



SIMPLIMATIC
AUTOMATION

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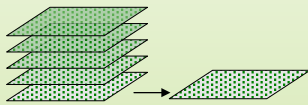
Bare Board Vacuum Loader Model 3140

The Model 3140 Bare Board Loader is designed for introducing unpopulated boards into a high volume, low mix environment. Its high capacity storage bin (20" stack) allows the unit to run unattended for long periods of time. The pneumatic lift design also works well with large board applications or thin boards. Each unit can automatically halt its operation so that other boards may pass through. Average cycle time is seven seconds.



STANDARD FEATURES

- High-speed DC stepper motor conveyor
- Pass-through mode
- Hand crank width adjust
- Expandable and easy-to-adjust vacuum cup array
- Holds 10" stack up to 18" x 20"
- Seven-second cycle time



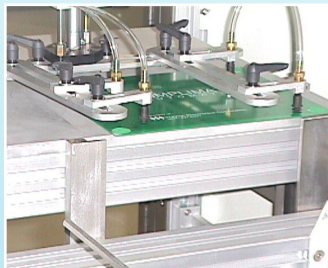
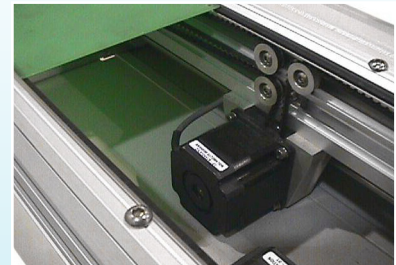
Up to 20" stack allows for extended run time

TYPICAL APPLICATIONS

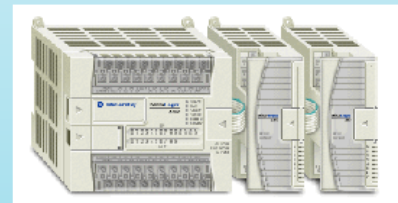
- Introducing unpopulated product into a production line, especially after a magazine unloader
- Loading particularly large or delicate substrates onto a production line

ADDITIONAL BENEFITS

- Gantry system and conveyor rails are permanently calibrated, ensuring accurate board placement throughout the life of the machine.
- Zero-clearance edge guides eliminate the danger of boards becoming jammed under the edge guide.
- Step-through mode allows the user to pause at each step of the loading process, which is very helpful during set-up and changeover.



- The vacuum cup array is adjustable without tools and additional vacuum cups can be added to speed changeover or increase the lift capacity, as required.
- Standard Allen-Bradley controller system can be expanded to include network capability.





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CONSTRUCTION

The Bare Board Loader utilizes Simplimatic's trademark sandwich construction, which creates a very rigid machine package by securing large aluminum frame members and load-bearing vanity covers between two 3/8" thick steel top and bottom plates. The result is a very strong, precise, modular frame.

The gantry system features a very robust rodless pneumatic cylinder that provides rock-solid repeatability while requiring no maintenance. Board stack guides are milled from stainless steel and secured to THK precision guides. The vacuum cup array is designed to easily and quickly place vacuum cups anywhere within an 18" x 20" envelope.

A machine-height loading door provides unobstructed and convenient access to the loading bay.

The conveyor assembly features ESD belts, DC stepper motors, and a sliding belt take-up.

MAINTAINABILITY

Three hinged, interlocked access doors provide maximum access to the interior of the machine. Aside from general cleaning and occasional belt replacement, the unit is maintenance-free.

SAFETY

Potential hazards are guarded and marked with SEMI-approved labels. Emergency stops are located in the front and rear of the machine. Machine status lights and audible alarm are standard.

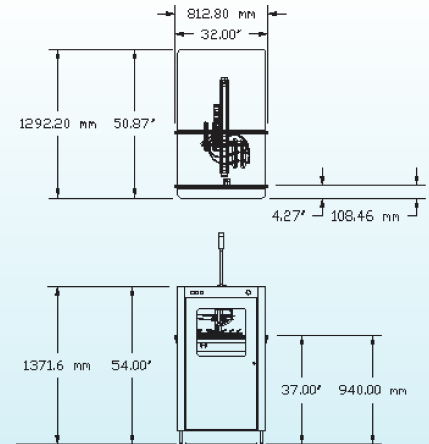
AVAILABLE OPTIONS

- Power Width Control – motorized conveyor width, controlled by thumbwheel
- Right-to-left transfer
- Auxiliary vacuum cups – help lift larger boards

SPECIFICATIONS

FOOTPRINT

- L 32" (80cm)
- W 51" (129.2cm)
- H 54" (137.2cm)



BOARD HANDLING CAPABILITY

- SMEMA 1.2 Compliant
- Circuit Board Length: 3" (76.2mm) to 20" (508mm)
- Circuit Board Width: 2" (50.8mm) to 18" (457.2mm)
- Circuit Board Thickness: 0.010" (0.254mm) to 0.125" (3.175mm)
- Allowable Warpage/Sag: 0.007 inch per inch, .125" max.
- Edge Clearance: Requires a clear area of 5mm (0.197") on the front and rear edges of the bottom surface of the board (3mm optional)
- Component Clearance: 2" (50mm) above and below the conveying surface

Note: Consult factory on PC boards with cutouts, or boards with an aspect ratio where the width is greater than the length, and on boards with specifications outside those listed above.

FACILITY REQUIREMENTS

- Power: 110 VAC, single phase, 10A
- Air: OFA, 80 PSI, 3CFM

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Simplimatic Automation has been a leader in material handling systems since 1965. The company is part of the Simplimatic Engineering Holdings family of companies, which also includes Advantage Puck Technologies.