

# Solder, Desolder & Rework



Solutions and systems for soldering, rework and repair of electronics

## 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 provide 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 the 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®!**

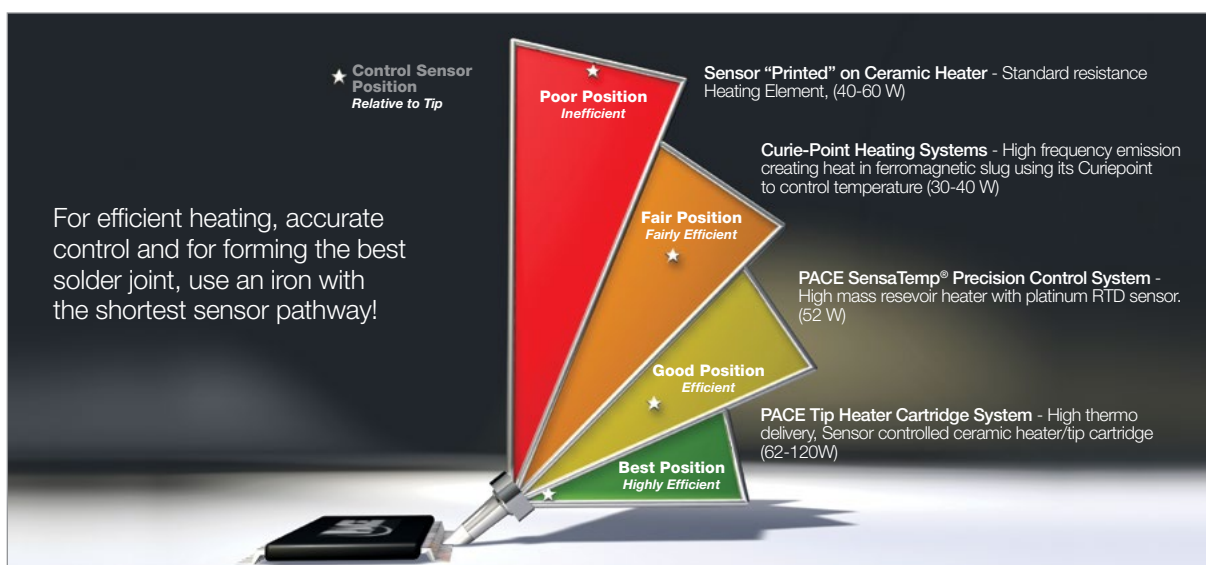
With over 50 years of experience and industry leadership in rework and repair technology and techniques, PACE provides much more than simply equipment. When you purchase PACE products, you receive access to one of the most valuable resources in the industry; PACE's applications and technical support 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! Please visit our website, [www.paceworldwide.com](http://www.paceworldwide.com).

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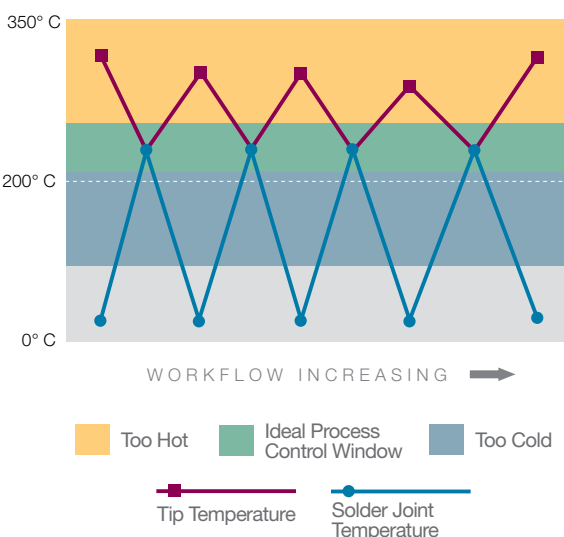
## Tip-Heater Cartridge Technology

The key advantage of Tip-Heater Cartridge based technology is that its advanced electronics provide instantaneous load sensing and on-demand power to quickly reflow solder joints, regardless of the mass of the application. Further, the position of the control sensor is as far forward as possible to immediately respond to the thermal demand of the work. The tip and heater are permanently coupled, ensuring all the heat generated by the heater is available for use by the tip. For applications where the work cycle is high and for micro-miniature applications the direct power approach is ideal as the thermal demand is continuously monitored and the heater responds immediately by providing adequate power to meet the demand from the work, without overshoot.



**MAINTAINING PERFORMANCE IN THE "GREEN" ZONE IS MORE LIKELY AS SENSOR PATHWAY BECOMES SMALLER**

### Ideal Iron Performance



## SensaTemp® Technology

At the heart of SensaTemp® is a laser trimmed, platinum RTD sensor that is 5 times more accurate than conventional thermocouples. This level of accuracy allows for safe, productive soldering at the lowest possible temperatures. As a result, the amount of time spent reflowing each joint is reduced, minimizing the possibility of damage. Additionally, SensaTemp® allows you to change tips, heaters and handpieces at will, without ever having to re-calibrate! SensaTemp®'s unique heater design acts as a "thermal reservoir" that minimizes tip temperature overshoot, ensures temperature stability and provides reserve power that can be accessed instantaneously when high mass applications are being performed.

SensaTemp® delivers consistent, repeatable results regardless of the thermal demand of the work. Its ability to respond quickly is ideal for light work, while its amazing thermal capacity can meet the challenges of the heaviest thermal loads, providing the operator with the flexibility that is essential in today's ever changing environment. Regardless of your application, SensaTemp® delivers unsurpassed thermal performance, productivity and "bottom line" savings.



# PACE Handpieces

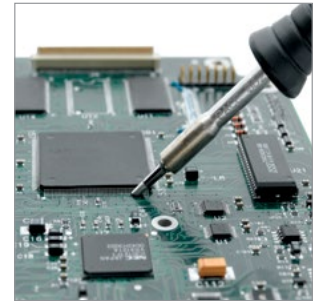


## TD-100 Thermo-Drive® Soldering Iron

The TD-100 Thermo-Drive® 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.

### Part Numbers:

IntelliHeat® Handpiece Only: 6010-0147-P1  
IntelliHeat® Kit: 6993-0263-P1  
TD-100 with PACE Logo: 6010-0165-P1  
TD-100 with Logo Kit: 6993-0295-P1  
TD-100 with Logo Kit with Instant Setback Cubby: 6993-0296-P1  
TD-100 kit with Instant Setback Cubby: 6993-0281-P1

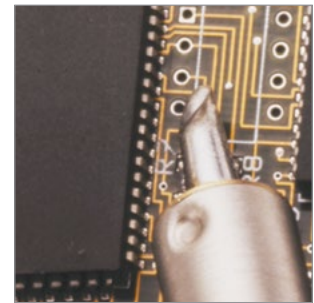


## PS-90 Universal Soldering Iron

The Universal Soldering Iron is ideal for most soldering applications and SMT rework operations where high thermal capacity and flexibility are required.

### Part Numbers:

IntelliHeat® Handpiece Only: 6010-0150-P1  
IntelliHeat® Kit: 6993-0267-P1  
SensaTemp® Handpiece Only: 6010-0131-P1  
SensaTemp® Kit: 6993-0199-P1

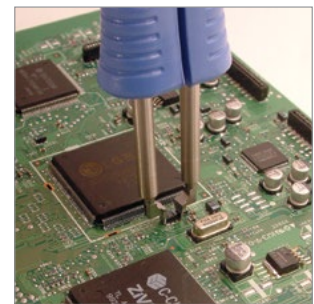


## MT-100 MiniTweez®

The only high capacity, micro tweezer 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.

### Part Numbers:

IntelliHeat® Handpiece Only: 6010-0148-P1  
IntelliHeat® Kit: 6993-0264-P1

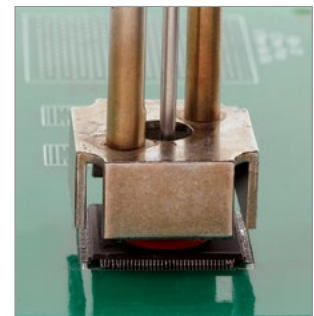


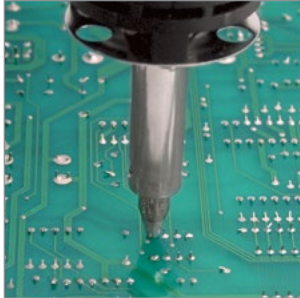
## TP-100 ThermoPik®

The newest tool for SMT component removal the TP-100. The TP-100 is designed to reflow and remove QFPs in seconds.

### Part Numbers:

IntelliHeat® Handpiece Only: 6010-0158-P1  
IntelliHeat® Kit: 6993-0280-P1



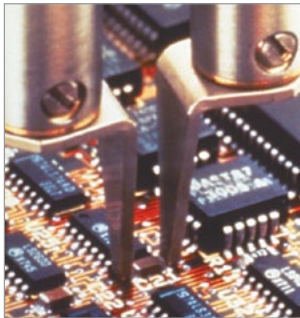


### SX-100 Sodr-X-Tractor®

The best performing, in-line, vacuum desoldering tool is ideal for Thru-Hole desoldering when fitted with SX-100 Desoldering Tips and for SMT land clean-up when fitted with SX-100 Flo-D-Sodr® Tips.

**Part Numbers:**

IntelliHeat® Handpiece Only: 6010-0149-P1  
 IntelliHeat® Kit: 6993-0266-P1  
 SensaTemp® Handpiece Only: 6010-0106-P1  
 SensaTemp® Kit: 6993-0213-P1

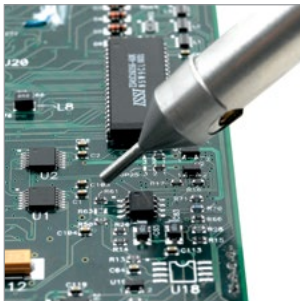


### TT-65 ThermoTweez®

The most versatile and only patented SMT removal tool provides safe, one-handed, rapid reflow and component removal of PLCCs and other 4 or 2 sided SMT components.

**Part Numbers:**

IntelliHeat® Handpiece Only: 6010-0151-P1  
 IntelliHeat® Kit: 6993-0268-P1  
 SensaTemp® Handpiece Only: 7025-0001-P1  
 SensaTemp® kit: 6993-0207-P1



### TJ-85 ThermoJet®

When the precise application of hot air is required, our slim line air pencil is ideal for delivering heat for the installation and removal of chip components and SOTs. The TJ-85's airflow is activated with a foot pedal.

**Part Numbers:**

IntelliHeat® Handpiece Only: 6010-0153-P1  
 IntelliHeat® Kit: 6993-0270-P1  
 SensaTemp® Handpiece Only: 6010-0142-P1  
 SensaTemp® Kit: 6993-0247-P1



### TJ-70 ThermoJet®

The TJ-70 ThermoJet® hot air pencil is ideal for delivering heat for the installation and removal of chip components, SOTs, and SOICs. A variety of quick change nozzles are available, to meet your operational needs. Its pencil grip design and finger-actuated control switch facilitates ease-of-use and manipulation in tight places for the precise application of hot air for large SMDs down to 0201s.

**Part Numbers:**

IntelliHeat® Handpiece Only: 7023-0003-P1  
 IntelliHeat® Kit: 6993-0292-P1  
 SensaTemp® Handpiece Only: 7023-0002-P1  
 SensaTemp® Kit: 6993-0206-P1





# ST Soldering Systems

## WJS 100

The WJS 100 features all the advanced process control technology you have grown to expect from PACE but now with nearly twice the maximum power output to make easy work of your most challenging, high-thermal-mass or high-volume soldering applications.

Integral to the WJS 100 solution is a special range of gold-end tip-heater cartridges\* uniquely engineered to deliver maximum heat through-put to the work and increase productivity while allowing you to solder at safer, lower temperatures—even with lead-free solder.

The WJS 100 is fully programmable, loaded with features, and incorporates PACE's exclusive IntelliHeat® Control Technology. The WJS 100 comes standard with a special edition of PACE's renowned TD-100 Thermo-Drive® Handpiece, considered by many to be the most comfortable soldering handle available. The MT-100 is also compatible with the WJS 100 when used with the WJS MT-100 tips.

- IntelliHeat® Control Technology.
- Fully programmable, digital processor, LED display and keypad.
- Password lockout
- Temp Setback and Auto-Off helps to maximize tip life and saves on power costs.
- Definable Operating Temperature Range via “Hi” and “Lo” Setting.
- Nearly twice the maximum power output increases productivity at safer, lower temperatures—even on the heaviest loads.



Specifications	8007-0558 120 Volt System with Standard Tip & Tool Stand	8007-0560 120 Volt System with ISB Tip & Tool Stand	8007-0559 230 Volt System with Standard Tip & Tool Stand	8007-0561 230 Volt System with ISB Tip & Tool Stand
<b>Power Requirements</b>	120 W Maximum Output, 97-127 VAC, 50/60 Hz		120 W Maximum Output, 197-253 VAC, 50/60 Hz	
<b>Dimensions</b>	104mm (4.1") H x 130mm (5.1") W x 152mm (6") D			
<b>Weight</b>	2.3 kg (5 lbs)			
<b>Control</b>	LED Digital Display and Keypad			
<b>RoHS Compliant</b>	Yes			
<b>Control Technology</b>	IntelliHeat®			
<b>Tip to Ground Resistance</b>	2 ohms or less			
<b>Calibration</b>	Typically not needed, but system can be calibrated using PACE's Easy-Cal software feature (included in each system)			
<b>Temperature Accuracy</b>	Meets or exceeds ANSI-J-STD			
<b>Absolute Temperature Stability</b>	1.1°C (2°F) at idle tip temp			
<b>Temperature Range</b>	205-454°C (400-850°F)			
<b>Tips</b>	1128 Series, Ultra-Performance Tip-Heater Cartridge Tips with Gold End Connector*.			
<b>Soldering Handpiece</b>	TD-100 Thermo-Drive® Soldering Handpiece with PACE logo			
<b>Iron Stand</b>	TD-100 Tip and Tool stand can hold up to 6 tips. Comes standard with sponge, stay-moist well and brass wool to clean oxidation from tip.  WJS Systems are available with PACE's standard Tip & Tool Stand or with the Tip & Tool Stand with Instant-Setback that extends tip life and saves energy.			

\*The WJS 100 can only be used with 1128 series tips and the TD-100 Thermo-Drive® Soldering Handpiece.

# ST Systems Power Supplies



## ST 30

The ST 30 is a single channel system with dial control featuring IntelliHeat®. The system is packaged with the TD-100 ThermoDrive Soldering Iron or can be purchased as a Power Source only and combined with any of 4 optional handpieces. The ST 30 improves quality, reduces costs and eliminates the maintenance and calibration hassles associated with other 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. The optional Tip & Tool Stand with Instant-Setback is available for the TD-100 ThermoDrive Soldering Iron to extend tip life, especially beneficial when Lead Free solders are used.

- IntelliHeat® Control Technology
- °C/°F Temperature Scales
- Temperature Adjustment Lockout
- Fixed Temperature SetBack (30 mins)
- Fixed Auto-Off (30 mins)
- ESD grounding jack
- ESD Safe metal housing
- Stackable
- Can be mounted under workbench or shelf with optional bracket (1321-0609-P1)



## ST 50

The ST 50 is a single channel, digital power supply that is available with the TD-100 ThermoDrive Soldering Iron or PS-90 SensaTemp® Soldering Iron. The ST 50 can also be purchased as a Power Source only and combined with any of 4 optional handpieces. The programmable features of the ST 50 cannot be found anywhere on similarly priced systems! The ST 50 improves quality, reduces costs and eliminates the maintenance and calibration hassles associated with other systems. The ST 50 features IntelliHeat® Control Technology. 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. The optional Tip & Tool Stand with Instant-Setback is available for the TD-100 ThermoDrive Soldering Iron to extend tip life, especially beneficial when Lead Free solders are used.

- IntelliHeat® Control Technology
- Digital Display & Keypad
- °C/°F display options
- Password lockout
- Temperature SetBack
- Auto-Off
- Definable operating temperature range
- ESD grounding jack
- ESD Safe metal housing
- Stackable
- Can be mounted under workbench or shelf with optional bracket (1321-0609-P1)



## ST 70

The ST 70 is a single channel system that is controlled by POWER MODULES™ and comes with the ThermoDrive Soldering Iron (TD-100). The system can also be purchased as a Power Source only and combined with any of 4 optional IntelliHeat® handpieces. The ST 70 is the easiest to operate. Simply select the performance level you desire, plug in the appropriate Power Module and the system takes care of the rest! The ST 70 improves quality, reduces costs while protecting your process. 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. The optional Tip & Tool Stand with Instant-Setback is available for the TD-100 ThermoDrive Soldering Iron to extend tip life, especially beneficial when Lead Free solders are used.

- IntelliHeat® Control Technology
- Performance level lockout (if Power Module is removed the system is shut down.)
- Fixed Temperature SetBack (30 mins)
- Fixed Auto-Off (30 mins)
- ESD grounding jack
- ESD Safe metal housing
- Stackable
- Can be mounted under workbench or shelf with optional bracket (1321-0609-P1)
- Supplied with 6.5, 7 and 7.5 Power Modules

Power Module	Part Number	Color
Heat Level 5	1207-0446-01-P1	Green
Heat Level 5.5	1207-0446-02-P1	Blue
Heat Level 6	1207-0446-03-P1	Orange
Heat Level 6.5	1207-0446-04-P1	Gold
Heat Level 7	1207-0446-05-P1	Red
Heat Level 7.5	1207-0446-06-P1	Purple
Heat Level 8	1207-0446-07-P1	Black
Heat Level 8.5	1207-0446-08-P1	Silver



# Dual Channel Soldering System

## ST 100 The answer for 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 cross-contamination 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.

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 "Tip & Tool Stand with Instant-Setback". The Tip & Tool Stand puts the iron's channel into SetBack if it has been in the Tip & Tool Stand 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.





# Maximize Tip Life

CUSTOMIZE YOUR SYSTEM  
**for even greater flexibility.**

## Tip & Tool Stand with Instant-Setback

The optional Tip & Tool Stand with Instant-Setback is available for use with the ST 30, ST 50, ST 65, ST 70, ST 75, ST 100, ST 115, MBT 301, MBT 350 and WJS 100. When connected, it automatically puts the system into SetBack mode when the TD-100 Iron has been in the Tip & Tool Stand for 45 seconds. SetBack mode means that the temperature is set to just below solder melt temperature so the corrosive action of the leaded or Lead Free solder is stopped, maximizing the life of your tips! The system returns to normal operation when the iron is removed from the Tip & Tool Stand. The part number for the Tip & Tool Stand with Instant-Setback is 6019-0084-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.
- 3 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.
- 4 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.
- 5 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.

# ST Desoldering Systems



## ST 65

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-100 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 N2 source can be connected to create an inert gas reflow environment when using an N2 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. N2 capable soldering iron.

- IntelliHeat® Control Technology
- Dial control
- °C/°F Temperature Scales
- Temperature lockout
- Fixed Temperature SetBack (30 mins)
- Fixed Auto-Off (30 mins)
- 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 through-hole 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-100 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.

- IntelliHeat® Control Technology
- Dial control
- °C/°F Temperature Scales
- Temperature lockout
- Fixed Temperature SetBack (30 mins)
- Fixed Auto-Off (30 mins)
- Hi-Flo Pump
- Patented Snap-Vac Technology
- ESD grounding jack
- ESD Safe metal housing
- Stackable



## 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-100 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.

- IntelliHeat® Control Technology
- Digital Display and 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

# ST System Specifications

Specifications	ST 30	ST 50	ST 70	ST 100
<b>System with TD-100 115v</b>	8007-0499	8007-0500	8007-0504	8007-0525
<b>System with PS-90 115v</b>	N/A	8007-0532	N/A	N/A
<b>Power Source Only 115v</b>	8007-0497	8007-0501	8007-0505	8007-0524
<b>System with TD-100 230v</b>	8007-0512	8007-0514	8007-0518	8007-0527
<b>System with PS-90 230v</b>	N/A	8007-0533	N/A	N/A
<b>Power Source Only 230v</b>	8007-0513	8007-0515	8007-0519	8007-0526
<b>Power Requirements</b>	97-127 VAC, 50/60 Hz, 90 Watts max. 197-253 VAC, 50/60 Hz, 90 Watts max.			
<b>Dimensions</b>	104mm (4.1") <b>H</b> x 130mm (5.1") <b>W</b> x 152mm (6.0") <b>D</b>		135mm (5.3") <b>H</b> x 165mm (6.5") <b>W</b> x 260mm (9.25") <b>D</b>	
<b>Weight</b>	5 Kg (11 lbs.)		5 Kg (11 lbs.)	
<b>Control</b>	Dial	LED Display	Power Module	LCD Display & Keypad
<b>Control Technology</b>	IntelliHeat			
<b>Tip to Ground Resistance</b>	2 ohms or less			
<b>Temperature Accuracy</b>	Meets or exceeds ANSI-J-STD 001		N/A	Meets or exceeds ANSI-J-STD 001
<b>Absolute Temperature Stability</b>	± 1.1°C (± 2 °F) at idle tip temp.			
<b>Temperature Range</b>	Tip Heater Cartridge Technology Handpieces = 205°C to 454°C (400°F to 850°F) SensaTemp® Dial Control 176°C to 482°C (350°F to 900°F) SensaTemp® Digital Control 37°C to 482°C (100°F to 900°F)			
<b>System Can Be Calibrated</b>	Yes			

Specifications	ST 65	ST 75	ST 115
<b>System 115v</b>	8007-0502	8007-0506	8007-0508
<b>Power Source Only 115v</b>	8007-0503	8007-0507	8007-0509
<b>System 230v</b>	8007-0516	8007-0520	8007-0522
<b>Power Source Only 230v</b>	8007-0517	8007-0521	8007-0523
<b>Power Requirements</b>	97-127 VAC, 50/60 Hz, 90 Watts max. 197-253 VAC, 50/60 Hz, 90 Watts max.	97-127 VAC, 50/60 Hz, 120 Watts max. 197-253 VAC, 50/60 Hz, 120 Watts max.	
<b>Dimensions</b>	104mm (4.1") <b>H</b> x 130mm (5.1") <b>W</b> x 152mm (6.0") <b>D</b>	88mm (3.5") <b>H</b> x 171mm (6.75") <b>W</b> x 254mm (10") <b>D</b>	
<b>Weight</b>	2.3 Kg (5 lbs.)	4 Kg (9 lbs.)	
<b>Control</b>	Dial	Dial	LED Display & Keypad
<b>Control Technology</b>	IntelliHeat		
<b>Tip to Ground Resistance</b>	2 ohms or less		
<b>Temperature Accuracy</b>	Meets or exceeds ANSI-J-STD		
<b>Absolute Temperature Stability</b>	± 1.1°C (± 2°F) at idle tip temp.		
<b>Temperature Range</b>	Tip Heater Cartridge Technology Handpieces = 205°C to 454°C (400°F to 850°F) SensaTemp® Dial Control 176°C to 482°C (350°F to 900°F) SensaTemp® Digital Control 37°C to 482°C (100°F to 900°F)		
<b>System Can Be Calibrated</b>	Yes		
<b>Vacuum/Pressure Source Type</b>	Compressed Air Powered Venturi	Self Contained Pump	
<b>Vacuum Rise Time</b>	150 ms Average		
<b>Vacuum (Nominal)</b>	20 in Hg max		
<b>Flow Control Valve</b>	Coarse Adjustment	High Precision Needle Valve	
<b>Pressure (Nominal)</b>	18 p.s.i. max		
<b>Air Flow (Nominal)</b>	8 slpm max		



# Rework & Repair Systems

## Advanced Technology and Programmability

### MBT 350

The MBT 350 is loaded with features to improve quality, increase through-put, extend tip life, and protect your process. The system is fully programmable and can be password protected from unauthorized changes. In some cases technicians become frustrated with being locked into a single temperature. The MBT 350 provides the solution! An approved operating range can be programmed 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. Operators can be given a range of 100-900°F (37-482°C) for SensaTemp handpieces and 400-850°F for THC handpieces to operate within! When high-mass tips are required, an offset can be programmed for each of the three channels, individually.

To maximize tip life and reduce operating costs, PACE's well recognized "SetBack" and "Auto-Off" features are included. The system will automatically set the temperature to 350° then turn off after a user defined period of inactivity, from 10 to 90 minutes. To really protect your more expensive tip-heater cartridge and fine point soldering tips from oxidation, the TD-100 can be used with the "Tip & Tool Stand with Instant-Setback." The Tip & Tool Stand puts the iron's channel into setback if it's in the Tip & Tool Stand for more than 45 seconds! Up to two Tip & Tool Stands with Instant-Setback can be connected to the MBT 350.

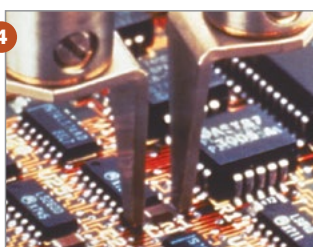
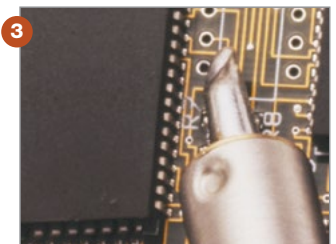
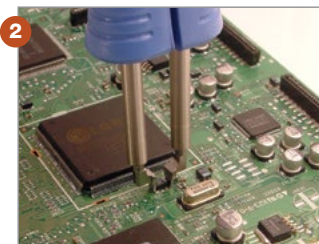
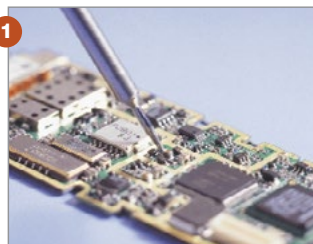
The new dual purpose vacuum/pressure pump and delivery system featuring PACE's patented SNAP-VAC Technology, provides the most



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.

The new backlit, digital, LCD screen displays the temperature of all three 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. And finally, the system can be programmed with the name of the operator or company which is displayed when the system is turned on.

- 1 **TD-100** Thermo-Drive Iron
- 2 **MT-100** MiniTweez
- 3 **PS-90** Universal Iron
- 4 **TT-65** ThermoTweez
- 5 **TJ-85** ThermoJet
- 6 **SX-100** Sodr-X-Tractor
- 7 **TP-100** ThermoPik







## Simple and easy to use for rework technicians or operators on the line.

### MBT 301

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 “Tip & Tool Stand with Instant-Setback”. The Tip & Tool Stand puts the iron’s channel into setback if it is idle in the Tip & Tool Stand for more than 45 seconds! One Tip & Tool Stand with Instant-Setback 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 Q201’s.

Specifications	MBT 301	MBT 350	MBT 301 E	MBT 350 E
<b>Kit with Handpieces Part Numbers:</b>	8007-0478 (TD-100 & SX-100)	8007-0454 (TD-100, MT-100 & SX-100)	8007-0479 (TD-100 & SX-100)	8007-0455 (TD-100, MT-100 & SX-100)
<b>Power Source Only Part Numbers:</b>	8007-0480	8007-0452	8007-0481	8007-0453
<b>Power Requirements</b>	120 VAC, 60 Hz (240 watts maximum)		230 VAC, 50 Hz (240 watts maximum)	
<b>IntelliHeat® Compatibility</b>	IntelliHeat® Handpieces with Tip Heater Cartridge or SensaTemp® Technology			
<b>Dimensions</b>	135mm (5.3") H x 165mm (6.5") W x 260mm (9.25") D			
<b>Weight</b>	5 Kgs (11 lbs.)			
<b>Tip to Ground Resistance</b>	< 2 Ohms			
<b>Temperature Stability</b>	± 1.1°C (2°F)			
<b>Temperature Accuracy</b>	Meets or exceeds ANSI J Std 001			
<b>Set Temp Range</b>	37-482°C (100-900°F) SensaTemp® 205-454°C (400-850°F) tip Heater Cartridge			
<b>Vacuum Rise Time</b>	150 ms Average			
<b>Vacuum</b>	20 in Hg max			
<b>Pressure</b>	18 p.s.i. max			
<b>Air Flow</b>	8 SLPM max			



# Handpiece & Power Source Charts

## Handpieces

Handpiece	Description	Part Numbers
<b>TD-100 Thermo-Drive Iron</b>	The most responsive soldering iron available. Uses tip-heater cartridges.	6993-0263-P1
<b>TD-100 N</b>	A nitrogen compatible version of the TD-100. Requires 6993-0271-P1.	6993-0272-P1
<b>TD-100 with Instant-Setback Tool Stand</b>	A kit containing the TD-100 and Tip & Tool Stand with Instant-Setback	6993-0281-P1
<b>MT-100 MiniTweez</b>	Tip-heater cartridge based tweezers for 2 sided SMD removal.	6993-0264-P1
<b>TP-100 ThermoPik</b>	QFP removal tool with integrated component vacuum pick to lift reflowed component.	6993-0280-P1
<b>TJ-70 ThermoJet</b>	Provides focused hot air for component installation and SMT land preparation.	6993-0206-P1
<b>PS-90 Universal Soldering Iron</b>	Our famous High Capacity Soldering Iron for the most demanding applications.	6993-0267-P1
<b>PS-90 N</b>	A nitrogen compatible version of the PS-90.	6993-0274-P1
<b>SX-100 Sodr-X-Tractor</b>	The latest innovation in desoldering. Features disposable or reusable solder traps.	6993-0266-P1
<b>TT-65 ThermoTweez</b>	High capacity tweezers for large or small SMDs.	6993-0268-P1
<b>TJ-85 ThermoJet</b>	A foot-pedal activated precision air pencil for the installation or removal of SMDs.	6993-0270-P1
<b>SX-100 Heat Sleeve</b>	Maintains comfortable temperature in heavy use applications.	6993-0229-P1
<b>Tip &amp; Tool Stand with Instant-Setback for TD-100</b>	Reduces tip temperature when iron is not in use. (tool stand only)	6019-0084-P1
<b>Nitrogen Regulator Assembly</b>	Controls the flow of nitrogen to tip.	6993-0271-P1
<b>N<sub>2</sub> Manifold Kit</b>	Connect up to 10 N <sub>2</sub> irons to a single N <sub>2</sub> source.	6993-0277-P1

Part Number includes handpiece and standard Tip & Tool Stand, IntelliHeat systems only.

## Kits & Applications

Kits & Applications	Tip Heater Cartridge Technology Handpieces			SensaTemp® Technology Handpieces			
	TD-100	MT-100	TP-100	PS-90	SX-100	TT-65	TJ-85
<b>Handpiece Kits</b> (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
<b>Handpiece Only Part Number</b>	6010-0147-P1	6010-0148-P1	6010-0158-P1	6010-0150-P1	6010-0149-P1	6010-0151-P1	6010-0153-P1
<b>High Cycle Soldering</b>	✓			✓			
<b>Standard Soldering</b>	✓			✓			
<b>High Mass Soldering</b>				✓			
<b>Micro Soldering</b>	✓						
<b>Chip Installation</b>	✓	✓		✓		✓	✓
<b>Solder Wicking</b>	✓			✓			✓
<b>Thru-Hole Desoldering</b>					✓		
<b>SMT Land Preparation</b>	✓			✓	✓		✓
<b>Solder Removal from Lands</b>					✓		
<b>Large SMD Removal</b>			✓			✓	
<b>Standard SMD Removal</b>	✓	✓	✓	✓		✓	
<b>Micro SMD Removal</b>	✓	✓		✓		✓	✓
<b>Large Component Installations*</b>	✓			✓			✓
<b>Standard Component Installations*</b>	✓			✓			✓
<b>Micro Component Installations*</b>	✓			✓			✓

\* with Solder Paste

## Compatibility

Tip-Heater Cartridge Handpieces	Power Source Options - ST and MBT Systems ✓ = Optional Handpiece ★ = Standard handpiece packaged with System									
	WJS 100	ST 30	ST 50	ST 65	ST 70	ST 75	ST 100	ST 115	MBT 301	MBT 350
TD-100	★	★	★	✓	★	✓	★	✓	★	★
MT-100	✓	✓	✓	✓	✓	✓	✓	✓	✓	★
TP-100				✓		✓		✓	✓	✓
SensaTemp® Handpieces	WJS 100	ST 30	ST 50	ST 65	ST 70	ST 75	ST 100	ST 115	MBT 301	MBT 350
PS-90	✓	✓	★	✓	✓	✓	✓	✓	✓	✓
SX-100				★		★		★	★	★
TT-65	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
TJ-85						✓		✓	✓	✓

# SMR Rework Systems

## The SMR...finally, a stand-alone Pulse-Heat system from PACE.

### SMR

The SMR features a Pulse Heat power output which provides controlled temperature ramp-up to reflow temperatures, reducing thermal shock risk and unwanted heating of adjacent solder joints. The system can be used for the removal and installation of small SMD's, thermal wire stripping, resistance soldering of wires to connector cups, lap repairs for conductors and traces and removal of conformal coatings.

- 4 SMR Pulse Heat Compatible Handpieces
- Adjustable power level from 1-20 (20 being maximum power)
- An approved operating range can be programmed allowing operators flexibility to do their work
- Clear LCD display with functional soft-keys to perform operations
- ESD safe metal housing
- Password protected



\* Shown with three optional handpieces.

### Optional Handpieces

PACE's **StripTweez Handpiece** (TS-15) has one application and one only, thermal stripping of wires. Offering a range of tips for specific gauged wires, the StripTweez comes standard with the SMR System.

Part Number: 7012-0002-P1

PACE's **LapFlo Tool** (LF-15) has two primary applications, conductor/trace/ pad repairs and thermal parting e.g. controlled heat and abrasion for removal of conformal coating and laminate repairs.

Part Number: 7013-0004-02-P1

PACE's **ResisTweez Handpiece** (TW-15) has two main applications, wire to terminal/lug soldering & desoldering and PLCC removal.

Part Number: 7009-0005-P1

PACE's **ConducTweez** (CT-15) applications are focused on the installation and removal of chips, SOTs and SOICs.

Part Number: 7020-0001-P1

Specifications	SMR
<b>Part Number</b>	8007-0565 (120V) 8007-0566 (230V)
<b>Dimensions</b>	104mm (4.1") <b>H</b> x 130mm (5.1") <b>W</b> x 152mm (6") <b>D</b>
<b>Weight</b>	6.3lbs
<b>Power Requirements</b>	60Hz, 80 Watts maximum at 115 VAC, 50Hz at 230 VAC
<b>Control</b>	LED Digital Display & Keypad
<b>RoHs Compliant</b>	Yes
<b>Calibration Required</b>	No
<b>Power Range</b>	1-20



# SensaTemp® Systems

## ST 25

The ST 25 soldering system from PACE improves quality, reduce costs and eliminate the maintenance and calibration hassles associated with other soldering systems. The ST 25 maximizes heat delivery at low, safe temperatures and eliminates the need for calibration. Heavy-duty metal housing makes the system the ideal choice for the harshest production environments. The ST 25 system comes with the PS-90 Soldering Iron.

- 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)



## MBT 250

Self-contained, three channel capability offers high capacity, low temperature SMT/ Thru-Hole soldering and desoldering. Digital readout displays the current channel's temperature information, error codes and programming status. Supplied with PS-90 Universal Soldering Iron, SX-100 Sodr-X-Tractor, TT-65 ThermoTweez Handpiece & TP-65 ThermoPik Handpieces.



## 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.



Specifications	ST 25	MBT 250 SD/MBT 250 SDTP	PRC 2000 SMT	PRC 2000 TH
<b>System 115 V</b>	8007-0528	8007-0203 (SD) 8007-0206 (SDTP)	8007-0132	8007-0138
<b>Power Source Only 115 V</b>	8007-0529	8007-0349	N/A	N/A
<b>System 230 V</b>	8007-0510	8007-0204 (SD) 8007-0207 (SDTP)	8007-0133	N/A
<b>Power Source Only 230 V</b>	8007-0511	8007-0353	N/A	N/A
<b>Input Power Requirements</b>		97-127 VAC, 50/60 Hz or 197-253 VAC, 50/60 Hz		
<b>Max Power Consumption</b>	120 W	240 W	400 W	
<b>Dimensions</b>	104mm (4.1") H x 130mm (5.1") W x 152mm (6.0") D	135mm (5.3") H x 165mm (6.5") W x 260mm (9.25") D	175mm (6.9") H x 350mm (13.75") W x 230mm (9.25") D	
<b>Weight</b>	2.3 Kgs (5 lbs.)	5 Kgs (11 lbs.)	13 Kgs (28.6 lbs.)	
<b>Control</b>		LED Display	LED Display	
<b>Control Technology</b>		SensaTemp® (Black Connector HandPieces)		
<b>Tip to Ground Resistance</b>		2 ohms or less		
<b>Temperature Accuracy</b>		Meets or exceeds ANSI-J-STD 001		
<b>Absolute Temperature Stability</b>		± 1.1°C (± 2 °F) at idle tip temp.		
<b>Temperature Range</b>		176° to 482°C (350° to 900°F) nominal		
<b>System Can be Calibrated</b>		Calibration not required		
<b>Pump Type</b>	N/A		Self Contained Pump	
<b>Vacuum Rise Time</b>	N/A		150 ms Average	
<b>Vacuum (Nominal)</b>	N/A		20 in Hg max	
<b>Flow Control Valve</b>	N/A		Coarse adjustment	
<b>Pressure (Nominal)</b>	N/A	18 p.s.i. max	7 p.s.i. max	
<b>Air Flow (Nominal)</b>	N/A	8 slpm max	13 slpm max	



# Lead Free



## Working with Lead Free solders

Lead Free solders do not behave or look like their lead containing counterparts. As our industry changes over to Lead Free solders, individual PCB assemblers will need to address several issues relating to hand soldering and rework. These issues include:

- **Higher melting temperatures** – which mistakenly lead to operators increasing equipment operating temperatures. Higher operating temperatures do not make the process quicker, they can actually slow it down.
- **Poor wetting and spreading properties** – Additional time is required when working with Lead Free solders, they do not spread or wet like lead containing solders do. Operators must slow down.
- **Difficult to work with** – Bridging and insufficient solder defects are common, even for experienced operators, leading to operator frustration and poor quality.
- **Dull grainy finish** – makes inspection difficult.

Because Lead Free solders oxidize quickly, more aggressive and longer lasting fluxes are required to keep surfaces clean and free from oxidation. Working with no-clean fluxes is challenging as their process window is often small. Once they are burned off, oxidation immediately begins to form which can result in a marginal or defective solder joint. Additionally, increasing operating temperatures creates an ideal environment for oxidation to form and will also lead to flux and solder ball splatter on the PCB. If the flux is splattered all over the PCB, it's not able to do its job on the surfaces to be joined during the soldering process.

Lead Free solders also affect soldering and rework tools and their effect is detrimental. Lead Free solders contain high percentages of tin, almost always over 94%. Tin is a corrosive and active metal. When it mixes with iron (the protective layer on soldering tips), an inter-metallic compound is formed that wears away more quickly than the iron would either by itself or when used with lead containing solder. This causes two problems, one is shorter tip life as the protective iron coating is dissolved in the tin, and the second is that oxidation forms more quickly which is further exacerbated by the high temperature environment the tips work in. As a result, tin oxides form and create an inter-metallic compound with the iron plating on the tip. Once the oxidation begins to form, the tip will lose its ability to wet with solder and if not cleaned off quickly, it becomes almost impossible to remove and the tip must be replaced.

When using Lead Free solders, regardless of alloy, it is absolutely imperative that tips are properly maintained, otherwise tip life will be reduced significantly. Tips should be cleaned frequently to remove oxidation before it becomes impossible to remove. Tips should always be tinned when not being used, otherwise oxidation will quickly form on the tip. If the iron will not be used for extended periods of time, they should be turned off.

The use of equipment with SetBack and Auto-Off functions (standard on all PACE equipment), is very desirable. Additionally, optional accessories such as PACE's Tip & Tool Stand with Instant-Setback ensure that tip life is maximized. The Tip & Tool Stand with Instant-Setback puts the system into "SetBack" after 45 seconds of inactivity. When the iron is removed from the Tip & Tool Stand, it restores itself to the set temperature almost immediately.

The use of nitrogen assisted soldering equipment helps to mitigate the problems associated with using Lead Free solders. Nitrogen helps on two fronts. First, it creates an inert environment around the soldering tip, reducing the potential for tip to oxidize. Second, it assists in the soldering process at the PCB level by purging oxygen from the immediate area which reduces or eliminates the formation of oxidation on the work site. This not only reduces the amount of flux that is required, but it also helps to improve wetting, spreading and leaves a finish that is shinier and less grainy.

PACE's nitrogen assisted soldering systems pass the nitrogen through or around the heater before it is directed to the work site. This "pre-heats" the immediate area which can also help to reduce thermal shock to component leads and to components themselves. Pre-heating also allows for the use of lower, safer and more effective soldering temperatures.

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.



# Nitrogen Soldering

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.



N2 Regulator Accessory  
P/N 6993-0271-P1

	Handpiece Kit	Handpiece Only
<b>TD-100 N</b>	6993-0272-P1	6010-0156-P1
<b>PS-90 N</b>	6993-0274-P1	6010-0157-P1

Any PACE system that is compatible with the TD-100 or PS-90 soldering irons can be converted to work with the nitrogen versions of the soldering irons by simply adding the N2 regulator (P/N 6993-0271-P1). The N2 regulator is easily mounted to PACE's unique extruded aluminum case. The N2 supply needs to be provided at the benchtop.

## 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.

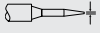
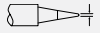
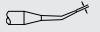
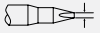

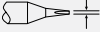
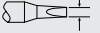

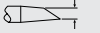
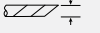
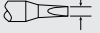
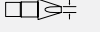
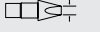
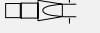
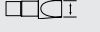
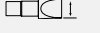
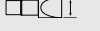
PACE is leading the way in soldering technology with our patented "Diamond Series" tips. "Diamond Series" tips are manufactured with an iron matrix that is impregnated with sub micron sized diamond particles. The diamond-impregnated surface is harder and more corrosion resistant than iron alone.

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.

# WJS 100 Compatible Tips

## TD-100 Tip Specifications



























WJS Tips	Part Numbers	Description	Tip Size-L		Size-D	
	1128-0001-P1	<b>1/32" Conical Sharp Extended</b>	12.75mm	(0.502")	0.8128mm	(0.032")
	1128-0002-P1	<b>1/64" Conical Sharp</b>	9.144mm	(0.36")	0.4064mm	(0.016")
	1128-0003-P1	<b>1/64" Conical Sharp Bent 30 Degree</b>	9.144mm	(0.36")	0.4064mm	(0.016")
	1128-0008-P1	<b>3/64" 30 Degree Chisel</b>	9.906mm	(0.39")	1.1938mm	(0.047")
	1128-0010-P1	<b>13/64" Extra Large Chisel</b>	7.62mm	(0.3")	5.1562mm	(0.203")
	1128-0012-P1	<b>1/32" 30 Degree Chisel</b>	9.017mm	(0.355")	0.8128mm	(0.032")
	1128-0013-P1	<b>3/32" 30 Degree Chisel</b>	9.017mm	(0.355")	2.3876mm	(0.094")
	1128-0019-P1	<b>1/16" 30 Degree Chisel</b>	9.017mm	(0.355")	1.5748mm	(0.062")
	1128-0032-P1	<b>MiniWave®</b>	8.255mm	(0.325")	2.794mm	(0.11")
	1128-0037-P1	<b>0.25" Knife Blade</b>	12.446mm	(0.49")	6.35mm	(0.25")
	1128-0051-P1	<b>1/8" 30 Degree Chisel</b>	9.0mm	(0.355")	3.2mm	(0.125")
	1128-0052-P1	<b>0.063" Chisel Tip</b>	9.017mm	(0.355")	1.6mm	(0.063")
	1128-0053-P1	<b>0.125" Chisel Tip</b>	9.017mm	(0.355")	3.175mm	(0.125")
	1128-0054-P1	<b>0.188" Chisel Tip</b>	9.017mm	(0.355")	4.775mm	(0.188")
	1128-0055-P1	<b>0.250" Chisel Tip</b>	9.017mm	(0.355")	6.35mm	(0.25")
	1128-0056-P1	<b>0.281" Chisel Tip</b>	9.017mm	(0.355")	7.137mm	(0.281")
	1128-0057-P1	<b>0.313" Chisel Tip</b>	9.017mm	(0.355")	7.95mm	(0.313")

## MT-100 Tip Specifications

WJS Tips	Part Numbers	Description	Tip Size-L		Size-D	
 (fig.A)	1128-1001-P1	<b>Chip (fig.A)</b>	0.2mm	(0.008")	0.2mm	(0.008")
	1128-1002-P1	<b>Chip, SOT (fig.B)</b>	0.7mm	(0.03")	0.5mm	(0.02")
	1128-1003-P1	<b>Chip, SOT (fig.B)</b>	0.7mm	(0.03")	1mm	(0.04")
	1128-1004-P1	<b>Chip, SOT (fig.B)</b>	0.7mm	(0.03")	2mm	(0.08")
 (fig.B)	1128-1005-P1	<b>SOIC, SOT, TSOPS (fig.C)</b>	0.7 mm	(0.03")	6mm	(0.24")
	1128-1006-P1	<b>SOIC, SOT, TSOPS (fig.C)</b>	0.7mm	(0.03")	8mm	(0.31")
	1128-1007-P1	<b>SOIC, SOT, TSOPS (fig.C)</b>	0.7mm	(0.03")	10mm	(0.39")
 (fig.C)	1128-1008-P1	<b>SOIC, SOT, TSOPS (fig.C)</b>	0.7mm	(0.03")	13mm	(0.51")
	1128-1009-P1	<b>SOIC, SOT, TSOPS (fig.C)</b>	0.7mm	(0.03")	18mm	(0.74")
	1128-1010-P1	<b>SOIC, SOT, TSOPS (fig.C)</b>	0.7mm	(0.03")	28mm	(1.09")
	1128-1011-P1	<b>Extended Chip, SOT (fig.B)</b>	0.7mm	(0.03")	1mm	(0.04")

# TD-100 Standard Soldering Tips

## Tip Specifications

Tips	Description	Tip Size - L	Size - D	Part Number
	<b>1/32" Conical Sharp Extended</b>	13.4mm (0.530")	0.80mm (0.031")	1124-0001-P1
	<b>1/64" Conical Sharp</b>	7.8mm (0.310")	0.40mm (0.016")	1124-0002-P1
	<b>1/64" Conical Sharp Bent 30 Degrees</b>	7.8mm (0.310")	0.40mm (0.016")	1124-0003-P1
	<b>1/64" Conical Sharp Extended</b>	13.5mm (0.535")	0.40mm (0.016")	1124-0004-P1
	<b>13/64" Conical Sharp Extended</b>	4.7mm (0.188")	0.80mm (0.031")	1124-0005-P1
	<b>3/128" Conical</b>	4.6mm (0.184")	0.58mm (0.023")	1124-0006-P1
	<b>1/16" 90 Degree Chisel</b>	10.9mm (0.430")	2.03mm (0.080")	1124-0007-P1
	<b>3/64" 30 Degree Chisel</b>	9.7mm (0.380")	1.20mm (0.047")	1124-0008-P1
	<b>3/64" 30 Degree Bevel</b>	3.6mm (0.140")	1.20mm (0.047")	1124-0009-P1
	<b>13/64" Extra Large Chisel</b>	7.62mm (0.300")	5.15mm (0.203")	1124-0010-P1
	<b>1/64" 60 Degree Bevel</b>	14.7mm (0.580")	0.40mm (0.016")	1124-0011-P1
	<b>1/32" 30 Degree Chisel</b>	9.1mm (0.360")	0.80mm (0.031")	1124-0012-P1
	<b>3/32" 30 Degree Chisel</b>	9.9mm (0.390")	2.40mm (0.094")	1124-0013-P1
	<b>5/64" 60 Degree Chisel</b>	4.7mm (0.185")	2.00mm (0.078")	1124-0014-P1
	<b>1/64" Conical, Sharp, Bent 30 Degrees, Extended</b>	15.1mm (0.595")	0.40mm (0.016")	1124-0015-P1
	<b>3/64" Chisel Bent 30 Degrees</b>	11.7mm (0.460")	1.20mm (0.047")	1124-0016-P1
	<b>1/16" 60 Degree Chisel</b>	15.8mm (0.620")	1.60mm (0.063")	1124-0017-P1
	<b>1/32" Conical Sharp Extended</b>	16.7mm (0.660")	0.80mm (0.031")	1124-0018-P1
	<b>1/16" 30 Degree Chisel</b>	9.9mm (0.390")	1.60mm (0.063")	1124-0019-P1
	<b>1/8" 90 Degree Chisel</b>	4.8mm (0.190")	3.20mm (0.125")	1124-0020-P1
	<b>3/128" Conical Sharp Bent 30 Degrees</b>	14.4mm (0.570")	0.58mm (0.023")	1124-0021-P1
	<b>1/16" Conical Sharp</b>	9.9mm (0.390")	1.60mm (0.063")	1124-0022-P1
	<b>1/8" 90 Degree Chisel Extended</b>	8.6mm (0.340")	3.20mm (0.125")	1124-0023-P1
	<b>1/16" 30 Degree Bevel</b>	9.9mm (0.390")	1.60mm (0.063")	1124-0024-P1
	<b>1/16" Conical Sharp Extended</b>	12.1mm (0.478")	1.60mm (0.063")	1124-0025-P1
	<b>1/16" Chisel Bent 30 Degrees</b>	9.7mm (0.385")	1.60mm (0.063")	1124-0026-P1



# TD-100 Standard Soldering Tips

## Tip Specifications

Tips	Description	Tip Size - L	Size - D	Part Number
	<b>3/128" Conical Sharp</b>	15.2mm (0.600")	0.58mm (0.023")	1124-0027-P1
	<b>3/64" Chisel, Bent 30 Degrees, Extended</b>	15.2mm (0.600")	0.91mm (0.36")	1124-0028-P1
	<b>1/32" 30 Degree Bevel</b>	9.1mm (0.360")	1.91mm (0.75")	1124-0029-P1
	<b>1/32" Conical Sharp</b>	9.9mm (0.390")	0.80mm (0.031")	1124-0030-P1
	<b>Heat Staking</b>	N/A	4.04mm (0.159")	1124-0031-P1
	<b>MiniWave®</b>	N/A	3.05mm (0.120")	1124-0032-P1
	<b>Angled MiniWave®</b>	N/A	3.05mm (0.120")	1124-0033-P1
	<b>Single Sided Chisel</b>	N/A	3.05mm (0.120")	1124-0034-P1
	<b>Angled MiniWave®</b>	N/A	2.11mm (0.083")	1124-0035-P1
	<b>1/128" Conical</b>	N/A	0.20mm (0.008")	1124-0036-P1
	<b>1/4 Flat Blade</b>	N/A	4.57mm (0.180")	1124-0037-P1
	<b>Single Sided Chisel, Fine Pitch</b>	N/A	1.5mm (0.06")	1124-0038-P1
	<b>Angled MiniWave®, Fine Pitch</b>	N/A	1.6mm (0.064")	1124-0039-P1
	<b>MicroFine Single Sided Chisel</b>	N/A	0.9mm (0.035")	1124-0040-P1
	<b>MicroFine Single Sided Chisel</b>	N/A	1.1mm (0.045")	1124-0041-P1
	<b>MicroFine Conical</b>	N/A	0.25mm (0.01")	1124-0042-P1
	<b>MicroFine Bent Conical</b>	N/A	0.76mm (0.03")	1124-0043-P1
	<b>MicroFine Bent Conical</b>	N/A	0.5mm (0.02")	1124-0044-P1
	<b>Angled Micro-Wave</b>	N/A	1.1mm (0.045")	1124-0045-P1
	<b>Micro-Wave</b>	N/A	1.1mm (0.045")	1124-0046-P1
	<b>Angled Chisel</b>	8.4mm (0.33")	1.33mm (0.051")	1124-0047-P1
	<b>Single Sided Chisel</b>	17.00mm (0.693")	4.55mm (0.178")	1124-0048-P1
	<b>MiniWave®</b>	N/A	2.79mm (0.110")	1124-0049-P1
	<b>1/128" Conical, Special HA</b>	N/A	2.40mm (0.09")	1124-0050-P1
	<b>0.157" Chisel Tip</b>	3.9mm (0.157")	0.5mm (0.02")	1124-0051-P1

# TD-100 Diamond Series Extended Life Soldering Tips

## 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.

Profile	Description	Part Number
	<b>.016 Conical</b>	1126-0601-P1
	<b>.039 Conical</b>	1126-0602-P1
	<b>.055 Conical, Blunt</b>	1126-0603-P1
	<b>.031 Conical, Blunt</b>	1126-0604-P1
	<b>.016 Conical, Long</b>	1126-0605-P1
	<b>.016 Conical</b>	1126-0606-P1
	<b>.016 Conical, Extended</b>	1126-0607-P1
	<b>.024 Conical</b>	1126-0608-P1
	<b>.039 Conical</b>	1126-0609-P1
	<b>.031 Conical</b>	1126-0610-P1
	<b>.047 Conical</b>	1126-0611-P1
	<b>.016 Conical Bent</b>	1126-0612-P1
	<b>.016 Conical, Blunt, Bent</b>	1126-0613-P1
	<b>.016 Conical, Blunt</b>	1126-0614-P1
	<b>.016 Conical Extended, Bent</b>	1126-0615-P1
	<b>.157 Bevel, 45 Degree</b>	1126-0616-P1
	<b>.078 Bevel, 60 Degree</b>	1126-0617-P1
	<b>.118 Bevel, 60 Degree</b>	1126-0618-P1
	<b>.157 Bevel, 45 Degree Tinned on edge / face</b>	1126-0619-P1
	<b>.039 Bevel, 60 Degree, Extended</b>	1126-0620-P1
	<b>.039 Bevel, 45 Degree Tinned on edge / face</b>	1126-0621-P1
	<b>.078 Bevel, 45 Degree Tinned on edge / face</b>	1126-0622-P1
	<b>.118 Bevel, 45 Degree Tinned on edge / face</b>	1126-0623-P1
	<b>.039 Bevel, 45 Degree</b>	1126-0624-P1

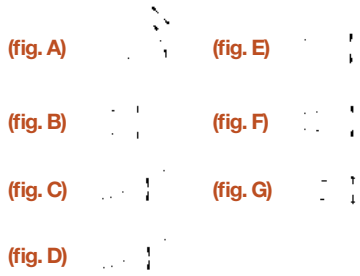

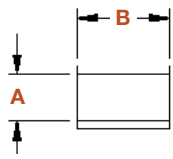
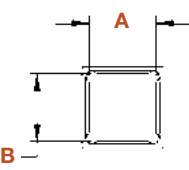
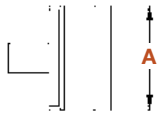
Profile	Description	Part Number
	<b>.06 Wide, Bevel 60 Degrees, .12x.06 Oval Face</b>	1126-0625-P1
	<b>.07 Bevel, 60 Degree</b>	1126-0626-P1
	<b>.078 Bevel, 45 Degree</b>	1126-0627-P1
	<b>.13 Bevel, 60 Degree</b>	1126-0628-P1
	<b>.118 Bevel, 45 Degree</b>	1126-0629-P1
	<b>.023 Bevel, Special</b>	1126-0630-P1
	<b>.031 Chisel Standard</b>	1126-0631-P1
	<b>.047 Chisel Standard</b>	1126-0632-P1
	<b>.062 Chisel Standard</b>	1126-0633-P1
	<b>.094 Chisel Standard</b>	1126-0634-P1
	<b>.157 Chisel Standard</b>	1126-0635-P1
	<b>.205 Chisel Standard</b>	1126-0636-P1
	<b>.157 Chisel Long Reach</b>	1126-0637-P1
	<b>.205 Chisel Long Reach</b>	1126-0638-P1
	<b>.078 Chisel Blunt</b>	1126-0639-P1
	<b>.125 Chisel Blunt</b>	1126-0640-P1
	<b>.055 Chisel, Bent 30 Degrees</b>	1126-0641-P1
	<b>.062 Chisel, Bent 30 Degrees</b>	1126-0642-P1
	<b>.055 Chisel, Bent, Extended</b>	1126-0643-P1
	<b>.185 Knife, 45 Degree</b>	1126-0644-P1
	<b>.181 Knife, 45 Degree</b>	1126-0645-P1
	<b>.185 Knife, 45 Degree, Blunt</b>	1126-0646-P1
	<b>.118 Knife, 45 Degree</b>	1126-0647-P1
	<b>Single Sided Chisel .08 Wide</b>	1126-0648-P1

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



# TD-100 SMT Removal Tips

## Tip Specifications

Tip - Chip/SOT Removal	Component Type	Size - A	Size - B	Part Number	
	<b>Chip 0402 Angle (fig. A)</b>	2.2mm (.085")	-	1124-0518-P1	
	<b>Chip 0201 Angle (fig. A)</b>	0.5mm (.02")	-	1124-0533-P1	
	<b>Chip 1808 (fig. B)</b>	5.0mm (.195")	-	1124-0520-P1	
	<b>Chip 0402 (fig. C)</b>	1.0mm (.40")	-	1124-0521-P1	
	<b>Chip 0201 (fig. C)</b>	0.5mm (0.2")	-	1124-0534-P1	
	<b>SOT 23 (fig. D)</b>	1.8mm (.070")	-	1124-0522-P1	
	<b>SOT 89 (fig. E)</b>	2.8mm (.110")	-	1124-0523-P1	
	<b>Chip 1206 (fig. F)</b>	3.6mm (.142")	-	1124-0524-P1	
	<b>Chip 0805 (fig. G)</b>	2.4mm (.095")	-	1124-0525-P1	
	Tip - SOIC/SOP/TSOP Removal	Component Type	Size - A	Size - B	Part Number
		<b>SOIC 14/16</b>	5.2mm (.205")	10.5mm (.415")	1124-0504-P1
<b>SOIC 20</b>		9.6mm (.377")	13.6mm (.535")	1124-0505-P1	
<b>SOP 28</b>		10.8mm (.426")	18.6mm (.734")	1124-0506-P1	
<b>SOP 40</b>		11.9mm (.467")	25.7mm (1.011")	1124-0507-P1	
<b>SOP 44</b>		13.1mm (.516")	28.4mm (1.120")	1124-0508-P1	
<b>TSOP 56</b>		18.8mm (.739")	14.1mm (.557")	1124-0509-P1	
<b>TSOP 28</b>		12.0mm (.471")	8.5mm (.333")	1124-0510-P1	
<b>SOIC 8</b>		5.1mm (.202")	4.65mm (.183")	1124-0519-P1	
<b>TSOP 40</b>		18.8mm (.740")	10.4mm (.410")	1124-0526-P1	
Tip - SOIC/SOP/TSOP Removal	Component Type	Size - A	Size - B	Part Number	
	<b>PLCC 28 Socket</b>	9.3mm (.365")	9.3mm (.365")	1124-0511-P1	
	<b>PLCC 32</b>	14.2mm (.561")	11.7mm (.459")	1124-0512-P1	
	<b>PLCC 44</b>	16.8mm (.622")	16.8mm (.622")	1124-0513-P1	
	<b>QFP 144</b>	20.6mm (.810")	20.6mm (.810")	1124-0514-P1	
	<b>PLCC 28</b>	11.8mm (.465")	11.8mm (.465")	1124-0515-P1	
	<b>QFP 100/128</b>	22.0mm (.865")	16.0mm (.628")	1124-0516-P1	
	<b>PLCC 18</b>	7.6mm (.300")	12.8mm (.505")	1124-0528-P1	
	<b>TQFP 80</b>	12.5mm (.491")	12.5mm (.491")	1124-0529-P1	
	<b>PLCC 52</b>	19.4mm (.762")	19.4mm (.762")	1124-0530-P1	
	<b>QFP 100</b>	26.6mm (1.048")	26.6mm (1.048")	1124-0531-P1	
	<b>VQFP 100</b>	15.5mm (.610")	15.5mm (.610")	1124-0535-P1	
	<b>TQFP 64</b>	15.3mm (.602")	15.3mm (.602")	1124-0537-P1	
	<b>TQFP 64</b>	11mm (.433")	11mm (.433")	1124-0539-P1	
	Tip - SOIC/SOP/TSOP Removal	Component Type	Size - A	Size - B	Part Number
	<b>Blade</b>	6mm (.236")	-	1124-0536-P1	
	<b>Blade</b>	10.8mm (.425")	-	1124-0501-P1	
	<b>Blade</b>	16.0mm (.630")	-	1124-0502-P1	
	<b>Blade</b>	21.2mm (.835")	-	1124-0503-P1	
	<b>Blade</b>	25.0mm (.984")	-	1124-0532-P1	

# MT-100 & TP-100 SMT Removal Tips

## MT-100 Tips

Tips - Chip/SOT Removal	Component Type	Size - A	Size - B	Part Number
<p>Diagrams showing various MT-100 removal tip configurations. Labels A and B indicate different tip widths, and C indicates a specific tip shape. The diagrams are arranged in three groups: (fig. A) and (fig. B) each have two sub-diagrams, and (fig. C) has two sub-diagrams.</p>	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
	Chip, SOT (fig. B)	0.7mm (.03")	2mm (.08")	1124-1004-P1
	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
	Chip Extended (fig. B)	0.6mm (.025")	1.0mm (.039")	1124-1011-P1

## TP-100 Tips

Tips	Type	Lead Count	Size - A	Size - B	Component Height	Component Footprint	Part Number
<p>Diagram showing TP-100 removal tip configurations. Label A indicates a wider tip, and B indicates a narrower tip. The diagram shows a side view of the tip with leads.</p>	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
	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 Soldering Tips

Tips	Description	Tip Size	Part Number
	<b>1/16" Chisel (High Capacity)</b>	1.60mm (0.063")	1121-0414-P5
	<b>1/64" Conical</b>	0.40mm (0.016")	1121-0357-P5
	<b>1/64" Sharp Bent Conical</b>	0.40mm (0.016")	1121-0830-P5
	<b>1/32" Conical</b>	0.80mm (0.031")	1121-0336-P5
	<b>1/16" Chisel</b>	1.60mm (0.063")	1121-0335-P5
	<b>1/16" Chisel, Long Reach</b>	1.60mm (0.063")	1121-0499-P5
	<b>1/8" Chisel</b>	3.20mm (0.125")	1121-0337-P5
	<b>1/32" Chisel</b>	0.80mm (0.031")	1121-0359-P5
	<b>3/32" Chisel</b>	2.40mm (0.094")	1121-0360-P5
	<b>1/16" Chisel, Extended Reach</b>	1.60mm (0.063")	1121-0533-P5
	<b>1/64" Bent Conical</b>	0.40mm (0.016")	1121-0363-P5
	<b>1/32" Conical, Extended Reach</b>	0.80mm (0.031")	1121-0527-P5
	<b>3/16" Chisel</b>	4.80mm (0.188")	1121-0358-P5
	<b>1/16" Chisel (MicroFine)</b>	1.60mm (0.063")	1121-0349-P5
	<b>1/16" Chisel, Thermo-Drive</b>	1.60mm (0.063")	1121-0510-P5
	<b>1/32" Bent Chisel</b>	0.80mm (0.031")	1121-0361-P5
	<b>1/8" Chisel, Thermo-Drive</b>	3.20mm (0.125")	1121-0518-P5
	<b>3/32" Chisel, Extended Reach</b>	2.40mm (0.094")	1121-0529-P5
	<b>1/16" Bent Chisel, Long Reach</b>	1.60mm (0.063")	1121-0500-P5
	<b>1/64" Conical, Long Reach</b>	0.40mm (0.016")	1121-0528-P5
	<b>Angled Mini-Wave, Fine Pitch</b>	1.80mm (0.07")	1121-0564-P5
	<b>Angled Mini-Wave</b>	2.40mm (0.09")	1121-0610-P5
	<b>Single-Sided Chisel, Fine Pitch</b>	1.50mm (0.06")	1121-0563-P5
	<b>Single-Sided Chisel</b>	3.30mm (0.13")	1121-0406-P5
	<b>Mini-Wave</b>	3.30mm (0.13")	1121-0490-P5
	<b>Flat Blade</b>	6.60mm (0.25")	1121-0402-P1
	<b>Flat Blade</b>	10.2mm (0.40")	1121-0305-P1

# PS-90 SMT Removal Tips

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

# SMR Pulse Heat Handpiece Tips

Description	Part Number
<b>LF-1 Single Point SMD Soldering Tip</b>	6000-0008-P1
<b>LF-2 Multip Point SMD Soldering Tip</b>	1121-0298-P1
<b>LF-3 Multip Point SMD Soldering Tip</b>	1121-0299-P1
<b>LF-4 Multip Point SMD Soldering Tip</b>	1121-0300-P1
<b>CT-1 Chip Component Tip</b>	1121-0286-P1
<b>CT-2 14, 16 Lead SOIC Tip</b>	1121-0271-P1
<b>CT-3 20 Lead SOIC Tip</b>	1121-0270-P1
<b>CT-4 24, 28 Lead SOIC Tip</b>	1121-0293-P1
<b>CT-5 SOT Tip</b>	1121-0269-P1
<b>CT-6 Rounded End Auxiliary Heating Tip</b>	1121-0004-P2
<b>RT 1 18 Pin PLCC ThermoBond Tip</b>	1121-0294-P1

Description	Part Number
<b>RT 2 20 Pin PLCC ThermoBond Tip</b>	1121-0295-P1
<b>RT 4 44 Pin PLCC ThermoBond Tip</b>	1121-0297-P1
<b>RT 5 Tapered Flat End Resistance Tips</b>	1121-0301-P1
<b>RT 7 Flat End Resistance Tips</b>	1121-0006-P2
<b>Thermal Stripper Tips*</b>	1121-0003-P1
<b>TS-15 24 Gauge through 18 Gauge Tips*</b>	1121-0960-P1
<b>TS-15 18 Gauge Tip</b>	1121-0961-P1
<b>TS-15 20 Gauge Tip</b>	1121-0962-P1
<b>TS-15 22 Gauge Tip</b>	1121-0963-P1
<b>TS-15 24 Gauge Tip</b>	1121-0964-P1
<b>Thermopart Coating Removal Tip</b>	6000-0009-P1






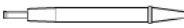
\* Tips are supplied with the SMR system.

# SX-100/SX-90 Desoldering Tips

## Tips Selection

One of the most important aspects for successful solder removal is the selection of the proper size tip. There are several points to keep in mind.

- 1 The Inside Diameter (I.D.) of the tip must be large enough to fit over the lead, while providing sufficient room so that air and solder can be drawn through the tip.
- 2 The Outside Diameter (O.D.) of the tip must be slightly smaller than the diameter of the pad to prevent tip contact to the board laminate and minimize the possibility of damage.

Tips	Description	Diameter	Part Number
	<b>Thermo-Drive</b>	0.76mm (0.030") I.D. x 2.03mm (0.080") O.D.	1121-0930-P5
	<b>Thermo-Drive</b>	1.02mm (0.040") I.D. x 2.29mm (0.090") O.D.	1121-0931-P5
	<b>Thermo-Drive</b>	1.52mm (0.060") I.D. x 3.05mm (0.120") O.D.	1121-0932-P5
	<b>Thermo-Drive</b>	2.29mm (0.090") I.D. x 5.1mm (0.200") O.D.	1121-0933-P5
	<b>Thermo-Drive</b>	4mm (0.16") I.D. x 5.1mm (0.200") O.D.	1121-0951-P5
 	<b>Thermo-Drive, Flathead</b>	(0.050") x (0.090") I.D. x (0.110") x (0.190") O.D.	1121-0934-P5
	<b>Extended Reach Thermo-Drive</b>	0.78mm (0.030") I.D. x 2.29mm (0.090") O.D.	1121-0935-P5
	<b>Extended Reach Thermo-Drive</b>	1.02mm (0.040") I.D. x 2.54mm (0.10") O.D.	1121-0936-P5
	<b>Extended Reach Thermo-Drive</b>	1.52mm (0.060") I.D. x 3.05mm (0.120") O.D.	1121-0937-P5
	<b>ThermoMax</b>	0.76mm (0.030") I.D. x 1.91mm (0.075") O.D.	1121-0938-P5
	<b>ThermoMax</b>	1.02mm (0.040") I.D. x 2.20mm (0.085") O.D.	1121-0939-P5
	<b>ThermoMax</b>	1.52mm (0.060") I.D. x 2.69mm (0.106") O.D.	1121-0940-P5
		<b>Precision</b>	0.50mm (0.020") I.D. x 1.79mm (0.070") O.D.
<b>Precision</b>		0.76mm (0.030") I.D. x 2.03mm (0.080") O.D.	1121-0942-P5
<b>Precision</b>		1.02mm (0.040") I.D. x 2.29mm (0.090") O.D.	1121-0943-P5
<b>Precision</b>		1.52mm (0.060") I.D. x 2.79mm (0.110") O.D.	1121-0944-P5
<b>Precision</b>		0.635mm (0.025") I.D. x 1.39mm (0.055") O.D.	1121-0949-P5
<b>Precision</b>		0.635mm (0.025") I.D. x 1.14mm (0.045") O.D.	1121-0950-P5
 	<b>Flo-D-Sodr</b>	1.52mm (0.060") I.D. X 4.78mm (0.188") O.D.	1121-0945-P5
	<b>Flo-D-Sodr, Precision</b>	0.50mm (0.020") I.D. X 1.78mm (0.070") O.D.	1121-0946-P5
	<b>Flo-D-Sodr, Precision</b>	0.50mm (0.020") I.D. X 1.78mm (0.070") O.D.	1121-0947-P5
	<b>Flo-D-Sodr, Precision</b>	1.02mm (0.040") I.D. X 2.29mm (0.090") O.D.	1121-0948-P5

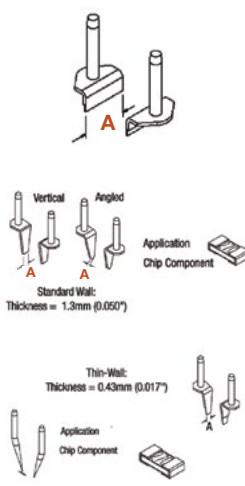
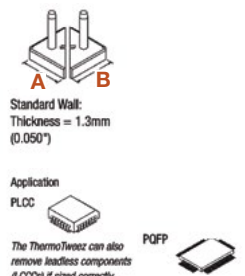
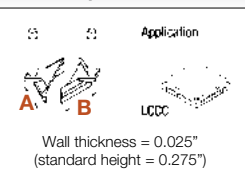
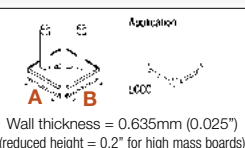
Not compatible with SX-70 or SX-80

# SX-100

## Surface Mount Removal Pik-Tips

Tips	Description	Tip Size A X B	Part Number
	<b>TSOP-32</b>	8.1mm (0.320") x 12.7mm (0.500")	1121-0566-P1
	<b>TSOP-28</b>	8.1mm (0.320") x 19.3mm (0.760")	1121-0567-P1
	<b>TSOP-40</b>	9.9mm (0.390") x 19.3mm (0.760")	1121-0568-P1
	<b>TSOP-56</b>	14.2mm (0.560") x 19.3mm (0.760")	1121-0569-P1
	<b>TQFP-28</b>	8.2mm (0.322") x 8.23mm (0.3220")	1121-0571-P1
	<b>TQFP-32</b>	8.7mm (0.344") x 8.7mm (0.344")	1121-0572-P1
	<b>TQFP-52</b>	12mm (0.472") x 12mm (0.472")	1121-0573-P1
	<b>TQFP-40</b>	12mm (0.472") x 12mm (0.472")	1121-0574-P1
	<b>TQFP-80</b>	13.2mm (0.520") x 13.2mm (0.520")	1121-0575-P1
	<b>TQFP-80/100</b>	15.3mm (0.604") x 15.3mm (0.604")	1121-0576-P1
	<b>PQFP-80/100</b>	16.8mm (0.660") x 22.9mm (0.900")	1121-0603-P1
	<b>TQFP-144</b>	21.6mm (0.850") x 21.6mm (0.850")	1121-0604-P1
	<b>TQFP-112</b>	22.1mm (0.870") x 22.3mm (0.870")	1121-0605-P1

# TT-65 SMT Removal Tips

Chip Removal Tips	Description	Tip Size	Part Number
 <p>Standard Wall: Thickness = 1.3mm (0.050")</p> <p>Thin-Wall: Thickness = 0.43mm (0.017")</p>	<b>SOIC, SOJ, SIMMs</b>	A=7.6mm (0.3")	1121-0512-P1
	<b>SOIC, SOJ, SIMMs</b>	A=10.2mm (0.4")	1121-0514-P1
	<b>SOIC, SOJ, SIMMs</b>	A=12.7mm (0.5")	1121-0473-P1
	<b>SOIC, SOJ, SIMMs</b>	A=17.8mm (0.7")	1121-0416-P1
	<b>SOIC, SOJ, SIMMs</b>	A=20.3mm (0.8")	1121-0497-P1
	<b>SOIC, SOJ, SIMMs</b>	A=25.4mm (1.0")	1121-0448-P1
	<b>Chip Component</b>	A=0.76mm (0.03")	1121-0398-P1
	<b>Chip Component</b>	A=2.0mm (0.08")	1121-0313-P1
	<b>Chip Component</b>	A=4.1mm (0.16")	1121-0399-P1
	<b>Chip Component, Small SOIC</b>	A=6.4mm (0.25")	1121-0401-P1
	<b>Thin-Walled Chip Component</b>	A=0.76mm (0.03")	1121-0520-P1
	<b>Thin-Walled Chip Component</b>	A=2.0mm (0.08")	1121-0521-P1
	<b>1/64" Angled Fine Point Conical</b>	A=0.43mm (0.017")	1121-0517-P1
PLCC Removal Tips	Description	Tip Size A X B	Part Number
 <p>Standard Wall: Thickness = 1.3mm (0.050")</p> <p>The ThermoTweez can also remove leadless components (LCCs) if sized correctly.</p>	<b>PLCC-20</b>	6.86mm x 6.86mm (0.27" x 0.27")	1121-0316-P1
	<b>PLCC-28</b>	9.4mm x 9.4mm (0.37" x 0.37")	1121-0317-P1
	<b>PLCC-32</b>	12.2mm x 9.65mm (0.48" x 0.38")	1121-0352-P1
	<b>PLCC-44, PQFP-84</b>	14.5mm x 14.5mm (0.57" x 0.57")	1121-0318-P1
	<b>PLCC-52, PQFP-100</b>	17.0mm x 17.0mm (0.67" x 0.67")	1121-0319-P1
	<b>PLCC-68, PQFP-132</b>	21.9mm x 21.9mm (0.86" x 0.86")	1121-0320-P1
	<b>PLCC-84, PQFP-160</b>	26.9mm x 26.9mm (1.06" x 1.06")	1121-0321-P1
Thin-Walled Surface Mount Removal Tips	Description	Tip Size A X B	Part Number
 <p>Wall thickness = 0.025" (standard height = 0.275")</p>	<b>Removal Tips for Motorola Pager LCCC Packages and Small, Fine-Pitch PQFPs</b>	6.6mm x 6.6mm (0.26" x 0.26")	1121-0417-P1
			9.16mm x 8.89mm (0.40" x 0.35")
LCC Removal Tips	Description	Tip Size A X B	Part Number
 <p>Wall thickness = 0.635mm (0.025") (reduced height = 0.2" for high mass boards)</p>	<b>Removal Tips for LCC Packages and Small, Fine-Pitch PQFPs</b>	8.89mm x 6.35mm (0.35" x 0.25")	1121-0452-P1
			21.6mm x 21.6mm (0.85" x 0.85")



# TJ-70 / TJ-85 Hot Jet Nozzles

## TJ-70 Hot Jet Tips

Tips	Description	Tip Size A x B	Part Number
	<b>Small, Straight, Single Jet Tip</b>	0.060" I.D.	1121-0366-P1
	<b>Small, Curved, Single Jet Tip</b>	0.060" I.D.	1121-0338-P1
	<b>SOIC Tip (dual-jet)</b>	A = 4.32mm (0.17")	1121-0330-P1
	<b>Flat End Tip</b>	A = 7.11mm (0.28") B = 1.88mm (0.074")	1121-0365-P1
		A = 6.10mm (0.24") B = 1.88mm (0.074")	1121-0371-P1

## TJ-85 Hot Jet Nozzles

Tips	Description	Tip Size	Part Number
	<b>Round Nozzle</b>	1.5mm (.06") Inner diameter	1259-0129-P1
	<b>Round Nozzle, Bent 60 degrees</b>	1.5mm (0.6") Inner diameter	1259-0130-P1
	<b>Flat Jet Nozzle</b>	6.1mm x 1.9mm (.24" x .074") Inner flow dimensions	1259-0131-P1



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

## Solder & Desolder Stations

SMR



WJS 100



ST 50



ST 70



ST 65



ST 115



## Fume Extraction

Arm-Evac 50



Arm-Evac 105



Arm-Evac 200



Arm-Evac 250



Arm-Evac 500



## Rework & Repair Systems

MBT 250



MBT 350



ST 325



ST 350

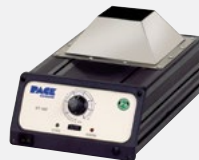


## Pre-heaters & Process Monitors

ST 400



ST 450



ST 1600



Tip Temperature Monitor



PM 200



## Area Array (BGA) Rework Systems

TF 2700



TF 1700



IR 3000



IR 1000



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

## A Worldwide Commitment

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

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

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

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

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PACE products meet or exceed all applicable military or civilian EOS/ESD, temperature stability and other specifications, including MIL-STD-2000, ANSI/J-STD001, IPC 7711, IPC 7721 and IPC-A-610.

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