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A GREEN INNOVATION FROM EASTMAN GROUP

TALL TUBULAR GEL BATTERY (150Ah to 200Ah)

PLATINUM SERIES

www.eaplworld.com | sales@eastmanglobal.com

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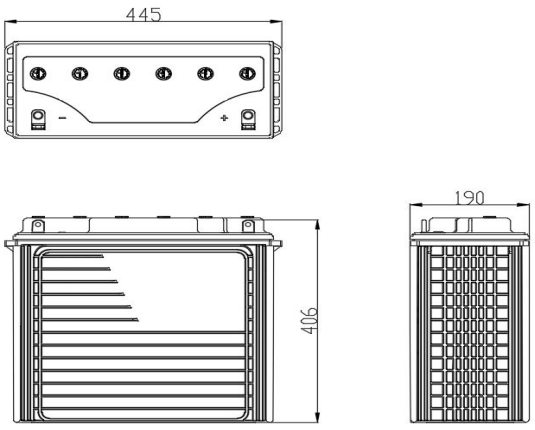
TECHNICAL SPECIFICATION - Tubular Gel Battery



Product Features :-

1. Robust Tubular with High pressure diecasted spine - rate of spine corrosion is very low as compare to AGM VRLA
2. Gelled electrolyte - no stratification and no failure due to PSOC
3. Valve regulated - no water top up during service life
4. Antimony free alloy - Low Self Discharge
5. Very High Design & service life as compare to than AGM VRLA
6. Good for Cyclic & Float Applications
7. Wide operating Temperature Range.

Technical Specifications

Model	Nominal Voltage	Rated Capacity 10 Hr @ 27°C (Ah)	Dimensions in mm			Net Battery Weight [Kg] [±3%]	Terminal Type
			Length (± 3 mm)	Width (± 3 mm)	Height (± 3 mm)		
EM150PT [12 V 150 AH @ C20]	12	135	445	190	406	56.50	L
EM200PT [12 V 200 AH @ C20]	12	180	445	190	406	63.60	L

Electrical Parameters & Charging Profile

Battery Specified Capacity Test @ 27 °C						
	C20 @10.5V	C10 @10.5V	C7 @10.5V	C5 @10.5V	C3 @10.5V	C1 @10.5V
EM150PT [12 V 150 AH @ C20]	150	135	124	112	97	68
EM200PT [12 V 200 AH @ C20]	200	180	166	150	129	90

Ah & Wh Efficiency			
Ah Efficiency	>96%	Wh Efficiency	>84%

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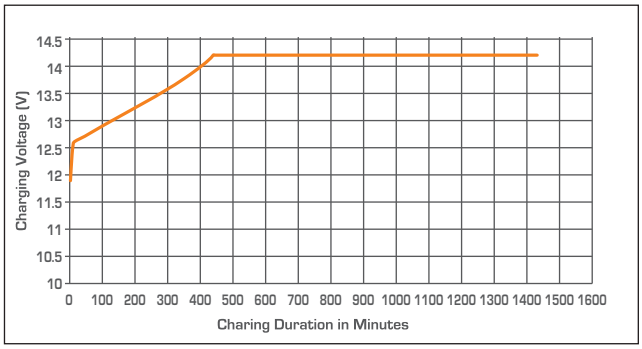
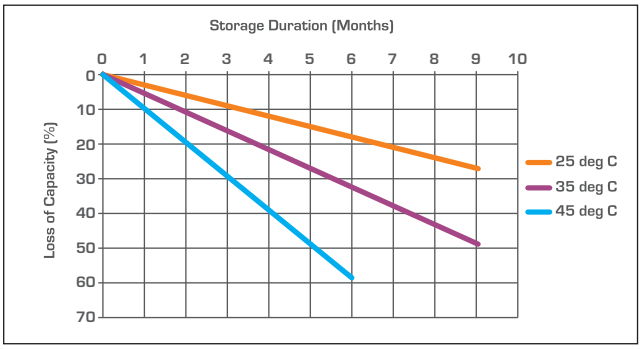
Poly Components Material :- Polypropylene Co polymer
Color :- Blue
Testing Parameters :- IS 13369:1992, IEC 60896-21 & IEC 61427-1

Charging Profile



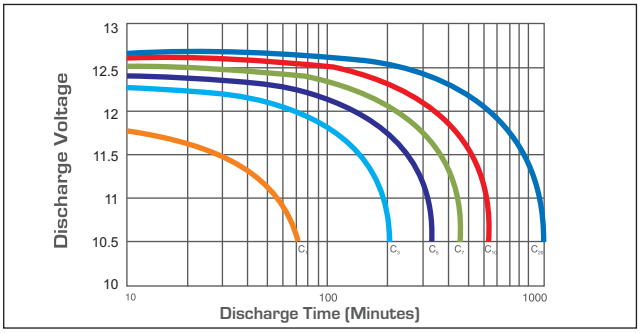
Self Discharge Characteristics @ Different Temperature



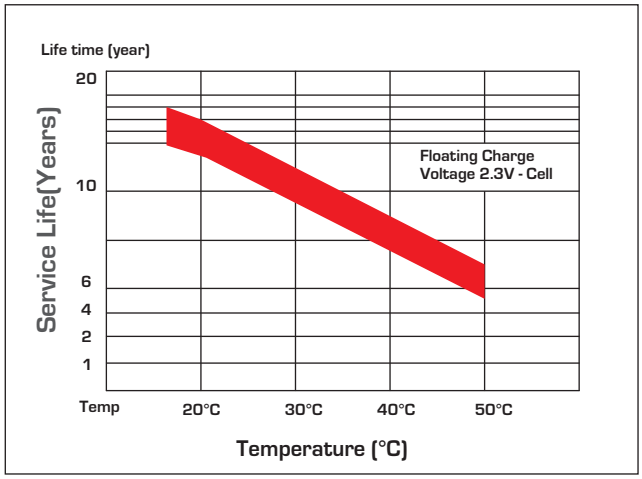
State of Charge Measure of Open-circuit Voltage @ 27°C

State of Charge	Specific Gravity	Voltage
100%	NA	12.90-13.10V
75%	NA	≤ 12.75V
50%	NA	≤ 12.45V
25%	NA	≤ 12.1V
0%	NA	11.9V

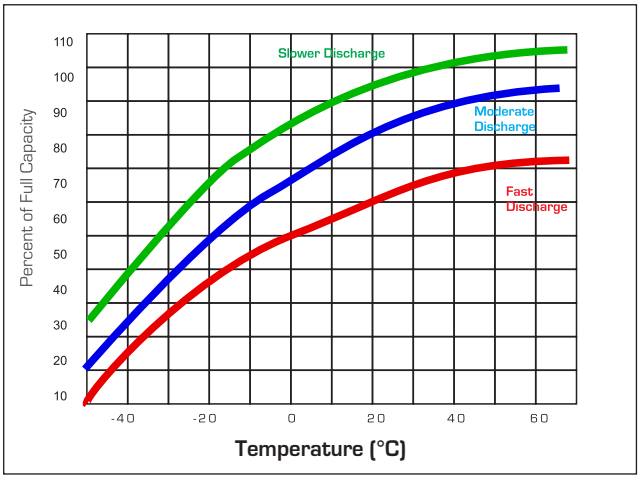
Discharging Characteristics at various rates @ 27°C



Service (Float) Life and Temperature



Expected Capacity vs Temperature



Eastman Battery Manufacturing Certified by Vincotte for

ISO9001 CERTIFIED VINÇOTTE

ISO 14001 ENVIRONMENTAL MANAGEMENT VINÇOTTE

OHSAS18001 CERTIFIED VINÇOTTE

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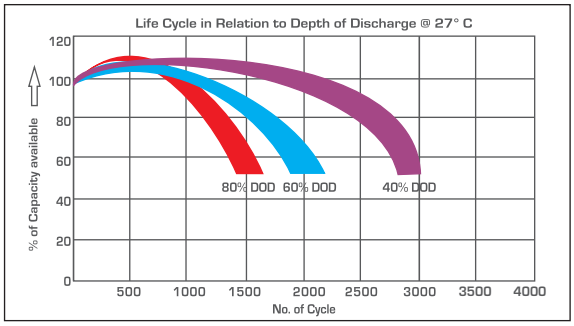
Specific Gravity & Self Discharge w.r.t. Temperature

	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
	Operating Temperature	**Self Discharge**
OPERATIONAL DATA	-4°F to 131°F (-20°C to +55°C). At temperatures below 32°F (0°C) maintain a state of charge greater than 60%.	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		
Maximum Absorption Phase Time (hours)	4		
Absorption Voltage	14.2	28.4	56.8
Float Voltage	13.8	27.6	55.2
Equalization Voltage	14.8	29.6	59.2
Do not install or charge batteries in a sealer or non- ventilated compartment. Constant under or overcharging will damage the battery and shorten its life as with any battery.			
Periodic Charge	Provide a periodic freshening charge to maintain a SOC greater than the threshold of 70%		

Eastman Gel battery testing procedure adhere IEC & UL 94 test standards

Comparison in between Eastman Tubular Gel & AGM Gel VRLA

S.No	Parameter	Eastman Tubular Gel	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 Hour discharge rate"	"Power Back up - Inverter/UPS Good for float & stand by application"
4	Electrolyte	Electrolyte in- Between Gel	Electrolyte in- between AGM
5	Water Loss	Negligible	Negligible
6	Water Top up	No water top up throughout Warranty Life	No water top up throughout Warranty Life
7	Life Extension	Not Applicable	Not Applicable
8	Self Discharge	Very Low < 2.0%	Very Low < 2.0%
9	Life Cycle w.r.t DOD @27° C @ 80% DoD	1500 Cycle	450 Cycle
10	Spillage	Spill-proof	Spill-proof
11	Fumes	No	No
12	Recovery in PSOC	Excellent	Low
13	Charger Settings	Generic set point for chargers	Required special set point for chargers
14	Operating Temperature Range	`-20 Degrees to +55 Degrees	-15 Degrees to +40 Degrees
15	Terminal Type	L-Type Terminal	Stud Type Terminal

Terminal Configuration :-
Terminal Type :- L
Terminal Height :- 25 mm
Torque Value :- 8-10 N.m
Bolt Type :- M8

Vent Plug Type :-
M18 with vent valve & flame arrestor assembly

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