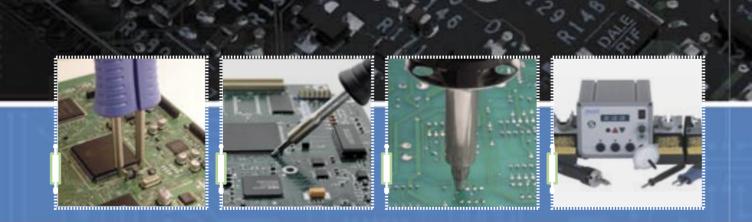




# SOLDERING DESOLDERING & REWORK

LEAD FREE COMPLIANT AND COMPATIBLE



SOLUTIONS FOR THE ELECTRONICS INTERCONNECTION PROCESS



### IN TODAY'S ENVIRONMENT FLEXIBILITY ISN'T JUST IMPORTANT, IT'S THE KEY TO SUCCESS...

Component foot-prints are shrinking, through-put requirements are increasing, and thermally massive power management components (connectors, heat sinks, RF shields, and SMDs) on heavy ground planes **are not** going away anytime soon. Oh yes, let's not forget about the challenges of incorporating Lead Free solders into your process! Being locked into one heat control technology on your Soldering/Desoldering system isn't going to open the door to your success...

The ability to have multiple heating technologies available within a single system directly affects your bottom line. Until now, most systems only offer one type of heating technology which will never fit every application efficiently. The time has come for soldering and desoldering systems to evolve.



#### ....FLEXIBILITY DRIVES THROUGH-PUT!

PACE is proud to introduce your key to future success...The INTELLIHEAT™ Control System. IntelliHeat is the only thermal control system capable of managing multiple types of heating technologies within a single Power Source. There is no longer a need to have multiple Power Sources on your work bench or to force operators to use only one heating technology. Simply plug in any compatible handpiece and IntelliHeat does the rest.

The IntelliHeat Control System allows either SENSATEMP® or Tip-Heater Cartridge based technology handpieces to be plugged into a single Power Source. Finally, the benefits of SENSATEMP® and Tip-Heater Cartridge based technology can be found in a single system, without restriction.

PACE's legendary SENSATEMP® technology is renowned for its temperature stability and ability to handle high mass applications. For smaller components and when through-put is important, there is Tip-Heater Cartridge based technology. Tip-Heater Cartridge based technology is a patented technology that boasts the best response time for high volume applications and easily keeps up in a fast paced environment.

Upgrade your equipment, clear off your work bench and unlock your success with INTELLIHEAT<sup>TM</sup>!

With over 50 years of experience and industry leadership in rework and repair technology and techniques, PACE provides much more than simply equipment. When you purchase PACE products, you receive access to one of the most valuable resources in the industry; PACE's applications and technical support services. Over the years, our applications support services have been the cornerstone of quality assurance and repair reliability for countless customers. Whenever you encounter a new component, a new PCB, Lead Free Solder, or if you just want reassurance that your process is safe and effective, simply contact PACE and we will create a procedure for you that not only identifies the equipment required to do the job correctly, but also every step in the process!

#### TABLE OF CONTENTS

PAGE	
2	INTRODUCTION & TABLE OF CONTENTS
3	PACE HEATING TECHNOLOGY
4	INTELLIHEAT COMPATIBLE HANDPIECES
6	HANDPIECE AND POWER SOURCE CHARTS
7	ST 30, ST 50 AND ST 70 SYSTEMS
8	ST 100 SYSTEM
9	INSTANT SETBACK CUBBY & LEAD FREE ACCESSORIES
10	ST 65, ST 75 AND ST 115 POWER SUPPLIES
11	ST SYSTEMS SPECIFICATIONS
12	MBT 301
13	MBT 350
14	ST 25, MBT 250 AND PRC 2000
15	LEAD FREE SOLDERING
16	SOLDERING WITH NITROGEN
17	NITROGEN ASSISTED SOLDERING ACCESSORIES
18	TD-100 STANDARD TIPS
20	TD-100 DIAMOND SERIES TIPS
21	TD-100 SMT REMOVAL TIPS
22	MT-100 & TP-100 SMT REMOVAL TIPS
23	PS-90 SOLDERING TIPS
24	PS-90 SMT REMOVAL TIPS
25	SX-90 DESOLDERING/SOLDER REMOVAL TIPS
26	TT-65 SMT TIPS AND TJ-85 NOZZLES
27	PRODUCT PAGE





## INTELLIHEAT COMPATIBLE HANDPIECES

TIP-HEATER CARTRIDGE HANDPIECES PERFECT FOR LEAD FREE



#### TD-100 THERMO-DRIVE® SOLDERING IRON

The **TD-100 Thermo-Drive**<sup>®</sup> Soldering Iron is the only iron crafted by a team of surgical instrument engineers and is uniquely designed to eliminate operator fatigue, improve control and enhance productivity in demanding soldering applications. The TD-100 uses a patented Tip-Heater Cartridge that is the best performing and lowest priced Tip-Heater Cartridge on the market today! Almost 100 soldering tip geometries are available as well as over 30 surface mount removal tips. **See Pages 18-21** for tip selection.

Shown with optional comfort grip 6993-0241-P1



#### MT-100 MINITWEEZ<sup>™</sup>

The only high capacity, micro tweezer (**MT-100 MiniTweez<sup>™</sup>**) on the market today features soft comfort grips, the smallest stroke available, and its tweezing action mimics the natural motion of the human hand to eliminate hand fatigue. With 10 styles of component removal tips available, the MT-100 is one of the most versatile component removal tweezers and our tips cost less than half of our competitors! See Page 22 for tip selection.



#### **THERMOPIK® 100**

The newest tool for SMT component removal the **ThermoPik**® **100**. The TP-100 is designed to reflow and remove QFPs in seconds. The integrated vacuum pik lifts the component from the PCB upon reflow. Based on our unique MT-100 handpiece, there isn't another SMT removal tool that is more comfortable in your hand. Over 10 styles of tips are available. **See Page 22** for tip selection.





## **HANDPIECE & POWER SOURCE CHARTS**

CHOOSE THE RIGHT INTELLIHEAT HANDPIECE FOR YOUR APPLICATION

нΛ	NI	DE		CES	
ПА			11-1	CED	

Part Number includes handpiece and standard cubby \*Does not include Handpiece

HANDPIECE	DESCRIPTION	PART NUMBERS
TD-100 Thermo-Drive Iron	The most responsive soldering iron available. Uses tip-heater cartridges.	6993-0263-P1
TD-100 N	A nitrogen compatible version of the TD-100. Requires 6993-0271-P1.	6993-0272-P1
TD-100 with Instant SetBack Cubby	A kit containing the TD-100 and Instant SetBack Cubby	6993-0281-P1
MT-100 MiniTweez	Tip-heater cartridge based tweezer for 2 sided SMD removal.	6993-0264-P1
TP-100 ThermoPik	QFP removal tool with integrated component vacuum pick to lift reflowed component.	6993-0280-P1
PS-90 Universal Soldering Iron	Our famous High Capacity Soldering Iron for the most demanding applications.	6993-0267-P1
PS-90 N	A nitrogen compatible version of the PS-90.	6993-0274-P1
SX-90 Sodr-X-Tractor	The latest innovation in desoldering. Features disposable or reuseable solder traps.	6993-0266-P1
TT-65 ThermoTweez	High capacity tweezer for large or small SMDs.	6993-0268-P1
TJ-85 ThermoJet	A foot-pedal activated precision air pencil for the installation or removal of SMDs.	6993-0270-P1
SX-90 Heat Sleeve	Maintains comfortable temperature in heavy use applications.	6993-0229-P1
Instant Setback Cubby for TD-100*	Reduces tip temperature when iron is not in use.	6019-0077-P1
Nitrogen Regulator Accessory	Controls the flow of nitrogen to tip.	6993-0271-P1
N <sub>2</sub> Manifold Kit	Connect up to $10 \text{ N}_2$ irons to a single $\text{N}_2$ source.	6993-0277-P1

#### KITS & ADDUCATIONS

KITS & APPLICATIONS	Tip Heater C	Tip Heater Cartridge Technology Handpieces			SensaTemp Technology Handpieces		
KITS & APPLICATIONS	TD-100	MT-100	TP-100	PS-90	SX-90	TT-65	TJ-85
Handpiece Kits (includes handpiece and tool stand)	6993-0263-P1 6993-0281-P1	6993-0264-P1	6993-0280-P1	6993-0267-P1	6993-0266-P1	6993-0268-P1	6993-0270-P1
Handpiece Only Part Number	6010-0147-P1	6010-0148-P1	6010-0158-P1	6010-0150-P1	6010-0149-P1	6010-0151-P1	6010-0153-P1
High Cycle Soldering	1			1			
Standard Soldering	1			1			
High Mass Soldering				1			
Micro Soldering	1						
Chip Installation	1	1		1		1	1
Solder Wicking	1			1			1
Thru-Hole Desoldering					1		
SMT Land Preparation	1			1	1		1
Solder Removal from Lands					1		
Large SMD Removal			1			1	
Standard SMD Removal	1	1	1	1		1	
Micro SMD Removal	1	<ul> <li>✓</li> </ul>		1		<ul> <li>✓</li> </ul>	1
Large Component Installations*	1			1			1
Standard Component Installations*	1			1			1
Micro Component Installations*	1			1			1

#### **INTELLIHEAT POWER SOURCE & HANDPIECE COMPATIBILITY**

Power Source Options - ST and MBT Systems ✓= Optional Handpiece ★ = Standard handpiece packaged with System ST 30 ST 50 TIP-HEATER CARTRIDGE HANDPIECES ST 65 ST 70 ST 75 ST 100 ST 115 MBT 301 MBT 350 • TD-100  $\star$ 1 \* 1  $\star$  $\star$ 1  $\star$ \* • MT-100 1 1 1 1 1 1 1 \* 1 • TP-100 1 1 1 1 SENSATEMP HANDPIECES ST 30 MBT 301 ST 50 ST 65 MBT 350 ST 70 ST 75 ST 100 ST 115 • PS-90 1 1 1 1 \* 1 1 1 1 • SX-90 \*  $\star$ \* \* \* • TT-65 1 1 1 1 1 1 ⁄ 1 1 • TJ-85 1 1 1 1







## **DUAL CHANNEL SOLDERING SYSTEMS**

SOLDERING & REWORK SYSTEMS

#### **ST 100 THE ANSWER FOR THE LEAD FREE SOLDER TRANSITION...**

While transitioning from lead containing solders to Lead Free solders a very real problem is that most soldering operations will need to utilize Lead Free AND lead containing solders at the same time. Having only one soldering iron, or other handpiece, on the bench will ultimately lead to crosscontamination issues and result in lower productivity and potentially, higher costs. The ST 100 is a fully programmable system featuring two, individually controlled, IntelliHeat compatible handpiece channels. The system allows for 2 soldering irons, 2 MiniTweezers or one of each to co-exist on a workbench. Color coding accessories that clearly identify which handpiece is designated for use with Lead Free and lead containing solders are available.

The ST 100 is loaded with features to improve quality, control your process, increase through-put, and extend tip life. The system is fully programmable and can be password protected to prevent unauthorized changes. When high-mass tips are used, an offset can be programmed into the system.

Technicians can become frustrated with being locked into a single temperature. Additionally, a higher set temperature is often desired when working with Lead Free solders. The ST 100 has the solution! An approved, unique, operating range or process window, can be programmed FOR EACH HANDPIECE, allowing operators the flexibility to do their work, while eliminating the risks associated with giving techs access to the entire temperature range of the system. Also, a process window can be defined for the handpiece using leaded solder, and a separate process window can be defined for the handpiece using lead containing solder. Operators can be given a range of 5 to 450°F to operate within!



To maximize tip life and reduce operating costs, PACE's well recognized "SetBack" and "Auto-Off" features are included. The system will automatically reduce the set temperature to below solder melt temperatures, then turn off after a user defined period of inactivity, from 10 to 90 minutes each. To really protect the more expensive tip-heater cartridge and fine point soldering tips from oxidation, the TD-100 iron can be used with the PACE's "Instant-SetBack if it has been in the cubby for more than 45 seconds! Up to two Instant-SetBack cubbies can be connected to the ST 100.

The backlit, digital, LCD screen displays the temperature of both handpiece channels or with scan mode activated will cycle through the handpiece channels one at a time displaying set and actual temperatures. The backlight and character contrast on the display can be adjusted to meet individual preferences. Finally, the system can be programmed with the name of the operator or company which is displayed when the system is turned on.







## SOLDERING & REWORK SYSTEMS

ST 65, ST 75 & ST 115 POWER SUPPLIES

The **ST 65** is a single channel, dial control power supply that is compatible with all IntelliHeat handpieces and comes as a system with the new SX-90 Sodr-X-Tractor or as a Power Source only. Featuring a powerful multistage venturi that is powered by your compressed air source, the ST 65 is ideal for application where continuous vacuum or pressure is required. An N<sub>2</sub> source can be connected to create an inert gas reflow environment when using an N<sub>2</sub> capable soldering iron. The heavy-duty, durable metal housing ensures years of service and the sloped face of the front panel is a standard feature for ease of use. An optional mounting bracket (P/N 1321-0609-P1) is available to mount the system under a work-bench or shelf, preserving precious bench top space. N<sub>2</sub> capable soldering iron.

#### FEATURES:

- IntelliHeat Control Technology
- Dial control
- °C/°F Temperature Scales
- Temperature lockout
- Patented Snap-Vac Technology
- ESD grounding jack
- ESD Safe metal housing
- Stackable
- Can be mounted under workbench or shelf with optional bracket 1321-0609-P1



The **ST 75** and **ST 115** are ideal for users having to deal with wide ranges of applications. With these systems, you can solder, desolder, remove components with a variety of tweezers and thermo-piks, as well as make use of the high performance, foot pedal activated, air pencil. The systems come standard with PACE's patented SNAPVAC desoldering technology to ensure quick, clean removal of solder from any throughhole joint. The Hi-Flo pump is so powerful that you won't lose vacuum in continuous use applications when removing residual/excess solder from surface mount leads. The new, high resolution pressure control valve delivers the widest range of adjustable airflow available on the market today. So if you're using the new TJ-85 to reflow a PLCC or an 0201 resistor, you always have the precise level of control that you need to get the job done right!

**ST 75** A single channel, dial control power supply, the ST 75 is compatible with all IntelliHeat handpieces and comes as a system with the new SX-90 or as a Power Source only. The ST 75 improves quality, reduces costs and eliminates the maintenance and calibration hassles associated with other systems. The heavy-duty, durable metal housing ensures years of service and the sloped face of the front panel is a standard feature for ease of use.

**ST 115** A single channel, digital display, fully programmable power supply, the ST 115 is compatible with all IntelliHeat handpieces and comes as a system with the new SX-90 or as a Power Source only. The programmable features of the ST 115 cannot be found anywhere on similarly priced systems! The ST 115 improves quality, reduces costs and eliminates the maintenance and calibration hassles associated with other systems. The heavy-duty, durable metal housing ensures years of service and the sloped face of the front panel is a standard feature for ease of use.

#### FEATURES:

- IntelliHeat Control Technology
- Dial control
- °C/°F Temperature Scales
- Temperature lockout
- Hi-Flo Pump
- Patented Snap-Vac Technology
- ESD grounding jack
- ESD Safe metal housing
- Stackable

#### **FEATURES:**

- IntelliHeat Control Technology
- Digital Display & Keypad
- °C/°F display options
- Password lockout
- Temperature SetBack
- Auto-Off
- User defined operating
- temperature range
- Hi-Flo Pump
- Patented Snap-Vac Technology
- ESD grounding jack
- ESD Safe metal housing
- Stackable









### **MBT 301** SIMPLE AND EASY TO USE FOR REWORK TECHNICIANS OR OPERATORS ON THE LINE

The **MBT 301** is a multi-technology system with two, individually controlled, universal handpiece channels. The system features a two-line back lit LCD display. The programmable features include: password protection from unauthorized changes, a user definable temperature operating range, and "SetBack" & "Auto-Off" functions to preserve tip life. To protect your more expensive tip-heater cartridge and fine point soldering tips from oxidation, the TD-100 can be used with the optional "Instant-SetBack Cubby". The cubby puts the iron's channel into setback if it is idle in the cubby for more than 45 seconds! One Instant SetBack Cubby can be connected to the MBT 301.



The new dual purpose vacuum/pressure pump and delivery system featuring PACE's patented SNAP-VAC Technology, provides the most vacuum available for desoldering applications. When used with an air pencil, the high resolution, pressure control valve allows for precise adjustment when working on the smallest components such as 0201's.

SPECIFICATIONS	MBT 301	MBT 350	MBT 301 E	MBT 350 E		
Kit with Handpieces Part Numbers:	8007-0478 (TD-100 & SX-90)	8007-0454 (TD-100, MT-100 & SX-90)	8007-0479 (TD-100 & SX-90)	8007-0455 (TD-100, MT-100 & SX-90)		
Power Source Only Part Numbers:	8007-0480	8007-0452	8007-0481	8007-0453		
Power Requirements	120 VAC, 60 Hz (2	240 watts maximum)	230 VAC, 50 Hz (2	240 watts maximum)		
Handpiece Technology Compatibilty	IntelliHeat I	Handpieces with Tip Heate	r Cartridge or SensaTemp	Technology		
Dimensions	13	5mm H x 165mm W x 26	0mm D (5.3″ x 6.5″ x 9.2	25")		
Weight		5 Kgs (	11 lbs.)			
Tip to ground resistance		< 2 0	Ohms			
Temperature Stabililty		± 1.1 °	C (2 °F)			
Temperature Accuracy		Meets or exceed	s ANSI J Std 001			
Set Temp Range		37-482 ℃ (100-9 205-454 ℃ (400-850	· ·			
Vacuum Rise Time	15	150 ms Average as measured with PACE Process Monitor				
Vacuum	20 in Hg max					
Pressure	18 p.s.i. max					
Air Flow		8 SLP/	M max			

#### **MBT 300 SERIES SPECIFICATIONS**





## SENSATEMP REWORK SYSTEMS

ST 25, MBT 250 & PRC 2000

The PRC 2000 Benchtop Factory is the ultimate rework center. The PRC 2000 can tackle just about any Thru-Hole, SMT application and is well suited for multilayer repairs on damaged or prototype PCBs. Featuring 3 simultaneously active



SensaTemp handpiece channels, a built-in paste dispenser, MicroChine for removing conformal coatings or grinding away PCB laminate, and pulse heat technology. The PRC 2000 comes with 9 handpieces and continuously calibrates automatically.

The ST 25 soldering system uses SensaTemp to maximize heat delivery and improves quality, reduces costs and eliminates the maintenance and calibration hassles associated with other soldering systems. The heavy-duty metal housing makes this system the ideal choice for the harshest environments and the sloped face of the front panel is a standard feature for ease of use. An optional mounting bracket (P/N 1321-0609-P1) is available to mount the system under a work-bench or shelf, preserving precious bench top space.

#### **FEATURES:**

- SensaTemp Control Technology •
- Analog (dial) control
- °C/°F Temperature Scales
- Temperature Adjustment Lockout
- ESD grounding jack • • ESD Safe metal housing
- Stackable
  - Can be mounted under work bench or shelf with optional bracket 1321-0609-P1

#### SENSATEMP POWER SOURCE SPECIFICATIONS

SPECIFICATIONS	ST 25	MBT 250 SD/MBT 250 SDTP	PRC 2000 SMT	PRC 2000 TH		
System 115 V	8007-0528	8007-0203 (SD) 8007-0206 (SDTP)	8007-0132	8007-0138		
Power Source Only 115 V	8007-0529	8007-0349	N/A	N/A		
System 230 V	8007-0510	8007-0204 (SD) 8007-0207 (SDTP)	8007-0133	N/A		
Power Source Only 230 V	8007-0511	8007-0353	N/A	N/A		
Input Power Requirements		97-127 VAC, 50/60 Hz or 197-25	53 VAC, 50/60 Hz			
Max Power Consumption	120 W	240 W	400	W		
Dimensions	104mm H x 130mm W x 152mm D (4.1" H x 5.1" W x 6.0" D)	135mm H x 165mm W x 260mm D (5.3" H x 6.5" W x 9.25" D)	175mm H x 350mm W x 230mm D (6.9" H x 13.75" W x 9.25" D)			
Weight	2.3 Kgs (5 lbs.)	5 Kgs (11 lbs.)	13 Kgs (2	28.6 lbs.)		
Control		LED Display	LED D	isplay		
Control Technology		SensaTemp (Black Connector	HandPieces)			
Tip to Ground Resistance		2 ohms or less				
Temperature Accuracy		Meets or exceeds ANSI-J-	STD 001			
Absolute Temperature Stability		± 1.1°C (± 2 °F) at idle	ip temp.			
Temperature Range		176° to 482°C (350° to 90	D°F) nominal			
System Can be Calibrated		Calibration not requ	ired			
Ритр Туре	N/A	Se	If Contained Pump			
Vacuum Rise Time	N/A		150 ms Average			
Vacuum (Nominal)	N/A	20 in Hg max				
Flow Control Valve	N/A	High Resolution Needle Valve Coarse adjustment				
Pressure (Nominal)	N/A	18 p.s.i. max 7 p.s.i. max				
Air Flow (Nominal)	N/A	8 slpm max	8 slpm max 13 slpm max			









### LEAD FREE SOLDERING LEAD FREE SOLDERING COMPATIBLE AND ROHS COMPLIANT

PACE's soldering systems offer legendary thermal control as well as advanced features to maintain your process. Unique PACE features such as IntelliHeat, Power Modules and password protection ensure consistency and quality in your process. Economical tips and standard features such as "SetBack" and "Auto-Off" maximize tip life to reduce operating costs and increase your bottom line.

#### All ST & MBT systems, handpieces and tips are Lead Free soldering compatible and RoHS compliant.

They can be used with any Lead Free alloys without modification. PACE's soldering systems, handpieces and tips are fully compatible with your Lead Free process. PACE's TD-100 soldering iron boasts one of the most efficient heat transfer capabilities and is clearly one of the most responsive irons on the market today. This means that the TD-100's ability to recover from thermal loading and maintain its heat output is far superior to other conventional irons, eliminating the need for higher, unsafe temperatures when using Lead Free solders. Quick and consistent heat transfer also ensures that flux is fully activated and burned off, leaving the work site properly prepared for the formation of highly reliable solder joints. Our PS-90 soldering iron has been the staple of the industry for years and is known for its amazing thermal capacity and ability to deliver the heat at safe, low temperatures. Both the TD-100 and PS-90 are available for use with nitrogen.





All ST products are compatible with either the PS-90 N and/ or the TD-100 N handpieces. The benefits of nitrogen assisted soldering are available for all of PACE's soldering stations with the  $N_2$  Regulator Accessory which can be easily mounted to any ST system.

#### All of PACE's soldering, desoldering and component removal tips are tinned with Lead Free solder

Due to the corrosive nature of the high tin content in Lead Free alloys and because more aggressive fluxes are commonly required when using Lead Free solders, we have also optimized the iron plating on our tips to maximize thermal transfer while providing for the longest life possible.

PACE is leading the way in soldering technology with our patented "Diamond Series" tips. "Diamond Series" tips are manufactured with an iron matrix that is impregnated with sub micron sized diamond particles. The diamond-impregnated surface is harder and more corrosion resistant than iron alone. When reworking area array components with Lead Free solder, the greatest enhancement to existing equipment is the use of nitrogen for reflow. All of PACE's Area Array equipment comes fitted for nitrogen use as standard.

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 workers breathing zone thereby reducing or eliminating health risks and improving productivity.





### TD-100 STANDARD SOLDERING TIPS TIP SPECIFICATIONS

TIP	SPE	CIFI	CATI	ONS
-----	-----	------	------	-----

TIP SPECIFICATIO				
TIPS	DESCRIPTION	TIP SIZE - L	SIZE - D	PART NUMBER
€ŧ	1/32" Conical Sharp Extended	13.4mm (0.530")	0.80mm (0.031")	1124-0001-P1
	1/64" Conical Sharp	7.8mm (0.310")	0.40mm (0.016")	1124-0002-P1
5 Dar *	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
€ <b>−&gt;</b> ŧ	13/64" Conical Sharp Extended	4.7mm (0.188")	0.80mm (0.031")	1124-0005-P1
€ <b>⊳</b> +	3/128" Conical	4.6mm (0.184")	0.58mm (0.023")	1124-0006-P1
	1/16" 90 Degree Chisel	10.9mm (0.430")	2.03mm (0.080")	1124-0007-P1
	3/64" 30 Degree Chisel	9.7mm (0.380")	1.20mm (0.047")	1124-0008-P1
٤℃±	3/64" 30 Degree Bevel	3.6mm (0.140")	1.20mm (0.047")	1124-0009-P1
ة <u>`</u> '	13/64" Extra Large 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
5 <b>*</b>	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
b > mark	1/64" Conical, Sharp, Bent 30 Degrees, Extended	15.1mm (0.595")	0.40mm (0.016")	1124-0015-P1
	3/64" Chisel Bent 30 Degrees	11.7mm (0.460")	1.20mm (0.047")	1124-0016-P1
	1/16" 60 Degree Chisel	15.8mm (0.620")	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
δ 1 C.	1/8" 90 Degree Chisel	4.8mm (0.190")	3.20mm (0.125")	1124-0020-P1

**MAXIMIZING TIP LIFE** PACE recommends the following practices to maximize tip life.

- 1. Always use the lowest possible temperatures while soldering. High temperatures cause tips to oxidize faster, which reduces heat transfer and damages the protective iron plating.
- 2. Avoid aggressive fluxes whenever possible. Aggressive fluxes erode tips faster; shortening their useful life.
- Always use a properly sized tip for the work. Tips, that are too small, will wear out faster and tips that are too large will wear unevenly which, in turn, will change the tip geometry rendering it useless, possibly damaging pads.
   Always tin tips when not in use and after cleaning on a damp sponge. A coating of solder will prevent oxidation
- from forming which causes tips to lose their tinning or wetting capability.
- Always feed solder wire into the heated work, not the tip. Feeding solder directly into the tip will cause pin-holes in the tip and will cause the flux in the solder wire to be burned off before it can activate and prepare the surfaces being soldered.

Should tips lose their tinning or wetting capability, a tip cleaner such as PACE's Tip-Brite may be used to restore them.







UNIQUE TO PACE... PATENTED DIAMOND/IRON PLATING PROCESS USING REAL DIAMONDS THAT PROVIDES IMPROVED THERMAL PERFORMANCE AND LONG LIFE WHEN WORKING WITH LEAD FREE SOLDER

## DIAMOND SERIES EXTENDED LIFE SOLDERING TIPS

FOR USE WITH THE TD-100

PROFILE	DESCRIPTION	PART NUMBER	PROFILE	DESCRIPTION	PART NUMBER
	.016 Conical	1126-0601-P1	eth C	.06 Wide, Bevel 60 Degrees, .12x.06 Oval Face	1126-0625-P1
17.4	.039 Conical	1126-0602-P1	5	.07 Bevel, 60 Degree	1126-0626-P1
	.055 Conical, Blunt	1126-0603-P1		.078 Bevel, 45 Degree	1126-0627-P1
12>	.031 Conical, Blunt	1126-0604-P1		.13 Bevel, 60 Degree	1126-0628-P1
www.	.016 Conical, Long	1126-0605-P1	1	.118 Bevel, 45 Degree	1126-0629-P1
	.016 Conical	1126-0606-P1	8 110	.023 Bevel, Special	1126-0630-P1
[]]=>	.016 Conical, Extended	1126-0607-P1	5 000	.031 Chisel Standard	1126-0631-P1
	.024 Conical	1126-0608-P1		.047 Chisel Standard	1126-0632-P1
	.039 Conical	1126-0609-P1	8	.062 Chisel Standard	1126-0633-P1
	.031 Conical	1126-0610-P1	1	.094 Chisel Standard	1126-0634-P1
	.047 Conical	1126-0611-P1		.157 Chisel Standard	1126-0635-P1
	.016 Conical Bent	1126-0612-P1	8	.205 Chisel Standard	1126-0636-P1
200	.016 Conical, Blunt, Bent	1126-0613-P1	1	.157 Chisel Long Reach	1126-0637-P1
to D	.016 Conical, Blunt	1126-0614-P1	11	.205 Chisel Long Reach	1126-0638-P1
	.016 Conical Extended, Bent	1126-0615-P1	10	.078 Chisel Blunt	1126-0639-P1
5	.157 Bevel, 45 Degree	1126-0616-P1	8 🗸	.125 Chisel Blunt	1126-0640-P1
	.078 Bevel, 60 Degree	1126-0617-P1	527	.055 Chisel, Bent 30 Degrees	1126-0641-P1
	.118 Bevel, 60 Degree	1126-0618-P1	3	.062 Chisel, Bent 30 Degrees	1126-0642-P1
5	.157 Bevel, 45 Degree Tinned on edge/face	1126-0619-P1	Ĩ	.055 Chisel, Bent, Extended	1126-0643-P1
[]B])	.039 Bevel, 60 Degree, Extended	1126-0620-P1		.185 Knife, 45 Degree	1126-0644-P1
	.039 Bevel, 45 Degree Tinned on edge / face	1126-0621-P1	1	.181 Knife, 45 Degree	1126-0645-P1
	.078 Bevel, 45 Degree Tinned on edge / face	1126-0622-P1		.185 Knife, 45 Degree, Blunt	1126-0646-P1
1	.118 Bevel, 45 Degree Tinned on edge / face	1126-0623-P1	[]	.118 Knife, 45 Degree	1126-0647-P1
	.039 Bevel, 45 Degree	1126-0624-P1	1	Single Sided Chisel .08 Wide	1126-0648-P1

\* Drawings are representative of tips actual shape. Actual tips may differ somewhat, other than front end geometry.





## MT-100 AND TP-100 SMT REMOVAL TIPS

TIP SPECIFICATIONS

#### MT-100 TIPS

TIP - CHIP/SOT REMOVAL	COMPONENT TYPE	SIZE - A	SIZE - B	PART NUMBER
АВАВ	Chip (fig. A)	0.2mm (.008")	0.2mm (.008")	1124-1001-P1
	Chip, SOT (fig. B)	0.7mm (.03")	0.5mm (.03")	1124-1002-P1
	Chip, SOT (fig. B)	0.7mm (.03")	1mm (.04")	1124-1003-P1
A B (fig. C)	Chip, SOT (fig. B)	0.7mm (.03")	2mm (.08")	1124-1004-P1
(fig. C) 	Chip, SOT, TSOPS (fig. C)	0.7mm (.03″)	6mm (.24″)	1124-1005-P1
	Chip, SOT, TSOPS (fig. C)	0.7mm (.03")	8mm (.31″)	1124-1006-P1
	Chip, SOT, TSOPS (fig. C)	0.7mm (.03″)	10mm (.39″)	1124-1007-P1
	Chip, SOT, TSOPS (fig. C)	0.7mm (.03")	13mm (.51″)	1124-1008-P1
	Chip, SOT, TSOPS (fig. C)	0.7mm (.03")	18mm (.74″)	1124-1009-P1
	Chip, SOT, TSOPS (fig. C)	0.7mm (.03″)	28mm (1.09")	1124-1010-P1

#### **TP-100 TIPS**

TIP	ТҮРЕ	LEAD COUNT	SIZE - A	SIZE - B	COMPONENT HEIGHT	COMPONENT FOOTPRINT	PART NUMBER
	lqfp/tqfp	80	12mm (.472″)	12mm (.472″)	1.4mm	2.0mm	1124-2001-P1
	LQFP/TQFP	64, 80,100, 120, 128, 168	14mm (.551″)	14mm (.551″)	1.4mm	2.0mm	1124-2002-P1
	LQFP/TQFP	128, 144, 160, 176	20mm (.788″)	20mm (.788″)	1.4mm	2.0mm	1124-2003-P1
В	lqfp/tqfp	176, 216	24mm (.945")	24mm (.945″)	1.4mm	2.0mm	1224-2004-P1
	LQFP/TQFP	208, 256	28mm (1.10")	28mm (1.10")	1.4mm	2.0mm	1224-2005-P1
	QFP	52, 64, 80, 100	14mm (.551″)	14mm (.551″)	2.7mm	3.2mm	1124-2006-P1
	QFP	52, 64, 80, 100	14mm (.551″)	14mm (.551″)	2.7mm	3.9mm	1124-2007-P1
	QFP	64, 80, 100, 128	14mm (.551″)	20mm (.788″)	2.7mm	3.2mm	1124-2008-P1
	QFP	64, 80, 100, 128	14mm (.551″)	20mm (.788″)	2.7mm	3.9mm	1124-2009-P1
	QFP	120, 128, 144, 160, 208	28mm (1.10")	28mm (1.10")	3.4mm	3.9mm	1124-2010-P1
	QFP	160	28mm (1.10")	28mm (1.10")	3.4mm	3.9mm	1124-2011-P1



### **PS-90 SMT REMOVAL TIPS** TIP SPECIFICATIONS

TIPS	DESCRIPTION	TIP SIZE	PART NUMBER
(fig. A)	SOIC - 8 (JEDEC) (fig.A)	5.05mm x 5.08mm (0.199" x 0.200")	1121-0390-P1
	SOIC - 14 (JEDEC) (fig.A)	5.05mm x 8.99mm (0.199" x 0.354")	1121-0391-P1
	SOIC - 16 (JEDEC) (fig.A)	5.05mm x 10.2mm (0.199" x 0.404")	1121-0392-P1
(fig. B) B <sup>×</sup> A	Chip Component <i>(fig.B)</i>	3.56mm x 2.03mm (0.14" x 0.08")	1121-0303-P1
(fig. C)	TSOP (fig.C)	19.333mm x 8.1mm (0.76" x 0.32")	1121-0403-P1
	Flat Blade Tip	A = 7.6mm (0.3")	1121-0512-P1
8	Flat Blade Tip	A = 10.2mm (0.4")	1121-0514-P1
	Flat Blade Tip	A = 12.7mm (0.5")	1121-0473-P1
	Flat Blade Tip	A = 17.8mm (0.7")	1121-0416-P1
	Flat Blade Tip	A = 20.3mm (0.8")	1121-0497-P1
A	Flat Blade Tip	A = 25.4mm (1.0")	1121-0448-P1





### TT-65 SMT REMOVAL TIPS & HOT JET NOZZLES TIP SPECIFICATIONS

#### **TT-65 SMT REMOVAL TIPS**

CHIP REMOVAL TIPS	DESCRIPTION	TIP SIZE	PART NUMBER
A A A A A A A A A A A A A A A A A A A	SOIC, SOJ, SIMMs	A=10.2mm (0.4")	1121-0514-P1
	SOIC, SOJ, SIMMs	A=12.7mm (0.5")	1121-0473-P1
	SOIC, SOJ, SIMMs	A=17.8mm (0.7")	1121-0416-P1
	SOIC, SOJ, SIMMs	A=20.3mm (0.8")	1121-0497-P1
	SOIC, SOJ, SIMMs	A=25.4mm (1.0")	1121-0448-P1
	Chip Component	A=0.76mm (0.03")	1121-0398-P1
	Chip Component	A=2.0mm (0.08")	1121-0313-P1
	Chip Component	A=4.1mm (0.16")	1121-0399-P1
	Chip Component, Small SOIC	A=6.4mm (0.25")	1121-0401-P1
	Thin-Walled Chip Component	A=0.76mm (0.03")	1121-0520-P1
	Thin-Walled Chip Component	A=2.0mm (0.08")	1121-0521-P1
	1/64" Angled Fine Point Conical	A=0.43mm (0.017")	1121-0517-P1
PLCC REMOVAL TIPS	DESCRIPTION	TIP SIZE A x B	PART NUMBER
Exercise ref 2000/F Tell 2000/F Tell 2000/F April allow April allow Fill Control of the formation of t	PLCC-20	6.86mm x 6.86mm (0.27" x 0.27")	1121-0316-P1
	PLCC-28	9.4mm x 9.4mm (0.37" x 0.37")	1121-0317-P1
	PLCC-32	12.2mm x 9.65mm (0.48" x 0.38")	1121-0352-P1
	PLCC-44, PQFP-84	14.5mm x 14.5mm (0.57" x 0.57")	1121-0318-P1
	PLCC-52, PQFP-100	17.0mm x 17.0mm (0.67" x 0.67")	1121-0319-P1
	PLCC-68, PQFP-132	21.9mm x 21.9mm (0.86" x 0.86")	1121-0320-P1
	PLCC-84, PQFP-160	26.9mm x 26.9mm (1.06" x 1.06")	1121-0321-P1

#### **TT-85 HOT JET NOZZLES**

TIPS	DESCRIPTION	TIP SIZE	PART NUMBER
$\rightarrow$ $\circ$	Round Nozzle	1.5mm (.06") Inner diameter	1259-0129-P1
20-sq	Round Nozzle, Bent 60 degrees	1.5mm (0.6") Inner diameter	1259-0130-P1
200	Flat Jet Nozzle	6.1mm x 1.9mm (.24" x .074") Inner flow dimensions	1259-0131-P1



### SOLUTIONS FOR THE ELECTRONICS INTERCONNECTION PROCESS

#### **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.

#### 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.



#### PACE USA

255 Air Tool Drive, Southern Pines, NC 28387 U.S.A. **T:** 910-695-7223 **F:** 910-695-1594

#### PACE EUROPE

Technology Centre, Kelvin Drive, Knowlhill, Milton Keynes, MK5 8NH United Kingdom **T:** (44) 1908-277666 **F:** (44) 1908-277777

The following are trademarks and/or service marks of PACE, Incorporated,Annapolis Junction, MD USA: INSTACAL™, ENDURA™, FUMEFLO™, HI-FLO™, INTELLIHEAT™, CO-FLO™, MINITWEEZT™, PACEWORLDWIDET™, POWERMODULET™ and POWERPORT™.

The following are registered trademarks and/or service marks of PACE, Incorporated, Annapolis Junction, MD USA: ARM-EVAC®, FIQ-DSODR®, HEATWISE®, MINI-WAVE®, PACE®, PERMAGROUND®, SENSATEMP®, SNAP-VAC®, SODRTEK®, SODRX-TRACTOR®, TEMPWISE®, THERMO-DRIVE®, THERMOFILO®, THERMOJET®, THERMOTWEEZ® and VISIFILTER®. PACE products meet or exceed all applicable military and civilian EOS/ESD, temperature stability and other specifications, including MILSTD-2000, ANSI/JSTD001, IPC 77211 and IPC-A610.

PACE products meet or exceed all applicable military and civilian EOS/ESD, temperature stability and other specifications, including MILSTD-2000, ANSI/JSTD:001, IPC 7711, IPC 7721 and IPC-A-610.





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.

©2007 PACE, Inc. Southern Pines, North Carolina. All rights reserved. Printed in UK. P/N 5400-0140 10/07.

### **X-ON Electronics**

Largest Supplier of Electrical and Electronic Components

Click to view similar products for pace manufacturer:

Other Similar products are found below :

 8883-0111-P5
 1121-0690-P5
 1124-1004-P1
 1128-0003-P1
 1128-0019-P1
 1128-0012-P1
 1128-0001-P1
 1121-0416-P1
 1121-0399-P1
 6993 

 0317-P1
 8007-0510
 6993-0210
 8007-0455
 1128-0013-P1
 1121-0680-P5
 1121-0003-P2
 1121-0313-P1
 1124-0003
 6993-0316-P1
 8883-0931

 1131-0052-P1
 1129-0018-P1
 1128-0008-P1
 1124-0019-P1
 1124-0013-P1
 1121-0518-P5
 1124-0004-P1
 1121-0533-P5
 1128-0037-P1
 1309 

 0054-P10
 1128-0010-P1
 1121-0414-P5
 1309-0018-P50
 1121-0490-P5
 1121-0490-P5