

ROYPOW TECHNOLOGY CO., LTD. has a policy of improving products continuously. All the information in this catalogue is provided for reference only. We reserve the right to make revisions as well as product alterations and improvements at any time without prior notice. Trademarks are the property of ROYPOW TECHNOLOGY CO., LTD. or their respective owners. Technical data and illustrations are not binding. We assume no liability for misprints.

Version: December 17, 2024, LiFePO<sub>4</sub> Batteries for Aerial Work Platforms



# LiFePO<sub>4</sub> Batteries

## for Aerial Work Platforms

Drop-in Lithium-ion  
for Lead-acid  
Alternatives



### ROYPOW Technology Co., Ltd.

Tel: +86 (0)752-327 9099  
Email: [sales@roypow.com](mailto:sales@roypow.com)  
[service@roypow.com](mailto:service@roypow.com)  
[marketing@roypow.com](mailto:marketing@roypow.com)  
Web: [www.roypow.com](http://www.roypow.com)

Add: ROYPOW Industrial Park, No. 16, Dongsheng South Road, Chenjiang Street, Zhongkai High-Tech District, Huizhou City, Guangdong Province, China

### ROYPOW (USA) Technology Co., Ltd.

Tel: +1 512 688 5555 (Texas Office)  
Email: [sales@roypowusa.com](mailto:sales@roypowusa.com)

Service Support: +1 626 269 0547  
Email: [service@roypowusa.com](mailto:service@roypowusa.com)

Web: [www.roypow.com](http://www.roypow.com)

Head-Office: 5901 Triumph St, Commerce, CA 90040, USA

Texas Office: 2350 Campbell Creek Blvd #100 Richardson, TX 75082, USA

Florida Office: 277 Douglas Avenue, Unit 1004, Altamonte Springs, FL 32714, USA

Indiana Office: 5545 W Raymond St, Ste H Indianapolis, IN 46241, USA

Georgia Office: 1150 Cobb International Pl NW Ste E, Kennesaw, GA 30152, USA

### ROYPOW Technology UK Limited

Tel: +44 (0) 7918 955 940

Email: [sales.uk@roypow.com](mailto:sales.uk@roypow.com)

Add: Regus Green Park, 200 Brook Dr, Reading RG2 6UB, UK

### ROYPOW Battery Technology (Pty) Ltd

Email: [sales.za@roypow.com](mailto:sales.za@roypow.com)

Tel: +27 69 89 55555

Add: 53 Lake Rd, Longmeadow Business Estate, Edenvale, 1609, South Africa

### ROYPOW (Europe) Technology B.V.

Email: [sales.eu@roypow.com](mailto:sales.eu@roypow.com)

Tel: +31 702 001 114

Web: [www.roypoweurope.com](http://www.roypoweurope.com)

Add: Seattleweg 1, 3195 ND, Pernis, The Netherlands

### ROYPOW Australia Technology Pty Ltd

Email: [sales@roypowtech.com.au](mailto:sales@roypowtech.com.au)

Tel: +61 29185 0814

Web: [www.roypowtech.com.au](http://www.roypowtech.com.au)

Add: Suite 803a, 18 Orion Road, Lane Cove, NSW, 2066, Australia

### ROYPOW Technology GmbH

Tel: +49 (0) 176 2358 8956

Email: [sales.de@roypow.com](mailto:sales.de@roypow.com)

Web: [www.roypow.gmbh](http://www.roypow.gmbh)

Add: Rosa-Parks-Straße 4, 64295 Darmstadt, Germany

### ROYPOW株式会社

Tel: +81 090 7092 6969

Email: [info@roypow.co.jp](mailto:info@roypow.co.jp)

Web: [www.roypow.co.jp](http://www.roypow.co.jp)

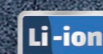
Add: 〒271-0094 千葉県松戸市上矢切299-7

### ROYPOW Technology Co., Ltd (Korea)

Tel: 1555-2016

Email: [sales.kr@roypow.com](mailto:sales.kr@roypow.com)

Add: 2405, GIDC Gwangmyeong station A Dong, 43 Iljok-ro, Gwangmyeong-si, Gyeonggi-do, Korea



[sales@roypow.com](mailto:sales@roypow.com)

[www.roypow.com](http://www.roypow.com)



Scan it!

*ROYPOW,  
Your Trusted Partner*

## Contents

About Us

New Technology, LiFePO<sub>4</sub> Battery

LiFePO<sub>4</sub> Batteries for Aerial Work Platforms

More about ROYPOW Lithium Batteries

ROYPOW Original Chargers



# ROYPOW

## For One-stop New Energy Solutions

- R&D, manufacturing and sales of motive power systems and energy storage systems as one-stop solutions
- Fully automatic production lines, a full range of test equipment and an advanced MES
- Covering Low-Speed Vehicles' Batteries, Industrial Batteries, as well as Residential ESS, Commercial & Industrial ESS, and Mobile ESS
- Self-development of power electronics technologies, including PCS, BMS, and EMS



**750+** Employees  
**190+** R&D People  
**105,000 m<sup>2</sup>** Headquarters Floor Area  
**2,500 m<sup>2</sup>** Testing Center  
**202** Patents

### Quality Control Certificates:

- ✓ Environmental Management System: ISO 14001:2015
- ✓ Occupational Health and Safety Management System: ISO 45001:2018
- ✓ Quality Management System: ISO 9001:2015, IATF16949:2016
- ✓ Information Security Management System: ISO/IEC 27001:2022
- ✓ Social Accountability Management System: SA8000:2014
- ✓ Hazardous Substance Process Management: IECQ QC 080000



### Product Certifications:

UL 1973, UL 9540A, UL 9540, UL 2580, UL 2271, UL 1741  
 IEC 62619  
 EN 62477, EN 62040, (EU) 2023/1542, EN 62109-1, EN 62109-2

**UL** **EMC** FCC, IEC/EN 61000-6, BS EN IEC 61000-6  
**GRID** **Function Safety** IEC 60730, ISO 13849-1  
**CB** **Transport** UN 38.3  
**CE** **RoHS** RoHS Directive 2011/65/EU & (EU) 2015/863

### R&D and Manufacturing Highlights

As a result of these investments, ROYPOW is capable of "end-to-end" integrated delivery, making our products out-perform the industry norms.

- Fully Automatic Production Lines
- BMS, PCS, EMS All Designed in House
- All-round Testing
- Advanced MES System

### Global Sales and Service Network

- Timely Delivery
- Hassle-free After-sales Service
- Fast Response Technical Support

ROYPOW has comprehensively unfolded its overseas market layout to ensure the localization of R&D, manufacturing, marketing and service, becoming one of your most reliable and valuable partners.



### Upgrading to New Technology, with Our Turnkey Solutions.

With years of dedication to new energy solutions, we are proud to offer customers professional solutions for:

- Low-speed Vehicle Batteries
- Battery Systems for Off-highway Applications
- Residential Energy Storage Systems
- Mobile Energy Storage Systems
- Industrial Batteries
- Battery Systems for Emerging Applications
- Commercial & Industrial Energy Storage Systems
- Chargers



# New Technology. Create Great Value for Your Business

Converting from lead-acid to lithium-ion is easy and cost-effective and increases the productivity of the fleets and the operator.



## Benefits of Lithium-ion Batteries

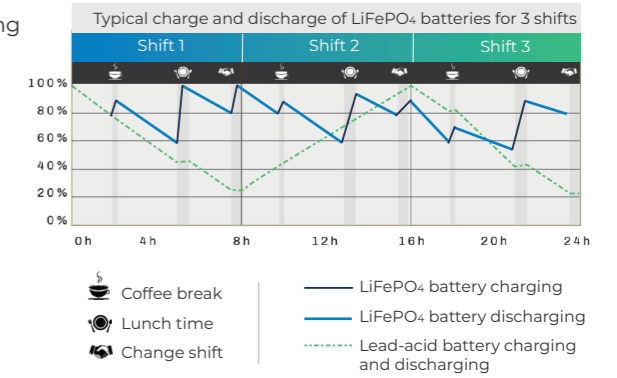


Lead-acid	LiFePO4 battery	
<p>3 years design life</p>	<p>up to 10 years design life</p> <p><b>Longer life</b> 3 to 4 times lead-acid lifespan</p>	<ul style="list-style-type: none"> <li>✓ Reduces overall battery investment</li> <li>✓ Eco-friendly</li> <li>✓ Minimize the need for spares</li> </ul>
<p>Frequent maintenance</p>	<p><b>0 maintenance</b> no need for regular filling of distilled water and electrolyte</p> <p>No maintenance</p>	<ul style="list-style-type: none"> <li>✓ No regular filling of distilled water</li> <li>✓ Saving costs on labor and maintenance</li> <li>✓ Less unplanned downtime and improved productivity</li> <li>✓ No frequent battery replacements</li> </ul>
<p>1-2 years warranty</p>	<p><b>5 years warranty</b> bring you peace of mind</p>	<ul style="list-style-type: none"> <li>✓ Durable and reliable</li> <li>✓ Reduces maintenance and labor costs</li> <li>✓ Quality guarantee</li> </ul>

## Reduce Downtime, Increase Equipment Availability

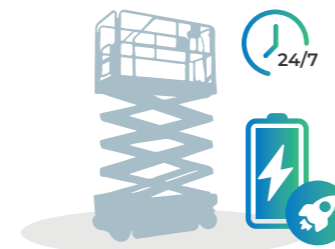
In day-to-day operations, the battery can be charged even during short breaks, such as taking a rest or changing shifts, effectively increasing productivity.

- ✓ Reduces the need for a full charge every time.
- ✓ Eliminates the need for frequent time-consuming battery swaps.
- ✓ Eliminates the risk of battery-changing accidents.
- ✓ Opportunity charge during breaks, lunch and at shift changes. Charge anytime equipment is not in use.



## Rapid Charging

Whether you have a single-shift or a large fleet working 24/7, fast charge is one of the most important advantages.



TIPS

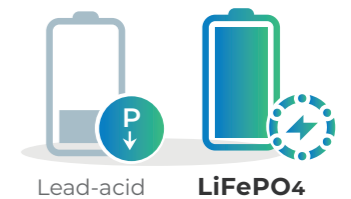
### Why choose LiFePO4 batteries for Aerial Work Platforms?

There are a few lithium-ion chemistries to choose from. ROYPOW uses LFP or Lithium Iron Phosphate, one of the most thermally stable and safe lithium-ion chemistries for Aerial Work Platforms.

LFP offers longer life, is more energy-dense, more stable, is more compact, and weighs less than lead-acid. Our battery packs are sealed units requiring no daily or weekly watering and no maintenance. LFP is ideal for batteries used in Aerial Work Platforms.

## Consistent Power

Lithium-ion batteries deliver consistently high performance, which maintains greater productivity even toward the end of a shift.



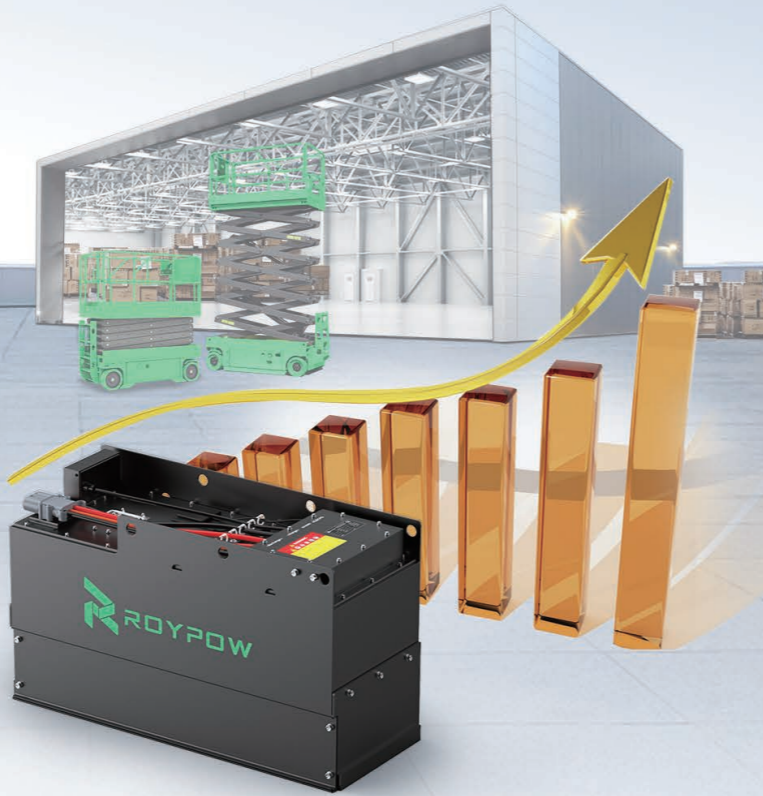
## Eliminate the Need for a Dedicated Charging Area and Frequent Battery Swaps

- ✓ Minimize the need to buy, store and maintain spares.
- ✓ Eliminate the cost and storage space required for additional lead-acid batteries.
- ✓ No gassing, no ventilation system needed when charging. No hazardous acid spills.



# Small Investment, Big Return

Converting your battery to lithium-ion may require a higher initial investment, but its ongoing savings on energy, equipment, labour and downtime can give you a more cost-effective bill in opposite.



## The LiFePO<sub>4</sub> batteries can offer you...

- ✓ Longer life reduces overall battery investment.
- ✓ No maintenance saves labor and maintenance costs.
- ✓ No gas or acid spills, avoids the space, equipment and running costs of a battery room and ventilation system.
- ✓ Energy saving and less downtime, improve productivity.

## 5-year Cost Comparison to Increase Your Overall Return on Investments.

Save Up to **70%** Expenses in 5 Years

Below is the 5-year expenditure table comparing ROYPOW LiFePO<sub>4</sub> batteries with lead-acid batteries.

Purchases over 5 Years	Lead-acid Battery	LiFePO <sub>4</sub> Battery
Battery cost	5x money bag icon	1x money bag icon (5yr)
Maintenance	5x stack of coins icon	/ (5yr)
Electricity waste	5x stack of coins icon	/ (5yr)
Installation	5x stack of coins icon	1x stack of coins icon (5yr)
Shipping	5x stack of coins icon	1x stack of coins icon (5yr)

Remark: Actual costs may vary according to local conditions.

# ROYPOW Batteries with Smart & Integrated Systems

Provide exceptional performance to get the job done and improve your productivity, which means fewer hours of unplanned downtime and more productive hours on your work.

0 Maintenance  
Up to **3,500+** Cycle Life

5 yr Warranty  
Up to **10** yr Design Life



## Durable

ROYPOW batteries have an IP65 ingress rating. They will provide fast lifting and travel speeds at all levels of discharge, under all-weather working conditions.

## Inbuilt Protection

Intelligent BMS is for automatic cell balancing and advanced battery management. The LiFePO<sub>4</sub> batteries have greater thermal and chemical stability.

## Reliable Power for Most Aerial Lift Brands

ROYPOW lithium-ion batteries deliver consistent, reliable power for Aerial Lifts.



Advanced battery solution for most leading brands of aerial work platforms. They can be generally applied in these famous aerial work platform brands:

Zoomlion  
Xcmg  
Dingli  
LGMG  
Sinoboom  
Snorkel/Xtreme

Genie  
JLG  
Sunward  
Sany  
Haulotte  
LiuGong

Mantall  
Runshare  
Skyjack  
Manitou  
Emis

Noble  
Eastmanhm  
Airman  
Sivge  
More>

Disclaimer: The information above is intended only to describe that products of ROYPOW are applicable to products of brands above under specific circumstances. It should not be regarded as any illegal use of third-party brands and trademarks. You should not infer that RoyPow has established or has any agency, employment, partnership or joint venture relationship with the companies above.

# Which LiFePO<sub>4</sub> Battery is Suitable for Your Aerial Work Platforms?

One Stop for All of Your Battery Needs!

We make 24 and 48 volt systems to cover small and large platform Electric Scissor Lifts:

### Small-platform

## 24 V Battery System

For small-platform electric scissor lifts



### Large-platform

## 48 V Battery System

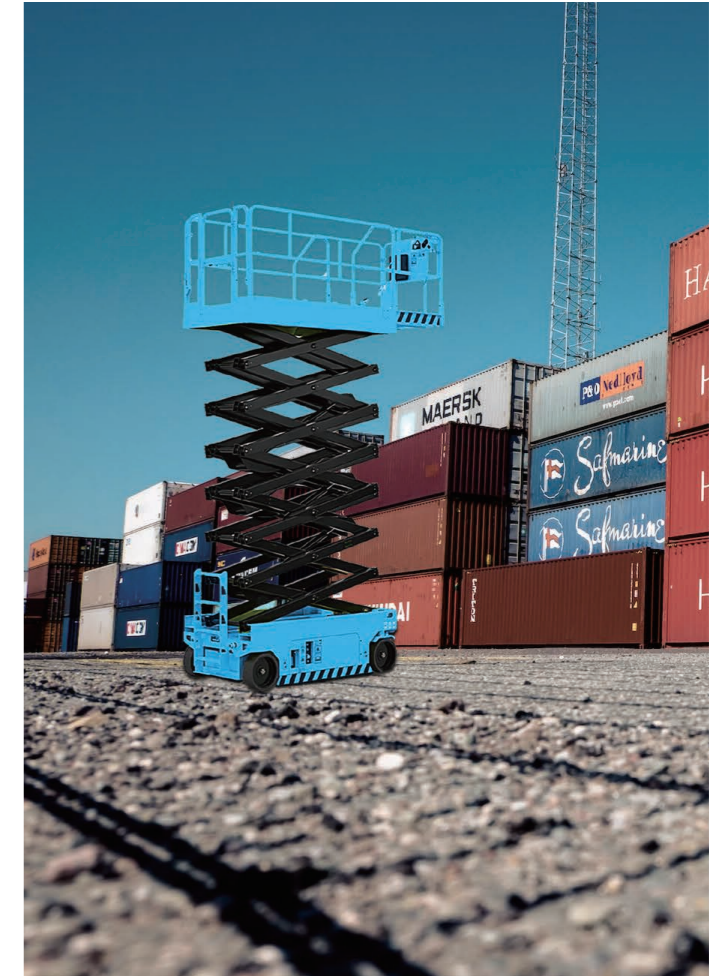
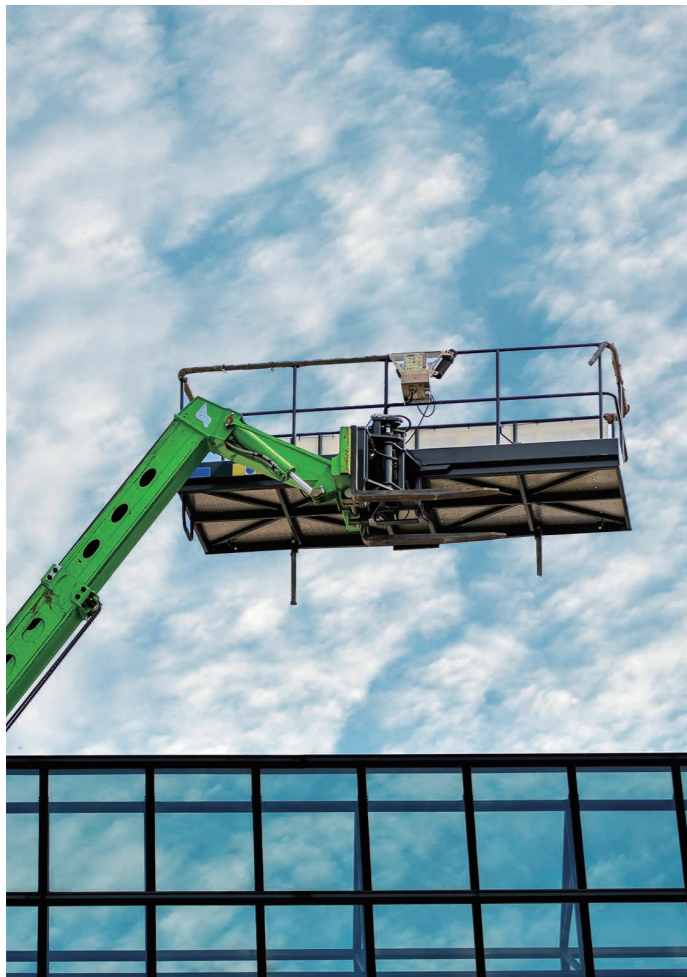
For large-platform electric scissor lifts



# LiFePO<sub>4</sub> Batteries for Aerial Work Platforms

Switch to new technology, lithium drop-in replacements for lead-acid batteries.

- ✓ A full range of lithium-ion battery to power your aerial lifts.
- ✓ Maximum uptime and flexible lifting.



## An Ideal Lithium-ion Solution

### Efficient

- ✓ High, consistent performance without the voltage drop at the end of the cycle.
- ✓ Reduce unplanned downtime with fast, efficient, opportunity charging.
- ✓ 10 years design life - a worthwhile upgrade.

### Flexible and Worry-free

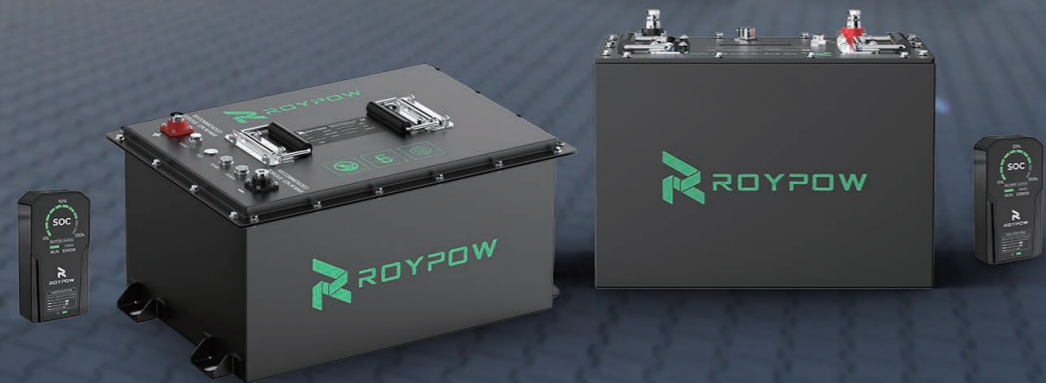
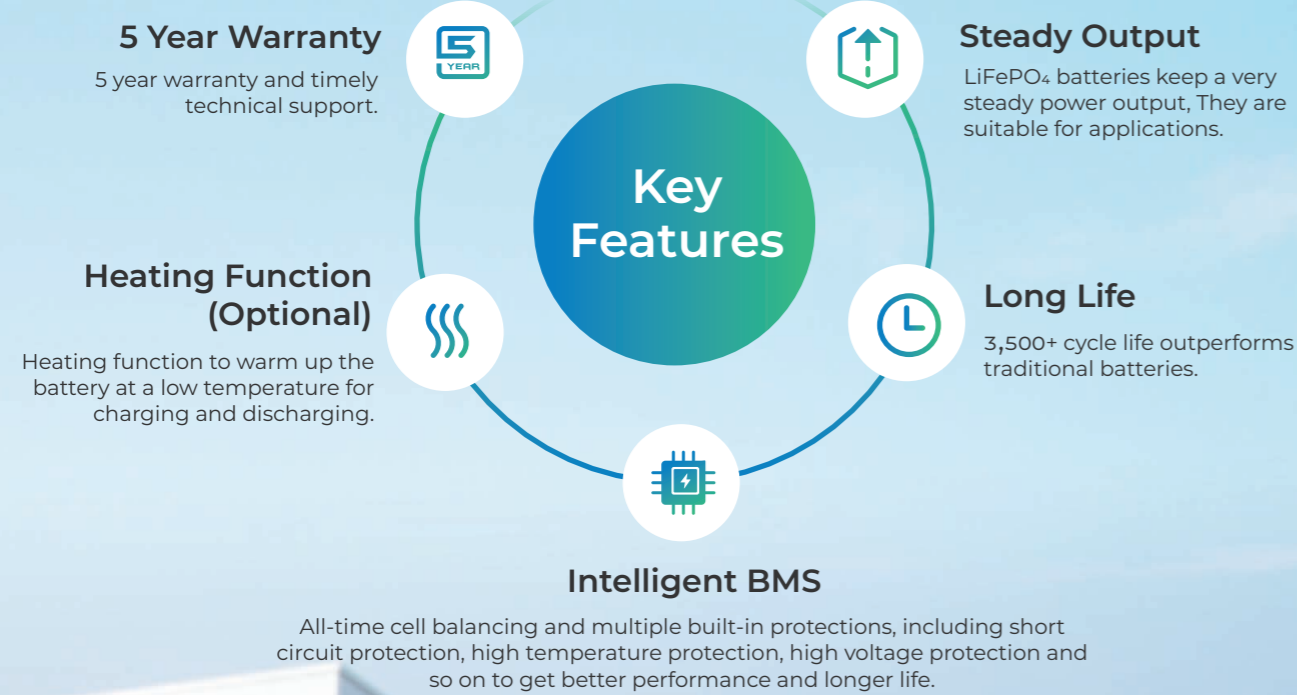
- ✓ Zero maintenance, no need for water top-ups or electrolyte checks.
- ✓ No battery swapping, reduce related accidents and resulting employee injuries.
- ✓ No need for specific charging room.

### Green and Stable

- ✓ No acid spills, no noxious gas emissions.
- ✓ More thermal & chemical stability.
- ✓ Good for you and the planet.



# Why ROYPOW LiFePO<sub>4</sub> Batteries



# Specifications



Model	Technical Specifications					Discharge Current		General		
	Nominal Voltage	Nominal Capacity	Stored Energy	Cycle Life	Dimensions (L*W*H)	Weight lbs. (kg)	Continuous Discharge	Maximum Discharge	Casing Material	IP Rating
<b>24 V System</b>										
T24100L	25.6 V	100 Ah	2.56 kWh	>3,500 times	13.8×9.8×10.3 inch (350×250×262 mm)	56 lbs. (25.6 kg)	150 A	250 A (30 S)	Steel	IP67
T24150L		150 Ah	3.84 kWh		20.3×10.1×10.3 inch (517×257×262 mm)	77 lbs. (35 kg)	150 A	350 A (30 S)	Steel	IP67
T24200L		200 Ah	5.12 kWh		19.2×13.4×10.5 inch (488×340×267 mm)	101 lbs. (46 kg)	150 A	350 A (30 S)	Steel	IP67
T24230L		230 Ah	5.89 kWh		16.53×14.33×10.51 inch (420×364×267 mm)	105.82 lbs. (48 kg)	200 A	350 A (30 S)	Steel	IP67
T24280L		280 Ah	7.17 kWh		17.05×16.53×10.51 inch (433×420×267 mm)	121.25 lbs. (55 kg)	200 A	350 A (30 S)	Steel	IP67
<b>48 V System</b>										
T51230P	51.2V	230 Ah	11.78 kWh	>3,500 times	23.4×11.69×10.9 inch(A/B BOX) (597×297×277 mm A/B BOX)	220 lbs. (100 kg)	230 A	350 A (30 S)	Steel	IP67
T51280P		280 Ah	14.34 kWh		28.0×10.8×10.8 inch(A/B BOX) (712×275×275 mm A/B BOX)	243 lbs. (110 kg)	280 A	350 A (30 S)	Steel	IP67
<b>Working Temperature Range</b>		<b>Charge</b>		<b>Discharge</b>		<b>Storage (1 month)</b>		<b>Storage (1 year)</b>		
		-4°F~131°F (-20°C ~ 55°C)		-4°F~131°F (-20°C ~ 55°C)		-4°F~131°F (-20°C ~ 55°C)		32°F~95°F (0°C~35°C)		

1. All pictures shown are for reference only and data are based on ROYPOW standard test procedures.  
 2. Actual performance may vary according to local conditions. Only authorized personnel are allowed to operate or make adjustments to the batteries.  
 3. We reserve the right to make revisions as well as product alterations and improvements at any time without prior notice.





# More about ROYPOW Lithium-ion Batteries

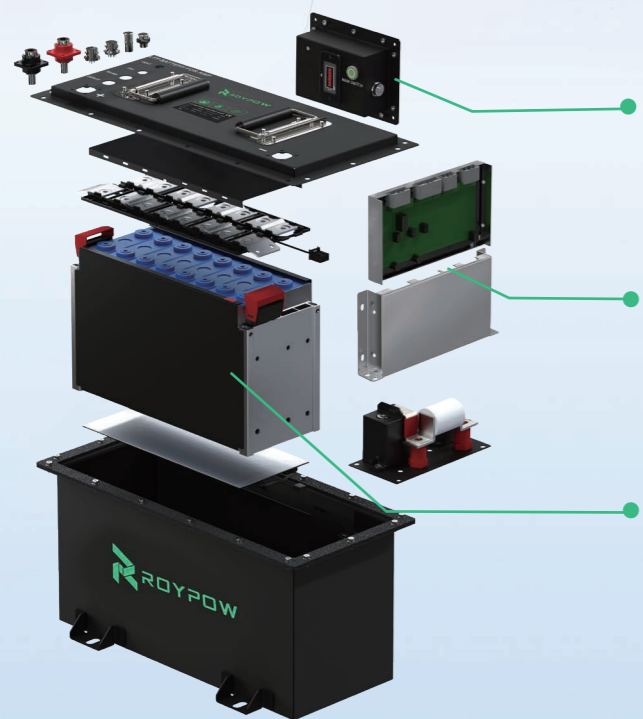


Quality and safety always come first. Except those benefits, we also have intelligent design from our professional R&D team.

- Maintenance free
- Fast charge
- Long life
- Ultra safe



## Intelligent design



- Control panel included**  
Showing all critical battery functions in real-time, voltage, current, and remaining charging time and fault alarm.
- Built-in BMS**  
For cell balancing and advanced battery management.
- Battery pack module**  
Using LiFePO<sub>4</sub> cells to insure stable and safe battery performance.

## Battery management system (BMS)

The built-in BMS is equipped with automotive-grade components assuring safe, top quality and high energy density. To provide a fully optimized solution for demanding industrial applications. BMS software ensures the battery to provide peak performance when in operation, to deliver longer run time between charges, to maximize the total battery lifespan and to communicate well between the charger, battery and users.



### The BMS can offer:

#### All-time cell balancing and battery management.

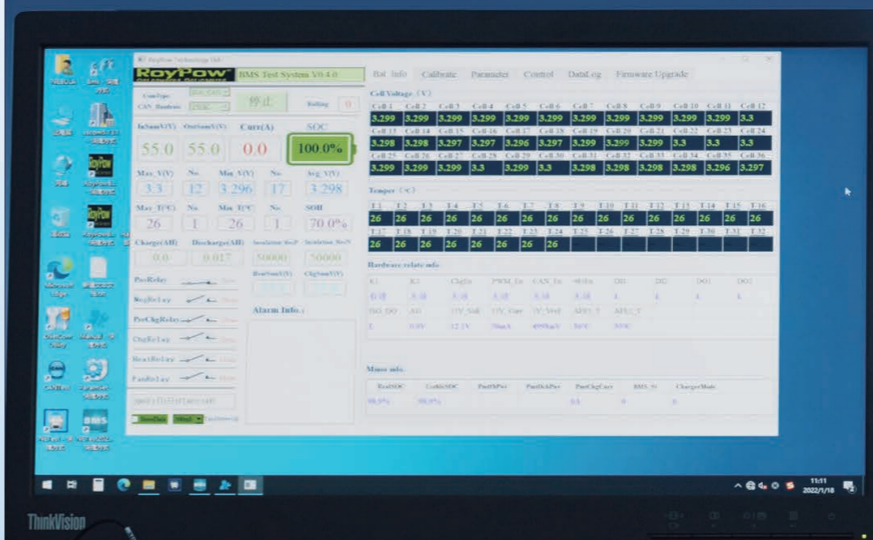
Through the intelligent balancing strategy, balancing between individual cells can be realized. The BMS can keep the battery's consistency at all times when in operation, maximizing the battery efficiency and improve the battery's working life.

#### Battery real-time monitoring and communication through CAN.

Monitoring cell voltage, electric current and battery temperature, so that any movement outside of normal range disconnects the cell or the entire battery.

#### Fault alarm and safety protection.

When the battery is less than 10%, it will beep to prompt for charging in case of stopping somewhere far away from charge station suddenly without notice. Over/under voltage, low/over temperature, over current or other faults will prompt to make the battery safe. Safety always comes first.



# Original Charger for Aerial Work Platforms

ROYPOW has developed chargers specifically for each type of lithium batteries to deliver the optimal battery performance, safeguard the driving experience, and keep the best communication between our LiFePO<sub>4</sub> batteries and the chargers.



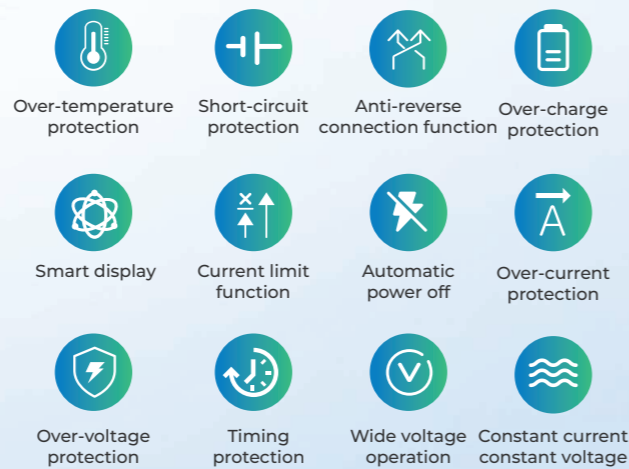
## Intelligent Charging Management

To use the ROYPOW charger, the battery management system (BMS) can control the charging current according to different temperatures and SOC of the batteries.

ROYPOW's intelligent BMS ensures the safety of the battery and improves the charging efficiency.

When the battery is at a low voltage, the battery can be charged at low current to ensure battery safety.

When the battery is less than 10%, it will beep to prompt for charging.



### Anti-walking Function

During the charging process, without disconnecting the plug, the equipment cannot be started.

### Waterproof

Get rid of the AC adapter to realise the real IP66 rate, no need to worry about water or debris like dirt or mud.

### Natural Cooling

It is sealed but with a natural cooling function without a fan for better heat dissipation capacity and to extend the lifespan.

### Safe Charging

Advanced charge algorithm ensures the batteries to be charged correctly and safely.

### Corrosion Protection & Vibration Resistance

Aluminum alloy design with the one-body forming technology which is more corrosion protection and vibration resistance.

Smart, Durable and Efficient

### Intelligent Protection

With the advanced technology of arc resistance hot-swap to keep the charger safe and extend its lifespan.

## Compatibility

TIPS

Our chargers are compatible with the voltages in most countries and regions. And it's applied to cater to various charge modes and the multiple AC plugs for choices.

### Single phase:

China 220V 50Hz    America 120V 60Hz  
Europe 230V 50Hz    Japan 100V 50Hz/60Hz



### AC input port

can be compatible with plugs from different countries.



### DC output port

is configured as ROYPOW exclusive charging adaptor.

