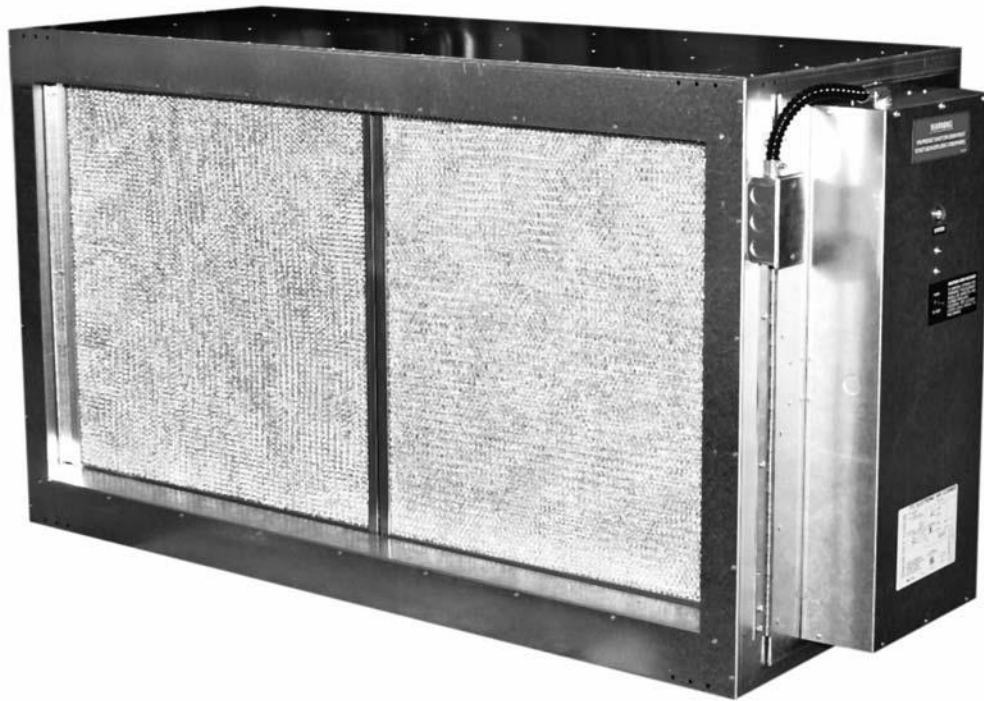


SMOKEMASTER®

MODELS F72A & F72B

INDUSTRIAL ELECTRONIC AIR CLEANER



THE F72 INDUSTRIAL ELECTRONIC AIR CLEANERS INCLUDE COMPONENTS REQUIRED TO REMOVE AIRBORNE PARTICLES SUCH AS COOLANT MIST, DUST, SOOT, POLLEN, BACTERIA, TOBACCO AND COOKING SMOKE FROM THE CIRCULATING AIR IN LARGE RESIDENTIAL, COMMERCIAL AND INDUSTRIAL MANUFACTURING FACILITIES. THE AIR CLEANER IS MOUNTED IN THE RETURN AIR DUCT OF A FORCED AIR SYSTEM WHERE AMBIENT TEMPERATURE DOES NOT EXCEED 125°F (52°C). ONE OR TWO ELECTRONIC CELLS, OPERATED BY HIGH VOLTAGE POWER SUPPLIES, REMOVE AIRBORNE CONTAMINANTS AT EFFICIENCIES AS HIGH AS 99 PERCENT. PERFORMANCE IS MONITORED BY A STATUS LIGHT ON THE POWER SUPPLY.

- Cleans the air at a rate of 1,000 to 12,000 cfm (1,699 to 20,390 m³/hr.) in forced air systems.
- Rated 80 to 99 percent efficient according to the National Bureau of Standards Dust Spot Method using atmospheric dust.
- Same high capacity, industrial electronic cell used in all models.
- Reversible electronic cell allows system airflow to enter cabinet from either side.
- High voltage, solid state power supply retains peak efficiency over a wide range of cell dirt loading conditions.
- High voltage power supply uses voltage doubler to provide increased ionization voltage.
- F72 models are available in all single phase voltages: 100-120 volt, 200-240 volt, 50 or 60 Hz.
- Performance indicator light and test button provides operational status.
- Strong, galvanized steel cabinet can be installed vertically or horizontally.
- Hinged power door allows easy access to cells and filters.

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SPECIFICATIONS

- IMPORTANT -

THE SPECIFICATIONS GIVEN IN THIS PUBLICATION DO NOT INCLUDE NORMAL MANUFACTURING TOLERANCES. THEREFORE, THIS UNIT MAY NOT MATCH THE LISTED SPECIFICATIONS EXACTLY. ALSO, THIS PRODUCT IS TESTED AND CALIBRATED UNDER CLOSELY CONTROLLED CONDITIONS AND SOME MINOR DIFFERENCES IN PERFORMANCE CAN BE EXPECTED IF THOSE CONDITIONS ARE CHANGED.

MODEL	F72A-1003	F72A-1011	F72B-1003	F72B-1011
NO. OF CELLS	1	1	2	2
RATED VOLTAGE	100-120 Vac	200-240 Vac	100-120 Vac	200-240 Vac
FREQUENCY	50-60 Hz	50-60 Hz	50-60 Hz	50-60 Hz
POWER, NOMINAL	40 Watts	40 Watts	50 Watts	50 Watts
POWER, MAXIMUM	90 Watts	90 Watts	100 Watts	100 Watts
WEIGHT, SHIPPING	200 Lbs.	200 Lbs.	300 Lbs.	300 Lbs.
WEIGHT, INSTALLATION	150 Lbs.	150 Lbs.	250 Lbs.	250 Lbs.

AMBIENT TEMPERATURE RATING: Air flow through cells -- 125°F maximum, 40°F minimum
Electronic cells -- 250°F maximum during washing or drying

CABINET: 16 gauge galvanized steel, hinged filter access door

POWER SUPPLY: Solid state, dual voltage power supply provides 9400 Vdc to the ionizer wires and 4700 Vdc to the collector positive plates. The solid state power supply is self-regulating so the output voltage remains constant over a wide range of cell dirt loading conditions.

ELECTRONIC CELL SPECIFICATIONS, PN 38010:

Dimensions: 24.25" x 24.125" x 10.75" deep
Cell Weight: 60 Lbs.
Collection Area: 240 sq. ft.
Voltage Gradient: 20,000 volts per inch
Ionizer Wires: 11 wires per cell, .010" diameter, tungsten

MOUNTING: a) Vertical, standing or hanging cabinet with horizontal air flow
b) Horizontal mounting with vertical air flow

DIMENSIONS: See Fig. 1, Pg. 4

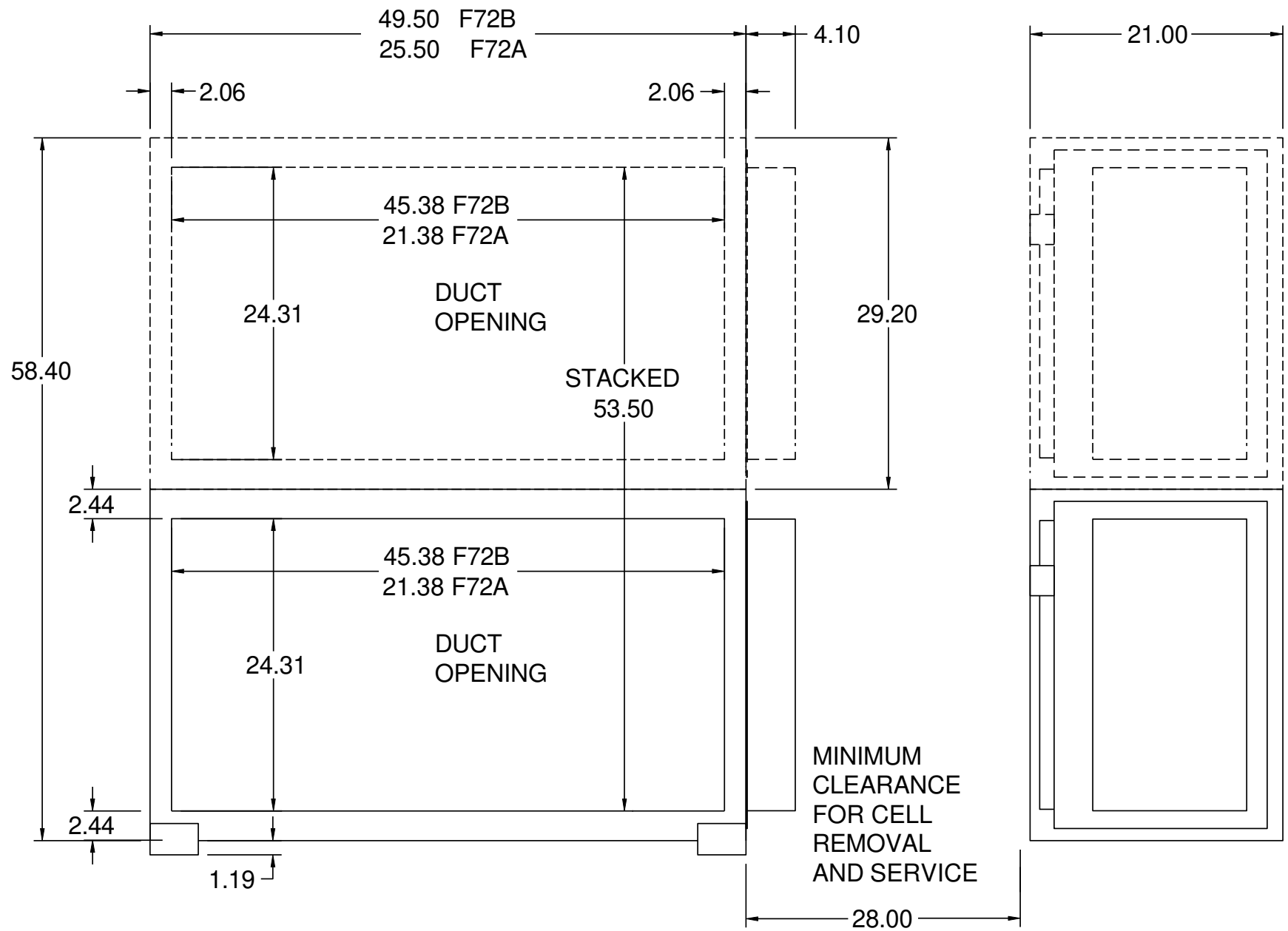
RECOMMENDED AIR FLOW (CFM) WITH CORRESPONDING PRESSURE DROP AND EFFICIENCY RATING

TABLE 1

F72A		F72B		F72B 2 UNITS STACKED		EFFICIENCY ^a (PERCENT)	WATER PRESSURE DROP	
cfm	m ³ /hr.	cfm	m ³ /hr.	cfm	m ³ /hr.		in.	kPa
1,000	1,699	2,000	3,398	4,000	6,796	99	0.06	.015
1,500	2,548	3,000	5,097	6,000	10,194	99	0.12	.030
2,000	3,398	4,000	6,796	8,000	13,592	95	0.22	.055
2,500	4,248	5,000	8,495	10,000	16,990	90	0.33	.083
3,000	5,096	6,000	10,194	12,000	20,388	80	0.49	.122

*Efficiency ratings based on National Bureau of Standards Dust Spot Method and American Society of Heating, Refrigerating and Air Conditioning Engineers Standard 52-76 using atmospheric dust.

Figure 1 – F72 INSTALLATION DIMENSIONS



PLANNING THE INSTALLATION

- WARNING -

The F72 Industrial Electronic Air Cleaner is not explosion-proof. It must not be installed where there is danger of vapor, gas or dust explosion.

INTRODUCTION

Clean air is the subject of numerous laws and regulations. Typical requirements in the United States are those put out by the Occupational Safety and Health Administration (OSHA). Private groups, such as the American Society of Heating, Refrigeration and Air Conditioning Engineers (ASHRAE) have also published numerous recommendations.

Normally, clean air is defined in regulations and recommendations as air having a limited amount of contaminant in it, commonly expressed as parts per million, or milligrams per cubic meter. Approved counteractions are intended to lower or eliminate the amount of contaminants in the air. One of the more common methods of achieving this goal is through the use of electronic air cleaners.

At no time should an electronic air cleaner be placed where there is a potential for explosion due to the presence of explosive dusts, gases or vapors. Contact the nearest Air Quality Engineering, Inc., representative for assistance in determining the correct application of an electronic air cleaner.

AIR CLEANER SIZING

The F72 Induct Air Cleaner is usually sized according to the capacity of the air handling system and desired efficiency. See Fig. 4.

LOCATION AND POSITION

Because air-handling systems vary greatly in arrangement and style, factors such as location, air distribution, transitions, etc., require careful consideration.

The F72 can be mounted in a vertical or horizontal duct. If the air cleaner is to be mounted in a vertical duct, position the F72 so that the hinged access door opens down.

TRANSITIONS

When adapting the duct to fit the air cleaner, use gradual transitions in duct size to prevent turbulence and to increase efficiency.

Duct transitions should not exceed 20 degrees (about 4 inches per lineal foot [101.6 mm per lineal 304.8 m]) on each side of a fitting.

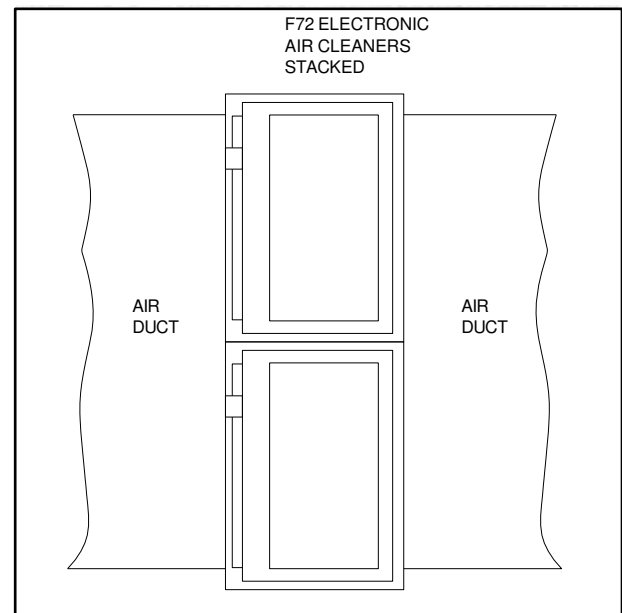


FIGURE 2 – TYPICAL INSTALLATION

OUTDOOR AIR

When outdoor air is added to the return air duct, sufficient heat must be added to maintain a uniform air temperature between 50°F and 125°F [10°C and 52°C]. Two methods are recommended:

1. Baffles. Mixing baffles should be used to mix the outdoor air and the return air before it enters the air cleaner.
2. Preheat Coil. If a large amount of outdoor air is used, it must be heated. An appropriate control system should be used to control the heating element (electric strip heater, steam coil, etc.)

Outdoor air intakes should be protected to prevent the introduction of unnecessary contaminants. Depending on the installation, it may be necessary

to incorporate some or all of the precautions mentioned below.

1. Air intakes should be hooded or louvered to provide adequate protection from rain and snow. The type of hood used will depend upon the installation and expected weather.

2. Air intakes should always be equipped with a "bird screen."

At times, it may be desirable to install a prefilter ahead of the electronic air cleaner. This is done to remove contaminants that could be harmful to the air cleaner or might cause excessively fast dirt buildup or arcing in the electronic cell.

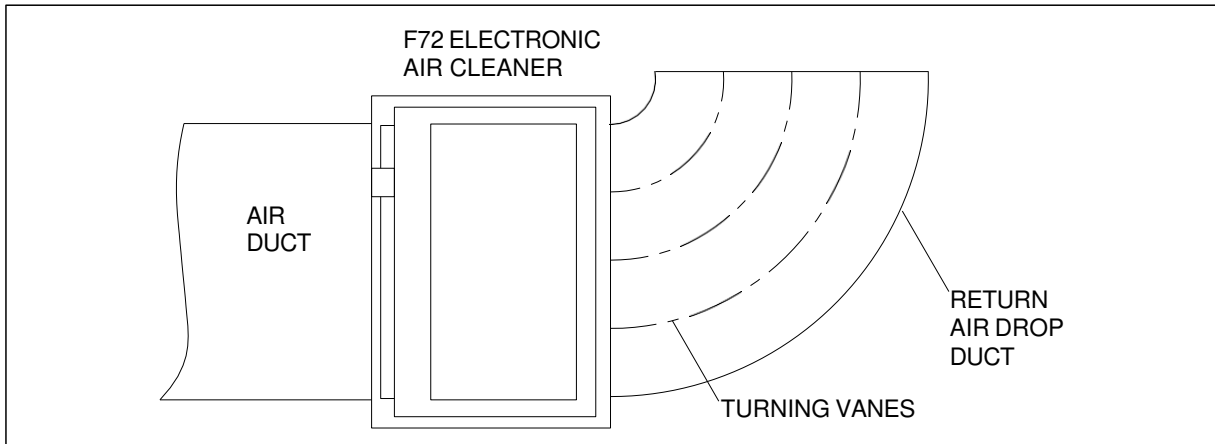


FIGURE 3 – TYPICAL INSTALLATION WITH TURNING VANES IN THE AIR DUCT.

COMMERCIAL APPLICATIONS

When deciding on the number of air cleaners required for applications such as a restaurant, bowling alley, store, bar or lounge, several conditions must be considered. They are:

1. Air to be cleaned of dust, tobacco smoke, greases, etc. These conditions may require a higher efficiency in the electronic air cleaner installation.
2. Capacity (cfm or m³/hr.) of equipment and system.
3. Method of circulation must be forced air distributed evenly to all parts of the controlled area with the required air changes per hour.
4. Maximum number and average number of people that will occupy controlled area.
5. The percent operating efficiency required of the electronic air cleaner. The F72 efficiency should be from 85 to 95 percent depending on the application and purpose (see Efficiency Chart, Fig. 4).

INDUSTRIAL APPLICATIONS

Sizing is determining how many air cleaning units are required to maintain a desired level of air

quality. The process of sizing an industrial application involves roughly figuring the number of air cleaners needed and then modifying the figures according to the specific characteristics of each application.

For ambient air cleaning, the estimated number of electronic air cleaners may be determined by the relationship of air volume to the needed air changes per hour.

An alternative method for calculating the estimated number of electronic air cleaners can be used if it is possible to measure the generation rate of the contaminants and the allowable level of contamination. To use either method of calculation, consult your local sales representative.

Regardless of the method used to calculate the number of units needed to produce clean air, the physical conditions of the space to be cleaned may either limit this number or demand that more units be installed. For ambient air cleaning, it is important to establish a uniform airflow pattern throughout the entire space. Limitations to the calculated sizing may be a lack of space for mounting areas or the number of units may interrupt normal building operation; that is, a unit cannot be mounted where an overhead crane will

smash into it or where stand mountings seriously interrupt building traffic patterns. The number of units required by air volume and air changes per hour might need to be increased when the shape

of a structure is such that effective capturing and air distribution is not possible according to the sizing calculations.

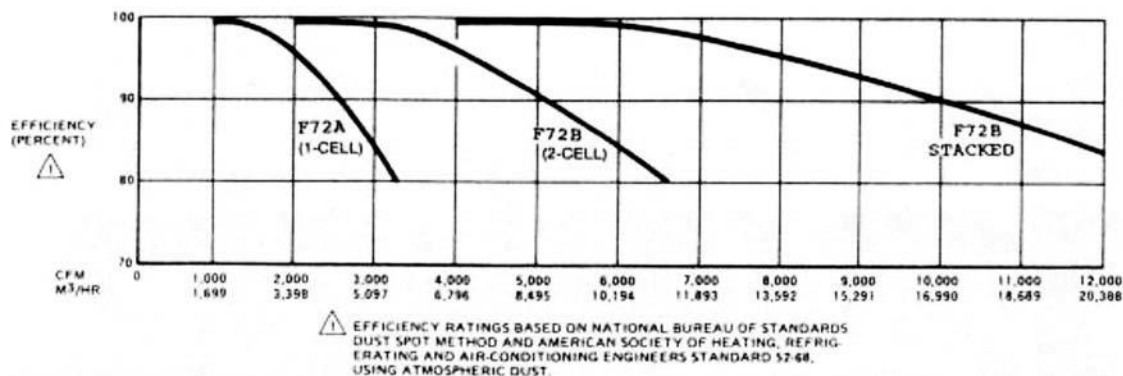


FIGURE 4 – F72 ELECTRONIC AIR CLEANER CAPACITY AND EFFICIENCY.

AIR CONDITIONING

Make certain the cooling coil is installed downstream from the air cleaner cabinet to prevent condensation and chilled air (cooler than 50°F [10°C]) from entering the cell.

HUMIDIFIERS

Location of the system humidifier is important to the operation of the air cleaner. An evaporative-type humidifier may be installed between the furnace warm air duct and the return air duct without affecting the electronic air cleaner. An atomizing-type humidifier should be installed downstream from the air cleaner. If the atomizing-type humidifier is installed upstream, mist, salts and minerals may decrease the efficiency of the electronic cell and create a need for equipment service.

When the atomizing-type unit *must* be used upstream from the F72, the following precautions should be taken:

1. It must be installed as far from the air cleaner as possible.
2. A standard, disposable-type furnace filter should be installed between the humidifier and the air cleaner to trap water droplets and mineral salts.
3. The electronic cell must be washed frequently to prevent a mineral deposit buildup.

INSTALLATION

WHEN INSTALLING THIS PRODUCT

1. Read these instructions carefully. Failure to follow them could damage the product or cause a hazardous condition.
2. Check the ratings given in the instructions and on the product to make sure the product is suitable for your application.
3. Installer must be a trained, experienced service technician.
4. After installation is complete, check out product operation as provided in these instructions.

- CAUTION -

Disconnect the power supply before installation to prevent electrical shock and equipment damage.

- IMPORTANT -

This section includes information for the sheet metal and electrical installation. Make certain each person involved with the installation is aware of the appropriate subsections in the manual.

INSTALLATION CHECKLIST

- Transitions
- Components Assembled
 - electronic cells
 - power door
- Turning Vanes
- Check Packing Materials Before Discarding
- Wiring

SHEETMETAL INSTALLATION

Air Distribution and Duct Work

The F72 operates most efficiently when all of the system air is delivered across the electronic cell at a uniform velocity. Turning vanes should be added to any return airdrop upstream from the air cleaner (Fig. 3).

Gradual transitions to the F72 cabinet are recommended in all duct work larger or smaller than the cabinet opening. If transitions are used, they should not exceed 20 degrees (4 in. rise per linear ft. [101.6 mm rise per linear 304.8 m]).

INSTALL AIR CLEANER

Mount the F72 air cleaner as follows:

1. Fabricate and install the necessary vanes and transitions.
2. Set the cabinet in position. If hanging brackets are used, make certain the brackets are strong enough to hold the cabinet and the cabinet is attached firmly to the brackets.

NOTE: Place a spirit level on top of the cabinet to make sure it is level.

3. a. Drill holes for sheet metal screws into the cabinet face and also the duct.
b. Fasten the duct to the inside of the cabinet flange opening with sheet metal screws.

- c. Seal all joints in the return air system to prevent dust from entering the clean air stream.

Install the F72 components as follows:

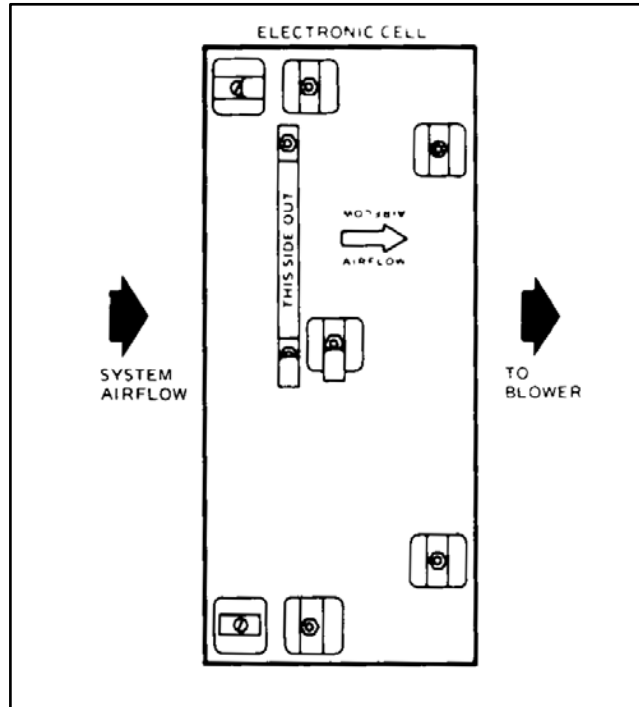


FIGURE 5 – CORRECT CELL POSITION IN THE F72

1. Slide the prefilter(s) and post filter(s) into place.
2. Insert the electronic cell(s) into the cabinet with the cell handle facing the door opening. Make certain the arrow stamped on the cell(s) points downstream (Fig. 5).

WIRING

- CAUTION -

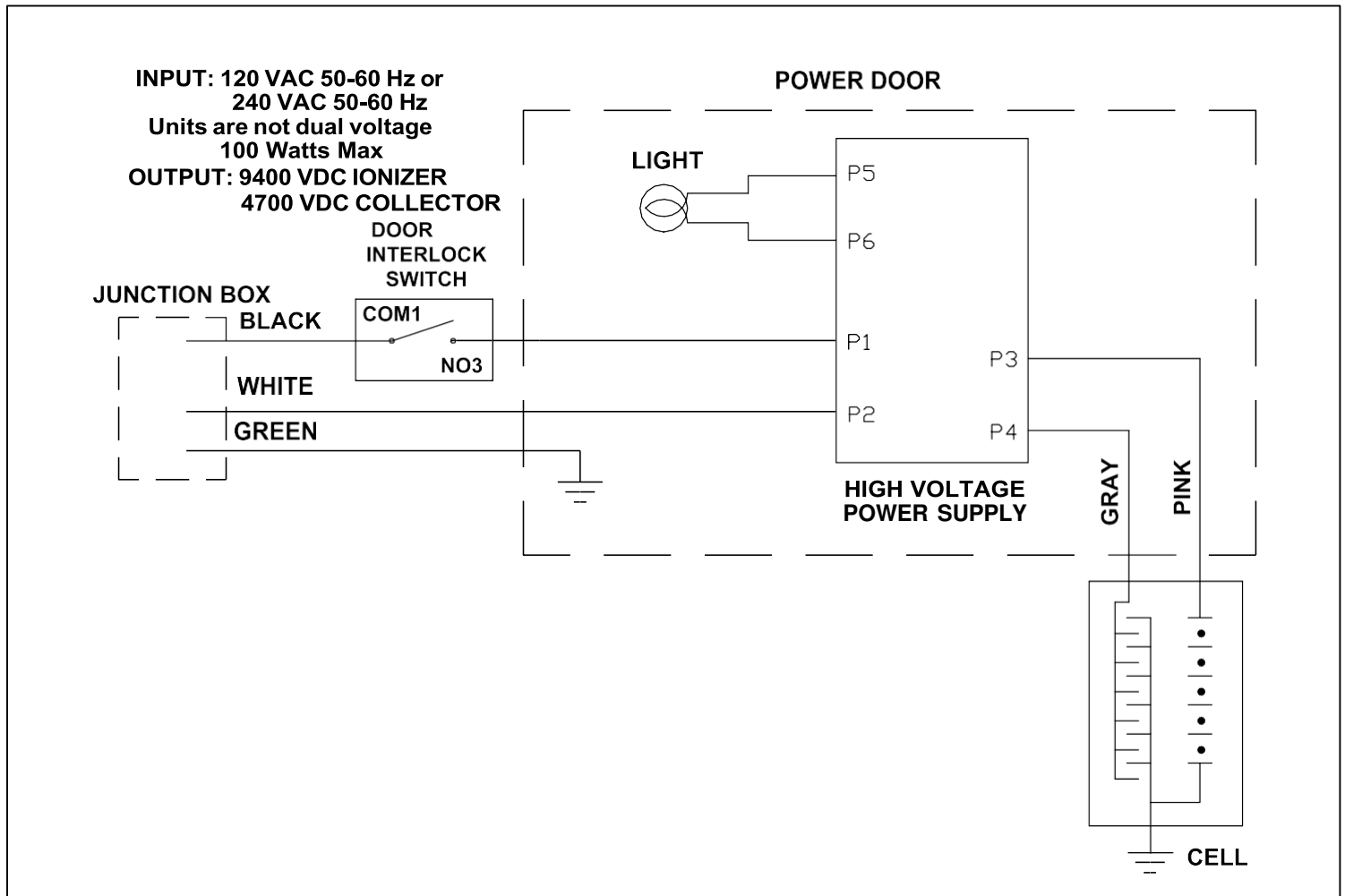
Disconnect the power supply before installation to prevent electrical shock and equipment damage.

The line voltage supplied to the F72 air cleaner must match the voltage rating stamped on the front of the air cleaner.

- CAUTION -

Only persons qualified to install electrical wiring should attempt this procedure. All wiring must comply with applicable codes and ordinances.

A complete internal schematic diagram of the F72 is shown in Figs. 6 and 7. Figs. 8 and 9 show typical hookups. Fig. 10 shows typical hookups to three phase voltage sources.



Figures 6 & 7 – F72 SCHEMATIC

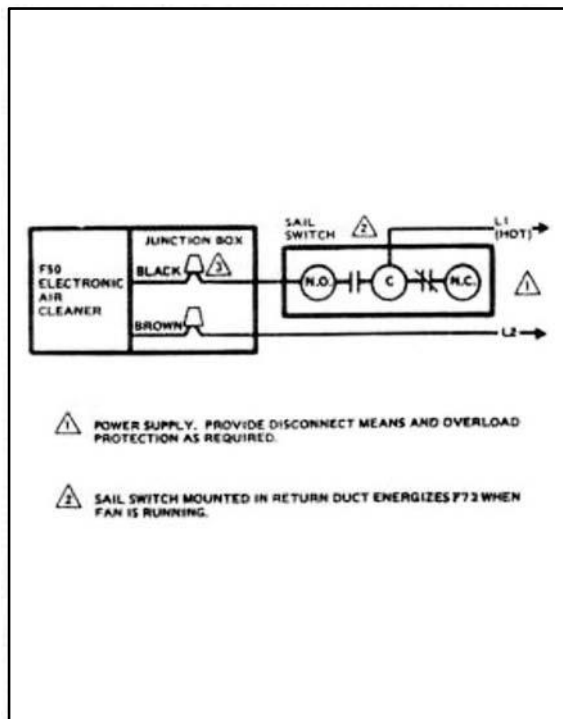


FIGURE 8 – MULTI-SPEED OR MODULATING BLOWER MOTOR. (Air cleaner is controlled by a sail switch.)

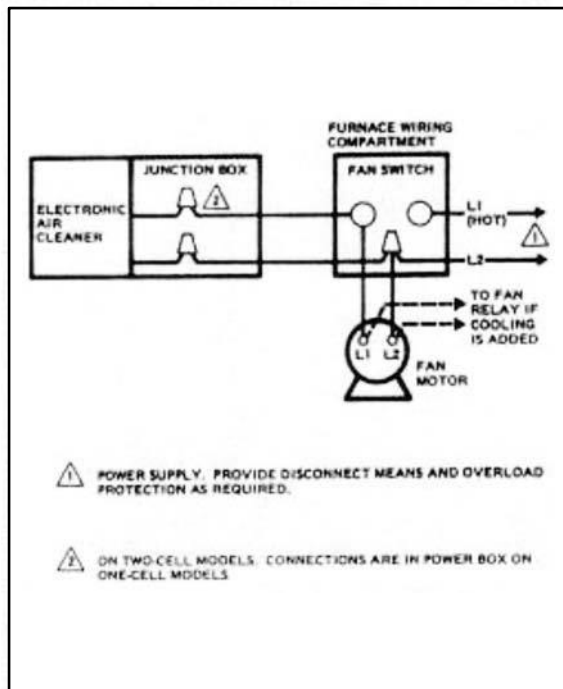


FIGURE 9 – SINGLE SPEED BLOWER MOTOR. (Air cleaner is controlled by the fan switch and/or the fan relay.)

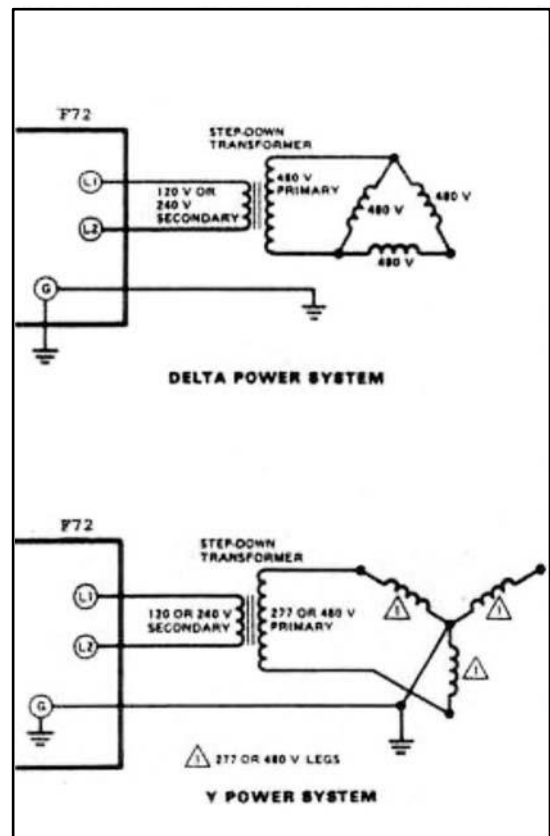


FIGURE 10 – F72 AIR CLEANER HOOKUP TO THREE PHASE, HIGH VOLTAGE POWER SUPPLIES.

SERVICE

CLEANING THE ELECTRONIC AIR CLEANER

The F72 is used to remove a variety of contaminants from the air. In the process of cleaning the air, however, parts of the air cleaner will become dirty and the cleaning efficiency will be lowered.

In order to maintain a high standard of reliability and efficiency, it is necessary for the F72 to receive periodic maintenance. Periodic maintenance means cleaning the collector cells and inspecting the electronic air cleaner both visibly and with instruments. Service will be required if the air cleaner seems damaged or appears to be performing at substandard efficiency.

Air Quality Engineering, Inc., recommends regular cleaning and the use of an alkaline detergent solution. The exact scheduling is a matter of experience since each air cleaning situation varies. Actual experience may dictate a greater or lesser period between cleanings.

If, because of excessive buildup of captured contaminants, the alkaline detergent solution proves inadequate, the use of physical force (such as high-pressure air, water or steam) or an acid detergent solution may be required.

- CAUTION -

1. Be extremely careful when working with the F72 cells and filters. The edges of the cells, the filters, the collection plates and the ionizing wires of the cells may be sharp.
2. When cleaning the cells and filters, be sure to wear appropriate protective gear, especially goggles and gloves. Skin contact with either alkaline or acid detergent solution should be avoided.

REMOVING THE ELECTRONIC CELLS AND PREFILTERS

Before the electronic cells and prefilters can be cleaned, they must be removed from the F72. Be careful NOT to place a ladder or other heavy item against the F72 unit, cells or prefilters. Electronic

air cleaners and their components are susceptible to damage.

CLEANING THE PREFILTERS

The prefilters on an F72 do require cleaning. The procedure is simple. Remove the prefilter and shake the accumulated contaminants from it. If this does not seem adequate, a vacuum can be used; or the prefilter can be soaked in the alkaline detergent solution. Do NOT soak the prefilter in an acid detergent solution. Physical force methods could also harm the prefilters.

THE ALKALINE DETERGENT SOLUTION CLEANING METHOD

1. Provide a container large enough to hold the electronic cells and prefilters to be cleaned.
2. Fill the container with detergent and hot water sufficient to cover the electronic cell.

NOTE: Be careful to avoid prolonged skin contact with the solution. Do NOT splash solution in your eyes.

3. Soak the cells and prefilters in the solution for about 15 minutes. The solution should be agitated in some way, such as sloshing the cells or prefilters or stirring the solution.

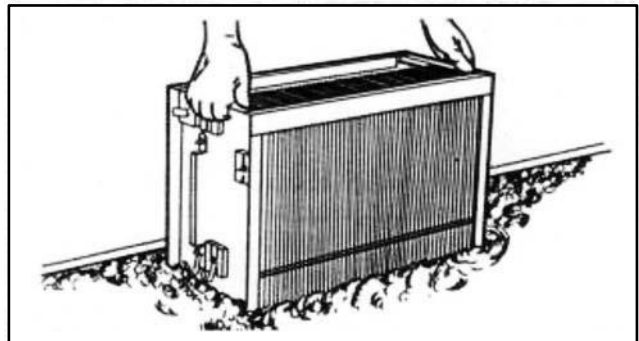


FIGURE 11 – WHEN SOAKING THE CELL, AGITATE THE WATER.

4. Remove the cells and prefilters from the alkaline cleaning solution and place them in another container of hot water (150°F to 170°F [66°C to 77°C] for rinsing. The cells and prefilters should be rinsed for 5 to 10 minutes.

5. Remove the cells and prefilters from the rinse water. Allow the cells and prefilters to drain and dry before energizing them.

The collection plates of the electronic cells **MUST** be checked for any detergent residue. If there is any residue remaining, rinse it off since it may affect the efficiency of the electronic air cleaner.

THE ACID DETERGENT METHOD

Air Quality Engineering, Inc., does sell an acid detergent. However, acid cleaners should be used only after alkaline detergents have proven to be corrosive. They *will* decrease the life of cells. If an acid detergent solution is used, be sure to use a weak mixture. Do **NOT** place prefilters in an acid detergent solution.

- IMPORTANT -

Acid cleaners *must* be properly handled. Refer to the label on the acid detergent used. This means wearing protective clothing, rubber gloves and goggles, and reading all precautions on the label of the detergent used. If contact is made in the eyes, flush with a large amount of water and consult a physician.



FIGURE 12 – BE SURE TO WEAR THE PROPER EQUIPMENT FOR WORKING WITH DETERGENT SOLUTIONS

NOTE: Be sure to provide adequate ventilation when using acid detergents.

After the cleaning process is completed, the soak water must be neutralized according to the U. S. Environmental Protection Agency and state and local pollution control guidelines and requirements. Soda ash is one neutralizer.

1. Use a polyethylene or Type 316 stainless steel container large enough to hold the electronic cell. Other types of containers should be avoided since the acid detergent may react with the container material.
2. Following the instructions for temperature of the water and amount of acid detergent used, prepare the cleaning solution. The amount of detergent and the soaking time will be determined by the amount of contaminants captured by the cells and the difficulty encountered in removing the buildup. The usual mix for acid solution is 2 oz. of acid detergent to 1 gal. of water (59.2 ML to 3.8 L).

NOTE: It is recommended that acid cleaning of any electronic air cleaner cells containing metal oxide contaminants be performed with room temperature or cold water. NEVER add acid detergent to hot water.

3. Be sure to observe the cleaning operation when the cells are placed in the acid detergent solution. The amount of acid detergent should be reduced if less than 30 seconds pass before large amounts of bubbles are released. The cells should **NOT** remain in the acid detergent solution more than 30 seconds after a vigorous reaction begins. It is a good idea to remove the cells and inspect the cleaning action of the acid detergent solution. If contaminant deposits remain, the cells can be returned to the solution.

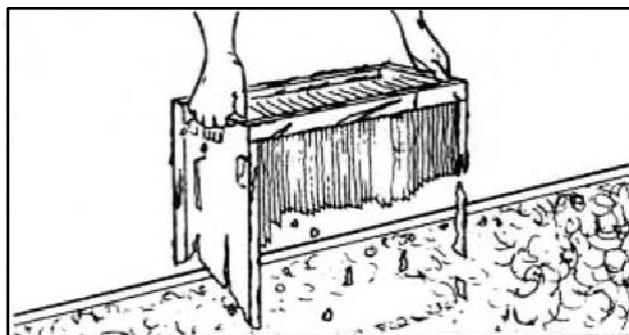


FIGURE 13 – TOO MUCH TIME IN THE ACID SOLUTION MAY HARM THE ELECTRONIC CELL.

- IMPORTANT -

After the contaminants are removed by the acid detergent solution, any further time the cells remain in the solution serves only to decrease their life.

4. After removing the cells from the acid detergent solution, rinse them thoroughly for at least five minutes.
5. Allow the cells to drain and dry before energizing them.

STAINING

Occasionally after the soaking process, the cells or prefilter may seem stained. If the stain is black or very dark, it is probably detergent residue and should be rinsed off at once. Detergent residue may affect the electronic air cleaner's efficiency.

If yellowing appears, it is probably staining. The acid detergent solution will remove the yellowing. However, it should be noted that the yellowing does not affect air cleaner efficiency.

PHYSICAL FORCE METHODS

The following physical force methods may be needed to clean some contaminants from the F72 cells. **DO NOT** use physical force methods on the filter screens.

1. High Pressure Air or Water

Either of these methods should prove to be adequate. However, care should be taken to avoid damage to the electronic cells.

NOTE: Using any caustic detergent with high pressure is dangerous.

If a detergent is required with the high-pressure water, an alkaline detergent should be used if allowed by the high-pressure equipment manufacturer. **DO NOT** use an acid detergent except when allowed by the equipment manufacturer.

2. Steam

Extreme care must be exercised when steam cleaning to avoid warping or bending the collector plates of the electronic cells or any other damage to the cells. Remember that the cells will be hot

after steam cleaning and that care must be taken to avoid burns.

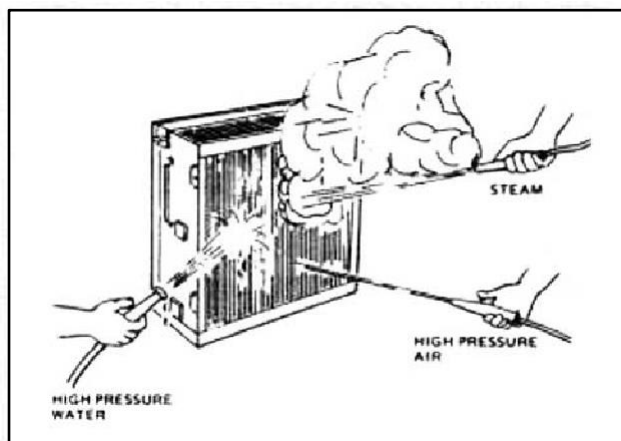


FIGURE 14 – IT MAY BE NECESSARY TO USE PHYSICAL FORCE METHODS TO REMOVE COLLECTED CONTAMINATION.

CONTAMINANTS AND CLEANING PROCEDURES

The following is a selective listing of contaminants captured by electronic air cleaners. This listing gives the appropriate cleaning procedure for various types of contaminants found on electronic air cleaner collector plates and prefilters.

CONTAMINANT	CLEANING PROCEDURE ^a
Animal Hair	Alkaline Solution
Cabosil	Alkaline Solution High Pressure Air
Carbon – (carbon black, soot, lamp black, graphite, charcoal, dust, etc.)	Alkaline Solution High Pressure Air High Pressure Water
Cooking Oils – Veg. (soybean, peanut, etc.) Animal (lard, butter, etc.)	Alkaline Solution Steam
Cotton Fibers	Alkaline Solution
Dust – (silicon dioxide, calcium carbonate and mineral type compounds)	Alkaline Solution
Flour Dust	Alkaline Solution
Linseed Oil	Alkaline Solution
Lubricants	Alkaline Solution High Pressure Water
Metal Oxides	Acid Solution
Metals	Acid Solution

CONTAMINANT	CLEANING PROCEDURE ^a
Mineral Oil – (petroleum base, diesters and silicone)	Alkaline Solution High Pressure Water
Paper Products	Alkaline Solution
Paint – Oil Base, Water Base	Alkaline Solution
Pine Tar Resins	Alkaline Solution Steam
Polyethylene	Alkaline Solution
Polyphenyleneoxide	Alkaline Solution
Polypropylene	Alkaline Solution
Rubber Molding Accelerators	Alkaline Solution
Soaps	Alkaline Solution
Sodium Chloride	Alkaline Solution
Sugar – (includes molasses)	Alkaline Solution Steam
Talc	High Pressure Air Alkaline Solution
Tobacco Tars and Smoke	Alkaline Solution
Varnishes	Alkaline Solution
Waxes – (all types)	Alkaline Solution Steam
Welding Fumes	Acid Solution
Wood Products	Alkaline Solution

^aCleaning procedures are listed in order of preference.

REPLACING THE CELLS

Before replacing the electronic cells, be sure to visually check the electronic cells for bent or damaged collector plates or broken ionizing wires. Bent or warped collector plates may be bent back into shape.

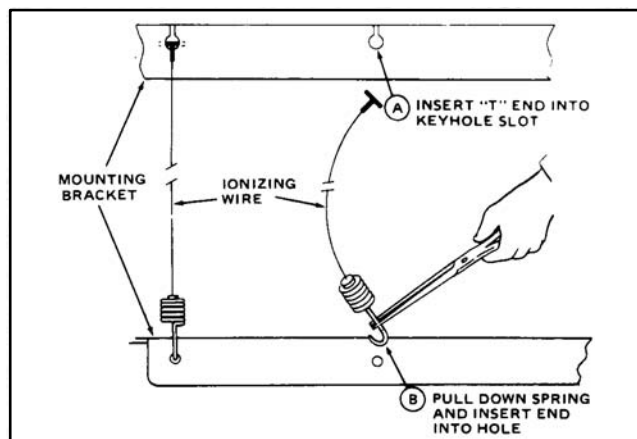


FIGURE 15 – REPLACING IONIZING WIRES

Broken or damaged ionizing wires must be replaced for top efficiency. Remove all parts of the broken or damaged wire. Replacement wires come cut to length and ready for installation. Remember that wires come cut to length and ready for installation. Remember when replacing the ionizing wires to:

1. Use care to avoid damage to the spring connector or other parts of the cell during installation.
2. Hook "T" end of the ionizing wire in the keyhole slot at one end of the cell.
3. Pull down the spring with a needle-nose pliers and insert hook into the hole.

Before replacing the cell, it might be a good idea to check it for a short circuit. This is done by using an ohmmeter to check the resistance between the frame of the cell and both the ionizer and collector contacts. In each case, the resistance should be infinite.

TROUBLESHOOTING

- CAUTION -

1. During troubleshooting, dangerous line voltage circuits are exposed. Use extreme care to avoid electrical shock or equipment damage.
2. Although not normally lethal, the high voltage output of the electronic air cleaner power supply can produce a painful shock. Use caution.

detection and proper repair of any malfunction in the electronic air cleaner.

Most of the troubleshooting steps can be performed by observing the performance indicator light and by pushing the test button.

Troubleshooting can be done with only a few tools:

- Test Meter – Simpson 248 Hi Voltage meter or equivalent.
- Neon test lamp for line voltage.
- Screwdrivers – long shank with plastic or rubber handles.
- Needle nose or long nose pliers – for replacing ionizing wires.

TROUBLESHOOTING PROCEDURE

The following procedure has been designed to speed troubleshooting and to insure the quick

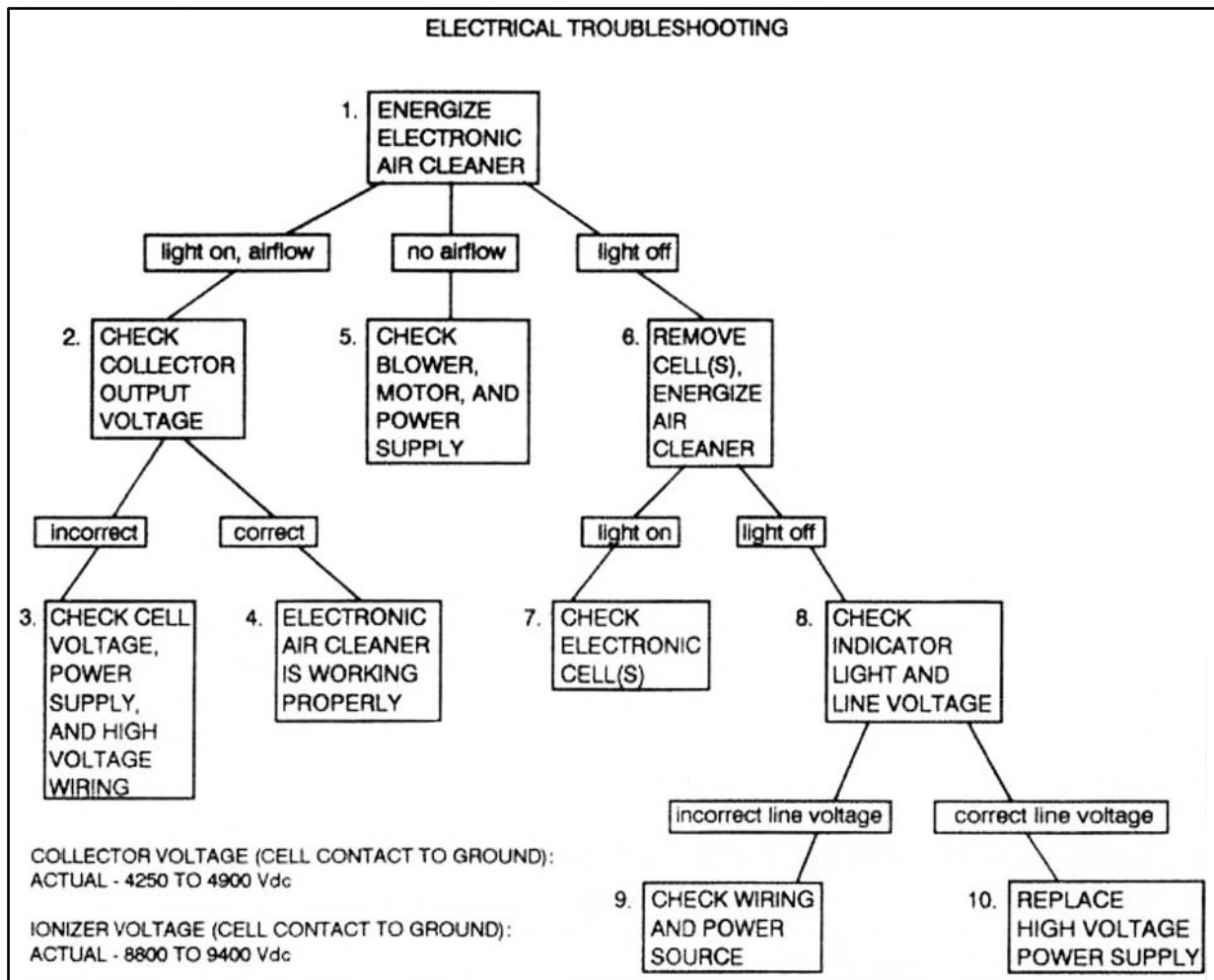


FIGURE 16 – F72 TROUBLESHOOTING FLOW CHART

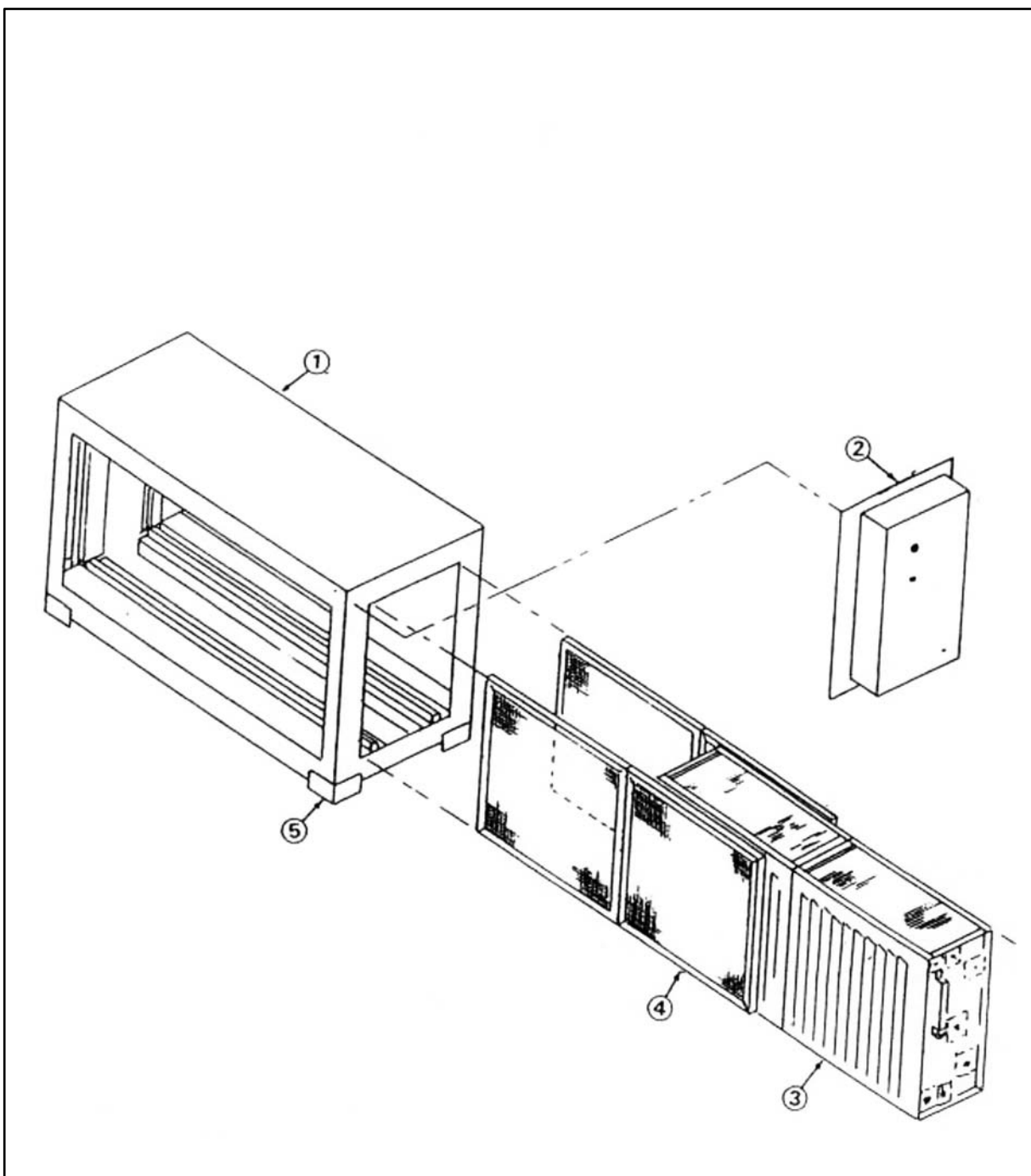


FIGURE 17 – EXPLODED VIEW OF THE F72 ELECTRONIC AIR CLEANER.

PARTS LIST

NO.	DESCRIPTION	PART NO.	
		F72A	F72B
1	Cabinet Assembly	05413-B (BLACK)	05416-B (BLACK)
		05413-GALV (GALVANIZED)	05416-GALV (GALVANIZED)
2	Door, 120V	05684-B (BLACK)	05684-B (BLACK)
		05684-GALV (GALVANIZED)	05684-GALV (GALVANIZED)
	Door, 240V	05685-B (BLACK)	05685-B (BLACK)
		05685-GALV (GALVANIZED)	05685-GALV (GALVANIZED)
3	Electronic Cell(s)-F72A (1), F72B (2)	38010	38010
4	Pre/Post Filters-F72A (2), F72B (4)	41113	41113
5	Cabinet Foot	21436	21436
	Ionizer Wires	38005	38005
	Indicator Light	10097	10097
	High Voltage Power Supply Replacement Kit, 120V	07081	07081
	High Voltage Power Supply Replacement Kit, 208-240V	07083	07083
	Male Connector	46199	46199
	Female Connector	46198	46198
	Media Prefilter Frame	41111	41111
	Media Prefilter Pad	41112	41112

NOTES:

NOTES:

CERTIFICATE OF WARRANTY

ONE-YEAR LIMITED WARRANTY

Air Quality Engineering, Inc. (AQE), warrants the Smokemaster® Electronic Air Cleaner to be free from defects in workmanship or materials, under normal use and service, for a period of one (1) year from the date of purchase by the consumer. If at any time during the warranty period the product is defective or malfunctions, AQE shall repair or replace it (at AQE's option) within a reasonable period of time.

If the product is defective:

- (i) obtain a Return Goods Authorization (RGA) Number from your AQE representative,
- (ii) return the unit or defective component with a bill of sale or other dated proof of purchase to the retailer from which you purchased it, or
- (iii) package the unit or component along with proof of purchase (including date purchased) and a short description of the malfunction, and mail or ship postage or freight prepaid to the following address:

**AIR QUALITY ENGINEERING, INC.
Warranty/Return Goods Department
7140 Northland Drive North
Minneapolis, Minnesota 55428-1520**

The repaired or replaced part or unit will be shipped freight collect by AQE to the purchaser with the purchaser to be responsible for all freight charges. The warranty on any repaired or replacement part shall be for a duration of time no longer than the remaining or unexpired term of the original warranty. This warranty does not cover any labor or other service charges incurred by the purchaser.

This warranty shall not apply if it is shown by AQE that the defect or malfunction was caused by damage that occurred while the product was in the possession of the consumer.

AQE's sole responsibility shall be to repair or replace the product within the terms stated above. AQE SHALL NOT BE LIABLE FOR ANY CONSEQUENTIAL DAMAGES RESULTING FROM ANY BREACH OF WARRANTY, EXPRESS OR IMPLIED, APPLICABLE TO THIS PRODUCT. Some states do not allow the exclusion or limitation of consequential damages so this limitation may not apply to you.

THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, AND THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE HEREBY EXCLUDED BEYOND THE ONE-YEAR DURATION OF THIS WARRANTY. Some states do not allow limitations on how long an implied warranty lasts so the above limitation may not apply to you.

This warranty gives you specific legal rights and you may also have other rights that vary from state to state.

**AIR QUALITY ENGINEERING, INC.
7140 NORTHLAND DRIVE NORTH
MINNEAPOLIS, MINNESOTA 55428-1520**

**TOLL FREE: 1-800-328-0787
TELEPHONE: (763) 531-9823
FAX: (763) 531-9900**

MANUFACTURER & WORLDWIDE DISTRIBUTOR OF SMOKEMASTER® AIR CLEANING SYSTEMS