Technology with Spirit

Since 1998

TWS TECHNOLOGY LIMITED

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Technology with Spirit

SINCE 1998

GLOBAL SMART ENERGY STORAGE SOLUTIONS PROVIDER

Powering a Sustainable Future

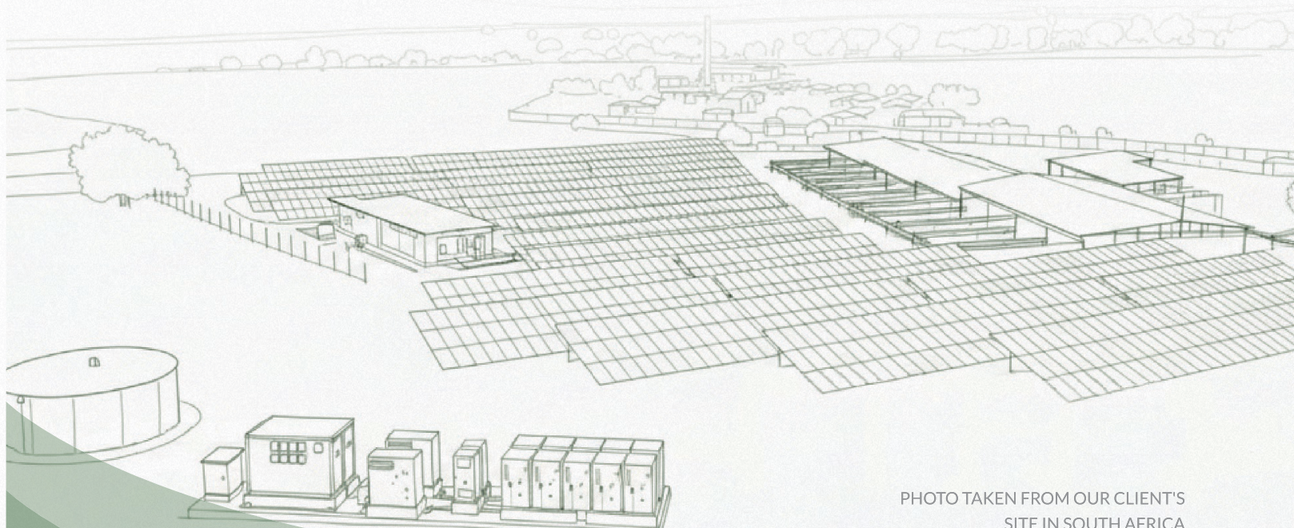


PHOTO TAKEN FROM OUR CLIENT'S SITE IN SOUTH AFRICA

FOR GLOBAL PARTNERS & STAKEHOLDERS

ABOUT TWS TECHNOLOGY

POWERING A SUSTAINABLE FUTURE

TWS Technology, founded in 1998 and entered the ESS field in 2019, is committed to providing reliable energy storage solutions for the global energy transition. Driven by continuous innovation and long-termism, TWS Technology continuously launches an extensive portfolio of energy storage products, ranging from cabinet-level units to containerized systems, to satisfy diversified and dynamic energy storage needs. These solutions have been successfully deployed in numerous benchmark projects of top-tier customers globally, covering all application scenarios across power, grid, and user sides.

28 Years Of Experience

6 Global Tech Centers

5 Factories

13 GWh Group Annual Production Capacity

ESG & CARBON FOOTPRINT

Certified Products

Provincial Green Factory

E — ENVIRONMENTAL PILLARS

25% lower energy consumption in production
Full product life cycle carbon footprint tracking
Established spent battery recycling program

S — SOCIAL RESPONSIBILITY

Supporting local employment in overseas markets
Comprehensive employee skill development and training
Corporate clean energy initiatives
Free employee access to charging facilities

G — GLOBAL CERTIFICATIONS & AWARDS

Certified green factory status
Product and emissions certifications (e.g., carbon footprint, greenhouse gas)
Certified management systems (environmental, occupational health, and quality)
Globally recognized industry awards and government listings

TWS Technology ESS has established international-standard carbon footprint management, laying a solid foundation for EU regulatory compliance and global market growth.

AWARDS & HONORS

RANKING

DC BESS Shipments in China in 2023
NO.5

BESS Shipments in China in 2022
NO.5

HONORS

Top 500 Global Renewable Energy Companies
NO.343

Top 10 Brands of Energy Storage System Integration

Employees
200+

Global R&D Team
50+

ESS Annual Production Capacity
10GWh+

Global Reach
20+

Local Support in Europe
5 Years

Total Commissioned Capacity as of 2025
8GWh

Next-Gen Products & R&D Highlights

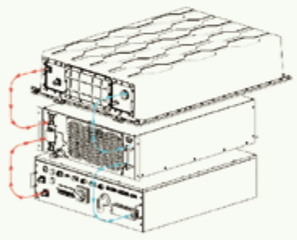
DUAL LIQUID COOLING SYSTEM

Integrated design for optimized performance and cost efficiency

THERMAL MANAGEMENT

Integrated Thermal Management:

- Shared liquid cooling unit for both the battery pack and PCS
- Centralized cooling with dynamic temperature control
- Ensuring unified thermal management



ELECTRICAL INTEGRATION

Integrated Electrical System:

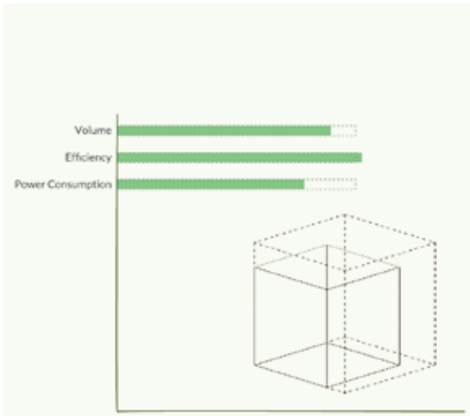
- High voltage box integrated with AC power distribution
- Uses primary and secondary fusion technology
- Minimizing interfaces and overall system complexity

MULTI-DIMENSIONAL OPTIMIZATION

15%
Volume reduction (fits standard containers)

0.2%
Increase in single unit cycle efficiency

30%
Reduction in auxiliary power consumption



ULTRA-LOW NOISE DESIGN

Ultra-low noise control below 65dB.
Quiet operation enhanced by multiple technologies.

ACOUSTIC ISOLATION

Acoustic Material Integration:
Sound absorbing cotton and insulation boards embedded in the shell and core components

COMPONENT OPTIMIZATION

Optimized flow channels and selection of low-noise components (compressors and pumps)

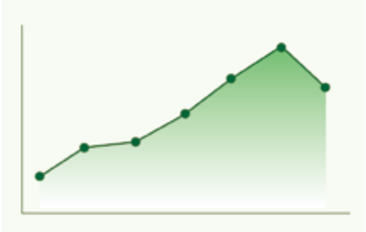
VIBRATION DAMPENING

Vibration dampening design on noise sources (pads or shock absorbers)

SMART FREQUENCY ADJUSTMENT

Intelligent variable frequency adjustment. Dynamic speed control based on load to suppress noise.

**Equivalent to the volume of a daily conversation
Running quietly without disturbing
the environment**



CLOUD-EDGE-TERMINAL PLATFORM

Our In-house Integrated Management System

HIGH SAFETY STANDARDS

Real-time monitoring of all system data.

Fast fault detection and response in milliseconds.

2S + functional safety design.

HIGH RELIABILITY & REDUNDANCY

Automotive-grade battery management (BMS).

Advanced protection to prevent system failure.

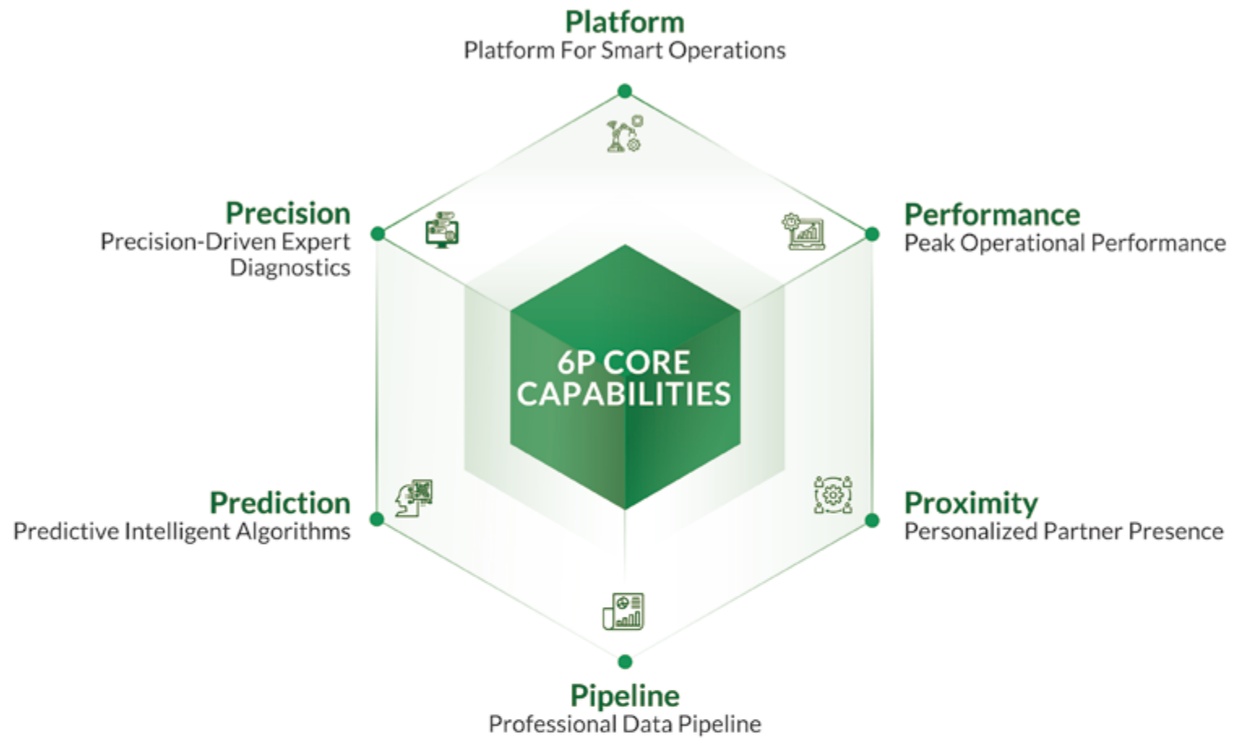
AI technology to predict potential faults.

GLOBAL SCALABILITY GLOBAL DEPLOYMENT

Global scalability for diverse energy markets.

Supports power market trading at different times.

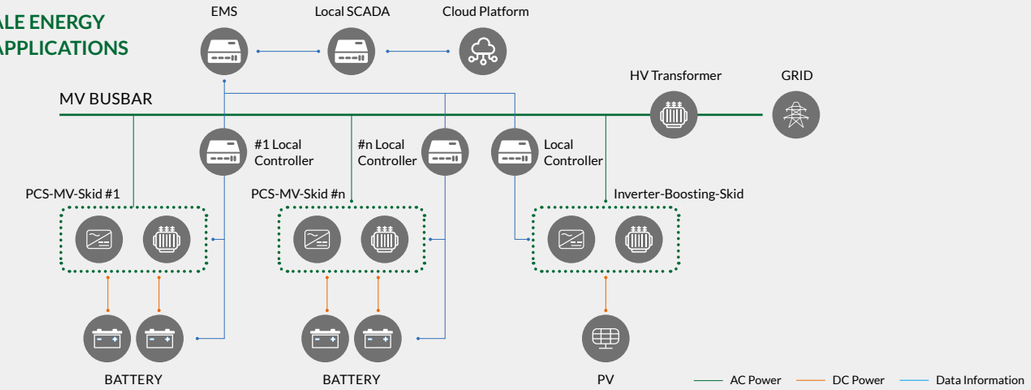
Customized hardware and software for overseas markets.



CLOUD-EDGE-TERMINAL PLATFORM
Our In-house Integrated Management System

SOLUTION VALUE PROPOSITION

LARGE-SCALE ENERGY STORAGE APPLICATIONS



- **BATTERY PRODUCT SERIES**

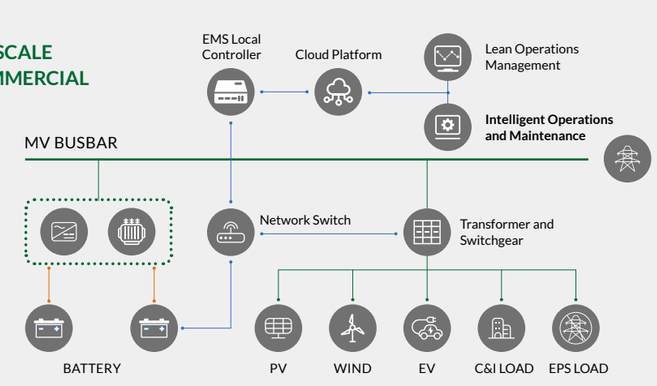
POWERCORE

- **PCS**

CENTRALIZED PCS-MV-SKID

STRING-TYPE PCS-MV SKID

MEDIUM AND LARGE-SCALE INDUSTRIAL AND COMMERCIAL APPLICATIONS



- **BATTERY PRODUCT SERIES**

PROEM315

POWERMOD

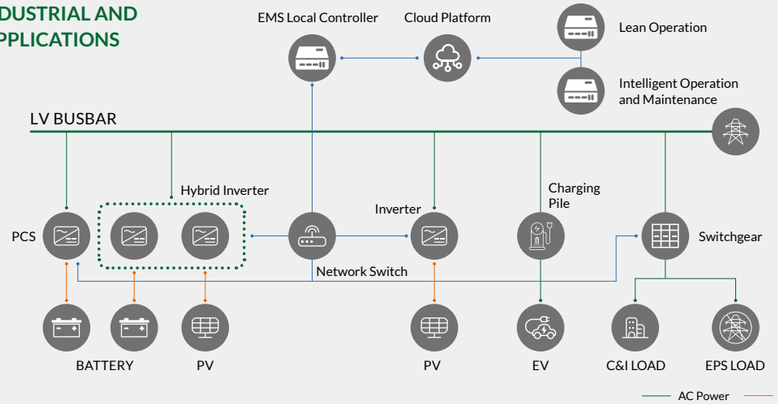
POWERCORE

- **PCS-MV-SKID (OPTIONAL)**

CENTRALIZED PCS-MV-SKID

STRING-TYPE PCS-MV SKID

SMALL-SCALE INDUSTRIAL AND COMMERCIAL APPLICATIONS



- **BATTERY PRODUCT SERIES**

MAX-CLASSIC

PROEM315

- **BATTERY AC/DC INTEGRATED SERIES**

MAX-SOLARIS

MAX-PRO

POWERM-PRO

OUR PRODUCT PORTFOLIO

MAX-PRO
C&I OUTDOOR LIQUID-COOLING ENERGY STORAGE CABINET

Adaptive To Harsh Environments

Resists extreme cold and heat
Intelligent internal dehumidification prevents condensation

Modular Design For Easy Construction

Allows parallel connection of multiple cabinets; Easy expansion and centralized control
EMS generates optimal operation strategy; Factory pre-commissioned; Plug and play on site

Small Size, Big Energy

High Energy Density（21% greater)
Compact footprint: 1.28 m²

Good-Quality Cells

315Ah cells ensure superb safety and long life cycle
High energy efficiency (≥95%)

Smart And User-Friendly

Accessible to the cloud platform for remote monitoring.
Smart and wireless; Supports remote upgrades

Product Model	Max-Pro
Cell parameters	
Type	LFP 315Ah
Cell configuration	1P260S
Rated energy at DC side	262kWh
Voltage range	728V~923V
PCS parameters	
Rated output power	125kW
Max. output power	138kW
THDi	<2% (rated power)
Rated power grid voltage	230Vac/400Vac
Allowable voltage deviation	-15%~+15%
Max. current	200A
Rated power grid frequency	50Hz/60Hz (which can be set)
DC component	<0.5%
Overload capacity	110% long-term
System parameters	
Dimensions (W*D*H)	950mm*1400mm*2330mm
Weight	2600kg
Ingress protection rating	IP55
Auxiliary power supply	Self-powered
Anti-corrosion grade	C4-M
Operating ambient humidity	0%~95% (non-condensing)
Operating ambient temperature	-20℃~55℃ (derated over 45 ℃)
Max. operating altitude	4000m (derated above 2000m)
Cooling method	Liquid-cooling
Fire protection	Aerosol + combustible gas detection + ventilation + water extinguishing system
Communication interface	LAN
Communication protocol	Modbus TCP
Certification	EC62619,IEC63056,IEC62477,IEC62933,EN61000,UL9540A,UN38.3

MAX-CLASSIC
C&I OUTDOOR LIQUID-COOLING ENERGY STORAGE CABINET

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Product Model	Max-Classic
Cell parameters	
Type	LFP 315Ah
Cell configuration	1P260S
Rated energy at DC side	262kWh
Voltage range	728V~923V
System parameters	
Dimensions (W*D*H)	950mm*1400mm*2120mm
Weight	2400kg
Ingress protection rating	IP55
Auxiliary power supply	External power supply
Anti-corrosion grade	C4-M
Operating ambient humidity	0%~95% (non-condensing)
Operating ambient temperature	-20℃~55℃ (derated over 45 ℃)
Max. operating altitude	4000m (derated above 2000 m)
Cooling method	Liquid-cooling
Fire protection	Aerosol + combustible gas detection + ventilation + water extinguishing system
Communication interface	LAN
Communication protocol	Modbus TCP
Certification	EC62619,IEC63056,IEC62477,EN61000, UL1973,UL9540A,UN38.3

MAX-SOLARIS
INTELLI-PV ESS CABINET

Multi-Dimensional Integration

Advanced DC coupling seamlessly integrates PV and storage.
20ms auto-switching between grid-connected and off-grid modes.

Intelligent Energy

Supports multiple strategies: self-consumption, peak loading shifting, and backup power supply.
Built-in EMS adapts flexibly to diverse scenarios.

Simple & User-Friendly

Compact design for easy installation.
Remote monitoring for effortless operation.

Product Model	Max-Solaris104	Max-Solaris262
Product Model		
Cabinet parameters		
Cabinet model	Max-Classic	
Cell type	LFP 315Ah	
Cell Configuration	1P104S	1P260S
Rated energy at DC side	104kWh	262kWh
Voltage range	291.2V~369.2V	728V~923V
Cabinet dimensions	950mm * 1400mm * 2120mm	
Weight	1380kg	2380kg
Ingress protection rating	IP55	
Anti-corrosion grade	C4-M	
Operating ambient humidity	0%~95% (non-condensing)	
Operating ambient temperature	-20°C ~55°C (derated over 45°C)	
Max. operating altitude	4000m (derated above 2000m)	
Cooling method	Liquid-cooling	
Fire protection	Aerosol + combustible gas detection + ventilation + water extinguishing system	
Communication interface	LAN	
Communication protocol	Modbus TCP	
Certification	IEC 62619, IEC 63056, IEC 62477, EN IEC 61000, UL 1973, UL 9540A, UN 38.3	
Hybrid inverter parameters		
DC input (PV side)		
Max. input power	100kW	250kW
Withstand voltage	1000V	
Input voltage range	180V~950V	
Max. MPPT input current	40A	
Max. MPPT short-circuit current	50A	

Product Model	Max-Solaris104	Max-Solaris262
MPPT voltage range	180V~850V	
Start-up voltage	180V	
Number of MPP trackers	4	8
Strings per MPP tracker	2	
AC output (Grid side)		
Rated AC power	50kW	125kW
Max. AC output power	55kVA	137.5kVA
Rated AC output current (Per phase)	76A	189.9A
Max. AC output current (Per phase)	83.6A	198.5A
Rated AC voltage	380V/400V, 3W+N+PE or 3W+PE	
AC voltage range	0.8Un~1.2Un	
Rated AC frequency	50Hz/60Hz	
Frequency range	50Hz/60Hz,±5Hz	
Power factor	0.8 leading-0.8 lagging	
THDi	<3% @Rated power	
AC input (Grid side)		
Max. AC input power	207kVA	
Max. bypass current	300A	
Rated AC voltage	380V/400V,3W+N+PE or 3W+PE	
Frequency range	50Hz/60Hz,±5Hz	
EPS output (Load)		
Max. AC output power	55kVA	137.5kVA
Peak AC output power (10s)	155kVA	
LRA current	300A	
Rated AC voltage	380V/400V, 3W+N+PE or 3W+PE	
Rated AC frequency	50Hz/60Hz	
Switching time	<10ms	
THDv	<3%@Rated power	
Efficiency		
Max. efficiency	98.5%	
General specification		
Dimensions (W*D*H)	730mm * 1060mm * 305mm	
Weight	115kg	120kg
Operating temperature	-30°C ~60°C	
Cooling method	Smart air cooling	
Max. operating altitude	4000m	
Humidity	0%~100%	
Noise	<70dB	
Standby consumption	<60W	
Ingress protection rating	IP65	
Topology	Non-isolation	
Display	LED, LCD, Wi-Fi+APP	
Communication ports	USB / RS485 / Bluetooth / Wi-Fi+LAN / 4G (Optional) / CAN	
Certification	EN IEC 62109, EN IEC 61000	

PROEM315 OUTDOOR LIQUID-COOLING ENERGY STORAGE CABINET

Low Maintenance
Modular design simplifies transportation and O&M.
Fully pre-assembled; minimal on-site integration required.

System Safety
Intelligent monitoring and coordinated response ensure system safety.
Integrated cooling enhances thermal stability and performance.

High Efficiency
Advanced liquid cooling keeps temperature difference within 3 °C
Supports parallel connection and easy system expansion.

Easy Deployment
All-in-one solution for commercial and industrial uses, PV + Storage, backup power, and microgrids.
Seamless transition between grid-connected and off-grid operations.

Product Model	ProeM315-209	ProeM315-262	ProeM315-314	ProeM315-366	ProeM315-419
Cell parameters					
Cell type	LFP				
Cell capacity	315 Ah				
PACK parameters					
Cell configuration	1P52S				
PACK rated voltage	166.4 V				
PACK energy	52.416 kWh				
Cabinet parameters					
System battery configuration	1P208S	1P260S	1P312S	1P364S	1P416S
PACK quantity	4	5	6	7	8
Rated energy (BOL) at DC side	209 kWh	262 kWh	314 kWh	366 kWh	419 kWh
System output voltage range	582.4~738.4 Vdc	728.0~923.0 Vdc	873.6~1107.6 Vdc	1019.2~1292.2 Vdc	1164.8~1476.8 Vdc
Rate for charging and discharging	≤0.5P				
Dimensions (H*W*D)	2300mm * 1330mm * 1350mm				
Weight	2160 kg	2500 kg	2840 kg	3180 kg	3520 kg
Ingress protection rating	IP55				
Anti-corrosion grade	C4-M				
Operating ambient humidity	0%~95% (non-condensing)				
Operating ambient temperature	-20℃~55℃				
Max. operating altitude	4000 m				
Cooling method	Liquid-cooling				
Fire protection	Aerosol + combustible gas detection + ventilation + water extinguishing system				
Communication interface	LAN				
Communication protocol	Modbus TCP				
Certification	IEC62619, IEC63056, IEC62477, EN IEC 61000, UL9540A, UL1973, UN38.3				

POWERMOD LIQUID-COOLING ENERGY STORAGE CONTAINER

Enhanced Safety
Triple-layer fire protection ensures early detection, accurate spraying, and rapid suppression.
Fire monitoring powered by big data analytics features comprehensive surveillance.
Predictive algorithms identify risks early for rapid, system-wide response.

Cost Efficiency
High-density 315Ah LFP cells extend cycle life and reduce cost per kWh by 30%.
Optimized size for cost-effective operation.
Ideal for small to medium commercial and industrial projects.

Flexible Deployment
10-foot container design allows rapid transport and deployment.
Scalable capacity supports on-demand expansion and optimized investment.

Product Model	PowerMod-1600	PowerMod-2000	PowerMod-2500
Cell parameters			
Cell type	LFP		
Cell capacity	315Ah		
Pack parameters			
Cell configuration	1P104S		
Pack rated voltage	332.8V		
Pack rated energy	104.832kWh		
Rack parameters			
Cell configuration	1P416S		
Pack quantity	4		
Rack rated energy	419.328kWh		
System parameters			
Cell configuration	4P416S	5P416S	6P416S
Rated energy (BOL) at DC side	1677kWh	2096kWh	2515kWh
Voltage range	1164.8Vdc-1476.8Vdc		
Rate for charging and discharging	≤0.5P		
Dimensions (W*D*H)	3360mm * 2896mm * 2438mm		
Weight	17400kg	20110kg	22790kg
Ingress protection rating	IP55		
Anti-corrosion grade	C4/C5		
Operating ambient humidity	0%-95% (non-condensing)		
Operating ambient temperature	-20°C ~55°C		
Max. operating altitude	4000m		
Cooling method	Liquid-cooling		
Fire safety configuration	Aerosol + combustible gas detection + ventilation + water extinguishing system		
Communication interface	LAN		
Communication protocol	Modbus TCP		
Certification	IEC62619, IEC63056, IEC62477, EN IEC61000, UL1973, UL9540A, UN38.3		

POWERCORE LIQUID-COOLING ENERGY STORAGE CONTAINER

Enhanced Safety

Triple-layer fire protection ensures early detection, accurate spraying, and rapid suppression.
Fire monitoring powered by big data analytics features comprehensive surveillance.
Predictive algorithms identify risks early for rapid, sytemwide response.

Cost Efficiency

315Ah LFP cells with high energy density extend cycle life and reduce cost per kWh by 30%.
5MWh capacity in a standard 20ft container.
Side-by-side arrangement reduces land footprint by over 40%.

Versatile Deployment

Adaptable topology supports renewable integration, grid stability, and commercial operations.
Modular design enables rapid deployment and flexible configuration.

Product Model	PowerCore
Cell parameters	
Cell type	LFP
Cell capacity	315Ah
Pack parameters	
Cell configuration	1P104S
Pack rated voltage	332.8V
Pack rated energy	104.832kWh
Rack parameters	
Rack battery configuration	1P416S
Pack quantity	4
Rack rated energy	419.328kWh
System parameters	
System battery configuration	12P416S
Rated energy (BOL) at DC side	5031kWh
System output voltage range	1164.8Vdc-1476.8Vdc
Rate for charging and discharging	≤0.5P
Dimensions (W *H *D)	20ft (6058mm * 2896mm * 2438mm)
Weight	43t
Ingress protection rating	IP55
Anti-corrosion grade	C4
Operating ambient humidity	0%-95% (non-condensing)
Operating ambient temperature	-20°C ~55°C (derated over 45 °C)
Max. operating altitude	4000m (derated above 2000m)
Cooling method	Liquid-cooling
Fire protection	Aerosol + combustible gas detection + ventilation + water extinguishing system
Communication interface	LAN
Communication protocol	Modbus TCP
Certification	IEC62619, IEC63056, IEC62477, EN61000, UL1973, UL9540A, UN38.3

POWERM-PRO LIQUID-COOLING ENERGY STORAGE CONTAINER

All-in-One Integration

Pre-integrates batteries, BMS, PCS, and EMS into a single container.
Unified AC/DC coupling for seamless operation.
Simplified & faster installation; Reduced costs & labor.

Modular Design

Flexible AC voltage options for diverse applications.
Supports on-demand capacity configuration.

Independent Rack Management

Prevents performance imbalance between racks.
Maximizes overall system efficiency and extends service life.

Intelligent O&M

Real-time monitoring provides instant system visibility and diagnostics.
Rack-level control and modular design enable precise maintenance.

Product Model	PowerM-Pro 2500/1000-400V	PowerM-Pro 3300/1700-690V	PowerM-Pro 3300/1700-800V
Battery Side Parameters			
Cell parameters			
Cell type	LFP		
Cell capacity	315Ah		
Pack parameters			
Pack battery configuration	1P104S		
Pack rated voltage	332.8V		
Pack rated energy	104.832kWh		
Rack parameters			
Rack battery configuration	1P312S	1P416S	
Rack rated voltage	998.4V	1331.2V	
Rack rated energy	314.496kWh	419.328kWh	
Battery compartment parameter			
Rated energy	2515kWh	3354kWh	
System battery configuration	8P312S	8P416S	
Rated voltage	998.4V	1331.2V	
System voltage range	873.6 ~ 1107.6Vdc	1164.8 ~ 1476.8Vdc	1206.4 ~ 1476.8Vdc
Rate for charging and discharging	≤0.5P		
PCS Side Parameters			
PCS quantity	8		
DC input voltage range	615 ~ 1200V	1060 ~ 1500V	1200 ~ 1500V
Rated AC output voltage	400V	690V	800V
AC voltage range	-15% ~ +10%		
Wiring method	Three-phase four-wire	Three-phase three-wire	
Rated output power	8*125kW	8*215kW	
Max. output power	8*137.5kW	8*237kW	
Frequency range	50±5Hz/60±5Hz		
Power factor	0.99/~1~1		
Current distortion rate	<3% (@rated power)		
System Parameters			
Container dimensions (W*D*H)	20ft.（6058 mm * 2896mm *2438 mm）		
Container weight	<28t	<33t	
Auxiliary power supply	Self-powered		
Ingress protection rating	IP55		
Anti-corrosion grade	C4 (C5 customizable)		
Operating ambient humidity	0%-95% (non-condensing)		
Operating ambient temperature	-20°C ~55°C		
Max. operating altitude	4000m (derated above 2000m)		
Cooling method	Battery compartment: liquid-cooling / PCS: smart air cooling		
Fire protection/safety features	Aerosol + combustible gas detection + ventilation + water extinguishing system		
Communication interface	LAN		
Communication protocol	Modbus TCP		
Certification	Battery rack: IEC 62619, IEC 63056, IEC 62477, EN IEC 61000, UL 1973, UL 9540A, UN 38.3 PCS: IEC 62477, EN IEC 61000		

GLOBAL TECHNICAL SERVICES

Global Expertise · European Presence · Local Support

Our investment in a local European subsidiary is a testament to our long-term commitment. We build lasting partnerships and ensure reliable service.

Trusted Since 1998
Frankfurt Service Center: Operational since 2020

LOCAL EXPERTS

Rapid On-site Support

SPARE PARTS HUB

European Warehousing,
Minimizing Downtime

24/7 MONITORING

Remote Surveillance &
Proactive Alerts

TRAINING

Comprehensive Team
Training Programs

INTEGRATED SYSTEMSOLUTIONS

- On-site Investigation and Consulting
- Technical Support and Services
- Warehousing and Logistics
- After-sales Service

READY TO EXPERIENCE PEACE OF MIND?

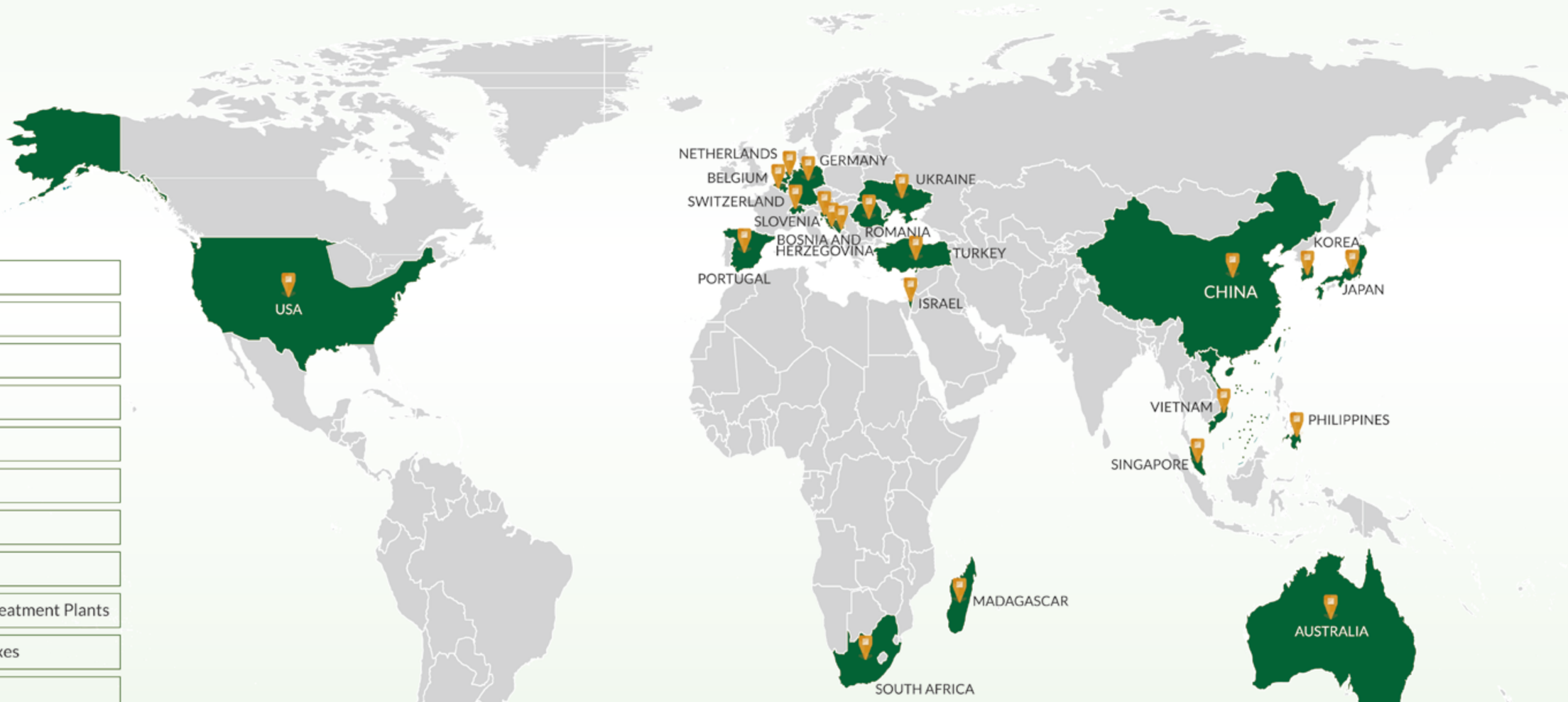
CONTACT OUR LOCAL SERVICE TEAM FOR SUPPORT AND CONSULTATION.

WhatsApp

TWS ESS IN PLACE: DEPLOYED, ENERGIZED, GLOBAL

TWS ESS SOLUTIONS SERVE IN

- State Power Plants
- State Grid
- Manufacturing
- Aquaculture
- Agriculture
- Iron & Steel Groups
- Mining
- Automated Sawmills
- Municipal Sewage Treatment Plants
- Commercial Complexes
- Laboratories
- Industrial Parks
- EV Charging Stations
- Electric Dredging Vessels
- Microgrid Systems



CERTIFICATION & CASE

Global Certification — UN38.3

UN38.3 Safe Transport

American Standard

UL9540A UL1973 CEC

South Korean Standard

KC

IEC

IEC62619 IEC63056 IEC62477 IEC61000

215 kWh & 262 kWh Manufacturing, Vietnam

Delivery time: 2025
Application: Dynamic capacity expansion
ESS product: MU Series cabinet

2MW / 6.7 MWh Utility Japan

Delivery time: 2025
Application: Grid Integration
ESS product: ProeM cabinet

1.72 MW/ 5 MWh Horticulture, Netherlands

Delivery time: 2025
Application: On/off-grid switching, energy arbitrage with PV
ESS product: PowerCore container

2.5 MW/ 5.24 MWh Food Processing, Belgium

Delivery time: 2025
Application: Demand management, energy arbitrage
ESS product: Max-Pro cabinet

500 kW/ 978 kWh Municipal Sewage Treatment, Netherlands

Delivery time: 2025
Application: Peak shifting
ESS product: ProeM cabinet

4.7 MW/ 5.9 MWh Agriculture & PV, South Africa

Delivery time: 2024
Application: Agriculture (& aquaculture), PV + ESS, 35 kV access, automatic on/off-grid switching
ESS product: ProeM cabinet

1.2 MWh Intelligent Microgrid, China

Delivery time: 2023
Application: ESS + PV + charging + diesel generator, automatic on/off-grid switching
ESS product: ProeM cabinet

3.75 MW/ 7.45 MWh Manufacturing, US

Delivery time: 2025
Application: Microgrid
ESS product: ProeM cabinet

2 MW/ 4.176 MWh Wind Power, Korea

Delivery time: 2025
Application: Dynamic frequency regulation
ESS product: ProeM cabinet

225 MW/450 MWh Steel Production, China

Delivery time:2023
Application: Energy consumption reduction, efficiency increase, frequency regulation, peak shaving, and backup power
ESS product: ProeM cabinet