

HELLER INDUSTRIES, INC.

Heller Reflow Oven Specifications		
Model	1809 MARKIII (Air)	1809 MARKIII (Nitrogen)
Electric Supply		
Power Input (3 Phase) Standard	480 volts	480 volts
Breaker Size	100 amps @ 480v	100 amps @ 480v
kW	8.5 - 10.5 Continuous*	8.5 - 10.5 Continuous*
Typical Run Current	20 - 25 amps @ 480v	20 - 25 amps @ 480v
Optional Power Inputs Available	208/240/380/400/440/415 VAC	208/240/380/400/440/415 VAC
Frequency	50/60 Hz	50/60 Hz
Sequential Zone Turn On	S	S
Single Phase Operation	Not Available	Not Available
Dimensions		
Overall Length	183" (465 cm)	183" (465 cm)
Overall Width	54" (137 cm)	54" (137 cm)
Overall Height	63" (160 cm)	63" (160 cm)
Typical Net Weight	3500 lbs. (1588 kg)	3500 lbs. (1588 kg)
Typical Shipping Weight (Domestic)	4000 lbs. (1814 kg)	4000 lbs. (1814 kg)
Typical Shipping Weight (Export)	4500 lbs. (2041 kg)	4500 lbs. (2041 kg)
Computer Control		
AMD or Intel Based Computer	S	S
Recipe Storage	> 500	> 500
Flat Screen Monitor	S	S
Windows Operating System	Windows XP®	Windows XP®
Monitor mount	S	S
Auto Start Software	S	S
Data Logging	S	S
Password Protection	S	S
LAN Networking	O	O
Inert Atmosphere		
Minimum PPM Oxygen	-	10-25 PPM
Nitrogen Cooling	-	S
Waterless Cooling w/ Flux Separation System	-	O
Nitrogen On/Off Valve	-	O
Oxygen Monitoring System	-	O
Nitrogen Standby System	-	O
Sample Port in Reflow	-	S
Typical Nitrogen Consumption	-	500 - 700 SCFH **
Additional Features		
KIC / ECD Profiling Software	S	S
Signal Light Tower	S	S
Powered Hood Lift	S	S
Five (5) Thermocouple Profiling	S	S
30" Heater Modules	O	O
Redundant Alarm Sensors	O	O
Independent Alarm Scanner	O	O
KIC Profiler / ECD Profiler	O	O
Center Board Support	O	O
Board Drop Sensor	O	O
Board Counter	O	O
Bar Code Reader	O	O
Custom Paint & Decal	O	O
Battery Backup for Conveyor and PC	O	O
GEM/SECS Interfacing	O	O
Custom Engineering and Software	Available	Available

* Varies depending on Options included with the oven

** Tested at 500 PPM. Varies with PCB size and oven configuration

Specifications Continue on Reverse

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Heller Reflow Oven Specifications (Continued)

Model	1809 MARKIII (Air)	1809 MARKIII (Nitrogen)
Mesh Belt Conveyor		
Height From Floor	35.5" $\pm$ 2.0" (90 cm $\pm$ 5 cm)	35.5" $\pm$ 2.0" (90 cm $\pm$ 5 cm)
Maximum PCB Width *** Requires 30" Heater Modules	20" (50.8 cm) 24" (61 cm)***	10" (25 cm) 15" (38 cm) 18" (46 cm) 20" (50.8 cm) 24" (61 cm)***
Space Required Between PCB's	0.0" (0.0 cm)	0.0" (0.0 cm)
Conveyor Length On-Load	18" (46 cm) *	6" (15 cm) *
Conveyor Length Off-Load	18" (46 cm) *	6" (15 cm) *
Heated Tunnel Length	105" (254 cm)	105" (254 cm)
Process Clearance Above Mesh Belt	2.3" (5.8 cm)	2.3" (5.8 cm)
Mesh Belt Pitch	0.5" (1.27 cm)	0.5" (1.27 cm)
Maximum Conveyor Speed	74"/Min (188 cm/min.)	74"/Min (188 cm/min.)
Conveyor Direction Left to Right	S	S
Conveyor Direction Right to Left	O	O
Conveyor Speed Control Type	Closed Loop	Closed Loop
Edge Hold Conveyor System Option		
Height from Floor – Standard	37.0" $\pm$ 2.0" (94 cm $\pm$ 5 cm)	37.0" $\pm$ 2.0" (94 cm $\pm$ 5 cm)
Height from Floor – Optional	32.6" $\pm$ 3.9" / - .4" (83 cm $\pm$ 10 cm / -1 cm)	32.6" $\pm$ 3.9" / - .4" (83 cm $\pm$ 10 cm / -1 cm)
Clearance Above Conveyor Pins	1.15" (2.9 cm)	1.15" (2.9 cm)
Clearance Below Conveyor Pins	1.15" (2.9 cm)	1.15" (2.9 cm)
Length of PCB Support Pins	.187" (4.75 mm)	.187" (4.75 mm)
3 mm long support pins	O	O
Minimum/Maximum Board Width *** Requires 30" Heater Modules	2.0" – 18" (5 – 45.7 cm) 22" (55.8 cm)***	2.0" – 18" (5 – 45.7 cm) 22" (55.8 cm)***
Edge Hold Rail Heaters	Not Required	Not Required
Power Width Adjustment	S	S
Computer Controlled Width Adjust	O	O
Auto Lubrication System	S	S
Forced Convection Zones		
Top	9	9
Bottom	9	9
Heater Type	Instant response open coil	Instant response open coil
Heater Material	Nichrome	Nichrome
IR Panel Heaters (For Curing)	O	O
Temperature Control		
Accuracy of Temperature Controller	$\pm$.1°C	$\pm$.1°C
Cross-Belt Temperature Tolerance	$\pm$ 3.0°C	$\pm$ 3.0°C
Heater Wattage Per Zone	6000 w	6000 w
Temperature Range Standard	25-350°C	25-350°C
High Temperature Up to 400°C	O	O
High Temperature Up to 450°C	O	O
Insulation Type	Calcium Silicate	Calcium Silicate
UV Cure	O	O
Cooling Systems		
Number of Cooling Zones Standard	2 – (3 optional)	2 – (3 optional)
Additional Cooling Zones (External)	O	O
Water Cooling	-	O
Waterless Cooling	-	O

Notes: S = Standard, O = Optional. * A 12" (30 cm) Conveyor extension is an available option
A continuous program of product improvement may result in changes to specification and performance.
The right is reserved to institute these improvements without notice or liability.

Specifications continue on reverse.

HELLER

INDUSTRIES, Inc.

At the leading edge of electronic assembly

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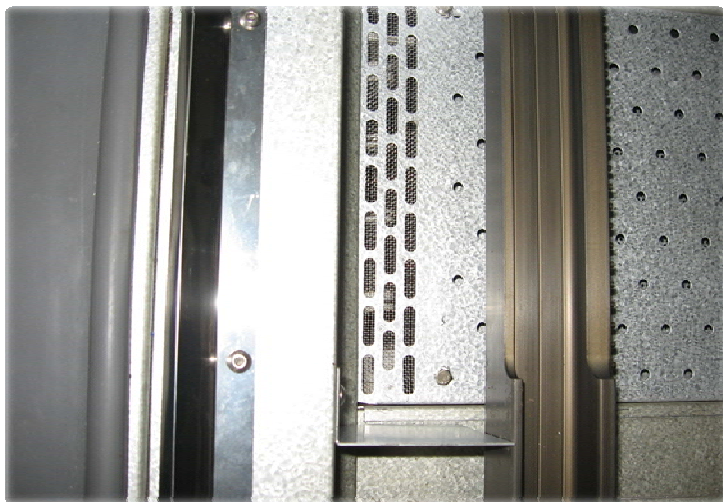
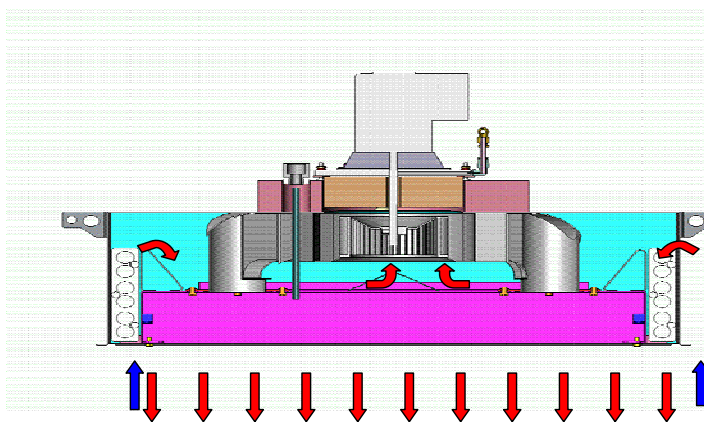
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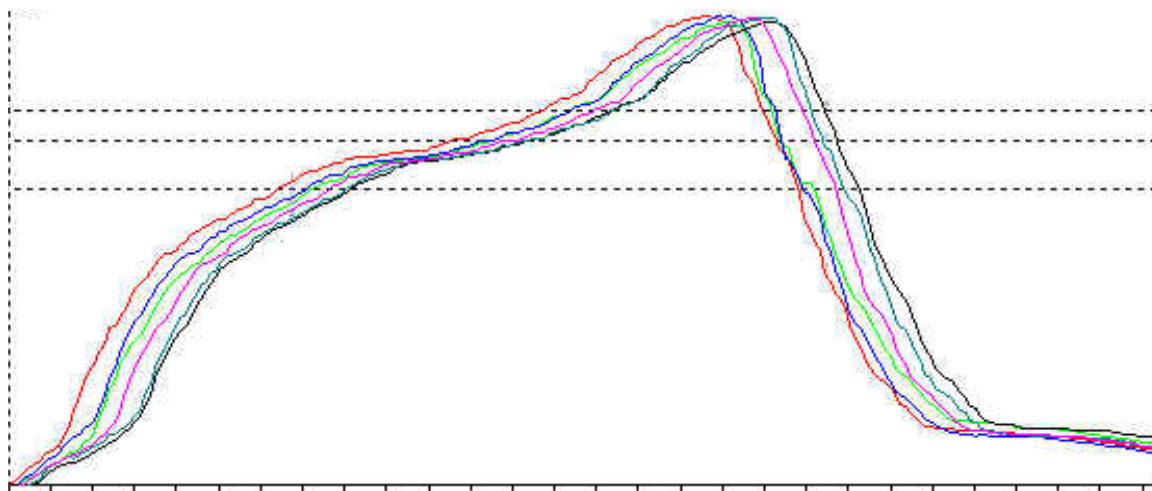
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二、Heller MKIII 回流焊机的主要特点

1、改良的新型的加热模组

新式 BFM 吹风系统，吹出的热风从两侧直接回流，大大提高了加热的均匀性，消除了温度曲线中两个温区之间的温度跳变。

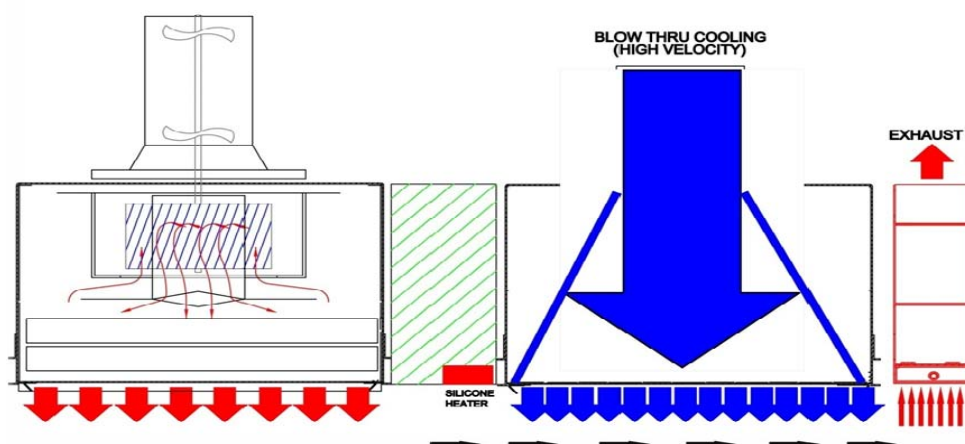




2、改良的新型冷却系统

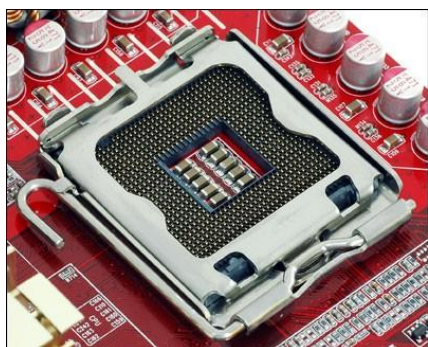
能够提供高于 3 度/秒的冷却速度，达到更低的出口温度。

新型直吹式冷却技术



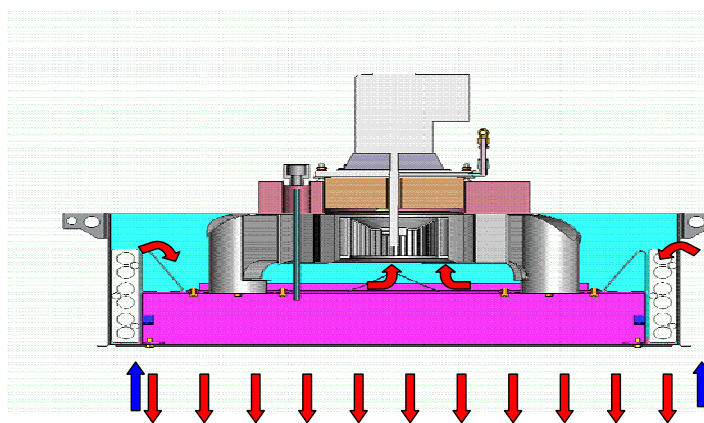


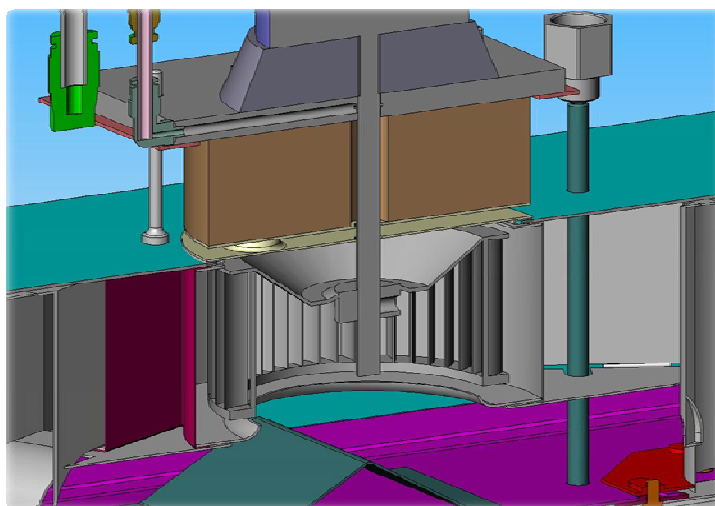
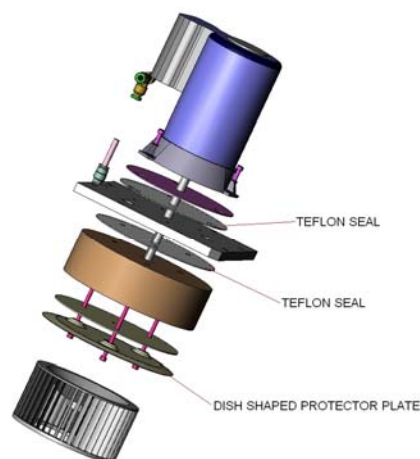
上述冷却系统，对于 LGA775 插座的冷却速率可大于 3°C/秒



3、新型的吹风马达

新型的 TFE 密封的吹风马达，大大降低了氮气的消耗，与以前的型号相比，氮气的消耗降低了 50%以上。500PPM at 500SCFH(14M³/Hr)仅氮气消耗一项，每年就可节约 RMB5000 元。





4、适用更大的 PCB 板的设计，最宽的电路板可以达到 508 毫米。

5、改良的助焊剂回收系统（氮气炉用）

新型 GEN X-箱式助焊剂管理系统，维护所需的时间降低，维护的周期增长，提高了设备的实际运行时间。

原来每 2 个星期需要进行一次维护，每次维护需要 4 个小时，每个月需要 8 个小时的时间维护。

现在，每 3 个星期需要进行一次维护，每次维护需要 5 个小时，每个月需要 6.6 个小时的时间维护。

这样，每年因为维护所节省的时间就达到 16.8 个小时。

6、大大降低了电源的消耗

新型的设备隔热系统，大大降低了设备的散热，设备的表面温度进一步降低。新型的加热系统减少了电源的消耗。

对于 Heller1809MKIII，对比以前相应的型号，电源的消耗降低了大约 30-50%。仅此一项，每年节约的电费约为 RMB25000.00。

因为设备的散热减少，降低了中央空调的负荷，减少了中央空调的用电量，进一步减少了设备的运行成本。

7、内置五通道温度曲线测试仪及 KIC 温度曲线分析软件

8、新型的轨道支撑系统

保证了轨道的直线性和长时间工作的稳定性。



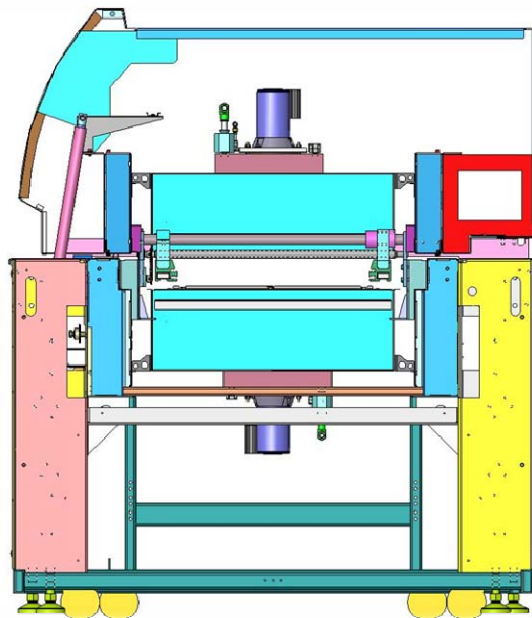
Dual Lead Screw
Gives Perfect
Straightness

9、新流线型外型设计

1、Heller 回流焊机评估使用的设备及配置

此次设备评估使用的回流焊机是 Heller1809MKIII 全热风回流焊机。





设备的主要配置如下：

NUMBER OF HEATED ZONES: 9 TOP AND BOTTOM 9 顶部/9 底部热温区

NUMBER OF COOLING ZONES: 2 2 个冷却温区

HEATED TUNNEL LENGTH: 100" (254 CM) 加热区总长 100 英寸 (254 厘米)

OVERALL SYSTEM LENGTH: 183" (465 CM) 回流焊机长度 183 英寸 (465 厘米)

VOLTAGE: 380V, 3-PHASE 电源: 3 相 380 伏

HEAVY DUTY PACKING: STD 出口型包装

**BATTERY BACKUP WITH HOOD LIFT: STD 重载 UPS 不间断电源，
可提供电动打开顶盖的动力。**

SMEMA INTERFACE: STD 标准 SMEMA 接口

AUDIBLE ALARM: STD 声音报警功能

BOARD GUIDES AT ENTRANCE: STD 输入端 PCB 导向板。

MESH BELT: STD 网带

EDGE HOLD CONVEYOR - POWER ADJUST: STD 电路板传送轨道宽度电动调节

AUTOMATIC LUBRICATION SYSTEM: STD 电路板传送轨道自动润滑系统

Computer Control System including: 电脑控制系统,配置如下:

IBM, Celeron 1.4GHz, 20G, CD Rom, 15" LCD Color Monitor, Windows XP

Complete Software Package including: 电脑软件包

Password Protection 密码保护

SPC data and alarm logging with timed download or printout capability
过程管理数据和报警功能, 带定时下载和打印输出功能

5 Thermocouple "Real Time" profiling 5个热电偶, 可用于加热曲线检测

Profile Graph Storage of up to 500 graphs 可存储多达 500 个加热曲线。

KIC Profile prediction KIC 温度曲线测试功能

Moveable slope window providing average slope over given portion of graph
可分析各曲线每段状态

6 color graphics to distinguish between graph lines 6 种颜色曲线图

PID temperature control to ensure zone temperature stability to $\pm 0.1^{\circ}\text{C}$
PID 温度控制, 保证温控精度 $\pm 0.1^{\circ}\text{C}$

Signal Light Tower to indicate system status 灯塔显示设备运行状态

6 moveable casters for easy relocation around shop floor 6 个地脚轮可方便移动机器

Power controlled Clamshell Hood Lift 炉盖动力开启

Three years Warranty on Heaters and Blowers 加热风机和加热器三年保用