

Electric Supply 电源供应	Standard 标准	Optional 选配
Power Input 电源输入	380V 3 Phase (75A/ phase)	220V, 400V, 415V, 440V, 480V
Frequency 频率	60Hz	50Hz
Dimensions 外形尺寸		
Overall Oven Dimensions [mm] 烤箱整机尺寸	1,700 x 2,200 x 1,807 (W*L*H)	
Typical Net Weight [Kg] 标准净重	3,000	
Chamber (Vessel) 腔体		
Processing Room Size [mm] 加工腔尺寸	536 x 664 x 408, 608 x 716 x 440, 614 x 770 x 440	
Chamber Diameter x Length [mm] 整个腔室直径X长度	860 x 1032	
Max. Operating Temp [° C] 最高温度	200 (Forced Air Convection)	
Max. Operating Pressure [kgf/cm ²] 最大操作压力	10	
Temperature Control 温度控制		
Temperature Uniformity [° C] 温度均匀性 [° C]	± 3	
Temperature Range [° C] 温度范围 [° C]	25 ~ 200	
Pressure Control 压力控制		
Pressure Uniformity [kgf/cm ²] 压力均匀性 [kgf/cm ²]	MAX. ± 0.1	
Gas (Body/ Chamber) 气体(主体/腔体)	CDA	N2
Vacuum 真空功能		
Min. Vacuum Level 最低真空度	N/A	0.1/ 10/ 100 torr + customizable time condition
Certification and Cleanroom 认证与洁净室		
Chamber (Vessel) Certification 腔体认证	select it from optional items	KOSHA, ASME, CSEL, PED, DOSH, JIS, ISI, CNS, etc
Oven Certification 固化炉资质证书	select it from optional items	SEMI S2/S8, ETL, CE, NFPA, etc
Cleanroom 洁净室等级	N/A	Class 10000/ 1000/ 100
Additional Features 附加类		
Oxygen Monitoring 氧含量监测	N/A	N2 [Down to 100ppm/ 15min]
HEPA Filter	N/A	For Class 1000/ 100
MES Barcode System MES条码系统	N/A	Option
Operation System 操作系统	PLC	PC
SECS/ GEM 通讯协议	N/A	Standard/ Non-Standard
Enhanced Fume Control 加强通风控制	N/A	applicable

HELLER Pressure Curing Oven

HELLER 压力固化炉

专为解决制造缺陷中的空洞问题

ZERO VOIDS & CONTAMINATION



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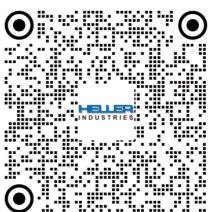
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Pressure Curing Oven



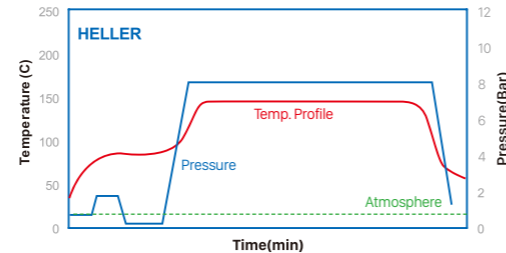
HELLER Pressure Curing Oven HELLER 压力固化炉

Heller PCO is used to minimize voiding and increase adhesion strength for bonding processes that require minimal voids, typically used in semiconductor packaging.

具有压力室的固化炉可有效减少空洞并增加粘接强度，适用于具有低空洞要求的固化应用。

Key Advantages 主要优势

- **Void-Free Curing:** High pressure curing to eliminate voids and improve reliability. 通过利用压力从固化应用中去掉空洞和气泡，提高薄膜和填充物的粘接强度。
- **Ultra-Clean Environment:** Oxygen ppm control & contamination-free curing atmosphere. 搭载氧气浓度控制，可选不同的洁净室选项，提供无污染的固化环境。
- **High Throughput & Uniformity:** Optimized heating/cooling for consistent results and productivity 均衡稳定的加热以及冷却系统，保证高可靠的生产效率。
- **Proven for Advanced Packaging:** Trusted in optical modules, AI servers, and 2.5D/3D packaging 专为先进封装打造：应用于光学模组、AI芯片、2.5D/3D封装技术。

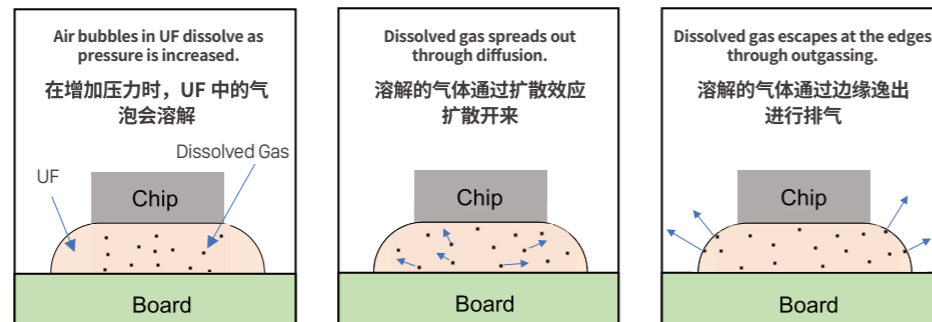


Applications 应用场景

- Die attach; Silver sintering 半导体芯片粘接、银烧结
- LCD 电子显示屏领域
- Advanced semiconductor packaging 电子封装
- New energy; Auto electronics 新能源与汽车电子
- Underfill Curing 耐高温胶水固化

Increasing pressure during curing removes voids

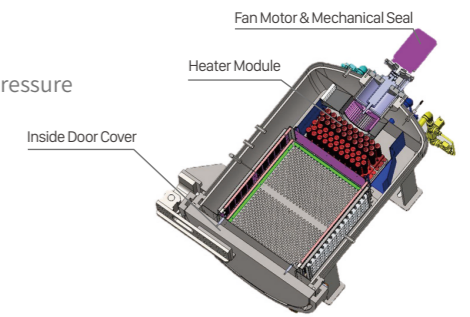
在固化过程中增加压力可去除空洞



Convection Heating Pressure Curing Ovens 对流加热压力固化炉

While maintaining constant pressure inside the chamber, air (or Nitrogen) is heated in convection heater module. Heated air moved by high-reliability fan motor and continuously circulates across the pressure chamber providing consistent heating on product.

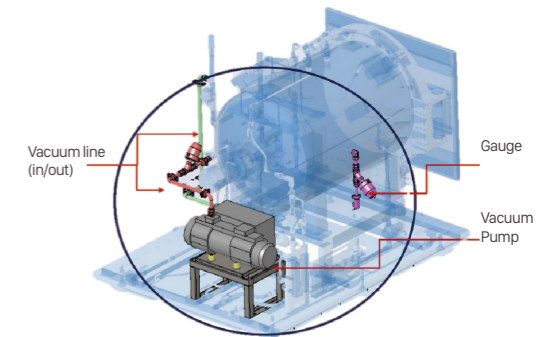
在保持腔室内压力恒定的同时，空气（或氮气）在对流加热模块中被加热。加热的空气由高可靠性的风扇马达驱动，并在压力室内持续循环，为产品提供一致的加热效果。



Vacuum Module Option 真空模块选项

An optional vacuum pump can be added for enhanced void removal. A vacuum is used at the beginning of the curing cycle to remove larger voids while the smaller voids are removed with pressure afterwards. Utilizing both vacuum and pressure can be used to achieve shorter overall cycle times.

可以添加一个可选的真空泵以增强空洞去除效果。在固化循环的开始阶段使用真空来去除较大的空洞，而较小的空洞随后通过压力去除。真空还用于在预热后去除产品的烟雾。另一个效果是从 CDA 到其他气体（如 N₂）的炉环境变化中，真空功能可以缩短更换时间。



High temperature & pressure TIM application 高温高压 TIM 工艺选项

Challenge 挑战

Voids in the TIM layer reduces heat conductivity and mechanical reliability. 焊料TIM层中的空洞降低了热传导性能和器件可靠性。

Solution 解决方案

Soldering under high pressure can eliminate voids. 在高压下进行焊接可以降低空洞率。



High temp 300°C; High pressure 20 Bar
高温 300°C 和高压 20Bar

