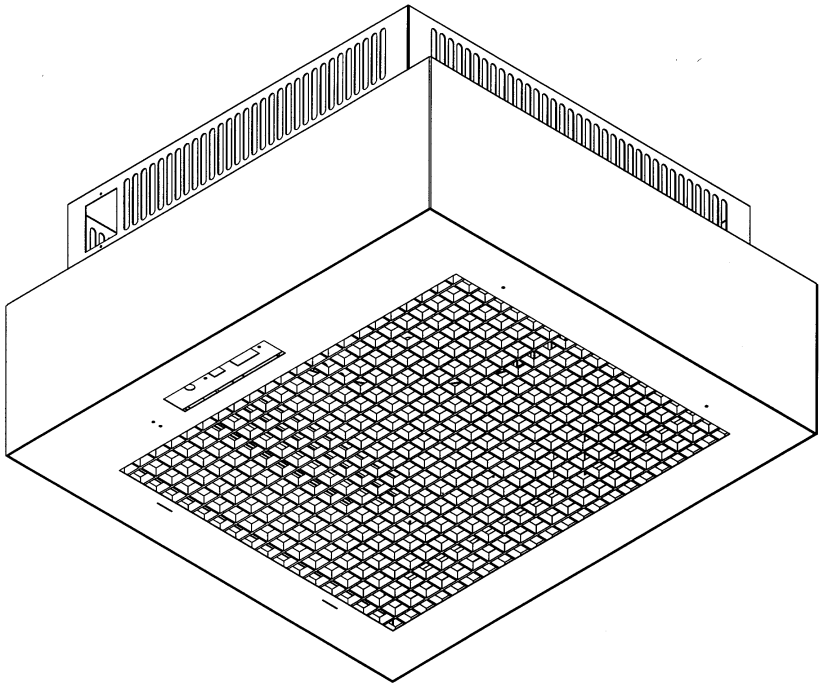
PUR
DISTRIBUTION LTD
AIR PURIFICATION SYSTEMS

OPERATION & MAINTENANCE MANUAL

MODELS SSCB15W-R, SSCB15W-RE SSCB15G-R, SSCB15G-RE CEILING MOUNTED ELECTRONIC AIR CLEANER

IMPORTANT: PLEASE READ MANUAL BEFORE OPERATING UNIT



FOR TECHNICAL SUPPORT AND REPLACEMENT FILTERS CALL: 416-410-3450
info@purdistribution.com

IMPORTANT: Please read entire instructions before installing the Electronic Air Cleaner.

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SAFETY CONSIDERATIONS

Read and follow instructions carefully. Follow all local electrical codes during installation. All wiring must conform to local and national electrical codes. Improper wiring or installation may damage Air Cleaner.

Understand the signal words WARNING and CAUTION which are present in the Installation, Operation & Service Instructions.

WARNING and CAUTION signifies a hazard which could result in property damage, personal injury or death.

Installation and servicing of Electronic Air Cleaners can be hazardous. Only trained and qualified service personnel should install, repair, or service Electronic Air Cleaners.

Untrained personnel can perform the basic maintenance functions of cleaning and replacing filters.

When working on air cleaning equipment, observe precautions in the manual, labels attached to the unit, and other safety precautions that may apply. Follow all safety codes. Wear safety glasses and work gloves.

WHAT THE ELECTRONIC AIR CLEANER DOES

WARNING

Before beginning any installation or modification, be certain that the main line electrical disconnect switch is in **OFF** position. Electric shock could result. Tag disconnect switch with suitable warning labels.

Your High Efficiency Electronic Air Cleaner has been designed to remove tobacco smoke particles, cooking smoke and grease, atmospheric dust, coal dust, insecticide dust, mites, pollen, mold spores, fungi, bacteria, viruses and more down to 0.01 micron (0.01 micron = 1/2,540,000 of an inch).

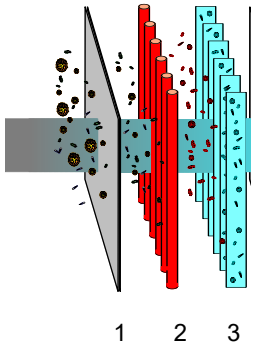
BENEFITS

- Helps clear up a smokey environment quickly, so customers can dine more comfortably.
- Helps employees reduce suffering from irritated eyes, nasal congestion and respiratory problems that lead to absenteeism.
- Helps prevent damaging black and greasy particles from staining ceilings, walls and furnishings, reducing the amount of housekeeping and redecorating costs.
- Helps to lower energy bills by recycling air rather than exhausting expensive heated or cooled air.

HOW IT WORKS

This Air Cleaner works on the principle of "Electrostatic Precipitation". Millions of airborne pollutants are drawn through the intake grill on the bottom of the Air Cleaner and first pass through a Prefilter which removes all large visible particles such as lint. Next, smaller particles move to a two-stage electrostatic Collecting Cell where they are given a powerful positive charge by the ionizing wires. Charged particles then move into the collecting area where they are attracted to a series of grounded plates. Pollutants are held in this section like a magnet until washed away during cleaning. Clean air is then dispersed from the side grills in four directions allowing superior air flow circulation.

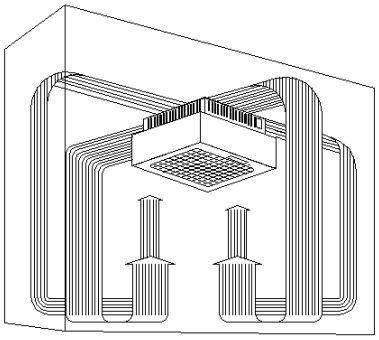
Electrostatic Precipitation



3 - Stage Electronic Air Cleaning Process:
1 - Prefilter Screen
2 - Charging Section
3 - Grounded Plates

Coanda Air Flow

The Air Cleaner creates a circular air flow pattern which never allows air to rest at the ceiling.



MAJOR COMPONENTS

Description

The Electronic Air Cleaner is approximately 29½ x 27 x 14½ inches (75 x 68.6 x 37 cm). The unit is designed to be mounted to the ceiling. The steel cover and intake grill are hinged to allow easy access to the Collecting Cells and Power Box. The unit is rated up to 1300 CFM (2210 m^3/hr).

Cabinet

The cabinet is constructed of 20 gauge steel. The external parts have a tough powder-coated, scratch-resistant finish. The internal parts are galvanized steel. Access to the Collecting Cells, Power Box and Prefilters is made by lifting the cover, sliding towards the front and lowering.

The cover is interlocked to cut power to the unit when opened.

Prefilters

The washable Prefilters measuring 12½ x 20 inches (31.75 x 50.8 cm) are constructed of multi-layers of aluminum mesh for maximum filtration of large particles.

Collecting Cells

The dual voltage Collecting Cells are constructed of heavy gauge aluminum to resist rust and damage. The first stage, the ionizing section, is charged at approximately 7500 VDC. The collecting plates are alternately grounded and charged at 5000 VDC. The arrow on the Cell indicates the direction of air flow which must point up towards the fan motor.

Motor & Fan Blade

The motor is 1/12 HP, 1050 RPM, 3 speed, controlled by a 3-position slide switch. The motor is thermally protected. The fan blade is aluminum, 18 inches (45.7 cm) with a 16˚ pitch.

INSTALLATION

1. Read instructions carefully. Failure to do so may result in product damage or injury.
2. Make sure the sizing is correct for your application.
3. Installation should be done by a knowledgeable technician.
4. After installation, check out operation as provided in these instructions.

Mounting

1. Remove the unit from the box with packing still on the unit and lay it on its back, grill side up.
2. Release the cover by sliding towards the front of the unit and lifting up.
3. Remove the "S" hook from each chain, tilt cover up, and release from back.
4. Holes are provided in the cabinet to accommodate 5/16 inch (8 mm) threaded rod. Threaded rod can be attached to angle iron, laid across the joists, and drilling holes through these supports. Pass threaded rod up through the supports and secure with two nuts and washers. This will allow adjustment of the unit so that it is flush with the underside of the ceiling.
   Leave enough room around the Air Cleaner for removal of Collecting Cells and Prefilters.
5. Replace cover and chain.

OPERATION & MAINTENANCE

Wiring

WARNING

Electrical shock can cause injury or death. Be certain main line disconnect switch is off before wiring.

All wiring must comply with applicable codes and standards. See unit rating label for correct voltage and amperage.

1. A knockout is provided on top of the unit, adjacent to the wiring compartment. For convenience, a wall switch may be installed near the Air Cleaner, in series with the power source, to turn the unit on and off.
2. Remove the cover of the wiring compartment to locate the input leads and ground stud. The Air Cleaner must be grounded for proper operation and safety.
3. Once the unit is mounted and wired, the cover can be replaced on the hinge and the chain replaced on the "S" hooks. Close the cover by sliding it forward, lifting the cover over the front flange and sliding it back into place.

Operation Check

1. With the cover closed and in place, turn the system switch on.
2. Adjust the fan speed with the slide switch. Insure the unit functions on all speeds.
3. The Performance Indicator Light should be lit, which indicates the Power Board is functioning properly.

When the Air Cleaner is new it may arc or periodically make "snapping sounds". A slight odor of ozone may be noticeable. The arcing and odor are due to rough edges and burrs on the cells. These symptoms will disappear during the first few weeks of normal operation. The ozone levels are well below government standards for indoor air concentration.

Maintenance Schedule

The Collecting Cells and Prefilters must be cleaned on a regular basis for the unit to function at its peak efficiency. The frequency of cleaning will vary from one environment to another. The following is an average wash cycle:

- Stores, Offices, Computer & Conference Rooms = 4 Weeks
- Cafeterias, Restaurants, Lounges = 3-4 Weeks
- Bars, Bingo halls = 1-3 Weeks

Cleaning & Service

CAUTION

Make sure Air Cleaner switch is **OFF** before performing any maintenance or removing any components.

1. Turn off the system switch and wait 15 seconds for high voltage to dissipate.
2. Open the cover and cell access door and remove collecting cells and prefilters. **Cell plates are sharp. Handle with care.**
3. Place Cells in tub and spray completely with **DAX Detergent**, allowing detergent to run down both sides of plates and ionizing wires. Let sit for 5 minutes. Rinse Cells well with hot water (140ºF / 60ºC maximum). Repeat washing process 3 times.
4. If dirt or nicotine remains on plates, let Cells soak in hot soapy water for 30 minutes. **Never use any instrument to clean the cell, as this may damage the ionizing wires or bend cell plates.**
5. Spray Prefilters with **DAX Detergent** and rinse well.
6. To dry cells, tilt on 45º angle against wall with arrows pointing sideways. Allow to dry completely for 10-24 hours. Place in sunlight for faster drying time.
7. When the Cells and Prefilters are dry, place them back into the unit. The arrow on the cell points up. The red fiberboard on the Cell should line up with the contacts in the cabinet. Close door and cover. If the Cells arc when the switch is turned on or if the Performance Indicator Light does not come on, then the Cells are still wet. Allow more time for drying.

The use of **DAX Detergent** is strongly recommended for cleaning as it is a heavy-duty solution used expressly for removal of accumulated pollutants on Cell plates. If used as directed, **DAX** will not harm aluminum or steel. Any problem arising out of the use of another cleaning agent will void the warranty. Do not use detergents that are corrosive or abrasive or detergents containing chlorine or ammonia.

CAUTION

Damage to Cells may occur if improperly handled or washed. Do not wash Cells in a dishwasher. Never use any object to clean between the cell plates, as this may cause damage to plates or ionizing wires. Never place cell in oven to dry. The edges of the cell may be sharp - handle with care.

DAX Detergent is available in 1 gallon (4.54L) and 4.8 gallon (22L) containers as well as 45 gallon drums (204L).

Service Maintenance

WARNING

Electronic Air Cleaners use high voltage (low amperage). Only trained personnel should perform service. Use caution. Electric shock can cause injury or death.

1. Determine if the Air Cleaner is performing properly by seeing that:
   - System switch is **ON**
   - Performance indicator is **ON**
2. A simple test to check hi-voltage would be to blow dust or cigarette ash into the intake grill. An audible arc or snapping sound should be heard, ensuring good hi-voltage.
3. If in doubt, and if the Cells are not collecting any carbon or nicotine tars, then see "Troubleshooting Guide" or consult your installation dealer.

SERVICE

Adjusting High Voltage Output

In case of excessive arcing on a clean, dry Cell, there is an adjustable resistor mounted on the Power Board.

1. Turn off the system switch before opening the unit.
2. Remove the cover by slipping the "S" hook from the chain and letting the cover gently down.
3. Lift the cover up off the rear hinge.
4. Remove the power box cover.
5. With a small slot screwdriver, adjust "R-2" slightly clockwise to reduce voltage to the cell. Do not reduce the voltage too much or the efficiency of the air cleaner will be reduced.

Removing The Power Box

1. Shut off main breaker or switch.
2. Remove the cover as described previously.
3. Open power box cover.
4. Disconnect the following wires:
   - Terminal Block -Red, blue or yellow, black and white leads from motor
     -Supply line leads
   - Power Board -Orange or grey leads on HV1 and HV2
5. Remove the two nuts holding the power box to the cell section.

TECHNICAL DATA

Dimensions	Length	29.5 in	75.0 cm
	Width	27.0 in	68.6 cm
	Height	14.5 in	37.0 cm
Weight		95.0 lbs	43.0 kg
Input Voltage		120 V 60 Hz	
Power Consumption	(max)	350 Watts	
Air Flow	High	1300 CFM	2210 m^3/hr
	Medium	1050 CFM	1785 m^3/hr
	Low	750 CFM	1275 m^3/hr
Motor		1/12 HP	

Table 2 — Technical Data

TROUBLESHOOTING GUIDE

PROBLEM:	CHECK:
Unit Does Not Operate	1. Main breaker is **ON** or voltage is supplied to unit. 2. Main supply fuse or breaker is not tripped. 3. Unit cover is completely closed and locked into place. 4. Power switch is **ON**.
Performance Indicator Light Is Not Lit	1. System switch is **ON**. 2. Remove Cells, close access door and turn unit **ON**. If Performance Indicator is still off, problem is in the power box. If light comes on with no cells, then there is a short circuit in the cells. Place one cell in the unit, close access door and turn unit **ON**. If the light comes on, check the other cell by the same method. When it has been determined which cell is the problem, look for bent plates, broken ionizing wires or burnt insulators or if cell is completely dry after washing.
Performance Indicator Light Is Lit, Fan Not Working	1. Fan control switch is in proper position. 2. Motor leads are connected to terminal block.
Cells Arcing Excessively	1. Cells are completely dry after washing. 2. Cell plates are not bent or spaced too close. 3. Cell insulators are not cracked, broken or burnt. 4. Cell is dirty and needs cleaning. 5. Broken ionizing wires.

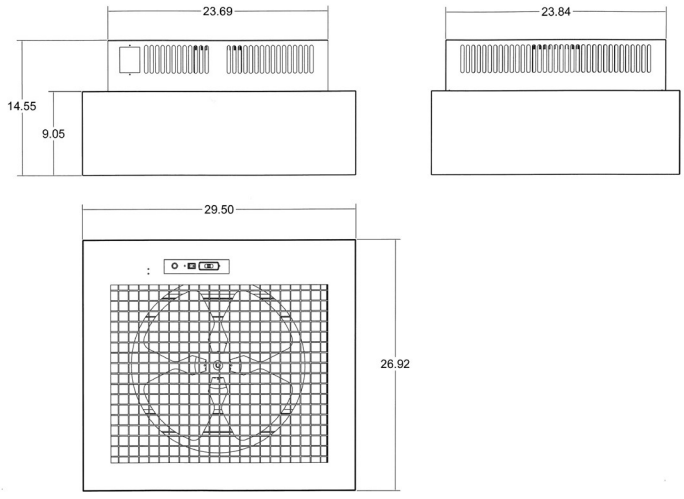
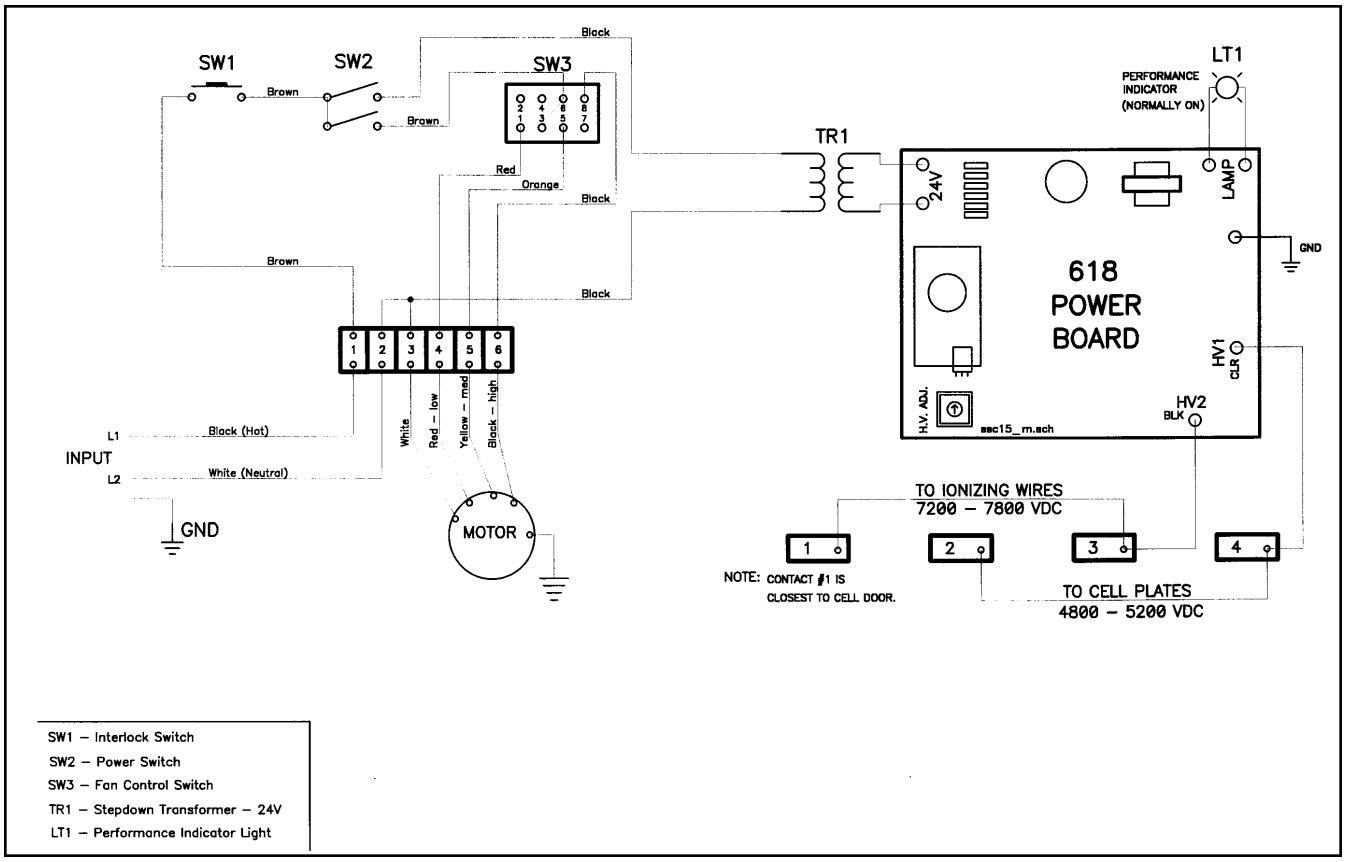
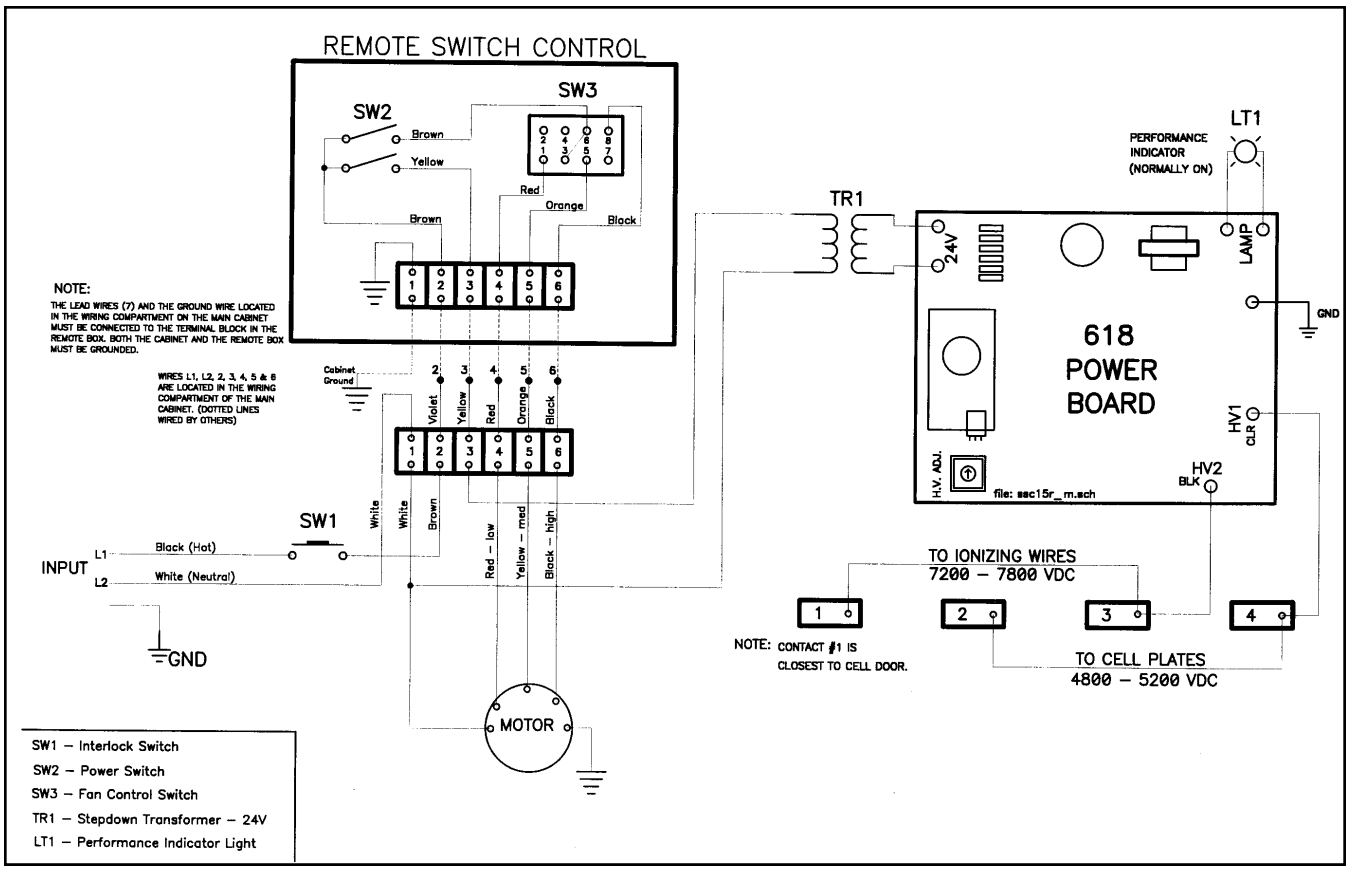


Fig. 8 — Dimensions

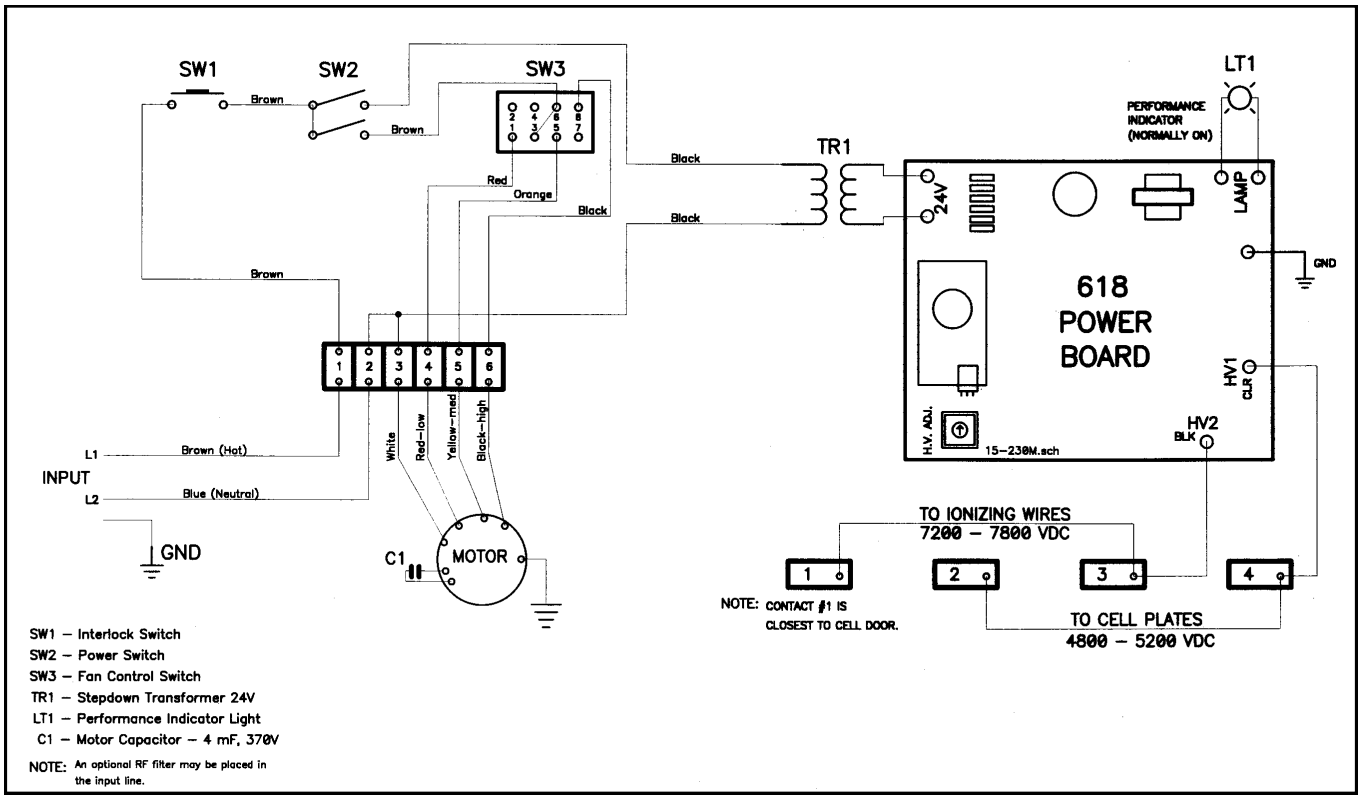
Electrical Schematic - A - 120 Volt



Electrical Schematic - B - with Wired Remote - 120 Volt



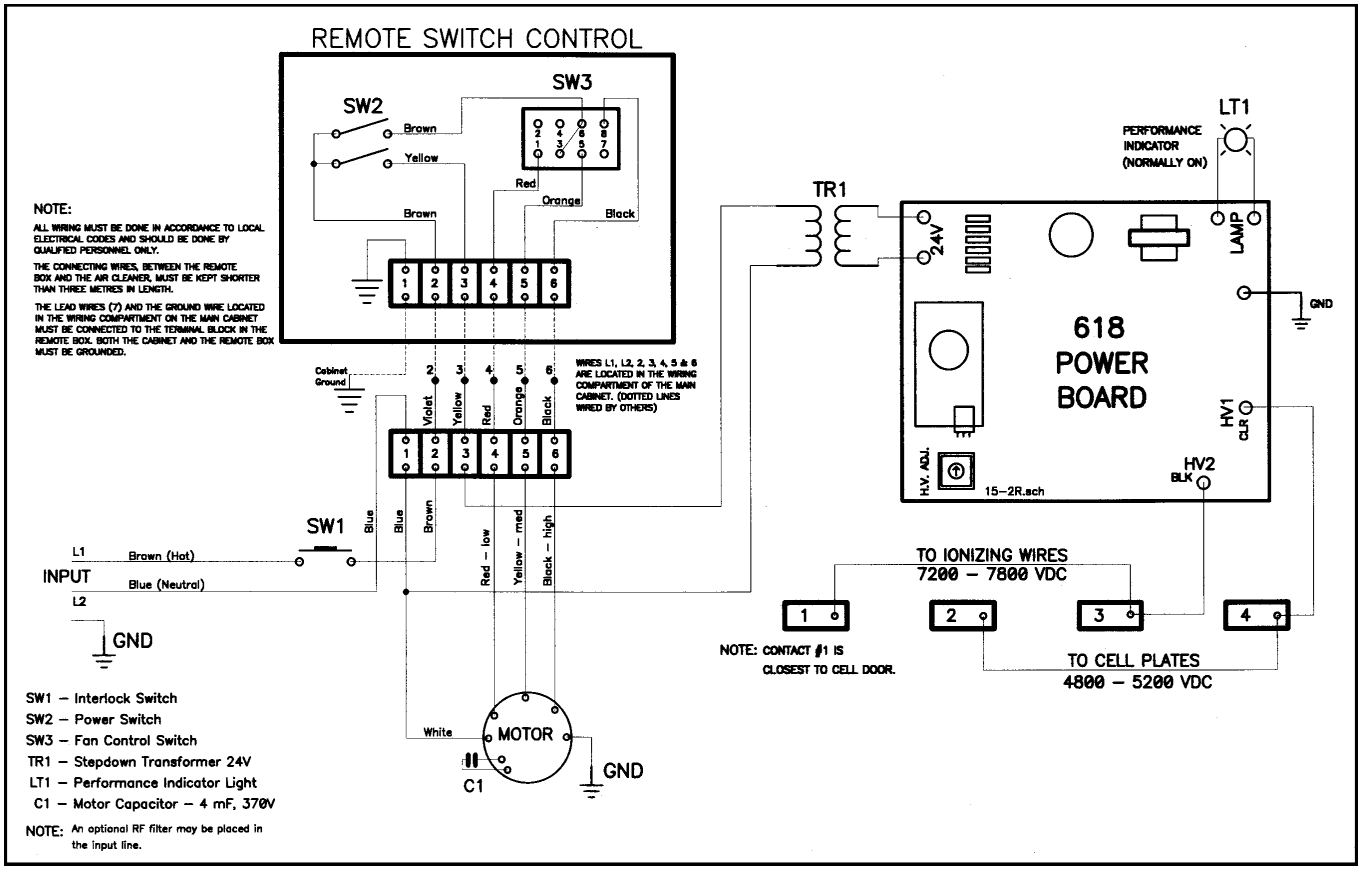
Electrical Schematic - A - 220 - 240 Volt



SW1 – Interlock Switch
SW2 – Power Switch
SW3 – Fan Control Switch
TR1 – Stepdown Transformer 24V
LT1 – Performance Indicator Light
C1 – Motor Capacitor – 4 mF, 370V

NOTE: An optional RF filter may be placed in the input line.

Electrical Schematic - B - with Wired Remote - 220 - 240 Volt



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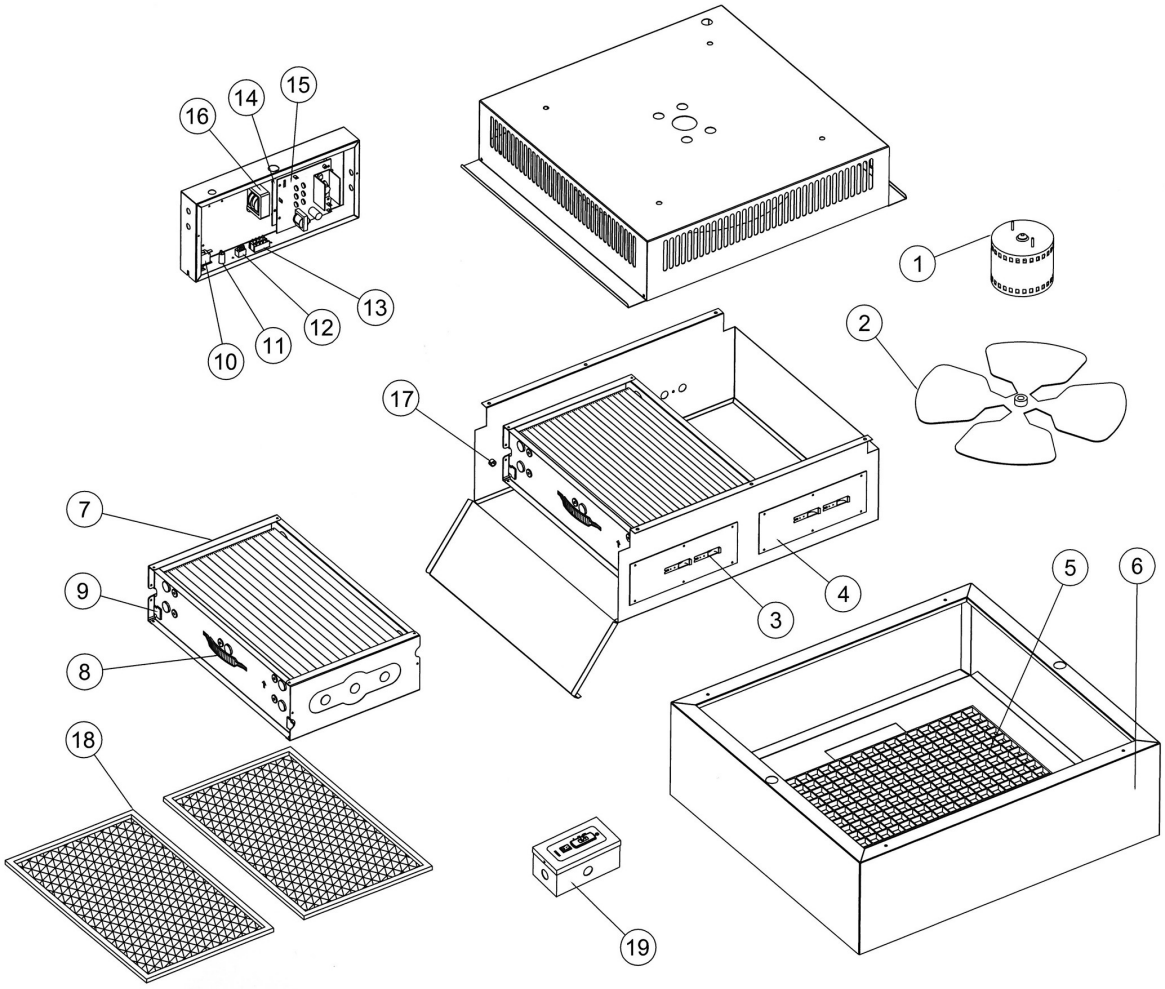

Fig. 7 — Exploded View and Parts List

#	Description	Part Number
1	Fan Motor	C5-070D
2	Fan Blade	C5-0710
3	Copper Contact	R1-9925
4	Fibreboard (with 2 Copper Contacts)	C5-0621
5	Intake Grill	C5-0615
6	Cover Assembly (incl. Grill) (White)	C5-0608
6a	Cover Assembly (incl. Grill) (Gray)	C5-0609
7	Collecting Cell	C5-0400
8	Cell Handle	R1-0484
9	Ionizing Wire	R8-0443
10	Safety Interlock Switch	C5-0202
11	Red Indicator Light	C5-0113
12	Power Switch (Gray)	C5-0222

#	Description	Part Number
12a	Power Switch (Black)	C5-0221
13	3-Position Slide Switch (Gray)	H9-0222
13a	3-Position Slide Switch (Black)	H9-0219
14	Power Board Fibreboard	C5-0526
15	Power Board	C5-052D
16	24 Volt Transformer	C5-053D
17	Cell Guide	R1-0603
18	Prefilter	C5-0855
19	Remote Switch Box	C5-0580
20	Door Label (Close Door Latch...)	MISC-Lab
21	Door Label (Lift and Pull...)	MISC-Lab
22	DAX Detergent—1 Gallon (4 L)	9902

LIMITED ONE YEAR WARRANTY

This PUR product is warranted to the original owner to be free from electrical and mechanical defects in material and workmanship, under normal use and maintenance, within its listed capacity, for a period of one (1) year from the date of original purchase; except however, for the prefilters or ionizing wires, which may have to be replaced from time to time. This PUR product must not have been moved from the site of original installation. A new or remanufactured part to replace the defective part will be provided without charge for the part itself, through PUR DISTRIBUTION or an authorized PUR DISTRIBUTION service dealer, provided the defective part is returned to PUR DISTRIBUTION or the PUR DISTRIBUTION service dealer **prepaid**, together with the **serial number, date of installation, and proof of purchase**. Defective parts must be packaged well and depending on the part, may require images emailed to PUR DISTRIBUTION prior to shipping, to confirm condition of parts. If goods arrive damaged due to improper packaging, warranty will be void. The replacement part assumes the unused portion of the warranty. Failing this, PUR DISTRIBUTION will guarantee the unit for a period of twelve (12) months from the date of manufacture, according to the manufacturer's records.

THIS WARRANTY DOES NOT INCLUDE ANY ADDITIONAL LABOR ALLOWANCE OR OTHER COSTS incurred for diagnosis, repairing, removing, installing, shipping, servicing, or handling of either defective parts or replacement parts. Such costs may be covered by a separate warranty provided by the dealer.

LIMITATIONS OF WARRANTY - All implied warranties (including implied warranties of merchantability) are hereby limited in duration to the period for which the limited warranty is given. The expressed warranties made in this warranty are exclusive and may not be altered, enlarged, or changed by any distributor, dealer or other person whatsoever.

PUR DISTRIBUTION LTD. will not be responsible for:

1. Normal maintenance as outlined in the Operation & Maintenance Manual including cleaning of electronic collecting cells and/or replacement of prefilters.
2. Damage or repairs required as a consequence of faulty installation or application by others.
3. Damage or repairs needed as a consequence of any misapplication, negligent handling, improper servicing, unauthorized alteration, or improper operations.
4. Failure to start due to voltage conditions, blown fuses, open circuit breakers or other damages due to the inadequacy or interruption of electrical service.
5. Damage as a result of floods, winds, fires, lightning, accidents, corrosive atmosphere, or other conditions beyond the control of PUR DISTRIBUTION LTD.
6. Parts not supplied or designated by PUR DISTRIBUTION LTD.
7. PUR DISTRIBUTION LTD. products installed outside the continental Canada, U.S.A., Alaska, and Hawaii.
8. Any personal injury, special indirect or consequential property or commercial damage of any nature whatsoever.

Model No.	**Serial No.**
Date of Purchase	**Dealer Name**
Owner's Company Name & Address	

RETAIN THIS CERTIFICATE WITH YOUR VALUABLE DOCUMENTS

PUR DISTRIBUTION LTD.
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