



The Intell-A-Changer automatically lines up with your forklift for a perfect battery change.

# Re-charging DC Savings

*MTC Introduces a Battery-Changing Robot that Decreases Labor Cost and Increases Efficiency*

**M**aterials Transportation Company (MTC), the Temple Texas-based company that designs, engineers and manufactures battery handling equipment, has created Intell-A-Changer, a microprocessor-controlled system that automatically charges, changes and helps maintain industrial batteries. According to Jim Lane, vice president of Battery Systems Sales, the company saw a need to help customers reduce the costs associated with manpower, batteries, real estate and maintenance issues surrounding the inventory of storage batteries required to power forklifts and AGVs (automatic guided vehicles).

“The use of an automated battery charging and changing system can increase the productivity of those vehicles by 30 percent while also reducing the inventory of batteries, number of charging units and related warehouse space,” says Jim Lane, a vice president with MTC. “By installing an automated system, the need for dedicated battery maintenance personnel is completely eliminated, and both the duty cycle and life cycle of batteries can be extended significantly.”

The Intell-A-Changer system incorporates fully automated battery changing technology, along with battery charging, watering and cleaning stations. This all-electric, customized system is equipped with PLC control of the system’s robotic movements that load and unload batteries without human intervention. Laser technology is used for down-aisle position sensing and for creating a protective barrier that helps ensure operator safety. Proprietary system software maintains records of battery activity, including service and life cycles, maintenance intervals and vehicle usage.

## Breaking Down the Benefits

Lift truck operators are the only ones to interface with the Intell-A-Changer during a battery change. Therefore, no additional battery department personnel are required for battery changing or charging.

“The automated system not only tracks battery service, including watering and washing, but it also performs those services,”



The T-arm utilizes a worm gear electric drive to transfer the magnet from one side to another.

says Lane. “This ensures that battery life will be optimized and that battery service will be documented – supporting warranty claims that may otherwise be unsupportable.”

The Intell-A-Changer is an alternative to expensive “hot shoe” fast charging systems that require major investments and can compromise the lifespan of expensive fast-charge batteries.

Worker safety is an important issue. The automated system removes the possibility of accidents associated with the battery changing operation by completely automating battery removal and installation. Lift truck operators present for a battery change are protected from possible hazard, because the system requires them to remain at a safe distance. The Intell-A Changer system also includes a light “curtain” that will automatically stop all system motion if any worker or vehicle enters the changing aisle.

The floor space requirements of the traditional battery room may also be optimized with the use of this system. Reduction in the battery inventory leaves space for fleet expansion without adding racks and the compact design of the battery watering and washing service areas frees up valuable floor space.

## An Automated Distribution Center for Battery Power

“This automated battery changing system is appropriate for both high-volume, big box retail distributors and smaller distribution centers,” says Lane. “I compare the benefits with the advent of the distribution center scheme a couple of decades ago. At that time we computerized the warehouse and instead of carrying 30 days inventory we limited the stock to three day’s worth. This system does the same thing with batteries, converting the battery room ‘warehouse’ to an automated distribution center for battery power that is needed for AGV and truck operations throughout the facility.”

Founded in 1946, MTC strives to meet the ever-increasing demands of industry by offering the complete sales, design, engineering, and manufacturing of a wide variety of material handling equipment.

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