# Fume Extraction

Solutions and systems for soldering, rework and repair of electronics

# Fume Extraction Systems

**PACE**
paceworldwide.com

As the full solution provider in the electronics industry, PACE has set the standards for over 20 years by leading technology development for fume extraction equipment specifically designed to meet the requirements of the electronics industry and by educating the industry on the effects of exposure and how to protect workers.

PACE offers Fume Extraction Systems that feature the latest advancements in filter condition monitoring and process control as well as cost effective solutions that incorporate many of our best features. A variety of collection accessories are available that offer highly effective source capture or wide area extraction to meet virtually any application.

Each system is composed of rugged steel construction and includes a heavy-duty, brushless motor for years of trouble-free service. Convenient, disposable filter cartridges are easily changed, eliminating the need for messy cleaning and costly service visits.

It's a fact...hazardous fumes in the working environment result in increased absenteeism, employee turnover, worker's compensation claims and lost productivity. Medical research has confirmed an increased incidence of occupational asthma, chronic bronchitis, allergic reactions, contact dermatitis and other health related effects associated with exposure to flux fumes. The substances in flux fumes are regulated by international health and safety agencies and many have been designated as Occupational Sensitizers which means that exposure should be eliminated or reduced to as low a level as possible. Where manual soldering is being performed or where solder-pots/fountains are utilized, hazardous fumes are produced and workers need to be protected from them.



## The Benefits
### OF PACE FUME EXTRACTION

**1**  Fumes are pulled away from the operator.

**2**  As flux fumes are removed at their source, secondary exposure of other operators is eliminated.

**3**  Assemblies and the work area are kept clean from flux fume contamination.

**4**  Filtered air is recirculated back into the work environment instead of being vented to the outside. Therefore, energy savings in the form of air conditioning and heating costs are realized.

**5**  Unfiltered air is not exhausted to the outside which may require costly environmental permits and pollution control devices.

**6**  PACE Fume Extraction Systems offer the greatest flexibility as they are modular and can be easily disassembled and reassembled in another location as manufacturing processes and layouts change.

## FACT:
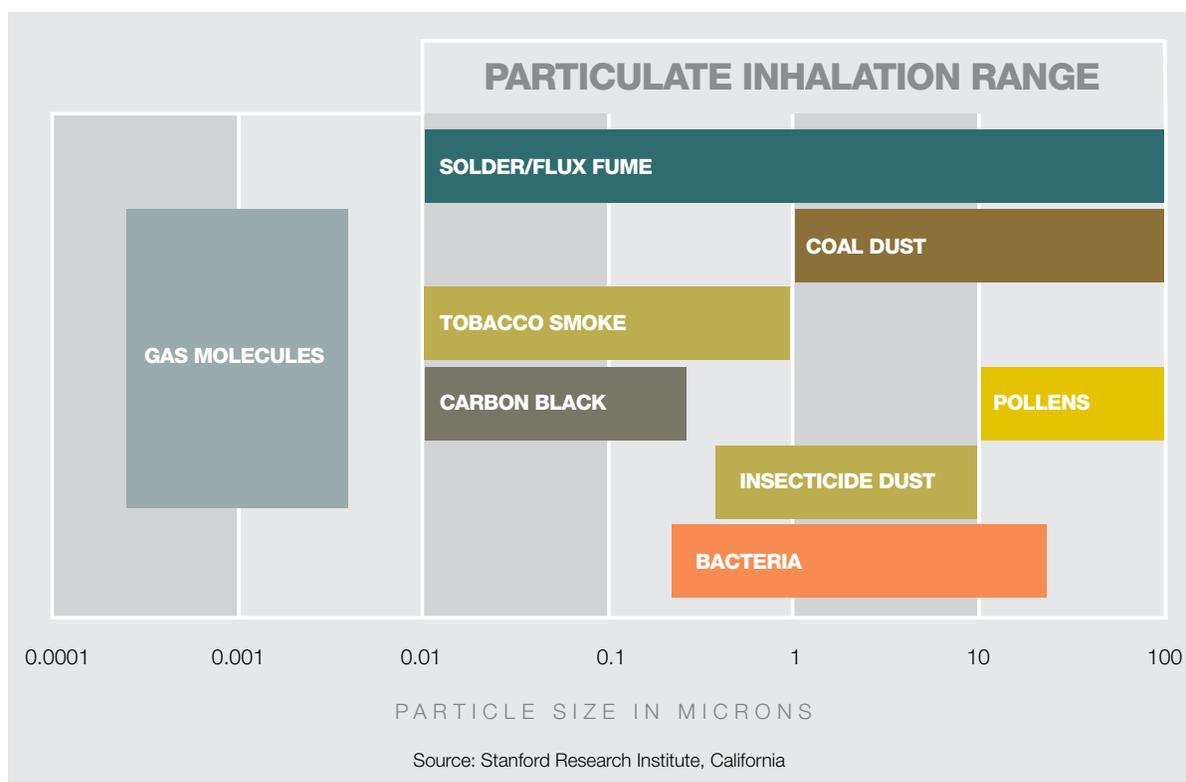# Exposure to Solder Fumes Leads to Respiratory Illness

When rosin-based or rosin-containing fluxes are heated, a substance called colophony is produced, which is one of the major causes of occupational asthma. In order to reduce exposure to colophony, rosin-based fluxes have been exchanged for no-clean or synthetic fluxes that contain no rosin or very low percentages. While this reduces or eliminates exposure to colophony, new chemical irritants may be introduced into the work place, many of which pose a more substantial threat to workers. Over 95% of the total fume produced from rosin-based fluxes are in the form of particulates. Chemical exposure from flux fume varies widely and is dependent on the chemical composition of the flux. Non-rosin or low-rosin fluxes use chemically aggressive substances such as acids, solvents, or alcohols in place of rosin to improve the cleaning action of the flux. **This is also true for Lead Free solders.**

Exposure to these substances is also recognized as hazardous, and when flux is heated, the resultant chemical by-products can be even more hazardous. Additionally, the use of cleaners, solvents or adhesives, which are common in electronic soldering applications, expose workers to chemical hazards. The human body has been designed with defense mechanisms such as nasal passageways lined with mucus that will collect larger particles through a process known as impaction and ciliated breathing passageways to remove foreign substances from the main airways of the lungs. Flux fumes contain high levels of respirable particles (less than 3.5 microns in diameter similar in size to cigarette smoke), that can bypass these natural defense mechanisms and deposit themselves in the gas-exchange region of the lungs, thereby posing the greatest exposure hazard.

## FACT:
# Material Safety Data Sheets for Fluxes Recommend the Use of Local Exhaust Ventilation Systems

The health effects caused by exposure to flux fumes tend to be forms of respiratory illness and contact dermatitis. However, since the components of flux fume are often designated as occupational sensitizers, chronic or prolonged exposure increases the severity of health effects. PACE Fume Extraction is a key element in protecting workers from being exposed to flux fumes!

**PARTICULATE INHALATION RANGE**

| | | | | |
| SOLDER/FLUX FUME | | | | |
| | COAL DUST | | | |
| TOBACCO SMOKE | | | | |
| CARBON BLACK | | POLLENS | | |
| GAS MOLECULES | INSECTICIDE DUST | | | |
| | BACTERIA | | | |

0.0001    0.001    0.01    0.1    1    10    100

PARTICLE SIZE IN MICRONS

Source: Stanford Research Institute, California

# Benchtop
# Fume Extraction




Arm-Evac 50


Arm-Evac 50 with optional Dual Arm Attachment


Providing fume extraction to two workstations

## Arm-Evac **50**

The Arm-Evac 50 is a unique, portable, cost-effective, bench-top fume extractor that provides wide area fume extraction or highly efficient source capture at two points using the optional arm attachment. The Arm-Evac 50 features operator adjustable airflow, quiet operation and a wide variety of filters to meet the needs of virtually any application.

See page 7 for replacement filters.

| Specifications | Arm-Evac 50 |
| --- | --- |
| **Part Number** | 8889-0050-P1 |
| **Dimensions** | 250mm (8.5") **H** x 330mm (13") **W** x 315mm (12.5") **D** |
| **Weight** | 6 Kg (13 lbs) |
| **Power Requirements** | 115 or 230 VAC, 50/60 Hz |
| **Noise Level*** | 54 dBA |
| **Number of Inlets** | One laminar flow, plenum inlet |
| **Flow Rate** | Adjustable: 152m³/h (90cfm) max with Plenum, One Arm Adjustable: 84.5m³/h (45cfm) max, Two Arms Adjustable: 50m³/h (30 cfm) max per arm |
| **Number of Collection Accessories** | Up to six 45mm (1.75"), Up to four 75mm (3") |
| **System Options** | Dual Arm Accessory, 8886-0055-P1 |
| **Standard Primary Filter** | General Purpose Filter |
| **Filtration Options** | General Purpose Filter, Cleanroom FIlter |

* Airflow and noise level are nominal numbers and will vary based on voltage

# Arm-Evac **105**

The best protection from harmful fumes in its price range. The Arm-Evac 105 is portable, compact and can be easily placed on or under a workbench. The unit features a heavy-duty, maintenance-free brushless motor along with a filtration process which includes a pre-filter for course particle removal, and a High Efficiency Particulate Arrestor (HEPA)/Gas Filter Cartridge. An inlet cap is provided to seal the unused inlet if only one flex-arm is used.

See page 7 for replacement filters. See pages 7 through 9 for additional accessories.

| Specifications | Arm-Evac 105 | Arm-Evac 105E |
|---|---|---|
| Part Number | 8888-0110-P1 | 8888-0105-P1 |
| Power Requirements | 115 VAC, 60 Hz | 230 VAC, 50 Hz |
| Dimensions | 362mm (14.25") **H** x 290mm (11.5") **W** x 290mm (11.5") **D** | |
| Weight | 11.5 Kg (25.3 lbs) | |
| Noise Level* | 55 dBA | |
| Number of Inlets | Two 75mm (3") | |
| Flow Rate* General Purpose Filter | **Single Inlet:** 220m³/h (131 cfm); **Dual Inlet:** 118m³/h (70 cfm) per inlet | |
| Flow Rate* Cleanroom Filter | **Single Inlet:** 187m³/h (110 cfm); **Dual Inlet:** 105m³/h (62 cfm) per inlet | |
| Number of Collection Accessories | Two 75mm (3") | |
| Maximum Duct Run | 2.5m (8') per inlet | |
| Standard Primary Filter | General Purpose Filter | |
| Filtration Options | General Purpose Filter, Cleanroom Filter, Adhesive Filter, Extended Life Filter, Economy Filter | |

* Airflow and noise level are nominal numbers and will vary based on voltage

# Arm-Evac **200**

The Arm-Evac 200 is designed to meet the needs of light-duty production as well as rework and repair operations. Lightweight and compact, the Arm-Evac 200 installs in minutes. A wide variety of collection accessory options and filters are available. An optional silencer/mobile cart is also available.

| Specifications | Arm-Evac 200 | Arm-Evac 200E |
|---|---|---|
| Part Number | 8889-0205-P1 | 8889-0200-P1 |
| Power Requirements | 115 VAC, 60 Hz | 230 VAC, 50 Hz |
| Dimensions | 393mm (15.4") **H** x 282mm (11.1") **W** x 365mm (14.3") **D** | |
| Weight | 13.75 Kg (30.25 lbs) | |
| Noise Level* | 58 dBA | |
| Number of Inlets | Two 75mm (3") | |
| Flow Rate* General Purpose Filter | **Single Inlet:** 288m³/h (170 cfm); **Dual Inlet:** 170m³/h (100 cfm) per inlet | |
| Flow Rate* Cleanroom Filter | **Single Inlet:** 255m³/h (150 cfm); **Dual Inlet:** 135m³/h (80 cfm) per inlet | |
| Number of Collection Accessories | Up to four 45mm (1.75"), Up to four 75mm (3") | |
| Maximum Duct Run | 5m (16') per inlet | |
| System Options | Silencer / Mobile Cart | |
| Standard Primary Filter | General Purpose Filter | |
| Filtration Options | General Purpose Filter, Cleanroom Filter, Adhesive Filter, Extended Life Filter, Economy Filter | |

See page 7 for replacement filters.
See pages 8 through 10 for additional accessories.

* Airflow and noise level are nominal numbers and will vary based on voltage

# Portable
# Fume Extraction

## Arm-Evac **250**

The Arm-Evac 250 is ideal for heavy-duty operations that need high capacity and continuous particle filter monitoring. Incorporating microprocessor technology, an easy-to-read graphical LED filter condition monitor changes from green to yellow to red as the filter becomes clogged. Additionally, flow sensors increase power to the motor as filters become blocked to assure peak performance. The filter monitoring system self calibrates using a membrane keypad on the front panel and an audible alarm alerts the operator when a filter change is required. A three-position motor speed button is also on the front panel. A wide variety of collection accessory options and filters are available. An optional silencer/mobile cart is available.

See page 7 for replacement filters.

See pages 8 through 10 for additional accessories.

| Specifications | Arm-Evac 250 | Arm-Evac 250E |
|---|---|---|
| **Part Number** | 8889-0255-P1 | 8889-0250-P1 |
| **Power Requirements** | 115 VAC, 60 Hz | 230 VAC, 50 Hz |
| **Dimensions** | 393mm (15.4") **H** x 282mm (11.1") **W** x 365mm (14.3") **D** | |
| **Weight** | 14 Kg (31 lbs) | |
| **Noise Level\*** | 58 dBA | |
| **Number of Inlets** | Two 75mm (3") | |
| **Flow Rate\* General Purpose Filter** | **Single Inlet:** 288m$^3$/h (170 cfm); **Dual Inlet:** 170m$^3$/h (100 cfm) per inlet | |
| **Flow Rate\* Cleanroom Filter** | **Single Inlet:** 255m$^3$/h (150 cfm); **Dual Inlet:** 135m$^3$/h (80 cfm) per inlet | |
| **Number of Collection Accessories** | Up to four 45mm (1.75"), Up to four 75mm (3") | |
| **Maximum Duct Run** | 5m (16') per inlet | |
| **System Options** | Silencer / Mobile Cart | |
| **Standard Primary Filter** | General Purpose Filter | |
| **Filtration Options** | General Purpose Filter, Cleanroom Filter, Adhesive Filter, Extended Life Filter, Economy Filter | |

\* Airflow and noise level are nominal numbers and will vary based on voltage

# Arm-Evac **500**

The Arm-Evac 500 is perfectly suited for high performance, cellular manufacturing activities and provides fume extraction for up to 6 workstations. This unit boasts a high airflow motor pump with an effective three-stage filtration system. Incorporating microprocessor technology, an easy-to-read graphical LED filter condition monitor changes from green to yellow to red as the filter becomes clogged. The filter monitoring system self calibrates using a membrane keypad on the front panel and an audible alarm alerts the operator when a filter change is required. A wide variety of collection accessory options and filters are available.
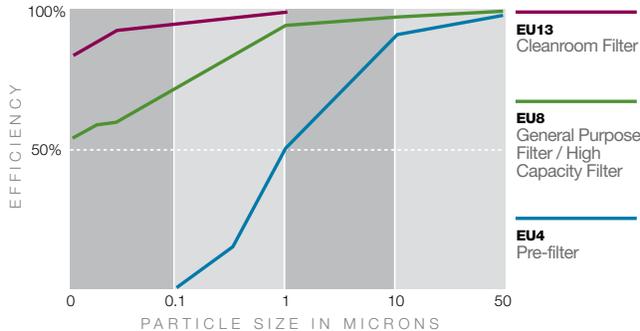
| Specifications | Arm-Evac 500 | Arm-Evac 500E |
|---|---|---|
| **Part Number** | 8889-0505-P1 | 8889-0500-P1 |
| **Power Requirements** | 115 VAC, 60 Hz | 230 VAC, 50 Hz |
| **Dimensions** | 640mm (25") **H** x 400mm (15.75") **W** x 500mm (19.5") **D** | |
| **Weight** | 28 Kg (62 lbs) | |
| **Noise Level*** | 61 dBA | |
| **Number of Inlets** | Three 75mm (3") | |
| **Flow Rate* General Purpose Filter** | **Single Inlet:** 451m$^3$/h (266 cfm); **Two Inlets:** 283m$^3$/h (167 cfm) per inlet; **Three Inlets:** 200m$^3$/h (119 cfm) per inlet | |
| **Flow Rate* Cleanroom Filter** | **Single Inlet:** 414m$^3$/h (244 cfm); **Two Inlets:** 236m$^3$/h (140 cfm) per inlet; **Three Inlets:** 160m$^3$/h (94 cfm) per inlet | |
| **Number of Collection Accessories** | 50mm (2"), Three 75mm (3") | |
| **Maximum Duct Run** | 5m (16') per inlet | |
| **Standard Primary Filter** | General Purpose Filter | |
| **Filtration Options** | General Purpose Filter, Cleanroom Filter | |

* Airflow and noise level are nominal numbers and will vary based on voltage

See page 7 for replacement filters.
See pages 8 through 10 for additional accessories.

# Fume Extraction
# Filters



EFFICIENCY vs PARTICLE SIZE IN MICRONS

**EU13** Cleanroom Filter
**EU8** General Purpose Filter / High Capacity Filter
**EU4** Pre-filter

## Our Filtration Systems

PACE's Filtration Systems have been specifically designed for applications in the electronics industry. A wide variety of filtration options are available for use with PACE Fume Extractors ensuring that you always have the right filter for the job.

Filtration systems for soldering applications are comprised of three filters. As fumes are collected, they first encounter the Pre-filter, which is a lower efficiency particle filter that is used to protect the primary filter from large particles, extending the life of the primary filter. Next is the Primary Particle Filter which is a particulate filter with large surface area having efficiency ratings of 85% and higher. A variety of filtration efficiencies are available to suit your needs. Lastly, a Gas Filter is included to eliminate any hazardous gases that may be present. PACE's Gas Filters use high-grade activated carbon or they combine adsorptive and chemisorptive technologies to maximize effectiveness. To fully understand your gas filtration needs, always consult your Material Safety Data Sheet. The Arm-Evac 50, 105, 200 & 250 use "Combo Filters" which means that the Primary and Gas filters are contained in one filter cartridge. The Arm-Evac 500 uses separate Primary and Gas filters which need to be changed individually. Pre-filters should be inspected at least weekly. When they become clogged, they should be replaced immediately to maximize primary filter life.

## Filter Types



| Filter Type | Filter Efficiency Rating | Recommended Application |
|---|---|---|
| Pre-filters | 90% ARRESTANCE EU 4 | Recommended for use with all filtration systems. |
| Economy Filters | N/A N/A | Ideal for applications where coarse dust is generated. |
| General Purpose Filters | 85% EU 8 | Recommended for soldering applications where normal volumes of fumes are being generated for 1 or 2 shifts. (.2-80 microns) |
| Cleanroom Filters | 99.99% EU 13 | Recommended for applications in Cleanroom environments or where the highest filtration efficiency is required. (.2-2 microns) |
| High Capacity Filters | 85% EU 8 | Recommended for soldering applications where heavy volumes of fumes are generated or where operations are running 3 shifts. Filter contains additional filtration media and will last longer. |
| Adhesive Filters | N/A | Recommended for any bench-top application utilizing adhesives, solvents, or cleaners used in small quantities and not in open containers or "baths". |

## Filter Selection

The following chart is a quick reference guide for PACE Filtration Systems. Simply select your fume extraction central filtration unit and the type of filter you need to identify the part number of the filter. (**Bold part numbers indicates standard primary filter in Central Filtration Unit**).
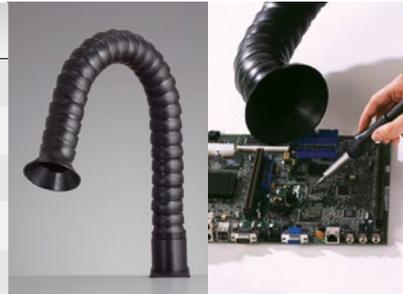
| System | Pre-filter | High Capacity Pre-filter | Economy Filter | General Filter | Cleanroom Filter | High Capacity Filter | Carbon Filter | Adhesive Filter |
|---|---|---|---|---|---|---|---|---|
| Arm-Evac 50 | 8883-0125-P5 | N/A | N/A | **8883-0280-P1** | 8883-0290-P1 | N/A | N/A | 8883-0295-P1 |
| Arm-Evac 105 | 8883-0111-P5 | 8883-0986-P10* | 8883-0871-P1 | **8883-0901-P1** | 8883-0921-P1 | 8883-0987-P1* | N/A | 8883-0951-P1 |
| Arm-Evac 200 | 8883-0111-P5 | 8883-0986-P10* | 8883-0871-P1 | **8883-0931-P1** | 8883-0921-P1 | 8883-0987-P1* | N/A | 8883-0951-P1 |
| Arm-Evac 250 | 8883-0111-P5 | 8883-0986-P10* | 8883-0871-P1 | **8883-0931-P1** | 8883-0921-P1 | 8883-0987-P1* | N/A | 8883-0951-P1 |
| Arm-Evac 500 | **8883-0145-P10** | N/A | N/A | **8883-0955-P1** | 8883-0965-P1 | N/A | **8883-0956-P1** | N/A |

* High Capacity Pre-fIlters must be used in combination with a High Capacity Filter. When filters need to be replaced, simply remove them from the Fume Extractor and replace with a new one. Disposal of filters should be done in compliance with local environmental regulations.

# ESD Safe Flex-Arm

PACE's ESD Flex-Arm can be positioned anywhere on the workbench. The ESD Safe Flex-Arm features a highly flexible hard plastic that easily adjusts to an infinite number of positions. The ESD Flex-Arm can be mounted directly to the workbench by cutting a hole in the bench top, or it can be mounted using the optional quick mounting bracket (P/N 8886-0552-P1).

| Specifications | ESD Safe Flex-Arm |
| --- | --- |
| **Part Number** | 8886-0750-P1 |
| **ESD Rating** | Surface Resistivity: 1.00E3 Ohm; Volume Resistivity: <6.00E2 Ohm-cm |
| **Length / Diameter** | 915mm (36") / 75mm (3") |
| **Mounting** | Directly onto Fume Extractor or uses optional Bench Mounting Bracket |
| **Standard Endpiece** | Round |

## 75mm (3") ESD Safe Flex-Arm Kit

Contains everything needed to mount an ESD Safe Flex-Arm to a workbench.

Part Number: 8886-0765-P1
Includes: (1) ESD Safe Flex-Arm (part number 8886-0750-p1), (1) Quick-Mount Bench Mounting Bracket Kit (part number 8886-0745-P1).

## 75mm (3") Flex-Arm Bench Mounting Bracket Kit

Part Number: 8886-0745-P1
Includes: 2.5m (8') of 75mm (3") ESD Safe Flex Hose (8886-0755-P1) and Bench Mounting Bracket (8886-0770-P1).

## Mounting Bracket for 75mm (3") ESD Safe Flex-Arm

Allows the ESD Safe Flex-Arm to be mounted virtually anywhere. Quick Mount clamp allows for arm and bracket to be repositioned in seconds.

Part Number: 8886-0770-P1

## 75mm (3") Flex Hose

Flex Hose, 75mm (3") diameter, 3m (10 feet) long with two 3" endcuffs.

Part Number: 8886-0755-P1

## 75mm (3") Expansion Kit

Allows two 75mm (3") diameter arms to be connected to one 75mm (3") inlet on the fume extractor. Contains one 3m (10') length of 75mm (3") flex hose, one 1.5m (5') length of 75mm (3") flex hose, one 75mm (3") "Y" connector, and four 75mm (3") endcuffs.

Part Number: 8882-0105-P1

## ESD Safe Flex-Arm Extension Tube

75mm (3") Flex-Arm used to increase the length of 8886-0750-P1. 305mm (12") long.

Part Number: 8886-0790-P1

## Optional Endpieces

**A** Round Endpiece for omni-directional fume collection.
Part Number: 8886-0792-P1

**B** Collection Tube Endpiece for focused and pin-point fume collection.
Part Number: 8886-0794-P1

**C** Cowl Endpiece for high volume laminar flow fume extraction.
Part Number: 8886-0793-P1

*See pages 11-13 for installation tips and configurations

# Fume Extraction
## Accessories

## Static-Safe Flex-Arm

| Specifications | 36" 50mm (2") Static-Safe Flex-Arm | 24" 50mm (2") Static-Safe Flex-Arm |
|---|---|---|
| Part Number | 8882-0435-P1 | 8882-0415-P1 |
| Material | Static Safe Flexible Plastic | Static Safe Flexible Plastic |
| Diameter / Length | 50mm (2") **D** x 915mm (36") **L** | 50mm (2") **D** x 610mm (24") **L** |

36" Static-Safe Flex-Arm

24" Static-Safe Flex-Arm

### 50mm (2") Flex-Arm Bench Mounting Kit

Kit includes one 3m (10') Length of 75mm (3") ESD Safe Flex Hose, one 75mm (3") to 50mm (2") reducer endcuff, one 75mm (3") endcuff and one Bench Mounting Bracket (8886-0552-P1).

Part Number: 8886-0553-P1

### 50mm (2") Expansion Kit

Allows two 50mm (2") diameter arms to be connected to one 75mm (3") inlet on the fume extractor. Contains one 3m (10') length of 75mm (3") flex hose, one 1.5m (5') length of 75mm (3") flex hose one 75mm (3") "Y" connector, three 75mm (3") endcuffs, and one 75mm (3") to 50mm (2") reducer endcuff.

Part Number: 8882-0692-P1

### Replaceable Fume-Scoop

Static Safe Fume Scoop for 50mm (2") ESD Safe Flex-Arm.

Part Number: 8882-0408-01-P1

### 75mm (3") Y

75mm (3") Y connector. Used to connect two hoses to a single hose.

Part Number: 8882-0691-P1

### Bench Mounting Bracket

50mm (2") Flex-Arm.

Part Number: 8886-0552-P1

### 2" to 3" End Cuff

75mm (3") to 50mm (2") Reducer.

Part Number: 8882-0775-P1

### 3" End Cuff

75mm (3") end cuff. Threads onto 75mm (3") flex hose for easy connection to 75mm (3") Flex-Arms and fume extractor inlets.

Part Number: 8882-0776-P1

*See pages 11-13 for installation tips and configurations

## 75mm Air Flow Controller

The Air Flow Controller for the 75mm (3") ESD Safe Flex-Arm gives the user complete control over the fume extraction air flow at their work bench. It is infinitely adjustable from fully-closed to fully-open to precisely deliver the ideal airflow needed to protect workers' health and eliminate any excessive air flow that could cool the solder/reflow work area.

Part Number: 8886-0795-P1

## 50mm Air Flow Controller

The air flow controller can be connected to any part of the ESD Safe Flex-Arm (P/N 8882-0435-P1 or 8882-0415-P1). The controller is mounted in the base of the arm for ease access. The air flow controller features an adjustable sliding gate valve that is easy to use and adjust.

Part Number: 8886-0509-P1

## Metal Plenum

The Plenum is ideal for providing fume extraction to work spaces where soldering is being performed over a large area, such as at several locations on a large PCB. At 455mm (18") wide laminar airflow is supplied over the entire work area, protecting the operator from exposure to harmful fumes. The Plenum also preserves bench-top space as it provides a sturdy shelf. The Plenum is constructed from rugged 18 gauge steel, is static-safe and includes 3m (10') of 75mm (3") ESD Safe Flexible Hose for easy connection to the Arm-Evac 105, 200, 250 or 500.

| Specifications | Static-Safe Metal Plenum |
|---|---|
| **Part Number** | 8886-0366-P1 |
| **Dimensions** | 130mm (5") **H** x 460mm (18") **W** x 130mm (5") **D** |
| **Weight** | 2.7 Kg (6 lbs) |
| **Material** | 18 gauge steel |
| **Inlet** | One 75mm (3") inlet |

## Silencer / Mobile Carts

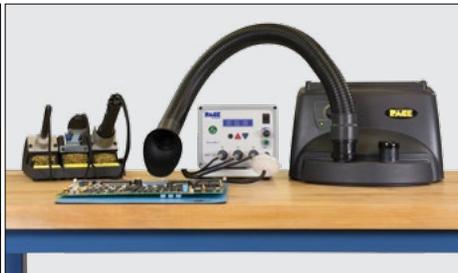| Specifications | Silencer/Mobile Cart Arm-Evac 200 | Silencer/Mobile Cart Arm-Evac 250 |
|---|---|---|
| **Part Number** | 8885-1225-P1 | 8885-1225-P1 |
| **Weight** | 4.5kg (10 lbs) | 4.5kg (10 lbs) |
| **Description** | Constructed of 18-Gauge steel and acoustical foam baffle liner. Arm-Evac 250 Silencer/Mobile Cart includes front locking casters. | |

# Fume Extraction
## Installation & Examples

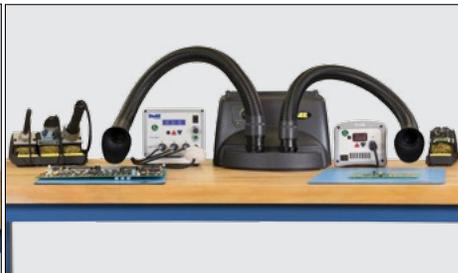## Arm Evac 50 Configurations
120 V and 230 V



Arm-Evac 50:  P/N 8889-0050-P1
(Refer to page 3 for system specifications.)

Arm-Evac 50:  P/N 8889-0050-P1
AE 50 Arm Kit:  P/N 8886-0055-P1
(One arm shown. Kit comes with 2.)

Arm-Evac 50:  P/N 8889-0050-P1
AE 50 Arm Kit:  P/N 8886-0055-P1 (Two arms shown.)

## Arm-Evac 105, 200 or 250 Configurations
For workstations requiring a single fume collection point



Arm-Evac 105, 200 or 250 (Arm-Evac 105 shown. See pages 4-5 for specifications.)
One 75mm (3") ESD Safe Flex Arm: P/N 8886-0750-P1

Arm-Evac 105, 200 or 250 (Arm-Evac 105 shown. See pages 4-5 for specifications.)
One 75mm (3") ESD Safe Flex Arm Kits: P/N 8886-0765-P1
Optional flow controller shown: P/N 8886-0795-P1

For workstations requiring 2 fume collection points



Arm-Evac 105, 200 or 250 (Arm-Evac 105 shown. See pages 4-5 for specifications.)
Two 75mm (3") ESD Safe Flex Arms: P/N 8886-0750-P1

Arm-Evac 105, 200 or 250 (Arm-Evac 200 shown. See pages 4-5 for specifications.)
Two 75mm (3") ESD Safe Flex Arm Kits: P/N 8886-0765-P1
Two Optional flow controllers shown: P/N 8886-0795-P1

For workstations requiring 1 or 2 metal plenums



Arm-Evac 105, 200 or 250 (Arm-Evac 105 shown. See pages 4-5 for specifications.)
One Metal Plenum Kit (includes hose): P/N 8886-0366-P1

Arm-Evac 105, 200 or 250 (Arm-Evac 200 shown. See pages 4-5 for specifications.)
Two Metal Plenum Kits (includes hose): P/N 8886-0366-P1

# Arm-Evac 200 and 250 Configurations

For workstations requiring 2 to 4 50mm (2") Flex Arms



Arm-Evac 200 or 250 (Arm-Evac 200 shown. See pages 4-5 for specifications.)
Two 50mm 24" Long ESD Flex Arm: P/N 8882-0415-P1
Two 50mm Bench Mounting Kit: P/N 8886-0553-P1



Arm-Evac 200 or 250 (Arm-Evac 250 shown. See pages 4-5 for specifications.)
Two 50mm (2") diameter 36" long ESD Flex Arms: P/N 8882-0435-P1
Two 50mm Bench Mounting Kits: P/N 8886-0553-P1



Arm-Evac 200 or 250 (Arm-Evac 200 shown. See pages 4-5 for specifications.)
Four 50mm (2") diameter, 24" Long ESD Flex Arms: P/N 8882-0415-P1
Two 50mm (2") Bench Mounting Kits: P/N 8886-0553-P1
Two Bench Mounting Brackets: P/N 8886-0552-P1
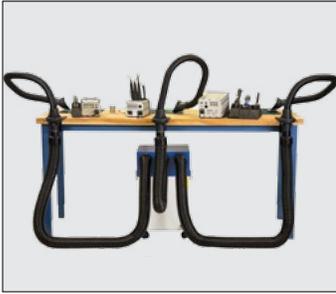Two ESD Safe 50mm (2") Flex Arm Expansion Kits: P/N 8882-0692-P1



Arm-Evac 200 or 250 (Arm-Evac 250 shown. See pages 4-5 for specifications.)
Four 50mm (2") diameter, 36" long, ESD Flex Arms: P/N 8882-0435-P1
Two 50mm (2") Bench Mounting Kits: P/N 8886-0553-P1
Two Bench Mounting Brackets: P/N 8886-0552-P1
Two ESD Safe 50mm (2") Flex Arm Expansion Kits: P/N 8882-0692-P1

# Arm-Evac 500 Configurations

For workstations requiring 3 to 6 fume collection points



Arm-Evac 500 (See page 6 for specifications.)
Three 50mm (2") diameter ESD Flex Arms: 24" Long P/N 8882-0415-P1 or Three 50mm (2")
diameter ESD Flex Arms: 36" Long P/N 8882-0435-P1
Three 50mm (2") Bench Mounting Kits: P/N 8886-0553-P1



Arm-Evac 500 (See page 6 for specifications.)
Three 75mm (3") ESD Flex Arm Kits: P/N 8886-0765-P1
Three Optional flow controllers shown: P/N 8886-0795-P1



Arm-Evac 500 (See page 6 for specifications.)
Two 75mm (3") ESD Flex Arm Kits: P/N 8886-0765-P1
Two 75mm (3") ESD Flex Arms: P/N 8886-0750-P1
Two 75mm (3") Expansion Kits: P/N 8882-0105-P1
Two 75mm (3") Bench Mounting Brackets: P/N 8886-0770-P1
Three Optional flow controllers shown: P/N 8886-0795-P1



Arm-Evac 500 (See page 6 for specifications.)
Four Metal Plenum Kits (includes hose): P/N 8886-0366-P1
One 75mm (3") Expansion Kit: P/N 8882-0105-P1
One 75mm (3") Y: P/N 8882-0691-P1



Arm-Evac 500 (See page 6 for specifications.)
Six 50mm (2") diameter, ESD Flex Arms: 24" Long P/N 8882-0415-P1 or Six 50mm (2") diameter, ESD Flex Arms: 36" Long P/N 8882-0435-P1
Three 50mm (2") Bench Mounting Kits: P/N 8886-0553-P1
Three 50mm (2") Bench Mounting Brackets: P/N 8886-0552-P1
Three 50mm (2") Expansion Kits: P/N 8882-0692-P1
Six 50mm (2") Flow Controllers to ensure equal air flow across all six arms: P/N 8886-0509-P1

PACE provides innovative solutions, products and training for the assembly, rework, repair and inspection of printed circuit boards. PACE's unique capabilities and evolving vision have provided universal solutions to thru-hole and surface-mount assembly and rework problems for the most advanced electronics. Our strong commitment and history of achievement has resulted in an unparalleled range of Assembly, Repair and Fume Extraction systems to meet your company's needs whether working to ISO-9001, industrial, military or your own internal specifications. Whatever the challenge, PACE stands ready to provide the best, cost-effective solution for you.

## Solder & Desolder Stations

| SMR | WJS 100 | ST 50 | ST 70 | ST 65 | ST 115 |
|-----|---------|-------|-------|-------|--------|

## Fume Extraction

Arm-Evac 50     Arm-Evac 105     Arm-Evac 200     Arm-Evac 250     Arm-Evac 500

## Rework & Repair Systems

ST 325          ST 350

MBT 250         MBT 350

## Pre-heaters & Process Monitors

| ST 400 | ST 450 | ST 1600 | Tip Temperature Monitor | PM 200 |
|--------|--------|---------|-------------------------|--------|

## Area Array (BGA) Rework Systems

| TF 2700 | TF 1700 | IR 3000 | IR 1000 |
|---------|---------|---------|---------|

# Solutions and systems for soldering, rework and repair of electronics

## A Worldwide Commitment

With offices worldwide, PACE is a recognized world leader in the development of solutions for the assembly and repair of highly advanced electronics. Our expertise extends back to the dawn of the modern electronics industry. In 1958, PACE introduced training programs for the repair of printed wire assemblies and soon after, revolutionized the industry by creating the first self-contained vacuum desoldering system.

Today, PACE continues to provide innovative solutions, products and training for the rework, repair and inspection of printed circuit assemblies. Our unique capabilities and evolving vision have provided universal solutions for thru-hole and surface mount assembly and rework problems for the most advanced electronics.

Additionally, PACE manufactures Fume Extraction Systems to reduce exposure to harmful particulates and gases created from hand soldering operations. PACE Fume Extraction Systems effectively remove these contaminants from the worker's breathing zone thereby reducing or eliminating health risks and improving productivity.

Our strong commitment and history of achievement has resulted in an unparalleled range of Assembly, Repair and Fume Extraction solutions to meet your needs whether working to ISO-9001, industrial, military or your own internal specifications. Whatever the challenge, PACE stands ready to help you set a new standard.

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