



AstroPure™

Portable Air Purification System

INSTALLATION, OPERATION, AND MAINTENANCE MANUAL



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INTRODUCTION AND PRECAUTIONS

Introduction

This document contains the information necessary to receive, assemble, install, operate, and maintain AAF AstroPure™ Air Purification System properly. The purchaser, installer, and operator of the filtration system MUST read and comply with this document in its entirety. Observe these precautions in order to prevent property damage or injury.

Failure to comply with the requirements of this document may result in serious injury, potentially death, and void the product warranty.

These instructions are specific to the AAF AstroPure Air Purification System. All ancillary tasks including, but not limited to, electrical and mechanical work, equipment handling, and safety procedures must be performed in accordance with industry-accepted practice and all relevant local, state, and federal government codes, laws, and policies.

Before proceeding with installation, operation, or maintenance, review this manual in its entirety and all safety procedures with your company's safety personnel.

Precautions & Warnings

- Failure to follow these instructions properly may result in injury or loss of life.
- Failure to follow these instructions properly may result in property damage or injury, which could be serious.
- Equipment must be properly transported and handled, as improper transport and/or handling can result in damage and/or blemishes.
- Deliveries are to be immediately inspected in the presence of the freight carrier to ensure equipment is delivered in full and damage-free.
- The installation site and environmental conditions must be suitable for equipment installation and operation.
- To prevent damage to the power supply cord and plug, avoid modifying, forcibly bending, pulling, twisting, bundling up, and placing heavy objects on them. If the power supply plug or cord is damaged, it must be replaced by the manufacturer, its service agent, or another qualified person to avoid a hazard. (An electric shock, short circuiting, or fire may result from use while damaged.)
- Do not attempt to disassemble, reconstruct, or repair the unit yourself. (Fire, an electric shock, or injury may result. For repairs, please contact your sales representative.)

INTRODUCTION AND PRECAUTIONS (CONT'D)

Precautions & Warnings (Cont'd)

- Do not use in the following places
 - Where oil or flammable gases are used or may leak. Fire or smoke may result from ignition or suction towards the unit; injury may result from degradation or cracking plastic.
 - Where there are corrosive gases or metal dust particles. Fire or smoke may result from ignition or suction towards the unit.
 - Where the temperature and humidity levels are high or water may pool, such as a bathroom. Fire or an electric shock may result from electricity mixing with moisture.
 - Where small children may be present. Electric shock or injury may result.
 - Where the floor is unstable. Nearby items may get wet, or a fire or an electric shock may result, if the unit topples over.
 - Where burning items, such as cigarettes or incense sticks, are present. Fire or smoke may result from ignition or suction toward the unit.
- Do not use near a smoke detector. If exhaust air flows in the direction of a smoke detector, the smoke detector may not function properly.
- Do not operate the unit when fumigating insecticide is in use.
 - After using insecticide, make sure the room is sufficiently ventilated before operating the unit. Harm may be caused to health by exhausted chemical compounds.
- Frequently ventilate the room when using the unit in the same space as combustion-based heating devices.

Note: Usage of this product is not a substitute for ventilation, as it cannot eliminate carbon monoxide.

- If the unit is placed within reach of a pet, be careful that the pet does not urinate on the unit or chew on the power supply cord. Fire, an electric shock, or injury may result.
- Do not obstruct the air inlets or air outlet. Overheating or fire may result from poor circulation.
- Do not climb, sit, or lean on the unit. Injury may result from falling or toppling.

INTRODUCTION AND PRECAUTIONS (CONT'D)

Important Safety Instructions

1. READ AND SAVE THESE INSTRUCTIONS







2. WARNING – To reduce the risk of fire, electrical shock, or injury to persons, observe the following:

- a. Equipment must be installed and operated with filters specified in this document. Other filters cannot be substituted, as this will impact the performance of the equipment.
- b. Use this equipment in the manner intended by the manufacturer. If you have questions, contact the manufacturer:
For Technical or Application Questions, Email: **AstroPure@aafintl.com**
- c. Before servicing or cleaning equipment, switch power off at the back of the equipment and unplug the power cable to prevent power from being switched on accidentally.
- d. Power cord should never be exposed to water, heat, or sharp objects. Check power cord before use. Never operate with a damaged power cord; replace immediately.
- e. Equipment should always be operated indoors in an HVAC-conditioned space and never be exposed to water.
- f. Do not pour water on or in the air outlet or any other part of the unit. Fire or electric shock may result.
- g. Installation work and electrical wiring must be done by a qualified person(s) in accordance with all applicable codes and standards, including fire-rated construction.
- h. Follow the heating equipment manufacturer's guideline and safety standards, such as those published by the National Fire Protection Association (NFPA); the American Society for Heating, Refrigeration, and Air Conditioning Engineers (ASHRAE); and the local code authorities.
- i. When cutting or drilling into wall or ceiling, do not damage electrical wiring or other hidden utilities.
- j. Ducted fans must always be vented to the outdoors.
- k. Do not use a damaged power supply plug or a loosely fitted power socket. Electric shock or fire, due to overheating or short circuiting, may result if the power supply plug is not firmly inserted.
- l. Do not plug or unplug with wet hands. Electric shock may result.
- m. Periodically wipe dust off the power supply cord and plug with a dry cloth.
- n. Do not use chlorinated or acidic detergents. Injury may result from the degradation or cracking of plastic; harm may be caused to health from the release of toxic gases.
- o. Do not insert fingers or foreign items into the air inlets or air outlet. Electric shock, injury, or damage may result.
- p. Do not use flammable substances (hair spray, insecticide, etc). near the unit. Do not wipe the unit with benzene or thinner. Electric shock, fire, or cracking may result.

INTRODUCTION AND PRECAUTIONS (CONT'D)

Important Safety Instructions (Cont'd)

-  **2. WARNING – To reduce the risk of fire, electrical shock, or injury to persons, observe the following: (Cont'd)**
- q. Examples of abnormality or damage:
 - The unit does not operate even if the switch is turned on.
 - Current passes through the cord only sometimes if the cord is moved.
 - There are abnormal sounds or vibration during operation.
 - The casing of the unit is deformed or abnormally hot.
 - A burnt smell may indicate a malfunctioning unit. Electric shock, smoke, fire, etc., may result if the abnormality is not addressed and the unit continues to be used. Contact your sales representative.
 - r. Do not use products that contain fine powder, such as cosmetics, neat the unit. Electric shock or malfunctioning may result
-  **3. CAUTION – During Use:**
- a. Small children or people with mobility challenges due to illness or injury should not operate the unit by themselves.
 - b. This appliance is not intended for use by people with reduced physical, sensory, or mental capabilities, nor limited experience and knowledge, unless they have been given supervision or instruction concerning operation of the unit by a person responsible for their safety.
 - c. Children should be supervised to ensure that they do not play with the unit.
 - d. People who are intoxicated or have taken sleep medication should not operate the unit. Electric shock, injury, or health hazard may result.
-  **4. CAUTION – Automatically operated device. To reduce the risk of injury, disconnect power cord from power supply before servicing.**
-  **5. WARNING – Risk of electrical shock. Can cause injury or death. Disconnect all remote electrical power before servicing. If connected to a circuit protector device by fuses, use time-delay fuses for this appliance.**

Intended Use

The The AAF AstroPure Air Purification System is designed to increase indoor air quality (IAQ) and reduce the risk of airborne infection within classrooms, clinics, office buildings, restaurants, and healthcare facilities. This is accomplished by recirculating conditioned air and removing contaminants from the space. Contaminants removed may include dust, pollen, mold, bacteria, and viruses.

AstroPure Principle of Operation

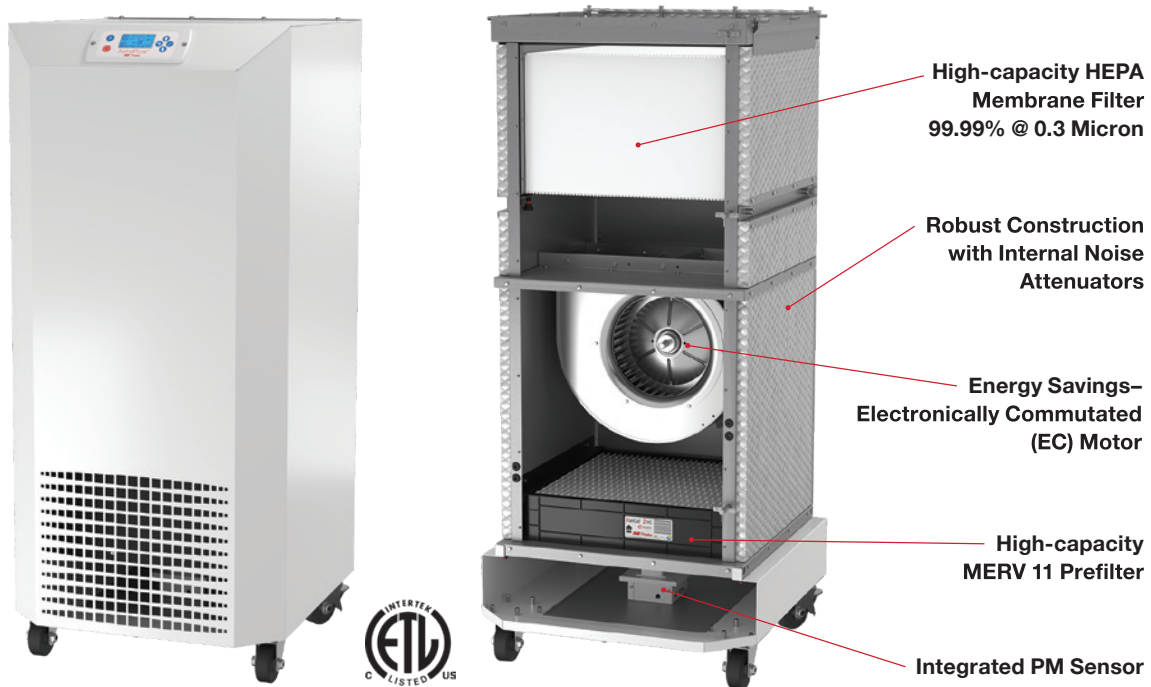
The AAF AstroPure Air Purification System is not intended for use as a dust/smoke extraction reduced system for remediation of a “dirty” environment. Use as such will result in significantly performance and may void warranty.

PRODUCT OVERVIEW & INSTALLATION INSTRUCTIONS

Platform Overview

The AAF Flanders AstroPure™ Air Purification platform includes two capacity ranges: a 0-500CFM and 500-1000CFM unit.

Part Number	Model Number	Additional Description
393-500-100	AstroPure 500 IR	Indoor Portable Unit – Air Recirculation – 0-500CFM
393-500-200	AstroPure 500 IE	Indoor Portable Unit – Air Exhaust – 0-500CFM
393-500-300	AstroPure 1000 IR	Indoor Portable Unit – Air Recirculation – 0-1000CFM
393-500-400	AstroPure 1000 IE	Indoor Portable Unit – Air Exhaust – 0-1000CFM



Features

- Two-stage filtration technology
 - MERV 11 prefilter & HEPA filter – 99.99% capture efficiency (0.3 micron)
- EC motor technology for efficient operation of two different capacity ranges
 - 0-500CFM
 - 500-1000CFM
- Preinstalled locking caster wheels and filters
- No assembly required
- 115V/120V operation for plug-&-play installation
- Control panel with multiple functions
- Housing 18-gauge cabinet construction with powder coat finish
- Internally fuse protected
- ETL listed
- One-year limited warranty



Certified Electrical Safety

- Meets or exceeds electrical safety standards for the U.S. and Canada as verified by **ETL**
- Means that you can trust that this product will operate safely in your workplace

PRODUCT OVERVIEW & INSTALLATION INSTRUCTIONS (CONT'D)

Specifications

		Product Model			
		AstroPure 500-IR <i>Internal portable unit - recirculation mode</i> Non-ducted	AstroPure 500-IE <i>Internal portable unit - exhaust air mode</i> Ducted (12" collar)	AstroPure 1000-IR <i>Internal portable unit - recirculation mode</i> Non-ducted	AstroPure 1000-IE <i>Internal portable unit - exhaust air mode</i> Ducted (12" collar)
Voltage	Hz	120V-60Hz	120V-60Hz	120V-60Hz	120V - 60Hz
Power	W	250W	250W	750W	750W
Max Airflow Rate	CFM	500	500	1000	1000
Operational Airflow Rate	CFM	400	400	800	800
Noise Level - Operational Point	Db(A)	<44	<44	<56	<56
Dimensions	HxWxD	51 3/8"x 22 7/8"x 24"	51 3/8"x 22 7/8"x 24"	51 3/8"x 22 7/8"x 24"	51 3/8"x 22 7/8"x 24"
Weight	Lbs	220	220	230	230
Pre Filter	MERV 11	16x16x4"	16x16x4"	16x16x4"	16x16x4"
HEPA Filter	99.99%	18x18x12"	18x18x12"	18x18x12"	18x18x12"
Motor Type	EC	Variable Speed - EC	Variable Speed - EC	Variable Speed - EC	Variable Speed - EC
Motor Power	HP	0.33	0.33	1	1
Max Current Draw	A	7	7	15	15
Blower Type	Impeller	Forward Curved Impeller	Forward Curved Impeller	Forward Curved Impeller	Forward Curved Impeller
Sensor Embedded		YES	YES	YES	YES
Control Interface		Programmable HMI	Programmable HMI	Programmable HMI	Programmable HMI

Shipping and Receiving

Deliveries are to be immediately checked in the presence of the carrier as being intact and complete. Equipment must be properly transported. Improper transport can lead to:

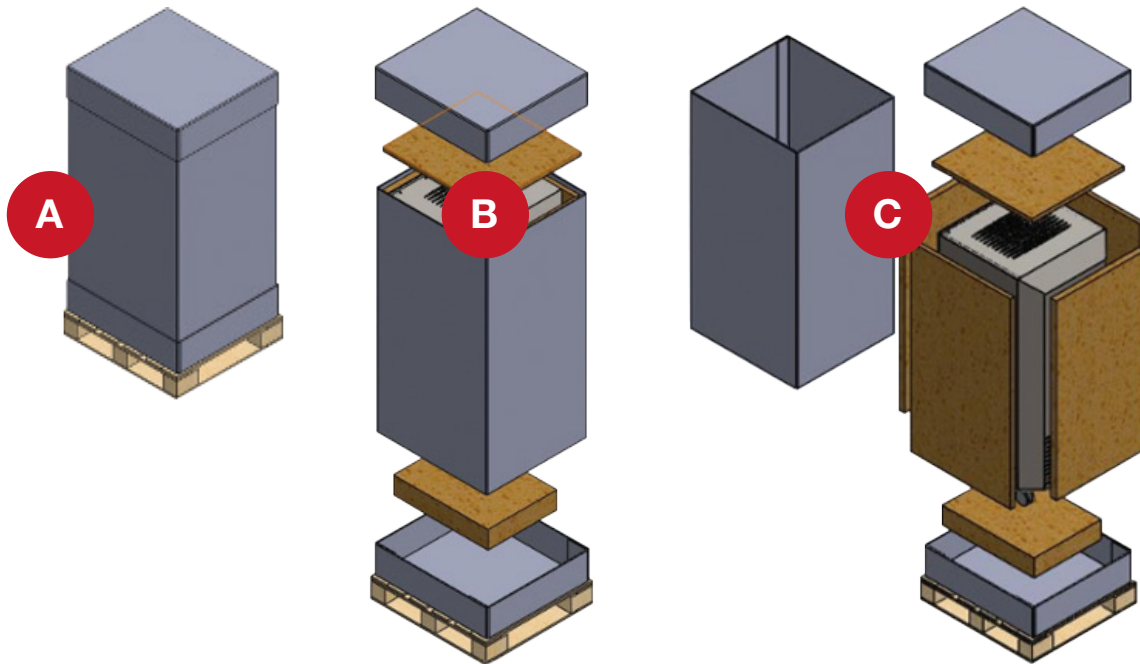
- Internal component disconnection
- Metallic structure deformation
- Broken casters
- Sensors and control panel (HMI) damage

*Pallet dimension (approx):
27" x 26" x 53" + 4.5" wood pallet
72 units per trailer aprox.
(under revision and confirmation)*

PRODUCT OVERVIEW & INSTALLATION INSTRUCTIONS (CONT'D)

Unpacking

1. Carefully remove the equipment from the shipping carton and inspect for any damage that may have occurred during transportation. Two workers at minimum are required to lift the unit from the container.
2. Remove unit from shipping carton.



3. Ensure when the unit is removed from the package that it is placed upon smooth, level, and stable ground.
4. Inspect for concealed damage and any hardware that may have become loose in transit.
5. Inspect for further damage that may adversely affect the equipment.

Items Shipped Per Carton:

1. Equipment with preinstalled filtration technology
2. Installation, Operation, & Maintenance manual
3. Quick Start Guide

See Maintenance and Service section for a list of spare parts sold separately.

PRODUCT OVERVIEW & INSTALLATION INSTRUCTIONS (CONT'D)

Installation Instructions

1. Read and observe all safety instructions included in this document for safe installation & operation.
2. Determine where the AAF AstroPure™ Air Purification System is to be installed.
3. Remove the equipment from the packaging as described in the Unpacking section of this document.
4. Ensure when the equipment is removed from the package that it is placed upon smooth, level, and stable ground.
5. Unlock the caster wheels.
 - a. AAF AstroPure Air Purification Systems come with pre-installed caster wheels and filters. There is no required assembly of these items.
6. Carefully move the unit to the desired location of service.
 - a. When moving the unit: Make sure the path is free of obstacles, make sure the wheels are unlocked, place hands around the center of the unit, and move slowly. CAUTION:



CAUTION:

- All electrical connections must be made by qualified, trained personnel only in accordance with all local, state, and national electrical codes and federal regulations.
- Install power cord and make electrical connection to appropriate 115/120V 60Hz outlet. Install in accordance with all local, state, and nation electrical codes.

Important Note: The equipment is “plug and play” and requires minimum conditions for normal operation. A standard 9 ft (3m) power cord is pre-fixed into the unit.

- Plug the power cord into a suitable 115V/120V grounded electrical receptacle on an electrically protected circuit.
- See Quick Start Guide & Operation section of this document for instructions on unit start-up and operation.



WARNING:

Risk of Fall Over During Movement

- Use extreme caution when moving the unit to its final location.
- Move the unit very slowly and make sure the back wheels are not blocked (release the brake).
- After placing the unit in the final location, make sure that all wheels are pointed in the front of the unit AND push the brake bracket in the back wheels.
- NEVER place any object on the unit.
- NEVER insert your fingers or any other object into the unit.
- NEVER obstruct the air inlet (bottom front) and the air outlet (top) of the unit.

*READ
and follow
instruction
manual before
starting the
unit.*

Danger of Suffocation

Some contents are shipped in plastic bags. To avoid danger of suffocation, keep bags away from babies and children. Do not use in cribs, beds, carriages, or playpens. Bags are not toys. The thin film may cling to nose and mouth and prevent breathing.



QUICK START GUIDE & OPERATION

Quick Start Guide

1. Read and observe all safety and installation instructions provided in the Introduction and Installation Instructions section of this document.
2. After completion of installation, turn on the power switch located on the back of the unit.
3. The unit is preset to 60% of maximum power.
 - a. If the installer would like to adjust the CFM settings, see the EC Motor Speed Adjustment Section for details on how to make adjustments.
4. When the power cord is plugged into a wall receptacle and the power switch is ON, the control panel (HMI) will sound an audible confirmation and illuminate.
5. The system starts with the fan in OFF position. To turn it ON, it is necessary to press the power button (RED).
 - a. The EC motor may require time to get to full operating speed (RPM). If the installer does not immediately detect the motor running upon turning the unit on, please allow 10 seconds for the EC motor to get to full operating RPM.

Important note: For additional information about controlling and set-up, see the Control Panel section.

QUICK START GUIDE & OPERATION (CONT'D)

Air Flow Calculation

Per ASHRAE guidelines and other relevant guidelines, the feet coverage of each unit can be calculated using the following example:

$$\text{CFM} = (\text{Ceiling Height}) \times (\text{Room Square Footage}) \times (\text{ACH}) \times (1\text{hr}/60\text{min})$$

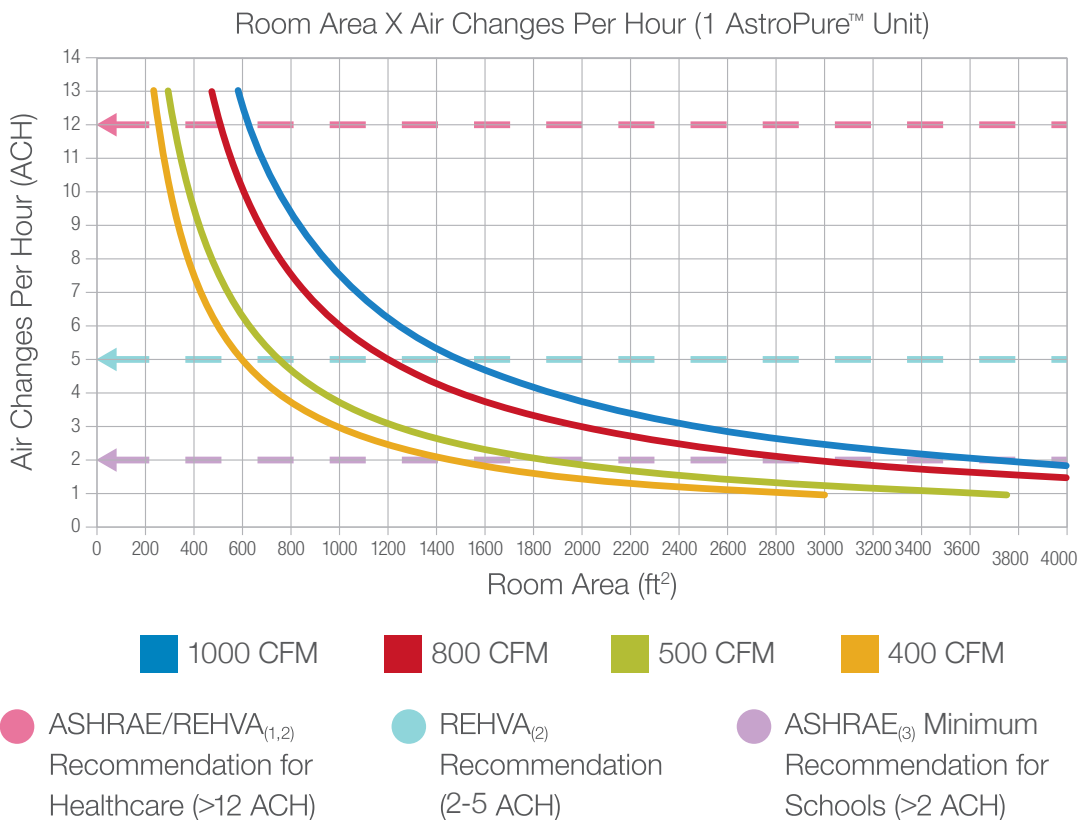
As an example, if the unit is installed in a 35' x 40' room with 10' ceilings, and the user would like to achieve the minimum recommended 2 ACH, then the recommended CFM for the unit would be:

$$\text{CFM} = (10') \times (35' \times 40') \times (2\text{ACH}) \times (1\text{hr}/60\text{min}) = 466\text{CFM}$$

NOTE: ASHRAE recommends a minimum of 2 ACH for re-opening schools, for example.

The following graph represents the feet coverage for each AstroPure™ unit considering four different operational points:

Room Size Calculation (8ft Ceiling Height)



QUICK START GUIDE & OPERATION (CONT'D)

EC Motor Speed Adjustment

The unit has been equipped with an EC motor and controller to allow customization of air flow settings or noise levels. This adjustment can be done directly in the control panel (see Control Panel section for more information).

Operating Instructions

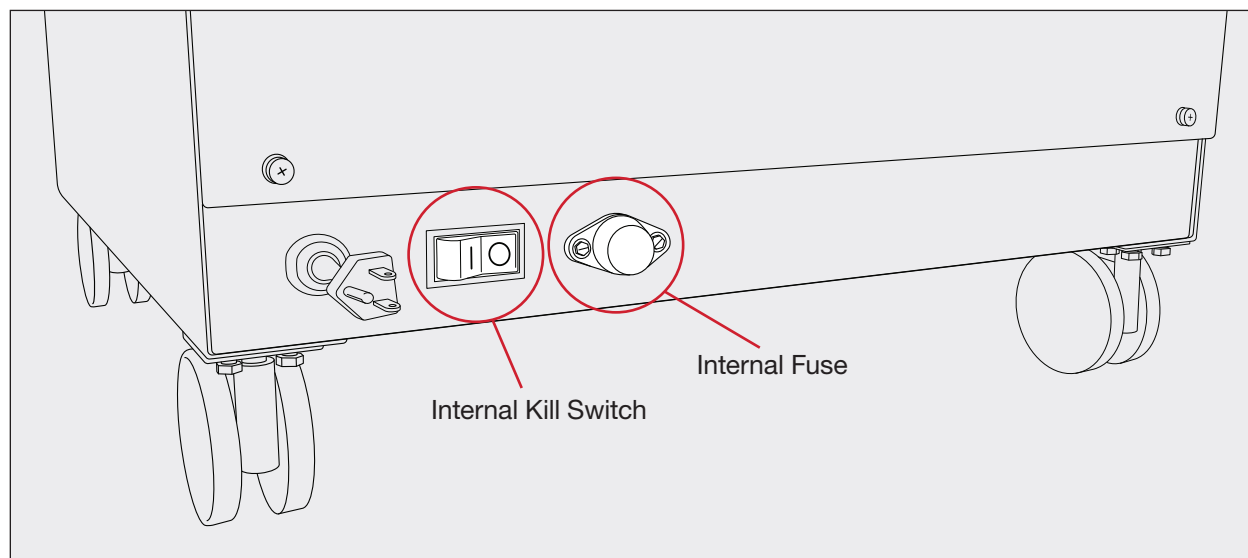
Operating Environmental Conditions:

Temperature: 50-100°F

Humidity: Relative humidity: Up to 95%

Internal Fuse

The equipment is protected by an inline cartridge fuse. This fuse is located on the back of the unit, close to the power cord. To access this fuse, twist the fuse holder from the cabinet-mounted fuse housing. Check for blown fuses if control panel does not illuminate when the unit is powered on.



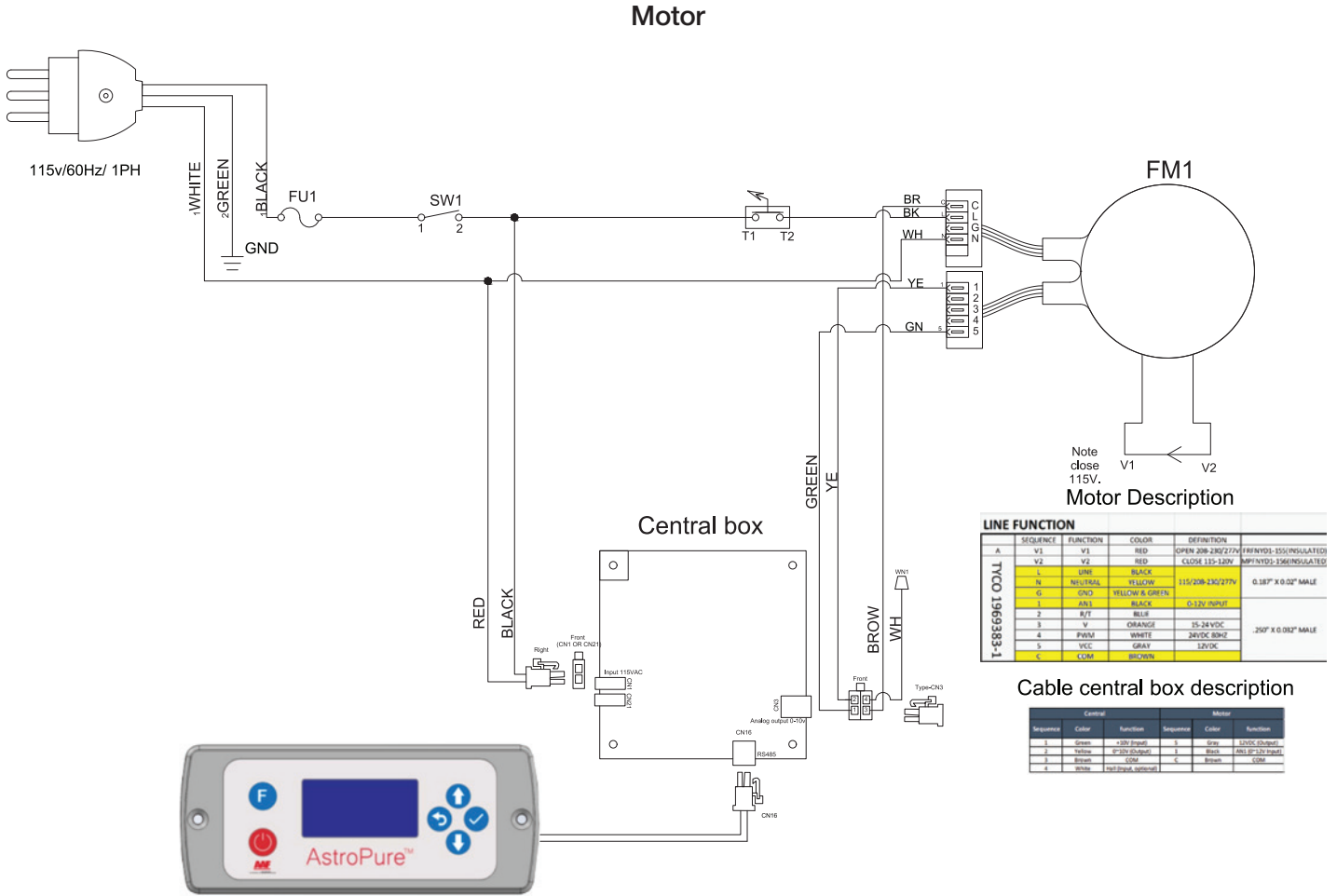
Internal Kill Switch

An internal kill switch has been installed on the back panel of the equipment. This switch is in the Normally Closed position when the back panel of the device is installed. When the back panel of the device is removed, the position of the switch moves to Normally Open and removes power from the internal components of the unit.

Note: If the unit does not seem to be operating correctly, it may be reset by switching the kill switch to the 'off' position, then switching it back to the 'on' position after a few seconds.

QUICK START GUIDE & OPERATION (CONT'D)

Wiring Diagram



Specification

AstroPure™ 1000 EC motor

- 1 HP – 11.45 Amp – 115/120 V – 50/60 Hz - 1 phase
- 15 Amp fuse
- Rotation: counter-clockwise
- Motor must start at 1 +/- 0.2 VDC, 10% PWM, AT 600 +/- 10 RPM

AstroPure 500 EC motor

- 0.33 HP – 4.4 Amp – 115/120V – 50/60 Hz - 1 phase
- 7 Amp fuse
- Rotation: counter-clockwise
- Motor must start at 1 +/- 0.2 VDC, 10% PWM, AT 500 +/- 10 RPM

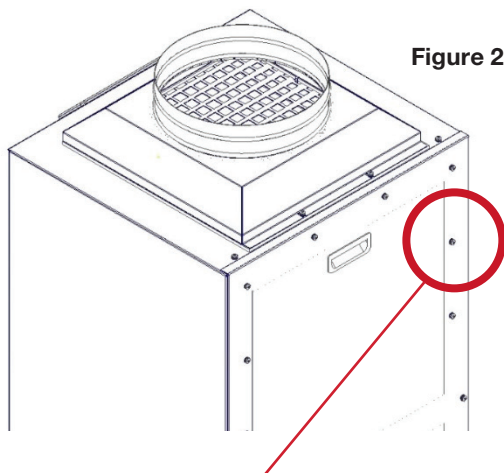
MAINTENANCE & SERVICE

Filter Replacement

Important note: The filters can be contaminated with various particles, including viable and potentially infectious contaminants. Suppose it is suspected that filters could be contaminated with contagious pollutants. In that case, it is recommended that before starting filter replacement, all designated PPE devices must be available, in good condition, and used during filter replacement. Please refer to local/federal regulations for PPE guidance. Similarly, handle dirty filters with extreme caution and local/national guidelines.

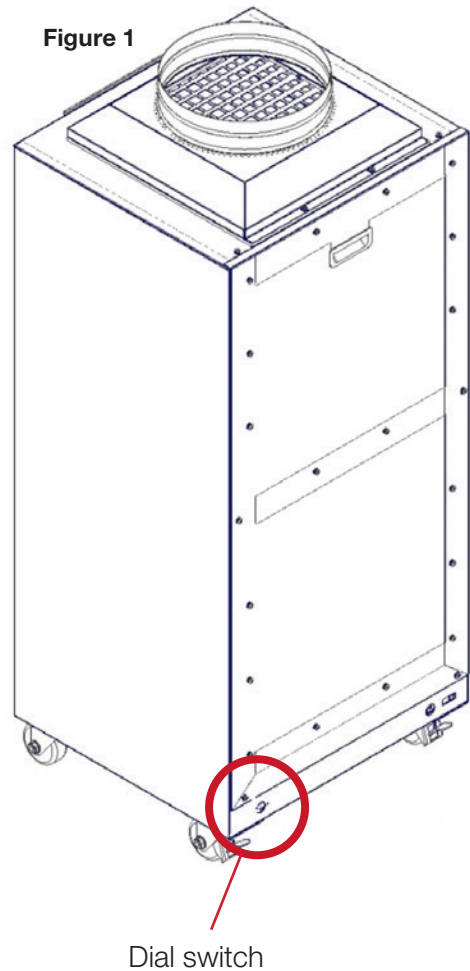
To replace the pre-filters & HEPA filters, please proceed according to the following steps:

1. Turn the dial switch located on the lower back of the unit to the Off position. (Figure 1)
2. Disconnect the power cord from the wall receptacle and wait for 15 seconds for electric discharge from the internal components.
3. Remove the back panel, unlocking the back screws. (Figure 2)



Hexagonal screw (22 units)
Please save all screws.

Figure 1

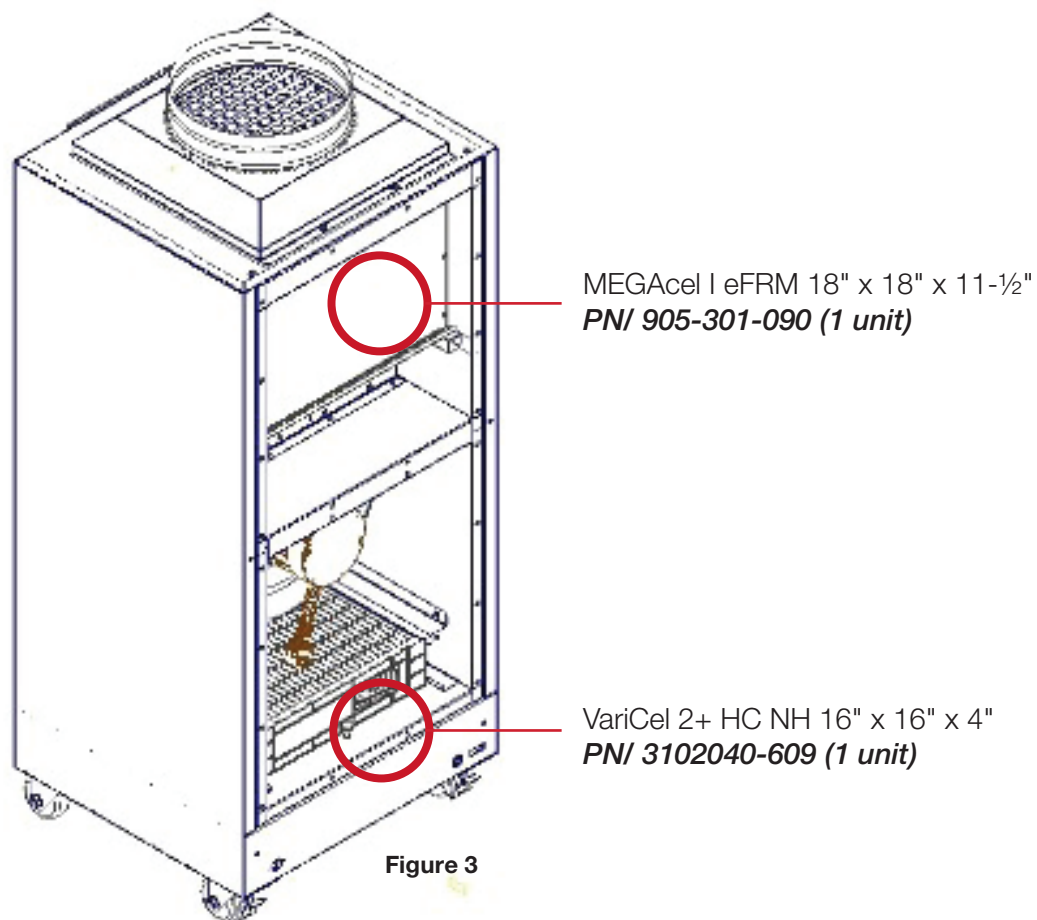


Dial switch

MAINTENANCE & SERVICE (CONT'D)

Filter Replacement (Continued)

4. When the Back Panel is removed, you will see the HEPA and Pre-filters.

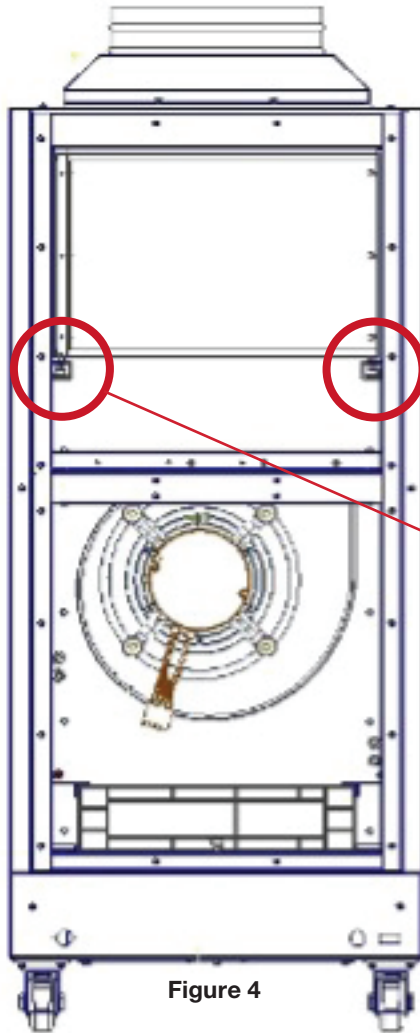


Note: If your equipment has the knob retention brackets (used only for shipping transportation), please do step 1 to step 2. If not, go to step 3.

MAINTENANCE & SERVICE (CONT'D)

Filter Replacement (Continued)

5. Replacement of the HEPA filter



Step A – Identify the brackets

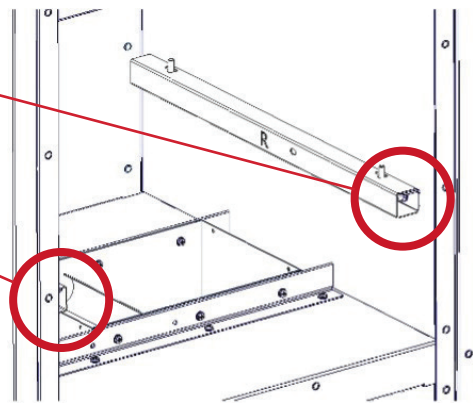


Figure 5

Step B – Remove the Brackets (Left and Right).

Slide the bracket to the side (forward or backward, depending on your model) then pull to remove. *Check the model to determine the bracket style on your equipment.*

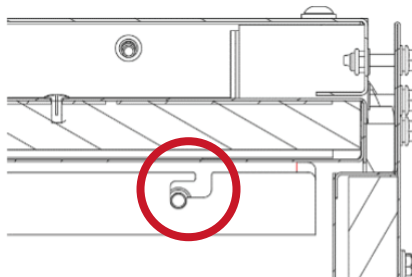


Figure 6 - Backward

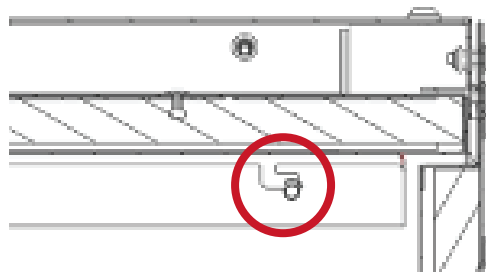


Figure 7 - Forward

MAINTENANCE & SERVICE (CONT'D)

Filter Replacement (Continued)

5. Replacement of the HEPA filter (Continued)

Step C – Remove the knob fasteners.

To remove, use your hands to loosen the knob by turning counterclockwise (Figure 8).

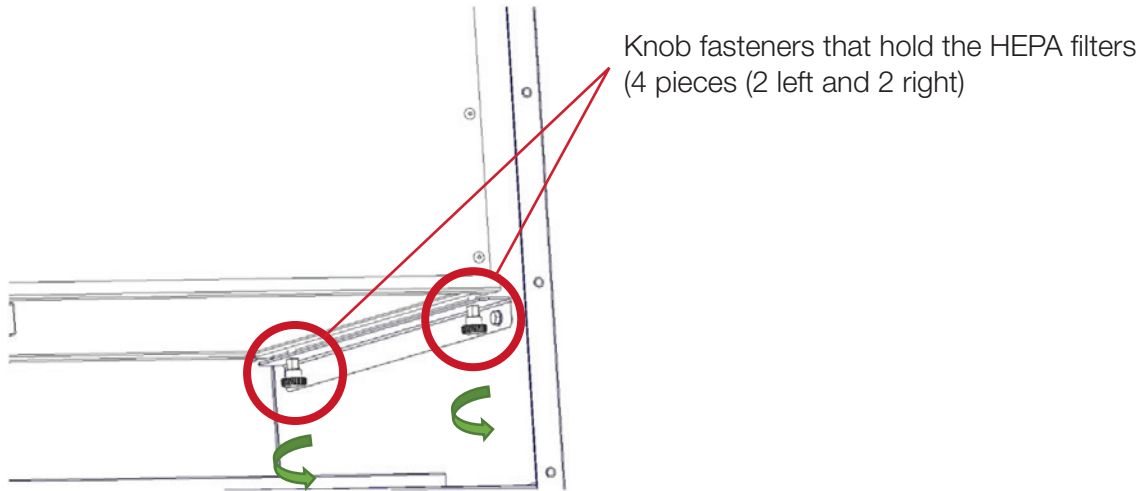


Figure 8

Install/Remove the HEPA filter by sliding it into the upper filter track (Figure 9). Be sure that the sealing gasket is located on the air outlet side of the equipment. (This is the side closest to the equipment outlet grille.)

Check to ensure the airflow arrow position is pointed UPWARD.

To lock the HEPA filter into place, replace the knobs and hand tighten the fasteners by turning clockwise.

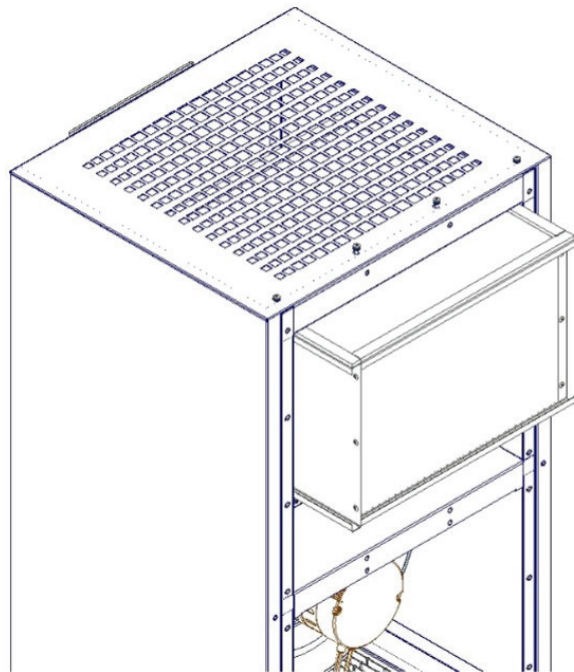


Figure 9

Note: To ensure a proper leak-free installation, adjust fasteners to seat the HEPA filter uniformly. Compressing the gasket appropriately.

MAINTENANCE & SERVICE (CONT'D)

Filter Replacement (Continued)

6. Replacement of the pre-filter

To remove, use your hands to loosen the knob by turning counterclockwise (Figure 11).

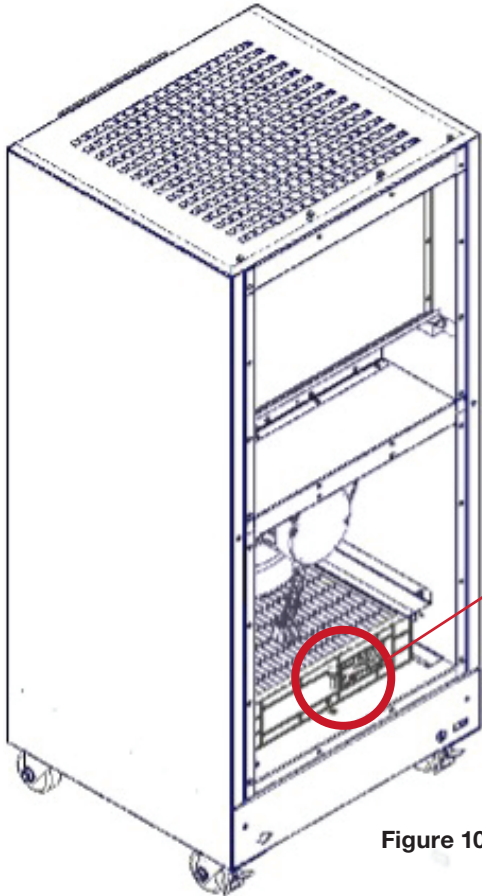


Figure 10

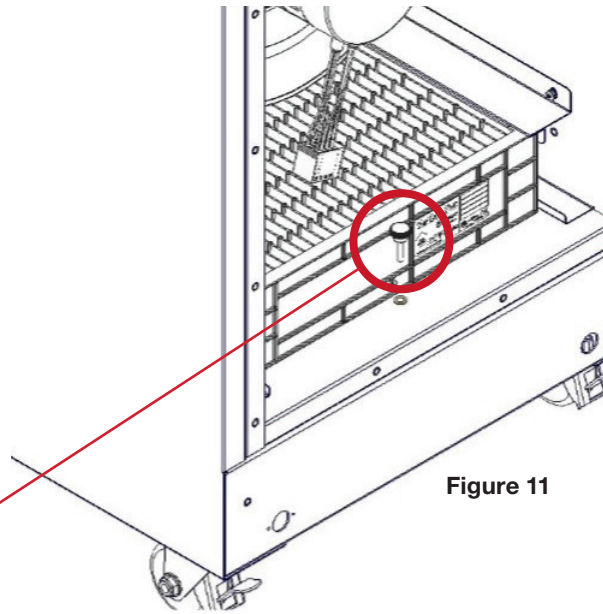


Figure 11

Install/Remove the pre-filter by sliding it into the lower-filter track (Figure 12). Check to ensure the airflow arrow position is pointed UPWARD.

To lock the Pre-filter into place, replace the knob and hand tighten the by turning clockwise.

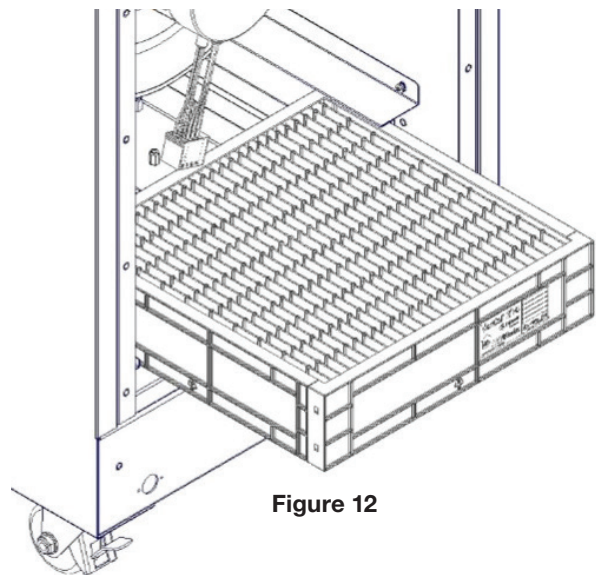


Figure 12

MAINTENANCE & SERVICE (CONT'D)

Replacement Parts

Prefilters

The prefilter can last up to six (6) months, depending on the indoor air contamination levels. It is recommended to replace it over an interval of four to six (4–6) months.

Efficiency	Description	Nominal Dimensions	Actual Dimensions	Part Number
Prefilter MERV 11	Varicel® 2+ HC NH	16 x 16 x 4	15 3/8" x 15 3/8" x 3-3/4"	3102040-609

HEPA Filters

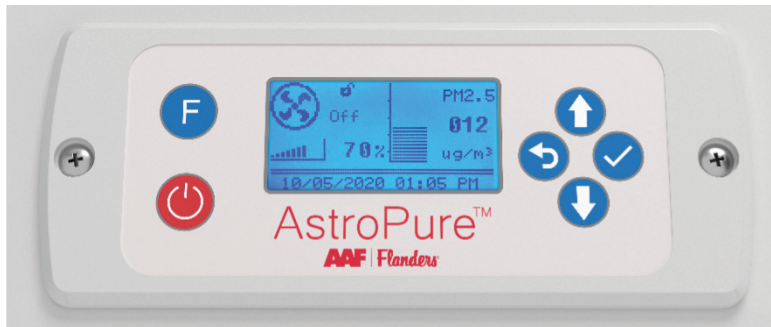
The HEPA filter can last up to 48 months, depending on indoor air contamination levels. It is recommended to replace it over an interval of 24-48 months.

For additional information, see the section of this manual on contacting AAF.

Efficiency	Description	Nominal Dimensions	Actual Dimensions	Part Number
HEPA 99,99% @ 0.3micron	MEGAcel® I eFRM E18A18AA1P13E2TOBA	18 x 18 x 11 ½	18 x 18 x 11 ½	905-301-090

CONTROL PANEL

The AAF AstroPure™ contains an intuitive six-button control panel (HMI).



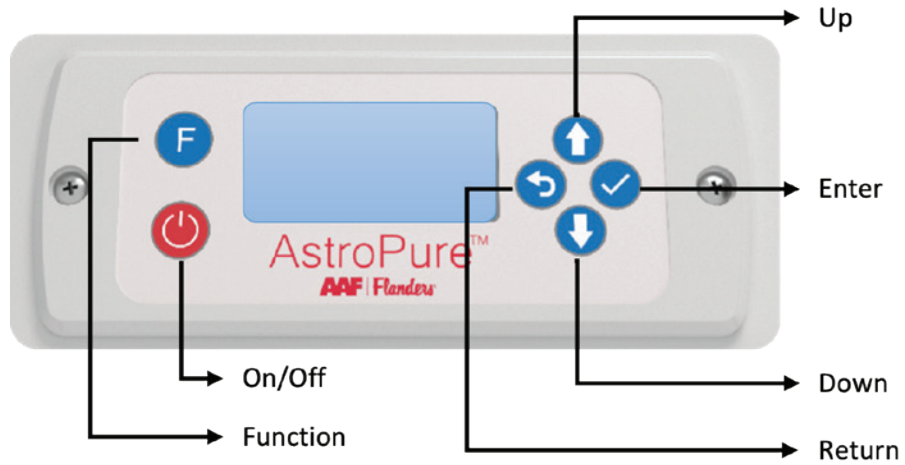
Available functions and features are described below.

- Graphic display with visual alarms and alerts
- On/off schedule programming that promotes energy savings
- Programmable decontamination cycle for cleaning the air faster
- Particulate matter (PM) sensor that measures the following size ranges simultaneously and in real time:
 - PM 10
 - PM 2.5
 - PM 1.0
 - PM0.5
- Pressure drop sensors to indicate remaining life of prefilter and of HEPA filter

CONTROL PANEL (CONT'D)

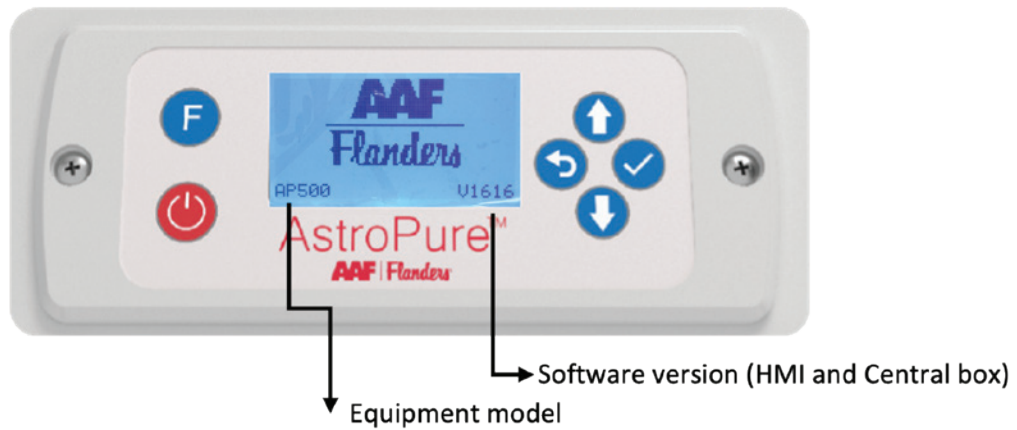
Control Panel – Screen Overview

Button Names



Control Panel – Screen Overview

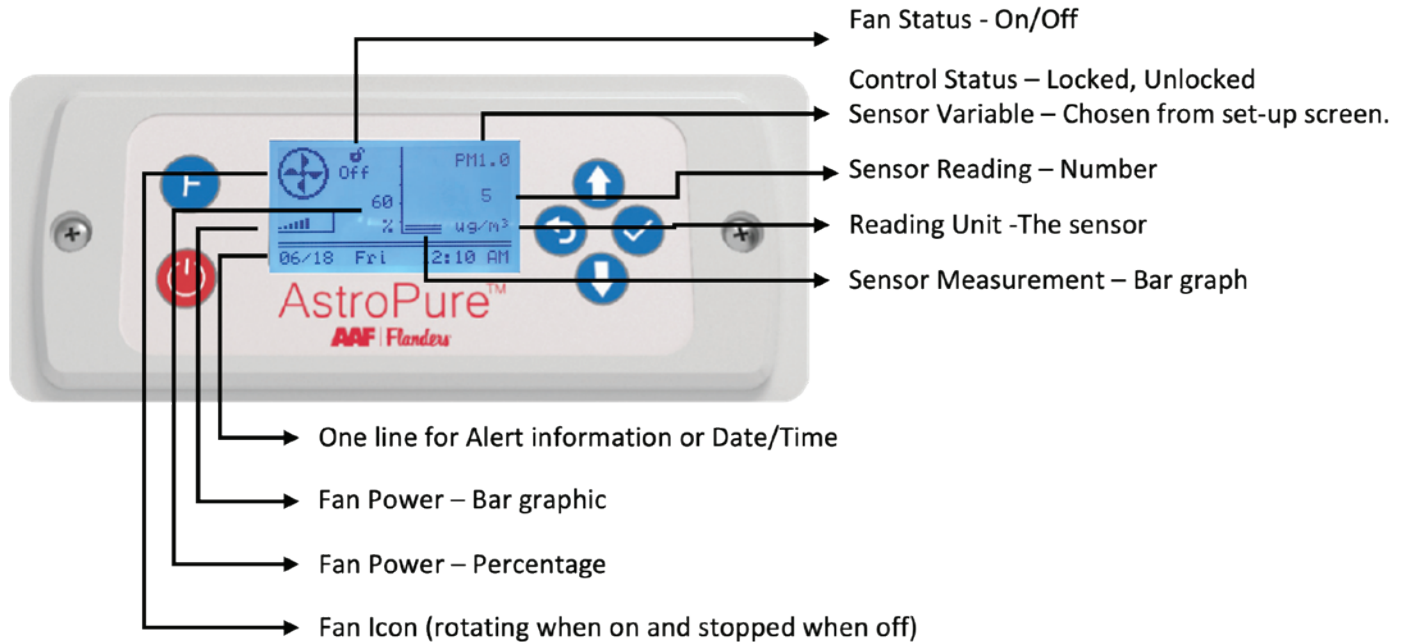
Startup Screen



CONTROL PANEL (CONT'D)

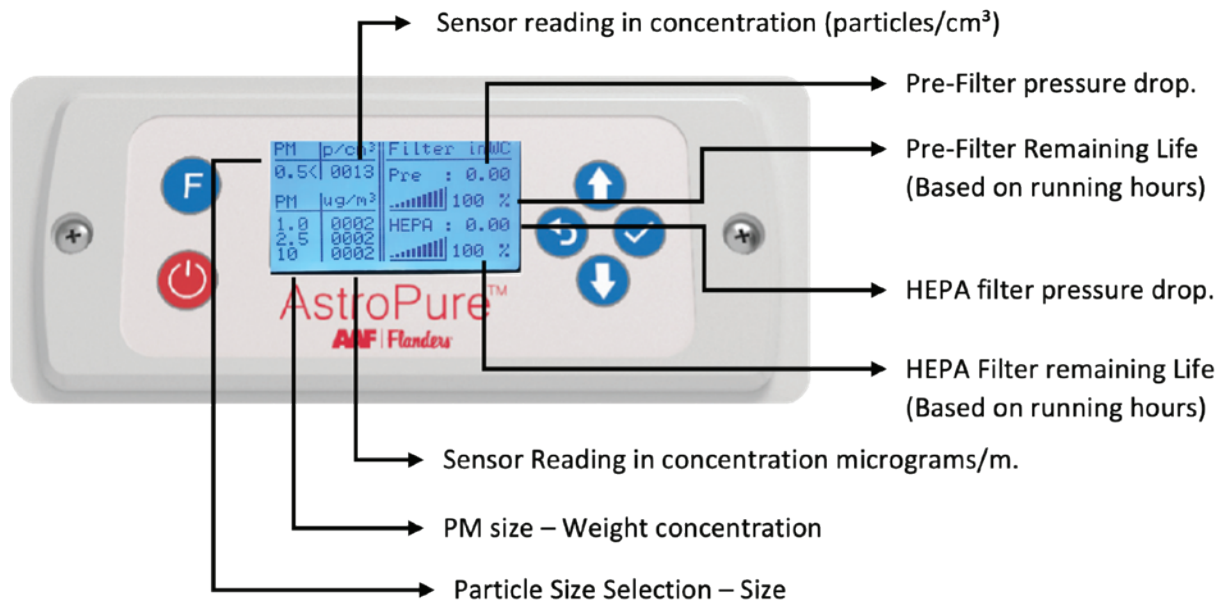
Control Panel – Screen Overview

Main Screen



Control Panel – Screen Overview

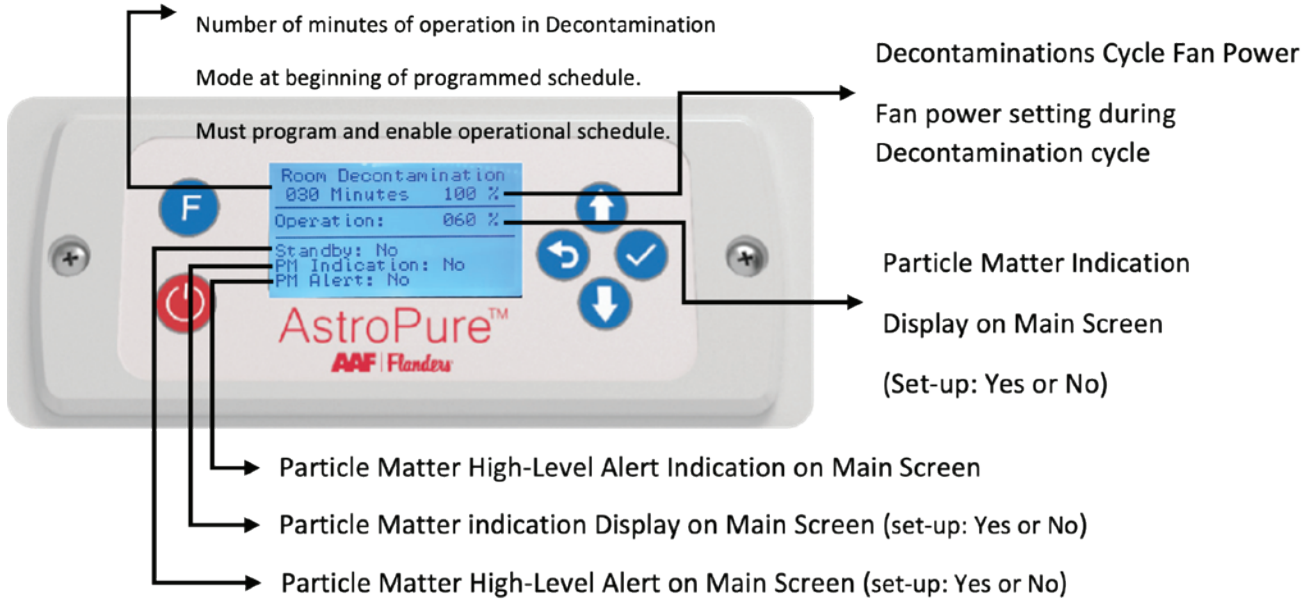
Filter's Pressure Drop and Particulate-Matter Counting Screen



CONTROL PANEL (CONT'D)

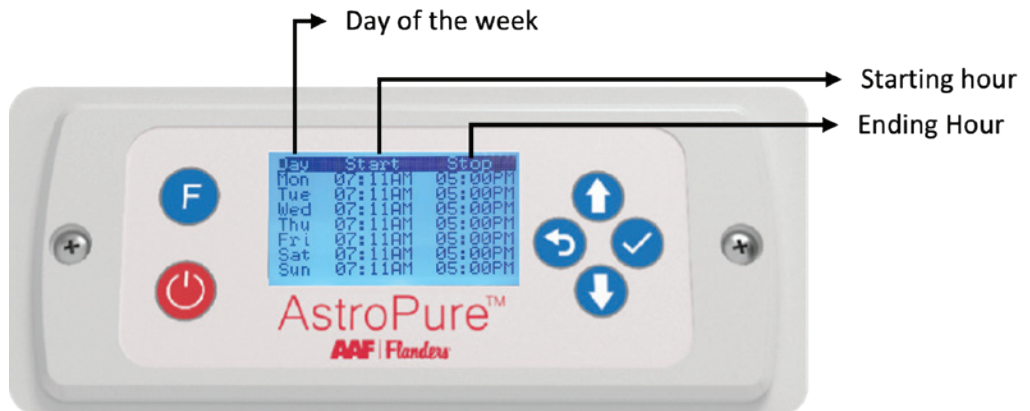
Control Panel – Screen Overview

Decontamination Cycle, Standby, & PM Indicator/Alert


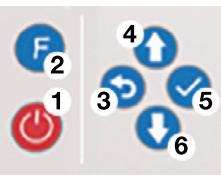

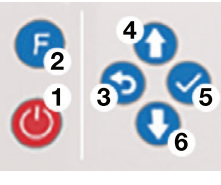



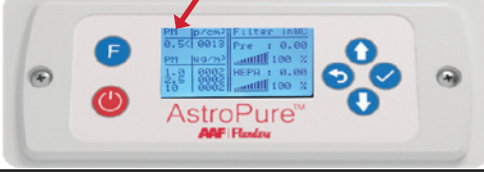
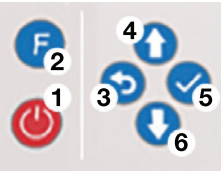

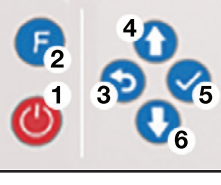


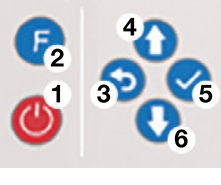


Control Panel – Screen Overview

Schedule Programming

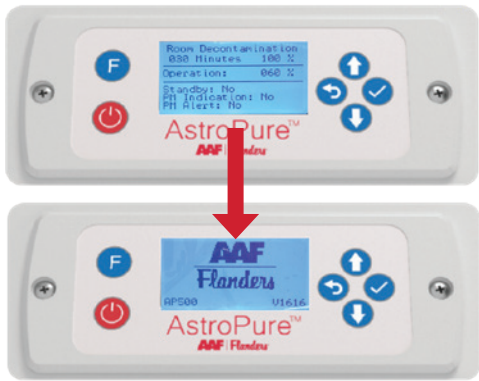
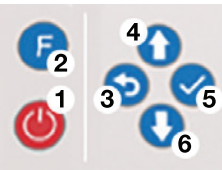

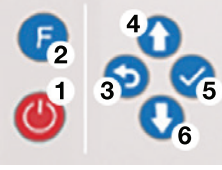
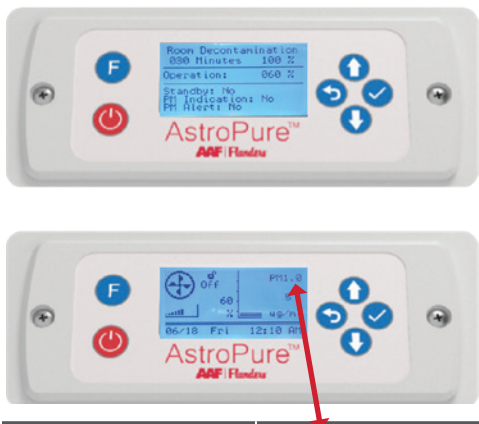
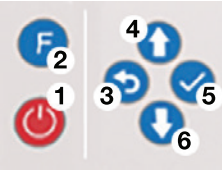


CONTROL PANEL (CONT'D) OPERATIONS MODE – FUNCTIONALITY



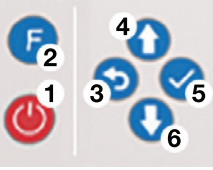

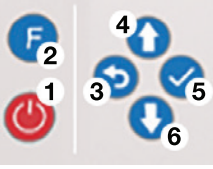

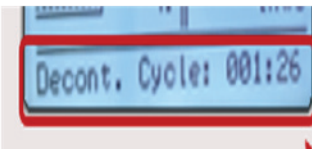

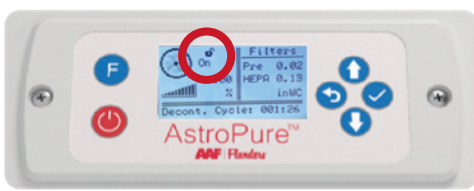
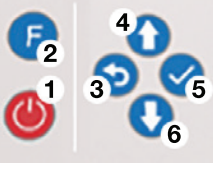
Screen	Button	Action
		<p>Turn on/Off the equipment Press the (1) power button to cycle fan On/Off.</p>
		<p>Changing the speed fan To change the fan speed, please use the (4) Up or (6) Down buttons. <i>Note: The equipment needs to be turned on for the fan speed adjustment to take effect.</i></p>
		<p>Adjust the Date and Time Press and hold for 5 secs (3) Enter Button. The date display will start blinking. Use the (4) Up or (6) Down button to change the date and time. Once you have selected the desired date, press the (3) Enter Button to move to the next input field. Repeat these steps to adjust the time. After making all the necessary changes, press (5) Return to confirm the new settings.</p>
 		<p>Choose particle size to display on main screen On the main screen, press (5) Return. The display will change, showing the screen (PM and filter pressure Drop). Press (2) Function + (4) Up or (6) Down to choose the desired particle size. The Arrow on the corner of the screen will indicate the particle size. After you selected the particle size, return to the main screen to view the results.</p>
		<p>Reset the Filter Life timer (After replacing the filter) On the “PM and Filter Pressure Drop”, press and hold for 5 secs (3) Enter button. This will open the “Changing Filters” screen. Use (4) Up or (6) Down to select “YES” to reset filters. Press the (3) Enter button to move between Pre-filter and HEPA filter options. Use the (5) Return button to confirm.</p>
 		<p>Adjust Room Decontamination cycle (Period and fan speed) On the “PM and Filter Pressure Drop”, press (5) Return to move the “Room Decontamination screens”. Press and hold for 5 secs (3) Enter button, the field will start blinking use the (4) Up or (6) Down buttons to select the number desired and (3) Enter button to move on the field. After making all the necessary changes, press (5) Return to confirm the new settings.</p>

Note: Important: The decontamination cycle values (time and fan speed) are only valid and functional when using the Autonomous Operation Schedule function. Otherwise, if a manual decontamination cycle is necessary (see Manual Decontamination Cycle).

CONTROL PANEL (CONT'D) OPERATIONS MODE – FUNCTIONALITY

Screen	Button	Action														
		<p>Set standby function</p> <p>On the “PM and Filter Pressure Drop”, press (5) Return to move the “Room Decontamination screens”. Press and hold for 5 secs (3) Enter button, the field will start blinking use the (4) Up or (6) Down buttons to select the number desired and (3) Enter button to move on the field until the Standby field. When set to “Yes” after 5 seconds without operational contact the display will go into standby Startup/Logo screen.</p>														
<p style="text-align: center;">"Yes" "No"</p> 		<p>Set PM indication function</p> <p>On the “PM and Filter Pressure Drop”, press (5) Return to move the “Room Decontamination screens”. Press and hold for 5 secs (3) Enter button, the field will start blinking use the (4) Up or (6) Down buttons to select the number desired and (3) Enter button to move on the field until the PM indication field. When set to “Yes”, the PM level will appear on the main screen. When set to “No”, the filter pressure drop will appear on the main screen.</p>														
		<p>Set PM Alert function</p> <p>On the “PM and Filter Pressure Drop”, press (5) Return to move the “Room Decontamination screens”. Press and hold for 5 secs (3) Enter button, the field will start blinking use the (4) Up or (6) Down buttons to select the number desired and (3) Enter button to move on the field until the PM Alert field. When set to “Yes”, the PM alert information will appear on the main screen.</p>														
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr style="background-color: #cccccc;"> <th style="text-align: left;">U.S. EPA Categories</th> <th style="text-align: left;">Values PM2.5 µg/m³</th> </tr> </thead> <tbody> <tr style="background-color: #90ee90;"> <td>Good</td> <td>0.0 - 12.0</td> </tr> <tr style="background-color: #c1e1c1;"> <td>Moderate</td> <td>12.1 - 35.4</td> </tr> <tr style="background-color: #ffff99;"> <td>Unhealthy Sensitivities</td> <td>35.5 - 55.4</td> </tr> <tr style="background-color: #ff9999;"> <td>Unhealthy</td> <td>55.5 - 150.4</td> </tr> <tr style="background-color: #9966cc;"> <td>Very Unhealthy</td> <td>150.5 - 250.4</td> </tr> <tr style="background-color: #cc0000;"> <td>Hazardous</td> <td>250.5 - 350.4</td> </tr> </tbody> </table>	U.S. EPA Categories	Values PM2.5 µg/m³	Good	0.0 - 12.0	Moderate	12.1 - 35.4	Unhealthy Sensitivities	35.5 - 55.4	Unhealthy	55.5 - 150.4	Very Unhealthy	150.5 - 250.4	Hazardous	250.5 - 350.4		<p>Note: The alert will only appear if the particle concentration exceeds 35 µg/m³. This threshold is considered unhealthy for individuals with sensitivities, as stated by the U.S. Environmental Protection Agency (EPA).</p>
U.S. EPA Categories	Values PM2.5 µg/m³															
Good	0.0 - 12.0															
Moderate	12.1 - 35.4															
Unhealthy Sensitivities	35.5 - 55.4															
Unhealthy	55.5 - 150.4															
Very Unhealthy	150.5 - 250.4															
Hazardous	250.5 - 350.4															

CONTROL PANEL (CONT'D) OPERATIONS MODE – FUNCTIONALITY

Screen	Button	Action
 		<p>Setting Autonomous Operation Schedule</p> <p>On the “Room Decontamination”, press (5) Return to move the “Schedule programming”. Press and hold for 5 secs (3) Enter button, and the field will start blinking use the (4) Up or (6) (Down) buttons to select the number desired and (3) Enter button to move on the field (day, start and stop) To copy the same settings from the previous day, press (2) Function plus (6) Down the previous day’s settings will automatically populate.</p> <p>Note: For days when the unit shall not run, adjust the initial and final hour with identical values.</p>
		<p>Activating autonomous (scheduled) operation</p> <p>On the “Main screen”, press (2) Function plus (1) On/Off. The icon “clock” will appear when activated. To deactivate this function, repeat the procedure. When activated, is possible to navigate between screens, however, the unit can not be turned on/off.</p> <p>Note: For days when the unit shall not run, adjust the initial and final hour with identical values.</p>
 		<p>Manual Decontamination Cycle</p> <p>The decontamination cycle can be activated manually. To turn on this function press (2) Function plus (4) Up from the main screen. A countdown timer will display on the main screen. At the end of this period, the unit will return to the previous operation status and fan speed set point. To cancel a manual Decontamination cycle, repeat the procedure that will disable the function.</p>
<p>Note: The Decontamination Cycle is intended to provide fast recovery and/or reduce the room contamination in short order by operating the unit at a higher airflow (fan speed). Operating in this manner (i.e. at a high fan speed) will increase the noise level of the unit, so it is recommended to run the decontamination cycle either prior to occupancy of the room or during times of no/minimal occupancy. The Decontamination Cycle period is intended to function as a part of the Autonomous Operation Scheduled (see section: “Adjust Room Decontamination cycle (Period and fan speed)”) and runs automatically when the unit is set-up for operating according to the user pre-defined schedule. However, it may be necessary to run a decontamination cycle due to a high contamination event, even if the Autonomous Operation Scheduling function is not activated. In this case, it is recommended to run a decontamination cycle manually.</p>		
		<p>To activate or deactivate the display lock function</p> <p>From the main screen, press the (2) Function button plus the (3) Return button. The Lock icon will indicate whether the display is currently locked or unlocked. When the display is locked, all buttons, including the on/off button, will be inoperable. To unlock the display, repeat the same process and observe the lock icon.</p>

CONTROL PANEL (CONT'D)

PM Alert: Figure 1

Categories	Values PM 2.5 $\mu\text{g}/\text{m}^3$	
Good	0.0 - 12.0	These messages will not be displayed.
Moderate	12.1 - 35.4	
Unhealthy for Sensitive People	35.5 - 55.4	Only these messages will be displayed.
Unhealthy	55.5 - 150.4	
Very Unhealthy	150.5 - 250.4	
Hazardous	250.5 - 350.4	

TROUBLESHOOTING GUIDE

No Equipment Power	Check for blown fuse.
	Check for loose power cord.
	Ensure power switch is in on position.
	Inspect wall receptacle.
	Ensure kill switch on back panel is in closed position.
Low Air Velocity	Check whether prefilter or HEPA filter require replacement.
	Increase speed setting on the control panel. NOTE: Increasing speed can lead to a higher noise level.

APPENDIX A – WARRANTY

AAF INTERNATIONAL LIMITED WARRANTY

The Seller warrants that it will provide free replacement parts in the event any product manufactured by the Seller proves defective in material or workmanship for a period of twelve (12) months from initial startup or eighteen (18) months from date of shipment, whichever expires sooner. Product(s) not manufactured by the Seller but also sold under this agreement are warranted only to the extent that the manufacturer warranted them to the Seller or directly to Buyer.

The Seller's liability to Buyer shall not exceed the lesser of the cost of correcting defects in the product(s) sold or the original purchase price of the product(s), and the Seller shall in no event be liable to Buyer or third parties for any delays. The Seller's warranty does not apply to any product(s) or goods which: (1) have been opened, disassembled, repaired, or altered by anyone other than the Seller or its authorized service representative; or (2) which have been subjected to misuse, misapplication, negligence, accidents, damage, abuse, improper storage, or abnormal use or service; or (3) have been operated or installed in a manner contrary to Seller's printed instructions; or (4) have been installed in an incorrect or improper application; or (5) have become corroded or subjected to abrasion. The Seller is not obligated to pay any costs or expenses in connection with the removal and re-installation of such product(s) or goods, including but not limited to labor, service costs, and shipping charges. The same obligations and conditions shall extend to replacement parts furnished by the Seller hereunder. This parts warranty and any optional extended warranties are granted only to the original user. Seller's duty to perform under this or any warranty may be delayed, at Seller's sole option, until Seller has been paid in full for all products or goods purchased by Buyer. No such delay shall extend the warranty period.

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No person (including any agent, salesman, dealer, or distributor) has the authority to expand the Seller's obligation beyond the terms of this express warranty, or to state that the performance of the product(s) is other than published by the Seller.

APPENDIX B – MANUAL REVISION HISTORY

Revision Version	Revision Date	Description of Change	Approval
A	12/24/2020	Initial edition	
B	03/25/2021	Revision B – adding new information about control panel	
C	09/14/2021	Adding new information about control panel and sound levels	
D	09/10/2023	Add appendix A and B about the installation of the Bracket- Change the appendix for Steps 1, 2 and 3; Updated wiring diagram; Updated information about control panel functions	

For Technical or Application Questions:

Email: astropure@aafintl.com



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AFP-3-106D 12/23