

USER MANUAL

TMT-HA200 HOT AIR TOOL



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WARRANTY

All equipment and accessories are warranted by Thermaltronics to be free from defects in materials and workmanship as follows:

Part Number	Description	Warranty Period
TMT-HA200	220-240V Hot Air Tool	1 Year
HE-HA200	Heating Element	30 Days
HE-PU200	Fan for TMT-HA200	30 Days

This warranty does not apply to equipment or goods which have been tampered with, misused, damaged through improper installation or used in a manner contrary to supplier instructions. Normal “wear and tear” of equipment or goods is not covered by this warranty. If the product should become defective within the warranty period, Thermaltronics will repair or replace it free of charge at its sole option. Warranty period is from the date of purchase by the original owner. If the date of purchase cannot be substantiated the date of manufacture will be used as the start of the warranty period.

WARNING:

This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.

Children should be supervised to ensure that they do not play with the appliance.

This tool must be placed on its stand when not in use.

TMT-HA200 SPECIFICATIONS

Input Line Voltage:	220-240 VAC
Power:	600 Watts
Temperature Range:	100C - 480C
Pump:	Turbine Fan
Air Flow (Max):	35L / min
Fuse:	250V 3A
Size (W x H x D):	112mm x 205mm x 117mm
Weight:	2.4 KG
Certification Marks:	CE

INTRODUCTION

Congratulations on your purchase of the TMT-HA200 hot air tool. This unit has been tested and inspected by Thermaltronics prior to shipment, and with proper maintenance will give you years of reliable performance.

SYSTEM FEATURES

The TMT-HA200 hot air tool can be used for surface mount component removal and reflow on components such as SOIC, CHIP, QFP, PLCC and others.

Functions and Features

1. Auto sleep activated when hot air tool is put in the holder.
2. Adjustable, easy to use temperature control knob
3. Adjustment, easy to use air flow control knob
4. Electrostatic discharge free (ESD) safe.
5. Large selection of high quality nozzles for rework on QFP, SOP, PLCC and SOJ components.

SAFETY PRECAUTIONS

Warning

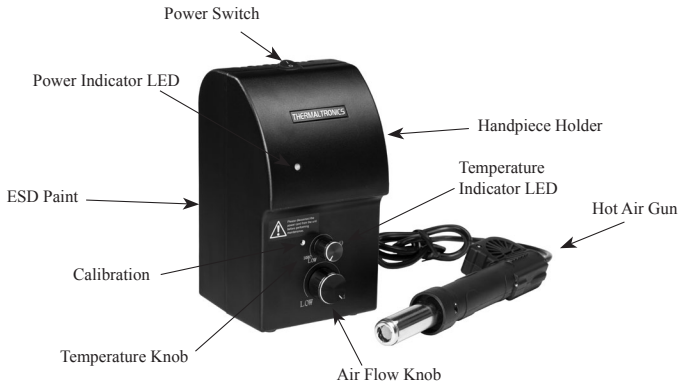
A fire may result if this equipment is not used with care and for intended applications. To avoid electric shock or injury, please follow the instructions below strictly:

1. The unit must be properly grounded.
2. The unit can reach extremely high temperatures when switched ON.
 - Do not use the device near flammable materials or gases
 - Do not touch heated parts, which can cause severe burns
 - Do not point the nozzle towards any part of the body
3. Never operate the equipment with wet hands.
4. Always disconnect the power cord and allow the unit ample time to cooldown before performing maintenance.
5. Use only genuine replacement parts.

Caution

1. Use this equipment in a well-ventilated area, away from combustible equipment.
2. Disconnect the power cord if unit is not used for extended period of time.
3. Place handle in stand when not in use.
4. Handle with care.
 - Never drop or sharply jolt the unit.
 - The unit contains delicate parts that can be damaged if subjected to physical force.
 - Do not spill any liquids into the unit.
5. Do not operate on uneven surfaces.
6. Allow to cool down before storage.
7. Turn off the power when the unit is not in use.
8. Do not alter the unit in any manner.
9. When resting the handle in the handle holder, make sure there are no objects within 30cm of the nozzle, as nearby objects maybe damaged.
10. Do not apply excessive force when installing and removing nozzles.
11. Do not use pliers to pull the edges of the nozzle.
12. Do not over tighten the screw when installing a new nozzle.

CONTROL PANEL



UNPACKING/ASSEMBLY/OPERATION

Please read this manual and follow the directions before using the equipment. The carton contains:

1. TMT-HA200 Hot Air Tool
2. Handpiece Holder
3. HTN-D30, HTN-D50, HTN-D80, HTN-D100 nozzles
4. HA-HE200 Heating Element
5. IC Popper

Important: Keep all shipping materials until satisfactory operation has been verified.

Assembly and Operation

1. Remove TMT-HA200 Hot Air Tool from its box and place on a suitable work bench.
2. Install the handpiece holder onto the side of the system with a screw driver.
3. Select the proper nozzle and secure it to the handle.
4. Ensure the hot air gun is placed in the handpiece holder.
5. Connect the AC plug to a suitable AC power outlet.
6. Switch the power switch to the "on" position.
7. Adjust the air flow and temperature.
8. The unit is now in sleep mode, with the power off and both the heating element and airflow off.
9. To activate the unit, lift the hot air gun from the holder.
10. After the heating element reaches temperature. The unit should then be read to use.

Power Off

1. Place the hot air gun back into the holder.
2. This will start the auto cool process, after the temperature has dropped down to safe levels, the fan will automatically shut down and the unit will enter sleep mode.
3. Switch off the unit, unplug if not used for extended periods of time.

UNPACKING/ASSEMBLY/OPERATION

Operating → Cooldown → Sleep → Power off

Operation - Operating Mode

Whenever the hot air gun is not placed in the holder, and the system is turned on, the unit will be in operating mode.

Note: To prolong heating element life, always let the unit enter cool down and sleep mode first before turning the unit off.

Operation - Cooldown Mode

Whenever the hot air gun is placed in the holder, the system will automatically go into cooldown mode as follows:

1. The heating element is turned off.
2. The fan will continue to blow cool air until the heating element temperature has gone down below 100C.
3. The system goes into sleep mode.
4. Lifting the hot air gun from the holder will deactivate the cooldown mode and the system will go back to operating mode.

Operation - Sleep Mode

Whenever the hot air gun is placed in the holder and the heating element temperature is lower than 100C.

1. The heating element is turned off.
2. The fan is turned off.
3. Lifting the hot air gun from the holder will deactivate the sleep mode.
4. In sleep mode both the power and temperature LED indicator are off.

Operation - Power off

The unit is powered down. Both the heating element and fan are off.

Note: To prolong heating element life, always turn the temperature knob fully counter clockwise and airflow knob to the midpoint after each use.

Calibrating the hot air gun

In some cases, it may be necessary to synchronize the amount of heat delivered by the hot air gun with an external temperature sensing device. This can be achieved by the following steps:

1. Turn the temperature knob to maximum.
2. Place an external temperature sensing device near the tip of the hot air gun nozzle.
3. Wait for the temperature LED indicator to start flickering and the external temperature readout has stabilized.
4. Unscrew the calibration screw. Insert a small screw driver into the hole and slowly turn the calibration utility until the approximate temperature on both devices are synchronized.

FREQUENTLY ASKED QUESTIONS

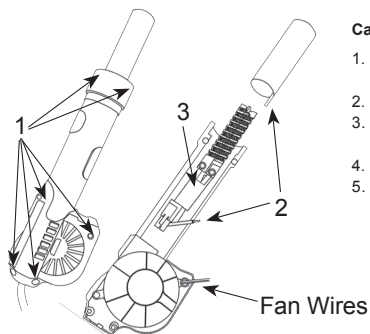
Q: The unit has no power.

A: Check if the unit is switched on and the power cord is plugged in. Verify that the fuse has not blown out. Pick up the hot air gun, the unit may just be in sleep mode.

Q: The actual temperature is not increasing

A: Pick up the hot air gun, the unit may just be in sleep mode. The overheat protection may be engaged, power off unit to cooldown and then power back on. Lastly, check if the heating element is damaged, replace if damaged.

Q: Replacing the heating element.



Caution: Disconnect power before replacing heater element.

1. Remove the six screws holding the hot air tool together and open the cover.
2. Disconnect and remove the heater pipe.
3. Disconnect the heater connector, pull back the heat shrink tube and desolder thermocouple wires.
4. Insert a new heating element (HA-HE200).
5. Reassemble the hot air gun in the reverse order it was disassembled.

Q: No air is coming out of the hot air gun

A: Check if the fan is damaged, replace if damaged.

Q: Replacing the fan.

Caution: Disconnect power before replacing the fan.

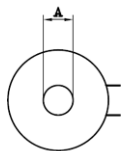
1. Remove the screws holding the hot air tool together and open the cover.
2. Disconnect and remove the heater pipe.
3. Pull back the heat shrink tube and disconnect the fan by unsoldering the power wires. Remember the wire order (one wire is positive, one wire is negative)
4. Insert a new fan (HA-PU200).
5. Reassemble the hot air gun in the reverse order it was disassembled.

Q: Other problems

A: Please contact your vendor or Thermaltronics: support@thermaltronics.com.

ORDERING GUIDE

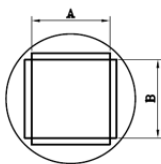
SPARE PARTS & NOZZLES



PART#	DESCRIPTION
HA-HE200	Heating Element for TMT-HA200
HA-PU200	Replacement Fan for TMT-HA200

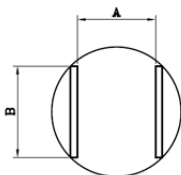
PART#	DESCRIPTION	A mm (in)
HTN-D30	Nozzle 3.0mm	3.0
HTN-D50	Nozzle 5.0mm	5.0
HTN-D80	Nozzle 8.0mm	8.0
HTN-D100	Nozzle 10.0mm	10.0

PLCC, QFP, BQFP



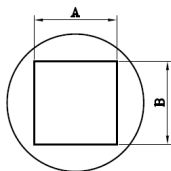
PART#	DESCRIPTION	A mm (in)	B mm (in)
HTN-PL20	Nozzle 11.9mm x 11.9mm, PLCC-20	11.9	11.9
HTN-PL28	Nozzle 14.5mm x 14.5mm, PLCC-28	14.5	14.5
HTN-PL32	Nozzle 16.9mm x 14.3mm, PLCC-32	16.9	14.3
HTN-PL44	Nozzle 19.5mm x 19.5mm, PLCC-44	19.5	19.5
HTN-PL52	Nozzle 22.0mm x 22.0mm, PLCC-52	22.0	22.0
HTN-PL68	Nozzle 27.0mm x 27.2mm, PLCC-68	27.0	27.2
HTN-PL84	Nozzle 32.4mm x 32.4mm, PLCC-84	32.4	32.4
HTN-QF48	Nozzle 8.4mm x 8.4mm, QFP-48	8.4	8.4
HTN-QF44	Nozzle 13.4mm x 13.4mm, QFP-44	13.4	13.4
HTN-QF80	Nozzle 17.3mm x 17.3mm, QFP-52,80	17.3	17.3
HTN-QF100	Nozzle 23.4mm x 18.1mm, QFP-64,80,100	23.4	18.1
HTN-QF160	Nozzle 31.2mm x 31.2mm, QFP-120,128,144,160	31.2	31.2
HTN-BQ100	Nozzle 22.4mm x 22.4mm, BQFP-100	22.4	22.4
HTN-QF240	Nozzle 34.5mm x 34.5mm, QFP-240	34.5	34.5
HTN-BQ196	Nozzle 37.7mm x 37.7mm, BQFP-196	37.7	37.7
HTN-QF208	Nozzle 29.8mm x 29.8mm, QFP-208	29.8	29.8

SO, TSOP



HTN-SC16	Nozzle 6.8mm x 10.2mm, SOIC 14, 16	6.8	10.2
HTN-SL16	Nozzle 10.6mm x 10.8mm, SOL 14, 16	10.6	10.8
HTN-SL20	Nozzle 10.6mm x 13.3mm, SOL 20, 20J	10.6	13.3
HTN-SL24	Nozzle 10.6mm x 15.9mm, SOL 24, 24J	10.6	15.9
HTN-SL28	Nozzle 10.6mm x 18.4mm, SOL 28	10.6	18.4
HTN-SL44	Nozzle 16.0mm x 27.9mm, SOL 44	16.0	27.9
HTN-SJ32	Nozzle 13.5mm x 20.6mm, SOJ 32	13.5	20.6
HTN-SJ40	Nozzle 13.5mm x 25.4mm, SOJ 40	13.5	25.4
HTN-TS24	Nozzle 17.0mm x 7.1mm, TSOP 20-24 PIN	17.0	7.1
HTN-TS32	Nozzle 21.0mm x 9.1mm, TSOP 28-32 PIN	21.0	9.1
HTN-TS40	Nozzle 21.0mm x 10.8, TSOP 40 PIN	21.0	10.8
HTN-TS48	Nozzle 21.0mm x 13.3mm, TSOP 48 PIN	21.0	13.3
HTN-TS24B	Nozzle 10.2mm x 18.4mm, TSOP 20-24 PIN	10.2	18.4
HTN-TS44	Nozzle 12.7mm x 19.8mm, TSOP 24-28/40-44 PIN	12.7	19.8

BGA



HTN-B1010	Nozzle 10.0mm x 10.0mm	10.0	10.0
HTN-B1313	Nozzle 13.0mm x 13.0mm	13.0	13.0
HTN-B1616	Nozzle 16.0mm x 16.0mm	16.0	16.0
HTN-B1919	Nozzle 19.0mm x 19.0mm	19.0	19.0
HTN-B2828	Nozzle 28.0mm x 28.0mm	28.0	28.0
HTN-B3030	Nozzle 30.0mm x 30.0mm	30.0	30.0
HTN-B3232	Nozzle 32.0mm x 32.0mm	32.0	32.0
HTN-B3636	Nozzle 36.0mm x 36.0mm	36.0	36.0
HTN-B3939	Nozzle 39.0mm x 39.0mm	39.0	39.0
HTN-B4141	Nozzle 41.0mm x 41.0mm	41.0	41.0
HTN-B4343	Nozzle 43.0mm x 43.0mm	43.0	43.0
HTN-B4545	Nozzle 45.0mm x 45.0mm	45.0	45.0