



Shenzhen PowerOak Newener Co., Ltd.

+86 755 2370 5916

inquiry@bluetti.com

Office: 19F, Block A, Kaidaer Bldg., No.168 Tongsha Rd.,
Nanshan Dist., Shenzhen, Guangdong, China

Factory: PowerOak Industrial Park, No. 1 Longsheng 5th Rd.,
Dayawan West Dist., Huizhou, Guangdong, China

EN-V3.0



C&I Energy Storage Solutions



All-in-One Solution



Safe & Reliable



Intelligent Management



Highly Adaptable

BLUETTI Core Trinity

MISSION

Provide clean and independent energy for all people

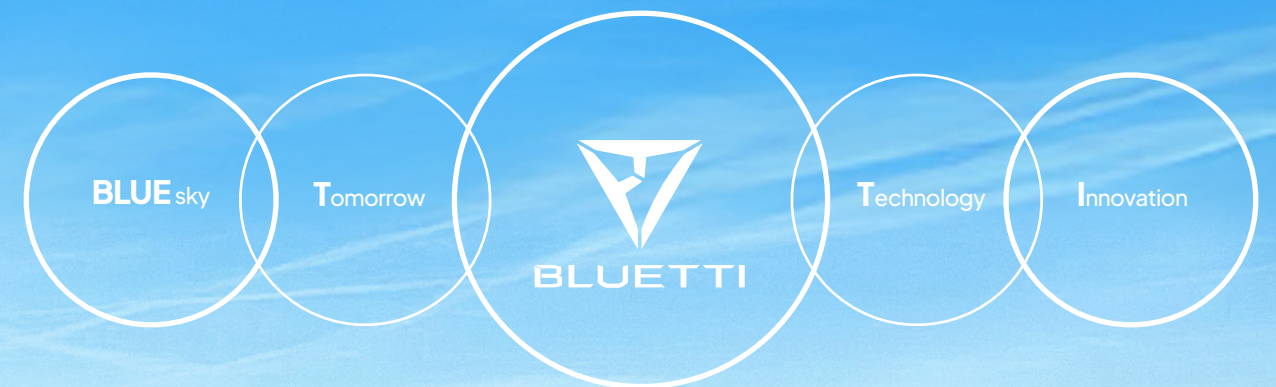
VISION

Provide energy storage solutions for every household

VALUE

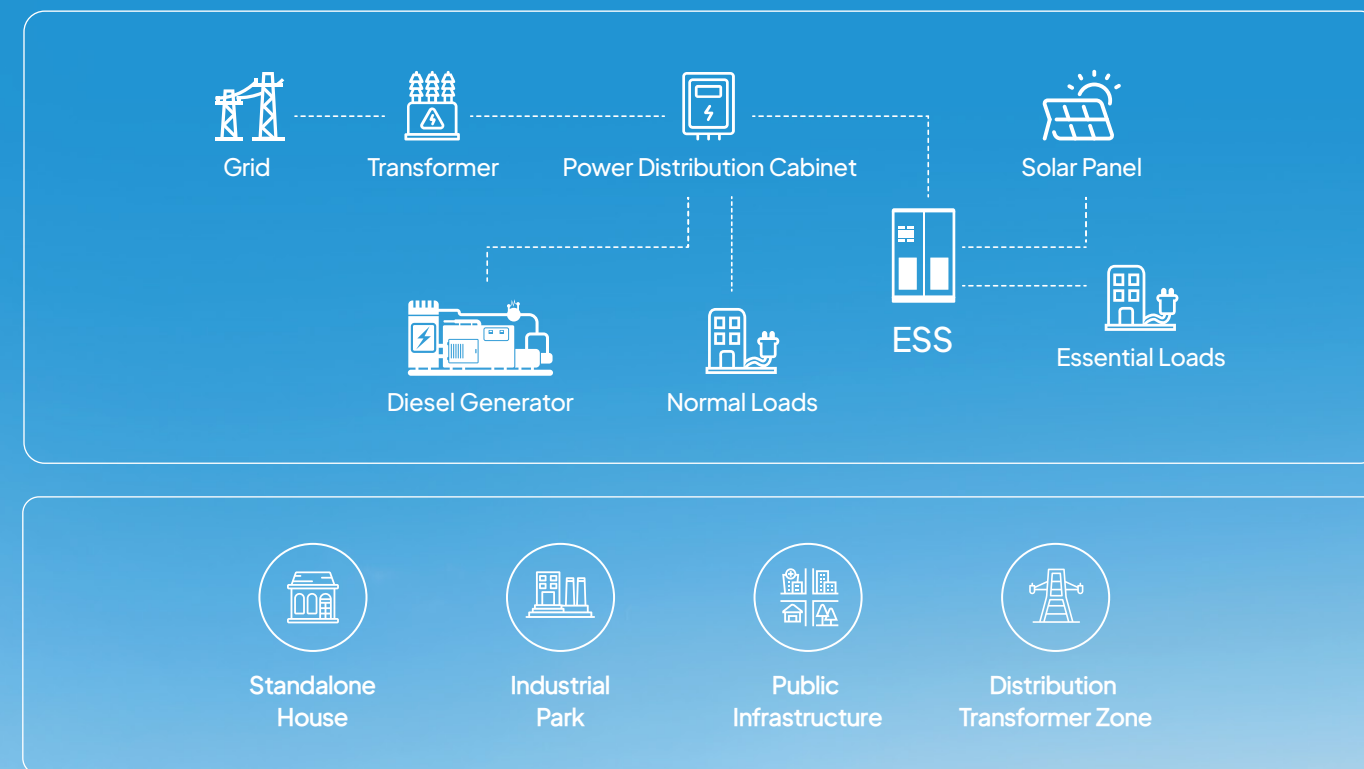
Create a better world with love and innovation

Technology Pioneer in Clean Energy



Energy Storage Solutions for C&I Applications

BLUETTI energy storage systems (ESS) are built to meet the diverse power needs of commercial and industrial settings. They cut energy costs by storing electricity during off-peak hours for use at high-demand times, maximize solar energy by saving excess power for later, expand capacity without costly upgrades, and provide reliable backup to keep operations running smoothly during outages or instability.



Case Studies



ES125 Liquid-Cooled Energy Storage System

125 kW | 257 kWh | Integrated Cabinet | Auto Grid/Off-Grid Switching



Vertical Segregated Architecture

- Top-to-bottom PCS/battery separation reduces thermal interaction.
- Front-door access allows maintenance without disassembly.
- Low CG for better seismic stability and handling.



Precise Thermal Regulation

- Industrial-grade liquid cooling keeps cell-to-cell temp difference $\leq 2.5^{\circ}\text{C}$ across -30°C to 60°C .
- Automatic coolant management reduces manual maintenance.



Industrial Strength Safety

- IP67/IP54 ratings protect against dust and water.
- High-strength Q235A steel ensures structural durability.
- Intelligent fire suppression with real-time alerts.



AI-Driven Energy Management

- Virtual capacity expansion smooths peaks, avoids grid upgrades.
- Continuous diagnostics provide early alerts, minimizing downtime and O&M.
- Single EMS coordinates PV, storage, and microgrid operation on- or off-grid.



Integrated Flexibility, Rapid Deployment

- PCS, BMS, and EMS integrated to simplify installation and operation.
- DC-coupled PV + battery boosts overall system efficiency.
- Optional PV and STS modules adapt to project-specific needs.



Professional Project Oversight

- Local warehousing and field teams shorten lead times and speed installation.
- Dedicated PMO manages project schedule, scope, and performance outcomes.

Model	ES125
PV Side (Optional)	
Rated Input Power	126 kW
Max. Input Power	140 kW
Operating Voltage	394 V to 686.8 V
Max. Input Voltage	900 V
No. of MPP Trackers/Strings	2/2
Max. Input Current	160 A $\times$ 2
Battery Side	
Battery Chemistry	LiFePO ₄
Rated Capacity	257 kWh
Battery Voltage	716.8 V to 921.6 V
Configuration	1P $\times$ 64S $\times$ 4S
Max. Charge/Discharge Current	157 A (subject to BMS strategy)
AC Side (On-Grid)	
Rated AC Power	125 kW
Rated AC Current	180 A
Max. Output Power	137.5 kW
Max. Output Current	200 A
Grid Voltage	400 V, 3W+N+PE/3W+PE
Grid Frequency	50/60 Hz
Power Factor	-1 (lagging) to +1 (leading)
THDi	< 2% (at rated power)
AC Side (Off-Grid, STS Optional)	
Rated Output Power	125 kW
Rated Output Current	180 A
Max. Output Power	137.5 kW
Max. Output Current	200 A
Output Voltage	400 V, 3W+N+PE/3W+PE
Output Frequency	50/60 Hz
THDu (Linear Load)	< 3%
Overload Capability	1.1 times rated power (continuous)
On-Grid/Off-Grid Switchover Time	< 20 ms
Certifications	
Battery	UN 38.3, IEC 62619, EMC
General	
Max. Parallel Units	2 (off-grid)/8 (grid-tied)
Operating Temperature	-30°C to 60°C (derating above 45°C)
Relative Humidity	0 to 95%
Operating Altitude	$\leq 4,000$ m (derating above 2,000 m)
Protection Rating	IP67 (battery compartment)/IP55 (electrical compartment)
Cooling Method	Liquid cooling
Noise	≤ 65 dB
Standby Power Consumption	< 100 W
Electrical Protection	Ground fault circuit interrupter (GFCI) Insulation resistance monitoring Anti-islanding protection Output overcurrent protection Short-circuit protection
Protection Class	Class I
Weight	Approx. 3,000 kg
Dimensions (W $\times$ D $\times$ H)	1,820 $\times$ 1,120 $\times$ 1,940 mm
Warranty	5 years

Note: Specifications are subject to change without notice.

ES60 Liquid-Cooled Energy Storage System

60 kW | 128 kWh | Integrated Cabinet | Auto Grid/Off-Grid Switching



Vertical Segregated Architecture

- Top-to-bottom PCS/battery separation reduces thermal interaction.
- Front-door access allows maintenance without disassembly.
- Low CG for better seismic stability and handling.



Precise Thermal Regulation

- Industrial-grade liquid cooling keeps cell-to-cell temp difference $\leq 2.5^{\circ}\text{C}$ across -30°C to 60°C .
- Automatic coolant management reduces manual maintenance.



Industrial Strength Safety

- IP67/IP54 ratings protect against dust and water.
- High-strength Q235A steel ensures structural durability.
- Intelligent fire suppression with real-time alerts.



AI-Driven Energy Management

- Virtual capacity expansion smooths peaks, avoids grid upgrades.
- Continuous diagnostics provide early alerts, minimizing downtime and O&M.
- Single EMS coordinates PV, storage, and microgrid operation on- or off-grid.



Integrated Flexibility, Rapid Deployment

- PCS, BMS, and EMS integrated to simplify installation and operation.
- DC-coupled PV + battery boosts overall system efficiency.
- Only 1.8 tons — installable with a manual pallet jack, no crane required.



Professional Project Oversight

- Local warehousing and field teams shorten lead times and speed installation.
- Dedicated PMO manages project schedule, scope, and performance outcomes.

Model	ES60
PV Side	
Max. Input Power	76.8 kW
Operating Voltage	200 V to 800 V
Max. Input Voltage	850 V
No. of MPP Trackers/Strings	2/2
Max. Input Current	64 A × 2
Battery Side	
Battery Chemistry	LiFePO ₄
Rated Capacity	128 kWh
Battery Voltage	358.4 V to 460.8 V
Configuration	1P × 64S × 2S
Max. Charge/Discharge Current	150 A (subject to BMS strategy)
AC Side (On-Grid)	
Rated AC Power	60 kW
Rated AC Current	87 A
Max. Output Power	66 kW
Max. Output Current	95.7 A
Grid Voltage	400 V, 3W+N+PE/3W+PE
Grid Frequency	50/60 Hz
Power Factor	-1 (lagging) to +1 (leading)
THDi	< 3% (at load > 30%)
AC Side (Off-Grid, STS Optional)	
Rated Output Power	60 kW
Rated Output Current	87 A
Max. Output Power	66 kW
Max. Output Current	95.7 A
Output Voltage	400 V, 3W+N+PE/3W+PE
Output Frequency	50/60 Hz
THDu (Linear Load)	< 3%
Overload Capability	1.1 times rated power (continuous) 1.25 times rated power for 100 s
On-Grid/Off-Grid Switchover Time	< 20 ms
Certifications	
Battery	UN 38.3, IEC 62619, EMC
General	
Max. Parallel Units	6 (both grid-tied and off-grid)
Operating Temperature	-30°C to 60°C (derating above 45°C)
Relative Humidity	0 to 95%
Operating Altitude	≤ 4,000 m (derating above 2,000 m)
Protection Rating	IP67 (battery compartment)/IP55 (electrical compartment)
Cooling Method	Liquid cooling
Noise	≤ 65 dB
Standby Power Consumption	< 100 W
Electrical Protection	
Ground fault circuit interrupter (GFCI) Insulation resistance monitoring Anti-islanding protection Output overcurrent protection Short-circuit protection	
Protection Class	Class I
Weight	Approx. 1,800 kg
Dimensions (W × D × H)	1,820 × 1,120 × 1,350 mm
Warranty	5 years

Note: Specifications are subject to change without notice.

ES125X Air Cooling Energy Storage System

125 kW | 241 kWh | All-in-One | Auto Grid/Off-Grid Switching



Flexible Expansion

Compact design with centralized management allows for AC-side parallel expansion as needed, maximizing space efficiency and cost savings.



All-in-One Solution

Fully integrated components pre-assembled in the factory, significantly reducing on-site installation complexity.



Modular Design

A comprehensive system includes a PV inverter, STS, isolation transformer, and battery, allowing easy expansion, maintenance, and replacement.



VSG Sync Technology

Supports up to 4 off-grid units in parallel, ensuring seamless synchronization.



Safe & Reliable

Dual fire protection for both the module and cabinet with an automatic aerosol suppression system. The advanced LFP battery cells boast 8,000+ charge cycles.



Robust Adaptability

Engineered with IP55-rated protection to withstand high temperatures and humidity—dustproof, water-resistant, shockproof, and corrosion-resistant.



Smart Operation

Comprehensive EMS monitoring, real-time cloud data, and intelligent control strategies ensure reliable performance.

PV Side (DC-Coupled, Optional)

Max. Power	120 kW
Operating Voltage	200 V to 650 V
MPPT Voltage Range (full load)	375 V to 550 V
Max. Current	80 A × 4
No. of MPP Trackers	4

Auto Grid/Off-Grid (STS Optional)

Static Transfer Switching Time	≤10 ms
Isolation Transformer	Included
Max. Off-Grid Parallel Units	4

Battery (DC Side)

Rated Capacity	241 kWh
Rated Voltage	768 V
Battery Chemistry	LiFePO ₄
Cell Capacity	314 Ah
Configuration	1P × 16S × 15S

Note: Specifications are subject to change without notice.

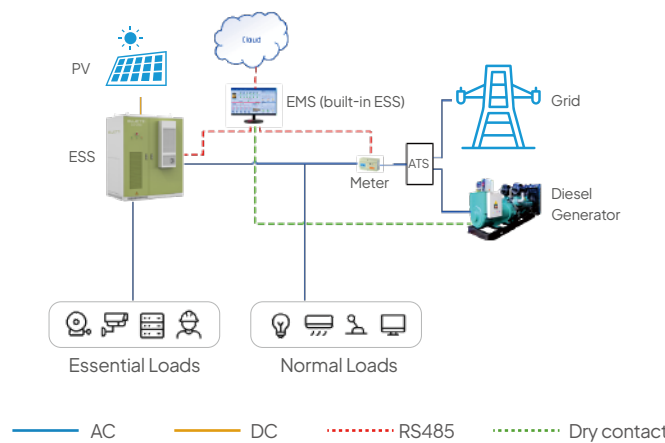
AC Output

Rated AC Power	125 kW
Rated AC Current	180 A
Rated AC Voltage	400 V, 3P+N+PE
Rated Frequency	50/60 Hz
THDi	< 3% (at rated power)
Power Factor	-1 (lagging) to +1 (leading)

System Parameters

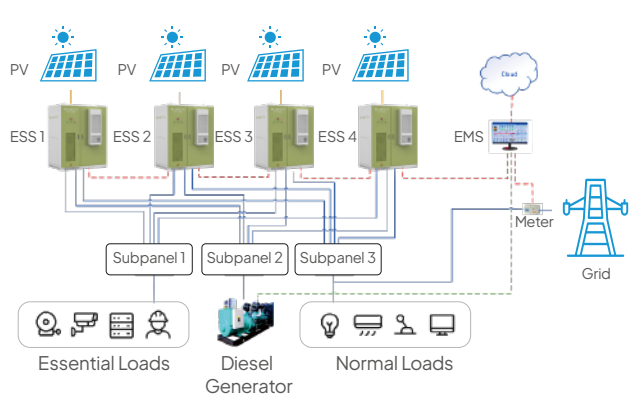
Protection Rating	IP55
Operating Temperature	-30°C to 60°C (derating above 45°C)
Operating Altitude	≤ 4,000 m (derating above 2,000 m)
Communication Interfaces	RS485/CAN 2.0/ Ethernet/Dry Contacts
Dimensions	1,800 × 1,200 × 2,300 mm
Fire Suppression System	Aerosol
Cooling Method	Air Cooling
Weight	Approx. 3,250 kg

On-grid/Off-grid: ES125X + ATS+Diesel Generator



Note: Contact BLUETTI energy experts for customized solutions.

Parallel Operation



ES125UL Liquid-Cooled Energy Storage System

125 kW | 250 kWh | Integrated Cabinet | Auto Grid/Off-Grid Switching



High Integration

Fully integrated batteries, PCS, distribution, cooling, fire suppression, and monitoring.



High Efficiency & Low LCOE

314 Ah high-density cells boost single-cabinet capacity and cut cost per kWh.



Safety & Reliability

Premium LiFePO₄ cells; IP67 battery packs and IP55 cabinet for dual-layer protection.



Intelligent Management

Local or cloud-based EMS with intelligent balancing, real-time alerts, and lifecycle consistency.

Certifications

PCS	UL 1741, CSA C22.2 No. 107.1-16, CLASS C531109, CLASS C531189, IEEE 1547.1-2020, IEEE 1547-2018, IEEE 1547a-2020
Battery Cell	UL 1973, UL 9540A
Battery Pack	UL 9540A, UL 1973, UL 60730-1, UN 38.3
System	UL 9540, UL 9540A, FCC Part 15B, UN 38.3, UN 3480

Battery Side

Configuration	1P × 260S
Nominal Capacity	250 kWh
Nominal Voltage	832 V
Voltage Range	728 V to 936 V
Life Cycle	≥ 8,000 cycles

AC Output

Rated Power	125 kW
Rated AC Voltage	480 V
Rated Current	150 A
Output Voltage Range	-10% to +5%
Rated Frequency	60 Hz
Allowable Frequency Deviation	± 3 Hz
Charge/Discharge Conversion Time	< 20 ms
THDi	< 3% (at rated power)
DC Component	< 0.5%
THDu	< 3% (linear load)
Max. AC Efficiency	90% (without aux. consumption)

General

Operating Temperature	-30°C to 55°C (derating below -15°C or above 45°C)
Operating Humidity	0 to 95%
Storage Temperature	-30°C to 55°C
Operating Altitude	≤ 4,000 m (derating above 2,000 m)
Noise	≤ 75 dB
Dimensions (W × D × H)	1,350 × 1,400 × 2,250 (2,340) mm (53.15 × 55.12 × 88.58(92.13)in)
Weight	Approx. 3,500 kg
Protection Rating	IP54
Protocol	CAN / Modbus TCP/RTU
Fire Suppression System	Aerosol
Cooling Method	Liquid-Cooling
Protection Rating	IP65 (PCS cabinet)/IP67 (battery pack)

Warranty

Standard Warranty	5 years (included)
Extended Warranty	5 or 10 years

Note: Specifications are subject to change without notice.

ES215 Liquid-Cooled Energy Storage System

215 kW | 418 kWh | Integrated Cabinet | On Grid/Off Grid



High Integration

Fully integrated batteries, PCS, distribution, cooling, fire suppression, and monitoring.

High Efficiency & Low LCOE

314 Ah high-density cells boost single-cabinet capacity and cut cost per kWh.

Safety & Reliability

Premium LiFePO₄ cells; IP67 battery packs and IP55 cabinet for dual-layer protection.

Intelligent Management

Local or cloud-based EMS with intelligent balancing, real-time alerts, and lifecycle consistency.

Model	ES215 – H8		ES215 – H6
Battery Rated Capacity	41.8 kWh		
Battery Nominal Voltage	1,331.2 V		
Battery Voltage Range	1,164.8 V to 1,497.6 V		
Battery Chemistry	LiFePO ₄		
Cell Capacity	314 Ah		
Battery Pack Configuration	1P × 52S × 8S		
Max. Charge/Discharge Current	157 A		
Rated AC Power	215 kW		
Rated AC Current	155.2 A		
Rated AC Voltage	800 Vac, 3W+PE		690 Vac, 3W+PE
Rated AC Frequency	50/60 Hz		
THDi	< 3% (at rated power)		
Power Factor	-1 (lagging) to +1 (leading)		
THDu (Linear Load)	< 3% (linear load)		
Protection Rating	IP55		
Isolation Type	None		
Self-Consumption	< 0.1% of rated power (excluding transformer)		
Display	Touch LCD		
Relative Humidity	0 to 95% (non-condensing)		
Operating Temperature	-25°C to 60°C (derating above 45°C)		
Cooling Method	Liquid cooling		
Operating Altitude	≤ 4,000 m (derating above 2,000 m)		
BMS Communication	CAN		
EMS Communication	Ethernet/RS485		
Dimensions (W × D × H)	1,600 × 1,350 × 2,300 mm		
Weight	Approx. 3,900 kg		

Note: Specifications are subject to change without notice.

B240 Air-Cooled Battery Cabinet

241 kWh | LiFePO₄ | 8,000+ Cycles



Model	B240
Rated Battery Capacity	241 kWh
Nominal Voltage	768 V
Battery Chemistry	LiFePO ₄
Cell Capacity	314 Ah
Pack Configuration	1P × 16S × 15S
Rated Charge/Discharge Rate	0.5 C
Protection Rating	IP55
Dimensions (W × D × H)	1,140 × 1,170 × 2,345 mm
Weight	Approx. 2,400 kg
Operating Temperature	-20°C to 55°C
Cooling Method	Air cooling
Relative Humidity	0 to 95% (non-condensing)
Noise	≤ 75 dB
Communication Interface	CAN/RS485
Max. Parallel Units	8
Parallel Combiner Cabinet	Custom
PCS Cabinet	250 kW/375 kW/500 kW/1,000 kW (custom)

Note: Specifications are subject to change without notice.



High Safety

Premium LiFePO₄ cells with dual-layer aerosol suppression deliver long life and full-system fire protection.



Rugged, Industrial Design

IP55 steel enclosure resists dust, water, impact, and corrosion for industrial reliability.



Three-Layer BMS

BMU-BCU-BMU architecture ensures millisecond fault isolation and full-system monitoring.



Modular Expansion

Supports 8 parallel DC strings for long-duration operation.

EP2000 Air-Cooled Energy Storage System

20-60 kW | 14.7-154.8 kWh | Modular Design | Auto Grid/Off-Grid Switching



All-in-One Solution

Fully integrated with PV inverters and all essential components, ensuring stable and reliable performance.



Robust Performance

Delivers up to 90 kW PV input, 60 kW AC output, and 154.8 kWh capacity.



Modular Design

Scale your system effortlessly by stacking multiple battery modules to meet evolving energy demands.



Six-Level Safety Protection

Comprehensive safety features from battery cells to the entire system guarantee top-tier protection.



High Conversion Efficiency

Achieve maximum returns with an inverter efficiency of up to 98%, optimizing energy conversion.



Cloud-Based Operation & Maintenance

Manage and monitor your system remotely via an exclusive app for streamlined and efficient maintenance.

Configurations	Single system (with 2-7 × B700)	2 systems in parallel (with 4-14 × B700)	3 systems in parallel (with 6-21 × B700)
Capacity	14.7 kWh-51.6 kWh	29.4 kWh-103.2 kWh	44.1 kWh-154.8 kWh
Output Power (On-grid)	20 kW	40 kW	60 kW
Output Power (Off-grid with PV input)			
Output Power (Off-grid without PV input)	10.5 kW-20 kW	21 kW-40 kW	31.5 kW-60 kW
Max. Solar Input	30 kW	60 kW	90 kW

EP2000 Hybrid Inverter

General

Operating Temperature	-20°C to 60°C (derating over 45°C)	Warranty	10 years
Noise	≤ 50 dB	Dimensions	670 × 280 × 460 mm
Net Weight	60 kg	Input Frequency	50 Hz
Cooling Method	Forced air cooling	Switchover Time to Backup Power	< 10 ms
Connectivity	USB/Wi-Fi/Bluetooth	Phase	3L/N/PE
Protection Rating	NEMA 4X/IP65		

PV Input

Max. Power	30 kW
MPPT Voltage Range/Rated	160 V to 850 V/500 V
MPPT Channels	2
Max. Input Current per String	15 A
Short Circuit Current per String	20 A

AC Output (Backup)

Rated Power	20 kW
Rated Voltage	230/400 V
Frequency	50 Hz

B700 Modular Battery

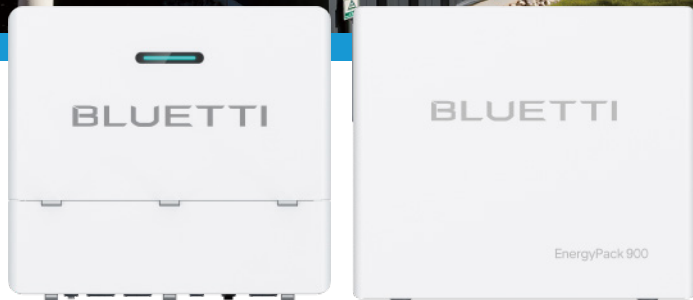
General

Battery Chemistry	LiFePO ₄	Net Weight	72 kg
Capacity	7,372.8 Wh	Dimensions	670 × 280 × 386 mm
Protection Rating	IP65		

Note: Specifications are subject to change without notice.

EnergyPro 19K Air-Cooled Energy Storage System

19.2-57.6 kW | 18-163 kWh | Modular Design | Auto Grid/Off-Grid Switching



EnergyPro 19K Hybrid Inverter

EnergyPack 900 Modular Battery Pack



All-in-One Solution

Hybrid inverter, battery, and EMS fully integrated in one system.



Modular Design

Quick to install, easy to deploy and service, and simple to expand.



Advanced LiFePO₄ Battery

Premium cells delivering 6,500+ deep cycles for long-lasting performance.



Scalable Energy

19.2–57.6 kW output, 18–163 kWh capacity — scale to fit your needs.



Certified Safety

Compliant with UL9540/9540A, UL1973, and NFPA 855 for proven reliability.



10-Year Warranty

Long-term protection and reliable support.

EnergyPro 19K Inverter	EnergyPack 900 Battery	Rated On/Off-Grid Output Power (kW)	Capacity (kWh)
1	2	19.2	18
	4		36
	6		54
2	4	38.4	36
	8		72
	12		108
3	6	57.6	54
	12		108
	18		163

EnergyPro 19K Hybrid Inverter

PV Input (DC-Coupled)

Max. Power	24 kW
MPPT Voltage Range/Rated	150 V to 470 V/380 V
MPPT Channels	4
Max. Input Current per String	16 A
Short Circuit Current per String	25 A

AC Output (Backup)

Rated Power	19.2 kW
Continuous Current	80 A (RMS)
Load Start Capability	185 LRA (1s)
Rated Voltage	120 V/240 V
Phase	L1/L2/N/G (split-phase)
Frequency	60 Hz
UPS Switchover Time	< 20 ms

General

Operating Temperature	–20°C to 55°C
Noise	60 dB Max., <50 dB (typical)
Net Weight	55 kg
Cooling Method	Forced air cooling
Connectivity	USB/Wi-Fi/Bluetooth
Protection Rating	NEMA 3R
Warranty	10 years
Dimensions	738 × 608 × 250 mm

EnergyPack 900 Battery

Battery Chemistry	LiFePO ₄
Capacity	9.04 kWh
Depth of Discharge (DoD)	90%
Net Weight	95 kg
Protection Rating	IP65/NEMA 4X
Dimensions	738 × 608 × 250 mm
Operating Temperature	–20°C to 55°C

ClearWa 30 Water Purification System

2 tons/hr Production Capacity (1 ton/hr Pure Water + 0.5 ton/hr Purified Water)



Fully Automated

Automatic water production, shutdown, and system protection make daily operation simple and stable.



Safe & Reliable

Readily available clean water meets the WHO Guidelines for Drinking Water Quality (GDWQ) and African regional regulations.



Efficient & Energy-Saving

Advanced Space Reverse Osmosis (RO) technology for strong purification performance with lower energy use.



Durable Materials

All key components are sourced from top-tier global suppliers for long service life.

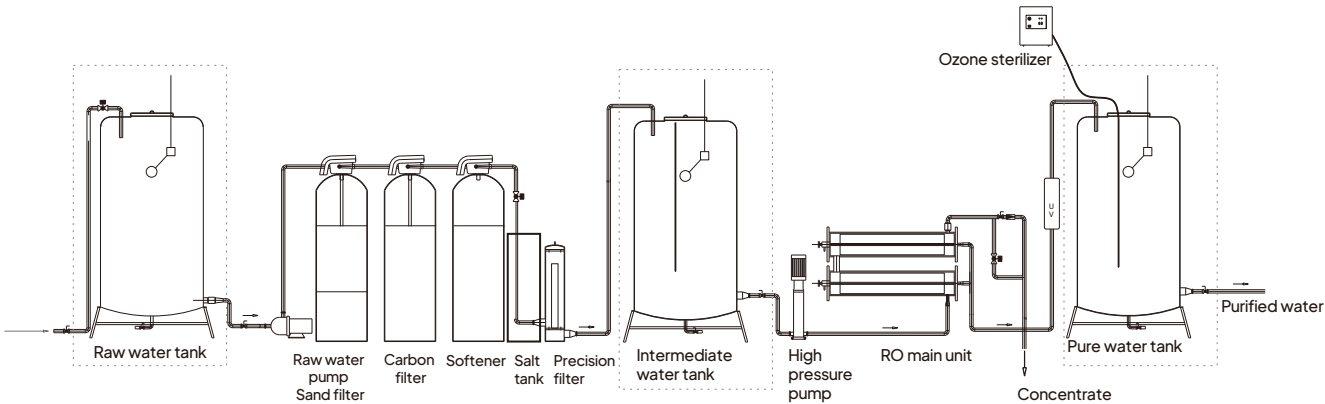


Compact Design

Integrated layout saves space and makes installation fast and easy.

Water Purification Process

Raw Water → Feed Water Pump → Quartz Sand Filter → Activated Carbon Filter → Water Softener → Precision Filter → Intermediate Water Tank → High-Pressure Pump → Reverse Osmosis (RO) main unit → ozone Sterilizer → pure Water Tank



Model	ClearWa 30
Operating Voltage	230 V
Operating Frequency	50 Hz
Rated Power	2.5 kW
Tank Material	FRP
Frame Material	FRP
Pipe Material	304 stainless steel
RO Membrane	4040 type, 2 units
Control Valve	Automatic
Total Purified Water Output	2 T/H
Pre-TreatmentOutput	1,000 L/H
RO Purified Water Output	500 L/H
Dimensions (L × W × H)	1,700 × 700 × 1,700 mm
Sterilization	Ozone

Note: Specifications are subject to change without notice.



Advanced Automation

Fully automated system for water production, supply, and shutdown when the tank is full.

Dry-run protection and programmable automatic flushing for effortless maintenance.



Precision Monitoring

Track water quality in real time with flow meters, pressure gauges, and online conductivity monitoring.

Automatic supply pressure control ensures smooth, stable operation.

BLUETTI Solar-Powered Water Purification System

Providing clean energy, clean water to off-grid communities



Solar Generation + Energy Storage + Water Purification

Off-Grid Operation

Fast Installation

≥560
kWh/day

Electricity
generated

36
tons/day

Purified
water supplied

600–1,000
people

Community
covered

BLUETTI Solar-Powered Water Purification System

This all-in-one system combines solar power, energy storage, and water purification to provide sustainable electricity and safe drinking water to wherever it's needed. It's a reliable solution for off-grid communities, worksites, hotels, factories, schools, and medical facilities.

Energy Storage System



ES60 Liquid-Cooled Energy Storage System
60 kW | 128 kWh

ES125 Liquid-Cooled Energy Storage System
125 kW | 257 kWh

EP2000 Air-Cooled Energy Storage System
20–60 kW | 14.7–154.8 kWh

Water Purification System



ClearWa 30
2 T/hr production capacity
(1 T pure water + 0.5 T purified water)

Note: Pair with a 126 kWp solar system for optimal efficiency.

How It Works

