EDSYN®

1072 LONER™ ATMOSCOPE™

high performance

Temperature Controlled SOLDERING STATION

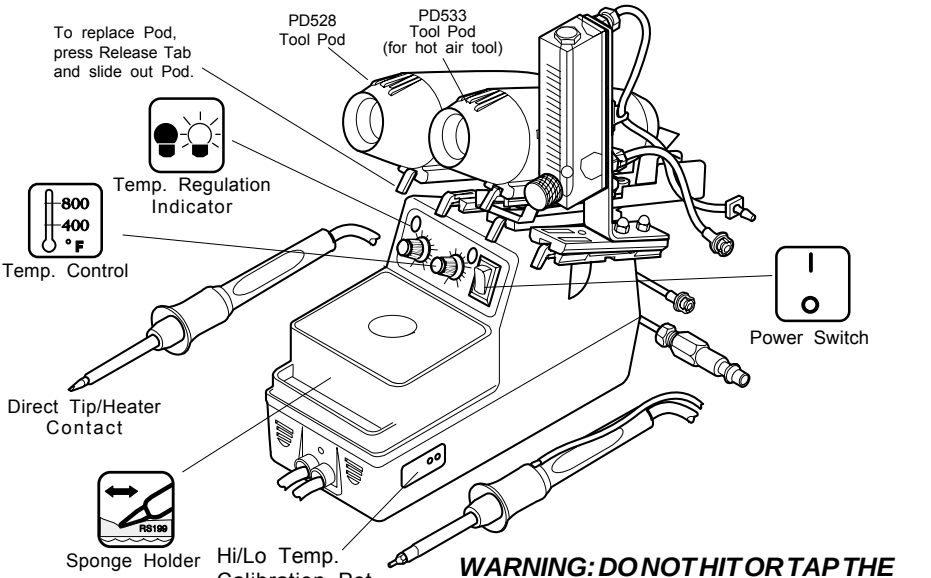
made in USA

LISTED

Static Safe

SPECIFICATIONS

- 120V, 50/60Hz, 70W per tool, 2.5 lbs. (1.13 kg.)
- COMPLIES WITH DOD-STD-2000-1B, MIL-STD-2000A and ESD SPEC. DOD-STD 1868, DOD-HDBK-263
- TEMP. RANGE: 400°F - 800°F (205°C - 427°C)
- TEMP. REGULATION: ±6°F (±3°C)
- TIP TO GROUND LEAKAGE: < 2MV
- TIP TO GROUND RESISTANCE: < 2 OHMS
- ULLISTED



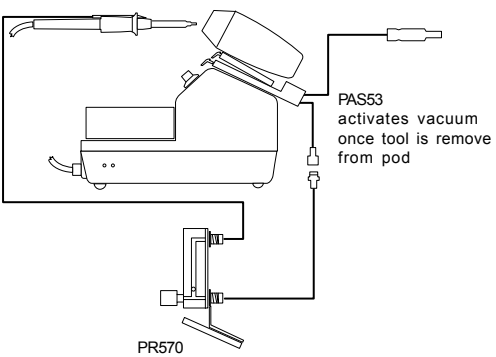
WARNING: DO NOT HIT OR TAP THE TOOL. HEATER ELEMENT WILL BREAK!!!

TIP CARE

1. Set desired temperature. Blinking Lamp means Tool is regulating.
2. TIN the Tip. (apply solder)
3. Do not rub, bend or reshape the Tip.
4. Always clean the Tip by wiping it against the saturated sponge and always RE-TIN.

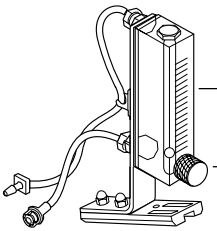
HOSE DIAGRAM

Compressed air or non-inflammable gas supply:
approx. 1.4 up to max. 5.5 bar
(approx. 138 up to max. 551 kPa)
(compressed air must be water- and oil-free)



OPERATION

PR570 Flow Regulator



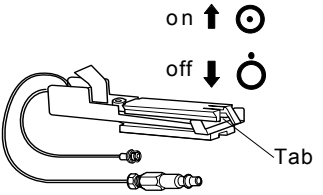
Flow in standard cubic feet per hour, scfh

Fully clockwise will shut off the flow.

scfh	5	10	15	20
li/m	2.4	4.7	7.1	9.4

PAS53 Pod Air Switch

(Tool Pod not shown)



With tool out of the pod, push in Tab to lock: Air on (continuous)

With tool in the pod, push in Tab to lock: Air off (disable)

REWORKING SMDs

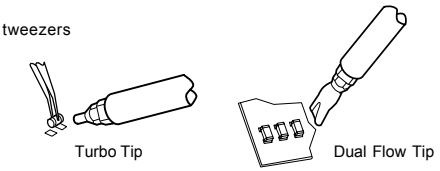
The following techniques are based on the manufacturer's point of view and should only serve as guidelines. It's effectiveness will depend on practice.

IMPORTANT

The 3 very important factors involved when working with the ATMOSCOPE SMD Hot Air Tool are *amount of air output, temperature setting and type of Tip used.* The key to an effective soldering is to reflow the solder **without blowing the solder** across the board and thus creating bridges.

FOR RESISTORS, CAPACITORS, TRANSISTORS AND ALIKE.

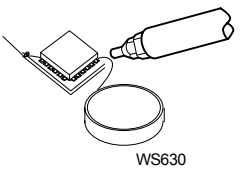
1. Have the proper Tip installed.
2. Adjust air output to about 2-4 scfh.
3. Set temperature between 700∞F to 800∞F.
4. Heat up the joints until the solder melts.
5. Remove by using a pair of tweezers.
6. To resolder, hold SMD in place making sure leads are aligned with solder pads.
7. Direct hot air flow to the connection until solder reflows. Release SMD when solder solidifies.

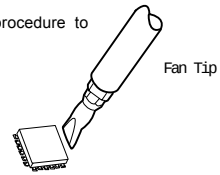


FOR GULLWINGS, LEADLESS CHIP CARRIERS and QUAD I.Cs

METHOD1

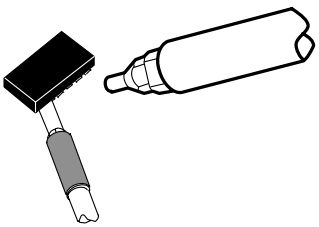
1. Install the proper Tip.
2. Adjust air output to 2-4 scfh.
3. Set temperature to 700∞F.
4. Using a **WS630** SMD Pull Wire, thread the pullwire under the leads of one side of the SMD and again thread the wire under the leads of the opposite side.
5. Anchor one end of the Pull Wire to an unused hole of the circuit board or maybe tape it securely to the board.
6. While directing hot air to the leads of the first side, pull the wire so that it will cut thru the solder connection.
7. After removing the two opposing side follow the same procedure to desolder the remaining sides.
8. To resolder, use a tweezer to hold SMD in place and align the leads with the pads.
9. Use a Fan Tip whose width is as close to the size of the SMD leads as possible.
10. Direct hot air on the leads and allow solder to reflow. Release SMD when solder solidifies.



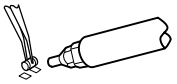
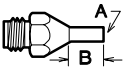
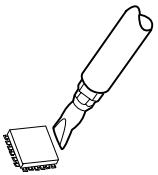
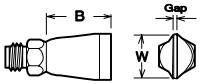
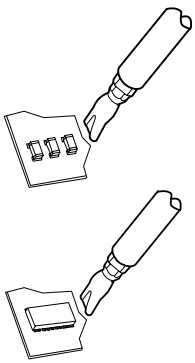
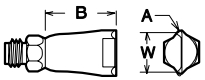


METHOD 2

1. Have the proper Tip installed.
2. Adjust air output to about 2-4 scfh.
3. Set temperature to 700∞F.
4. Heat up one corner of the SMD.
5. When the solder melts, insert the shimblade of SMD helper under the heated area of the chip as if cutting thru the solder connection.
6. While directing hot air ahead of the shim at all times, cut thru the sides of the SMD and lift it up from the board.
7. To resolder, use a Quadra-Flow Tip.



See Catalog for SMD Helpers, Pull Wires and other tools used in aiding SMD removal and placing.

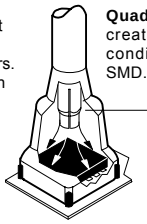
Application	Description	Part No.	Hole Dia.	L	W
	**Jet Tip** for pin point air flow. 	**LT427**	**.02 in.** 1/64 in. (0.6 mm)	**.38 in.** 3/8 in (9.5 mm)	———
	Short Jet Tip for medium air	**LT432**	**.04 in.** 3/64 in. (0.9 mm)	**.06 in.** 1/16 in. (1.5 mm)	———
	Turbo Flow for large air flow.	**LT428**	**.06 in.** 1/16 in. (1.5 mm)	**.25 in.** 1/4 in. (6.4 mm)	———
	**Fan Tips** use a wide air flow enough to cover one whole side of the SMD. .020 in (.5 mm) 	**LT426**	———	**.30 in.** 5/16 in. (7.6mm)	**.17 in.** 3/16 in. (4.3 mm)
		LT434	———	**.46 in.** 15/32 in. (11.7 mm)	**.23 in.** 15/64 in. (5.7 mm)
		LT435	———	**.59 in.** 19/32 in. (14.9 mm)	**.35 in.** 3/8 in. (8.9 mm)
		LT436	———	**.65 in.** 21/32 in. (16.5 mm)	**.43 in.** 7/16 in. (10.8 mm)
	**Dual Flow Tips** blow hot air on both sides of the SMD, not on the SMD. 	**LT526**	**.03 in.** 1/32 in. (0.8 mm)	**.30 in.** 5/16 in. (7.6 mm)	**.12 in.** 1/8 in. (3.2 mm)
		LT534	**.05 in.** 3/64 in. (1.2 mm)	**.46 in.** 15/32 in. (11.7 mm)	**.20 in.** 13/64 in. (5.1 mm)
		LT535		**.59 in.** 19/32 in. (14.9 mm)	**.28 in.** 17/64 in. (7.0 mm)
		LT536		**.65 in.** 21/32 in. (16 .5 mm)	**.35 in.** 23/64 in. (8.9 mm)

Apply AN112 or AN122
ANTI-SEIZE COMPOUND
To Heater and Area of Tip Contact.
AN122 comes in syringe dispenser.

USING QUADRA-FLOW TIPS (RECOMMENDED FOR FOUR SIDE LEADED COMPONENTS)

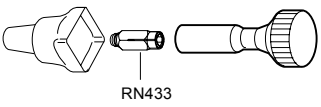
Quadra flow Tips come in a variety of sizes. Increase air output as you increase the size of the Tip.

1. Place Quadra-Flow Tips over the SMD.
2. After waiting for the solder to melt, twist tool gentlyto see if the SMD is freed.
3. Remove SMD by using a pair of tweezers.
4. To resolder, glue SMD to the board with the leads aligned with the pads.
5. Place Quadra-Flow Tip over SMD and allow solder to reflow.



Quadra-Flow Tips create an "oven-like" condition around the SMD.

Use WT620 Tip Wrench to install Tips with RN432 or RN433

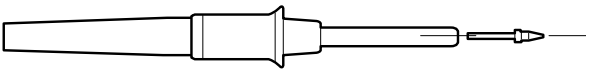


REPLACING TIPS

for contact soldering

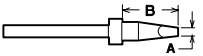
1. Tool must be cool when changing tips.
2. Do not twist or wiggle the tip.

AFTER TIP IS INSTALLED, TIGHTEN COLLAR PROPERLY.



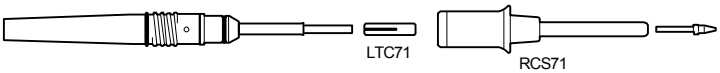
Loosen RCS71 Collar by turning counter-clockwise and pull the Tip straight out.

General Purpose Soldering Tips



Iron Plated for long lifeïNickel and Chrome Plated for optimum heat transfer.
EDSYN has over a 100 varieties of standard and custom-made Tips. CONTACT EDSYN FOR MORE SELECTIONS.

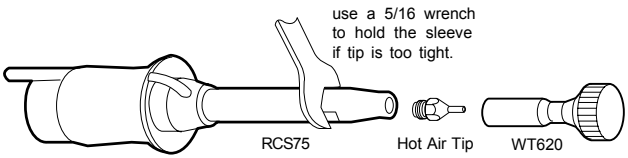
	Part No. & Description	a	b
	LT374 Standard Probe	.03 (0.8 mm)	.48 (12.2 mm)
	LT375 Standard Spade	.06 (1.5 mm)	.48 (12.2 mm)
	LT376-7 SMD Channel	.12 (3.0 mm)	.48 (12.2 mn)
	LT392 Extra-Long Needle	.02 (0.5 mm)	1.13 (28.8 mm)
	LT394 Extra-Long Spade	.07 (2.0 mm)	.93 (23.6 mm)
	LT399 Large Face	.17 (4.3 mm)	.49 (12.4 mm)
	LT444 SMD Mid-Length Fine Spade	.04 (1.0 mm)	.78 (19.8 mm)
	LT446 SMD Probe	.03 (0.8 mm)	.48 (12.2 mm)
	LT382 Long Cone	.02 (0.5 mm)	.62 (15.6 mm)
	LT395 Mid-Length Stubby Spade	.09 (2.3 mm)	.74 (18.8 mm)
	LT431 Mid-Length Spade	.07 (1.8 mm)	.74 (18.8 mm)
	LT439 SMD Thin Probe	.03 (0.8 mm)	.50 (12.7 mm)
	LT439-1 Same as LT439, Angled		
	LT445 SMD Angle Face	.03 (0.8 mm)	.48 (12.2 mm)

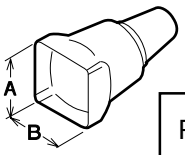


REPLACING TIPS

for Hot Air

1. Turn Tip counter-clock-wise by using a **WT620** Tip Wrench.
2. Remove and replace with desired Tip.





SMD Hot Air Quadra-Flow Tips

ALWAYS USE PD529 or PD529A TOOL PODS

Fractional dimensions are approx.

PART NO.	A x B		FITS PACKAGE (for reference only)
	(in.)	(mm)	
LT448*	**.21 x .35** 7/32 x 11/32	5.3 x 8.9	SO-14
LT483*	**.25 x .43** 1/4 x 7/16	6.4 x 10.9	Ceramic DIP 16
LT489	**.25 x .78** 1/4 x 25/32	6.4 x 19.8	
LT449	**.26 x .41** 1/4 x 13/32	6.6 x 10.4	SO-16
LT480	**.31 x .52** 5/16 x 33/64	7.9 x 13.2	LCCC-22R
LT478	**.32 x .45** 5/16 x 29/64	8.0 x 11.4	LCCC-18R
LT462	**.34 x .55** 11/32 x 35/64	8.7 x 13.9	PLCC-18
LT470*	**.36 x .36** 23/64 x 23/64	9.2 x 9.2	LCCC-20
LT487	**.36 x .60** 23/64 x 39/64	9.1 x 15.2	
LT452	**.38 x .52** 3/8 x 33/64	9.5 x 13.2	SO-20L
LT481	**.38 x .58** 3/8 x 37/64	9.5 x 14.6	LCCC-28R
LT455	**.40 x .40** 13/32 x 13/32	10.2 x 10.2	PLCC-20
LT486	**.40 x .60** 13/32 x 13/64	10.2 x 15.3	
LT484	**.40 x .79** 13/32 x 51/64	10.2 x 10.2	SOJ-20
LT450	**.42 X .43** 7/16 X 7/16	10.7 X 10.9	SO-16L
LT454	**.43 x .73** 7/16 x 18.6	10.9 x 18.6	SO-28L
LT451	**.44 X .48** 7/16 X 31/64	11.2 X12.2	SO-18L
LT493	**.45 x .85** 29/64 x 55/64	11.3 x 21.6	SOJ-32
LT494	**.45 x 1.05** 29/64 x 1 3/64	11.4 x 26.7	SOJ-40
LT482	**.47 x .58** 15/32 x 37/64	11.9 x 14.6	LCCC-32R

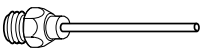
*RN432 not required in Application set up
**Comes w/ RN433

Fractional dimensions are approx.

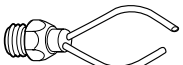
PART NO.	A x B		FITS PACKAGE (for reference only)
	(in.)	(mm)	
LT472S	**.48 x .48** 31/64 x 31/64	12.2 x 12.2	
LT472	**.49 x .49** 1/2 x 1/2	12.4 x 12.4	LCCC-28
LT456	**.50 x .50** 1/2 x 1/2	12.7 x 12.7	PLCC-28
LT485	**.52 x .64** 33/64 x 44/64	13.2 x 16.2	
LT463	**.60 x .60** 39/64 x 39/64	15.2 x 15.2	
LT468**	**.66 x .90** 21/32 x 29/32	16.8 x 22.9	QFP-100
LT458**	**.70 x .70** 45/64 x 45/64	17.8 x 17.8	PLCC44 LCCC-44
LT491**	**.71 x .94** 23/32 x 15/16	18.0 x 23.9	
LT477**	**.75 x 1.00** 1/4 x 1	19.0 x 25.4	LCCC-84
LT459**	**.80 x .80** 51/64 x 51/6	20.3 x 20.3	PLCC-52
LT492**	**.85 x .85** 55/64 x 55/64	21.6 x 21.6	
LT460**	**1.0 x 1.0** 1 x 1	25.4 x 25.4	PLCC-68
LT488**	**1.17 x 1.17** 1 11/64 x 1 11/64	29.7 x 29.7	QFP-144

*RN432 not required in Application set up
**Comes w/ RN433

Bendable Hot Air Tips

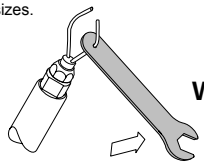


LT571 LONER™ Long-Flow Bendable

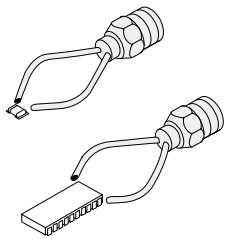


LT572 LONER™ Dual-Flow Adjustable

Using a special Bending Tool, WT622, the Dual-Flow and Long-Flow Nozzle that can be bent to accomodate most SMD sizes.



WT622



TEMPRATURE CALIBRATION

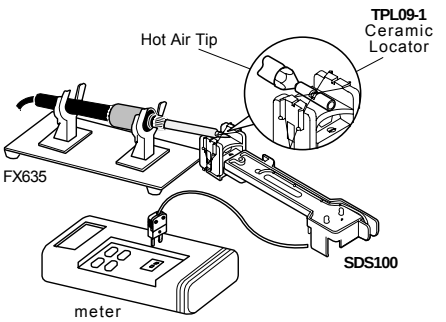
It is highly recommended to use new or a very clean thermocouple wires. ALWAYS WORK IN AN AREA WHERE AIR MOVEMENT IS MINIMAL.

For Hot air, you will need:
- **MS412 Calibration System**
- **TPL09 Set** (3 items)

for HOT AIR soldering

FOLLOW SET-UP AS ILLUSTRATED

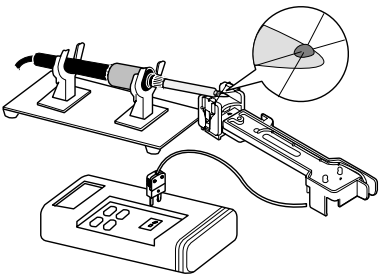
1. With the Hot Air Tip inside the **TPL09-1**, place the center of the thermocouple wire of the **SDS100** inside the slot of **TPL09-1** Locator.
2. Turn on power and set Temperature Control Knob to 400∞F.
3. Turn Regulator Knob to 4 - 5 SCFH.
4. Adjust LO-Temp. Calibration Pot so the Meter will read 400∞F.
5. Set Temperature Control Knob to 800∞F.
6. Adjust Hi-Temp. Calibration Pot so the Meter will read 800∞F.



for CONTACT soldering

FOLLOW SET-UP AS ILLUSTRATED

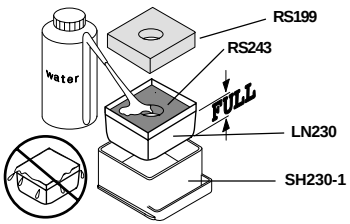
1. Turn on power and set Temperature Control Knob to 400∞F.
2. Using a clean and well tinned Tip, apply a small amount of solder on the Tip, just enough to form a bead on top of the Tip.
3. Place the center of the thermocouple wire of the **SDS100** on top of the bead.
4. Again, apply a small amount of solder on the center of the thermo-couple wire, just enough to embed the center.
5. Adjust LO-Temp. Calibration Pot so the Meter will read 400∞F.
6. Set Temperature Control Knob to 800∞F.
7. Adjust Hi-Temp. Calibration Pot so the Meter will read 800∞F.



MAINTENANCE

Replace RS199 Cleaning Sponge

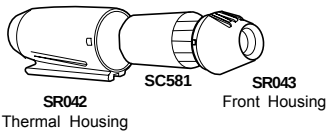
1. Fill water only up to the top of the **RS243** Leveling Pad.
2. Depress **RS199** to moisten it completely.



CAUTION:
Over-filling can cause thermal shock to the tip or heating element during tip cleaning.

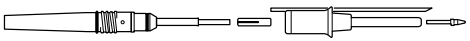
Replace SC581 Solder Collector

1. Hold the Housing firm and turn Cap counter-clockwise and pull it away from the Housing.
2. Remove used **SC581** and replace with a new one.
3. Reassemble Pod with TOP of the Cap in proper position.

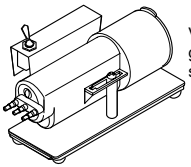


OPTIONS

The contact soldering tool of the 1072 can be converted to the fume extraction system. Ask for the VS174 and RCS73. Remember to remove the LTA75H from the heater accumulator.

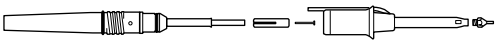


RSC73 Collar for fume extraction

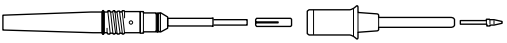


VS174 Vacuum generator and filter, shop air operated.

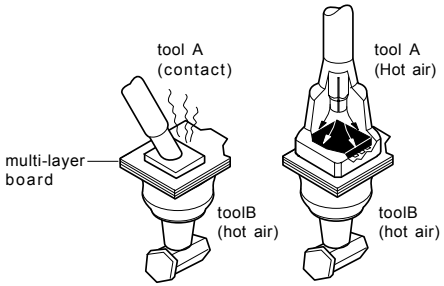
The hot air soldering tool of the 1072 can be converted to a preheater system (*per customer request*) for soldering multi-layer boards. Because it is easy to convert both tools, you can convert the 1072 to a dual hot air system.



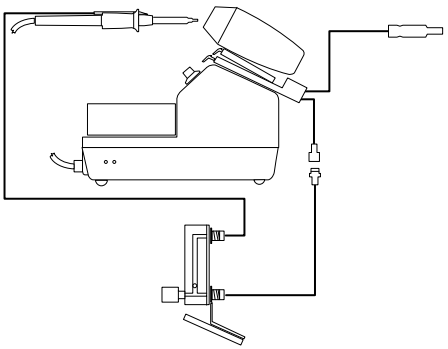
RSC75 Collar for hot air tips



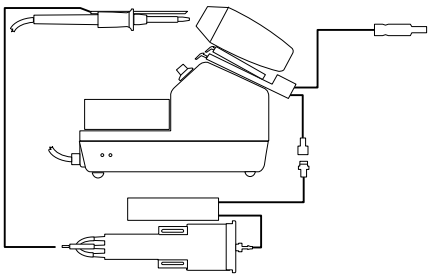
RSC71 Collar for contact tips



HOT AIR



FUME EXTRACTION



VA174

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