

Innovative, reliable lithium-ion technology

Rapid charging and opportunity charging ensure continuous availability of machines

High level of energy efficiency

Maintenance-free

Long service life



## Lithium-ion battery (110 Ah)

### Battery system based on lithium-ion technology

Efficient, compact and long-lasting – these are the advantages of the Jungheinrich® lithium-ion battery (110 Ah). Additional benefits include fast charging times, no maintenance and a reduction in overall costs. This form of energy storage also involves a high level of efficiency when charging and recuperating braking energy and facilitates energy savings of more than 20%.

The high performance energy cells of the lithium-ion battery are characterized by very short charging times. After an opportunity charging time of only 30 minutes, the battery absorbs 50% of its capacity. After 210 minutes, it reaches its full charge status. The opportunity charging option enables you to use your vehicles continuously for up to 24 hours a day, 7 days a week without changing batteries.

Using the latest lithium-ion technology, we developed a totally maintenance-free battery featuring an impressive life expectancy of up to 3,000 full and significantly more

partial discharge cycles. By comparison, the average service life for lead-acid batteries ranges from 900 to 1,200 cycles. Battery, charger and vehicle are fine-tuned to work with each other to ensure the maximum degree of efficiency, reliability and convenience in daily operation. In addition, the battery is continually monitored by our innovative battery management system, which is already included.

Restrictions on the operation of vehicles due to escaping gases or acid from conventional lead-acid batteries do not apply to lithium-ion batteries. That means vehicles equipped with lithium-ion-based batteries can also be confidently used in food storage areas, for example.

The tried-and-tested features of our vehicles – rugged design, powerful 3-phase technology and outstanding ergonomics – are perfectly complemented by this modern and highly efficient storage technology.

# Benefit From The Advantages



## Long operating times

May be used continuously in economical multi-shift operation.

- Unrestricted opportunity and quick charging capacity.

## Optimized charging processes with high-frequency charger

Extremely short charging times guarantee a high level of vehicle availability and great flexibility for day-to-day warehouse tasks:

- 50% battery capacity is reached after only 30 minutes of charging time, so that breaks and downtimes can be used for charging.
- The charge can be interrupted at any time with no adverse effects.
- The standard on-board charger (for 110 Ah) allows for convenient charging at any time.

## No battery maintenance

The lithium-ion battery is absolutely maintenance-free and does not emit gas. This largely eliminates the cost of battery upkeep, maintenance and infra-structure.

- No need to add water.
- No need for special charging areas with ventilation.
- No unpleasant odors from gases or acidification
- No expensive battery changing systems with their heavy drain on time and human resources.
- The enclosed design (IP54) makes the battery immune to outside influences.

## Integrated Battery Management System (BMS)

The Jungheinrich BMS continually monitors energy management and ensures reliable operation.

- Current charge state appears in the vehicle's display (SOC) including visualization of recuperation (current feedback).

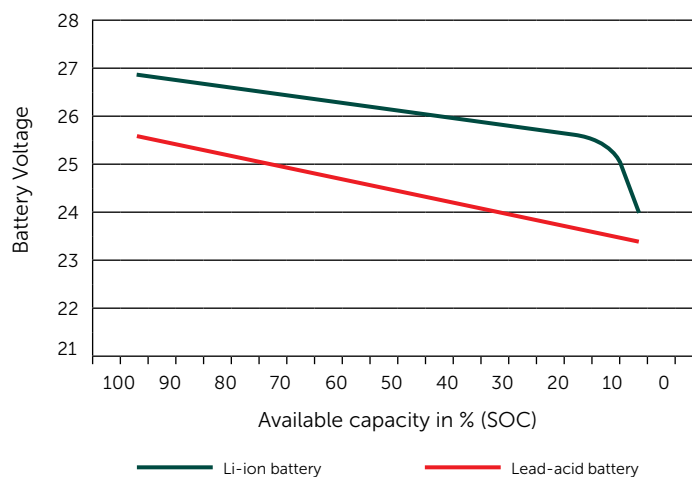
## High level of energy efficiency

The increased efficiency in comparison to conventional technologies significantly reduces energy costs.

- Fast and efficient charging due to communication between battery and charger.
- Even under extreme power requirements such as full load operation, the full energy of the battery is available (no voltage drop as seen in lead-acid batteries).
- High electrochemical efficiency level for charging, discharging, driving and lifting.
- Battery, vehicle and charger are fine-tuned to each other to save electrical energy and reduce CO<sub>2</sub> output.

		Size Small	
Battery Technical Data	Nominal capacity	110 Ah	
	Nominal voltage of battery	2.816 Wh	
	Nominal voltage of truck	25.6 V	
	Nominal energy content	24 V	
	Cell chemistry	Lithium / iron phosphate	
	Operating temperature <sup>1)</sup>	-10°C to 55°C (no cold store)	
	Operating temperature for charging	0°C to 40°C	
	Protection rating / impact	P54 / same as truck control system	
	Weight (incl. additional weight)	306 lb	139 kg
	Dimensions	23.6 x 5.7 x 23.3 in	660 x 145 x 590 mm
Color	Yellow		
Charge	Charge status display	Truck display 2 inches	
Trucks	Available	EJE 120	

1) Different temperatures may affect battery performance.



This specification sheet only provides technical values for the standard truck. Non-standard tires, additional equipment, etc., could produce other values. Rights reserved for technical changes and improvements.