

Introduction

These lead tubular batteries use premium technology and high grade materials to deliver maximum power for extended durations and have an appreciably longer life span. These batteries are specifically suitable for powering up UPS and inverters. These flooded lead acid batteries are environment-friendly, highly reliable in performance and are low in cost. Hear again our extensive research and development wing has helped us create batteries customized to suit Indian operating conditions. These flooded batteries are perfect for use in battery powered vehicles and to power inverters as well as for telecom use.

Product Options



Model	Capacity at 27 deg C when discharged at (C20 upto 1.75 Vpc 1.280)	Dimension (±3mm)			Weight (KG±5%)	
		Length	Width	Height	Dry	Filled
KMASTB16500	150 AH	505	190	410	29	56
KMASTB22000	200 AH	505	190	410	29	61
KMASTB26000	240 AH	505	190	410	34	68

*The height mentioned is upto terminal top

Model	Initial Charge Minimum AH Input (AH)	Initial Charge At Constant Current (A)		Constant Potential Limiting Current (Amps)	Triple Charge Current in (mA)	
		Start (Upto 2.3Vpc)	Finish (Upto 2.75Vpc)		Min.	Max.
KMASTB16500	15	7.5	525	25	130	520
KMASTB22000	20	9	630	30	155	625
KMASTB26000	24	11	770	36.6	190	765

Initial charging instruction for dry charge battery

- 1: Filling in specific 1.220± 0.005 at 27 deg C
- 2: Rest Period 12 hrs
- 3: In order to reduce the charging time, the following route may be adopted
 - For ASTB 22000 The initial 2.36Vpc charging current may be 20A upto followed by 9A upto 2.75Vpc
 - For ASTB 26000 The initial 2.36Vpc charging current may be 24A upto followed by 11A upto 2.75Vpc

Condition of Fully Charged

- 3 Consecutive hourly reading of specific gravity and voltage become constant
- Top of charge voltage will be around 16.2V - 16.5V
- All Cells should be gas freely
- Minimum Ah has been given
- Specific Gravity at fully Charged condition 1.240 ± 0.005 at 27 Deg C

Product Features



Long Shelf Life when left unattended for extended periods



Acid Resistant Polyester Gauntlets



Pasted Negative Plates



High Porosity Envelope Separators



Tubular Positive Plates



Micro Porous Ceramic Vent Plug

Product Benefits



Long Design Life



Rugged Performance



Very Low Maintenance



Longer Life Without Charging



Can Handle Extreme Weather Conditions

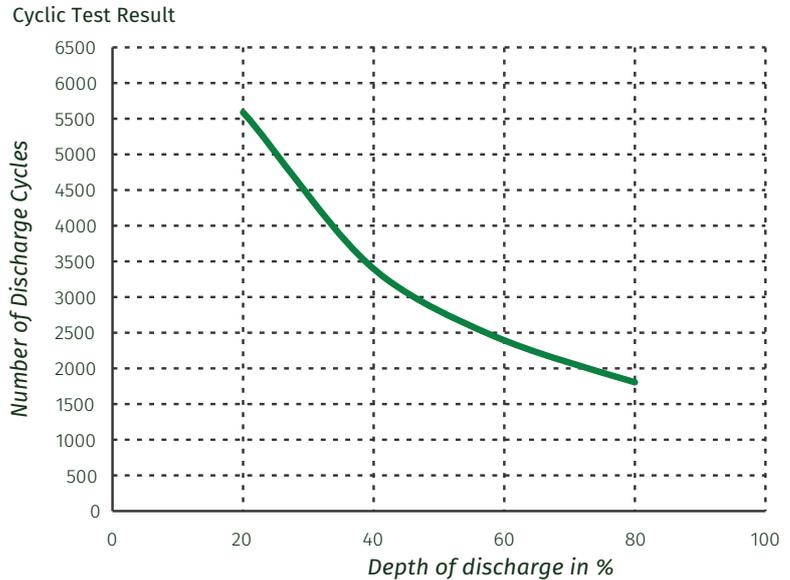


More Efficient and Save Money

Battery Cyclic Performance

Calculation & Estimation
IDEAL CYCLIC PERFORMANCE

Graph 1, Cycle life vs. DOD of KINGSMILL SOLAR TUBULAR BATTERY with Ideal Charge Table 1, data of cycle number



Discharge & Charge Scenario (80%DOD)

CYCLE METHOD

Discharge with $2I_{10}$ for 4 hours (80% DOD), charge with $2I_{10}$ for 3.5 hour + I_{10} for 0.5 hour + $0.25I$ for 3.5 hour. This is one cycle

RESIDUE CAPACITY DETERMINATION

The batteries are discharged at 10 hour rate after every 50 cycles to test battery capacity. When residue capacity of 10-hour rate capacity is lower than 80%, test is ended. After discharge at 10-hour rate after every 50 cycles, the charge method is: charge 80% of discharged capacity with current of $2I_{10}$ + charge 20% with 10 current of I_{10} + charge 20% with current of $0.4I_{10}$ (i.e. charge 120% of discharged capacity)

TEMPERATURE - 27 C

Advantage of Upper Constant Current Charge Model Battery; can be completely recharged within 8 hours. The end charge voltage will be higher than 2.6Vpc, which is good for active material exchange.

Disadvantage of Upper Constant Current Charge Model

It has risk of battery malfunction without voltage limited. It is not easy to manage charging in practice.

** Technical Parameters are Subject to Change due to Continuous improvements and R&D*

More Information

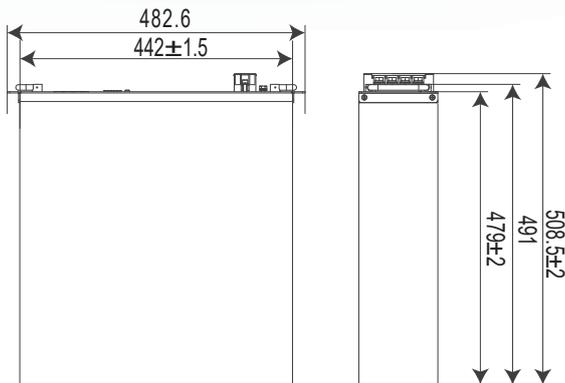
Solar panels are a clean source of energy that use the sun's rays to convert them into electricity or heat.

Our clean energy solutions provide electrical power as a way to decarbonize and transition to clean energy in our mission to combat climate change.

Introduction

Growatt Hope 4.8L-C1 Lithium Battery is an energy storage unit composed of cells, mechanical parts, battery management system (BMS) as well as power and signal terminals.

Product Options



Datasheet	Hope 4.8L-C1
Battery Data	
Nominal Voltage	48V
Normal Capacity	4.8kWh
Usable Capacity	4.46kWh
Operating Voltage	42 ~ 54V
Rated Charging Current	50A
Rated Discharging Current	100A
Max. Discharging Power	4.5kW
Peak Discharging Power	6.1kW/6s
Max Charging Power	4.5KW
General Data	
Dimension (W/D/H)	442/130/480mm
Weight	45Kg
IP Protection	IP20
Working Temperature	-10°C~+55°C
Storage Temperature	-20°C~+45°C
Features	
DOD	93%
Parallel Connection	Max.16packs
Communication Port	CAN/RS485
Warranty	5 Years
IEC62619 , CE , UN38.3	

Product Features

- Compact size and easy installation
- High energy density and efficiency
- Excellent safety of LiFePO4 battery
- DoD up to 93%

Certifications

- ISO9001/14001
- CE
- TUV

More Information

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How to Install

Installation Of Battery

It is recommended to install the battery into a cabinet and place it indoor.

If you install it outdoor, select a cabinet with a sufficient IP rating. Build sunshade & rain shelter to avoid direct exposure to sunlight and rain for outdoor application

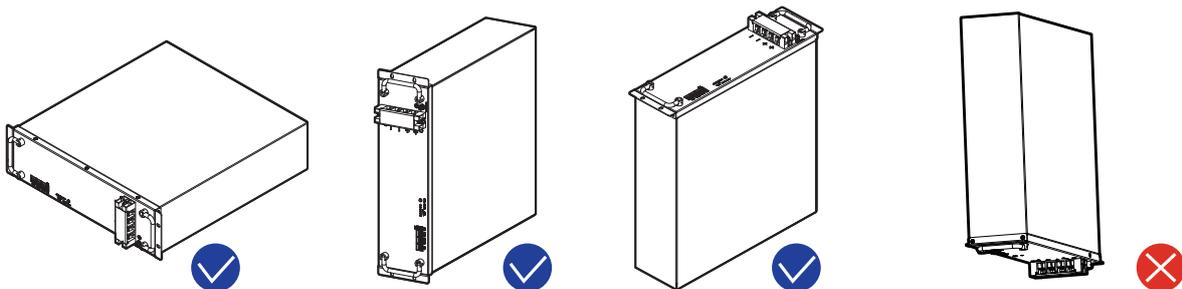
CAUTION

- Do NOT expose battery into sunshine or rain directly.
- Keep the dirt or dust at a minimal level.
- Do not install battery in a place where flood frequently occurs.
- Do not install battery in highly humid area.
- Ensure direct contact between battery shell and ambient air and do NOT cover or shield battery.

1 - Battery Orientation

The battery supports stackable installation with brackets. At most 8 batteries can be athwart stacked.

Ensure that you install the battery in correct directions. Please refer to figures below (✓ means acceptable and X unacceptable).



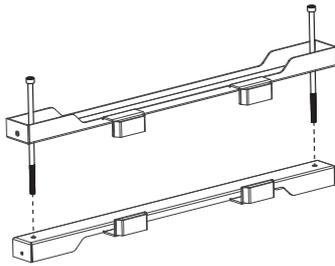
2 - Stackable Installation With Bracket Support

CAUTION !

Before installing battery, remove conductive ornaments such as watch, bracelet and rings and wear protection equipment. Check and confirm the battery is powered off and battery breakers are turned off before any process.

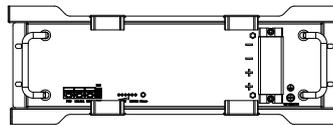
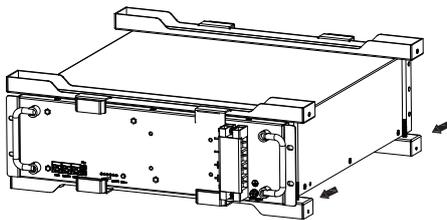
Step 1

Prepare support brackets.



Step 2

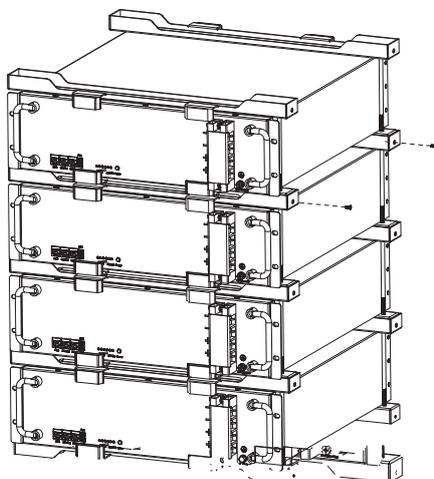
Set the battery into 2 pcs of brackets from the rear.



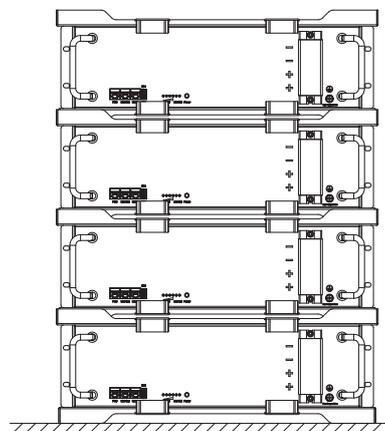
Step 3

Stack battery packs with brackets and fasten screws.

At most 8 battery packs can be stacked in this way.



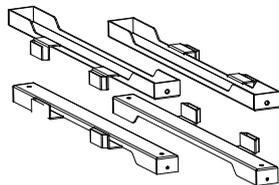
Max. 8 PACKs



For more information regarding battery installation please download our pdf [HERE](#).

Hope 4.8L-C1 Kit package

Item NO	Item Number	Qty
5	Battery Bracket	4 pcs
6	Screw bolt	4 pcs
7	RNB-22-6 lug	4 pcs
8	Screw	4 pcs
9	Power+ Cable	1 pcs
10	Power- Cable	1 pcs
11	Network Cable A	1 pcs
12	Network Cable B	1 pcs



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6



7



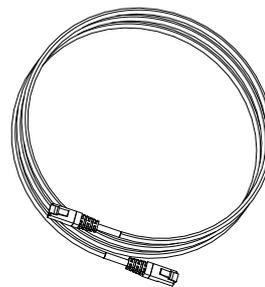
8



9



10



11



12