LOADING AUTOMATION, INC.

ATLS

Automatic Truck Loading System

LOADING AUTOMATION INC.
Automated Shipping & Receiving Systems

The unique ATLS alignment system

Thanks to its unique and compliant alignment system, the ATLS can cope with trailers of various dimensions and height. It also complies with trailer positioning variations relative to the dock.

After aligning at a door, the ATLS deploys its alignment arms to make contact inside the trailer walls. The alignment arms detect the exact position of the trailer relative to the door. It can then fine-tune its own lateral position with the trailer, assuring a smoother loading. A laser distance meter is used to automatically measure the dept of the trailer. A regular dock leveler allows the ATLS to manage trailers of different height. The loading dock remains unchanged.
This original and patented alignment concept, makes the ATLS the only Automated Truck Loading System that can comply with regular outsourced trailers of various length, width and elevation, using a regular loading dock, providing all the flexibility of a forklift, with the speed and accuracy of automation.

Loading Module Platform (LMP) traveling at designated door

LMP deploying its alignment arms to align with trailer

The alignment arms secure the perimeter for safety

Flexibility of integration

The Unit-Loads are delivered to the ATLS by an overhead pallet conveyor over the dock doors. This way, the loading dock area is kept clear from obstructions, allowing safe forklift and pedestrian circulation around the ATLS.

The ATLS Platform runs on imbedded tracks along the docks, allowing the Loading module to service several shipping doors.

The Loading module is rugged robotized dual forklift that is electrically powered by cable, eliminating battery maintenance

The Unit Loads can be fed directly from the palletizers, AS/RS, AGVS, accumulation conveyors, or any other automated or conventional means. A large variety of integration possibilities are available to suit your particular logistics needs. The Product flow can now be entirely hand free, from the production line to the truck.

Advantages of Automation

- reduces or eliminates lift truck operation;
- reduces labor costs;
- eliminates product and pallet damage;
- eliminates battery maintenance costs;
- eliminates potential accidents and injuries caused by forklift operation;
- eliminates ergonomic issues related to lift truck operation;
- increases loading speed;
- increases throughput capacity;
- reduces the number of shipping doors necessary;
- facilitates just-in-time delivery; and
- improves process reliability.

Unique Capabilities

The ATLS can:

- load a complete 53-foot trailer in 10 to 12 minutes;
- be installed on any conventional loading dock;
- load any unmodified regular semi-trailer;
- service multiple shipping doors;
- perform any load pattern;
- handle any type of pallet, skid, rack or slip sheet;
- be equipped with clamps to handle rolls or bales; and
- be integrated into most automatic, semi-automatic or conventional warehouse and shipping operations.

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Description of the automatic sequence

Unit-Loads (UL)are in the elevator

Conveyor aligns the UL with the ATLS

Loading Module (LM) picks-up the Unit-Loads

LM lowers the UL at travel height

LM enters truck to deposit the loads in it.

Automatic Truck Loading System features:

- direct plant power (no battery, no combustion engine);
- rugged steel construction;
- state-of-the-art components;
- a flexible control system (easily linkable to WHMS);
- versatility;
- reliability;
- end free operation;
- user-friendly interface;
- compact and flexible design; and
- compliant guiding system.

Technical Specification	
Power requirement	460 V, 3 Phases, 60 Hz
Capacity of loading Module	6,000 lb.
Loading speed	Over 110 pallets per hour
Controls	Allen Bradley PLC

The ATLS automatically measures the length of each trailer with a laser distance meter to optimize the load pattern.

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