Livguard Batteries Private Limited

Certified ISO 9001:2015 / ISO 14001:2015 / IATF 16949:2016

Livguard range of Tubular Batteries are customized exclusively for Home UPS and Inverter Application. **Livguard** Represents an assortment of Tubular Inverter Batteries that are high on Technology, Performance and Service Quality.

MODEL	IT200EXTT Tubular Deep Cycle Battery 12V 200Ah @C_{20}			
BATTERY	Flooded Tubular			
VOLTAGE	12V			
CAPACITY @C_{20}	200			
MATERIAL	Polypropylene			
DIMENSIONS (mm) Tolerance: ± 3 mm	Length	Width	Height (Up to cover)	Overall Height (up to terminal)
	505	188	398	410
BATTERY WEIGHT (±3%)	60.0			
GROSS WEIGHT (±3%)	62.0			

Livguard batteries have following features:-

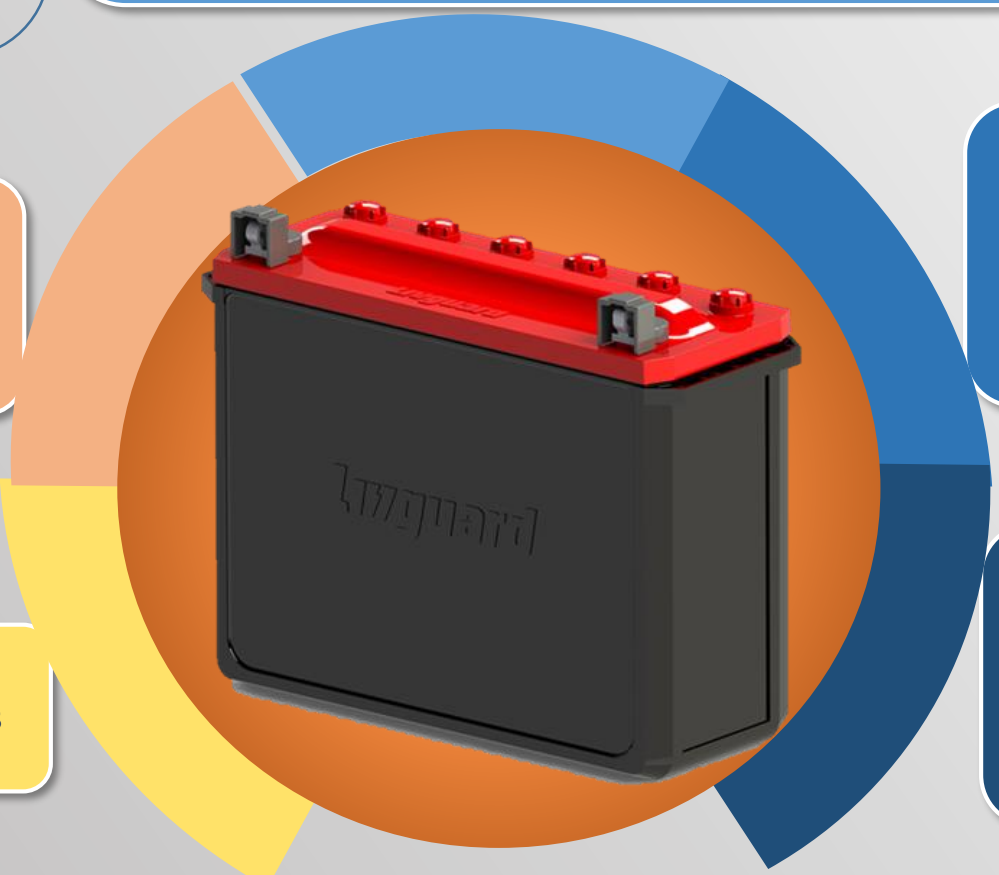
- Longer Cycle Life
- Low Self Discharge Rate
- Efficient Deep Discharge Recovery
- Wide Operating Temperature Range

Plate Technology

- Tubular Plates are made with High Pressure Die Casting Machines , ensures Low Spine corrosion and Longer service Life.
- Tubular Plates with Gauntlets, made of special fabric having ultra-fine pores and high permeability to ensure higher backup and longer life.
- Super TUFF grid design with double sided pasting ensures longer battery life.

Highest Purity Electrolyte

- Highest purity CP grade Sulphuric Acid for increased storage life.



NAM with Active Carbon

- Increased reaction surface area for higher backup.
- Optimized Negative paste recipe for fast charge acceptance

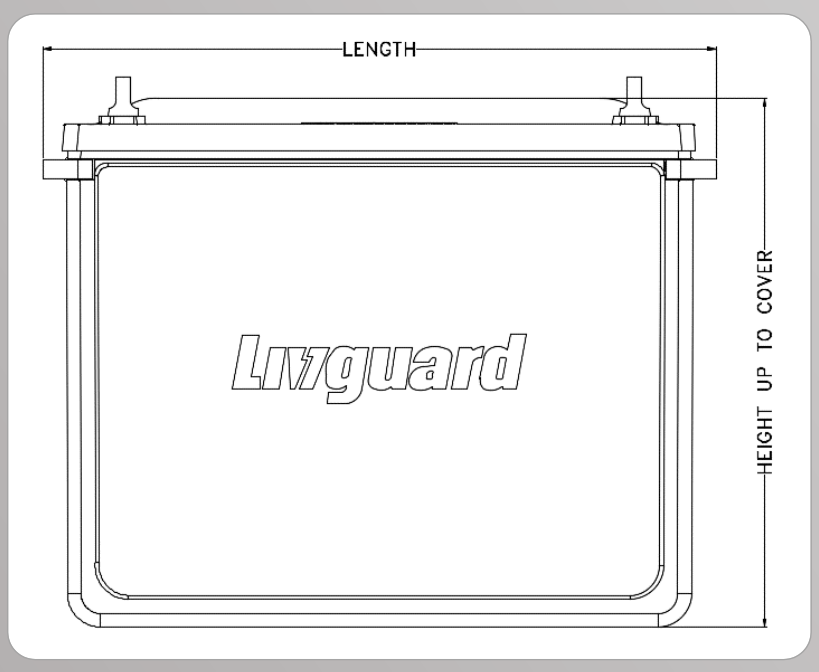
Ceramic Vent Plugs

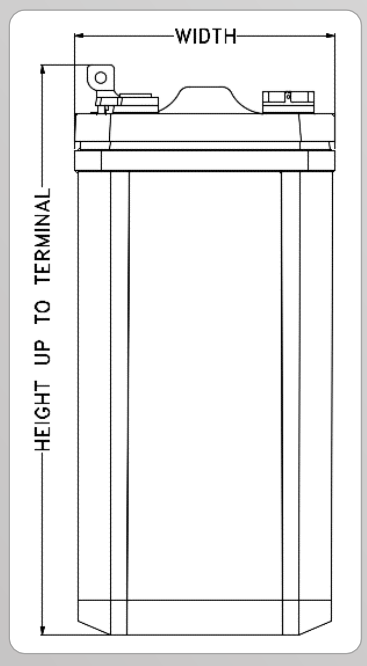
- Special Ceramic vent plugs for controlled acid fumes

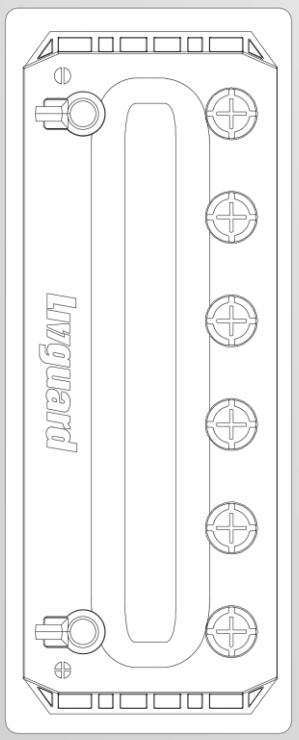
High Grade Imported Separator

- Less Electrical resistance, high oxidation resistance, high porosity, high charging efficiency.

Battery Dimensions:







CHARGING INSTRUCTIONS

BOOST CHARGING (Amp)		TRICKLE MODE (mAmp)	
STARTING RATE	**FINISHING RATE**	**MINIMUM**	**MAXIMUM**
20.2	10.1	168	672

CHARGE CHARACTERISTICS (27°C)

Cycle Use	Standby Use
14.40-15.0V (-40mV/°C), Maximum Current 30A	13.60-13.80V (-20mV/°C)

* Battery to be recharged in CCCV mode only.

CONSTANT POWER DISCHARGE PERFORMANCE**

MAXIMUM BACKUP DURATION (HH:MM)				
500 W	**400 W**	**300 W**	**200 W**	**100 W**
03:15	04:30	06:30	10:30	24:00

**All test data are based on stabilized battery capacity on new battery & under controlled laboratory test conditions.

CONSTANT CURRENT DISCHARGE PERFORMANCE**

CAPACITY AMP-HOUR (Ah)					
C_{20}@10.5V	C_{10}@10.8V	C_5@10.8V	C_3@10.8V	C_2@10.8V	C_1@10.5V
200	176	147	126	111	88

INTERNAL RESISTANCE

7 mΩ

**All data are based on stabilized battery capacity on new battery & under controlled laboratory test conditions.

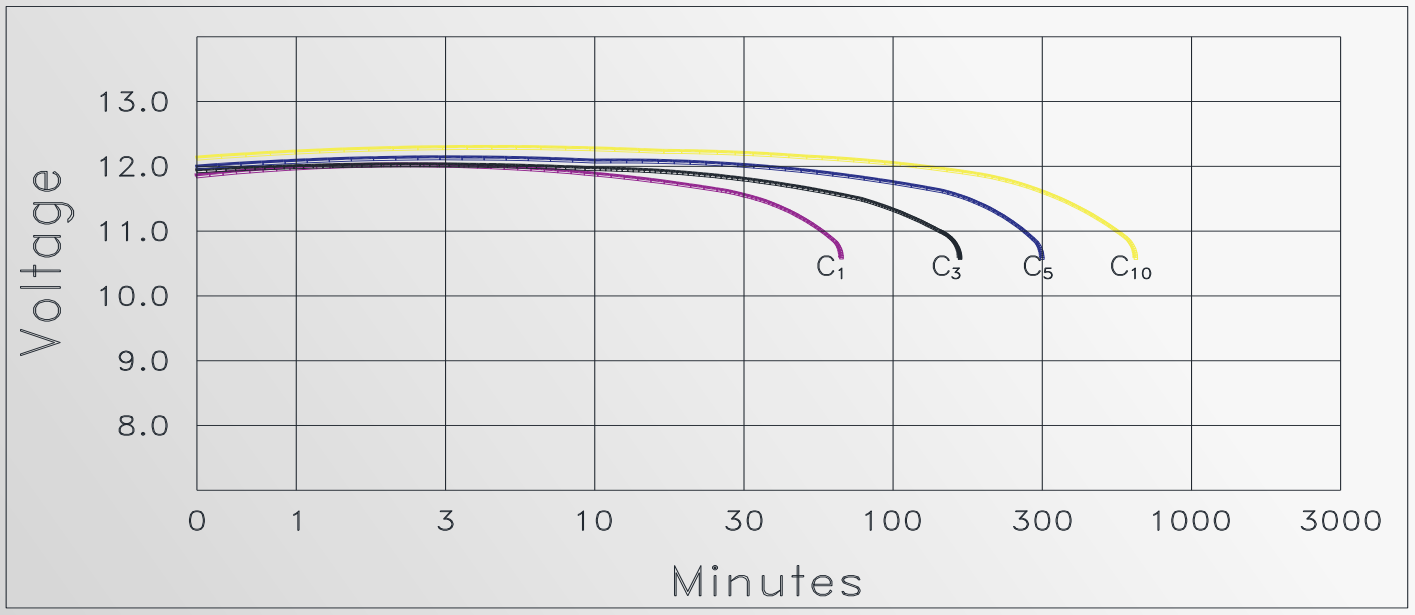
CHARGING TEMPERATURE COMPENSATION

ADD	SUBTRACT
0.005 Volt per cell for every 1°C below 25°C 0.0028 Volt per cell for every 1°F below 77°F	0.005 Volt per cell for every 1°C above 25°C 0.0028 Volt per cell for every 1°F above 77°F

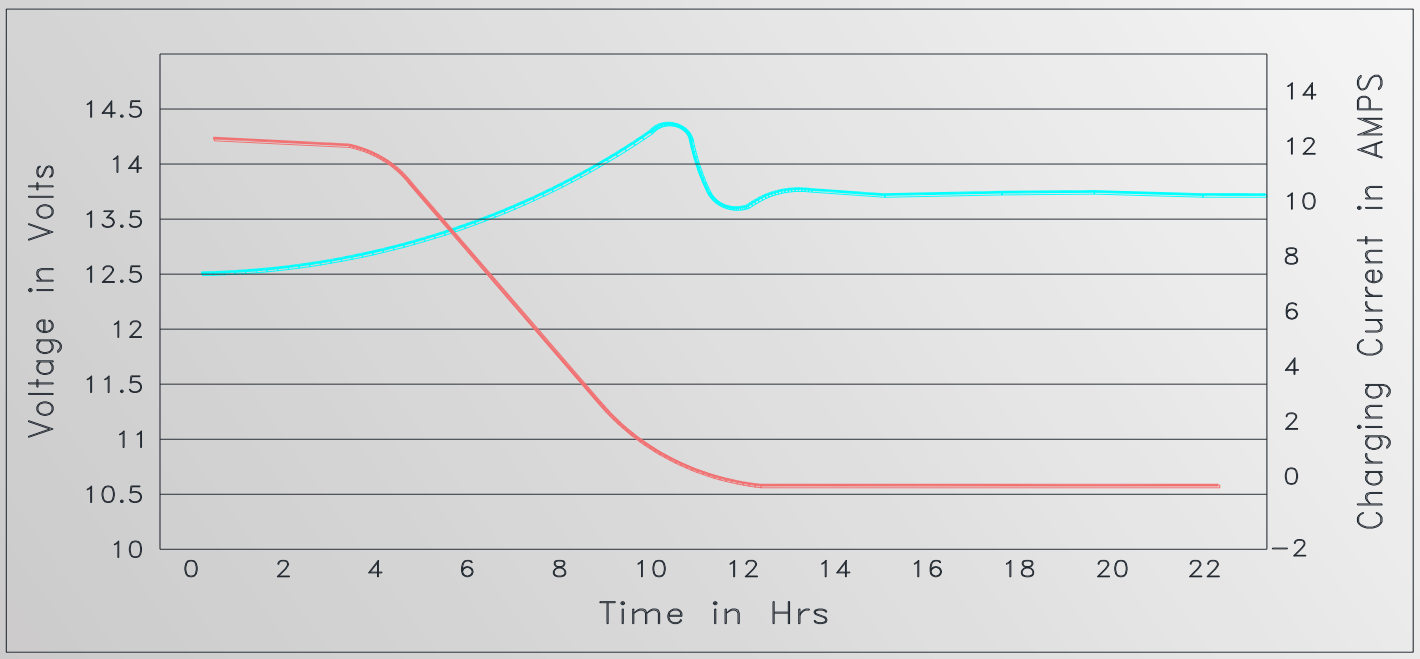
OPERATIONAL DATA

OPERATING TEMPERATURE		SELF DISCHARGE
-4°F to 113°F(-20°C to + 45°C). At temperatures below 32°F (0°C) maintain a state of charge greater than 60%		Less than 3% per month at 20°C temperature conditions.
C_{10} capacity correction formula at 27°C	Capacity at 27°C = $C_t + \frac{C_t x 0.43 x (27-t)}{100}$	C_t-Observed Capacity at t°C t-Actual test Temperature

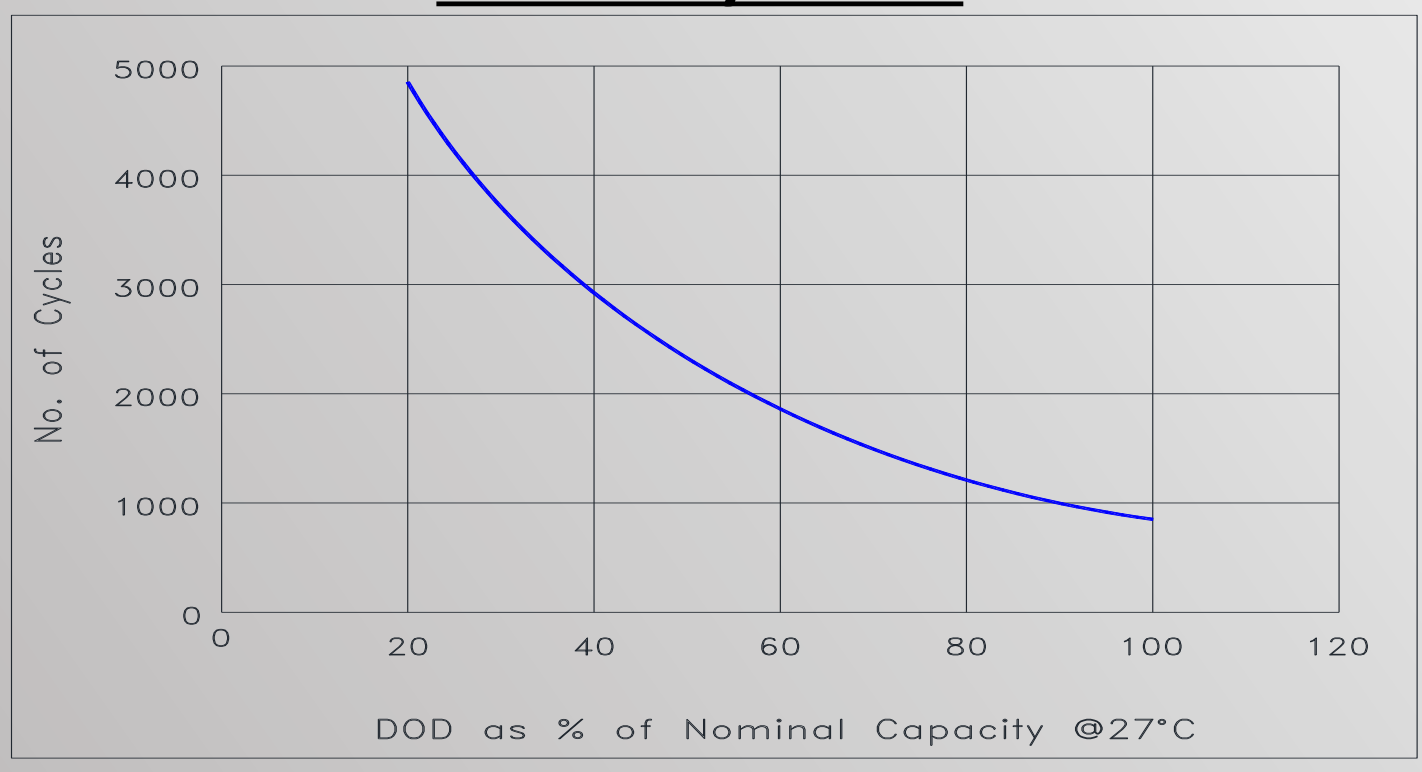
Discharging Characteristics at various rates @27°C



Charging Characteristics



DoD Vs Cycle Life



Disclaimer: Specification may change due to continual improvement and change in product design.

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