item 4.
4. The hose. Item 5 (not shown)

ASSEMBLY:

Step 1. If possible, mount the swivel base assembly where needed. Items 1 & 2.

Step 2. Attach items 3 to item 2. Do not tighten.

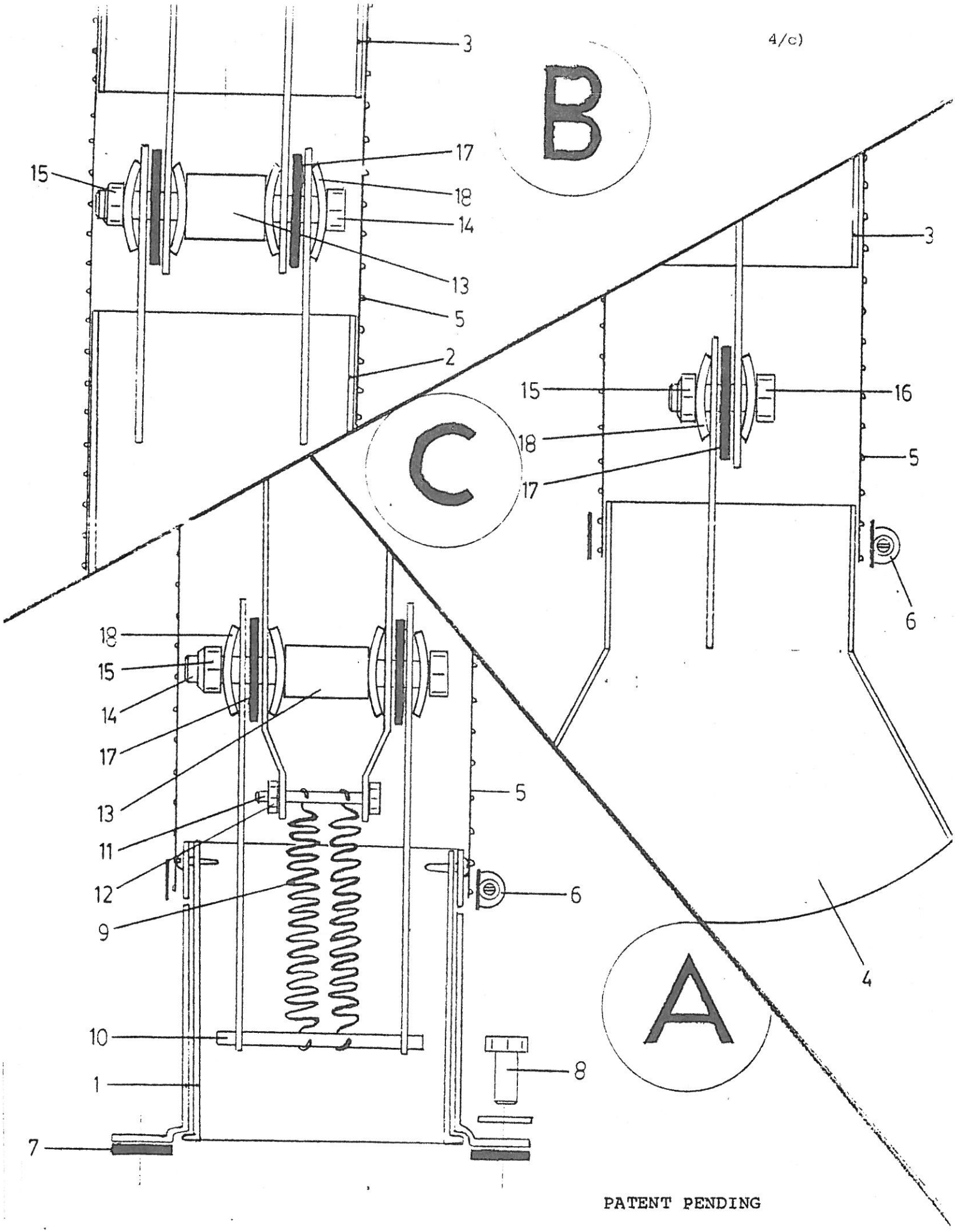
Step 3. Attach item 4 to item 3. Do not tighten.

Step 4. Go back to items 1 & 2 assembly. Tighten bolt assembly until proper tension is obtained.

step 5. Tighten bolt assembly of items 2 & 3 joint until the proper support is reached.

Step 6. When all of the joints have been tightened for proper arm support, remove item 4 (intake hood). Slide on item 5 (hose). When hose is in place, attach item 4 (intake hood) and tighten to obtain proper hood function.

Step 7. Attach hose clamps and tighten.



PATENT PENDING

SELF SUPPORTING ARM

PARTS LIST

ITEM	DESCRIPTION	QTY.	LOCATION
1	Swivel Base Assembly	1	Section A
2	Base Support	1	
3	Intake Hood Support	1	
4	Intake Hood	1	Section C
5	Type 100 Hose	1	
6	Hose Clamps	2	Section A & C
7	Base Gasket	1	Section A
8	3/8-16x1" Bolt & Nut Assembly	6	Section A
9	Tension Springs		Section A
	4" for 6" Dia.	2	Section A
	6½" for 8" Dia.	2	Section A
10	Rod ¼" for 6" Dia.	1	Section A
	Rod 3/8" for 8" Dia.	1	Section A
11	¼-20 x 2" Bolt	1	Section A
12	¼-20 Nut	1	Section A
13	Spacer 1½" for 6" Dia.	2	Sections A & B
	Spacer 3½" for 8" Dia.	2	Sections A &B
14	Bolt 3/8-16 x 3½" for 6" Dia.	2	Sections A & B
	Bolt 3/8-16 x 5½" for 8" Dia.	2	Section A & B
15	3/8-16 Lock Nuts	3	Sections A-B-C
16	3/8-16 x 1¼ Bolt	1	Section C
17	2" Dia. Friction Washer	5	Section A-B-C
18	1-3/4" Dia. Belleville Washers	10	Section A-B-C

PRINCIPLE OF OPERATION

The SP-1 Sourcer is an electrostatic precipitator working on a two stage principle. The particulate matter in the air stream passes through the ionizing section where it receives a positive D.C. voltage charge before passing into the cell section containing collector plates, which are alternately charged and ground. The particles are attached by a strong electric force to the ground plates to which they adhere until removed by blowing or using a detergent wash.

MAINTENANCE SCHEDULE

SP-1 SOURCER

PLEASE READ THESE INSTRUCTIONS THOROUGHLY
BEFORE SERVICING THE AIR CLEANER

1. Electrical Air Cleaners should have a scheduled maintenance program for maximum efficiency.
   a) IN WELDING SHOPS - Once weekly or more if there is a continuous smoke problem.
2. Electro-Air Canada Limited recommends the use of Dax Detergent in cleaning the collecting cells, as it is a heavy duty cleaner used expressly for removal of accumulated pollutants on cell plates. Dax Detergent in no way will harm aluminum or steel and is not detrimental to procelain or plastic insulators.

   DAX DETERGENT is available through your dealer or Electro-Air Canada Limited in 1-pint, 1-gallon, 5-gallon or 45-gallon containers.

PROCEDURE FOR CLEANING COLLECTING CELLS ON SP SERIES ELECTRONIC AIR CLEANERS:

1. a) Power switches for both blower motor and hi-voltage should be turned to OFF position.
   b) Open cell access doors. Wait 30 seconds for cell voltage to bleed off or pull cell out 4 to 5 inches and short plate, and ionizing bar with a plastic handled screw driver to ground.
   c) Pull cell, pre filter and after filters out of unit.

TO WASH CELLS

The cell should be flushed of excess dust build up with water or air. Then spray cell thoroughly with DAX Detergent. Wait three to five minutes and rinse the cell. A second wash may be necessary depending on dirt

load. Pre and after filters should be washed with the cell. Do not attempt to clean between the plates with any object. This may cause the plates to shift or the ionizing wires to break.

TO RESTART AIR CLEANER

1. a) Make sure that filters and cell are reasonable free of excess moisture.
   b) Before placing cell(s) back in the Air Cleaner, make sure spring contacts are free and do not bind. This will ensure a good contact between cell and hi-voltage contact. Failure to do so will decrease working voltage on cell and prevent hi-voltage from bleeding off when turned off.
   c) Place cell(s) in Cleaner with ionizing section facing air flow.
   d) Close access doors.
   e) Turn fan switches to ON.
   f) After a short drying period, turn power supply switch ON. Service indicator light should come on.
   g) If arcing occurs, turn power supply switch OFF, giving cell a longer time to dry. **NOTE** If cell has been soaked, it will take considerable more time for drying. If arcing still occurs, take cell out and inspect for broken ionizing wire or bent plates.

REMEMBER:

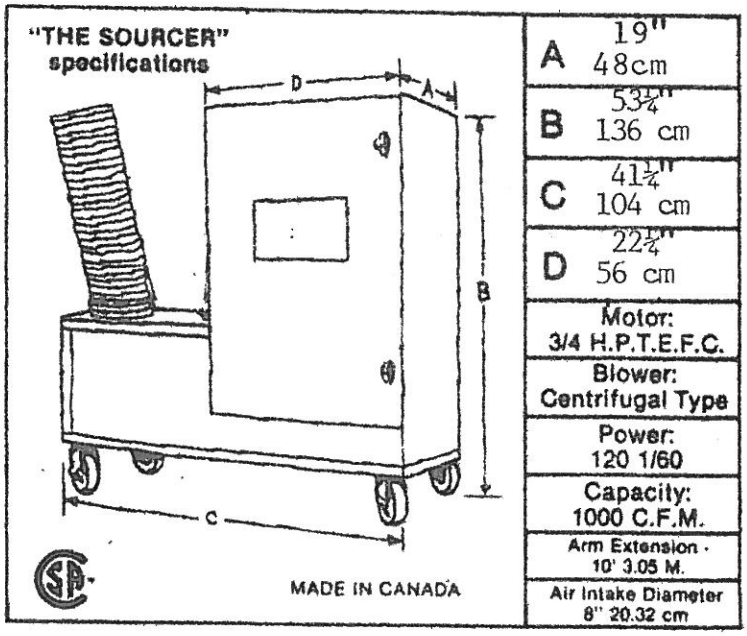
Electro-Air recommends the use of DAX Detergent. Any problem arising from the use of another detergent or cleaning agent is not the responsibility of Electro-Air Canada Limited. If any further information is required, you may contact our service department at 400 Eddystone Avenue, Downsview, Ontario, M3N 1H7, or call: (416) 743-2433.

SERVICE MAINTENANCE

1. Determine if Air Cleaner is performing properly first by:
   a) Fan switch is ON and lighted.
   b) Power supply switch is ON and lighted.
2. If both switches are normal, that is, fan motor is running and power supply light is ON, there should be no problems.
3. If service indicator fails to come on, check cell to ensure it has been installed properly. (Ionizing side towards intake, arrow should be pointing toward fan. Be sure your spring loaded contacts line up with hi-voltage contact on the wall of the Air Cleaner.)

   NOTE: A cell placed in the Air Cleaner incorrectly will burn out power supply. A simple test to ensure that the cell is in correctly is to take a long plastic handle screw driver and short cell between frame of Air Cleaner and the bolt head on the porcelain insulators. Check both plates and ionizer. *Be sure to activate micro switch first manually.
4. If in doubt, and if cell is not collecting any carbon, nicotine, tars or body shop dust, then consult your dealer, or factory if necessary. In all cases, the installing dealer should have sufficient knowledge to determine any problems.

D I M E N S I O N



A	19" 48cm
B	53¼" 136 cm
C	41¼" 104 cm
D	22¼" 56 cm
Motor: 3/4 H.P.T.E.F.C.	
Blower: Centrifugal Type	
Power: 120 1/60	
Capacity: 1000 C.F.M.	
Arm Extension - 10' 3.05 M.	
Air Intake Diameter 8" 20.32 cm	

ELECTRO-AIR PORTABLE AIR CLEANR

Model SP-1. "THE SOURCER"

Serial = _____

Terminals

1. 115 in Neutral
2. 115V in hot
3. Micro-Switch
4. Micro-Switch
5. Hot to Motor
6. Neutral to Motor
7. Service Light
8. Neutral to Power Supply
9. Hot to Power Supply

Components

SW-1. Safety Interlock - Power Box
SW-2. Safety Interlock - On Door
SW-3. Lighted Power Supply Switch
SW-4. Lighted Motor Switch
LT. Service Indicator - Normal on
.3/4 H.P. motor T.E.F.C. 10.8 AMPS.
P.S.I. High Voltage Power Supply
Ionizer - 10,000 V.D.C.
Plates - 5,000 V.D.C.

PLUG - Connecting Power Box to Inside Door
Micro Switch and motor.

Total Power Consumption 11.5 AMPS.