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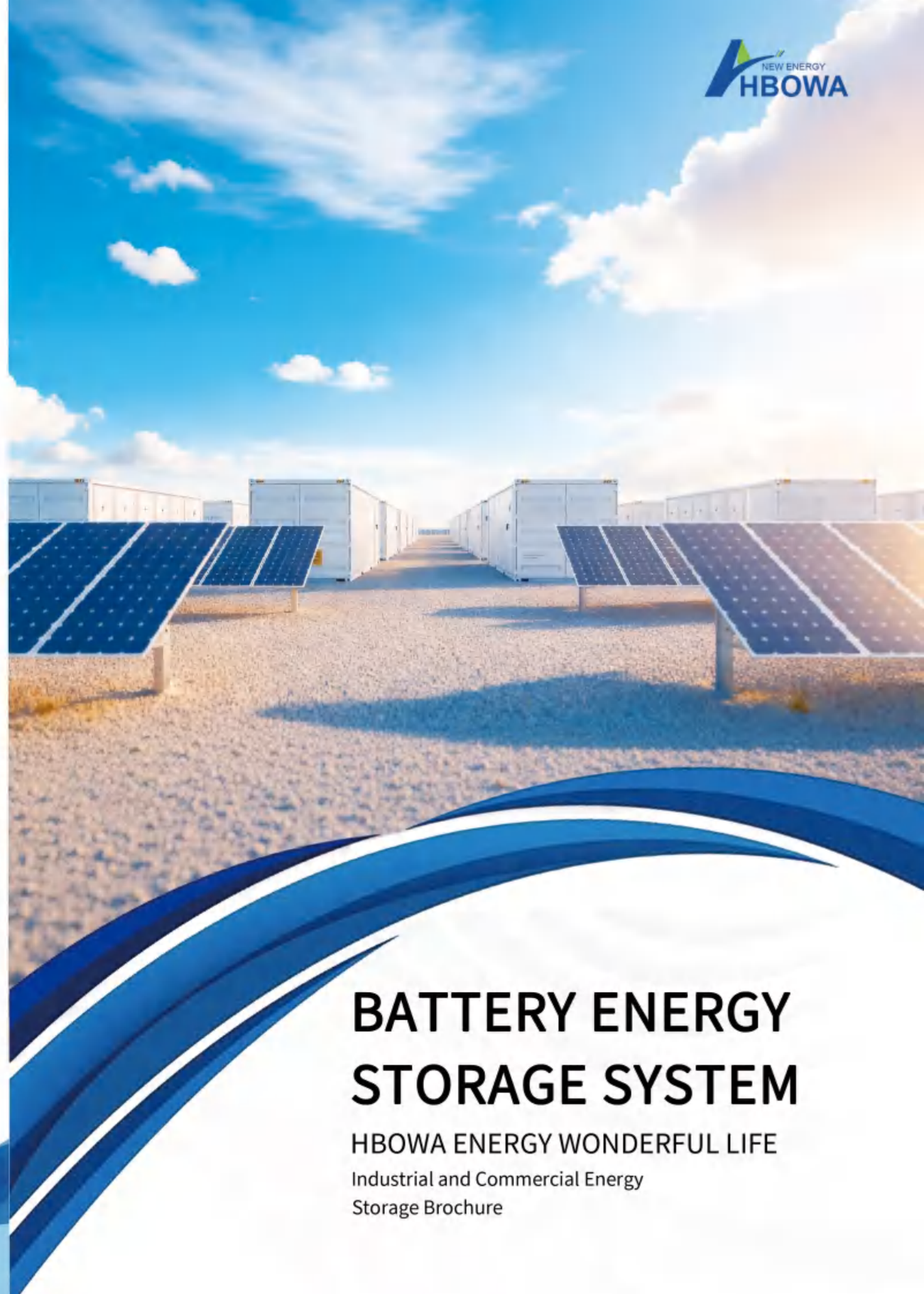


BATTERY ENERGY STORAGE SYSTEM

HBOWA ENERGY WONDERFUL LIFE

Industrial and Commercial Energy
Storage Brochure

ABOUT HBOWA

Founded in 2018, Suzhou Preta Intelligence and Technology Co. Ltd is a high-tech enterprise specializing in the design, research and development, production, sales and service of photovoltaic and storage integration and energy storage products, committed to providing high-quality energy storage products and smart energy storage solutions to customers around the world.

We have 30+ degree-holders, with over 20% PhDs and professors. Engineers focus on battery materials, pack design, and process improvement, while market leaders bring 22 years of global trade experience since 2003. Together,we turn customer needs into clear road maps and move products from lab to market fast.

Our product line covers C&I battery energy storage system solutions (large scale BESS), residential energy storage LifePO4 batteries, solar off-grid systems, on-grid systems, hybrid grid systems, and customized services, solar products backed by CE, UL, and IEC, etc certifications, meet market-entry requirements in Europe and North America, Southeast Asia, Africa, and other target regions.

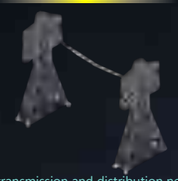
Besides, Preta is the authorized distributor for LONGi, Jinko, JA, Trina Solar, and Tongwei solar panels, ensuring top quality. With warehouses in Germany and the Netherlands, we guarantee fast, reliable delivery across Europe.

Our solar products' application areas include photovoltaic power generation, residential and small commercial energy storage, railway infrastructure, emergency lighting, electric power communication, medical electronics, firefighting power supply, surveying and mapping, and charging facilities.

Europe	North America	China	Other Regions
IEC 62619 IEC 63056 IEC 62933 ROHS REACH UN38.3 UN3536	UL 9540A UL 1973 UL 540 NFPA 855 UN38.3 UN3536	GB/T 36276	UN38.3

The Problem of Lack of Energy Storage

System Side



General transmission and distribution network:
Power supply and demand balance management is difficult
Inverstors:
I want to get involved in the system storage business

Demand Side

A factory or public facility:

Wants to strengthen disaster and power outage countermeasures
Trying to cut electricity bills at a time when they are soaring

Generation Side

A power producer:

Profit at a time when the market price is almost zero dollars
Want to ensure efficiency

The EMS developed by the company has many practical cases in domestic industrial energy storage cases, and has realized a variety of uses such as selling electricity. In addition, in the event of a power outage, the power system can be switched to Backup Power Mode (BCP) mode within 10 seconds.

Advantages of Energy Storage System

01 Stable Power Supply

With the popularization of renewable energy, the problem of power change.

Suppression to ensure the stability of the power system.

02 Economic Benefit

Cut electricity costs
Increase revenue from electricity sales
Enter the electricity market
Environmental value transaction

03 Disaster Prevention Countermeasures

Due to the impact of climate change, the occurrence of natural disasters has become a serious problem.

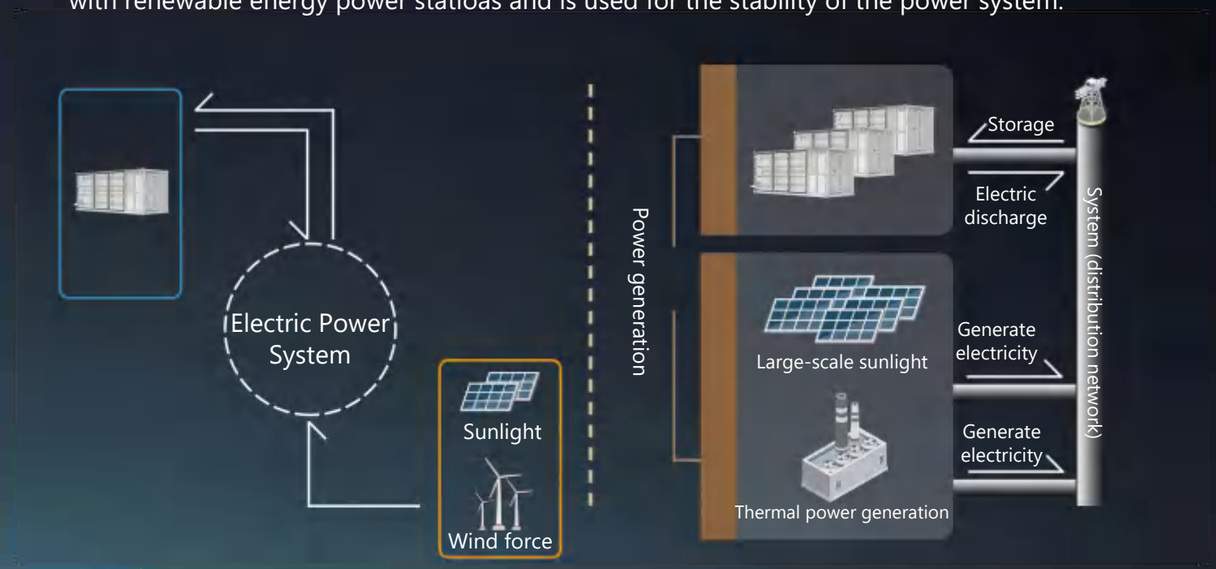
As a backup power supply, it can contribute to disaster preparedness and stress resistance.

04 Contribution to a Decarbonized Society

The battle for business dominance to lead the world to decarbonize society is intensifying, and business operators are required to solve the problem of decarbonization as a business issue.

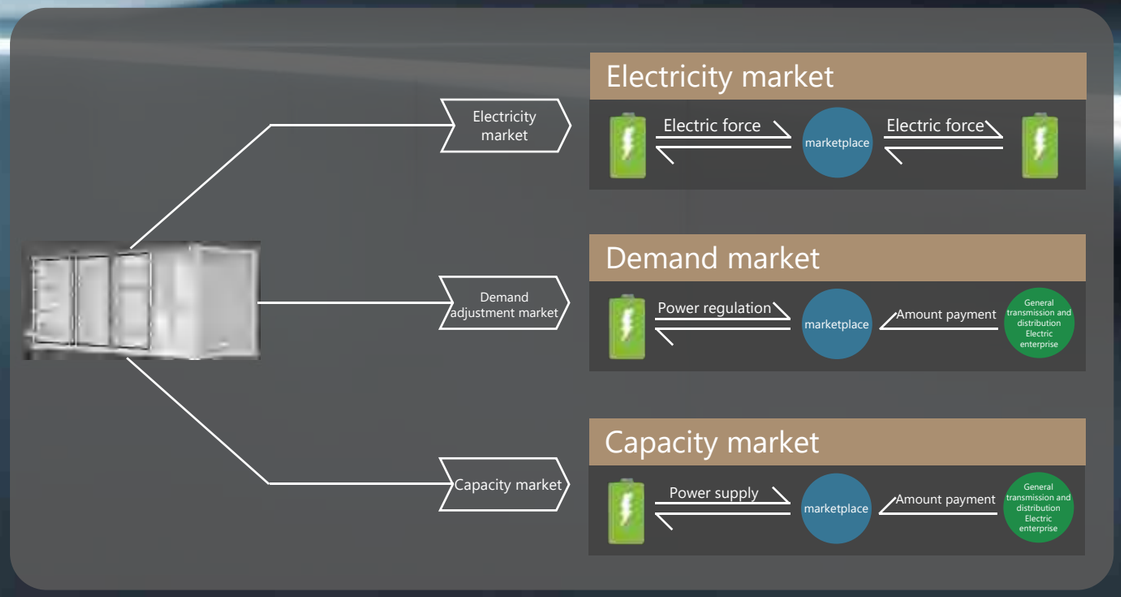
System Side

System-side energy storage refers to the storage battery that connects the power system with renewable energy power statioas and is used for the stability of the power system.



Main use

Revenue Enhancement	Achieve System Stabilization	Contribution to a Decarbonized Society	Disaster Prevention Counter-measures
Access to various power markets	Voltage adjustment, frequency adjustment	Re-efficient use of electricity	Have disaster preparedness



PEAK SHAVING & LOAD MANAGEMENT

Cut Electricity Costs by Reducing Peak Demand Charges

Energy storage shifts electricity consumption from peak to off-peak periods, helping commercial and industrial users reduce demand charges and overall electricity costs.

Key Advantages
- Reduce electricity bills by 10%–30%
- Lower peak demand penalties
- Improve load stability and energy efficiency

Supermarkets, food processing factories, gas station, textile plants, and small industrial manufacturing facilities




OFF-GRID & HYBRID MICROGRID

Reduce Fuel Costs and Enable Reliable Off-Grid Power

Integrates solar, battery storage, and diesel generators to provide stable and efficient power in areas without reliable grid access.

Key Advantages
- Reduce diesel fuel consumption by 30%–70%
- Provide stable off-grid power supply
- Enable clean and sustainable energy systems

Remote villages, mining sites, oil fields, island resorts, and construction sites




SOLAR SELF-CONSUMPTION (PV + ESS)

Maximize Solar ROI by Increasing Self-Consumption

The system stores excess solar energy during the day and uses it when needed, significantly improving solar utilization and investment returns.

Key Advantages
- Increase self-consumption up to 70%+
- Improve solar project ROI
- Reduce grid dependency

Shopping malls, supermarkets, office buildings, schools, and logistics warehouses




EV CHARGING INFRASTRUCTURE

Lower Charging Costs and Avoid Grid Upgrade Investment

Energy storage buffers peak charging demand, reducing pressure on the grid and enabling cost-efficient EV charging infrastructure.

Key Advantages
- Reduce grid expansion costs
- Lower charging operational costs
- Improve charging stability and efficiency

Highway service areas, shopping mall parking lots, fleet depots, and bus stations




BACKUP POWER SUPPLY

Ensure Business Continuity and Avoid Costly Downtime

Provides instant backup power during grid outages, ensuring uninterrupted operation of critical facilities and preventing financial losses.

Key Advantages
- Ensure uninterrupted power supply
- Avoid production and service downtime
- Reduce reliance on diesel generators

Hospitals, data centers, banks, airports, and telecom base stations




GRID SUPPORT & ENERGY OPTIMIZATION

Unlock Additional Revenue through Grid Services and Demand Response

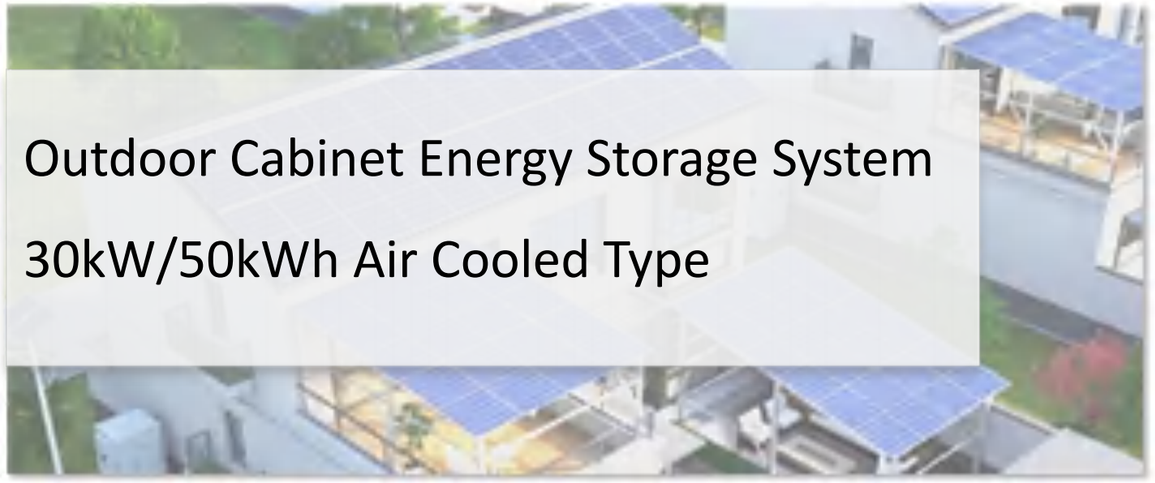
Enables participation in grid services such as demand response and peak load balancing, turning energy storage into a revenue-generating asset.

Key Advantages
- Create additional revenue streams
- Improve grid stability
- Increase asset utilization

Industrial park, large commercial complex, City District / Urban Energy Hub, utility-connected facility




High Safety | Long Cycle Life | High Efficiency | Easy Installation | Easy Operation



Outdoor Cabinet Energy Storage System

30kW/50kWh Air Cooled Type

COMPACT DESIGN

Small footprint design reduces cabinet space requirements and improves installation flexibility

FLEXIBLE INSTALLATION

Easy to install and adaptable to various mounting orientations and site conditions

WIDE COMPATIBILITY

Highly compatible with mainstream inverters and power supply systems for seamless integration

LONG CYCLE LIFE

Engineered for long service life, supporting applications such as peak shaving, energy trading, and backup power

AUTOMOTIVE-GRADE CELLS

Built with automotive-grade cells to ensure enhanced reliability, safety, and extended lifespan

SCALABLE EXPANSION

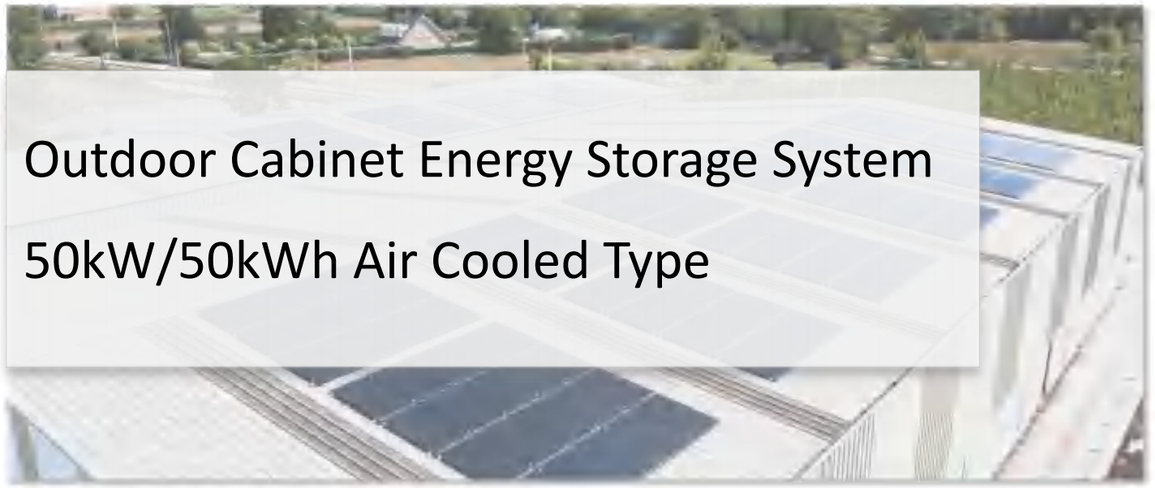
Supports multi-cabinet parallel connection, enabling flexible and efficient system capacity expansion

Compatible with mainstream inverters: 30kW Growatt/Deye/Solis/Megarevo/Afore

PRODUCT PARAMETERS

Model	Hbowa-30kW/50kWh
General Parameter	
Product	50kWh
Nominal Voltage	512V (10 module series)
Nominal Capacity	100AH
Cabinet Size(mm)	640*830*1900mm
Weight(kg)	750KG
Charge/discharge power MAX	100A
Cooling method	Air-cooled
Protection class	IP54
Type of firefighting	Aerosol
Battery Parameter	
Battery Types	51.2V-100AH
Nominal Capacity (KWh)	51KWh
Recommend Charge/Discharge Current (A)	50
Max. Charge/Discharge Current(A)	100
Communicaiton	RS485/CAN
Working Temperature	0°C~50°C Charge -10°C ~50°C Disharge
Transport or Storage Temperature Range	-20°C~60°C
Certification	CE/IEC/UL/UN38.3/MSDS
Design Life	10years+
Cycle Life	(0.5C/0.5C-80% D0D)>6000 times
Cooling method	Air-cooled
Certification	UN38.3/MSDS/ROHS
Inverter Parameter	
Rated power	30KW (Growatt/Deye/Solis/Megarevo/Other)
Type	Three Phase High Voltage Hybrid
Rated AC Voltage	400V
Rated frequency	50/60Hz
Overloaded	110%
Communicaiton	Ethernet/Modbus/TCP/IP
Power Factor Adjustment Range	0.8 leading to 0.8 lagging

※The manual is for reference only and is subject to actual communication.



Outdoor Cabinet Energy Storage System

50kW/50kWh Air Cooled Type

HIGH CYCLE LIFE

Can achieve 6000 cycles at 90% state of charge, effectively reducing total cost of ownership.

HIGHLY ADAPTABLE

Strong environmental adapt ability, can withstand up to 60℃.

EASY TO STORE

Due to its extremely low self-discharge rate (LSD) and no risk of sulfation, it can last up to 6 months.

FAST CHARGING SPEED

High charge and discharge efficiency, reducing equipment downtime and saving more time.

MORE SECURE

Real-time monitoring of PDU for better system protection.

MORE PORTABLE

Lithium batteries provide more watt-hours per kilogram while weighing only one-third of their SLA equivalents.

Compatible with mainstream inverters: 50kW Deye/Growatt/Solis/Afore

PRODUCT PARAMETERS

Model	Hbowa-50kW/50kWh
Battery Parameter	
Battery rated capacity	50kWh
Battery rated voltage	512V (10 module series)
Battery voltage range	448V~576V
Battery type	Lithium Iron Phosphate battery (LFP)
Battery cell capacity	100Ah
Series of Battery	1P*16S*10S
Maximum charge and discharge current	50A
Inverter Parameter	
Inverter	Deye/Growatt/Solis/Afore
Grid type	Three-Phase four-Wire
Rated charging and discharging power (kw)	50kW
Rated grid voltage (V)	AC380
Rated current (A)	76A
Rated AC frequency	50/60Hz
Total distortion rate of current harmonics	＜3% (Rated power)
Power Factor	1(Ahead of schedule) ~1(Lag)
General Parameter	
Degree of protection	IP54
System efficiency	≥90%
Relative humidity	0 ~ 95% (no condensation)
Noise	≤75dB
Operating temperature range (°C)	-20~50°C
Cooling mode	Air cooling (refrigeration, ventilation, heating)
Fire protection system	Integrated
Altitude	<2000
Communication interface	RS485, CAN
Size (W * D * H)	780*640*2000mm
Weight (approx.)	625kg

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Outdoor Cabinet Energy Storage System

50kW/112kWh Air Cooled Type

HIGH CYCLE LIFE

Can achieve 6000 cycles at 90% state of charge, effectively reducing total cost of ownership.

HIGHLY ADAPTABLE

Strong environmental adapt ability, can withstand up to 60°C.

EASY TO STORE

Due to its extremely low self-discharge rate (LSD) and no risk of sulfation, it can last up to 6 months.

FAST CHARGING SPEED

High charge and discharge efficiency, reducing equipment downtime and saving more time.

MORE SECURE

Real-time monitoring of PDU for better system protection.

MORE PORTABLE

Lithium batteries provide more watt-hours per kilogram while weighing only one-third of their SLA equivalents.

Compatible with mainstream inverters: 50kW Deye/Growatt/Solis/Afore

PRODUCT PARAMETERS

Model	Hbowa-50kW/112kWh
Battery Parameter	
Battery rated capacity	112.53kWh
Battery rated voltage	358.4V (7 module series)
Battery voltage range	280V~403V
Battery type	Lithium Iron Phosphate battery (LFP)
Battery cell capacity	314Ah
Series of Battery	1P*16S*7S
Maximum charge and discharge current	157A
Inverter Parameter	
Inverter	Deye/Growatt/Solis/Afore
Grid type	Three-Phase four-Wire
Rated charging and discharging power (kw)	50kW
Rated grid voltage (V)	AC380
Rated current (A)	76A
Rated AC frequency	50/60Hz
Total distortion rate of current harmonics	＜3% (Rated power)
Power Factor	1(Ahead of schedule) ~1(Lag)
General Parameter	
Degree of protection	IP54
System efficiency	≥90%
Relative humidity	0 ~ 95% (no condensation)
Noise	≤75dB
Operating temperature range (°C)	-20~50°C
Cooling mode	Air cooling (refrigeration, ventilation, heating)
Fire protection system	Integrated
Altitude	<2000
Communication interface	RS485, CAN
Size (W * D * H)	1200*803*2375mm
Weight (approx.)	1300kg

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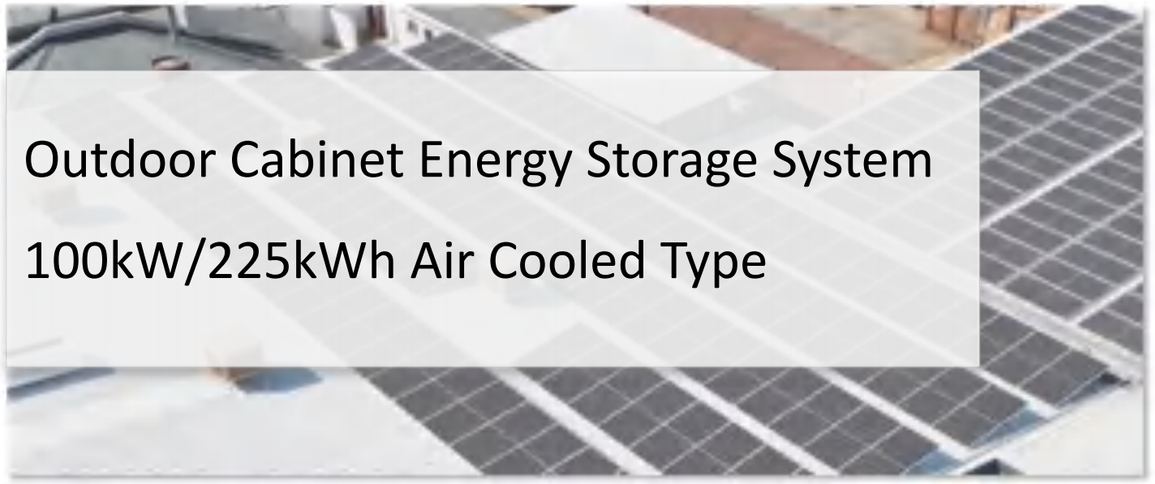

Outdoor Cabinet Energy Storage System

100kW/225kWh Air Cooled Type

COMPACT DESIGN

Small footprint design reduces cabinet space requirements and improves installation flexibility

FLEXIBLE INSTALLATION

Easy to install and adaptable to various mounting orientations and site conditions

WIDE COMPATIBILITY

Highly compatible with mainstream inverters and power supply systems for seamless integration

LONG CYCLE LIFE

Engineered for long service life, supporting applications such as peak shaving, energy trading, and backup power

AUTOMOTIVE-GRADE CELLS

Built with automotive-grade cells to ensure enhanced reliability, safety, and extended lifespan

SCALABLE EXPANSION

Supports multi-cabinet parallel connection, enabling flexible and efficient system capacity expansion

Compatible with mainstream inverters: 100kW Deye/Growatt/Solis

PRODUCT PARAMETERS

Model	Hbowa-100kW/225kWh
General Parameter	
Product	225kWh
Nominal Voltage	716.8V
Nominal Capacity	314AH
Cabinet Size(mm)	1290*1080*2260mm
Weight(kg)	2260KG
Charge/discharge power MAX	140A
Cooling method	Air-cooled
Protection class	IP55
Type of firefighting	Aerosol
Battery Parameter	
Battery Types	51.2V-314AH*14
Nominal Capacity (KWh)	225KWh
Recommend Charge/Discharge Current (A)	100
Max. Charge/Discharge Current(A)	140
Communicaiton	RS485/CAN
Working Temperature	10°C~50°C
Transport or Storage Temperature Range	-20°C~60°C
Certification	CE/IEC/UL/UN38.3/MSDS
Design Life	10years+
Cycle Life	(0.5C/0.5C-80% D0D)>6000 times
Cooling method	Air-cooled
Certification	UN38.3/MSDS/ROHS
Inverter Parameter	
Rated power	100kW/125KW (Deye/Solis/Growatt/Other)
Type	Three Phase High Voltage Hybrid
Rated AC Voltage	400V
Rated frequency	50/60Hz
Overloaded	110%
Communicaiton	Ethernet/Modbus/TCP/IP
Power Factor Adjustment Range	0.8 leading to 0.8 lagging

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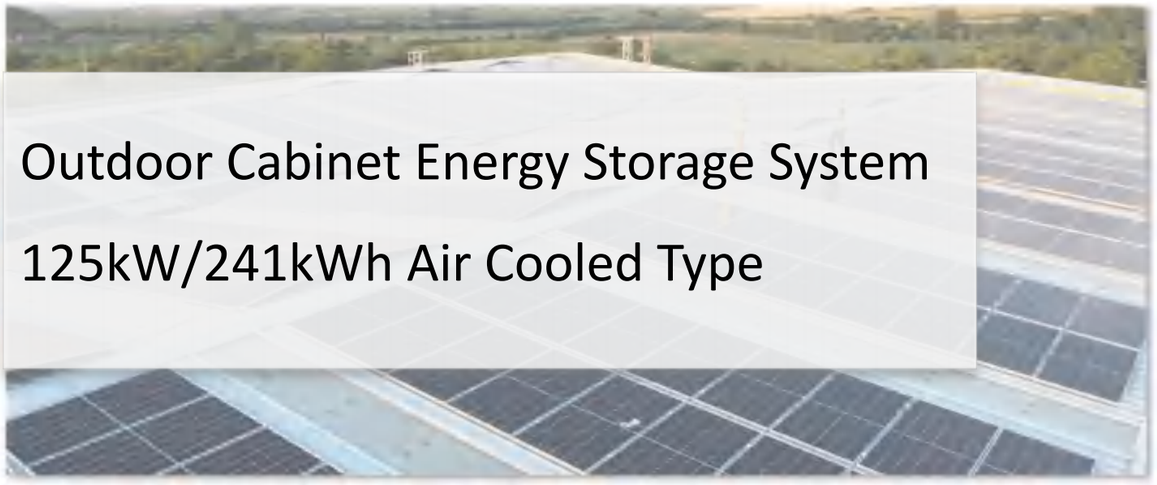

Outdoor Cabinet Energy Storage System

125kW/241kWh Air Cooled Type

HIGH CYCLE LIFE

Can achieve 6000 cycles at 90% state of charge, effectively reducing total cost of ownership.

HIGHLY ADAPTABLE

Strong environmental adapt ability, can withstand up to 60℃.

EASY TO STORE

Due to its extremely low self-discharge rate (LSD) and no risk of sulfation, it can last up to 6 months.

FAST CHARGING SPEED

High charge and discharge efficiency, reducing equipment downtime and saving more time.

MORE SECURE

Real-time monitoring of PDU for better system protection.

MORE PORTABLE

Lithium batteries provide more watt-hours per kilogram while weighing only one-third of their SLA equivalents.

Compatible with mainstream inverters: 125kW Deye/Growatt/Solis

PRODUCT PARAMETERS

Model	Hbowa-125kW/241kWh
Battery Parameter	
Battery rated capacity	241.15kWh
Battery rated voltage	768V (15 module series)
Battery voltage range	672V~864V
Battery type	Lithium Iron Phosphate battery (LFP)
Battery cell capacity	314Ah
Series of Battery	1P*16S*15S
Maximum charge and discharge current	157A
Inverter Parameter	
Inverter	Deye/Growatt/Solis
Grid type	Three-Phase four-Wire
Rated charging and discharging power (kw)	125kW
Rated grid voltage (V)	AC380
Rated current (A)	189A
Rated AC frequency	50/60Hz
Total distortion rate of current harmonics	＜3% (Rated power)
Power Factor	1(Ahead of schedule) ~1(Lag)
General Parameter	
Degree of protection	IP54
System efficiency	≥90%
Relative humidity	0 ~ 95% (no condensation)
Noise	≤75dB
Operating temperature range (°C)	-20~50°C
Cooling mode	Air cooling (refrigeration, ventilation, heating)
Fire protection system	Integrated
Altitude	<2000
Communication interface	RS485, CAN
Size (W * D * H)	1300*1260*2375mm
Weight (approx.)	2500kg (Without PCS)

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HBOWA BESS Products for Commercial & Industrial

◆AC Liquid-Cooled Outdoor Energy Storage Cabinet

High Safety
- Tier-1 brand high-safety battery cells, fully certified
- IP55 protection rating with multiple safety layers
- Battery pack compliant with China's GB/T 36276 certification
- Effectively prevents thermal runaway propagation between cells
- No circulating current within a single cluster; no short-circuit between clusters

High Efficiency
- High-efficiency cells with energy conversion efficiency >96%
- Single discharge exceeds 250kWh; two charge-discharge cycles reach 500kWh

Long Lifespan
- Equipped with branded long-life cycle cells, up to 12,000 cycles
- Temperature deviation <1.6°C, enhancing cycle life by 30%
- Designed lifespan of 15 years under standard working conditions
- Intelligent liquid cooling system: long lifespan, lower cost, smaller footprint

On/Off-Grid Ready
- Supports both grid-tied and off-grid parallel operation with anti-backflow function
- Scalable parallel expansion supported at any time

Easy Configuration
- Machines can be paralleled flexibly as needed
- Integrated transport solution for easy installation
- Flexible site installation and layout
- Modular design for easy maintenance and upgrades

100KW | 215kWh
125KW | 260kWh

Product Type	Hbowa-C&I-215	Hbowa-C&I-260
Rated Energy	215kwh@0.5C	260kwh@0.5C
Rated Power	100 kw	125 kw
Rated Output Voltage	400 Vac	400 Vac
Cell Capacity	280 Ah	314 Ah
Cell Type	LFP	LFP
Configuration	1P 240S	1P 260S
Rated Discharge Current	145 A	182 A
Rated Charging Current	145 A	182 A
Charging Temperature	0~50°C	0~50°C
Discharging Temperature	-20~55°C	-20~55°C
Communication Port	LAN、485	LAN、485
Cooling Method	Intelligent Liquid Cooling	Intelligent Liquid Cooling
Protection Level	IP54	IP54
Functional Safety	class B	class B
Product Weight	≈2280 Kg	≈2450 Kg
Dimensions	W1175xD1300xH2310 mm	W1175xD1300xH2310 mm
Applications	Utility-scale, C&I	Utility-scale, C&I

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HBOWA BESS Products for Commercial & Industrial

◆DC Liquid-Cooled Outdoor Energy Storage Cabinet

- **DC Outdoor Battery System**
- **High safety:** Passes UL9540A Unit-level test, preventing thermal runaway of battery cells. Can connect in series with PCS without risks of circulating current or inter-cluster short circuits.
- **Long lifespan:** Liquid cooling system maintains core temperature difference <2°C, increasing cycle life by 30%.
- **Easy scalability:** Replaces container solutions, allowing for flexible layout.
- **Easy to be installed:** Each unit weighs under 4 tons, facilitating on-site hoisting and installation.
- **Easy maintenance:** Modular design for convenient on-site maintenance.
- **Worldwide Certifications:**

UN38.3

180KW | 373kWh
209KW | 418kWh

Product Type	Hbowa-UTL-373	Hbowa-UTL-418
Rated Energy	372.7kwh@0.5c	418kwh@0.5C
Rated Power	180 kW	Max 209 kw
Rated Output Voltage	900-1500 Vdc	1100-1500 Vdc
Cell Capacity	280 Ah	314 Ah
Cell Type	LFP	LFP
Configuration	1P 416S	1P 416S
Rated Discharge Current	140 A	157 A
Rated Charging Current	140 A	157 A
charging Temperature	0~45°C	0~45°C
Discharging Temperature	-20~50°C	-20~50°C
Communication Port	CAN、485	CAN、485
Cooling Method	Liquid Cooling	Liquid Cooling
Protection Level	IP55	IP55
Functional Safety	class B	class B
Product Weight	≈4000 Kg	≈4100 Kg
Dimensions	W1300xD1300xH2365 mm	W1300xD1300xH2365 mm
Applications	Utility-scale, C&I	Utility-scale, C&I

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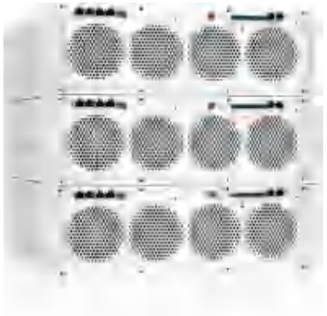
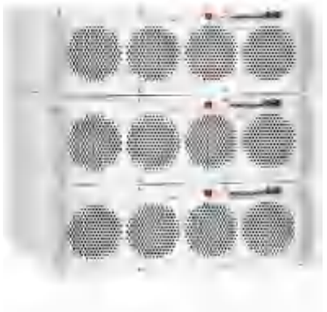
Modular Storage Solution



DC/AC Modules

With PQ/F, VSG, CV, MPPT multiple operating modes; Three level topology, high conversion efficiency, Compatible with 3-phase or 3/4-wire outputs

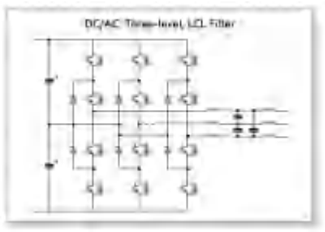


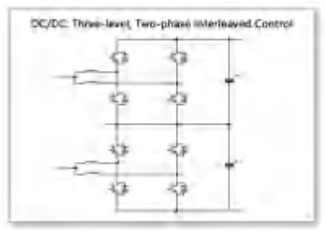
DC/DC Modules

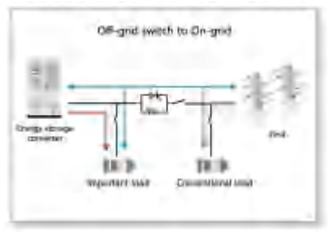
Both photovoltaic charging and energy storage charging and discharging functions; Three-level topology, high conversion efficiency, Dual interleaved parallel control reduces ripple current

STS Modules

With voltage, current, amplitude, frequency, and phase synchronization detection, and communication, it can realize seamless switching of microgrid system and off-grid to ensure power supply reliability,





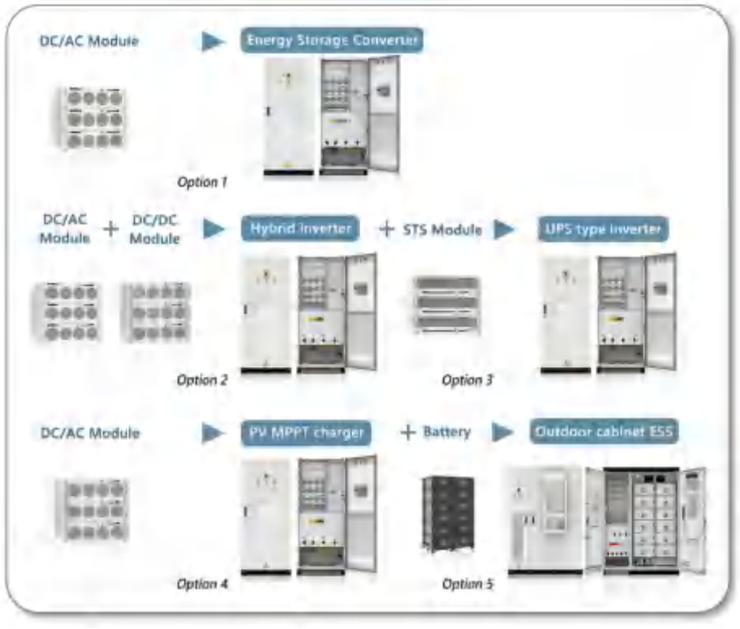


Energy Storage Solutions

We define standard DC/DC modules (suitable for photovoltaic, energy storage, hydrogen production, remote supply), DC/AC modules (suitable for photovoltaic, energy storage, flexible straight), STS modules (suitable for seamless switching, uninterrupted power supply).

The three power modules can be interchanged to meet the varied requirements of customers commercial and industrial battery energy storage container solution.

Within the same PV energy storage system, DC coupling or AC coupling can be used independently, or both AC and DC coupling can be used simultaneously, maximizing the ability to meet diverse customer needs and improve system efficiency.



PRODUCT PARAMETERS

Model	Hbowa-50AC	Hbowa-100AC	Hbowa-125AC
DC/AC Converter Module			
Rated power	50kW	100kW	125kW
Maximum power	55kW	110kW	137kW
DC Voltage Range (V)	500–1000V(3P3W)		580–1000V(3P3W) / 680–1000V(3P4W)
DC Side Full-Load Voltage Range	600–950V(3P3W)		625–1000V(3P3W) / 680–1000V(3P4W)
Maximum DC Current	110A	180A	200A
Rated AC Voltage	400Vac, 3W+PE		400Vac, 3W+PE/3W+N+PE
Rated Frequency	50/60Hz (±5)		
Rated AC Current	72A	144A	180A
Overload Capacity	110% normal operation; 120% for 1 minute		
Total Harmonic Distortion (THD)	<3% (rated power)		
Power Factor Adjustable Range	-1 Leading ~ +1 Lagging		
Compatible Batteries	PV / Lithium Battery / Lead-acid Battery / Flow Battery / DC Bus / DC Load, etc.		
Operating Modes	Grid-connected: Constant power/DC source/MPPT/VSG Off-grid: VF/VSG		
Operating Temperature	-25~60°C (Derating above 45°C)		
Max. Conversion Efficiency	98.5%		99%
Dimensions (W*D*H mm)	483*600*150mm	483*760*220mm	600*750*245mm
Weight (approx.)	35kg	50kg	80kg

Model	Hbowa-50DC	Hbowa-60DC
DC/DC Converter Module		
Rated power	50kW	60kW
Maximum power	55kW	66kW
DC Voltage Range	200~1000V	200~1000V
High-voltage Side Full-load Voltage Range	500~950V	545~950V
Max. Current (High-voltage Side)	110A	110A
Low-voltage Side Full-load Voltage Range	345~900V	375~900V
Max. Current (Low-voltage Side)	80A*2	80A*2
Low-voltage Side Inputs	2 (independent or paralleled as 1 input)	
Compatible Batteries	PV / Lithium Battery / Lead-acid Battery / Flow Battery / DC Bus / DC Load, etc.	
Operating Modes	MPPT / Constant Power / Constant Voltage (Bidirectional)	
Operating Temperature	-25~60°C (Derating above 45°C)	
Max. Conversion Efficiency	98.8%	
Dimensions (W*D*H mm)	483*600*150mm	566*600*150mm
Weight (approx.)	30kg	35kg

Model	Hbowa-150STS	Hbowa-300STS	Hbowa-600STS
STS (Static Transfer Switch) Module			
Rated AC Power	150kW	300kW	600kW
Maximum AC Power	165kVA	330kVA	660kVA
Rated AC Voltage	400Vac, 3W+PE		
Rated Frequency	50/60Hz		
Rated AC Current	216A	433A	866A
Transfer Time (ms)	<10ms		
Sync Control & Protection Interface	CAN / I/O Interface / CT Input		
Operating Temperature	-25~45°C		
Dimensions (W*D*H mm)	483*600*150mm		566*600*150mm
Weight (approx.)	25kg	30kg	35kg

Outdoor Cabinet Energy Storage System

50kW/100kWh Air Cooled Type

- PV energy storage and charging
- Backup power for data centers and communication base stations
- Islands, border posts, and other isolated power areas
- Public power distribution areas

High Integration

System-level product integration including energy storage battery, PCS, power distribution, thermal management, fire protection, water leakage and door status detection, as well as monitoring and communication systems — providing comprehensive control over system operation and safety.

Excellent Protection

Patented outdoor cabinet design with optimized cooling air duct ensures superior protection against dust and rain. Front and rear access doors facilitate on-site maintenance and allow multiple systems to be installed side-by-side, reducing overall footprint.

Space Efficiency

Adopts an embedded door-mounted integrated air conditioner without occupying internal cabinet space, improving usable volume inside the cabinet. The top structure provides better integrity and waterproof performance.

Versatile Functionality

Standardized modular design with menu-based function configuration. Optional modules such as PV charging, on/off-grid transfer, and power-frequency transformer can be added to form an integrated solar-storage system cabinet for microgrid applications.

Flexible Parallel Operation

Equipped with patented Virtual Synchronous Generator (VSG) technology, supporting communication-free long-distance parallel operation and seamless switching between on-grid and off-grid modes.

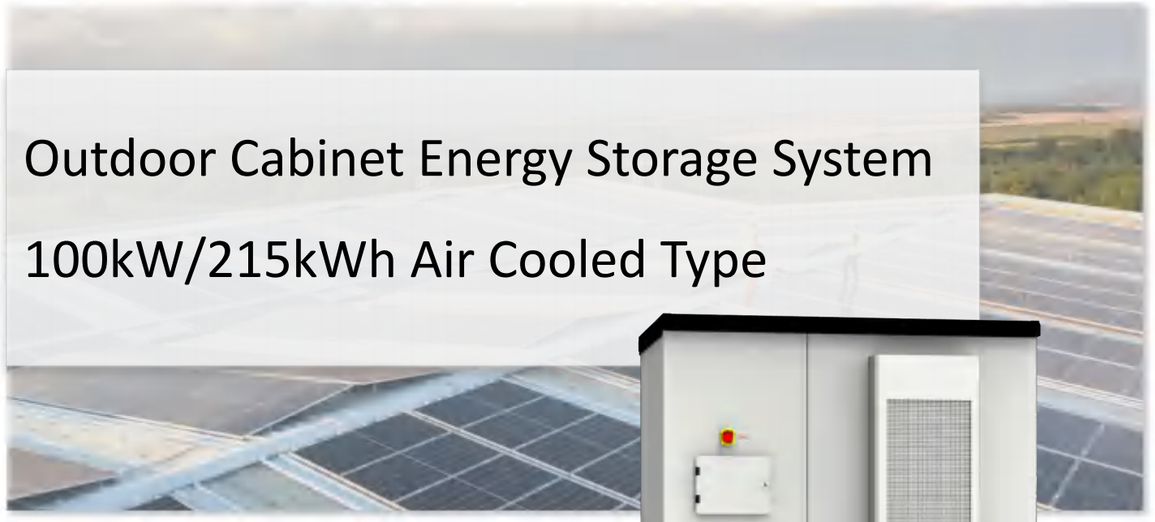
Intelligent Management

Local control screen enables real-time system monitoring, energy management strategy setting, and remote equipment upgrade for smart operation and maintenance.

PRODUCT PARAMETERS

Model	Hbowa-50TS (DC50) (100kWh)
Battery Parameter	
Battery rated capacity	100kWh
Battery rated voltage	844.8V
Battery voltage range	739.2V~950.4V
Battery type	Lithium Iron Phosphate battery (LFP)
Battery cell capacity	120Ah
Series of Battery	1P*24S*11S
Maximum charge and discharge current	60A
PCS Parameter	
Photovoltaic rated capacity	50kW
Photovoltaic voltage range	200~550V
Rated AC power	50kW
Rated AC current	72A
Rated AC voltage	400V, 3W+N+PE/3W+PE
Rated AC frequency	50/60Hz
THDI	＜3% (Rated power)
Power Factor	-1 leading to +1 lagging
THDU	＜3% (Linear Load)
General Parameter	
Degree of protection	IP54
Protective Class	I
Isolation mode	Industrial Transformer Isolation
Shutdown self-discharge	＜100W (Without transformer)
Display	LCD
Relative humidity	0 ~ 95% (no condensation)
Noise	＜78dB
Ambient temperature	-25°C to +60°C(with derating at temperatures above 45°C)
Cooling mode	Intelligent air-cooled
Altitude	3000m (> 3000m reduction)
Communication interface	CAN/Ethernet / 485
Size (W * D * H)	1300*1030*2100mm
Weight (approx.)	2150kg

※The manual is for reference only and is subject to actual communication.



Outdoor Cabinet Energy Storage System

100kW/215kWh Air Cooled Type

- PV energy storage and charging
- Backup power for data centers and communication base stations
- Islands, border posts, and other isolated power areas
- Public power distribution areas

High Integration

System-level product integration including energy storage battery, PCS, power distribution, thermal management, fire protection, water leakage and door status detection, as well as monitoring and communication systems — providing comprehensive control over system operation and safety.

Excellent Protection

Patented outdoor cabinet design with optimized cooling air duct ensures superior protection against dust and rain. Front and rear access doors facilitate on-site maintenance and allow multiple systems to be installed side-by-side, reducing overall footprint.

Space Efficiency

Adopts an embedded door-mounted integrated air conditioner without occupying internal cabinet space, improving usable volume inside the cabinet. The top structure provides better integrity and waterproof performance.

Versatile Functionality

Standardized modular design with menu-based function configuration. Optional modules such as PV charging, on/off-grid transfer, and power-frequency transformer can be added to form an integrated solar-storage system cabinet for microgrid applications.

Flexible Parallel Operation

Equipped with patented Virtual Synchronous Generator (VSG) technology, supporting communication-free long-distance parallel operation and seamless switching between on-grid and off-grid modes.

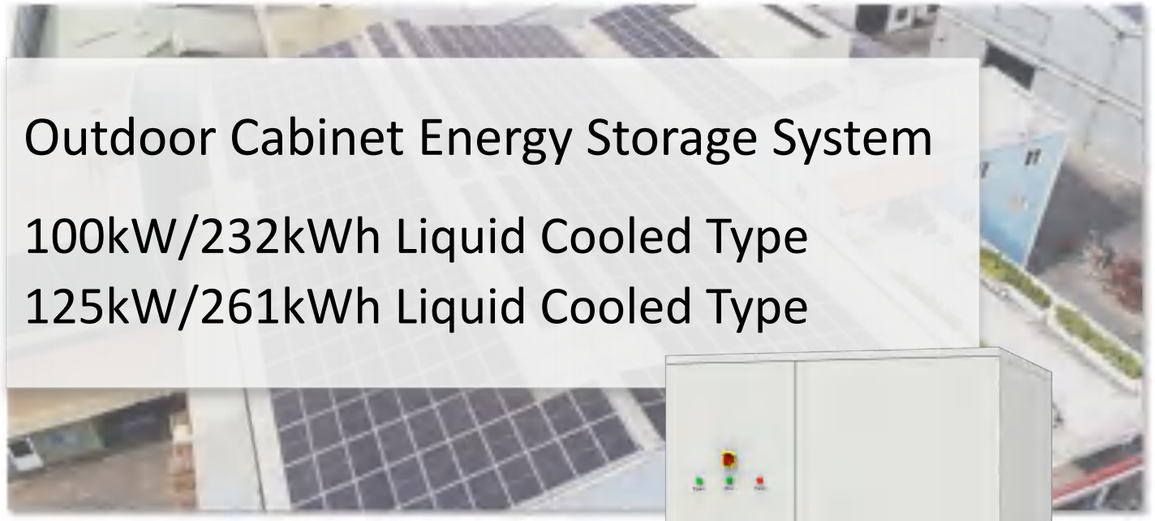
Intelligent Management

Local control screen enables real-time system monitoring, energy management strategy setting, and remote equipment upgrade for smart operation and maintenance.

PRODUCT PARAMETERS

Model	Hbowa-100TS (DC100) (215kWh)
Battery Parameter	
Battery rated capacity	215kWh
Battery rated voltage	768V
Battery voltage range	672V~864V
Battery type	Lithium Iron Phosphate battery (LFP)
Battery cell capacity	280Ah
Series of Battery	1P*20S*12S
Maximum charge and discharge current	140A
PCS Parameter	
Photovoltaic rated capacity	100kW
Photovoltaic voltage range	200~450V
Rated AC power	100kW
Rated AC current	144A
Rated AC voltage	400V, 3W+N+PE/3W+PE
Rated AC frequency	50/60Hz
THDI	＜3% (Rated power)
Power Factor	-1 leading to +1 lagging
THDU	＜3% (Linear Load)
General Parameter	
Degree of protection	IP54
Protective Class	I
Isolation mode	Industrial Transformer Isolation
Shutdown self-discharge	＜100W (Without transformer)
Display	LCD
Relative humidity	0 ~ 95% (no condensation)
Noise	＜78dB
Ambient temperature	-25°C to +60°C(with derating at temperatures above 45°C)
Cooling mode	Intelligent air-cooled
Altitude	3000m (> 3000m reduction)
Communication interface	CAN/Ethernet / 485
Size (W * D * H)	1800*1200*2300mm
Weight (approx.)	3100kg

※The manual is for reference only and is subject to actual communication.



Outdoor Cabinet Energy Storage System

100kW/232kWh Liquid Cooled Type
125kW/261kWh Liquid Cooled Type

- PV energy storage and charging
- Backup power for data centers and communication base stations
- Islands, border posts, and other isolated power areas
- Public power distribution areas

High Integration

System-level product integration including energy storage battery, PCS, power distribution, thermal management, fire protection, water leakage and door status detection, as well as monitoring and communication systems — providing comprehensive control over system operation and safety.

Excellent Protection

Patented outdoor cabinet design with optimized cooling air duct ensures superior protection against dust and rain. Front and rear access doors facilitate on-site maintenance and allow multiple systems to be installed side-by-side, reducing overall footprint.

Space Efficiency

Adopts an embedded door-mounted integrated air conditioner without occupying internal cabinet space, improving usable volume inside the cabinet. The top structure provides better integrity and waterproof performance.

Versatile Functionality

Standardized modular design with menu-based function configuration. Optional modules such as PV charging, on/off-grid transfer, and power-frequency transformer can be added to form an integrated solar-storage system cabinet for microgrid applications.

Flexible Parallel Operation

Equipped with patented Virtual Synchronous Generator (VSG) technology, supporting communication-free long-distance parallel operation and seamless switching between on-grid and off-grid modes.

Intelligent Management

Local control screen enables real-time system monitoring, energy management strategy setting, and remote equipment upgrade for smart operation and maintenance.

PRODUCT PARAMETERS

Model	Hbowa-100TS (DC100) (232kWh)	Hbowa-125TS (DC100) (261kWh)
Battery Parameter		
Battery rated capacity	232kWh	261kWh
Battery rated voltage	832V	
Battery voltage range	728V~936V	
Battery type	Lithium Iron Phosphate battery (LFP)	
Battery cell capacity	280Ah	314Ah
Cell Capacity	1P*52S*5S	1P*52S*5S
Max.charging/discharging power	0.5P	
Max.charge/discharge current	140A	157A
Photovoltaic Parameter		
Rated power	100kW	
PV Open Circuit Voltage Range	250~708V	
PV Max. Current	160A*2	
MPPT quantity	2	
AC Parameter		
Rated AC power	100kW	125kW
Rated AC current	180A	
Rated AC voltage	400V, 3W+N+PE/3W+PE	
Rated AC frequency	50/60Hz	
THDI	＜3% (Rated power)	
Power Factor	-1 leading to +1 lagging	
THDU	＜3% (Linear Load)	
General Parameter		
Degree of protection	IP54	IP55
Protective Class	I	
Isolation mode	No-Isolation (Adding isolation transformer is optional)	
Shutdown self-discharge	＜100W (Without transformer)	＜0.1% Rated power(Without transformer)
Display	LCD	
Relative humidity	0 ~ 95% (no condensation)	
Noise	＜78dB	
Ambient temperature	-25°C to +60°C(with derating at temperatures above 45°C)	
Cooling mode	Liquid-cooled	
Altitude	3000m (> 2000m reduction)	
Communication interface	CAN/Ethernet / 485	
Size (W * D * H)	1600*1350*2300mm	
Weight (approx.)	3025kg	3330kg

※The manual is for reference only and is subject to actual communication.

Outdoor Cabinet Energy Storage System

FOR PV STORAGE & CHARGING

100kW/215kWh EV120 Liquid Cooled Type

Its working principle is based on the "solar power (PV) + energy storage + charging" solution. It can be applied in various scenarios such as EV charging stations, industrial parks, commercial buildings, residential communities, remote areas and microgrids. Helping you realizes efficient utilization of renewable energy and reduces energy costs.

High Efficiency and Energy Saving

Intelligent control activates power modules on demand, achieving high conversion efficiency and low standby loss, enabling efficient charging while saving energy and reducing investment.

Smart management automatically adjusts charging strategies based on the demand of rechargeable vehicles, ensuring the charging process is both fast and safe.

Low electrical losses during operation and standby effectively reduce the customer's operating costs.

Flexible Compatibility

Standard modular design with flexible configuration, easy expansion, convenient maintenance, and reduced maintenance costs.

Adopts internationally recognized charging standards, widely compatible with most electric vehicle brands and models on the market, meeting diverse charging requirements.

Intelligent Management

The intelligent management control system can monitor battery status in real time and automatically adjust charging strategies, ensuring a safe and efficient charging process.

The local control panel supports diversified functions, including system operation monitoring, formulation of energy management strategies, and remote device upgrades.

Applicable Scenarios

Suitable for diverse scenarios such as solar-storage charging, industrial parks, and microgrids, providing efficient and convenient charging solutions for electric vehicle users in different contexts.

Employs patented harmonic technology, making it suitable for environments with significant voltage harmonics, such as industrial parks.

PRODUCT PARAMETERS

Model	Hbowa-100(DC100)(215kWh)(EV120)
Grid port	
Rated AC power	100kW
Max. AC power	110kW
Rated current	144A
Max. current	158A
Rated voltage	400Vac, 3W+PE
Rated frequency	50/60Hz (±5Hz)
PV port	
PV open-circuit voltage	250~652V
PV input power	100kW
MPPT channels	1/2/4
Battery port	
Battery rated capacity	215kWh
Battery rated voltage	768V
Battery voltage range	672V~864V
Battery type	Lithium iron phosphate battery (LFP)
Battery cell capacity	280Ah
Series of Battery	1P*20S*12S
Maximum charge and discharge current	140A
Charging port	
Rated input power	60kW*2
Rated input current	120A*2 (500Vdc)
Measurement accuracy	＜±0.1%
Number of Charging Guns	2
Gunline length	5m
Activation method	Scanning, swiping, APP
Charging method	Auto-fill, by amount, by power, by time
Display Mode	LED
General Parameters	
Cooling mode	Air cooling
Protection level	IP55
Shutdown self-discharge	＜0.1%Rated power (Without transformer)
Relative humidity	0 ~ 95% (no condensation)
Noise	＜75dB
Ambient temperature	-25℃ to +60℃ (with derating at temperatures above 45℃)
Altitude	3000m (> 2000m reduction)
Display	LCD
BMS Communication	CAN
EMS Communication	Ethernet / 485
Emergency stop protection	Equipped with emergency stop button, emergency stop protection function
Protection features	Input over-under-voltage protection, input over-current protection, anti-surge protection, output short-circuit protection, over-temperature protection, anti-backflooding protection, battery active protection, emergency shutdown and other protection functions.
Size (W*D*H)	1800*1200*2300mm
Weight (approx.)	2500kg

※The manual is for reference only and is subject to actual communication.

Structure Introduction - 20 GP 1MWH BESS Container

BESS Intro

The containerized energy storage system integrates a PV inverter system, lithium battery modules, BMS, thermal management, and safety protection system into a standard shipping container, enabling AC/DC input and three-phase AC output.

It is designed for microgrid applications in off-grid and weak-grid regions, and can operate in coordination with photovoltaic, wind power, and diesel generators to ensure stable and reliable power supply in remote areas.

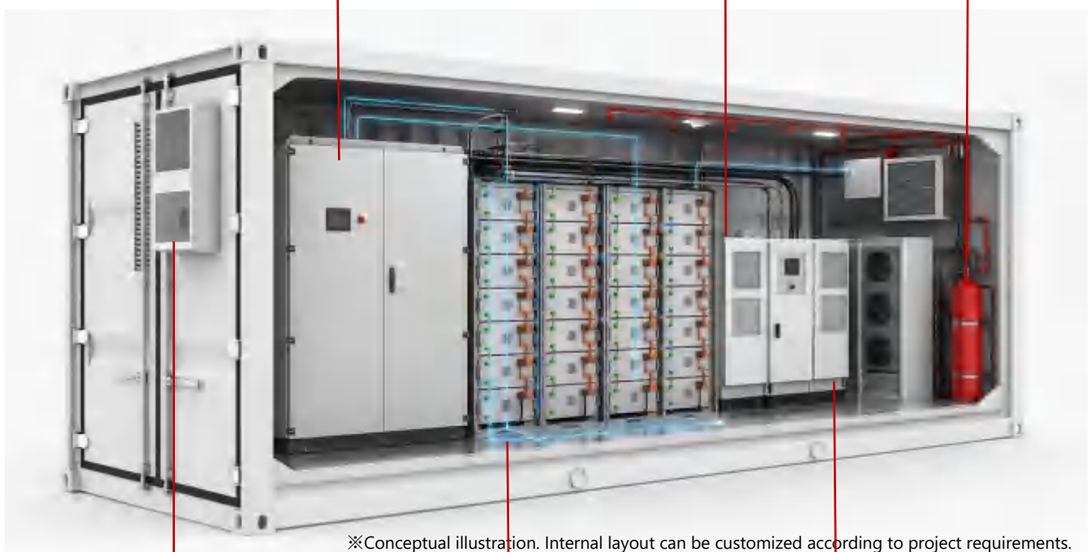
In terms of electrical performance, the 20ft container supports a power range of 250kW–500kW and an energy capacity of 600kWh–1200kWh. In a full battery configuration, a single container can be scaled up to approximately 1.7MWh.

The internal layout can be flexibly customized according to project requirements to meet different power and application scenarios.

PCS (Power Conversion System)

Auxiliary Power / AC-DC Distribution (including ATS)

Fire Protection System



※Conceptual illustration. Internal layout can be customized according to project requirements.

Air conditioning and exhaust system

Battery System

BMS/EMS (Management System)

Benefits

SOLAR INTEGRATION

Battery energy storage can be used to store electricity generated from renewable energy sources, such as solar, so that it can be used at a diff erent time.

PEAK DEMAND MANAGEMENT

Battery energy storage can help reduce peak demand costs for a facility by charging with excess renewable electricity or during off -peak hours, and discharging during on-peak hours.

BACKUP POWER

Battery energy storage can provide backup power during outages, ensuring that critical infrastructure and services remain operational.

CARBON REDUCTION

By collecting the sun's free energy and choosing when to deploy it, battery energy storage systems make it simple to reduce carbon emissions and contribute to ESG initiatives.

Applications

COMMERCIAL

In the commercial sector, managing energy consumption effi ciently is crucial for reducing costs, increasing sustainability, and ensuring uninterrupted operations. Battery energy storage systems off er an innovative solution to optimize energy management in commercial buildings.

INDUSTRIAL

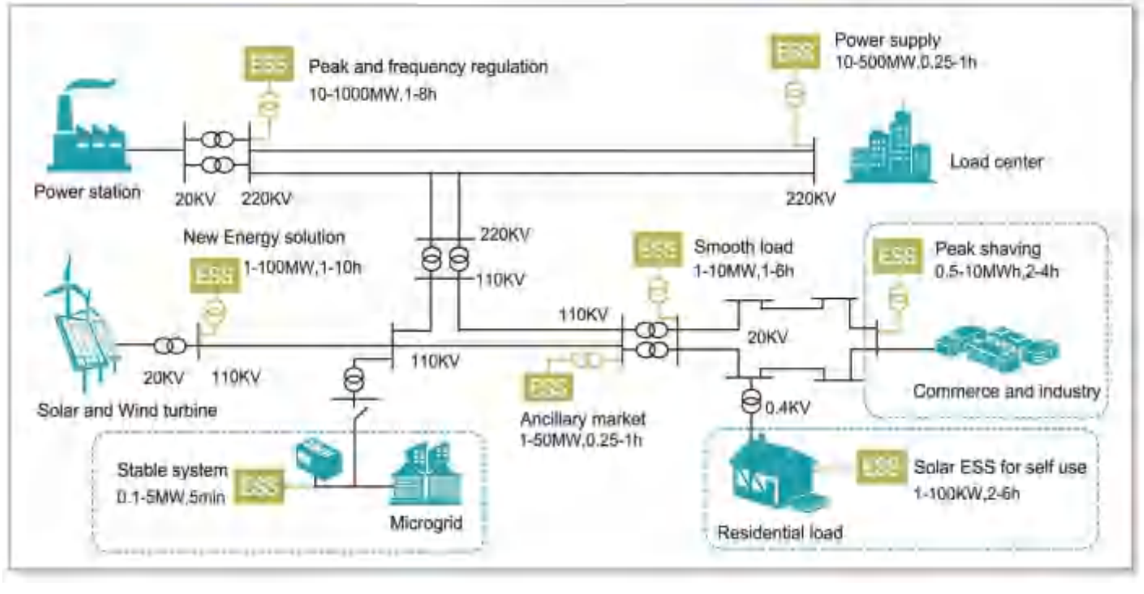
The industrial sector relies heavily on a stable and reliable power supply to maintain operations and meet production demands. Battery energy storage systems off er a robust solution for enhancing effi ciency, managing energy costs, and ensuring resiliency in industrial facilities.

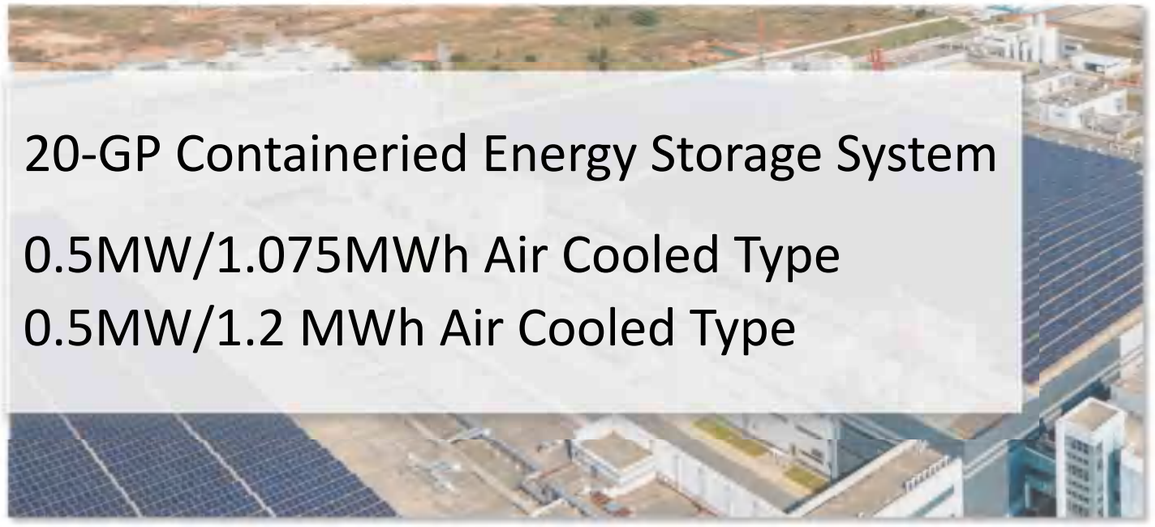
TRANSPORT ELECTRIFICATION

The electrifi cation of transportation, including electric vehicles (EVs) and electric public transport, is a key component of the transition to a sustainable and low carbon future. Battery energy storage systems play a crucial role in supporting the widespread adoption of electric transportation.

OFF-GRID

Off-grid applications refer to systems or locations that are not connected to the traditional electricity grid. These include remote areas, off-grid communities, mobile or temporary setups, and isolated facilities. Battery energy storage systems off er a reliable and effi cient solution for meeting energy needs in off-grid scenarios.





20-GP Containeried Energy Storage System

0.5MW/1.075MWh Air Cooled Type

0.5MW/1.2 MWh Air Cooled Type

- 20ft containerized design with high energy density up to 1.7MWh
- Flexible configuration from 250kW to 500kW and 600kWh to 1200kWh
- LFP battery system with >8000 cycles at 0.5C
- Multi-cluster parallel design up to 1MWh DC capacity
- Advanced multi-level BMS for cell-to-system level management
- Battery consistency controlled within 2% during operation
- High-efficiency PV integration with up to 98% charging efficiency
- Built-in transformer PCS for strong load adaptability
- Stable operation in weak-grid and off-grid environments
- Integrated EMS with real-time monitoring and remote control

PRODUCT PARAMETERS

Model	Hbowa-500kW/1075kWh	Hbowa-500kW/1200kWh)
PCS parameters		
Rated capacity	500kW	
Rated voltage	400V	
Rated current	722A	
Rated frequency	50/60Hz	
THDi	<3%	
THDu	<1% linear; or≤5% nonlinear	
Power factor	1leading-1lagging (settable)	
Grid type	3W+N+PE	
Overload capacity	110% long-term, 120% 1min	
MPPT voltage range	250~1000V	
PCS brand	Megarevo MPS / ATESS / Other	
General parameters		
Degree of protection	IP20 (Indoor)	
Display	LCD touch-screen	
Relative humidity	0 ~ 95% (no condensation)	
Noise	＜70dB	
Operation temperature	-30℃ to + 55℃	
Cooling mode	Air Cooling	
Altitude	3000m (> 3000m Derating)	
Communication interface	RS485/CAN, TCP/IP	
Dimensions (W * D * H)	(600*720*2050mm)*2 (DC/DC model) +1600*1050*2050mm	
Weight (approx.)	3205/3235/3265kg	
Battery parameters		
Battery rated capacity	1003.52kWh (200kWh*5)	1205.76kWh (241kWh*5)
Battery rated voltage	716.8V (51.2V*14)	768V (51.2V*15)
Battery voltage range	614~768V	672~864V
Series of Battery	5P*16S*14S	5P*16S*15S
Adaptive battery	LiFePO4	LiFePO4
Rated capacity (Ah)	1400Ah (280Ah*5)	1570Ah (314Ah*5)
Max. Charge/Discharge Current	700A@25℃	785A@25℃
Each battery pack	51.2V280Ah	51.2V314Ah
Cell Capacity	280Ah	314Ah
General parameters		
Degree of protection	IP54	
Working Temperature	0°C~50°C Charge -10°C ~50°C Disharge	
Transport or Storage Temperature Range	-20C~60C	
Relative humidity	5%-95% (no condensation)	
Fire extinguishing system	Aerosol/Perfluorohexane/heptafluoropropane pipeline fire extinguishing system	
Battery compartment cooling method	Air-conditioning cooling	
Efficiency	96%	
Altitude	<2000	
Cycle Life	(0.5C/0.5C-80% DOD) >6000 times	
Certification	CE/IEC/UN38.3/MSDS/ROHS	
Communication interface	RS485/CAN/BUS/Modbus TCP/IP	
Dimensions (W * D * H)	6058*2591*2438mm	6058*2438*2896mm
Battery Weight (approx.)	14t	16t

※The manual is for reference only and is subject to actual communication.

40-GP Containeried Energy Storage System

1MW/2MWh Air Cooled Type

IP54

Convenient Transportation

Space-Saving

EMS Local Data Management

Easy Installation And Maintenance

- The system can expand to 100 MWH
- AC and DC integrated dual power supply system
- Two-way active balancing
- High-precision battery SOX estimation
- Modular design, flexible capacity configuration
- Intelligent dynamic constant temperature design
- Full life cycle quality tracking and quality analysis
- Pack level detection protection, multi-level gas + water fire protection Automatic fire extinguishing system

PRODUCT PARAMETERS

Model	Hbowa-1000kW/2000kWh)
PCS parameters	
Rated capacity	1000kW (Two 500kW in parallel)
Rated voltage	400V
Rated current	722A
Rated frequency	50/60Hz
THDi	<3%
THDu	<1% linear; or≤5% nonlinear
Power factor	1leading-1lagging (settable)
Grid type	3W+N+PE
Overload capacity	110% long-term, 120% 1min
MPPT voltage range	250~1000V
PCS brand	Megarevo MPS / ATESS / Other
General parameters	
Degree of protection	IP20 (Indoor)
Display	LCD touch-screen
Relative humidity	0 ~ 95% (no condensation)
Noise	＜70dB
Operation temperature	-30℃ to + 55℃
Cooling mode	Air Cooling
Altitude	3000m (> 3000m Derating)
Communication interface	RS485/CAN, TCP/IP
Dimensions (W * D * H)	(600*720*2050mm)*2 (DC/DC model) +1600*1050*2050mm
Weight (approx.)	3205/3235/3265kg
Battery parameters	
Battery rated capacity	2150kWh (768V280Ah 215kWh*10)
Battery rated voltage	768V (51.2V*15)
Battery voltage range	672~864V
Series of Battery	10P*16S*15S
Adaptive battery	LiFePO4
Rated capacity (Ah)	2800Ah (280Ah*10)
Max. Charge/Discharge Current	1400A@25℃
Each battery pack	51.2V280Ah
Cell Capacity	280Ah
General parameters	
Degree of protection	IP54
Working Temperature	0°C~50°C Charge -10°C ~50°C Disharge
Transport or Storage Temperature Range	-20C~60C
Relative humidity	5%-95% (no condensation)
Fire extinguishing system	Aerosol/Perfluorohexane/heptafluoropropane pipeline fire extinguishing system
Battery compartment cooling method	Air-conditioning cooling
Efficiency	96%
Altitude	<2000
Cycle Life	(0.5C/0.5C-80% DOD) >6000 times
Certification	CE/IEC/UN38.3/MSDS/ROHS
Communication interface	RS485/CAN/BUS/Modbus TCP/IP
Dimensions (W * D * H)	12192*2896*2438mm
Weight (approx.)	43t (Box weight: 15t, Battery weight: 28t)

※The manual is for reference only and is subject to actual communication.

Cloud Platform

HBOWA intelligent cloud platform realizes diversified functions such as system operation monitoring, energy management strategy formulation, and remote equipment upgrade. With the Smart Cloud platform, you can easily manage your energy storage system 24/7, optimize energy efficiency, and enjoy more clean energy benefits.

Security and Reliability

Built on an industry-leading cloud computing platform, featuring full lifecycle management, data storage and backup to ensure information security and reliability.

User accounts are managed through hierarchical permission control, with full traceability and playback capability.

Remote Management

Supports real-time site monitoring and historical data query, with operation reports and data analysis for performance and revenue evaluation.

Provides millisecond-level fault alarms and predictive maintenance to reduce O&M costs. Enables remote monitoring and management with real-time fault warnings and alerts.

Safe and Efficient

Accurate alarm localization ensures efficient troubleshooting. Intelligent data analysis delivers real-time result notifications, reducing fault diagnosis time.

Cloud data is securely stored on Alibaba Cloud with whitelist-based access control to guarantee database security.

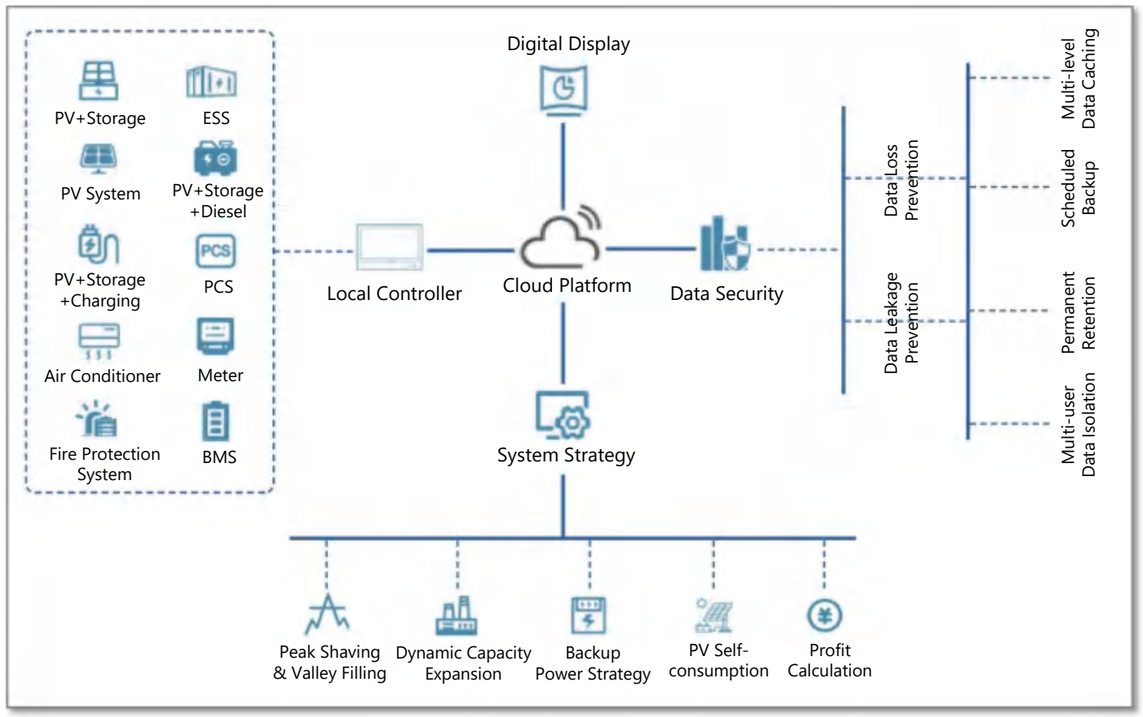
Flexible Customization

Applicable to energy storage power stations on both generation and grid sides, supporting grid frequency regulation and peak-shaving requirements.

Customized strategy development is supported based on user needs, including exclusive cloud domain configuration under the customer's name.

PRODUCT PARAMETERS

Model	SMART CLOUD PLATFORM
Intelligent Device	
Supported Devices	Converters, Combiner Boxes, Transformers, Air Conditioners, etc.
Other Devices Customizable	Other Power Station Equipment, System Cabinets, Diesel Generators, Charging Piles, Electric Meters, etc.
Client Environment	
Minimum Browser Version	IE8 and earlier versions are not supported
Recommended Browser	Chrome (V23–V113), Edge (V12–V110), Firefox (V21–V112)
Language	Currently supports Chinese and English (other languages customizable)
Display	LCD Screens, Large Displays, Computers, Tablets, etc.
Display Functions	
Data Monitoring	Energy Storage Data Display, Historical Curve
Alarm Center	Real-time Alarms, Alarm Statistics
Strategy Management	Peak Shaving and Valley Filling, Time-of-use Pricing, Backup Power Planning, PV-Storage-Charging Mode, Capacity Control, Anti-reverse Control, Load Smoothing, etc.
Remote Device Control	Device Upgrade, Parameter Issuance
Access Control	Supports creation of users with different permission levels (Level-2 and Level-3 accounts for system management, etc.)
Device Management Capacity	Up to 100 Devices



Service & Support

End-to-End Project Service Process

Requirement Definition
Sales and technical teams collaborate to define project objectives, technical specifications, site conditions, and regulatory requirements. Free consultation and project feasibility analysis are provided.

System Design & Engineering
Customized system sizing, component selection, and layout design to ensure efficiency, reliability, and compliance with grid standards.

Installation Guidance
Provide detailed wiring diagrams, installation manuals, and instructional videos. Remote technical support is available to assist local installers and ensure smooth commissioning.

Training & Handover
Equip client personnel with operation, maintenance, and safety knowledge through on-site or online training.

Monitoring & Support
Continuous system monitoring, preventive maintenance guidance, technical support, and optional upgrades to ensure long-term reliability.

Our Advantages— What Can We Provide?

Full-Scenario Solutions
Covers industrial BESS, microgrids, and PV-storage-charging systems for diverse applications.

Smart EMS
Self-developed EMS with proven industrial use cases, remote monitoring, tuning, and OTA upgrades.

Reliable LiFePO4
Graphene-enhanced LiFePO4 cells with ≥8000 cycles, smart BMS, and thermal management.

Global Certification
CE, UL, IEC, and other certifications ensure compliance with Europe, Southeast Asia, Africa, and other markets.

Modular PCS
Modular PCS design enables scalable configurations and precise matching for different scenarios.

Flexible Integration
Supports module-level delivery, complete cabinets, and customized integrated systems.

Seamless Backup
Supports rapid transition to backup power mode to ensure uninterrupted supply.

Stable Supply
Strong production capacity and stable supply chain ensure quality, delivery, and large-scale rollout.

Project References

Somalia+200kW/430kWh

The hotel deployed 2 sets of elecod 100kW/215kWh solar energy storage system, with a total capacity of 200kW/430kWh for peak shaving and valley filling, storing electricity during low-consumption periods and releasing it during peak periods reduces electricity costs, its the best choice for enhancing business competitiveness, especially in areas with time-of-use electricity prices.

Finland+100kW/215kWh

Aim to provides 2 hours of backup time to ensure the continuity of production. Besides, you can reduce electricity expenditure costs through peak load management; It's an ideal choice for large manufacturing factories or companies in industrial parks.

China+250kW EV charging station

The system includes a 250kW PCS, 100kW photovoltaic power, and a 100kW DCDC converter that steps down the voltage for the battery to supply DC charging piles. It is equipped with a 261kWh liquid-cooled battery and supports 360kW dual-gun DC charging. An additional local HMI controller is included to communicate with the DC charging piles for power control. This project helps super charging stations significantly reduce electricity costs through peak shaving, valley filling, and solar energy utilization.

Europe+500kW/1044kWh

The project is located on a farm in a European country, where four 125kW/261kWh liquid-cooled energy storage systems (500kW/1044kWh in total) have been deployed for PV system. These systems store the surplus electricity generated by the photovoltaic system that the farm cannot immediately consume, preventing waste and maximizing the benefits of green power. In the event of a grid failure, the system serves as a stable backup power source for critical loads, ensuring continuous key production activities.

Ukraine+100kW/215kWh

The client is a livestock farm in Ukraine. In this project, 100kW/215kWh energy storage system addresses the farm's need for 24-hour power supply, ensuring continuous operation of ventilation, temperature control, water supply, and feed distribution systems.The farm can use solar power during the day and stored solar energy at night or on cloudy/rainy days, achieving truly round-the-clock green energy supply.

Bulgaria+100kW/215kWh

This project combines a 100kW photovoltaic system with a 215kWh energy storage cabinet to efficiently utilize photovoltaic power generation and provide backup power support, offering industrial facilities a green, reliable, and economical energy solution. With continuous technological advances and cost reductions, such projects will be widely applied in more fields.

Project References

Sweden+50kW/100kWh

The project is located at a hotel in Sweden. It utilizes an 50kW/100kWh energy storage system (on/off grid) to store surplus solar power generated during the day and supply it to the hotel at night, ensuring 24-hour continuous operation. During cloudy or rainy days, the system works in conjunction with a diesel generator.

South Africa+200kW/430kWh

HBOWA empowers a factory in South Africa. Grid instability and frequent outages disrupt daily manufacturing, 2 sets of 100kW/215kWh (with 200kW PV) battery energy storage systems are delivering much-needed power continuity for production. When the grid outage occurs, automatically switch to PV and diesel backup.

Europe+250kW/522kWh

This solar-plus-storage project is located in a Renewable Energy Community in Europe. By deploying photovoltaic systems and 250kW/522kWh energy storage solutions, it aims to provide local businesses with more affordable solar energy, replacing expensive commercial electricity purchased from the grid and reducing electricity costs. Excess energy is stored to ensure an uninterrupted power supply.

Spain+500kW1075kWh

The energy storage system adopts 20ft container and aims to achieve peak shaving for Spain customer. It's prefabricated in the factory, one-stop delivery, ready for use. neat wiring, higher space utilization. IP54 protection level adapts to harsh outdoor environments.

Africa+1MW/2.15MWh

The industrial park faces pain points such as large peak-valley difference in power load, high electricity cost, and insufficient photovoltaic absorption rate. In response to the "dual carbon" goal and the needs of regional power market reform, HBOWA introduce 10 units of 100kW/215kWh industrial and commercial solar energy storage system cabinets to the park, helping to build a distributed energy storage system, realize peak shaving and valley filling, demand control and other functions, and reduce basic electricity expenses.

Swaziland+500kW/1075kWh

The project adopted 500kW/1075kWh container BESS, the system configured 4 units of Monet-125kW PCS, and integrates battery, fire protection, refrigeration, isolation transformer, dynamic environment monitoring and energy management, friendly grid adaptability, accepts grid dispatching, carries out active and reactive power compensation, supports peak shaving and valley filling, demand-side response, assists new energy grid integration and other applications.