EXPERIENCE
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SIMPLIMATIC AUTOMATION

Model 2133L Magazine Loader

Standard Features

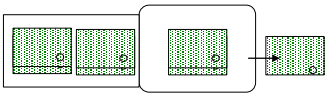
- Motorized ball-screw carriage system
- High-speed DC stepper motor conveyor
- Five magazine capacity
- Hand crank width adjust
- Touchscreen interface
- Top and bottom pneumatic magazine clamps

Application

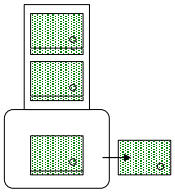
The Model 2131L Magazine Loader is designed to load product into a magazine at the end of a manufacturing line. With standard Simplimatic magazines, the machine can load up to 250 populated boards without operator intervention. The machine can also be customized to handle most third-party magazines types.

There are two magazine handling configurations:

Inline



and 90°



Typical applications include:

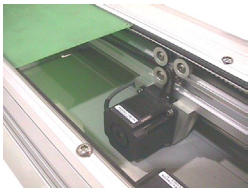
– Removing populated product into a production line, especially where magazines are used elsewhere for WIP management

– Handling large, delicate, or large volumes of product

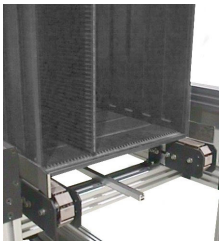
Additional Benefits

– Zero-clearance edge guides eliminate the danger of boards becoming jammed under the edge guide.

– Load and unload positions can be taught at the touchscreen, which also provides diagnostic and troubleshooting information.



– Closed-loop servo positioning system delivers a high degree of precision and repeatability.



– Electromagnetic ball screw brake helps maintain a high degree of repeatability.

– Optional, adjustable, low-backpressure magazine conveyors deliver a smooth and reliable magazine transfer.

– Pneumatic locking cylinders on the carriage secure both the top and bottom of the magazine, which reduces transfer errors due to slightly out-of-square magazines.

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Construction

The Magazine 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 beefy carriage assembly is designed to support the top and bottom of the magazine. A servo-controlled positioning system, electromagnetic brake, and THK linear guides work together to ensure correct magazine alignment.

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

Maintainability

Two hinged, interlocked access doors provide maximum access to the interior of the machine. Maintenance-free pneumatic cylinders are used and maintenance overrides in the software help the technician configure the machine for maintenance.

Safety

Lexan guards around the magazine loading and unloading conveyors reduce pinch hazards.

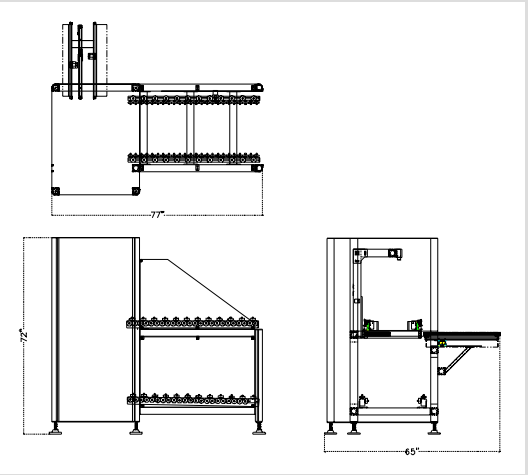
Other potential hazards are guarded and marked with SEMI-approved labels. Emergency stops are located in the front and rear of the machine and exhaust air pressure when activated. Machine status lights and audible alarm are standard.

Available Options

- Inline or ninety-degree magazine conveyor orientation (see "Application" section)
- Power Width Control
- Good board/bad board magazine sorting
- Large board version—up to 22" x 28"
- Custom magazine handling
- Tooled Width Adjust—requires tools to adjust
- Magazine Carts
- Conveyorized magazine racks
- CE compliance

We welcome custom applications.

Specifications



Board Handling Capability

SMEMA 1.2 Compliant

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

Footprint

Length:	32 inches (80 cm)
Width:	51 inches (129.2 cm)
Height:	54 inches (137.2 cm)

Facility Requirements

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

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