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.

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

SOLUTIONS FOR THE ELECTRONICS INTERCONNECTION PROCESS

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

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PACE® worldwide

LEAD FREE Pb SOLDER COMPATIBLE

SOLDERING DESOLDERING & REWORK

LEAD FREE COMPLIANT AND COMPATIBLE

TD-100

SX-90

SOLUTIONS FOR THE ELECTRONICS INTERCONNECTION PROCESS

PACE ST SYSTEMS

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.

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!

FLEXIBILITY DRIVES THROUGH-PUT!

IntelliHeat™

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.

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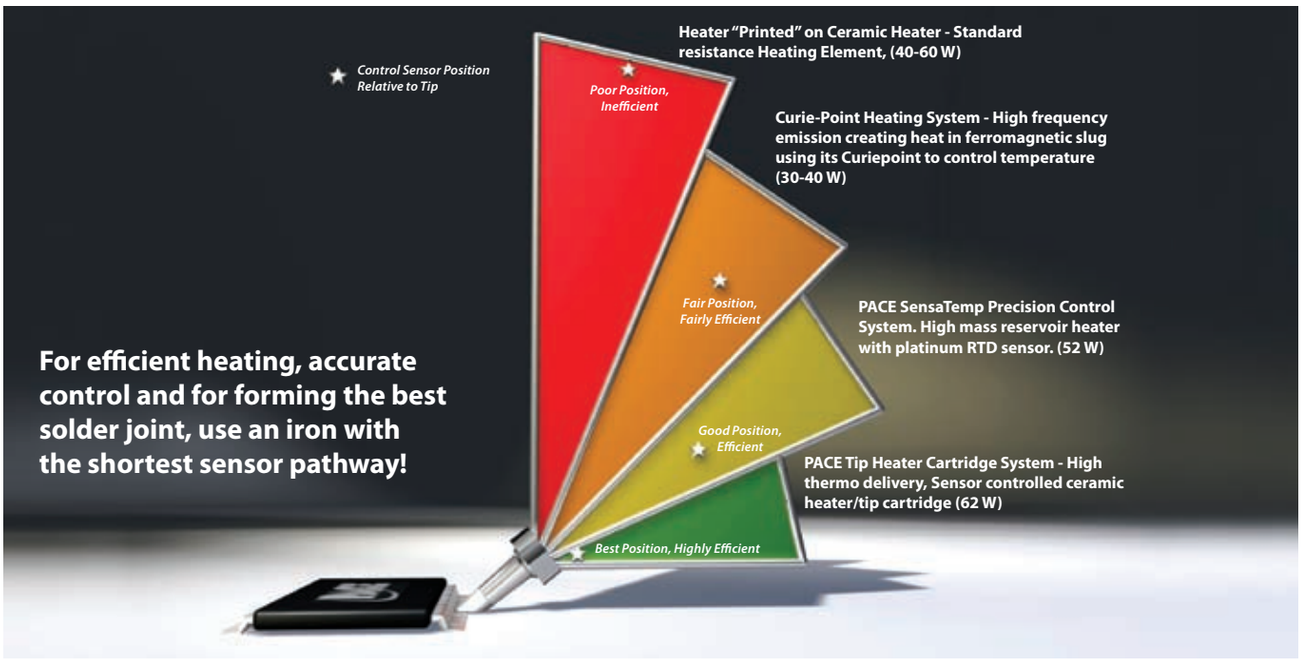
TIP-HEATER CARTRIDGE TECHNOLOGY

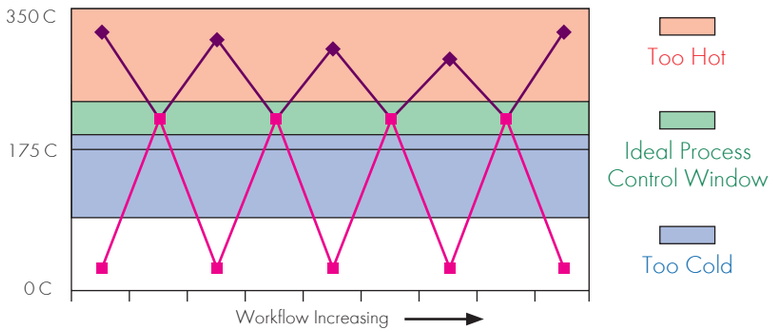
The key advantage of Tip-Heater Cartridge based technology is that its advanced electronics provide instantaneous load sensing and on-demand power to quickly reflow solder joints, regardless of the mass of the application. Further, the position of the control sensor is as far forward as possible to immediately 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

Tip Temperature
Solder Joint Temperature



SENSATEMP® TECHNOLOGY

At the heart of SensaTemp is a laser trimmed, platinum RTD sensor that is more than 5 times more accurate than conventional thermo-couples. 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 dampener that minimizes tip temperature overshoot, ensures temperature stability and creates a "thermal reservoir" 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.

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INTELLIHEAT COMPATIBLE HANDPIECES

TIP-HEATER CARTRIDGE HANDPIECES

PERFECT FOR LEAD FREE

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. 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™

The only high capacity, micro tweezer (**MT-100 MiniTweez™**) 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.

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PS-90 UNIVERSAL SOLDERING IRON

The Universal Soldering Iron (**PS-90**) is ideal for most soldering applications and SMT rework operations where high thermal capacity and flexibility are required. The PS-90 features a rugged plug in heater with gold contacts. There are 15 single point soldering tips and over 10 surface mount removal tips available for the PS-90.
See Pages 23-24 for tip selection

SX-90 SODR-X-TRACTOR®

The best performing, in-line, vacuum desoldering tool (**SX-90 Sodr-X-Tractor®**) is ideal for Thru-Hole desoldering when fitted with SX-90 Desoldering tips and for SMT land clean-up when fitted with SX-90 Flo-D-Sodr® tips. SX-90 Desoldering tips are the longest lasting, best performing soldering tips on the market! The SX-90 features a unique solder collection system that can utilize disposable Flux/Solder traps or a reusable glass collection chamber. An operator replaceable plug-in heater cartridge that can be changed in seconds is standard. There is a wide range of standard and precision SX-90 Desoldering tips for when access is tight!
See Page 25 for tip selection.

TT-65 THERMOTWEEZ®

The most versatile and only patented SMT removal tool (**TT-65 ThermoTweez®**) provides safe, one-handed, rapid reflow and component removal of PLCCs and other 4 or 2 sided SMT components. Unlike other methods, its high thermal capacity and targeted heat delivery remove even the largest SMDs in just seconds without damaging the PCB or risking of adjacent component reflow; even on heavy assemblies.
The patented vertically oriented handpiece and a wide variety of quick-change, slim-line tips easily reach into the tightest spaces for fast, safe component removal. The TT-65 also features a patented "stroke" adjustment to reduce hand fatigue for repetitive operations. **See Page 26** for tip selection.

TJ-85 THERMOJET®

When the precise application of hot air is required, our slim line air pencil (**TJ-85 ThermoJet®**) is ideal for delivering heat for the installation and removal of chip components, SOTs, and SOICs. Multiple quick-change nozzle sizes are available. The handpiece's slim line, pencil grip design maximizes operator comfort and control. The TJ-85's airflow is actuated with a foot pedal. Ideal for the precise application of hot air for large SMDs down to 0201s.
See Page 26 for nozzle selection.

HANDPIECE & POWER SOURCE CHARTS

Part Number includes handpiece and standard cubby

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_2 Manifold Kit	Connect up to 10 N_2 irons to a single N_2 source.	6993-0277-P1

*Does not include Handpiece

CHOOSE THE RIGHT INTELLIHEAT HANDPIECE FOR YOUR APPLICATION

	Tip Heater Cartridge Technology Handpieces			SensaTemp Technology Handpieces			
	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	✓			✓			
Standard Soldering	✓			✓			
High Mass Soldering				✓			
Micro Soldering	✓						
Chip Installation	✓	✓		✓		✓	✓
Solder Wicking	✓			✓			✓
Thru-Hole Desoldering					✓		
SMT Land Preparation	✓			✓	✓		✓
Solder Removal from Lands					✓		
Large SMD Removal			✓			✓	
Standard SMD Removal	✓	✓	✓	✓		✓	
Micro SMD Removal	✓	✓		✓		✓	✓
Large Component Installations*	✓			✓			✓
Standard Component Installations*	✓			✓			✓
Micro Component Installations*	✓			✓			✓

*with Solder Paste

INTELLIHEAT POWER SOURCE & HANDPIECE COMPATABILITY

	Power Source Options - ST and MBT Systems								
TIP-HEATER CARTRIDGE HANDPIECES	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	ST 30	ST 50	ST 65	ST 70	ST 75	ST 100	ST 115	MBT 301	MBT 350
• PS-90	✓	✓	✓	✓	✓	✓	✓	✓	✓
• SX-90			★		★		★	★	★
• TT-65	✓	✓	✓	✓	✓	✓	✓	✓	✓
• TJ-85					✓		✓	✓	✓

✓ = Optional Handpiece ★ = Standard handpiece packaged with System

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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 Instant-SetBack Cubby is available for the TD-100 ThermoDrive Soldering Iron to extend tip life, especially beneficial when Lead Free solders are used.

Features

- IntelliHeat Control Technology
- °C/°F Temperature Scales
- Temperature Adjustment Lockout
- 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 Instant-SetBack Cubby is available for the TD-100 ThermoDrive Soldering Iron to extend tip life, especially beneficial when Lead Free solders are used.

Features

- 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 Instant-SetBack Cubby is available for the TD-100 ThermoDrive Soldering Iron to extend tip life, especially beneficial when Lead Free solders are used.

Features

- IntelliHeat Control Technology
- Performance level lockout (if Power Module is removed the system is shut down.)
- 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

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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 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. Color coding accessories that clearly identify which handpiece is designated for use with Lead Free and lead containing solders.

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 degrees 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 Cubby". The cubby puts the iron's channel into set back 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.

ST 100 Shown with optional handpieces

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LEAD FREE ACCESSORIES

CUSTOMIZE YOUR SYSTEM FOR EVEN GREATER FLEXIBILITY

INSTANT SETBACK CUBBY

The optional Instant-SetBack Cubby is available for use with the ST 30, ST 50, ST 65, ST 70, ST 75, and ST 115. When connected, it automatically puts the system into SetBack mode when the TD-100 Iron has been in the cubby 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 cubby. The part number for the Instant-SetBack Cubby is 6019-0077-P1. The Instant-SetBack Cubby is also available for use with the TD-100 fitted with the Green Lead-Free moulded Comfort Grip as part number 6019-0078-P1.

LEAD FREE IDENTIFIABLE

During the transition from leaded to Lead Free solders, it will not be uncommon to be using both types of solders at the same time. To assist in reducing cross contamination of soldering tools and to keep additional tips separated on a workbench, PACE is pleased to offer a variety of options to clearly identify handpieces and tool stands being used with Lead Free solders. The handpieces are identified by green comfort grips and the tool stands are identified with green cubbies. These options are available for the TD-100, MT-100 and PS-90 handpieces in the following configurations.

DESCRIPTION	PART NUMBER
Green comfort grip and Green handpiece insert for TD-100 Tip & Tool Stand	6993-0283-P1
Replacement Green Comfort Grips for TD-100, pack of 5.	1119-0176-P5
Instant SetBack Tip & Tool Stand for TD-100 with Green insert	6019-0078-P1
Green replacement handpiece insert for TD-100 Tip & Tool Stand	1140-0075-G-P1
Green comfort grip and Green handpiece insert for MT-100 Tip & Tool Stand	6993-0284-P1
Replacement Green Comfort Grips for MT-100, pack of 2	1119-0177-P2
Green replacement handpiece insert for MT-100 Tip & Tool Stand	1257-0323-G-P1
PS-90 Handpiece (IntelliHeat Version) with Green comfort grip	6010-0159-P1
PS-90 Tip & Tool Stand with Green insert	6019-0074-P1

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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-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_2 source can be connected to create an inert gas reflow environment when using an N_2 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_2 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 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-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.

Features

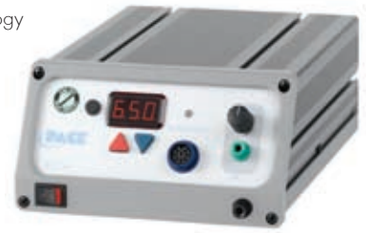
- IntelliHeat Control Technology
- Dial control
- °C/°F Temperature Scales
- Temperature lockout
- Hi-Flo Pump
- Patented Snap-Vac Technology
- ESD grounding jack
- ESD Safe metal housing
- Stackable

ST 115

A single channel, dial control 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
- 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



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SPECIFICATIONS	ST 30	ST 50	ST 70	ST 100
System with TD-100 115v	8007-0499	8007-0500	8007-0504	8007-0525
System with PS-90 115v	N/A	N/A	N/A	N/A
Power Source Only 115v	8007-0497	8007-0501	8007-0505	8007-0524
System with TD-100 230v	8007-0512	8007-0514	8007-0518	8007-0527
System with PS-90 230v	N/A	N/A	N/A	N/A
Power Source Only 230v	8007-0513	8007-0515	8007-0519	8007-0526
Power Requirements	97-127 VAC, 50/60 Hz, 90 Watts max. 197-253 VAC, 50/60 Hz, 90 Watts max.			
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)
Weight				5 Kg (11 lbs.)
Control	Dial	LED Display	Power Module	LED Display & Keypad
Control Technology	IntelliHeat			
Tip to Ground Resistance	2 ohms or less			
Temperature Accuracy	Meets or exceeds ANSI-J-STD 001		N/A	Meets or exceeds ANSI-J-STD 001
Absolute Temperature Stability	± 1.1°C (± 2 °F) at idle tip temp.			
Temperature Range	Tip Heater Cartridge Technology Handpieces = 205° to 454°C (400° to 850°F) SensaTemp Technology Handpieces = 176° (Dial) or 37°C (Digital Display) to 482°C (350° (Dial) or 100° (Digital Display) to 900°F)			
System Can be Calibrated	Yes			

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

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MBT 301

SIMPLE AND EASY TO USE FOR REWORK TECHNICIANS OR OPERATORS ON THE LINE

MBT 301

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(N) 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.

MBT 301

MBT 300 SERIES SPECIFICATIONS

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 (240 watts maximum)		230 VAC, 50 Hz (240 watts maximum)	
Handpiece Technology Compatibility	Blue Series Handpieces with Tip Heater Cartridge or SensaTemp Technology			
Dimensions	135mm H x 165mm W x 260mm D (5.3" x 6.5" x 9.25")			
Weight	5 Kgs (11 lbs.)			
Tip to ground resistance	< 2 Ohms			
Temperature Stability	± 1.1 °C (2 °F)			
Temperature Accuracy	Meets or exceeds ANSI J Std 001			
Set Temp Range	37-482 °C (100-900 °F) SensaTemp 205-454 °C (400-850 °F) Tip Heater Cartridge			
Vacuum Rise Time	150 ms Average as measured with PACE Process Monitor			
Vacuum	20 in Hg max			
Pressure	18 p.s.i. max			
Air Flow	8 SLPM max			

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MBT 350

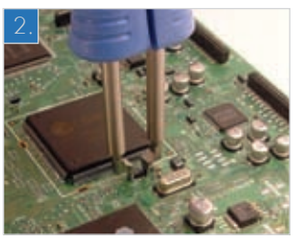
The MBT 350 is loaded with features to improve quality, increase through-put, extend tip life, and protect your process. The system is fully programmable and can be password protected from unauthorized changes. In some cases technicians become frustrated with being locked into a single temperature. The 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 5 to 450 F (3-250 C) to operate within! When high-mass tips are required, an offset can be programmed for each of the three channels, individually.

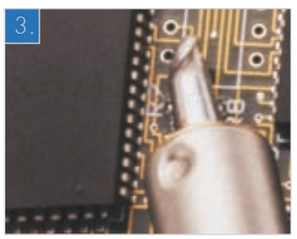
To maximize tip life and reduce operating costs, PACE's well recognized "Setback" and "Auto-Off" features are included. The system will automatically reduce the set temperature by 50% then turn off after a user defined period of inactivity, from 1 to 90 minutes. To really protect your more expensive tip-heater cartridge and fine point soldering tips from oxidation, the TD-100 can be used with the new "Instant-Setback Cubby". The cubby puts the iron's channel into setback if it's in the cubby for more than 45 seconds! Up to two instant setback cubbies 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.

MBT 350

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-90 SODR-X-TRACTOR
7. TP-100 THERMOPIK

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SENSATEMP REWORK SYSTEMS

ST 25, MBT 250 & PRC 2000

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.

ST 25

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

MBT 250 SD/SDTP

Still available

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 197-253 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 (28.6 lbs.)	
Control		LED Display	LED Display	
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 tip temp.			
Temperature Range	176° to 482°C (350° to 900°F) nominal			
System Can be Calibrated	Calibration not required			
Pump Type	N/A	Self 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	13 slpm max	

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LEAD FREE SOLDERING

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. Should oxidation form that cannot be easily cleaned by tinning or by using a cleaning tool, Sodr-Tek's Tip-Brite is recommended. Tip-Brite is a high quality tip tinner that will remove stubborn oxidation.

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 Instant SetBack Cubby ensure that tip life is maximized. The Instant SetBack Cubby puts the system into "Setback" after 45 seconds of inactivity. When the iron is removed from the cubby, 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.

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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 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.

	HANDPIECE KIT	HANDPIECE ONLY
TD-100 N	6993-0272-P1	6010-0156-P1
PS-90 N	6993-0274-P1	6010-0157-P1

N_2 REGULATOR ACCESSORY

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.

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NF 50 & NF 100

The compact high-performance single station N_2 generator (NF 100) will generate Nitrogen Gas at a maximum concentration level of 99.9%. This system should be used in conjunction with NF 50 N_2 Flow Control Unit.

NF 500 & NF 1000

PACE is also pleased to offer the NF Series Nitrogen farms. Nitrogen farms harvest N_2 from a compressed air supply that is passed through a specialized filter. The other atoms that make up "air" are forced through the filter, leaving a pure stream of N_2 as the product of filtering. Nitrogen farms are passive collection devices which means that there are no electrical or moving parts, little or no maintenance, low running costs, and they maintain the balance of air/N_2 in a confined space (as long as the compressed air is pulled from the same space).

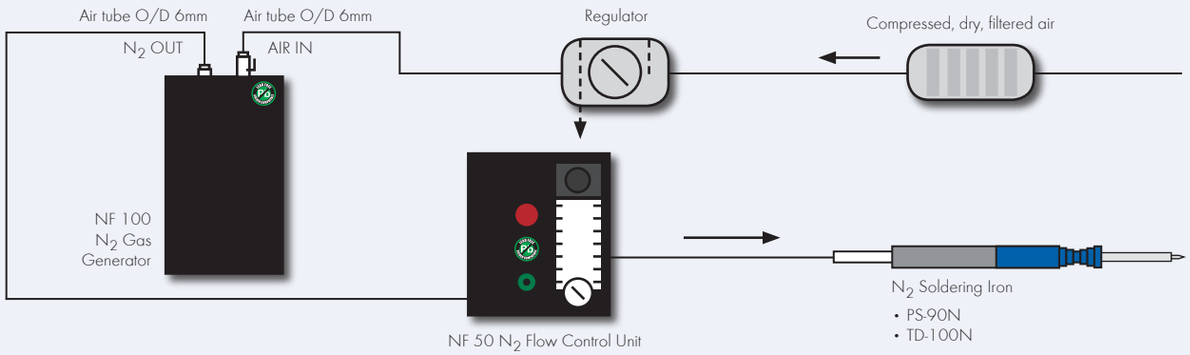
NF 100 Performance Table

N_2 Concentration %

Input compression air pressure (MPa)	Output amount (L/min)	99.9	99.5	99.0	98.0	97.0	96.0	95.0	90.0
0.3		0.15	0.37	0.48	0.66	0.88	1.1	1.3	2.6
0.4		0.24	0.57	0.77	1.1	1.4	1.7	2.0	4.4
0.5		0.35	0.75	1.1	1.5	1.9	2.2	2.9	5.9
0.6		0.48	0.97	1.3	1.8	2.4	3.1	3.5	7.5
0.7		0.55	1.2	1.6	2.2	3.1	3.7	4.2	9.2

NF SYSTEM	DESCRIPTION	PART NUMBERS
NF 50	Single station N_2 regulator with shut off	8110-0050
NF 100	For a single station	8110-0100
NF 500	For up to 2 stations	8110-0001
NF 1000	For up to 10 stations	8110-0002

NF 100/50 Connection method



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TD-100 STANDARD SOLDERING TIPS

TIP SPECIFICATIONS

TIPS	DESCRIPTION	TIP SIZE - L	SIZE - D	PART NUMBER
	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
	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
	13/64" Conical Sharp Extended	4.7mm (0.188")	0.80mm (0.031")	1124-0005-P1
	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
	3/64" 30 Degree Bevel	3.6mm (0.140")	1.20mm (0.047")	1124-0009-P1
	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
	1/32" 30 Degree Chisel	9.1mm (0.360")	0.80mm (0.031")	1124-0012-P1
	3/32" 30 Degree Chisel	9.9mm (0.390")	2.40mm (0.094")	1124-0013-P1
	5/64" 60 Degree Chisel	4.7mm (0.185")	2.00mm (0.078")	1124-0014-P1
	1/64" Conical, Sharp, Bent 30 Degrees, Extended	15.1mm (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
	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.
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.

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

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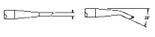
TD-100 STANDARD SOLDERING TIPS

TIP SPECIFICATIONS

TIPS	DESCRIPTION	TIP SIZE - L	SIZE - D	PART NUMBER
	3/128" Conical Sharp Bent 30 Degrees	14.4mm (0.570")	0.58mm (0.023")	1124-0021-P1
	1/16" Conical Sharp	9.9mm (0.390")	1.60mm (0.063")	1124-0022-P1
	1/8" 90 Degree Chisel Extended	8.6mm (0.340")	3.20mm (0.125")	1124-0023-P1
	1/16" 30 Degree Bevel	9.9mm (0.390")	1.60mm (0.063")	1124-0024-P1
	1/16" Conical Sharp Extended	12.1mm (0.478")	1.60mm (0.063")	1124-0025-P1
	1/16" Chisel Bent 30 Degrees	9.7mm (0.385")	1.60mm (0.063")	1124-0026-P1
	3/128" Conical Sharp	15.2mm (0.600")	0.58mm (0.023")	1124-0027-P1
	3/64" Chisel, Bent 30 Degrees, Extended	15.2mm (0.600")	0.91mm (0.36")	1124-0028-P1
	1/32" 30 Degree Bevel	9.1mm (0.360")	1.91mm (0.75")	1124-0029-P1
	1/32" Conical Sharp	9.9mm (0.390")	0.80mm (0.031")	1124-0030-P1
	Heat Staking	N/A	4.04mm (0.159")	1124-0031-P1
	MiniWave	N/A	3.05mm (.120")	1124-0032-P1
	Angled MiniWave	N/A	3.05mm (.120")	1124-0033-P1
	Single Sided Chisel	N/A	3.05mm (.120")	1124-0034-P1
	Angled MiniWave	N/A	2.11mm (.083")	1124-0035-P1
	1/128" Conical	N/A	0.20mm (0.008")	1124-0036-P1
	1/4 Flat Blade	N/A	4.57mm (0.180")	1124-0037-P1
	Single Sided Chisel, Fine Pitch	N/A	1.5mm (.06")	1124-0038-P1
	Angled MiniWave, Fine Pitch	N/A	1.6mm (.064")	1124-0039-P1
	MicroFine Single Sided Chisel	N/A	0.9mm (.035")	1124-0040-P1
	MicroFine Single Sided Chisel	N/A	1.1mm (.045")	1124-0041-P1
	MicroFine Conical	N/A	0.25mm (.01")	1124-0042-P1
	MicroFine Bent Conical	N/A	0.76mm (.03")	1124-0043-P1
	MicroFine Bent Conical	N/A	0.5mm (.02")	1124-0044-P1
	Angled Micro-Wave	N/A	1.1mm (.045")	1124-0045-P1
	Micro-Wave	N/A	1.1mm (.045")	1124-0046-P1
	Angled Chisel	8.4mm (0.33")	1.33mm (0.051")	1124-0047-P1
	Single Sided Chisel	17.00mm (0.693")	4.55mm (0.178")	1124-0048-P1

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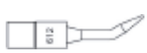
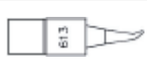
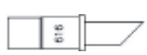
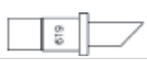
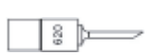
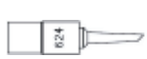
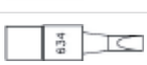
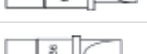
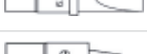
DIAMOND SERIES EXTENDED LIFE SOLDERING TIPS

FOR USE WITH THE TD-100

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

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

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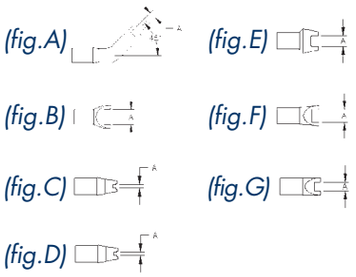
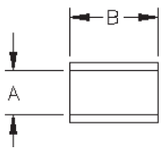
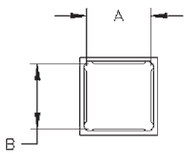
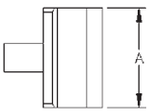
TD-100 SMT REMOVAL TIPS

TIP SPECIFICATIONS

TIP - CHIP/SOT REMOVAL	COMPONENT TYPE	SIZE - A	SIZE - B	PART NUMBER
	Chip 0402 Angle *(fig.A)*	2.2mm (.085")	-	1124-0518-P1
	Chip 0201 Angle *(fig.A)*	0.5mm (.02")	-	1124-0533-P1
	Chip 1808 *(fig.B)*	5.0mm (.195")	-	1124-0520-P1
	Chip 0402 *(fig.C)*	1.0mm (.040")	-	1124-0521-P1
	Chip 0201 *(fig.C)*	0.5mm (0.2")	-	1124-0534-P1
	SOT 23 *(fig.D)*	1.8mm (.070")	-	1124-0522-P1
	SOT 89 *(fig.E)*	2.8mm (.110")	-	1124-0523-P1
	Chip 1206 *(fig.F)*	3.6mm (.142")	-	1124-0524-P1
	Chip 0805 *(fig.G)*	2.4mm (.095")	-	1124-0525-P1
TIP - SOIC/SOP/TSOP REMOVAL	COMPONENT TYPE	SIZE - A	SIZE - B	PART NUMBER
	SOIC 14/16	5.2mm (.205")	10.5mm (.415")	1124-0504-P1
	SOIC 20	9.6mm (.377")	13.6mm (.535")	1124-0505-P1
	SOP 28	10.8mm (.426")	18.6mm (.734")	1124-0506-P1
	SOP 40	11.9mm (.467")	25.7mm (1.011")	1124-0507-P1
	SOP 44	13.1mm (.516")	28.4mm (1.120")	1124-0508-P1
	TSOP 56	18.8mm (.739")	14.1mm (.557")	1124-0509-P1
	TSOP 28	12.0mm (.471")	8.5mm (.333")	1124-0510-P1
	SOIC 8	5.1mm (.202")	4.65mm (.183")	1124-0519-P1
	TSOP 40	18.8mm (.740")	10.4mm (.410")	1124-0526-P1
TIP - SOIC/SOP/TSOP REMOVAL	COMPONENT TYPE	SIZE - A	SIZE - B	PART NUMBER
	PLCC 28 Socket	9.3mm (.365")	9.3mm (.365")	1124-0511-P1
	PLCC 32	14.2mm (.561")	11.7mm (.459")	1124-0512-P1
	PLCC 44	16.8mm (.662")	16.8mm (.662")	1124-0513-P1
	QFP 144	20.6mm (.810")	20.6mm (.810")	1124-0514-P1
	PLCC 28	11.8mm (.465")	11.8mm (.465")	1124-0515-P1
	QFP 100/128	22.0mm (.865")	16.0mm (.628")	1124-0516-P1
	PLCC 18	7.6mm (.300")	12.8mm (.505")	1124-0528-P1
	TQFP 80	12.5mm (.491")	12.5mm (.491")	1124-0529-P1
	PLCC 52	19.4mm (.762")	19.4mm (.762")	1124-0530-P1
	QFP 100	26.6mm (1.048")	26.6mm (1.048")	1124-0531-P1
	VQFP 100	15.5mm (.610")	15.5mm (.610")	1124-0535-P1
	TQFP 64	15.3mm (.602")	15.3mm (.602")	1124-0537-P1
TIP - SOIC/SOP/TSOP REMOVAL	COMPONENT TYPE	SIZE - A	SIZE - B	PART NUMBER
	Blade	6mm (.236")	-	1124-0536-P1
	Blade	10.8mm (.425")	-	1124-0501-P1
	Blade	16.0mm (.630")	-	1124-0502-P1
	Blade	21.2mm (.835")	-	1124-0503-P1
	Blade	25.0mm (.984")	-	1124-0532-P1

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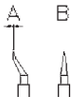
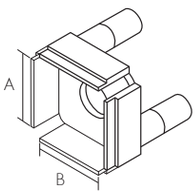
MT-100 AND TP-100 SMT REMOVAL TIPS

TIP SPECIFICATIONS

MT-100 TIPS

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

TP-100 TIPS

TIPS	TYPE	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
	LQFP/TQFP	176, 216	24mm (.945")	24mm (.945")	1.4mm	2.0mm	1124-2004-P1
	LQFP/TQFP	208, 256	28mm (1.10")	28mm (1.10")	1.4mm	2.0mm	1124-2005-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	2.6/3.2mm	1124-2010-P1
	QFP	160	28mm (1.10")	28mm (1.10")	3.4mm	3.9mm	1124-2011-P1

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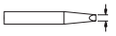
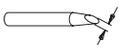
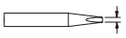
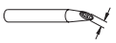
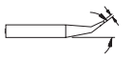
PS-90 SOLDERING TIPS

TIP SPECIFICATIONS

TIPS	DESCRIPTION	TIP SIZE	PART NUMBER
	1/16" Chisel	1.60mm (0.063")	1121-0335-P5
	1/32" Conical	0.80mm (0.031")	1121-0336-P5
	1/8" Chisel	3.20mm (0.125")	1121-0337-P5
	1/16" Chisel (MicroFine)	1.60mm (0.063")	1121-0349-P5
	1/32" Chisel	0.80mm (0.031")	1121-0359-P5
	3/32" Chisel	2.40mm (0.094")	1121-0360-P5
	1/32" Bent Chisel	0.80mm (0.031")	1121-0361-P5
	Single-Sided Chisel	3.30mm (0.13")	1121-0406-P5
	1/16" Chisel (High Capacity)	1.60mm (0.063")	1121-0414-P5
	Mini-Wave	3.30mm (0.13")	1121-0490-P5
	1/16" Chisel, Long Reach	1.60mm (0.063")	1121-0499-P5
	1/16" Bent Chisel, Long Reach	1.60mm (0.063")	1121-0500-P5
	1/16" Chisel, Extended Reach	1.60mm (0.063")	1121-0533-P5
	Angled Mini-Wave	2.40mm (0.09")	1121-0610-P5
	1/64" Sharp Bent Conical	0.40mm (0.016")	1121-0830-P5

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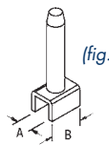
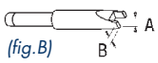
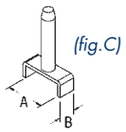
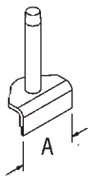
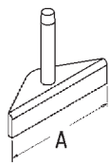
PS-90 SMT REMOVAL TIPS

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
 *(fig.B)*	SOIC - 16 (JEDEC) *(fig.A)*	5.05mm x 10.2mm (0.199" x 0.404")	1121-0392-P1
	Chip Component *(fig.B)*	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
	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
	Flat Blade Tip	A = 25.4mm (1.0")	1121-0448-P1

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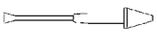
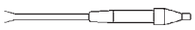
SX-90 DESOLDERING TIPS & SOLDER REMOVAL TIPS

TIP SPECIFICATIONS

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 NUMBERS
	Thermo-Drive	(0.76mm (0.030") I.D. X 2.03mm (0.080") O.D.	1121-0930-P5
	Thermo-Drive	1.02mm (0.040") I.D. X 2.29mm (0.090") O.D.	1121-0931-P5
	Thermo-Drive	1.52mm (0.060") I.D. X 3.05mm (0.120") O.D.	1121-0932-P5
	Thermo-Drive	2.29mm (0.090") I.D. X 5.1mm (0.200") O.D.	1121-0933-P5
	Thermo-Drive	4mm (0.16") I.D. X 5.1mm (0.200") O.D.	1121-0951-P5
	Thermo-Drive, Flathead	(0.050") x (0.090") I.D. X (0.110") X (0.190") O.D.	1121-0934-P5
	Extended Reach Thermo-Drive	0.78mm (0.030") I.D. X 2.29mm (0.090") O.D.	1121-0935-P5
	Extended Reach Thermo-Drive	1.02mm (0.040") I.D. X 2.54mm (0.10") O.D.	1121-0936-P5
	Extended Reach Thermo-Drive	1.52mm (0.060") I.D. X 3.05mm (0.120") O.D.	1121-0937-P5
	ThermoMax	0.76mm (0.030") I.D. X 1.91mm (0.075") O.D.	1121-0938-P5
	ThermoMax	1.02mm (0.040") I.D. X 2.20mm (0.085") O.D.	1121-0939-P5
	ThermoMax	1.52mm (0.060") I.D. X 2.69mm (0.106") O.D.	1121-0940-P5
	Precision	0.50mm (0.020") I.D. X 1.79mm (0.070") O.D.	1121-0941-P5
	Precision	0.76mm (0.030") I.D. X 2.03mm (0.080") O.D.	1121-0942-P5
	Precision	1.02mm (0.040") I.D. X 2.29mm (0.090") O.D.	1121-0943-P5
	Precision	1.52mm (0.060") I.D. X 2.79mm (0.110") O.D.	1121-0944-P5
	Precision	0.635mm (0.025") I.D X 1.39mm (0.055") O.D.	1121-0949-P5
	Precision	0.635mm (0.025") I.D X 1.14mm (0.045") O.D.	1121-0950-P5
	Flo-D-Sodr	1.52mm (0.060") I.D. X 4.78mm (0.188") O.D.	1121-0945-P5
	Flo-D-Sodr, Precision	0.50mm (0.020") I.D. X 1.78mm (0.070") O.D.	1121-0946-P5
	Flo-D-Sodr, Precision	0.76mm (0.030") I.D. X 2.03mm (0.080") O.D.	1121-0947-P5
	Flo-D-Sodr, Precision	1.02mm (0.040") I.D. X 2.29mm (0.090") O.D.	1121-0948-P5

Not suitable for use with SX-70 or SX-80

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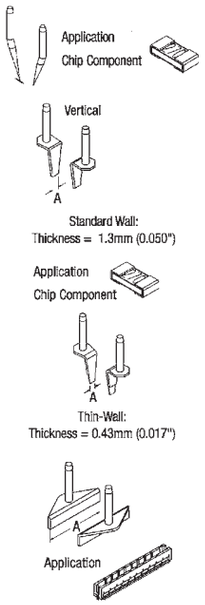
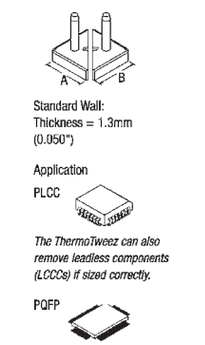
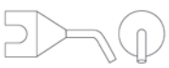
TT-65 SMT REMOVAL TIPS & HOT JET NOZZLES

TIP SPECIFICATIONS

TT-65 SMT REMOVAL TIPS

TIPS	DESCRIPTION	TIP SIZE	PART NUMBER
	SOIC, SOJ, SIMMs	A=10.2mm (0.4")	1121-0514-P1
	SOIC, SOJ, SIMMs	A=12.7mm (0.5")	1121-0473-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
		A=17.8mm (0.7")	1121-0416-P1
		A=20.3mm (0.8")	1121-0497-P1
		A=25.4mm (1.0")	1121-0448-P1
TIPS	PLCC/PQFP REMOVAL TIPS	TIP SIZE A x B	PART NUMBER
	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

TJ-85 HOT JET NOZZLES

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

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PRODUCT PAGE

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

PACE provides innovative solutions, products and training for the assembly, rework, repair and testing of printed circuit boards. PACE's unique capabilities and evolving vision have provided universal solutions to thru-hole and surface-mount assembly and rework problems for the most advanced electronics. Our strong commitment and history of achievement has resulted in an unparalleled range of Assembly, Repair and Fume Extraction systems to meet your company's needs whether working to ISO-9000, industrial, military or your own internal specifications. Whatever the challenge, PACE stands ready to provide the best, cost-effective solution for you.

ST SYSTEMS

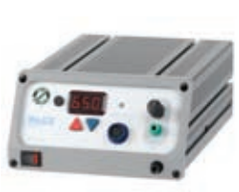
PACE's new ST systems offer the most innovative control technology ever developed - IntelliHeat. ST systems are capable of providing the widest range of applications and flexibility by simply adding additional handpieces. Regardless if you are a small or large shop, ST systems are the right answer for you!

ST 30

ST 50

ST 70

ST 115



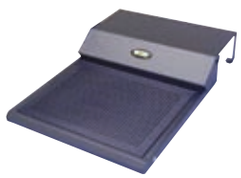
FUME EXTRACTION

PACE's Fume Extraction Systems feature the latest advancements in filter condition monitoring and process control as well as cost effective solutions. A variety of collection accessories are available.

ARM-EVAC 105

ARM-EVAC 250

FUMEFLO WORKTABLE



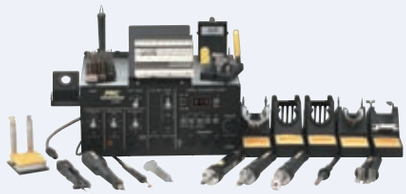
FX 50

MBT/PRC SYSTEMS

PACE offers a broad range of rework and repair products to meet all your repair needs. Whether you are replacing a surface mount component, repairing a multi-layer printed circuit board, or making a plated thru-hole repair.

MBT 350

PRC 2000



THERMOFLO SYSTEMS

PACE's family of ThermoFlo products offer complete solutions from simple surface mount removal and installation to delicate BGA and CSP rework. PACE's new inspection systems feature X-Ray and endoscopic technology to really "SEE" the results of your processes.

TF 1700

TF 2700

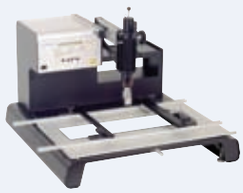
XR 3000

CONVECTIVE & PRE-HEAT

PACE's new family of hot air rework systems are ideal for all SMT applications. A wide range of product features are available to meet your specific needs. They can be easily upgraded by adding one of our powerful preheaters and/or PCB holders.

ST 300

ST 350



ST 525

ST 450

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