

Vanstron

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ExplorFlow
Lead free Reflow Oven

ExplorFlow -series Reflow soldering oven



Versatility for Any Reflow Soldering Application



Main features:

- Automatic cover opening which allows direct access to the tunnel and upper zones. A must for cleaning and maintenance.
- Control system driven by a computer, UPS and a proprietary controller specially designed for optimizing the machine in lead-free environment. It gives a quicker response than a PLC based controller and more compatibility.
- Reliable electrical components.
- Independent air velocity controlled by section, which can allow flexible processing adjustments.
- New air management system with significant energy save, lower electric power consumption & lower carbon.
- Multi-layer chambers with thick thermal insulation to protect the oven external surface.
- Forced hot air convection in upper and bottom zones.
- Stainless steel mesh belt and chain conveyor (optional: center support replacing the mesh belt).
- New cooling configuration which directs the filtered air back to the oven chamber, reducing the thermal loss, and getting a better flux reclamation.

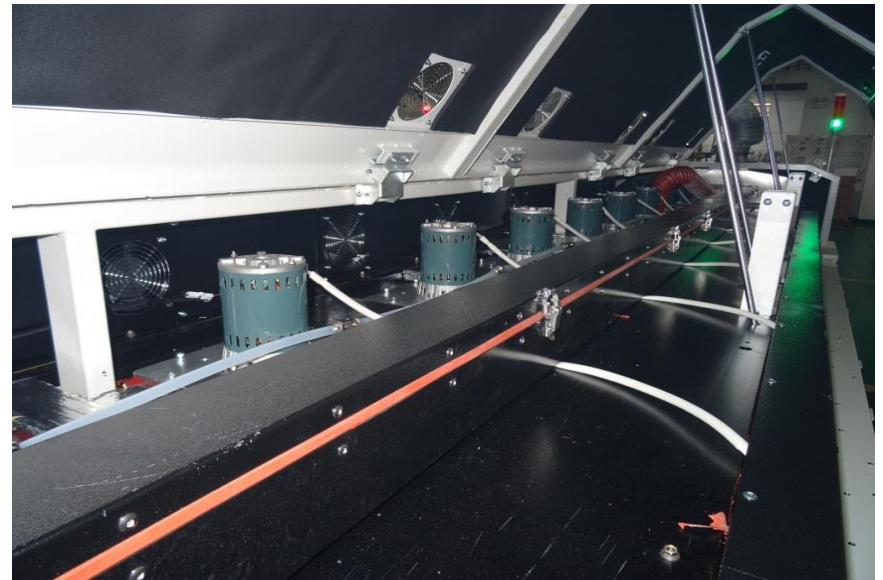


Excellent thermal convection system

- Provide Maximum heat capacity to rapidly reach temperature setting points at low rates of power consumption within a short period of time. The special process chambers design makes the air convection uniformly and temperature profile changeover easily.
- Profile spikes per zone is eliminated with better zone segregation and decrease cross flow. The nozzle plate design allow to cover the boards with hot air in all direction for good uniformity.
- Our heater generate the desired temperature faster than any other reflow heat source and respond in less than half a second to temperature change of less than 0.1° C thus maintaining the highest level of temperature repeatability.

Efficient power design and heat management system greatly improves energy savings while lowering carbon emissions.

- Power savings of 15 to 20 %, due to large aluminum alloy heat plates.
- Double insulation around the body prevents heat loss;
- Short warm-up time;
- Low power consumption;
- New and improved highly effective exhaust design with piping in each zone to extract flux.



More. Reliability transportation conveyor rail



Due to our secure transport system and the arrangement of the transport mechanism, you will receive a stable process while reducing maintenance expenses and machine downtime.

- **Center support system for preventing the deformation of PCB board puzzle (Optional)**

The unique retractable center support system is easy to use with maximum flexibility. It can hide itself when not used and will not hit the components on double sided boards or boards with long components leads.

- Our security transportation rail have the special multi-segement design which allows the conveyor rail easily to avoid the possibility of deformation and be good for lifetime usage without any problem.
- All the transportation system is designed for high temperature environment including High temperature bearing and heat-treatment rail, special conveyor chain and mesh to ensure the transportation secure running and prevent the phenomena of dropping PCB.

Excellent Nitrogen system (Optional)

A wide range of PPM levels can be selected with nitrogen consumption rate as low as depending upon board size . An internal oxygen sensor and proportioning valve is used to minimize nitrogen consumption and related costs by up to 50% ! Use completely sealed design inside the chamber of oven to be effective protection for nitrogen.

The nitrogen system is for lead free process no matter it is single lane or dual lane option. All the functions include the high quality nitrogen hermetic configuration, nitrogen flow meter, oxygen analyzer, and water chiller as standard accessories.



Powerful cooling technology

- Cooling zone is achieved with 2 top zones allowing adjustable convection speed for desired cooling slope;
- water chiller cooling system is optional;
- The fans in the individual zones, which can be controlled separately as an option, allow for accurate control, and cooling gradients can be correspondingly influenced. This assures stress-free cooling for your PCBs, for lead-free soldering as well.

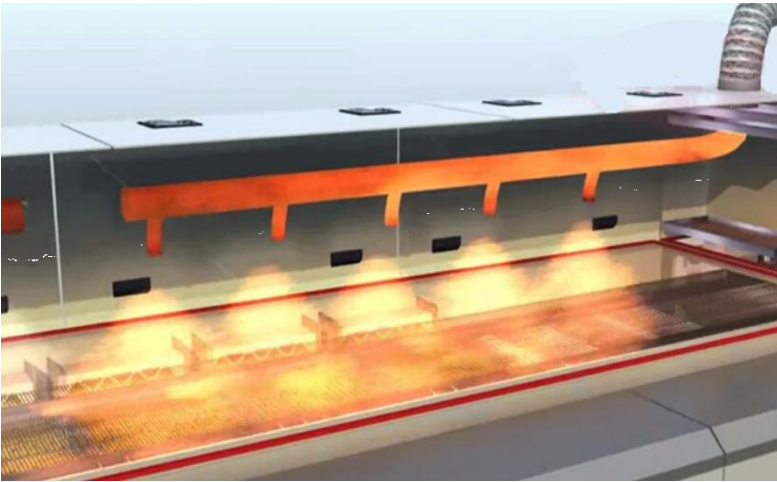


CE quality electrical system

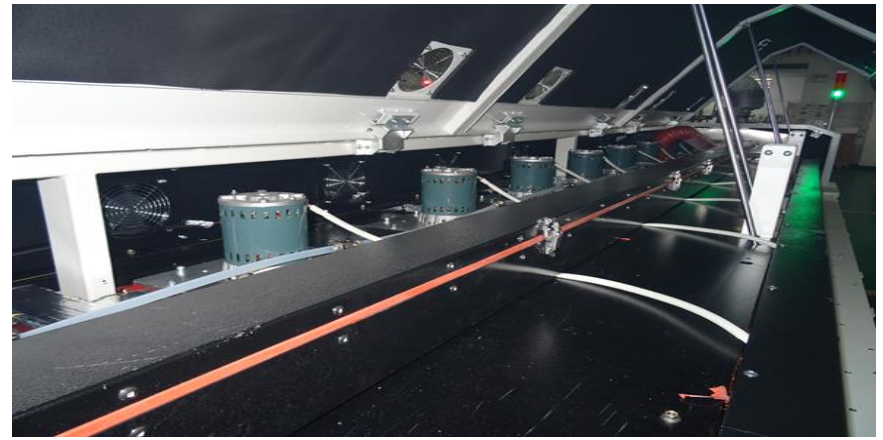
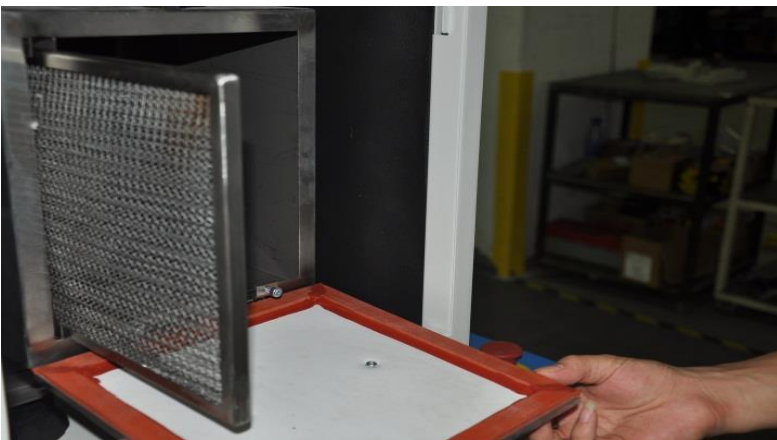
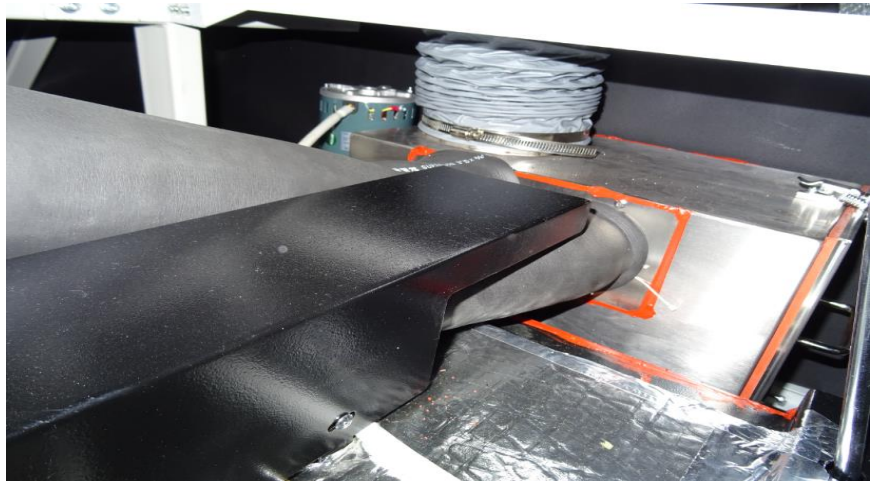
- Assembled with Know branded parts: Lenovo PC, SIEMENS PLC, AB American controller, Schneider, Panasonic motor, Carlo Gavazzi relay, etc.
- All the electrical system totally match the European quality standard and other international safety standard;



Powerful flux collection system and maintenance easily



A special air exchange motor is added to promote the air circulation in the flux collection management container which makes the hot fume flux easily cool down.



Both front-back end exhausts are installed with quick release metallic filters similar with the heat exchanger for less and easy maintenance

Model	ExplorFlow-0601	ExplorFlow-0802	ExplorFlow-1002	ExplorFlow-1202
Dimension(L*W*H)mm	3600*1383*1490	5310*1353*1490	6100*1353*1496	6915*1353*1496
Weight (kg)	1325	2200	2400	2600
Number of heating zones	Top 6+ bottom 6	Top 8+ bottom 8	Top 10+bottom 10	Top 12+bottom 12
Length of heating zones(mm)	2359	3121	3891	4706
Number of cooling zones	Top 1 zone	Top 2 zones		
Nozzle plate	High quality Steel sheet			
Exhaust volume	10CBM/min *2 channel exhaust			
Power supply requirements	3 phase ,380V 50/60Hz (optional : 3 phase ,220V 50/60V)			
Total Power	52KW	64KW	80KW	92KW
Startup power	26KW	28KW	34KW	38KW
Normal Power consumption	7KW	9KW	10KW	11KW
Warming time	30 minutes			
Temp. setting range	Room temperature to 300°C			
Temperature control method	PID Close loop control +SSR Driving			
Temperature control precision	+/- 1.0 °C			
Temperature deviation on PCB	+/- 1.5°C (by HB test standard)			
Max. PCB width	400mm (Optional 610mm)			
Range of rail width	50mm -400mm (optional 50mm -610mm)			
Components clearance	Top/Bottom clearance of PCB : 25mm			
Conveyor direction	L to R (Optional R to L)			
PCB transmission method	Chain + Mesh			
Conveyor speech	300mm /min-2000mm / min			
lubrication	Auto-lubrication + Manual-lubrication			
Optional	Full N2 system, Center support system ,KIC RPI reflow process inspection ,Dual lane			

The **ExplorFlow series Reflow product** platform is the good evolution in a long history of reflow systems that have proven their capability worldwide and established a reputation for superior reliability.

Robust design combined with a unique heat transfer system consistently deliver benchmark thermal performance, precise process control, and superior value for high production, in a 24 hours-a-day, 7 days-a -week environment.



Key Features (Standard):

- 300° C maximum set-point temperature for any lead free process;
- Maintenance easily flux management;
- UPS system;
- Active forced convection top and bottom cooling cells;
- Automatically lubrication system for chain conveyor;
- Automatically start-up and shut down the machine setting by software;
- Comprehensive safety alarm system for temperature abnormal, board dropped, signal communication;
- Standard SMEMA communication interface;

Optional Features:

- Full nitrogen system including the nitrogen atmosphere function, external water chiller cooling system, nitrogen flow meter, oxygen Analyzer;
- Center support system;
- Dual lane with independent lane speed control;
- Dual center support system with independent lane speed control;

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