

HX-F Series Vacuum Reflow Oven

Perfect technology to reduce solder voids











The HX-F series vacuum reflow oven is developed to meet the increasing needs from different industrial fields, especially for inline processing of PCB assemblies or products that require low solder void for critical performance applications. Heat dissipation applications such as thermal pads on SMT components can benefit from vacuum processing resulting in reduced solder voids, improved thermal transfer and increased yield.

The system has been designed with the requirements of large EMS, OEMs and high-volume automotive segments in mind. Processing temperatures of up to 350°C can be achieved with vacuum levels very low. Integrated controls and fully automatic vacuum operation makes production smart!

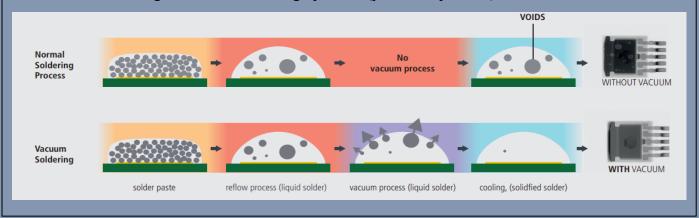


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Models	HX-F1030L		
Number of heating zones	Top 10 /bottom 10 (customized)		
Number of cooling zones	Top 3 /bottom 3		
Void rate	Approx.1%-2%		
Hot air blower speed regulation	Inverters		
Temperature control range	Room temperature ~ 300 °C can be set		
Production recipes	Multi-combination production recipes can be stored		
Rail structure	Single lane		
Pallet dimension (mm)	L400*D400 (customized)		
Mode of conveying	Chain drive		
Vacuum specifications:			
Minimum vacuum pressure	0.1Kpa		
Vacuum structure	Single chamber		
Vacuum pump flow	1500L/min		
Pressure relief time	≤10s		
Production efficiency	≥40s		
Optional nitrogen system			
Nitrogen structure	Full/local nitrogen filling		
Nitrogen system	Automatic/manual		

What is solder void?

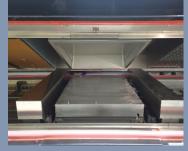
Solder void occurs when flux or solder paste oxidation is entrapped in the solder joint. There may be several contributing factors to solder void. The solder paste formulation, flux type, pad design, size of the pad, thermal profile and stencil design are examples of contributing factors. A common voiding area is in thermal pads. Shown below is soldering processes with and without vacuum reflow. Huaxin's vacuum reflow solution is designed to reduce voiding up to 3% (process dependent)



Vacuum reflow oven







Key Benefits

- Solder voiding to <3%
- Thermal uniformity +/- 1°C
- Superior profile control
- Full MES integration
- Reliable & efficient& precise

Key Features

- Vacuum module between peak and cooling zone
- Patented vacuum chamber design
- Inline system
- Vacuum chamber with supplement heating
- Vacuum and non-vacuum process possible
- All vacuum parameters are individually adjustable
- Nitrogen-capable, ensure soldering quality
- Easy maintenance access

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