



**ARM-EVAC<sup>®</sup> 105**

**Central Filter Unit**

**MANUAL NO. 8881-0990  
REV. C**

**TABLE OF CONTENTS**

Safety ..... 1  
Introduction..... 2  
Specifications..... 2  
Features ..... 3  
Set up ..... 3  
Operation ..... 4  
Maintenance..... 4  
Troubleshooting..... 4  
Filter Replacement & Spare Parts..... 5  
Warranty ..... 7

<b>WARNING</b>
Read the safety & setup information sections in this manual before installing and using your fume extraction system.

## **Safety**

PACE Fume Extraction systems are designed to reduce the level of harmful contaminants from the work environment and to assist in achieving the recommended health and safety requirements for local exhaust ventilation and contaminant removal. Be sure to follow all safety guidelines contained here and in other relevant safety literature (i.e., Material Safety Data Sheets) provided with the substances and equipment producing the fumes to be extracted.

## **Disclaimer**

PACE 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 misapplication of this product, failure of the user to regularly maintain the product according to the recommended guidelines, or failure to adequately monitor fume extraction exhaust air and the ambient workplace air for the presence of harmful levels of gases, fumes and particulates.

Compliance with all applicable environmental and personal safety regulations is the sole responsibility of the user. Adequate self-monitoring of exhaust air released into as well as monitoring of the ambient workplace air is strongly recommended. To insure continued effective performance, the following guidelines must be followed.

## **Dangers**

1. PACE Fume Extractors 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, contact your industrial hygienist or PACE.
2. Never use PACE Fume Extraction Systems to extract fumes from highly flammable liquids and gases such as Ether, Gasoline (Petrol) and others. Risk of serious injury, death, fire or explosion may result.
3. High concentrations or airborne contaminants such as Methyl Ethyl Ketone, Cyclohexane, Ozone and others when contacted with activated carbon, can undergo oxidation, decomposition or polymerization resulting in exothermic reactions or heat generation. PACE Fume Extraction Systems must not be used to extract fumes from these substances when high concentrations are present.
4. 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.

## **Introduction**

Solder Fume removal when hand soldering is an often-overlooked work place hazard. Medical research has confirmed an increased incidence of occupational asthma, chronic bronchitis, allergic reactions and other deleterious health effects to be associated with exposure to solder/flux fumes in the electronics industry.

The PACE Arm-Evac 105 Central Filter Unit represents the latest technology in affordable fume extraction. It features a brushless motor along with a filtration process which includes a pre-filter for course particle removal, and a HEPA-Type Particulate/Gas Filter cartridge for efficient filtration. Several types of filters are available:

- 1) A General Purpose Filter for normal soldering applications.
- 2) A Clean room Filter for use in clean room environments.
- 3) An Adhesive Filter for removing fumes produced from light gluing applications.
- 4) An Economy Foam filter for larger applications such as sanding, bench-top machining & grinding.
- 5) An Extended Life Filter and High Capacity Pre-Filter for longer maintenance intervals during normal soldering operations.

The Arm-Evac 105 Fume Extractor uses specially designed extraction accessories that can be conveniently mounted on any workbench or tabletop. The Arm-Evac 105 can be used to extract fumes from one or two different work benches/collection points.

## **Specifications**

Arm-Evac 105 System Part Number	8888-0110-P1 for 110V, 60hz unit
	8888-0105-P1 for 230V, 50hz unit
Flow Rate with standard filter	Single inlet: 131 cfm
	Dual Inlet: 70cfm per inlet
Flow Rate with Cleanroom Filter	Single inlet: 122cfm
	Dual inlet: 62cfm per inlet
Noise Level	57dbA at 2 meters
Weight	11.5Kg (25.3lbs)
Size H x W x D	362 x 290 x 290mm
	(14.25" x 11.5" x 11.5")
Housing	20 gauge steel (static safe)
Number of inlets	Two 75mm (3")
# of Collection accessories	Two 65mm (2.5") or 75mm (3")
Maximum duct run	2.5m (8') per inlet

## **Environmental Specifications**

Ambient operating temperature	0°C to 50° (32°F to 122°F)
Storage temperature	-40°C to 125°C (-40°F to 257°F)
Ambient operating humidity	90% relative humidity max non-condensing
Storage humidity	90% relative humidity max non-condensing

## Features

### Arm-Evac 105 Central Filter Unit

1. On/Off Switch
2. 75mm (3") inlets/Lid
3. Lid clasps

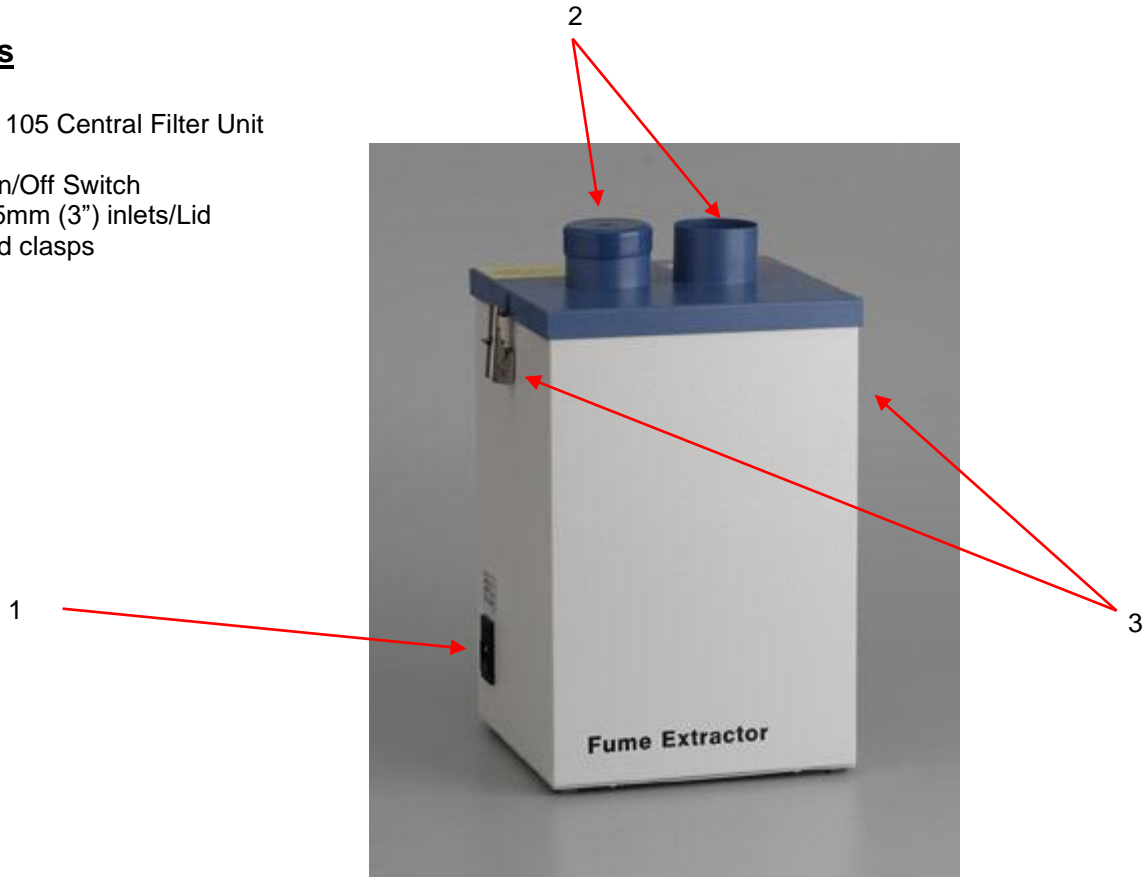


Fig.1 Arm-Evac 105 Central Filter Unit

## Set up

1. The Arm-Evac 105 has been designed for ease of use and maximum installation flexibility in mind. The major considerations for placement of the unit are:

### **Exhaust Port:**

This is located on the right side of the 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.

### **Proximity to work area:**

The unit should be placed as close to the work area as possible. Do not create any sharp bends in the flexible hose (sold separately), as this will reduce airflow.

### **Unit Location**

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

2. The Arm-Evac 105 will plug into either a standard 110v or 230v electrical outlet. The appropriate power cord is provided with each system.

## **Operation**

1. Remove Arm-Evac 105 from packaging and place in suitable position.
2. Plug the supplied power cord into receptacle at left side of unit, ensuring that it is connected to a properly grounded outlet.
3. Fit appropriate fume collection accessories.
4. Turn on the Arm-Evac 105.

## **Maintenance**

Fuses: The fuse is located in a sliding tray at the left side of the unit, just below the power receptacle. Each Arm-Evac is supplied with one replacement fuse, also located in the sliding tray.

Fan Assy: The Arm-Evac 105 is fitted with a brush-less, single inlet fan assembly, which does not require routine maintenance. It is important that fume extractor filters are changed on a regular basis to protect the fan assembly.

A vent is located on the right side of the unit to allow the cleaned air to return to the workplace. Do not cover this vent as this may cause damage to the fan assembly.

Never operate the Arm-Evac 105 without filters installed.

## **Troubleshooting**

<b>Symptom</b>	<b>Possible Causes</b>	<b>Solution</b>
System will not turn on.	No power supplied to unit	Make sure the power cord is fully seated and that the power is turned on.
Reduced Airflow	Filter blocked.	Check & change filter(s)
	Arm attachment not installed correctly.	Make sure all accessories are fully seated.

If the unit does not work after checking the above, please contact PACE, or your Authorized PACE Distributor if outside U.S.

## **Filter Replacement & Spare Parts**

PACE Fume Extraction Systems are equipped with filters designed to capture particulates and noxious gases and odors that are present in the air being filtered. Over time, the filters will become clogged, impeding airflow through the system and the capacity of the gas filter (if fitted) will be reached, reducing its ability to continue to neutralize and adsorb noxious gases and odors.

Do not attempt to clean any PACE fume extraction 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 fan assembly.

To ensure the highest level of performance, use only PACE replacement filters in your PACE Fume Extraction System.

### **Arm-Evac 105 Pre-Filter**

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

#### Replacing the Pre-Filter

1. Remove the Filter access cover (lid)
2. Remove the old Pre-Filter
3. Install a new Pre-Filter. Be sure that the blue side of the filter faces up.
4. Attach lid.
5. Dispose of the used Pre-Filter properly

### **Arm-Evac 105 standard filter**

The standard filter cartridge removes particulates from the air and captures noxious odors & gases. In general, the filter cartridge must be changed every 6 to 9 months. However, depending on your particular process, the filter cartridge may need to be changed more or less frequently.

#### Replacing the Filter cartridge

1. Remove the lid.
2. Remove the old filter.
3. Install new filter.
4. Install a new Pre-Filter. Be sure that the blue side of the pre-filter faces up.
5. Attach lid
6. Dispose of old filter properly.

BE SURE the new filter cartridge is installed with the airflow arrow pointing downward.

When disposing of used filters, 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.

**Replacement Filter part numbers**

<b>Part Number</b>	<b>Name</b>	<b>Description</b>	<b>Typical Applications</b>
8883-0112-P5 (Pkg. Of 5)	Pre-filter	Fiber filter media sheet for capture of coarse materials.	Used with all Arm-Evac 105 systems.
8883-0932-P1	General Purpose Filter	Comprised of HEPA pleated paper filter & activated carbon media	Soldering, Pharmaceuticals, Laser Cutting/Laser Marking, Jewelry manufacture & repair.
8883-0951-P1	Adhesives Filter	Comprised of HEPA pleated paper filter & activated carbon media	Benchtop Adhesives Procedures, Gluing Applications, Circuit Board Cleaning, Laboratory Applications
8883-0921-P1	Cleanroom Filter	Comprised of HEPA pleated paper filter & activated carbon media	Fine particulate and gas removal in designated Cleanroom environments.
8883-0871-P1	Economy Foam Filter	Activated carbon-impregnated foam media. Designed for coarse particle capture.	Sanding applications, Benchtop Machining Operations, Benchtop Prototyping Operations, Grinding Applications.

**Replacement Part Numbers**

<b>Part</b>	<b>Part Number</b>
Fuse 115 Volts	<b>1159-0280-02-P5</b>
Fuse 230 Volts	<b>1159-0280-01-P5</b>
Motor Fan Assembly 115 Volts	6000-0410-P1
Motor Fan Assembly 230 Volts	6000-0409-P1



## **Warranty**

PACE warrants that this equipment will be free of defects in materials and workmanship for a period of one (1) year from the date of receipt by the first user.

This warranty does not cover repair or replacement required as a result of misuse, mishandling or improper storage. Failure to perform recommended routine maintenance, alterations or repairs made other than in accordance with PACE's directions, or removal or alteration of identification plates in any way will void this warranty. This warranty is available only to the first user, but the exclusions and limitations therein apply to all persons and entities.

This warranty does not apply to consumable items such as filters.

PACE MAKES NO OTHER WARRANTY, EXPRESSED OR IMPLIED, AND MAKES NO WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

PACE will, at its option, repair or replace and defective equipment or parts at its facility or other location approved by it at no charge to the user, or provide parts without charge for installation by the user in the field at the user's expense and risk. User will be responsible for all costs of shipping equipment to PACE or other warranty location for warranty service.

EXCEPT FOR THE REMEDY ABOVE DESCRIBED, UNLESS OTHERWISE REQUIRED BY APPLICABLE LAW, PACE WILL HAVE NO OTHER OBLIGATION WITH REGARD TO ANY BREACH OF WARRANTY OR OTHER CLAIM WITH RESPECT TO THE EQUIPMENT, OR LIABILITY FOR ANY DIRECT, INDIRECT, CONSEQUENTIAL, OR INCIDENTAL LOSS OR DAMAGE CAUSED BY OR OCCURRING IN CONNECTION WITH ANY OF THE EQUIPMENT.

To obtain warranty service, contact the appropriate PACE company listed below

Do NOT return defective equipment or parts to PACE without obtaining prior authorization.

Any warranty or other claim with respect to the equipment must be made in writing and delivered to PACE (or local authorized PACE Distributor outside the U.S.) within a reasonable time of the expiration date of this warranty. Sufficient evidence of purchase and date of receipt must also be included, otherwise user's rights under this warranty shall be deemed waived.

Questions or comments? Contact us at:



**PACE Incorporated**  
346 Grant Road  
Vass, NC 28394

**Tel: (877) 882-PACE**  
**Tel: (910) 695-7223**  
**Fax: (910) 695-1594**

**Pace Europe**  
11 Holdom Avenue  
Bletchley, Milton Keynes,  
United Kingdom, MK1 1QU

**Tel: 011 44 1908 277666**  
**Fax: 011 44 1908 277777**

You can also visit us on the World Wide Web at <http://paceworldwide.com/>  
or reach out to us by email at [support@paceworldwide.com](mailto:support@paceworldwide.com)