BATTERY ENERGY STORAGE SYSTEM for COMMERCIAL & INDUSTRIAL



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BESS


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Aksa BESS leads Turkey’s energy transition with its end-to-end engineering and project design expertise.

Engineered for commercial and industrial facilities, our C&I product line delivers uninterrupted power, high efficiency, and sustainable energy management across a broad spectrum of applications.

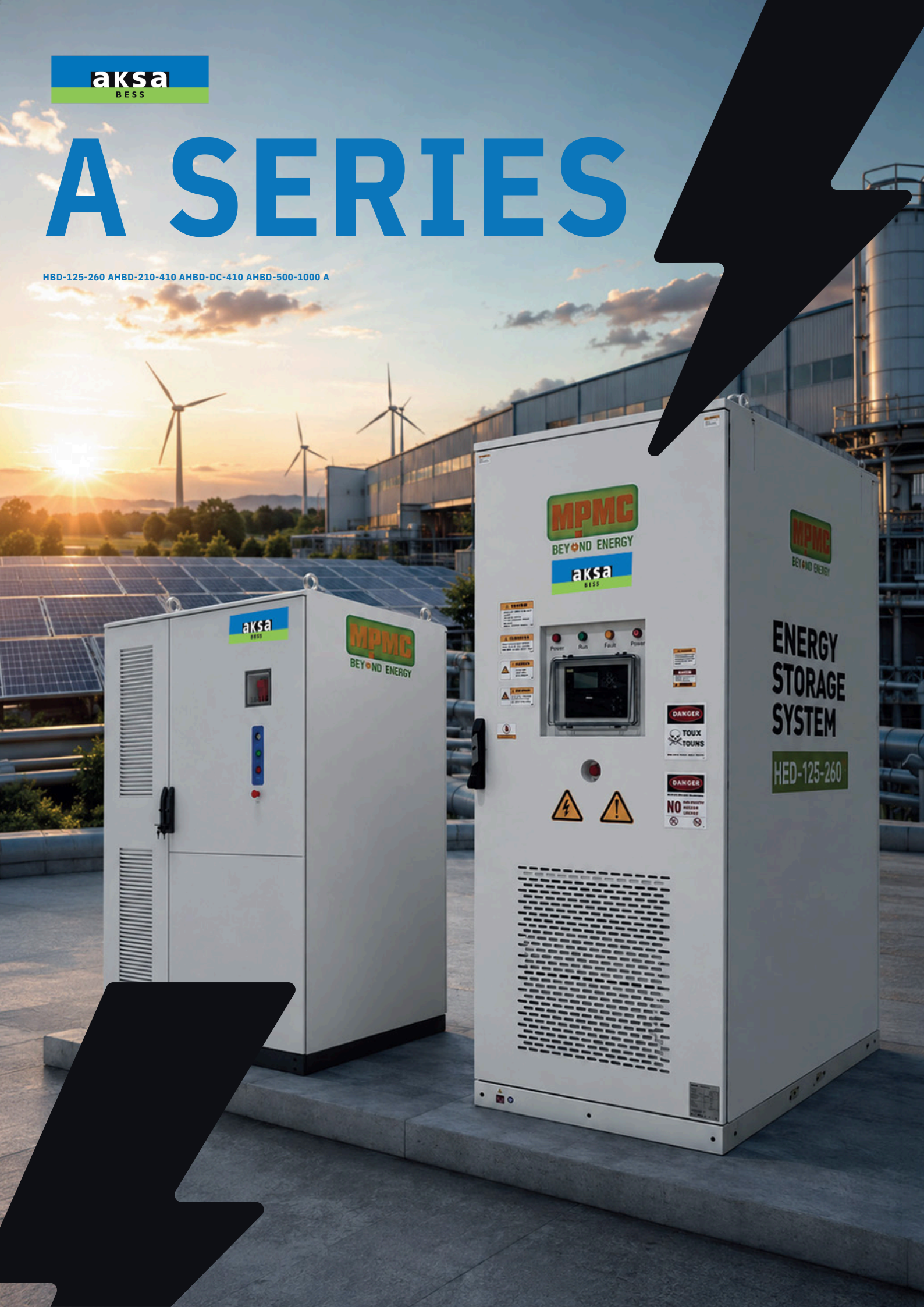
Discover our smart C&I storage solutions designed to add value to your facility in this catalog.



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A SERIES

HBD-125-260 AHBD-210-410 AHBD-DC-410 AHBD-500-1000 A



HBD-125-260



Design Standards

HBD[a] Series is a new range of secure, integrated battery energy storage systems. This modular solution includes batteries, PCS, LCAC, FSS, and EMS, with optional components such as STS, PV inverters, PV modules, ATS, and auxiliary units to meet diverse application needs. Support emergency backup, peak shaving, Arbitrage, Grid Service, Self -consumption

Benefits

- HighEnergy Density: Top-tier 314Ah LFP cells
- Comprehensive Safety Protection: Multi-layer protection
- High Compatibility: Compatible with multiple electrical solutions
- IntelligentOperation: Smart EMS

Warranty

3years after export from the factory or the Energy Throughput achieve 4590kWh per kWh which comes first.

General Information		HBD-125-260
Rated Output Power@25 C°		125kVA
Rated Power Factor		0.8 lagging
Rated Output Voltage		380V@50Hz/60Hz, 3ph. (400V & 415V available)
Rated Battery Storage Capacity		261.25kWh
Output	Terminals	Copper Busbar
	Sockets	N/A
Protection Class		IP55
Loading Dimension (W*D*H)		940*1600*2460mm
Net. Weight		2700kg
Loading Capacity	20'GP	N/A
	40'HC	9 units
Discharge Temperature Range		-20~50°C (> 45°C derating)
Max Altitude		3000m (> 2000m derating)

ISO 9001:2015 ilac-MRA CE



Battery	HBD-125-260
Cell Type	LFP (LiFePO4)
Pack Capacity	52.25kWh
Pack Rated Voltage	166.4Vdc
Cyclic Life	8000 (0.5C@90%DOD)
Battery Voltage of Rack	832Vdc
Connection of Rack	5S1P
PCS	
Max. Current (AC)	200A
Max. Output Power	137.5kVA
Rated Output Power	125kW
AC Input Voltage	380~415Vac
Range Rated	50/60Hz (±2.5Hz)
Frequency Range PF	1 lagging~1 leading
AC Connection	3W+N+PE
Max. Efficiency	98.5%
Transformer	N/A
Communication Grid-	CAN/RS485
tied Certificates	EN50549, NRS 097, C10/11, VDE4105, G99，AS4777，IEC61727&62116，CEI 0-21 Austria TOR EZA Type A&B，217001/2，NTS631，The Saudi Arabian
Safety & EMC Certificates	IEC61000, IEC62477
Cooling System	
Cooling Type	LCAC
Fire Protection	
Type	Aerosol (CE)
EMS	
Display and Monitor	Local screen
Function	Energy management and coordinated control of energy storage system



HBD-125-260



1 LiFePO4 BATTERY
Long Life Design Up to 8000 cycles
High Quality Based on Specification
Consistency of CELLS~!



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



3 Fits the practical application & guaranteed by high-quality manufacturing technology.



4 INTELLIGENT PCS with EMS
EASY OPERATION ON ONE SCREEN

HBD



PV
Renewable Energy



CLOUD
Remote Monitoring
& Control



INVERTER
Remote Monitoring
& Control



HBD-125-260



STS



GENSET
Power Consumption



GRID
Backup Power



ATS



LOAD
Remote Monitoring
& Control

ALL-IN-ONE SOLUTION

BATTERY STORAGE
Reliable & Safe

EMS
Smart Energy
Management

PCS
Bidirectional Power
Conversion

REMOTE CONTROL
Monitor Anytime,
Anywhere

HBD-210-410

Design Standards

HBD[a] Series is a new range of secure, integrated battery energy storage systems. This modular solution includes batteries, PCS, LCAC, FSS, and EMS, with external optional components such as STS, PV inverters, PV modules, ATS, and auxiliary units to meet diverse application needs. Support emergency backup, peak shaving, Arbitrage, Grid Service, Self -consumption

Benefits

- HighEnergy Density: Top-tier 314Ah LFP cells
- Comprehensive Safety Protection: Multi-layer protection
- High Compatibility: Compatible with multiple electrical solutions
- IntelligentOperation: Smart EMS

Warranty

Kindlycheck“WARRANTY MANUAL”



General Information		HBD-210-410
Rated Output Power@25 °C		210kW
Rated Power Factor		0.99 lagging~0.99 leading
Rated Output Voltage		800V@50Hz/60Hz, 3ph. (690V available)
Rated Battery Storage Capacity		418kWh
Efficiency		≥89%
Protection Class		IP55
Loading Dimension (W*D*H)		1500*1350*2400mm
Net. Weight		3800kg
Loading Capacity	20’GP	N/A
	40’HC	6 units
Discharge Temperature Range		-25~55°C (> 45°C derating)
Humidity		5~95%RH, non-condensing
Max Altitude		3000m(> 2000m derating)

ISO 9001:2015 ilac-MRA CE



Battery	HBD-210-410
Cell Type	LFP (LiFePO4)/314Ah
Pack Capacity	52.25kWh
Pack Rated Voltage	166.4Vdc
Cyclic Life	8000 (0.5C@90%DOD)
Battery Voltage of Rack	1164.8~1497.6Vdc
Connection of Rack	8S1P
PCS	
Max. Current (AC)	167.2A
Max. Output Power	231kW
Rated Output Power	210kW
AC Input Voltage Range	800Vac (-15%~+10%)
Rated Frequency Range	50/60Hz (±2.5Hz)
PF	-0.99 lagging~0.99 leading
AC Connection	3P+PE
Max. Efficiency	98%
Transformer	N/A
Communication Grid-	Ethernet/CAN/RS485
tied Certificates Safety	IEC 62477, IEC 62109, EN 50549-1/2/10, VDE-AR-N 4110, VDE-AR-N 4120,
& EMC Certificates	IEC61850，IEC 61000,
Cooling System	
Cooling Type	LCAC
Fire Protection	
Type	Aerosol (CE)
EMS	
Function	Energy management and coordinated control of energy storage system



HBD-210-410



1 LiFePO4 BATTERY:
Long Life Design Up to 8000 cycles
High Quality Based on Specification
Consistency of CELLS~!



2 INTEGRATED with PCS EMS BMS
EASY OPERATION ON ONE SCREEN



3 C-4 LEVEL ANTI-CORROSION SUITABLE WITH HEAVY DUTY
2 m² Footprint Only, Easy transportation & fast installation
MODULAR DESIGN, simplified parallel expansion.
Fits the practical application & guaranteed by high-quality manufacturing technology.

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HBD



PV
Renewable Energy

CLOUD
Remote Monitoring
& Control



INVERTER
Remote Monitoring
& Control



STS



HBD-210-410



GENSET
Power Consumption



GRID
Backup Power



ATS



LOAD
Remote Monitoring
& Control

ALL-IN-ONE SOLUTION

BATTERY STORAGE
Reliable & Safe

EMS
Smart Energy
Management

PCS
Bidirectional Power
Conversion

REMOTE CONTROL
Monitor Anytime,
Anywhere

HBD-DC-410

Design Standards

TheHBD-DC410 is a self-contained battery cabinet featuring pack-level liquid cooling and cell-level temperature balancing. It keeps cell temperature differences within 3°C, ensuring superior thermal uniformity and longer battery life. With a modular design, it supports flexible parallel configurations and can be integrated with a centralized PCS to form a complete ESS solution. This delivers higher energy density and greatly improved overall cost-effectiveness.

Benefits

- HighEnergy Density: Top-tier 314Ah LFP cells
- Comprehensive Safety Protection: Multi-layer protection
- High Compatibility: Compatible with multiple electrical solutions
- IntelligentOperation: Smart EMS

Warranty

Kindlycheck“WARRANTY MANUAL”



General Information		HBD-DC-410
Rated Battery Storage Capacity		418kWh
Battery Stack		1P416S
Rated Voltage		1331.2VDC
DC Voltage Range		1164.8VDC~1497.6VDC
Charge/Discharge Rate		0.5P
Protection Class		IP55
Loading Dimension (W*D*H)		1500*1350*2400mm
Net. Weight		3800kg
Loading Capacity	20’GP	N/A
	40’HC	6 units
Discharge Temperature Range		-25~55°C (> 45°C derating)
Max Altitude		3000m (> 2000m derating)

ISO 9001:2015 ilac-MRA CE



HBD-DC 410



1 LiFePO4 BATTERY: Long Life Design Up to 8000 cycles
High Quality Based on Specification Consistency of CELLS~!
C-4 LEVEL ANTI-CORROSION SUITABLE WITH HEAVY DUTY
1.4m² Footprint Only, Easy transportation & fast installation
MODULAR DESIGN, simplified parallel expansion.



2 INTEGRATED with PCS EMS BMS
EASY OPERATION ON ONE SCREEN



3 Aerosol & Water Fire Suppression fully guarantee the safe operation of the system
Fits the practical application & guaranteed by high-quality manufacturing technology.

HBD



PV
Renewable Energy



INVERTER
Remote Monitoring
& Control



CLOUD
Remote Monitoring
& Control



STS



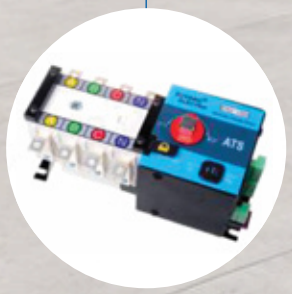
HBD-DC-410



GENSET
Power Consumption



PCS
Optional



ATS



LOAD
Remote Monitoring
& Control



GRID
Backup Power

ALL-IN-ONE SOLUTION

BATTERY STORAGE
Reliable & Safe

EMS
Smart Energy
Management

PCS
Bidirectional Power
Conversion

REMOTE CONTROL
Monitor Anytime,
Anywhere

HBD-500-1000

Design Standards

HBD[a] Series is a new range of secure, integrated battery energy storage systems. This modular solution includes batteries, PCS, LCAC, FSS, and EMS, with optional components such as STS, PV inverters, PV modules, ATS and auxiliary units to meet diverse application needs. Emergency backup, peak shaving, Arbitrage, Grid Service, Self-consumption

Benefits

- HighEnergy Density: Top-tier 314Ah LFP cells
- Comprehensive Safety Protection: Multi-layer protection
- High Compatibility: Compatible with multiple electrical solutions
- IntelligentOperation: Smart EMS

Warranty

3years after export from the factory or the Energy Throughput achieve 4590kWh per kWh which comes first.



HBD-500-1000

General Information		HBD-500-1000
Rated Output Power@25 C°		500kVA
Rated Power Factor		1 lagging~1 leading
Rated Output Voltage		380V@50Hz/60Hz, 3ph. (400V & 415V available)
Rated Battery Storage Capacity		1045kWh
Output	Terminals	Copper Busbar
	Sockets	Option
Protection Class		IP54
Loading Dimension (W*D*H)		4800*2250*2250mm
Net. Weight		14000kg
Loading Capacity	20'GP	1 unit
	40'HC	NA
Discharge Temperature Range		-20~50°C (> 45°C derating)
Max Altitude		3000m (> 2000m derating)



Battery	HBD-500-1000
Cell Type	LFP (LiFePO4)
Pack Capacity	52.25kWh
Pack Rated Voltage	166.4Vdc
Cyclic Life	8000 Times (0.5C@90%DOD)
Battery Voltage of Rack	832Vdc
Connection of Rack	5S1P
PCS	
Max. Current (AC)	800A
Max. Output Power	550kVA
Rated Output Power	500kW
AC Input Voltage Range	400Vac (-15%~+15%)
Rated Frequency Range	50/60Hz (±2.5Hz)
PF	1 lagging~1 leading
AC Connection	3W+N+PE
Max. Efficiency	98.5%
Transformer	N/A
Communication	CAN/RS485/Ethernet
Grid-tied Certificates Safety & EMC Certificates	EN50549, NRS 097, C10/11, VDE4105, G99，AS4777，IEC61727&62116，CEI 0-21 Austria TOR EZA Type A&B，217001/2，NTS631，The Saudi Arabian IEC61000, IEC62477
Cooling System	
Cooling Type	LCAC
Fire Protection	
Type	Aerosol (CE)
EMS	
Display and Monitor	Local screen
Function	Energy management and coordinated control of energy storage system



HBD-500-1000



1 Liquid Cooling System LiFePO4 BATTERY Long Life Design
Up to 8000 cycles
High Quality Based on Specification Consistency of CELLS~!
All-in-One Design
INTELLIGENT PCS with EMS
EASY OPERATION ON ONE SCREEN.



2 C-3 Level Anti-Corrosion Suitable With Heavy Duty
Fits the practical application & guaranteed by high quality manufacturing technology.

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GENSET
Power Consumption



LOAD
Remote Monitoring
& Control

HBD



CLOUD
Remote Monitoring
& Control



MDB



INVERTER
Remote Monitoring
& Control



HBD-500-1000



PV
Renewable Energy



GRID
Backup Power

ALL-IN-ONE SOLUTION

BATTERY STORAGE
Reliable & Safe

EMS
Smart Energy
Management

PCS
Bidirectional Power
Conversion

REMOTE CONTROL
Monitor Anytime,
Anywhere

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E SERIES

HBD-10-30 EHBD-12-30 EHBD-30-100 E



HBD-10-30
HBD-12-30 E Series

Design Standards



HBD®-E is a new range of secure integrated Battery Energy storage system. It redefines convenient energy storage with its fully integrated, all-in-one design. This secure system combines LFP batteries, a hybrid inverter, and intelligent controls in a modular solution. It connects directly to PV arrays, the grid, or generators, enabling emission-free operation and reduced grid reliance. Developed to ensure power quality and provide emergency backup, the E-Series is an ideal, scalable solution for reliable and independent energy management.

HBC® is a new range of Residential Battery Energy Storage System, with participation ofPV, hybrid inverter, battery, loads and grid system for energy management.

Benefits

- All-in-One Energy: Enabling direct connection to Grid、PV arrays and diesel generators for versatile power input.
- Plug-and-Play: Pre-integrated components for simple, fast installation. Significantly reduces installation time and labor costs.
- Smart Remote Control: Monitor and manage via APP, 4G, or WiFi.
- Scalable & Flexible: Modular design supports parallel expansion.
- 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;
-

Warranty

Kindlycheck“WARRANTY MANUAL”

General Information		HBD-10-30	HBD-12-30
Model		HBD-10	HBD-12
Rated Output Power@25°C		10 kVA	12kW
Rated Power Factor		0.8 lagging	
Rated Output Voltage		380V@50/60Hz, 3ph. (400V & 415V available)	380 ~ 415V@50/60Hz, 3ph.
Battery Storage Capacity		30.72kWh	30kWh
PV Input	Max Power	18kWp	
	Max. input Current per MPPT	20A	
	Number of MPPT* Strings per MPPT	3*1	
Protection Class		IP54	
Loading Dimension (W*D*H)		1365*1081*1820	
Ingress Rating			IP55
Net. Weight		700kg	
Loading Capacity	20’GP	8 units	
	40’HC	16 units	
Discharge Temperature Range		-20~50°C (> 45°C derating)	-20 ~ +50 °C (> +45°C derating)
Max Altitude		3000m (> 2000m derating)	

ISO 9001:2015 ilac-MRA CE



Battery	HBD-12-30
Cell Type	LFP (LiFePO4)
Pack Model	MF51100
Pack Capacity	5.12kWh
Pack Rated Voltage	51.2VDC
Cyclic Life	6000 (0.5C@90% DOD)
Charger/Discharge Current	50A (0.5C)
Connection of Packs	1S6P
PV Input Data	
Max. PV Power	15.6kWp
DC Input Voltage Range	160 ~ 800V
MPPT Voltage Range	200 ~ 650V
Start Up DC Voltage	160V
Nominal DC Input Voltage	550V
Number of MPPT / Strings per MPPT	2/2+1
Max. PV Input Current	26 + 13A
Max. PV Short-circuit Current	34 + 17A
AC Output Data	
Rated AC Output Power	12kW
Rated UPS Output Power	12kW
Max. Apparent AC Power	13.2kVA
Max. Output Current	27.3A
Rated Voltage	380/220 400/230 415/240V
Rated Frequency	50/60Hz
Grid Type	3 Phase/3L-N-PE
Power Factor	0.8 leading to 0.8 lagging
Cooling System	
Cooling type	HVAC
Fire Protection (Optional)	
Type	Aerosol (CE)

HBD-10-30



HBD-12-30



1
Hybrid Inverter
On-grid & Off-grid
Supporting Diesel Generator Input
LiFePO4 BATTERY Long Life Design
Up to 6000 cycles
HVAC
Switchgear Easy for Wiring
Forklift Pockets & Removable Lifting Lugs on Top
Easy for Transport

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PV
Renewable Energy



PV

HBD-E



CLOUD
Remote Monitoring
& Control



INVERTER
Remote Monitoring
& Control

HBD-30-60



HBD-50-100



LOAD
Remote Monitoring
& Control



GRID
Backup Power



GENSET
Power Consumption

ALL-IN-ONE SOLUTION

BATTERY STORAGE
Reliable & Safe

EMS
Smart Energy
Management

PCS
Bidirectional Power
Conversion

REMOTE CONTROL
Monitor Anytime,
Anywhere

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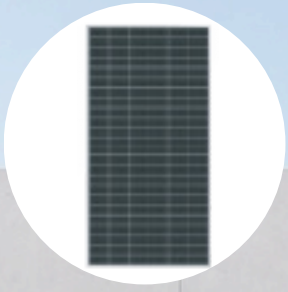


CLOUD
Remote Monitoring & Control



Battery

Inverter

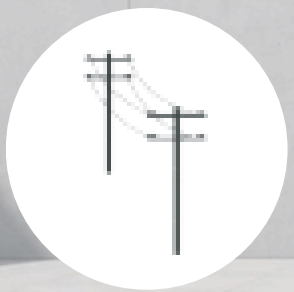


PV





Generator



Grid



Normal Load



Back-up Load

ALL-IN-ONE SOLUTION

BATTERY STORAGE
Reliable & Safe

EMS
Smart Energy Management

PCS
Bidirectional Power Conversion

REMOTE CONTROL
Monitor Anytime, Anywhere

HBD-30-100 HBD-40-100 HBD-50-100 E Series



Design Standards

HBD®-E is a new range of secure integrated Battery Energy storage system. This secure system combines LFP batteries, a hybrid inverter, and intelligent controls in a modular solution. It connects directly to PV arrays, or grid, enabling emission-free operation and reduced grid reliance. Developed to ensure power quality and provide emergency backup, the E-Series is an ideal, scalable solution for reliable and independent energy management.

Benefits

- All-in-One Energy: Enabling direct connection to Grid、 PV arrays and diesel generators for versatile power input.
- Installation. Significantly reduces installation time and labor costs.
- Smart Remote Control: Monitor and manage via APP, 4G, or WiFi.
- Scalable & Flexible: Modular design supports parallel expansion.
- Safety upgrades: Added door open alarm, explosion venting valve, and water fire-fighting connection port for enhanced safety and reliable protection

Warranty

Kindlycheck“WARRANTY MANUAL”

General Information		HBD-30-100	HBD-40-100	HBD-50-100
Rated Output Power@25°C		30kVA	40kVA	50kVA
Rated Power Factor		0.8 lagging~0.8 leading		
Rated Output Voltage		380V@50/60Hz, 3ph. (400V & 415V available)		
Battery Storage Capacity		100kWh		
PV Input	Max Power	60kWp	80kWp	100kWp
	Max. input Current per MPPT	40A		
	Number of MPPT* Strings per MPPT	3*2	4*2	
Protection Class		IP54		
Loading Dimension (W*D*H)		800*1200*2100mm (excluding hybrid inverter)		
Net. Weight		1200kg		
Loading Capacity	20’GP	10 units		
	40’HC	20 units/40’GP		
Discharge Temperature Range		-20~55°C (> 45°C derating)		
Max Altitude		3000m (> 2000m derating)		

ISO 9001:2015 ilac-MRA CE

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PV
Renewable Energy



PV

HBD



CLOUD
Remote Monitoring
& Control



INVERTER
Remote Monitoring
& Control

HBD-30-100



HBD-50-100

HBD-40-100



LOAD
Remote Monitoring
& Control



GRID
Backup Power



GENSET
Power Consumption

ALL-IN-ONE SOLUTION

BATTERY STORAGE
Reliable & Safe

EMS
Smart Energy
Management

PCS
Bidirectional Power
Conversion

REMOTE CONTROL
Monitor Anytime,
Anywhere

HBD-125-260



Design Standards

HBD®-E isanew range of secure integrated Battery Energy storage system. This secure system combines LFP batteries, a hybrid inverter, and intelligent controls in a modular solution. It connects directly to PV arrays, or grid, enabling emission-free operation and reduced grid reliance. Developed to ensure power quality and provide emergency backup, the E-Series is an ideal, scalable solution for reliable and independent energy management.

Benefits

- All-in-One Energy: Enabling direct connection to Grid、 PV arrays and diesel generators for versatile power input.
- Installation. Significantly reduces installation time and labor costs.
- Smart Remote Control: Monitor and manage via APP, 4G, or WiFi.
- Scalable & Flexible: Modular design supports parallel expansion.
- Safety upgrades: Added door open alarm, explosion venting valve, and water fire-fighting connection port for enhanced safety and reliable protection

Warranty

Kindlycheck“WARRANTY MANUAL”

General Information		HBD-125-260
Rated Output Power@25 C°		125kVA
Rated Power Factor		0.8 lagging~0.8 leading
Rated Output Voltage		380V@50/60Hz, 3ph. (400V & 415V available)
Battery Storage Capacity		261kWh
PV Input	Max Power	250kWp
	Max. input Current per MPPT	42A
	Number of MPPT * Strings per MPPT	10*2
Protection Class		IP54
Loading Dimension (W*D*H)		1050*1350*2400mm
Net. Weight		2600kg
Loading Capacity	20’GP	N/A
	40’HC	10 units
Discharge Temperature Range		-20~55°C (> 45°C derating)
Max Altitude		3000m (> 2000m derating)

ISO 9001:2015 ilac-MRA CE

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PV
Renewable Energy



PV

HBD



CLOUD
Remote Monitoring
& Control



INVERTER
Remote Monitoring
& Control





LOAD
Remote Monitoring
& Control

HBD-125-260



GRID
Backup Power



GENSET
Power Consumption

ALL-IN-ONE SOLUTION

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Conversion

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Monitor Anytime,
Anywhere


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