



Operation and Maintenance Manual for the
TD-100N (Nitrogen) Handpiece
P/N 5050-0550



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Safety Guidelines

The following are safety precautions that personnel must understand and follow when using or servicing this product.

1. **POTENTIAL SHOCK HAZARD** - Repair procedures on PACE products should be performed by Qualified Service Personnel only. Line voltage parts may be exposed when the equipment is disassembled. Service personnel must avoid contact with these parts when troubleshooting the product.
2. To prevent personnel injury, adhere to safety guidelines in accordance with OSHA and other applicable safety standards.
3. Heater Cartridge Tips are hot when the handpiece is powered on and for a period of time after power off. **DO NOT** touch the cartridge. Severe burns may result.
4. PACE Tip & Tool Stands and handpiece cubbies are designed specifically for use with the associated handpiece and houses it in a manner that protects the user from accidental burns. Always store the handpiece in its holder. Be sure to place the handpiece in its holder after use and allow for cooling before storing.
5. Always use PACE systems in a well ventilated area. A fume extraction system such as those available from PACE are highly recommended to help protect personnel from solder flux fumes.
6. Exercise proper precautions when using chemicals (e.g., solder paste). Refer to the Material Safety Data Sheet (MSDS) supplied with each chemical and adhere to all safety precautions recommended by the manufacturer.

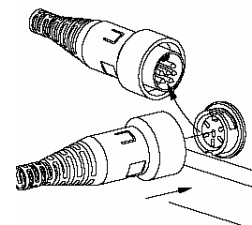
Handpiece Connection

The PACE TD-100N handpiece is available in two different connector /pin configurations. Part number 6993-0273-P1 is designed to work with the *HeatWise™* and *TempWise™* units. The PACE MBT 350 requires handpiece part number 6010-0155-P1 for nitrogen operation.

	TD-100 N, 4 Pin 6993-0273-P1 (kit) 6010-0155-P1 (handpiece only)	TD-100 N, 8 Pin 6993-0273-P1 (kit) 6010-0155-P1 (handpiece only)	N2 Regulator Accessory required (6993-0271-P1)
HW 50	☺		☺
TW 50	☺		☺
MBT 350		☺	☺

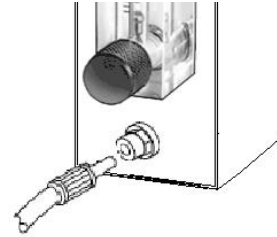
Connect the handpiece connector plug into the Power Receptacle in the following manner.

1. Align guide on the connector with slot on power receptacle.
2. Insert connector into power receptacle.
3. Turn the connector housing clockwise to lock in place.



Nitrogen Connection

1. Connect the 54 inch (137cm) length of Nitrogen Hose to the metal tube in the back of the TD-100N handpiece.
2. Insert the ribbed end of a Male Quick Connect Hose Mount Fitting (P/N 1259-0087) into the free end of the 54 inch (137cm) Air Hose. Secure the Air Hose to the handpiece power cable with Cable Clips (P/N 1321-0085-01).
3. Connect the male quick connect hose mount fitting to the power source or optional nitrogen port.



Optional PACE Nitrogen Regulator

The TD-100N may be adapted to any Tip Heater Cartridge compatible system. Simply mount the PACE Nitrogen regulator (Part Number 6993-0271-P1) to the side of the power supply housing using the supplied mounting hardware. Then connect your Nitrogen source such as the PACE Nitrogen Farm model NF500 (P/N 8110-0001) or NF1000 (P/N 8110-0002) to the barbed hose fitting located on the back of the regulator. Follow recommended flow rate instructions included with this product.



Optional PACE Nitrogen Expansion Kit

The PACE Nitrogen Expansion Kit (P/N **????-????-P1**) adds 10 quick connect ports to your Nitrogen source. The kit includes (1) quick connect 10 port manifold, (1) plastic port plug, and 50 feet of flexible tubing that may be cut to reach any workstation application. The image to the right shows three ports in use with the remaining seven ports capped off using the included plastic port plug and supplied tubing.



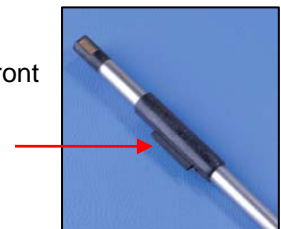
CAUTION

When removing Nitrogen Hose, turn and pull. DO NOT attempt to pull Hose directly off. Damage to or breakage of fitting may occur.

Tip Cartridge Installation

TD-100 tip cartridges are fitted with a key lock device. This feature ensures that tip cartridges are held firmly in position and will maintain their orientation.

1. Line up the key lock feature on the tip cartridge with the notch on the front of the handpiece.
2. Push the tip cartridge all the way into the handpiece.



To remove a tip cartridge, use the included **hot grip removal pad** to grasp the tip cartridge and pull the tip cartridge out of the handpiece. Be careful when completing this procedure as the tip cartridge may be hot and direct contact can cause injury.




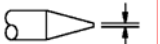
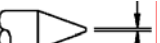
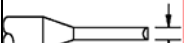

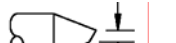




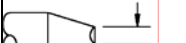
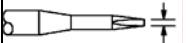



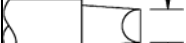


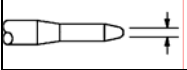
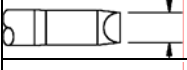
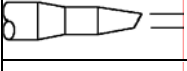

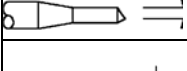

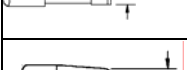
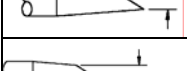
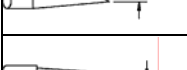
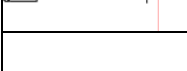
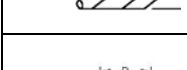
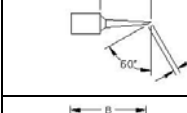
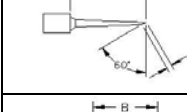
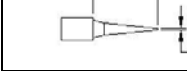
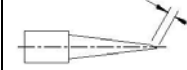
Tips cartridges can be changed at any time and without turning off the power to the unit.
Accessory and Replacement Parts

	Description	PACE Part Number
	Tip Case Holds 10 Tips (Tips not included)	1310-0034-P1
	Hot Grip Removal Pad	1100-0307-P1
	TD-100 Tool Stand (TD-100 Handpiece and tips not included)	6019-0068-P1
	TD-100N 4 pin Handpiece (Tip cartridge not included)	6010-0155-P1
	TD-100N 8 pin Handpiece (Tip cartridge not included)	6010-056-P1
	TD-100N 4 pin Handpiece Replacement Cord	3008-0258-P1
	TD-100N 8 pin Handpiece Replacement Cord	3008-0259-P1
	Nitrogen Regulator Kit	6993-0271-P1
	Nitrogen Expansion Kit	???-????-P1

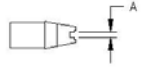
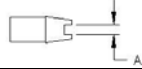
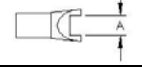
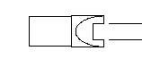
Available Tips

A wide variety of tip cartridges are available for use with the TD-100N and the Handpiece. Please refer to the table below for available tip cartridge styles.

	<u>PACE P/N</u>	<u>Description</u>
	1124-0001-P1	1/32" Conical Sharp Extended
	1124-0002-P1	1/64" Conical Sharp
	1124-0004-P1	1/64" Conical Sharp Extended
	1124-0005-P1	1/32" Conical
	1124-0006-P1	3/128" Conical
	1124-0007-P1	1/16" 90 Degree Chisel
	1124-0008-P1	3/64" 30 Degree Chisel
	1124-0009-P1	3/64" 30 Degree Bevel
	1124-0010-P1	13/64" Chisel
	1124-0011-P1	1/64" 60 Degree Bevel
	1124-0012-P1	1/32" 30 Degree Chisel
	1124-0013-P1	3/32" 30 Degree Chisel
	1124-0014-P1	5/64" 60 Degree Bevel
	1124-0016-P1	3/64" Chisel Bent 30 Degrees
	1124-0017-P1	1/16" 60 Degree Chisel
	1124-0018-P1	1/32" Conical Sharp Extended
	1124-0019-P1	1/16" 30 Degree Chisel
	1124-0020-P1	1/8" 90 Degree Chisel

	1124-0022-P1	1/16" Conical Sharp
	1124-0023-P1	1/8" 90 Degree Chisel Extended
	1124-0024-P1	1/16" 30 Degree Bevel
	1124-0025-P1	1/16" Conical Sharp Extended
	1124-0029-P1	1/32" 30 Degree Bevel
	1124-0030-P1	1/32" Conical Sharp
	1124-0031-P1	Heat Staking
	1124-0032-P1	MiniWave
	1124-0034-P1	Single Sided Chisel
	1124-0036-P1	1/128" Conical
	1124-0037-P1	1/4 Flat Blade
	1124-0040-P1	MicroFine Single Sided Chisel, 0.9mm (.035")
	1124-0041-P1	MicroFine Single Sided Chisel, 1.1mm (.045")
	1124-0042-P1	MicroFine Conical, 0.25mm (.01")
	1124-0046-P1	Micro-Wave Tip

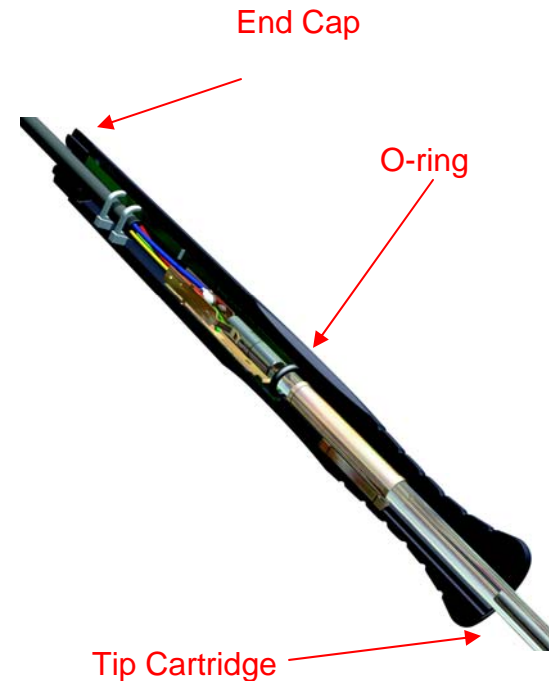
Surface Mount Removal Tips for TD-100N Soldering Iron

	Component Type	Dimension A	Dimension B	Part Number
	Chip 402	1mm (.04")		1124-0521-P1
	SOT 23	1.8mm (.07")		1124-0522-P1
	Chip 1206	3.6mm (.142")		1124-0524-P1
	Chip 0805	2.4mm (.095")		1124-0525-P1

Corrective Maintenance

The TD 100N handpiece features a replaceable O-ring that protects the contact area from flux fume and other contamination. The O-ring may need to be replaced over time. To replace the O-ring follow the procedure below:

1. Disconnect the TD 100N from the power source
2. Remove the tip cartridge
3. Unscrew the cap from the back of the TD 100N
4. Slide the connector assembly out of the handle
5. Remove and replace the old O-ring from the connector assembly (Old "O-ring" may remain in handle)
6. Reinstall the connector assembly. Be sure to line up the keyways on the handle and connector assembly. Do not force the connector assembly into the handle.
7. Reinstall the cap and make sure it is fully seated against the handle
8. Install a tip cartridge



Handpiece Troubleshooting

Most malfunctions are simple and easy to correct.

Symptom	Probable Cause	Solution
Handpiece will not heat	Defective Heater	Change Tip Cartridge
	Power Source Malfunction	Contact PACE

Service

Please contact PACE or your local distributor for service and repair.

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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/JSTD 001, IPC7711, and IPC A-610.

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