Vanstron

electronic assembly & traceability

Thermal system

Traceability

Automation

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With the core business concept of innovation, reliability & loyalty, Vanstron was created at 2016 in Shenzhen by a group engineers who has over 10 years SMT industry experience.We are the young technical company, with the great passion and business loyalty business contract spirit, have been contributed all of our efforts in design, manufacturing & sales for our leading quality products like Lead free reflow ovens, Vertical heating ovens, inline laser marker machine & Boards handling machines.

Thanks to our talent engineers in the technology supports, Vanstron is very flexible in the market for the customized automation machine, covering from advanced thermal control technology to industrial 4.0 technology, IPC Hermes 9852 communication. We have been continuing to listen to the end users feedback and do the change in time.

History

Manufacturing operation since from 2016.

The company history is rather short but has achieved excellent results through developing new technologies and expending overseas markets.

2016
Vanstron created and setup the business for thermal, traceability, automation .

2017
Manufacturing operation in a 500 square meters factory plant.

2018
Receive the CE certificates for full range equipment

2019
Released the first generation Vanstron lasers & vertical heating oven

2020
Operating the overseas sales branch office in east of Europe and build the first demo center in Hungary

2021
Vanstron entered the important AVL list of international EMS company

2023
By working with SICK Germany for Hermes protocol communication & move to the 3000 square meters modern plant for lasers, ovens, and boards handling machines

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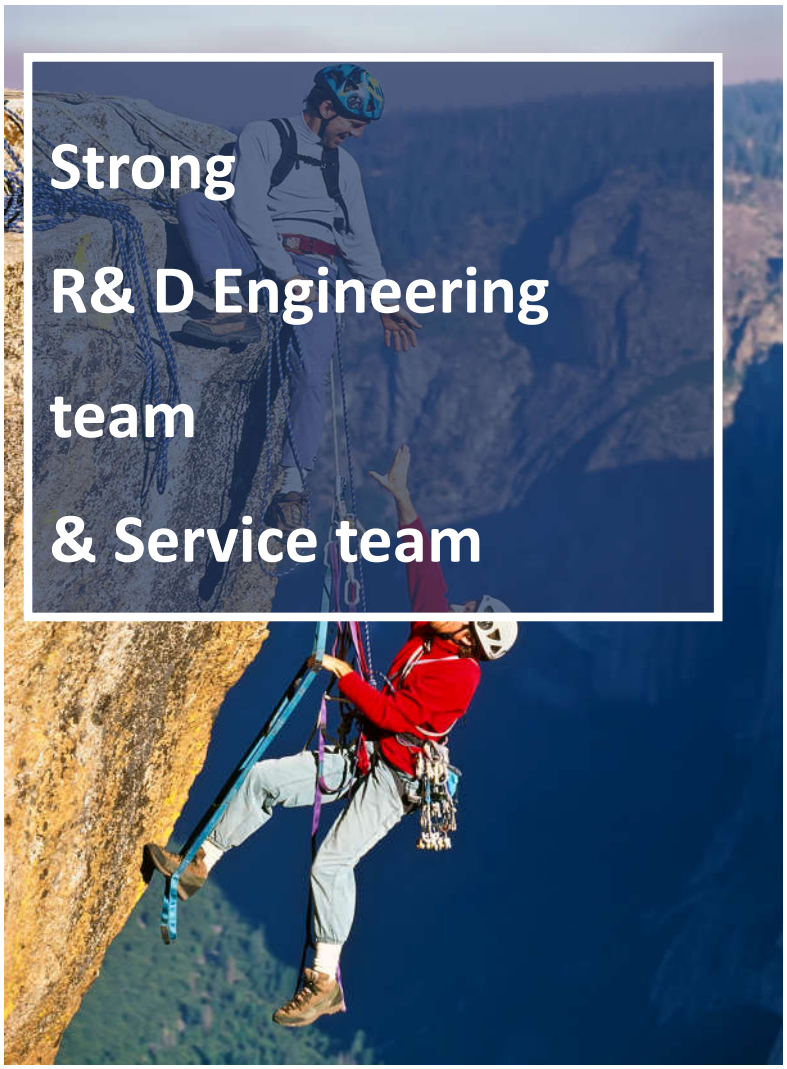

We are a high-tech enterprise with core technology, strong independent research and development, innovation and production capacity. We adhere to the spirit of consistent focus and continuous innovation, and constantly innovate in product strength. We respect knowledge, value talents, encourage competition, and look forward to Cooperation, build a platform for employees to display their talents, and create broad development opportunities and space for employees. Our products are attracting widespread attention with excellent performance and excellent quality, and have been recognized and favored by many well-known companies.

Total employees with 45 working in Vanstron, and the average age is no more than 35 years old and 30% of them with the Bachelor's degree, and more than 10% of them are with 10 years experience in the SMT industrial.

End users in Global market

With the good quality products and service, Vanstron received the international end users selectable

Normagrup Sense of Technology
Dextra
EAS ELECTRONICS
éolane
Visteon
ROSSI
GPV Accomplish More
UNICOBA
FOXCONN
Celestica
SANMINA
JABIL
METHODE AUTOMOTIVE SOLUTIONS
STE Ltd
makso assemblage
CITROX
Rantelon
VISHAY
flex
enics
Nidec
UNIVERSAL ELECTRONICS
KEMPPI
MULTILASER
NOTE YOUR MANUFACTURING PARTNER
VARIASS
legrand
Salcomp
LACROIX

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Inline

Vertical heating oven

Special for PCBA back-end process

Drying | Hardening

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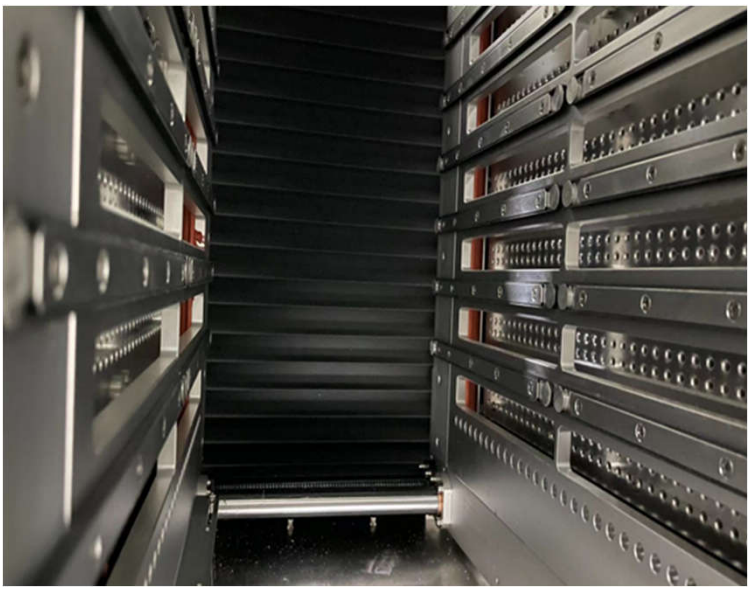
Drying | Hardening

High quality and reliablefunction of electronics

Hardening of coated printed circuit boards vertically with minimal space required

To ensure the reliability of these sensitive electronic sub-assemblies even in difficult environmental conditions, a coat of paint is applied to the printed circuit board and then dried in a special drying system. The coating protects the electronics from damage due to corrosion or other environmental influences such as moisture, chemicals and dust. It increases the lifetime and quality of the product many times over. Alternatively, complete sub-assemblies are cast and encapsulated.



Vanstron Thermal Systems provides innovative drying and hardening procedures that meet every requirement. The latest development is a vertical drying system which offers maximum performance with minimal space required. All industries which implement painting processes and process sensitive sub-assemblies with a protective paint coating can benefit from this system.

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Drying | Hardening

Maximum performance in minimum space with equipment

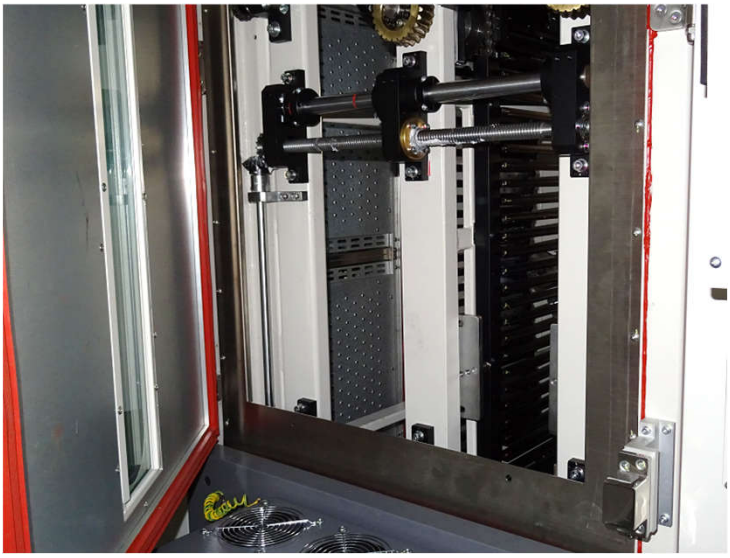
In-line, vertical automation of the epoxy cure process produces immediate, significant benefits in three areas:

1.In-line automation increases productivity by eliminating the labor needed to load and unload batch ovens.

2.It improves process consistency, and therefore quality, by reducing the time and temperature variations caused by the frequent opening of batch oven doors.

3.And, as floor allocation costs rise on all factory floors... and particularly in clean rooms... a vertical format oven requires as little as 2.8㎡of floor space for cure cycles for a long time;

4. Good for Back End Semiconductor and PCB curing an underfill process;



Key features

- Saves space through vertical transport principle
- Targeted air feed in the heating zones for reproducible temperature profiles
- Pre-heated supply air and the volume flow can be set for each heating zone
- Minimal heat emission due to outstanding insulation
- No thermal stress on the system mechanics due to external drive technology
- Optimum accessibility of the system technology and easy maintenance

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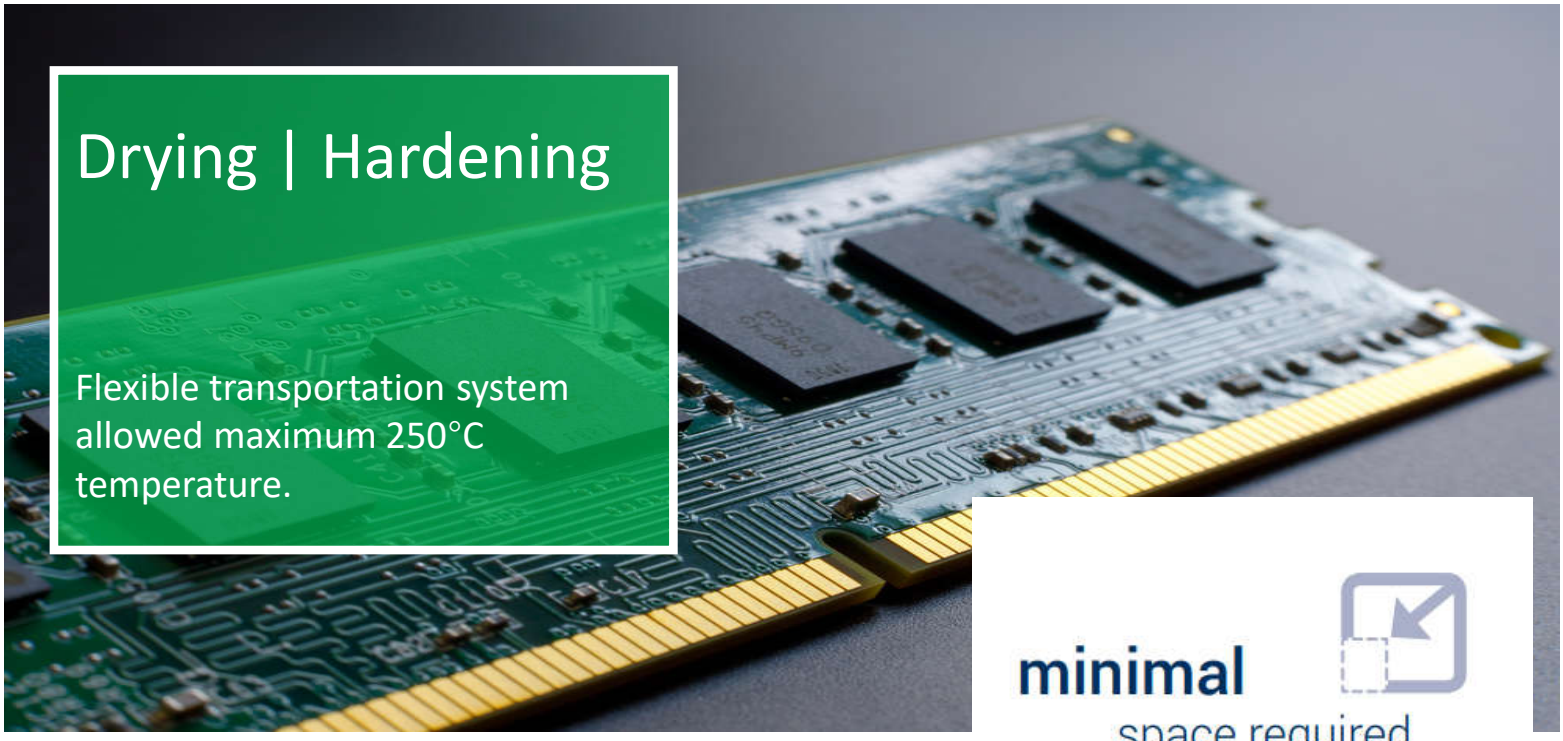
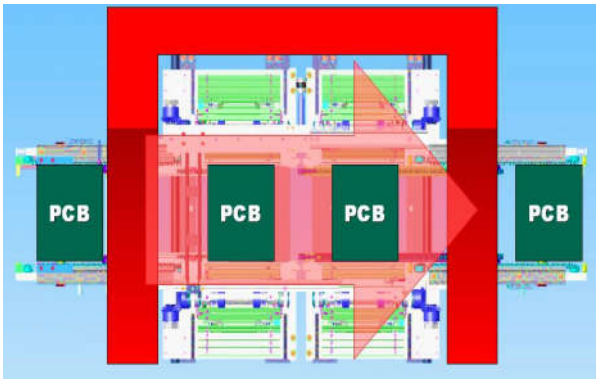


Drying | Hardening

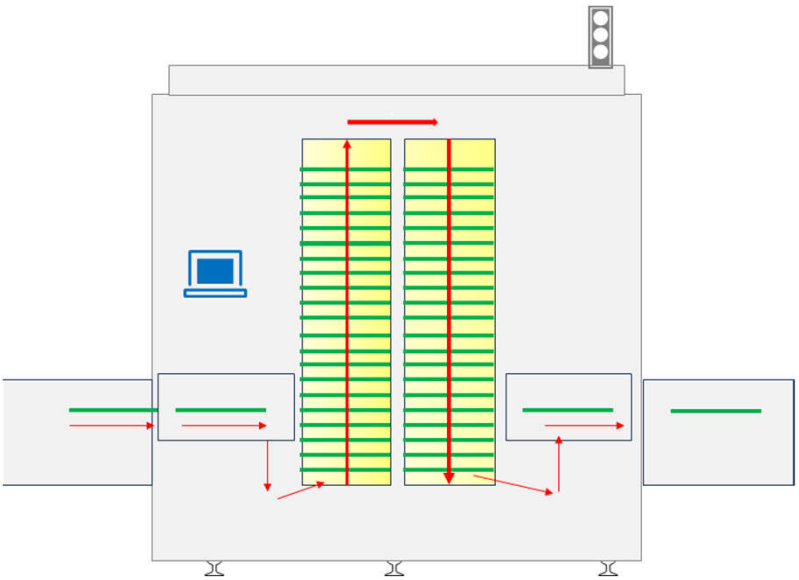
Flexible transportation system allowed maximum 250°C temperature.

minimal space required

The Vertical buffer oven System not only offers ideal drying and hardening processes, it is also extremely compact and space-saving thanks to its design. As a result of the vertical transport, the systems replaces, with a system length of only around 2.35 m, a comparable 40 m long horizontal furnace. With the innovative system design, you can save valuable space in your production hall.



Flexible transport width, where the transport by means of circulating goods carriers is automatically set to the respective circuit board size Several painting lines can thus feed different products with different circuit board transport widths in the mix to the system. With the vertical buffer oven, printed circuit boards with a **maximum height of 50 mm can be dried.**



Transportation logical

Due to the reliable transportation technology, our conveyors is without the thermal stress on the system mechanics in the oven chamber air where there is the temperature degree **reached maximum.250degree.**

The optional conveyor is using the chain as the key transportation elements.

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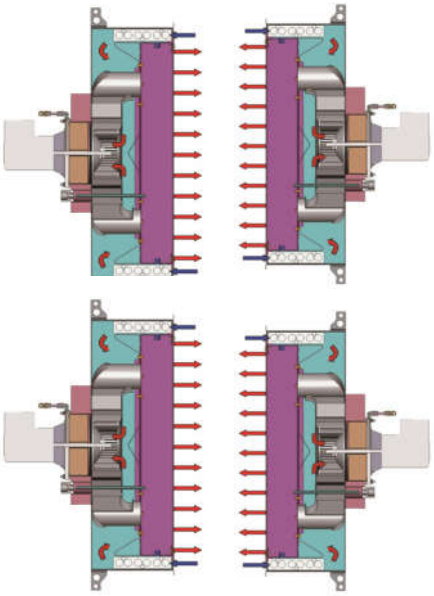
Drying | Hardening

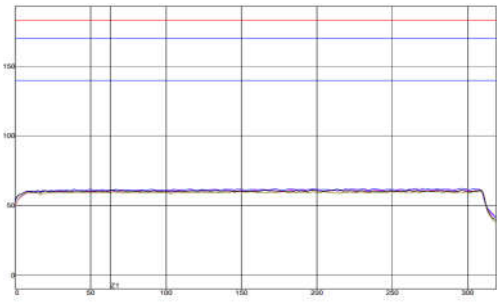
Best profiling capability for reproducible procedures.

Using innovative control, blower, heating and sensor components combined with a solid machine design, Vanstron supplies a high-quality system enabling you to run and log stable processes in your production operations.

- Return Air Flow returns into module through side suction holes and Outlet holes in grill are for convection gas flow only. All this improve our temperature stays constantly stable in the oven chamber and allows a good temperature uniformity.
- Independent air velocity controlling system allows flexible processing control to easily handle complicated curing and drying process.



- 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 chamber 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.



Technology Specifications

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Products name & Model: VBH- series		Descriptions
Inline Drying / Curing oven- (Vertical Buffer type)		
Standard Configuration	Heating system	12 Heating module system
		Forced convection heating ensures consistent, uniform cure profiles.
		Hot air speed adjusting by software;
		Temperature control accuracy on pallet surface: +/-1°C;
		Temperature distribution (air temperature): +/- 2°C
		Temperature range: Room temperature to Max.200°C;
		Temperature setting by software
		Process time: program by the software.
		Temperature control : PID closed loop control +SSR drive;
	Transportation system	Adopted with automatically boards infeed loader and outfeed unloader system
		Conveyor direction: right to left
		Conveyor heights:900mm+/-50mm
		Conveyor width adjustable from 50*460mm
		Max. length of product available: 50-500mm;
		Conveyor width adjustments: automatic
		Products components heights: top 30mm+ down 30 mm **(customized solution)**
		Buffer stock capacity: customized.
		Per Boards keeping in the oven for 60min or programming by user
		Boards per weight: 5kg Max.
		Loader / unloader edge distance for PCB and PCB with carrier :5mm (or specified)
		Buffer boards infeed lifting & outfeed lifting move speed: 0 - 300mm/s adjustable;
		Transportation control: Servo motor
		Easy eye-level access to internal controls;
		Products feeding system and Outlet unloading system
		Transmission mechanism with power-off self-locking protection function
		Japanese Imported high precision, high strength of ball screw rod and high temperaturebearing
		international standard SMEMA interface
	Extension conveyor	Extension conveyor with input and out conveyor for easily loading boards / pallets
	Control system	PLC controller + touch screen software
		-Temperature abnormal alarm
		-Board dropped alarm system
		-PID close loop temperature control
		- Error diagnosis system;
		- Operator password management
		-SMEMA communication
	Fume exhaust system	Standard exhaust system
	Electrical system	-CE certificates supported;
		Power supply: 380 V ,3 Phase 50hz;

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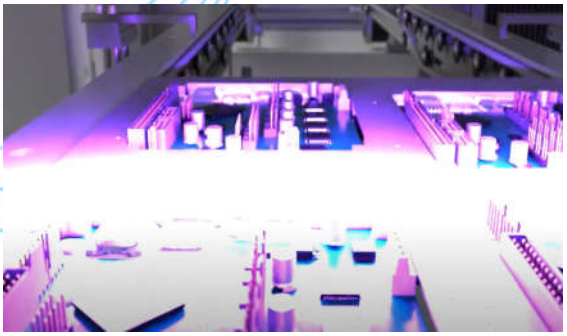
UV Curing ovens



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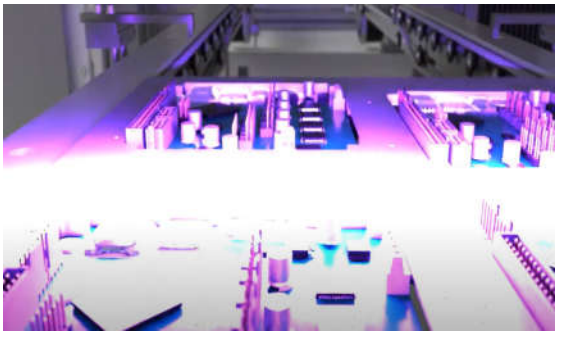
ExplorCuring UV Curing System

Main Features

• Modular configuration for curing topside of PCBs, optional for bottom –side or both sides of PCBs.
• A inline SMEMA-compatible chain conveyor allows processing of boards and is easily integrated with your existing Century conformal coating system.
• World-class Fusion® microwave lamp technology allows the focus height of the Ultraviolet lamps can be adjusted.
• The ventilation blower forces cooling air across the surface of the boards to keep the temperature and rate of rise at acceptable levels – safer and better for electronic components.
• UV lamp size and focal height are configurable to meet specific application requirements.
• Automatic shutters at the oven entrance and exit to prevent the UV light leak from the environment.
• Fully enclosed machine frame for clean and quiet operation, no UV light leak!
• Large access doors to all critical areas
• Being ready for high volume production throughout!
• CE certificates support to enhance the top safety machine.

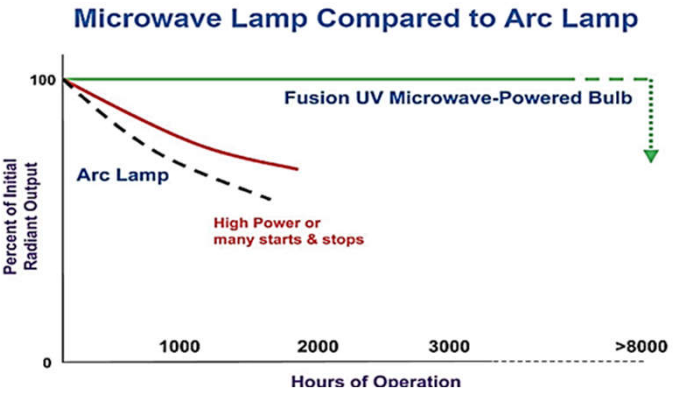


Partner with Heraeus

UV lamp technology advantages!

Electrodeless Technology

At the heart of the microwave technology is the tubular electrodeless bulb in an elliptical reflector that focuses an intense strip of UV energy onto the surface in front of it. These long life bulbs (no metal electrodes as required in conventional arc lamps) are known for their stable performance, high intensity and low maintenance operation. Frequent on/off operation has no adverse effect on UV output or bulb lifetime.

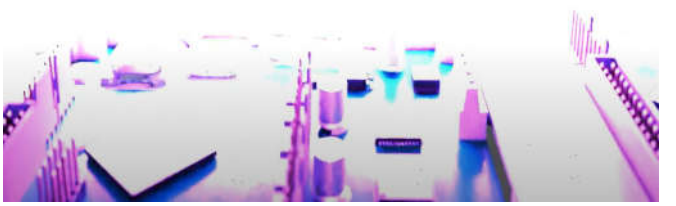


FUSION F300 series UV system

More Efficient and Faster UV Curing from High Peak Irradiance and Low Infrared

The heart of the UV-cure system is the lamp technology.
ExplorCuring UV system is using Fusion® microwave lamp technology to ensure the correct wave length of UV-light, but also a constant output during a guaranteed life time of at ***least 8000 hours!***

The focus height of the Ultraviolet lamps can be adjusted and a range of bulb types offers specific wavelengths to match your material curing parameters.



ExplorCuring UV Curing System

Specifications

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UV-Curing unit	
Type	**UV-Curing unit**
UV system	Heraeus- Fusion F-300S series or specify.
Model	ExplorCuring-XXX depending on type of light bulb your application requires.
Dimension (L x W x H)	1500mm x 1100 mm x 1662 mm
Tunnel length / height	1500 mm long 100 mm clearance on top and 100 mm clearance on bottom of chain.
Board size	Min: 30 mm (W) x 120 mm (L), smaller products need to be processed in a carrier. Max. 460 mm (W) x 500 mm (L)
Conveyor width adjustments	Motorized type, optional: automatic by software setting
Conveyor	Pin chain conveyor, 5 mm pins
Transport speed	0-5m/min
Safety	CE certificatesL,Shutters on entrance and exit to avoid operator contact with hazardous UV light.
Controller	Microprocessor PLC controller. Speed, shutters and UV on/off. The oven checks if boards are jammed in the transport conveyor and shuts down the UV source when a jammed board is detected.
User Interface	Touch screen on oven
Communications	SMEMA interface.
Cooling	External extraction to remove the generated heat from the process tunnel is needed.
Exhaust	Oven uses external exhaust.
Power	Depending on number of installed UV lights. Range: 3.6 kW - 18.6 kW.For more details: ask for Power Supply overview from one to max. 6 bulbs.
Air	Minimal required: 3.5 bar. Consumption: 5L/min. The standard oven can be equipped with lights from the top. When bottom emitters are required you need to order bottom light mounting option.
Top and Bottom	The standard oven can be equipped with lights from the top. When bottom emitters are required you need to order bottom light mounting option.
Light source	Fusion F-300 light source
Weight	300 kg with one lamp. Extra lamp appr. 35 kg per lamp.

ExplorCuring UV Curing System