

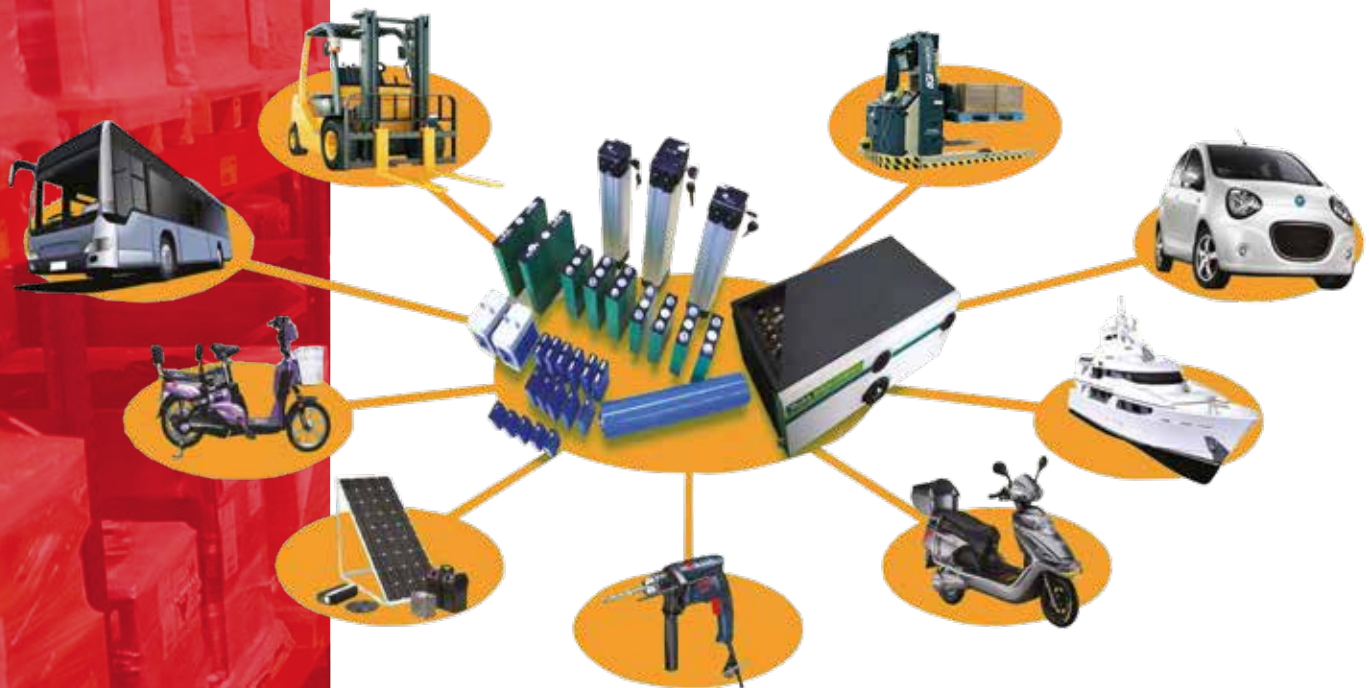


CYCLIC BATTERIES

LITHIUM-ION BATTERIES

Lithium-Ion

**Only
benefits**



Advantages

- Excellent low temperature performance
- High safety performance
- Longer lifespan
- High energy density
- Outstanding charging, discharging performance
- Lower self-discharging rate

Applications

- Electric Vehicles
- Electric bus
- Electric car
- Boat
- Energy storage
- Solar storage
- UPS
- Electric scooter
- Electric bike
- ...





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

From stand-alone replacement of lithium blocks in 12, 24 and 48V, to our modular M+ series, to custom battery packs based on cylindrical cells for small applications and high-quality prismatic cell-based batteries for heavy material handling applications.

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

WHY CHOOSE OUR "LIFEPO4" = LITHIUM IRON PHOSPHATE BATTERIES

- High Performance and super compact.
- Extremely safe & stable chemistry : It is non-explosive & will not catch fire under collision due to overcharging or from short circuit.
- High discharge rate capability : When accelerating, the battery will have better powerful performance than other Lithium and NiMh batteries.
- Long service life : Up to over 6-7 years, up to 4000 cycles (under 80% DOD = depth of discharge 25°C).
- Fast charging features: the battery can charge quickly & safely & is very resistant to deep discharges
- High & stable voltage
- The voltage of LiFePO₄ is 3.2V/cell. The voltage will also remain from 3.2V – 2.85V within 85% of its discharge time.
- No memory effect.
- Environmentally friendly : Non-toxic, non-contaminating, no rare metals.
- Spread working temperature: extreme cold & hot weather has no effect on battery performance
- Compact: high energy density
- Light



RANGE OF LI-ION BATTERIES

Batteries up to 100Wh

Our battery packs are frequently used for all small applications such as backup in camera surveillance or small mobile applications. Also e-bike batteries belong in this group. Many packs are custom made to the customer's specifications.

Battery up to 1 kWh

If the technical specifications of our drop-in batteries match your requirements, then these drop-in batteries are the cheapest solution for your application. Be careful when placing these batteries in series and parallel, contact us for further details. If your desired battery is not included in our range, we can provide you with one of our own assemblies. Send an email to info@batterysupplies.be and we will sort it out for you.

Batteries between 1 and 10 kWh

Our modular batteries M+ can be placed both serial and parallel 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 you.

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 96V and capacities from 100Ah 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.

BATTERYPACKS

DROP-INS

M+ SERIES

TRACTION



If you have an inquiry for our Lithium-Ion batteries, please send a mail to info@batterysupplies.be and our technical team will look to offer you the battery that will fit your application.



CYCLIC BATTERIES

LITHIUM-ION BATTERIES

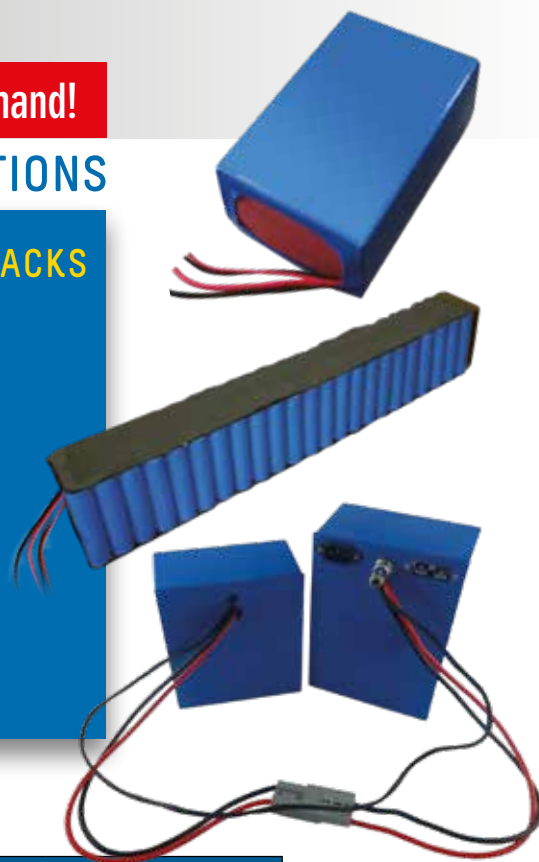
Battery Packs made on your demand!

CUSTOMIZED LI-ION SOLUTIONS

CUSTOMIZED LI-ION BATTERY PACKS

According to your specifications :

- Li-NMC-02 or LiFePO4 chemistry
- Cylindrical or pouch cell
- Voltage < 48V
- Capacity up to 40Ah
- Different C-rates (for energy storage or power applications)
- Build-in protection PCB, cell balancing
- Dimensions following demand
- Soft PVC or Aluminium housing



POUCHES

We also have an assortment of LiFePO4 pouches. Ask for availability of your needed capacity.



CELLS

Reference	Description				
LIT/02.01.0001	LiNMC02 CELL 18650	3,6V	1500MAH	15C	
LIT/02.01.0005	Li(NMC)02 CELL 18650	3.6V	2200MAH	1C	
LIT/02.01.0006	LiMn02 CELL 18650	3.7V	2600MAH	0.5C	
LIT/02.01.0013	LiMn02 CELL 18650	3,6V	2200MAH	2C	SAMSUNG
LIT/02.01.0014	LiMn02 CELL 18650	3,7V	2600MAH	2C	SAMSUNG
LIT/02.02.0002	LiFePO4 CELL 18650	3,2V	1100MAH	10C	
LIT/02.02.0004	LiFePO4 CELL A123 18650	3,3V	1100MAH	30C	
LIT/02.01.0003	LiMn02 CELL 26650	3,7V	3500MAH	5C	
LIT/02.02.0001	LiFePO4 CELL 26650	3,2V	2500MAH	10C	
LIT/02.02.0003	LiFePO4 CELL A123 26650	3,3V	2500MAH	30C	ANR26650M1A

BMS

Reference	Description			
LIT/04.01.0094	PCB FOR 4S LIMn02	14.8V	10A	1 PORT
LIT/04.01.0028	PCB FOR 7S LIMn02	25.20V	10A-30A	1 PORT
LIT/04.01.0029	PCB FOR 10S LIMn02	36V	10A-30A	1 PORT
LIT/04.01.0073	PCB FOR 13S LIMN02	48V	15A-30A	1 PORT
LIT/04.01.0074	PCB FOR 13S LIMN02	48V	50A-100A	1 PORT
LIT/04.01.0123	BMS FOR 14S LiMNO2	360V	15A-30A	1 PORT
LIT/04.01.0136	BMS FOR 10S LIMNO2	36V	50A-100A	1 PORT
LIT/04.01.0096	BMS FOR 2S LiFePo4	6.4V	8A-15A	2 PORT 8A
LIT/04.01.0097	BMS FOR 4S LiFePo4	12.8V	40A-80A	2 PORT 8A
LIT/04.01.0105	ACTIVE BALANCING PCB FOR 8S LiFePO4	24V	20A-40A	1 PORT
LIT/04.01.0107	ACTIVE BALANCING PCB FOR 4S LiFePO4	12V	20A-40A	1 PORT



LITHIUM-ION TECHNOLOGY

Battery Supplies' strength in regards to li-ion-solutions is the full technical support we provide.

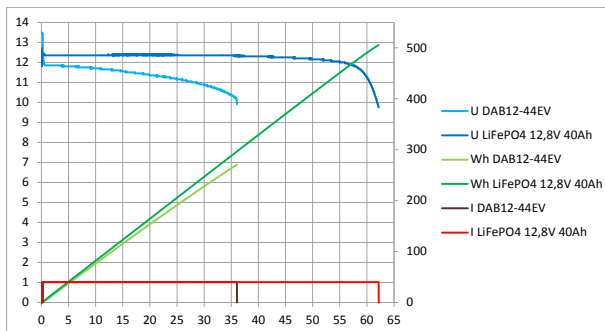
At Battery Supplies we have a technical team fully dedicated to LiFePO4-Solutions.

We provide OEM-companies and installers with a custom-made and readymade solution based on your specifications and demands. Please put yourself into contact with our engineering department!

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.

Comparing discharging graph => AGM12-44Ah / LiFePO4 12,8V 40Ah



Discharged @ 1C (40A)

Higher energy density for LiFePO4 in comparison with AGM, this at high discharge current and short discharge time

ADVANTAGES

- High C-Rate
- Safe Lithium Battery
- Good storage, few maintenance
- Good High Temp performance
- No gassing
- Can be mounted in every position

CHARACTERISTICS

- These LiFePO4 batteries can directly replace SLA batteries in many applications.
- Longer service life: up to 2000 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, not-toxic substances
- Small sizes
- The size is the same, the performance, service-life and weight are much better!
- Easy to use and to install
- Safest Li-Ion battery





CYCLIC BATTERIES

LITHIUM DROP-IN BATTERIES

Applications



UPS



Signal



EPS



Solar Power



Base Station



Electric Vehicle



Other power supply

USE IN SERIES OR PARALLEL

General

The batteries must first be charged separately to the same state. Only connect them in parallel or in series after charging. Only connect batteries from the same production batch in series or parallel.

Parallel configuration

Do not connect more than 4 batteries in parallel. If batteries connected in parallel are discharged (fully or partially), it is harmful to replace one of the batteries with a full battery. Disconnect all batteries, charge them separately and then switch them back into parallel.

Serial configuration

Do not connect more than 4 batteries (12V) in series. However, we recommend purchasing a 24V, 36V or 48V battery instead of connecting 12V batteries in series. Again, the batteries should first be charged separately and only then connected in series. The batteries connected in series should be simultaneously charged by several 12V chargers.

Requirement: The chargers must not share the negative pole.

**LiFePO4
TECHNOLOGY**

Ref.	Terminals	Voltage (V)	Capacity (Ah)	Dimensions (mm)			Weight (kg)	Discharge current (A)		Cut-off voltage (V)	Charge current (A)	Serial/Parallel conf.	Suitable charger*
				Length	Width	Height		Max. (30min)	Peak (3S)				
D12-7.5	T1	12,8	7,5	151	65	93	1,1	12	30	10	≤5	/	LIT/04.01.0052
D12-12	T2	12,8	12	151	99	95	1,6	12	60	10	≤6	≤ 4S or ≤ 4P	LIT/04.01.0053
D12-20	M5	12,8	20	181	76	166	3,0	25	60	10	≤10	≤ 4S or ≤ 4P	LIT/04.01.0053
D12-30N	M8	12,8	30	175	175	112	3,9	30	50	10	≤15	/	LIT/04.01.0053
D12-40	M6	12,8	40	197	135	172	5,4	30	50	10	≤20	/	LIT/04.01.0080
D12-50	M6	12,8	50	196	166	174	6,5	50	170	10	≤25	≤ 4P	LIT/04.01.0080
D12-75	M6	12,8	75	260	168	213	9,8	50	150	10	≤40	≤ 4S or ≤ 4P	LIT/04.01.0043
D12-100	M8	12,8	100	318	165	215	12,0	100	350	10	≤50	≤ 4P	LIT/04.01.0043
D12-125	M8	12,8	125	318	165	215	14,7	100	350	10	≤60	≤ 4S or ≤ 4P	LIT/04.01.0043
D12-200	M8	12,8	200	484	170	241	25,0	100	350	10	≤80	≤ 4S or ≤ 4P	LIT/04.01.0043
D12-300	M8	12,8	300	520	268	221	38,0	200	450	10	≤150	≤ 4S or ≤ 4P	LIT/04.01.0043
D24-10	M5	25,6	10	181	77	167	2,9	15	40	20	≤5	/	LIT/04.01.0008
D24-20	M6	25,6	20	197	135	172	5,1	20	50	20	≤10	/	LIT/04.01.0054
D24-50	M8	25,6	50	318	165	215	12,0	50	130	20	≤25	≤ 4P	LIT/04.01.0046
D24-100	M8	25,6	100	484	170	241	24,5	175	300	20	≤50	≤ 4P	LIT/04.01.0046
D36-100	M8	38,4	100	520	269	220	37,3	50	200	30	≤50	≤ 4P	LIT/04.01.0049
D48-10	Anderson	51,2	10	175	136	145	9,1	10	75	40	≤5	≤ 4P	LIT/04.01.0137
D48-20	Anderson	51,2	20	238	146	165	9,1	20	115	40	≤10	≤ 4P	LIT/04.01.0137
D48-25	M8	51,2	25	318	165	215	12,2	50	115	40	≤12,5	≤ 4P	LIT/04.01.0070
D48-50	M8	51,2	50	484	170	241	24,5	50	150	40	≤25	≤ 4P	LIT/04.01.0056
D48-75	M8	51,2	75	520	269	221	37,7	100	350	40	≤40	≤ 4P	LIT/04.01.0134

*Specific connector on request

Product Features



Cylindrical LFePO₄ cell-26650/32700 (3.2V 3.0~6.3Ah), higher reliability



Longer cycle life
2000 cycles@100%DOD.



Fully replaceable with current batteries (Lead-acid, Ni-Cd)



Lithium iron phosphate technology, safe and reliable.



Maintenance free
50% lighter than lead acid batteries



Optimum adaptation to variety applications with series & parallel expansion support (for models ≥12Ah)

LITHIUM P-SERIES : IP66



Features

- LiFePO₄ batteries
- Aluminum housing
- IP66 - dustproof and water resistant
- Attention to safety
- High peak discharge capability
- Bolt holes on the side to secure the battery
- Indicator on the battery (voltage, current and SOC)
- Possibility of a 2nd external indicator

Use in series or parallel

No connection in series allowed
Parallel connection is allowed, but please contact us for more information & usage instructions

PRO version: NO

Only standard equipment available: connection for a 2nd external indicator.

PRO version: YES

These batteries are equipped with a special multi-pin connector. Optionally, a connector can be connected to it, for sending signals/warnings regarding voltage, current and temperature. The connector is equipped with enough pins to connect a second external indicator.

The PRO version is very important when connecting these batteries in parallel.

Ref.	Terminals	Voltage (V)	Capacity (Ah)	Dimensions (mm)			Weight (kg)	Discharge current (A)		Cut-off voltage (V)	Charge current (A)	PRO Version	Suitable charger*
				Length	Width	Height		Max. (30min)	Peak (3S)				
D12-200P	M8	12,8	200	310	266	229	22,3	200	400	≤10,4	≤100	NO	NG1 12-50/60 CB
D12-400P	M8	12,8	400	432	266	254	40,5	200	400	≤10,4	≤200	YES	NG3 12-100 CB
D24-100P	M8	25,6	100	310	266	229	22,3	120	260	≤20,8	≤50	NO	AQHF24-25 WP
D24-200P	M8	25,6	200	432	266	254	40,5	200	400	≤20,8	≤100	YES	AQHF24-50 WP
D48-100P	M8	51,2	100	432	266	254	40,5	120	260	≤41,6	≤50	YES	AQHF48-25 WP

*Specific connector on request

Optional: external indicator LIT/04.01.0223



SOC INDICATORS (based on coulomb counting)

Max. current(A)	With contact MIN SOC%	With serial TTL communication
50	LIT/04.01.0200	LIT/04.01.0197
100	LIT/04.01.0201	LIT/04.01.0196
350	LIT/04.01.0203	LIT/04.01.0202
500	LIT/04.01.0205	LIT04.01.0204



CYCLIC BATTERIES

LITHIUM M+ BATTERIES

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



Our modular batteries M+ can be placed both serial and parallel and can easily meet your specifications. In addition to the flexibility, the delivery time is also a major advantage.

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.



LIT/04.01.0085



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 minus SOC% (adjustable)

LIFEPO4 12.8V/25.6V MODULE

LIFEPO4
TECHNOLOGY

SERIAL or
PARALLEL
CONFIGURATION
POSSIBLE

Specifications		D12-120M+	D12-150M+	D24-75M+
Voltage (V)		12,8	12,8	25,6
Capacity (C/2) (Ah)		118,0	150,0	75,0
Weight (kg)		15,8	20,0	20,0
Dimensions (mm)		260 x 172 x 225	310 x 180 x 234	310 x 180 x 235
Terminals, Female Threaded		M8 x 1.25	M8 x 1.25	M8 x 1.25
Specific Energy (Wh/kg)		96,0	96,0	96,0
Standard Discharge	Max. current (A)	150,0	150,0	140,0
	Peak current (A)	300,0	300,0	200,0
	Cut-off Voltage (V)	10,0	10,0	20,0
Standard Charge	Charging current (V)	14,6	14,6	29,2
	Max. current (A)	59,0	72,5	36,0
	Charging time (u)	2,5	2,5	2,5

LITHIUM-ION BATTERIES



LIFEPO4 PALLET TRUCK BATTERY



ADVANTAGES

- 100% Maintenance Free
- Up to 30% energy savings
- Opportunity charging = no need to have exchange battery
- Can be charged in 1 hour (with adapted charger)
- No acid or hydrogen gasses
- 2000 Cycles at 80% DOD with 80% capacity granted

THE BATTERY IS SUPPLIED WITH:

- Battery connector (to be specified)
- (external) LED screen: Voltage, Temp., RSOC, Current
- Rijbeveiliging tussen machine en lader
- Spacers to mount insert into a bigger container
- Charger (standard not included): efficiency > 90%
- Compatible with Zivan chargers both for fast charging and night charging

**FITS
IN 50+
MODELS**



LIT/DYN24-210 - SPECIFICATIONS

Reference	LIT/DYN24-210
Nominal voltage	24 V
Capacity	210 Ah
Operation temperature	between 0 – 50°C
Protection against	Over Voltage/Under voltage/Over Current/Short Circuit/Over Temperature/Under temperature

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
JUNGHEINRICH	660x145x590h	24v 150Ah/c5
JUNGHEINRICH	655x145x685h	24v 200Ah/c5
LINDE	624x284x537h	24V 270Ah/c5
LINDE	786x210x630h	24V 375Ah/c5
LINDE	624x212x627h	24V 250Ah/c5
LINDE	624x212x537h	24V 180Ah/c5
LINDE	648x148x595h	24V 150Ah/c5
LINDE	624x284x627h	24V 375Ah/c5
STILL	624x284x627h	24V 375Ah/c5
STILL	624x284x627h	24V 250Ah/c5
STILL	624x284x627h	24V 200Ah/c5
...		

And fits in more 50 different types of handpallet trucks!

ALSO AVAILABLE: LIT/DYN24-315

Reference	LIT/DYN24-315
Nominal voltage	25,8 V
Capacity	315 Ah
Dimensions insert	600 x 213 x 537 mm





CYCLIC BATTERIES

LITHIUM-ION BATTERIES



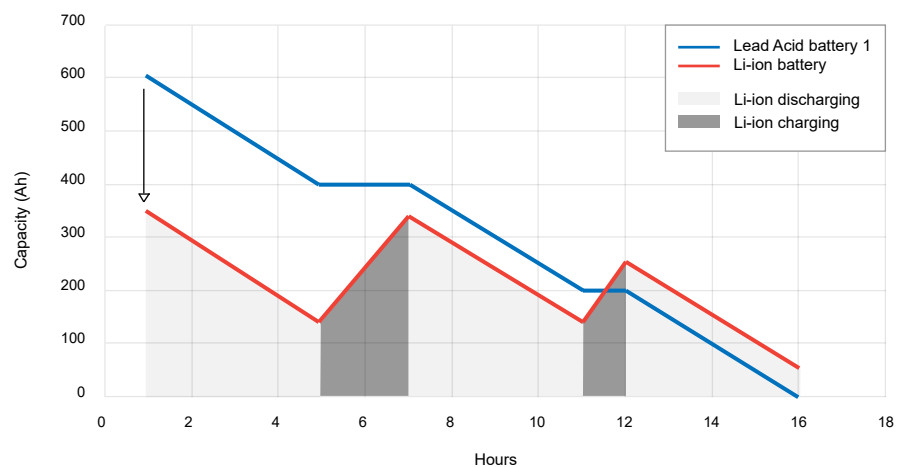
LITHIUM-ION TECHNOLOGY

QUICK & OPPORTUNITY CHARGING

A Li-ion battery can be charged whenever you want: during each lunch break, between two operations, etc. A quick charger can charge the battery up to 25% in 30 minutes. A saving of 30% capacity (and thus cost) can be found easily

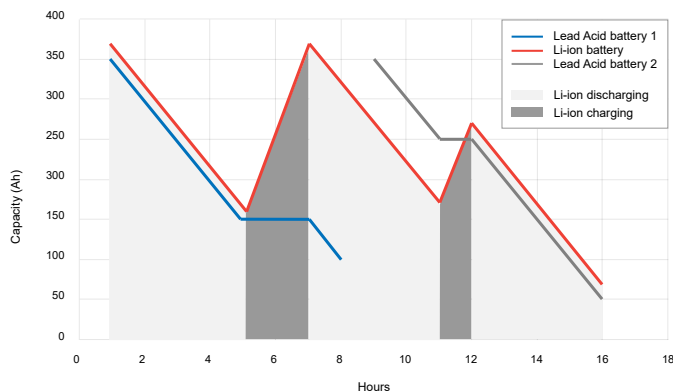
Especially for trucks used in two shifts, the autonomy of a battery is too low. In that case, you need to switch to a 2° battery after a shift. It takes easily 15 minutes for an operator to replace an acid traction battery. With a Li-ion battery combined with opportunity charging, you can increase the capacity and autonomy for the whole day. This will avoid the investment and maintenance of a 2° battery and save the time to switch the batteries.

DISCHARGE DURING THE DAY



Compared to traditional lead-acid batteries, a Li-ion battery can be charged very fast. It takes only 2 to 3 hrs for a total charge. Opportunity charging can be done relatively faster. This makes that a Li-ion battery is a perfect choice for opportunity charging and for transport systems in 24/24 hrs regime (as AGV's).

1 LI-ION BATTERY REPLACES 2 LEAD ACID BATTERIES



AQ-LITH®

the total energy capacity is much higher : $20 \text{ kWh} \times 4000 \text{ cycles} \times 80 \% \text{DOD} = 64 \text{ MWh}$. This makes a Li-ion traction battery the cheapest maintenance-free battery.

This price will drop if you take into account the possible reduction of capacity (almost no effect of high discharge currents and low temperatures) and the possibility to avoid a 2° battery (saving in labour).

ZERO EMISSION

Lithium-ion batteries have no emissions during charging. They can be used easily in the food industry. The battery can be charged in a standard room without venting. You don't need to invest in a separate charging room.

MAINTENANCE FREE

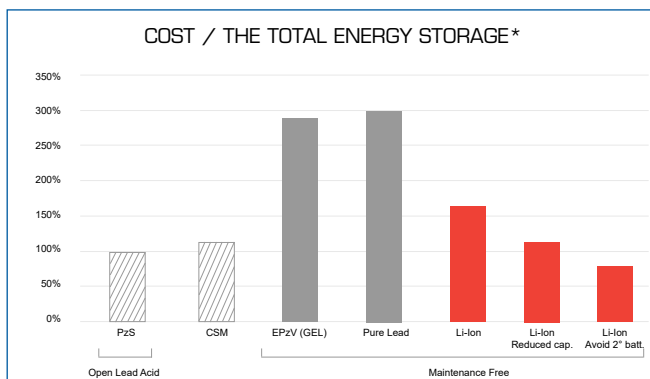
LifePO4 batteries are fully maintenance-free and can cope with intermediate charging. Intermediate charging – or opportunity charging – leads to battery sulphation, the number one killer of batteries as the acid particles of the electrolyte will attach to the lead plates causing huge internal damage and loss of capacity. However, opportunity charging does not harm lithium-ion batteries.

99% of the early fall-out of acid traction batteries are not due to production faults, but to bad battery handling or bad maintenance: mistakes during watering, intermediate charging, not fully charging the battery after use or leaving the battery in a discharged state, incidents when replacing batteries, etc. The lithium cells inside the LFP battery pack are protected, supervised and balanced by a Battery Management System (BMS). The BMS is basically the heart of the lithium battery system. The BMS prevents all kinds of abuse of the operator.

COST-EFFECTIVENESS

No doubt about it that the purchase of a lead-acid battery is the cheapest solution. The investment of a maintenance-free traction battery of 20 kWh (as gel or pure lead) will be more than double compared to the standard lead-acid battery. The cost of a Li-ion battery can be 4 times more expensive.

However, if you take into account the total energy stored in the battery over its life time, the comparison is totally different. The total storage of energy in a gel and pure-lead battery is limited to the low lifetime expectations (1200 cycles) and the proposed useful capacity (60% DOD) and is about 14 MWh. For Li-ion batteries,



* The total energy stored in the battery during its life time = capacity (20 kWh) x expected cycles x DOD%

EXTRA ADVANTAGES

- Lithium-ion batteries have no memory effect.
- The energy efficiency (discharged energy/charged energy) for Li-ion batteries is much higher than conventional lead-acid batteries.
- Used in low-temperature circumstances, Lead-acid batteries lose a lot of capacity. The reduction of capacity for Li-ion batteries is much smaller what makes them very useful for low temperature operations. If you need to charge the battery in freezing conditions, we can install an extra heater into the tray. This heater will be fed by the charger, thus the battery will keep its autonomy.
- The AQ-LITH® Lithium BMS has standard 2 CANbus-connections to allow a perfect control and supervision. The battery will be delivered with a standard CANbus indicator displaying the SOC% (State of Charge) , but also the current, voltage, temperature and warning messages. If needed, a CANbus datalogger will store all necessary data and transfer it via WIFI or UMTS.
- The energy density of Li-ion is very high. You can replace a lead-acid battery with a Li-ion battery with the double capacity and the same dimensions.
- The Li-ion battery is much lighter than the conventional lead-acid battery, this can give an important saving in the construction and reduces the energy consumption for mobile systems.
- High discharge currents reduce seriously the capacity of a lead-acid battery (see Peukert's law). However, the capacity of a Li-ion battery is almost not influenced by high discharge currents.
- The internal resistance of a Li-ion battery is very low.
- Long cycle life: 4000 cycles @ 80 %DOD



CYCLIC BATTERIES

LITHIUM-ION BATTERIES

WHY BUY A AQ-LITH LI-ION BATTERY?

Based on the long experience with Li-ion, Battery Supplies developed a new generation of Li-ion traction batteries with 3 important advantages:

1. The AQ-LITH® Lithium batteries use prismatic cells based on the superior LiFePO₄ (lithium ferrophosphate) technology. This cell offers long cycle life with an excellent energy density. Compared to the NMC technology (lithium nickel manganese cobalt), the LiFePO₄ is a lot safer.



In industrial and logistics applications only LiFePO₄ is used. It is important to understand that this technology does not ignite or explode, even if the battery breaks down. It is fully protected. The cells are assembled in modules with laserwelded busbars. This connection reduces the internal resistance and reduces the risk of poor connections.

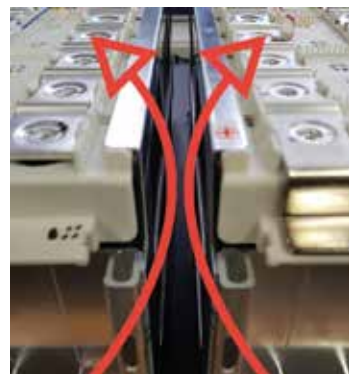
2. The core of the AQ-LITH® Lithium battery is our own innovative BMS (Battery Management System). This BMS has been developed in cooperation with a renowned Belgian university and will protect the cells for overcurrent, undervoltage, overvoltage and temperatures.

The unique and patented dynamic balancing system uses a clever algorithm with active and passive balancing methods. This will guarantee an optimal balanced battery with redistribution of the energy during discharge. The BMS has 2 CANbus outputs for an optimal communication with load and charger.

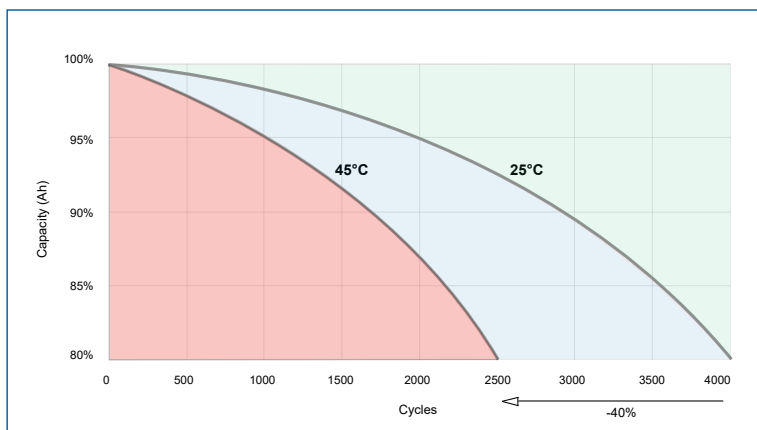
3. The heat dissipation in the cells have a big negative impact on the life time of the battery. Higher temperatures will reduce the lifetime drastically (each °C extra reduces the life time with 2%).

For the most Li-ion batteries on the market, the cells and modules are placed together, what will effect an unstable heat dissipation and local hotspots of the cells. The AQ-LITH® Lithium batteries have an optimal heat balance: the modules are placed to allow an excellent natural venting. This venting will transfer the heat towards the tray and will balance the overall temperature.

Optionally, the battery can be installed with a forced cooling (airco) for high temperatures or heaters for low temperatures.



Optimal venting



LIFEPO₄
TECHNOLOGY



AQ-LITH®

STANDARD RANGE OF AQ-LITH LITHIUM BATTERIES

The AQ-LITH® Lithium batteries are delivered ready-to-use in a tray. In the tray all necessary safety and control components are present as the AQ-LITH® BMS with dynamic balancing.

The standard AQ-LITH® Lithium batteries can be built in the most standard dimensions of lift truck trays. For lift trucks, the weight of the batteries are quite important as contra-weight. In that case extra ballast will be placed in the tray as option to match the same weight as a standard lead-acid battery.

Standard models	DYN24-210	DYN24-315	DYN24-420
Voltage (V)	24	24	24
Capacity (Ah)	210	315	420
Capacity (kWh)	5,04	7,56	10,08
Discharge current (nom) (A)	200	300	400
Discharge current (peak) (A)	600	900	1200
Charge current (A)	100	150	200
Temperature charging (°C)	0->40°C	0->40°C	0->40°C
Option heating (°C)	-20°C->40°C	-20°C->40°C	-20°C->40°C
Temperature discharging (°C)	-20->50°C	-20->50°C	-20->50°C
Charger for standard charging (5 to 6 hrs)	NG1/24-45 RE	NG1/24-45 RE	NG3/24-60 RE
Charger for fast charging (2 to 3 hrs)	NG3/24-95 RE	NG9/24-145	NG9+/24-200



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 minimum State of Charge (adjustable)

Standard models	DYN48-315	DYN48-420	DYN48-630	DYN80-420
Voltage (V)	48	48	48	80
Capacity (Ah)	315	420	630	420
Capacity (kWh)	15,12	20,16	30,24	33,60
Discharge current (nom) (A)	300	400	600	400
Discharge current (peak) (A)	900	1200	1800	1200
Charge current (A)	150	200	300	200
Temperature charging (°C)	0->40°C	0->40°C	0->40°C	0->40°C
Option heating (°C)	-20°C->40°C	-20°C->40°C	-20°C->40°C	-20°C->40°C
Temperature discharging (°C)	-20->50°C	-20->50°C	-20->50°C	-20->50°C
Charger for standard charging (5 to 6 hrs)	NG3/48-60 RE	NG5/48-95 RE	NG9/48-120 RE	NG9/80-100 RE
Charger for fast charging (2 to 3 hrs)	NG9+/48-160 RE	NG9+/48-160 RE	2x NG9+/48-160 RE	2x NG9/80-100 RE

! CUSTOM MADE AQ-LITH® LITHIUM BATTERIES

If the standard batteries don't fit for your application, then we can assembly a custom made AQ-LITH® Lithium battery based on your specifications. Please send us your parameters as dimensions, voltage, capacity and required current and we will search together with you for a solution.

Please contact info@batterysupplies.be

