

# Light Weight, High Efficiency, Long Life Lithium to Replace Lead-acid Battery

## Replace lead-acid to Lithium battery !

Lead-acid battery for power has a short cycle life and gradually decrease in capacity, so they require maintenance.

Why not replace with lithium batteries to reduce maintenance and replacement costs?

### LI-BATY series

- ◆ 12V38Ah
- ◆ 12V50Ah
- ◆ 12V75Ah



LED lamp to identify the charge amount

### Main Features

#### 1 Lightweight

Weight reduced to less than half that of ordinary lead-acid batteries.

#### 2 Increased operating efficiency

High voltage can be maintained until the end, and the operation time to the equipment stop voltage becomes longer.

#### 3 Reduced replacement frequency

It has durability against deep discharge, and its cycle life is significantly longer than that of lead batteries.

#### 4 Easy to store and manage

Less self-discharge, no need for supplementary charge when re-starting after vacation or maintenance.

#### 5 Resistant to temperature

Strong against temperature changes, can be used in temperature environment from 5 to 40°C.

#### 6 Cost reduction

Initial cost is high, but running cost can be reduced to about 1/3.

#### 7 No need to change equipment

Lead batteries can be used as is for equipment and peripheral equipment such as chargers. No cost for remodeling or replacement of equipment is required.  
※ Check the current amount etc.

### About safety

The safety of lithium batteries is sometimes skeptical due to fire, but we have adopted highly safe lithium iron phosphate. The built-in voltage control and overcharge / over discharge protection circuits achieved higher safety.

#### [Safety Standards] In compliance with international standard IEC 62133

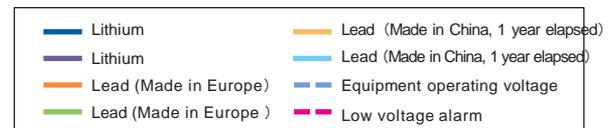
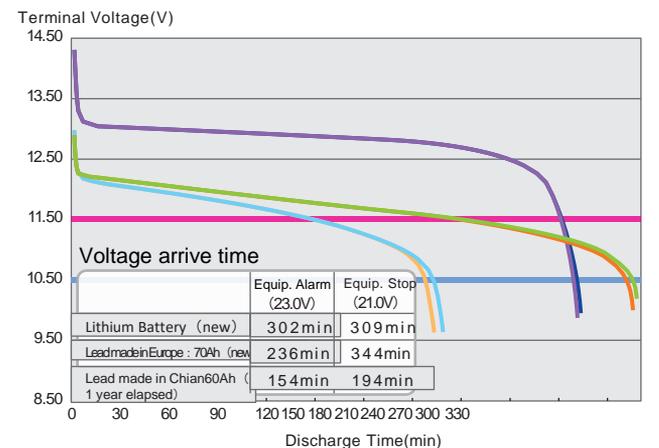
- ① Internal pressure reduction mechanism ② Safety during continuous constant voltage charging ③ Safety under vibration during transportation ④ Safety during temperature change ⑤ Safety during external short circuit ⑥ Safety during fall ⑦ Safety during impact ⑧ Safety at extreme high temperature ⑨ Safety at crush ⑩ Safety at low pressure ⑪ Safety at overcharge ⑫ Safety at forced discharge ⑬ Safety at high rate charge

LI-BATY series	
Battery Type	Lithium iron phosphate battery
Protection Function	Overcharge/over discharge/overcurrent protection circuit
Cycle Life	800 cycles at 100% discharge
Terminal Shape	Insert terminal M10(50Ah·75Ah)、M8(38Ah)
Capacity Type	3 type of 12V75Ah·50Ah·38Ah
Others	With simple charge amount indicator

### Lithium battery operation test for AGV

Discharge voltage transition graph  
Comparison with lead battery (new)

【 Discharge current 10A 5 hour rate Discharge end voltage 10.5V / cell 】



For more information



# Propose your desired battery ! Made to order battery

For those who want to convert a lithium battery with newly developed products or current products

## We propose **lithium battery** with **perfect specifications!**

Have you given up installing lithium batteries for various reasons such as limited space, cost, and small number of lots? We will propose a battery according to your request and an alternative product with the necessary specifications. Please provide the necessary information for consideration.



### Information required for the proposal

- ① Case size
- ② Rating : Capacity / voltage ( Max./Min. )/current ( Max./Avg. )
- ③ Other conditions required for batteries ( waterproof specifications, etc. )
- ④ Usage environment

We will discuss additional confirmation as necessary.

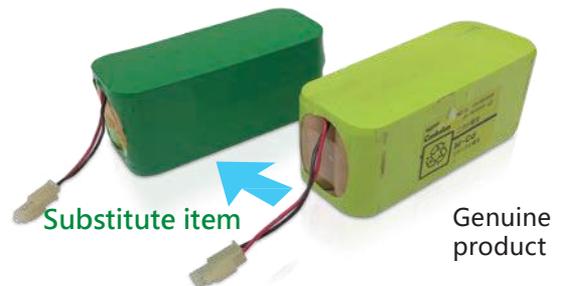
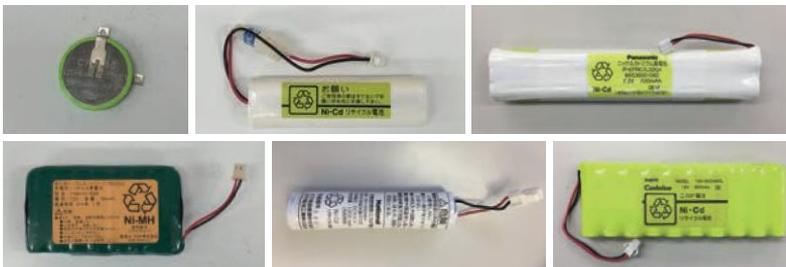
## For those who are in trouble as the Nickel-Cadmium battery installed in the equipment is discontinued

## Create a new Nickel-Cadmium hydrogen battery pack!

The relatively old equipment is still equipped with Nickel-Cadmium hydrogen battery pack. Some battery packs are discontinued and cannot be provided by the manufacturer. If you can provide the actual item, we can create a substitute item (new item).

### Alternative benefits

- ① Existing products can be exchanged as they are. (As long as you have a lead wire and connector, we may create one.)
- ② We can propose a capacity increase without changing the size and usability.  
※ Please note that proposals may be made up to the same capacity.
- ③ Discontinued battery can also be made if the connector terminal is available.
- ④ It may reduce the cost compared to purchasing from manufacturer.



※We also handle single batteries without lead wires etc.

Please give us the batteries you no longer need. We will propose after investigating connectors, lead wires, etc.

For more information

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