



SolarEast Clean Energy Solutions

## CATALOG

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# 01 | SOLAREAST INTRODUCTION



5

Production bases across China



25

Years' experience



6,000+

Employees

Founded in 1999, SolarEast is a technological innovation-based enterprise that is publicly listed on Shanghai Stock Exchange (Stock code: 603366). Committed to making a 'Green world, Better life', SolarEast is a global leader in solar thermal industry and ranks Top 500 global new energy enterprises. SolarEast has established five production bases across China.

SolarEast Energy Storage Technology Co., Ltd is a wholly-owned subsidiary of SolarEast. It specializes in R&D, manufacturing and sales of energy storage products of various specifications that are widely used in residential, commercial & industrial, and large-scale applications. Furthermore, the Company also smartly incorporates energy storage with PV, air-source heat pumps and EV chargers, providing customers with flexible All-in-One solutions.



2 GWh

Annual residential ESS production capacity



10 GWh

Annual production capacity of Commercial & Industrial ESS and Large-scale ESS

## Strong Manufacturing Capability

SolarEast owns 25 years' experience in solar thermal, heat pump and energy storage production. It has established five modern production bases across China and boasts 12GWh annual production capacity of energy storage systems.



Luoyang base

Built in 2002  
Solar heater production base



Tibet base

Built in 2020  
Large flat plate solar thermal collector production base



Shunde base

Built in 2012  
Heat pump production base



Yuyao base

Built in 1984  
Kitchen appliance production base  
Electric water heater production base



Lianyungang base

Built in 1999  
Solar heater production base  
Water Purifier production base  
Heat pump production base



## Advanced Laboratory and Equipment

### CNAS Accredited Lab

The laboratory, accredited by CNAS, is equivalent to a national testing center.



### Postdoctoral Research Workstation

In 2010, it was jointly established by the Ministry of Human Resources and Social Security and the National Postdoctoral Management Committee



### Nationally recognized enterprise technology center

The nationally recognized enterprise technology center is a testament to our strengths on scientific research and technological innovation.



### Solar simulator

SolarEast is the first company in China to have introduced the indoor solar testing equipment, which simulates sunlight to test the solar thermal products



## Main Business & Market Position

**World's largest manufacturer in the solar thermal industry**



**Well-known EPC contractor in the PV industry in Jiangsu China**



**Top OEM supplier of heat pump in China**



**One of the fastest growing energy storage manufacturers in China**



**Integrated solution provider featuring PV + ESS + Heat Pump +EV Charger**



## Global Sales Network

Up to date, SolarEast has provided clean energy solutions for up to 35 million families and 20,000 enterprises in more than 80 countries and regions. With multiple overseas warehouses and branch offices worldwide, such as China, Europe and USA, SolarEast is able to offer global customers products and services in a timely and effective manner.



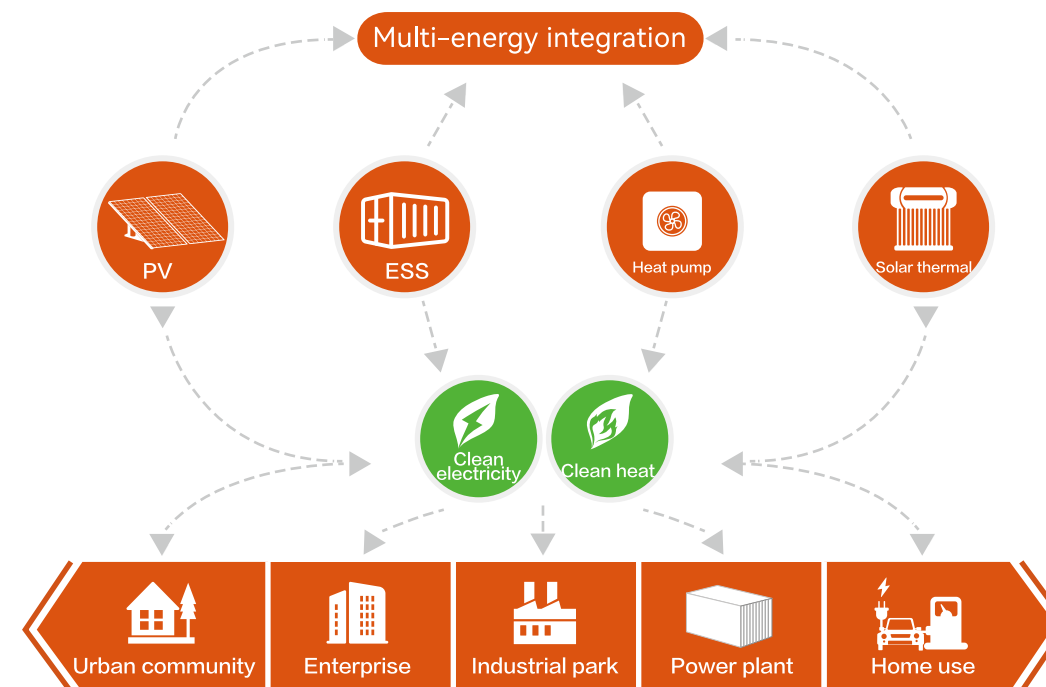
## Comprehensive Clean Energy Solution

**Multi-energy integration:** PV, energy storage, heat pump, and solar thermal energy

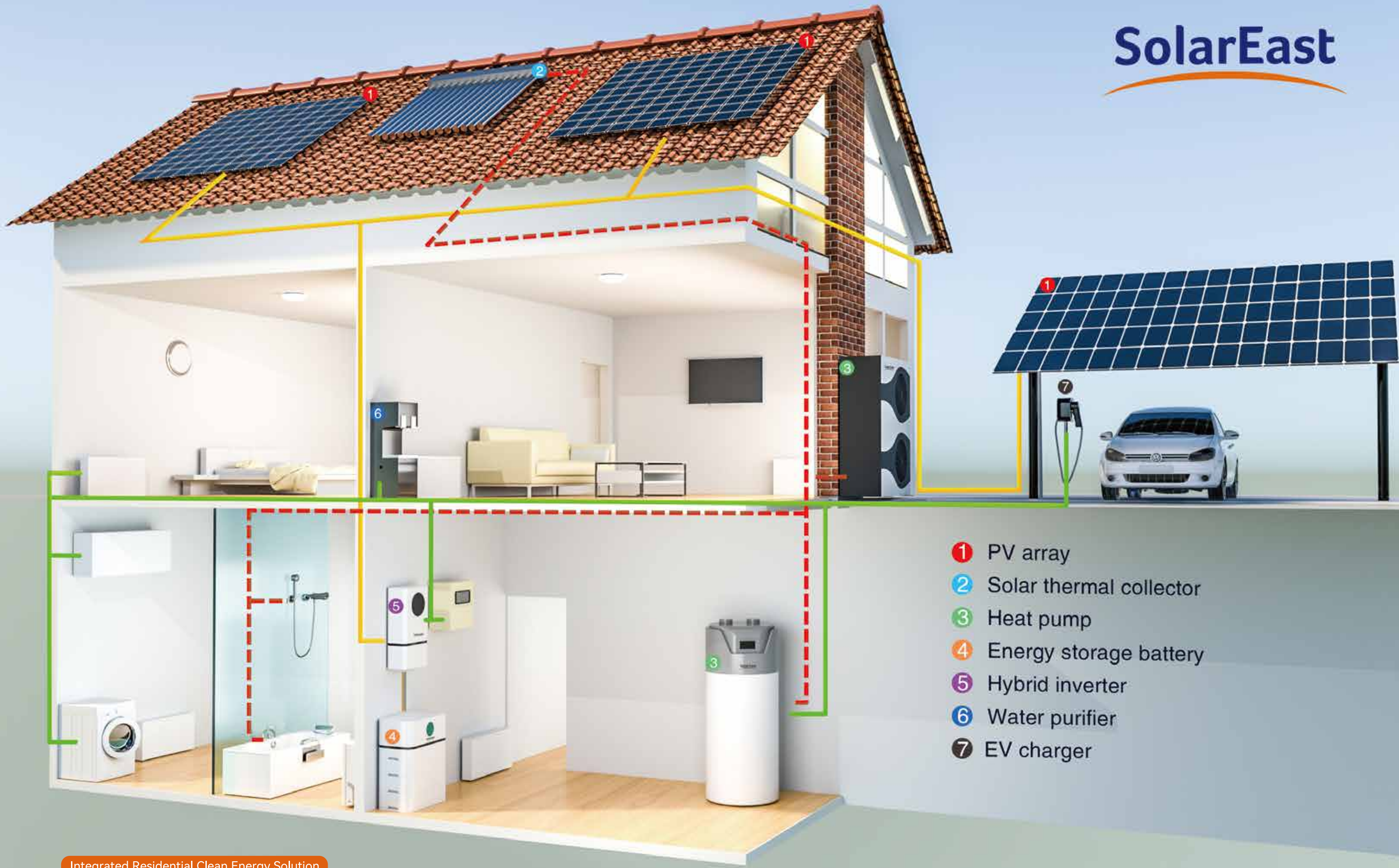
**Application scenarios:** Power supply side, grid side

Commercial & industrial users, homes, and communities, etc

**Energy type:** Clean electricity, clean thermal energy







- 1 PV array
- 2 Solar thermal collector
- 3 Heat pump
- 4 Energy storage battery
- 5 Hybrid inverter
- 6 Water purifier
- 7 EV charger

# 02 | BATTERY ENERGY STORAGE PRODUCTS

## Stack-mounted Residential ESS



### Features & Advantages

- 
**Safety**  
 LFP Battery, Intelligent BMS and protective hardware providing complete protection
- 
**Easy Installation**  
 Scalable up to 56 packs
- 
**Accuracy**  
 Dynamic SOC calibration
- 
**Durability**  
 6,000 cycles at 95% DOD
- 
**Compatibility**  
 Suitable for most mainstream inverters
- 
**Certificates**  
 IEC62619, IEC63056, IEC62477-1, IEC60730, UN38.3, MSDS, IEC61000, IEC62040

### Technical Specifications

Model	PowerCool-LFP-HV2					
Battery type	LFP					
Number of connection	2pcs	3pcs	4pcs	5pcs	6pcs	7pcs
Total energy	10.24kWh	15.36kWh	20.48kWh	25.6kWh	30.72kWh	35.84kWh
Usable energy	9.72kWh	14.59kWh	19.45kWh	24.32kWh	29.18kWh	34.04kWh
Max.parallel strings	8P					
Voltage	102.4V	153.6V	204.8V	256V	307.2V	358.4V
Nominal charging voltage	115.2V	172.8V	230.4V	288V	345.6V	403.2V
Max. charging current	50A					
Nominal discharging current	50A					
Discharge cut-off voltage	89.6V	134.4V	179.2V	224V	268.8V	313.6V
Battery efficiency	95%					
Battery Protection	Over-current/Over-voltage/Short-circuit/Under-voltage/Over temperature					
Maximum recommended DOD	95%					
Communication	CAN,RS485					
IP rating	IP66					
Operating temperature	0 ~ 55°C					
Altitude	≤5,000m					
Humidity	5% ~ 95%					
Warranty	10 years (5 free warranty + 5 paid warranty)					
Dimension	(660±2) * (390±2) * (515±3) mm	(660±2) * (390±2) * (665±3) mm	(660±2) * (390±2) * (815±7) mm	(660±2) * (390±2) * (965±9) mm	(660±2) * (390±2) * (1115±9) mm	(660±2) * (390±2) * (1265±9) mm
Net weight	(117±2)kg	(152±4)kg	(197±6)kg	(242±8)kg	(287±8)kg	(332±8)kg
Certificates	CE-EMC,IEC62619,IEC62477,IEC62040,IEC62100,IEC60068-2-52,IEC60730,UN38.3,MSDS					
Installation	Stacked Installation					



## Stack-mounted Residential ESS



### Features & Advantages

**Safety**  
LFP Battery, Intelligent BMS and protective hardware providing complete protection

**Accuracy**  
Dynamic SOC calibration

**Compatibility**  
Suitable for most mainstream inverters

**Easy Installation**  
Stackable up to 7 packs

**Durability**  
6,000 cycles at 95% DOD

**Certificates**  
IEC62619, IEC63056, IEC62477-1, IEC60730, UN38.3, MSDS

### Technical Specifications





Model	PowerCool-LFP-LV						
Battery type	LFP						
Number of connection	1pcs	2pcs	3pcs	4pcs	5pcs	6pcs	7pcs
Total energy	5.22kWh	10.44kWh	15.66kWh	20.88kWh	26.11kWh	31.33kWh	36.55kWh
Usable energy	4.96kWh	9.92kWh	14.88kWh	19.84kWh	24.80kWh	29.76kWh	34.72kWh
Voltage	51.2V						
Max. charging voltage	57.6V						
Nominal charging current	50A	100A	150A	160A	160A	160A	160A
Discharging cut-off voltage	44.8V						
Max. Battery efficiency	95%						
Max. recommended DOD	95%						
Communication	RS485/CAN						
IP rating	IP55						
Operating temperature	-10 ~ 50°C						
Altitude	≤5,000m						
Humidity	5% ~ 95%						
Warranty	10 years (5 free warranty + 5 paid warranty)						
Dimension	720*420*458mm	720*420*608mm	720*420*758mm	720*420*908mm	720*420*1058mm	720*420*1208mm	720*420*1358mm
Net weight	63kg	113kg	163kg	213kg	263kg	313kg	363kg
Certificates	CE, IEC62619, IEC61000, IEC62040, IEC63056, UN38.3, MSDS						

Model	PowerCool-LFP-HV						
Battery type	LFP						
Number of connection	2pcs	3pcs	4pcs	5pcs	6pcs	7pcs	
Total energy	10.44kWh	15.66kWh	20.88kWh	26.11kWh	31.33kWh	36.55kWh	
Usable energy	9.92kWh	14.88kWh	19.84kWh	24.80kWh	29.76kWh	34.72kWh	
Voltage	102.4V	153.6V	204.8V	256V	307.2V	358.4V	
Nominal charging voltage	115.2V	172.8V	230.4V	288V	345.6V	403.2V	
Max. charging/discharging current	50A						
Discharge cut-off voltage	89.6V	134.4V	179.2V	224V	268.8V	313.6V	
Max. Battery efficiency	95%						
Maximum recommended DOD	95%						
Communication	RS485/CAN						
IP rating	IP55						
Operating temperature	-10 ~ 50°C						
Altitude	≤5,000m						
Humidity	5% ~ 95%						
Warranty	10 years (5 free warranty + 5 paid warranty)						
Dimension	720*420*608mm	720*420*758mm	720*420*908mm	720*420*1058mm	720*420*1208mm	720*420*1358mm	
Net weight	113kg	163kg	213kg	263kg	313kg	363kg	
Certificates	CE, IEC62619, IEC61000, IEC62040, IEC63056, UN38.3, MSDS						

## Wall-mounted Residential ESS



### Features & Advantages

- 
Wall-mounted or floor-standing
- 
Safe LFP cells and smart BMS
- 
Scalable up to 30kWh
- 
6,000 cycles at 90% DOD  
15+ years design life



### Technical Specifications

Model	PowerCool-LFP-WLV5000
Total Energy*	5.12kWh
Usable Energy(DC)*	4.86kWh
Voltage	44.8~57.6Vdc
Nominal Voltage	51.2Vdc
Rated Capacity	100Ah
Max.Charge Voltage	57.6Vdc
Nominal Discharging Current	80A(1P) /160A(2P) / 160A(3P) / 160A(4P) / 160A(5P) / 160A(6P)
Nominal Charging Current	50A(1P) /100A(2P) / 150A(3P) / 160A(4P) / 160A(5P) / 160A(6P)
Weight	47kg
Dimension(mm)(H*L*W)	640*420*161.5mm
Max.recommendde DOD	95%
Operating Condition	Indoor
Operating Charge	0~55°C
Temperature Discharge	0~55°C
Standard Ambient Temperature Range	0~40°C
Storage Temperature Range	> 1 month 0~35°C / ≤1 month -20~45°C
Humidity	5% ~ 95%(RH)(No Condensation)
Over Voltage Category	II
Cooling Type	Natural cooling
Case Material	Metal
Installation	Wall-mounted or floor-standing
IP Rating	IP 20
Protective Class	I
Max.Connection Number	6P
Communication	CAN/ RS485
Battery Protection	Over-current/Over-voltage/Short circuit/ Under-voltage/Over temperature
Certificates	CE,IEC62619,IEC61000,IEC62040,IEC63056,UN38.3,MSDS
Warranty	10 years (5 free warranty + 5 paid warranty)

Testing conditions based on temperature 25°C at the beginning of life.

\*Total Energy/Usable Energy measured under specific conditions from PowerCool-LFP-WLV 0.2C CC-CV



## Vertical Residential All-in-One ESS (LV)

### Features & Advantages

- **All-in-One Design**

- AIO modular system that includes inverter, charger controller, UPS-level switching system and battery modules

- **Easy Installation & Capacity Expansion**

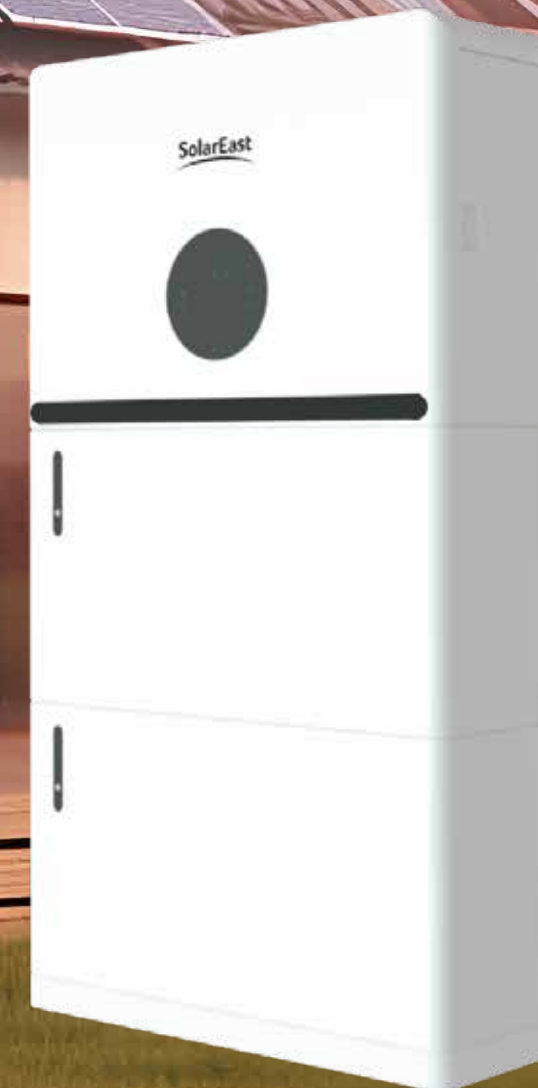
- Plug & Play modular design
- Save 50% installation time
- Save 50% installation space
- Scalable up to 30.72kWh

- **High Safety**

- IP65 outdoor design
- 3-level (cell-pack-system) protection
- AFCI standard
- Overload capacity 150% for 10mins

- **Easy Management**

- Dynamic SOC calibration
- RSD Ready & VPP Ready
- Support remote monitoring through mobile phone APP & global Cloud platform available



## Technical Specifications

	Ares 3KAL	Ares 3.6KAL	Ares 4KAL	Ares 4.6KAL	Ares 5KAL	Ares 5.5KAL	Ares 6KAL
<b>PV Input</b>							
Max. Input Power	4.5 kW	5.4 kW	6.0 kW	6.9 kW	7.5 kW	8.3 kW	9.0 kW
Max. PV Voltage	550 V						
MPPT Range	80-500 V						
Full MPPT Range	90 - 500 V	110 - 500 V	120 - 500 V	130 - 500 V	150 - 500 V	160 - 500 V	170 - 500 V
Normal Voltage	360 V						
Startup Voltage	100 V						
Max. Input Current	18.5 x 2 A						
Max. Short Current	26 x 2 A						
No. of MPP Tracker / No. of PV String	2/2						
<b>Battery Port</b>							
Max. Charge/Discharge Power	3.0 kW	3.6 kW	4.0 kW	4.6 kW	5.0 kW	5.5 kW	6.0 kW
Max. Charge/Discharge Current	80 A						
Battery Normal Voltage	51.2 V						
Battery Voltage Range	40 - 60 V						
Battery Type	Li-ion / Lead-acid etc.						
<b>AC Grid</b>							
Max Continuous Current	14.0 A	17.0 A	19.0 A	22.0 A	23.0A	26.0 A	28.0 A
Max Continuous Power	3.0 kVA	3.6 kVA	4.0 kVA	4.6 kVA	5.0 kVA	5.5 kVA	6.0 kVA
Nominal Grid Current	13.7 / 13.1 A	16.4 / 15.7 A	18.2 / 17.4 A	21.0 / 20.0 A	22.8 / 21.8 A	25.0 / 24.0 A	27.3 / 26.1 A
Nominal Grid Voltage	198 to 242 @ 220 / 207 to 253 @ 230 V						
Nominal Grid Frequency	50 / 60 Hz						
Power Factor	0.999 (Adjustable from 0.8 overexcited to 0.8 underexcited)						
Current THD	< 3 %						
<b>AC Load Output(Back-up)</b>							
Max Continuous Current	14.0 A	17.0 A	19.0 A	22.0 A	23.0 A	26.0 A	28.0 A
Max Continuous Power	3.0 kVA	3.6 kVA	4.0kVA	4.6 kVA	5.0 kVA	5.5 kVA	6.0 kVA
Max Peak Current (10min)	20.5 / 19.6A	24.6 / 23.5A	27.3 / 26.1A	31.4 / 30A	34.1 / 32.7A	37.8 / 36.1A	41.0 / 39.2A
Max Peak Power (10min)	4.5 kVA	5.4 kVA	6.0 kVA	6.9 kVA	7.5 kVA	8.3 kVA	9.0 kVA
Nominal AC Voltage L-N	220 / 230 V						
Nominal AC Frequency	50 / 60 Hz						
Switching Time	< 10 ms						
Voltage THD	< 3 c						
<b>Efficiency</b>							
CEC Efficiency	97.0 %						
Max. Efficiency	97.6 %						
PV to Bat. Efficiency	98.1 %						
Bat. between AC Efficiency	96.8 %						
<b>Protection</b>							
PV Reverse Polarity Protection	Yes						
Over Current/Voltage Protection	Yes						
Anti-Islanding Protection	Yes						
AC Short Circuit Protection	Yes						
Residual Current Detection	Yes						
Ground Fault Monitoring	Yes						
Insulation Resister Detection	Yes						
PV Arc Detection	Yes						
Enclosure Protect Level	IP65 / NEMA4X						

	Ares 3KAL	Ares 3.6KAL	Ares 4KAL	Ares 4.6KAL	Ares 5KAL	Ares 5.5KAL	Ares 6KAL
<b>General Data</b>							
Dimensions (W*H*D)	600 x 430 x 210 mm						
Weight	25 kg						
Topology	Transformerless						
Cooling	Intelligent Fan						
Relatively Humidity	0-100 %						
Operating Temperature Range	-25 to 60 °C						
Operating Altitude	≤ 2000 <sup>o</sup> m						
Noise Emission	< 25 dB						
Standby Consumption	< 10 W						
Mounting	Wall Bracket						
Communication with RSD	SUNSPEC						
Display & Communication Interfaces	LCD, LED, RS485, CAN, Wi-Fi, GPRS, 4G						
Certification & Approvals	NRS097, G98/G99, EN50549-1, C10/C11, AS4777.2, VDE-AR-N4105, VDE0126, IEC62109-1, IEC62109-2						
EMC	EN61000-6-2, EN61000-6-3						
<b>Battery Cell Technology</b>							
	<b>PowerCool-LFP-VLV</b>						
Number of Pack	1pcs	2pcs	3pcs	4pcs	5pcs	6pcs	
Total Energy*	5.12 kWh	10.24 kWh	15.36 kWh	20.48 kWh	25.6 kWh	30.72 kWh	
Usable Energy*	4.86 kWh	9.72 kWh	14.59 kWh	19.45 kWh	24.32 kWh	29.18 kWh	
Voltage Range	44.8 ~ 57.6 Vd.c						
Nominal Voltage	51.2 V						
Max. Charge Voltage	57.6 V						
Max. Continuous Charging Current	50 A	100 A	150 A	160 A	160 A	160 A	160 A
Max. Continuous Discharge Current	50 A	100 A	150 A	160 A	160 A	160 A	160 A
DOD	95 %						
Communication	CAN						
Dimension(L*W*H)	(600±2) * (215±2) * (360±3) mm	(600±2) * (215±2) * (680±5) mm	(600±2) * (215±2) * (1000±7) mm	(600±2) * (215±2) * (1320±9) mm	(600±2) * (215±2) * (1640±9) mm	(600±2) * (215±2) * (1960±9) mm	(600±2) * (215±2) * (1960±9) mm
Net Weight	(50±2) kg	(97±4) kg	(144±6) kg	(191±6) kg	(238±6) kg	(285±6) kg	
Operating Condition	Indoor or outdoor						
Operating Temperature	Charging	0~55 °C					
	Discharging	0~55 °C					
Humidity	15% ~ 85% (No Condensation)						
Cooling Type	Natural						
IP Rating	IP66						
Installation Method	Stacked installation						
Warranty	10 years (5 free warranty + 5 paid warranty)						
Configuration	IEC62619,IEC63056,IEC61000-6-1,IEC61000-6-3,IEC62477-1,IEC60730,IEC62040,UN38.3,MSDS						

Testing conditions based on temperature 25°C at the beginning of life.

\*Total Energy/Usable Energy measured under specific conditions from PowerCool-LFP 0.2C CC-CV



## Rack-mounted Residential ESS



### Features & Advantages

- 🛡️

**Safety**  
LFP Battery, Intelligent BMS and protective hardware providing complete protection
- 🔧

**Easy Installation**  
Support parallel connection number up to 10
- 📏

**Accuracy**  
Dynamic SOC calibration
- 🔋

**Durability**  
6,000 cycles at 95% DOD, 15+ years design life
- 🔌

**Compatibility**  
Suitable for most mainstream inverters
- 📄

**Certificates**  
CE/IEC62619/IEC63056/IEC62040 /UN38.3/MSDS



### Technical Specifications

Model	PowerCool-LFP-5000
Battery Type	LFP
Total Energy	5.22kWh
Usable Energy	4.96kWh
Voltage	51.2V
Cell capacity	102Ah
Max. parallel connection number	10P
Max. charging voltage	57.6V
Nominal charging current	50A(single) /100A(multiple in parallel)
Nominal discharging current	80A(single) /100A(multiple in parallel)
Discharge cut-off voltage	44.8V
Battery efficiency	95%
Max. recommended DOD	95%
Communication	RS485/CAN
IP rating	IP20
Operating temperature	0 ~ 50°C
Cooling Type	Natural cooling
Altitude	≤5,000m
Humidity	5% ~ 95%(No condensed water)
Battery Protection	Over-current/Over-voltage/Short-circuit/Under-voltage/Over temperature
Warranty	10 years (5 free warranty + 5 paid warranty)
Dimension	560*390*138mm
Net weight	45kg
Case Material	Metal
Color	Black
Installation	Ground Installation

Testing conditions based on temperature 25°C at the beginning of life.

\*Total Energy/Usable Energy measured under specific conditions from PowerCool-LFP 0.2C CC-CV

# 03 | HYBRID INVERTER

## Single-phase Hybrid Inverter



### Features & Advantages

- Support Time-of-use Optimization
- Configurable Operation Modes
- AFCI (Optional) & Rapid Shutdown Ready
- Build-in Anti-feed-in Function
- 100% unbalanced output, each phase;  
200% unbalanced output, each phase (Below 10kW)
- Smart Monitoring & Remote Firmware Upgrade

### Technical Specifications

PV Input	Ares 3.6KL	Ares 5KL	Ares 6KL
Max. Input Power	5.4kW	7.5kW	9.0kW
Max. PV Voltage	550V		
MPPT Range	80 - 500V		
Full MPPT Range	110 - 500V	150 - 500V	170 - 500V
Normal Voltage	360V		
Startup Voltage	100V		
Max. Input Current	18.5 x 2A		
Max. Short Current	26 x 2A		
No.of MPP Tracker/No. of PV String	2 / 2		
Battery Port			
Max. Charge/Discharge Power	3.6kw	4.8kw	4.8kw
Max. Charge/Discharge Current	80A		
Battery Normal Voltage	51.2V		
Battery Voltage Range	40 - 60V		
Battery Type	Li-ion / Lead-acid etc.		
AC Grid			
Max Continuous Current	17.0A	23.0A	28.0A
Max Continuous Power	3.6kVA	5.0kVA	6.0kVA
Nominal Grid Current	16.4/15.7A	22.8 / 21.8A	27.3 / 26.1A
Nominal Grid Voltage	198 to 242 @ 220 / 207 to 253 @ 230V		
Nominal Grid Frequency	50 / 60 Hz		
Power Factor	0.999 (Adjustable from 0.8 overexcited to 0.8 underexcited)		
Current THD	< 3%		
AC Load Output			
Max Continuous Current	17.0A	23.0A	28.0A
Max Continuous Power	3.6kVA	5.0kVA	6.0kVA
Max Peak Current (10min)	24.6/23.5A	34.1 / 32.7A	41.0 / 39.2A
Max Peak Power(10min)	5.4kVA	7.5kVA	9.0kVA
Nominal AC Current	16.4 / 15.7A	22.8 / 21.8A	27.3 / 26.1A
Nominal AC Voltage L-N	220/230V		
Nominal AC Frequency	50/60Hz		
Switching Time	Seamless s		
Voltage THD	< 3%		
Efficiency			
CEC Efficiency	97.0%		
Max. Efficiency	97.6%		
PV to Bat. Efficiency	98.1%		
Bat. between AC Efficiency	96.8%		
Protection			
PV Reverse Polarity Protection	Yes		
Over Current/Voltage Protection	Yes		
Anti-Islanding Protection	Yes		
AC Short Circuit Protection	Yes		
Residual Current Detection	Yes		
Ground Fault Monitoring	Yes		
Insulation Resister Detection	Yes		
PV Arc Detection	Yes		
Enclosure Protect Level	IP65/NEMA4X		
General Data			
Dimensions	370 x 535 x 192mm		
Weight	18.5kg	20.5kg	
Topology	Transformerless		
Cooling	Intelligent Fan		
Relatively Humidity	0 - 100%		
Operating Temperature Range	-25 to 60°C		
Operating Altitude	< 4000m		
Noise Emission	<25dB		
Standby Consumption	<10W		
Mounting	Wall Bracket		
Communication with RSD	SUNSPEC		
Display & Communication Interfaces	LCD, LED, RS485, CAN, Wi-Fi, GPRS, 4G		
Certification & Approvals	NRS097, G98/G99, EN50549-1, C10/C11, AS4777.2, VDE-AR-N4105, VDE0126, IEC62109-1, IEC62109-2		
EMC	EN61000-6-2, EN61000-6-3		



## Three-phase Hybrid Inverter



### Features & Advantages

- Support Time-of-use Optimization
- Configurable Operation Modes
- AFCI (Optional) & Rapid Shutdown Ready
- Build-in Anti-feed-in Function
- 100% unbalanced output, each phase;  
200% unbalanced output, each phase (Below 10kW)
- Smart Monitoring & Remote Firmware Upgrade

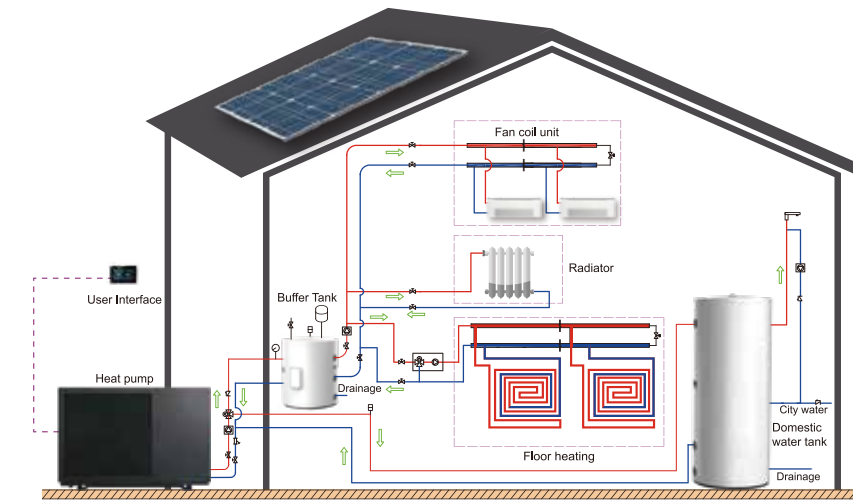
### Technical Specifications

PV Input	Ares 8KH3	Ares 12KH3	Ares 15KH3	Ares 17KH3
Max. DC Input Power	12kW	18kW	22.5kW	25.5kW
Max. PV Voltage		1000V		
Rated DC Input Voltage		620V		
DC Input Voltage Range		150-1000V		
MPPT Voltage Range		150-850V		
Full MPPT Range	300-850V	500-850V	500-850V	500-850V
Start-up Voltage		160V		
Max. DC Input Current	20x2A	20x2A	20+32A	32x2A
Max. Short Current	30x2A	30x2A	30+48A	48x2A
No. of MPPT Tracker / Strings	2/2	2/2	2/3	2/4
Battery Port				
Battery Nominal Voltage	300V	450V	500V	400V
Battery Voltage Range	150-800V	150-800V	150-800V	150-800V
Max. Charge/Discharge Current	30A	30A	50A	50A
Max. Charge/Discharge Power	8kW	12kW	15kW	17kW
Charging Curve		3 Stages		
Compatible Battery Type	Li-ion / Lead-acid / Sodium metal chloride battery			
AC Grid				
Nominal AC Output Power	8kW	12kW	15kW	17kW
Max. AC Input/Output Power	12/8.8kVA	18/13.2kVA	22.5/16.5kVA	25.5/18.7kVA
Max. AC Output Current	17A	21.5A	27A	30A
Nominal AC Voltage	230/400V			
Nominal AC Frequency	50/60Hz			
Power Factor	1 (-0.8-0.8) adjustable			
Current THD	<3%			
AC Load Output (Back-up)				
Nominal Output Power	8000VA	12000VA	15000VA	17000VA
Nominal Output Voltage	230/400V			
Nominal Output Frequency	50/60Hz			
Nominal Output Current	11.6A	17.4 A	21.8A	24.7A
Peak Output Power	8800VA, 60s	13200VA, 60s	16500VA, 60s	18700VA, 60s
THDV (with linear load)	<3%			
Switching Time	<10ms			
Efficiency				
Europe Efficiency	97.50%	97.50%	97.50%	97.80%
Max. Efficiency	98.20%	98.30%	98.30%	98.30%
Battery Charge/Discharge Efficiency	98.00%			
Protection				
Reverse Polarity Protection	Yes			
Over Current / Voltage Protection	Yes			
Anti-islanding Protection	Yes			
AC Short-circuit Protection	Yes			
Leakage Current Detection	Yes			
Ground Fault Monitoring	Yes			
Grid Monitoring	Yes			
Enclosure Protect Level	IP65			
AC/DC surge protection	Type II			
General Data				
Dimensions	558 x 535 x 260 mm			
Weight	29kg			
Topology	Transformerless			
Cooling Concept	Intelligent Fan			
Relatively Humidity	0-100%			
Operating Temperature Range	-25 to 60°C			
Operating Altitude	<4000m			
Noise Emission	<30dB	<40dB	<40dB	<40dB
Standby Consumption	<5W			
Display & Communication Interfaces	LCD, LED, RS485, CAN, Wi-Fi, GPRS, 4G			
Certification & Approvals	NRS097, G98/G99, EN50549-1, C10/C11, AS4777.2, VDE-AR-N4105, VDE0126, IEC62109-1, IEC62109-2			
EMC	EN61000-6-2, EN61000-6-3			

# 04 | AIR SOURCE HEAT PUMP

## MONOBLOCK HEAT PUMP

Heating / Cooling / DHW / DC Inverter / Residential Type



### Features & Advantages



- R290 refrigerant, low GWP (GWP=3)
- Energy class: A+++
- Stable operation at -25°C
- Outlet water temperature up to 75°C
- Power Detection Function
- SG-READY Function
- 5-Inch TFT True Color Screen
- 5G/2.4G Compatible WIFI Module
- Dual Temperature Zone
- Reserved RS485 Communication Port
- Linkage Control with PV Function

Model		BLN-006TC1	BLN-008TC1	BLN-008TC3	BLN-012TC1	BLN-012TC3	BLN-018TC1	BLN-018TC3
Power supply	V/Ph/Hz	220-240/1/50	220-240/1/50	380-415/3/50	220-240/1/50	380-415/3/50	220-240/1/50	380-415/3/50
Nominal Heating (Max) (A7/6°C, W30/35°C)	Heating capacity	kW 2.92 ~ 9.10	4.10 ~ 12.10	4.10 ~ 12.10	4.30 ~ 15.20	4.30 ~ 15.20	7.24 ~ 21.90	7.24 ~ 21.90
	Power input	kW 0.61 ~ 2.11	0.79 ~ 2.85	0.79 ~ 2.85	0.87 ~ 3.73	0.87 ~ 3.73	1.50 ~ 5.88	1.50 ~ 5.88
	Current input	A 2.80 ~ 9.25	3.45 ~ 13.04	3.45 ~ 13.04	4.02 ~ 16.38	4.02 ~ 16.38	6.86 ~ 30.25	6.86 ~ 30.25
Nominal Heating (Max) (A7/6°C, W47/55°C)	COP	W/W 4.31 ~ 5.66	4.24 ~ 5.57	4.24 ~ 5.57	4.07 ~ 5.57	4.07 ~ 5.57	3.82 ~ 5.59	3.82 ~ 5.59
	Heating capacity	kW 2.99 ~ 8.16	4.05 ~ 12.15	4.05 ~ 12.15	4.25 ~ 14.55	4.25 ~ 14.55	6.36 ~ 19.45	6.36 ~ 19.45
	Power input	kW 1.03 ~ 2.92	1.38 ~ 4.06	1.38 ~ 4.06	1.45 ~ 4.28	1.45 ~ 4.28	2.15 ~ 6.85	2.15 ~ 6.85
Nominal Cooling (Max) (A35/24°C, W12/7°C)	Current input	A 4.57 ~ 12.79	5.73 ~ 17.70	5.73 ~ 17.70	6.71 ~ 18.80	6.71 ~ 18.80	9.84 ~ 30.12	9.84 ~ 30.12
	COP	W/W 2.79 ~ 3.46	2.99 ~ 3.45	2.99 ~ 3.45	2.83 ~ 3.45	2.83 ~ 3.45	2.84 ~ 3.57	2.84 ~ 3.57
	Cooling capacity	kW 1.38 ~ 5.70	3.65 ~ 8.59	3.65 ~ 8.59	3.65 ~ 11.04	3.65 ~ 11.04	4.55 ~ 17.20	4.55 ~ 17.20
ERP level (outlet water temp. at 35°C)	/	A+++	A+++	A+++	A+++	A+++	A+++	A+++
Max. input power	kW	3.5	5.40	5.85	5.40	5.85	7.5	10.5
Max. input current	A	15.0	25.0	10.0	25.0	10.0	35.0	17.0
Refrigerant Type / Charge / GWP	... / kg	R290 / 0.55 / 3	R290 / 1.05 / 3	R290 / 1.05 / 3	R290 / 1.05 / 3	R290 / 1.05 / 3	R290 / 1.4 / 3	R290 / 1.4 / 3
Rated water flow	m³/h	1.00	1.4	1.4	2.06	2.06	3.1	3.1
Fan quantity	/	1	1	1	1	1	2	2
Fan motor type	/	DC inverter						
Compressor	/	DC inverter						
Circulating pump	/	Inverter type / Built-in						
IP class	/	IPX4						
Sound pressure at 1m distance	dB(A)	46	43	43	53	54	56	56
Max outlet water temperature	°C	75	75	75	75	75	75	75
Water piping connections	/	G1	G1	G1	G1	G1	G1 - 1 / 4	G1 - 1 / 4
Water Pressure drop	kPa	20	20	20	20	20	55	55
Operating temperature range (heating mode)	°C	-25~45						
Operating temperature range (cooling mode)	°C	16~45						
Unpacked dimensions (L*D*H)	mm	1187*418*805	1287*448*904	1287*448*904	1287*448*904	1287*448*904	1187*488*1456	1187*488*1456
Packed dimensions (L*D*H)	mm	1217*463*920	1317*493*1020	1317*493*1020	1317*493*1020	1317*493*1020	1217*538*1570	1217*538*1570
UnPacked weight	kg	110	134	134	134	134	195	195
Packed weight	kg	122	146	146	146	146	208	208

\* Please refer to the nameplate for product upgrades or changes in specifications without prior notice.



# MONOBLOCK HEAT PUMP

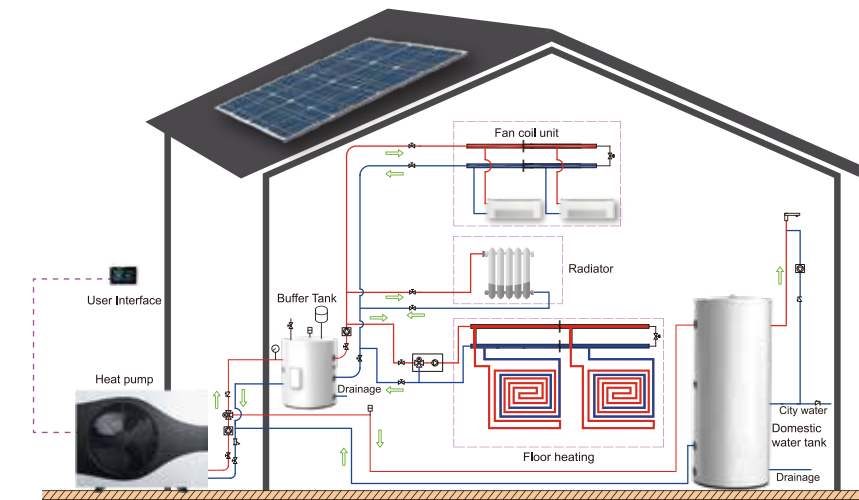
Heating / Cooling / DHW / DC Inverter / Residential Type



## Features & Advantages



- R32 environmental refrigerant
- Energy class: A+++
- Full DC inverter Panasonic compressor and fan motor
- -25°C inverter EVI
- Power Detection Function
- SG-READY Function
- 5-Inch TFT True Color Screen
- 5G/2.4G Compatible WIFI Module
- Dual Temperature Zone
- Reserved RS485 Communication Port
- Linkage Control with PV Function
- Outlet water temperature up to 60°C



Model		BLN-006TB1	BLN-010TB1	BLN-010TB3	BLN-014TB1	BLN-014TB3	BLN-018TB1	BLN-018TB3	BLN-024TB3
Power supply	V/Ph/Hz	220~240/1/50	220~240/1/50	380~415/3/50	220~240/1/50	380~415/3/50	220~240/1/50	380~415/3/50	380~415/3/50
Nominal Heating (Max) (A7/6°C,W30/35°C)	Heating Capacity	kW	2.50 ~ 8.30	4.20~12.20	4.20 ~ 12.20	5.30 ~ 16.50	5.30~16.60	6.20~20.50	6.20 ~ 20.50
	Power Input	kW	0.57 ~ 1.92	0.86 ~ 2.88	0.86 ~ 2.88	1.15 ~ 4.15	1.15 ~ 4.15	1.36 ~ 5.28	1.36 ~ 5.28
	Current Input	A	2.53 ~ 8.52	3.82 ~ 12.77	1.46 ~ 4.89	5.10 ~ 18.41	1.86 ~ 6.70	6.10 ~ 23.67	2.31 ~ 8.96
	COP	W/W	4.32 ~ 5.86	4.23 ~ 5.39	4.23 ~ 5.39	3.97 ~ 5.43	3.97 ~ 5.43	3.88 ~ 5.21	3.88 ~ 5.21
Nominal Heating (Max) (A7/6°C,W47/55°C)	Heating Capacity	kW	2.30 ~ 7.62	3.85 ~ 11.20	3.85 ~ 11.20	4.90 ~ 15.10	4.90 ~ 15.10	6.30 ~ 19.90	6.30 ~ 19.90
	Power Input	kW	0.75 ~ 2.61	1.13 ~ 3.75	1.13 ~ 3.75	1.65 ~ 5.25	1.65 ~ 5.25	1.65 ~ 6.82	1.65 ~ 6.82
	Current Input	A	3.32 ~ 11.58	5.01 ~ 16.6	1.92 ~ 6.37	7.32 ~ 23.30	1.67 ~ 8.47	7.40 ~ 30.56	2.80 ~ 11.58
	COP	W/W	2.92 ~ 3.33	2.99 ~ 3.46	2.99 ~ 3.46	2.87 ~ 3.38	2.87 ~ 3.38	2.91 ~ 3.34	2.91 ~ 3.34
Nominal Cooling (Max) (A35/24°C,W12/7°C)	Cooling Capacity	kW	1.80 ~ 7.10	2.60 ~ 10.30	2.60 ~ 10.30	4.50 ~ 13.50	4.50 ~ 13.50	5.50 ~ 17.50	5.50 ~ 17.50
	Power Input	kW	0.61 ~ 2.43	0.91 ~ 3.65	0.91 ~ 3.65	1.45 ~ 4.85	1.45 ~ 4.85	1.65 ~ 6.25	1.65 ~ 6.25
	Current Input	A	2.71 ~ 10.78	4.03 ~ 16.19	1.55 ~ 6.20	6.43 ~ 21.52	2.34 ~ 7.82	7.40 ~ 28.02	2.80 ~ 10.61
	EER	W/W	3.04	3	3.00	2.87	2.87	2.96	2.96
ERP Level (Outlet water temp. at 35°C)	/	A+++	A+++	A+++	A+++	A+++	A+++	A+++	A+++
ERP Level (Outlet water temp. at 55°C)	/	A++	A++	A++	A++	A++	A++	A++	A++
Rated input power	kW	2.71	3.83	3.83	6.20	6.20	7.50	7.50	10.00
Rated input current	A	12	17	6.5	27.50	10.50	35.00	13.00	17.00
Refrigerant Type / Charge / GWP	... / kg	R32/1.25/675	R32/1.8/675	R32/1.8/675	R32/2.8/675	R32/2.8/675	R32/3.5/675	R32/3.5/675	R32/3.5/675
Rated water flow	m³/h	1.1	1.75	1.75	2.52	2.52	3.20	3.20	4.12
Fan quantity	/	1	1	1	1	1	2	2	2
Fan motor type	/	DC inverter							
Compressor	/	Panasonic / DC inverter / Rotary / EVI							
Circulating pump	/	Inverter type / Built-in							
IP Class	/	IPX4							
Sound pressure at 1m distance	dB(A)	49	52	52	53	54	56	55	58
Max outlet water temperature	°C	60	60	60	60	60	60	60	60
Water piping connections	inch	G1	G1	G1	G1-1/4	G1-1/4	G1-1/2	G1-1/2	G1-1/2
Pressure drop at rating water flow	kPa	25	27	27	30	30	32	32	35
Operating temperature range(Heating mode) °C		-25~45							
Operating temperature range(Cooling mode) °C		16~45							
Unpacked Dimensions ( L*D*H )	mm	1100*445*850	1100*445*850	1100*445*850	1110*480*850	1110*480*850	1110*445*1450	1110*445*1450	1110*445*1450
Packed Dimensions ( L*D*H )	mm	1160*530*1010	1160*530*1010	1160*530*1010	1160*565*1010	1160*565*1010	1170*530*1610	1170*530*1610	1170*530*1610
UnPacked Weight	kg	102	107	107	124	124	151	151	160
Packed Weight	kg	114	119	119	136	136	168	168	177

\* Please refer to the nameplate for product upgrades or changes in specifications without prior notice.

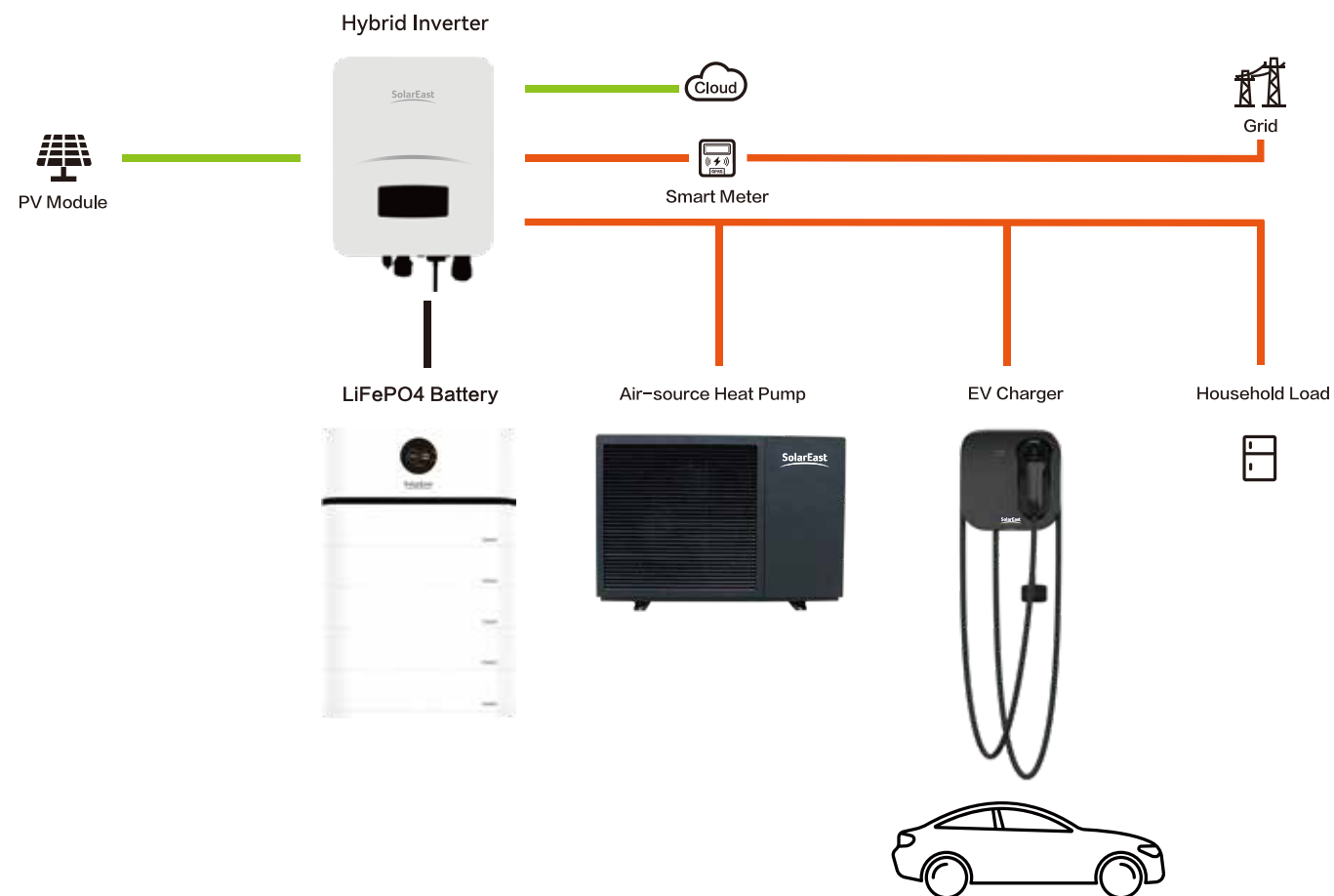
# 05 | INTEGRATED CLEAN ENERGY SOLUTION

## ▸ PV+Energy Storage+Heat Pump+EV Charger

The Company can provide customers with "PV+storage+thermal/charging" combined system, which integrates low-cost power generation with power storage, realizing clean, efficient and cost-efficient energy end use.

The system includes PV module, hybrid inverter, energy storage battery module and air-source heat pump and/or EV charger.

The PV module adopts high-efficient mono-crystalline cells, which can be installed on the roof or ground according to the specific situation of users to better achieve clean and low-cost power supply. The energy storage module stores part of the electricity generated by the photovoltaic module and uses it at night or when the light is poor, therefore improving the utilization rate of the solar panels and reducing the use cost; while the air-source heat pump module uses heat pumps for heating, which can save 70% of electricity.



## Smart Energy Management System

With our self-developed smart home terminal based on IOT technology, our products can work smoothly together and play nice with the other devices in your house, therefore improving the quality of your life in terms of automation, security, comfort, and convenience.





# 06 | PROJECT DEVELOPMENT

For those big power consumers, such as steel factories and chemical plants, the Company can work out feasibility study report and customize the energy storage facilities accordingly based on their load characteristics, with a view to helping them save power bill, postpone transformer capacity expansion, enhance utilization of PV power generation, and improve electrical safety alike through the means of peak load shifting and other avenues.

The Company provides overall solutions encompassing engineering, procurement, construction, operation & maintenance, and can offer financing for the eligible clients.



10MW/39MWh Energy Storage Station

## Overseas project cases



PV+Solar Thermal+Energy Storage Project, Tibet



PV+Storage+Thermal project for 17 elementary schools, Tibet



Industrial & Commercial Energy Storage Project, Guangdong




Heat Pump Project, Jingtu Industrial Park in Caina Town, Tibet



# 07 | FLEXIBLE COOPERATION




  
**Regional Distributors**



  
**OEM/ODM**



  
**Integrated Solutions**