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ASPIRO 
CONVEY THE **SUN POWER**



**SOLAR TUBULAR
LEAD ACID BATTERIES**



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ASPIRO uses premium technology and high grade materials in these lead tubular batteries 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. ASPIRO 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.

SOLAR TUBULAR LEAD ACID BATTERIES



TECHNICAL SPECIFICATIONS OF SOLAR TUBULAR BATTERIES

Model	Capacity at 27 deg C When discharged at (C20 upto 1.75 VPc 1.280)	Dimension (±3mm)			Weight (Kg±5%)		Initial Fresh Charge Minimum AH Input (AH)	Constant Charge (Amps)
		Length	Width	Height	Dry	Filled		
ASTB 12000	100 AH	500	220	280	24	42	810	7.5
ASTB 17000	150 AH	505	190	410	31	56	900	10
ASTB 20000	180 AH	505	190	410	32	58	1200	11
ASTB 22000	200 AH	505	190	410	38	61	1320	12
ASTB 24000	220 AH	505	190	410	41	64	1440	13
ASTB 26000	240 AH	505	190	410	44	68	1460	14
ASTB 27000	250 AH	505	190	410	47	71	1500	15
ASTB 29000	270 AH	505	190	410	47.5	75	1700	18
ASTB 32000	300 AH	505	190	410	52	78	1850	20

* The height mentioned is upto terminal top

CONDITION OF FULLY CHARGED

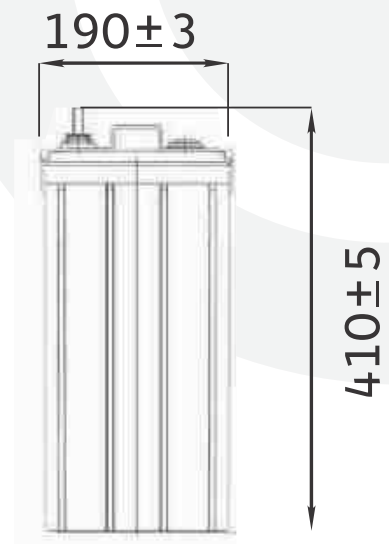
- A) 3 Consecutive hourly reading of specific gravity and voltage become constant
- B) Top of charge voltage will be around 16.2V - 16.5V
- C) All Cells should be gas freely
- D) Minimum Ah has been given
- 5) Specific Gravity at fully Charged condition 1.240 ± 0.005 at 27 Deg C

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 Ceramic Vent Plug

PRODUCT BENEFITS

-  Long design life
-  Very low maintenance
-  Can handle extreme weather conditions
-  Rugged Performance
-  Longer life without charging
-  More efficient and saves money



FEATURES

- Electrolyte level indicator
- High Acid volume per ampere hour
- Deep cycle design
- Tower type design
- Common sight venting
- IEC 60896-11 or equivalent

ADVANTAGES

I Very long life I user friendly I acid volume per ampere hour is 30% more than that off ordinary tubular batteries. it act as coolant and also ensure very low maintenance I suited for use in areas of frequent power cuts I can withstand overcharge better I occupies less floor space, totally new look I less pollution environment friendly I ensure consistent quality

NORMAL RECHARGING INSTRUCTION

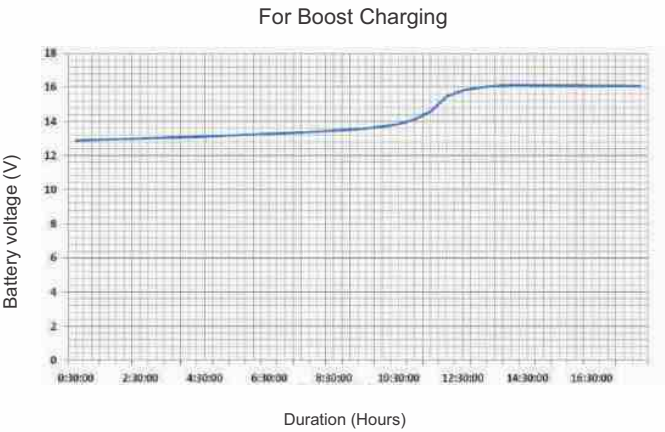
Recharging through Inverter at constant potential mode of 14.2V with limited current as specified. After battery potential reaches 14.4V, the battery should continue in trickle charge mode at constant potential of 13.8V.

Statutory Notice

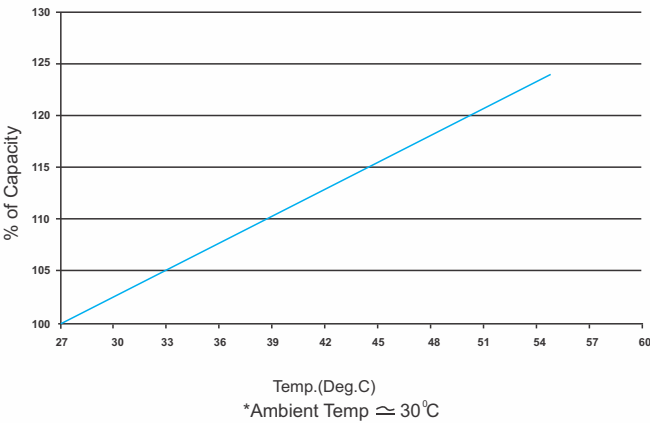
All batteries contain lead, which is harmful for humans and environment. As per statutory requirements, the used battery must be returned to the authorized dealer, manufacturer or at designated collection centers.

CHARECTERISTICS CURVES:

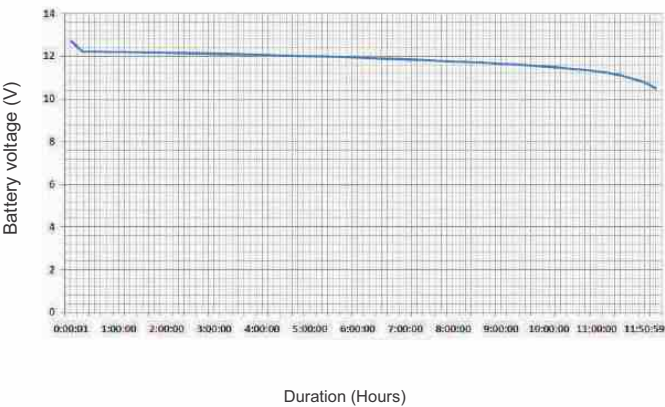
Charge Characteristic graph



Temperature Vs Capacity

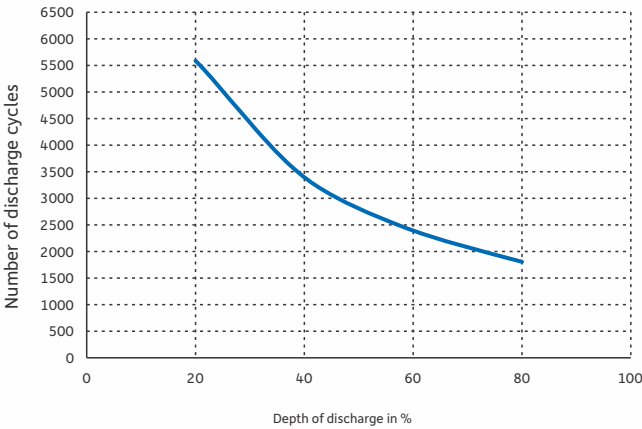


Discharge Characteristic Graph



*Above both graphs for 150 AH, $\frac{C20}{C10} \pm 2\%$ (Due power losses)

Cycle life vs. DOD of Aspiro Serie



Discharge & Charge Scenario (80%DOD)

- 1) Cycle method: Discharge with $2I_{10}$ for 4 hours (80% DOD), charge with $2I_{10}$ for 3.5hour + I_{10} for 0.5hour + $0.25I_{10}$ for 3.5hour. This is one cycle.
 - 2) 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 50cycles, the charge method is: charge 80% of discharged capacity with current of $2I_{10}$ + charge 20% with current of I_{10} + charge 20% with current of $0.4I_{10}$ (i.e. charge 120% of discharged capacity)
 - 3) Temperature: 27
- 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 isn't easy to manage charging in practice.

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



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