



HC FM-1

# User Manual

## HEPA Air Purifier

This manual provides information about safety, installation, operation, and maintenance. Prior to installing the Blade Air HEPA Air Purifier, be sure to thoroughly read through this manual to ensure optimal use of the product and avoid improper installation.

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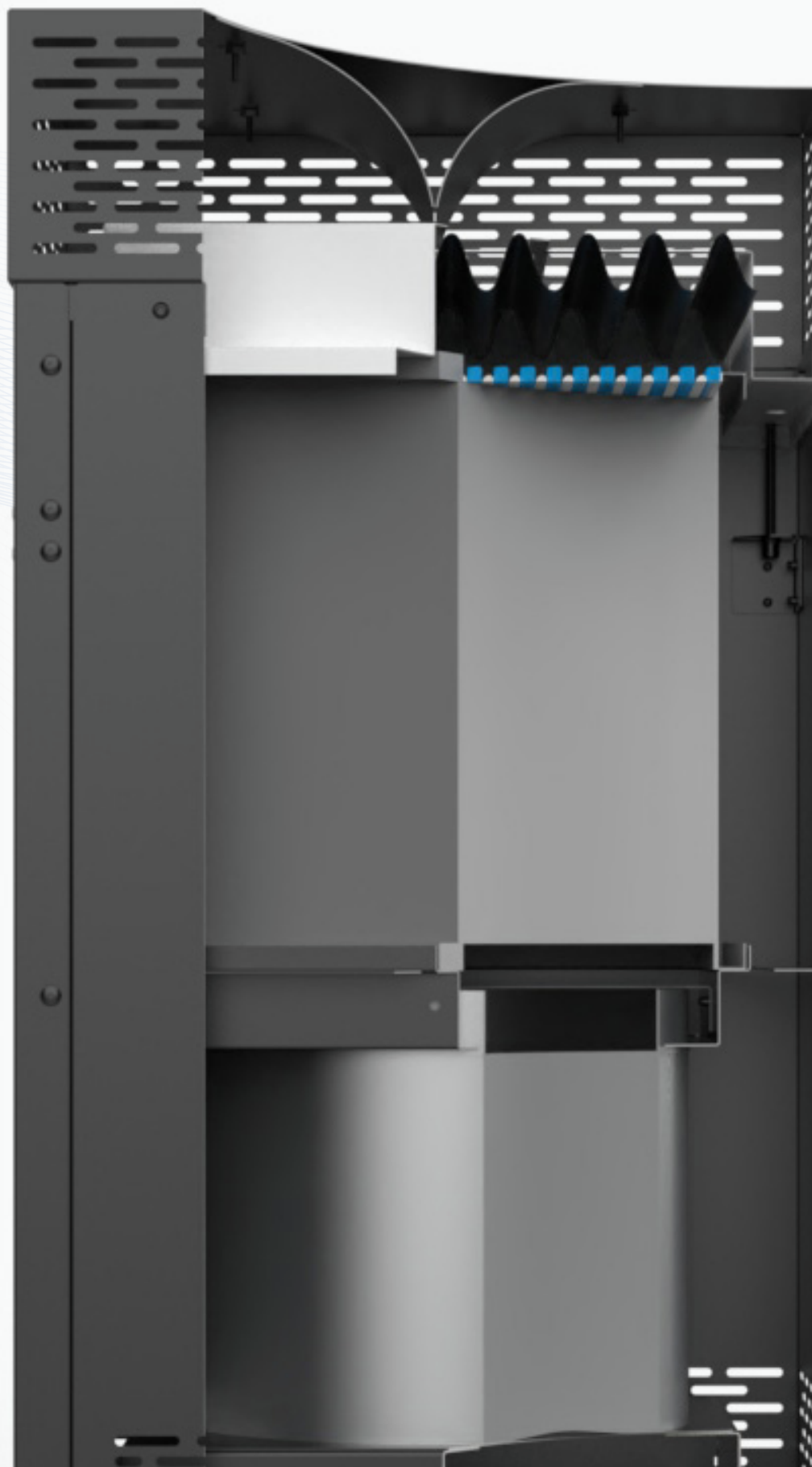
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# Safety Precautions

 **WARNING**

Before carrying out any maintenance or servicing, ensure the unit is disconnected from the main power supply.

This equipment should be inspected frequently and collected dirt removed from it regularly to prevent excessive accumulation that may result in flashover or a risk of fire.

**TO REDUCE THE RISK OF FIRE, ELECTRICAL SHOCK, OR INJURY TO PERSONS, OBSERVE THE FOLLOWING:**

**A.**  
Use this unit only in the manner intended by the manufacturer.  
If you have any questions, contact Blade Air at [service@bladeair.com](mailto:service@bladeair.com).

**B.**  
To reduce the risk of electrical shock, do not expose the unit to water or rain.

**C.**  
Before servicing or cleaning the unit, turn the power off.

 **RISK OF ELECTRIC SHOCK**

These service instructions are for use by qualified personnel only.

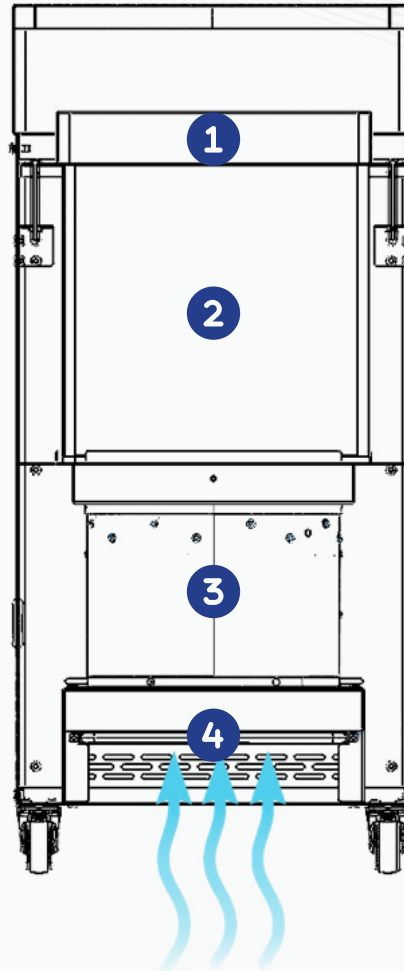
To reduce the risk of electric shock, do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so.

To reduce the risk of electric shock, this equipment has a grounding-type plug that has a third (grounding) pin. This plug will only fit into a grounding type power outlet. If the plug does not fit into the outlet, contact qualified personnel to install the proper outlet. Do not alter the plug in any way.

# Product Overview

Elevate air quality across a range of environments, from personal offices to extensive communal spaces.

Designed for areas with insufficient ventilation, our HEPA Air Purifier combines medical-grade filtration with unmatched coverage, providing a mobile, plug-and-play solution for immediate air quality improvement.



This illustration depicts the key components found inside each (HCFM-1) HEPA Air Purifier.

- 1 CARBON FILTER**

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- 2 HEPA FILTER**

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- 3 POWERFUL FAN**

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- 4 MERV-8 PRE-FILTER**

## HCFM-1 Package Contents

- 1 HEPA AIR PURIFIER**

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- 2 VARIABLE SPEED CONTROLLER**



# HC FM-1 Specifications



## PERFORMANCE

	HC FM-1	
Area Coverage	≤1,400 square feet	
Pre-Filter Efficiency	MERV 8	
HEPA Efficiency	True HEPA 99.99% @0.3µm Third-Party Tested & Validated	
Airflow	80 - 530 CFM	
CADR	247 Smoke   221 Fine Dust   211 Pollen	
VACS	225 CFM	
ACH	600 Square Feet	6.6 ACH
	1,400 Square Feet	2.84 ACH
Fan Rating	1,019 CFM	

## PHYSICAL


Physical Dimensions	16" x 16" x 36.5"
Weight	50 lbs [20kg]
Shipping Dimensions	16" x 16" x 64"
Shipping Weight	62.1 lbs
Operating/Storage Temp.	0°C - 50 °C
Housing Material	Powder Coated Steel


## ELECTRICAL

Power Requirements	120VAC / 60Hz / 217 Watts
Max Current Consumption	1.9 Amps
Controls	Variable Fan Speed Dial
Plug Type	Standard 120V


## APPLICATIONS


 Offices

 Classrooms

 Daycares

 Retail Stores

 Communal Spaces

 Waiting Rooms

## KEY FEATURES

99.99% particle removal at 0.3 microns

1,400 sq. ft. area coverage

Variable Speed Controller to accommodate different settings

Plug-and-play solution for instant deployment

Full size high-capacity HEPA

# HCFM-1 Installation

Carefully review this section before installing the Blade Air HEPA Air Purifier to ensure safe operation. **Failure to adhere to these instructions may result in product damage or hazardous situations.**

## CAUTION & WARNINGS

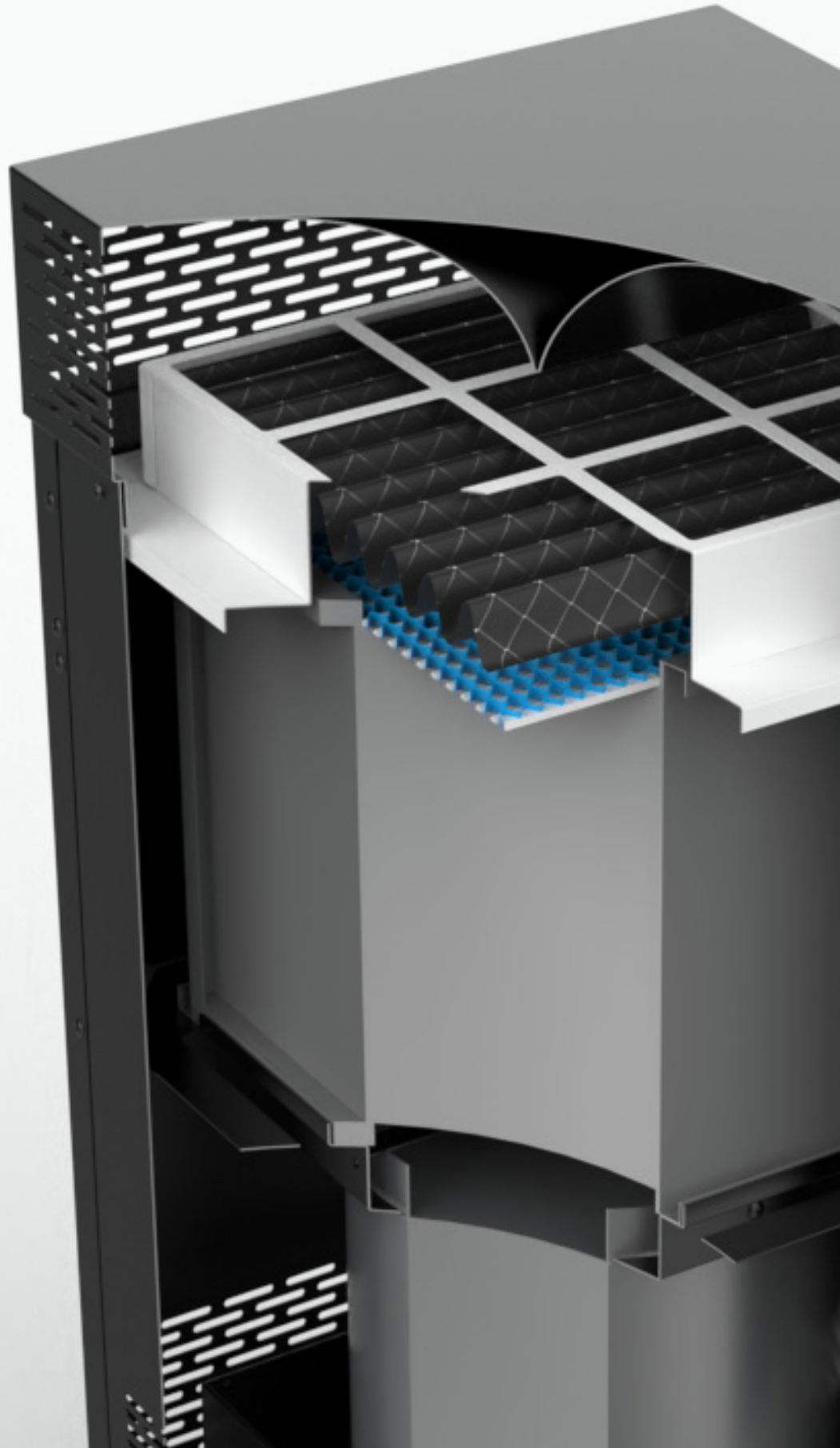
Failing to push correctly or debris impeding wheels may lead to the unit tipping, which can result in serious injury. Do not lift the air purifier by the wheels.

Do not plug in unit if there is any physical damage to power cord.



## REQUIRED TOOLS

Tools Required for optional installation procedures are listed below in the 'Installation Steps' Section.







## Installation Steps

### 01. Place unit into desired location

**A)** Firm, level and flat surface.

**B)** Ensure no vented areas are blocked.

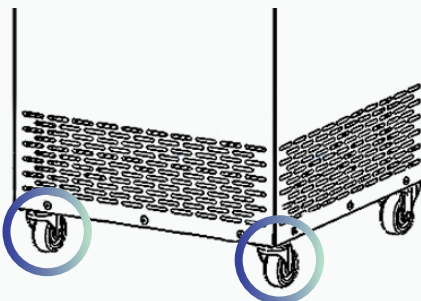
**C)** Recommended to place 2 feet away from any wall for optimal performance of the units airflow.

#### ⓘ Important Note:

When moving the unit, have one hand firmly on top of the unit and push with the other hand. Do not lift unit by it's wheels.

### 02. Lock the unit into place

Once the unit is placed in the desired location, lock castors by flipping the switch down on both front wheels:



### 03. Plug the unit in

Plug unit into a 120 VAC outlet  
(see 'Safety Precautions' section)

OPTIONAL

# Wall Mounting Steps

## Wall Mounting For 3/8"-5/8" Thick Drywall

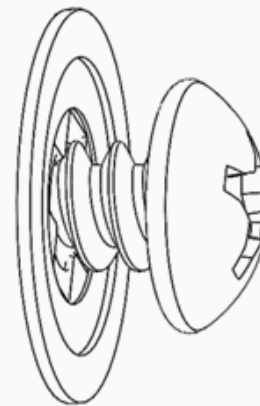
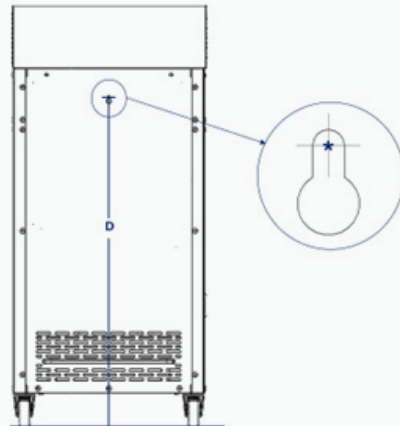
Wall mounting services available by Blade Air staff depending on scope of the application. Contact [service@bladeair.com](mailto:service@bladeair.com) to request.



### REQUIRED TOOLS

ZINC ALLOY WALL ANCHOR

NO.8 2-1/2" ZINC ALLOY BOLT



- 01.** Measure the distance from the ground to just below the top of the keyhole shape on the back of the unit (the end of the thinner slot portion) and mark this spot.
- 02.** Drive the anchor into the wall.
- 03.** Insert the bolt into the anchor and tighten until approximately 1/4" of the threads on the bolt are still showing.

- 04.** Ensure the side of the unit with the keyhole is facing the wall with the bolt sticking out.
- 05.** Line up the keyhole with the bolt.
- 06.** Lever the unit so that the bolt goes into the keyhole.

## Wall Mounting to a Stud

Wall mounting services available by Blade Air staff depending on scope of the application. Contact [service@bladeair.com](mailto:service@bladeair.com) to request.



### REQUIRED TOOLS

NO.8 2-1/2" ZINC ALLOY BOLT

- 01.** Measure the distance from the ground to just below the top of the keyhole shape on the back of the unit (the end of the thinner slot portion) and mark this spot, see step 1 from "Wall Mounting For 3/8"-5/8" Thick Drywall" above
- 02.** Drive the screw into the wall until approximately 1/4" of the threads are still showing.

- 03.** Ensure the side of the unit with the keyhole is facing the wall with the bolt sticking out.
- 04.** Line up the keyhole with the bolt.
- 05.** Lever the unit so that the bolt goes into the keyhole.



OPTIONAL

## Speed Controller Installation

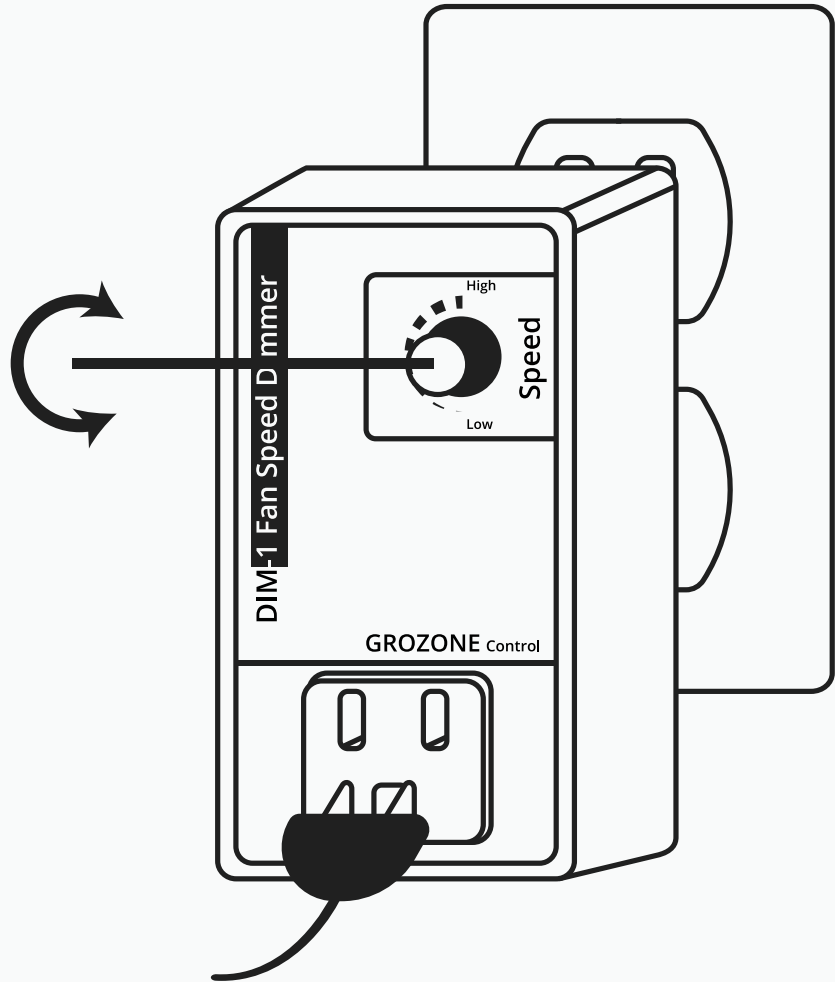
If speed control feature is desired, see the steps below.

**01.** Plug unit into a 120 VAC outlet (see 'Safety Precautions' section)

**02.** Connect unit into the front panel outlet

**ⓘ Important Note:**

In 'LOW' position, the controller will NEVER turn the unit OFF and will keep the unit running at idle or minimum speed.



## Air changes & Noise levels

The Table below displays information regarding Air Changes and noise levels for a range of options on the speed controller.

**ⓘ Important Note:**

'CFM Required' corresponds to the selected speed on the speed controller.

### NOISE SPECIFICATIONS

Room Size [ft <sup>2</sup> / ft <sup>3</sup> ]	Room Use	Air Changes	CFM Required	Decibal Reading	Ambient dBA
88 / 836	Personal Office	5.6	78	45 dBA	<b>42 dBA</b>
		10	139	55 dBA	
		20	533	69.5 dBA	
425 / 3,999	Multi-Person Office	2	133	45 dBA	<b>42 dBA</b>
		4	267	50.5 dBA	
		6	400	55 dBA	
1,500 / 15,000	Common Area	1.86	465	60 dBA	<b>42 dBA</b>
		2.13	533	62 dBA	

Measurements taken 6ft from source  
Recording Room Size: 3,869ft<sup>3</sup>, (22ft. x 19ft. x 9ft.)



## Care & Maintenance

Maintaining the Blade Air HEPA Air Purifier is simple and crucial for optimal performance.

White glove maintenance service available by Blade Air expert team. Please contact Blade Air at [service@bladeair.com](mailto:service@bladeair.com) with a request or visit the Blade Air Website and select maintenance department to place an order.

[Contact Us >](#)

### 🕒 Important Note:

Discount provided on filter replacements with maintenance service package.

## Cleaning

Clean outside surfaces with a mild soap solution and a damp cloth, avoid abrasive cleaners and excessive moisture. See 'Safety Precautions' section.

## Operation

No specific steps required for daily operation. Unit should always be on unless unplugged.

## Troubleshooting

Ensure unit is plugged in to an appropriate, functioning power source. If unit is still not running, contact the Blade Air team, [service@bladeair.com](mailto:service@bladeair.com).

## Ordering a Replacement

The following components of the Blade Air HEPA Air Purifiers require maintenance. The projected lifespans assume the unit is run 24/7 and can be dependent on the dust loading of the specific space the unit is being used in.

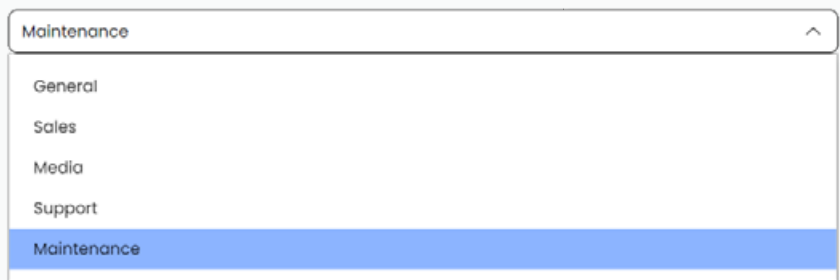
### HCFM-1 COMPONENT

### EXPECTED LIFESPAN

HEPA FILTER	4,380 Running Hours > 6 Months
PRE-FILTER	4,380 Running Hours > 6 Months
CARBON FILTER	8,760 Running Hours > 12 Months

### HCFM-1 Annual Bundle

When the time comes to order replacement components, contact [info@bladeair.com](mailto:info@bladeair.com) or see the 'Contact Us' page of the Blade Air Website. Select maintenance department to place an order.

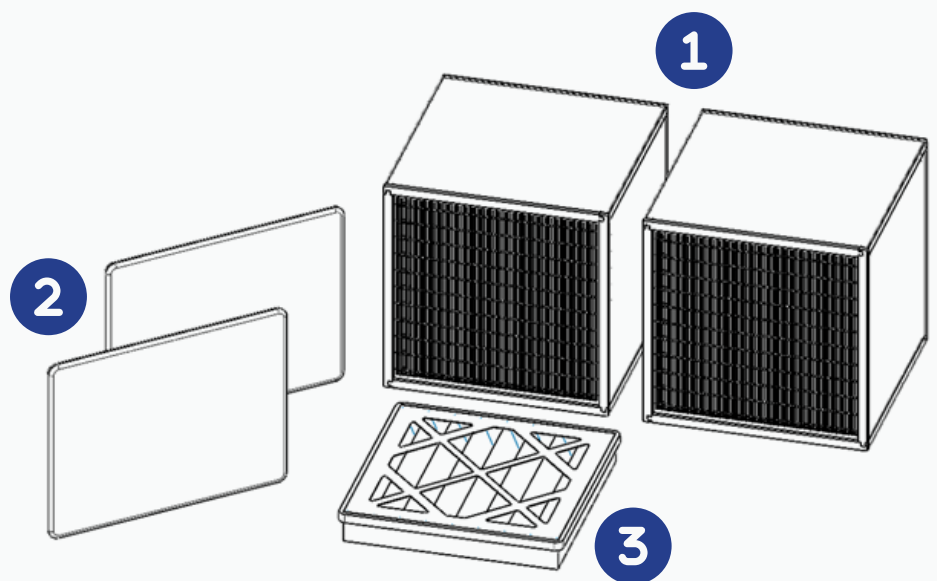


### HCFM-1 Annual Bundle

It is recommended to purchase an Annual Bundle within the first 6 months of installing a Blade Air HEPA Air Purifier and each year following.

The annual bundle includes the following:

- 1 2 HEPA FILTERS**
- 2 2 PRE-FILTERS**
- 3 1 CARBON FILTER**



## Installing Replacements

Review this section for the correct steps to take when performing maintenance. Scan the QR code below for a video demonstration.



### REQUIRED TOOLS

Power Drill

Size 3 Robertson Drill Bit

Size 3 Extended Robertson Drill Bit

Medical Grade Mask

Nitrile Gloves

Disposable Bag

**01.** Ensure the unit is disconnected from the main power supply.

**02.** Wait for fan to stop spinning before continuing with maintenance.

**03.** Ensure castors are in lock position.

**04.** Unfasten 4X tamperproof screws securing the top hood using drill with Roberston 2 head or Roberston 2 screwdriver.



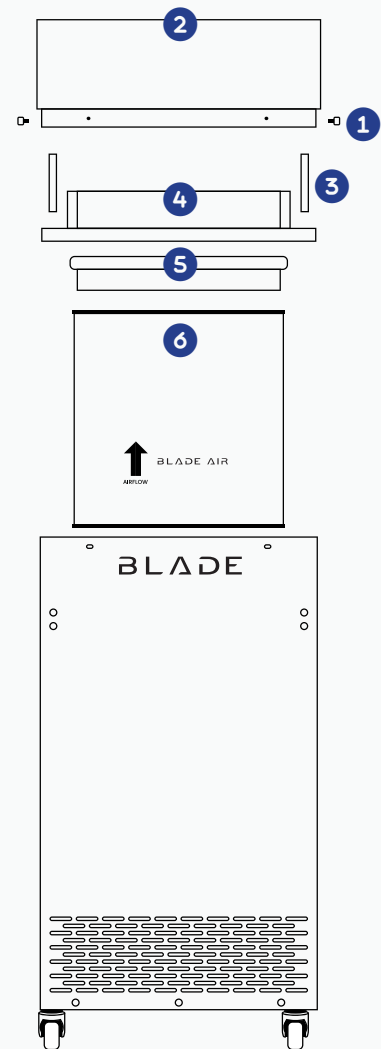
**05.** Remove the top hood and place on a flat and smooth surface.

**06.** Remove the four bolts securing down the carbon filter using drill with extended Roberston 3 head or extended Robertson 3 screwdriver.

**07.** Remove the carbon tray

**08.** Remove the exhausted carbon filter and transfer to a suitable disposal bag.

**09.** Remove the HEPA filter and transfer to a suitable disposal bag. Note the HEPA Filter can be taken to a metal scrap yard.



### HCFM-1 Dissassembly steps

Please follow the order of component removal for mainenance.

- 1** 4x Tamperproof Screws
- 2** Top Hood
- 3** 4x Bolts
- 4** Carbon Tray
- 5** Carbon Filter
- 6** HEPA Filter

**⚠ Important Note:** Maintenance times can vary depending on site conditions.

## Installing Replacements

Review this section for the correct steps to take when performing maintenance. Scan the QR code below for a video demonstration.



### REQUIRED TOOLS

Power Drill

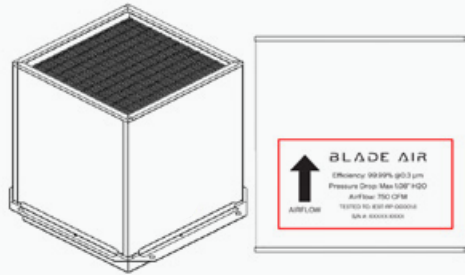
Size 3 Robertson Drill Bit

Size 3 Extended Robertson Drill Bit

Medical Grade Mask

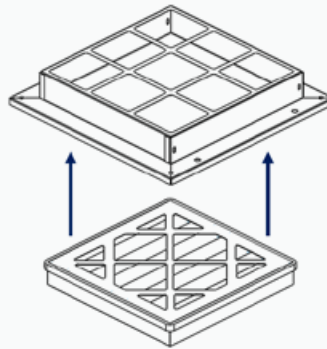
Nitrile Gloves

Disposable Bag



#### 10.

Insert New HEPA Filter and align with top plate. Ensure the airflow direction indicator on the side of the HEPA is facing the upward direction.



#### 11.

Place new Carbon Filter inside the carbon tray, ensuring the airflow arrow is pointing upwards when inside carbon tray.

#### 12.

Place the carbon tray with the pleated carbon filter inside into the air purifier

#### 13.

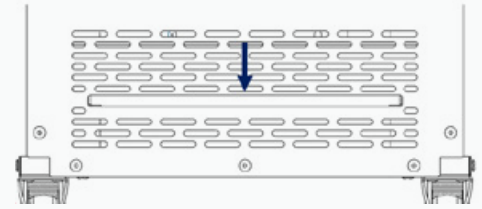
Ensure HEPA Filter is sitting flush with pleated carbon filter to prevent air leakage

#### 14.

Refasten the 4 bolts that hold carbon tray down to create compression, do not over tighten to avoid crushing filter elements.

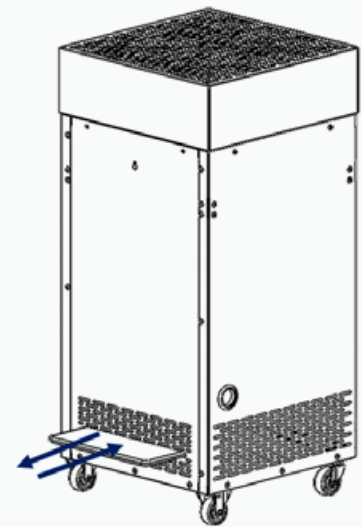
#### 15.

Place hood back on unit while ensuring that bottom flanges are sitting inside the air purifier and that all four lips are properly secured with tamperproof screws.



#### 16.

On the rear face of the unit, remove exhausted pre-filter by sliding it out of the slot of the unit and transfer to a suitable disposal bag.



#### 16.

Slide the new pre-filter into the vacant slot on rear face of the unit.

#### 17.


Locate the yellow maintenance sticker above the slot and write down the date that each filter was replaced.

#### 18.

Maintenance is complete and Blade Air HEPA Air Purifier can be reconnected to power.

#### ⓘ Important Note:

Maintenance times can vary depending on site conditions.



## Product Warranty

Blade Air Inc. (“Blade Air”) warrants the unit to be free from defects in workmanship or materials under normal use and service in accordance with our instructions (the “Warranty”) for a period of three (3) years (the “Warranty Period”) from the date of purchase through an authorized dealer or distributor.

During the Warranty Period, should a product be determined to be defective, Blade Air will repair or replace the defective unit(s) (at Blade Air or the applicable dealer or distributor’s option) within a reasonable period. Replacement will be made with a new or remanufactured product or component.

The Warranty is the only representation regarding the products covered by this manual and Blade Air Inc. disclaims all other warranties, including any implied warranties of merchantability or fitness for use. The Warranty does not cover normal wear and tear of parts or damage resulting from any of the following: negligent use or misuse of the product (including use other than in accordance with our instructions), use on improper voltage or current, repair, or alteration by anyone other than a Blade Air authorized service technician.

The Warranty does not cover acts of god such as fire, flood, hurricanes, earthquakes, and tornadoes. Blade Air shall not be liable for any damages of any kind resulting from the purchase, use or misuse of, or inability to use the product including incidental, special, consequential or similar damages or loss of profits, or for any breach of contract, fundamental or otherwise, or for any claim brought against the purchaser by any other party.

Some provinces, states or jurisdictions do not allow the exclusion or limitation of incidental or consequential damages or limitations on how long an implied warranty lasts, so the above limitation or exclusion may not apply to you.

### For Customer Service Inquiries

✉ [service@bladeair.com](mailto:service@bladeair.com)

☎ 416.701.0201

👉 [bladeair.com/contact-us](https://bladeair.com/contact-us)