

---

# SUPPLYING CLEAN AIR TO INDUSTRY

## **FumeFighter®**

### COMPACT HIGH EFFICIENCY FUME EXTRACTOR



The FumeFighter® high efficiency fume extractor removes harmful particulate, fumes and gases before they reach the worker's breathing zone. The FumeFighter® can help reduce employee absenteeism, employee turnover, worker's compensation claims and lost productivity. Compact, portable and versatile, the FumeFighter® can be used in a wide variety of applications including: electronics soldering, jewelry repair brazing, cleanrooms and more!



## **TABLE OF CONTENTS**

SPECIFICATIONS	2
DIMENSIONS	3
SAFETY AND APPLICATION	5
INSTALLATION	7
Arm	8
Bench Mount	9
Optional Silencer Installation	10
OPERATION	11
MAINTENANCE	12
WARRANTY	14

## SPECIFICATIONS

### - IMPORTANT -

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

#### **DIMENSIONS:**

**WEIGHT:** 70 lbs.

**AIRFLOW:** Up to 225 CFM (with two arms)

**CABINET:** 18-gauge welded steel cabinet with chemical resistant baked enamel, textured finish

**FILTRATION:** **1<sup>st</sup> Stage** – 15" x 60" mesh impregnated with carbon wrapped around the HEPA filter.

**2<sup>nd</sup> Stage** – 82 sq. ft. of 99.97% efficient at 0.3 microns particle size

**3<sup>rd</sup> Stage** – 15 lbs. total of Activated Carbon

#### **MOTORIZED**

**IMPELLER:** Backward curved, vibration-free, direct drive rated at 50-500 cfm @ 0.9" WG

**FAN CONTROL:** Infinitely variable speed controller

**ELECTRICAL:** 115 Vac, 60 Hz, 2 amps  
230 Vac, 60 Hz, 1 amp

**POWER CORD:** 10-foot power cord with standard molded plug

**SOUND LEVELS:** **Without Silencer** – 67 dBA @ 6.5 ft.

**With Silencer** – 62 dBA @ 6.5 ft.

#### **OPTIONAL COLLECTOR**

**ARM:** 48" long, 3" diameter stainless steel collector arm (2 available to mount per FumeFighter®)

#### **AMBIENT OPERATING**

**TEMPERATURE:** 32 °F To 122 °F

#### **STORAGE**

**TEMPERATURE:** -40 °F To 257 °F

#### **AMBIENT OPERATING**

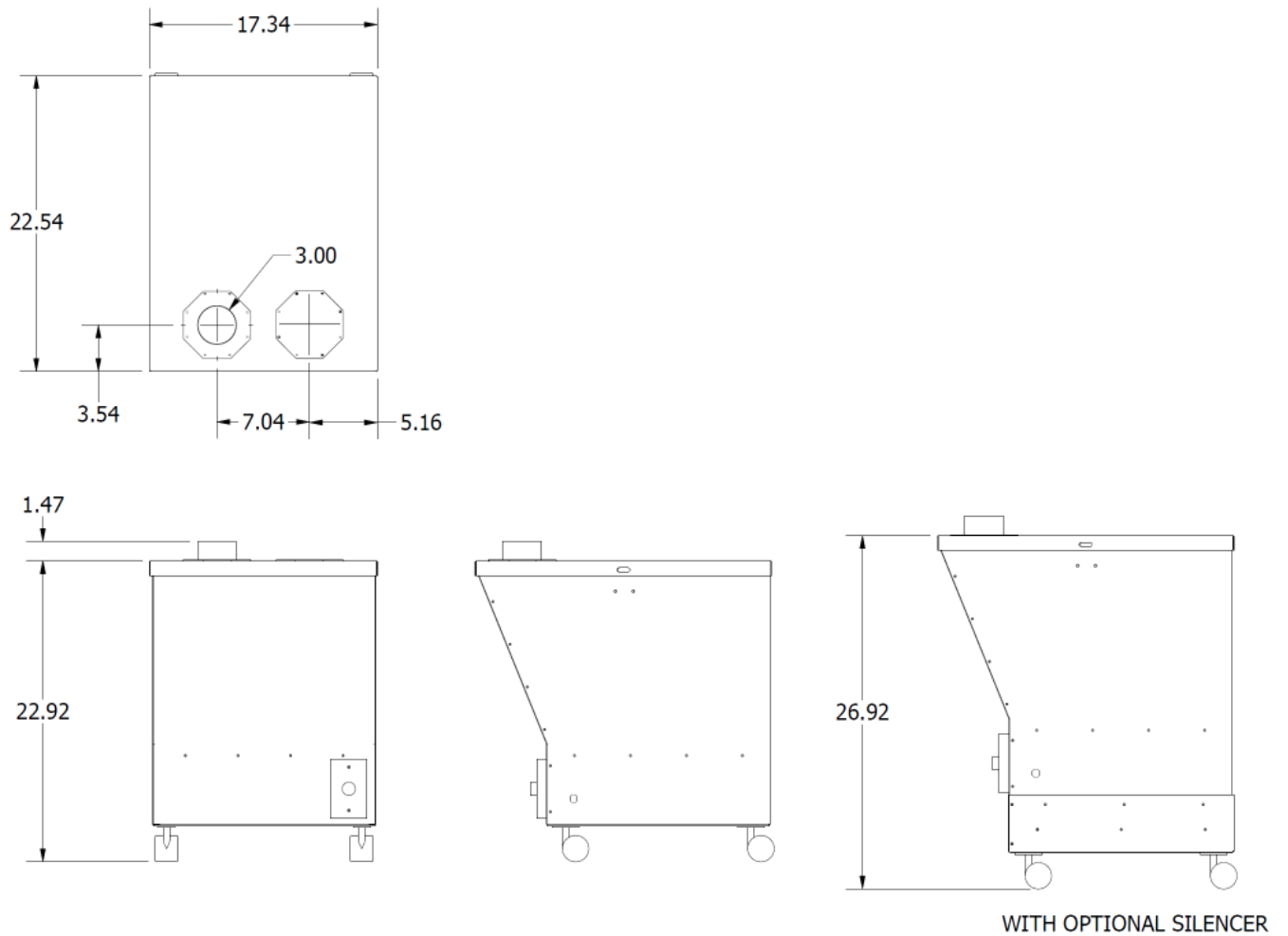
**HUMIDITY:** 90% relative humidity maximum non-condensing

#### **STORAGE**

**HUMIDITY:** 90% relative humidity maximum non-condensing

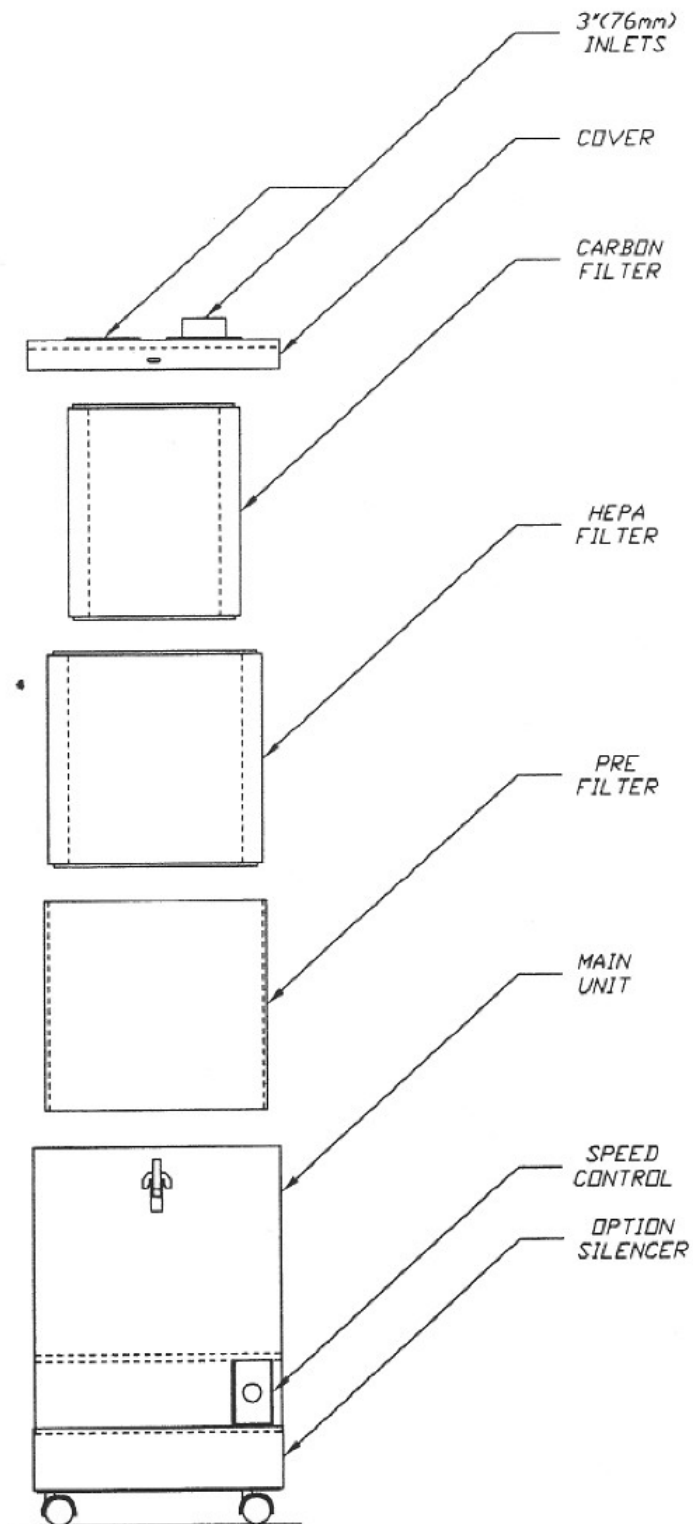
*This unit is to be used exclusively for source control in industrial applications in California.*

## DIMENSIONS



**Figure 1: FumeFighter® Dimensions**

## GENERAL INFORMATION



**Figure 2: FumeFighter® Parts Identification**

## SAFETY AND APPLICATION INFORMATION

Air Quality Engineering's FumeFighter® System is designed to reduce the level of harmful contaminants from the work environment and to assist in the achievement of recommended health and safety requirements for local exhaust ventilation and contaminant removal. Be sure to follow all Application and Maintenance guidelines contained herein and precautions contained in other relevant product safety literature (i.e., Material Safety Data Sheets) provided with the substances and equipment producing the fumes to be extracted.

### DISCLAIMER

Air Quality Engineering hereby disclaims all responsibility for any personal injury, property Damage, fine, citation or penalty imposed by any government or private entity which results from any use, misuse or mis-application of this product, failure of the user to regularly maintain the product according to the recommended guidelines, or failure to adequately monitor FumeFighter® exhaust air and the ambient workplace air for the presence of harmful levels of gases, fumes and particulates.

Compliance with all applicable environmental and personnel safety regulations is the sole responsibility of the user and adequate self-monitoring of exhaust air released into the atmosphere or the workplace as well as monitoring of the ambient workplace air is strongly recommended.

### WARNING

FAILURE TO COMPLY WITH THE APPLICATION AND MAINTENANCE GUIDELINES, FILTER REPLACEMENT SCHEDULES, MONITORING RECOMMENDATIONS AND SAFETY GUIDELINES CONTAINED HEREIN AND IN OTHER RELEVANT PRODUCT SAFETY LITERATURE (I.E., MATERIAL SAFETY DATA SHEETS) PROVIDED WITH THE SUBSTANCES AND EQUIPMENT PRODUCING THE FUMES TO BE EXTRACTED COULD RESULT IN RISK OF SERIOUS INJURY, FIRE OR EXPLOSION

To insure continued effective performance, the following guidelines must be followed.

### HEPA and Gas Filter Cartridges

Your FumeFighter® comes standard with the HEPA and Gas Filter Cartridge. The HEPA and Gas Filter Cartridges are designed to capture particulates and noxious gases and odors that are present in the air being filtered. Over time, the HEPA filter cartridge will gradually become clogged, impeding airflow through the system, and the capacity of the gas filter cartridge will be decreased, reducing its ability to continue to adsorb noxious gases and odors.

HEPA and Gas Filter Cartridges *must be replaced at regular intervals* to ensure that the FumeFighter® is operating effectively. These intervals will vary depending on the type of work being performed, the level of use, and the amount and composition of airborne contaminants produced.

## SAFETY AND APPLICATIONS INFORMATION

### CAUTION

To ensure the highest level of performance, use only genuine Air Quality Engineering replacement filter cartridges in your FumeFighter®

The exhaust air stream from the central filtration unit as well as the ambient air in the workplace should be monitored with the appropriate and adequate measuring/detection device to assure compliance with all applicable health and safety regulations.

Flammable vapors and gases (e.g. Isopropyl Alcohol) are removed by and accumulate in the HEPA and Gas filter cartridges presenting a potential fire hazard. Therefore, the user must exercise appropriate precautions when extracting such fumes or when handling and disposing of filter cartridges containing such flammable substances. Follow *all fire safety and personnel protection guidelines* contained in the Material Safety Data Sheet (MSDS) for the substance(s) producing the extracted vapors and gases (fumes).

### DANGER

AIR QUALITY ENGINEERING FUMEFIGHTER®S ARE NOT INTENDED TO BE USED AS A SUBSTITUTE FOR DEVICES SUCH AS PERSONAL PROTECTIVE RESPIRATORS WHICH ARE DESIGNED TO REMOVE POORLY ADSORBED SUBSTANCES INCLUDING CARBON MONOXIDE, METHANE, HYDROGEN, ACETYLENE AND OTHER GASES. RISK OF SERIOUS INJURY OR DEATH, FIRE OR EXPLOSION MAY RESULT FROM IMPROPER USE. IF IN DOUBT, CONSULT WITH YOUR INDUSTRIAL HYGIENIST OR AIR QUALITY ENGINEERING.

When disposing of used filter cartridges, extreme care must be taken to comply with *all* applicable environmental regulations. Carefully consult the MSDS supplied with the material(s) producing the fume. If in doubt, check with your local environmental authority.

Extreme care must be exercised when disposing of a used HEPA and Gas filter cartridge containing potentially hazardous substances. When disposing of filter cartridges, appropriate and adequate personal protective equipment (i.e. gloves, respirators, plastic containment bags, etc.) must be used when hazardous substances such as asbestos, lead, radioactive or biohazard materials may be present. Consult the Material Safety Data Sheet (MSDS) of the materials generating the extracted fume.

### WARNING

Use with inappropriate chemicals or substances, failure to provide regular maintenance or other misuse of your FumeFighter® may result in contaminated air being recirculated into the work environment.

## INSTALLATION

### DANGER

Never use the FumeFighter® to remove fumes from highly flammable liquids and gases such as ether, gasoline (petrol) and others. Risk of serious injury, death, fire, or explosion may result.

### GENERAL

The FumeFighter® has been designed with maximum installation flexibility in mind. A number of configurations may be used. (See the "Configurations" section.) The FumeFighter® is designed to be used with *one or two* flex arms. The following are recommended guidelines for setting up your FumeFighter®. If you have any specific questions that this section does not cover, please consult your Air Quality Engineering, Inc. Representative.

#### 1. Placement

There are three major considerations that need to be addressed for proper placement of the central filtration unit.

**Exhaust Port:** The exhaust port is located on the bottom of the filtration unit. When positioning the unit, make sure that the exhaust port is ***not*** blocked or that airflow from the exhaust port is not restricted in any way. Additionally, the on/off switch must be readily accessible.

**Unit Location:** The filtration unit should be located so that it will not block aiseways or impede normal operating traffic or material handling pathways. It is important to position the unit in such a way that allows for proper clearance to remove the filler access cover and replace the filters as needed.

**Proximity to the work area:** The filtration unit should be placed as close to the work area as possible. If using a flex hose, it is advantageous to keep the length of flex hose as short as possible. Do not kink or create any sharp bends in the flex hose as this will reduce airflow.



## SETUP

### 2. Power

The FumeFighter® will plug into a standard 110 Volt electrical outlet. Be sure the filtration unit is plugged into 110 Volt power supply. If your unit is a 220 Volt, be sure to plug the fume fighter into the correct outlet for the unit you purchased.

### WARNING

Failure to supply the correct voltage to the unit will result in damage to the motor.

### 3. Media Filter

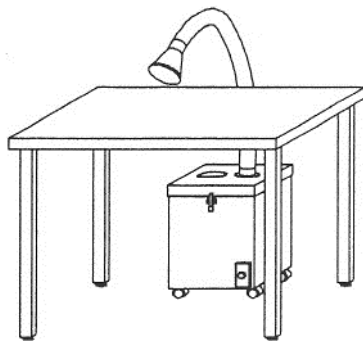
To use the prefilter, remove the standard HEPA filter cartridge and install the Particulate Filter around the outside of the HEPA filter cartridge. Before operating the unit, make sure the filter is correctly positioned. The pre-filter is always on the outside of the HEPA and Gas Filters.

## Configurations

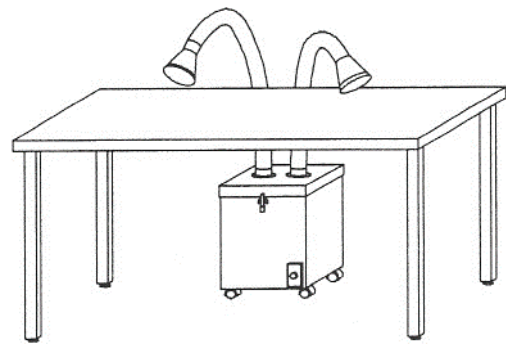
### Connecting One or Two Flex Arms (Optional)

1. Remove the 8 screws on the inlet flange and remove inlet flange.
2. Place flange of the flex arm over the hole and align mounting holes. Attach the flex arm with the 8 screws.
3. If a second flex arm was ordered remove the 8 screws on the cover plate and repeat step 2.

Note: If only one arm is being used make sure the second port is covered for maximum airflow.



Fume Fighter Fitted with One Flex Arm



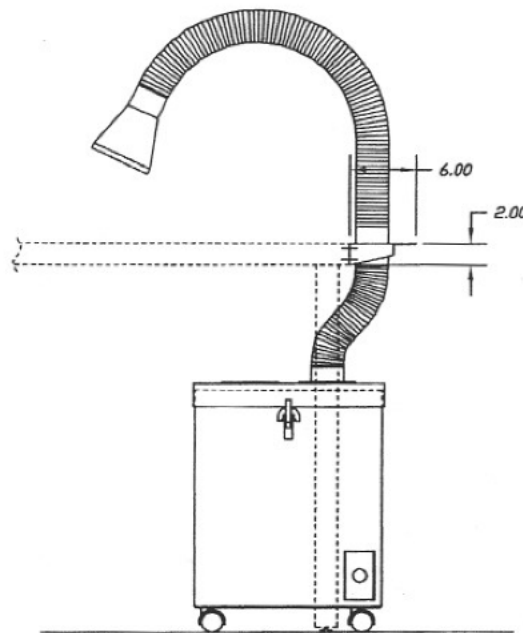
Fume Fighter Fitted with Two Flex Arms

## INSTALLATION

### Connecting One or Two Bench Mounted Flex Arms (optional)

Note: If you ordered a flex arm (70082) with a bench mount kit (70081) the flex arm will be attached to the bench mount bracket.

1. Position the bench-mount on the edge of the tabletop and secure it with the two screws provided.
2. Slide one end of the flex hose on the inlet flange on the FumeFighter® and attach with hose clamp.
3. Attach the other end of the flex hose to the outlet flange of the bench-mount bracket and attach with hose clamp.
4. If only one flex arm is being used make sure second port on the FumeFighter® is capped. If second bench mount arm is going to be used install flange on the second port of the FumeFighter® and follow steps 1 through 3.



FumeFighter® fitted with one Flex Arm and Bench Mounting Kit

### WARNING

Inspect arm before every use to ensure proper operation and for damage. If arm is damaged discontinue use and repair or replace arm.

## SILENCER INTALLATION

- 1) Turn off power and unplug from line-in source.
- 2) Remove the bottom grille plate with the casters on it. Position self-adhesive foam to the inside center of the grille plate (opposite side of the casters).
- 3) Attach the new supplied grille plate to the bottom of the unit (with foam to the out side), using only the center holes on each side.
- 4) Secure the four angle brackets to the bottom of the unit, using the remaining holes on the bottom of the unit.
- 5) Reattach the bottom grille plate with the casters on it, to the silencers bottom edge with the screws provided.
- 6) Slide the silencer over the angle bracket and bottom edge of the unit, secure with the screws provided three screws per side.

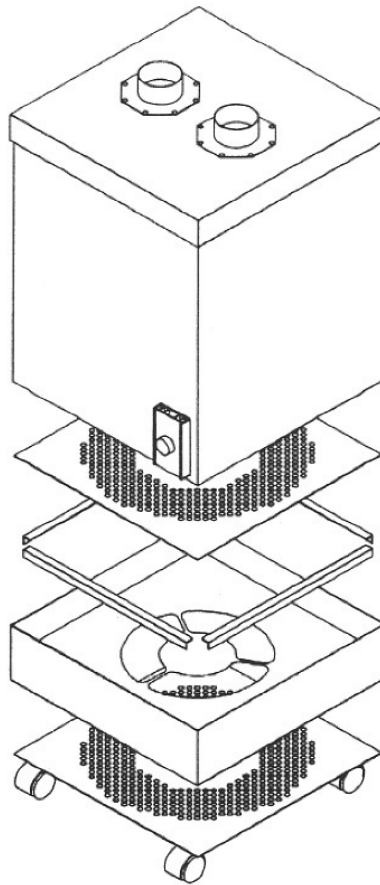


Figure 7: FumeFighter® Silencer Part Identification

## **OPERATION**

The following information provides the user with the operating instruction for normal use.

### **Procedure**

- 1) Turn on the FumeFighter® with the Speed Control knob.
- 2) Position the Flex Arm in a convenient and effective extraction location.
- 3) Set the Speed Control to your desired speed for best extraction.

### **General Tips**

- Before opening the FumeFighter® turn off the power source.
- The FumeFighter® must not be used without filters. Impurities in the extracted air could damage the impeller motor.
- Do not extract corrosive compounds without checking with Air Quality Engineering, Inc.
- Do not use the FumeFighter® to collect highly flammable or explosive substances.

## **MAINTENANCE**

### **Pre-Filter**

The Pre-Filter removes coarse particles from the air. In general, the pre-filter must be changed on a semi-annual basis. However, depending on your process the filter may need to be changed more or less frequently. A visual inspection on a monthly basis is recommended.

#### **Replacing the Pre-Filter**

- 1) Remove the filter access cover
- 2) Remove the old Pre-Filter from around the HEPA filter cartridge
- 3) Install a new Pre-Filter around the HEPA filter cartridge and tape
- 4) Attach the filter access cover
- 5) Dispose of the used Pre-Filter properly

### **HEPA Cartridge**

The HEPA (High Efficiency Particulate Air) filter removes particulate from the air down to .03 microns. In general, the filter cartridge must be changed every 18 to 24 months. However, depending on your process, the filter cartridge may need to be changed more or less frequently.

#### **Replacing the HEPA Cartridge**

- 1) Remove the filter access cover
- 2) Remove the old larger diameter filter cartridge
- 3) Install new filter cartridge
- 4) Attach filter access cover
- 5) Dispose of old filter properly

### **Gas Filter Cartridge**

The Gas filter cartridge captures noxious odors and gases. In general, the filter cartridge must be changed every 18 to 24 months. However, depending on your particular process, the filter cartridge may need to be changed more or less frequently.

#### **Replacing the Gas Filter Cartridge**

- 1) Remove the filter access cover
- 2) Remove the old inside smaller diameter filter cartridge
- 3) Install the new filter cartridge
- 4) Replace filter access cover
- 5) Dispose of old filter properly

## MAINTENANCE

### WARNING

Do not attempt to clean the pre-filter, HEPA or Gas filters for reuse. Cleaning the filters will severely damage the filter media and consequently, the filter's performance. This will result in unfiltered, contaminated air being returned to the working environment. Unfiltered air can also damage the motorized impeller.

## FUMEFIGHTER® ACCESSORIES

Monthly cleaning of the FumeFighter® Accessories is recommended. When cleaning accessories, use a non-aggressive cleaning solvent or detergent only. Make sure the accessories are completely dry before reuse.

### REPLACEMENT FILTERS

<u>Model</u>	<u>Pre-Filter</u>	<u>Standard HEPA Filter Cartridge</u>	<u>Carbon Filter Cartridge</u>
FumeFighter®	41174	41164	41163

Table 2: Replacement Filters

### FumeFighter® Flex Arm (*PIN 70082*)

- 30" (750mm) long x 3" (75mm) diameter stainless flex arm
- Fume collection canopy

### Bench Mounting *Kit* for FumeFighter® Flex Arm (*PIN 70081*)

- Includes bench mounting bracket and 8" (203 mm) of 3" (75mm) flex hose

### FumeFighter® Silencer (*PIN 07194*)

- For applications where the FumeFighter® will be operating in a setting with low background noise levels.
- 4 3/8" (112mm) H x 17 3/16" (437mm) W x 17 3/16" (437mm) D

## WARRANTY CERTIFICATE

### THREE-YEAR LIMITED WARRANTY

Air Quality Engineering, Inc. (AQE), warrants to the original purchaser, subject to the conditions below, that if the "Product" covered by this warranty should fail to perform by reason of improper workmanship or material, AQE will during the period of three (3) years from the date of original purchase either (i) replace the product or (ii) provide all necessary parts to repair the product without charge. The decision to replace the product or the necessary parts shall rest solely with AQE. This three-year limited warranty does not apply to main filter elements. AQE will replace without charge the main filter elements during the period of thirty (30) days from the date of original purchase if the main filter elements fail to perform by reason of improper workmanship or material. This warranty is valid only under the following conditions:

### CONDITIONS

1. **REGISTRATION:** The purchaser's completion and mailing of the Registration Card to Air Quality Engineering, Inc., 7140 Northland Drive North, Minneapolis, Minnesota 55428-1520 within 30 days of original purchase.
2. **AUTHORIZATION:** The purchaser will contact AQE at (800) 328-0787 for authorization, returned goods number (RGA) and the shipping address. AQE will direct the purchaser to either return the necessary parts or the product at AQE's option.
3. **PROPER DELIVERY:** The shipping, freight prepaid or delivery of the parts or the product to AQE in either its original carton or in a carton assuring similar protection of the product with the returned goods number (RGA) clearly displayed on the outside of the carton.
4. **UNAUTHORIZED REPAIR:** A showing by the original purchaser that the product has not been altered, repaired or serviced by anyone other than an authorized service technician using genuine AQE parts.
5. **UNAUTHORIZED PARTS:** A showing by the original purchaser that the product has had only genuine AQE parts and filters used in its operation and maintenance.
6. **SERIAL NUMBER INTACT:** A showing by the original purchaser that the serial number has not been altered or removed.
7. **MISUSE:** A showing by the original purchaser that the product has not been involved in an accident, freight damaged, misused, abused or operated contrary to the instructions contained in the Owner's Manual.

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

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

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

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

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

MANUFACTURER & WORLDWIDE DISTRIBUTOR OF SMOKEMASTER® AIR CLEANING SYSTEMS