



MYPro series MY300™ pick-and-place



Specifications

MY300SX™

pick-and-place

May 2017

MYPro series specification – MY300SX

PLACEMENT SPEED AND ACCURACY

| PLACEMENT SPEED AND ACCURACY – MY300SX-11/15 | |
|---|---|
| Rated speed ⁽¹⁾ | 24 000 CPH |
| IPC 9850 chip net throughput ^(2, 3) | 20 000 CPH |
| IPC 9850 chip tact time ⁽³⁾ | 0.163 s |
| IPC 9850 chip repeatability 3σ (X, Y, Theta) ⁽³⁾ | 30 μm, 1.8° ⁽⁶⁾ 45 μm, 1.8° |
| IPC 9850 chip accuracy @ Cpk = 1.33 (X, Y, Theta) ⁽⁵⁾ | 50 μm, 2.6° ⁽⁶⁾ 75 μm, 2.6° |
| IPC 9850 fine pitch repeatability 3σ (X, Y, Theta) ⁽⁴⁾ | 21 μm, 0.05° |
| IPC 9850 fine pitch accuracy @ Cpk = 1.33 (X, Y, Theta) ^(4, 5) | 35 μm, 0.09° |

The above specification achieved with a machine configuration including high precision mounthead (Midas), high speed mounthead (HYDRA Z8), line scan vision system (LVS), inline conveyor T460 and 15 mm component max height.
The IPC 9850 net throughput and accuracy numbers are obtained simultaneously, with the same machine settings. The rated speed value is obtained under conditions optimized for speed.

- (1) Depending on component and application.
- (2) According to IPC 9850. Net throughput = (no of parts x 3600) / (board build time + board transfer time).
- (3) According to IPC 9850 0402C verification panel.
- (4) According to IPC 9850 QFP64/QFP100 verification panel.
- (5) According to IPC 9850 Cpk 1.33 = 4σ + offset.
- (6) Small chip settings, recommended for 0201 (0.6 x 0.3 mm) and below.

SYSTEM FEATURES

| SYSTEM FEATURES MY300SX |
|--|
| On-the-fly mount order optimization |
| Vision autoteach with snap-to-grid |
| Automatic illumination settings |
| Intelligent feeder concept – Agilis |
| Automatic feeder and component recognition |
| On-the-fly feeder loading |
| Dynamic feeder positions |
| Automatic board stretch compensation |
| Automatic conveyor width adjustment |
| Intelligent surface impact control |
| Tool collision avoidance |
| Multi-user, multi-tasking system software |
| Open software interfaces for factory integration |
| SQL database engine |
| Programmable light settings fiducial camera |

FEEDER CAPACITY

| FEEDER CAPACITY 8 MM TAPE | | |
|---------------------------|------|------|
| | T460 | T640 |
| MY300SX-11 | 128 | 112 |
| MY300SX-15 | 192 | 176 |

BOARD HANDLING

| INLINE CONVEYOR | | |
|---|--|-------------------------------|
| | T460 | T640 |
| Maximum board size | 460 x 510 mm (18" x 20") | 640 x 510 mm (25" x 20") |
| Maximum board size with ML adaptor ⁽¹⁾ | 419 x 443 mm (16.5" x 17.4") | 554 x 443 mm (21.8" x 17.4") |
| Minimum board size ⁽²⁾ | 70 x 50 mm (2.7" x 2") | 70 x 50 mm (2.7" x 2") |
| Board thickness range ⁽²⁾ | 0.4 – 6.0 mm (0.016" – 0.24") | 0.4 – 6.0 mm (0.016" – 0.24") |
| Board edge clearance top and bottom | 3.2 mm (0.13") | 3.2 mm (0.13") |
| Top side clearance (max) ⁽³⁾ | 15 mm (0.59") | 15 mm (0.59") |
| Bottom side clearance (max) ⁽⁴⁾ | 32 mm (1.25") | 32 mm (1.25") |
| Maximum board weight | 4 kg (8.8 lbs) | 4 kg (8.8 lbs) |
| Board transfer height | Conforms to SMEMA standard for board transfer height. Height adjustable from 880 to 975 mm (34.6" to 38.4"). | |
| Operation mode | Inline, manual, inline odd-board, left-to-right/right-to-left. | |

- (1) Optional. Suitable for irregular sized and odd-shaped boards.
- (2) Board train specification: 90 x 50 mm (3.5" x 2") board size, 1.6 mm (0.06") min thickness. Max warpage 1 mm (0.04").
- (3) Customized tall component capability 22 mm (0.86") available.
- (4) 15 mm (0.59") with support pins.

COMPONENT RANGE

| HIGH PRECISION MOUNTHEAD – MIDAS | |
|----------------------------------|--|
| Component range | Chip (from 01005), SOIC, PLCC, TSOP, QFP, BGA, flip chip, odd-shape, surface-mount connectors, through-hole components, CSP, CCGA, DPAK, Alcap, Tantalum |
| Component specification | Min: 0.4 x 0.2 mm (0.016" x 0.008") (01005) Max: 140 x 73 x 15 mm (5.51" x 2.87" x 0.59") ⁽¹⁾ Max: component weight: 140 g ⁽²⁾ |

- (1) With 4K vision. Max component size with 2K vision: 140 x 56 x 15 mm (5.51" x 2.20" x 0.59"). Customized tall component capability 22 mm (0.86") available.
- (2) Depending on mounthead, mount tool, package, and production altitude.

| HIGH SPEED MOUNTHEAD – HYDRA Z8 | |
|---------------------------------|--|
| Component range | Chip (from 01005), SO28, SOT223, SOJ20, PLCC32, MELF, SOD, TSOP |
| Component specification | Min: 0.4 x 0.2 mm (0.016" x 0.008") (01005) Max: 18.6 x 18.6 x 5.60 mm (0.73" x 0.73" x 0.22") (PLCC44) |

| ELECTRICAL VERIFIER (OPTIONAL) | |
|--------------------------------|--|
| Component range | Resistor, capacitor, unipolar capacitor, diode (forward voltage, reverse current), Zener diode (voltage drop), transistor (current gain) |

VISION CAPABILITY

| LINESCAN VISION SYSTEM - 4K RESOLUTION | | | |
|--|---------------|-----------------|-----------------|
| COMPONENT TYPE | FIELD OF VIEW | MIN PITCH | MIN LEAD WIDTH |
| Leaded components | 80 mm (3.1") | 0.10 mm (4 mil) | 0.05 mm (2 mil) |
| Bumped components | 80 mm (3.1") | 0.15 mm (6 mil) | 0.08 mm (3 mil) |

| LINESCAN VISION SYSTEM - 2K RESOLUTION | | | |
|--|---------------|------------------|-----------------|
| COMPONENT TYPE | FIELD OF VIEW | MIN PITCH | MIN LEAD WIDTH |
| Leaded components | 63 mm (2.5") | 0.20 mm (8 mil) | 0.10 mm (4 mil) |
| Bumped components | 63 mm (2.5") | 0.25 mm (10 mil) | 0.13 mm (5 mil) |

SOFTWARE

SOFTWARE MODULES (OPTIONAL)

| |
|---------------------|
| Shared databases |
| Line mode |
| PCB ID (2D barcode) |
| Pre-pick inspection |
| Barcode software |
| PRM software |

OFFLINE SOFTWARE TOOLS (OPTIONAL)

| |
|---|
| Data preparation - MYCenter |
| Optimization and scheduling - MYPlan |
| Inventory management and kitting - MYCenter |
| Traceability - MYTrace |

MISCELLANEOUS

INSTALLATION REQUIREMENTS

| | |
|--------------------|--|
| Power requirements | Three phase AC 6.6 kVA (3 x 2.2 kVA) |
| Power consumption | 1.5 kW (average) |
| Voltages | 3 x 200, 210, 220, 230, 240, 250 +/- 10%, Y or Delta |
| Air supply | No air required |
| Noise | 70 dBA |
| Air temperature | +18 to +35 °C (65 to 95 °F) |
| Air humidity | < 95% RH non condensing |

MACHINE WEIGHT ⁽¹⁾

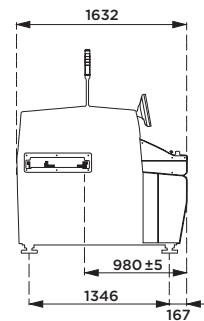
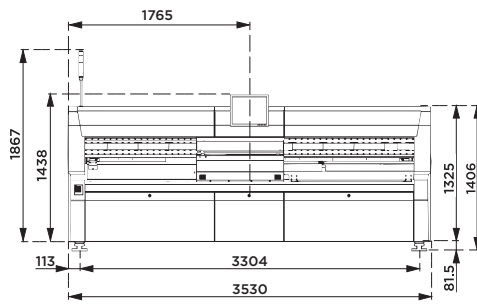
| | |
|------------|----------------------|
| MY300SX-11 | 1 600 kg (3 500 lbs) |
| MY300SX-15 | 2 000 kg (4 400 lbs) |

(1) Total machine weight excluding magazines.

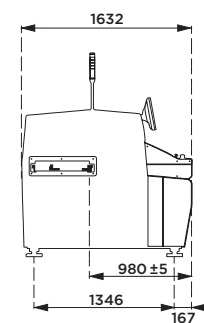
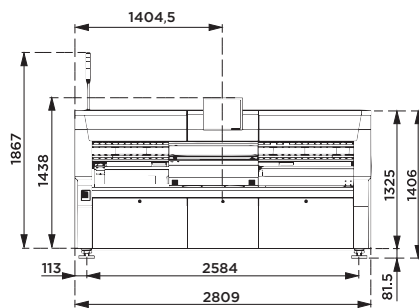
DIMENSIONS

in mm.

MY300SX-15



MY300SX-11



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