

MYPro series A40SX™

pick-and-place

Specifications
October 2024



Specifications MYPro series **A40SX™**

PLACEMENT SPEED AND ACCURACY	
A40SX-13/17	
Rated speed ⁽¹⁾	29,000 CPH
IPC 9850 chip net throughput ^(2, 3)	22,000 CPH
IPC 9850 chip throughput ⁽³⁾	23,000 CPH
IPC 9850 chip repeatability 3σ (X, Y, Theta) ^(7, 8)	30μm, 1.8° ⁽⁶⁾ 45μm, 1.8°
IPC 9850 QFP repeatability 3σ (X, Y, Theta) ⁽⁴⁾	21μm, 0.054° ⁽⁹⁾ 30μm, 0.12° ^(6, 8) 45μm, 0.21° ⁽⁸⁾
IPC 9850 QFP accuracy @ Cpk 1.33 (X, Y, Theta) ^(4, 5)	35μm, 0.09° ⁽⁹⁾ 50μm, 0.2° ^(6, 8) 75μm, 0.35° ⁽⁸⁾

The above specification achieved with a machine configuration including high precision mounthead (Midas), high speed mounthead (MX7), line scan vision system (LVS), inline conveyor T460 and 15mm 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 3,600)/(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) High precision setting, recommended for small chip or fine pitch.
- (7) IPC 9850 chip accuracy @ Cpk 1.33, Theta = 2.6°
- (8) High-speed mounthead - MX7
- (9) High-precision mounthead - MIDAS

SYSTEM FEATURES
A40SX
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
Hermes

COMPONENT RANGE	
HIGH PRECISION MOUNTHEAD—MIDAS	
Component specification	Min: 0.3 x 0.15 (0.012 x 0.006") (03015) Max: 99 x 73 x 15mm (3.89 x 2.87 x 0.59") ^{(1) (3)} Max: component weight: 140g ⁽²⁾

- (1) With 4K vision. Max component size with 2K vision: 99x56x15mm (3.89x2.20x0.59"). Customized tall component capability 22mm (0.86") available.
- (2) Depending on mounthead, mount tool, package, and production altitude.
- (3) Components with diagonal larger than 58mm must be presented in the same angle as placed.

HIGH SPEED MOUNTHEAD—MX7	
Component specification	Min: 0.4 x 0.2 mm (0.016 x 0.008") (01005) Max: 45 x 45 x 15 mm (1.77 x 1.77 x 0.59") ⁽¹⁾ Max: 150 x 40 x 15mm (5.90 x 1.57 x 0.59") ⁽¹⁾

- (1) Components with diagonal larger than 52mm will if needed be rotated over the place area

ELECTRICAL VERIFIER (OPTIONAL)	
Component range	Resistor, capacitor, unipolar capacitor, diode (forward voltage, reverse current), Zener diode (reverse voltage), bipolar transistor (current gain), FET/IGBT (gate threshold voltage). Smallest chip size 1.0x0.5 mm (0.04x0.02").

FEEDER CAPACITY		
8 MM TAPE	T460	T640
A40SX-13	160	144
A40SX-17	224	208

BOARD HANDLING		
INLINE CONVEYOR	T460	T640
Maximum board size	460 x 510mm (18 x 20")	640 x 510mm (25 x 20")
Minimum board size ⁽¹⁾	70 x 50mm (2.7 x 2")	70 x 50mm (2.7 x 2")
Maximum board train length	436mm (17.1")	472mm (18.5")
Board thickness range	0.4–6.0mm (0.016–0.24")	0.4–6.0mm (0.016–0.24")
Board edge clearance top	3.2mm (0.13")	3.2mm (0.13")
Board edge clearance bottom ⁽²⁾	3.2mm (0.13")	3.2mm (0.13")
Top side clearance (max) ⁽³⁾	15mm (0.59")	15mm (0.59")
Bottom side clearance (max) ⁽⁴⁾	32mm (1.25")	32mm (1.25")
Maximum board weight	4kg (8.8lbs)	4kg (8.8lbs)
Board transfer height	Conforms to SMEMA standard for board transfer height. Height adjustable from 880 to 975mm (34.6 to 38.4").	
Operation mode	Inline, manual, inline odd-board, left-to-right/right-to-left.	

- (1) Board train specification: 90 x 50mm (3.5 x 2") board size, 1.6mm (0.06") min thickness. Max warpage 1mm (0.04").
- (2) Edge clearance 5.5mm (0.22") if component taller than 6mm (0.24"). 14.3mm (0.56") if taller than 19mm (0.75").
- (3) Customized tall component capability 22mm (0.86") available.
- (4) 15mm (0.59") with support pins.

VISION CAPABILITY			
LINESCAN VISION SYSTEM—4K RESOLUTION			
Component type	Field of View	Minimum pitch	Minimum lead width
Leaded components	80mm (3.1")	0.10mm (4mil)	0.05mm (2mil)
Bumped components	80mm (3.1")	0.15mm (6mil)	0.08mm (3mil)

LINESCAN VISION SYSTEM—2K RESOLUTION			
Component type	Field of View	Minimum pitch	Minimum lead width
Leaded components	63mm (2.5")	0.20mm (8mil)	0.10mm (4mil)
Bumped components	63mm (2.5")	0.25mm (10mil)	0.13mm (5mil)

SOFTWARE
SOFTWARE MODULES (OPTIONAL)
Shared databases
Line mode
PCB ID (2D barcode)
Pre-pick inspection
Barcode software
PRM (Proactive Replenishment Monitoring) software
Hermes

OFFLINE SOFTWARE TOOLS (OPTIONAL)
Data preparation—MYCenter
Optimization and scheduling—MYPlan
Inventory management and kitting—MYCenter
Traceability—MYTrace
Performance monitoring—MYCenter Analysis

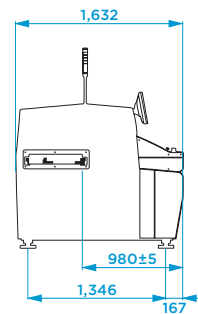
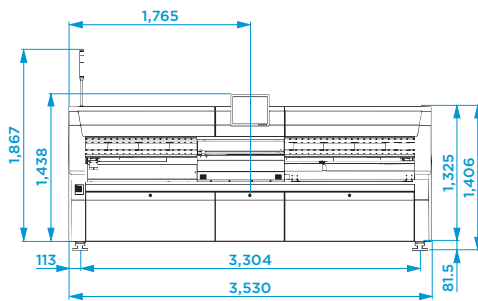
MISCELLANEOUS	
INSTALLATION REQUIREMENTS	
Power requirements	Three phase AC 6.6kVA (3x2.2kVA)
Power consumption	1.5kW (average)
Voltages	3x200, 210, 220, 230, 240, 250 ±10%, Y or Delta
Air supply	No air required
Air temperature	+18 to +35°C (65 to 95°F)
Air humidity	<95% RH non condensing

MACHINE WEIGHT ⁽¹⁾	
A40SX-13	1,600kg (3,500lbs)
A40SX-17	2,200kg (4,850lbs)

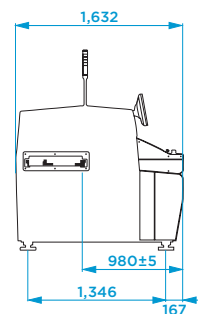
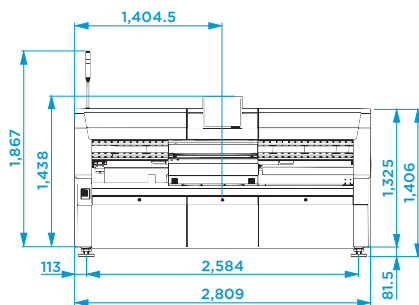
(1) Total machine weight excluding magazines.

DIMENSIONS [mm]

A40SX-17



A40SX-13



MYCRONIC

MYCRONIC.COM

SWEDEN
Mycronic AB
PO Box 3141
Nytorspvägen 9
SE-183 03 Täby
Tel: +46 8 638 52 00

GERMANY
Mycronic GmbH
Tel: +49 89 45 24 24 8-0

UK
Mycronic Ltd.
Tel: +44 1202 723 585

FRANCE
Mycronic S.A.S.
Tel: +33 1 41 80 15 80

NETHERLANDS
Mycronic B.V.
Tel: +31 402 62 06 67

USA
Mycronic Inc.
Tel: +1 978 495 9799

SOUTH KOREA
Mycronic Co. Ltd.
Tel: +82 31 387 5111

CHINA
Mycronic Co., Ltd.
Tel: +86 21 3252 3785/86

SINGAPORE
Mycronic Pte Ltd.
Tel: +65 6281 7997

JAPAN
Mycronic Technologies Corporation
Tel: +81 42 433 9400

Specifications are subject to change without notice. Mycronic, MYDATA, MYDATA automation and MY: Mycronic 4.0; MYNews; MYCare; MYSynergy, MYTrilogy; MYPro, MYPro Line; MY100, MY100e, MY200, MY300, MY300DX, MY300EX, MY300HX, MY300LX, MY300SX, MY500, MY600, MY700, MY700JD, MY700JP, MY700JX, MYPro A40, A40DX, A40SX, A40LX; MYPro S20; MYPro S30; MYPro ISO, ISL, I80, I81, I90, I91; MYSmart; MYC10, MYC50, MYC60, MYD10, MYD50, MYT10, MYT50; Mycronic SMD Tower; MYTower 5, 6, 6+, 7+, 5x, 6x; Vi TECHNOLOGY; VIT; 5K, 5K3D, 8K, 8K3D, 9K, 9K3D; PI, PI Pico, PI Primo; SIGMA Link; MX7; HYDRA, Midas, ISIC, Agilis, Agilis Linear Magazine (ALM), Agilis Linear Magazine Flex (ALM FLEX), Agilis Stick Magazine (ASM), Agilis Tray Magazine (ATM); Mycronic Tray Exchanger (TEX), Mycronic Tray Wagon Magazine (TWM); Mycronic Dip Unit (DPU); Mycronic Linescan Vision System (LVS); Mycronic Assembly Process Management (APM) including: JPSys, STSys, TPSys, MYCam, MYCenter, MYCenter Analysis, MYLabel, MYPlan, MYPro Connect, MYPro Link, MYTrace and FlowLine are registered trademarks or trademarks of Mycronic AB. Mycronic AB is ISO 9001:2015 and ISO 14001:2015 certified.