HUBBLE™ ENERGY

CONTAINER SOLUTIONS

ADVANCED ENERGY STORAGE SOLUTIONS

860kWh

215kWh

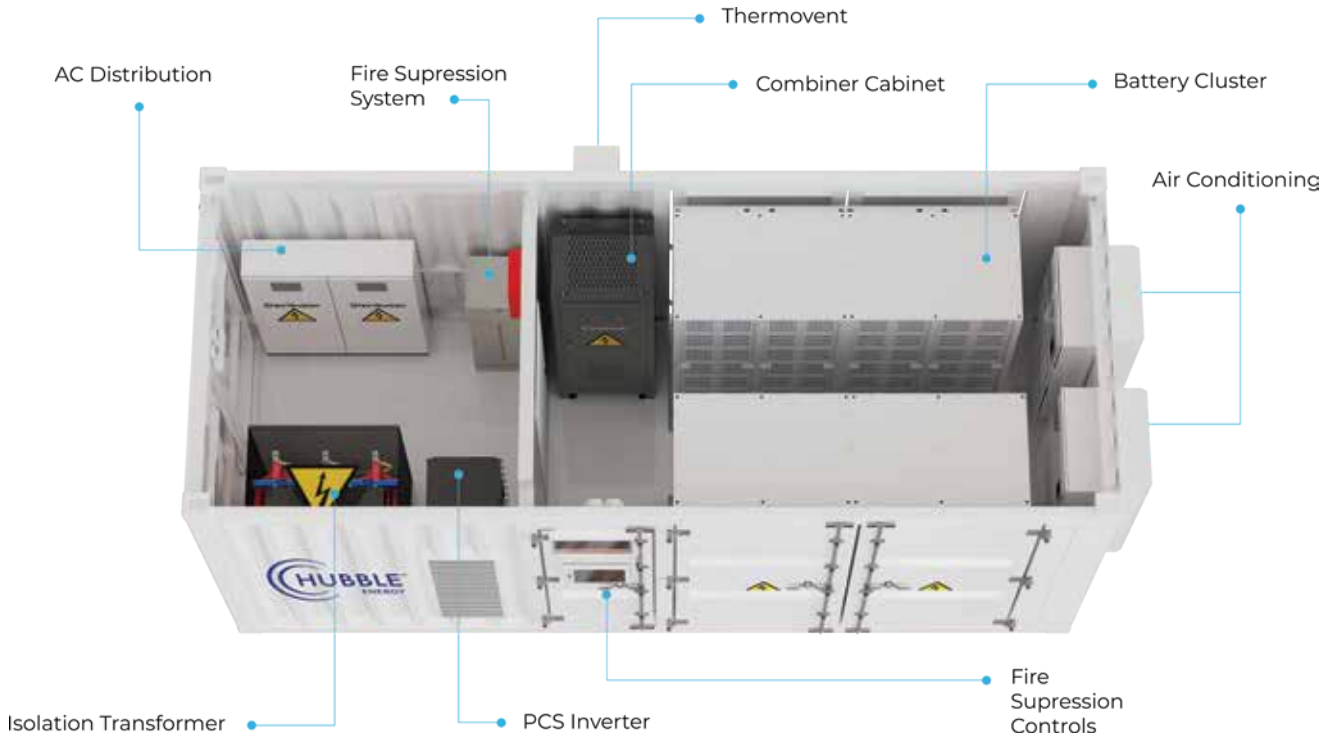
a Bud Group Company

BESPOKE SOLUTIONS

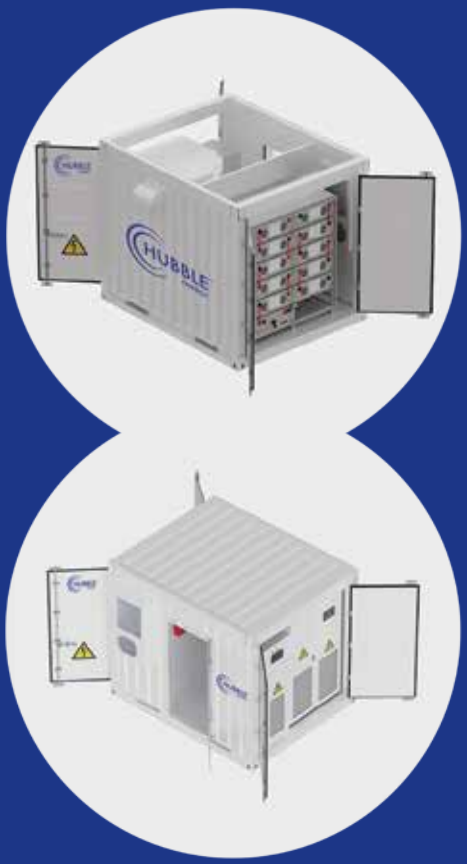
SCALABLE
215kWh – 860kWh

860kWh

HUBBLE ENERGY DESIGNS, ENGINEERS AND SUPPLIES LITHIUM BATTERIES FOR THE SOLAR, RENEWABLE AND POWER BACK UP INDUSTRY IN SOUTH AFRICA, SUB-SAHARAN AFRICA AND EUROPE.



215kWh



+ Tested and Certified
+ On-site Assistance and Commissioning
+ Fire Detection and Fire Suppresant System
+ Insulated Walls and Temperature Controlled
+ Remote Monitoring, Management and Diagnostics
+ Off Grid, On Grid and Solar Ready

Bespoke Solutions

Our dedicated team can create custom solutions that match your distinct requirements.

Free Remote Monitoring

Cloudlink allows for real-time and historical data monitoring. Our internal control room and dedicated monitoring team can quickly provide diagnosis and support.

Durability

Our containers are built to withstand tough conditions, ensuring uninterrupted power when you need it the most.

97.6% +

HIGH EFFICIENCY

Cooling system ensures higher efficiency and longer battery life cycle.

+

EASY INSTALLATION

Highly integrated ESS for easy transportation and O&M. All pre-assembled, no battery module handling on site.

+

VARIOUS SOLUTIONS

Variety of applications are supported such as peak-shift, peak-cut, frequency regulation etc.

+

SAFETY + RELIABILITY

Multi-level battery protection layers formed by discreet stand-alone systems offer impeccable safety.

CONTAINER SOLUTIONS

ESS Parameters	215kWh Solution	860kWh Solution
Design Capacity	215 kWh	860 kWh
Rated Capacity	280 Ah (0,5 C)	
Nominal Voltage	768 V	
Max. Continuous Charging Current	0,5 C @ 25°C	
Max. Continuous Discharging Current	0,5 C @ 25°C	
Depth of Discharge	Recommended 80% DoD	
C Rating	0,5 C	
Cells	LiFePO4	
Cycle Life	6000 Cycles @ 0.5 C, 25°C, 80% DoD	
Design Life	+/- 15 Years	
Communication	Two-Way CAN2.0/RS485	CAN/RS485/RS232
Total Cells	240 Cells	960 Cells
Protection	IP65	
Operating Temperature	-30°C to 60°C	
Battery Cluster Weight	+/- 2200 kg	+/- 8800 kg
Dimensions	7,5 ft Container	20 ft Container
Operating Humidity Range	0 to 95% without Condensation	
Max. Working Altitude	3000 m	
Installation Environment Requirements	Outdoor Installation Forced Air Cooling, Industrial Air Conditioner	Outdoor Installation Forced Air Cooling, Industrial Air Conditioner (9,3KW*2)
BESS Fire Supression	Supported (Heptafluoropropane)	
Auxiliary Power Supply	220Vac, ≤4.2KW	
ESS Communication Protocol	Modbus TCP	
EMC Level Requirements	Class A	
DC Side Lightning Protection Level	Type II	
Certification	UN 38.3, IEC 62619, NB/T 42091-2016, GBT 34131-2017, GB/T 36276-2018, GB 51048-2014, NB-T 31016-2011, GB 4208-2008, NBT 33014-2014, DL/T 614-2007, GB 14048.1-2006, GB/T 17626, DL/T 621-1997	

Cell Parameters	215kWh Solution	860kWh Solution
Battery Dimension	72mm(D)*174mm(W)*207mm(H)	
Nominal Capacity	280Ah @0.5C 25 °C	
Nominal Voltage	3.20V @0.5C, 25 °C	
Operating Voltage Range	2.50V-3.65V	
Continuous Charge Rate	0.5C 25°C	
Continuous Discharge Rate	0.5C 25°C	
Pulse Discharge Rate	1C 25°C, ≤3min	
Cycle Life	6000 Cycles @0.5C, 25 80%DoD	

Battery Module Parameters	215kWh Solution	860kWh Solution
Battery Module Dimension	550mm(W)*750mm(D)*270mm(H)	
Nominal Capacity	280Ah@0.5C, 25°C	
Nominal Voltage	51.2V (16 Cells)	
Working Voltage Range	44.8V-58.4V	
Continuous Charge Rate	0.5C@25°C	
Continuous Discharge Rate	0.5C@25°C	
Weight	115Kg	
Energy	14.336kWh	
Max. Continuous Charge Rate	0.5C@25°C	
Max. Continuous Discharge Rate	0.5C@25°C	
Insulation Standards	Insulation Resistance of Battery Housing > 1GΩ (1000VDC)	
Withstand Voltage Standard	3840VDC, no Breakdown or Flashover Occurring	
Max. Charge Voltage of a Single Cell	3.65V	
Min. Discharge Voltage of a Single Cell	2.5V	
Instantaneous Max. Discharge Current	180A@5S	
Instantaneous Max. Charge Current	180A@5S	
High Temperature Protection during Charge	≥ 45°C	
High Temperature Protection during Discharge	≥ 50°C	
Low Temperature Protection during Charge	≤ 0°C	
Low Temperature Protection during Discharge	≤-20°C	
Cycle Times	≥ 6000 Cycle	
Application Environment	Indoor, Dry, Constant Temperature	
Waterproof Grade	IP21	
Working temperature Range (°C)	Charge 0°C to 45°C Discharge to 50°C	
Storage Temperature Range (°C)	-30°C to 45°C	
Storage Environment Humidity (RH)	5% to 95%	

Battery Cluster BMS System Parameters	215kWh Solution	860kWh Solution
Working Power Supply	DC 24V ±5%	
Cluster Voltage Collection Range	0-1000V	
Cluster Voltage Collection Accuracy	≤±0.2%FSR	
Current Collection Range	0-± 500A (CAN Communication Hall)	
Current Acquisition Accuracy	≤±1%	
Temperature Acquisition Accuracy	±3°C	
Balanced Current	2A	
SoC Estimation	≤10%	
Protection	Short Circuit, Overcharge, Over-Discharge, Over Temperature	
Communication Interface	CAN/RS485/RS232	

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PCS - General	215kWh Solution	860kWh Solution
Allow Environment Temp.	-30-60°C	
Humidity	0-95%	
Noise	<70dB	
Protection Level	IP20	
Cooling Method	Air Cooling	

PCS - DC Input Side	215kWh Solution	860kWh Solution
Voltage	420-850VDC(768V)	350 - 1000 (768V)
Max. Power	120kW	240kW

PCS - PV Input Side	215kWh Solution	860kWh Solution
Max. Photovoltaic Power	120kW	240kW
Max. Photovoltaic Voltage	1000V	1000V
Starting Voltage	150V	200V
MPPT Range	250-850VDC	250-850VDC
Full Load DC Voltage	450-850VDC	350-1000VDC
Rated DC Input	600V	800V
PY Input Current	36A+36A+36A+36A	86A+86A+86A+86A
PV Input Channels	4 Ways	
Communication Method	Two Way CAN2.0/RS485	

PCS - AC Output Side (Off-Grid)	215kWh Solution	860kWh Solution
Rated AC Power	110kVA	264kVA
Active Power	100kW	240kW
Rated Voltage	400VAC	230/400VAC
Rated Current	144A	344A
THOU	<2% Linear	
Rated Frequency	50/60Hz	
Overload Capacity	110% Long-Term	

PCS - AC Side (On-Grid)	215kWh Solution	860kWh Solution
Rated AC Power	110kVA	264kVA
Active Power	100kW	240kW
Rated Voltage	400VAC	230/400VAC
Rated Current	144A	344A
Voltage Range	320-460VAC	
Rated Frequency	50/60Hz	
THDi	<3% Linear	-
Power Factor	Standard: 1.0; Lead 0.8 /Lag 0.8	
AC Phase	Three-Phase Four - Wire+ Ground Wire (3 W+N+P E)	Three-Phase Four - Wire+ Ground Wire (3 W+N+P E)
Working Temp. Range	-30-60°C, >45°C Freq. Reduction	-30-60°C, >45°C Freq. Reduction

STS	215kWh Solution	860kWh Solution
Rated Output Power	120kW	240kW
Max Rated Current	172A	360A
Overload Capacity	1.1 (10%)	
AC Frequency	50 ± 5Hz	
Wiring Method	Three Phase, Three Wire	
On/Off Grid Switching Time	<20ms	

HUBBLE™
ENERGY

Bud
Built to Grow

HUBBLE ENERGY
IS A MEMBER OF
THE BUD GROUP

The Bud Group is a services, manufacturing and distribution group.
A diversified group, operating across manufacturing,
industrial services, minerals beneficiation and energy solutions.

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