



The **Wise** Choice



Low Cost
Of Ownership



Low Water
Loss



Easy Recovery
After Idle Period



Lowest Electricity
Consumption In
Recharging



Less Fumes
Generation



5% Extra Capacity &
Backup WRT Rated
Capacity

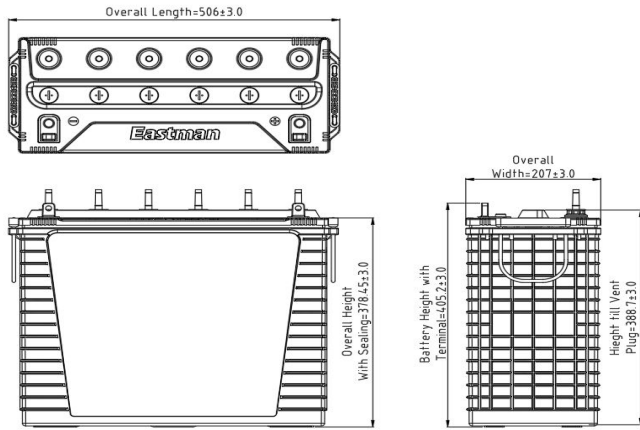
TALL TUBULAR CONVENTIONAL BATTERY 250Ah @ C20



 www.eastmanworld.com

 customer@eaplworld.com

TECHNICAL SPECIFICATION - Tall Tubular Conventional Battery



Product Features:

1. Robust Tubular with High Pressure Diecasted spine - resulting low rate of spine corrosion.
2. Spill Proof Vent Plug- Resulting in no spillage on Top and low controlled acid fumes.
3. Optimized Negative paste receipte for fast charge acceptance.
4. Consistent backup throughout life.
5. Excellent behavior in PSOC condition as compare.
6. Low Self Discharge.
7. Excellent performance on deep cyclic application.
8. Very High Design & Service Life.
9. Low water loss.

Technical Specifications

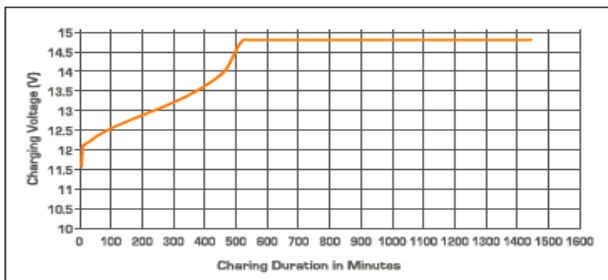
Model	Nominal Voltage	Rated Capacity 20 Hr @ 27°C (Ah)	Dimensions in mm			Gross Battery Weight [Kg] [±3%]	Terminal Type
			Length (±3 mm)	Width (±3 mm)	Height (±3 mm)		
EM250 PM [12 V 250 AH @ C20]	12	250	506	207	405	83.5	L

Electrical Parameters & Charging Profile

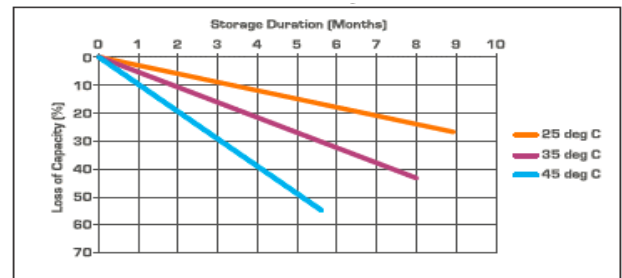
Battery Specified Capacity Test @ 27 °C							
Model	C20 @10.5V	C10 @10.5V	C7 @10.5V	C5 @10.5V	C3 @10.5V	C1 @10.5V	Energy Kwh
EM250 PM [12 V 250 AH @ C20]	250	225	206	187	161	113	3.0
Ah & Wh Efficiency							
Ah Efficiency	>90%		Wh Efficiency			>75%	

- Poly Components Material :- Polypropylene Co Polymer
- Watering System :- Individual to every cell in Monobloc
- Color :- Blue
- Testing Parameters :- IS 13369:1992 & IEC 60896-11 & 61407-1

Charging Profile



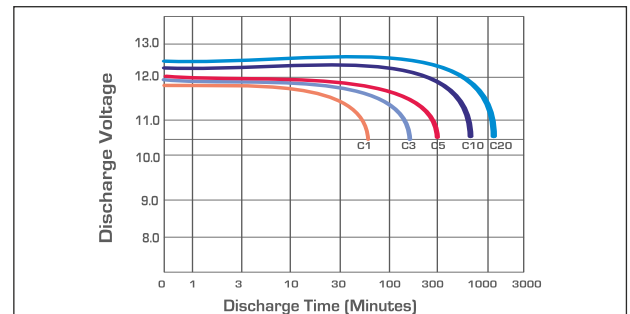
Self Discharge Characteristics @ Different Temperature



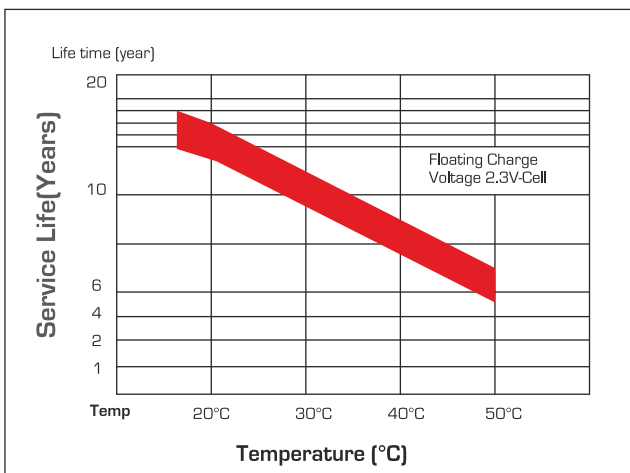
State of Charge Measure of open-circuit voltage @27°C

State of Charge	Specific Gravity	Voltage
100%	1.245-1.275	12.55V-12.70V
75%	≤ 1.225	≤ 12.4V
50%	≤ 1.190	≤ 12.1V
25%	≤ 1.155	≤ 12.0V
0%	1.120	11.8V

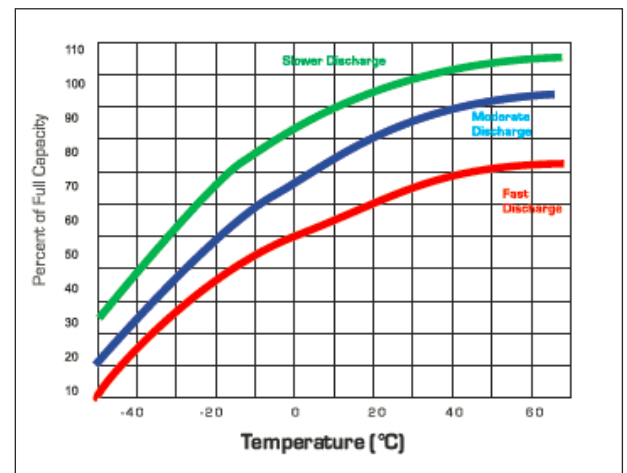
Discharging characteristics at various rates @27°C



Service (Float) Life and Temperature



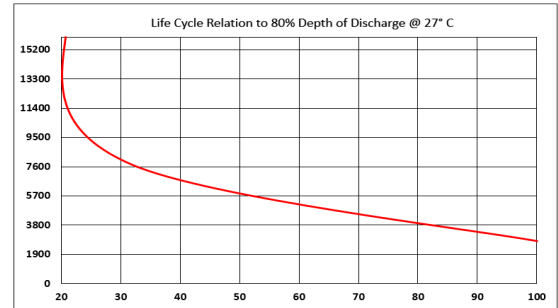
Expected Capacity vs Temperature



Specific Gravity & Self Discharge w.r.t Temperature

	Add	Subtract
CHARGING TEMPERATURE COMPENSATION	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 or 0.0028 volt per cell for every 1°F above 77°F
OPERATIONAL DATA	Operating Temperature -4°F to 131°F (-20°C to +55°F) At temperatures below 32°F (0°C) maintain a state of charge greater than 60%	Self Discharge As per discharge Graph

Expected Life



Charging Instructions

Charger Voltage Settings (at 77°F/25°C)			
System Voltage	12V	24V	48V
Maximum Charge Current	0.2C10		
Minimum Charge Current	20Amp.		
Maximum Absorption Phase Time (Hours)	4		
Absorption Voltage	14.6	29.2	58.4
Float Voltage	13.8	27.6	55.2
Equalization Voltage	16	32	64

NOTE:
1) Do not install or charge batteries in sealer or non-ventilated compartment, Constant under or overcharge will damage the battery and shorten its life as any battery.
2) Maximum two strings are allowed in parallel connections

Periodic Charge	Provide a periodic fresh charge to maintain a SOC greater than the threshold of 80%
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Comparison in Between Eastman TTC & AGM VRLA

S.No	Parameter	Eastman Tall Tubular Conventional	AGM VRLA
1	Plate technology	Tall Tubular Plate	Flat Pasted Plate
2	Life W.R.T. Application	Excellent performance on cyclic application	Not good for deep cycle application
3	Application	Power Backup solution-solar/Inverter/UPS suitable for float application above 1 Hours discharge rate	Power Backup Inverter/UPS suitable for float application and Stand by application
4	Electrolyte	Free Flow Electrolyte	Electrolyte in Between AGM
5	Water Loss	Low	Negligible
6	Water Top up	Low Water Top	No water Top up required
7	Life Extension	Long life with regular water top up	Not Applicable
8	Self Discharge	Low < 3.0%	Very Low < 2.0%
9	Life Cycle w.r.t. 80% DOD@27°C	3800 cycles	2500 Cycles
10	Recovery in PSOC	Excellent	Low
11	Charger Setting	Generic set point for charger	Required special set point for chargers
12	Operating Temperature Range	- 20 Degrees to + 55 Degree	- 15 Degrees to + 40 Degree
13	Terminal type	L- Type Terminal	Stud Type Terminal

Terminal Configuration:-
Terminal Type:- L
Terminal Height :- 24mm
Torque Value :- 8-10 N.m
Bolt Type:-M8



Vent Plug Type :
M22 Coin Type



Vent Plug Type :
M30 Dummy Plug



Float Indicator



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