



ENERPLAZ PAWA RUN

TECHNICAL SPECIFICATION - Tall Tubular Conventional Battery EM2000 (12V 200 Ah @ C20)



Technical Specifications

Nominal Voltage	Rated Capacity 20 Hr @ 27 °C (Ah)	Dimensions in mm			Filled Battery Weight (Kg) [±3 %]
		Length (± 3 mm)	Width (± 3 mm)	Height (± 3 mm)	
12	200	502	190	402	61.5

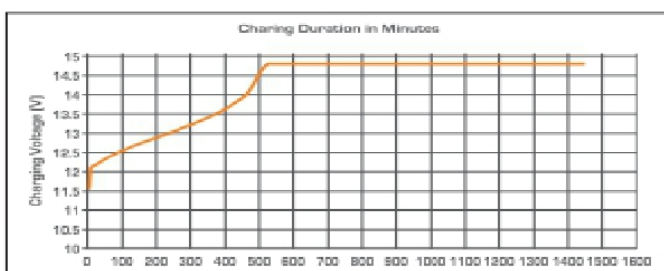
Product Features :-

1. Robust Tubular with High pressure die-cast spine - rate of spine corrosion is very low
2. Ceramic Vent Plugs- Special ceramic vent plugs for controlled acid fumes.
3. Optimized Negative paste recipe for fast charge acceptance
4. Consistant backup throughout life
5. Excellent behavior in PSOC condition as compare
6. Low Self Discharge
7. Excellent performance on deep Cyclic application as compare to AGM VRLA
8. Very High Design & service life
9. Low water loss

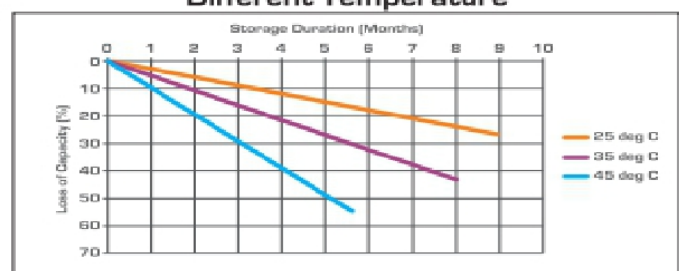
Electrical Parameters & Charging Profile

Battery Specified Capacity Test @ 27°C					
C20 @10.5 V	C10 @10.5 V	C7 @10.5 V	C5 @10.5 V	C3 @10.5 V	C1 @10.5 V
200	180	166	150	129	90
Ah & Wh Efficiency					
Ah Efficiency		>90%		Wh Efficiency	
				>75%	

Charging Profile



Self Discharge Characteristics @ Different Temperature



Enerplaz Pawa Run Battery Manufacturing Certified by Vincotte for





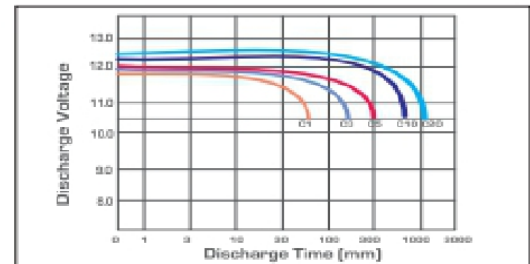
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TECHNICAL SPECIFICATION - Tall Tubular Conventional Battery EM200D (12V 200 Ah @ C20)

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

State of Charge	Specific Gravity	Voltage
100%	1.260	12.7V
75%	1.225	12.4V
50%	1.900	12.1V
25%	1.155	12.0V
0%	1.120	11.8V

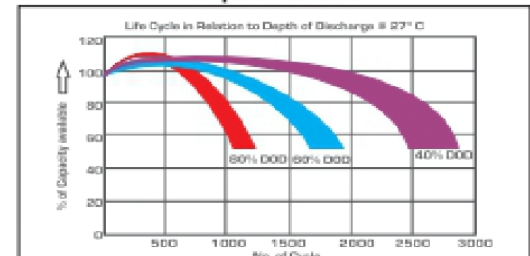
Discharging Characteristics at various rates @ 27°C



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	Self Discharge
	-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	0.2C ₁₀		
Maximum Absorption Phase Time (hours)	4		
Absorption Voltage	14.4	28.8	57.6
Float Voltage	13.6	27.2	54.4
Equalization Voltage	16	32	64
Do not install or charge batteries in a sealed 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%.		

Comparison in between Eastman TT & AGM VRLA

S. No.	Parameter	Eastman Tall Tubular Conventional	AGM VRLA
1.	Plate Technology	Tall Tubular Plate	Flat Pasted Plate
2.	Electrolyte	Free Flow Electrolyte	Electrolyte in-between AGM
3.	Water loss	Low	Negligible
4.	Self Discharge	low <3.0%	low <2.0%
5.	Life Cycle w.r.t. DOD	1300 Cycle @ 80% DOD	450 Cycle @ 80% DOD
6.	Water Top up	No water top up Upto 12M	Water top up not required throughout Life
7.	Plastic Material	PPCP material	PPCP material & ABS material
8.	Battery Technology	Conventional Technology	Valve Regulated Technology
9.	Separator	Polyethylene (PE)	AGM Separator (Very Low electrical resistance)
10.	Life w.r.t. Application	Excellent performance on cyclic application	Not good for cyclic application
11.	Acid Stratification	Low	No
12.	Discharge Current	Low range	Wide range
13.	Charging setting	Generic set point for chargers	Required special set point for chargers
14.	Operating Temperature	Wide Temperature Operating range	Temperature Operating range is limited
15.	Spillage	Low Spill-proof	Spill-proof
16.	Application	Not good for Float & Stand by application	Good for Float & Stand by application
17.	Recovery in PSOC	Excellent	Low

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