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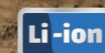
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Global Lithium+ Solution Provider

LiFePO₄ Batteries for Electric Excavators

Powering Excavating Excellence.
Redefining Unmatched Productivity

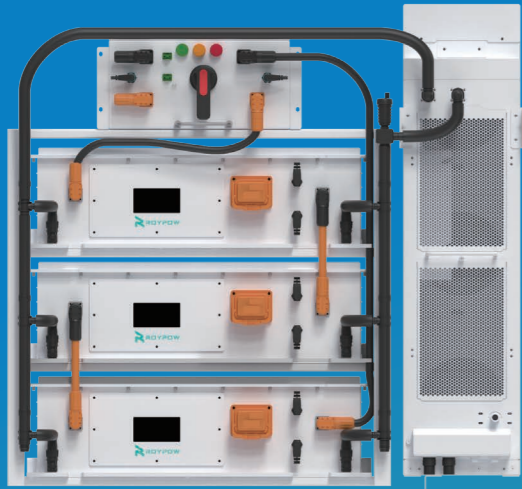


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Scan it!



LiFePO₄ Batteries for Electric Excavators

In the battery-powered excavator construction equipment industry, business requires batteries that won't tire out no matter the task. ROYPOW comes in handy and gives your excavators full performance capacity.

Embedded with ROYPOW batteries in electric excavators, businesses can expect uncompromising power performance and capability comparable to traditional diesel-powered solutions while reducing carbon footprint and enhancing sustainability and profitability.



Efficient and Stable

- ✓ More power with a high rate of discharge
- ✓ Consistent performance without the voltage drop at the end of the cycle
- ✓ Reduced unplanned downtime and maximized uptime



Worry-Free and Cost-Effective

- ✓ Long lifespan and no need for more batteries
- ✓ Zero maintenance and no frequent battery swaps
- ✓ Reduced battery maintenance labor costs

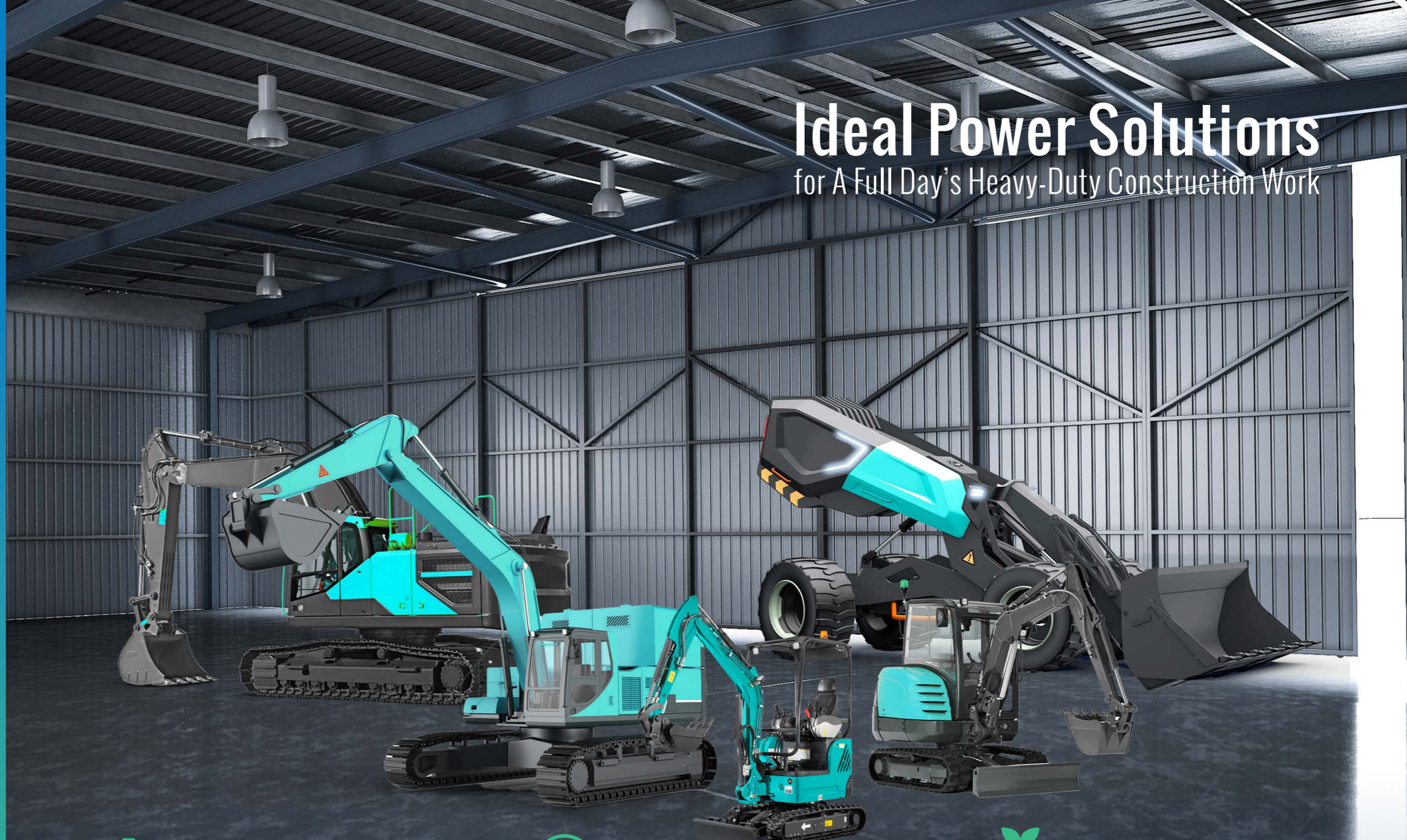


Green and Sustainable

- ✓ Reduced carbon footprint
- ✓ Good for excavator operators and the planet

Ideal Power Solutions

for A Full Day's Heavy-Duty Construction Work



Why ROYPOW Batteries



Safest LFP Chemistry

The excavator batteries are built with the LFP chemistry, proven the safest, most stable, efficient, and economical power option for industrial applications.



Long Lifespan

The batteries are designed for longevity with a lifespan of up to 10 years and can withstand over 3,500 times of deep charge and discharge.



Low Temperature Heating

The heating function will activate for stable charging and discharge at a low temperature during the cold months.



Automotive-Grade Rugged Durability

From the ruggedized, heavy-duty base to the internal structural supports, the batteries withstand the harsh vibrations and shocks of outdoor construction.



Built-in Fire Extinguishing System

Each battery is equipped with one or more specially designed fire extinguisher devices for fire protection.



Zero Maintenance

ROYPOW batteries eliminate the need for frequent swaps or maintenance, saving abundant time and costs to replace the battery on excavators.



IP65 Rated

The electrical components are fully enclosed to protect from dust and water ingress to fit different construction site environments.



Designed for Extended Heavy-duty Excavation

Charge Fast. Power Long

ROYPOW batteries support fast charge to increase the uptime and complete the construction tasks on schedule. A single full charge extends up to 10 hours of use for the best productivity. Operators can recharge the equipment during breaks or overnight to get well-prepared for another shift of hard work.



1.5 - 3 Hours
DC Fast Charging Station

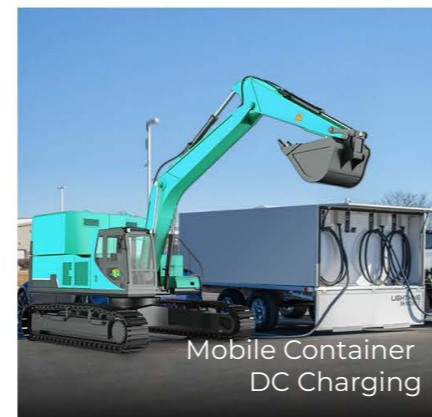
8 - 12 Hours
AC Charging

6 - 10 Hours*
Continuous Use

*Actual battery duration time varies depending on different working conditions and the type of job.

Multiple Charging Ways

More Versatility and Flexibility



Intelligent Battery Management System (BMS)

ROYPOW's self-developed BMS ensures the electric excavator battery's peak performance and safety through real-time monitoring and multiple protections, maximizing efficiency and extending battery life.

- ✓ All-Time Cell Balancing and Energy Management
- ✓ Real-time Monitoring and Communication Through CAN
- ✓ Battery Maintenance and Remote Upgrades
- ✓ Fault Alarm and Safety Protection



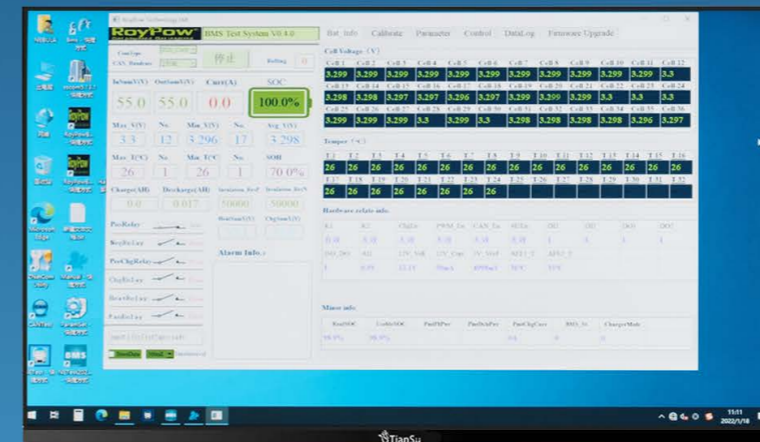
Smart 4G Module (Optional)

ROYPOW smart 4G module can be customized in the excavator batteries to realize real-time remote monitoring.

- ✓ Battery Status Monitoring
- ✓ Remote Control
- ✓ GPS Location
- ✓ Remote Software Upgrades
- ✓ Easy Network Connection
- ✓ Faults Alarm

Liquid Cooling System (Optional)

A well-designed and high-quality thermal management solution can be customized to help dissipate the heat when the power goes up.



Tailored Battery Systems for Excavation Applications

From mini to large excavators



Customizable for Specific Power Demands

One Battery Unit

High Voltage + Low Capacity
192V 33kWH

Low Voltage + High Capacity
106V 33kWH

One Battery Unit

High Voltage + Low Capacity
230V 40kWH

Low Voltage + High Capacity
128V 40kWH



Specifications

System specifications	Installed energy (entire system)	Topology in 400/800 V system	Energy	Max energy
400 V system Max. 3 batteries	n*33 kWh	3SnP	33 kWh	up to 330 kWh
800 V system Max. 6 batteries	n*33 kWh	6SnP	66 kWh	up to 660 kWh
400 V system Max. 3 batteries	n*40 kWh	3SnP	40 kWh	up to 400 kWh
800 V system Max. 6 batteries	n*40 kWh	6SnP	80 kWh	up to 800 kWh

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.

ROYPOW, Your Trusted Partner

For One-stop Energy Solutions

ROYPOW TECHNOLOGY is dedicated to the R&D, manufacturing and sales of motive power systems and energy storage systems as one-stop solutions.

With more than 20 years of combined experience in manufacturing renewable energy and battery systems, ROYPOW provides Lithium-ion Batteries covering most daily living and working fields: for Low-Speed Vehicles such as golf carts, personnel carriers; Industrial Batteries for use in Material Handling Equipment such as forklifts, aerial work platforms and floor cleaning machines as well as renewable Energy Storage Systems for residential, commercial, industrial, vehicle-mounted and marine applications.

ROYPOW has established a worldwide network to serve customers with a manufacturing center in China and subsidiaries in the USA, the UK, Germany, the Netherlands, South Africa, Australia, Japan and Korea to date. ROYPOW owns and operates fully automatic production lines, a full range of test equipment and an advanced MES that collectively address all aspects of its manufacturing process, from electronics, software design to module assembly, battery assembly as well as initial and final testing. ROYPOW focuses on the self-development of power electronics technologies, including PCS, BMS, and EMS as the core competence.

As a renewable energy innovator, ROYPOW is committed to the mission of achieving energy sustainability while creating a better life for human beings.



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.

- All-round testing.
- Integrated design.
- Advanced MES system.
- IATF 16949 automotive quality management system certification
- QC system.
- Persistent technology innovation.
- Fully automatic production line.
- ISO12405-2 vibration performance and safety testing of automotive lithium batteries

Global Sales and Service Network System

- 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** including golf carts and sightseeing cars;
- ✓ **Industrial Batteries** including forklifts, aerial work platforms, floor cleaning machines and electric excavators;
- ✓ **Vehicle-Mounted Energy Storage Systems & Batteries** Including RV and truck energy storage and air conditioning systems, off-grid solar systems for RV, as well as power batteries for electric motorcycles and airport ground support equipment;
- ✓ **Marine Energy Storage Systems & Batteries** including trolling motors, fish finders, other off-grid energy storage systems for marine, and marine power systems;
- ✓ **Residential Energy Storage Systems & Portable Power Units** including home storage and portable energy storage products, as well as off-grid energy storage (for forest cabin, island homes without electricity, etc.);
- ✓ **Commercial & Industrial Energy Storage Systems** including diesel generator power micro-grid energy storage systems (for tower cranes, air compressors, mixers, crushers, etc);
- ✓ **Chargers** for forklifts, aerial work platforms, floor cleaning machines, golf carts and various marine batteries.
- ✓ **Battery Systems for Port Machinery** including Reach Stackers, Empty Container Handlers, Carriers, Cranes, Terminal Tractors, and other electric equipment.

