

**EDSYN** INC. <sup>®</sup>



**971DH-230 / B**

**ATMOSCOPE** <sup>®</sup>

**SMD Hot Air Station**

**24V Tool**



**OPERATING REQUIREMENTS:**

• 230 V, 50 Hz

- Automatic air shut-off
- Easy to use flow regulator
- Modulator assembly
- Easily converted to contact soldering with NO-FUME system
- ESD safe
- Hot air calibration capability
- Check valve equipped high pressure hose

**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)

**PRECAUTIONARY**

**MEASURES:**



Safety glasses must be worn when using the hot air station

The hot air tool itself must always be placed in the tool pod when not in use.

To avoid personal injury, a faulty or damaged power cable must be replaced by the manufacturer or by an authorized workshop.

Unplug from power source when replacing the fuse, 1A.

For indoor use only.

**PR570**

Air Flow Regulator

**PD533 Pod**

**PAS53**

Pod Air Switch



Temperature Control



Power switch

**RS199** Sponge

Connect to tool

Male connector connect

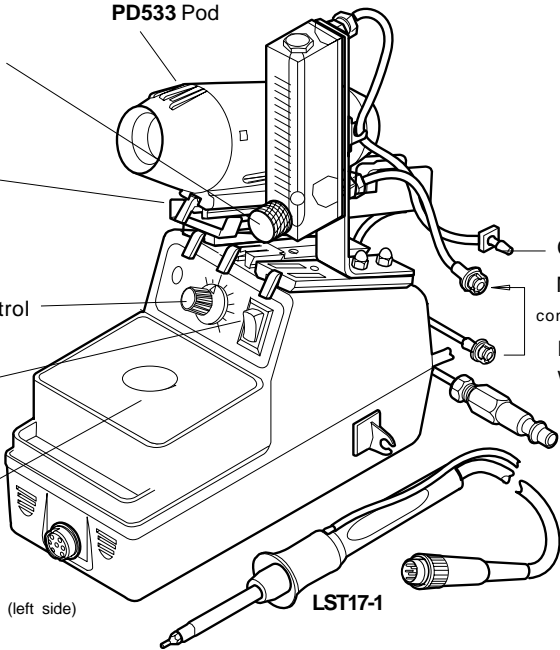
Female connector w/ check valve

Air or nitrogen input, 5.5 bar max.  
(clean & dry)

NOT SHOWN:

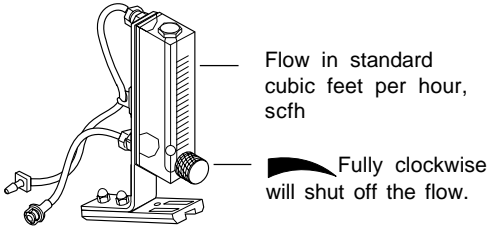
External Calibration Pots (left side)  
1A fuse (under side)

**LST17-1**



# OPERATION

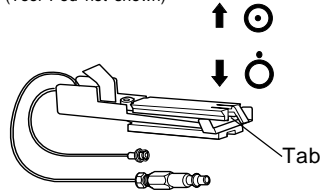
## PR570 Flow Regulator



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)

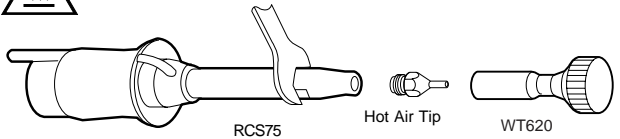
With tool in the pod, push in Tab to lock: Air off (disable)

## CHANGING TIPS

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



use a 5/16 wrench to hold the sleeve if tip is too tight.



## HOT AIR CALIBRATION

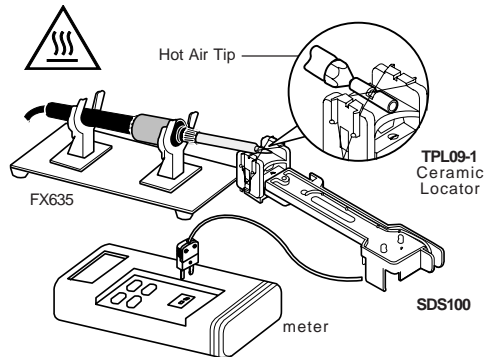
It is highly recommended to use new or a very clean thermocouple wires (never been use to calibrate soldering tips)

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 205°C.
3. Turn Flow Regulator Knob to 4 - 5 SCFH (2.4 lpm).
4. Adjust LO-Temp. Calibration Pot so the Meter will read 205°C.
5. Set Temperature Control Knob to 427°C.
6. Adjust Hi-Temp. Calibration Pot so the Meter will read 427°C.

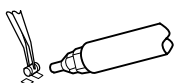

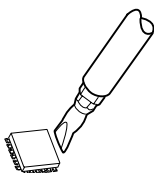
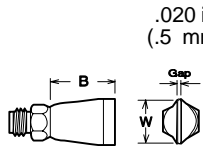
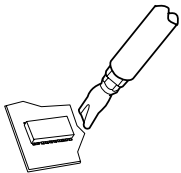
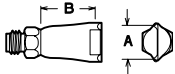
You will need:

- **MS412 Calibration System**
- **TPL09 Set (3 items)**



# SMD Hot Air Tips

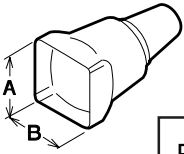
See Catalog for SMD Helpers, Pull Wires and other tools used in aiding SMD removal and placing.

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



**SMD Hot Air Quadra-Flow Tips**  
**ALWAYS USE PD529 or PD529A TOOL PODS**

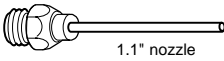
Fractional dimensions are approx.

PART NO.	A x B		FITSPACKAGE (for reference only)
	( in.)	( mm )	
<b>LT448*</b>	<b>.21 x .35</b>	<b>5.3 x 8.9</b>	<b>SO-14</b>
<b>LT483*</b>	<b>.25 x .43</b>	<b>6.4 x 10.9</b>	<b>Ceramic DIP 16</b>
<b>LT449</b>	<b>.26 x .41</b>	<b>6.6 x 10.4</b>	<b>SO-16</b>
<b>LT480</b>	<b>.31 x .52</b>	<b>7.9 x 13.2</b>	<b>LCCC-22R</b>
<b>LT478</b>	<b>.32 x .45</b>	<b>8.0 x 11.4</b>	<b>LCCC-18R</b>
<b>LT462</b>	<b>.34 x .55</b>	<b>8.7 x 13.9</b>	<b>PLCC-18</b>
<b>LT470*</b>	<b>.36 x .36</b>	<b>9.2 x 9.2</b>	<b>LCCC-20</b>
<b>LT452</b>	<b>.38 x .52</b>	<b>9.5 x 13.2</b>	<b>SO-20L</b>
<b>LT481</b>	<b>.38 x .58</b>	<b>9.5 x 14.6</b>	<b>LCCC-28R</b>
<b>LT455</b>	<b>.40 x .40</b>	<b>10.2 x 10.2</b>	<b>PLCC-20</b>
<b>LT484</b>	<b>.40 x .79</b>	<b>10.2 x 10.2</b>	<b>SOJ-20</b>
<b>LT450</b>	<b>.42 X .43</b>	<b>10.7 X 10.9</b>	<b>SO-16L</b>
<b>LT454</b>	<b>.43 x .73</b>	<b>10.9 x 18.6</b>	<b>SO-28L</b>
<b>LT451</b>	<b>.44 X .48</b>	<b>11.2 X 12.2</b>	<b>SO-18L</b>
<b>LT493</b>	<b>.45 x .85</b>	<b>11.3 x 21.6</b>	<b>SOJ-32</b>
<b>LT494</b>	<b>.45 x 1.05</b>	<b>11.4 x 26.7</b>	<b>SOJ-40</b>
<b>LT482</b>	<b>.47 x .58</b>	<b>11.9 x 14.6</b>	<b>LCCC-32R</b>
<b>LT472</b>	<b>.49 x .49</b>	<b>12.4 x 12.4</b>	<b>LCCC-28</b>
<b>LT456</b>	<b>.50 x .50</b>	<b>12.7 x 12.7</b>	<b>PLCC-28</b>
<b>LT468**</b>	<b>.66 x .90</b>	<b>16.8 x 22.9</b>	<b>QFP-100</b>
<b>LT458**</b>	<b>.70 x .70</b>	<b>17.8 x 17.8</b>	<b>PLCC44</b>
<b>LT477**</b>	<b>.75 x 1.00</b>	<b>19.0 x 25.4</b>	<b>LCCC-84</b>
<b>LT459**</b>	<b>.80 x .80</b>	<b>20.3 x 20.3</b>	<b>PLCC-52</b>
<b>LT460**</b>	<b>1.0 x 1.0</b>	<b>25.4 x 25.4</b>	<b>PLCC-68</b>
<b>LT488**</b>	<b>1.17 x 1.17</b>	<b>29.7 x 29.7</b>	<b>QFP-144</b>

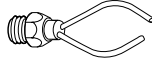
\*RN432 not required in Application set up

\*\*Comes w/ RN433

## Bendable Hot Air Tips

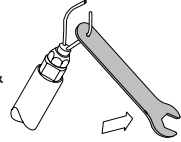


**LT571**LONER<sub>®</sub> Long-Flow Bendable



**LT572**LONER<sub>®</sub> Dual-Flow Adjustable

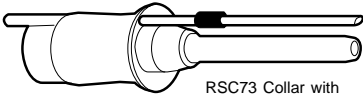
**WT622** (optional)  
Bending Tool for Dual Flow Adjustable &  
Long Flow Bendable Tips



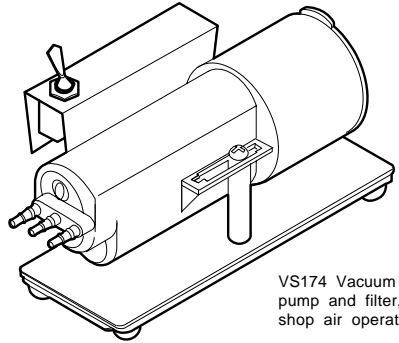
### OPTIONS

The 971DH can be converted to a contact soldering with No Fume system. Ask for the VS174 and RCS73.

*Remember to remove the LTA75H from the heater accumulator. See spare parts list.*



RCS73 Collar with  
fume extraction pipe

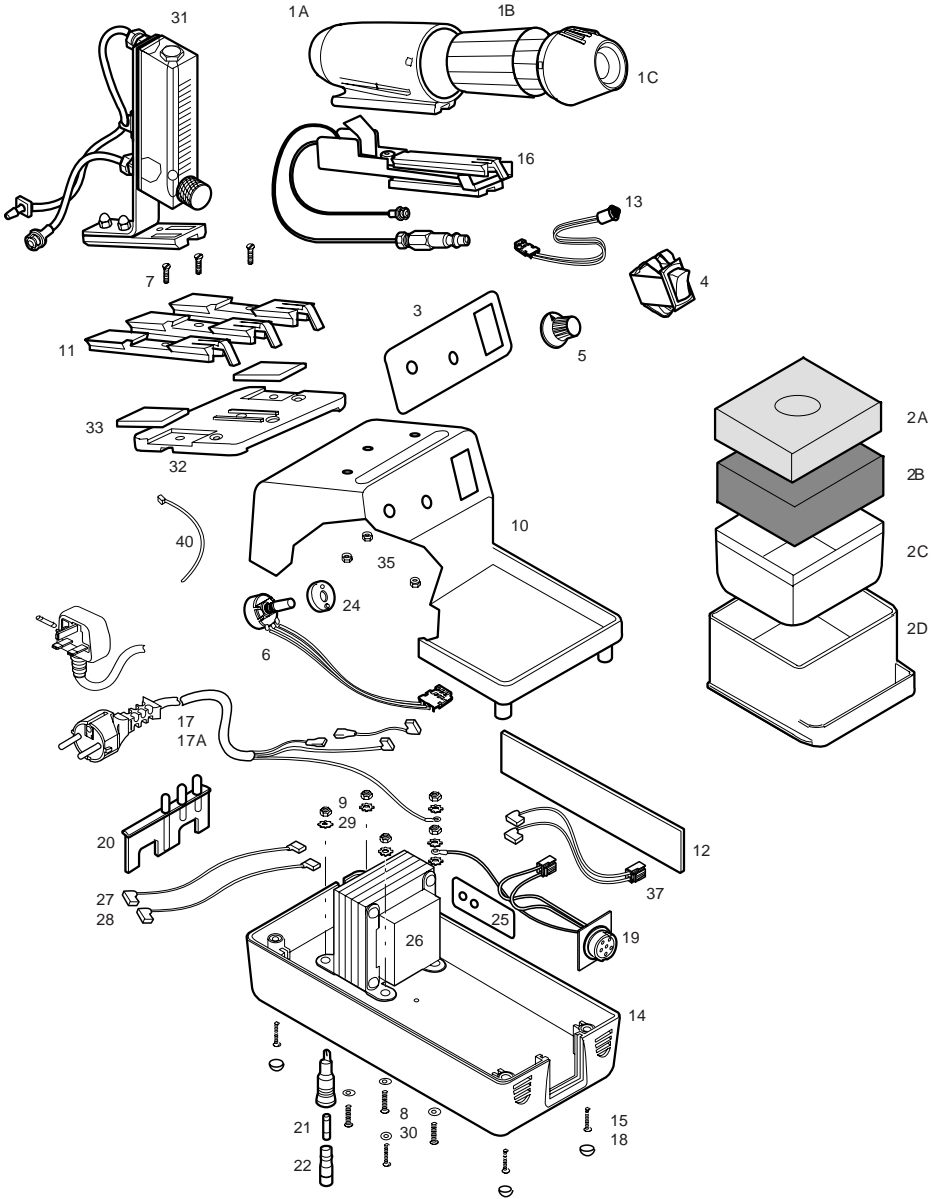


VS174 Vacuum  
pump and filter,  
shop air operated.

### SPECIFICATIONS

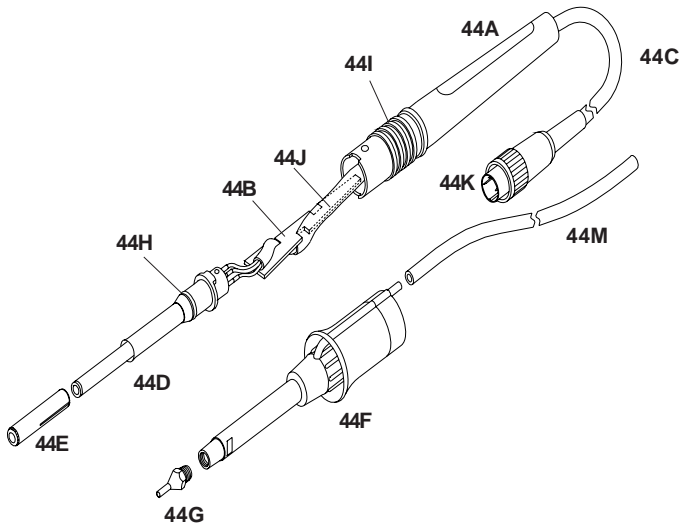
- 230V, 70 W
- 0 to 20 SCFH flow meter
- Temperature range: 400°F - 800°F (205°C - 427°C)
- Temperature regulation:  $\pm 6^\circ\text{F}$  ( $\pm 3^\circ\text{C}$ )
- Voltage leakage from tip to ground less than 2 MV
- Tip to ground resistance less than 2 ohm
- Complies with MIL-S-45743E, DOD-STD-2000-1B, MIL-STD-2000 WS6536E and ESD SPEC, DOD-STD-1686, DOD-HDBK-263.

971DH-230LONER® ATMOSCOPE®  
 Deluxe SMT Hot Air Station  
 SPAREPARTS



ITEM NO.	PART NO.	DESCRIPTION	QTY REQD
1	<b>PD533</b>	Tool Pod (complete assembly)	1
1A	<b>SR531</b>	Thermal Housing for Tool Pod	1
1B	<b>SC581</b>	Solder Collector for Tool Pod	1
1C	<b>SR457</b>	Front Housing for Tool Pod	1
2	<b>SH230</b>	General Purpose Sponge Holder (complete assembly)	1
2A	<b>RS199</b>	Cleaning Sponge	1
2B	<b>RS243</b>	Leveling Pad for SH230	1
2C	<b>LN230</b>	Liner for SH230	1
2D	<b>SH230-1</b>	Sponge Holder Tray	1
3	<b>SR374</b>	Control Panel Label	1
4	<b>SR452</b>	Power Switch	1
5	<b>SR045</b>	Knob, Temperature Control	1
6	<b>SR243</b>	Potentiometer Assy. 5K, for Temperature Control	1
7	<b>SR015</b>	Screw, Flat Head, Slotted #6 - 32 x 1/2	3
8	<b>SR016</b>	Flat Washer- #6	4
9	<b>SR017</b>	Hex Nut- #6 - 32	5
10	<b>SR578</b>	Top Cover	1
11	<b>SR019</b>	Dove Tail Mount	1
12	<b>15242W53H9</b>	Circuit Board, 24V	1
13	<b>SR573</b>	LED Assy. (Green Lens included)	1
14	<b>SR365</b>	Bottom Base	1
15	<b>SR011</b>	Screw, Pan Head, Phillips #6 - 18 x 5/8	4
16	<b>PAS53</b>	Pod Air Switch	1
17	<b>SR615</b>	Power Cord Assy.	1
17	<b>SR549</b>	Power Cord Assy. (British Plug)	1
18	<b>SR251</b>	Rubber Foot	4
19	<b>SR481</b>	Connector Assy. 5-Pin, 3-Wire	1
20	<b>SR241</b>	Strain Relief for Power Cord	1
21	<b>SR543</b>	Fuse, 1A, 250V, 5 x 20 mm	1
22	<b>SR569</b>	Fuse Holder	1
24	<b>SR255</b>	Spacer for Potentiometer Assy.	1
25	<b>SR311</b>	Label, External Calibration, Left Front or Right Rear	1
26	<b>SR387</b>	Transformer, 24V, 80VA, Dual Primary	1
27	<b>SR809</b>	Wire Assembly, Black	1
28	<b>SR810</b>	Wire Assembly, White	1
29	<b>SR139</b>	Star Washer, Lock, #6	6
30	<b>SR144</b>	Screw, Rnd. Head, #6-32 x 1/2	4
31	<b>PR570</b>	Flow Regulator and Meter	1
32	<b>SR562</b>	Dovetail Riser Plate	1
33	<b>SR036</b>	Shelf Plate for Dovetail Riser	2
35	<b>SR467</b>	Nut, for Dovetail	3
37	<b>SR554</b>	Wire Assembly, 2-Conductor	1
40	<b>SR050</b>	Cable Tie	3

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 Deluxe SMT Hot Air Station  
 SPAREPARTS



ITEM NO.	PART NO.	DESCRIPTION	QTY REQ'D
44	<b>LST17-1</b>	Soldering Tool, Complete Assembly	1
44A	<b>SR579</b>	Handle for Tool	1
44B	<b>SR058</b>	Cord Strain Relief	1
44C	<b>SR816</b>	Tool Cord, Burn Proof (Connector Assy. on one end)	1
44D	<b>SR607</b>	Heater Assembly	1
44E	<b>LTH71</b>	Adapter Hot Air	1
44F	<b>RCS75</b>	Retaining Collar and Sleeve	1
44G	<b>LT428</b>	LONER® Standard Hot Air Tip	1
44H	<b>SR001</b>	O-Ring, Silicone, .30 ID	1
44I	<b>SR240</b>	O-Ring, For Handle, .50 ID	1
44J	<b>SR525</b>	Hose, Low Static, 1/4 I.D. (sold per foot)	5 1/4"
44K	<b>SR353</b>	Plug, Male Connector, 5-Pin	1
44M	<b>HS307</b>	Air Hose, Low Static	36"



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Property

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