

Fume Extraction



Solutions and systems for soldering, rework and repair of electronics

PAGE[®]
paceworldwide.com



American Made

Professional Grade

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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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.

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Arm-Evac 150
Webpage



Arm-Evac 150

PACE's Arm-Evac® 150 captures hazardous fumes locally and is suitable for benchtop soldering and electronic rework applications including handheld machining operations and light, limited use of solvents, adhesives and other light and medium duty industrial applications. The low-cost Arm-Evac® 150 System comes complete with a self-supporting SteadyFlex™ ESD-Safe Arm/Nozzle assembly and general purpose combo filter (P/N 8883-0932-P1). For 1-2 workstations.

See page 10 for replacement filters.
See page 6 for additional accessories.

Specifications	Arm-Evac 150	Arm-Evac 150E
Part Number	8889-0150-P1	8889-0155-P1
Power Requirements	120 VAC, 60 Hz	230 VAC, 50 Hz
Dimensions	432mm (17") H x 305mm (12") W x 305mm (12") D	
Weight	9.07 Kg (20 lbs)	
Noise Level*	63 dBA	
Number of Inlets	Two 60mm (2.4")	
Flow Rate* General Purpose Filter	Single Inlet: 263m ³ /h (155 cfm); Two Inlets: 153m ³ /h (90 cfm) per inlet	
Flow Rate* HEPA Filter	Single Inlet: 246m ³ /h (145 cfm); Two Inlets: 144m ³ /h (85 cfm) per inlet	
Number of Collection Accessories	Up to two 60mm (2.4")	
Maximum Duct Run	1.3m (52") per inlet	
Standard Primary Filter	General Purpose Combo Filter	
Filtration Options	Pre-Filter, General Purpose Combo Filter, HEPA Combo Filter, Adhesive Combo Filter	

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

SteadyFlex™ Arm/Nozzle Assembly

PACE's SteadyFlex™ ESD-Safe Arm & Nozzle Assembly is a flexible articulated arm designed specifically for the Arm-Evac 150 Digital Fume Extractor. The SteadyFlex Arm is extra long at 132cm (52") length, reaches a wide bench top area, with no clamps required. The self-supporting Arm stays put, exactly where you position it.

Specifications	52"/2.4" ESD Safe Flex-Arm
Part Number	8886-0850-P1
Material	ESD Safe
Length / Diameter	132cm (52") / 60mm (2.4")
Standard Endpiece	Oval



Replacement Wireless Remote Control

The Arm-Evac 150 comes standard with the wireless remote, allowing for easy operation of most functions, from a distance. Some functions include: control lock, preventing unauthorized alteration of settings, air flow adjustment, and a time setting.

Part Number: 8884-0153-P1



Replacement Casters

The Arm-Evac 150 comes standard with four casters that allow for convenient mobility. Locking mechanisms are easily adjusted with the tap of a foot.

Part Number: 8884-0151-P1

SteadyFlex™ Endpiece

Made from an ESD Safe plastic. Can only be used with the SteadyFlex™ Arm

Part Number: 8884-0154-P1



Replacement Inlet Cap

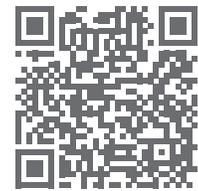
The Arm-Evac 150 comes standard with inlet cap for dual or single configuration options.

Part Number: 8884-0152-P1



Fume Extractors

for 1 to 4 Workstations



Arm-Evac 105
Webpage



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 coarse particle removal, and a General Purpose Air/Gas Filter Cartridge. An inlet cap is provided to seal the unused inlet if only one flex-arm is used.

See page 10 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	120 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: 220m ³ /h (131 cfm); Dual Inlet: 118m ³ /h (70 cfm) per inlet	
Flow Rate* HEPA Filter	Single Inlet: 187m ³ /h (110 cfm); Dual Inlet: 105m ³ /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 Combo Filter	
Filtration Options	Pre-Filter, General Purpose Combo Filter, HEPA Combo Filter, Adhesive Combo Filter	

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



Arm-Evac 200
Webpage

Fume Extractors

for 1 to 4 Workstations

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.

See page 10 for replacement filters.
See pages 7 through 9 for additional accessories..



Specifications	Arm-Evac 200	Arm-Evac 200E
Part Number	8889-0205-P1	8889-0200-P1
Power Requirements	120 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: 288m ³ /h (170 cfm); Dual Inlet: 170m ³ /h (100 cfm) per inlet	
Flow Rate* HEPA 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 Combo Filter	
Filtration Options	Pre-Filter, General Purpose Combo Filter, HEPA Combo Filter, Adhesive Combo Filter	

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

Fume Extractors

for 1 to 4 Workstations



Arm-Evac 250
Webpage



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

Specifications	Arm-Evac 250	Arm-Evac 250E
Part Number	8889-0255-P1	8889-0250-P1
Power Requirements	120 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* HEPA 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 Combo Filter	
Filtration Options	Pre-Filter, General Purpose Combo Filter, HEPA Combo Filter, Adhesive Combo Filter	

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

Arm-Evac Accessories

Accessories for Arm Evac's 105, 200, & 250

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



75mm/3" 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/1.75" 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

Silencer Cart

Specifications	Silencer/Mobile Cart for Arm-Evac 200 & 250
Part Number	8885-1225-P1
Weight	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.



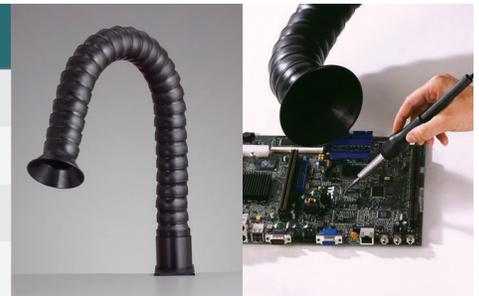
Accessories

for Arm Evac's 105, 200, & 250

ESD Safe Flex-Arm

PACE's ESD Safe Flex-Arms features a highly flexible hard plastic that easily adjusts to an infinite number of positions. The ESD Flex-Arm can be customized with a number of accessories for specific needs. It can be mounted directly to the workbench using the quick mounting bracket (P/N 8886-0552-P1)*. **4 foot Flex-Arm now available (P/N 8886-0760-P1).**

Specifications	36/3" 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")
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 (P/N 8886-0750-P1), (1) Bench Mounting Bracket Kit (P/N 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 (P/N 8882-0755-P1) and Bench Mounting Bracket (P/N 8886-0770-P1).



75mm (3") Expansion Kit

Allows two 75mm (3") diameter arms to be connected to one 75mm (3") inlet on the fume extractor.

Part Number: 8882-0105-P1
Includes: (2) 2.5m (8'2") length of 75mm (3") ESD Safe Flex Hose, (1) 75mm (3") Y (PN 8882-0691), and (4) 75mm (3") End Cuff (P/N 8882-0776-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 for 3"

- 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

Accessories

for Arm Evac's 105, 200, & 250



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

Part Number: 8886-0553-P1
Includes: (1) 3m (10') Length of 75mm (3") ESD Safe Flex Hose, (1) 3" to 2" End Cuff (P/N 8882-0775-P1), (1) 3" End Cuffs (P/N 8882-0776-P1), and (1) Bench Mounting Bracket (P/N 8886-0552-P1).



50mm (2") Expansion Kit

Allows two 50mm (2") diameter arms to be connected to one 75mm (3") inlet on the fume extractor.

Part Number: 8882-0692-P1

Includes: (1) 3m (10') length of 75mm (3") ESD Safe Flex Hose, (1) 1.5m (5') length of 75mm (3") flex hose, (1) 75mm (3") Y (P/N 8882-0691-P1), (3) 3" End Cuffs (P/N 8882-0776-P1), and (1) 3" to 2" End Cuff (P/N 8882-0775-P1).



Bench Mounting Bracket (2") ESD Safe Flex-Arm

Allows the ESD Safe Flex-Arm 50mm (2") Flex-Arm to be mounted virtually anywhere.

Part Number: 8886-0552-P1



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

Allows the ESD Safe Flex-Arm 75mm (3") to be mounted virtually anywhere.

Part Number: 8886-0770-P1



Replaceable Fume-Scoop

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

Part Number: 8882-0408-01-P1



75mm (3") Y

Used to connect two hoses to a single hose. Allows for dual operator configurations.

Part Number: 8882-0691-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

Fume Extraction Filters

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.



PACE Filters, The Highest Standards.

PACE FILTERS		MERV Rating	Air Particles Trapped: 0.3-1.0 microns	Air Particles Trapped: 1-3 microns	Air Particles Trapped: 3-10 microns	Particles Removed
		General Purpose Combo Filter	MERV 10	< 20%	50% - 64%	85% or Better
HEPA Combo Filter	MERV 11	< 20%	65% - 79%	85% or Better		
HEPA Combo Filter	MERV 12	< 20%	80% - 90%	90% or Better		
HEPA Combo Filter	MERV 13	< 75%	90% or Better	90% or Better		
		MERV 14	75% - 85%	95% or Better	90% or Better	- Smoke - Bacteria - Human Aerosole Particles
		MERV 15	85% - 94%	95% or Better	90% or Better	
		MERV 16	95% or Better	95% or Better	90% or Better	
		MERV 17	99.97%	99% or Better	99% or Better	- Viruses - Carbon Dust - Particles smaller than .30 pm
		MERV 18	99.997%	99% or Better	99% or Better	
		MERV 19	99.9997%	99% or Better	99% or Better	
		MERV 20	99.99997%	99% or Better	99% or Better	



PACE Combo Filters

PACE offers 3 different “Combo” filters for the Arm-Evac 105, 150, 200 and 250. Each filter combines both the Primary Particle Filter and Gas Filter into one filter cartridge. PACE filter life lasts up to 2 years, and can be extended with the use of Pre-filters (P/N 8883-0112-P5).

Combo Filter Types

Filter Type	PN	Recommended Application
General Combo Filters	8883-0932-P1	Recommended for soldering applications where normal volumes of fumes are being generated for 1 or 2 shifts. (0.2-80 microns)
HEPA Combo Filters	8883-0922-P1	Recommended for applications in cleanroom environments or where high filtration efficiency is required. (.2-2 microns)
Adhesive Combo Filters	8883-0952-P1	Recommended for any bench top application utilizing adhesives, solvents, and cleaners used in small quantities.



Pre-Filters

Pre-filters extend the life of your PACE filter and are recommended for all filtration systems.

Filter Type	PN	Recommended Application
Pre-Filters	8883-0112-P5	Used to protect the primary filter from large coarse particles, extending the life of the primary filter.



Fume Extraction Installation & Examples

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 page 2 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 page 2 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 page 2 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 page 3 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 4 fume collection points*



Arm-Evac 105, 200 or 250 (Arm-Evac 250 shown.
See page 4 for specifications.)
Four 75mm (3") ESD Safe Flex Arm Kits: P/N 8886-0765-P1
Two 75mm (3") Expansion Kits: P/N 8882-0105-P1
*8886-0765-P1 not shown in above configuration

Arm-Evac 150 Installation & Examples



Arm-Evac 150 Single Collection Point

Pace's Arm-Evac 150 comes standard with the SteadyFlex™ ESD-Safe Arm & Nozzle Assembly. It is extra long at 132cm (52") length, reaching a wide bench top area, with no clamps required. The self-supporting SteadyFlex™ Arm stays put, exactly where you position it.



Arm-Evac 150 Dual Collection Point

For workstations requiring two SteadyFlex™ Arms, simply attach second arm into second port and adjust the self-supporting arms.

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Solder & Desolder Stations

ADS 200



ST 25



ST 35



ST 125



Handpieces

TD-200



MT-200



SX-100



PS-90



Rework & Repair Systems

MBT 250



MBT 360



ST 925



Pre-heaters & Process Monitors

ST 400



PH100



PM 200



Area Array (BGA) Rework Systems

IR 3100



IR 4100



TF 1800



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