

HP-100

Pick & Place

Specifications

Dimensions Hybrid

Base l.w.h. Off-line 1500 x 1700 x 1500 + 500mm for signal light
In-line 1500 x 1200 x 1500 + 500mm for signal light

Board thickness-size

min. 0.5mm - max. 4.5mm thick
min. 30 x 30mm - off-line max. 330 x 450mm
in-line max. 300 x 500mm

Maximum Warpage

0.5mm up - 1mm down

Component Height

Top max. 16mm - bottom max. 30mm

Placement Accuracy

±50µm at 3 sigma with 1µm encoders

Placement Rate

Up to 4,600 cph IPC rated 6000 cph on tact time

Components

Chip, MELF, SOT, SOIC, TSOP, TNT, PLCC, QFP, BGA, LCC, µBGA, etc. smallest pitch 0.3mm

Component Size

0201 up to field of view of 42 x 42mm wide (prepared for 01005)

Motion

X and Y, AC / DC servo motors with Linear encoder and digital motion controller

Control

Integrated microprocessor controller with CAN interface combined with PC running on Windows®

Axis Characteristics	X	Y	Z	Theta
Increment	0.001mm	0.001mm	0.02mm	0.045 degr.
Maximum Speed	3 m/s	3 m/s	3 m/s	-
Maximum Acceleration	3G	3G	-	-

Interface

Fully SMEMA compatible,
Conveyor height 865 to 970mm

Feeder Characteristics

Intelligent feeders, in-line 88 / off-line 132 - 8 or 12mm tapes, 132 / 198 - plastic sticks, number of trays depending on PCB size, tape feeders from 8 to 44mm, plastic stick up to 50mm wide, tray 335 x 185mm

Vision System

ESI Correctplace®, Automatic board alignment - full vision component alignment and analysis by vision system. Test on lead pitch, sqew angle, BGA bal size and number of balls

Cameras

1 Fiducial and 2 component align cameras with CCD chip

Power-Air Requirement

220 VAC / 50 - 60Hz / 2500 Watt
6 Bar / 85 PSI / 80 L/Min.

Operating Temperature

18 - 30° Celsius

Noise Level

Noise emission during operation < 70 dB(A),

Weight

450kg without feeders
800kg with feeders



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Your Distributor

Specifications are subject to change without prior notice. HP100 0810E

HP-100

Pick & Place



**"The HP-100 series is
 a flexible, full vision, automatic,
 Pick and Place machine equipped
 with the ESI vision alignment"**



To improve your productivity



Extreme precise and flexible placement

DIMA established in 1986 continues to offer state of the art developments pushing the boundaries of R&D, striving for optimum performance, shorter production times, improved output and reduced costs. These goals have been achieved by close liaison and communication with DIMA's worldwide customer base. Global success has enabled DIMA to extract the knowledge required for continued advancement direct from the customer. This knowledge was of particular importance during the development of DIMA's latest component placement machine the Hybrid. The Hybrid offers the very best price performance ratio currently available in the industry.

High Speed Fiducial Camera

Dedicated to fiducial marks only, offering not only an extremely fast reaction time, but also the ability to read any mark offered for correction.

Dual Placement Head

Incorporated 2 individual Z axis-programmable pipette's offering full vision alignment for all components. A large CCD camera for placement of fine pitch components up to 42 x 42 mm and a small camera (12 x 12 mm) for chip components is standard. Due to the flexibility of ESI Correct-place® technology utilised on the vision card.

Key Features

- 88 8/12mm feeder positions in-line or 132 feeders off-line
- Standard with full vision alignment
- no feeder reduction for 12mm
- 4600 CPH (IPC rated)
- Dual placement pipettes
- Intelligent feeders
- Dimasoft® one key operation software
- Linear encoders with 0.001mm resolution
- Easy width adjust pass-through conveyor
- Off-line programming and optimization
- In-line or off-line available

Quick Feeder Change

All feeder easily accessed, reducing feeder change over time. Feeders can be prepared prior to loading and exchanged on-the-fly. Pre-warning indication is highlighted on the monitor preparing the operator in advance.

Machine types

- HP-100 Full vision Pick and place machine stand alone 4600 cph (IPC rated)
- HP-105 As above including bidirectional conveyor (3 sides feeders)
- HP-110 As above including In-line conveyor, optimising PCB handling
- HP-2100 Tray sequencer for 6 jedec trays

PCB Transport Unit

The in-line machine fully complies with the SMEMA standard. Dual direction of transport is available enabling integration with global peripheral equipment. Stand-alone units have the added facility for IN/OUT the same side if required.



DIMASoft® Windows®

Offers the user a programming software format making DIMASoft one of the most advanced easy to use interfaces available in the market today. Its unique capabilities offer quick, informative one-key operations, drastically reducing programming time. Demonstration software is available on request. DIMA offers also CAD, Stock and Batch traceability software.



photo: HP-110 with dual Vision, tray platform and tape strip feeder

Real Intelligent Feeders

The feeders contain a fully programmable micro-processor offering a high level of management information, component counting, part number information, component name, component value, pitch requirements, operator warning for component depletion. Unlike other systems this information is stored into the feeder so that the machine data base is not required to determine what product is in the feeder. The DIMA feeders are equipped with the unique quick loading mechanism allowing you to change tapes within 40 seconds. For small strips of SMD tape DIMA offers a tape strip feeder that can be adjusted to any width of tape. DIMA also offers a broad selection of feeders for tray components. A feeder for leaded LED components is available from DIMA.

Life time warranty

The contacts on the feeder interface PCB are of outstanding quality, so that DIMA gives lifetime warrant on these contacts.



photo: HP100

Other equipment available from DIMA

- Convection reflow ovens
- Automatic glue and solder paste dispensing systems
- Board handling equipment
- Production optimising software
- Conformal coating machines and ovens
- Manual pick and place machines
- Stencil printing machines
- See www.dimasmt.com for more information