



CASE
STUDY



1 | Challenge : **Increasing the efficiency of airport vehicles**

A manufacturer of airport vehicles for passenger transport turned to HOPPECKE because the battery life and charging technology of a special group of vehicles needed to be improved.

In 2022, a total of just under 165 million passengers were transported through the air from German airports. But not only that - these 165 million were also brought to the airplane and back to the airport after landing.

For those tasks, countless airport vehicles are in use every day, driving both passengers and luggage safely across the airport grounds. The vehicles must be able to demonstrate maximum profitability and high availability daily to avoid delays and guarantee that processes run smoothly.

The new generation of the customer's airport e-vehicles for passengers with mobile limitations

should, above all, have a better battery and charging technology. The gel batteries used until then were only suitable for four to five hours of operation with 80 V.

For this reason, the customer wished for a low-maintenance traction battery with easy handling and protection against damage to the battery surface and cables. He wanted to avoid the disadvantages of previously used gel batteries: reduced driving and service life are unacceptable in airport use. The charging technology also had to be suitable for year-round outdoor use, which means also for low and high temperatures as well as rain.

High performance requirements
on the charging technology

Dirty usage environment
of the battery

Outdoor-installation
of the charging station

Improving the service life
of the battery



Clemens Röhnelt
HOPPECKE Motive Power

"The customer wanted a reliable and protected battery without a lot of maintenance. With the trak | uplift save+ he got exactly what he wished for."

60% longer driving times
of industrial trucks

30%
less energy costs

To 6h reduced
charging time
due to electrolyte
circulation

Minimized
maintenance costs
due to full-
protection-tray

2 | Solution : Savings and trouble-free operation of the airport fleet

With the **trak | uplift save+** HOPPECKE found the best solution for use in airport traffic. The customer's requirements could be fully met by means of appropriate extensions.

After analysing the situation and the circumstances, HOPPECKE decided to use the **trak | uplift save+** wet battery for the customer. It offers all the advantages in terms of performance and low maintenance at the same time. The full-protection-tray cover encapsulates and protects the entire battery surface against dirt and damage which significantly reduces repair costs.

In addition, the HOPPECKE **trak | aquafill** and the electronic electrolyte level indicator **trak | aquacheck** simplify and speed up water filling and control. The central degassing system discharges aerosols from the battery and the vehicle into the atmosphere. This eliminates the usual damp and dirty battery surface. These two factors result in minimal maintenance.

The use of **trak | air** electrolyte circulation reduces the charging time to a short six hours, the energy costs by

30% and allows individual intermediate charges according to handling needs.

A **trak | charger HF premium** charger was used to charge the batteries. The innovative outdoor charging winter programme ensures minimal performance losses despite severe frost by adapting the charging parameters to the current battery temperature. Due to its IP54 encapsulation, the outdoor charger can stand outside in wind and weather without any problems and can be flexibly placed anywhere on the airport apron.

Thanks to the **trak | uplift save+** technology in combination with the **trak | air EUW** and the **outdoor charger**, the daily driving time of the vehicles at the customer's could be increased by 60%. With the HOPPECKE solution, the customer has an efficient battery and charging technology that enables trouble-free passenger transport on the airport premises. The battery can withstand dirt and every weather condition without any problems and its long service life ensures maximum customer satisfaction.

Key Benefits

- High performance and yet low maintenance
- Reduced repair costs due to protected battery surface
- Outdoor-ready charger in all weather conditions
- Minimum maintenance due to central degassing system
- Minimal loss of performance in extreme temperatures thanks to special winter charging program
- Possibility of intermediate charging according to handling requirements

3 | Products :

- ▶ **Batteries:** **trak | uplift save+**
- ▶ **Chargers:** **trak | charger HF premium**
- ▶ **Outdoor-Housing:** **trak | systemizer powercube**
- ▶ **Elektrolyte circulation:** **trak | air**
- ▶ **Elektrolyte level check:** **trak | aquacheck**
- ▶ **Water refilling:** **trak | aquafill**



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