

# Macy's Distribution Center Makes A "Smart" Move

SmartCart® Automatic Guided Carts Improve Operations  
at California Facility

Macy's Distribution Center in City of Industry, California, wanted to improve how products were moved in its 750,000 square foot warehouse. With its old system, six associates used a tugger to manually move carts loaded with furniture product including sofas, chairs and mattresses to and from the dock doors. Today, this process is automated by the Jervis B. Webb Company's SmartCart® Automatic Guided Cart (AGC®) system.

"I really love the SmartCart because it doesn't call in sick and it doesn't take any breaks," said Bill O'Malley, Vice President of Furniture and Bedding Operations. "It's a very predictable, safe and efficient model."

The new system includes five Model 300 SmartCarts, which are designed to tow up to eight carts that are connected together like a train. Macy's currently has 200 carts that are retrofitted to link with the SmartCart, which is an improvement over the old system.

"One of our biggest challenges was we could never get the empty carts back to where they needed to be so we were operating with about three times the carts that we operate with today," said O'Malley.



The SmartCarts are controlled by a computer system. A computer operator directs a SmartCart to one of six pick-up zones. After arriving at the assigned

bay operator. After the carts are loaded, the operator presses a button to release the SmartCart, which then delivers the furniture to its assigned drop zone.



pick-up zone, the SmartCart delivers a train of empty carts to the inbound drop lane. It automatically decouples from the train and then moves to the outbound lane where it automatically couples with a train of carts that are being loaded with furniture by a high-



The furniture is manually unloaded at five drop zones. The associates have four minutes to unload the SmartCart or it starts beeping.



While the SmartCart is idle during the four minutes, it charges using a metal plate that is connected to a charger and installed at three designated charge locations. When a SmartCart reaches a charge location, spring-loaded shoes come in contact with the floor plates. A contactor energizes connecting the battery to the floor plates, which charges the battery. The system is called “Opportunistic charging” and this allows the SmartCart to run continuously without a battery changing operation.

“It improves the flow, and we don’t have to wait,” said Michele Beard, Director of Operations. “Nobody has to come and hook it up. It hooks up by itself, and it starts charging.”

The SmartCarts travel along a path that is approximately 4,500 feet long. They are guided by magnetic tape. In-floor magnetic bar is used in high traffic areas to avoid wear and tear. Magnetic tape equals increased flexibility because the path to be changed and installed quickly and easily.

“It’s really within a day that you can make a change it’s a very quick process,” said O’Malley. “We constantly are looking for ways to improve our business so being able to customize and being able to change is a huge advantage.”

As a Six Sigma company, Macy’s is always looking for ways to improve its processes. Macy’s executives considered many types of automation, including conveyors, before deciding on the SmartCart system.

“We find that towlines are costly to maintain and also they are very unpredictable. They have their own challenges, said O’Malley. “A lot of product will continue to go around the towline, and we have to manage the offloading process. We also find

the cost of putting them in – is cost prohibitive in today’s capital markets.”

Bill O’Malley recommends the SmartCart system to other companies that are looking to improve their operations and their bottom line.

“We’ve reduced our processing overtime. We’re getting out on time daily,” said O’Malley. “We’re confident that the Smart Cart is providing us with the ROI we proposed on this project.”



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Macy’s Inc.