

Fume Extraction

*REMOVES HARMFUL
particulates and gases*

the latest advancements in filter condition monitoring and process control



Pace, Inc.
www.paceusa.com

Part #5400-0103 Rev. 8/99

With offices worldwide, PACE, Inc. is a recognized world leader in the development of products and training for the assembly and repair of highly advanced electronics. The company's expertise extends back literally 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 assembly, rework, repair and testing 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-9000, industrial, military or your own internal specifications. Whatever the challenge, PACE stands ready to set a new standard for you.



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PACE Fume Extraction – The World's Leader in Benchtop Fume Removal For a Safer, Cleaner Working Environment

Recommended by International Institutes of Occupational Safety and Health.

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 and other health related effects associated with exposure to these fumes.

PACE Fume Extraction Systems reduce these health risks by removing harmful particulates and gases before they reach the worker's breathing zone. These systems are easily positioned close to the source, safely capturing the fumes which then pass through our proven filtration system.

PACE Fume Extraction Systems feature the latest advancements in filter condition monitoring and process control. Incorporating progressive microprocessor technology, PACE Fume Extraction Systems continuously track and control crucial operating parameters and provide innovative features such as direct connection to personal computers and electronic air monitoring sensors. Each system is composed of rugged steel construction and includes a heavy duty brushless motor for years of trouble-free use.

Convenient, disposable filter cartridges are easily changed eliminating the need for messy cleaning and costly service visits. In addition, PACE offers a wide variety of fume extraction accessories to meet virtually any application.

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ARM-EVAC 200

P A C E Fume Extraction Systems



Versatile Performance for 1 to 4 Workstations

Arm-Evac 200

Arm-Evac 200 P/N 8889-0205 120VAC, 60Hz
 Arm-Evac 200 P/N 8889-0200 230VAC, 50Hz

Features

- High volume air flow
- Heavy duty brushless motor
- 18 gauge steel construction
- On/off switch located on front panel
- Easy filter access
- Compact and self-contained
- Includes pre-filter, general purpose combo filter and power cord

System Specs

Unit: Arm-Evac 200
 Power Requirements: 120VAC, 60Hz 3 Amps 230VAC, 50Hz 1.38 Amps
 Size: 280mm (11")W x 330mm (13")D x 395mm (15.5")H
 Weight: 14 Kg (32 lbs.)
 Sound Level: 59 dBA @ 2m (6')
 # Inlets: Two 75mm (3") dia.
 Free Blowing Flow Rate: 510 m³/h (300 cfm)

Workbench Connections: 45mm (1.75") and 50mm (2") 4
 65mm (2.5") and 75mm (3") 2

Microprocessor Controls: No
 Maximum Duct Run: 5m (16') per inlet

Arm - Evac

Silencer/Mobile Cart for
 Arm-Evac 200/250
 P/N 8885-1225

- Constructed of 18-gauge steel and acoustical foam baffle liner. Includes front locking casters.
- Dimensions: 280mm (11")W x 330mm (13")D x 150mm (6")H
- Weight: 4.5 Kg (10 lbs)



FILTER

ITEM	DESCRIPTION	PART NUMBER
General Purpose Filter Cartridge	Combination of HEPA and Gas Filters.	8883-0931
Optional Adhesive Filter Cartridge	Blend of Adsorptive and Chemisorptive Medias.	8883-0951
Optional Cleanroom Filter Cartridge	Combination of HEPA and Bonded Activated Carbon Filters.	8883-0921
Optional Economy Filter Cartridge	Carbon-Impregnated Reticulated Foam Media.	8883-0871
Optional Extended Life Filter Combination	For increased service life. Includes condensed pleat combo HEPA/Gas Filter.	8883-0936

Compact, Portable Filtration with Intelligence for 1 to 4 Workstations



Accessories

Benchtop Controller for Arm-Evac 250
P/N 8884-2250

- Includes LED filter condition monitor, three-speed controller and remote cable
- Dimensions: 140mm (5.5")W x 75mm (3")D x 30mm (1.25")H



Arm-Evac 250

Arm-Evac 250 P/N 8889-0255 120VAC, 60Hz
Arm-Evac 250 P/N 8889-0250 230VAC, 50Hz

Features

- Microprocessor controlled
- Three-color LED filter condition gauge
- Laser-trimmed electronic air flow sensor
- Self-calibrates to specific arm configuration
- Audible alarm alerts operator of filter change
- Three-speed air flow adjustment
- Intelligent air flow compensation – motor pump speed increases as filter becomes loaded
- RS232C port for computerized connection
- Includes pre-filter, general purpose combo filter and power cord

System Specs

Unit:	Arm-Evac 250	
Power Requirements:	120VAC, 60Hz 3 Amps	230VAC, 50Hz 1.38 Amps
Size:	280mm (11")W x 330mm (13")D x 395mm (15.5")H	
Weight:	14 Kg (32 lbs.)	
Sound Level:	59 dBA @ 2m (6')	
# Inlets:	Two 75mm (3") dia.	
Free Blowing Flow Rate:	510 m ³ /h (300 cfm)	
# Workbench Connections:	45mm (1.75") and 50mm (2")	4
	65mm (2.5") and 75mm (3")	2
Microprocessor Controls:	Yes	
Maximum Duct Run:	5m (16') per inlet	

OPTIONS

TYPICAL APPLICATIONS

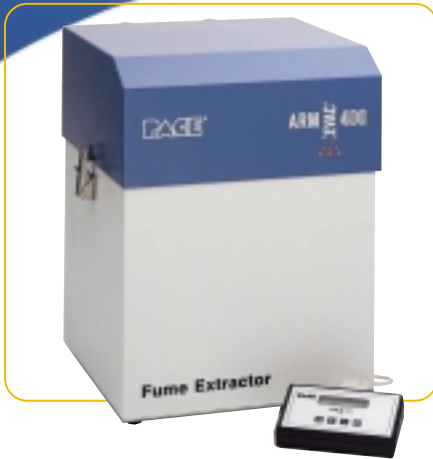
Electronic Soldering, Laser Cutting, Stained Glass Production, Jewelry Manufacturing and Repair, Brazing
Benchtop Adhesive Procedures, Gluing Operations, Laboratory Demonstrations
Fine Particulate and Gas Removal in Designated Cleanroom Environments

Sanding Procedures, Grinding Operations, Benchtop Machining
High Production Soldering Operations

For filter details, see page 7

ARM-EVAC 400

P A C E Fume Extraction Systems



High Production Cellular Manufacturing
Environments for 2 to 6 Workstations

Arm-Evac 400

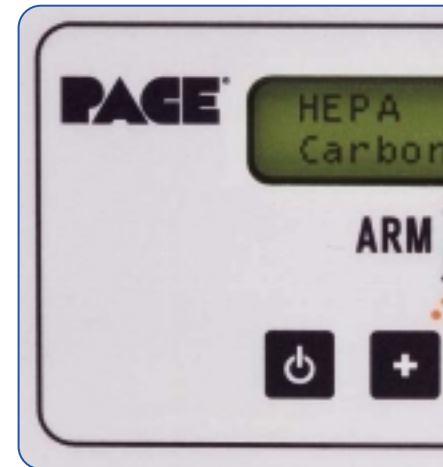
Arm-Evac 400 P/N 8889-0405 120VAC, 60Hz
Arm-Evac 400 P/N 8889-0400 230VAC, 50Hz

Features

- Benchtop microprocessor controller with LCD display*
- Continuous particle and gas filter monitoring
- Self-calibrates to specific arm configuration
- Laser-trimmed electronic air flow sensor
- Intelligent air flow compensation – motor pump speed increases as filter becomes loaded
- RS232C port for computerized connection
- Optional silencer/mobile cart
- Includes extended life pre-filter, HEPA filter, gas filter and power cord

System Specs

Unit:	Arm-Evac 400		
Power Requirements:	120VAC, 60Hz 3 Amps	230VAC, 50Hz 3 Amps	
Size:	342mm (13.5")W x 353mm (14")D x 460mm (18")H		
Weight:	22 Kg (49 lbs.)		
# Inlets:	Two 75mm (3") dia.		
Free Blowing Flow Rate:	595 m ³ /h (350 cfm)		
# Workbench Connections:	45mm (1.75")	and 50mm (2")	6
	65mm (2.5")		3
	75mm (3")		2
Microprocessor Controls:	Yes		
Maximum Duct Run:	7.5m (24') per inlet		



* Microprocessor Controller with LCD Display

For the Arm-Evac 400, Arm-Evac 1200 and Lab-Evac 150

- Easy to use
- Particulate/gas sensing and monitoring to ppm detection
- Interactive 32-character display
- Seven languages always accessible: English, Spanish, French, German, Italian, Portuguese, and Swedish
- Pump speed adjustable to 18 levels
- Audible alarm alerts operator when filter change is necessary
- Self-calibrates to particular arm configuration
- Access code protected to eliminate tampering

ITEM DESCRIPTION	PART NUMBER
Extended Life Pre-Filter (Pkg.10)	8883-0140-P10
HEPA Filter Cartridge	8883-0945
Gas Filter Cartridge	8883-0946

Silencer/Mobile Cart for Arm-Evac 400
P/N 8885-1425
— Dimensions: 342mm (13.5")W x 353mm (14")D x 150mm (6")H
— Weight: 5.9 Kg (13 pounds)

Large Production and Classroom Environments
for 6 to 16 Workstations



Arm-Evac 1200

Arm-Evac 1200 P/N 8889-1205 220VAC, 60Hz 3ph
Arm-Evac 1200 P/N 8889-1200 230VAC, 50Hz

Features

- Front panel mounted microprocessor controller with LCD display*
- Continuous particle and gas filter monitoring
- Self-calibrates to specific arm configuration
- Laser-trimmed electronic air flow sensor
- Two inlet styles for versatile installations
- RS232C port for computerized connection
- Optional remote microprocessor controller
- Silencer and locking casters included
- Includes pre-filter, HEPA filter, and gas filter

System Specs

Unit:	Arm-Evac 1200	
Power Requirements:	220VAC, 60Hz 3ph 10.6 Amps	230VAC, 50Hz 8 Amps
Size:	530mm (21")W x 810mm (32")D x 1270mm (50")H	
Weight:	75 Kg (165 lbs.)	
Sound Level:	59 dBA @ 2m (6')	
# Inlets:	One 150mm (6") dia. top inlet Four 75mm (3") dia. side inlets	
Free Blowing Flow Rate:	3060 m ³ /h (1800 cfm)	
# Workbench Connections:	45mm (1.75") 50mm (2") 65mm (2.5") 75mm (3")	16 14 10 8
Microprocessor Controls:	Yes	
Maximum Duct Run:	80m (260') per inlet	



- Alerts user when time of filter service is due
- Ambient air and motor temperature monitor
- Date and time mode
- RS232C port for data transfer and input controls
- Optional ISO 14000 documentation software package
- Computerized control and recording of parameters such as auto on/off, length of service, alarm triggered events, and operator records.

OPTIONS



ITEM DESCRIPTION	PART NUMBER
Pre-Filter (Pkg. 10)	8883-0141-P10
HEPA Filter Cartridge	8883-0541
Gas Filter Cartridge	8883-0941



Portable Work Center for Individual Operations

Lab-Evac 150

Lab-Evac 150 P/N 8883-0105 120VAC, 60Hz
 Lab-Evac 150 P/N 8883-0100 230VAC, 50Hz

Features

- Front panel mounted microprocessor controller with LCD display (see page 4)
- Continuous particle and gas filter monitoring
- Laser-trimmed electronic air flow sensor
- RS232C port for computerized connection
- Clear polycarbonate cover
- Self-contained and portable, no installation required
- Static-safe strap snaps included
- Includes pre-filter, HEPA filter, and gas filter

System Specs

Unit: Lab-Evac 150
 Power Requirements: 120VAC, 60Hz 3 Amps 230VAC, 50Hz 1.38 Amps
 Size: 600mm (23.5")W x 635mm (25")D x 495mm (19.5")H
 Weight: 35 Kg (77 lbs.)
 Sound Level: 59 dBA @ 2m (6')
 Free Blowing Flow Rate: 595 m³/h (350 cfm)
 # Workstations: 1
 Work Area: 600mm (23.5")W x 300mm (11.75")D

Tip-Evac Systems

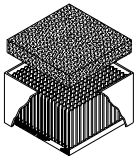


For Pinpoint Fume Removal Right at the Soldering Iron Tip

- Self-contained
- A cost-effective method of removing and filtering fumes from hand soldering operations without adversely affecting tip temperature
- Fume Extraction Tube Kits are available for adaptation to all popular soldering stations
- Variety of central filtration units available
- Quiet operation

FILTER OPTIONS

ITEM DESCRIPTION	PART NUMBER
Pre-Filter (Pkg. 5)	8883-0120-P5
HEPA Filter	8883-0521
Gas Filter	8883-0975



ARM-EVAC Accessories

P A C E F u m e E x t r a c t i o n A c c e s s o r i e s



45mm (1.75") Static-Safe Accessories



45mm (1.75") Static-Safe Metal Flex Arm

P/N 8886-0429

- Conserves benchtop space
- Rugged stainless steel construction, 0.9m (3') long
- Complete with unique Fume Scoop endpiece and Bench Mount Flange



Optional Locking Adjustable Air Flow Controller for 45mm (1.75") Metal Flex Arm
P/N 8886-0509



50mm (2") Static-Safe Accessories



50mm (2") Static-Safe Metal Flex Arm

P/N 8886-0550

- Easy to move in and out of position
- High quality stainless steel construction, 0.9m (3') long
- Variety of endpieces available (see inset)
- Includes Locking Adjustable Air Flow Controller and Bench Mount Flange



shown with optional fume scoop

A Static-Safe Fume Scoop for 50mm (2") Metal Flex Arm
P/N 8886-0530

B Stainless Steel Static-Safe 100mm (4") Nozzle for 50mm (2") Metal Flex Arm
P/N 8886-0318

C Stainless Steel Static-Safe 200mm (8") Nozzle for 50mm (2") Metal Flex Arm
P/N 8886-0328



ITEM DESCRIPTION

Bench Mounting Bracket for 45mm (1.75") and 50mm (2") Flex Arm

PART NUMBER

8886-0552

MOUNTING





50mm (2") Static-Safe Accessories



- Joints lock into position
- 50mm (2") Two-Section Articulated Arm** P/N 8886-0158
 - Reach: 530mm (21") radius
- 50mm (2") Three-Section Articulated Arm** P/N 8886-0155
 - Reach: 860mm (34") radius
- 50mm (2") Wall-Mounted Three-Section Articulated Arm** P/N 8886-0135
 - Reach: 940mm (37") radius



shown with optional bench mounting bracket and canopy

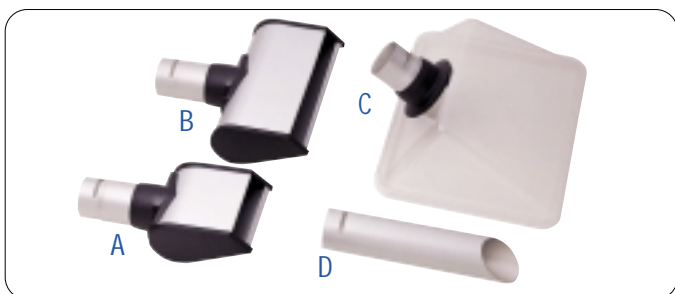
65mm (2.5") Static-Safe Accessories



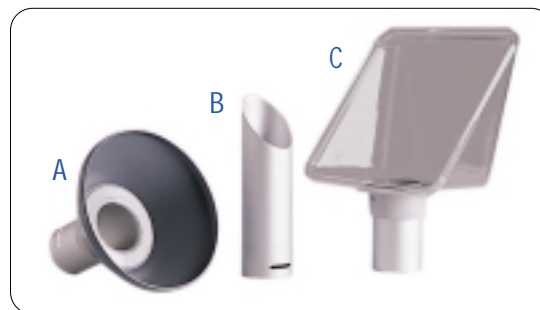
- Joints lock into position
- 65mm (2.5") Two-Section Articulated Arm** P/N 8886-0650
 - Reach: 685mm (27") radius
- 65mm (2.5") Three-Section Articulated Arm** P/N 8886-0652
 - Reach: 940mm (37") radius
- 65mm (2.5") Wall-Mounted Articulated Arm** P/N 8886-0654
 - Reach: 940mm (37") radius



shown with optional bench mounting bracket and canopy



- A Static-Safe Suction Nozzle** P/N 8886-0315
 - 100mm (4") wide
- B Static-Safe Suction Nozzle** P/N 8886-0325
 - 200mm (8") wide
- C Clear Extraction Canopy** P/N 8886-0345
 - 296mm x 248mm (11.6" x 9.75")
- D Static-Safe Suction Tube** P/N 8886-1511
 - 210mm (8.25") long
- Static-Safe Suction Nozzle** P/N 8886-0335 (not shown)
 - 300mm (12") wide
- Static-Safe Suction Hood** P/N 8886-0351 (not shown)
 - 200mm (8") diameter



- A Static-Safe Suction Hood** P/N 8886-0658
 - 200mm (8") diameter
- B Static-Safe Suction Tube** P/N 8886-0660
 - 210mm (8.25") long
- C Clear Extraction Canopy** P/N 8886-0656
 - 254mm x 406mm (10" x 16")

BRACKETS



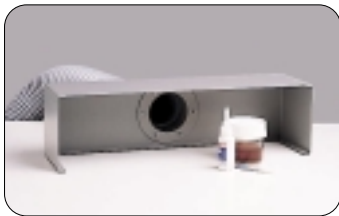
ITEM DESCRIPTION	PART NUMBER
Bench Mounting Bracket for 65mm (2.5") Articulated Arm	8886-0662
Wall-Mounting Bracket for 65mm (2.5") Articulated Arm	8886-0664
Bench Mounting Bracket for 50mm (2") Articulated Arm	8886-1121
Wall-Mounting Bracket for 50mm (2") Articulated Arm	8886-1111

ARM-EVAC Accessories

P A C E F u m e E x t r a c t i o n A c c e s s o r i e s



75mm (3") Fume Collection Accessories



Static-Safe Metal Plenum

P/N 8886-0366

- For wide area extraction
- 18 gauge steel construction
- 460mm (18")W x 130mm (5")H x 130mm (5")D
- Includes 2.5m (8') of 75mm (3") Flex Hose



Static-Safe Laminar Flow Endpiece with Bench Stand

P/N 8886-0939

- For large air volume extraction
- 250mm (10") x 300mm (12")
- Includes adjustable bench stand and 2.5m (8') of 3" Flex Hose

Plastic Flex Arm

75mm (3") Flex Tube

P/N 8882-0752



Flex tube shown with optional fume scoop and bench mounting kit bracket

A Fume Scoop

P/N 8886-0937

- For focused, directional fume extraction

B Fume Hood

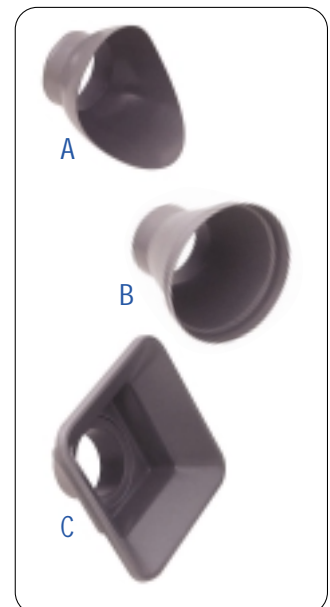
P/N 8886-0930

- For omni-directional fume extraction

C Laminar Flow Endpiece

P/N 8886-0938

- For high volume laminar flow fume extraction



Installation Accessories

PACE has a wide variety of ducting accessories to complete your installation. Please contact your local PACE representative for options available.

Configuration Examples



#1

- 1 Arm-Evac 200 (P/N 8889-0205 / 8889-0200) or Arm-Evac 250 (P/N 8889-0255 / 8889-0250)
- 2 75mm (3") Flex Tubes (P/N 8882-0752)
- 2 75mm (3") Fume Scoops (P/N 8886-0937)

#2

- 1 Arm-Evac 200 (P/N 8889-0205 / 8889-0200) or Arm-Evac 250 (P/N 8889-0255 / 8889-0250)
- 2 75mm (3") Flex Tubes (P/N 8882-0752)
- 2 75mm (3") Fume Scoops (P/N 8886-0937)
- 2 75mm (3") Flex Arm Bench Mounting Kits (P/N 8886-0363) includes Bench Mounting Bracket and 2.5m (8') of 75mm (3") Flex Hose

#3

- 1 Arm-Evac 200 (P/N 8889-0205 / 8889-0200) or Arm-Evac 250 (P/N 8889-0255 / 8889-0250)
- 2 50mm (2") Metal Flex Arms (P/N 8886-0550)
- 2 50mm (2") Fume Scoops (P/N 8886-0530)
- 2 Bench Mounting Brackets (P/N 8886-0552)
- 2 2.5m (8') of 75mm (3") Flex Hose with 75mm (3") to 50mm (2") Reducer (P/N 8886-0299)

#4

- 1 Arm-Evac 200 (P/N 8889-0205 / 8889-0200) or Arm-Evac 250 (P/N 8889-0255 / 8889-0250)
- 2 Metal Plenums (P/N 8886-0366) includes 2.5m (8') of 75mm (3") Flex Hose

#5

- 1 Arm-Evac 200 (P/N 8889-0205 / 8889-0200) or Arm-Evac 250 (P/N 8889-0255 / 8889-0250)
- 1 50mm (2") Metal Flex Arm (P/N 8886-0550)
- 1 50mm (2") Fume Scoop (P/N 8886-0530)
- 1 Bench Mounting Bracket (P/N 8886-0552)
- 1 2.5m (8') of 75mm (3") Flex Hose with 75mm (3") to 50mm (2") Reducer (P/N 8886-0299)
- 1 Metal Plenum (P/N 8886-0366) includes 2.5m (8') of 75mm (3") Flex Hose

- Call about new Fume Extraction ISO 14000 PC Software.
- Ask about new Arm - Evac 100 Specifications.
- Place order for new Fume Extraction System.

Useful Equivalent and Conversion Table

1 Centimeter	= 0.3937	Inches
1 Cubic meter	= 35.31	Cubic feet
1 Foot	= 0.3048	Meters
1 Inch of water	= 0.07355	Inches of mercury
1 Kilogram	= 2.205	Lbs.
1 Liter	= 0.03551	Cubic feet
1 Meter	= 3.281	Feet
1 Pound	= 453.5924	Grams
Temp.(°C)	=	5/9 [Temp. (°F) - 32]
Temp.(°F)	=	9/5 Temp. (°C) + 32

Comprehensive Hands-On Training for Printed Circuit Board Production, Rework and Repair



PACE classroom training combines:

- Conductive and Convective Technology
- Video Instruction
- Classroom Lecture and Theory
- Instructor Demonstration
- Maximum Hands-On Practice
- Written Materials for Future Reference

Results: Increased product quality and employee productivity

Customized training to suit your needs

One week courses available in:

- SMT Rework and Repair
- High Reliability Thru-Hole Soldering
- Multi-Layer and Flexible Circuit Repair
- BGA/CSP Rework and Repair

Two day courses available in:

- SMT Rework
- High Reliability Thru-Hole Soldering
- Mixed Technology (SMT and Thru-Hole) Rework
- Thru-Hole PCB Repair
- Mixed Technology (SMT and Thru-Hole) PCB Repair
- BGA/CSP Rework and Repair

PACE provides everything

- All Equipment, Training Materials and Training Aids
- PACE will ship in and ship out all necessary items

State of the art equipment and training materials are utilized

Courses are conducted in accordance with the latest industry specifications

Attendees are encouraged to bring problem boards for discussion and analysis



PACE Product Line

For more information about the complete line of PACE Products contact your local distributor or PACE

ST SYSTEMS	 ST 25  ST 45  ST 65  ST 75  ST 85  ST 115  ST 115P
MBT/PRC SYSTEMS	 MBT 201  MBT 220  MBT 250  PRC 1500  PRC 2000
THERMOFLO SYSTEMS	 TF 200  TF 500  TF 700  TF 2000
FUME EXTRACTION	 Arm-Evac 200  Arm-Evac 250  Arm-Evac 400  Arm-Evac 1200  Lab-Evac 150
SUPPORT SYSTEMS	 HS 200 Heat Wave  PS 100 Programmable Solder Bath  Thermobond Circuits  Process Monitor

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Systems for Development,
Production, and Repair of
Electronic Assemblies

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PACE products meet or exceed all applicable military and civilian EOS/ESD, temperature stability and other specifications, including MIL-Std-2000, ANSI/J-Std-001, and IPC-A-610.

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