

Jan. 2006

MY-Series P&P Specification MY9, MY12, MY15 and MY19



PLACEMENT SPEED AND ACCURACY

MY-SERIES

HYDRA, HC, Midas, DVC and 500T conveyor

| Midas - Single Mounthead | | Fine Pitch |
|--|-----|-------------------|
| Rated Speed | (1) | 6 100 CPH |
| IPC 9850 Fine Pitch Net Throughput * | (2) | 1 500 CPH |
| IPC 9850 Fine Pitch Repeatability 3 σ (X, Y, Theta) | (4) | 25 μ m, 0,08° |

*) Vision centering QFP100. 3030 CPH with LVC option.

| HYDRA - Multi Mounthead Option | | Chip |
|--|-----|------------------|
| Rated Speed | (1) | 21 000 CPH |
| IPC 9850 Chip Net Throughput | (2) | 17 500 CPH |
| IPC 9850 Chip Repeatability 3 σ (X, Y, Theta) | (3) | 69 μ m, 3,0° |

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 0603C verification panel.
 (4) According to IPC 9850 QFP100 verification panel.

COMPONENT RANGE

| Midas - Single Mounthead | |
|--------------------------|---|
| Component Range | Chips (from 01005), SOIC, PLCC, TSOP, QFP, BGA, flip chip, odd-shape, surface-mount connectors, through-hole components, CSP, CCGA, DPack, 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") * Max component weight: 80 g ** |

*) Customized larger component capability available with LVC option: 76 x 66 x 12 mm (2.9" x 2.6" x 0.47") or 132 x 26 x 12 mm (5.2" x 1.0" x 0.47"). Customized tall component capability 22 mm (0.86") available for T-Series conveyors. Contact MYDATA sales for detailed customization information.

**) Depending on mounthead, mount tool, package, and production altitude.

| HYDRA - Multi Mounthead Option | |
|--------------------------------|--|
| Component Range | Chips (from 0402), SO8, SO14, SOT23, MELF |
| Component Specifications | Min: 1.0 x 0.5 mm (0.04" x 0.02") Max: 6.35 x 8.35 x 5.60 mm (0.25" x 0.34" x 0.22") (SO14) |

| HYDRA ER - Multi Mounthead Option | |
|-----------------------------------|---|
| Component Range | Chips (from 0201), SO24, SOT223, SOJ20, PLCC32, MELF, SOD |
| Component Specifications | Min: 0.6 x 0.3 mm (0.02 x 0.01") (0201) Max: 15.0 x 15.0 x 5.6 mm (0.59" x 0.59" x 0.22") (SO24) |

| Mount Tool Capacity | T- Series* | 500T | ML | 400PT |
|----------------------------|------------|------|----|-------|
| HYDRA tool positions ** | 64 | 32 | 32 | 32 |
| Midas tool positions | 24 | 21 | 21 | 21 |
| Special tool positions *** | 2 + 2 | 2 | 2 | 2 |

*) T5 and T6 delivered before November 2005 have 32 HYDRA positions and 21 Midas tool positions.

**) HYDRA ER has 32 tool positions as standard.

**) Including two large customized tool positions on T-Series.

BOARD HANDLING

| Inline Conveyor | | 500T | 400PT |
|-------------------------------------|------------------------------|------------------------------|-------|
| Maximum Board Size | 440 x 508 mm (17.3" x 20") | 400 x 590 mm (15.7" x 23.2") | |
| Maximum Board Size with ML adaptor | 427 x 461 mm (16.8" x 18") | | - |
| Minimum Board Size | 50 x 50 mm (2" x 2") | 50 x 50 mm (2" x 2") | |
| Board Thickness Range | 0.8 - 3.2 mm (0.03" - 0.13") | 1.0 - 2.5 mm (0.04" - 0.1") | |
| Board Edge Clearance Top and Bottom | 3.0 mm (0.12") | 4.0 mm (0.16") | |
| Top Side Clearance (max) | 15 mm (0.59") | 15 mm (1.25") | |
| Bottom Side Clearance (max) | 23 mm (0.90") | 23 mm (0.90") | |
| Maximum Board Weight | 4 kg (9 lbs) | 4 kg (9 lbs) | |

| Manual Load | ML3 | ML4 | ML5 | ML6 |
|-------------------------------------|--------------------------------|--------------------------------|-------------------------------|-------------------------------|
| Maximum Board Size | 384 x 508 mm (15.1" x 20") | 563 x 508 mm (22.1" x 20") | 745 x 610 mm (29.3" x 24") | 932 x 732 mm (36.7" x 28.8") |
| Minimum Board Size | 30 x 30 mm (1.2" x 1.2") | 30 x 30 mm (1.2" x 1.2") | 30 x 30 mm (1.2" x 1.2") | 30 x 30 mm (1.2" x 1.2") |
| Board Thickness Range | 0.5 - 4 mm (0.02" - 0.16") * | 0.5 - 4 mm (0.02" - 0.16")* | 0.5 - 10 mm (0.02" - 0.39")* | 0.5 - 10 mm (0.02" - 0.39")* |
| Board Edge Clearance Top and Bottom | 0.5 - 3.5 mm (0.02" - 0.14") * | 0.5 - 3.5 mm (0.02" - 0.14") * | 1.3 - 4.7 mm (0.05 - 0.19") * | 1.3 - 4.7 mm (0.05 - 0.19") * |
| Top Side Clearance (max) | 12.5 - 15 mm * | 12.5 - 15.0 mm * | 13.5 - 18 mm * | 13.5 - 18 mm * |
| Bottom Side Clearance (max) | 32 mm (1.25") | 32 mm (1.25") | 32 mm (1.25") | 32 mm (1.25") |
| Maximum Board Weight | 4 kg (9 lbs) | 4 kg (9 lbs) | 10 kg (22 lbs) | 10 kg (22 lbs) *** |

| Inline Conveyor "T-Series" | T3 | T4 | T5 | T6 |
|-------------------------------------|-------------------------------|-------------------------------|------------------------------|------------------------------|
| Maximum Board Size | 443 x 508 mm (17.4" x 20") | 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 | 419 x 443 mm (16.5" x 17.4") | 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 | 70 x 50 mm (2.7" x 2") * | 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") | 0.4 - 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") | 3.2 mm (0.13") |
| Top Side Clearance (max) | 15 mm (0.59") ** | 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") | 32 mm (1.25") |
| Maximum Board Weight | 5 kg (11 lbs) | 8 kg (17 lbs) | 15 kg (33 lbs) *** | 15 kg (33 lbs) *** |

(1) Recommended board train specification: 90 x 50 mm (3.5" x 2") minimum board size, 1.6 mm (0.06") thickness.

*) Depending on PCB thickness.

**) Customized tall component capability 22 mm (0.86") available for T-Series conveyors.

***) Greater weight capability available on request.

VISION CAPABILITY

| Dual Vision Camera Standard | | | | |
|-----------------------------|--------|----------------------------|-------------------|-------------------|
| Component Type | Camera | Max Active Field of View | Min Pitch | Min Lead Width |
| Leaded Components | SVC | 56 x 52 mm (2.20" x 2.04") | 0.40 mm (15 mil) | 0.20 mm (8 mil) |
| | HRC | 15 x 15 mm (0.59" x 0.59") | 0.10 mm (4 mil) | 0.05 mm (2 mil) |
| Bumped Components | SVC | 56 x 52 mm (2.20" x 2.04") | 0.50 mm (20 mil) | 0.25 mm (10 mil) |
| | HRC | 15 x 15 mm (0.59" x 0.59") | 0.16 mm (6.3 mil) | 0.08 mm (3.1 mil) |

SVC: Standard Vision Camera in DVC.

HRC: High Resolution Camera in DVC.

| Linescan Vision Camera Option | | | | |
|-------------------------------|--------|----------------------------|------------------|-----------------|
| Component Type | Camera | Max Active Field of View | Min Pitch | Min Lead Width |
| Leaded Components | LVC | 56 x 56 mm * (2.2" x 2.2") | 0.20 mm (8 mil) | 0.10 mm (4 mil) |
| Bumped Components | LVC | 56 x 56 mm * (2.2" x 2.2") | 0.30 mm (12 mil) | 0.15 mm (6 mil) |

*) Larger component capability available on request with customized LVC option: 76 x 66 x 12 mm (2.9" x 2.6" x 0.47").

LVC: Linescan Vision Camera.

MISCELLANEOUS

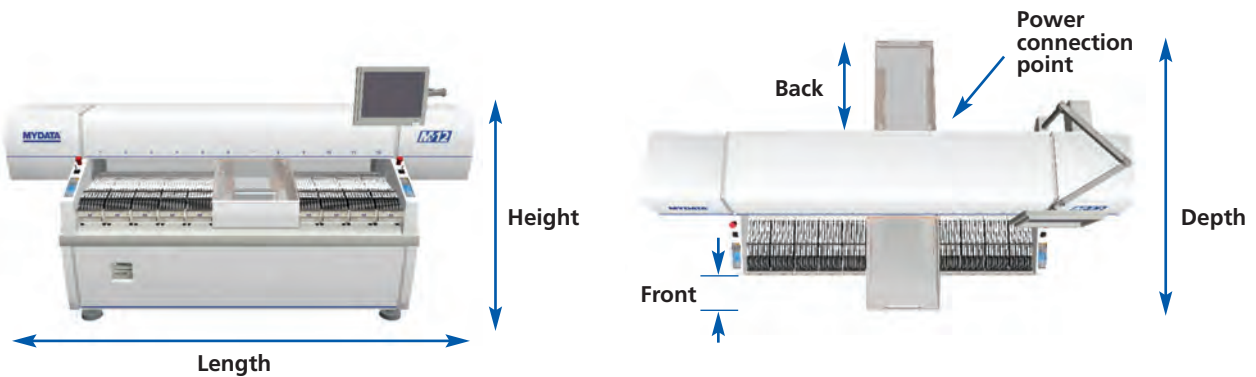
| Machine size | 500T Front / Back | | T3/T4 Front / Back | | T5/T6 Front / Back | |
|--------------|-------------------|----------------|--------------------|--------------|--------------------|---------------|
| MY9 | 150 mm (5.9") | 930 mm (36.6") | 200 mm (7.8") | 987 mm (39") | 300 mm (11.8") | 1130 mm (45") |
| MY12 | 150 mm (5.9") | 930 mm (36.6") | 200 mm (7.8") | 987 mm (39") | 300 mm (11.8") | 1130 mm (45") |
| MY15 | 150 mm (5.9") | 930 mm (36.6") | 200 mm (7.8") | 987 mm (39") | 300 mm (11.8") | 1130 mm (45") |
| MY19 | 150 mm (5.9") | 930 mm (36.6") | 200 mm (7.8") | 987 mm (39") | 300 mm (11.8") | 1130 mm (45") |

| Machine size | Length | Height ** | Depth 500T * | Depth T3/T4 | Depth T5/T6 | Weight *** |
|--------------|----------------|---------------|---------------|---------------|---------------|--------------------|
| MY9 | 2820 mm (111") | 1450 mm (57") | 2000 mm (78") | 2134 mm (84") | 2378 mm (94") | 1900 kg (4180 lbs) |
| MY12 | 3360 mm (132") | 1450 mm (57") | 2000 mm (78") | 2134 mm (84") | 2378 mm (94") | 2100 kg (4620 lbs) |
| MY15 | 4080 mm (160") | 1450 mm (57") | 2000 mm (78") | 2134 mm (84") | 2378 mm (94") | 2600 kg (5720 lbs) |
| MY19 | 4800 mm (188") | 1450 mm (57") | 2000 mm (78") | 2134 mm (84") | 2378 mm (94") | 3200 kg (7040 lbs) |

*) 1382 mm (54") for 400PT, ML depth depending on size.

**) Excluding monitor.

***) Total machine weight including magazines and board handling.



Installation Requirements

| | |
|--------------------|--|
| Power Requirements | Three phase AC 6.6 kVA (3 x 2.2 kVA) |
| Power Consumption | 1.8 kW (average) |
| Voltages | 3 x 190, 200, 210, 215, 220, 225, 230, 235, 240, 250 +/- 10%, Y or Delta |
| Air Supply | No air required |
| Noise | 62 dB (A) (equivalent continuous) |
| Air Temperature | +18° to +35°C (+10°C to 18°C with lower precision) |
| Air Humidity | < 95% RH |

| Feeder Capacity 8 mm tapes | 500T * | T3 | T4 ** | T5 ** | T6 ** |
|----------------------------|--------|-----|-------|-------|-------|
| MY9 | 96 | 96 | 80 | - | - |
| MY12 | 144 | 144 | 128 | 112 | 96 |
| MY15 | 192 | 192 | 176 | 160 | 144 |
| MY19 | 256 | 256 | 240 | 224 | 208 |

*) 400PT and ML3.

**) Including two vision camera positions.

Specifications subject to change without notice.

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