All Creform AGVs are environmentally friendly because they operate on either 12V or 24V battery power. The Creform System focuses on good ergonomics and Creform AGVs are designed to minimize battery handling. AGVs with bolt-on drives are generally designed with battery trays on roll-off conveyors minimizing battery handling and lifting. BST undercarriage style AGVs all have battery compartments with trays that can be rolled off on to special battery carts that are easily transported to charging stations.

There are two basic battery types available. AGM lead-acid batteries for conventional charging methods and TPPL batteries for the high amperage charging associated with opportunity charging. These are no-leak in the unlikely event of a cracked battery case. Both battery types utilize spark-proof connections for wiring safety.

Creform also offers three methods of battery charging, all designed to maintain uninterrupted AGV operations during active shifts. These are conventional battery charging, opportunity charging and automatic battery charging stations all designed to keep AGV fleets running during production hours no matter what those may be.
Charging methods to meet every need

Manual Battery Charging Stations are an economical and simple way to keep AGVs ready to work, offering up front economy, but requiring ongoing associate involvement. For single shift operations, where in-vehicle charging is an option, charging stations placed at strategic locations along guidepaths will allow simple plug-in overnight charging. For multi-shift operations, or if battery exchange is necessary, charging stations should be placed on or near guidepaths where batteries can also be stored. Multiple battery sets need to include one battery set per shift per vehicle to allow for charging and cool down before operation, extending battery life. Build charging stations using either the Creform System of pipe and joints or steel fabrications.

Opportunity Charging is one of Creform’s automatic battery charging options. While this requires an additional up front investment, it minimizes associate involvement, an important consideration for large numbers of vehicles. Stations can be located at various stopping points along a route where charging time is available. Depending on the amperage and length of the charge, opportunity charging may fully top off batteries, or provide a supplemental charge to extend the time between battery replenishment charge or exchange. In either case, when an AGV reaches a charging station, it will communicate its presence and initiate the auto-charge cycle. The mechanical charging connection consists of either floor-embedded contacts or contacts set adjacent to the guidepath.

Automatic battery charging can take place off the main guidepath on a charging spur. This requires an additional up front investment but minimizes human involvement. This method is ideal when time during operating cycles will not permit opportunity charging. Certain Creform AGV models can be configured to monitor their battery levels. Upon reaching a set discharge level, they can complete an assignment and then automatically route to a charging spur and communicate their presence to initiate the auto-charge cycle like opportunity charging. An AGV will generally stay on the charger until its batteries are fully replenished. This method requires spare vehicles to allow AGVs to be offline for charging.