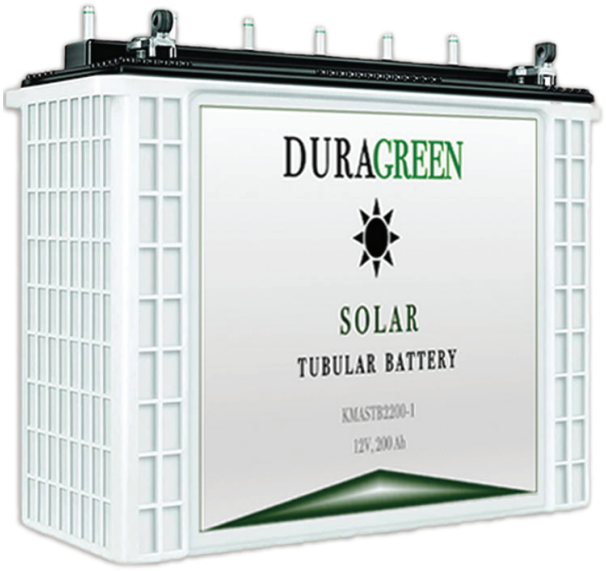
## Introduction

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
- Pasted Negative Plates
- Tubular Positive Plates
- Acid Resistant Polyester Gauntlets
- High Porosity Envelope Separators
- Micro Porous Ceamic Vent Plug

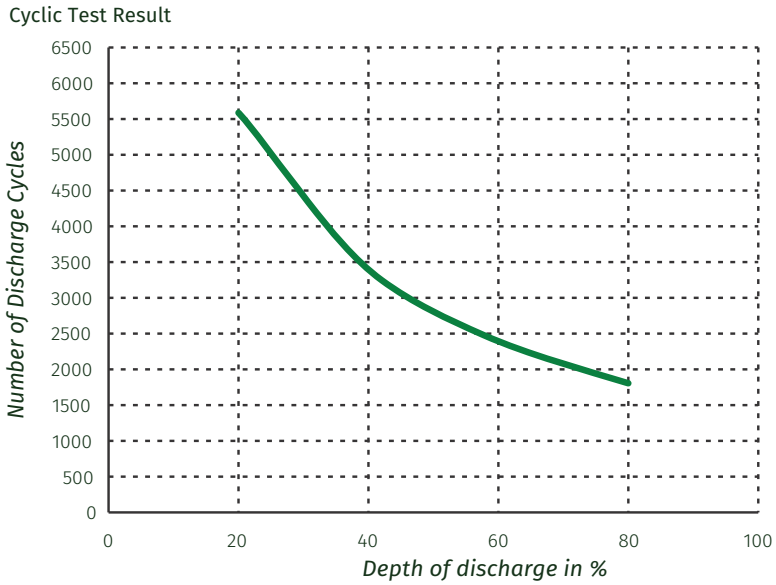
## Product Benefits

- Long Design Life
- Very Low Maintenance
- Can Handle Extreme Weather Conditions
- Rugged Performance
- Longer Life Without Charging
- 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 $0.41_{10}$ (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.