VELOCITY VIDEO CASE HISTORY

A DC VELOCITY SPEED CHALLENGE

Harnessing automotive supply

BLG Logistics relies on a Stoecklin automated storage and retrieval system to sequence wiring harnesses for just-in-time delivery to Mercedes-Benz.

TODAY'S AUTOMOTIVE ASSEMBLY PLANTS RUN ON extremely tight production schedules. Materials and parts arrive at facilities just as they are needed on the vehicle assembly line. To add to this complexity, the many options available on today's automobiles mean that in many cases, the components are not the same for every car on the line. Suppliers must sequence the correct parts to match up with each individual vehicle being assembled.

At its 350,000-square-foot facility in Vance, Ala., BLG Logistics supplies wiring harnesses for the Mercedes-Benz assembly plant next door. The company receives the harnesses from manufacturers in Mexico, stores them for two or three days, and then sequences them to meet the exact specifications of cars on the line. It's a process that requires speed and precision—and one that must be performed within a very tight time frame.

"Once that order has been received, we have about 45 minutes to have the harnesses come down the line to be sequenced, picked, verified, and shipped to the plant," explains Jamaal Roberts, manager of operations at BLG.

Work at this facility would be nearly impossible without automation and software systems to drive accurate processing. At the heart of its operations, BLG relies on an automated storage and retrieval system (AS/RS) supplied by Stoecklin Logistics. The three-aisle system is based on a mini-load system that was modified to accommodate the large wooden boxes that hold the harnesses. The boxes measure 73 by 32 by18 inches, requiring larger carriages and right-sized racking locations to hold them.

To assure uptime, the interior racking within the AS/RS only contains one wiring harness between the two crane aisles. This is so that the middle crane in Aisle 2 can retrieve products from the interior racks of Aisles 1 and 3. The system has capacity for 3,400 harness sets in a footprint of only 50,000 square feet. At any given time, there are between 2,000 and 3,000 sets in storage. The additional capacity allows for growth and a continuous reshuffling of inventory, so that harnesses needed soon are re-deposited closer to output stations to reduce retrieval time.

SMART & FAST

Any delays in processing at BLG could stop the line at Mercedes-Benz. That's why it's critical that accuracy and speed are assured.

Each car rolling down the line at Mercedes-Benz actually requires three different harness assemblies to meet the electrical connections in the engine, control console, and cabin interior. BLG uses the storage boxes to combine the harnesses needed for each car model based on the build plan. The harnesses then remain together in storage until needed for assembly next door. At that time, information is sent to the warehouse management system, which then coordinates with the Stoecklin warehouse control system to direct the cranes to retrieve the needed harnesses. The system handles 70 boxes in and 70 boxes out per hour.

The cranes deliver boxes of harnesses onto conveyors for transport to processing stations. Workers use scanners to verify that the correct harnesses have been delivered. They then use a put-to-light system to load the harness sets into metal racks for transport to the automotive plant, where they will arrive just before they're needed for assembly. The facility processes about 1,100 harness sets each day, depending on the plant's requirements, and 1,400 sets at peak production. The automation assures that BLG can meet the fast-paced demands of the plant continuously.

"The Stoecklin AS/RS is very dependable. We can run all day," says Roberts. "We chose this machine because it allows us to be competitive, smart, and fast."

To see a video of BLG's distribution center in Vance, Ala., go to dcvtv.com and click on Channel 2. For more information on Stoecklin Logistics, go to www.stoecklin.us.