

AMERDEN AGVS APPLICATION REPORT

AGV SYSTEM: INNOVATIONS FOR SPECIAL HANDLING

When a West Coast manufacturer of Packaging Products wanted to automate their finished goods transport, they looked to Amerden AGVS for help. The Operations Management had a long list of needs for the project including creation of a safe work environment, reducing labor cost, minimizing fork truck traffic, reduction of product damage and tracking their finished goods from manufacturing to storage to shipping.

Not only was this a tall order but the loads were very tall as well—up to 104” high with over 20 variations of load heights. The new system would have to create deep lane, stacked storage and track the inventory for over 4,000 pallet locations in the Warehouse and Shipping Area.



Amerden AGVS, www.Amerden.com

Amerden evaluated the operation and found that moving a double stack of product was the most efficient and cost effective method. But the product is light and a double stack of 104” tall loads caused problems for stability as well as for the laser guidance system. Design innovations were needed to solve the problems and Amerden was the only company that delivered the solutions.

As product exits the manufacturing lines through stretch wrappers, the PC based AGV Control System (AGVSM) dispatches one of two FLA model AGVs to the appropriate line.

The FLA double stacks the loads at the line and uses a specially designed clamp device to stabilize the top load. Now the AGV is ready for the trip to the Warehouse with both loads safely captured.

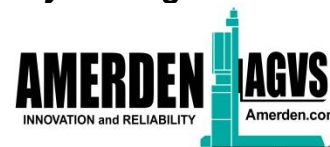
The next challenge was to find a way to utilize laser guidance for the new AGVS. Because of the height of loads stacked in the Warehouse (up to 312”) the reflectors may be blocked so Amerden devised a “movable mast” for the laser head on the vehicles. This mast extends for normal travel and stacking but lowers to allow the vehicles to negotiate lower areas of the facility like doorways.



Laser Mast Lowered For Special Areas of the Facility

Amerden provided it's De'Carte system control for the application. This PC based controller manages all move requests, vehicle traffic, monitors battery levels, provides reports and interfaces with I/O at the stretch wrappers, conveyors and doors. The system reads bar codes on the loads and transmits the data to the AGVSM via RF. In turn, the AGVS tracks pallet ID, location in the Warehouse, time stored, load height and number of loads stored by SKU. All of the data is uploaded to the customer's host to create an end-to-end solution and

Productivity Through AGV Technology.



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