EPES233

105kW 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 ℃

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

MOBILE ENERGY SOLUTIONS
COMMERCIAL OFF-GRID CHARGING

EPES233

105kW 233kWh Outdoor Liquid Cooling Energy Storage Cabinet

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	105 kW
Maximum AC Apparent Power	116 kVA
Nominal Grid Voltage	230/400 Vac, 3W+N+PE
Voltage Range	340~460 Vac
Nominal Grid Frequency	50/60 Hz
Total Harmonic Distortion(THDi)	<3%
Adjustable Power Factor	-1 ~ 1
DC Component	<0.5%Ipn
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℃~50℃
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

MOBILE ENERGY SOLUTIONS
COMMERCIAL OFF-GRID CHARGING

EPES233

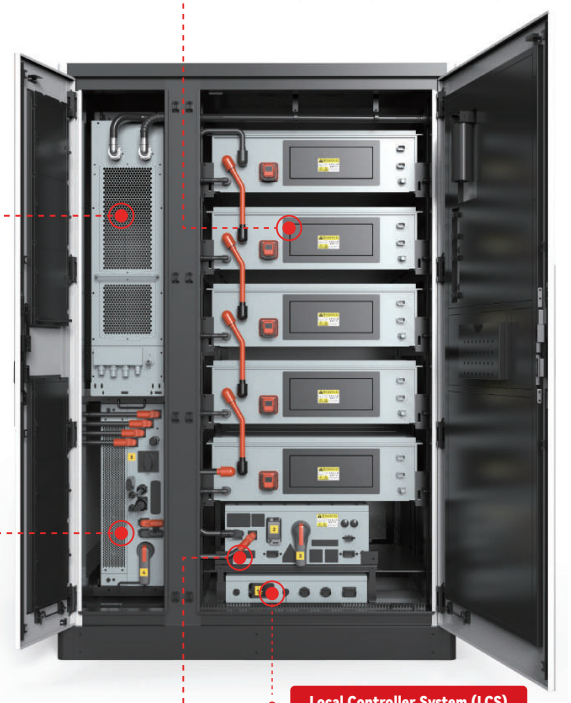
100kW 233kWh Outdoor Liquid Cooling Energy Storage Cabinet For Energy Arbitrage and Improved PV Self-Consumption

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

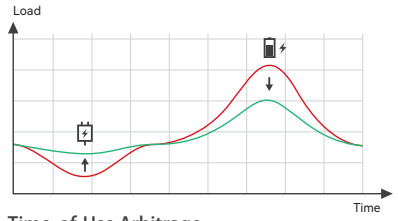
Local Controller System (LCS)

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)

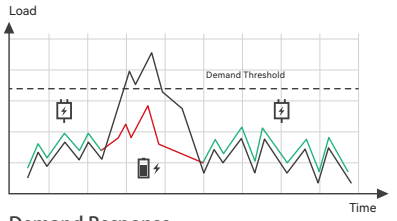
Guarantee safe and reliable operation of battery by monitoring cells voltage and temperature, calculating system SOX at real-time, and providing protection in case of overload, short-circuit, and other abnormalities.

Application Model



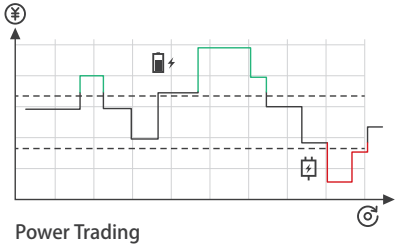
Time-of-Use Arbitrage

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.



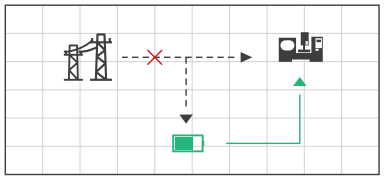
Demand Response

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



EPES5000

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

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EPES5000

5MWh Liquid Cooling Energy Storage Container

Battery Parameters	
Cell Type	LFP
Nominal Voltage	1,331.2 Vdc
Operating Voltage Range	1,040 ~ 1,500 Vdc
Nominal Capacity	314 Ah
Nominal Energy	5,015 kWh
Charge/Discharge Rate	0.5C
System Configuration	416S12P
Module Nominal Energy/Configuration	104.5kWh/1P104S

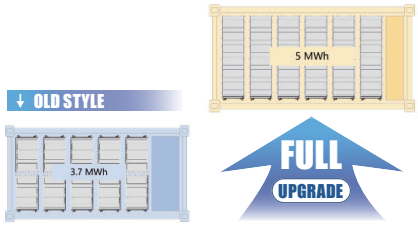
System Parameters	
Maximum System Efficiency	≥93.8%@0.5P, ≥95.2%@0.25P
Charge/Discharge Rate	0.5P
Continuous charging/discharging Current	1,884A
Short Circuit Current	98kA@ Single Rack
Insulation standard	≥1,000Ω/V
Withstand voltage	4,500Vdc. Leakage Current ≤5mA. No Breakdown or Flashover
Depth of Discharge	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℃ ~ 55℃
Thermal Management Mode	Liquid Cooling & Heating
Rated Auxiliary Power Supply Power	27 kW @ Ambient 35℃, 33.5 kW @ Ambient 45℃
Rated Cooling Capacity	60 kW @ Ambient 35℃, 55 kW @ Ambient 45℃
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

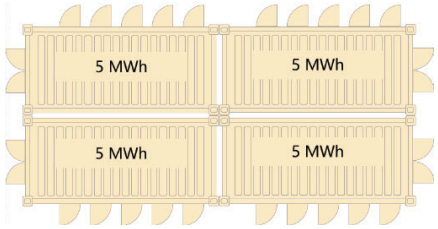
MOBILE ENERGY SOLUTIONS
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EPES5000

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

Optimized for Higher Energy Density

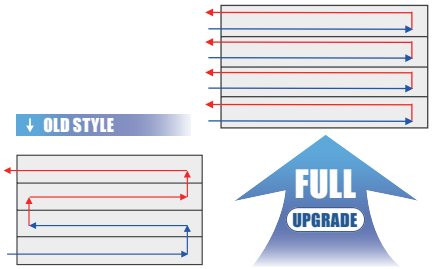


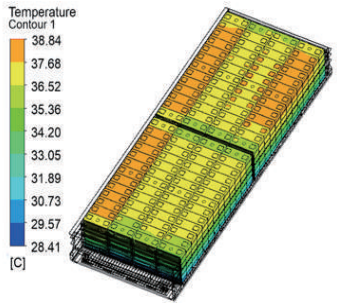


Nominal energy upgrades by 35% from 3.7MWh to 5MWh in a 20HQ container, due to internal space optimization, cell capacity upgrade and single-side maintenance. Battery capacity upgraded by 12% from 280Ah to 314Ah. Battery quantity increased by 20% from 4160 to 4992. Battery array increased by 20% from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

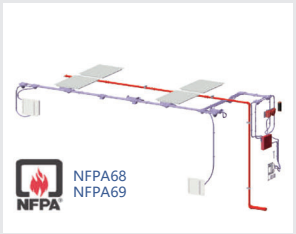
Parallel Flow Channel



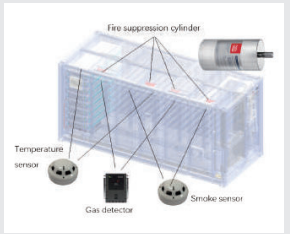


Compared with traditional serial flow channel, the flow resistance of parallel flow channel at the same flow rate is reduced by **85.5%**. The maximum temperature difference between cells is kept under **2.78℃**.

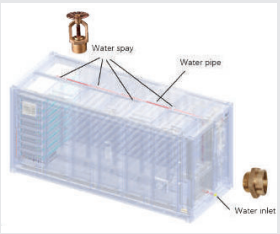
Fire Suppression NFPA 68 & 69 Compliance



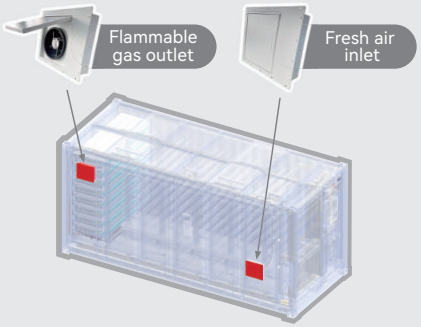
FFS Configuration



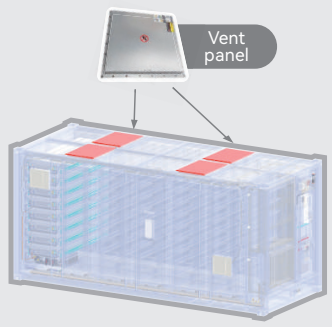
Aerosol Cylinder Layout



Water Pipe Layout



Ventilation (NFPA69)



Explosion Prevention (NFPA68)

Example Project Showcase



Texas, USA 226MWh Frequency Regulation



Weda Bay, Indonesia 28MWh Frequency Regulation

MOBILE ENERGY SOLUTIONS
COMMERCIAL OFF-GRID CHARGING

EPHS1075/2150

500kW 1.07MWh/1MW 2.15MWh Microgrid-ready PV+ESS All-in-One Container



All-in-One
Highly integrated design, modular system that can be expanded

Green
Easily integrates solar panels for renewable power generation

Convenient
Flexible configuration of multiple operating modes

Easy Management
Supports real-time online monitoring of system status

EPHS1075/2150

500kW 1.07MWh/1MW 2.15MWh Microgrid-ready PV+ESS All-in-one Container

AC Side Parameters		
Model	EPHS1075-500	EPHS2150-1000
Rated AC Power	500 kW	1,000 kW
Rated AC Current	722 A	1,445 A
Nominal Grid Voltage	400 Vac, 3W+N+PE	
Voltage Range	320 ~ 460 Vac	
Nominal Grid Frequency	50/60 Hz	
THDi (On-grid)	<3%	
THDu (Off-grid)	≤1% Linear, ≤5% Non-linear	
Adjustable Power Factor	0.8 leading to 0.8 lagging	
Overload Capability	110% Continuous	
Isolation Transformer	315/400	
On-grid and Off-grid Switching	YES	

PV Side Parameters		
Model	EPHS1075-500	EPHS2150-1000
Max. PV Input Voltage	1,000 Vdc	1,000 Vdc
Max. Power	720 kW	1,440 kW
MPPT Operating Voltage Range	250 Vdc ~ 850 Vdc	
MPPT Full Load Voltage Range	450 Vdc ~ 850 Vdc	
Buck-Boost Mode	YES	

Battery Parameters		
Cell Type	LFP	
Rated Voltage	768 Vdc, 1P240S	
Nominal Energy	1.075 MWh	2.150 MWh
Operating Voltage Range	672 Vdc ~ 850 Vdc	
Max. Charge/Discharge Rate	0.5C @ 25℃	
Cycle Life	≥5,000 Cycles	

System Parameters		
Model	EPHS1075-500	EPHS2150-1000
Dimension(W*D*H)	6,058 mm*2,438 mm*2,896 mm	12,192 mm*2,438 mm*2,896 mm
Weight	~21,000 kg	~38,000 kg
Operating Temperature Range	0℃ ~ 45℃	
Operating Relative Humidity	0 ~ 95%RH. No Condensation	
Ingress Protection	IP54	
Noise	<75 dB	
Operating Altitude	<3,000m. Derating Above 3,000m	
Thermal Management Mode	Air Conditioner Cooling And Heating	
Fire Protection System	Perfluoro, HFC-227ea(optional)	

MOBILE ENERGY SOLUTIONS
COMMERCIAL OFF-GRID CHARGING

EPHS120/143/197

50kW 120/143/197kWh 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.

EPHS210/143/197

50kW 120/143/197kWh Air Cooling Hybrid Energy Storage Cabinet

DC Side Parameters			
Model	EPHS120	EPHS143	EPHS197
Cell Type	LFP	LFP	LFP
Nominal Voltage	336-432 Vdc	512 Vdc	704 Vdc
Operating Voltage Range	420 ~ 560 Vdc	420 ~ 560 Vdc	650 ~ 949 Vdc
Nominal Capacity	280 Ah	280 Ah	280 Ah
Nominal Energy	120 kWh	143 kWh	197 kWh
Charge/Discharge Rate	0.42C	0.35C	0.25C
System Configuration	1P134S	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	380/400 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	EPHS120	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℃ ~ 50℃		
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	~1,650kg	~2,150kg	~2,600kg

EPGW2/3/6/9

AC Low Voltage Power Distribution Cabinet For 2/3/6/9 EPES233
For Energy Centralized Management And Distribution



Flexible Deployment

- 1-9 EPES233 flexible deployment
- Maximum 990kW Power Combine
- Unified appearance style with EPES233

High Performance

- H-level breaking capacity main and branch breakers
- 40 kA Imax SPD(Surge protection device)
- High IP level supports outdoor installation

Complete Functionality

- Anti-reflux, peak shaving, PV Storage, TOU, demand responing
- Electrical billing and metering
- Data statistics and analysis with cloud EMS

EPGW2/3/6/9

AC Low Voltage Power Combine Cabinet For 2/3/6/9 EPES233

Model	EPGW2	EPGW3	EPGW6	EPGW9
Nominal Voltage	230/400 Vac, 3W+N+P			
Rated Frequency	50/60 Hz			
Rated Power	220 kW	330 kW	660 kW	990 kW
Rated Current	318 A	476 A	953 A	1,429 A
Main Breaker Quantity	/	1 PCS	2 PCS	3 PCS
Breaking Capacity Level	H-level			
Rated Current	/	630 A		
Rated Limit Short-circuit Breaking Capacity Icu	/	100 kA		
Rated Operating Short-circuit Breaking Capacity Ics	/	70 kA		
Branch Breaker Quantity	2 PCS	3 PCS	6 PCS	9PCS
Breaking Capacity Level	H-level			
Rated Current	200 A			
Rated Limit Short-circuit Breaking Capacity Icu	100 kA			
Rated Operating Short-circuit Breaking Capacity Ics	70 kA			
Nominal Surge Discharge Current In(8/20μs)	20 kA			
Maximum Surge Discharge Current Imax(8/20μs)	40 kA			
Auxiliary Power Supply	230Vac,1W+N+PE, 2.2A			
Voltage Range Of Auxiliary Power Supply	180 ~ 264 Vac			
Internal Network Available Interface	RJ45*6	RJ45*6	RJ45*14	RJ45*14
Internet Interface	RJ45*1	RJ45*1	RJ45*1	RJ45*1
Communication Interface For Input Device	RS485*5	RS485*5	RS485*5	RS485*5
Altitude	<2,000m, Derating Above 2,000m			
Operating Relative Humidity	5~95%RH, No Condensation			
Operating Temperature Range	-20℃~55℃			
Thermal Management Mode	Passive Cooling	Air Cooling		
Ingress Protection	IP55			
Anti-Corrosion Grade	C4			
Dimension(W*D*H, mm)	700 *400*1,320	940*655*2,160	940*655*2,160	1,195*655*2,160
Weight	106 kg	251 kg	279 kg	350 kg

EPBS Series

High-Voltage Battery System for C&I Solution
Lithium Battery System: 80/100/120/140/160/180/200/221/241/261kWh

The EPBS Battery System is a high-performance, scalable lithium-ion solution for Commercial and Industrial (C&I) applications. Featuring advanced technology, intelligent energy management, and a robust design, it provides reliable backup power, peak load shaving, and energy optimization.



Compatible with Hybrid Inverters: Deye / Solis / Megarevo, etc.

High Performance

Flexible Expansion

High Safety LFP

Versatile Compatibility

EPBS Series

TECHNICAL SPECIFICATIONS

Model	80kWh/100kWh/120kWh/140kWh/160kWh/180kWh/200kWh/221kWh/241kWh/261kWh
System	
Module Quantity	1/2/3/4/5/6/7/8/9/10/11/12/13
Nominal Capacity	80kWh/100kWh/120kWh/140kWh/160kWh/180kWh/200kWh/221kWh/241kWh/261kWh
Nominal Voltage	256V/320V/384V/448V/512V/576V/640V/704V768V/832V
Operation Voltage Range	224-288V/280-360V/336-432V/392-504V/448-576V/504-648V/560-720V/616-792V/672-864V/728-936V
Weight	651kg/831kg/963kg/1112kg/1261kg/1423kg/1572kg/1719kg/1868kg/2030kg
Battery Type	LFP
Cell Capacity	314Ah
Rated Charge/Discharge Current	160A(0.5C)

Battery Module	
Module Capacity	20.09kWh
Rated Voltage	64V
Dimension(W*D*H)	483*941*261mm
Weight	149kg

General	
Cycel Life	6000 Cycles@80%DOD, 25℃C
Communication	CAN/RS485
Altitude	<3000m
Expansion	Max.6 Cluster System in Parallel
IP Rating	IP20
Operating Humidity	5-95%RH(no condensation)
Environment	Indoor
Installation Type	Stackable Level Package((Rack Option)
Cooling Concept	Natural Cooling
Standard	UN38.3/CE-EMC/EC62619/EC 62477/EC 63056
Inverter Match	Deye/Solis/Megarevo etc.
Transport Testing Requirement	UN38.3

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