



LITHIUM PRODUCT RANGE

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Probenenergy
REDEFINING ENERGY STORAGE

THE COMPLETE POWER PACKAGE

LEAD ACID | AGM | NANO CARBON | **LITHIUM** | SUPERCAP

LOW VOLTAGE ENERGY STORAGE SOLUTION

- ✓ **Longer Cycle Life:** Offers up to 20times longer cycle life and five times longer float /calendar life than lead acid battery, helping to minimize replacement cost and reduce total cost of ownership.
- ✓ **Lighter Weight:** About 40% of the weight of a comparable lead acid battery. A 'drop in' replacement for lead acid batteries.
- ✓ **Higher Power:** Delivers twice power of lead acid battery, even high discharge rate, while maintaining high energy capacity.
- ✓ **Wider Temperature Range:** -20°C~60°C.
- ✓ **Superior Safety:** Lithium Iron Phosphate chemistry eliminates the risk of explosion or combustion due to high impact, overcharging or short circuit situation.
- ✓ **Increased Flexibility:** Modular design enables deployment of up to four batteries in series and up to ten batteries in parallel.

24V Box Model



12V Box Model

LOW VOLTAGE ENERGY STORAGE SOLUTION

- ✓ Wall mount & rack mount units
- ✓ 51,2V - 50, 70, 100 & 200 Ah\
- ✓ Wall mount up to 10 units in parallel
- ✓ Rack mount up to 16 units in parallel
- ✓ Bluetooth monitoring
- ✓ IP65 Rated
- ✓ 10 years warranty
- ✓ No maintenance required

Wall Mount Model



51,2V Units

Rack Mount Model



LOW VOLTAGE ENERGY STORAGE SOLUTION

- ✓ Energy Storage Capacity: 11kWh/215Ah – 12kWh/235Ah
- ✓ Power: 52V - 5kW/100A or 8kW/155A
- ✓ Digital battery management system
- ✓ Cost-effective energy storage for solar and backup installations
- ✓ Suitable for residential and commercial applications
- ✓ Robust and reliable with high-performance second-life EV cells



RACK MOUNT ENERGY STORAGE SOLUTIONS

Up to 80kW per Rack
Maximum 3 racks in parallel
with inverter

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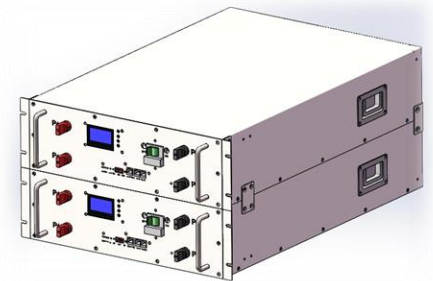
- ✓ Long cycle life-time
- ✓ Fast charging
- ✓ Safest technology
- ✓ Large discharge power
- ✓ Low self-discharge
- ✓ Low maintenance
- ✓ Environment friendly



5,1kW Unit



10kW Unit



STACK ENERGY STORAGE SOLUTIONS

This battery pack System is suitable both for residential and commercial energy storage system applications, which is assembled with a 3.2V 50Ah Lithium Iron Phosphate cell in 16S2P configuration, and intelligent BMS form 51.2V100Ah Lithium Battery System. Each pack supports 16 packs in parallel to easily expand capacity.

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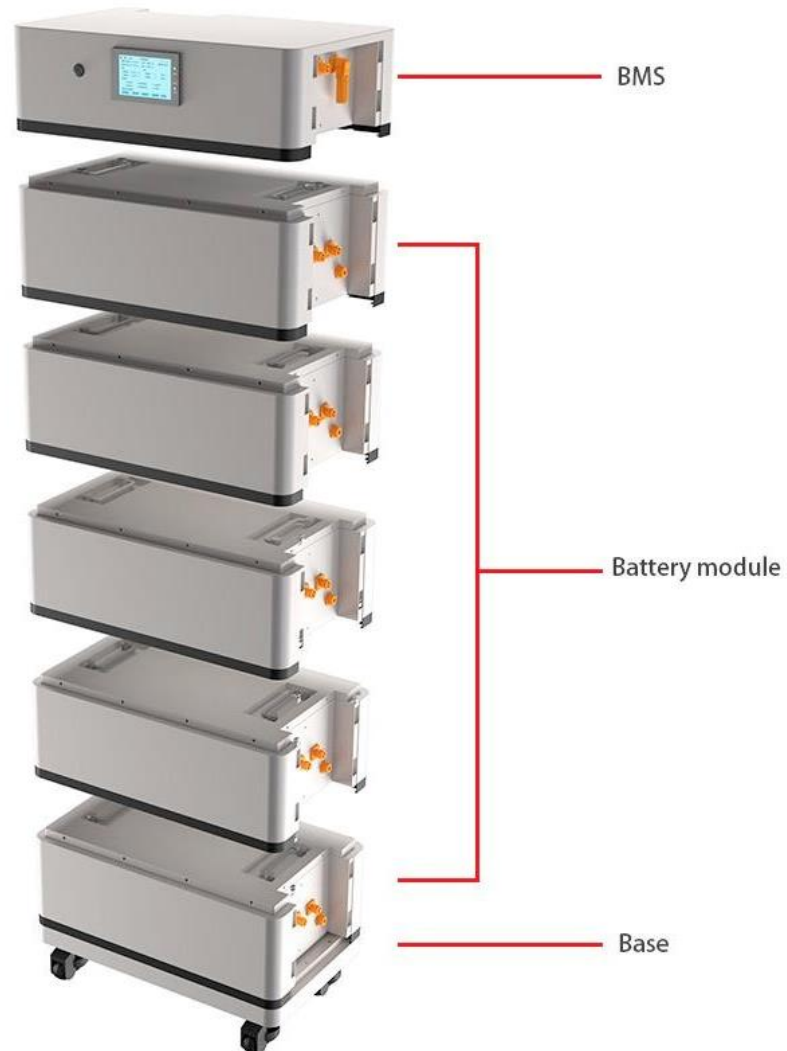


Low Voltage:
16 in parallel

High Voltage:
kWh: 10.24, 18.3, 20.4, 25.6
Maximum 3 in parallel
with inverter per stack



STACK ENERGY STORAGE SOLUTIONS



Features

- ✓ Battery voltage calculation: 16 battery voltage sampling test, deviation $\pm 20\text{mV}$
- ✓ Battery and ambient temperature detection: 4 battery temperature sensors, 1 ambient temperature sensor, 1 MOS temperature sensor, deviation $\pm 2\text{ }^\circ\text{C}$.
- ✓ Smart cell balance: charging and static balance strategies can be flexibly set to effectively extend the service life.
- ✓ Communication interface: PC or intelligent front-end can monitor battery data, control operation and set parameters through telemetry, remote signalling, remote adjustment, remote control and other commands. The communication protocol meets the requirements of YD/T 1363.3 and realizes cascade communication
- ✓ Historical data recording. At present, up to 500 historical fault data can be stored.
- ✓ Battery management system parameters, including cell battery over voltage/under voltage, battery total voltage over voltage/under voltage, charge and discharge over current, battery high/low temperature, battery capacity, working mode, charge and discharge limit current, can be set.
- ✓ Multiple protection functions: hardware protection, battery protection, high and low temperature protection, output short circuit protection, etc.

MEDIUM ENERGY STORAGE SOLUTION

400V - 876V

All-in-one Design

Quick installation and minimum footprint:

- ✓ Integrated wiring and cabinets in the skid. Only communication and DC lined need to be connected on-site.
- ✓ Pre-assembly and testing before leaving the factory, making delivery, installation and maintenance easier.

Optimal System Protection

Reduces the risk of accidents and protects assets:

- ✓ Battery management system (BMS) that can be monitored from the cell and module to system level.
- ✓ Anti-fire propagation and auto-fire suppression system.
- ✓ Each cabinet is equipped with an HVAC unit, as well as temperature, smoke and flood sensors.



Flexible and Scalable Configuration

Meets both current and future needs:

- ✓ Flexibly fits current needs while allowing for future expansion to reduce the cost of the initial investment.
- ✓ Supports parallel installation for higher power requirements.



MEDIUM ENERGY STORAGE SOLUTION : 400V - 876V

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Energy Storage Skid Solution

- ✓ All-in-one design for quick installation and minimum footprint
- ✓ Optimal system safety to reduce risks and protect assets
- ✓ Flexible and scalable configurations to meet current and future needs



EV Charging Stations



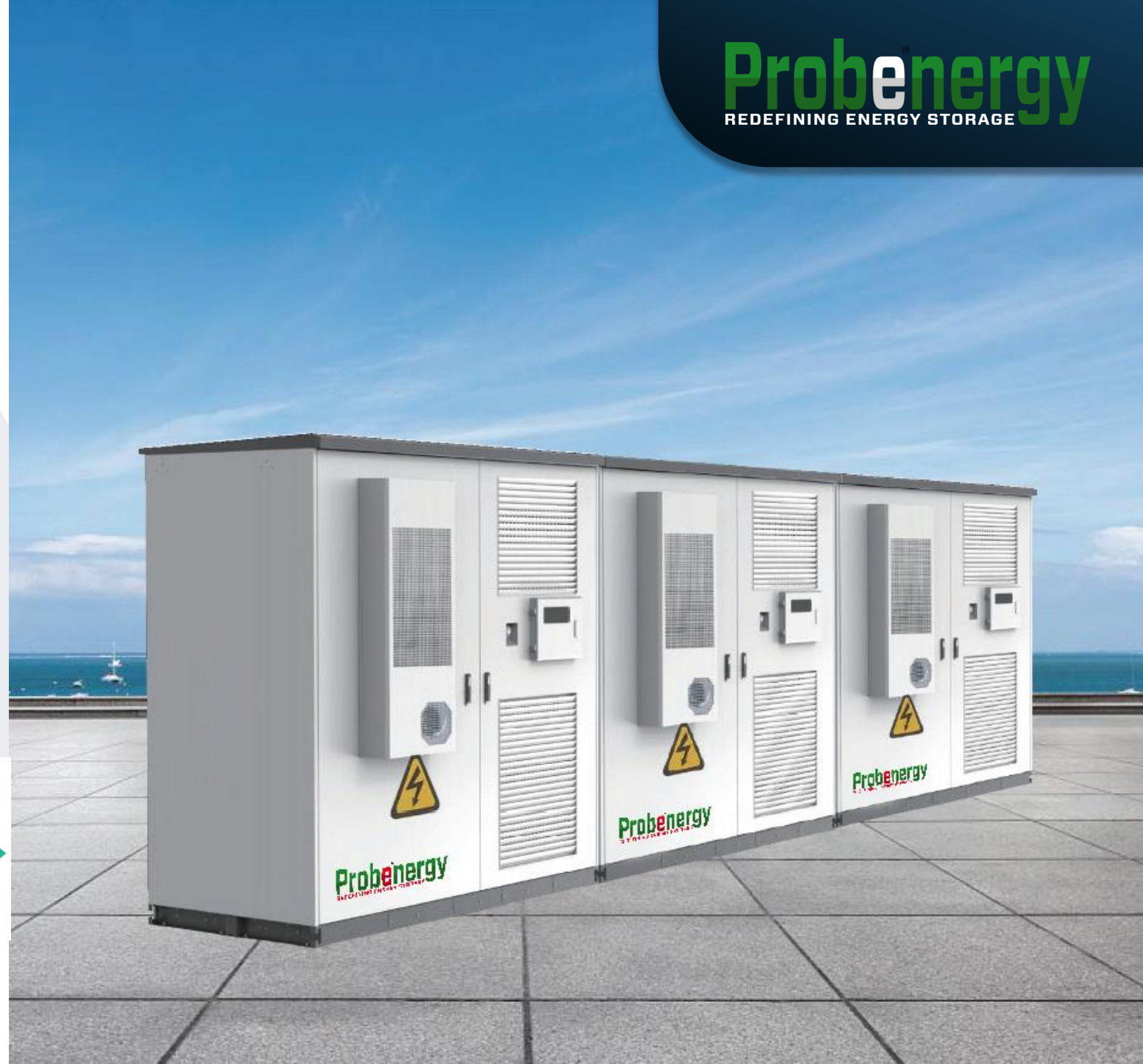
Factories



Commercial Buildings



Microgrids



MEDIUM ENERGY STORAGE SOLUTION

400V - 876V



113kWh | 215kWh | 340kWh | 435kWh | 565kWh | 645kWh | 860kW | 1075kWh

Up to 5x 113kWh
Up to 5x 215kWh

Optional: PCS included O.5C
Cabinet (IP67)

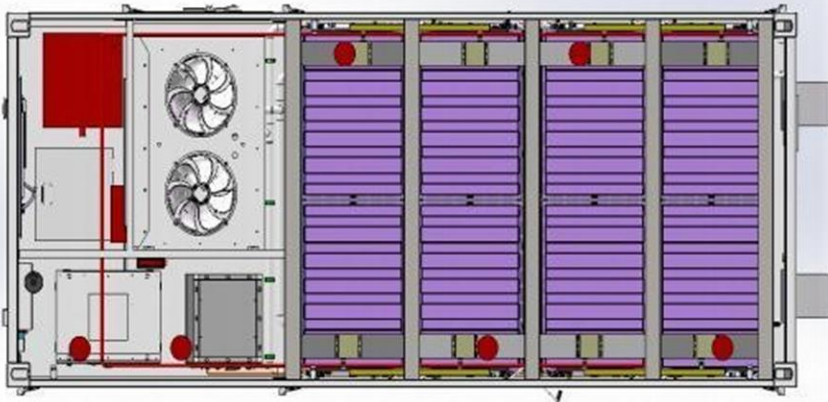
CONTAINERISED SOLUTIONS

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CONTAINERISED SOLUTIONS

Container Size: 10FT | 20FT | 40FT
Bess Mw: 1,6 | 3,3 | 6,6



The layout of the 20-foot container is shown in the figure above, and the weather-resistant steel profile tailor-welded box scheme is adopted. The main material of the box is SPA-H. Dimension = 6058*2438*2896.

Features

The container energy storage power station should include:

- ✓ energy storage battery units
- ✓ BMS battery management system
- ✓ fire protection system
- ✓ thermal management system
- ✓ confluence power distribution system
- ✓ ventilation system
- ✓ video surveillance, etc.

The equipment is integrated in the 20-foot battery prefabricated cabin. The standard unit of the battery prefabricated cabin has its own:

- ✓ independent power supply system
- ✓ temperature control system
- ✓ heat insulation system
- ✓ flame retardant system
- ✓ fire alarm system
- ✓ electrical interlocking system
- ✓ mechanical interlocking system
- ✓ safety escape system
- ✓ automatic control and safety guarantee systems such as emergency systems and fire protection systems.

CONTAINERISED SOLUTIONS

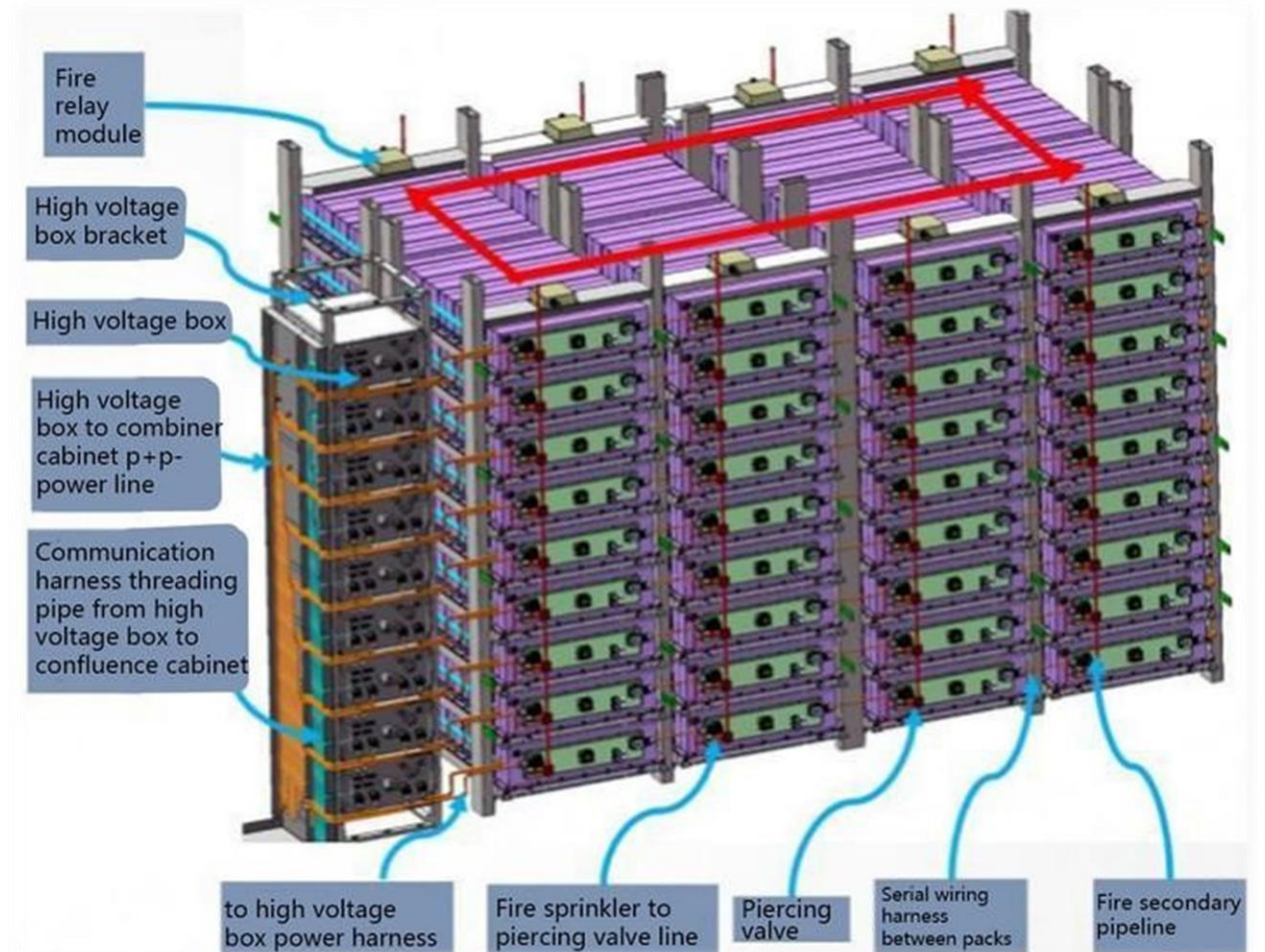
Structural Layout

Each container is equipped with 9 battery clusters, and the installation method of the battery clusters is shown in the figure to the right.

Each battery cluster is composed of 1 high-voltage box, 8 PACK boxes, BMS, inter-box collection, power wiring harness, etc., and is arranged horizontally on the container mounting frame.

The high-voltage box is equipped with a battery cluster management unit, which is used for pre-charging contactor control, main circuit contactor control, cluster current collection, cluster temperature and monomer voltage status report to the master control and performs protection and alarm according to the set protection threshold.

The function communicates with the master controller of the battery system through the CAN bus.



FUNDING

PPA
Rent To Own
Traditional Asset Funding

WHY FUNDING?

Enjoy zero upfront capital expenditure with possible immediate savings from the first month. With zero capital outlay there are no risks on the technology utilised.

PPA

The full capital cost will be outlaid allowing you to benefit immediately from power security and substantially well below your current energy exposure. Have your solar energy system maintained, insured and operated by a PPA funder hassle free.

RENT TO OWN

Short term term funding on a similar basis to PPA's where the solution is maintained and insured by the funder over the rental period. At the end of the term the client has the option to take ownership of the current solution or upgrade to newer and greener technology.

TRADITIONAL ASSET FUNDING

Short term asset funding providing cash flow affordability options where YOU the client can still take advantage of all SARS rebates and tax incentives in line with investing into an alternative energy solution.

SUPPLY CHAIN, NATIONAL FOOTPRINT & LINKS



WORLDWIDE SUPPLY CHAIN
36 LOCAL BRANCHES



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