Model	Heller® Reflow Oven Specifications						
Mesh Belt Conveyor Height From Floor							
Height From Floor	Mesh Belt Conveyor			, ,			
Space Required Between PCB's 0.0" (0.0 cm) 0.0" (0.0 cm)				5 cm)			
Space Required Between PCB's 0.0" (0.0 cm) 0.0" (0.0 cm) 1.0" (0.0 cm) Conveyor Length On-Load 18" (46 cm) * 2" (5 cm) * 6" (15 cm) * 6"	Maximum PCB Width	22" (56 cm)	22" (56 cm)	(38 cm) 18" (46			
Conveyor Length Off-Load 18" (46 cm) * 2" (5 cm) * 6" (15 cm) * Heated Tunnel Length 105" (267 cm) 105" (267 cm) 105" (267 cm) 105" (267 cm) Process Clearance Above Mesh Belt 2.3" (5.8 cm) 2.3" (5.8 cm) N/A (No Mesh belt incld.) Mesh Belt Pitch 0.5" (1.27 cm) 0.5" (1.27 cm) N/A Maximum Conveyor Speed 74"/Min (188 cm/min.) cm/min.) cm/min.) cm/min.) cm/min. Conveyor Direction Left to Right 0 0 0 0 Left Conveyor Speed Control Type Closed Loop Closed Loop Closed Loop Edge Hold Conveyor System Option	Space Required Between PCB's		0.0" (0.0 cm)				
Heated Tunnel Length 105" (267 cm) 105" (267 cm) 105" (267 cm) Process Clearance Above Mesh Belt 2.3" (5.8 cm) 2.3" (5.8 cm) N/A (No Mesh belt incld.)	Conveyor Length On-Load	18" (46 cm) *	2" (5 cm) *	6" (15 cm) *			
Process Clearance Above Mesh Belt 2.3" (5.8 cm) N/A (No Mesh belt incld.) Mesh Belt Pitch 0.5" (1.27 cm) N/S Mesh Belt Pitch 0.5" (1.27 cm) N/A Maximum Conveyor Speed 74"/Min (188 cm/min.) 74"/Min (188 cm/min.) Conveyor Direction Left to Right S S Right O O O Conveyor Direction Right to Left O O O Conveyor Speed Control Type Closed Loop Closed Loop Closed Loop Edge Hold Conveyor System Option Closed Loop Closed Loop Closed Loop Height from Floor – Standard 37.0" ± 2.0" (94 ± 5 cm) 37.0"	Conveyor Length Off-Load			6" (15 cm) *			
Belt 0.5" (1.27 cm) 0.5" (1.27 cm) N/A Maximum Conveyor Speed 74"/Min (188 cm/min.) 74"/Min (188 cm/min.) 74"/Min (188 cm/min.) Conveyor Direction Left to Right S S S Conveyor Direction Right to Left O O O Conveyor Speed Control Type Closed Loop Closed Loop Closed Loop Edge Hold Conveyor System Option Teight from Floor – Standard 37.0" ± 2.0" (94 ± 5 cm) 32.6" + 3.9" / -4" 32.6	Heated Tunnel Length						
Maximum Conveyor Speed 74"/Min (188 cm/min.) 74"/Min (188 cm/min.) 74"/Min (188 cm/min.) Conveyor Direction Left to Right S S S Conveyor Direction Right to Left O O O O Conveyor Speed Control Type Closed Loop Closed Loop Closed Loop Closed Loop Edge Hold Conveyor System Option Height from Floor – Standard 37.0" ± 2.0" (94 ± 5 cm) 5 cm) 4 cm / 1 cm / 2 cm) (83 cm + 10 cm / -1 cm) 32.6" +3.9" / -4" 32.6" +3.9"		2.3" (5.8 cm)	2.3" (5.8 cm)				
Conveyor Direction Left to Right S S S S S Right	Mesh Belt Pitch	0.5" (1.27 cm)	0.5" (1.27 cm)	N/A			
Conveyor Direction Left to Right S S S S Conveyor Direction Right to Left Conveyor Direction Right to Left Conveyor Speed Control Type Closed Loop Closed Loop Closed Loop Closed Loop Edge Hold Conveyor System Option	Maximum Conveyor Speed	*	,	,			
Conveyor Direction Right to Left O O O Conveyor Speed Control Type Closed Loop Closed Loop Closed Loop Edge Hold Conveyor System Option 37.0" ± 2.0" (94 ± 5 cm) 37.0" ± 2.0" (91 ± 5 cm) 37.0" ± 2.0" (9	•						
Height from Floor – Standard 37.0" ± 2.0" (94 ± 5 cm) 5 cm) 37.0" ± 2.0" (94 ± 5 cm) 5 cm) 32.6" +3.9" /4" 32.6" +3.9"	Conveyor Direction Right to	0	0	0			
Height from Floor – Standard 37.0" ± 2.0" (94 ± 5 cm) 5 cm) 37.0" ± 2.0" (94 ± 5 cm) 5 cm) 32.6" +3.9" /4" 32.6" +3.9"	Conveyor Speed Control Type	Closed Loop	Closed Loop	Closed Loop			
Height from Floor – Standard 37.0" ± 2.0" (94 ± 5 cm) 37.0" ± 2.0" (94 ± 5 cm) 37.0" ± 2.0" (94 ± 5 cm) 3 cm 4 cm 5 cm 32.6" +3.9" /4" 32.6" +3.9" /4" 32.6" +3.9" /4" 32.6" +3.9" /4" 32.6" +3.9" /4" 32.6" +3.9" /4" 32.6" +3.9" /4" (83 cm + 10 cm / - 1 cm) cm) cm cm cm cm cm cm							
Clearance Above Conveyor Pins		37.0" <u>+</u> 2.0" (94 <u>+</u>					
Clearance Above Conveyor Pins 1.15" (2.9 cm) 1.15" (2.9 cm) 1.15" (2.9 cm) Clearance Below Conveyor Pins 1.15" (2.9 cm) 1.15" (2.9 cm) 1.15" (2.9 cm) Length of PCB Support Pins 1.187" (4.75 mm) 1.187" (4.75 mm) 1.187" (4.75 mm) 3 mm long support pins O O O Minimum/Maximum Board Width 2.0" − 20" (5 − 50.8 cm) 2.0" − 20" (5 − 50.8 cm) 2.0" − 20" (5 − 50.8 cm) Width So.8 cm) S S S Edge Hold Rail Heaters Not Required Not Required Not Required Not Required Power Width Adjustment S S S S Computer Controlled Width O O O O Auto Lubrication System S S S S Forced Convection Zones S S S S Top 9 9 9 9 Bottom 8 8 8 Heater Type Instant response open coil Open coil Nichrome Nichrome	Height from Floor – Optional	32.6" +3.9" /4"	32.6" +3.9" /4"	32.6" +3.9" /4"			
Clearance Below Conveyor Pins 1.15" (2.9 cm) 1.15" (2.9 cm) 1.15" (2.9 cm) Length of PCB Support Pins .187" (4.75 mm) .187" (4.75 mm) .187" (4.75 mm) 3 mm long support pins O O O Minimum/Maximum Board Width 2.0" - 20" (5 - 50.8 cm) 2.0" - 20" (5 - 50.8 cm) 2.0" - 20" (5 - 50.8 cm) Width Solution Not Required Not Required Not Required Power Width Adjustment Solution Solution Solution Computer Controlled Width Oolution Oolution Oolution Adjust Solution Solution Solution Solution Forced Convection Zones Solution Solution Solution Solution Solution Bottom Solution Solution Solution Solution Solution Heater Type Instant response open coil Open coil Open coil Open coil Heater Material Nichrome Nichrome Nichrome Nichrome Profile Change Time 1 - 15 minutes 1 - 15 minutes 1 - 15 minutes <td></td> <td></td> <td>cm)</td> <td>· ·</td>			cm)	· ·			
Length of PCB Support Pins .187" (4.75 mm) .187" (4.75 mm) .187" (4.75 mm) 3 mm long support pins O O O Minimum/Maximum Board Width 2.0" − 20" (5 − 50.8 cm) 2.0" − 20" (5 − 50.8 cm) 2.0" − 20" (5 − 50.8 cm) Width So.8 cm) cm) Not Required Power Width Adjustment So.8 cm So.8 cm Computer Controlled Width Oo.9 cm. Oo.9 cm. Adjust So.9 cm. So.9 cm. Auto Lubrication System So.9 cm. So.9 cm. Forced Convection Zones So.9 cm. So.9 cm. Top 9 cm. 9 cm. 9 cm. Bottom 8 cm. 8 cm. 8 cm. Heater Type Instant response open coil open coil open coil Heater Material Nichrome Nichrome Nichrome Profile Change Time 1 - 15 minutes 1 - 15 minutes 1 - 15 minutes Temperature Control Accuracy of Temperature ± 0.1°C ± 0.1°C ± 0.1°C	*	1.15" (2.9 cm)					
3 mm long support pins O O O Minimum/Maximum Board Width 2.0" − 20" (5 − 50.8 cm) 2.0" − 20" (5 − 50.8 cm) 2.0" − 20" (5 − 50.8 cm) Width 50.8 cm) cm) Not Required Power Width Adjustment S S S Computer Controlled Width O O O Adjust S S S Auto Lubrication System S S S Forced Convection Zones S S S Top 9 9 9 9 Bottom 8 8 8 8 Heater Type Instant response open coil Instant response open coil open coil Nichrome Nichrome Nichrome Nichrome Nichrome Nichrome 1 - 15 minutes 1 - 10 °C ± 0.1 °C				1.15" (2.9 cm)			
Minimum/Maximum Board Width 2.0" - 20" (5 - 50.8 cm) 2.0" (5 - 50.8 cm) <t< td=""><td></td><td>.187" (4.75 mm)</td><td>.187" (4.75 mm)</td><td>.187" (4.75 mm)</td></t<>		.187" (4.75 mm)	.187" (4.75 mm)	.187" (4.75 mm)			
Width 50.8 cm) cm) cm) Edge Hold Rail Heaters Not Required Not Required Power Width Adjustment S S Computer Controlled Width O O Adjust S S Auto Lubrication System S S Forced Convection Zones S S Top 9 9 9 Bottom 8 8 8 Heater Type Instant response open coil Instant response open coil Instant response open coil Heater Material Nichrome Nichrome Nichrome Profile Change Time 1 - 15 minutes 1 - 15 minutes Temperature Control ± 0.1°C ± 0.1°C ± 0.1°C Controller ± 0.1°C ± 0.1°C ± 0.1°C				_			
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$		`					
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	Edge Hold Rail Heaters	Not Required	Not Required	Not Required			
AdjustSSAuto Lubrication SystemSSForced Convection ZonesTop99Bottom88Heater TypeInstant response open coilInstant response open coilHeater MaterialNichromeNichromeNichromeProfile Change Time $1 - 15$ minutes $1 - 15$ minutesTemperature ControlAccuracy of Temperature $\pm 0.1^{\circ}$ C $\pm 0.1^{\circ}$ C $\pm 0.1^{\circ}$ CController $\pm 0.1^{\circ}$ C $\pm 0.1^{\circ}$ C $\pm 0.1^{\circ}$ C							
Auto Lubrication System S S S S S Forced Convection Zones Top 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9		0	0	О			
Forced Convection Zones Top 9 9 9 Bottom 8 8 8 Heater Type Instant response open coil Instant response open coil Instant response open coil Heater Material Nichrome Nichrome Nichrome Profile Change Time 1 - 15 minutes 1 - 15 minutes 1 - 15 minutes Temperature Control Accuracy of Temperature $\pm 0.1^{\circ}$ C $\pm 0.1^{\circ}$ C $\pm 0.1^{\circ}$ C Controller		S	S	S			
Top 9 9 9 Bottom 8 8 8 Heater Type Instant response open coil Instant response open coil Instant response open coil Heater Material Nichrome Nichrome Nichrome Profile Change Time $1 - 15$ minutes $1 - 15$ minutes $1 - 15$ minutes Temperature Control Accuracy of Temperature $\pm 0.1^{\circ}$ C $\pm 0.1^{\circ}$ C $\pm 0.1^{\circ}$ C Controller		<u>L</u>					
Bottom 8 8 8 Heater Type Instant response open coil Instant response open coil Instant response open coil Heater Material Nichrome Nichrome Nichrome Profile Change Time $1 - 15$ minutes $1 - 15$ minutes $1 - 15$ minutes Temperature Control Accuracy of Temperature $\pm 0.1^{\circ}$ C $\pm 0.1^{\circ}$ C $\pm 0.1^{\circ}$ C Controller		9	9	9			
		8	8	8			
Heater Material Nichrome Nichrome Nichrome Profile Change Time $1 - 15$ minutes $1 - 15$ minutes $1 - 15$ minutes Temperature Control Accuracy of Temperature $\pm 0.1^{\circ}$ C $\pm 0.1^{\circ}$ C $\pm 0.1^{\circ}$ C Controller	Heater Type						
Temperature Control Accuracy of Temperature $\pm 0.1^{\circ}\text{C}$ $\pm 0.1^{\circ}\text{C}$ $\pm 0.1^{\circ}\text{C}$ Controller	Heater Material	•					
Accuracy of Temperature $\pm 0.1^{\circ}\text{C}$ $\pm 0.1^{\circ}\text{C}$ $\pm 0.1^{\circ}\text{C}$	Profile Change Time	1 - 15 minutes	1 - 15 minutes	1 - 15 minutes			
Controller							
	Accuracy of Temperature	± 0.1°C	± 0.1°C	± 0.1°C			
		± 2.0°C	<u>+</u> 2.0°C	<u>+</u> 2.0°C			

Tolerance			- 1		
Heater Wattage Per Zone		6000 w		6000 w	6000 w
Temperature Range Standard		25-450°C		25-450°C	25-450°C
Insulation Type		Calcium Silicate		Calcium Silicate	Calcium Silicate
UV Cure		0		O	0
Cooling Systems					
Number of Cooling Zones				2	2
Standard					
Additional Cooling Zones		0	-	0	0
Water Cooling		-		-	0
Waterless Cooling		-		-	0
					Specifications continu
Model	1	.800	1	1800 EXL-	1800 EXL-
Model	EXL		S	(Air)	N (Nitrogen)
Electric Supply	LZX	(1111)	D	(1111)	11 (Tittogeti)
Power Input (3 Phase)		480 volts		480 volts	480 volts
Standard		480 VOITS		480 VOIIS	480 VOIIS
Breaker Size	10	0 amps @ 480v	1	00 amps @ 480v	100 amps @ 480v
Typical Run Current	25-30 amps @ 480v			25-30 amps @ 480v	25-30 amps @ 480v
Optional Power Inputs	208	/ 240 / 380 / 400 /		208 / 240 / 380 /	208 / 240 / 380 / 400 /
Available	415 VAC			400 / 415 VAC	415 VAC
Frequency	50/60 Hz			50/60 Hz	50/60 Hz
Sequential Zone Turn On		S		S	S
Single Phase Operation		Not Available		Not Available	Not Available
Dimensions		i tot i i tuliuoio		TiotTivaliable	1 (ot 11 validote
Overall Length	183" (465 cm)		Г	150" (381 cm)	183" (465 cm)
Overall Width	54" (137 cm)			54" (137 cm)	54" (137 cm)
Overall Height	63" (160 cm)			63" (160 cm)	63" (160 cm)
Typical Net Weight	3500 lbs. (1588 kg)			500 lbs. (1588 kg)	3500 lbs. (1588 kg)
Typical Shipping Weight		00 lbs. (1814 kg)		000 lbs. (1814 kg)	4000 lbs. (1814 kg)
(Domestic) Typical Shipping Weight	450	00 lbs. (2041 kg)	45	500 lbs. (2041 kg)	4500 lbs. (2041 kg)
(Export)					
Computer Control	-		_		
AMD K-6/Pentium II or greater		S		S	S
14" SVGA Monitor	S			S	S
Flat Screen Monitor	0			S	0
Windows Operating System	Windows 98®			Windows 98®	Windows 98®
DOS 6.2 Operating System	О			0	0
or higher		G		~	9
Computer Swing Arm	S			S	S
Auto Start Software	S			S	S
Data Logging	S			S	S
Profile Storage of up to 500 profile graphs		S		S	S
Password Protection	S			S	S
		0		0	0
LAN Networking		0			
LAN Networking Inert Atmosphere		- U	L		

Flexible Entrance and Exit Doors	-	-	S
Nitrogen Cooling	-	-	S
Waterless Cooling w/ Flux Separation System	-	-	S
Nitrogen On/Off Valve	-	-	0
Oxygen Monitoring System	-	-	S
Nitrogen Standby System	-	-	S
Sample Port in Reflow	-	-	S
Typical Nitrogen Consumption	-	-	800-1000 SCFH
Additional Features		L	
KIC Profiling Software	S	S	S
Signal Light Tower	S	S	S
Powered Hood Lift	S	S	S
Five (5)Thermocouple Profiling	S	S	S
Air Flux Separation System	0	0	N/A
Redundant Alarm Sensors	0	0	0
Independent Alarm Scanner	0	0	O
Center Board Support – Specify Power Adjust, Computer Control or Thin Profile	0	0	0
Board Drop Sensor	0	0	0
Board Counter	0	0	0
Bar Code Reader	0	0	0
Custom Paint & Decal	0	0	0
Battery Backup for Conveyor and PC	S	S	S
GEM/SECS Interfacing	0	0	0
Custom Engineering and Software	Available	Available	Available

Continue on Reverse