Blue Brand

ULTRA HIGH EFFICIENCY COOLING, WITH 1% OF THE ENERGY STORAGE

0.6MWh BESS

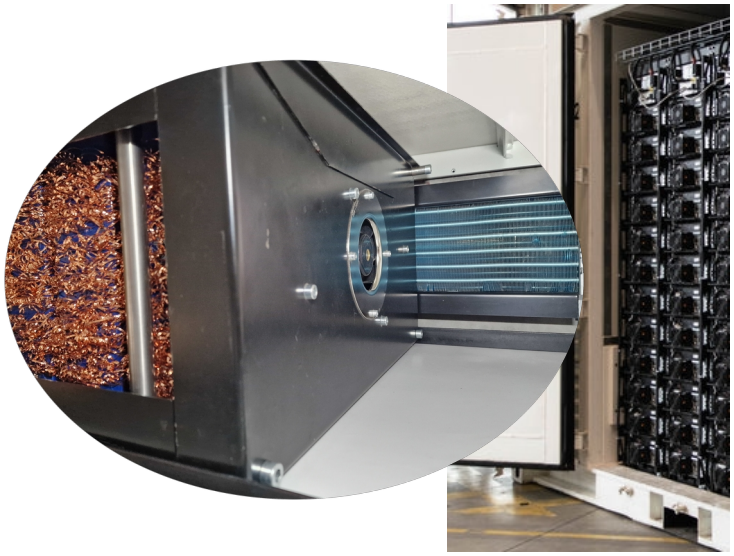
Energy Storage 8ft

Up to 0.5C at / <24 °

Integral 62 KBTU cooling system

Intensive energy storage buffer

Grid stabilizer and storage Industry



INDUSTRIAL AS A LAB

Blue Brand Storage Container “BBSC” insure the power supply and energy storage in extreme conditions, beside the power backup.

Grid injection network require robust energy storage, safety and cost effective. “BBSC” is the on duty energy partner that charge and supply on request at the highest safety standard.

DESIGNED FOR STORAGE

The lithium batteries give the best of the chemistry at specific LAB conditions, that we made in the practice, in production, at the perfection, for safety first, then for life cycles.

Charge / discharge 3 hrs (0.33C), max charge 95%, max discharge 5%, integral cooling per cells at <24 °C, temp probe per cell.

MEDIUM HIGH DENSITY

LiPO “BBPK” have a respectable energy density of 92Wh/l, all in, with integral cooling forced ventilation and BMS.

POLYVALENT ASSEMBLY

We get the best from any Lithium Cells, LiPO, NMC, LTO etc, and we made the pack for heavy duty task but, for safety first.

SCALABILITY

Our ESS has 0.6MWh, scalable with no limitation of multiple ESS because it’s equipped with 18 KW cooling capacity, 4000 KW heating capacity, tween PCS of 150KW each / 1050DCV to 400/800ACV 3P.

LITHIUM CELL’S

Proprietary technology on cooling and twin cells serial, single cell cooling, single live monitoring and single temperature probe.

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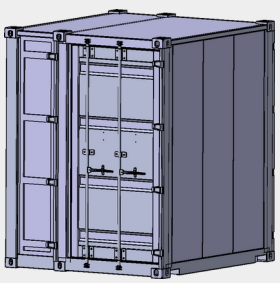
Technical specifications	
Enclosure	8ft container
Cell model	320Ah//3.2V LiFePO4
Dimensions & Cycles	Cubic Capacity: 8 ft, Length: 2.44m, width: 2.44m height: 2.9m spec < 24°C cycles >7800
Max Mains Supply Block	200A internal switch mode power supply, Nominal 51.2V DC
Battery Capacity	0.18 MWh 57.6V VRSLA, Charge /Discharge 0.33C recommended 3Hrs
Container Capacity	(288 x 320Ah)x2 at 921VDC, main output 400VAC 3P or 800VAC 3P
Cells Circuits	18s, twin 320Ah in serial, 3.2V LiPO chemistry spec zone card, monitored, fused @500mA. EOL = 4K7R
Twin Wire Block	With copper bar of 20 mm x 3 mm covered with silicon P65
Networking	PoE on all power electronic peripheral, CAN,RS485, 5G encrypted BT, Ethernet, 256 Key Gen,TPCA05 network card
Battery Management System	Activ BMS license: priority, balancing topology: cells to pack, Bidirectional, 10 Amp for cell and max 90 Amp/pack.
Block Energy Density	Density of container 34.75 Wh / liter Density of module 172.26 Wh / liter
Switch Inputs	Class change & alert (pulsing)
Event Log	4mil's event history
Sleep Safe Mode	Off duty efficiency 99.7%
Live Alarm Management	Type A, B & C dependency modes, approved by LPCB
Cooling for 18 KW Cal	Refrigerant / liquid(out), and Liquid/air(in)

Sizes & Power



Inside Length	Inside width	Inside height	Cubic Capacity	Outside Length	Outside width	Outside height	DC output	Current output
2.2m	1.4m	2.68m	8 ft	2.44m	2.44m	2.9m	1024V	2234A

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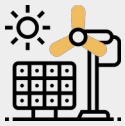
Advantages

Charge / discharge at requested high load time, works as Energy Storage in Lithium Battery and power supply flexible output, max 1050V ±15% at 200A scalable.

Live time supervisory control unit, Scada and 5G encrypted embedded unix / linux system, Switch on control , Segregation of Duty, Smoke or fire.

Operator can maintain the electric grid in the safest operation standard.



Full compatible with renewable energy and AC/DC DC/DC inverters, integrated BMS and solar source.

Full compatible with all communication way and controllers, power management, live monitoring and thermal status.

Long life operation >16 years at two cycles per day in energy storage, energy buffer and power backup at entire 4MWh scalable containerized design.

Operation under low temperature with serf forced cooling at internal direct cell surface in homogeneous heat dissipation and heat exchange, at internal core <24 °C.

Money saving at cost effective with cooling system at 1% of energy storage.

DC to DC system from source to supply, flexible conversion DC/AC, at requested linear power supply max 1050V ±15%, from 0.221MWh per battery pack up to 0.6MWh, scalable.

Note: Specifications in the above table are design estimates only and are not guaranteed. Contact Blue Brand for a project-specific estimate as final values depend on system design, location, and use case;
1 Per acre energy capacity represents fully installed AC BESS, including inverters, transformers, and auxiliaries; excludes augmentation;
2 Energy capacity is recorded at the DC terminal;
3 End of life depends both on BESS age and usage; actual lifetime may be less than 20 years;
6 Degree of HVAC redundancy (partial or full) depends on location and use case;
7 IP rating applicable only for the compartments containing batteries and electronics;
8 Master Controller may automatically derate power at high/low ambient temperatures or after extended operation to maintain proper cell temperatures.

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