



We put you in charge.

battery systems and solutions

BeLoaded specializes in optimizing electric networks including electrical vehicle (EV) charging and photovoltaic (PV) electricity generation through **grid load balancing, energy storage and demand response solutions**. We empower businesses and the public sector to **maximize energy efficiency and reduce costs**.

With over a decade of experience in the Belgian energy market, BeLoaded is dedicated to providing **innovative solutions and support**, ensuring a smooth transition to a fully electric future.

Our mission is to promote a sustainable electrified society by **enhancing energy management and minimizing costs** while **maximizing renewable energy use**.

Battery systems & solutions



Magic - ZBlock200 - MF



PAGE 7

Magic - ZBlock261-L



PAGE 9

Magic - ZCube1290 - MF



PAGE 11

Magic - ZCube2400



PAGE 13

Magic - ZCube5000 - L



PAGE 15

PWS1-500 Inverter



PAGE 17

PWS1-1725 Inverter



PAGE 19

Mobile container



PAGE 20

Inspiration - T



PAGE 21

Magic - ZBlock200-MF

The product of Magic-ZBlock200-MF is a power storage system specially designed for regional microgrids such as small CBDs, farms, islands, outdoor photovoltaic power stations, etc., which can fully guarantee the power demand and energy security in these scenarios.



Multi-scenario

- Multifunctional integration, supporting PV and generator access, on grid to off-grid switching<20ms



Economical & Efficient

- High energy efficiency
- Pre-assembled, transportation of complete
- High-efficiency heat dissipation, increase battery life and system discharge capacity



Real-time monitoring and control

- 7*24h Real-time remote and local monitoring and control
- Intelligent early warning, regular automatic safety checks, and elimination of hidden dangers



Flexible & expandable

- Single unit 100-215kWh capacity
- Parallel MAX. up to 2MWh capacity battery

Magic - ZBlock200-MF



Model	Magic-ZBlock200-MF (ZHE5512805N)				
AC Parameter	50P ⁽¹⁾	100P ⁽²⁾	150P ⁽²⁾	250P ⁽³⁾	500P ⁽³⁾
Rated Power (kVA)	50	100	150	250	500
Rated Voltage (V)	400				
Voltage Range (V)	320-460				
Rated Current(A)	72	144	216	361	722
Rated Frequency (Hz)	50/60				
Over Power	110%long time;120% 1min				
PV parameters					
Rated MPPT Quantity	1	2	3	5	10
Rated MPPT Module Power (kW)	50				
Max. Output Power (kW)	60	120	180	300	600
MPPT Voltage Range	250-850V				
MPPT Voltage Range @ full load (V)	450-850				
Battery Parameter					
Cell Type (Ah)	LFP 280				
Rated Voltage (V)	768				
Voltage Range (V)	672-850				
Rated Energy (kWh)	215	215-430	215-645	430-1075	860-2150
General					
Max System Efficiency	90%				
IP Rating	Battery Cabinet: IP55 / Hybrid Inverter: IP54				
Anticorrosion Grade	StandardC4				
Cooling Method	Battery: HVAC		Hybrid Inverter: Forced air Cooling		
Operating Temperature Range	-20-50C				
Operating Humidity	0%-95%				
Elevation (m)	<2000				
Firefighting System	Integrated				
Communication Port	CAN, RS485, ETH				

Note:
(1)ZBlock200-MF-50P is all-in-one cabinet, 2150*1320*2340mm, IP55;
(2) ZBlcok200-MF-100P/150P are separate cabinets, inverter cabinet 1600*1430*2340mm,IP54; battery cabinet 1050*1100*2340mm, IP55;
(3)ZBlock200-MF-250P/500P are separate cabinets, inverter cabinet 1600*1430*2340mm,IP54; MPPT cabinet 800*1100*2340mm, IP54; battery cabinet 1050*1100*2340mm, IP55.

Magic - ZBlock261-L

The Magic-ZBlock261-L is All-in-one power storage system specially designed for regional On-grid application, such as small CBDs, farms, and factories. It integrated PCS and battery system, ensures reliable power supply and energy security in distributed scenarios.



Multi-scenario

- Supports peak shaving, energy shifting, and capacity firming
- Bidirectional power conversion system with full four-quadrant operation



Economical & Efficient

- High energy efficiency for optimized performance
- Factory pre-assembled, fast deployment and easy transportation
- Advanced thermal management
- Improves battery lifespan and system discharge capacity



Real-time monitoring and control

- 24/7 real-time monitoring and control, both remote and on-site
- Intelligent early warning system,
- Automated safety checks and elimination of potential hazards



Flexible & expandable

- Parallel energy battery cabinet system expansion, supporting up to 5 units
- Easy and convenient installation for rapid deployment

Magic - ZBlock261-L



AC Parameter	
Rated Power (kVA)	125
Rated Voltage (V)	380 / 400
Voltage Range (V)	±15%
Rated Frequency (Hz)	50/60
Overload Capability	110%-longtime
Battery Parameter	
Cell Type (Ah)	LFP314
Maximum charging/discharging current (A)	180 / 180
Rated charging/discharging current (A)	157 / 157
Rated Voltage (V)	832
Voltage Range (V)	728-936
Battery Energy (kWh)	261
General Parameter	
System Efficiency	≥ 88% (25°C, = <0.5P)
IP Rating	IP54
Anticorrosion Grade	StandardC4
Cooling Method	Liquid cooling
Operating Temperature Range	-20- 55°C (derating > 45°C)
Operating Humidity	0%-95%R.H
Altitude (m)	< 3000m (derating >2000m)
Firefighting System	Integrated
Dimension:W*D*H (mm)	1300x 1330x2350
Total Weight (t)	2400
Communication Port	CAN, RS485, ETH

Magic - ZCube1290-MF

The product of Magic-ZCube-MF is a power storage system specially designed for regional microgrids such as small CBDs, farms, islands, outdoor photovoltaic power stations, etc., which can fully guarantee the power demand and energy security in these scenarios.



Multi-scenario

- Multifunctional integration, supporting PV and generator acces, on grid to off-grid switching<20ms



Economical & Efficient

- High energy efficiency
- Pre-assembled, transportation of complete
- High-efficiency heat dissipation, increase battery life and system discharge capacity



Real-time monitoring and control

- 7*24h Real-time remote and local monitoring and control
- Intelligent early warning, regular automatic safety checks, and eliminationof hidden dangers



Flexible & expandable

- Single unit 1290kWh capacity
- The Max. number of parallel connections is 8

Magic - ZCube1290-MF



AC Parameter	
Rated Power (kVA)	500
Rated Voltage (V)	400
Voltage Range (V)	320-460
Rated Current(A)	722
Rated Frequency (Hz)	50/60
Isolation Method	Transformer
Over Power	110%long time;120% 1min
PV Parameter	
Rated MPPT Quantity	10
Rated MPPT Module Power (kW)	50
Max output Power (kW)	600
MPPT Voltage Range	250-850
MPPT voltage range @full load (V)	450-850
Battery Parameter	
Cell Type (Ah)	LFP280
Battery Module Rated Voltage (V)	51.2
Battery Module Energy (kWh)	l4.336
Rated Voltage (V)	768
Voltage Range (V)	672-850
Battery Energy (kWh)	1290
General Parameter	
Max. System Efficiency	90%
IP Rating	IP54
Anticorrosion Grade	StandardC4
Cooling Method	HVAC
Operating Temperature Range	-20-50C
Operating Humidity	0%-95%R.H
Max. Charging/Discharging Rate	<2000
Elevation (m)	Integrated
Dimension:W*D*H (mm)	6058*259l*2438
Total Weight (t)	20
Communication Port	CAN, RS485, ETH

Magic - ZCube2400

Zcube2400 system is designed for outdoor high voltage battery system, adopting modular & non-walk-in design, which can realize pre-assembly, minimal operation and maintenance, industrial air-conditioning temperature control. It has 0.5C times charging and discharging capability, integrated intelligent BMS system is widely compatible with multi-brand PCS, and integrated 2.4MWh capacity, which is more suitable for medium and large industrial and commercial application scenarios. For example, increasing solar self-consumption, providing backup power or peak shifting, etc.



Economical & Efficient

- High energy efficiency
- Pre-assembled, transportation of complete
- High-efficiency heat dissipation, increase battery life and system discharge capacity



Real-time monitoring and control

- 7*24h Real-time remote and local monitoring and control
- Intelligent early warning, regular automatic safety checks, and elimination of hidden dangers



Safety & Reliable

- Electrical safety management, overcurrent fast breaking and arc extinguishing protection
- The electrical cabinet and battery cabinet are separated to prevent thermal runaway



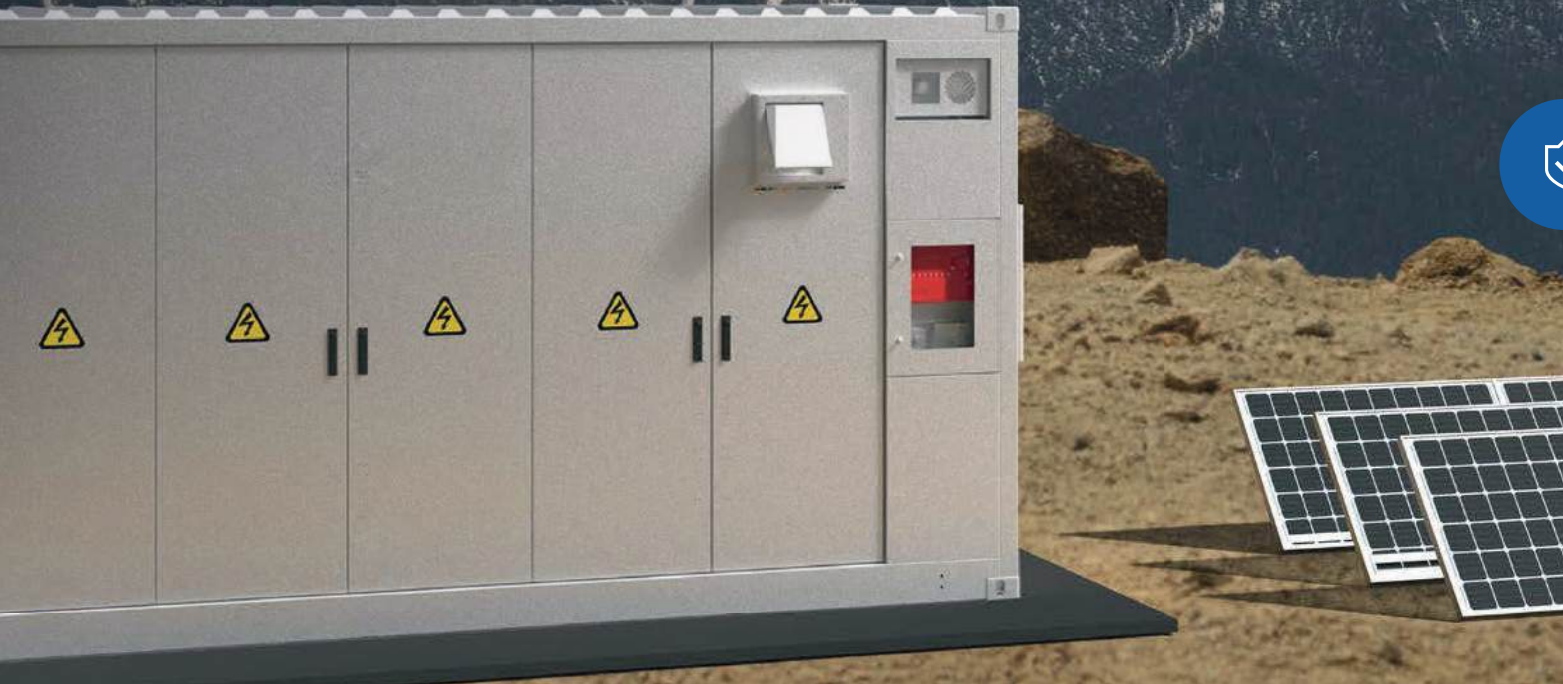
Magic - ZCube2400



Battery Parameter	
Cell Type (Ah)	LFP280
System Configuration	272SIP*10
Module Rated Voltage (V)	51.2
Module Rated Energy (kWh)	14.336
Rated Voltage (V)	870
Voltage Range (V)	734-979
Rated Energy (kWh)	2437
Rated Charge/Discharge Current (A)	1400/1400
Max. Charge/Discharge Current (A)	2000/2000
General Parameter	
Protection Degree	IP54
Anticorrosion Grade	StandardC4
Cooling Mode	HVAC
Operating Temperature (C)	-20- 50
Operating Humidity	0%-95%R.H
Elevation (m)	<2000
Firefighting System	Integrated
Dimension(W*D*H)(mm)	6058*2438*2896
Total Weight (t)	28
Communication Port	CAN, RS485, ETH
Cloud Monitoring	Opt
Compliance	
Battery	IEC62619, ICE61000

Magic - ZCube5000-L

Zcube2400 system is specially designed for outdoor high voltage battery system, adopting modular & non-walk-in design, which can realize pre-assembly, minimal operation and maintenance, liquid-cooled unit temperature control, higher temperature regulation efficiency. Adopting 0.5C 3l4 large battery cell, integrated intelligent BMS system is widely compatible with multi-brand PCS, integrated 5MWh capacity, more suitable for medium and large industrial and commercial application scenarios, or large power station application scenarios. For example, increasing solar self-consumption, providing backup power or peak shifting, etc.



Economical & Efficient

- High energy efficiency
- Pre-assembled, transportation of complete
- High-efficiency heat dissipation, increase battery life and system discharge capacity



Real-time monitoring and control

- 7*24h Real-time remote and local monitoring and control
- Intelligent early warning, regular automatic safety checks, and elimination of hidden dangers



Safety & Reliable

- Electrical safety management, overcurrent fast breaking and arc extinguishing protection
- The electrical cabinet and battery cabinet are separated to prevent thermal runaway

 Magic - ZCube5000-L



Battery Parameter	
Cell Type (Ah)	LFP3l4
System Configuration	4l6SlP*l2
Module Rated Volage (V)	166
Module Rated Energy (kWh)	52
Rated Voltage (V)	1331
Voltage Range (V)	ll23-l497
Rated Energy (kWh)	5015
Rated Charge/Discharge Current (A)	1670/1670
General Parameter	
Protection Degree	IP54
Anticorrosion Grade	StandardC4
Cooling Mode	Liquid cooling
Operating Temperature (C)	-20- 50
Operating Humidity	0%-95%R.H
Elevation (m)	<2000
Firefighting System	Integrated
Dimension(W*D*H)(mm)	6058*2438*259l
Total Weight (t)	42
Communication Port	CAN, RS485, ETH
Cloud Monitoring	Opt
Compliance	
Battery	IEC626l9, IEC6l000, UL9540A

PWS1-500 Inverter



Flexible Configuration

- 62.5kW to 500kW by 1 to 8 power modules.
- 3P3W AC output for 400/480/208/690Vac interconnection w/ external transformer



High Efficiency & Stability

- Maximum efficiency up to 98.2%
- Multi-string technology for better battery safety and performance.



Extensive Use

- Multiple battery strings working in parallel or independently to allow easy power and energy expansion.



Compliance & Compatibility

- Compatible with various types of battery system.
- Global grid certified & listed

PWS1-500 Inverter



Model	PWS1-500KTL-EX- 8M1	PWS1-500KTL-EX- 8M4	PWS1-500KTL-EX- 8M8
Utility-interactive Mode			
Nominal power	500kVA ¹		
AC max power	550kVA ¹		
AC frequency	50/60(-2.5~2.5) Hz		
AC voltage	400(-15%~15%) Vac		
Battery voltage range	600~900Vdc		
Quantity of battery strings	1	4	8
DC max current in each branch	864A	216A	108A
THDi	≤3%		
AC PF	Listed: 0.8~1 leading or lagging (Controllable)		
	Actual: 0.1~1 leading or lagging (Controllable)		
Stand-alone Mode			
Nominal power	500kVA ¹		
AC max power	550kVA ¹		
AC frequency	50/60(-2.5~2.5) Hz		
AC output voltage	380/400(± 10% configurable) Vac		
Battery voltage range	600~900Vdc		
Quantity of battery strings	1	4	8
DC max current in each branch	864A	216A	108A
Output THDu	≤2% (Linear load)		
AC PF	Listed: 0.8~1 leading or lagging (Load-depend)		
	Actual: 0.1~1 leading or lagging (Load-depend)		
Overload Capability	110%~115% 10min		
	115%~125% 1min		
	125%~150% 200ms		
1. Power could be 62.5Kw to 500Kw by equipping different numbers of power modules.			

PWS1-1725 Inverter



Flexible Configuration

- Modular design with up to 8 modules
- Direct interconnection with 690Vac
- Power range: 215kW-1.72MW



High Efficiency & Stability

- Maximum efficiency up to 98.2%
- Multi-string technology for better battery safety and performance.



Extensive Use

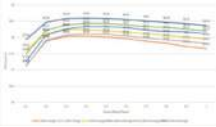
- Automatic operation strategy of peak shaving and load shifting
- Outdoor NEMA3R Cabinet.



Compliance & Compatibility

- Fast response time less than 20ms
- Grid-support function built-in
- Global grid certified & listed

PWS1-1725 Inverter

AC parameters								
Nominal AC power	215kVA	430kVA	645kVA	860kVA	1075kVA	1290kVA	1505kVA	1725kVA
AC connection	Three-phase three-wire (3P3W)							
Overload Capability	237kVA	473kVA	710kVA	946kVA	1183kVA	1419kVA	1656kVA	1898kVA
AC voltage	690(-15%~10%)V							
AC frequency	50/60 (-5~5) Hz							
THDi	≤3%							
AC PF	-0.9~0.9							
DC parameters								
Max DC power	237kW	473kW	710kW	946kW	1183kW	1419kW	1656kW	1898kW
DC voltage range	1000~1500V (full power charging)							
Full load voltage range	1070~1500V (full power discharging)							
Number of DC branch	1							
Number of modules	1	2	3	4	5	6	7	8
Maximum DC current every branch	208A	416A	624A	832A	1040A	1248A	1456A	1664A
Voltage regulation accuracy	≤±1%							
System parameters								
Efficiency curve								
Peak efficiency (with auxiliary source)	98.5%							
Size (W*H*D)	2200*2160*1300 mm							
Weight	1549kg	1642kg	1735kg	1828kg	1921kg	2014kg	2107kg	2200kg
Noise	< 75dB							
Protection	IP54							
Operating temp.	-20 ℃ to 60 ℃ (De-rating over 45 ℃)							
Cooling	Air cooling							
Humidity (storage)	0~95% (No condensing)							
Max altitude	3000m (De-rating over 3000 m)							
Connection parameters								
Communication	RS 485, Ethernet, CAN							
Protocol	Modbus TCP/RTU,IEC104,IEC61850							
Certification	EN50549-2, VDE4110, VDE4120, G99, IEC62477/61000/62109							

MOBILE CONTAINERS

Magic MOB 640/ 1800 - 4 x 150KW



Multi-scenario

- Off-grid EV charging, temporary installations, EV capacity boost



Economical & Efficient

- Pre-assembled
- Easy transportation
- Fully charged in less than 3 hours
- Four 150KW DC guns
- Integrated EMS system for load balancing



Real Time monitoring and control

- 7x24h Real time monitoring and control
- Compatible with OCPP 1.6j
- Gui for realtime follow-up
- Intelligent early warning system



Flexible

- 20 Feet container with liquid cooling
- Electrical Safety Management and overcurrent fast breaking

Inspiration T

The Inspiration Series features an integrated design with all-in-one installation and IP65-rated protection, tailored for residential photovoltaic systems. It combines a hybrid inverter and an LFP battery pack with a modular, expandable structure for flexible power configuration. The inverter supports 5 kW*N output and allows simultaneous connection to the grid, PV, and battery, with built-in offgrid capability.



Flexible Expansion

- On-demand configuration with flexible module expansion based on application needs
- Supports up to 6 inverters in parallel to increase power availability
- AC/Hybrid coupling enables retrofit compatibility, protecting legacy investments and reducing installation costs



High Performance

- 200% PV oversizing supported, enabling higher yields with lower investment
- Load monitoring accuracy up to 10W, with a battery discharge threshold as low as 10W
- Lower cost, higher savings and returns



High Reliability

- High-voltage DC-DC battery design supports mixed use of new and old batteries, simplifying maintenance and inventory management
- Multi-point temperature monitoring and refined thermal management ensure stable operation
- Low-temperature heating function for enhanced performance in cold environments

Make money out of your energy consumption

Boost your power

Avoid negative prices



Get in touch

Desguinlei 6
2018 Antwerpen

+32 476 20 00 34

+32 475 23 39 46

info@BeLoaded.be

www.BeLoaded.be