

January 2015

MY200 series

Specification

MY200DX™



MYCRONIC

When passion meets innovation ●

MY200 series specification – MY200DX

PLACEMENT SPEED AND ACCURACY

PLACEMENT SPEED AND ACCURACY – MY200DX 10/14	
Rated speed ⁽¹⁾	40 000 CPH
IPC 9850 chip net throughput ^(2, 3)	32 000 CPH
IPC 9850 chip tact time ⁽³⁾	0.103 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 net throughput ^(2, 4)	4 400 CPH
IPC 9850 fine pitch tact time ⁽⁴⁾	0.720 s
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) 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 ⁽¹⁾	T6 ⁽¹⁾
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 ⁽²⁾	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 ⁽³⁾	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) ⁽⁴⁾	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)	15 kg (33 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) 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) Max: 56 x 56 x 15 mm (2.20” x 2.20” x 0.59”) ⁽¹⁾ Max: component weight: 140 g ⁽²⁾

(1) Customized larger component capabilty 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 Mycronic 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) 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 ⁽¹⁾	56 x 52 mm (2.20” x 2.04”)	0.40 mm (16 mil)	0.20 mm (8 mil)
	HRC ⁽²⁾	15 x 15 mm (0.59” x 0.59”)	0.10 mm (4 mil)	0.05 mm (2 mil)
Bumped components	SVC ⁽¹⁾	56 x 52 mm (2.20” x 2.04”)	0.50 mm (20 mil)	0.25 mm (10 mil)
	HRC ⁽²⁾	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	80 x 70 mm ⁽¹⁾ (3.1” x 2.8”)	0.20 mm (8 mil)	0.10 mm (4 mil)
Bumped components	LVC	80 x 70 mm ⁽¹⁾ (3.1” x 2.8”)	0.30 mm (12 mil)	0.15 mm (6 mil)

(1) Customized field of view available: 160 x 30 mm (6.3” x 1.2”).

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 – 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 ⁽¹⁾

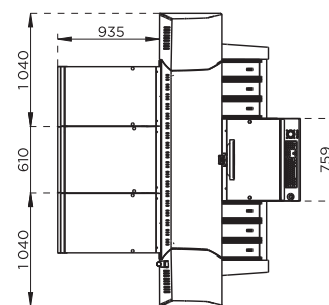
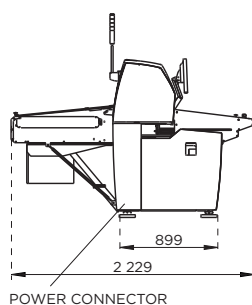
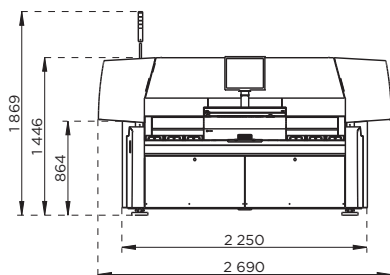
MY200DX-10	1 400 kg (3 100 lbs)
MY200DX-14	1 700 kg (3 700 lbs)

(1) Total machine weight excluding magazines.

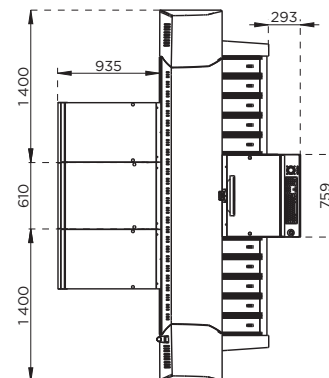
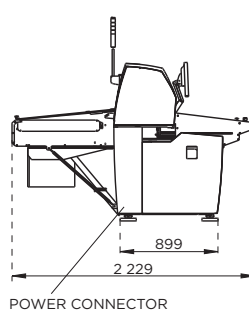
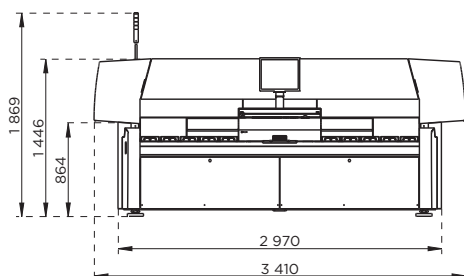
DIMENSIONS

in mm.

MY200DX-10 T4



MY200DX-14 T4



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