

# The fastest large-board machine on the market

Internet infrastructure applications are driving the need for large board capability in process manufacturing lines. The challenge is to populate these larger boards without sacrificing throughput. Universal Instruments' 4797L HSP is designed specifically to address your large board applications, while providing the performance and flexibility you've come to expect from the HSP high speed placement system.

The 4797 is the newest series in the HSP family, delivering unsurpassed performance and reliability in a technically advanced design with fewer moving parts. The innovations of the 4797L HSP allow you to achieve higher throughput, greater utilization, and superior performance over other high speed placement systems. All this while providing the flexibility to populate boards up to 457mm x 610mm (18" x 24").

### Machine Performance

Placement Rate	48,000 cph
Placement Tact Time	0.075 sec. (within the X,Y table movement of 12mm, with picks within the same feeder)
Feeder Axis Tact Time	.09 sec. (one lane movement) / .08 sec. with dual-track feeder
Programmable Orientation	0° - 359.9° in 0.01° increments
Placement Pressure	Not programmable; however, component Z-height is automatically adjusted by the machine and each nozzle maintains a nominal 100g - 150g spring-loaded placement force
Final Placement Performance	100 parts per million, 99.99%
Intrinsic Availability	95%
Placement Accuracy	X,Y Axis MELFs: ±0.08mm (0.003") @ 3 sigma Chips: ±0.08mm (0.003") @ 3 sigma Leaded Parts: ±0.05mm (0.002") @ 3 sigma
Feeder Slots	Up to 144 unique components (8mm tape) Up to 192 unique components with dual-track 8mm feeders
Feeder Types	Tape (8mm to 44mm), 8mm dual-track tape, bulk
Placement Head	Twelve 5-spindle, advanced direct-drive placement heads

### Component Range

	Minimum	Maximum
Length	0.3mm (0.012")	26mm (1.024")
Width	0.6mm (0.024")	26mm (1.024")
Thickness	0.3mm (0.012")	6.5mm (0.256")
Ball/Lead Pitch	0.5mm (0.020")	1.27mm (0.050")
Lead Width	0.18mm (0.007")	—
Ball Size	0.3mm (0.012")	—
MELF Length	1.6mm (0.063")	5.9mm (0.232")
MELF Diameter	0.8mm (0.031")	2.2mm (0.087")

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## PCB Dimensions

	Minimum	Maximum
Length	50mm (1.968")	610mm (24")
Width	50mm (1.968")	460mm (18")
Thickness <sup>1</sup>	0.5mm (0.02")	5mm (0.197")
Weight	–	2kg (4.4 lbs)
Top-Side Clearance	6.5mm (0.256")	–
Standard Bottom-Side Clearance	30.0mm (1.181")	–

<sup>1</sup>PCMCIA and ceramic board applications require factory review and quote.

## Options

Component Library Data Teach  
 Pattern Program Data Teach  
 Barcode Validation System (BVS)  
 Traceability Package  
 BGA/CSP Recognition  
 Black Light PEC Camera  
 GEM/SECS II

## Software

UCT-53 offline programming utility  
 Microsoft® Windows 2000® operating system

## Service Requirements

**Electrical** 200 VAC (±20 VAC)  
**Pneumatic** 28 liters/minute @ 4.1 bar (1 scfm @ 60psi)

## Machine Dimensions

Length	Depth	Height	Weight
6,000mm (236.2")	2,155mm (84.8")	Max. 2,100mm (82.7")	4,600kg (10,364lbs.)

