

3,500 lb. Motorized Custom Transport Solution Cart



Research studies conducted at the Liberty Mutual Research Institute for Safety have concluded that pull/push forces in excess of as little as 35 pounds contribute to musculoskeletal workplace injuries in employees. When they follow these standards, companies have reduced employee injuries, lowered workers compensation claims, and improved bottom line performance. To meet these standards requires matching the cart and caster design with the payload to be moved. Even when this is done, sometimes it is not enough and a motorized cart solution needs to be deployed.

A large international industrial client faced such a challenge when they were trying to move a 3,500 pound payload in tight spaces. After exhausting all manual transport options, the client turned to Electro Kinetic Technologies for assistance.

During the concept phase of the project, several alternatives were investigated including a dual independent drive system to assist in turning the equipment. In the end, the client selected a center mount transaxle system with a differential drive. This system and high performance Darcor dual casters gave the motorized cart a tight turning radius and exceptional maneuverability in the client's small operating space.

Another requirement for the custom design was to have the batteries and electronics housed in a NEMA 4X/IP66 enclosure. To achieve this requirement, an appropriate enclosure was added to the cart with control and power cables exiting the cabinet through the rear using NEMA 4X seals. The final step after fabrication was to add a powder coat custom color to the frame.

By adding a customized motorized cart solution, the client was able to move their 3,500 pound payload while achieving their ergonomic and performance goals for the project.

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Electro *Kinetic* Technologies

Ergonomic Solutions for Transport

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