

Best Choice To Go With Small Volume Production

E-THERM E4/E6 Lead Free Reflow Oven

Economical Lead Free Reflow Oven Series

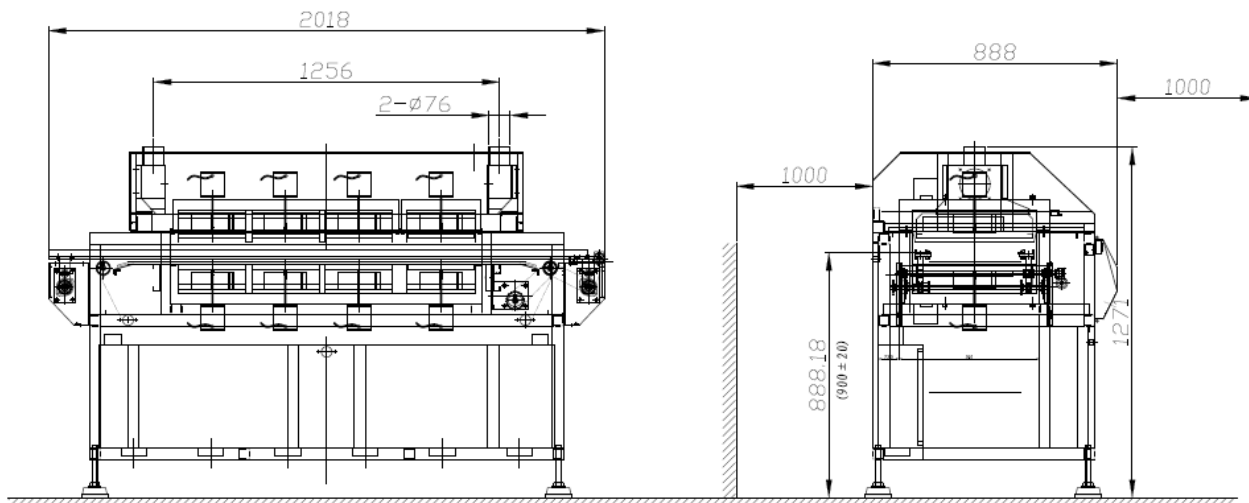


E4/E6 is a capable lead free CE certificated reflow oven with 4/6 upper & 4/6 bottom individual hot air convection zones, pin chain&mesh belt inline conveyor. It's the best choice to go with small volume pick&place machine like Autotronik, TWS, DIMA, ESSEMTEC etc.

E4/E6 Lead Free Reflow Oven Description:

- Touch screen and PLC controlling system
- E4:Upper 4 /6 bottom 4/6 individual zones hot air convection
- Stainless steel mesh belt and chain conveyor.
- Conveyor with SMEMA
- Brand electrical component with CE certificated
- Max 300mm PCB width capable.
- Heating tunnel : E4/980mm E6/1540mm
- Overall length :E4/1920mm E6/2550mm





E4/E6 Lead Free Reflow Oven Features:

- ▶ Streamline shape design make the oven looks great. Touch screen with PLC controller which can save 50 groups of temperature parameters and provide extra 2 ports for profile test.
- ▶ Equipped with brand electrical component like Schneider (German made) contactor, Omron (Japan made) box relay. CE certificated high temperature resistant blower ensure stable and lower noise operation .
- ▶ Upper zone, hood and electrical box cover can be opened easily, easy for cleaning and maintenance.
- ▶ The inner tunnel of the oven is made of stainless steel which can stand the high temperature and easy for cleaning.
- ▶ The entire upper and bottom zones are forced hot air convection.
- ▶ Stainless steel mesh belt, chain conveyor and SMEMA connector.
- ▶ Unique program design can automatically adjust the start power consumption and lower the start current .



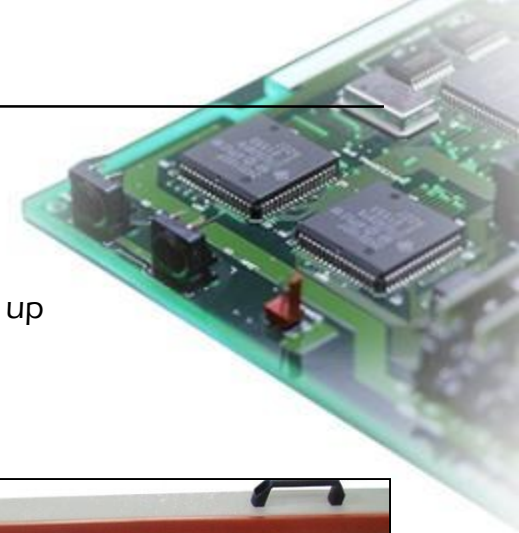
E4/E6 Lead Free Reflow Oven - Specifications		
Model	E4	E6
Heating zones	Upper 4 zones	Upper 6 zones
	bottom 4 zones	bottom 6 zones
Heating tunnel	980mm	1540mm
Dimension	L1920*W750*H1250	L2550*W750*H1250
Net weight	about 280Kg	about 360Kg
General power	23KW	33KW
Power consumption	Approx.3-7KW	Approx.4-8KW
Rising time	15 mins	15 mins
Controlling type	Touch screen and PLC	Touch screen and PLC
Heating method	Fully forced air convection	Fully forced air convection
Temperature controlling	PID close-loop control, SSR drive	PID close-loop control, SSR drive
Temperature range	Ambient-350°C	Ambient-350°C
Temperature accuracy	± 1 °C	± 1 °C
Temperature uniform	± 2 °C	± 2 °C
Cooling	one cooling zones, fans for cooling	one cooling zones, fans for cooling
Conveyor method	Mesh belt and chain conveyor	Mesh belt and chain conveyor
Conveyor height	900 ± 20mm	900 ± 20mm
Mesh belt width	330mm	330mm
Max PCB width	300mm	300mm
PCB clearance	30mm	30mm
Conveyor direction	Left to right	Left to right
Conveyor speed	0-900mm/min	0-900mm/min
Hook lift	Manual	Manual
Power supply	380v,3ph,50hz	380v,3ph,50hz



E4/E6 Lead Free Reflow Oven General:



Machine's cover can be easily lifted up with air spring holder.

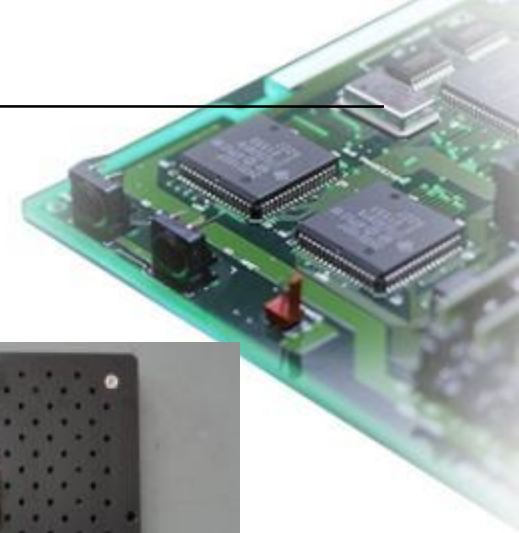


Inner tunnel can be manually lifted up too, easy for clean and maintenance.

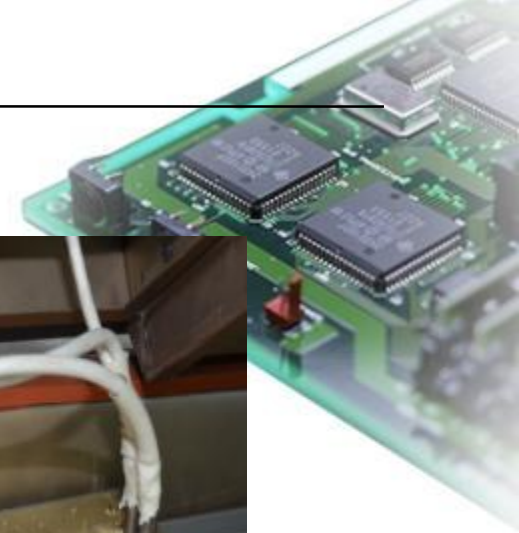
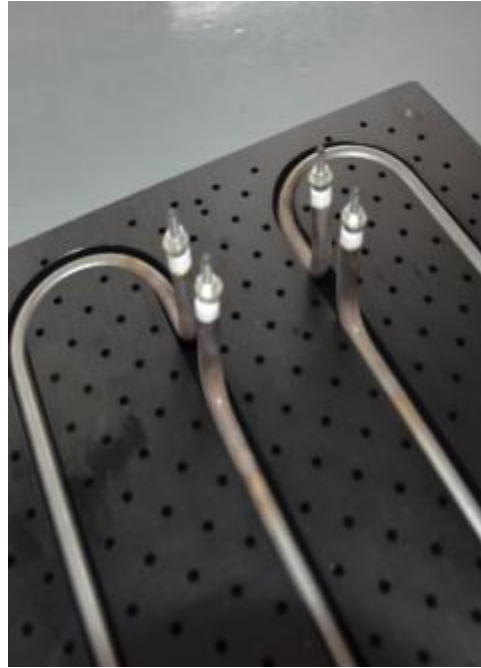




Latest self-designed porous plate, get best uniform hot air distribution under the theory of static pressure. New designing :aluminum heating plate +U shape heating tube, more stabile and longer service life



E4/E6 Lead Free Reflow Oven Aluminum Heating System



Aluminum heating system is made up by 2 pieces aluminum plates (top and bottom) and 2 pieces U shape heater by stainless steel, compare with the traditional heater, advantages as below:

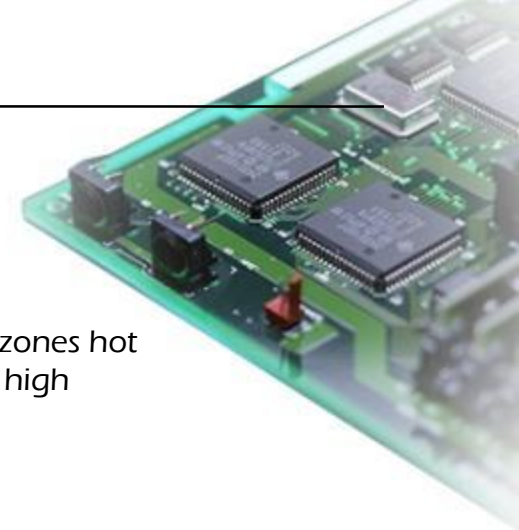
1. Easy to replace and maintain, only need to remove fix screws and replace U- heater
2. It has longer service life than old version, can save more cost for customers
3. Better raw materials to ensure the stability of oven temperature
4. Customers can replace aluminum heating system on installed reflow ovens (with old heating elements), maintenance and service problem can be solved at once



E4/E6 Lead Free Reflow Oven Tunnel:



Upper 4 /6 zones and bottom 4 /6 zones hot air convection latest CE certificated high temperature resistant motor .

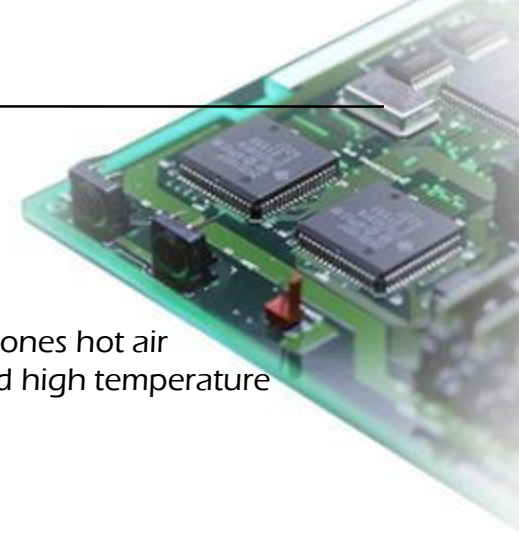


Equipped with fan and adjustable bracket angle for cooling system.





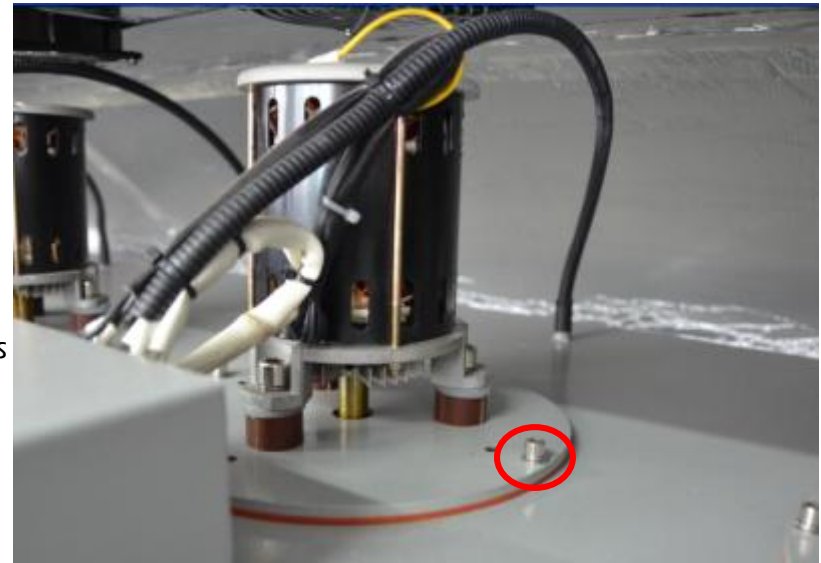
Upper 4/6 zones/bottom 4/6 zones hot air convection latest CE certificated high temperature resistant motor .



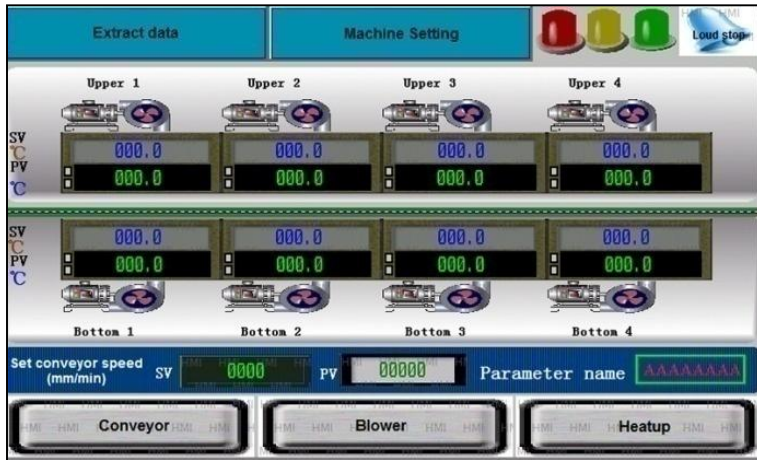
New designing makes easy to replace hot air motor

- 1.Remove these screws
- 2.Take out whole structure (blower motor+ rounded fixing plate+ fan),
- 3.Take out motor fan which is fixed by set screw
- 4.Replace blower motor and fan
- 5.Fix the rounded fixing plate with blower motor by screws

Operator can finish that within 15 minutes

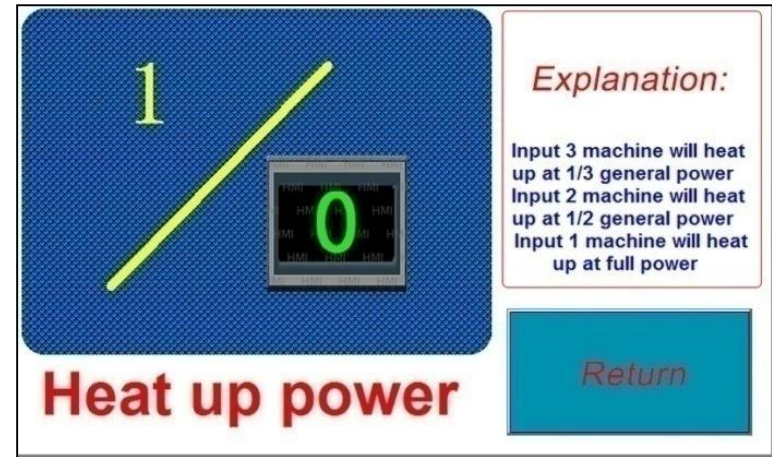


E4/E6 Lead Free Reflow Oven Controlling:



Full English interface, easy to be operated which can stock more than 50 groups parameters with recommended leaded/leaded free temperature/speed setting before machine be delivered. You can master how to operate it within 10 minutes.

Unique program design can adjust the start power consumption and lower the start current . Best choice for customer with limit power supply.



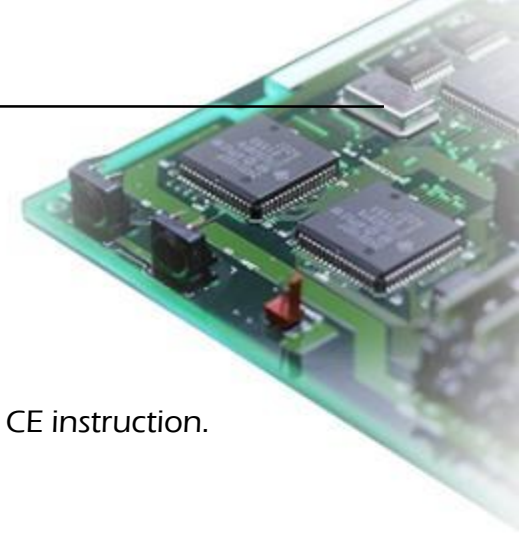
Colored touchscreen interface with PLC controller ensure stable operation of machine.



E4/E6 Lead Free Reflow Oven Electrical:



The whole machine was built under CE instruction.



Schneider Converter



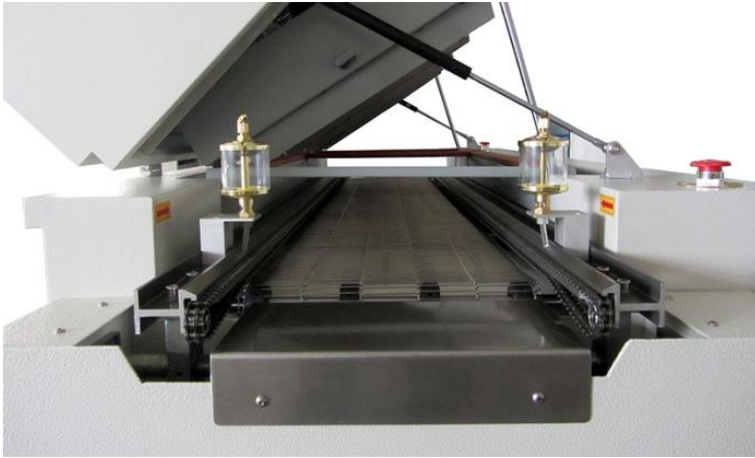
Mitsubishi Breaker



PLC (Made In Taiwan)



E4/E6 Lead Free Reflow Oven Conveyor:



Chain and mesh belt conveyor, all rail has been harden-treated, equipped with lubrication cup.




PLC, Schneider transducer, Panasonic motor formed a stable conveyor system.



Standardly equipped with SMEMA connector for inline production.



CE certification machine under
2006/42/EC Machinery
Directive, EN ISO 12100:2010
EN 60204-1:2006+A1:2009


SHENZHEN HUATONGWEI INTERNATIONAL INSPECTION Co., Ltd.

Declaration of Conformity

Certificate No.: CTM13050102 R/C: 64237
Issued Date: Apr 8, 2014

In accordance with the following Applicable Directives:

2006/42/EC
Machinery Directive

The device, as described herewith, was tested pursuant to applicable test procedure and complies with the requirements of:

EN ISO 12100:2010
EN 60204-1:2006+A1:2009

The test results are traceable to the international or national standards.

Applicant: DEKTEC AUTOMATIC EQUIPMENT CO., LTD.
C2 Building, BeiFangYongFa Industrial Zone, ShangLiao Village, ShauJing Town, ShenZhen City, Guangdong Province, China

Manufacturer: DEKTEC AUTOMATIC EQUIPMENT CO., LTD.
C2 Building, BeiFangYongFa Industrial Zone, ShangLiao Village, ShauJing Town, ShenZhen City, Guangdong Province, China


EUT Name: Lead Free Reflow Oven Machine
Model number: BM-W645G2
Listed Model(s): BM-W645G1, BM-W630, BM-W430, BM-W640, BM-W845, SF-8C, SF-10C, SF-12C, ICM-2200, ICM-3300, ICM-4600, BCM-13

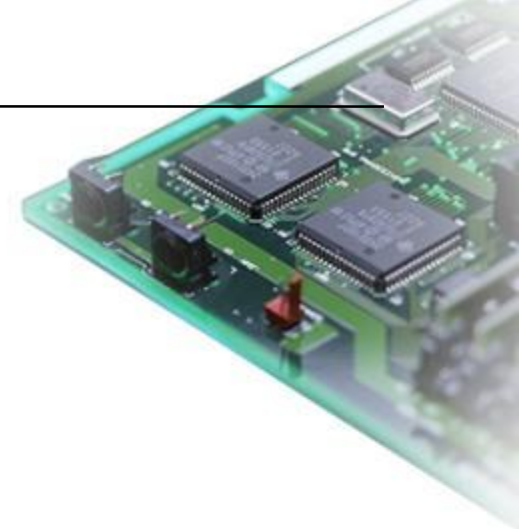
Laboratory: Shenzhen Huatongwei International Inspection Co., Ltd.
Keji Nan No.12 Road, Hi-tech Park, Shenzhen, China
Tel: 86-755-26748078 Fax: 86-755-26748089
Http: //www.szhtw.com.cn E-mail: cs@szhtw.com.cn

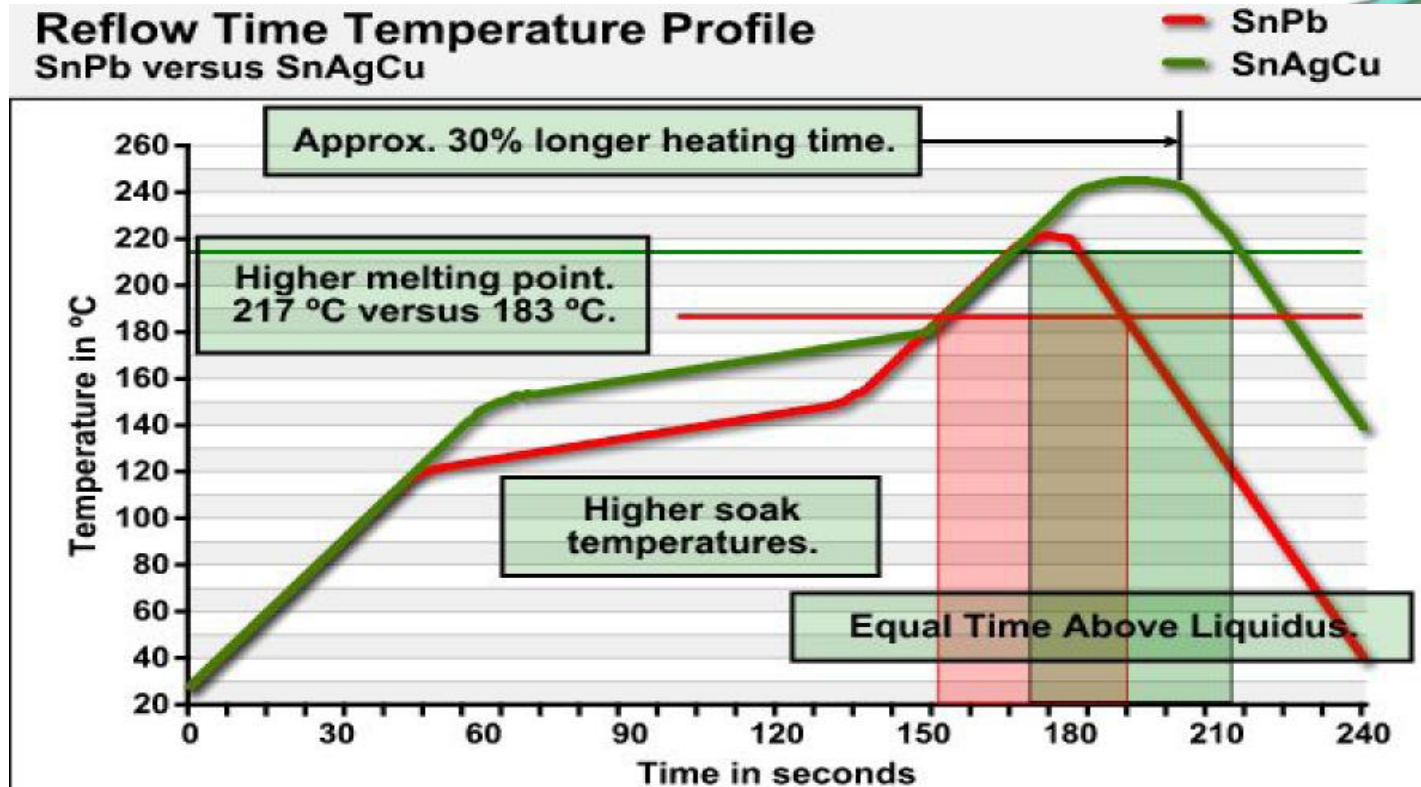
CE **Note:**
The certification is only valid for the equipment and configuration described, in conjunction with the test data detailed above.
The CE mark as shown beside can be used, under the responsibility of the manufacturer, after completion of an EC Directive of Conformity and compliance with all relevant EC Directive.

For and on behalf of
Shenzhen Huatongwei International Inspection Co., Ltd.

Authorized by: *Tiger Jiang*







Solder paste according to the metal powder into leaded solder paste and lead-free solder paste, The differences are mainly in the process of welding temperature. Lead-free soluble melt temperature and peak temperature higher than leader solder, about 30 -50C



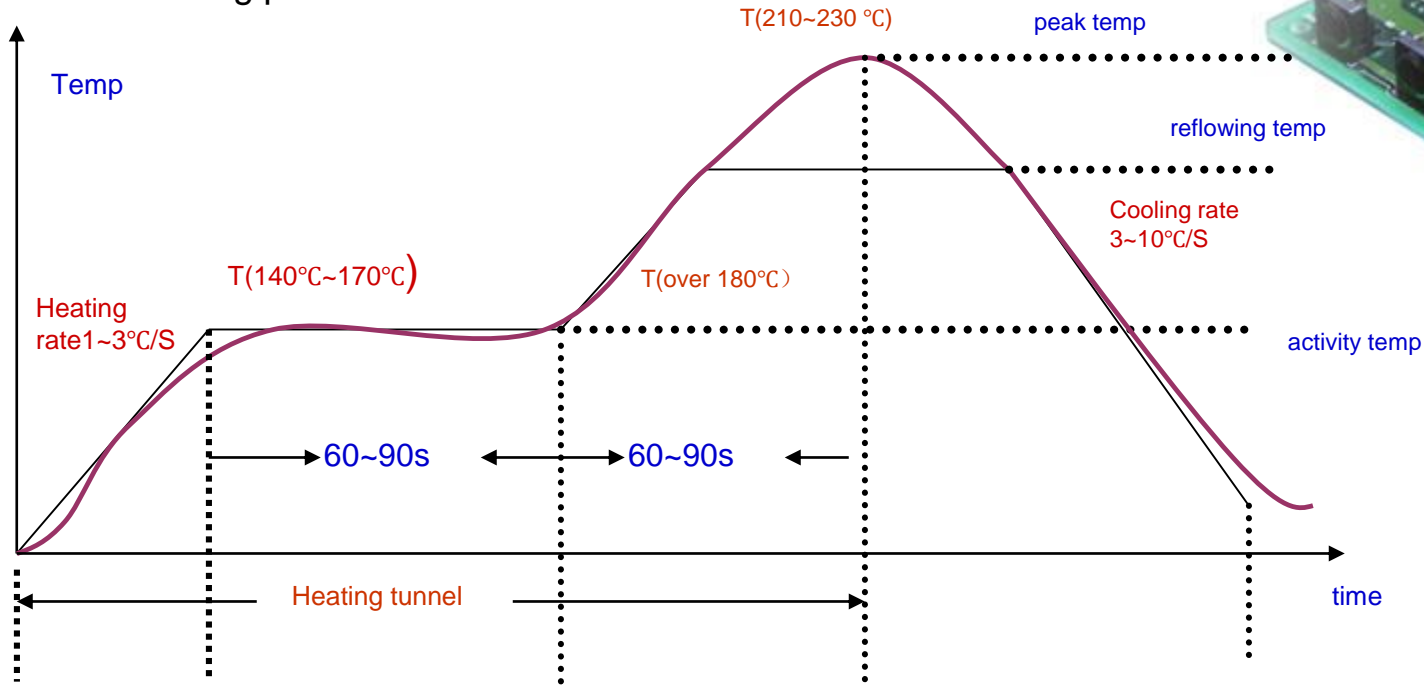
Table 5-2 Classification Reflow Profiles

Profile Feature	Sn-Pb Eutectic Assembly	Pb-Free Assembly
Average ramp-up rate (T _{smax} to T _p)	3° C/second max.	3° C/second max.
Preheat		
- Temperature Min (T _{smin})	100 °C	150 °C
- Temperature Max (T _{smax})	150 °C	200 °C
- Time (T _{smin} to T _{smax}) (ts)	60-120 seconds	60-180 seconds
Time maintained above:		
- Temperature (T _L)	183 °C	217 °C
- Time (t _L)	60-150 seconds	60-150 seconds
Peak Temperature (T _p)	See Table 4.1	See Table 4.2
Time within 5°C of actual Peak Temperature (tp) ²	10-30 seconds	20-40 seconds
Ramp-down Rate	6 °C/second max.	6 °C/second max.
Time 25°C to Peak Temperature	6 minutes max.	8 minutes max.

Based on IPC standard reflow oven need to abide by attached profile feature, it can provide the best soldering result for Sn-Pb and Pb-Free assembly ,before shipment , we calibrate the oven many times and save the perfect temperature setting for customer



Sn-Pb reflowing profile

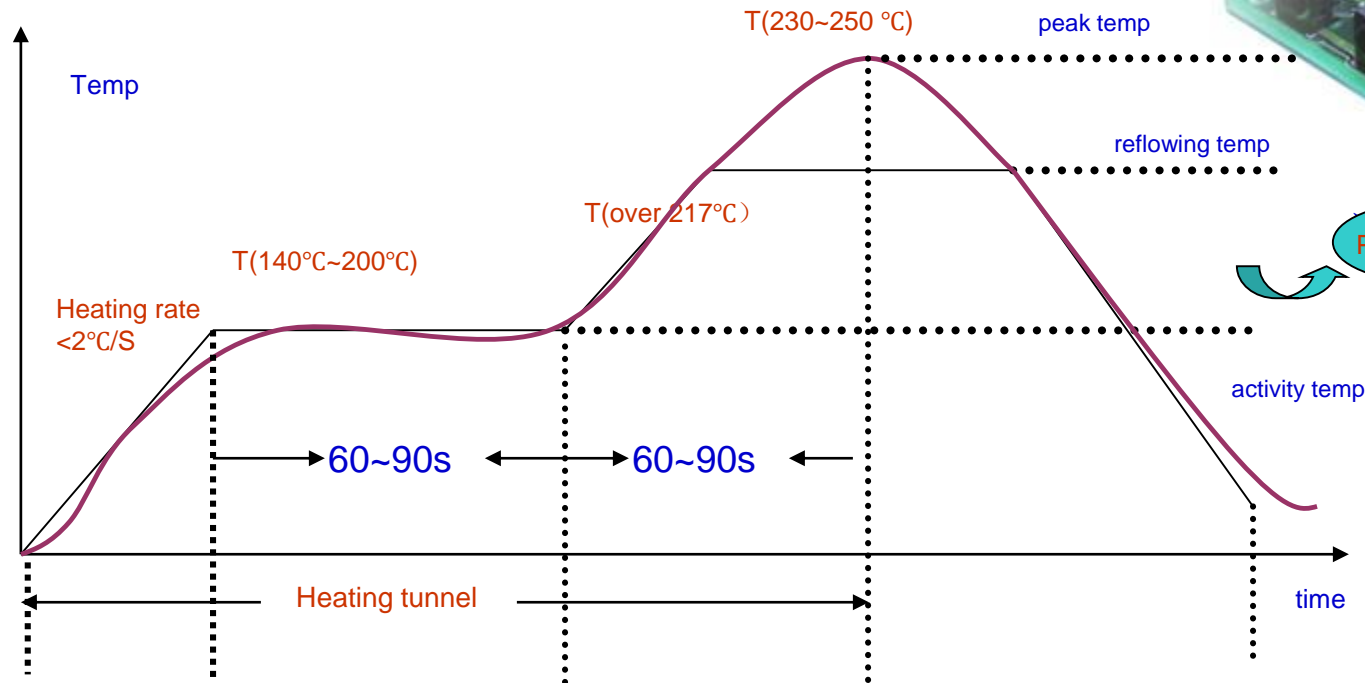


Zone	Preheating	Activity	Reflowing	Cooling
Function	Solvent evaporation	Flux activation and board temperature equilibrium	Melting of solder paste	Solder joints form

Peak temperature should be higher than the melting point solder paste at least 20 to 30 °C



Pb-Free Reflowing Profile

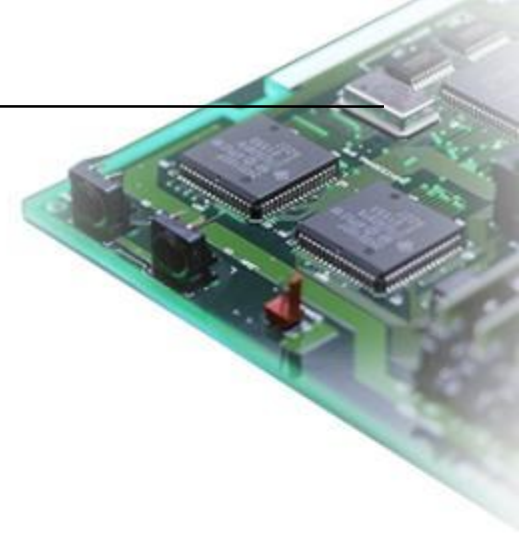


Zone	Preheating	Activity	Reflowing	Cooling
Function	Solvent evaporation	Flux activation and board temperature equilibrium	Melting of solder paste	Solder joints form



E4/E6 Lead Free Reflow Oven Calibration & aging before package:

1. Test instrument : 6 CH Thermal Profiler /450 *300mm PCB
2. E4/E6 Lead free Reflow Oven temperature setting value :



Oven Info

Available Machines

Line: device type: Temp Units: Angle:

Manufacturer: Heat: Zone Units: Entry Lengths:

Model: zones: Speed Units:

Process Setpoints

Zone Lengths(CM)

1	2	3	4
24.5	24.5	24.5	24.5

Dektec-BM-W430

Machines Zone Information

Zone Setpoints(°C)

1	2	3	4
230	280	300	310
180	180	180	180

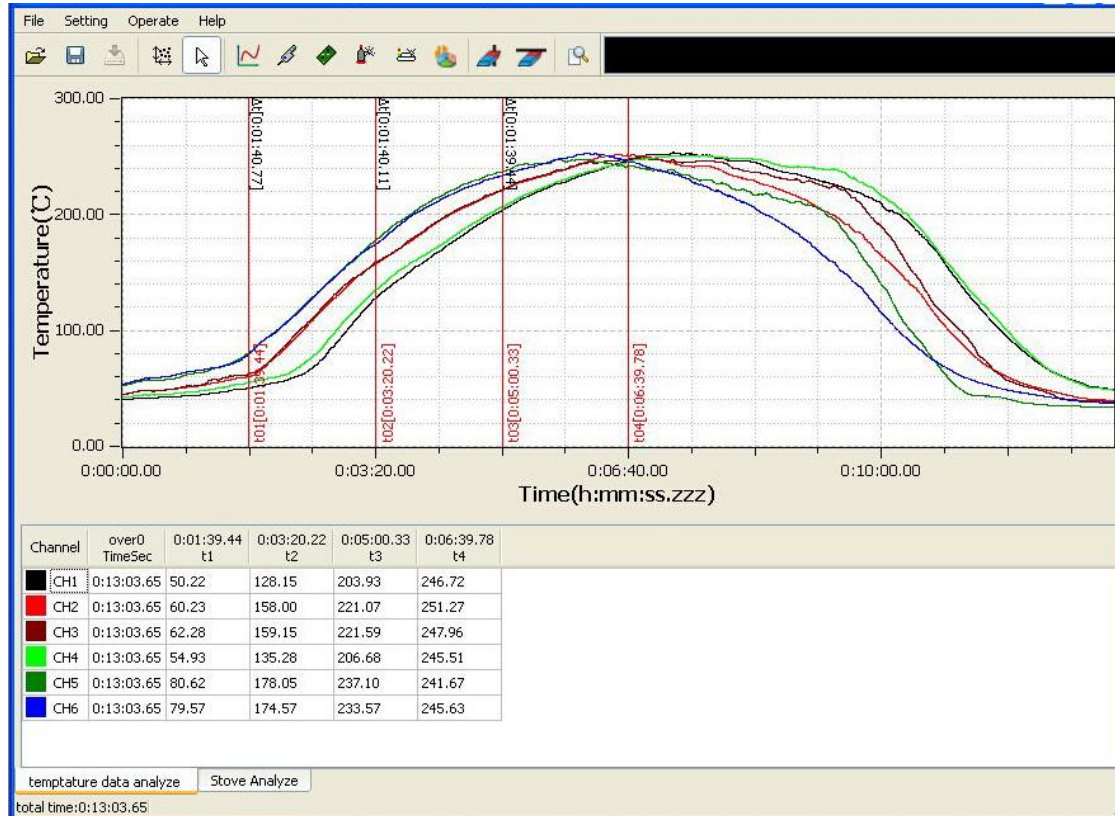
CM/min

☒ TopBottom Same Setpoint

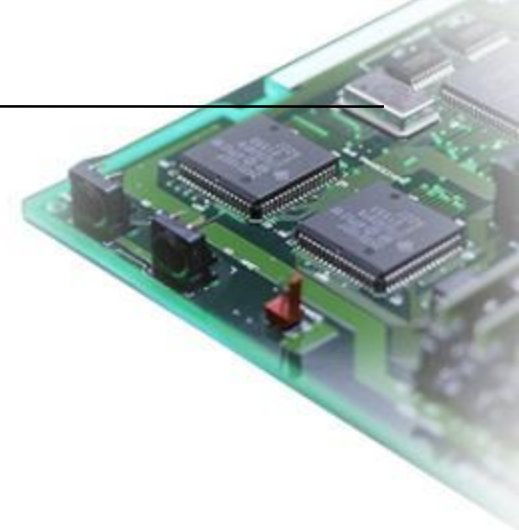
Refresh Ok Cancel



E4/E6 Lead Free Reflow Oven Calibration & aging before package:



After calibration & aging test, our reflow oven is acceptable by IPC Standard completely



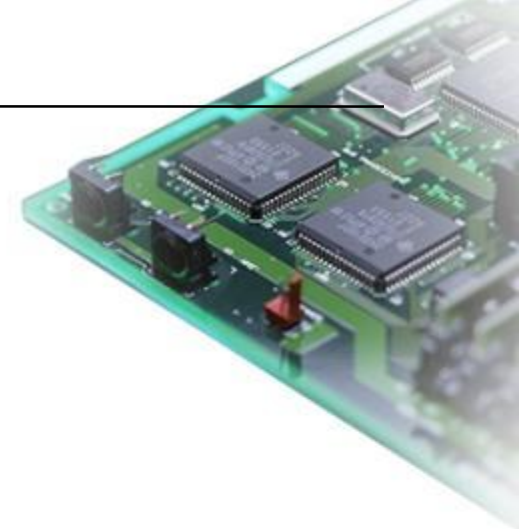
E4/E6 Lead Free Reflow Oven Plenty Spare parts:

E4/E6 Lead Free Reflow Oven Includes:

- ▶Lead free reflow oven
- ▶4/6 independently controlled upper heating zones
- ▶4/6 independently controlled lower heating zones
- ▶Corrosion-resistant, heatproof, stainless steel heating tunnel
- ▶PID temperature controls for each zone with $\pm 1^{\circ}\text{C}$ accuracy
- ▶Air cooling
- ▶Mesh belt chain conveyor
- ▶Pin conveyor lubrication
- ▶Colored touch screen panel
- ▶1 year parts warranty

Free accessories as below :

NO.	ITEM NAME	DESCRIPTION	QUANTITY	
1	Blower	45w 4"	2	pcs
2	Preheater	2.2KW 220V	4	pcs
3	Preheater Sensor	3M	2	pcs
4	Conveyor chain clip	/	3	pcs
5	Conveyor sensor	U shape sensor S-670	1	pcs
6	SSR	SSR-KD-40-L	1	pcs
7	Cooling fan	4" 220VAC	4	pcs
8	Hex spanner		1	pcs
9	Open spanner		1	pcs
10	Key of door		2	pcs
11	Alarm light bulb		3	pcs
12	Fuse		3	pcs
13	Tool box		1	pcs



E4

Shipping Information:

- Dimensions:
L2.2*W1.08*H1.6m
- Gross Weight:
about 500 KG
- Cubic Meter:
3.8CBM



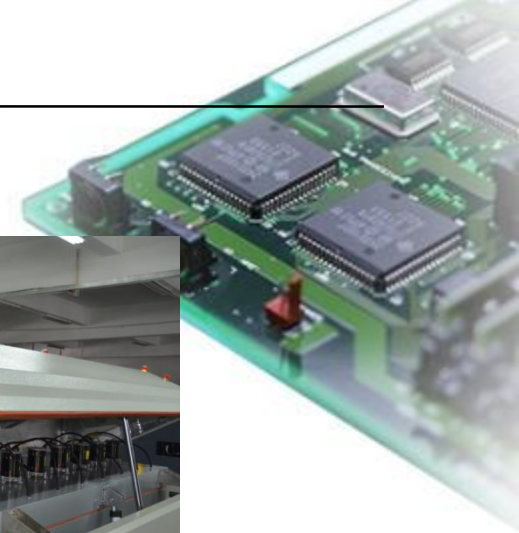
E6

Shipping Information:

- Dimensions:
L2.8*W1.08*H1.63m
- Gross Weight:
about 600 KG
- Cubic Meter:
4.9CBM



Our Factory Pictures:



Our Customers:

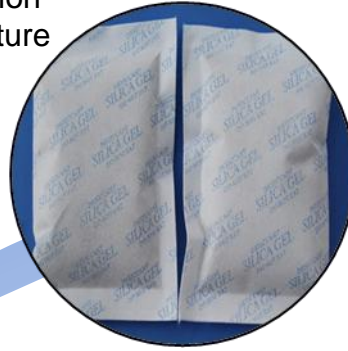


Many Thanks to Below Customers
For Their Trust of 1Clicksmt !!!!



Package & shipping:

Dry partical with safty certification
used in machine to avoid moisture



Vacuming package for long
distance shipping



Plywood case and metal
frame for big case



Shock watch & Tilt watch



Package



Contact :



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