The power to perform.

An electrical equipment manufacturer turns to Creform Corporation for an AGV system

Greer, SC — An electrical equipment manufacturer, based in Mexico, was looking to optimize its manufacturing operation and looked to Creform engineers to help develop the right system. The right system proved to be a Creform AGV that transfers unit loads to powered conveyors for automatic load transfers.

The heavy-duty FH-B50066 bolt-on AGV drive, which features standard bi-directional drive, was recommended. The AGV features a single-powered conveyor deck situated at 14 in. transfer height. Mechanical load-safety stops drop down when pulling into conveyor stations to allow transfers then rise up when leaving to ensure load is secure for transport. The parts are transferred off both ends of the AGV.

In this application, the overall footprint of the unit is 63 in. long x 55 in. wide (1600mm x 1400mm) and travels at a 164 Ft./Min. (50 M/Min.) maximum speed. The unit has a capacity of 1460 lb. (660kg).

Each end of the vehicle follows an approximately 160 ft. long magnetic guidepath to ensure accurate and repeatable tracking in space restrictive areas and accurate conveyor alignment for reliable transfers. The vehicle stops and starts automatically and maintains a home position at the upstream process until it is released by an associate. It then travels, deposits the load and returns.

Photo eyes are used for secure load verification while the AGV is traveling. Any load shift is detected and will stop the AGV.

The AGV is PLC controlled and features an HMI touch-screen for user and maintenance interface. Operator interface panels include push buttons at both the front and rear of the unit. It uses floor positioned RFID tags for routing, speed changes and -more-
The power to perform… with photo and caption

Embedded photo is for reference only. Hi-res photo is attached as separate file.

obstacle sensor-view changes.

The power pack is a 24-volt system powered by two easy-access 12V TPPL batteries, covered, and with side-mounted opportunity charging to automatically maintain peak performance levels. The opportunity charging system minimizes the need for the user to change batteries as they are automatically charged by just pulling into the charging station positioned along the route. No human intervention is necessary.

The AGV features complete equipment for compliance to safety category 3 and includes safety circuit to cut power, audible warning device, flashing light, E-stops and laser scanners (one at either end) and blue-beam projector lights.

The blue safety lights on either end are like those used on forklifts. They project a large blue dot on the floor in front of the traveling AGV and inform associates that the unit is coming. This simple projection light lets people know the AGV’s position, direction and speed of travel in time to clear the path. This helps make the work area safe and allows the AGV to move freely without pedestrians causing unnecessary stoppages.

Options include onboard radio for integration into larger projects with the need for traffic control and the unit can be manufactured to different specs with corresponding operating capacities.

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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Online at creform.com for additional information regarding Creform Corporation and its products.

CRE-599 Caption: Bi-directional AGV with dual conveyor deck from Creform.