

Product Brochure

Energy Storage + Charging Solutions



Discover how EP Energy can power your future!

EPPS93-A10

EP ENERGY

**60kW 93kWh Liquid Cooling Mobile Power Unit
For Comprehensive Off-grid Power Supply**



Six-in-One

- Highly integrated solar inverter, battery inverter, ESS, fast charge input, EV charger, liquid cooling system in a compact cabinet
- Multiple usage scenarios



High Performance

- High quality LFP cells
- Up to 60kW DC charge output
- Broad temperature range for use



Robustly Designed

- 8mm steel galvanized cold rolled coil chassis
- 4mm 360° full body protection
- Automotive-grade waterproof components



Off-grid AC Output

- Energy independent for household
- Up to 30kW AC output for use
- Single and three phase sockets availability

AC Input Parameters	
Rated Voltage	230/400 Vac, 3W+N+PE
Voltage Range	260 Vac~485 Vac
Nominal Grid Frequency	50/60 Hz
Rated Power	40 kW Adjustable
Max. Current	60 A
Input Socket	CEE Socket 63A

DC Input Parameters	
Nominal Voltage	332.8 V
Voltage Range	260 Vdc~ 379.6 Vdc
Max. Current	168 A
Max. Power	60 kW
DC Input Socket	GB/T Socket CCS2 Socket

PV Input Parameters	
Max. Power	54 kW
MPPT Voltage Range	200 Vdc~ 850 Vdc
Max. PV Input Current	168 A
MPPT Trackers/ Strings	4/ 8
PV Input Socket	4 x MC4 External or 8 x MC4 Internal

DC Output Parameters		
Product Model	EPPS93-GB/T	EPPS93-CCS2
Max. Output Power	60 kW	60 kW
Output Voltage Range	200 Vdc~ 1000 Vdc	200 Vdc~ 1000 Vdc
Max. Current	200 A	200 A
Output Plug	GB/T Plug	CCS2 Plug

AC Output Parameters		
Product Model	EPPS93-GB/T	EPPS93-CCS2
Rated Voltage	230/400 Vac, 3W+N+PE, 50/60Hz	230/400 Vac, 3W+N+PE, 50/60Hz
Max. Output Power	30 kVA	30 kVA
Max. Output Current	43 A	43 A
Output Socket	CEE Socket 63A*1, Type I*2	CEE Socket 63A*1, Type E*2

General Parameters	
Nominal Energy	93 kWh
Usable Energy	84 kWh
Cell Type	LFP
Altitude	<2,000 m, Derating Above 2,000 m
Operating Relative Humidity	5~95%RH, No Condensation
Operating Temperature Range	-20 °C~ 50 °C
Thermal Management Mode	Liquid Cooling & Heating
Rated Cooling Input Power	3 kW
Ingress Protection	IPX4
Dimension(W*D*H)	1,600 mm*1,100 mm*1,650 mm
Weight	1,500 kg

EPPS93-DC

EP ENERGY

**60kW 93kWh Liquid Cooling Mobile Power Unit
For Industrial Vehicles' DC Fast Charge Under Grid Constraints**



Range Extension

- Extend Industrial Vehicles' working hours in facilities with limited power supply



Power Amplifier

- Amplify grid charging capability DC fast charging up to 60kW by storing energy at a lower power especially in areas where power is limited



Profit Arbitrage

- Store energy during off-peak hours
- Release energy during peak hours



Easy Deployment

- Highly integrated with compact design
- Highly mobile for optimized use

AC Input Parameters	
Rated Voltage	230/400 Vac,3L+PE
Voltage Range	260 Vac~485 Vac
Nominal Grid Frequency	50/60 Hz
Rated Power	20 kW
Max. Current	32 A
System Voltage Format	TT/TN-S/TN-C/TN-C-S
Power Factor	≥0.99
Total Harmonic Distortion(THDi)	<5%
Overvoltage Category	III
Input Socket	32A 5-Pin 3-Phase Industrial Socket

DC Input Parameters	
Nominal Voltage	332.8 V
Voltage Range	260 Vdc~ 379.6 Vdc
Max. Current	168 A
Max. Power	60 kW
DC Input Socket	CCS2 Socket

Output Parameters				
Product Model		EPPS93-HV	EPPS93-MX	
Output Plug Model	GB/T EV DC	1	1	
	REMA DIN 320A	N/A		1
Output Parameter	Voltage Range	150 -1,000 Vdc	150 -1,000 Vdc	40 -120 Vdc
	Max. Current	200 A	200A	200A
Rated Power		60 kW	60 kW	
Cable Length		3 m	3 m	

General Parameters	
Nominal Energy	93 kWh
Usable Energy	84 kWh
Cell Type	LFP
Altitude	<2,000 m, Derating Above 2,000 m
Operating Relative Humidity	5~95%RH, No Condensation
Operating Temperature Range	-20 °C~ 50 °C
Thermal Management Mode	Liquid Cooling & Heating
Rated Cooling Input Power	3 kW
Ingress Protection	IPX4
Dimension(W*D*H)	1,600 mm*1,100 mm*1,580 mm
Weight	1,300 kg

Protection	
Phase-Lacking Fault Protection	YES
Over/Under-Voltage Protection	YES
Over-Current Protection	YES
Over-Temperature Protection	YES
Short-Circuit Protection	YES

EPPS93

EP ENERGY

60kW 93kWh Liquid Cooling Mobile Power Unit

Application Highlights



Power Amplification



Range Extension For Industrial Vehicles



Mobile Power



PV Storage

Product Design Highlights

Robust Structure

The 8mm steel galvanized cold rolled coil chassis provides high-strength performance, capable of supporting the entire mass without deformation during transportation.



Highly Reliable Modules

2 high-energy-density LFP battery modules are included, equipped with an automatic-triggering aerosol fire extinguisher and MSD

Battery fully certified:

Cell: UL 1642/1973/9540A, IEC 62619, UN 38.3, GB/T 36276

Module: UN 38.3, UL 9540A, GB/T 36276

Rack: IEC 62619, IEC 63056, UL 1973/9540A, GB/T 36276



Integrated Sockets Interface

Multiple-interface design, integrating single-phase output sockets, three-phase input/output sockets, multiple photovoltaic input sockets, DC charger input sockets, and DC charger output plugs, ensuring comprehensive coverage for diverse electrical usage scenarios.



Human Machine Interface

Features integrated light indicators and a 7-inch display for visual monitoring of system status and information. Durable metal buttons provide convenient and easy operation.



EPES233

EP ENERGY

100kW 233kWh Outdoor Liquid Cooling Energy Storage Cabinet
For Energy Arbitrage and Improved PV Self-Consumption



All-in-One

Pre-assembled for easy installation
Highly integrated for easy O&M



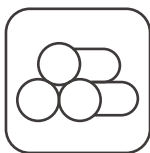
High Performance

High performance PCS
AC coupling without DC arc



Safe & Reliable

High quality LFP cells
Thermal runaway above 800 °C



Flexible Expansion

Low upfront CapEx
Expand as required
Outdoor installation



Long Cycle Life

Cycle life >8000 cycles
Active liquid cooling (heating) system
Optimized operating temperature



Cloud Management

Intelligent monitoring & control
Full-dimensional security warning,
7*24 hours to ensure battery safety

DC Side Parameters	
Cell Type	LFP
Nominal Voltage	832 Vdc
Operating Voltage Range	650-949 Vdc
Nominal Capacity	280 Ah
Nominal Energy	233 kWh
Charge/Discharge Rate	0.5C
System Configuration	1P260S
Module Nominal Energy	46.6kWh
Module Configuration	1P52S

AC Side Parameters	
Rated AC Power	100 kVA
Maximum AC Power	110 kVA
Nominal Grid Voltage	230/400 Vac, 3W+N+PE
Voltage Range	345~435 Vac
Nominal Grid Frequency	50/60 Hz
Total Harmonic Distortion(THDi)	<3%
Adjustable Power Factor	-1 ~ 1
DC Component	<0.5% pn
System Voltage Format	TT/TN-S/TN-C/TN-C-S

System Parameters	
Maximum System Efficiency	≥91%&0.25P, ≥89%&0.5P
Charge/Discharge Rate	0.5P
Depth of Discharge	0~95%
SOE Accuracy	<3%
Cycle Life	>8,000 Cycles & 70% EOL 95% DOD
Altitude	<2,000m, Derating Above 2,000m
Operating Relative Humidity	5~95%RH, No Condensation
Operating Temperature Range	-20°C~55°C
Thermal Management Mode	Air Cooling(PCS) + Liquid Cooling & Heating(Battery)
Rated Cooling Input Power	2.5 kW
Rated Cooling Capacity	5 kW
Rated Heating Power	2 kW
Fire Protection System	Aerosol + PACK Level Immersion + Active Warning
Ingress Protection	IP55
Anti-Corrosion Grade	C4
Noise	<72 dB
Dimension(W*D*H)	1,450 mm*1,300 mm*2,160 mm
Weight	~2,600 kg

EPES233



100kW 233kWh Outdoor Liquid Cooling Energy Storage Cabinet For Energy Arbitrage and Improved PV Self-Consumption

Liquid Cooling/Heating System

Consistently maintain optimal working temperature range by dissipating heat during operation, and preheating battery in low temperature environment

Battery Module

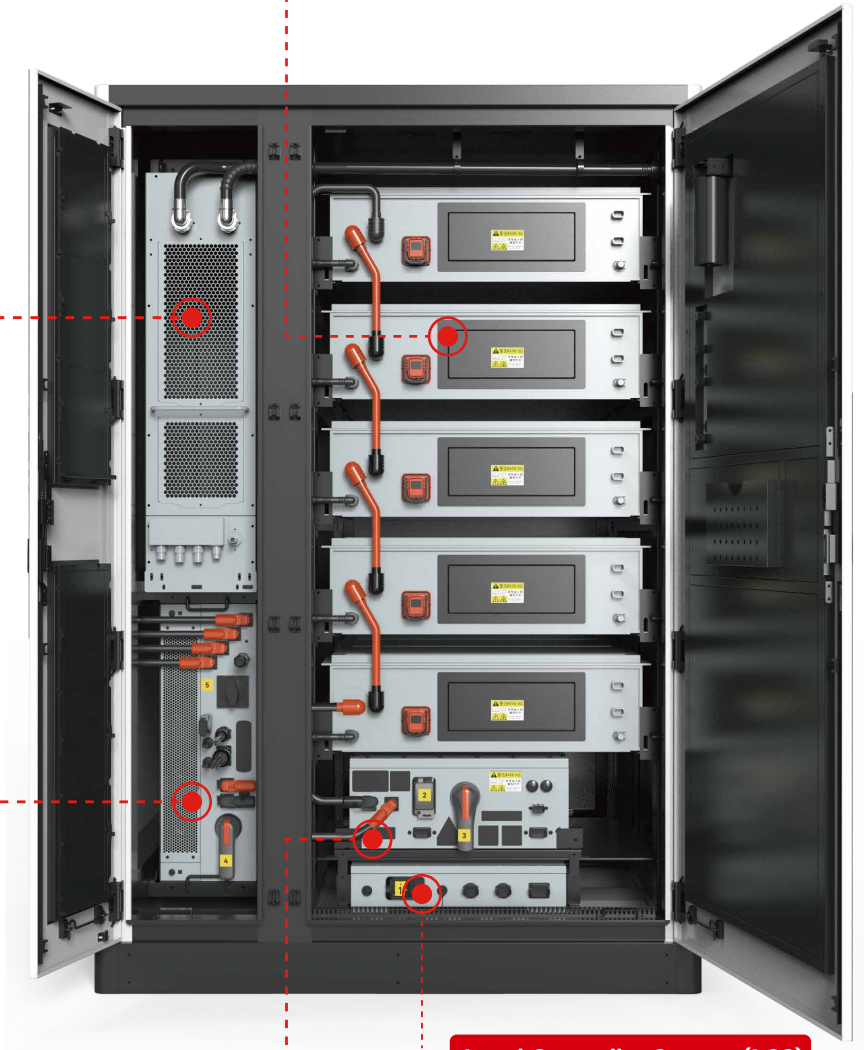
5 high energy density LFP modules, equipped with automatic-triggering aerosol fire extinguishing device and MSD.

Battery fully certified:

Cell: UL 1973, UL 1642, UL9540A, IEC62619, UN 38.3, GB/T 36276

Module: UN 38.3, UL9540A, GB/T 36276

Rack: IEC 62619, IEC 63056, UL 9540A, UL 1973, GB/T 36276



Power Conversion System (PCS)

Bi-directional energy conversion:
AC-DC for grid-to-battery,
DC-AC for battery-to-grid

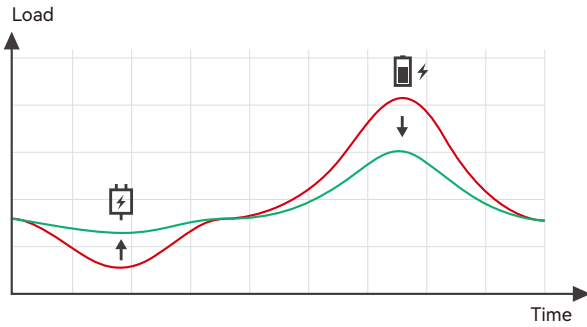
Local Controller System (LCS)

Real-time control and communication among BMS, PCS and cloud server. Monitor overall system operation and safety via CAN, open door sensor, temperature sensor, smoke sensor and water immersion sensor. Trigger fire extinguishing system in case of emergency.

Battery Management System (BMS)

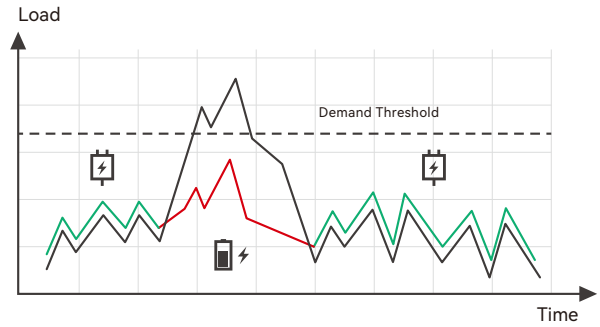
Guarantee safe and reliable operation of battery by monitoring cells voltage and temperature, calculating system SOX at real-time, and providing protection in case of overload, short-circuit, and other abnormalities.

Application Model



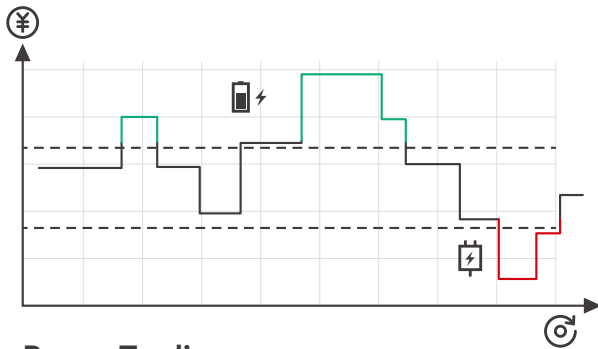
Time-of-Use Arbitrage

Charge system during off-peak hours and discharge for load consumptions during peak hours. Enterprises can reduce the electricity bill by the electricity price difference.



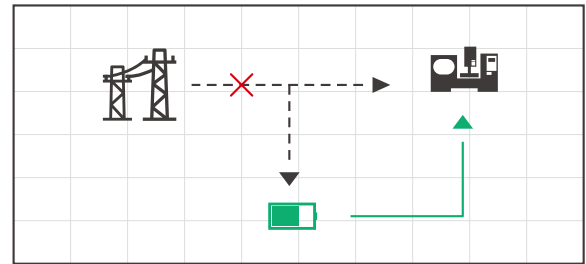
Demand Response

When the short-term power consumption is greater than transformer capacity, the system discharges quickly to meet the load power demand, avoid overloading damage to transformer, and reduce transformer expansion costs.



Power Trading

Short-term power trading combined with load forecasting on the power market trading platform to maximize revenue.



Backup Power Supply

In case of grid outages, the system automatically switch to off-grid mode to support the operation of loads and reduce economic losses caused by the outages.

Application Scenario



Factory



Logistics



Capacity Expansion



PV Station



Charging Station



Parking



Commercial



Office



Surveillance Center



Hospital



TV Station



Farm

EPES5000

EP ENERGY

5MWh Liquid Cooling Energy Storage Container
For Large-Scale Sustainable Energy Infrastructure



High Energy Density

- 5MWh in a 20HQ container
- Up to 340kWh/m² AED
- Maximized space utilization



Robust Performance

- Stabilizes the grid and prevent outages
- Supports volatile and extreme power demands
- Intelligent TMS ensuring long cycle life



Safe Design

- High quality LFP cells
- NFPA 68&69 compliance FFS
- Highly integrated Fire Suppression System



Easy & Efficient

- Unit ships, Ready to operate
- Pre-assembled for easy onsite installation
- Minimal maintenance required

Battery Parameters	
Cell Type	LFP
Nominal Voltage	1331.2 Vdc
Operating Voltage Range	1040-1500 Vdc
Nominal Capacity	314 Ah
Nominal Energy	5015 kWh
Charge/Discharge Rate	0.5C
System Configuration	416S12P
Module Nominal Energy/Configuration	104.5kWh/ 1P104S

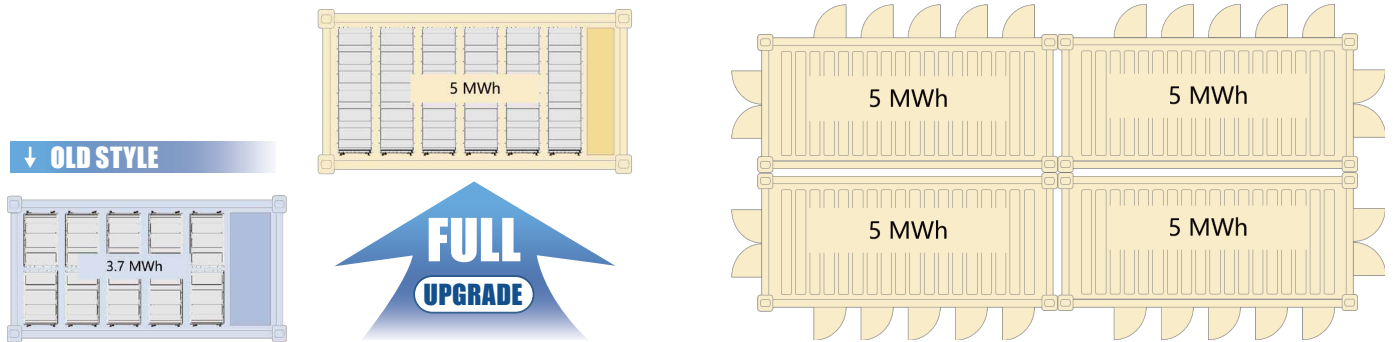
System Parameters	
Maximum System Efficiency	≥93.8%@0.5P, ≥95.2%@0.25P
Charge/Discharge Rate	0.5P
Continuous charging/discharging Current	1884A
Short Circuit Current	98kA@ Single Rack
Insulation standard	≥1000Ω/V
Withstand voltage	4500VDC, Leakage Current ≤5mA, No Breakdown or Flashover
Depth of Discharge	0~97%
SOE Accuracy	<3%
Operating Altitude	<3,000m, Derating Above 3,000m
Operating Relative Humidity	5~95%RH, No Condensation
Operating Temperature Range	-20°C~55°C
Thermal Management Mode	Liquid Cooling & Heating
Rated Auxiliary Power Supply Power	27 kW @ Ambient 35°C, 33.5 kW @ Ambient 45°C
Rated Cooling Capacity	60 kW @ Ambient 35°C, 55 kW @ Ambient 45°C
Rated Heating Power	27 kW
Fire Protection System	Active Warning+ Container Aerosol + PACK Level Immersion + Water Spray
Ingress Protection	Battery Room IP55 / Electric Room IP54
Anti-Corrosion Grade	C4
Dimension(W*D*H)	2,438 mm*6,058 mm*2,896 mm
Weight	~44,000 kg
Cell Certification	UN38.3, UL1973, IEC62619, UL9540A, GB/T 36276
System Certification	IEC62477, IEC62619, IEC 62933, IEC63056, IEC60730 UL1973, UL9540A, UL9540, NFPA855, NFPA68, NFPA69

EPES5000



5MWh Liquid Cooling Energy Storage Container For Large-Scale Sustainable Energy Infrastructure

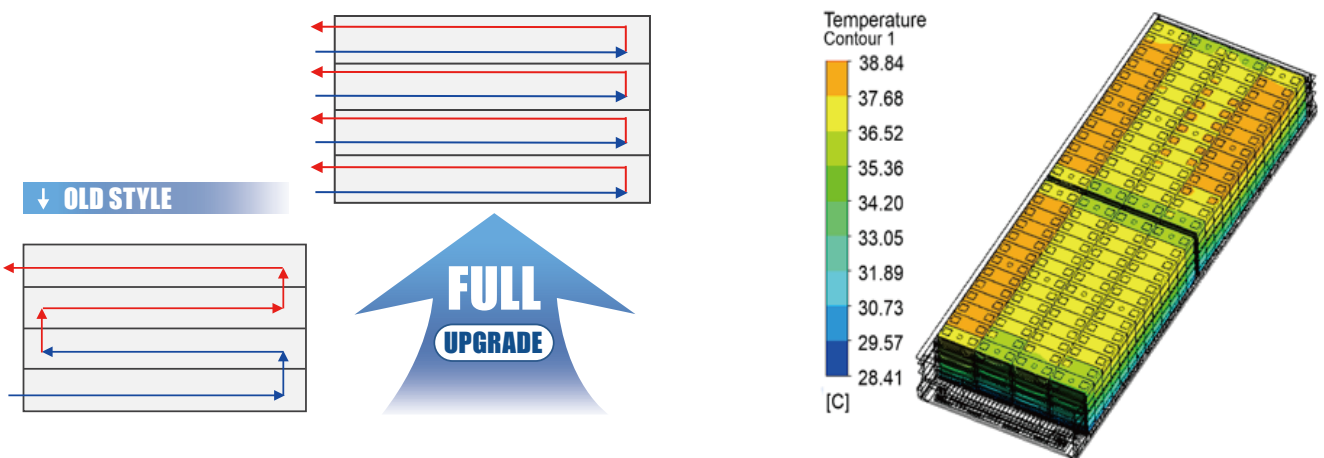
Optimized for Higher Energy Density



Nominal energy upgrades by 35% from 3.7MWh to 5MWh in a 20HQ container, due to internal space optimization, cell capacity upgrade and single-side maintenance. Battery capacity upgraded by 12% from 280Ah to 314Ah. Battery quantity increased by 20% from 4160 to 4992. Battery array increased by 20% from 10 to 12.

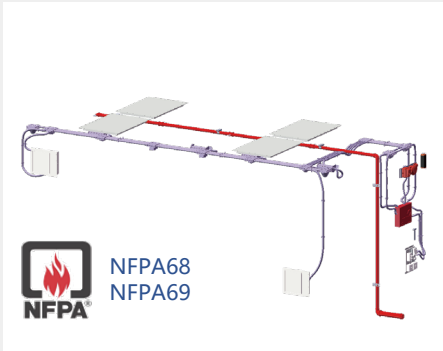
New model maximizes space utilization (improved by 26% from older version). With single-side maintenance design, containers can be installed back-to-back and shoulder-to-shoulder onsite.

Parallel Flow Channel

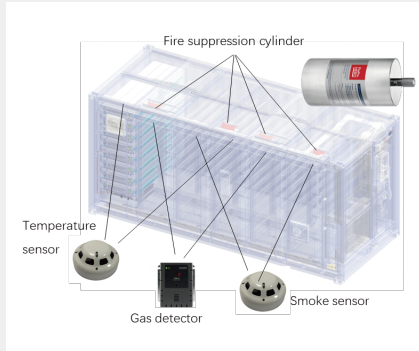


Compared with traditional serial flow channel, the flow resistance of parallel flow channel at the same flow rate is reduced by 85.5%. The maximum temperature difference between cells is kept under 2.78°C.

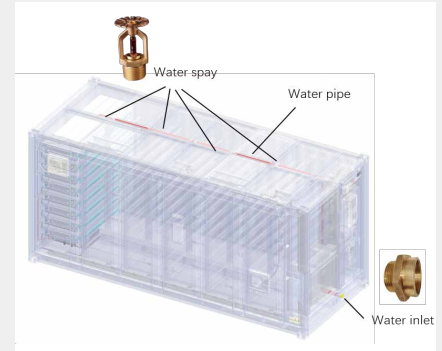
Fire Suppression NFPA 68 & 69 Compliance



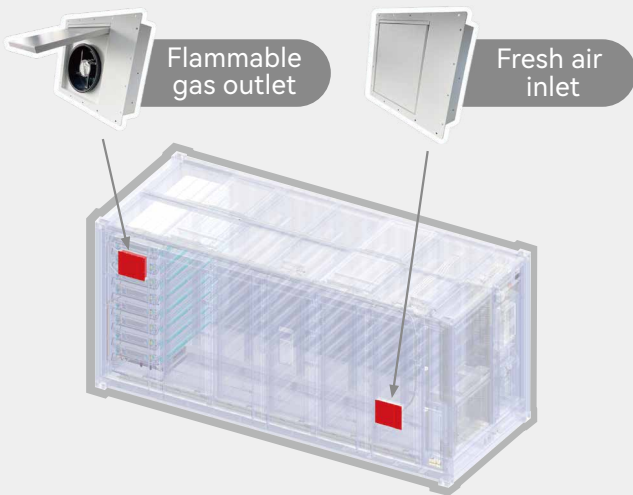
FFS Configuration



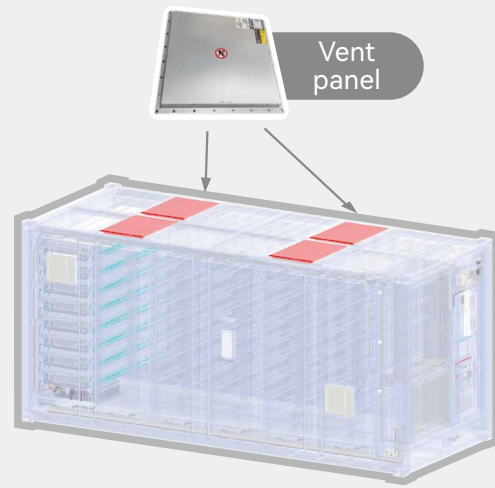
Aerosol Cylinder Layout



Water Pipe Layout



Ventilation (NFPA69)



Explosion Prevention (NFPA68)

Example Project Showcase



Texas, USA 226MWh Frequency Regulation



Weda Bay, Indonesia 28MWh Frequency Regulation

EPES2097

EP ENERGY

**900kW 2097kWh Liquid Cooling Energy Storage Container
For Large-Scale Sustainable Energy Infrastructure**



● Key Features

- High energy density: 900kW 2097kWh AC coupled ESS, pre-assembled in a 20HQ container.
- Safe design: high quality LFP cells, distributed Fire Suppression System.
- Easy and efficient: Unit ships, ready to operate, pre-assembled for easy onsite installation.

Battery Parameters	
Cell Type	LFP
Nominal Voltage	832 Vdc
Operating Voltage Range	650-949 Vdc
Nominal Capacity	280 Ah
Nominal Energy	2097 kWh
Charge/Discharge Rate	0.5C
System Configuration	1P52S*9(AC coupled)
Module Nominal Energy/Configuration	46.6kWh/ 1P52S

AC Side Parameters	
Rated AC Power	900 kVA
Maximum AC Power	990 kVA
Nominal Grid Voltage	230/400 Vac, 3L+N+PE
Voltage Range	345~435 Vac
Nominal Grid Frequency	50/60 Hz
Total Harmonic Distortion(THDi)	<3%
Adjustable Power Factor	-1 ~ 1

System Parameters	
Maximum System Efficiency	≥91%&0.25P, ≥89%&0.5P
Charge/Discharge Rate	0.5P
Depth of Discharge	0~97%
Operating Altitude	<3,000m, Derating Above 3,000m
Operating Relative Humidity	5~95%RH, No Condensation
Operating Temperature Range	-20°C~50°C
Thermal Management Mode	Liquid Cooling & Heating
Rated Cooling Power	22.5 kW
Rated Cooling Capacity	45 kW
Rated Heating Power	18 kW
Rated Auxiliary Power Supply Power	24 kW
Ingress Protection	IP55
Anti-Corrosion Grade	C4
Dimension(W*D*H)	2,438 mm*6,058 mm*2,896 mm
Weight	~36,000 kg
Cell Certification	UN38.3, UL1973, IEC62619, UL9540A, GB/T 36276 IEC62477, IEC62619, IEC 62933, IEC63056, IEC60730 UL1973, UL9540A, UL9540, NFPA855, NFPA68, NFPA69

EPHS143/197

EP ENERGY

50kW143/197kWh Air Cooling Hybrid Energy Storage Cabinet
Energy Independence For Home And Light Commercial Centers



● Key Features

- Modular design, support up to 6 clusters in parallel
- Pre-installed design for convenient transportation and installation, cost-saving.
- High security, multi-level BMS protection function.
- Local & remote intelligent monitoring, real-time data storage.

DC Side Parameters		
Model	EPHS143	EPHS197
Cell Type	LFP	LFP
Nominal Voltage	512 Vdc	704 Vdc
Operating Voltage Range	420-560 Vdc	650-949 Vdc
Nominal Capacity	280 Ah	280 Ah
Nominal Energy	143 kWh	197 kWh
Charge/Discharge Rate	0.35C	0.25C
System Configuration	1P160S	1P220S

PV Input Parameters	
Max. Power	65 kW
MPPT Voltage Range	150 Vdc~ 850 Vdc
Max. PV Input Current	36+36+36+36
MPPT Trackers	4
No. of Strings Per MPPT Tracker	2+2+2+2

AC Side Parameters	
Rated AC Power	50 kVA
Maximum AC Power	55 kVA
Max. AC Current(A)	83.4A/79.8A
Nominal Grid Voltage	220/380 Vac, 230/400 Vac, 3W+N+PE
Voltage Range	345~435 Vac
Nominal Grid Frequency	50/60 Hz
Total Harmonic Distortion(THDi)	<3%
Adjustable Power Factor	0.8 leading to 0.8 lagging

System Parameters		
Model	EPHS143	EPHS197
Maximum System Efficiency	≥91%&0.25P, ≥89%&0.5P	
Depth of Discharge	0~95%	
SOE Accuracy	<3%	
Cycle Life	>8,000 Cycles & 70% EOL 95% DOD	
Altitude	<2,000m	
Operating Relative Humidity	5~95%RH, No Condensation	
Operating Temperature Range	-20°C~50°C	
Thermal Management Mode	Air Conditioner Cooling And Heating	
Fire Protection System	Aerosol, Perfluoro(optional)	
Ingress Protection	IP55	
Anti-Corrosion Grade	C3	
Noise	<65 dB	
Dimension(W*D*H)	1,200 mm*1,450 mm*2,300 mm	
Weight	2,150kg	2,600kg

Tailored Energy Storage Solutions for you!



GET IN TOUCH.

Email: epenergy@ep-ep.com