Creform BST AGV Tugger ‘pulls its weight’ in manufacturing environment.

Creform units help manufacturer of radio frequency technology establish a continuous flow of material throughout its production operation

Greer, SC—A manufacturer of technology for security equipment was looking for a way to transport its myriad raw materials to enhance its production process. Creform had the answer. Creform BST AGVs were already in use at one of the manufacturer’s sister facilities and it was thought to be ideal for this application as well. The AGV provides strategic help in moving carts carrying raw material from the warehouse to production and returning with finished goods. The Creform BST AGV works as an automated tugger, traveling along a magnetic tape guidepath. It slips under a stationary cart, extends a tow pin into the cart’s frame and then conveys it to a designated area.

The BST CA-A50060-NSI designated AGV makes four to six trips during two shifts. It currently travels a two-route system, with ability to handle more. The overall distance the unit travels is 600 ft. The forward-only mode AGV can travel from 10-164 ft./min depending on the area conditions and production needs.

In this operation, the ‘home station’ is in the warehouse and the raw material is manually loaded and delivered to one of two production locations, assigned by the warehouse associate and determined by work flow.

The system employs two carts, with one being loaded in the warehouse while the other is actively delivering products in route. A unique twist to this operation is that the delivery to the work locations is inside a secure area. An RFID security card with entry authorization is attached to the cart that the tugger is pulling automatically opens the door to the secure area. As the BST AGV leaves the secure area, motion detectors open the
exit doors.

The Creform BST AGV-NSI offers a sophisticated control system. It is programmable and can control 50 courses with up to 128 commands on each. Programs can be downloaded via USB memory, Ethernet cable or radio signals (with optional equipment). The unit runs on 24-volt power, and can run a full shift under load capacity prior to recharge.

The carts are built using Creform 42mm pipe and joint system for the high load capacity and wide shelf spans. Each shelf is rated for a distributed load of 400 lb. The dimensions of the carts are 64” L x 40” W x 51” H. It is open on four sides for easy load/unload and each shelf features retainers around the perimeter to ensure payload stays safely aboard during transport. The cart features high quality 6 in. casters for the frequent movements by AGV with a special hitch plate that enhances auto couple/uncoupling.

Options to the system include remote start via data transmitter at home station, opportunity charging systems, radio communications to integrate with a Creform traffic control system, as well as preventative maintenance program to ensure reliable operations.

The Creform System is used to create an array of material handling and efficiency enhancing devices and is a proven component in continuous improvement and Lean Manufacturing programs. The company partners with customers in developing and implementing these programs.

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