

November 2013

# MY200 Series P&P Specification

## MY200DX™



MY200-SERIES P&P SPECIFICATION – MY200DX

PLACEMENT SPEED AND ACCURACY

| PLACEMENT SPEED AND ACCURACY – MY200DX 10/14                             |                                           |
|--------------------------------------------------------------------------|-------------------------------------------|
| Rated Speed <sup>(1)</sup>                                               | 40 000 CPH                                |
| IPC 9850 Chip Net Throughput <sup>(2,3)</sup>                            | 32 000 CPH                                |
| IPC 9850 Chip Tact Time <sup>(3)</sup>                                   | 0.103 s                                   |
| IPC 9850 Chip Repeatability 3σ (X, Y, Theta) <sup>(3)</sup>              | 30 μm, 1.8° <sup>(6)</sup><br>45 μm, 1.8° |
| IPC 9850 Chip Accuracy @ Cpk = 1.33 (X, Y, Theta) <sup>(5)</sup>         | 50 μm, 2.6° <sup>(6)</sup><br>75 μm, 2.6° |
| IPC 9850 Fine Pitch Net Throughput <sup>(2,4)</sup>                      | 4 400 CPH                                 |
| IPC 9850 Fine Pitch Tact Time <sup>(4)</sup>                             | 0.720 s                                   |
| IPC 9850 Fine Pitch Repeatability 3σ (X, Y, Theta) <sup>(4)</sup>        | 21 μm, 0.05°                              |
| IPC 9850 Fine Pitch Accuracy @ Cpk = 1.33 (X, Y, Theta) <sup>(4,5)</sup> | 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) and inline conveyor T4.  
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 MY200DX                          |
|--------------------------------------------------|
| 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 |     |     |     |
|---------------------------|-----|-----|-----|
|                           | T4  | T5  | T6  |
| MY200DX-10                | 96  | -   | -   |
| MY200DX-14                | 160 | 144 | 128 |

BOARD HANDLING

| INLINE CONVEYOR                                   |                                                                                                                 |                               |                               |
|---------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|-------------------------------|-------------------------------|
|                                                   | T4                                                                                                              | T5 <sup>(1)</sup>             | T6 <sup>(1)</sup>             |
| Maximum Board Size                                | 575 x 508 mm (22.6" x 20")                                                                                      | 736 x 609 mm (29" x 24")      | 914 x 609 mm (36" x 24")      |
| Maximum Board Size with ML adaptor <sup>(2)</sup> | 554 x 443 mm (21.8" x 17.4")                                                                                    | 725 x 556 mm (28" x 22")      | 905 x 556 mm (35.5" x 22")    |
| Minimum Board Size <sup>(3)</sup>                 | 70 x 50 mm (2.7" x 2")                                                                                          | 70 x 50 mm (2.7" x 2")        | 70 x 50 mm (2.7" x 2")        |
| Board Thickness Range                             | 0.4 - 6.0 mm (0.016" - 0.24")                                                                                   | 0.8 - 12.5 mm (0.03" - 0.5")  | 0.8 - 12.5 mm (0.03" - 0.5")  |
| Board Edge Clearance Top and Bottom               | 3.2 mm (0.13")                                                                                                  | 3.2 mm (0.13")                | 3.2 mm (0.13")                |
| Top Side Clearance (max) <sup>(4)</sup>           | 15 mm (0.59")                                                                                                   | 15 mm (0.59")                 | 15 mm (0.59")                 |
| Bottom Side Clearance (max)                       | 32 mm (1.25")                                                                                                   | 32 mm (1.25")                 | 32 mm (1.25")                 |
| Maximum Board Weight                              | 8 kg (17 lbs)                                                                                                   | 15 kg (33 lbs) <sup>(5)</sup> | 15 kg (33 lbs) <sup>(5)</sup> |
| Board Transfer Height                             | Conforms to SMEMA standard for board transfer height.<br>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) Available for MY200DX-14.  
2) Optional. Suitable for irregular sized and odd shaped boards.  
3) Recommended board train specification: 90 x 50 mm (3.5" x 2") board size, 1.6 mm (0.06") thickness.  
4) Customized tall component capability 22 mm (0.86").

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)<br>Max: 56 x 56 x 15 mm (2.20" x 2.20" x 0.59") <sup>(1)</sup><br>Max: component weight: 140 g <sup>(2)</sup> |

1) Customized larger component capability available: 76 x 66 x 15 mm (2.9" x 2.6" x 0.59") or 151 x 26 x 15 mm (5.9" x 1.0" x 0.59"). Customized tall component capability 22 mm (0.86") available.  
Contact MYDATA sales for detailed customization information.  
2) Depending on mounthead, mount tool, package, and production altitude.

| HIGH SPEED MOUNTHEAD – HYDRA Z8 |                                                                                                     |
|---------------------------------|-----------------------------------------------------------------------------------------------------|
| Component Range                 | Chip (from 0201), SO28, SOT223, SOJ20, PLCC32, MELF, SOD, TSOP                                      |
| Component Specification         | Min: 0.6 x 0.3 mm (0.02 x 0.01") (0201)<br>Max: 18.6 x 18.6 x 5.6 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) |
| Verification Time              | On-the-fly                                                                                                                               |

VISION CAPABILITY

| DUAL VISION SYSTEM (OPTIONAL) |                    |                            |                   |                   |
|-------------------------------|--------------------|----------------------------|-------------------|-------------------|
| COMPONENT TYPE                | CAMERA             | MAX ACTIVE FIELD OF VIEW   | MIN PITCH         | MIN LEAD WIDTH    |
| Leaded Components             | SVC <sup>(1)</sup> | 56 x 52 mm (2.20" x 2.04") | 0.40 mm (16 mil)  | 0.20 mm (8 mil)   |
|                               | HRC <sup>(2)</sup> | 15 x 15 mm (0.59" x 0.59") | 0.10 mm (4 mil)   | 0.05 mm (2 mil)   |
| Bumped Components             | SVC <sup>(1)</sup> | 56 x 52 mm (2.20" x 2.04") | 0.50 mm (20 mil)  | 0.25 mm (10 mil)  |
|                               | HRC <sup>(2)</sup> | 15 x 15 mm (0.59" x 0.59") | 0.16 mm (6.3 mil) | 0.08 mm (3.1 mil) |

1) Standard vision camera in dual vision system (DVS).  
2) High resolution camera in dual vision system (DVS).

| LINESCAN VISION SYSTEM |                    |                          |                  |                 |
|------------------------|--------------------|--------------------------|------------------|-----------------|
| COMPONENT TYPE         | CAMERA             | MAX ACTIVE FIELD OF VIEW | MIN PITCH        | MIN LEAD WIDTH  |
| Leaded Components      | LVC <sup>(1)</sup> | 56 x 56 mm (2.2" x 2.2") | 0.20 mm (8 mil)  | 0.10 mm (4 mil) |
| Bumped Components      | LVC <sup>(1)</sup> | 56 x 56 mm (2.2" x 2.2") | 0.30 mm (12 mil) | 0.15 mm (6 mil) |

1) Line scan vision camera.

## SOFTWARE

| SOFTWARE MODULES (OPTIONAL) |
|-----------------------------|
| Shared Databases            |
| Line Mode                   |
| PCB ID (2D barcode)         |
| Electrical Measurement Log  |
| Pre-Pick Inspection         |
| Barcode Software            |

| OFFLINE SOFTWARE TOOLS (OPTIONAL)           |
|---------------------------------------------|
| Data Preparation – MYCam                    |
| Machine Programming – MYCenter              |
| Optimization and Scheduling – MYPlan        |
| Inventory Management and Kitting - MYCenter |
| Traceability – MYTrace                      |
| Line Automation – FlowLine                  |

## MISCELLANEOUS

| INSTALLATION REQUIREMENTS |                                                     |
|---------------------------|-----------------------------------------------------|
| Power Requirements        | Three phase AC 6.6 kVA (3 x 2.2 kVA)                |
| Power Consumption         | 2.5 kW (average)                                    |
| Voltages                  | 3 x 200, 210, 220, 230, 240, 250 +/-10%, Y or Delta |
| Air Supply                | No air required                                     |
| Noise                     | 65 dBA                                              |
| Air Temperature           | +18 to +35 °C (65 to 95 °F)                         |
| Air Humidity              | < 95% RH non condensing                             |

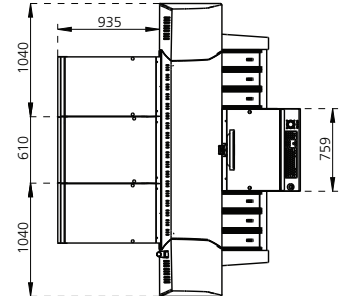
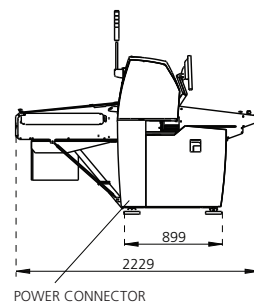
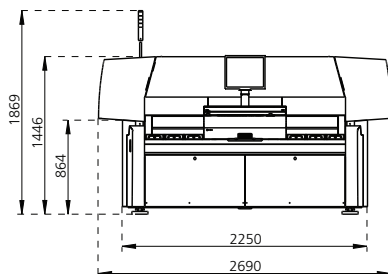
| MACHINE WEIGHT <sup>(1)</sup> |                      |
|-------------------------------|----------------------|
| MY200DX-10                    | 1 400 kg (3 100 lbs) |
| MY200DX-14                    | 1 700 kg (3 700 lbs) |

1) Total machine weight excluding magazines.

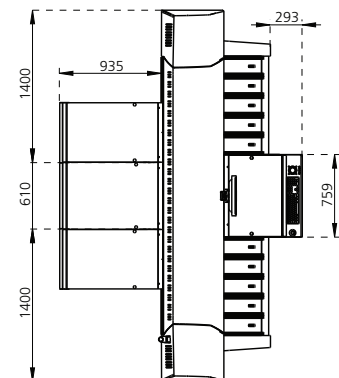
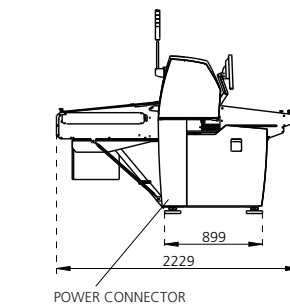
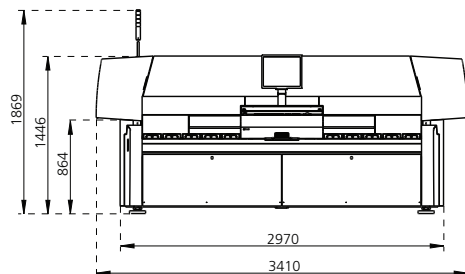
## DIMENSIONS

in mm.

### MY200DX-10 T4



### MY200DX-14 T4



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Specifications are subject to change without notice.

MYDATA, MYDATA automation and MY, MY100, MY100DX, MY100SX, MY100LX, MY100e, MY100Hx, MY100DXe, MY100SXe, MY100LXe, MY200, MY200HX, MY200DX, MY200SX, MY200LX, MY500 and MYSynergy; T3, T4, T5 and T6; HYDRA Speedmount, Midas, ISiC; Agilis, Agilis Linear Magazine (ALM), Agilis Linear Magazine Flex (ALM FLEX), Agilis Stick Magazine (ASM), MYDATA Tray Exchanger (TEX), MYDATA Tape Magazine (TM), MYDATA Tray Wagon Magazine (TWM); MYDATA Dip Unit (DPU); MYDATA Standard Vision System (SVS), MYDATA Dual Vision System (DVS), MYDATA Linescan Vision System (LVS), MYDATA HYDRA Vision System (HVS); MYDATA Assembly Process Management (APM) including; JPSys, TSPys, MYLabel, MYPlan, MYCenter, MYTrace, MYCam, FlowLine and CAD Conversion are registered trademarks or trademarks of Micronic Mydata AB. MYDATA is ISO 9001:2008 certified.