

GSL ENERGY Launches 125kW/418kWh Liquid-Cooled All-in-One ESS to Accelerate Global C&I Energy Storage Deployment

125kW/418kWh liquid-cooled all-in-one ESS delivering scalable, safe, and efficient energy storage solutions for global C&I applications.

□□, □□□ — GUANGDONG SHENG, CHINA, August 7, 2026

/EINPresswire.com/ -- GSL ENERGY, a leading lithium battery manufacturer specializing in advanced LiFePO₄ battery solutions and energy storage systems, has officially launched its latest commercial and industrial energy storage solution, the GSL-BESS-125K418.

Designed with 125kW power output and 418kWh energy capacity, this liquid-cooled all-in-one ESS delivers safe, reliable, and scalable [commercial energy storage](#) and [industrial battery storage](#) solutions for factories, commercial facilities, industrial parks, microgrids, and renewable energy projects worldwide.

As global energy transition accelerates, businesses across Europe, Southeast Asia, the Middle East, North America, and emerging markets are increasingly adopting solar-plus-storage solutions to reduce electricity costs, improve energy independence, and enhance power reliability.



GSL ENERGY
Much More Than Grade A

125kW/261kWh Liquid-Cooled C&I ESS

All-in-One Energy Storage System
Integrated 125kW Deye Hybrid Inverter, 261kWh LiFePO₄ Battery, EMS, BMS, Liquid Cooling and Fire Protection in One Cabinet.

- Liquid Cooling**
Intelligent temperature control for higher efficiency
- 8,000+ Cycles**
LiFePO₄ battery with long cycle life and 10-year warranty
- All-in-One Design**
Integrated battery, inverter, EMS, BMS, and safety systems
- Flexible Expansion**
Supports up to 32 cabinets in parallel connection

GSL ENERGY unveils the GSL-BESS-125K418, a 125kW/418kWh liquid-cooled all-in-one energy storage system designed for global commercial and industrial energy storage applications.



GSL ENERGY
Much More Than Grade A

ALL-IN-ONE LIQUID-COOLED ENERGY STORAGE SYSTEM

125kW / 418kWh
Commercial & Industrial ESS Solution

- Liquid Cooling**
-40°C ~ 55°C
Wide Temperature Operation
- 200% PV Input**
Max. 250kW PV
10 MPPTs
150V-850V
- <10ms Switching**
Seamless On/Off-Grid
Switching Time
- Multi-level Safety Protection**
From Cell to System
- Flexible Expansion**
Up to 8MWh
(10 Units Parallel)

Advanced Features:

- All-in-One Design**
Pre-installed & Pre-tested
Easy Deployment
- High Safety**
Lithium Iron Phosphate
Long Cycle Life
- Smart BMS & EMS**
Real-time Monitoring
Remote Management
- Multi-Energy Integration**
PV / Grid / Diesel / Wind
Microgrid Ready
- Global Certifications**
UN38.3 / IEC / CE
VDE-AR-N 4105, etc.

Advanced liquid cooling technology enables the GSL-BESS-125K418 to maintain stable performance across extreme climates from -40° to 55° for worldwide energy storage projects.

However, many commercial and industrial energy projects continue to face challenges including mismatched solar generation and electricity demand, unstable grid conditions, rising peak electricity prices, extreme climate environments, and complex overseas installation requirements.

To address these challenges, GSL ENERGY developed the GSL-BESS-125K418 as a next-generation battery energy storage system integrating high-voltage LiFePO₄ battery technology, intelligent liquid cooling thermal management, advanced battery management system (BMS), 125kW bidirectional PCS, and cloud-based energy management system (EMS).

As one of the experienced [lithium battery manufacturers](#) in the global energy storage industry, GSL ENERGY continues to develop advanced battery technologies and integrated ESS solutions that support customers worldwide in achieving higher efficiency, improved energy resilience, and sustainable energy management.

Integrated All-in-One Design Simplifies Global Energy Storage Deployment

Unlike traditional split-type energy storage systems requiring separate battery cabinets, PCS units, cooling equipment, and safety systems, the GSL-BESS-125K418 integrates multiple critical components into a single IP55-rated cabinet.

The integrated system includes:

- High-voltage LiFePO₄ battery cluster

- 125kW bidirectional PCS

- Intelligent liquid cooling system

- Self-developed high-voltage BMS

- Complete safety protection system with smoke detection, aerosol fire suppression, and intelligent dehumidification

The factory-integrated design enables pre-assembly and testing before shipment, reducing transportation complexity, installation workload, and commissioning time for global projects.

With simplified on-site connections and standardized deployment procedures, the solution helps EPC contractors, distributors, and project developers accelerate commercial energy storage implementation across different markets.

Scalable 125kW/418kWh Architecture Supports Multiple C&I Applications

The GSL-BESS-125K418 provides 125kW rated AC output and 418kWh usable energy capacity per unit. Through modular parallel expansion, up to 10 units can operate together, enabling approximately 8MWh energy storage capacity for larger industrial applications.

The flexible architecture supports a wide range of applications, including:

Manufacturing facilities: Peak shaving, demand charge reduction, PV surplus storage, and backup power

Commercial buildings and hotels: Optimized electricity consumption and improved power stability

Industrial parks: Renewable energy integration and microgrid development

Solar PV projects: Higher self-consumption rates and improved renewable energy returns

By storing excess renewable energy during low-demand periods and supplying power during peak tariff hours, the system helps businesses reduce electricity expenses and improve long-term operational efficiency.

Advanced PV Integration Maximizes Renewable Energy Utilization

The GSL-BESS-125K418 is optimized for solar-plus-storage applications and supports up to 250kW PV input capacity, allowing up to 200% PV oversizing compared with PCS rated power.

Equipped with:

10 independent MPPT trackers

Up to 42A string current compatibility

Wide 150V–850V MPPT voltage range

the system is compatible with high-power photovoltaic modules used in Europe, Southeast Asia, the Middle East, and other global markets.

Through intelligent PV-storage coordination, the system automatically stores excess solar energy during daytime and supplies electricity during peak demand periods or grid interruptions, improving renewable energy utilization and reducing reliance on conventional power sources.

Liquid Cooling Technology Ensures Reliable Performance in Extreme Climates

Temperature management is a critical factor affecting battery safety, efficiency, and lifecycle performance. The GSL-BESS-125K418 adopts an advanced liquid cooling system to maintain balanced cell temperature and stable operation under demanding environmental conditions.

The system provides:

Improved temperature consistency between battery cells

Reduced thermal stress and battery degradation

Stable charging and discharging performance under high temperatures

Optimized system footprint with higher energy density

Wide operating temperature range from -40° to 55°

This enables reliable operation in diverse environments, including hot Middle Eastern regions, tropical Southeast Asia, and colder European markets.

Reliable Backup Power with Smart Energy Management

For regions facing unstable grids and frequent power interruptions, the GSL-BESS-125K418 provides rapid backup capability with less than 10ms on-grid/off-grid switching.

The system supports short-term overload capability to handle demanding loads such as industrial motors, pumps, compressors, and other critical equipment, helping businesses avoid production losses caused by unexpected outages.

With an intelligent EMS platform, the system supports hybrid energy management combining:

Solar PV

Utility grid

Diesel generators

Wind energy systems

The EMS automatically manages peak-valley arbitrage, load shifting, renewable energy optimization, backup power operation, and microgrid coordination to improve overall energy efficiency.

Global Certification Compliance and Intelligent Remote Operation

Safety and compliance are essential requirements for international energy storage deployment. The GSL-BESS-125K418 adopts multi-layer protection covering battery cells, electrical systems, environmental safety, and fire prevention.

The system complies with international standards including:

UN38.3

IEC62619

IEC62109

CE

CEI 0-21

VDE-AR-N 4105

supporting deployment across Europe, Southeast Asia, Australia, Latin America, and other global markets.

The self-developed high-voltage BMS continuously monitors battery voltage, current, temperature, SOC, and SOH while providing early fault warnings. Remote monitoring options including CAN, RS485, RS232, 4G, WiFi, LAN, and GPRS enable efficient operation and maintenance management.

The system is also compatible with mainstream inverter brands, allowing faster integration for global installers and EPC partners.

Supporting the Future of Global Commercial and Industrial Energy Storage

With its integrated architecture, advanced liquid cooling technology, modular scalability, and international certification readiness, the GSL-BESS-125K418 provides a reliable solution for businesses seeking smarter and more sustainable energy management.

As a professional lithium battery manufacturer, GSL ENERGY continues to expand its global energy storage portfolio by delivering advanced battery solutions for distributors, EPC contractors, and renewable energy developers.

Through innovative industrial battery storage technologies and comprehensive commercial energy storage solutions, GSL ENERGY is helping organizations worldwide reduce energy costs, improve power reliability, and accelerate the transition toward a cleaner energy future.

For product datasheets, customized project proposals, and global partnership opportunities, please contact GSL ENERGY for professional energy storage solutions.

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