

## KTR-1000 Specification:

Model	KTR-1000	Control	Industrial computer
Heating zones quan.	Top 10, bottom 10	Cooling zones quan.	<b>Top 3, bottom 3</b>
Heating zone length	3892mm	Current plate	Thick copper plate
Weight	APPROX:2700KG	Dimension	6300*1430*1530mm
Exhaust capacity	10m <sup>2</sup> /min×2	Color	Grey
<b><i>Control system</i></b>			
Electricity supply	3P 380V/220V 50/60HZ	Temp. control range	Room temp. ~ 300°C
Total power	80KW	Temp. control accuracy	±1°C (static state)
Start power	36KW	Temp. control method	PID +SSR drive
Consumption power	11KW	PCB temperature deviation	±1.5°C
Speed control	<b>3 sections with 3 inverters</b>	Data save	All profiles can be saved
Warm up time	Apprx.30minute	Abnormal alarm	High, low temp. alarm
<b><i>Conveying system</i></b>			
Rail structure	2 Sectional structure	Rail fixed method	Front fix
Chainstructure	Stuck-free type	Conveying height	900±20mm
PCB Max. width	60-460mm	Conveying method	Rail+ chain+ central support
Component height	<b>Top/bottom 25mm</b>	Conveying speed	300-2000mm
Conveying direction	Left to right	Lubrication	Automatic
<b><i>Cooling system</i></b>			
Cooling method	Forced air cooling		

<i>Heating features</i>	
Heating zones	Top 10,bottom 10 (3892mm) can meet the need of the peak lead-free technique.
Cooling zones	After cool down by air, PCB temp. is $\leq 70^{\circ}\text{C}$ at the exit.
Warm up time	From the normal temp. to set temp, approximate 30 minutes.
Warm up sequence	Warm up from two side, save the power and time
Profile transfer time	< 15min
Heating zone temp. control accuracy	$\pm 1^{\circ}\text{C}$
PCB temp. deviation	$\pm 1.5^{\circ}\text{C}$
Empty $\rightarrow$ full load heat balance respond time	$\leq 20$ s
Heating zones separately close function	Every heating zone can be closed separately on computer. When the bottom heating zones are closed, the PCB two sides temp. different reaches max.( PCB of different material, thickness, size, the temp. difference value is different.)
<i>Heating parts</i>	
Hot air motor	Import anti high temperature motor,RPM:2800rpm。 Adopts inverter to control, can adjust the speed of motor from 0to 3000, stepless. Motor warranty is 5 years.
Heater	The heater is specially made, with high efficiency and sensitivity, warranty time is 5 years.
Air lane structure	High efficient air lane, provides abundant air
Exhaust system	Forced exhaust device, ensure no escape of flux.

***Transmission parts***

Anti torque rail	High strength and hardened rail, is very durable and wear resistant.
Rail parallelism	±0.3mm
Chain stretch out length	Standard: 5mm, the chain is anti-stuck type, solve the soldering problem of small PCB
C/V speed set min.unit range	0.01m/min, 0~2m/min
C/V speed deviation range	Computer close loop, within ±2%
Chain tension device	Automatic adjust by spring, avoid the chain stuck due to the heating.
Conveying motor	<b>Panasonic adjustable motor</b>
Chain lubrication	The lubrication is controlled by PC, lubrication cycle and time can be set (there are three modes: fine, standard, economical. There is also manual lubrication in software)
Rail width-adjusting	Independent adjusting

***Machine structure***

Frame	The frame is well soldered, firm and durable.
Door	Dismountable structure, provide wide space for maintenance.
Hood open method	Double electric cylinder to open the hood, with self-lock function, safe and reliable.
Cover open method	Self-made holder, easy to clean up

<b><i>Electrical parts and control performance</i></b>	
Control system	Industrial PC PLC+ Modular + PID, stable and reliable, with high repeat accuracy
Operation interface	Windows7 with Chinese& English shift easily.
Machine&operator safety	With creepage protector
Electric part	All electric parts are imported, very durable, ensure the machine runs stably.
Working mode	Three working mode: operation, edition and presentation, with on-line editing function
Real time monitor	Generate the operation record daily, if there happen some problems, the responsible operator will be found easily.
Temperature profile	Generate the profile for each zone daily, user can review and analyze. This function is not for PCB profile testing, just for inspecting when some problem happens in a certain zone.
Production database	Generate production statement for all kinds of PCB and statistics, printable.
Alarm list	The system saves all alarm information for user to review the alarm item and time.
Alarm system	The system enters cool down mode when the alarm is strict.
Profile test	With temp. profile testing function, can analyze according to the profile.
Abnormal alarm	1.PCB runs abnormally 2. Operation abnormal 3.Temperature abnormal 4.Conveyor speed abnormal 5.Hot air devices abnormal.
Flux recycle device	Standard configured. When use nitrogen, as it is closed recirculation, if the flux fog cannot be spread, it will pollute the PCB.
<b><i>After-sales services</i></b>	
Warranty	2 years for the whole machine, <b>5 years</b> For motors, heaters.
Out of warranty	Charge only purchase price for parts.
Service respond time	12 hours