



Shanghai ZOE Energy Storage Technology Co., Ltd





ZOE signifies "life" in Greek

ZOE

LIFE

Every life form in the universe represents a form of energy storage. The birth of life, and indeed miracles, emerge when energy comes into order. We witness each collision between life and the universe; faint yet overwhelmingly impactful, it symbolizes a coupling state of one form of energy with another. ZOE derives from our attention to life. Life is a blade of grass in the wilderness, the last rhinoceros on Earth, and a pouting baby in a mother's arms, all sharing the same name – "ZOE".





# Energy for Life

Resources + Life = Energy  
Energy + Life = Civilization  
Mankind will continue to create its own civilization.







SHANGHAI-CHINA

# About ZOE Energy Storage

Shanghai ZOE Energy Storage Technology Co., Ltd., established in 2022, is dedicated to providing global users with safe, efficient, and intelligent energy storage product system solutions. The company is headquartered in Shanghai, with its R&D center in Changzhou and a 2GWh fully automated battery pack factory in Fuzhou, Jiangxi. Meanwhile, a 6GWh intelligent energy storage system factory is being planned in Xiangyang, Hubei. ZOE relying on the innovative “ZOE” model and rich R&D experience, has developed modular, intelligent, integrated energy storage products for different application scenarios, like power generation, commercial and household markets. The company has developed its own PCS, BMS, EMS (3S) to ensure deep coupling and 3S high integration of products, and has also worked hard to build an EaaS cloud management platform to provide clean, intelligent new energy solutions to users.

Shanghai ZOE Energy Storage inherits from ZOE Solar Energy Group Co., Ltd., which is established in 2013, and committed to changing the global energy structure, promoting the development of clean energy. It is a high-tech renewable energy enterprise with new energy power station development investment, energy storage product research and development production, and new energy commercial applications as the main business units. The group is headquartered in Shanghai as well, with four major market divisions in the south, west, central and north of China. With a CAGR of 183%, the total scale of the power stations developed by the group reached 1.92GW, and the energy storage power station 3.27 GWh, and a total investment of 16 billion CNY.







# ZOE R&D Center

ZOE R&D center, located in Changzhou, the city of new energy in China, is responsible for conducting energy storage technology research, new product development, and scientific research cooperation expansion. The center strives to be a leader in the field of energy storage technology research and application, making significant contributions to energy transformation and sustainable development.

The center has continuously introduced top talents in the field of energy storage, and has established a core R&D team with a complete system, which consists of experts and engineers with profound technical expertise and innovative capabilities in fields such as energy storage materials, energy storage equipment, energy storage management and control, and system design and optimization. The center is equipped with advanced experimental equipment and laboratories, including an energy storage laboratory, a power electronics laboratory, a micro-grid laboratory, and a battery safety testing laboratory.

The center focuses on the development of energy storage 3S system products, which involves battery cluster structure design, cooling and pipeline design, container internal structure design, system control and EMS development, PCS development, and so on. In the field of battery safety management, the center has proposed a globally leading multi-dimensional information fusion-based technology for battery fault diagnosis and risk management, which integrates multiple types of information, such as voltage and current, environmental temperature and humidity, sound characteristics, vibration characteristics, VOC gases, etc. The center has established a technical system from information sampling to feature-level edge computing at terminal to cloud-based decision-making-level integration, which ensures reliable health management and risk prediction of battery cells throughout their lifecycle. In terms of professional cooperation, the center collaborates with third-party professional organizations such as TÜV Rheinland and JH Certification to jointly achieve broader and deeper technological innovation and scientific research expansion, to jointly solve industry technical problems, develop new types of energy storage products and solutions, and promote the development and commercial application of energy storage technology.





JIANGXI-CHINA



HUBEI-CHINA

# ZOE Intelligent Factory

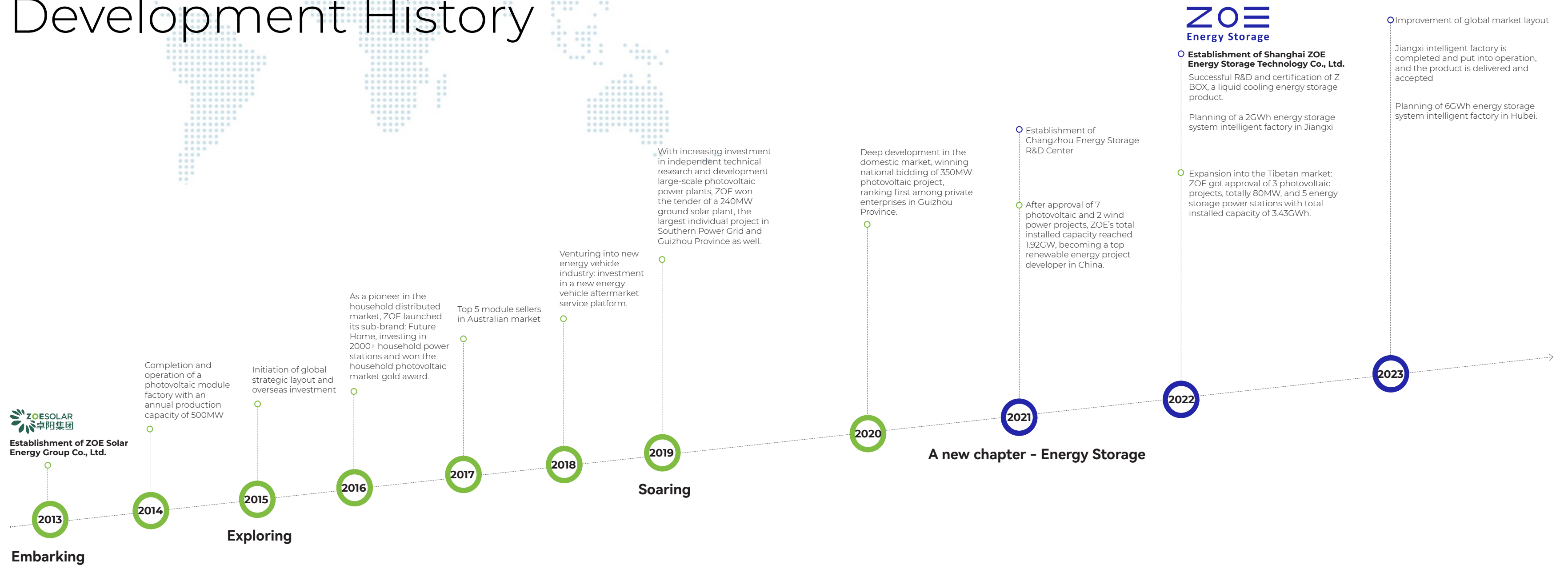


The 2GWh intelligent factory, located in the Intelligent Manufacturing Industrial Park of Nanfeng County, Fuzhou City, Jiangxi Province, has a workshop of 10,000 square meters and possesses a 2GWh energy storage module integrated intelligent production line, with the characteristics of automation, intelligence, data-driven, and flexible production. The products are widely used in source/grid side energy storage, commercial and industrial energy storage, and household energy storage. By utilizing the "PV-storage-charging integrated" clean energy system and digital energy monitoring and management methods, the company reduces its reliance on fossil fuels, achieving low-carbon and sustainable green production.

In the manufacturing process, quality checkpoints are thoroughly controlled. From the battery cell, module, PACK, battery cluster to the energy storage system, the inspection includes consistency, safety, reliability, and other aspects, adopting advanced quality control techniques such as machine vision and non-destructive testing to ensure product quality meets the standard.



# ZOE Development History











#### Source/Grid Side Energy Storage System

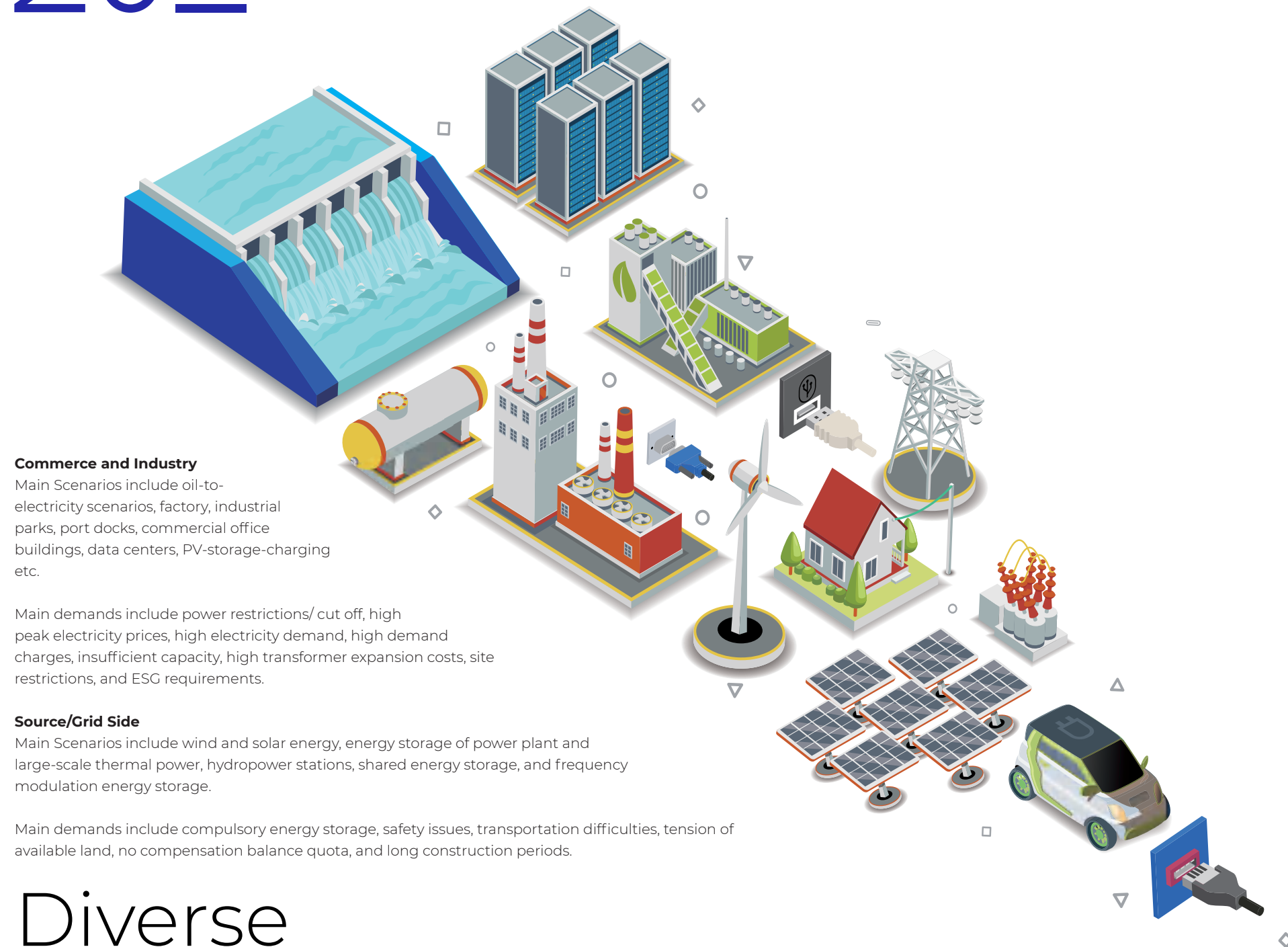
Amid the global energy transition, solutions for grid-side energy storage systems are of paramount importance. By digitally coordinating the management of key links in energy production, inversion, energy storage, monitoring, and communication, the stability, reliability, and economic efficiency of the power system on the grid side are strengthened. Grid-side energy storage systems aim to lower overall energy costs by optimizing energy allocation strategies and coordinating peak shaving and valley filling measures. Simultaneously, this solution actively promotes the large-scale application of clean energy, responding to current social demands for environmental protection and sustainable development.

#### Commercial and Industrial Energy Storage Systems

Facing the diverse demands of commerce and industry, we provide a tailored energy storage system solution, which utilizes a modular design, flexibly adapting to various commercial and industrial scenarios, supporting multiple operating modes, and maximizing return on investment. The solution focuses on dispatching peak and valley power demands. By realizing peak shifting and off-peak power consumption, it can effectively alleviate grid pressure while lowering electricity costs. This is particularly important for commercial and industrial users with higher requirements for power stability and continuity, such as data centers, medical equipment, and production lines.







#### Commerce and Industry

Main Scenarios include oil-to-electricity scenarios, factory, industrial parks, port docks, commercial office buildings, data centers, PV-storage-charging etc.

Main demands include power restrictions/ cut off, high peak electricity prices, high electricity demand, high demand charges, insufficient capacity, high transformer expansion costs, site restrictions, and ESG requirements.

#### Source/Grid Side

Main Scenarios include wind and solar energy, energy storage of power plant and large-scale thermal power, hydropower stations, shared energy storage, and frequency modulation energy storage.

Main demands include compulsory energy storage, safety issues, transportation difficulties, tension of available land, no compensation balance quota, and long construction periods.

## Diverse Application Scenario

## Product Advantages

### ○ Safety

- Our self-developed liquid cooling system effectively dissipates heat when battery temperature is high, physically reducing the probability of thermal failure, and keeping the temperature difference between cells within 2.5°C.
- The PCS comes with a built-in arc detection system + intelligent algorithms, cutting off the main circuit in seconds upon arc detection, ensuring the safety of electrical equipment.
- The EMS, based on cloud architecture, conducts historical data trend analysis + machine learning to maintain the health of the cells throughout their lifecycle.
- A three-level fire safety design: the 1st level provides early warning with an embedded thermal runaway warning module that provides a 10-minute advanced warning, giving firefighters more valuable time. The 2nd level can achieve active firefighting at the single Pack level. When a single Pack has thermal runaway, it can perform intelligent directional spot spraying at the Pack level. The 3rd level, system-level fire protection barrier of the Z BOX, ensures that other outdoor cabinets can continue to operate safely.

### ○ Stability

- Our self-developed SmartM200 system supports millisecond-level response and can realize intelligent detection, intelligent analysis, centralized management, and centralized control of the energy storage system.
- The PCS has a Virtual Synchronous Generator (VSG) function, possesses rotational inertia characteristics, and can perform primary frequency regulation and secondary frequency regulation.
- The PCS has the ability to perform black-start operations, has real-time load-following capabilities, and active SVG dynamic reactive power support capability.
- The EMS has edge computing capabilities, allowing for decision-making, intelligent analysis, and unmanned operations at energy storage stations. Additionally, 5G / Ethernet enables high-speed connectivity between local and cloud data, improving grid / EaaS dispatch response capabilities.

### ○ Economy

- Over 15 years of ultra-long design life, the intelligent cell temperature control mechanism extends cell life by 25% and extends system usage life by 18%.
- The full lifecycle return rate is increased by 22%, and LCOS is reduced by 17%

### ○ Efficiency

- The advanced ANPC three-level technology, optimized multistage SVPWM control technology, low-loss magnetic component design technology, can achieve a maximum efficiency of 99.2%.
- The liquid cooling system can heat the batteries in the cold northern regions, can control the cell temperature within the optimal range of 25°C ~35°C, achieving optimal power and capacity, 95% DOD, and system efficiency can be over 95%.



# Born for Hill



“Born for the Mountain Areas”, Z BOX-H is a liquid-cooled energy storage product developed for the complex and diverse outdoor terrains and landscapes, such as plains, hills, plateaus, basins, etc. It provides systematic solutions for pain points in energy storage scenarios, such as: high safety, difficult transportation, long construction period, and the problems of balancing occupancy and compensation. Compared with traditional centralized large-scale energy storage, Z BOX-H occupies a smaller area, greatly saving occupancy and compensation indicators. It can fully utilize scattered high and low areas in mountainous areas for deployment, greatly relieving dependence on regular land, and enhancing project feasibility and economy. In terms of transportation: small vehicles can complete the transportation on winding and steep mountain roads, without the need for bridge construction for large vehicles. As for installation, no crane is required, forklift can be used for loading; the Pack is pre-assembled as a whole in factory, which shortens the installation and commissioning period in the mountains by 50%, significantly saving installation construction costs.

# Z BOX-H

1500V Liquid-cooled Energy Storage System

## ZOE-C372L-H-A

0.5C

Battery data	
Battery type	LFP
Cell capacity	280Ah
Series-parallel connection	1P416S
Rated battery PACK capacity	46.59kWh
Rated battery system capacity	372.7kWh
Rated voltage	1331.2Vdc
Operating voltage range	1164.8~1497.6Vdc

General data	
Max. efficiency	≥96%
Charge/discharge ratio	≤0.5C
Depth of discharge (DOD)	95%DOD
Protection degree	IP55
Cooling	Liquid cooling
Heating	Liquid cooling
Fire extinguishing system	aerosol+perfluorohexanone
Operating temperature range	-25~55℃
Relative humidity	5~95% RH, without condensation
Typical noise emission	≤67dB
Relative humidity	4000m
Cycle life	≥8000@25℃, 0.5C, 70%SOH
Designed life	≥15 years
Communication interfaces	RS485/CAN/Ethernet
Dimensions (W × D × H)	1370*1330*2270mm
Weight	3550kg

## ZOE-C344L-H-A

1C

Battery data	
Battery type	LFP
Cell capacity	280Ah
Series-parallel connection	1P384S
Rated battery PACK capacity	43kWh
Rated battery system capacity	344kWh
Rated voltage	1228.8Vdc
Operating voltage range	1075.2~1382.4Vdc

General data	
Max. efficiency	≥93%
Charge/discharge ratio	≤1C
Depth of discharge (DOD)	90%DOD
Protection degree	IP55
Cooling	Liquid cooling
Heating	Liquid cooling
Fire extinguishing system	aerosol+perfluorohexanone
Operating temperature range	-25~55℃
Relative humidity	5~95%RH, without condensation
Typical noise emission	≤65dB
Relative humidity	4000m
Cycle life	≥5000@25℃, 1C, 70%EOL
Designed life	≥15 年
Communication interfaces	RS485/CAN/Ethernet
Dimensions (W × D × H)	1370*1330*2270mm
Weight	3350kg



# Born for City



"Born for the City", Z BOX-C is a liquid-cooled outdoor energy storage product that can adapt to various city environments such as ports, parks, factories, and office buildings. Under conditions of power restrictions/cut off, peak electricity prices, high demand, insufficient capacity, and space restrictions, Z BOX-C can perfectly address the pain points of urban industry and commerce, providing a safer, more stable, and more economical electricity usage experience. Through Z BOX-C, we hope to popularize energy storage in cities and accelerate the pace of urban clean energy advancement. Main scenarios: oil to electricity scenarios, factory, industrial parks, ports, commercial office buildings, data centers, photovoltaic-storage-charging etc. Main demands include power restrictions/ cut off, high peak electricity prices, high electricity demand, high demand charges, insufficient capacity, high transformer expansion costs, site restrictions, and ESG requirements.

## Z BOX-C

1000V Liquid-cooled Energy Storage System

### ZOE-C186L-L-A

Battery data	
Battery type	LFP
Cell capacity	280Ah
Series-parallel connection	1P208S
Rated battery PACK capacity	46.59kWh
Rated battery system capacity	186.3kWh
Rated voltage	665.6Vdc
Operating voltage range	600~748.8Vdc

PCS data (AC)	
Rated AC power	93.1kW
Max. AC power	102.4kW
Rated grid voltage	400Vac
Grid voltage range	400Vac(-20%~+15%)
Rated grid frequency	50/60±2.5Hz
Rated output current	135A
AC connection	Three-phase four-wire
THDi	≤3%
Power factor	-0.99~+0.99
Switch time of charge/discharge	<100ms
Changeover time	≤20ms
Imbalanced load capacity	100%

General data	
Max. efficiency	≥91%
Charge/discharge ratio	≤0.5C
Depth of discharge (DOD)	95%DOD
Protection degree	IP55
Cooling	Liquid cooling
Heating	Liquid heating
Fire extinguishing system	aerosol+perfluorohexanone
Operating temperature range	-25~55℃
Relative humidity	5~95% RH, without condensation
Typical noise emission	≤75dB
Relative humidity	4000m
Cycle life	≥8000@25℃, 0.5C, 70%SOH
Designed life	≥15 years
Communication interfaces	RS485/CAN/Ethernet
Dimensions (W × D × H)	965*1328*1850mm
Weight	1900kg

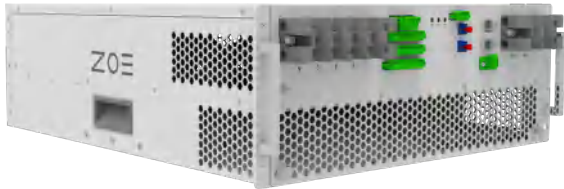


# 100KW PCS

## ZOE-ECS100-LA-A

DC-INPUT	
Max. DC voltage	1000Vdc
Operation voltage range	600~1000Vdc
Max. input current	183A
Full-load voltage range	600~850Vdc
OUTPUT - AC	
Rated output power	100kW
Max. output power	110kVA
Rated grid voltage	400Vac
Rated frequency	50Hz/60Hz
Max. output current	158A
Power factor	-0.99~+0.99
THDi	<3%
Switch time of charge/discharge	<100ms
Changeover time	≤20ms
Imbalanced load capacity	100%

General Data	
Max. efficiency	≥99%
Isolation transformer	无
Protection degree	IP65
Operating temperature range	-30~60℃ (>40℃ derating)
Relative humidity	0~100%
Cooling	Intelligent fan
Relative humidity	4000m (>3000m derating)
Communication interfaces	Modbus-RTU/Modbus-TCP/IEC61850/CAN
Dimensions (W × D × H)	600*480*221mm
Weight	60kg
Certification	GB/T 34120-2017
	GB/T 34133-2017
	IEEE 1547
	IEC 62477-1
	IEC 61000-6-2
	IEC 61000-6-4



# 200KW PCS

## ZOE-ECS200-HA-A

DC-INPUT	
Max. DC voltage	1500Vdc
Operation voltage range	1000~1500Vdc
Max. input current	224A
Full-load voltage range	1000~1400Vdc
OUTPUT - AC	
Rated output power	200kW
Max. output power	220kVA
Rated grid voltage	690Vac
Rated frequency	50Hz/60Hz
Max. output current	184A
Power factor	-1~+1
THDi	<3%

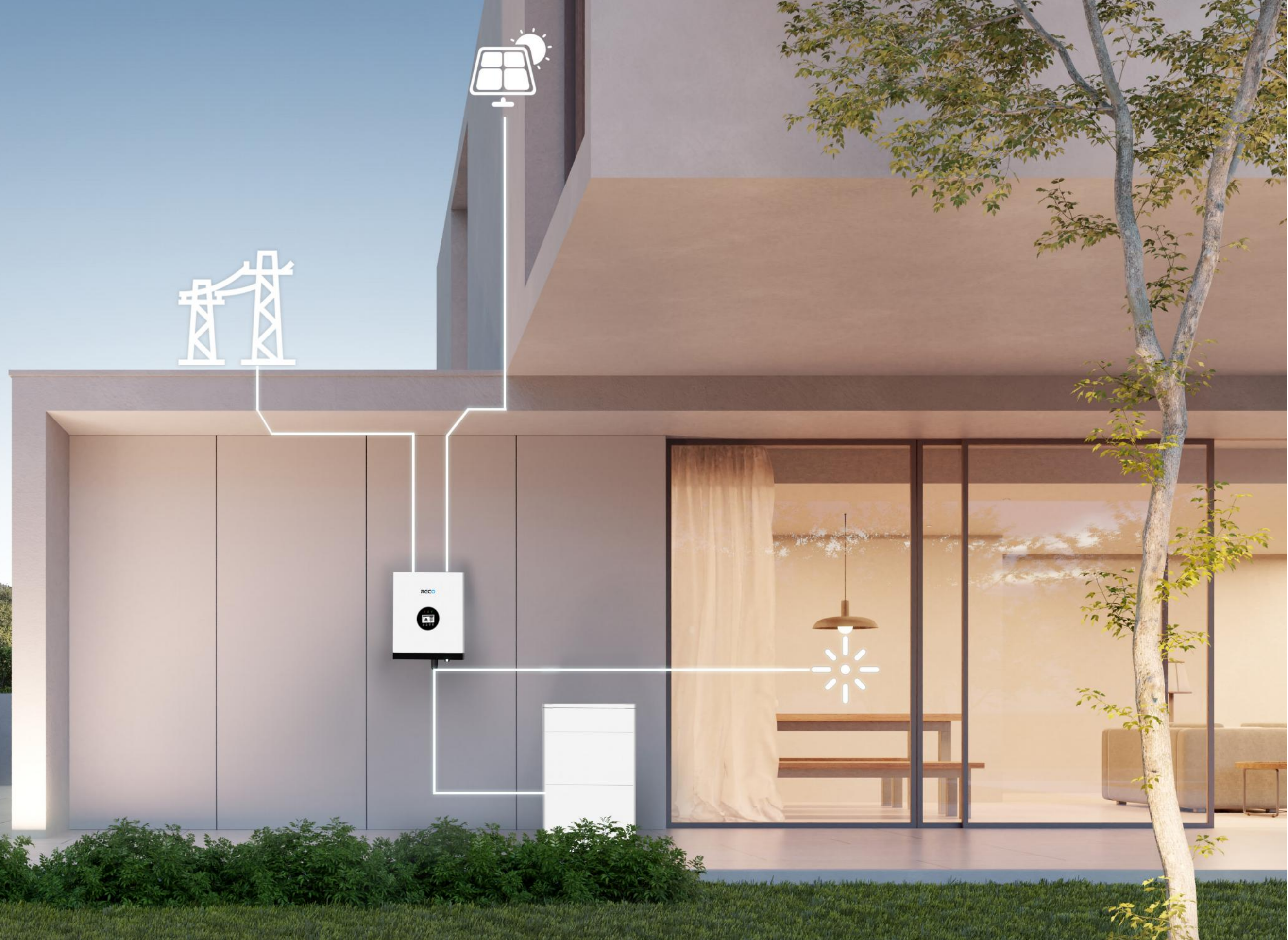
General Data	
Max. efficiency	≥99%
Isolation transformer	无
Protection degree	IP66
Operating temperature range	-30~60℃ (>40℃ derating)
Relative humidity	0~100%
Cooling	Intelligent fan
Relative humidity	4000m (>3000m derating)
Communication interfaces	Modbus-RTU/Modbus-TCP/IEC61850/CAN
Dimensions (W × D × H)	900*835*280mm
Weight	110kg
Certification	GB/T 34120-2017
	GB/T 34133-2017
	IEEE 1547
	IEC 62477-1
	IEC 61000-6-2
	IEC 61000-6-4





# RECO

RECO is a clean energy brand for future families, and our goal is to achieve global sharing of clean energy, by providing zero-carbon eco-friendly energy services for families around the world. We are not just an energy storage company, but a pioneer in promoting the green energy revolution. Our mission is to make clean energy a daily routine for every family. Only when every family enjoys clean energy, can our Earth finally achieve zero carbon emissions. We look forward to your participation to create a greener and better future together.





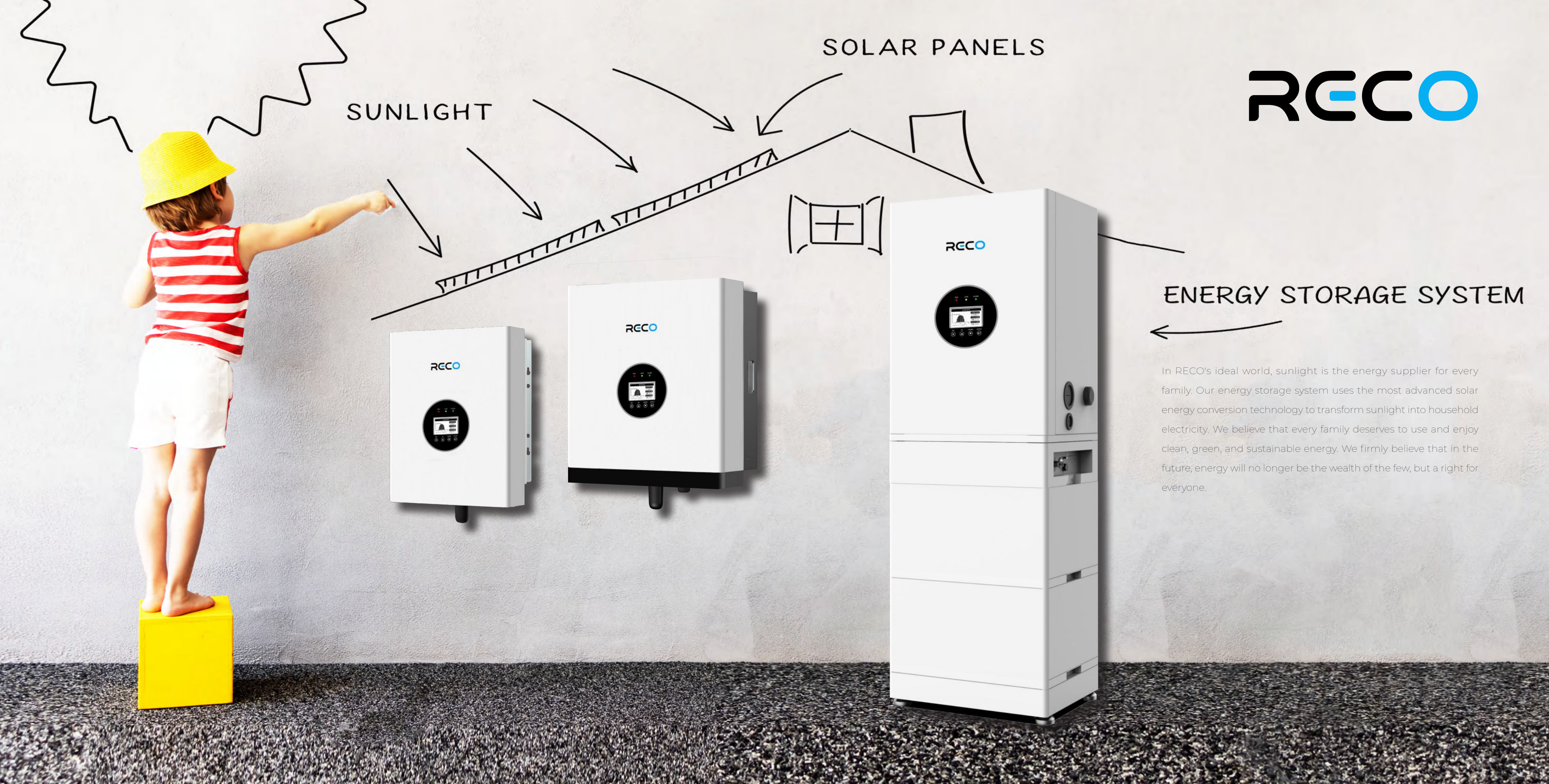
# RECO

SOLAR PANELS

SUNLIGHT

ENERGY STORAGE SYSTEM

In RECO's ideal world, sunlight is the energy supplier for every family. Our energy storage system uses the most advanced solar energy conversion technology to transform sunlight into household electricity. We believe that every family deserves to use and enjoy clean, green, and sustainable energy. We firmly believe that in the future, energy will no longer be the wealth of the few, but a right for everyone.





# RECO

## Hybrid Inverter (single phase) 5-8 kW



Inverter Model	Unit	SHA-5000-H	SHA-6000-H	SHA-7000-H	SHA-8000-H
INPUT - PV					
Max. PV power	kWp	7.5	9	10.5	12
Max. voltage (rated operating voltage)	V	600 (360)			
MPPT voltage range (start operating voltage)	V	80-500 (60)			
Max. input current (short circuit current)	A	16 (25)			
No. of MPPT trackers(strings per MPPT tracker)		2 (1/1)			
Battery					
Battery voltage range	V	85-450			
Max. charge/discharge current	A	30/30			
Battery type		Li-ion/Lead-acid			
OUTPUT - AC (on grid)					
Rated output power (Max. apparent output power)	kWp (kVA)	5 (5)	6 (6)	7 (7)	8 (8)
Rated grid voltage	V	230			
Operation Voltage Range	V	230/240			
Rated grid frequency	Hz	50/60			
Max. current	A	21.7	26	30.4	34.8
Power factor	%	0.8 leading to 0.8 lagging (adjustable)			
THDi	%	< 3			
OUTPUT - AC (with battery)					
Rated output power (Max. apparent output power)	kWp (kVA)	5 (5)	6 (6)	7 (7)	8 (8)
Rated output voltage	V	230			
Max. output current	A	21.7	26	30.4	34.8
Rated frequency	Hz	50/60			
Changeover time	ms	< 8			
EFFICIENCY					
MPPT efficiency	%	97.8			
Europe efficiency (Max. efficiency)	%	97.1			
Battery charge/discharge efficiency	%	97.8			
SAFETY & PROTECTION					
Intergrated protection		Insulation protection / Residual current monitoring / PV reverse polarity protection / Anti-islanding protection / Overcurrent protection / DC component protection / DC surge protection (Class II) / AC surge protection (Class III)			
General Data					
Operating temperature range	℃	-25 ~ + 60 ( unable to charge below 0℃ and derating above +45℃ )			
Relative humidity	m	< 3000			
Typical noise emission	dB	< 40			
Topology		Transformerless isolation			
Cooling		Natural convection			
Protection degree		IP65			
Relative humidity	%	0-95			
LCD display		LCD, WIFI+APP			
Communication interfaces		WIFI/ RS485/ GPRS			
Dimensions (W × D × H)	mm	390*192*407			
Weight	kg	17			
COMPLIANCE					
Safety		IEC 62109-1 IEC 62109-2			
EMC		EN 55011 EN/IEC 61000-6-1 EN/IEC 61000-6-3 EN 61000-3-11 EN 61000-3-12 IEC 61000-4-2/-3/-4/-5/-6/-8/-11/-34			



# RECO

## Hybrid Inverter (three phase) 6-20 kW

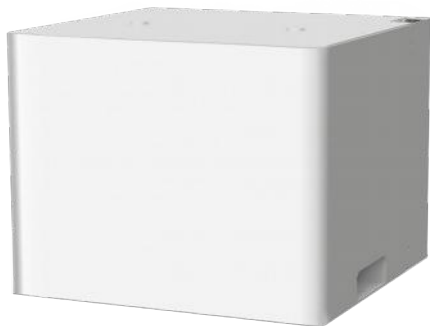


Inverter Model	Unit	THA-6K	THA-8K	THA-10K	THA-12K	THA-15K	THA-17K	THA-20K
INPUT - PV								
Max. PV power	kWp	9	12	15	18	22.5	25.5	30
Max. voltage (rated operating voltage)	V	1000 (630)						
MPPT voltage range (start operating voltage)	V	180-900 (120)						
Max. input current (short circuit current)	A	15/15 (18/18)				15/28 (18/32)	28/28 (32/32)	
No. of MPPT trackers(strings per MPPT tracker)		2 (1/1)				2 (1/2)	2 (2/2)	
Battery								
Battery voltage range	V	180-550			180-700			
Max. charge/discharge current	A	25/30			50/50			
Battery type		Li-ion/Lead-acid						
OUTPUT - AC (on grid)								
Rated output power (Max. apparent output power)	kWp (kVA)	6 (6)	8 (8)	10 (10)	12 (12)	15 (15)	17 (17)	20 (20)
Rated grid voltage	V	380						
Operation Voltage Range	V	380/400						
Rated grid frequency	Hz	50/60						
Max. current	A	10	12	15	18	22	25	31
Power factor	%	0.8 leading to 0.8 lagging (adjustable)						
THDi	%	< 3						
OUTPUT - AC (with battery)								
Rated output power (Max. output power)	kWp (kVA)	6 (6)	8 (8)	10 (10)	12 (12)	15 (15)	17 (17)	20 (20)
Rated output voltage	V	380						
Max. output current	A	10	12	15	18	22	25	31
Rated frequency	Hz	50/60						
Changeover time	ms	< 8						
EFFICIENCY								
MPPT efficiency	%	98.2			99.9			
Europe efficiency (Max. efficiency)	%	97.3			97.5			
Battery charge/discharge efficiency	%	98.2			98.4			
SAFETY & PROTECTION								
Intergrated protection		Insulation protection/ Residual current monitoring/ PV reverse polarity protection/ Anti-islanding protection/ Overcurrent protection/ DC component protection/ DC surge protection (Class II)/ AC surge protection (Class III)						
General Data								
Operating temperature range	℃	-25 ~ + 60 ( unable to charge below 0 ℃ and derating above +45 ℃ )						
Relative humidity	m	< 4000						
Typical noise emission	dB	< 40						
Topology		Transformerless isolation						
Cooling		Natural convection			Intelligent fan			
Protection degree		IP65						
Relative humidity	%	0~100%, without condensation						
LCD display		LCD						
Communication interfaces		RS485 (WIFI/4G/GPRS optional)						
Dimensions (W × D × H)	mm	505*220*570			505*220*630			
Weight	kg	29			34		36	
COMPLIANCE								
Safety		IEC 62109-1 IEC 62109-2						
EMC		EN 55011 EN/IEC 61000-6-1 EN/IEC 61000-6-3 EN 61000-3-11 EN 61000-3-12 IEC 61000-4-2/-3/-4/-5/-6/-8/-11/-34						





Battery



CBrick-AH10516



CBrick-AH04032

Battery Model	Unit	CBrick-AH10516	CBrick-AH04032
Battery type		LFP	LFP
Cell capacity	Ah	105	20
Usable battery capacityv	Wh	4838	3686
rated battery capacity	Wh	5376	4096
Rated voltage (Operating voltage range)	V	51.2 (46.4~56.8)	102.4 (92.8~113.6)
Max. charge/discharge current	A	55	30
Depth of discharge (DOD)	%	90%	
Cycle life [@90% DOD]	cycle	6000	
Dimensions (W × D × H)	mm	390*380*300	425*340*242
Weight	kg	39	30
Miscellaneous			
Communication interface		CAN/RS485	
Protection degree		IP54	IP65
Operating temperature range	℃	0 ~ +50	
Storage temperature	℃	-20 ~ +45	
Relative humidity	%	0~95	
Max. operation altitude	m	< 2000	
Cooling		Natural convection	
COMPLIANCE			
Safety		EN/IEC 62619 EN/IEC 62040-1	
EMC		EN/IEC 61000-6-1 EN/IEC 61000-6-3	
Transport testing requirement		UN38.3	



RECO

Stackable Energy Storage System



## Energy storage system

Stackable Energy Storage System	Specification	Inverter model	No. of battery pack per system	Dimension (W*D*H, mm)	Weight (kg)	Certification
SHA-5K040-H	5KW/4KWh	SHA-5000-H	1	425*340*914	66	IEC 62109-1/-2 EN/IEC 62619 EN/IEC 62040-1 EN/IEC 61000-6-1/-3 EN 61000-3-11/-12 IEC 61000-4-2/-3/-4/-5/-6/-8/-11/-34 EN 55011 UN38.3
SHA-5K080-H	5KW/8KWh		2	425*340*1156	96	
SHA-5K120-H	5KW/12KWh		3	425*340*1398	126	
SHA-6K040-H	6KW/4KWh	SHA-6000-H	1	425*340*914	66	
SHA-6K080-H	6KW/8KWh		2	425*340*1156	96	
SHA-6K120-H	6KW/12KWh		3	425*340*1398	126	
SHA-7K080-H	7KW/8KWh	SHA-7000-H	2	425*340*1156	96	
SHA-7K120-H	7KW/12KWh		3	425*340*1398	126	
SHA-7K160-H	7KW/16KWh		4	425*340*1640	156	
SHA-8K080-H	8KW/8KWh	SHA-8000-H	2	425*340*1156	96	
SHA-8K120-H	8KW/12KWh		3	425*340*1398	126	
SHA-8K160-H	8KW/16KWh		4	425*340*1640	156	

## Battery Data

Battery system model		EBrick-AH040		EBrick-AH081		EBrick-AH122		EBrick-AH163	
System components		BCU*1 CBrick-AH04032*1		BCU*1 CBrick-AH04032*2		BCU*1 CBrick-AH04032*3		BCU*1 CBrick-AH04032*4	
		Battery data	Unit						
		Battery type		LFP					
		Cell capacity	Ah	20					
Usable battery capacity	kWh	3.686		7.372		11.059		14.745	
Rated battery capacity	kWh	4.096		8.192		12.288		16.384	
Rated voltage (Operating voltage range)	V	102.4 (92.8~113.6)		204.8 (185.6~227.2)		307.2 (278.4~340.8)		409.6 (371.2~454.4)	
Max. charge/discharge current	A	30							
Depth of discharge (DOD)	%	90							
Cycle life [@90% DOD]	cycle	6000							
Miscellaneous									
Communication Interface		CAN/RS485							
Protection degree		IP65							
Operating temperature range	℃	0 ~ +50 ( unable to charge below 0℃ )							
Storage temperature	℃	0 ~ +45							
Relative humidity	%	0 ~ 95							
Max. operation altitude	m	< 2000							
Cooling		Natural convection							





Stackable Energy Storage System



Inverter Data

Inverter Model	Unit	SHA-5000-H-S	SHA-6000-H-S	SHA-7000-H-S	SHA-8000-H-S
INPUT - PV					
Max. PV power	kWp	7.5	9	10.5	12
Max. voltage (rated operating voltage)	V	600 (360)			
MPPT voltage range (start operating voltage)	V	80-500 (60)			
Max. input current (short circuit current)	A	16 (25)			
No. of MPPT trackers(strings per MPPT tracker)		2 (1/1)			
Battery					
Battery voltage range	V	85-450			
Max. charge/discharge current	A	30/30			
Battery type		Li-ion/Lead-acid			
OUTPUT - AC (on grid)					
Rated output power (Max. apparent output power)	kWp (kVA)	5 (5)	6 (6)	7 (7)	8 (8)
Rated grid voltage	V	230			
Operation Voltage Range	V	230/240			
Rated grid frequency	Hz	50/60			
Max. current	A	21.7	26	30.4	34.8
Power factor	%	0.8 leading to 0.8 lagging (adjustable)			
THDi	%	< 3			
OUTPUT - AC (with battery)					
Rated output power (Max. apparent output power)	kWp (kVA)	5 (5)	6 (6)	7 (7)	8 (8)
Rated output voltage	V	230			
Max. output current	A	21.7	26	30.4	34.8
Rated frequency	Hz	50/60			
Changeover time	ms	< 8			
EFFICIENCY					
MPPT efficiency	%	97.8			
Europe efficiency (Max. efficiency)	%	97.1			
Battery charge/discharge efficiency	%	97.8			
SAFETY & PROTECTION					
Intergrated protection		Insulation protection/ Residual current monitoring/ PV reverse polarity protection/ Anti-islanding protection/ Overcurrent protection/ DC component protection DC surge protection (Class II)/ AC surge protection (Class III)			
General Data					
Operating temperature range	℃	-25 ~ + 60 ( unable to charge below 0℃ and derating above +45℃ )			
Relative humidity	m	< 3000			
Typical noise emission	dB	< 40			
Topology		Transformerless isolation			
Cooling		Natural convection			
Protection degree		IP65			
Relative humidity	%	0-95			
LCD display		LCD, WIFI+APP			
Communication interfaces		WIFI/RS485/GPR			



