BLUE SPHERE
ENERGY SOLUTIONS

HIGH-VOLTAGE BATTERY ENERGY STORAGE

Blue Sphere HV Rack Series

Power for resilient, scalable energy storage.

51.2 V 314 Ah high-voltage rack-mount LiFePO4 battery system for modular deployments from 64.31 kWh to 337.61 kWh.



64.31-337.61 kWh	314 Ah	≥8,000
NOMINAL ENERGY RANGE	BATTERY CAPACITY	CYCLE LIFE

Smart BMS
Advanced battery management.

Scalable platform
Configurations from 4 to 21 packs.

High compatibility
Compatible with leading inverters.

IP20 protection
Triple hardware protection.

Compatible with leading inverter platforms

GROWATT · solis inverters · MEGAREVO · GOODWE Smart Energy Innovator · Deye · FOX ESS

Model range and electrical specifications

A scalable 314 Ah platform from 64.31 kWh to 241.15 kWh.

MODEL	HV-64kWh	HV-80kWh	HV-96kWh	HV-112kWh	HV-128kWh	HV-144kWh
Battery capacity	314 Ah	314 Ah	314 Ah	314 Ah	314 Ah	314 Ah
Nominal energy (25°C)	64.31 kWh	80.38 kWh	96.46 kWh	112.54 kWh	128.61 kWh	144.69 kWh
Usable energy (90% DOD)	57.9 kWh	72.4 kWh	86.8 kWh	101.3 kWh	115.8 kWh	130.2 kWh
Nominal voltage	204.8 V	256.0 V	307.2 V	358.4 V	409.6 V	460.8 V
Operating voltage range	179.2-230.4 V	224.0-288.0 V	268.8-345.6 V	313.6-403.2 V	358.4-460.8 V	403.2-518.4 V
Battery packs	4	5	6	7	8	9
Weight	510 (±10) kg	630 (±10) kg	750 (±10) kg	870 (±10) kg	990 (±10) kg	1110 (±10) kg
Dimensions (mm)	442x810x1259.8	884x810x768.6 (+100 pack distance)	884x810x1003.6 (+100 pack distance)	884x810x1024.8 (+100 pack distance)	884x810x1259.8 (+100 pack distance)	1326x810x1003.6 (+200 pack distance)

MODEL	HV-160kWh	HV-176kWh	HV-192kWh	HV-208kWh	HV-225kWh	HV-241kWh
Battery capacity	314 Ah	314 Ah	314 Ah	314 Ah	314 Ah	314 Ah
Nominal energy (25°C)	160.77 kWh	176.84 kWh	192.92 kWh	209.00 kWh	225.08 kWh	241.15 kWh
Usable energy (90% DOD)	144.7 kWh	159.2 kWh	173.6 kWh	188.1 kWh	202.6 kWh	217.0 kWh
Nominal voltage	512.0 V	563.2 V	614.4 V	665.6 V	716.8 V	768.0 V
Operating voltage range	448.0-576.0 V	492.8-633.6 V	537.6-691.2 V	582.4-748.8 V	627.2-806.4 V	672.0-864.0 V
Battery packs	10	11	12	13	14	15
Weight	1230 (±10) kg	1350 (±10) kg	1470 (±10) kg	1590 (±10) kg	1710 (±10) kg	1830 (±10) kg
Dimensions (mm)	1326x810x1003.6 (+200 pack distance)	1326x810x1003.6 (+200 pack distance)	1326x810x1259.8 (+200 pack distance)	1768x810x1024.8 (+300 pack distance)	1768x810x1024.8 (+300 pack distance)	1768x810x1024.6 (+300 pack distance)

EXTENDED RANGE

Higher-voltage configurations continue to 337.61 kWh on the following page.

Higher-voltage configurations

257.23 kWh to 337.61 kWh, retaining the same 314 Ah battery platform.

MODEL	HV-257kWh	HV-273kWh	HV-289kWh	HV-305kWh	HV-321kWh	HV-337kWh
Battery capacity	314 Ah	314 Ah	314 Ah	314 Ah	314 Ah	314 Ah
Nominal energy (25°C)	257.23 kWh	273.31 kWh	289.38 kWh	305.46 kWh	321.54 kWh	337.61 kWh
Usable energy (90% DOD)	231.5 kWh	246.0 kWh	260.4 kWh	275.0 kWh	289.4 kWh	303.9 kWh
Nominal voltage	819.2 V	870.4 V	921.6 V	972.8 V	1024.0 V	1075.2 V
Operating voltage range	716.8-921.6 V	761.6-979.2 V	806.4-1036.8 V	851.2-1094.4 V	896.0-1152.0 V	940.8-1209.6 V
Battery packs	16	17	18	19	20	21
Weight	1950 (±10) kg	2070 (±10) kg	2190 (±10) kg	2310 (±10) kg	2430 (±10) kg	2550 (±10) kg
Dimensions (mm)	1768x810x1259.8 (+300 pack distance)	2210x810x1024.8 (+400 pack distance)	2210x810x1024.8 (+400 pack distance)	2210x810x1024.8 (+400 pack distance)	2210x810x1259.8 (+400 pack distance)	2652x810x1024.8 (+500 pack distance)

TECHNICAL DATA BASIS Electrical values are presented in a consistent field order. Published usable-energy figures are retained as specified.

Operating envelope

[illegible]	Indoor	[illegible]	3
Charge temperature	0 to 45°C	Over-voltage category	II
Discharge temperature	-10 to 50°C	Cooling type	Natural cooling
Storage temperature	-20 to 50°C	IP rating	IP20
Humidity	Up to 90% (non-condensing)	Protective class	I

Cycle life ≥8,000 cycles (@25°C ±2°C, 0.5P / 0.5P, 70% EOL)

Communication CAN / RS485

Protection, interfaces and packing

Core protection functions, interfaces and physical packing information.

TRIPLE
HARDWARE PROTECTION

CAN / RS485
COMMUNICATION

>15 YEARS
STATED LIFESPAN

BATTERY PROTECTION

Over-current / Over-voltage / Short circuit / Under-voltage

SERIES CONNECTION

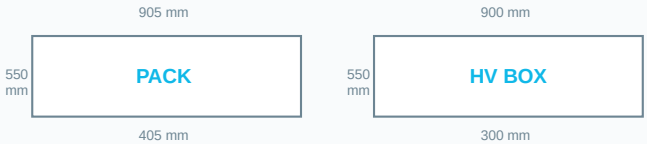
Up to 25 battery packs in series connection*

BATTERY CHEMISTRY

Lithium Iron Phosphate (LFP)

Packing configuration

PACK	Inner: 885 x 530 x 270 mm +/-3 Outer: 905 x 550 x 405 mm
HV BOX	900 x 550 x 300 mm



Inverter compatibility

Compatible with all listed inverter platforms

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Speak with engineering

For deployment guidance, configuration support and commercial discussions.

Web www.bluesphereenergysolutions.com
Email hello@bluesphereenergysolutions.com
Phone +44 333 577 2219

Applications and deployment

Where the HV Rack Series supports site resilience, energy management and scalable deployment.

Designed for resilient storage, modular rollout and integration across a broad range of commercial and infrastructure use cases.

Commercial & industrial

Supports business continuity, site resilience and on-site energy optimisation for operational facilities.

Solar + storage

Pairs effectively with solar generation to improve self-consumption and support more flexible energy use.

EV charging support

Helps support charging infrastructure with localised storage capacity and smoother load management.

Peak shaving

Reduces demand spikes and supports more efficient management of site loads and imported power.

Backup power

Adds resilience for critical circuits, continuity planning and sites requiring a stronger energy buffer.

Scalable projects

Modular architecture supports phased deployment, making the platform suitable for growing sites and larger projects.

Deployment considerations

- Indoor high-voltage rack platform with natural cooling and CAN / RS485 communication.
- Published configurations cover 4 to 21 battery packs, from 64.31 kWh to 337.61 kWh.
- Application suitability should be confirmed against duty cycle, integration scope and project requirements.

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Why Blue Sphere

A more strategic, brand-led view of the platform and how it sits within modern energy infrastructure.

Four domains. One platform language. A product story shaped for real deployments, technical dialogue and larger infrastructure ambition.

01 Battery Energy Storage Systems

A modular high-voltage rack platform suited to scalable energy storage deployments.

02 Data Centre Energy Infrastructure

Supports resilience, load shaping and energy support for power-intensive sites.

03 Grid Integration

Designed to sit within broader energy infrastructure and modern power architectures.

04 Utility-Scale Thinking

A product family and brand language shaped for larger infrastructure programmes.

Platform-aligned standards

IEC 62619	Battery safety
IEC 62933	Grid-connected storage
UN 38.3	Cell transport
ISO 9001	Quality management
ISO 14001	Environmental
ISO 45001	Health & safety

Blue Sphere positioning

A brochure and platform message designed to support discussions with commercial clients, technical stakeholders and wider infrastructure opportunities.

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