



## CASE STUDY

### Custom Lithium-ion Battery Packs for Airport GSE Tow Tractor

With rated traction of 30,000 Kg

Learn How Frey's Lithium-ion Battery Benefits Aviation GSE OEM Manufacturer

## THE CHALLENGE

GS INDUSTRIAL is a world leading manufacturer of material handling equipment, warehouse equipment and ground support equipment. Headquartered in China, it's GSEs are widely used in 130 countries.

In 2018, they were looking to add lithium option into their airport tow tractor BT30 as power source. With numerous lithium-ion battery suppliers in the market, GS INDUSTRIAL was looking specifically for a lithium battery supplier with solid background and experience in industrial electric vehicles instead of general energy storage or electric cars. Being an OEM manufacturer and considering the stringent safety requirement in aviation industry, they put power reliability and safety as the top priorities.

The tractors will be spread all over the world, they need a lithium battery solution that can handle all types of weather conditions, from rainy season to snow storms, and from blazing hot sun to severe freeze.



## SOLUTION AND RESULT

Frey New Energy custom built the lithium-ion battery pack of **320V200Ah**, it met all GS INDUSTRIAL's requirements, and it exceeded their expectation about the benefits of lithium-ion battery.

The production of the OEM batteries started on June 2018, until July 2021, each battery performs well without any issue during the 3 years. All the batteries are proudly powering the tow tractors in various airports in the world.

Frey New Energy's lithium solution enhanced GS INDUSTRIAL's leading position in the aviation GSE market in adapting green energy.

### Built to Last

Constructed with Frey's high-power output cell, it's extremely durable and long-lasting, with a cycle life of  $\geq 3,000$  times at 80% depth of discharge.

### High Capacity and Productivity

Frey battery-driven tow tractors running move efficiently, towing more and running longer than their electric car battery-driven counterparts.

### Extremely Safe

Frey's LiFePO4 cells and modules are tested explosion-proof, it can be used in any extreme environment. OEMs can have peace of mind about the safety.

### Low-Temp Performance

Tractors can run efficiently in extremely low temperature due to Frey's patented Nanometer Technology.

