EMPOWERING THE EARTH

CHARGING PILE PRODUCT MANUAL

WATTZING New energy technology
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From Energy Nodes to Smart Ecology

Future vision
Redefining energy boundary with technological innovation
Let every kilowatt hour become the cornerstone of a sustainable future.

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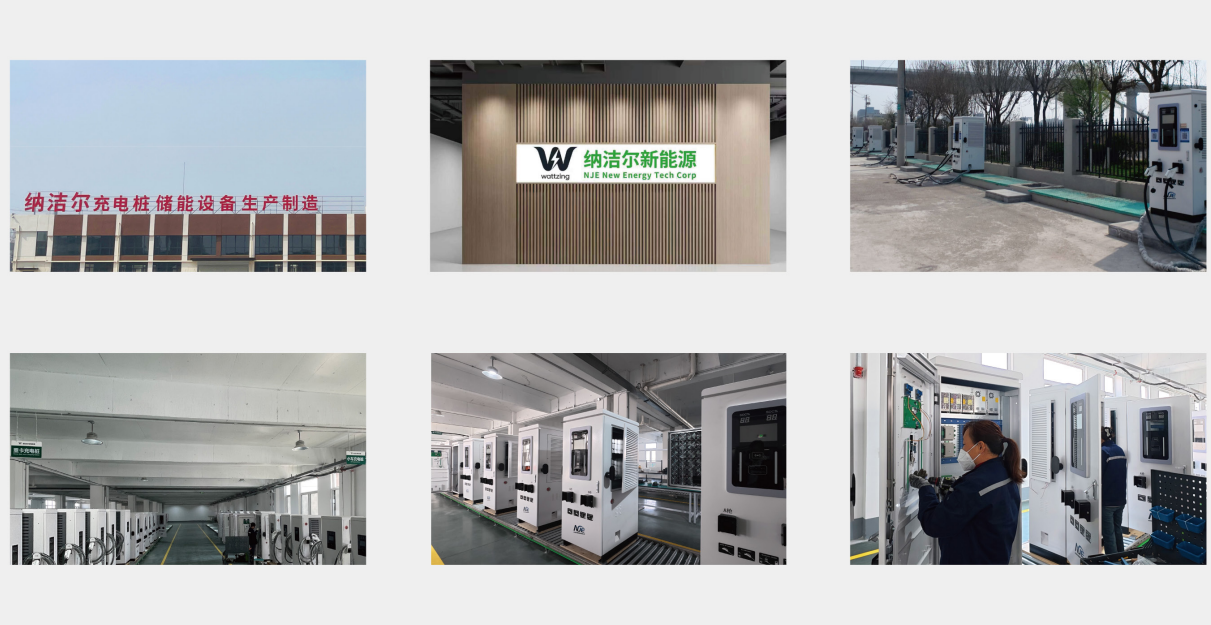
01
ABOUT WATTZING

Shandong Wattzing (Najer) New Energy Technology Co., Ltd. focuses on the research and development, production, and manufacturing of industry-specific intelligent terminal equipment, with a focus on display terminals, zero carbon terminals, and service terminals, providing intelligent products and system solutions for green travel and low-carbon environmental protection.

In the field of charging piles, Shandong Wattzing's main products cover a diversified product matrix, including charging piles (car charging piles, heavy-duty truck charging piles, supercharging charging piles) and energy storage products (household energy storage, mobile energy storage, industrial and commercial energy storage), which can be widely used in urban communities, public transportation, logistics transportation and other scenarios to meet the charging needs of different power and frequency.

Relying on profound technological accumulation and rich industry experience, Shandong Wattzing provides customers with integrated solutions from intelligent terminal devices to industrial Internet of Things, helping enterprises achieve digital, intelligent, and green transformation.



Corporate Philosophy

ENTEPRPRISE MISSION
Empower customers to enhance their core competitiveness with high-quality products and services.

CORPORATE VISION
Create high-quality products with ingenuity and strive to become the industry benchmark.

ENTERPRISE VALUES
Quality first | honesty first | gratitude and win-win situation

02
BRAND HONOR
品牌荣誉

Wattzing-qualification certificate
Wattzing new energy
Lead the future with science and technology, and create brilliance with quality.

High-tech enterprise certification
National recognition, technology enterprise.

china compulsory certification
National compulsory certification, safety bottom line

Eu CE certification
International quality, global access

A number of practical invention patents
The crystallization of innovation rooted in reality

Layout of the whole industrial chain of optical storage and charging
From power generation to electricity consumption, open up every link of green energy

02
BRAND HONOR
品牌荣誉

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Wattzing new energy
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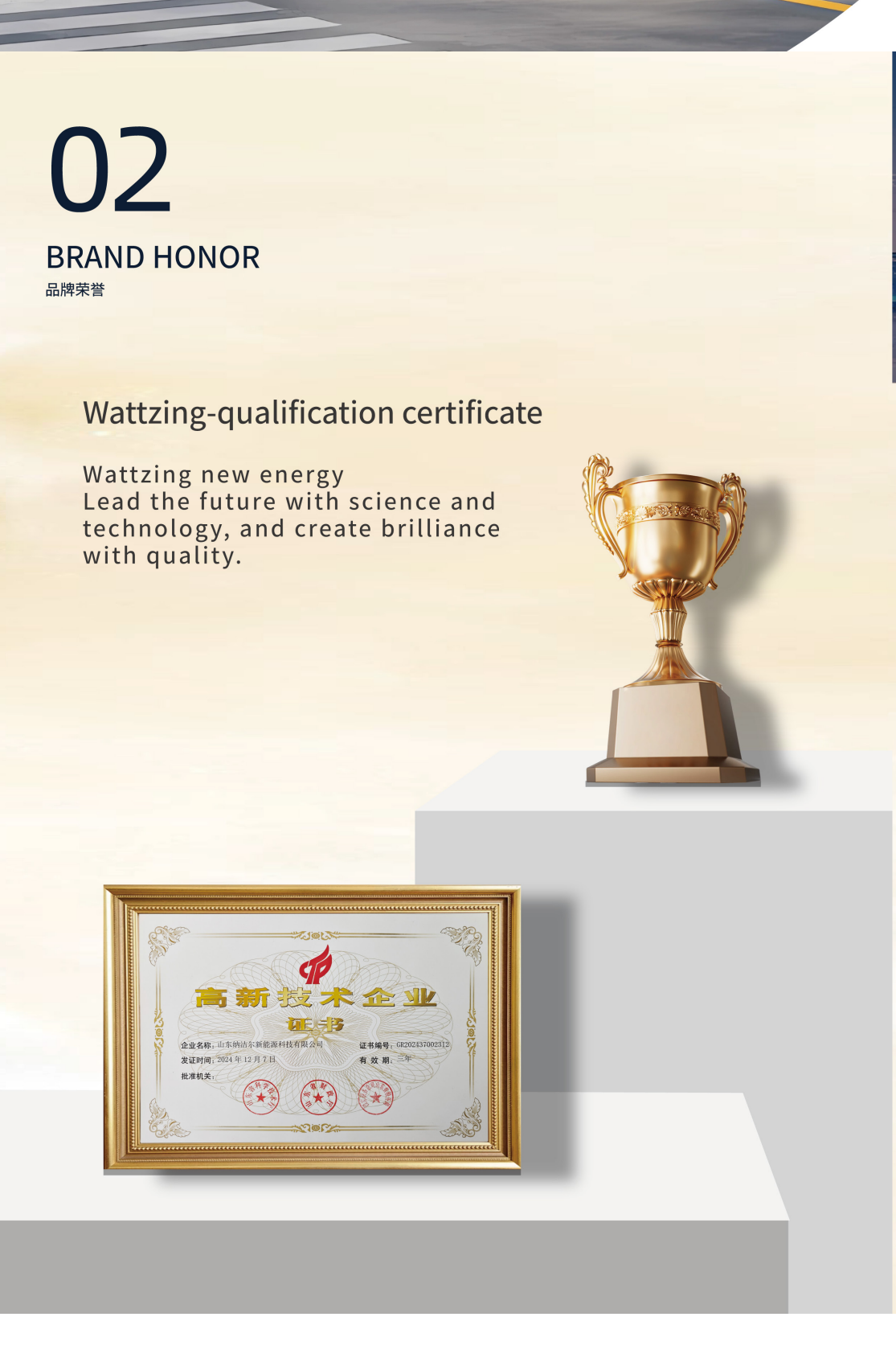
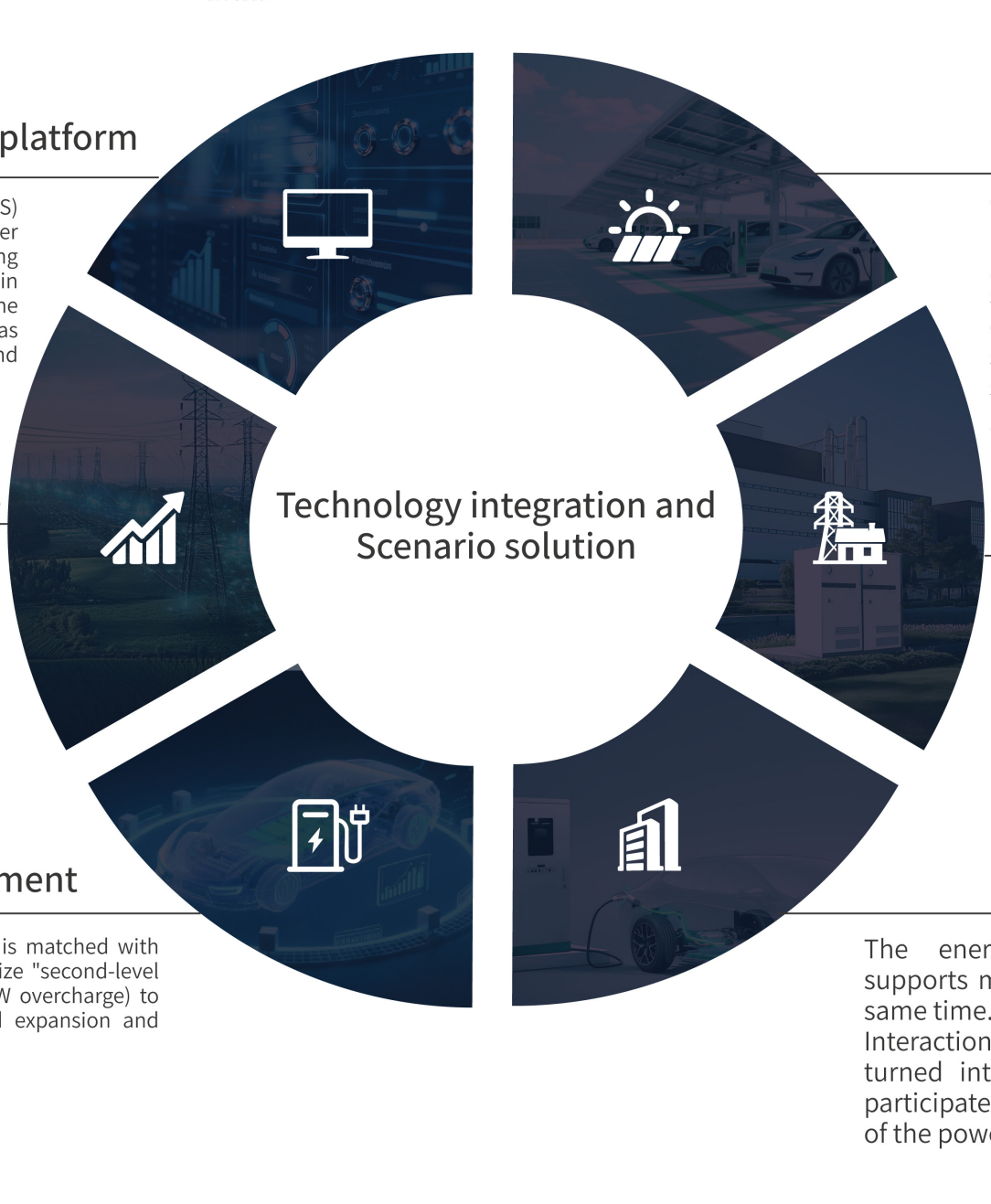


Brand honor strength certification
品牌荣誉 实力认证

企业信用等级证书
AAA级
企业资信等级证书
AAA级
产品认证证书
外观设计专利证书
实用新型专利证书

03 TRINITY SYNERGISTIC VALUE
三位一体 协同价值



Intelligent scheduling platform
The energy management system (EMS) is used to coordinate the power distribution of charging piles, charging piles and energy storage equipment in real time, giving priority to the consumption of green electricity such as photovoltaic and wind power, and stabilizing power grid fluctuations.

Dynamic peak shaving
The energy storage system stores energy in the low power consumption period, and releases electricity through charging piles/piles in the peak period, which reduces the electricity consumption cost of enterprises by more than 30%.

Overcharge empowerment
The electric energy storage system is matched with high-power charging reactor to realize "second-level energy supplement" (such as 600KW overcharge) to relieve the pressure of power grid expansion and improve the user experience.

Optical storage and charging integrated station
Optical storage and charging integrated station: photovoltaic power generation+energy storage system+charging pile/reactor operate cooperatively, and the energy of the station is 100% self-sufficient, and the surplus electricity is sold in reverse to generate income.

Comprehensive energy hub of industrial park
The energy storage system regulates the load of the park, and the charging reactor serves the electric logistics vehicle to realize the closed loop of the whole chain of "energy storage-green transportation". More than 30%.

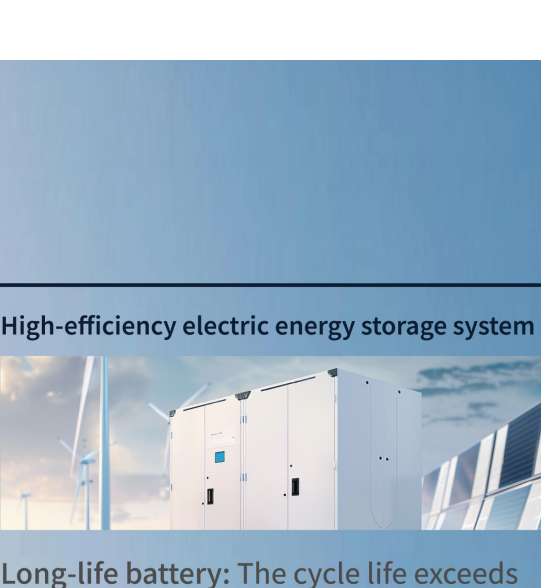
City super charging port
The energy storage system+charging pile supports multiple vehicles to overcharge at the same time. Combined with V2G (Vehicle-Network Interaction) technology, the electric vehicle is turned into a mobile energy storage unit to participate in the frequency modulation service of the power grid.

04 TECHNICAL SUPERIORITY
核心产品 技术优势

Intelligent charging pile and charging pile

Overcharge capacity: the liquid-cooled charging pile supports 600KW peak power, and it can recharge 200 kilometers in 5 minutes.
Intelligent interaction: AI identifies vehicle demand and automatically matches the optimal charging strategy.
Multi-scene adaptation: flexible coverage of the whole plant, from household slow-filling piles to megawatt piles in bus hubs.

High-efficiency electric energy storage system



Long-life battery: The cycle life exceeds 8,000 times, and it can be charged and discharged once a day and run stably for 20 years.
Multi-level safety protection: from carrier-level thermal runaway barrier to system-level fire linkage, it has passed UL9540A certification.
Modular expansion: the single cabinet is expanded by 100KWh1MWh, which supports various modes such as industrial and commercial energy storage and source network load storage.

cooperationmanagement platform

Energy brain: integrate charging pile, energy storage and photovoltaic data to realize the automation of the whole process of "prediction-scheduling-optimization-transaction".
Carbon asset tracking: Real-time accounting of emission reduction will connect with the carbon trading market, creating additional benefits for customers.

INTRODUCTION OF CHARGING PILE PRODUCTS

05
WATTZING

HY-AC
7/11/22kW

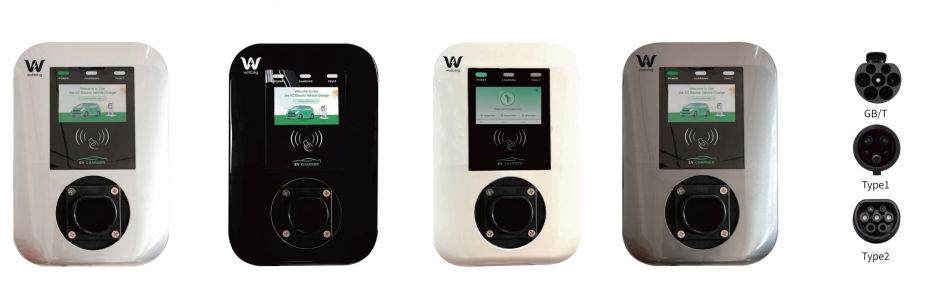
The 7kW AC charging pile is connected to a single-phase 220V AC power supply and provides stable charging for electric vehicles through internal circuits, which is suitable for home or small business scenarios.
At the same time, we also provide 11kW and 22kW AC charging piles. These two models adopt three-phase 380V power input, which has higher charging efficiency, and are suitable for commercial places or application scenarios with higher requirements on charging speed.
Overall, this series of products can provide flexible and efficient charging solutions for electric vehicle users in residential and commercial environments.

Product parameter

Power	7kW	11kW	22kW
Input voltage	1/N/PE ~ 230V	3/N/PE ~ 380V	3/N/PE ~ 380V
Rated Output	max output 32A	max output 16A	max output 32A
Output Current	Max 32A、Max 16A		
RCD	Type AC/A+B		
Basic Function	Screen / Bluetooth & WIFI / RFID Card / LAN / APP		
Charging Method	RFID(Optional) card / plug and charge /APP / Reservation charging		
Input Frequency	50Hz		
System Language	English (Accept Customization)		
Gun Cable Length	5m (Accept Customization)		
Altitude Height	2000m		
Humidity	5% to 95% no congeal		
Application	Indoor/Outdoor		
Load Balance	CT+Single / Three Phase Meter		
OCPP	4G&LAN		
Temperature	-40°C ~ 75°C (Frequency drop above 55°C)		
Standard	GBT / Type 1 / Type 2		
Color	White / Black / Brown / Gray		
Screen	Optional without screen		
Waterproof	IP65		

Illustrate：Please refer to the actual purchased machine.

Product features



HY-DC
7/15/20/30/40kW

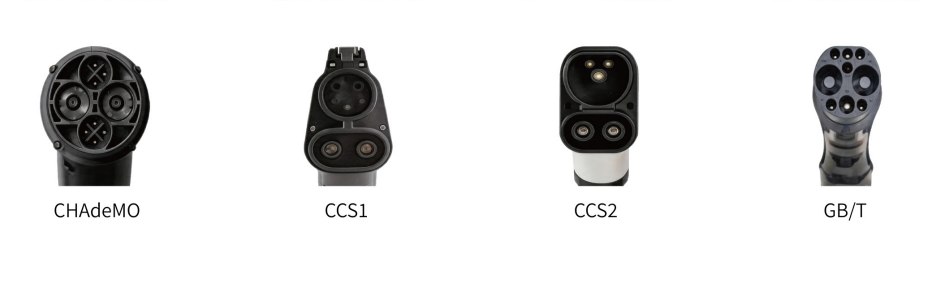
The Wattzing wall-mounted DC electric vehicle charger features a 7-inch touch screen for easy operation and real-time charging monitoring. Equipped with multiple protection functions, it ensures safe and stable charging performance.
With app control and Ethernet/4G/WiFi connectivity, users can conveniently manage charging anytime and anywhere. Its compact design and intelligent features make it an ideal choice for residential and commercial EV charging applications.

Product parameter

Output Powe	7kW	15kW	20kW	30kW	40kW
Output Current	20A	37A	60A	100A	133A
Output Voltage	200-750V (200-1000V optional)				
Input Connection	L+N+PE	3P+N+PE			
Input Current	32A	25A	32A	45A	64A
Input voltage	90-265V	260-475V			
Frequency	50/60 Hz				
Power Factor	> 099@ rated voltage				
Efficiency	95%				
Display	5 inch Color display				
Dimension(cm)	42*22*65			50*23*70	60*27*83
Weight	20KG	30KG	44KG	56KG	70KG
Operating Tempeerature	-20C to +50°C				
Altitude	2000M				
IP LEVEL	IP54				
Working Relative Humidity	RH≤95%				
Input cable length	0M(Customization Acceptable)				
Gun cable Length	5M(Customization Acceptable)				
Interface Standard	CCS CHADEMO GB/T				
Charging protocol	GBT27930/CHADEMO 2.0/ DIN 701210CPP 1.6(JSON)ISO 15118				

Illustrate：Please refer to the actual purchased machine.

Product features



HY-DC
40/60/80/120/160/180/240/320/360/400/480KW
Double-gun DC charging pile

The 240KW, 320KW, 360KW, 400KW and 480KW dual-gun DC integrated machine is an efficient and intelligent charging equipment for electric vehicles. The power range of this model covers 160-480KW, and it has the functions of charging control, electric energy billing, cost settlement, human-computer interaction, remote communication and so on. It adopts dual-gun design, is equipped with intelligent management system, has multiple charging modes, supports VIN plug-and-play and so on.

Product parameter

output rating	40、60、80、120、160、180、240、320、360、400、480KW
Maximum output current of single gun	300A
Input voltage range	380±15%Vac
Input frequency	50±5HZ
Output voltage	DC200-1000V (constant power range: DC300-1000V)
Power factor	⩾0.99
Peak efficiency	⩾96%
Muzzle number	Double gun
Installation mode	console mode
Networking mode	4G/ Ethernet
Length of gun line	5m
Monitor	7-inch touch screen
The protection grades	IP55
Noise	＜65db
Charging mode	Scan code/swipe card /VIN
Charging mode	Automatic charging/constant charge/amount/time.
Working temperature	-25 ~ 65 C, frequency reduction output above 50 C.
Humidity	5%~92% without frost
Connection mode	Go in and out
Safety function	AC input overvoltage/undervoltage protection, DC output overvoltage/undervoltage protection, overload protection, short circuit protection, grounding protection, overtemperature protection, low temperature protection, lightning protection, emergency stop protection, leakage protection, battery active protection, insulation protection, door opening protection, contactor adhesion protection, etc.

Product features

Efficient and stable
High efficiency and high power density, peak efficiency > 96%; Independent silencing design, noise ≤ 65dB; Abnormal state automatically stops, supporting remote OTA upgrade.

Intelligent charging
Double auxiliary source design, compatible with new and old national standard models; Single gun full power output, double gun flexible distribution; A variety of charging modes can be freely selected.

Safety protection
Comprehensive safety monitoring of voltage, current and temperature; AC/DC separation, acrylic board electric shock isolation; Automatic recording of charging data and safe backtracking.

Application scenario
Large public parking lot high-speed service area refueling station bus stop municipal official car stop network car distribution center.

HQ MAX
360/480/600/720/800/960/1200/1600/2400/3200KW DC flexible charging piles

The DC flexible charging reactor is a charging device composed of a host and a charging terminal independently, and its power range covers 480-960kW. Its unique design allows a single charging pile to be connected with up to 16 guns, and all charging terminals share the power of the main engine. According to the charging needs of different vehicles, the power can be dynamically distributed, unified scheduling and unified management, and the impact on the power grid can be reduced. It is mainly suitable for large-scale centralized charging scenes and overcharging demonstration scenes.

Product features

Efficient and stable
Terminals share host power, maximizing efficiency; Single module failure automatically exits; The charging module is fully protected by glue, and the failure rate is low.

Intelligent charging
Full matrix topology; Power pooling+intelligent algorithm; The terminal automatically recognizes single gun charging and double gun charging.

Safety protection
Comprehensive safety monitoring of voltage, current and temperature; Automatic recording of charging data and safe backtracking; Abnormal data input and output double power-off protection.

Product parameter

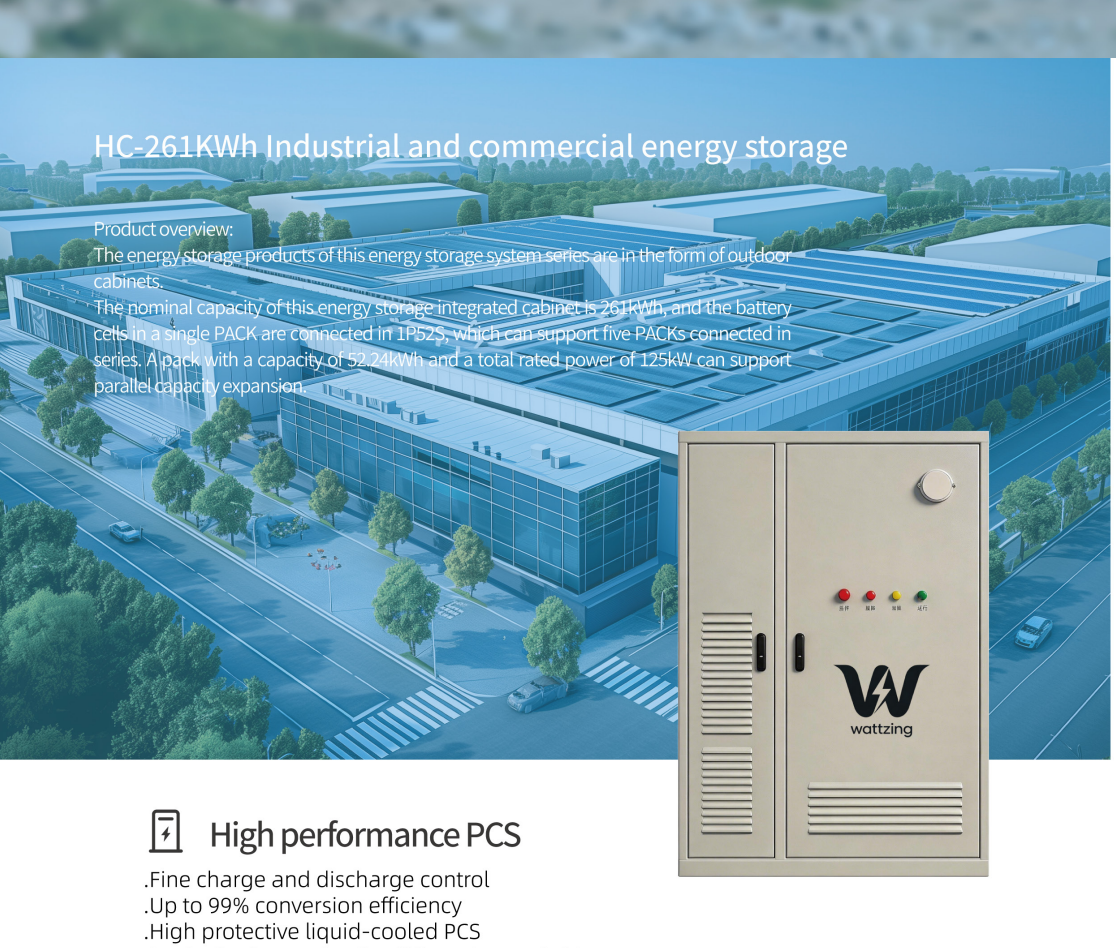
output rating	360、480、600、720、800、960、1200、1600、2400、3200KW
Output current	The maximum output current of air-cooled terminal single gun is 300A and that of liquid-cooled terminal single gun is 600A
Input voltage range	380±15%Vac
Input frequency	50±5HZ
Output voltage	DC200-1000V (constant power range: DC300-1000V)
Power factor	⩾0.99
Peak efficiency	⩾96%
General configuration	480KW-6 guns, 600KW-10 guns, 720KW-12 guns, 800KW-14 guns and 960KW-16 guns.
Installation mode	console mode
Networking mode	4G/ Ethernet
Length of gun line	5m
Monitor	7-inch touch screen
The protection grades	IP55
Noise	＜65db
Charging mode	Scan code/swipe card /VIN
Charging mode	Automatic charging/current charge/amount/time.
Working temperature	-25 ~ 65 C, frequency reduction output above 50 C.
Humidity	5%~92% without frost
Connection mode	Go in and out
Safety function	AC input overvoltage/undervoltage protection, DC output overvoltage/undervoltage protection, overload protection, short circuit protection, grounding protection, overtemperature protection, low temperature protection, lightning protection, emergency stop protection, leakage protection, battery active protection, insulation protection, door opening protection, contactor adhesion protection, etc.

Application scenario

- Airport
- Large parking lot
- High speed service area
- Logistics park
- Overcharge demonstration station

INTRODUCTION OF ENERGY STORAGE PRODUCTS

06
WATTZING



HC-261KWh Industrial and commercial energy storage

Product overview:
The energy storage products of this energy storage system series are in the form of outdoor cabinets.
The nominal capacity of this energy storage integrated cabinet is 261KWh, and the battery cells in a single PACK are connected in 1P52S, which can support five PACKs connected in series. A pack with a capacity of 52.24kWh and a total rated power of 125kW can support parallel capacity expansion.

High performance PCS
.Fine charge and discharge control
.Up to 99% conversion efficiency
.High protective liquid-cooled PCS
.Peak clipping and valley filling, demand side response
.Dynamic expansion of electric power

Self-developed EMS adaptation
.Provide a comprehensive solution integrating software and hardware
.Real-time multitask operating system
.Intelligent monitoring operation equipment

The battery is stable and reliable
.Efficient configuration of BMS battery management system
.Intelligent monitoring of battery condition
.6000 cycles

Safe and convenient
. Modular installation and expansion are convenient.
. Efficient thermal management system
. Protection grade IP55
. Integrated design
. Silent operation

Product parameter

Rated capacity of battery	261KWh
Rated voltage of battery	832V
Battery voltage range	700V~950V
Battery Type	Lithium iron phosphate battery
Battery capacity	3.2V 314Ah
Series parallel connection method of battery pack	1P*52S*5
Maximum charging and discharging current	157A
Rated AC power	125kW
Rated AC current	157A
Rated AC voltage	380V (±10%)
Rated AC frequency	50/60Hz
Total harmonic distortion rate of current (THDi)	≤5% (rated power)
Power factor	-1 leading~+1 lagging
Protection level	IP54
Shutdown self power consumption	<100W
Display	LCD touch screen
Relative humidity	0~95%
Noise	<7 5 dB
Ambient temperature	-25°C~55°C (Reduced rating above 45 °C)
Cooling method	Lntelligent liquid cooling
Altitude	2000m
Contact method	Ethernet/RS485
size (W*D*H	1470* 1430*2000mm
weight	3500kg

HJ-15KWh Household energy storage

Product overview:
The energy storage integrated machine has a nominal capacity of 14.3kWh, a rated voltage of 51.2V, and a rated capacity of 280Ah. The battery connection mode in the pack is 1P16s, and a 280 Ah lithium iron phosphate battery is selected, with a single battery energy of 0.896kWh. The whole machine is equipped with a single battery module with a nominal power of 5-8kW (suitable for mainstream household inverters), and supports multiple parallel capacity expansion.

Safe and reliable
. passed the international certification such as UL/CE.
.Three-level BMS real-time monitoring
.Cycle life ≥6000 times

Intelligent and efficient
.AI intelligent charging and discharging strategy
. Emergency power supply and other modes
.Remote upgrade of cloud platform.
.Support peak-valley arbitrage

Flexible and convenient
.Integrated integrated design
.Installation only takes 0.2m²
.Support for later expansion
. Silent operation ≤45DB

Service guarantee
.Self-help research and development and production
.24 small responseTen-year warranty
. APP real-time monitoring

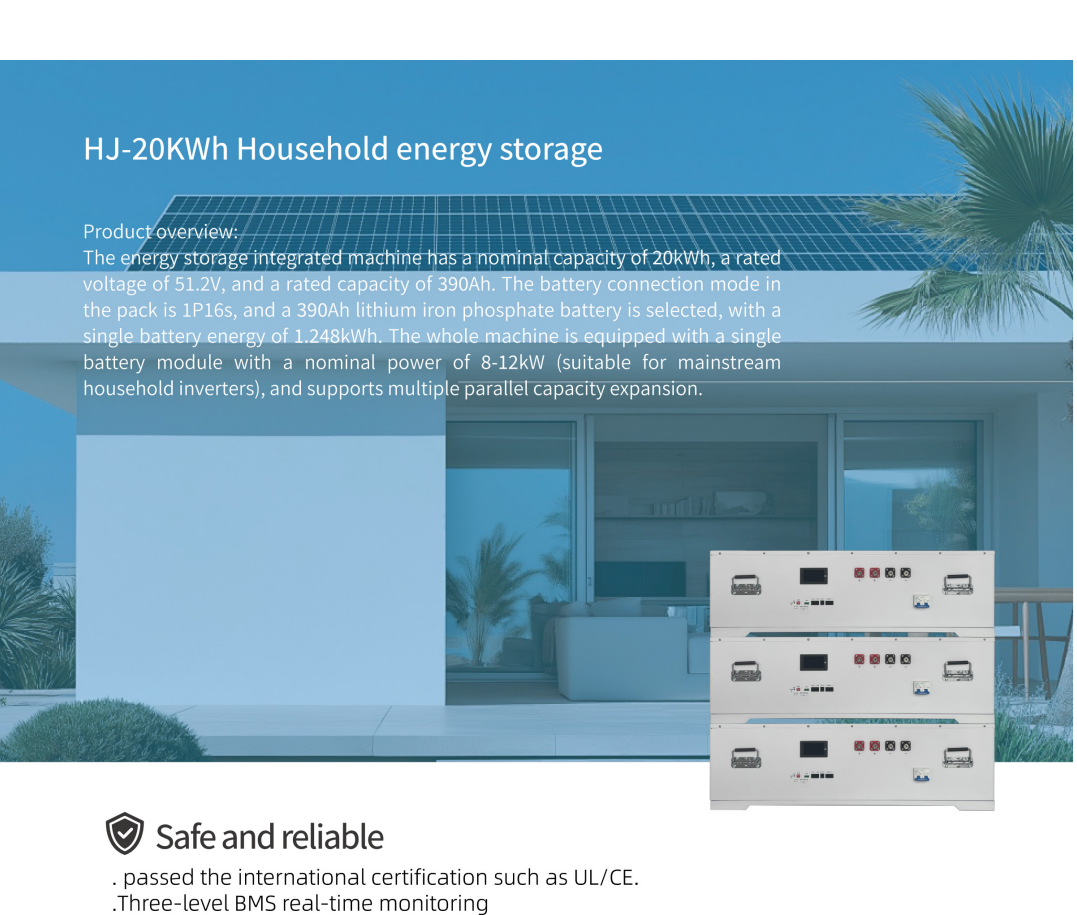
Product parameter

Lithium battery cell parameters

Battery Type	Lithium iron phosphate
Rated voltage/capacity	3.2V/280Ah
Voltage range of individual battery cells	2.5～3.65V
Weight of individual battery	5400±30g
Operating Temperature	Discharge；-20°C~+60°C Charge；0°C~+60°C
Relative humidity of the environment	(65±20) %RH
Charge retention	97%；25°C, 30days
Standard cycle life	⩾6000 cycles

Lithium battery system parameters

Rated voltage	51.2V
Rated capacity	280Ah
Discharge cut-off voltage	40.0V，Or any battery cell 2.50V
Charging protection voltage	58.4V，Or any battery cell 3.65V
Total energy	14.3KWh
Maximum continuous discharge current	200A
Charging working temperature range	0°C~+60°C
Discharge working temperature range	-20°C~+60°C
Charge and discharge interface	Square terminal
communication protocol	Serial port customization protocol，RS485，CAN
size range	L385*W250*H785mm
Weight	120KG±20



HJ-20KWh Household energy storage

Product overview:
The energy storage integrated machine has a nominal capacity of 20kWh, a rated voltage of 51.2V, and a rated capacity of 390Ah. The battery connection mode in the pack is 1P16s, and a 390Ah lithium iron phosphate battery is selected, with a single battery energy of 1.248kWh. The whole machine is equipped with a single battery module with a nominal power of 8-12kW (suitable for mainstream household inverters), and supports multiple parallel capacity expansion.

Safe and reliable
. passed the international certification such as UL/CE.
.Three-level BMS real-time monitoring
.Cycle life ≥6000 times

Intelligent and efficient
.AI intelligent charging and discharging strategy
. Emergency power supply and other modes
.Remote upgrade of cloud platform.
.Support peak-valley arbitrage

Flexible and convenient
.Integrated integrated design
.Installation only takes 0.2m²
.Support for later expansion
. Silent operation ≤45DB

Service guarantee
.Self-help research and development and production
.24 small responseTen-year warranty
. APP real-time monitoring

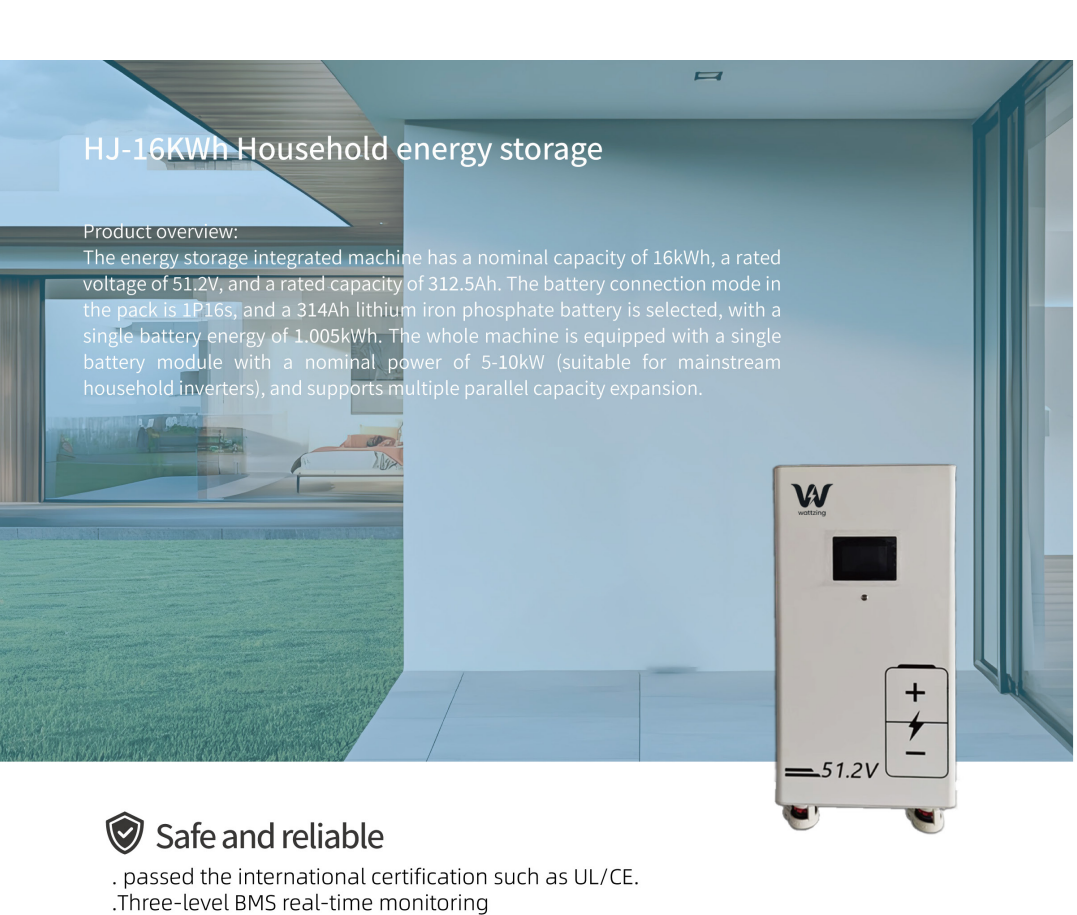
Product parameter

Lithium battery cell parameters

Battery Type	Lithium iron phosphate
Rated voltage/capacity	3.2V/280Ah
Voltage range of individual battery cells	2.5～3.65V
Weight of individual battery	5400±30g
Operating Temperature	Discharge；-20°C~+60°C Charge；0°C~+60°C
Relative humidity of the environment	(65±20) %RH
Charge retention	97%；25°C, 30days
Standard cycle life	⩾6000 cycles

Lithium battery system parameters

Rated voltage	51.2V
Rated capacity	390Ah
Discharge cut-off voltage	40.0V，Or any battery cell 2.50V
Charging protection voltage	58.4V，Or any battery cell 3.65V
Total energy	20KWh
Charging current	⩽ 200A
Maximum continuous discharge current	260A
Charging working temperature range	0°C~+60°C
Discharge working temperature range	-20°C~+60°C
Charge and discharge interface	Square terminal
communication protocol	Serial port customization protocol，RS485，CAN
size range	L1040*W430*H330mm
Weight	130KG±20



HJ-16KWh Household energy storage

Product overview:
The energy storage integrated machine has a nominal capacity of 16kWh, a rated voltage of 51.2V, and a rated capacity of 312.5Ah. The battery connection mode in the pack is 1P16s, and a 314Ah lithium iron phosphate battery is selected, with a single battery energy of 1.005kWh. The whole machine is equipped with a single battery module with a nominal power of 5-10kW (suitable for mainstream household inverters), and supports multiple parallel capacity expansion.

Safe and reliable
. passed the international certification such as UL/CE.
.Three-level BMS real-time monitoring
.Cycle life ≥6000 times

Intelligent and efficient
.AI intelligent charging and discharging strategy
. Emergency power supply and other modes
.Remote upgrade of cloud platform.
.Support peak-valley arbitrage

Flexible and convenient
.Integrated integrated design
.Installation only takes 0.2m²
.Support for later expansion
. Silent operation ≤45DB

Service guarantee
.Self-help research and development and production
.24 small responseTen-year warranty
. APP real-time monitoring

Product parameter

Lithium battery cell parameters

Battery Type	Lithium iron phosphate
Rated voltage/capacity	3.2V/280Ah
Voltage range of individual battery cells	2.5～3.65V
Weight of individual battery	5400±30g
Operating Temperature	Discharge；-20°C~+60°C Charge；0°C~+60°C
Relative humidity of the environment	(65±20) %RH
Charge retention	97%；25°C, 30days
Standard cycle life	⩾6000 cycles

Lithium battery system parameters

Rated voltage	51.2V
Rated capacity	314Ah
Discharge cut-off voltage	42V，Or any battery cell 2.50V
Charging protection voltage	58.4V，Or any battery cell 3.65V
Total energy	15.3KWh
Charging current	⩽ 200A
Maximum continuous discharge current	220A
Charging working temperature range	0°C~+60°C
Discharge working temperature range	-20°C~+60°C
Charge and discharge interface	Square terminal
communication protocol	Serial port customization protocol，RS485，CAN
size range	L390*W250*H800mm
Weight	120KG±20

07
SERVICE AND SUPPORT
服务与支持

Pre-sale and mid-sale support
- Localization professional consulting services
- Integrated project management and delivery
- Post-market equipment transformation
- Diversity empowerment training

After sales service support
- Localization professional service team
- Safety supervision and grid-connected debugging
- Product life cycle management
- Customized extended warranty service

Service response support
- Information resource sharing of service platform
- Safety inventory management of spare parts
- 1 hour response, 24 hours to solve

With local service as the core, supported by intelligent system platform, and supported by intelligent system platform, Najier builds an online and offline service support system, provides services and solutions covering the whole life cycle of products, improves service efficiency and response speed with professional and efficient services, constantly exceeds customers' expectations and creates greater value for customers.