
GLOBE
ENERGY
POWERING THE FUTURE – TODAY
Fast charging, battery solutions and energy systems for tomorrows demands – available today
We deliver complete energy solutions
– DC fast charging up to MW level
– Battery Energy Storage Systems (BESS) – from 100 kWh to multiple MWh
– Mobile charging solutions – deployed in weeks, not years
– Installation, service and operations across the Nordics and Europe
– Financing and leasing available
Limited grid capacity?
We optimize, reinforce, or complement with battery solutions

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MODEL : 40-10007-BESS

MOBILE BESS CHARGER

Design Standards

BCH® is a new range of charging solutions for electric drive equipment and electric vehicles. The product is designed based on mobile scenarios, fully considering the issues of convenience and security. Becoming a brand new choice for power transportation.

Benefits

- Integrated installation, convenient storage and transportation;
- High return on investment and short payback period;
- Simple operation and easy maintenance;
- Power and Capacity can be expanded, meet different user needs;

Warranty

Please contact the sales and check the warranty manual

LABORATORY ACCREDITATION CERTIFICATE

Certificate of the World Manufacturer Identifier Code

General Information		
Charging Gun	Charging Power	500kW
	Voltage	DC1000V
	Type	CCS-2
	Qty.	2
Rated Battery Storage Capacity		LFP 1075kWh
Output	AC	OPTION
	DC	500kW
Input	AC	500kW(380~415Vac)
	DC	OPTION
Protection Class		IP55
Loading Dimension(W*D*H)		20'GP
Net.Weight		18000kG
Loading Capacity	20'GP	1 units
	40'HC	2 units
Discharge Temperature Range		-20~50°C(> 45℃ derating)
Max Altitude		3000m (> 2000m derating)

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$LiFePO_4$ BATTERY

Long Life Design Up to **6000** cycles @ **0.5C**

High Efficiency up to **90%**

C-5 LEVEL ANTI-CORROSION

SUITABLE WITH HEAVY DUTY

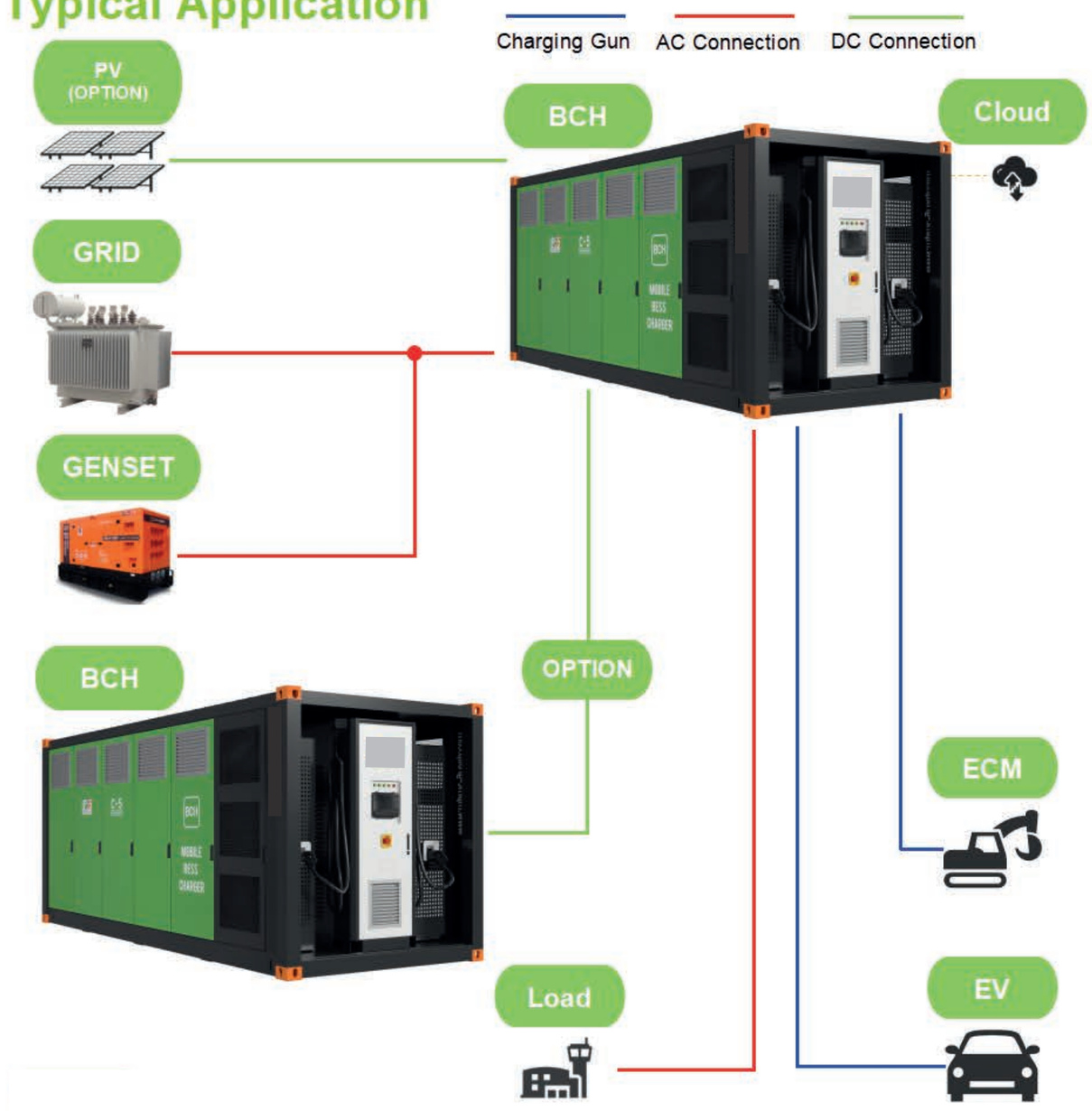
Extremely high ROI, with an average payback time of less than 1 year

*Depends on local charging electricity prices and service rates

DESIGN BASED ON PLUG AND PLAY

Friendly human-machine interface

Typical Application



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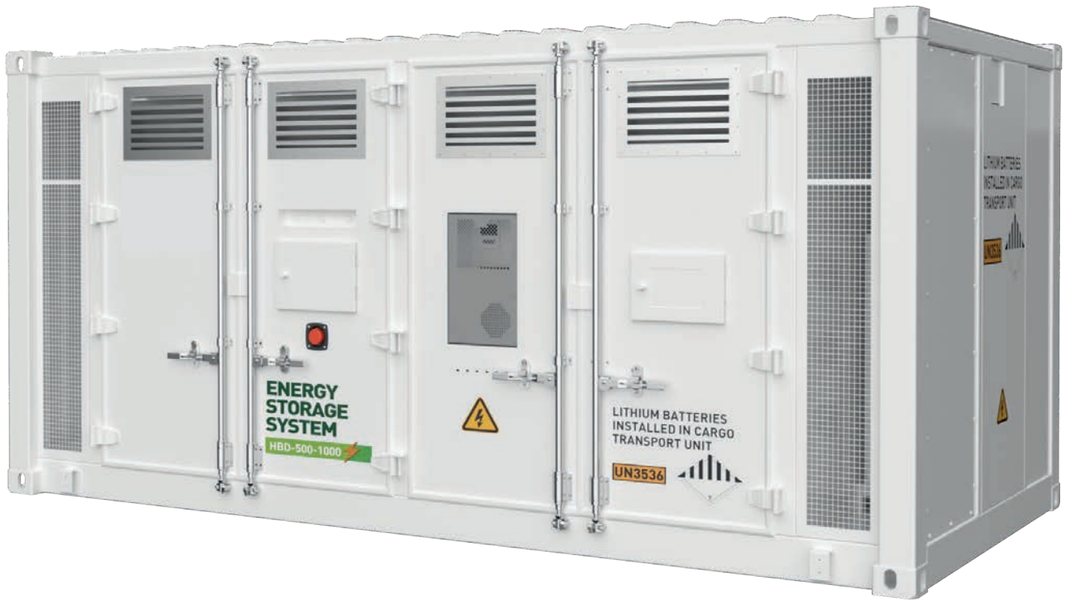
A Series

Model: 10-10026-BESS

BATTERY ENERGY STORAGE SYSTEM



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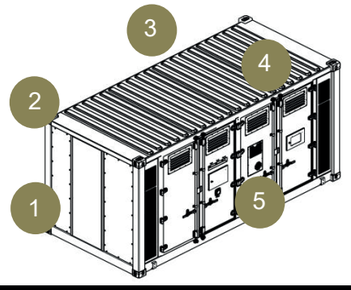
General Information			
Rated Output Power	Diesel Generator	N/A	
	Inverter	500kVA/500kW，3ph.	
	PV Array Integrated	N/A	
MAX. Output Power	550 kVA	*P.F.=1.0	
MIN. Output Power	4 kW		
Rated Voltage	50HZ	400Vac(-15%~+15%)	
	60HZ	400Vac(-15%~+15%)	
Rated Power Factor	1 lagging~ 1 leading	*Changeable	
Rated Battery Capacity	1045.00kWh		
Rated Battery Power	500 kW		
Rated Voltage of Group	832 Vdc		
MAX. AC Current	Charge	800 A	
	Discharge	800 A	
Applicable Standards	IEC62109，EN50549		
Standard Condition	≤3000m ASL，-20℃~ + 50°C，≤80% humility (power derating when ＞2000m or＞45℃）		

Noise level



Position	dB(A)@1m, 0% load	dB(A)@1m, 75% load
1	TBA	TBA
2	TBA	TBA
3	TBA	TBA
4	TBA	TBA
5	TBA	TBA
Average Value	TBA	TBA

Dimensions	Length	Width	Height
Loading Size	4800 mm	2250 mm	2250 mm
Expand Size	4800 mm	2250 mm	2250 mm

NA

20’ Container

40’ Container

Net.Weight	14000kG

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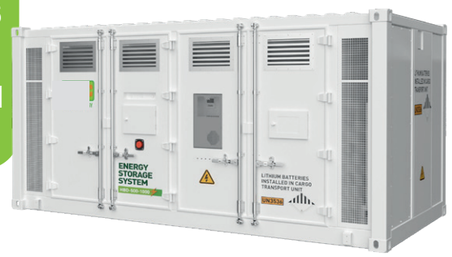
ZERO-EMISSION & Low-Noise Modular Power Solution

FOR GRID & EMERGENCY POWER

INTELLIGENT **PCS** with **EMS** EASY OPERATION **ONONE SCREEN**



LiFePO4 BATTERY
Long Life Design Up to
8000 **cycles**
High Quality Based on Specification Consistency Of CELLS!

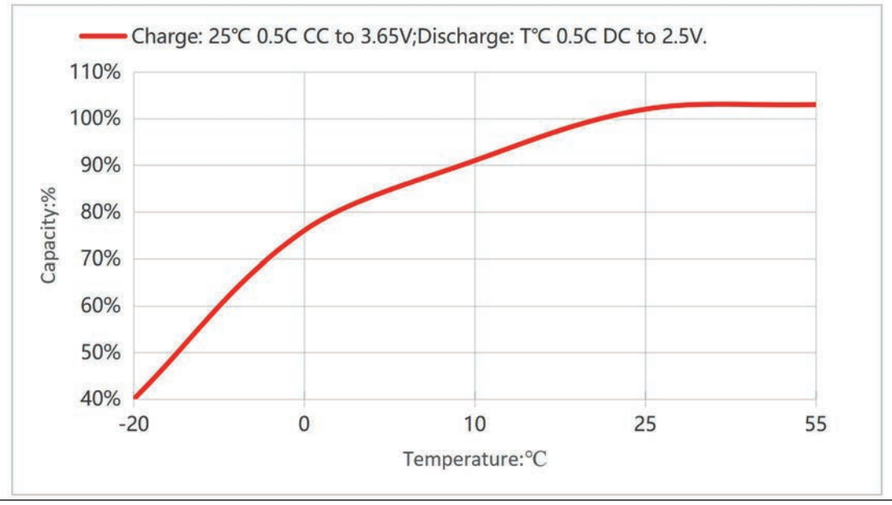
C-3 LEVED ANTECORROSION SUITABLE WITH HEAVY DUTY

Inverter System		
AC Performance	Rated AC Power	500kVA / 500kW
	Maximal AC Output Power	550kVA /550kW
	Power Factor Adjustment	1 leading~1 lagging
	AC Voltage Adjustment	400Vac(-15%~+15%)
	Frequency Adjustment	50Hz/60Hz
	Maximal AC Current	800 A
	AC Connection	3 Phase 4 Wire
	Efficiency	98.5%（Max）

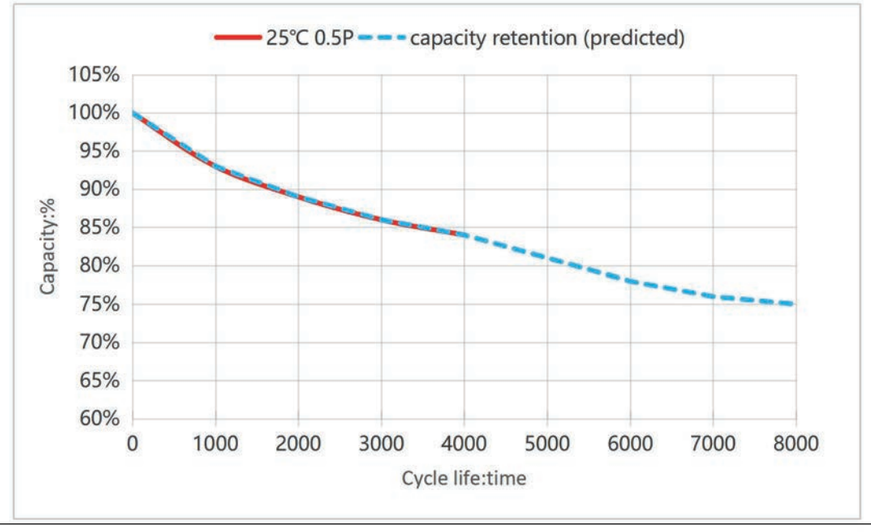
Battery Energy Storage System

Battery Pack	Cell Type	LiFePO4
	Rated Pack Voltage	153.6 Vdc
	Rated Pack Current	157Amps
	Maximal Pack Current	314 Amps
	Rated Capacity	52.25 kWh
	Charging temperature	0° C~55° C
	Discharging temperature	-20° C~55° C
	Cooling Method	Liquid Cooling
	IP Level	IP67

Temperature / capacity derating curve：



Cycle life / capacity derating curve：



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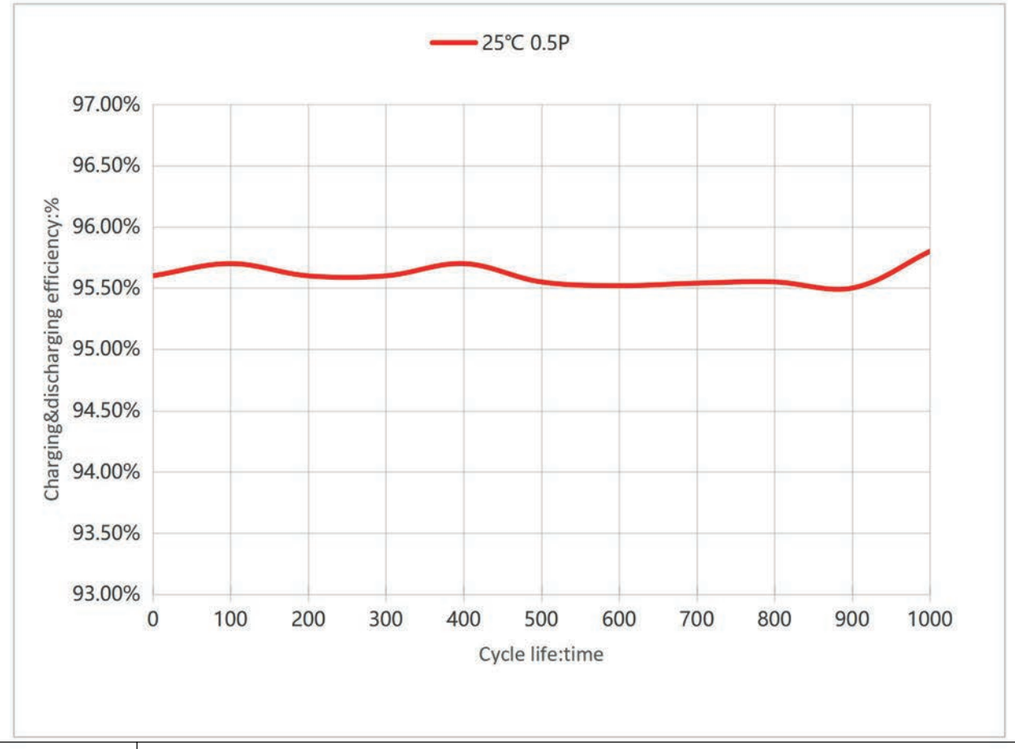
Battery Group	Rated Group Capacity	261.25 kWh
	Rated Group Voltage	832 Vdc
	Group Voltage Range	728 Vdc ~936Vdc
	Rated Group Current	157 Amps
	Maximal Group Current	314 Amps
	Depth of Discharge	90%
	Depth of Charge	90%
	Efficiency	95%
	State of Health	70%
	Rated Cycle Life	8000 Times

Charging&discharging efficiency / capacity derating curve：



BMS Functions	☑ Overcharge protection	☑ Passive equalization
	☑ Overdischarge protection	☐ Active equalization
	☑ Temperature monitoring	☑ CAN
	☑ Overcurrent protection	☑ RS485
	☑ Short circuit protection	☑ SOC monitoring
	☑ Overvoltage protection	

EMS Functions	☑ Peak shifting with grid	☑ Peak shaving with grid
	☐ Peak shifting with generator	☑ Peak shaving with generator
	☑ Peak shifting with PV	☑ Peak shaving with PV
	☐ Peak shifting with external HBD	☑ Peak shaving with external HBD
	☑ Time table	☐ PLC function
	☑ Export to grid	☐ Remote control through I/O terminals
	☑ Charge by grid	☐ Remote control through WIFI
	☑ Charge by generator	☑ Remote control through 4G/5G
	☑ Charge by PV	☐ On-grid & off-grid seamless change
	☑ Grid forming	☑ Cloud platform
	☑ RS485 Communication	☑ Ethernet Communication
Safety Device		
Fire Protection System	☑ Smoke detector	☑ Temperature detector
	☐ Li-ion detector	☐ H2 detector
	☑ CO detector	☑ Aerosol
	☐ FM-200	☐ Novec-1230
	☑ Air inlet motorized louvers with air outlet fans	☐ Audible and visual alarm
	☐ Water inlet valve	☑ Explosion board/valve
	☑ 60mins fire resistance rating(EI 60)	☐ 120mins fire resistance rating(EI 120)
Environmental Adaptability	☑ Water logging alarm	☑ Door opening alarm
	☑ CCTV with IR alarm	☐ HVAC
	☑ LCAC	☐ Cooling fans
	☐ Access control	☐ Air inlet filter
	☑ Drain valve	☐ Galvanized basement
	☑ IP54	☑ C-3 anti-corrosion
	☐ IP65	☐ C-5 anti-corrosion
Electrical Protection (AC)	☑ Surge arrestor	☐ Breaker with residential current device
	☑ Grounding point	☑ Emergency stop button
	☑ UPS	☐ Standby startup battery
	☑ Over-current	☑ Over-voltage
	☑ Under-voltage	☑ Short circuit
	☑ Over-frequency	☑ Under-frequency

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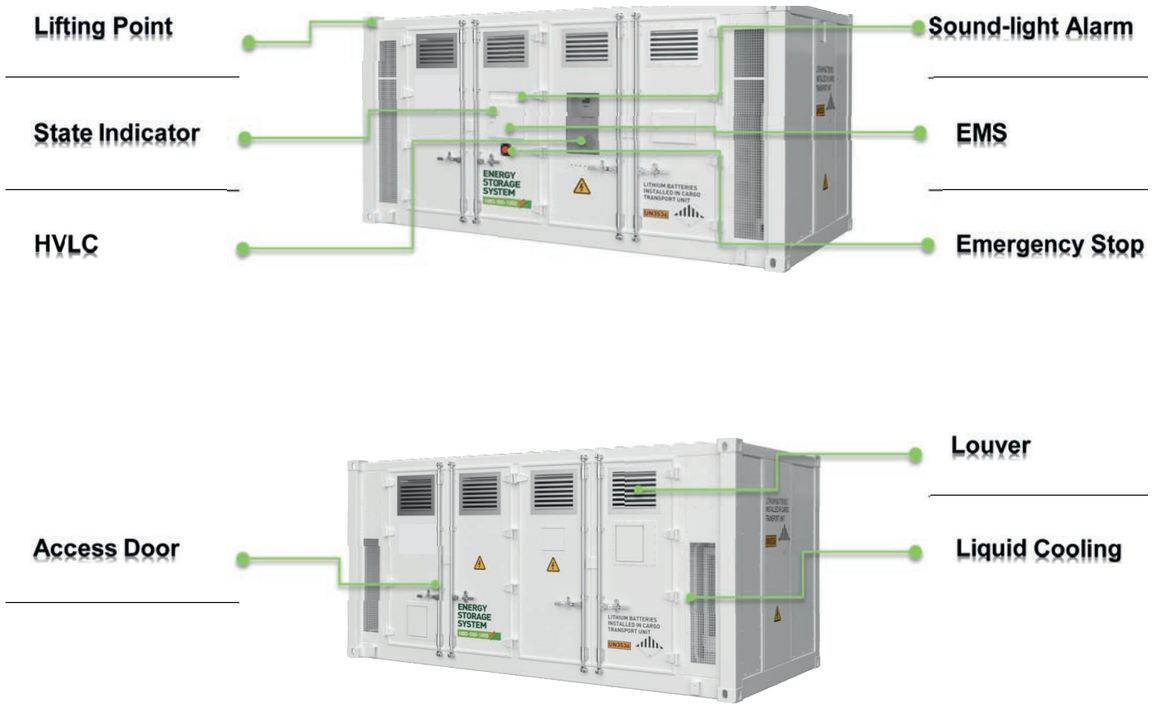
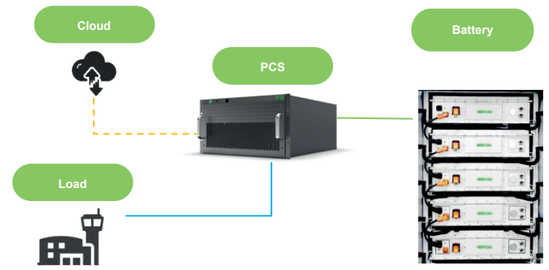


COMPLIED WITH

☑IEC 62619	☐AS 4777
☑IEC/EN 62109	☐AS 5139
☑IEC 61000	☐AS 3010
☑IEC 62477	☐AS 62040
☐IEC 63056	☑AS 62477
☑IEC 62933-5	☐UL 9540A
☐IEC 62116	☐UL 9540
☐IEC 61727	☐UL 1741/CSA C22.2
☑EN 50549	☑UN 38.3
☐GB/T 44240	☑UN 38.3/3536



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MODEL : 40-10005-150M

MOBILE BESS CHARGER

Design Standards

BCH® is a new range of charging solutions for electric drive equipment and electric vehicles. The product is designed based on mobile scenarios, fully considering the issues of convenience and security. Becoming a brand new choice for power transportation.

Benefits

- Integrated installation, convenient storage and transportation;
- High return on investment and short payback period;
- Simple operation and easy maintenance;
- Power and Capacity can be expanded, meet different user needs;

Warranty

Please contact the sales and check the warranty manual

LABORATORY ACCREDITATION CERTIFICATE

Certificate of the World Manufacturer Identifier Code

General Information		
Charging Gun	Charging Power	150kW
	Voltage	DC1000V
	Type	CCS-2
	Qty.	2
Rated Battery Storage Capacity		LFP 203kWh
Output	AC	125kW(380~415Vac)
	DC	150kW
Input	AC	80kW(380~415Vac)
	DC	150kW
Protection Class		IP55
Loading Dimension(W*D*H)		2250*1450*1800mm (w/o trailer)
Net.Weight		2800kG (w/o trailer)
Loading Capacity	20'GP	4 units(w/o trailer)
	40'HC	8 units(w/o trailer)
Discharge Temperature Range		-20~55°C(> 45℃ derating)
Max Altitude		2000m

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$LiFePO_4$ BATTERY

Long Life Design Up to ***6000*** cycles @ ***1C***

High Efficiency up to ***90%***

DESIGN BASED ON PLUG AND PLAY
Friendly human-machine interface

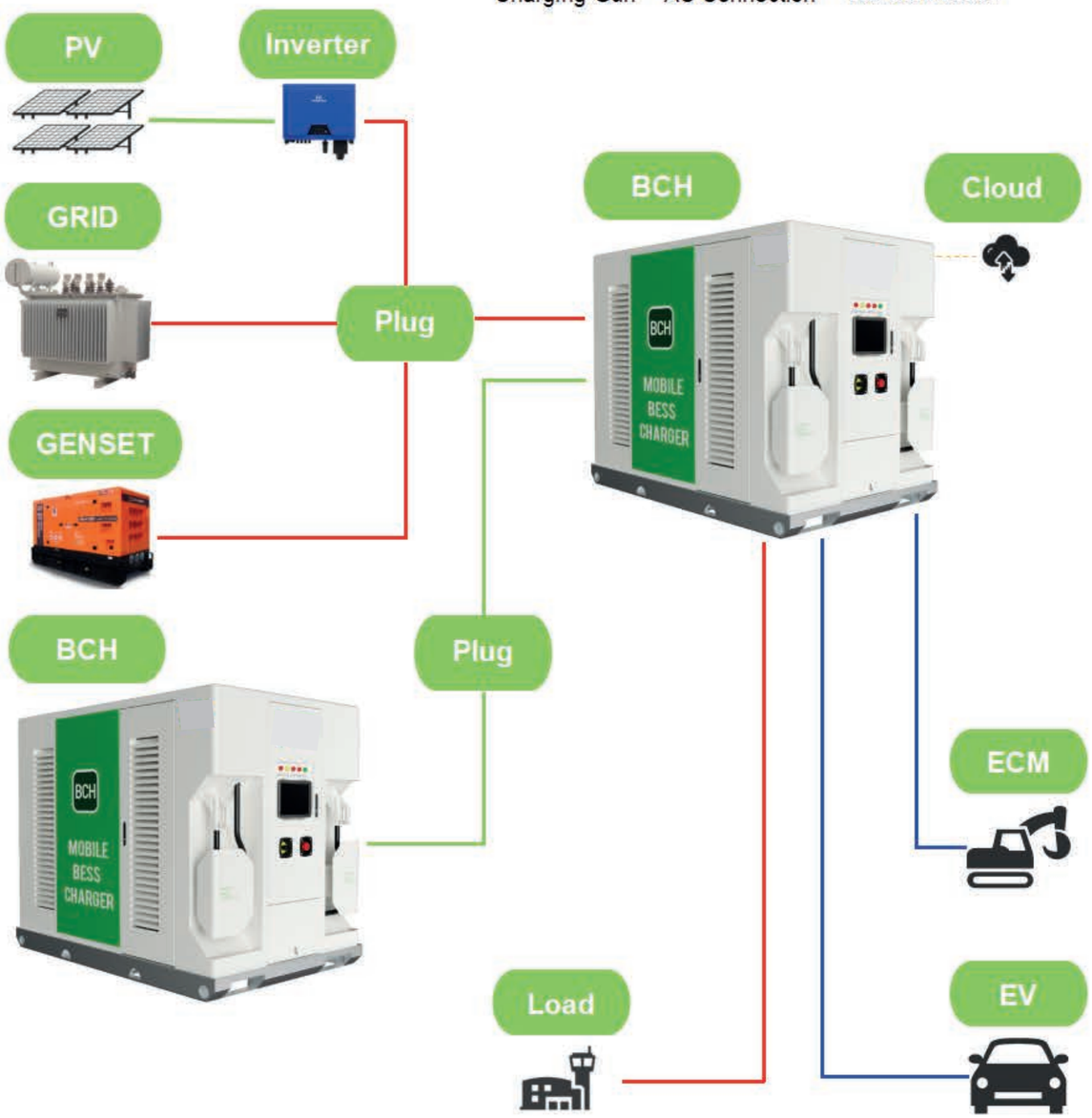
C-4M LEVEL ANTI-CORROSION SUITABLE WITH HEAVY DUTY

Multiple output extensions can be achieved through external socket boxes

Compatible with the 3.5T road trailer required by EU regulations
Achieving instant installation and departure, while also considering safety, reliability, and convenience

Extremely high ROI, with an average payback time of less than 1 year
*Depends on local charging electricity prices and service rates

Typical Application



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MODEL: 30-20000

PORTABLE ELECTRIC COMPRESSED AIR SOLUTION

Portable electric air compressor, DADY-55, compresses air to the ideal capacity 10.5 m^3/min at working pressure 8bar, generates clean and safe compressed air.

Sound level	⩽85 dB(A)
Motor power	55kW
Voltage	380V/3Ph/50Hz
Motor speed	2970 rpm
Lubricant volume	35 Liters
Dimensions (L*W*H)	(Length includes tow bar) 3420x1560x1555 mm
Weight	1200 kg

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MODEL: 40-10003-960-Cab

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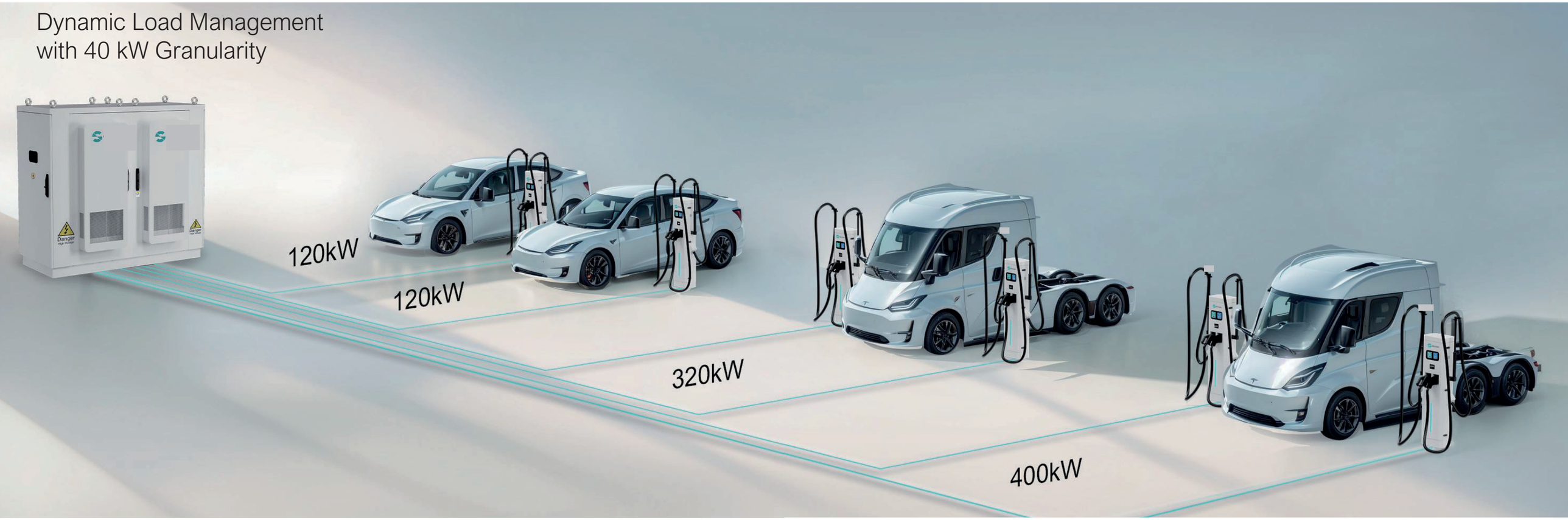
MODEL: 40-10003-960-Cab



Up to 960 kW Output

Simultaneous DC Charging for up to 24 Vehicles

150V-1000V Output Range

40 kW Granularity

960 kW Ultra-Fast Charging
A modular power cabinet delivering up to 960 kW of total power in 40 kW granularity.

Dynamic Load Management
With 40 kW granularity, the system enables dynamic energy distribution among vehicles.

Modular and Scalable
Supports 1–12 dispensers, up to 960 kW total output. The system can be easily scaled up accordingly when your business grows.

Optimized EV Charging
The combination of intelligent S 960 Power Cabinet and Dispenser provides the most powerful EV charging for truck and large fleets.

Up to 600 kW Output

Up to 2x CCS/ NACS/ CHAdeMO/ GBT Connectors

Simultaneous Charging at 600 A

Integrated Cable Management System

Touchscreen and Push Button Interface

Up to 600 kW Power Range
With S 960 Power Cabinet, each outlet offers power from 40 kW to 600 kW.

Compact and Small Footprint
Dispensers can be installed separately from the power cabinet, ideal for space-limited environments.

Optimized EV Charging
Up to 12 Dispensers in one S 960 Distributed system, supports flexible combinations of charging outlets including all charger standards.

Future-proof Charging Solution
Maximize your investment with flexible, modular hardware that adapts to evolving market trends.

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MODEL: 40-10003-960-Cab

Design

Power	240kW-960kW
Dimension(W x D x H)	2058*983*1848 mm
Charging Ports	4-24 Ports

Technical Data

Input Voltage	400V±15%（3P+N+PE）
Dc Output Voltage	DC150V-1000V
Power Distribution Mode	PDU Dual-Circuit Power Distribution Mode
Peak Efficiency	⩾95%
Power Factor	⩾0.98
Operating Temperature	-30°C ~ +50°C
Storage Temperature	-35°C ~ +55°C
Protection	IP55
Cooling Method	Air cooling

UI

Display	7" LCD Touch Screen
Language	Chinese, English, French, German, Spanish, Russian, etc.(Customized)

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MODEL: 40-10003-CD

Design

Power (Dual Ports)	600kW
Power (Single Port)	400kW
Dispenser (W x D x H)	380*260*1500 mm
Cable Length	5m

Technical Data

Rated Voltage	DC 1000 V
Working Frequency	45~65Hz
Rated Voltage	CHAdeMO/ CCS1/ CCS2/ GBT DC150V-1000V
Output Current	CHAdeMO 125A; CCS1/ CCS2 400AMax; GBT 300A

UI

Display	7" LCD Touch Screen
Language	Chinese, English, French, German, Spanish, Russian, etc.(Customized)
Payment	Mobile APP/ RFID/ POS
Network Connection	4G/ Ethernet
Communication Protocol	OCPP1.6J

Physical and Environmental Data

Operating Temperature	-30°C ~ +50°C
Storage Temperature	-35°C ~ +55°C
Operating Humidity	⩽95% Non-Condensing
Protection	IP55

MODEL: 40-10000-240

60kW-240kW

240kW
Supports GBT, CCS, CHAdeMO and NACS

OCPP1.6J
Interoperability and security

All-weather
-30°C~55°C, 5200m altitude, humidity& salt mist

26Months
Warranty with extended warranty options

Premium Service Life
Top-brand components from Phoenix, Schneider and more are at the core of every product, for stable and durable operation.

8-inch LCD Touch Screen
Designed with independent cooling system with larger intake and exhaust vents and 50% more fans than standard models enhancing cooling capabilities.

Dynamic Power Distribution
Dynamically allocate power to 2 outlets with 1/4 total power granularity, enhancing flexibility.

Easy Accessibility
Supports RFID, QR code, remote start and POS terminal access (Pax, Nayax,Ingenico, Payter).

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Design

Power	60kW-240kW
Dimension(W x D x H)	1058*700*1960mm
Charging Ports	Dual Ports
Cable Length	5m or 7m

Technical Data

Input Voltage	400V±15%/ 440V±10%/ 480V±10%
Input Voltage Type	TN-S
Working Frequency	45~65Hz
Power Factor	⩾0.99
Efficiency	⩾94%
Rated Voltage	CHAdeMO 500Vdc; CCS1/ CCS2 1000Vdc; GBT 1000Vdc
Output Current	CHAdeMO 125A; CCS1/ CCS2 400AMax; GBT 250A

UI

Display	8" LCD Touch Screen
Language	Chinese, English, French, German, Spanish, Russian, etc.(Customized)
Payment	Mobile APP/ RFID/ POS
Network Connection	4G/ Ethernet
Communication Protocol	OCPP1.6J

Physical and Environmental Data

Operating Temperature	-30°C ~ +50°C
Storage Temperature	-35°C ~ +55°C
Operating Humidity	⩽95% Non-Condensing
Protection	IP55
Cooling Method	Forced Air Cooling

Certs & Standards

Certificate	NTC CE
Charging Interface	DIN70121/ DIN70122/ ISO15118

Customization Options

Cable Management System	Yes
Dehumidifier	Yes
Heater	Yes
POS Terminal	Yes

MODEL: 40-10001-360, 40-10001-480

Ultra-fast
Power up to 480kW, delivering 240 km of range in just 5 minutes, works with all EVs

Dynamic Power Distribution
Dynamically allocate power to 2 outlets with 1/4 total power granularity, enhancing flexibility.

Premium Service Life
Top-brand components from Phoenix, Schneider and more are at the core of every product, for stable and durable operation.

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Design

Power	240kW-480kW
Dimension(W x D x H)	800*885*2226mm
Charging Ports	Dual Ports
Cable Length	5m or 7m

Technical Data

Input Voltage	400V±15%/ 440V±10%/ 480V±10%
Input Voltage Type	TN-S
Working Frequency	45~65Hz
Power Factor	⩾0.99
Efficiency	⩾94%
Rated Voltage	CHAdeMO 500Vdc; CCS1/ CCS2 1000Vdc; GBT 1000Vdc
Output Current	CHAdeMO 125A; CCS1/ CCS2 400AMax; GBT 250A

UI

Display	8" LCD Touch Screen
Language	Chinese, English, French, German, Spanish, Russian, etc.(Customized)
Payment	Mobile APP/ RFID/ POS
Network Connection	4G/ Ethernet
Communication Protocol	OCPP1.6J

Physical and Environmental Data

Operating Temperature	-30°C ~ +50°C
Storage Temperature	-35°C ~ +55°C
Operating Humidity	⩽95% Non-Condensing
Protection	IP55
Cooling Method	Forced Air Cooling

Certs & Standards

Certificate	NTC CE
Charging Interface	DIN70121/ DIN70122/ ISO15118

Customization Options

Cable Management System	Yes
Dehumidifier	Yes
Heater	Yes
POS Terminal	Yes

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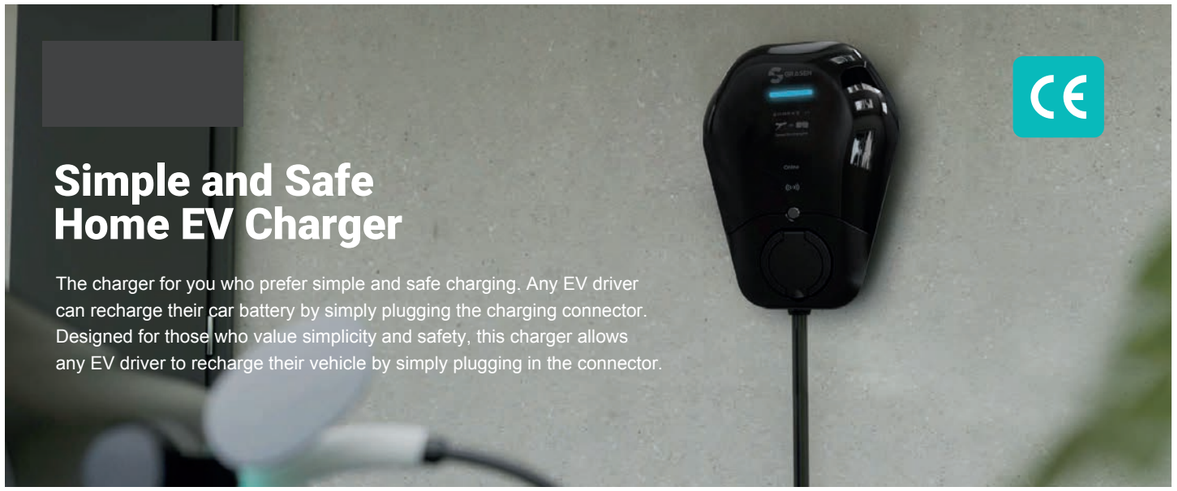

Simple and Safe Home EV Charger

The charger for you who prefer simple and safe charging. Any EV driver can recharge their car battery by simply plugging the charging connector. Designed for those who value simplicity and safety, this charger allows any EV driver to recharge their vehicle by simply plugging in the connector.

MODEL: 40-10006-7

MODEL: 40-10006-22

7kW/22kW

- Compatible with all EVs and power grids
- 1-Phase 7kW & 3-Phase 22kW available
- Both socket & tethered version available
- Simple 'Just Plug and Play' operation
- Unique installation design with independent backplate
- Streamlined design, simple and elegant appearance
- AC 30mA & DC 6mA current leakage protection, IEC62955 & IEC61008 certified

Make life easier

Just plug in your car and we will do the rest! You can start/stop the charging session via RFID card or charger physical button. We guarantee its safety and simplicity so that you can fully enjoy your charging experience without any extra steps.

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Design

Power	7kW	22kW
Dimension(W x D x H)	288*141*380mm	
Charging Ports	Single Port	
Charging Interface	Type-2 cable/ Type-2 socket	
Button	Yes	
Indications	Standby(White), Charging(Flashing White), Fault(Red), Warning(Flash Red)	

Technical Data

Dynamic Load Balancing	Support up to 252 pcs chargers per LAN	
Input Voltage	1-phase 230V±20%	3-phase 400V± 20%
Working Frequency	50/ 60Hz	
Internal RCD Rated	AC 30mA, DC 6mA	
Output Rating	1-phase 7kW, 32A	3-phase 22kW, 32A

UI

Display	2.8" LCD
Payment	RFID Card/ Mobile APP
Network Connection	Ethernet, WiFi, 4G
Communication Protocol	OCPP 1.6J/ OCPP 2.0.1

Physical and Environmental Data

Operating Humidity	⩽95%
Protection	IP55, IK10

Certs & Standards

Certifications	CE, EN IEC 61851-1, EN IEC 61851-21-2, IEC61008-1, IEC62955

Customization Options

IS015118 Plug & Charge	Yes
Phase Rotation	Yes
POS Terminal	Yes
Pedestal	Yes

TECHNICAL DATA

SOLAR LIGHT TOWER

MODEL: 32-10000-M

SOLAR

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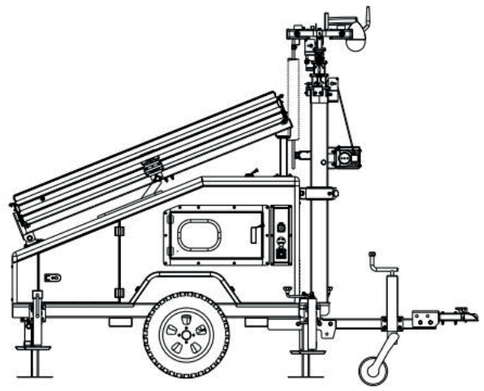
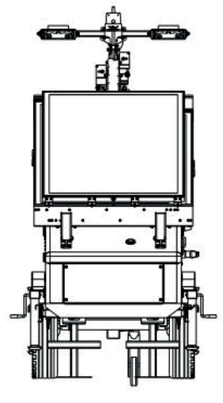
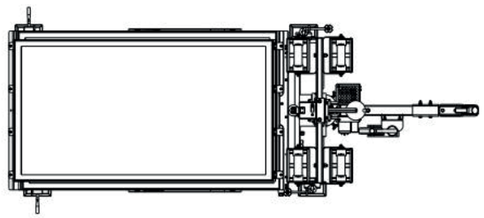
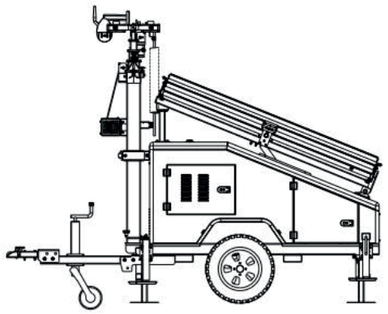
Features

The solar light towers take the advantages of solar renewable energy and LED light systems on the road. Ideal for special events, construction sites, security and any other application where on-demand lighting is desired. This system provides cost-effective bright white LED lighting without all of the disadvantages inherent to diesel lighting systems – high operating costs (diesel fuel, maintenance, labor) as well as carbon emissions, noise, fumes and light pollution.









Dimension	
Model	HSL-1000B
Expanding Dimensions	3400*2950*7500 mm (LxWxH)
Loading Dimensions	2384*1150*2458 mm (LxWxH)
Weight	740 kg
Loading Capacity in 40 HQ	10 units

General Specification	
Rated voltage	DC48V
Rated Power (LED Lamp)	4×100W
Solar System Charge Time	4.2Hours
Lighting Discharge Time	12.5Hours
Standby Generator Charge Time	3.3Hours

Solar Panel	
Maximum Power（Pmax）	390W
Maximum Power Voltage(Vmp）	44.71V
Maximum Power Current（Imp）	8.72A
Power Tolerance	0~+4.99W
Dimension	1979*992*30mm(L*W*H)
Lifting angle	Fixed 30°
Extending type	Sliding
Extending area	5.2m²
Quantity	3pcs
Battery Bank	
Type	LFP battery
Model	100AH 51.2V
Voltage	48V (One battery)
Maximum Charging Current	100A
Quantity	1pcs
LED Lamp	
Input Voltage	DC48V
LED Power	100W
Light Beam Angle	60°
LED Luminous Efficiency	200lm/w
Correlated Color Temperature	5000K
Protection Class	IP67
Quantity	4pcs
Solar Charging Controller	
Model	SmartSolar MPPT 150/35
Manufacturer	VICTRON
Rated Current	35A
Rated Voltage	48V
Floating Charge Voltage	55.2V
Self-power Consumption	10mA
Ambient Temp range	-25℃~55℃
Dimension	590×300×163mm
Weight	13.8kg
Type of Protection	IP43
Battery Charging Control	Stop Charging Voltage：57.6V
Safety	EN/IEC 62109-1, UL 1741, CSA C22.2
Display Function	Battery Charging and discharging condition

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Light Load Model	Settable Load Model a) 24 hours working b) b) Working hours setting c) c) 12hours working at night only
Trailer	
Model	B900 （Off road）
Loading Capacity	900kg
Pulling Speed	≤25km/h
Tire and Rim Size	165R13
Drawing Bar	Ball Type
Stablished Supports	4 * Manual
Mast	
Mast Type	manual
Maximum Lifting Heigh	7.2m
Mast Rotation	355°
Surface spraying	Galvanized
Option	
Backup Genset	Gas or Diesel ， 1~3KW for option
Battery Charger	AC220V—DC24V , 15~45A for option
Inverter	2~5KW for option
Cameras	WIFI or 4G type

Is Neo 3.0 Mr. Right for Your Project?

Rooftop projects need to balance space, performance, and return on investment:

For Tight Spaces: When every square inch counts (like in cities), Neo 3.0's maximum power output makes it the top choice.

For Cloudy Areas: Neo 3.0 panels best ever low light performance helps in places that are often cloudy, like UK., Germany, Japan.

Large solar farms care most about LCOE, BOS and proven reliability:

For $/kWh: Industry leading power and the excellent bifacial performance (85%-90%), proven low light performance and lower working temperature makes it ideal and competitive for ground mounted utility projects.

For Hot Places

Neo 3.0 is perfectly ideal for hot, extreme summer heat regions like desert areas, tropical areas. Its lower temperature coefficient of -0.26%/°C means better performance at high temperatures.

For High UV Areas

UV resistant mechanisms enables lower UV induced degradation compared to BC panels, ideal for projects like offshore PV farm, floating projects.

In summary, Tiger Neo 3.0 offers a compelling combination of "Three High, Three Low, Three Long", that is industry-leading high power, high efficiency and high bifacility, best low light performance, low degradation, low temperature coefficient, superior long working time, long warranty, long-term energy yield reliability.

Tiger Neo III JinKO Solar

What's Great About Neo 3.0?

650-670Wp Power
Catch More Sunlight on Front Side

Based on TOPCon technology platform,achieved through cutting-edge technology and an optimized layout that captures more sunlight. This makes Neo 3.0 panels reach record high module efficiency of 24.8%, 650-670Wp in 66-cell. This makes Neo 3.0 perfect for both utility and rooftop applications.

85±5% Bifaciality
Generate Much Better on Rear Side

Enabling 90% bifaciality of efficient TOPCon cell by an improved structure to enhance light absorption and trapping, as a result, Neo 3.0 bifacial modules are encapsulated with an impressive bifaciality of 85±5% and a power output of 670 W. This is great for utility projects where panels are mounted up high as well as C&I where light can more or less bounce up from below. BTW, you get these extra power generated by rear side free of charge.

- 0.26%/°C Temp Coefficient
Handles Heat Better

When solar panels heat up, their electricity output drops. Neo 3.0 panels lose less power in hot weather (temperature coefficient of -0.26%/°C). In most places in the world, this means 1.5-1.7% more energy over a year. In tropical and hot areas, the advantage is even greater.

96.77%% Low Irradiation
200W/m² Performance Index

This term correlates for difference between low irradiation 200W/m² and STC condition 1000W/m² used for actual power generation. The industry high index indicates the better low light response that can generate more electricity in practical applications.

- 0.35% Linear Degradation
Proven to Last

TOPCon cells offer better long-term reliability and stability in certain degradation scenarios, particularly regarding UV degradation in BC cells. Neo 3.0 degrades at 0.30-0.35% per year, which is significantly better than BC panels of about 0.4%. It demonstrates advantages in certain critical degradation pathways.

2-3% Average Yield Gain
Overall Gain Guaranteed

In the number of independent field tests conducted, TOPCon modules achieved a performance ratio of 5% higher than BC co unterparts on average, which results in generating an average of 2-3% more energy than BC modules annually.

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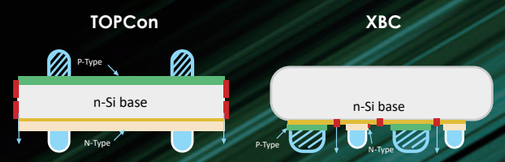
Low Light Champion

Put aside the high power and efficiency as well as high bifacility, TOPCon's excel in low irradiance performance stands it out in rooftop applications.The low irradiance performance of photovoltaic modules is directly related to the energy generation efficiency and stability of solar power systems, significantly impacting their power output capabilities. Although TOPCon's high bifaciality may not be fully utilized in monofacial settings, its excellent low irradiance performance can be adequately leveraged.

Optimized Leakage Current Path Distribution

TOPCon solar cells feature a tunneling oxide layer formed on their surface, which effectively reduces leakage current paths. These paths are primarily located around the perimeter of the cell rather than in the grid line areas, significantly minimizing leakage routes and effectively controlling leakage current. In contrast, cells utilizing other technologies often have a higher number of grid lines on the back electrodes, which increases the leakage pathways. This exacerbates leakage issues under low irradiance conditions, making TOPCon a more effective performer in this aspect.



Leakage current paths are mainly distributed around the periphery of the cell

Large number of potential leakage paths—over 200 on a single cell—making process control difficult, and resulting in high leakage currents

Good Parallel Resistance Characteristics

The parallel resistance (Rsh) of a solar cell is closely linked to its low irradiance performance; a higher Rsh indicates better performance under these conditions. The structural design of TOPCon allows for relatively larger parallel resistance, reducing current losses even in low irradiance scenarios and maintaining robust energy generation capabilities. For instance, during reverse bias voltage testing, the leakage current of TOPCon cells is significantly lower than that of several other structural types, laying a solid foundation for their impressive performance under low light conditions.

Reduced Front Grid Line Shading

TOPCon cells utilize a bifacial contact structure, which aids in minimizing shading caused by front grid lines, thereby enhancing the cell's light absorption efficiency. In low irradiance environments, even with weaker light intensity, these cells can absorb as much light as possible and convert it into electrical energy, thereby boosting their power generation capabilities.

Better Rear Heat Dissipation

Compared to certain complex back structures found in other solar technologies, TOPCon cells have a simpler rear structure that allows for more efficient heat dissipation. Under low irradiance conditions, the operating temperature of the cells can affect performance. Superior heat dissipation ensures that TOPCon cells can operate stably even in low light, reducing performance degradation due to elevated temperatures.

Passivation Layer Reduces Carrier Recombination Losses

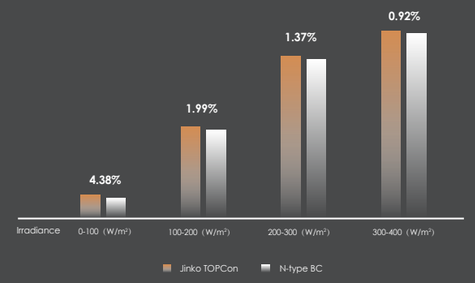
The passivation layer in TOPCon technology effectively minimizes carrier recombination losses. In low irradiance scenarios, the generation of charge carriers is relatively limited; if recombination losses are high, it severely impacts the cell's performance. TOPCon's passivation layer mitigates these losses, maintaining good cell performance even in low-light environments and enhancing the energy conversion efficiency of the cells.

TIGER Neo III
JinKO Solar

Performance of TOPCon in Field Tests Under Low Irradiance Conditions

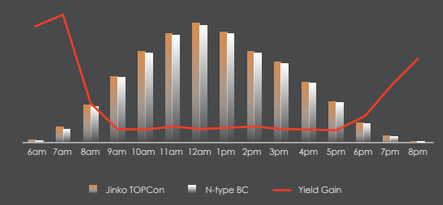
Yinchuan, Ningxia 2025.6.1-6.30 — CPVT

The Single-watt Power Generation Gain of N-type TOPCon over N-type BC is up to **4.38%** in low-light conditions



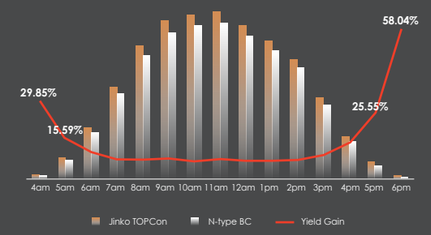
Chengdu, Sichuan 2025.7.9-7.21 — TÜVRheinland Precisely Right.

In 6:00-8:00 + 18:00-20:00 Period
The gain of TOPCon compared to BC is **7.18%**



Kagoshima, Japan 2025.6.1-6.30 — TÜVNORD

Under low-light conditions(0-400W/m²)
The gain of TOPCon compared to BC is as high as **10.81%**



Haikou, Hainan 2024.11-2025.3 — 检测认证

Under low-light conditions(100-400W/m²)
The gain of TOPCon compared to BC is as high as **7.83%**

Month	Sunny	Overcast	Rainy
2024.11	6	2	8
2024.12	12	16	3
2025.1	19	10	2
2025.2	9	9	10
2025.3	5	8	8
Total	**51**	**45**	**31**

During the 127-day detection period, there were a total of 76 cloudy and rainy days, accounting for **60%**

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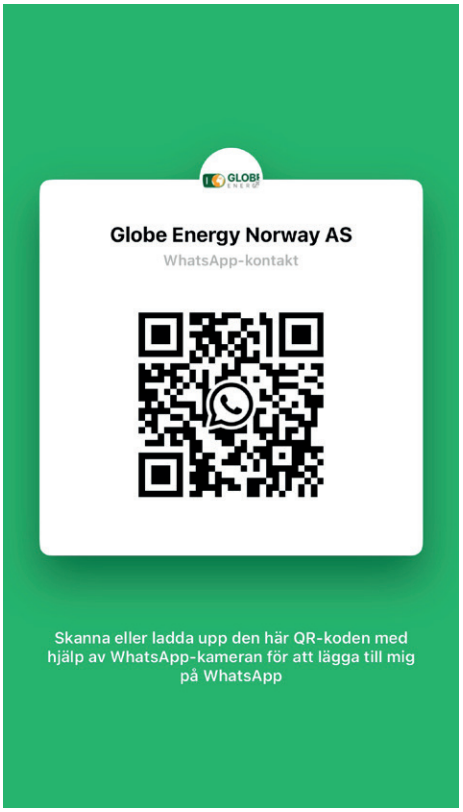

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