

# Pallet Truck batteries

LITHIUM-ION - LIFEPO4 - PALLET TRUCK BATTERIES



FOR HIGH DEMANDING APPLICATIONS. MADE UPON YOUR DEMAND!

## AQ-LITH® LIT/DYN BATTERIES

Developed and assembled by Battery Supplies

- The tray fits perfectly in the machine without need of filler material
- Extra weight is included in the bottom of the battery tray if this is required for ballast. No need to add extra weight in the machine.

Premium quality with high expected cycle life

Canbus communication to charger to allow a perfect charging profile and balancing action.



Ref.	Voltage (V)	Capacity (Ah)	Capacity (kWh)	Capacity (kWh net)	Charger: standard charging (4 to 8 hrs)	Charger: fast charging (2 to 3 hrs)
DYN24-210	24	210	5,04	4,032	NG1/24-45 RE-L	NG3/24-95RE-L
DYN24-315	24	315	7,56	6,048	NG1/24-45RE-L	NG9/24-145 RE-L

## THE BATTERY IS SUPPLIED WITH:

- Battery connector (to be specified)
- (external) LED screen: Voltage, Temp., RSOC, Current
- Drive protection between machine and charger
- Charger (standard not included): efficiency > 90%
- Compatible with Zivan chargers both for fast charging and night charging

## ADVANTAGES

- 100% Maintenance Free
- Opportunity charging = no need to have exchange battery
- Can be charged in 2 hours (with adapted charger)
- No acid or hydrogen gasses
- Expected lifetime: up to 4000 cycles

## APPLICATIONS



Pallet jack

Suitable for following types:

BT	645x196x570h	24V 160 - 165Ah/c5
BT	645x245x570h	24V 210 - 225Ah/c5
JUNGHEINRICH	624x212x573h	24v 180Ah/c5
JUNGHEINRICH	624x212x627h	24v 250Ah/c5
LINDE	624x284x537h	24V 270Ah/c5
LINDE	786x210x630h	24V 375Ah/c5
LINDE	624x212x627h	24V 250Ah/c5
LINDE	624x212x537h	24V 180Ah/c5
LINDE	624x284x627h	24V 375Ah/c5
STILL	624x284x627h	24V 375Ah/c5
STILL	624x284x627h	24V 250Ah/c5
STILL	624x284x627h	24V 200Ah/c5
...		



## AQ-LITH® INSERT BATTERIES

### ECONOMICAL SOLUTION

#### ADVANTAGES

- Delivery time: in stock
- Economical solution
- Can resist high currents: use of contactors instead MOSFET
- INSERT battery: we reduced the dimensions of the battery to a minimum. Doing so, this battery fits in mostly all pallet jacks, even if the width is limited.



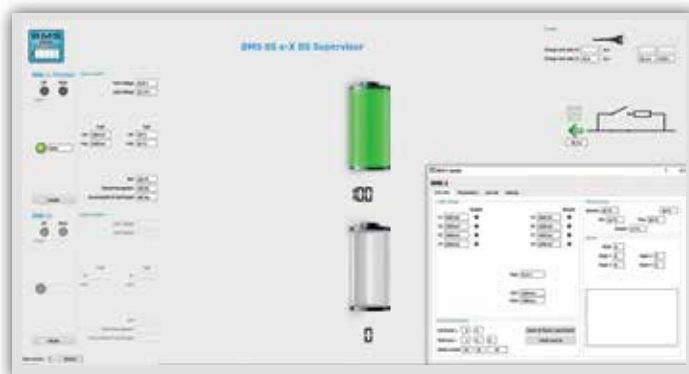
#### SPECIFICATIONS

- Battery excl spacers and ballast plates
- 4 options: in 100Ah or 200Ah, with built-in charger or without charger
- With internal fuse and precharge contactor
- With remote control box with start/stop button, buzzer and display.
- With autosleep function to increase autonomy of the battery
- Perfect replacement of standard lead-acid batteries. if you want to replace a Li-ion battery, then please take care as some machines need a special canbus-communication with the battery. Please contact us

Ref.	LIT/INS24-100	LIT/INS24-100C	LIT/INS24-200	LIT/INS24-200C
	24V 100Ah	24V 100Ah with charger	24V 200Ah	24V 200Ah with charger
<b>Battery specifications</b>				
Technology	LFP	LFP	LFP	LFP
Type of cell	prismatic	prismatic	prismatic	prismatic
Nominal voltage (V)	25,6	25,6	25,6	25,6
Max continuous charging current	0,5C	0,5C	0,5C	0,5C
Max continuous discharging current	0,5C	0,5C	0,5C	0,5C
Max discharging current during 10s	2,5C	2,5C	2,5C	2,5C
Operating temp during charge	0 °C to 45 °C	0 °C to 45 °C	0 °C to 45 °C	0 °C to 45 °C
Operating temp during discharge	-20 °C to 50 °C	-20 °C to 50 °C	-20 °C to 50 °C	-20 °C to 50 °C
IP	IP20	IP20	IP20	IP20
Dimensions (W x L x H, mm)	130 x 450 x 500	130 x 450 x 570	190 x 550 x 500	190 x 550 x 569
Weight (kg)	42	45	62	67
Charging cable	1,1 m - REMA 160A	1ph 220V / 1,5m	1 m - REMA 160A	1ph 220V / 1,5m
Discharging cable	1,1 m - REMA 160A	1,1 m - REMA 160A	1,1 m - REMA 160A	1,1 m - REMA 160A
Charger profile	CCCV	CCCV	CCCV	CCCV
Expected life time (cycles or years)	2000 cycles	2000 cycles	2000 cycles	2000 cycles
Warranty	3 years with 80% EOL	3 years with 80% EOL	3 years with 80% EOL	3 years with 80% EOL
Ref. separate charger	LAD/INS24-30		LAD/INS24-45	
<b>Charger specifications</b>				
Voltage in (VAC)	220		220	
Monopase	yes		yes	
Current in (A)	7		10	
Voltage out (V DC nominal)	25,6		25,6	
Profile	CCCV		CCCV	
Current out (A)	30		45	

# Lithium-Ion batteries

## OVERVIEW



Battery Supplies NV/SA has been investigating the possibilities of lithium in the aftermarkets for more than ten years.

This has led to a very wide range of different LiFePO4 solutions. This enables us to meet the demands of the various demanding markets in which we operate.

We have come to the market with a lithium solution for every demand!

## ADVANTAGES

- Up to 4000 cycles
- Full capacity even at high speed discharge rates
- Fast charging without overheating and gassing
- Excellent life-span: service life up to 6 years
- Protection against overcharge and deep discharge
- Lighter weight: 70% lighter than standard lead acid batteries
- Ecologic: no acid, no lead, no toxic substances
- Small sizes
- Easy to use and to install
- Safest Li-Ion battery
- These LiFePO4 batteries can directly replace SLA batteries in many applications.
- The size is the same, the performance, service-life and weight are much better!

### The most reliable Li-Ion batteries on the market:

Our LiFePO4 (Lithium Iron Phosphate) batteries are developed for cyclic applications, where batteries are frequently charged & discharged. LiFePO4 is the battery technology of the future for cyclic applications where light weight, high currents and a high number of cycles are important !

For cyclic applications.

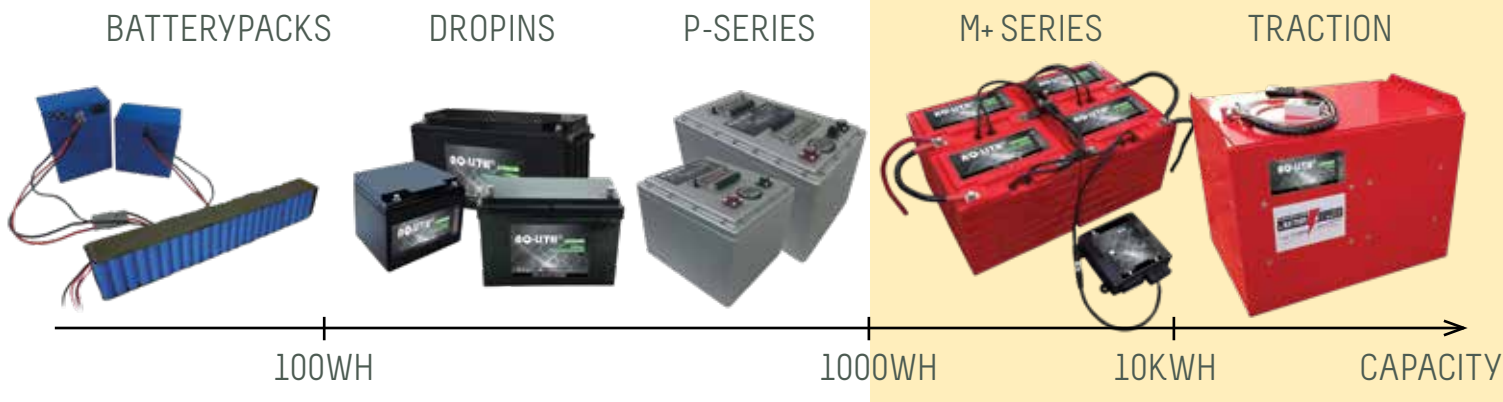
## RANGE OF LI-ION BATTERIES

### Batteries between 1 and 10 kWh

Our modular batteries M+ can be placed both in serial and parallel configuration and can easily meet your specifications. In addition to the flexibility, the delivery time is also a big advantage. However, these blocks still need to be assembled and connected by the customer.

### Batteries from 10 kWh

If you want a ready-made solution in a specific container, we can propose our own compositions. These are assembled in the most common containers with voltages between 24V and 80V and capacities from 210Ah to 840Ah. If your desired battery does not appear in our standard assemblies, please let us know. Then we will find a suitable solution for you.



# Lithium-Ion batteries

M+ BATTERIES

- ➔ MODULAR
- ➔ SERIAL & PARALLEL CONNECTION
- ➔ EASY INSTALLATION
- ➔ FLEXIBLE BATTERY SYSTEM



Our modular batteries M+ can be placed both in serial and parallel configuration and can easily meet your specifications.

These modular M+ batteries fit in a lot of spaces easily, you can also place them on their side if this is more convenient. The batteries each contain a slave BMS which is controlled by a master BMS (LIT/04.01.0085). This master BMS provides the necessary safety functions but also has a CANbus communication.

The batteries are supplied separately, you ensure the connection and the necessary additional components such as contactors and auxiliary relays. If desired, we can also offer these additional components.

## LIFEP04 12.8V MODULE

Specifications		D12-150M+
Voltage (V)		12,8
Capacity (C/2) (Ah)		150,0
Weight (kg)		20,0
Dimensions (mm)		310 x 180 x 234
Terminals, Female Threaded		M8 x 1,25
Specific Energy (Wh/kg)		96,0
Standard Discharge	Max. current (A)	150,0
	Peak current (A)	300,0
	Cut-off Voltage (V)	10,0
Standard Charge	Charging current (V)	14,6
	Max. current (A)	72,5
	Charging time (u)	2,5



Canbus indicator: BAT/48769

Ideal for all M+ and AQ-LITH® traction batteries.

This indicator reads the CANBUS signals from the BMS and displays the SOC, voltage, current, temperature and all warnings. With potential-free contact for minimal SOC% (adjustable)



LIT/04.01.0085

# Lithium-Ion batteries



## PROJECTS

### ACCESS EQUIPMENT



AQ-LITH® Lithium Custom-made  
24V - 210Ah

### CONSTRUCTION



AQ-LITH® Lithium Custom-made  
80V - 420Ah

### AGRI



AQ-LITH® Lithium Custom-made  
48V - 420Ah

### AGRI



AQ-LITH® Lithium Waterproof  
4 x LIT/D48-100P

### GSE (GROUND SUPPORT EQUIPMENT)



AQ-LITH® Lithium Custom-made  
80V - 420Ah

### AGV



AQ-LITH® Lithium Custom-made  
24V - 210Ah

## FORKLIFT



AQ-LITH® Lithium Custom-made  
24V - 210Ah

## BOAT



AQ-LITH® Lithium Custom-made  
48V - 210Ah

## ENERGY STORAGE



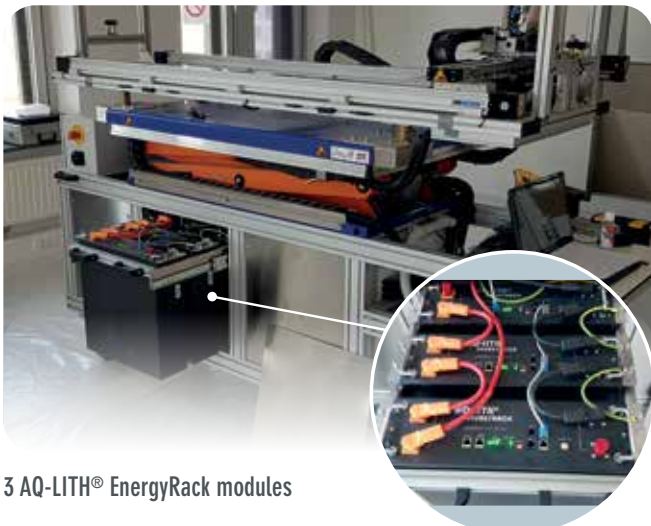
AQ-LITH® EnergyRack 46kWh

## ENERGY STORAGE



AQ-LITH® 400V

## TESTING EQUIPMENT



3 AQ-LITH® EnergyRack modules

## ENERGY STORAGE



AQ-LITH® EnergyRack 138 kWh