



Better Air is Our Business®

AmericanAirFilter® HFS800F Free Standing/Portable HEPA Filtration System

*Installation, Operation, and
Maintenance Instructions*

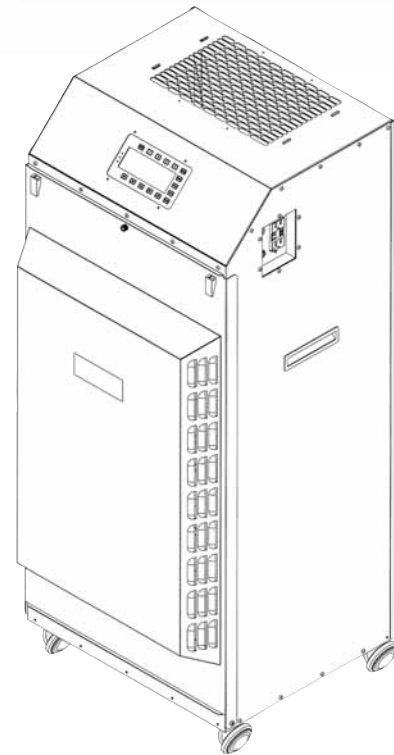


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Read and Save These Instructions!

NOTE: 1. Read and understand all operating instructions before using this product.

2. Save this manual for future reference.

This instruction manual provides important information on the installation and operation of the AAF International HFS800F Free Standing/Portable HEPA Filtration System. These instructions must be carefully followed in order to operate the units safely and correctly. If you have any questions regarding the use or care of this equipment call AAF at 1.888.AAF.2003.

AAF strongly recommends users of the HFS800F and accessories to follow the most recent guidelines and/or standards published by Occupational Safety and Health Administration, Centers for Disease Control and Prevention, Environmental Protection Agency, American Society of Heating, Refrigerating and Air Conditioning Engineers, and all other federal, state, provincial, and local regulations.

AAF has published a [User Application Guide](#) to assist in the effective use of air filtration devices in health care facilities. Health care facility personnel are urged to read this document thoroughly and save it for reference purposes.

1.0 General Information

The HFS800F unit incorporates HEPA (High Efficiency Particulate Air) filtration which provides the most effective mechanical filtration method available. In addition to providing HEPA filtration, the units are primarily used in a negative pressure and/or recirculation mode. A negative pressure condition is created in order to confine contaminated airborne particles. This condition exists when the static pressure inside the room containing the unit(s) is lower relative to the pressure of the environment outside the room. The static pressure differential is created and maintained by continuously exhausting air out of a given room at a faster rate than air enters the room from all other sources. In the recirculation mode, all or part of the filtered air is exhausted back into the room containing the unit.

The HFS800F can be used to create a positive pressure condition by directing filtered exhaust air from the units to another area of the facility via rigid or flexible ducting; however, this is not their primary application. A positive pressure condition exists when the static pressure in a given room is higher relative to the pressure of the environment outside the room. The static pressure differential is created and maintained by continuously delivering air into a given room at a faster rate than air is exhausted from the room.

NOTE: The HFS800F is equipped with a touch pad control panel. Carefully read the sections of this instruction manual that describe how to operate the units using the touch pad control panel.

2.0 How to Determine the Required Number of Air Filtration Devices (AFD)

1. Calculate the total air volume (TAV) in cubic feet (ft³) within the enclosed containment area by multiplying the length (L) x the width (W) x the height (H), all in feet ($V = L \times W \times H$).
2. Determine the minimum number of air changes per hour (ACH) specification. When no ACH number is specified, most users target at least 6 ACH for construction areas. Building in a safety factor to compensate for filter loading, duct losses, reduced voltage, and other factors that can reduce actual installed airflow is a good practice. For example, if 6 ACH is the objective, you might design for 8 ACH.
3. Select an air filtration device (AFD) model and determine the peak airflow rating for that model in cubic feet per minute (CFM),
4. Determine the total number of AFD required using the following formula:
$$\text{Quantity} = (V \times \text{Design ACH}) / (\text{AFD Rating} \times 60)$$
5. Always round up to the next whole number. For example, if the minimum requirement is 2.13, 3 units are recommended, not 2.

Example:

How many air filtration devices (each with 600 CFM rated airflow) would be required to provide 8 ACH (including a safety factor) in a 40 ft. L x 24 ft. W x 10 ft. H containment area?

- $V = 40 \text{ ft.} \times 24 \text{ ft.} \times 10 \text{ ft.} = 9,600 \text{ ft}^3$
- Design ACH = 8
- Quantity of AFD required = $(9,600 \text{ ft}^3 \times 8 \text{ ACH}) / (600 \text{ CFM} \times 60) = 76,000/36,000 = 2.13 = 3 \text{ units}$

3.0 Electrical and Safety Requirements

ELECTRICAL REQUIREMENTS

1. The units require a minimum of 110 volts AC, 60 Hz to operate properly; however, maximum airflow performance requires 120 volts AC, 60Hz. The units require a 15 amp circuit that is free of other loads.
2. Extension cords used must be UL listed, the number 14-3 AWG 3 wire type, and be equipped with hospital grade plugs (if used in a health care facility). Use of larger numerical gauge (lower capacity wire) power cord(s) may result in electrical shock, fire hazards, damage to the UV lamp and ballast, and/or damage to the unit. The cords must be in good condition, in continuous lengths (no splicing), and should not exceed a total of 25 feet in length. Make certain that any extension cords used do not reduce power to the unit to less than 110 volts. Use of a voltmeter to confirm adequate voltage is recommended.
3. Check to ensure that any circuit to which a unit is connected is protected by a 15 ampere circuit breaker.
4. The units should be connected to a three-prong, properly grounded electrical outlet equipped with a Ground Fault Circuit Interrupt (GFCI) device. A GFCI is an electrical safety device that will trip the circuit and stop the flow of electricity if leakage of current is detected.

IMPORTANT NOTE: The GFCI on the HFS800F control panel only detects leakage of current from the unit or an electrical device plugged into the GFCI. The HFS800F should be plugged into a GFCI receptacle at the power source to protect the power cord and the unit. This GFCI will trip the circuit if it detects leakage of current from the power cord or unit.

IMPORTANT SAFETY INSTRUCTIONS

1. Do not operate any unit with a damaged cord or plug. Discard unit or return it to an authorized service facility for examination and/or repair.
2. Do not run cord under carpeting. Do not cover cord with throw rugs, runners, or similar coverings. Do not route cord under furniture or appliances. Arrange cord away from traffic area and where it will not be tripped over.

4.0 Requirements for Safe Operation

1. Check condition of power cord(s) before using them. Damaged cords can cause fatal electric shock and/or motorized impeller failure.
2. Power cords should never be exposed to water, heat, sharp or abrasive objects; in addition, they should never be kinked or crushed. Avoid tightly wrapping the cords to prevent kinking of the internal wires. Always replace damaged power cords immediately.
3. Never pull a unit by its power cord.

CAUTION: As with any piece of electrical equipment, always make sure that the unit is turned "OFF" prior to connecting the power cord to an electrical outlet or disconnecting it from an electrical outlet. Failure to do so will cause "arcing", and could result in personal injury, fire hazards, and/or damage to the unit. Do not disconnect the power cord from supply receptacle while the unit is operating.

WARNING: To reduce risk of electrical shock, do not expose the units to water or rain. Do not touch the electrical outlet or power cord(s) with wet hands or while standing on a wet or damp surface.

WARNING: Risk of electrical shock! Can cause injury or death! Turn unit "OFF" and disconnect power cord from supply receptacle before replacing the HEPA filter, HEPA filter/UV lamp assembly and before cleaning or servicing the unit.

WARNING: The HFS800F is equipped with automatic restart motorized impellers that will restart without warning after a temporary power interruption or recovery from a thermal overload (over-heating) condition. Keep clear of the motorized impellers at all times to reduce the risk of injury.

WARNING: To reduce the risk of fire or electrical shock, do not use these units with any solid state speed control device. Do not use in a cooking area.

CAUTION: These units are designed for indoor use only.

CAUTION: For General Ventilating Use Only. Do Not Use To Exhaust Hazardous Or Explosive Materials And Vapors.

WARNING: AAF air filtration systems are not intrinsically safe for use in hazardous environments. Always consult a certified industrial hygienist before using them. Do NOT use this equipment in any atmosphere that is or may be immediately dangerous to life or health (IDLH), combustible, flammable, explosive, oxygen deficient, and/or contains odors, vapors, gases, or particulates that exceed permissible exposure levels. Such atmospheres may require the use of intrinsically safe equipment, specific engineering controls, and personal protective equipment in accordance with Occupational Safety and Health Administration (OSHA), Environmental Protection Agency (EPA), Canadian Standards Association (CSA), and other federal, state, provincial, and local regulations.

WARNING: This equipment is not classified as "intrinsically safe" and should not be used in the following hazardous locations as defined by the Underwriters Laboratories: Class I Division 1, Class I Division 2, Class I Zone 0, Class I Zone 1, Class I Zone 2, Class II Division 1, Class II Division 2, Class III Division 1, Class III Division 2. Refer to the UL web site: <http://www.ul.com/hazloc/define.htm>.

WARNING: Do not use unit near sparks, open flames, or other possible sources of ignition.

5.0 Key Components - Refer to Figure A

Filters

- Prefilters - Pleated particulate filter that protects and extends the life of the more expensive HEPA filter. The prefilter for the HFS800F has an ASHRAE MERV 8 rating and is treated with an EPA registered antimicrobial agent.

An optional (must be purchased separately) carbon prefilter for capturing low concentrations of odors, vapors, gases, and volatile organic compounds, collectively known as OVG, is also available. Carbon filters reduce airborne OVG by chemically bonding the OVG molecules to the surface area of the carbon granules, via a process known as adsorption.

NOTE: To capture low concentrations of OVG, a carbon filter must be used. The particulate filters in this HEPA Filtration System do not remove odors, vapors, or gases, including volatile organic compounds.

- HEPA – The HEPA for the HFS800F has an efficiency rating of 99.99% in removing 0.3 micron size particles and incorporates a special gel seal to prevent leakage.

Motorized Impellers - pull air through a clean set of filters (prefilter and HEPA).

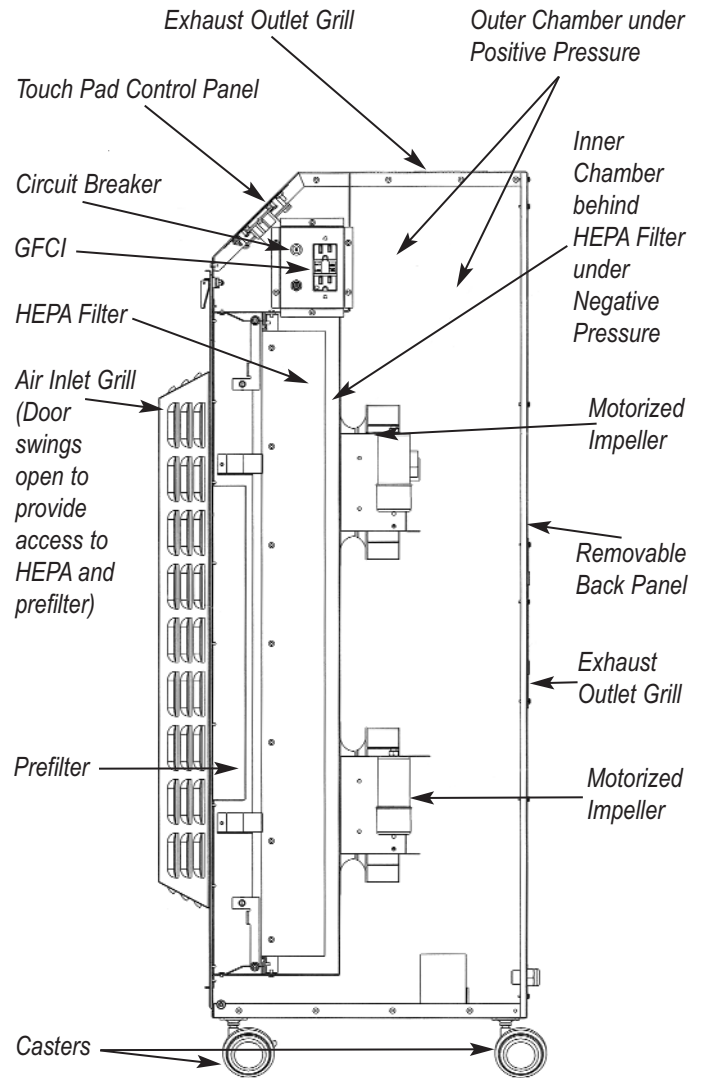
Ground Fault Circuit Interrupter (GFCI) - Electrical safety device that will trip and stop the flow of electricity if leakage of current is detected from the unit or an electrical device plugged into the GFCI receptacle. The GFCI is mounted to the side of the HFS800F cabinet.

Note: The HFS800F can supply a total of 7 amps of electrical power for additional equipment that is connected to its GFCI receptacle. If the equipment connected to the GFCI receptacle draws more than a total of 7 amps, the circuit breaker on the control panel and/or the building breaker will trip. This condition can only be remedied by reducing the total amperage draw.

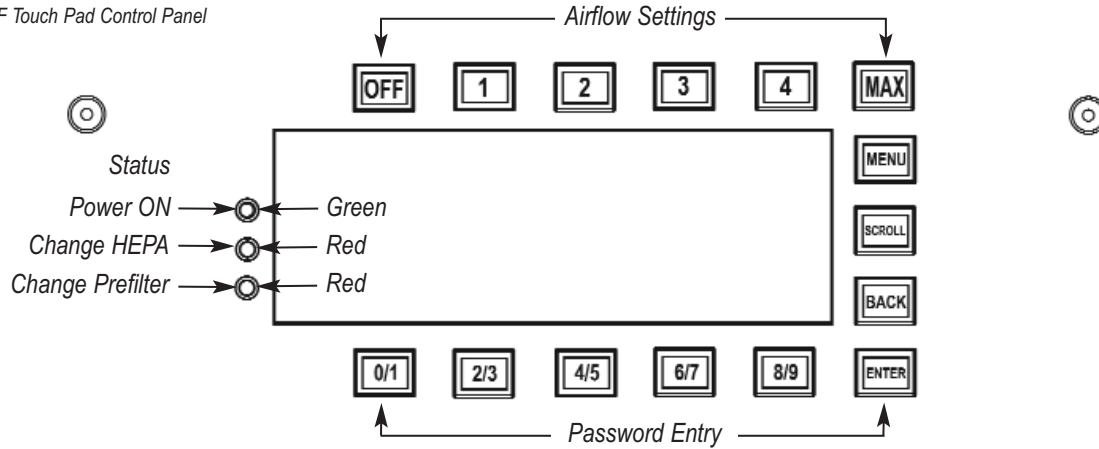
Circuit Breaker - Provides protection for the unit's electrical components. The circuit breaker is mounted to the side of the HFS800F cabinet, adjacent to the GFCI.

IMPORTANT NOTE: Do not operate the unit unless the prefilter(s) and HEPA filter are installed, and the filter access door and panel (if applicable) are in place and closed.

Figure A: HFS800F



HFS800F Touch Pad Control Panel



6.0 Touch Pad Control Panel for HFS800F - See Drawing

The three LED lights on the left side of the control panel indicate the following:

Top

- Power ON - Green light that illuminates when unit is connected to electrical outlet.

Middle

- Change HEPA - Red light that will flash if there is excessive loading of the HEPA filter, indicating that HEPA filter change procedures should be followed.

Bottom

- Change Prefilter - Red light that will flash if there is excessive loading of the prefilter, indicating that prefilter change procedures should be followed.

The functions of the touch pad control panel keys are as follows:

Speed Setting



- Set Motor speed from #1 (lowest) to MAX (highest).
- Turn unit "OFF".

Menu



- Cycle through each menu item.

Scroll



- Move vertically among various menu options. When the SCROLL key is pressed, arrows will bracket the various menu options.

Back



- Back out of current screen and return to previous or main screen.

Enter



- Select the menu option bracketed by the scroll arrows.

Password Entry Keys



NOTE:

1. Unit is shipped with the password feature enabled.
2. The default password is: 9-1-1; however, this password can be changed.
3. Password is used to "lock-in" various control panel settings and prevents them from being tampered with or changed.
4. If the password is forgotten and/or lost, the factory preset password will have to be entered as follows: 3-0-0-2-4.
5. After entering a password, always press ENTER.

7.0 Before Operating the Unit

Inspect and tighten any HEPA filter retaining nuts that may have loosened during transportation. Inspect the filters for any material or structural damage prior to use and replace any damaged filters before operating the units.

An optional round exhaust collar that accepts 8" diameter rigid or flexible ducting is available to fit onto the exhaust outlet(s) of all models. The collar slides in over the exhaust grill(s) and is secured by offset tabs and machine screws.

As with any air filtration system, airflow losses not attributable to the HEPA Filtration System will reduce the airflow of the system. The following recommendations can facilitate user installation and minimize air flow losses created by external static resistance.

1. Always use the minimum length of ducting possible with the fewest possible number of turns and bends.
2. Rigid metal ducting creates less turbulence and consequently less airflow loss than flexible ducting. Regardless of the type of ducting used, rigid "sweep-type", radiused connections should be used for all turns and bends.
3. If flexible ducting is used, it must be kept as taut as possible to avoid flattening.
4. Louvers, dampers, and other external control devices should be sized to provide the equivalent open area to the cross sectional area of the exhaust duct.
5. For negative pressure applications, the total volume of air supplied to the room must be lower than the volume of air exhausted by the air filtration unit. The minimum recommended differential is the greater of 100 CFM or 10%. Negative pressure levels should be continuously monitored.

NOTE: If the air supply to the room is not controlled, sufficient negative pressure might not be achieved.

8.0 Location of the Unit and Modes of Operation

The HFS800F unit should be positioned at a maximum distance from the main door to the room in which they are used.

NOTE: The HFS800F has two exhaust outlets. An optional (not included with unit) exhaust collar is available for the HFS800F.

The units can be operated in the following modes:

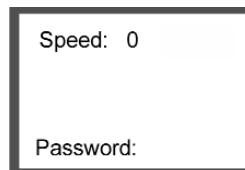
1. Negative pressure - all of the filtered air is exhausted to an external environment or recirculated within the facility if allowed by federal, state, local, and facility ventilation codes. The other exhaust outlet (on top or rear panel) can be sealed with the solid cover plate or used as a second exhaust outlet.

2. Negative pressure & recirculation - approximately 50% of the filtered air is exhausted through one outlet and the other 50% is re-circulated back into the room through the other outlet.
3. Full in room recirculation - all of the filtered air is re-circulated back into the room through both exhaust outlets.
4. Positive pressure - all of the filtered air is exhausted to another room and creates a positive pressure in that room.

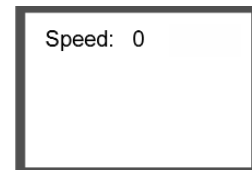
9.0 To Operate the HFS800F With Touch Pad Control Panel

Menu Screen

- When the HFS800F is put into service and connected to a 120 volt AC, 60Hz, 15 amp electrical outlet, the green LED light illuminates, the screen displays "AAF International HFS" for a few seconds, then one of the following screens displays:



Screen display if password enabled.



Screen display if password disabled.

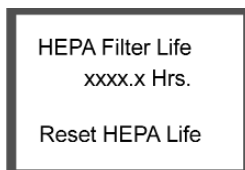
- Press the MENU key to cycle through the following menu items: "HEPA Filter Life" and "Total Unit Hours".
- Enter the default password, 9-1-1, and press ENTER to change the settings of the menu items.

NOTE: After the password has been entered, the electronic controls will unlock and the settings of the various menu items can be changed. If no key has been pressed within 10 seconds after the password is entered, the initial screen will display and the electronic controls will lock. At this point, the password must be re-entered.

- To Set the Speed:

1. Enter the password if prompted. See screen above entitled: "Screen display if password enabled".
2. Press desired speed setting key.

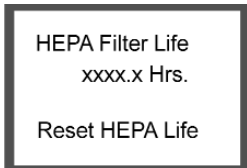
- HEPA filter hours - The units display the remaining service life of the HEPA filter. To access this information, press the MENU key and the screen will display:



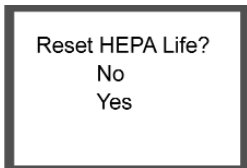
- To reset HEPA filter life:

NOTE: This should only be done when the HEPA filter has been changed.

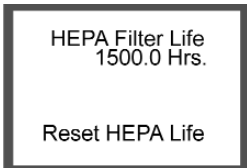
1. Enter the password if prompted.
2. Press the MENU key until the following screen displays:



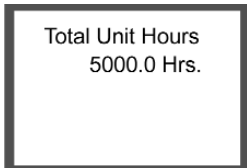
- Press SCROLL key until the arrows bracket "Reset HEPA Life".
- Press ENTER and the screen will display:



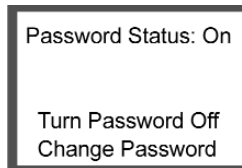
- Scroll to the desired selection and press ENTER. When the selection is "Yes", the screen will display "HEPA Life Reset" for 2 seconds, then the following confirmation screen will display:



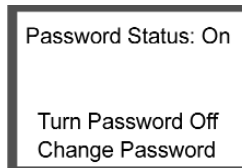
- To access the "Total Unit Hours" screen, press the MENU key twice and the screen will display:



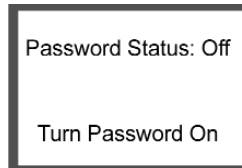
- The Password feature has 2 functions (see screen below):



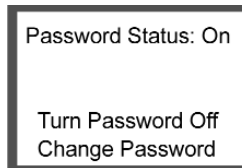
1. Enabling and disabling the password feature. As stated previously, the unit is shipped with the password feature enabled.
 - a. To disable the password feature:
 - i. Enter the password from the main menu.
 - ii. Press MENU key until the following screen displays:



- iii. Scroll to: "Turn Password Off" and press ENTER. A screen will briefly display "Password is Off", then the screen will display:

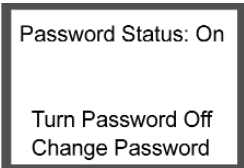


- b. To enable the password feature:
 - i. Press MENU key until the screen in (a. iii above) displays.
 - ii. Scroll to "Turn Password On" and press ENTER. A screen will briefly display "Password is On", then the screen will display:

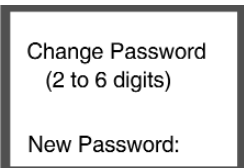


2. Change the password:

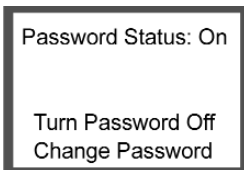
- a. Enter the password from the main menu.
- b. Press MENU key until the following screen displays:



- c. Scroll to “Change Password”, press ENTER and the following screen will display:



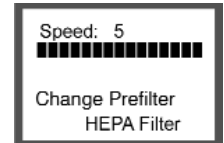
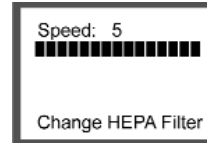
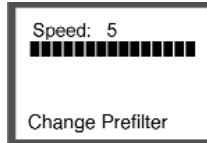
- d. Enter the new password. A screen will briefly display “Password Changed”, then the screen will display:



- Alarm Conditions - The HFS800F is equipped with filter change indicators. When either or both filters become loaded, an alarm condition is created. The alarm condition is indicated by an audible beep, flashing red LED light(s), and a screen display. Refer to the section entitled Touch Pad Control Panel for HFS800F for specifics regarding the function of each LED light.

NOTE: The audible alarm can be muted by pressing any key; however, the red LED light(s) will continue to flash until the indicated filter is changed.

The screen will indicate the cause of the alarm condition. When an alarm condition is present, one of the following screens will display:



NOTE: The display will toggle between Prefilter and HEPA filter.

1. Press the BACK key (only if not in the main screen).
2. Enter the password if prompted.
3. Press the OFF key to turn the unit “Off”.
4. Refer to the sections of this instruction manual entitled: “Filter Replacement” and “Filter and UV Lamp Change Procedure” and change the filter(s).

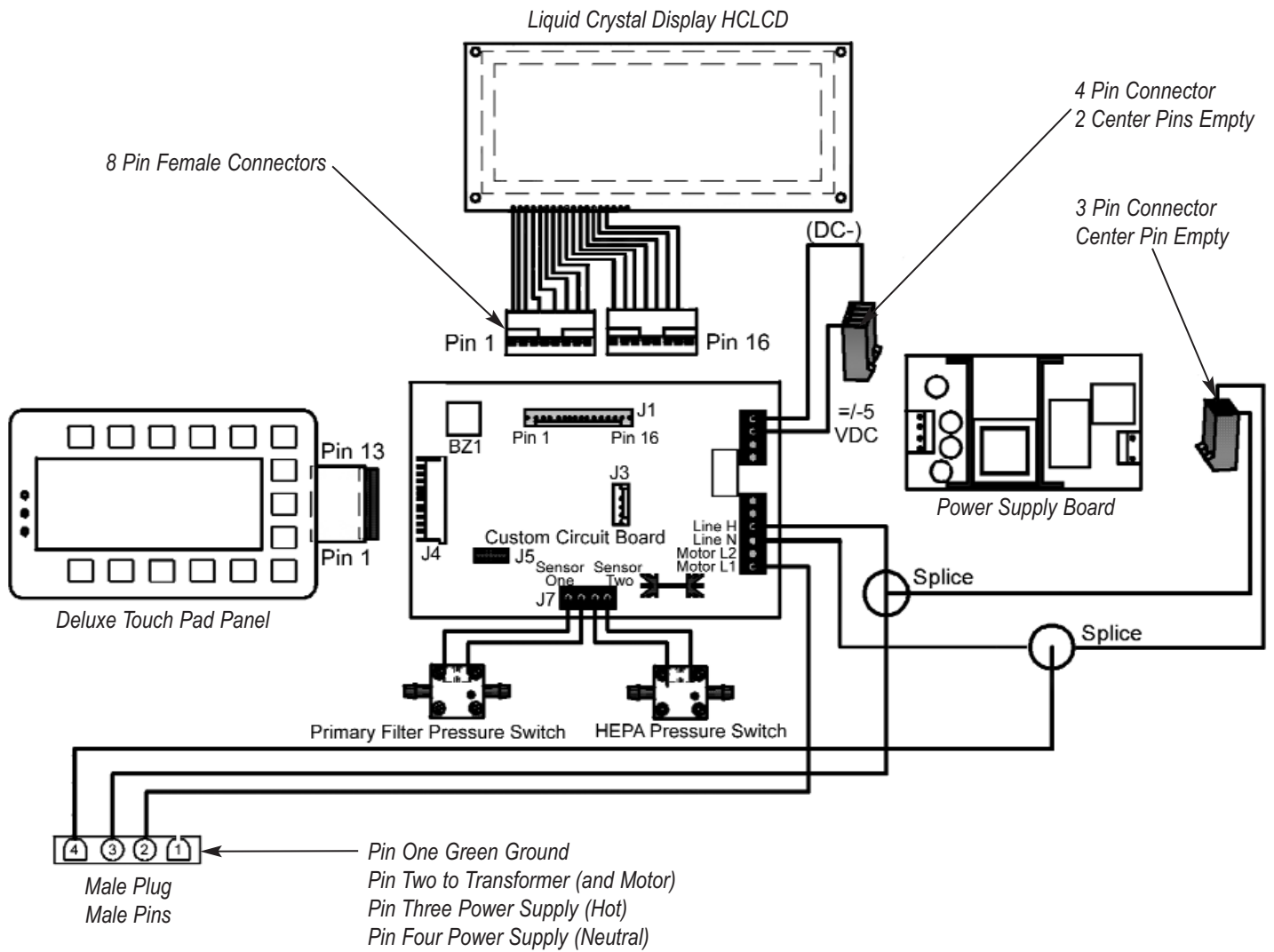
NOTE: The backlight for the control panel screen will remain ON for 5 minutes after the unit is connected to the power supply, then shuts OFF. To reactivate the screen, press “ENTER” and the backlight will turn ON for another 5 minute period.

NOTE: It is recommended that the units be operated at “MAX” speed whenever possible to maximize filtration, air changes and overall operating conditions.

The HFS800F has an automatic restart feature. If there is a temporary loss of electrical power, the unit will automatically restart as soon as power is restored.

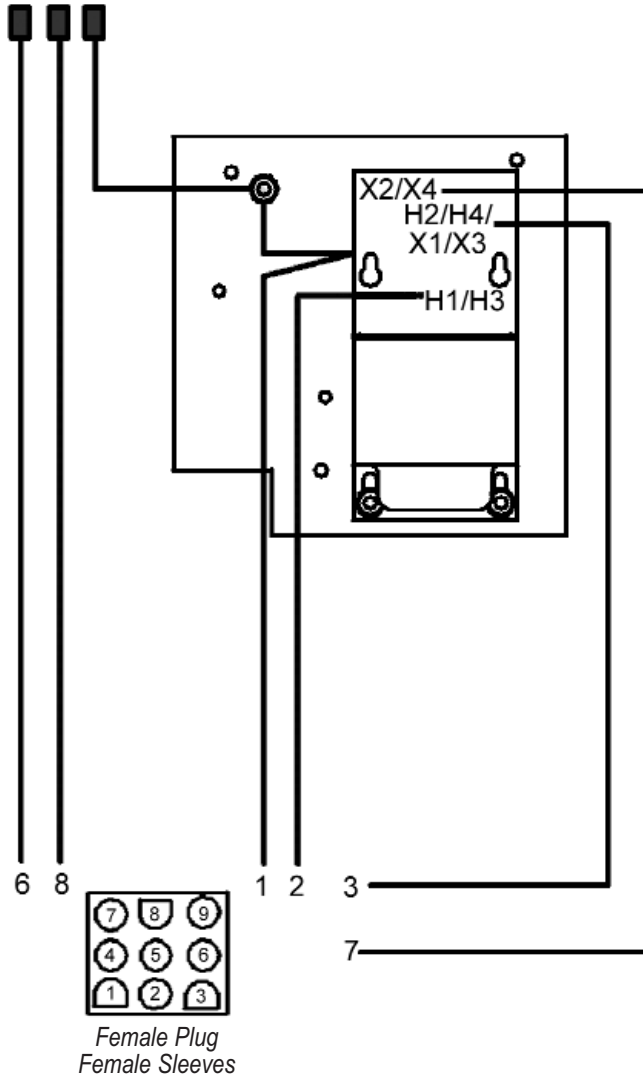
If the HFS800F is being used to create and maintain a negative pressure condition, the pressure differential (between the room containing the unit and the environment outside the room) should be monitored with a calibrated instrument as per OSHA/CDC requirements. The AAF HCRPM-3N2 is recommended for room pressure monitoring.

HFS800F Wiring Diagram - Control Panel

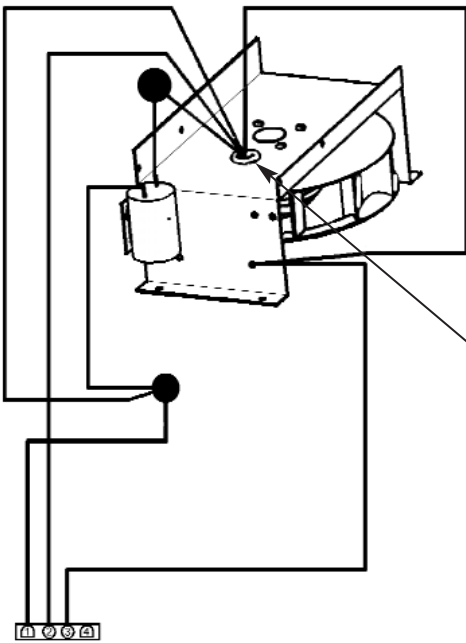


HFS800F Wiring Diagram - Transformer Bracket

Butt Splice to 10 Foot Power Cord
120 VAC/15 Ampere Circuit



HFS800F Wiring Diagram - Motorized Impeller Harness

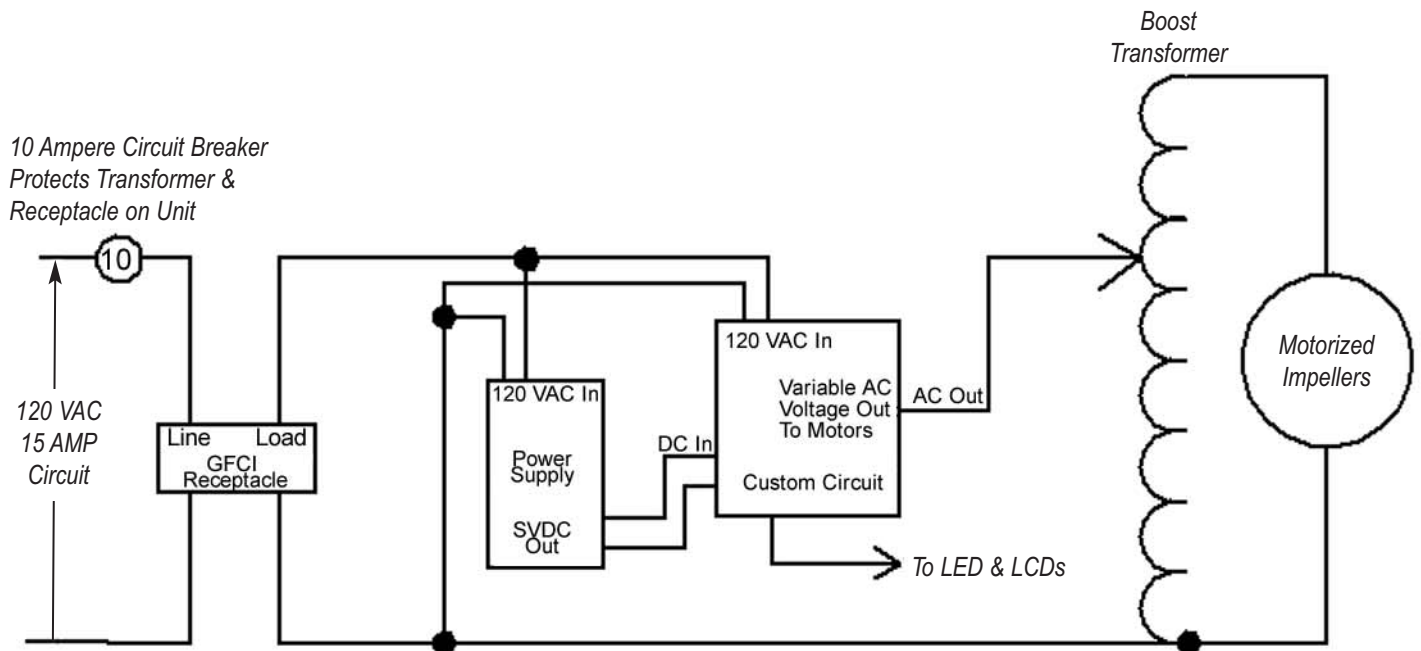


Motor Brown to Capacitor Terminal One
 Motor Blue to Pin 2 Motor Power
 Motor Black to Capacitor Terminal Two
 Power Neutral (White) to Capacitor Terminal Two Also

Female Plug Pin 1 - Neutral
 Female Pins Pin 2 - Variable Voltage to Motor
 Pin 3 - Ground

NOTE: The HFS800F contains 2 motorized impellers

HFS800F Wiring Schematic



10 Ampere Circuit Breaker
 Protects Transformer &
 Receptacle on Unit

120 VAC
 15 AMP
 Circuit

Line Load
 GFCI
 Receptacle

120 VAC In
 Power Supply
 SVDC Out

120 VAC In
 Variable AC
 Voltage Out
 To Motors
 Custom Circuit
 DC In

AC Out

To LED & LCDs

Boost
 Transformer

Motorized
 Impellers

10.0 Filter Loading Indicators

When the red light(s) on the HFS800F control panel flash, this indicates one or more of the following: (1) the prefilter is loaded and should be replaced, (2) the inlet is obstructed, (3) and the HEPA filter is loaded and should be replaced. The screen will display which filter(s) need to be replaced.

11.0 Filter Replacement - Refer to Figure A

NOTE: Personnel responsible for changing filters, servicing units, or relocating units within the facility are urged to wear the proper personal protective equipment and follow safe work practices in accordance with federal, state, provincial and employer regulations.

NOTE: Filters being replaced must be disposed of in accordance with federal, state, provincial, local, and facility regulations.

The size and concentration of airborne contaminants, temperature and humidity conditions, and duration of use determine how often filters need replacement.

The method of determining when to replace the optional carbon filter is somewhat subjective. As the odor, vapor, and/or gas filtration capacity decreases, the user will begin to sense a slight odor or taste of the contaminant, indicating that the filter should be replaced.

NOTE: The filters are not reusable. Do not attempt to clean and reuse them.

NOTE: If an optional carbon filter is being used, be sure to remove it from its poly bag before installing it in a unit. Most carbon filters are packaged in poly bags to preserve the integrity of the carbon granules.

CAUTION: AAF HEPA Filtration Systems are designed to meet or exceed standards for high efficiency air filtration equipment. Use only AAF parts, including replacement filters. Use of non-AAF parts and filters voids the product warranty and all performance claims.

WARNING: To reduce the risk of fire, electrical shock or personal injury, always turn the HFS800F "OFF" and disconnect the power cord from supply receptacle before replacing the HEPA filter and before cleaning or servicing the unit.

12.0 Filter Change Procedure

To Change the Prefilter in the HFS800F:

1. Turn the unit "OFF". Use the ¼" hex key (provided with unit) to loosen the cap screw on the door panel. Pull up on the two door latches and open the door panel.
2. Remove the prefilter from the filter retention channel mounted on the inside of the door. The filter slides out toward the top of the door.
3. Install a new prefilter and check to ensure that it is properly seated at the bottom of the retention channel.
4. Close the door panel and lock it in position by pushing down on the latches. Tighten the cap screw with the hex key.

To Change the HEPA filter in the HFS800F:

1. Turn the unit "OFF", disconnect the power cord from the power supply outlet and open the door panel.
2. The HEPA filter is held in place by spring-loaded swivel brackets. Grasp each spring-loaded knob, slide it away from the unit housing until it disengages, and rotate the bracket away from the filter toward the outside of the unit. Upper brackets rotate "up" and lower brackets rotate "down."
3. The HEPA filter has a gel seal and fits snugly against the mounting frame. When removing the filter there will be some resistance felt while pulling it away from the mounting frame. Remove the HEPA filter and dispose of it.
4. Orient the new HEPA filter so that the gel seal surface is facing the inside of the unit. Position the filter against the filter guides attached to the unit housing and slide it inward until it is flush against the mounting frame.
5. Rotate the swivel filter mounting brackets back into their locked position, making sure that each knob snaps securely into the unit housing.
6. Close the door panel and lock it in position by pushing down on the latches. Tighten the cap screw with the hex key.
7. Rotate the swivel filter mounting brackets back into their locked position, making sure that each knob snaps securely into the unit housing.
8. Close the door panel and lock it in position by pushing down on the latches. Tighten the cap screw with the hex key.

13.0 Specifications

Feature	HFS800F
Net weight with filters	HFS800F = 81 lbs.
Shipping weight	100 lbs.
Dimensions Width x Depth x Height)	20.5"W x 20"D x 50.5"H
Power supply requirements	120 volts AC, 60 Hz, 15 amp circuit. Unit draws 3.0 amps
Motorized impeller	2 each 125 watts, variable speed with thermal overload protection, automatic reset, 60 hz, single phase
Automatic restart - unit will automatically restart itself after temporary power interruption	Yes
Cabinet material	.050" powder coated aluminum
Cabinet seams	Assembled with solid rivets and sealed
Control panel	Touch pad style, with LED lights and liquid crystal display (LCD) screen
Sound baffle/Prefilter shield	Yes
Circuit breaker	10 amp
Built-in Ground Fault Circuit Interrupter (GFCI)	Yes
Power indicator	Yes
Filter loading indicator	LED lights and LCD screen
Motor speed	5 motor speed settings
Power cord	10 ft., 14/3 AWG SJT cord with 15 amp/120 volt AC hospital grade plug.
Prefilter	ASHRAE MERV 8 rated pleated filter. Treated with an EPA registered antimicrobial agent - p/n 175-02-17E17G
HEPA filter	Individually tested and certified to a minimum efficiency of 99.99% against a 0.3 micron challenge aerosol; anodized aluminum frame; gel seal - p/n 577-571-002
Location of exhaust outlet	Top and/or back panel. Optional exhaust collar available
Accessories included with unit	One solid exhaust cover plate

NOTE: Specifications subject to change without notice.

14.0 Noise Level Chart

	8" x 12" Rectangular Exhaust	8" Diameter Exhaust
HFS800F Top Exhaust Outlet	49 - 59 dBA	49 - 59 dBA
HFS800F Rear Exhaust Outlet	47 - 59 dBA	47 - 59 dBA

NOTE: Readings were taken using digital noise meter TENMA model 72-860A using the slow response dBA scale. The readings were taken in an office room roughly 15 ft x 25 ft with a background reading of 46 dBA. The unit was run on "MAX" speed setting and noise readings were taken at a distance of 5 feet on the sides and in front of the unit. An exhaust collar and 3 foot long metal exhaust duct were used to simulate airflow under negative-pressure conditions.

15.0 Airflow Ratings

Model	Exhaust Type	Speed 1 (Low)	Speed 2	Speed 3	Speed 4	Speed 5 (Max)
HFS800F Rear Exhaust Outlet	8" x 12" rectangular exhaust	300 CFM	450 CFM	600 CFM	750 CFM	900 CFM
HFS800F Rear Exhaust Outlet	8" diameter exhaust	240 CFM	360 CFM	480 CFM	600 CFM	720 CFM
HFS800F Top Exhaust Outlet	8" x 12" rectangular exhaust	200 CFM	400 CFM	600 CFM	700 CFM	800 CFM
HFS800F Top Exhaust Outlet	8" diameter exhaust	200 CFM	325 CFM	450 CFM	525 CFM	600 CFM

NOTE: Airflow ratings estimates are based on factory and independent testing @ 120 VAC with an air straightener and a traverse of readings taken with a computing vane-anemometer. Actual results may vary for various reasons, including motor and blower and HEPA filter tolerances. Factors such as filter loading, reduced voltage to the motor, and inlet and outlet ducting will reduce airflow. Use these ratings as a general guideline only.

16.0 Troubleshooting Guide

Problem	Possible Cause	Solution
Unit won't start when it is turned "ON."	Power cord.	Check all connections and condition of cord(s). Do not operate unit with damaged power cord(s).
	Tripped circuit breaker.	Reset building breaker. Reset circuit breaker on unit.
	Tripped GFCI.	Reset GFCI on unit and/or at power source.
	Thermal overload on motorized impeller has tripped.	Turn unit "OFF", wait 20-30 minutes and restart.
Filter loading indicators flashing.	Loaded filters.	Refer to Filter Change Procedures.
	Excessive restrictions.	Reduce bends and/or length of flex duct or other restrictions.
	Optional carbon filter not removed from polybag.	Remove from poly bag.

NOTE: If unit does not start or malfunctions after carefully following the Troubleshooting Guide, call AAF at 1-888-223-2003 for assistance.

AmericanAirFilter®

HFS800F Free Standing/Portable HEPA Filtration System

Installation, Operation, and Maintenance Instructions

17.0 Component Replacement and Care of the Unit

WARNING: To reduce the risk of fire, electrical shock or personal injury, always turn the unit "OFF" and disconnect power cord from supply receptacle before removing the control panel, replacing the HEPA filter and before cleaning or servicing the unit. The HFS800F is equipped with automatic restart motorized impellers that will restart without warning after a temporary power interruption or recovery from a thermal overload (over-heating) condition. Keep clear of motorized impellers at all times to reduce the risk of injury.

Occasionally a defective component will cause the unit to operate improperly or not at all. Any electrical component can fail. Refer to the Wiring Diagrams and Wiring Schematics to diagnose the failure of any component. Diagnostics should only be performed by a technician qualified to service electrical equipment.

The HFS800F units are powder coated and should be cleaned with a damp cloth or a water-based cleaner/sanitizer. Do not use harsh chemicals, solvents or detergents to clean the units.

WARNING: Keep electrical components dry as their exposure to liquids poses a safety hazard and can damage components.

18.0 Certification of HEPA Filtration System

The AAF HFS800F has been tested by Intertek Testing Services (ITS) and is ETL and ETLC (Canada) listed.

ITS is accredited by the U.S. Occupational Safety and Health Administration (OSHA) as a Nationally Recognized Testing Laboratory (NRTL).

19.0 Limited Warranty

AAF International HEPA Filtration Systems are manufactured by Abatement Technologies, Inc. and warranted by AAF to the original user, against defects in materials and workmanship for a period of two years after the date of purchase. This warranty does not guarantee a useful life of the filters. Our only obligation shall be, at our option, to repair or replace the defective component(s) or make a suitable adjustment for each defect(s) upon timely notification thereof, provided the unit has been used, maintained and handled in accordance with these Operating Instructions.

20.0 Limitation of Liability

Except as provided above, AAF International shall not be liable for any loss or damage, whether direct, indirect, incidental, special or consequential, arising out of the sale, use or misuse of AmericanAirFilter® products or the user's inability to use such products. The remedies set forth herein are exclusive.

For warranty information and assistance contact AAF International's Customer Service Department at 1-888-AAF-2003.

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