



ENERGY  
STORAGE



BYHV-3440BLC

BYHV-4000BLC

BYHV-5000BLC

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⚠️ If the models and specifications in this product catalogue change due to product updates, we will not provide prior notification.



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# VoyagerPower 2.0 Liquid Cooling Energy Storage System

## Product Introduction

VoyagerPower 2.0 is a container energy storage system introduced by Beny, covering BESS from 1MWh~5MWh. ESS adopts an "All-In-One" design concept, with ultra-high integration that combines energy storage batteries, BMS (Battery Management System), PCS (Power Conversion System), EMS(energy management system),fire protection, air conditioning, and more into a single unit, making it adaptable to various scenarios. This product features a prefabricated cabin design flexible deployment, convenient transportation, and no need for internal wiring and debugging. It responds quickly, boasts high reliability, and offers functions such as peak shaving, power capacity expansion, emergency backup power, grid balancing, capacity management, and multi-level parallel connection.

## Application Scenario

**grid side:** load corresponding , peak regulation, grid dispatching, energy transfer;  
**user side:** peak cutting and valley filling , anti-reflux zero feedback, time-of-sale price, optical storage and charging;  
**micro-grid:** light storage and firewood micro-grid , automatic and off-grid switching, black starting;

## Product Features

### Safe and reliable

IP55 protection grade design, cluster level aerosol layout, BMS and AC/DC multi-layer protection Settings to ensure the safe operation of the system;

### Cost optimization

Small size, light weight, save floor space and installation costs, can be pre-installed whole system transportation, long life, low failure rate, low operation and maintenance costs;

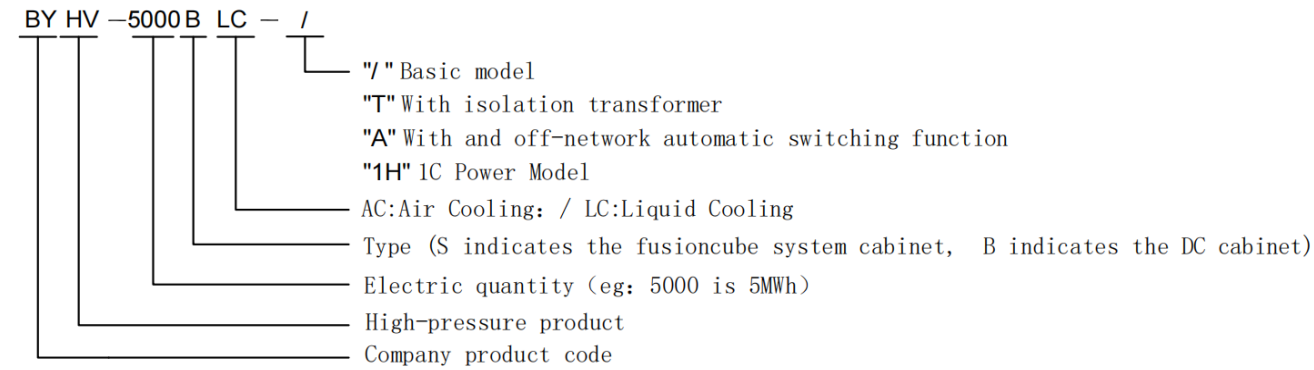
### Efficient and convenient

Batteries, PCS, etc., all adopt modular design for easy installation and transportation, and can remotely guide configuration, equipment management, data analysis, fault prediction, etc.

### Rich scene

Application strategies can be customized in different environments to meet product requirements;

## Specifications and Model Description



Tip: "/" can be sequentially stacked after

## Product Parameter

Type designation	BYHV-3440BLC	BYHV-4000BLC	BYHV-5000BLC
Battery Data			
Cell type	LFP 3.2V / 280Ah	LFP 3.2V / 306Ah	LFP 3.2V / 314Ah
Battery configuration	(1P48S*8)×10	(1P52S*8)×10	(1P52S*8)×12
Battery capacity	3440.6kWh	4073.4kWh	5016kWh
Battery current	1400A	1530A	1884A
Nominal Voltage	1228.8V	1331.2V	1331.2V
Battery voltage range	1075.2V~1382.4V	1123.2V~1497.6V	1123.2V~1497.6V
System parameter			
Dimension (W*H*D)	6058*2591*2438	6058*2591*2438	6058*2896*2438
Weight	33600Kg	37200kg	42000Kg
IP grade	IP55		
Anti-corrosion degree	C3(Support C5)		
Operating temperature	-30 to 55°C(>45°C derating)		
Operating humidity	0 ~ 95%(non-condensing)		
Working altitude	3000m		
Temperature control	Intelligent liquid cooling		
Fire suppression system	NFPA 69 explosion prevention and Aerosol		
communication protocol	Modbus TCP, MQTT		
Standard	IEC 62477, IEC 61000-6-2, IEC 61000-6-4, IEC 62619, UN 38.3/UN 3536		

BESS booster integrated chamber



Safe

- On-line insulation detection
- Adapt to extreme environment,such as high temperature, salt, and extreme cold etc. Real-time transformer condition monitoring



Smart

- Support multi-machine parallel connection & black- start H/LVRT function, high adaptation ability to the grid
- Various applications such as peak shaving, frequency modulation, auxiliary grid connection for new energy system, etc.



Simple

- Integrated data acquisition and optical fiber network, intelligent operation management
- Efficient layout to improve space utilization
- Integrated design of converter and transformer system to achieve the integrated delivery

Product Parameter

Type designation	BYHV-1725KEC-T	BYHV-2000KEC-T	BYHV-2500KEC-T
DC input			
Max. DC voltage	1500Vdc		
DC voltage range	1000-1500Vdc	1000-1500Vdc	1000-1500Vdc
Max. DC current	1936A	2500A	3086A
Soft start	Yes		
AC output (On-grid)			
Rated AC output power	1725kW	2000kW	2500kW
Max. AC output power	1897kVA	2200kVA	2750kVA
Rated grid-tied voltage	690Vac	600Vac	690Vac
Grid voltage range	-15%~10% (settable)		
Grid frequency range	50Hz/60Hz		
Max. output current	1588A	2082A	2532A
Power factor	>0.99 (at rated power)		
Adjustable power factor	1 (leading)~1 (lagging)		
THDi	<3% (at rated power)		
AC output (Off-grid)			
Rated AC output voltage	690Vac	600Vac	690Vac
Output voltage accuracy	1%		
Max. output current	1588A	2082A	2532A
THDu	<3% (liner load)		
Rated output frequency	50Hz/60Hz		
Overload capability	110% overload		
Transformer efficiency			
Rated power	2500kVA	3000kVA	3450kVA
Voltage transformation ratio	0.55/(6-35)kV	0.6/(6-35)kV	0.69/(6-35)kV
Isolation mode	oil-immersed transformer or dry type transformer		
General data			
IP rating	IP54		
Operation temperature	-35℃~60℃ (>45℃ derating)		
Relative humidity	0~100% (no-condensing)		
Cooling type	Intelligent air cooling		
Dimensions (W×H×D)	6058×2896×2438mm		
Weight	13000kg		
Altitude	4000m (>2000m customized)		
Display	Touch screen		
Communication protocol	Modbus-RTU, Modbus-TCP, IEC61850, IEC104		
Communication interface	RS485, Ethernet		
Standard	IEC62477-1, EN61000, EN62116		