

# OWNER'S MANUAL

KA-464-A

## MicroPleat HEPA Fan/Filter Module



**READ AND SAVE  
THESE INSTRUCTIONS**

**AIRGUARD**  
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*Changing The Way The World Cleans The Air*

Phone: 502/969/2304

Telefax: 502/961-0930

Website: [www.airguard.com](http://www.airguard.com)

# MicroPleat HEPA Fan/Filter Module Specifications

<b>HEPA FILTER</b>	A sealed, separatorless mini-pleat filter with anodized aluminum cell sides, minimum DOP efficiency of 99.99% @ 0.3 microns.
<b>ELECTRICAL</b>	Standard connection to terminal strip in external junction box. (See Wiring Schematic on Page 7.)
<b>PILOT LIGHT</b>	Red neon light mounted in the center of filter for visual confirmation that unit is operating and to identify specific groups of filter banks. Bulb is not a non-replaceable type.
<b>AIR FLOW</b>	Variable speed control to maintain 70 to 140 FPM ( $\pm 20\%$ ) measured six inches from filter face.
<b>BLOWER SECTION</b>	A backward curved motorized impeller is used for better airflow distribution and quieter operation. The $\frac{1}{4}$ HP motor is an external rotor, PSC type, with built-in thermal overload protector. Maximum airflow capacity is 800 CFM. Impeller is aluminum/plastic construction and an inlet ring is provided for improved performance. Blower housing is constructed of formed aluminum.
<b>GASKET</b>	Gray closed cell neoprene with dovetail corners applied around face the HEPA filters (when specified). Down-stream $-1/4"$ x $5/8"$ , Upstream $-1/8"$ x $5/8"$ .
<b>TEST PORT</b>	Internal test port for DOP challenge to filter and seal.
<b>PROTECTIVE FACE</b>	Steel screen with a white coating to protect the HEPA filter.
<b>OPTIONAL</b>	-Intake Prefilter – 16 x 20 pleated filter 35-40%, MERV 11
<b>ACCESSORIES</b>	-ULPA Filter – 99.9995% DOP Efficiency @ 0.12 Microns -Spare Prefilters
<b>WARRANTY</b>	Three-year warranty on all parts, except filters and pilot light from date of shipment. (Refer to Warranty Statement on back page.)

# Operation & Maintenance

## INSTALLATION

Install the MicroPleat fan module by carefully lifting the unit up through the ceiling grid opening. The MicroPleat requires a 2' x 4' opening. In a 2' x 2' system, remove one cross tee to create the larger opening. It may help to remove the ceiling panels from adjacent openings while setting the fan module in the ceiling grid. Center the fan module in the ceiling opening. All four corners of the ceiling grid around the fan module should be supported from above.

**Caution:** Be careful handling the module. The filter face is delicate and can be punctured or fractured easily. Only lift or handle the anodized aluminum parts of the fan/filter.

Connect appropriate power supply equal to MicroPleat fan motor.

**CAUTION** - TO REDUCE THE RISK OF INJURY TO PERSONS, INSTALL THE UNIT AT LEAST 7 FEET ABOVE GRADE OR IN CEILING.

**TROUBLE SHOOTING** Use the following table to diagnose problems with the Micropleat unit.

<b>Problem</b>	<b>Probable Cause</b>	<b>Remedy</b>
HEPA Monitor "red light" not on	No Power to unit  Defective pilot light Defective motor	Check wiring connections  Check circuit breaker Replace pilot light Replace motor
No air flow	Dirty prefilter Restricted intake or duct  Locked Motor  Faulty motor	Replace prefilter Check intake grille and duct for blockage Check motor for foreign object, restricted rotation Check wiring and/or replace motor

## HEPA FILTER REPLACEMENT

HEPA filters should have a velocity profile taken once a year and particle counts every six months. HEPA filters should be changed when the velocity falls below 70 feet per minute, as measured 6 inches below the filter face.

**To change the filter:** Remove the plastic clamping strips located on the side of the unit. Starting at one end, pull the bottom portion out away from the filter and work toward the other end until the entire bottom rib has been pulled out. The strip should come off at this point. Repeat this step for the remaining strips. Carefully separate the frame from the filter and disconnect the two pilot light wires. Discard the old filter and pilot light; replace with a new filter. Connect the pilot light wires of the new filter to the leads from the blower housing. Attach the filter and frame back together with the plastic strips by reversing the procedure used to remove them.

**WARNING - RISK OF ELECTRIC SHOCK.  
CAN CAUSE INJURY OR DEATH:**  
Disconnect all remote electric power  
supplies before servicing.

## SPEED CONTROL ADJUSTMENT

**NOTE** - This procedure involves the removal of one plug in the outlet side of the HEPA filter. The air coming out of this port does not pass through the filter section.

1. Remove the slotted screw and plug from the test port in the center divider of the filter face.
2. Insert the screwdriver into the open port approximately three inches until it engages the speed control adjustment screw. Rotate the screwdriver to engage into the slot.
3. Rotating the screwdriver clockwise slows the fan speed; counterclockwise rotation speeds up the fan speed.
4. When the desired airflow is reached, install the plug snugly back into the port.

## REPLACEMENT PARTS

Motorized Impeller  3 speed, 115/1/60, 160 watts 3 speed, 277/1/60, 160 watts
Capacitor  115-volt 227-volt
Motor Speed Control  115-volt 277-volt
Red Neon Pilot Light
Filter Retainer Clip

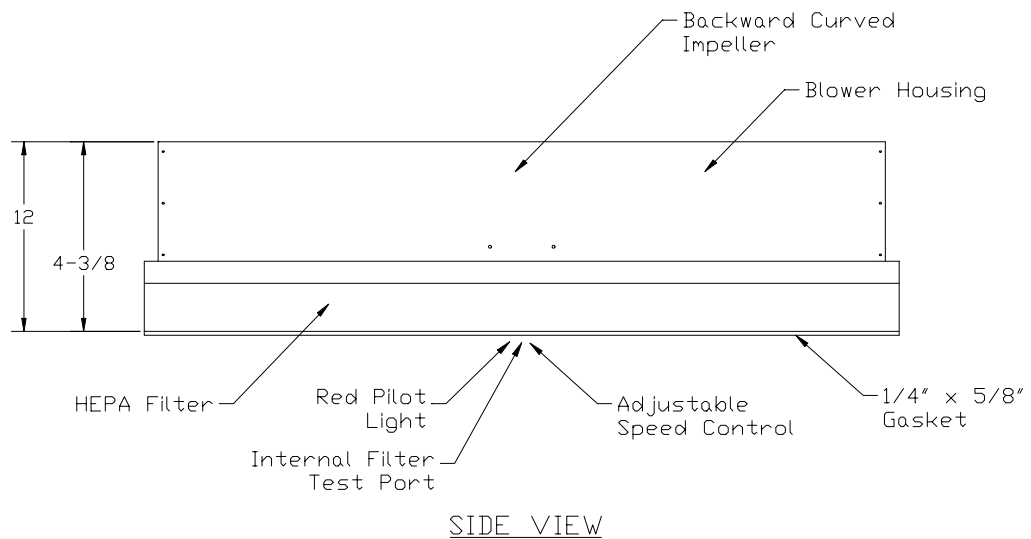
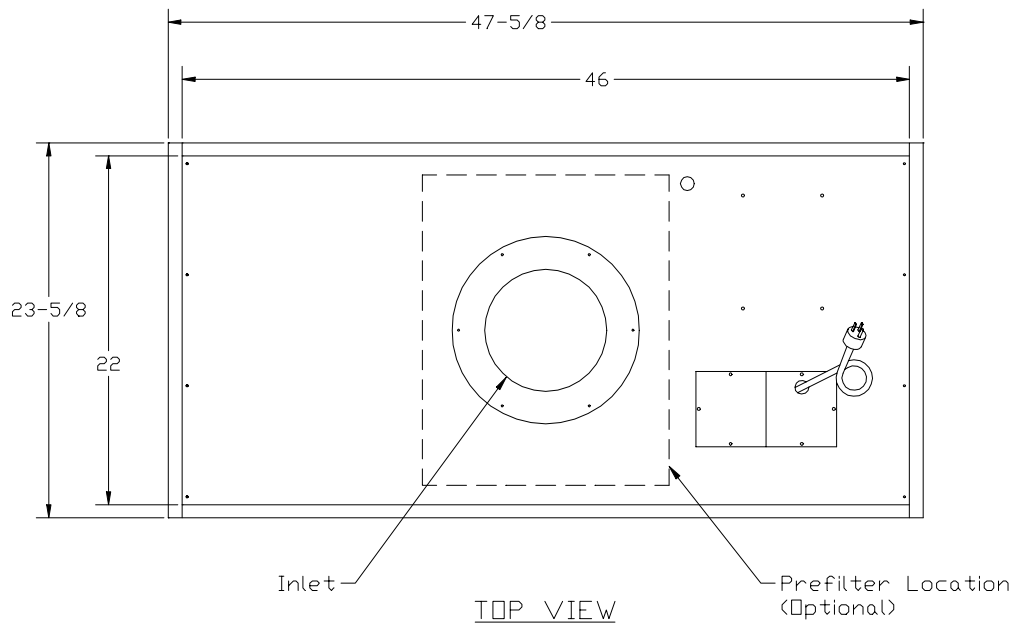
## REPLACEMENT FILTERS

Prefilter, 16"x20, 35-40%, MERV 11 Type FFP Pleated Filter
HEPA Filter, 2'x2' or 2'x4". 53mm pack, 99.99% @ 0.3um
ULPA Filter, 2'x2' or 2'x4". 53mm pack, 99.99% @ 0.3um

## INSTALLATION OF PREFILTER (OPTIONAL)



# Dimensions

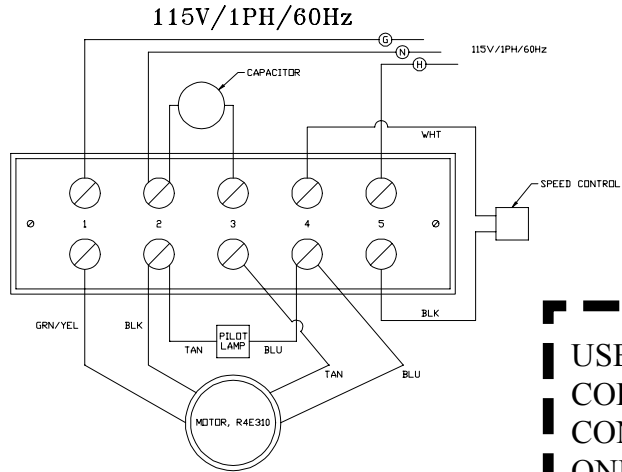


## NOTES:

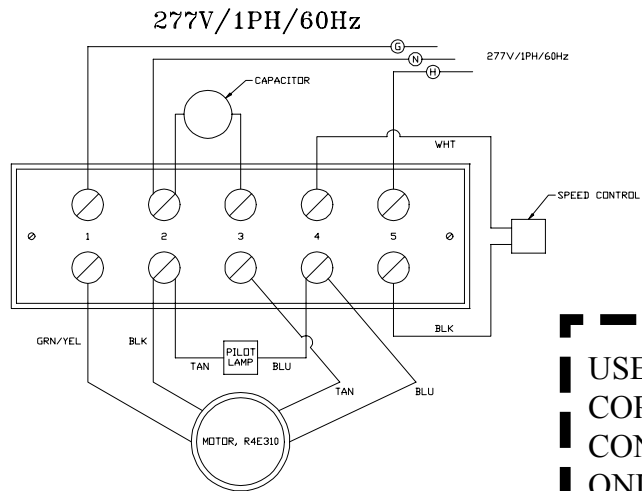
1. MicroPleat HEPA fan module self-contained blower/filter
2. Blower Section – Direct drive with backward curved motorized impeller
3. Filter Section – HEPA or ULPA filter available
4. Prefilter (optional) – 16" x 20", 35-40%, MERV 11 Type FFP pleated filter
5. Total unit weight = 54 lbs.

# Wiring Schematics

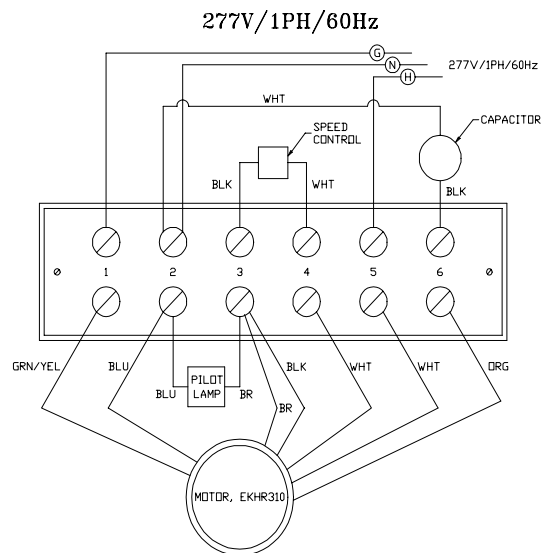
# THERMALLY PROTECTED



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# **MANUFACTURER'S LIMITED WARRANTY**

Your Micro Pleat fan/filter unit is made of good-quality material by skilled workmen and designed to provide trouble-free service with ordinary use and care. Its manufacturer, Airguard Industries, Inc., P.O. Box 32578, Louisville, KY 40232, warrants the quality of its units according to the terms and conditions stated in this warranty.

Airguard warrants to the original purchaser that this unit will be free of structural or mechanical defects due to faulty materials or workmanship for three years from the date of shipment, except for the prefilter, HEPA filter and pilot light, which will require replacement from time to time depending upon the use.

This warranty applies only to products or parts manufactured by Airguard and is contingent upon the following conditions: that the purchaser promptly notify Airguard of the defect; that the purchaser establish that the product or part has been properly installed, maintained and operated within the limits of normal usage as specified by Airguard; and that, at Airguard's request the purchaser return the defective product or part to Airguard at the purchaser's expense. AIRGUARD MAKES NO OTHER WARRANTIES AND SPECIFICALLY MAKES NO IMPLIED WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR NONINFRINGEMENT.

As the purchaser's exclusive remedy for any claim (whether in warranty, contract, tort or strict liability), Airguard, at its option, will repair or replace the defective products or parts or refund the purchase price of defective products or parts. Airguard will not be responsible for labor or transportation charges for the removal, return, reshipment or reinstallation of products or parts. IN NO EVENT IS AIRGUARD RESPONSIBLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES RELATING TO ANY CLAIM (WHETHER IN WARRANTY, CONTRACT, TORT OR STRICT LIABILITY), INCLUDING WITHOUT LIMITATION CLAIMS FOR INJURY TO PERSON OR PROPERTY OR LOST PROFITS.

Airguard is not responsible for damage to any product or part incurred during shipment. Any claims for shipping damages should be filed directly with the carrier.