

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 testing 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-9000, industrial, military or your own internal specifications. Whatever the challenge, PACE stands ready to help you set a new standard.



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P/N 5400-0126 02/03

A CUSTOMER COMMITMENT

In 2001 the distinguished Frost & Sullivan Award for the World Surface Mount Technology Rework and Repair Equipment Industry was bestowed upon PACE.

The Frost & Sullivan Market Engineering Customer Service Leadership Award is presented to companies that have demonstrated superior responsiveness to customer needs and value-added support in technology and services.

PACE was selected based upon independent research with customers, key market participants and even our competition. This award reiterates PACE's commitment to excellence from product concept to customer service in the field. Frost & Sullivan's research recognizes that the key to PACE's success in the industry is our interactive approach with customers to provide solutions and respond to end-user feedback when developing products.

In 2002 PACE was awarded World Class Status, signifying that PACE uses best practices in its design, development and manufacturing processes to provide the finest quality products to its customers at the lowest possible cost. The first Maryland based company to receive this coveted award, PACE stands alone in its market segment in achieving this highly regarded status.

SOLUTIONS FOR THE ELECTRONICS INTERCONNECTION PROCESS

The following are trademarks and/or service marks of PACE, Incorporated, Annapolis Junction, MD USA: INSTACAL™, ENDURA™, FUMEFLO™, MINITWEEZ™, PACEWORLDWIDE™, POWERMODULE™ and POWERPORT™.

The following are registered trademarks and/or service marks of PACE, Incorporated, Annapolis Junction, MD USA: ARM-EVAC®, FLO-D-SODR®, HEATWISE®, MINI-WAVE®, PACE®, PERMAGROUND®, SENSATEMP®, SNAP-VAC®, SODRTEK®, SODR-X-TRACTOR®, TEMPWISE®, THERMO-DRIVE®, THERMOFLO®, THERMOJET®, THERMOTWEEZ® and VISIFILTER®.

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, IPC 7711, IPC 7721 and IPC-A-610.

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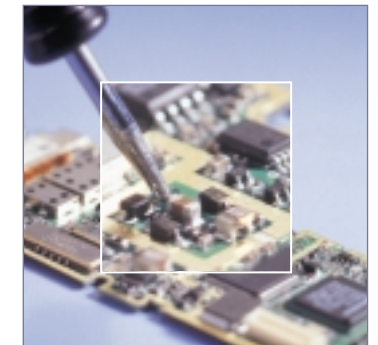


DUAL CHANNEL HIGH CAPACITY SOLDERING/SMT REWORK

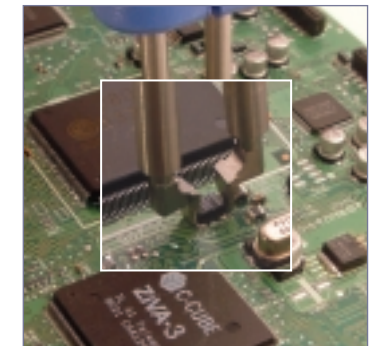


HW200 HEATWISE®

THERMO-DRIVE® IRON



MINITWEEZ™



HEATWISE® TECHNOLOGY



SOLUTIONS FOR THE ELECTRONICS INTERCONNECTION PROCESS

HEATWISE PERFORMANCE CONTROL TECHNOLOGY

High Reliability Soldering/Rework for Thru-hole, SMT, Hybrid and other applications

HW200

The new HW200 Dual Channel system features HEATWISE®, PACE's latest Performance Control Technology. Using advanced electronics, HeatWise continuously monitors the thermal demand of the work and responds instantly by supplying the precise amount of thermal energy required to achieve safe, rapid reflow in virtually any soldering or SMT rework application.

Today's demanding electronic manufacturing environments with micro-miniature components, tight packaging and high thermal mass assemblies require nothing less than the thermal performance, process control and ease of use the HW200 HEATWISE System has to offer.

HeatWise provides 'on-demand' power that never runs out. Solder joint after joint in the most high cycle production environments with maximum productivity, even if you're working with lead free alloys! Making high quality joints consistently has never been easier, even for your less experienced operators.

HeatWise brings Process Control right out in the open. Color coded Power Modules™ with different Heat Levels install right into the two PowerPort™ jacks on the front of the system. Always know at what Heat Level your operators are working. Changing Heat Levels is easy and can be done in seconds without ever having to change tips. And the HW200 never needs calibration.

The HW 200 Dual Channel system offers you maximum versatility, value and efficiency. The compact, attractively designed power source drives two handpieces **simultaneously** with independent Heat Level control. Have any combination of MiniTweez™ or Thermo-Drive® handpieces with just the right tips ready to handle an endless variety of applications. Multiple systems can be combined using the Work Space Management Center (P/N 6018-0128).



HW200 shown with the Thermo-Drive® Soldering Iron and MINITWEEZ™
Note - Handpieces are sold separately

"Drives Two Handpieces simultaneously with independent Heat Level Controls"

The HW 200 Dual Channel System provides an endless variety of component installation and removal capability, ideal for either the production line or rework center. Both channels can power any combination of MiniTweez™ or Thermo-Drive® handpieces **simultaneously** with the widest range of tips to suit virtually any application. Color coded Power Modules let you easily select and monitor Heat Levels independently for each handpiece, maximizing process control and versatility.

ERGONOMIC HANDPIECES

Unsurpassed thermal performance and productivity

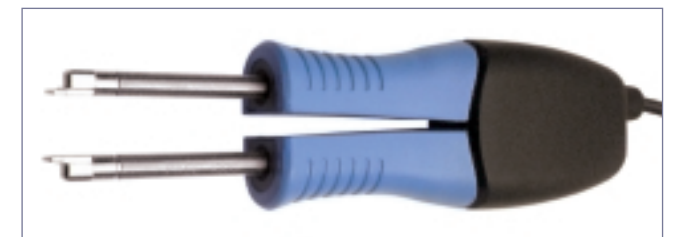
TD-100 THERMO-DRIVE® IRON

The TD-100 Thermo-Drive® Soldering Iron, crafted by a team of surgical instrument engineers, is uniquely designed to eliminate operator fatigue, improve control and enhance productivity in demanding production soldering applications. The Thermo-Drive Iron uses a patented tip-heater cartridge with Direct Power technology. The heater and sensor are built right into the tip for maximum performance and responsiveness! Contact the work, and PACE's Direct Power Technology instantly senses the thermal load and drives in just the right amount of thermal power for safe, high productivity soldering, even with small, fine tips required to access today's microminiature assemblies. And because the low mass tip, sensor and heater are one, temperature recovery is instantaneous so you can solder joint after joint with no loss in performance. Over 40 soldering tip geometries are available as well as over 30 surface mount removal tips. ThermoDrive Tip Heater cartridges are the most competitively priced on the market today.



MT-100 MINITWEEZ™

The MT-100 MINITWEEZ™ handpiece features soft comfort grips and an ergonomic design which mimics the natural motion of the human hand virtually eliminating operator fatigue. Easily remove a wide range of SMD's from today's high density/high thermal load assemblies. With more than 8 different styles of component removal tips available, the MiniTweez is the most versatile component removal handpiece. Tips cost less than half of our leading competitors!



FEATURES	HW 200	
CALIBRATION REQUIREMENT	None	
THERMAL MANAGEMENT SYSTEM	Microprocessor control with Fixed performance level selected by the POWER MODULE®	
TEMPERATURE LOCK-OUT	Yes! Operator access to POWER MODULE® can be easily restricted	
TEMPERATURE SETBACK	Yes, Fixed 30 minutes (can be disabled)	
AUTO OFF	Yes, Fixed 30 minutes (can be disabled)	
HEAT LEVEL SELECTION	POWER MODULE® Performance	
OPERATING HEAT LEVEL VISIBILITY	Yes! color coded POWER MODULES® are visible from a distance.	
ESD SAFE HOUSING	Yes	
SPECIFICATIONS		
PART NUMBER 115 VAC	8007-0407	
PART NUMBER 230 VAC	8007-0408	
TD-100 THERMO-DRIVE® IRON AND CUBBY KIT	6993-0242-P1	
MT-100 MINITWEEZ™ IRON AND CUBBY KIT	6993-0243-P1	
POWER REQUIREMENTS	97-127 VAC, 50/60 Hz, 150 watts max 197-253 VAC, 50/60 Hz, 150 watts max	
DIMENSIONS	191mm (H) x 134mm (W) x 140mm (D) (5.25" x 7.50" x 5.50")	
WEIGHT	3.8kgs (8.3 lbs)	
TEMPERATURE STABILITY	Within ± 5°C (9°F)	
PERFORMANCE LEVEL RANGE	260°C - 424°C (500°F - 800°F)	
TIP TO GROUND RESISTANCE	< 2 Ohms	
POWER MODULES	Performance Level	Color
1207-0362-01-P1	5	Green
1207-0362-02-P1	5.5	Blue
1207-0362-03-P1	6	Orange
1207-0362-04-P1	6.5	Gold
1207-0362-05-P1	7	Red
1207-0362-06-P1	7.5	Purple
1207-0362-07-P1	8	Black

Please visit www.paceworldwide.com for more information on PACE's available tips and accessories for all handpieces contained in this catalog.

THERMO-DRIVE® SINGLE POINT TIP HEATER CARTRIDGES

In test after test THERMO-DRIVE® Tips have out performed the competition

TIP CARTRIDGES	COMPONENT TYPE	SIZE - A	SIZE - B	PART NUMBER
	1/32" Conical Sharp Extended	13.4mm (0.530")	0.80mm (0.031")	1124-0001-P1
	1/64" Conical Sharp	8.3mm (0.330")	0.40mm (0.016")	1124-0002-P1
	1/64" Conical Sharp Bent 30 Degrees	7.8mm (0.310")	0.40mm (0.016")	1124-0003-P1
	1/64" Conical Sharp Extended	13.5mm (0.535")	0.40mm (0.016")	1124-0004-P1
	1/32" Conical	4.7mm (0.188")	0.80mm (0.031")	1124-0005-P1
	3/128" Conical	4.6mm (0.184")	0.60mm (0.023")	1124-0006-P1
	1/16" 90 Degree Chisel	10.9mm (0.430")	1.60mm (0.063")	1124-0007-P1
	3/64" 30 Degree Chisel	9.9mm (0.390")	1.20mm (0.047")	1124-0008-P1
	3/64" 30 Degree Bevel	4.3mm (0.170")	1.20mm (0.047")	1124-0009-P1
	13/64" Chisel	7.62mm (0.300")	5.15mm (0.203")	1124-0010-P1
	1/64" 60 Degree Bevel	14.7mm (0.580")	0.40mm (0.016")	1124-0011-P1
	1/32" 30 Degree Chisel	9.1mm (0.360")	0.80mm (0.031")	1124-0012-P1
	3/32" 30 Degree Chisel	9.9mm (0.390")	2.40mm (0.094")	1124-0013-P1
	5/64" 60 Degree Chisel	4.7mm (0.185")	2.00mm (0.078")	1124-0014-P1
	1/64" Conical, Sharp, Bent 30 Degrees, Extended	15.8mm (0.625")	0.40mm (0.016")	1124-0015-P1
	3/64" Chisel Bent 30 Degrees	10.7mm (0.425")	1.20mm (0.047")	1124-0016-P1
	1/16" 60 Degree Chisel	15.8mm (0.425")	1.60mm (0.063")	1124-0017-P1
	1/32" Conical Sharp Extended	16.7mm (0.660")	0.80mm (0.031")	1124-0018-P1
	1/16" 30 Degree Chisel	9.9mm (0.390")	1.60mm (0.063")	1124-0019-P1
	1/8" 90 Degree Chisel	4.8mm (0.190")	3.20mm (0.125")	1124-0020-P1
	3/128" Conical Sharp Bent 30 Degrees	14.4mm (0.570")	0.60mm (0.023")	1124-0021-P1
	1/16" Conical Sharp	9.9mm (0.390")	1.60mm (0.063")	1124-0022-P1
	1/8" 90 Degree Chisel Extended	8.6mm (0.340")	3.20mm (0.125")	1124-0023-P1
	1/16" 30 Degree Bevel	9.9mm (0.390")	1.60mm (0.063")	1124-0024-P1
	1/16" Conical Sharp Extended	12.1mm (0.478")	1.60mm (0.063")	1124-0025-P1
	1/16" Chisel Bent 30 Degrees	9.7mm (0.385")	1.60mm (0.063")	1124-0026-P1
	3/128" Conical Sharp	15.2mm (0.600")	0.60mm (0.023")	1124-0027-P1
	3/64" Chisel, Bent 30 Degrees, Extended	21.8mm (0.860")	1.20mm (0.047")	1124-0028-P1
	1/32" 30 Degree Bevel	9.1mm (0.360")	0.80mm (0.031")	1124-0029-P1
	1/32" Conical Sharp	9.9mm (0.390")	0.80mm (0.031")	1124-0030-P1
	Heat Staking	N/A	4.00mm (0.156")	1124-0031-P1
	MiniWave	N/A	6.35mm (0.25")	1124-0032-P1
	Angled MiniWave, 3.3 mm	N/A	6.35mm (0.25")	1124-0033-P1
	Single Sided Chisel	N/A	6.35mm (0.25")	1124-0034-P1
	Angled MiniWave, 2.4mm	N/A	3.04mm (0.12)	1124-0035-P1
	1/128" Conical	N/A	0.19mm (0.007)	1124-0036-P1
	1/4 Flat Blade	N/A	6.35mm (0.25")	1124-0037-P1

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THERMO-DRIVE® SMT TIP HEATER CARTRIDGES

THERMO-DRIVE® Tips Deliver More Heat at Safer, Lower Temperatures

CHIP/SOT REMOVAL

TIP CARTRIDGES	COMPONENT TYPE	SIZE - A	SIZE - B	PART NUMBER
	Chip 0402 Angle	2.2mm (.085")	-	1124-0518-P1
	Chip 1808	5.0mm (.195")	-	1124-0520-P1
	Chip 0402	1.0mm (.040")	-	1124-0521-P1
	SOT 23	1.8mm (.070")	-	1124-0522-P1
	SOT 89	2.8mm (.110")	-	1124-0523-P1
	Chip 1206	3.6mm (.142")	-	1124-0524-P1
	Chip 0805	2.4mm (.095")	-	1124-0525-P1

SOIC/SOP/T SOP REMOVAL

TIP CARTRIDGES	COMPONENT TYPE	SIZE - A	SIZE - B	PART NUMBER
	SOIC 14/16	5.2mm (.205")	10.5mm (.415")	1124-0504-P1
	SOIC 20	9.6mm (.377")	13.6mm (.535")	1124-0505-P1
	SOP 28	10.8mm (.426")	18.6mm (.734")	1124-0506-P1
	SOP 40	11.9mm (.467")	25.7mm (1.011")	1124-0507-P1
	SOP 44	13.1mm (.516")	28.4mm (1.120")	1124-0508-P1
	TSOP 56	18.8mm (.739")	14.1mm (.557")	1124-0509-P1
	TSOP 28	12.0mm (.471")	8.5mm (.333")	1124-0510-P1
	SOIC 8	5.1mm (.202")	4.65mm (.183")	1124-0519-P1
	TSOP 40	18.8mm (.740")	10.4mm (.410")	1124-0526-P1

PLCC/QFP REMOVAL

TIP CARTRIDGES	COMPONENT TYPE	SIZE - A	SIZE - B	PART NUMBER
	PLCC 28 Socket	9.3mm (.365")	9.3mm (.365")	1124-0511-P1
	PLCC 32	14.2mm (.561")	11.7mm (.459")	1124-0512-P1
	PLCC 44	16.8mm (.662")	16.8mm (.662")	1124-0513-P1
	QFP 144	20.6mm (.810")	20.6mm (.810")	1124-0514-P1
	PLCC 28	11.8mm (.465")	11.8mm (.465")	1124-0515-P1
	QFP 100/128	22.0mm (.865")	16.0mm (.628")	1124-0516-P1
	PLCC 20	9.3mm (.365")	9.3mm (.365")	1124-0527-P1
	PLCC 18	7.6mm (.300")	12.8mm (.505")	1124-0528-P1
	TQFP 80	12.5mm (.491")	12.5mm (.491")	1124-0529-P1
	PLCC 52	19.4mm (.762")	19.4mm (.762")	1124-0530-P1
	QFP 100	26.6mm (1.048")	26.6mm (1.048")	1124-0531-P1








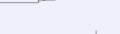








PLCC/QFP REMOVAL

TIP CARTRIDGES	COMPONENT TYPE	SIZE - A	SIZE - B	PART NUMBER
	Blade	10.8mm (.425")	-	1124-0501-P1
	Blade	16.0mm (.630")	-	1124-0502-P1
	Blade	21.2mm (.835")	-	1124-0503-P1
	Blade	25.0mm (.984")	-	1124-0532-P1

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MINITWEEZ™ HEATER CARTRIDGES

Quickly remove SMD's at Safer, Lower Temperatures

TIP CARTRIDGES	COMPONENT TYPE	SIZE - A	SIZE - B	PART NUMBER
 A 	Chip	0.2mm (.008")	-	1124-1001-P1
 A 	Chip, SOT's	0.7mm (.03")	0.5mm (.02")	1124-1002-P1
 A 	Chip, SOT's	0.7mm (0.3")	1mm (.04")	1124-1003-P1
 A 	Chip, SOT's	0.7mm (.03")	2mm (.08")	1124-1004-P1
 A 	SOIC's, SOT, TSOP's Narrow Body Connectors	0.7mm (.03")	6mm (.24")	1124-1005-P1
 A 	SOIC's, SOT, TSOP's Narrow Body Connectors	0.7mm (.03")	8mm (.31")	1124-1006-P1
 A 	SOIC's, SOT, TSOP's Narrow Body Connectors	0.7mm (.03")	10mm (.39")	1124-1007-P1
 A 	SOIC's, SOT, TSOP's Narrow Body Connectors	0.7mm (.03")	13mm (.51")	1124-1008-P1

PRODUCT PAGE

For a complete product listing contact PACE or visit www.paceworldwide.com

PACE provides 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 provide the best, cost-effective solution for you.

HEATWISE/TEMPWISE	HW 100	POWER MODULES	TW 100	INSTACAL™
HeatWise and TempWise systems feature handpiece with unsurpassed ergonomic design and operator comfort and use replaceable tip heater cartridges. The ability to change performance level without having to change tips results in significant cost savings and inventory reduction.				
ST SYSTEMS	ST 65	ST 85	ST 75	ST 115
This product line offers three basic configurations: production soldering, shop air desoldering and fully self-contained desoldering. Each of these basic configurations are available in either analog or digital versions.				
MBT/PRC SYSTEMS	MBT 250	PRC 2000		
PACE offers a broad range of rework and repair products to meet all your repair needs. Whether you are replacing a surface mount component, repairing a multi-layer printed circuit board, or making a plated thru-hole repair.				
CONVECTIVE/INSPECTION	TF 200	TF 3000	LS 3000	XR 3000
PACE's family of ThermoFlo products offer complete solutions from simple surface mount removal and installations to delicate BGA and CSP rework. PACE's new inspection systems feature X-Ray and endoscopic technology to really "SEE" the results of your processes.				
FUME EXTRACTION	ARM-EVAC 105	ARM-EVAC 50	FUMEFLO WORKTABLE	LAB-EVAC 150
PACE offers Fume Extraction Systems that feature the latest advancements in filter condition monitoring and process control as well as cost effective solutions. A variety of collection accessories are available.				

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