



Clean Energy Solutions

Global Leader In Distributed Hybrid Solution & Off-Grid Systems



Global leader in distributed hybrid solutions & off-grid systems



120 Countries

Products are exported to 120 countries



59 Types

Three categories of 59 types of products



15000 Sets

Annual production capacity



80 Specialists

80 solution experts focused on different applications



126 Patents

7 invention patents, 108 utility model patents, 8 software copyrights and 3 appearance patents.

With lower carbon, greener, more reliable and more intelligent customized solutions !

UPS was established in Sharjah, United Arab Emirates, 2008.

UPS focus on independent research & development, full process intelligent manufacturing, and global marketing & service, committed to high quality development and high-end brand positioning. UPS specializes in the research & development, design, production and sales of diesel, natural gas generator sets, hybrid power systems, and battery energy storage systems, after years of industry development, the business scope has developed from the original single type of diesel generator set, traditional energy products to a power supply equipment integrator covering a variety of renewable green power generation units such as wind, solar, methanol, hydrogen, and diesel generator sets and energy storage systems, and is committed to providing global customers with lower carbon, greener and more environmentally friendly hybrid power solutions. Currently, UPS' products have been exported to most countries or regions in Asia, Africa, Oceania, America and Europe, widely used in mobile power, construction, industry and commerce, oil and gas field, mining, railway, banking, telecom, municipal construction, emergency rescue and other fields, helping global users to use more green, low-carbon, intelligent and reliable main and standby hybrid power.



Built-in Smart EMS

Grid Forming

Grid Following



EMS

THE FUTURE

is coming with sustainable,
smart, stable energy

DEDICATION Product Portfolio

01) Commercial & Industrial BESS

HBD A Series

HBD E Series

HBD R Series

02) Mobile BESS Charger

BCH Series

03) Battery Cluster & PACK

04) Biofuel Generator Sets

05) Gas Generator Sets

06) Methanol Generator Sets

07) Hydrogen Fuel Cell Generator Sets



6000

Life Cycles

EOL 70%

Usable Energy

110%~150%

Overload

< 20MS

Switch Mode

3000M

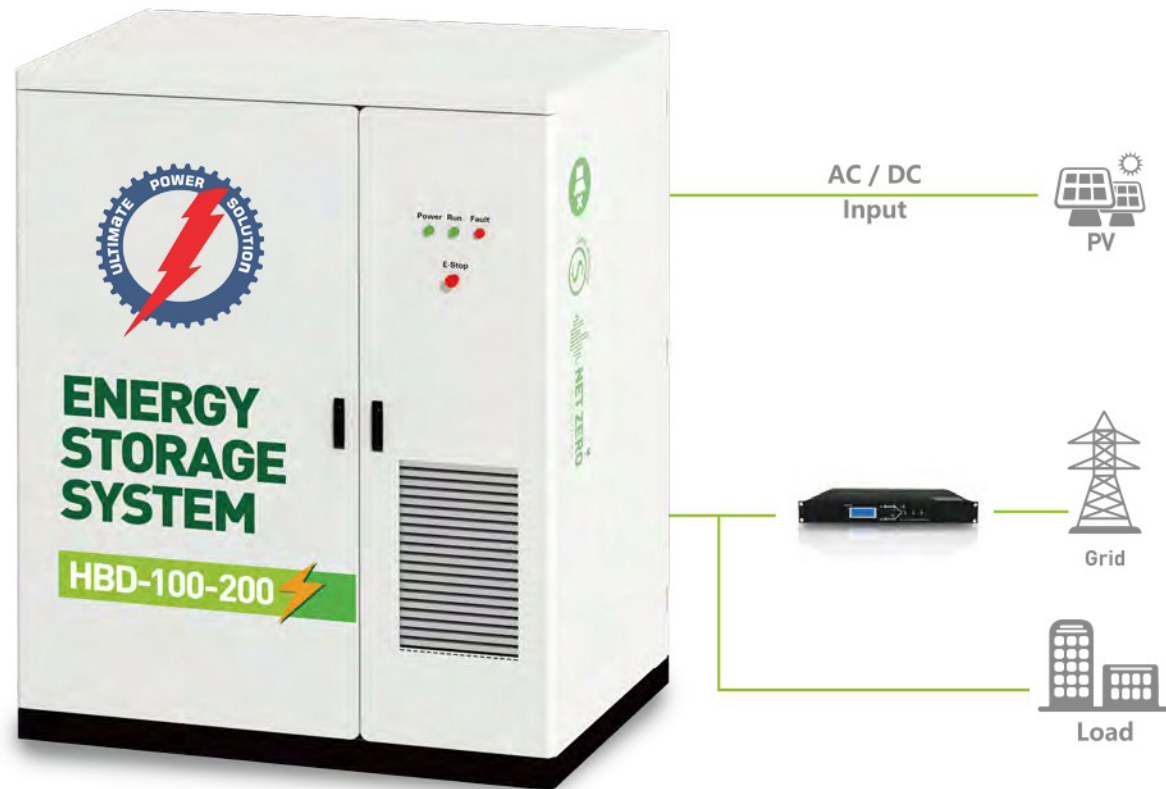
Max altitude

-20~50°C

Operating Temperature

Commercial & Industrial BESS

A Series All-in-one



Features

UPS HBD A Series is a new range of secure integrated Battery Energy Storage System. This modular solution includes batteries, PCS, control system, HVAC, fire protection and auxiliary components for option. It can be connected to external PV power station and Grid power.

Details

- ① Cabinet C4 anti-corrosive grade, UV resistant plastic spraying
- ② Modular layout, flexible deployment, reduce the occupation space
- ③ Multiple fire protection design guarantee, prevention and elimination of combinations, effectively realize the module and the energy storage unit fire isolation
- ④ The system conversion efficiency can reach up to 93%
- ⑤ Intelligent management system, 24H system performance monitoring, real-time safety warning



110% long-term overload
120% for 10min
150% for 200ms



C4

Anti-corrosive

24H

Performance
monitoring

0.2~0.5C

Discharging
Rate

100-1000
kW

Power Range

IP54

Indoors
& Outdoors



Air Cooling / Liquid Cooling for option

Guaranteed by high-quality
manufacturing technology



INTELLIGENT PCS
with EMS
EASY OPERATION ON
ONE SCREEN

LiFePO₄ BATTERY
Long Life Design Up to
6000 cycles
High Quality Based on
Specification Consistency of CELLS-!

HBD A Series Specification

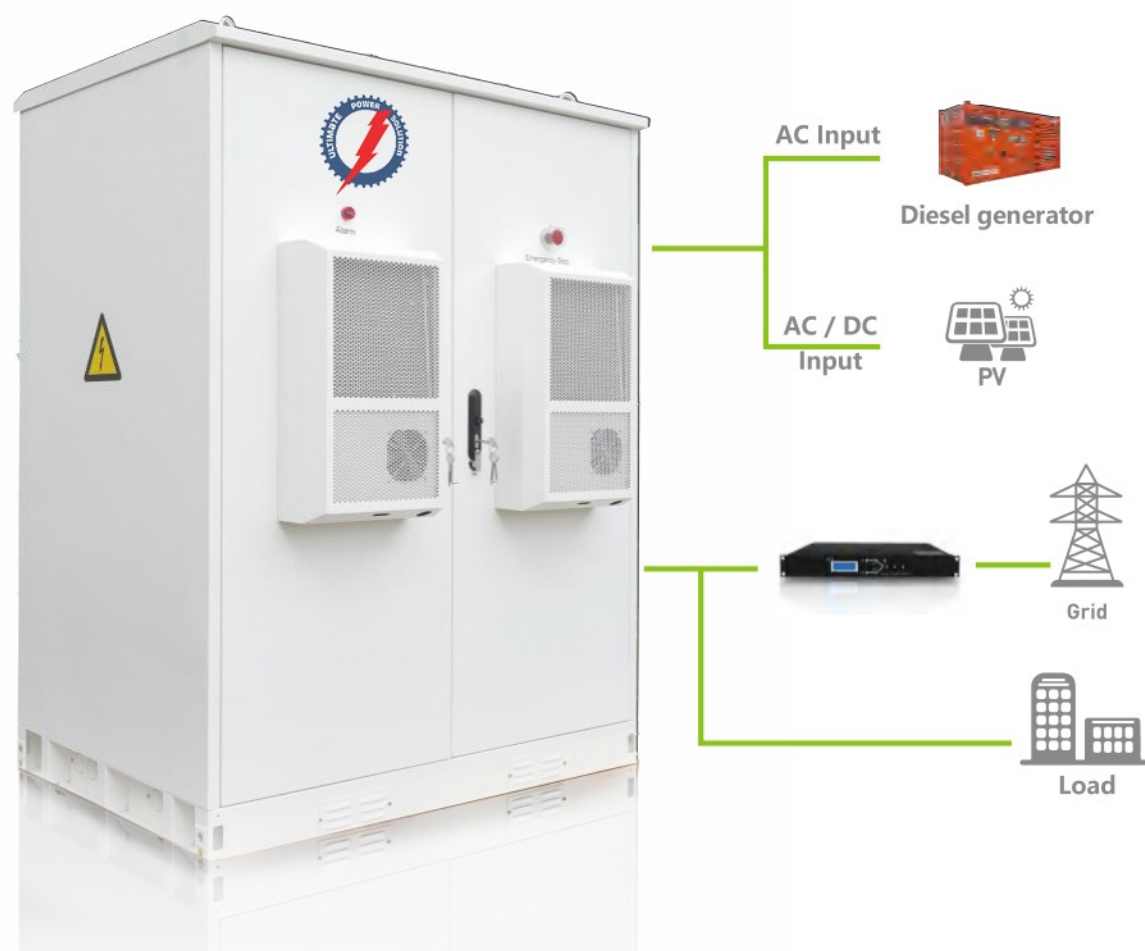
Model	HBD-100-200	HBD-100-233	HBD-500-1000	HBD-1000-2000
Rated Power(AC Output)	100kW	100kW	500kW	1000kW
Rated Voltage/Phase	400Vac/3P			
Frequency	50/60Hz			
AC Connection	3P4W			
Battery Cluster Voltage	716.8VDC	832VDC	1075.2VDC	
Battery Cluster Voltage Range	627.2~806.4VDC	728~936VDC	940.8~1209.6VDC	
BESS Engery@25℃	200.7kWh	232.96kWh	1012.8kWh	2025.6kWh
Battery Pack Voltage	51.2VDC	166.4VDC	153.6VDC	
Battery Pack Capacity	280Ah	280Ah	314Ah	
Pack Engery@25℃	14.336kWh	46.592kWh	48.23kwh	
Pack Qty.	14pcs	5pcs	21pcs	42pcs
Cycle Life@90%DOD	6000times			
PCS Model	EPCS105-AM		PWS1-PWS1-160M-H	
PCS Rated Power	100kW		160kW	
Battery Voltage Range	615~950VDC		720~1500VDC	
PCS Qty.	1pcs		3pcs	6pcs
Control System	EMS			
Cooling System	HVAC	Liquid Cooling	Liquid Cooling	
Fire Fighting System	Aerosol (CE)		Novec™ 1230	
Operating Temp.	-20~50℃		-20~50℃ (> 45℃ derating)	
Altitude	≤4000m (> 2000m derating)		≤3000m (> 2000m derating)	
Dimensions (L x W x H)	1760*1321*2200mm	1050*1300*2385mm	3950*2250*2250mm	20'GP
The loading capacity	4 units/20'GP 8 units/40'GP	8 units/20'GP 18 units/40'GP	1 unit/20'GP 3 units/40'GP	NA
Weight	2.6t	2.5t	12.5t	18.4t

Commercial & Industrial BESS

E Series
Stationary



10 YEARS
System Warranty



Features

UPS HBD E Series is a new range of Battery Energy Storage System for households, small farms and low power factories, with participation of PV, hybrid inverter, batteries, loads and grid system for energy management.

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;
- Accept customer customization, suitable for various scenarios;



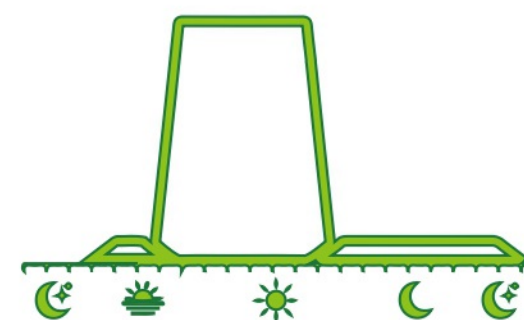
Applications



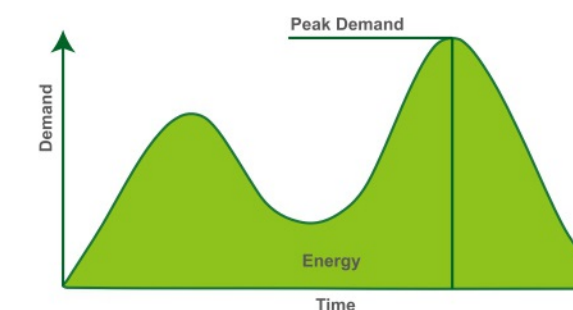
Self-Consumption



Standby power

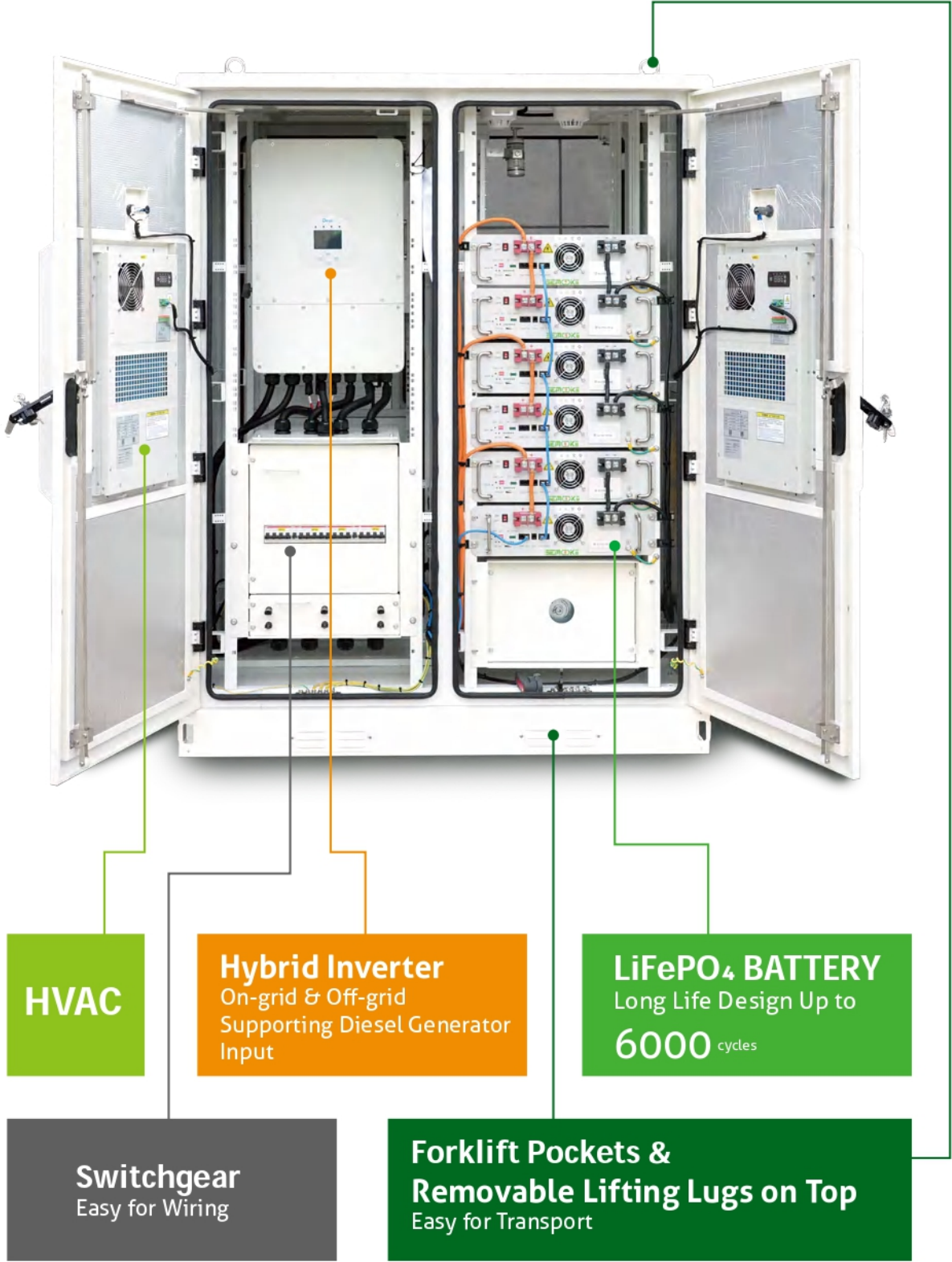


Peak-valley arbitrage



Electricity rate management

Friendly Structural Design



HBD E Series Specification

Model	HBD-10	HBD-12	HBD-30	HBD-50
Rated Power(AC Output)	10kW	12kW	30kW	50kW
Rated Voltage/Phase	400Vac/3P			
Frequency	50/60Hz	50/60Hz	50/60Hz	50/60Hz
AC Connection	3P4W			
Min. Battery Storage Capacity	20kWh		40kWh	100kWh
Max. Battery Storage Capacity	30kWh		60kWh	100kWh
Battery Pack Voltage	51.2VDC			
Battery Pack Capacity	100Ah			280Ah
Pack Engery@25℃	5.12kWh			14.336kWh
Pack Qty.	4~6pcs		12pcs	7pcs
Cycle Life@90%DOD	6000times			
Max. PV Power	13 kWp	15.6kWp	45kWp	75kWp
PV DC Input Voltage Range	160 ~800 V		200-830V	
PV MPPT Voltage Range	200 ~ 650 V		200~750V	
PV Start Up DC Voltage	160 V		250V	
PV Nominal DC Input Voltage	550 V		600V	
Number of MPPT / Strings per MPPT	2/2+1		3/2+2+2	6/2+2+2+2+2+2
Max. PV Input Current	26 + 13 A		35+35+35A	35+35+35+35+35+35A
Max. PV Short-circuit Current	34 + 17 A		40+40+40A	40+40+40+40+40+40A
Cooling System	HVAC			
Fire Fighting System	Aerosol (CE) (Optional)		Aerosol (CE)	
Operating Temp.	-20~50℃ (> 45℃ derating)			
Altitude	≤3000m (> 2000m derating)			
Dimensions (L x W x H)	1350*1041*1750mm		1350*1041*2150	
The loading capacity	8 units/20'GP 16 units/40'GP			
Weight	900kg		1350kg	1500kg

Commercial & Industrial BESS

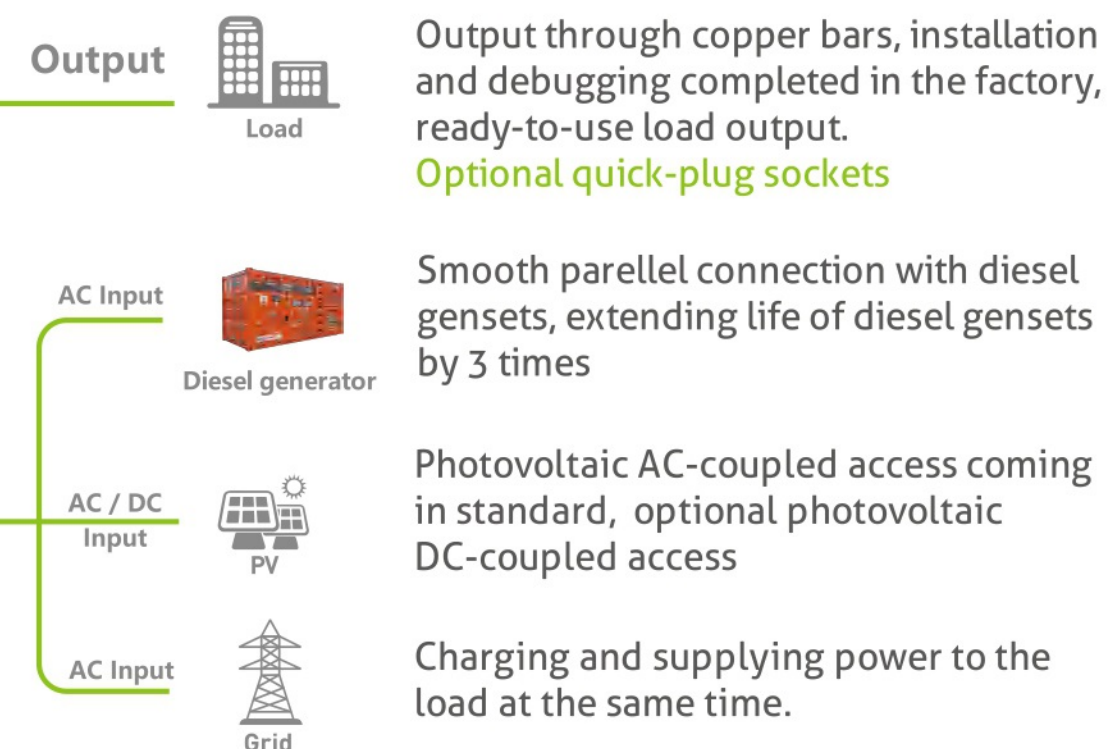
R Series
Expert for rental market
& as genset mate



10 YEARS
System Warranty



Input Energy Sources



Features

UPS HBD R Series is a new range of secure integrated Battery Energy Storage System. This modular solution includes batteries, PCS, control system, HVAC, fire protection and auxiliary components for option. It can be connected to external PV power station, AC generator and Grid power.

Details

- 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
- Accept customer customization, suitable for various scenarios

Parallel

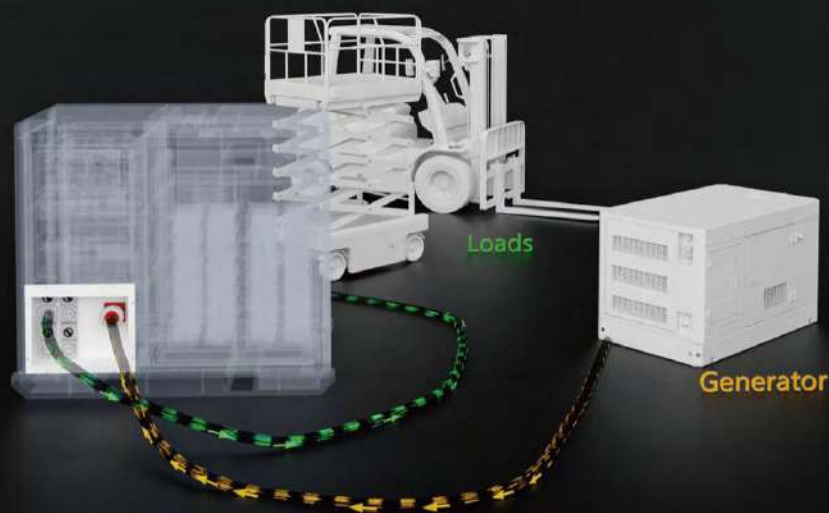
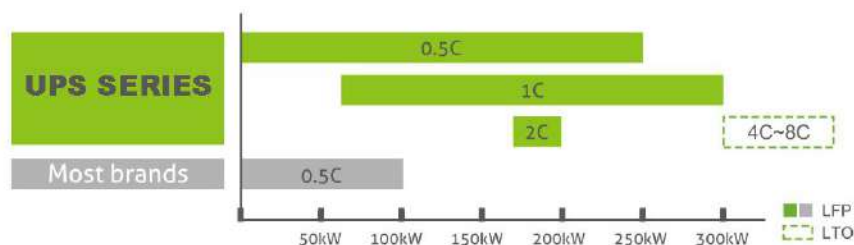
Flexible expansion, no limit for the number of parallel connection in the on-grid mode.



Max. 6 units in in the off-grid mode.

Your Off-grid Energy Pilot

Super Capacity, Wide Power Range



Up to 4C fast charging and discharging
Fully charged in 15min-2h

Proactive Grid Forming

Smart energy management to extend the life span of diesel gensets by **3X** saving up to **75%** of fuel consumption



Applications



Municipal engineering



Construction



Mining



Events



Sports & Games



Bridges, Roads & Ports



**BUILT-IN OUTLETS
FOR OPTION
EASY CONNECTED**

HBD R Series Specification

Model	HBD-30-60	HBD-50-100	HBD-100-200	HBD-250-400	HBD-100-100	HBD-200-200	HBD-300-300	HBD-400-400	HBD-500-500	HBD-500-250
Rated Power (Continuous)	30kW	50kW	100kW	250kW	100kW	200kW	175kW	400kW	500kW	500kW
Rated Voltage /Phase	400Vac/3P									
Frequency	50/60Hz									
AC Connection	3P4W									
Battery Cluster Voltage	614.4VDC	358.4VDC		716.8VDC	537.6VDC	844.8VDC	768VDC	844.8VDC		768VDC
Battery Cluster Voltage Range	537.6 ~ 691.2 VDC	313.6 ~ 403.2 VDC		627.2 ~ 806.4 VDC	470.4 ~ 604.8 VDC	739.2 ~ 950.4 VDC	672 ~ 864 VDC	739.2 ~ 950.4 VDC		672 ~ 864 VDC
BESS Engery @25°C	61.44kWh	100.3kWh	200.7kWh	401.4kWh	107.5kWh	169kWh	307.2kWh	337.9kWh	506.9kWh	245.8kWh
Battery Pack Voltage	51.2VDC				76.8VDC					
Battery Pack Capacity	100Ah	280Ah			200Ah				160Ah	
Pack Engery @25°C	5.12kWh	14.336kWh			15.36kWh				12.288kWh	
Pack Qty.	12pcs	7pcs	14pcs	28pcs	7pcs	11pcs	20pcs	22pcs	33pcs	20pcs
Cycle Life @90%DOD	6000times									
PCS Model	PWS2-30P-EX			Mars-125KT	PWS2-30P-EX	Mars-100KT			Mars-125KT	
PCS Rated Power	30kW			125kW	30kW	100kW			125kW	
Battery Voltage Range	150 ~ 750 VDC			580~1000VDC	150~750VDC	580~1000VDC			580~1000VDC	
PCS Qty.	1pcs	2pcs	4pcs	2pcs	4pcs	2pcs	3pcs	4pcs	4pcs	4pcs
Control System	EMS									
Cooling System	HVAC									
Fire Fighting System	Aerosol (CE)									
PV System	AC 400V input									
Operating Temp.	-20~50°C (> 45°C derating)									
Altitude	≤3000m (> 2000m derating)									
Dimensions (L x W x H) mm	1940*1145*1880	2200*1268*1922	2250*1900*2010	2950*2250*2250	2430*1825*2250		2950*2250*2250		3950*2250*2250	
Loading capacity	6units/20'GP 12units/40'GP	4units/20'GP 9units/40'GP	3units/20'GP 6units/40'GP	2units/20'GP 4units/40'GP	2units/20'GP 4units/40'GP	2units/20'GP 4units/40'GP	2units/20'GP 4units/40'GP	2units/20'GP 4units/40'GP	1units/20'GP 3units/40'GP	1units/20'GP 3units/40'GP
Weight	1.86t	2.45t	3.85t	7.6t	4t	4.5t	7t	7.2t	8.5t	7t



Product Features



Battery

Long battery life - 6000 cycles Batteries only connected in series, high voltage and low current with high efficiency, no circulation Influence.



High voltage system

Using smaller wires and components, reducing resistance and energy loss, more efficient than low voltage systems in storing and delivering energy. Using fewer batteries and wires, reducing material and installation costs.

Compact structure, higher energy density per unit space, flexible control of the system scale.

High voltage systems can be used in a wider range of equipment and applications, making them more versatile and able to adapt to changing energy needs.

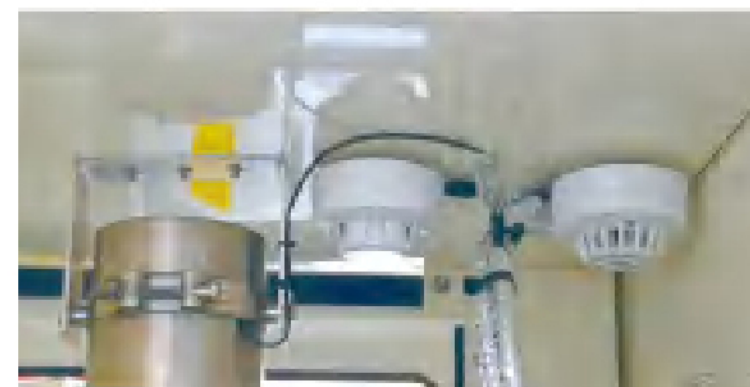


PCS

Three level topology, high operating efficiency. 110% long-term overload supported, 120% for 10min, 150% for 200ms.

Equipped with off-grid V/F, P/Q output, VSG and black-start features.

Supporting charge and discharge modes such as constant voltage, constant current, constant AC power, constant DC power, etc.



Fireproof

Built-in fire protection system, subdivision design, fire resistant isolation for 1 hour.

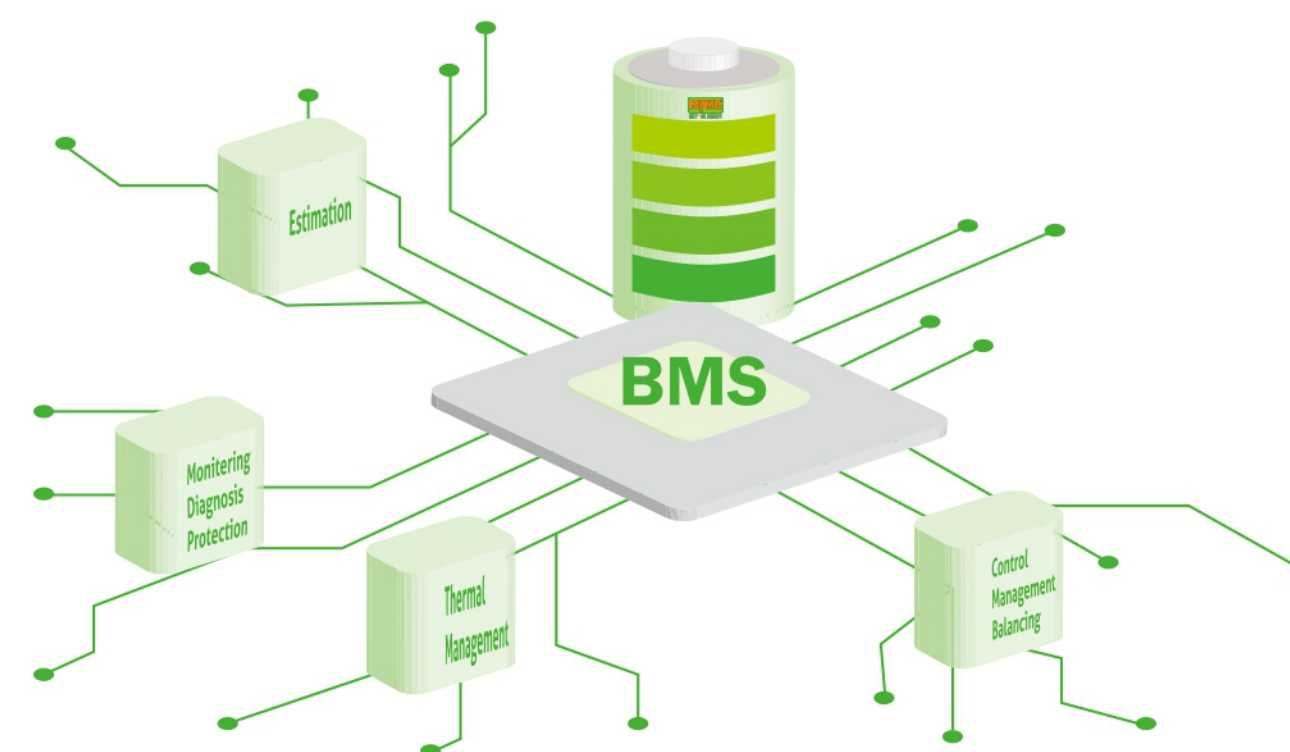


Cooling system

Distributed air conditioning, well thermal management and thermal isolation structure design, improving consistency.

BMS

Reliable, reputable brand, application tested Sensor with high stability



High voltage BESS All-in-one



Why do high voltage all-in-one battery energy storage systems have more advantages over low voltage systems



EFFICIENCY

High voltage systems are generally more efficient at storing and delivering energy than low voltage systems. This is because higher voltage systems can use smaller wires and components, resulting in less resistance and energy loss, based on $P=V \cdot I$, when the power is same, the higher the voltage, the less the current (I), less the loss of energy, and thus the wire of the machine is thinner (lighter).

SCALABILITY

High voltage systems can be more easily scaled up or down than low voltage systems. This is because higher voltage systems require less physical space to store the same amount of energy, making them more suitable for large-scale commercial or industrial applications.

COST

High voltage systems can be more cost-effective than low voltage systems in certain applications. This is because high voltage batteries require fewer cells and less wiring, resulting in lower material and installation costs.

FLEXIBILITY

High voltage systems can be used with a wider range of equipment and applications than low voltage systems, making them more versatile and adaptable to changing energy needs.

Smaller wires

Fewer cells

More compact

Less wiring

Lower costs

More versatile

Case Study



Micro Grid Hybrid Power Plants Project

Site location: Kenya

Sites: Qty. 4

Total Power Installation: 6MW

Each Site: Diesel Generators 2 units of 500kw & 2 units of 250kw

Diesel Generators

Each site equipped with totally 4 units of diesel generators (2 units of 500kw and 2 units of 250kw) as backup power, to coordinate with PV panels and BESS.

All sites connect with SCADA, realizing real energy management, and ensuring maximum fuel efficiency of the diesel generators while supporting the loads.

Excitation after closing, ensuring fast response of backup power during power shortages.

Battery Energy Storage Systems

Each Site: ≥1MWh BESS, 80% DOD, 6000 lifecycles.

Redundant design. DC coupled.

Functions: PQ, VF, VSG, Black Start, Grid-forming.

SCADA

Each site can run the SCADA independently and communicate with Master system in real time. StarLink for communication backup.

Realtime data and remote control. Weather forecasting for emergency response.

Smart maintenance management with alarms and records. 10-years data tracking. Reports can be generated to support on-site spare parts management,

PV Panels

Each Site: > 1MWc PV power



BESS for Long-term Rental

Site location: Chile

Total battery capacity installation: 2MWh

Application: Long-term Rental

Mobile BESS Charger

BCH Series

Product Advantages



Green Electricity



Fast Charging



Emergency Backup Power



Plug & Play



Peak Load Shifting



Peak-Valley Arbitrage

Specification

Model	BCH-100-200	BCH-250-400	BCH-250-500	BCH-500-1000
Rated AC Power	100kW	250kW	250kW	500kW
Rated Voltage/Phase	400Vac/3P			
Frequency	50/60Hz			
Battery Storage Capacity @25°C	200.7kWh	401.4kWh	482.3kWh	1003.5kWh
Loading Dimension (L*W*H)	2950*2250*2250mm	3950*2250*2250mm	20'GP	20'HC
The Loading Capacity	2 units/20'GP 4 units/40'GP	1 units/20'GP 3 units/40'GP	NA	NA
Weight	5.5 t	9 t	13 t	19.8 t
Operating Temperature Range	-25~50°C (> 45°C derating)			
Max altitude	3000m (> 2000m derating)			
DC EV Charger				
Rated DC Output Power	80kW	240kW	240kW	360kW
Connector Type	CCS2 200 A + 200 A (Air Cooled)			CCS2 400 A + 400 A (Air Cooled)
Charger Output Voltage	DC 200 ~ 1000 V			
Connector Cable Length	7m			
Battery				
Battery Cluster Voltage	358.4VDC	716.8VDC	768VDC	716.8VDC
Battery Cluster Voltage Range	313.6 ~ 403.2 VDC	627.2 ~ 806.4 VDC	672 ~ 864 VDC	627.2 ~ 806.4 VDC
Battery Pack Voltage	51.2VDC			
Battery Pack Capacity	280Ah	280Ah	314Ah	280Ah
Pack Engery@25°C	14.336kWh	14.336kWh	16.08kWh	14.336kWh
Pack Qty.	14pcs	28pcs	30pcs	70pcs
Cycle Life@90%DOD	6000times			
PCS				
PCS Model	PWS2-30P-EX	Mars-125KT	Mars-125KT	BCS500K-A
PCS Rated Power	30kW	125kW	125kW	500kW
Battery Voltage Range	150 ~ 750 VDC	580 ~ 1000 VDC	580 ~ 1000 VDC	500 ~ 900 VDC
PCS Qty.	4pcs	2pcs	2pcs	1pcs
AC Connection	3P4W			
Control System	EMS			
Cooling System	HVAC			
Fire Fighting System	Aerosol (CE)		Novec™ 1230	Novec™ 1230 Firehose Connection EI60 Insulated Container



BCH-80-70

BCH-80-70 is mainly developed full scene storage and charging integrated driving mobile supercharging device. It can be quickly and flexibly deployed to various types of indoor and outdoor parking lots, eliminating the high cost of power expansion and renovation, so that all parking spaces are immediately charged, and providing users with the ultimate non-inductive fast charging experience.



Expert For Rental BESS & Mobile EV Charger



UPS BCH Series is a new range of mobile power station secure integrated Battery Energy storage system with Mobile EV Charging guns. This mobile and modular solution includes batteries, PCS, control system and EV charging guns, HVAC, fire protection and auxiliary components for option. It can be connected to external PV power station, AC generator and Grid power.

Its purpose is to facilitate efficient and fast charging for large electric trucks and construction machinery in weak or no grid areas.

Battery Cluster & PACK

OEM / ODM Service

Applications



For Independent Power



For Greener Power Solutions



For Battery Energy Storage System



Mobile BESS Charger



51100HV



51100LV



51280HV



51314LT



25314LT



Battery Cluster

BMS Function:
Overcurrent, Overvoltage, Overcharge,
Over Discharge, High Temperature,
Short Circuit, SOC Estimation, Equalizing

10% ~85% Ambient Humidity

≤2000M Altitude

0.5C Standard Charging /Discharging Rate

Specification

Application Products		GSB		HBD				HSL		HBD A			
Specification		MF51100		MF51100		MF51280		MF25314LT1	MF51314LT1	MF154280	MF166280	MF154314	MF166314
Model		MF51100LV5	MF51100LV2	MF51100HVS	MF51100HV3	MF51280HVS	MF51280HV3						
Standard Product		√		√		√							
Rated Capacity		100Ah				280Ah		314Ah		280Ah		314Ah	
Rated Voltage		51.2Vdc				51.2Vdc		25.6Vdc	51.2Vdc	153.6Vdc	166.4Vdc	153.6Vdc	166.4Vdc
Voltage Range		44.8~57.6Vdc				44.8~57.6Vdc		22.4Vdc ~28.8Vdc	44.8Vdc ~57.6Vdc	134.4Vdc ~172.8Vdc	145.6Vdc ~187.2Vdc	134.4Vdc ~172.8Vdc	145.6Vdc ~187.2Vdc
Energy @25 ℃		5.12kWh				14.336kWh		8.0384 kWh	16.0768 kWh	43.008 kWh	46.592 kWh	48.23 kWh	52.2496 kWh
Cycle Life@90%DOD		6000times											
Suitable System		51.2Vdc		1000V HV		1000V&1500V HV		25.6Vdc	51.2Vdc	1000V&1500V HV			
Certification	Transportation	/	/	UN38.3		UN38.3	/	/	/	/	UN38.3	/	/
	Safety	/	/	CE-EMC	/	CE-EMC	/	/	/	/	IEC 62619 CE-EMC UL9540A UL1973		/
Structural Form		Steel Stripe Harmonica Tube								Steel Stripe Liquid cooling plate			
Dimensions (L x W x H)mm		482.6×445×221.5	645×483×133	405×482.6×226.5	615×482.6×133	748×482.6×226.5	748×482.6×226	740×330×236	800×420×230	810×1090×240	810×1160×240	810×1090×240	810×1160×240
Weight		56kg	49kg	52.2kg	46.6kg	113.9kg	110.8kg	67kg	126kg	312kg	340kg	320kg	345kg

BIOFUEL Generator Sets

BF Series



Generating
Sets

50
Hz

60
Hz



Advantages

UPS biofuel generator set has good economy and environmental protection

Features

- 1) Good biodegradability
- 2) The safety of transportation, storage and use is significantly better than that of diesel
- 3) Can improve the thermal efficiency of the engine
- 4) Renewable energy, will not be exhausted
- 5) can be used with petrochemical diesel in a certain proportion

FAME: EN14214

HVO: EN15940



Environmental
protection



Reliable



Thermal
Efficiency



Renewable



Reconcilable

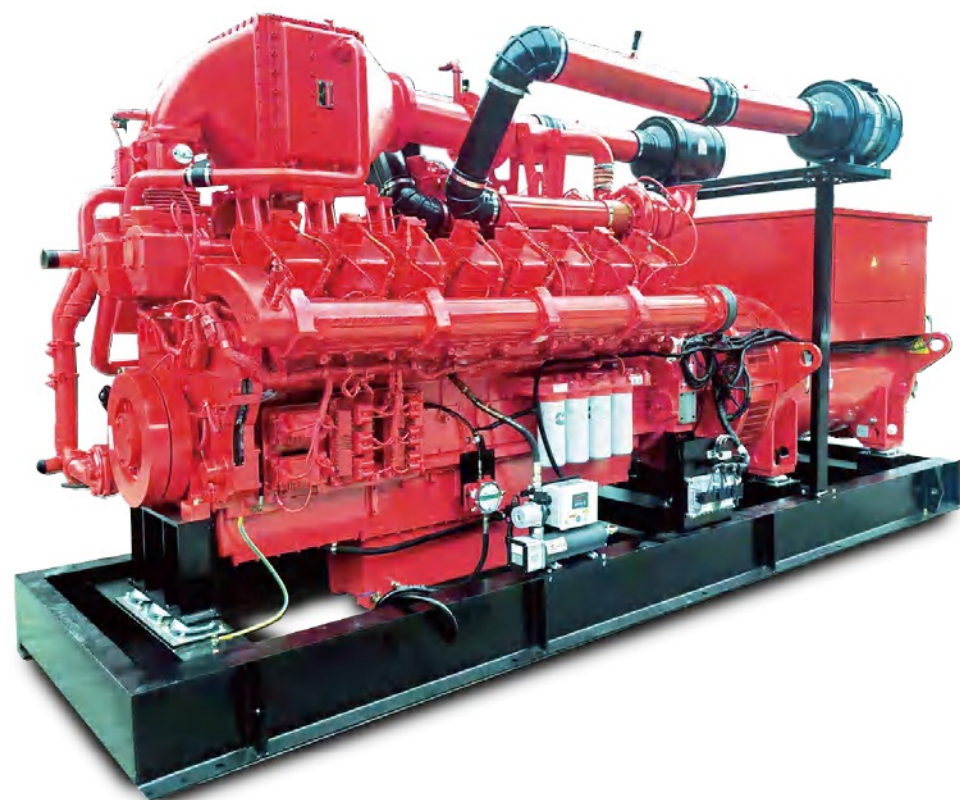
Engine: CUMMINS / FPT / WEICHAI / BAUDOUIN / SCANIA

Gas Generator Sets

GG Series



Applications



Natural gas requirements

1	Methane volume	%	≥95
2	Methane Number	MN	≥88
3	Intake pressure	KPa	30~50
4	Changes in gas pressure	mbar/s	≤10
5	Gas temperature	°C	10~40
6	Gas humidity	%	<10
7	Total sulfur	mg/(10kWh)	≤200
8	Hydrogen sulfide	ppm	<20
9	Dust particle size	μm	<3
10	Dust	mg/(10kWh)	<5
11	Free state water	/	0

Specification

Genset Model	FUEL TYPE	Genset Rating Power		Amps 400V 50Hz	Brand New Cummins Engine							Open sets	
		KVA	KW		Engine Model	Place of Origin	Emissions Level NOx (5%O ₂)	Control	Switchable	Cylinders	Displacement (L)	Dimensions L*W*H (mm)	Weight (kg)
MC375-1	NG	375.0	300.0	541.3	K19N-G1	CHINA	≤500 mg/Nm ³	Electric	N	6	19.0	4055×1650×2235	4850
MC438-1	NG	437.5	350.0	631.5	K19N-G3	CHINA	≤500 mg/Nm ³	Electric	N	6	19.0	4055×1650×2235	4850
MC500-1	NG	500.0	400.0	721.7	K19N-G4	CHINA	≤500 mg/Nm ³	Electric	N	6	19.0	4055×1650×2235	5550
MC625-1	NG	625.0	500.0	902.1	K38N-G5	CHINA	≤500 mg/Nm ³	Electric	N	12	38.0	6400*2200*2500	9600
MC750-1	NG	750.0	600.0	1082.6	K38N-G6	CHINA	≤500 mg/Nm ³	Electric	N	12	38.0	6400*2200*2500	9600
MC875-1	NG	875.0	700.0	1263.0	K38N-G7	CHINA	≤500 mg/Nm ³	Electric	N	12	38.0	6400*2200*2500	10500
MC1000-1	NG	1000.0	800.0	1443.4	K38N-G8	CHINA	≤500 mg/Nm ³	Electric	N	12	38.0	6400*2200*2500	10500
MC1125-1	NG	1125.0	900.0	1623.8	K50N-G9	CHINA	≤500 mg/Nm ³	Electric	N	16	50.3	4900x1600x2400	7850
MC1250-1	NG	1250.0	1000.0	1804.3	K50N-G10	CHINA	≤500 mg/Nm ³	Electric	N	16	50.3	4900x1600x2400	7850
MC1250-1	NG	1250.0	1000.0	1804.3	K50N-G11	CHINA	≤500 mg/Nm ³	Electric	N	16	50.3	4900x1600x2400	7850

* Under ISO8528-1, ISO3046 conditions

Engine: Cummins

Advantages

UPS gas units mainly use natural gas, biogas, coal bed methane, oil field associated gas and other flammable gases as fuel

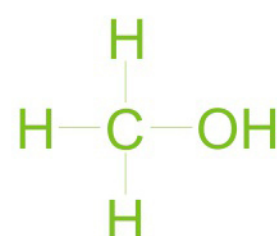
- 1 UPS has the technical capabilities to provide combined heat and power (CHP) and combined Heat and Cold (CHHP) solutions.
- 2 By using the waste heat discharged by the engine and the heat generated by the engine cylinder block, the waste heat recovery and utilization device provides heating and cooling to the user.
- 3 In this way, the comprehensive energy utilization rate of the whole system is greatly improved, and the cascade utilization of energy is realized.

Features

- 1 High reliability, easy maintenance, and short startup time
- 2 Compact structure and low noise
- 3 Low emission: NOx (5%O₂)≤500 mg/Nm³
- 4 Electrical efficiency: ≥40%, comprehensive utilization efficiency: ≥85%

Methanol Generator Sets

MG Series



METHANOL
THE FUEL FOR THE FUTURE

Advantages

UPS methanol generator sets has the advantages of economy, environmental protection, and reliability.

Details:

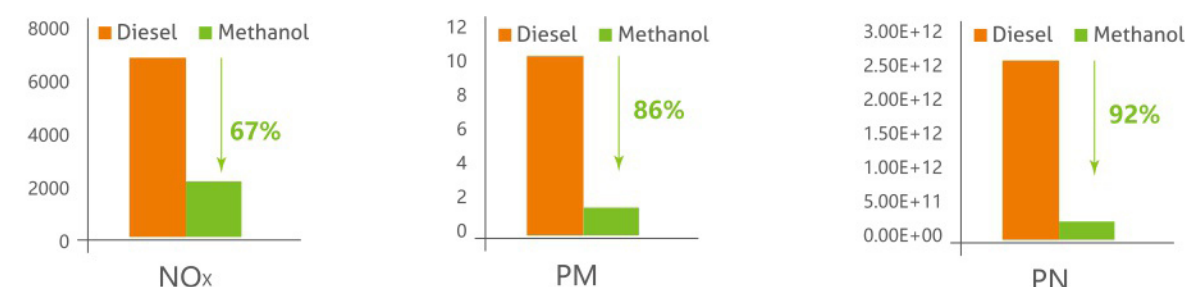
- **Efficient combustion:** High energy ignition, exclusive combustion chamber
- **Corrosion and wear resistance:** methanol-related special coating technology, high corrosion resistance, high wear resistance
- **Methanol special oil:** ultra-low ash to adapt to methanol environment, improve anti-wear performance
- **Low temperature starting:** gasoline assisted starting methanol heating
- **Intelligent hybrid:** hybrid extended range intelligent control
- **Emission control:** High voltage common track, high efficiency TWC, precise air fuel ratio

Engine: CAMC GS13M435HF-40

Methanol VS diesel

Compared with diesel engine, the original emission of methanol engine has obvious advantages, which can simplify the structure and control of the post-processor

- Diesel engine post-treatment must use DOC+DPF+SCR+ASC combination to meet the national 6b emission requirements
- The methanol engine can meet the national 6b emission requirements by using a three-way catalytic converter

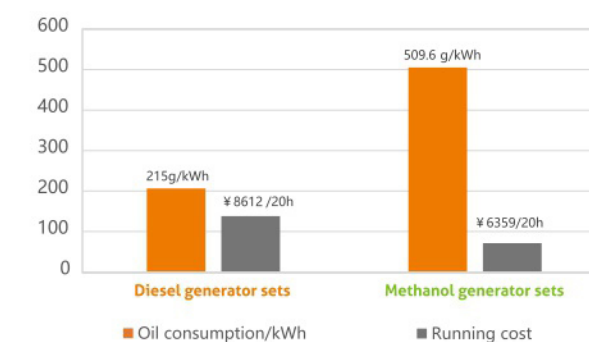


Methanol Engine Performance parameter

Working condition	Power (kW)	Fuel consumption (Kg/h)	Cylinders /Valves	Displacement (L)	Rotational Speed	Air intake method
Standby 110%	352	154.13	6/24	12.82	1500@50Hz	Turbocharged Intercooled
Primary 100%	320	139.01				
80%	256	111.96				
50%	160	74.71				
30%	96	51.72				
10%	32	27.84				

Economy of methanol generator sets

Both diesel and methanol machines run at 240kW power for 20 hours, The cost of saving fuel per unit is ¥ 2,253 , Methanol is 26% lower than diesel.



Hydrogen Fuel Cell Generator Sets

HPG Series

UPS specializes in core components for hydrogen and fuel cells, provides stack and system sales and technical services depending on the nature of the market application.

Advantages



Environmentally friendly

"Negative" emission
Low noise level



Highly efficient

High energy density
Convenient refueling



Super safe

Automatic warning and protection IP54



Super reliable

Anti-attenuation, long lifespan, high and low temperature resistance, easy maintenance



Highly adaptive

Fully independent R&D, modular expansion

H1 STACK

UPS H1 is a new generation, graphite liquid-cooled stack with power output of 20~180kW. It can be used in applications such as commercial vehicles, shipping, cogeneration, power station and energy storage, etc.

Product parameters	
Rated power (kW)	174
Rated volumetric power density (kW/L)	4.6
Peak power (kW)	188
Peak volumetric power density (kW/L)	5.0
L*W*H (mm)	736*510*265
Weight (kg)	68.1
IP rating	IP67
Output voltage (VDC)	210~350
Output current (A)	0~875
Fuel	Hydrogen, ISO 14687-2
Stack coolant	Deionized water or FC coolant
Minimum start temperature (°C)	-30
Storage temperature (°C)	-40~60



Fuel cell power plant

UPS independent R&D and production fueled by hydrogen, provides efficient, reliable, stable and environment-friendly power support for the user sides. The system adopts a modular design, including six 420kW fuel cell power generation modules. It has the functions of automatic data acquisition, multi-channel cell detection, active safety protection and intelligent temperature/pressure/flow control.

Product parameters	
Rated power(MW)	2.5
L*W*H (m)	12.19*2.44*2.59(40-foot ISO standard container)
Weight(T)	30
Output voltage(VDC)	500~850, adjustable
Max. efficiency	>55%
Cooling mode	Water cooling
Ambient temperature(°C)	-20~55
Relative humidity(%RH)	0~100 Non-condensing
IP rating	IP54
Communication mode	CANbus, RS485



CH1 Fuel cell backup power supply

UPS' CH1, including 5kW fuel cell module and methanol- to-hydrogen module, can supply fuel conveniently and operate above 40°C, features low maintenance cost.

Product parameters			
Rated power (kw)	5	50	100
Output voltage (VDC)	44-58		
Max. efficiency	>55%		
Cooling mode	Air cooling		
Ambient temperature(°C)	0~45		
Fuel	Methanol solution (62wt% methanol, 38wt% deionized water)		
Fuel consumption (L/kWh)	1.2		
IP rating	IP54		

Clean Energy Solutions

Internet Intelligent "More Power" Remote Service System



Battery Power Bank
(A series)



Battery Power Bank
(R series)



Battery Power Bank
(E series)



Mobile Bess Charger



Battery Cluster



Methanol
Generator Sets



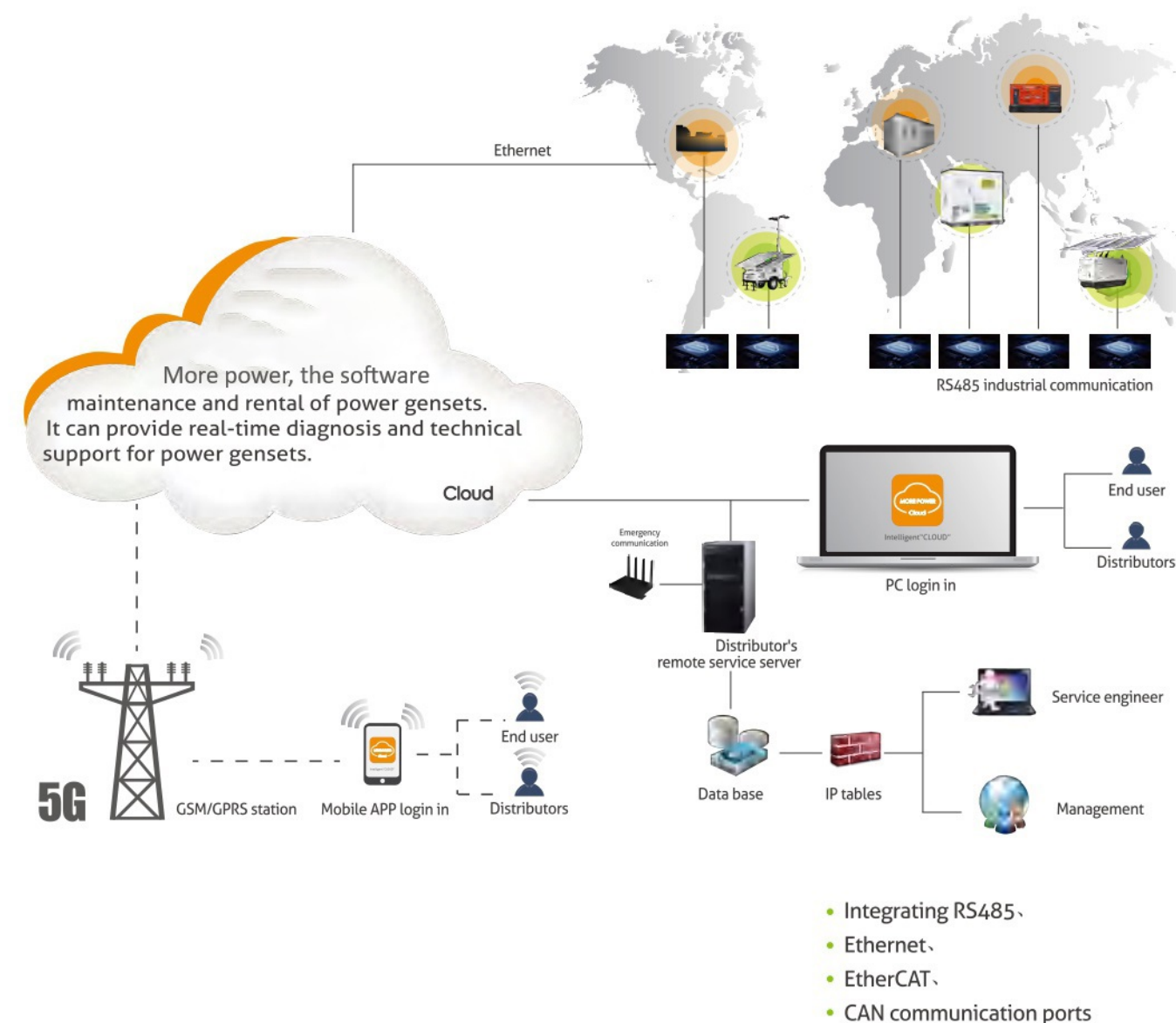
Biofuel Generator Sets



Gas Generator Sets



Hydrogen Fuel
Cell Generator Sets



UPS Cooperated with Tongli University and developed "More Power" cloud system which focused on the power solution systems health management for operation, maintenance and rental.

Smart could platform on PC/ Mobile APP, real-time monitoring, unattended, automatic warning, storing data for benefit analysis.

Easy to maintain, equipped with SCADA, remote monitoring, diagnosing and upgrading supported.

More Power can provide real-time diagnosis and timely technical support for customers in different countries and different industries.