

### General features for MPb Series (AGM) battery

- \* Stable quality & high reliability.
- \* Unique construction and sealing technique guarantees.
- \* Design life 10years in float service;the battery comply to the most popular international standards,like IEC60896-21/22,etc
- \* Maintenance-free operation.
- \* UL-recognized component.
- \* Heavy duty grids:  
The heavy-duty lead calcium-alloy grids ,provide an extra margin of performance and service life in float & cyclic.
- \* Case and cover are available in both standard and flame retardant ABS.
- \* Low self discharge;low pressure venting system.



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**MP12-45**

(12V45Ah)

### Specifications

Nominal Voltage		12V	
Rated capacity (10hour rate)		45Ah	
Dimensions (±2mm)	Total Height	T16	171 mm (6.73 inches)
		T9	171 mm (6.73 inches)
	Height	171 mm (6.73 inches)	
	Length	197 mm (7.73 inches)	
	Width	166 mm (6.54inches)	
Weight Approx (±3%)		13.8Kg (30.4 lbs)	

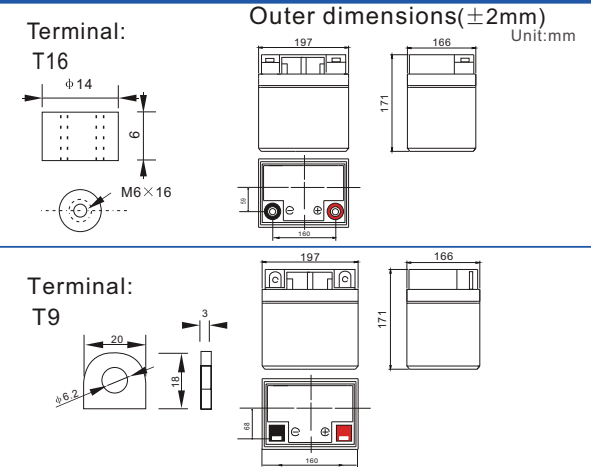
### Battery picture and construction



#### Battery Construction

Component	Positive plate	Negative plate	Container	Cover
Raw material	Lead dioxide	Lead	ABS	ABS
Component	Electrolyte	Separator	Safety valve	Terminal
Raw material	Dilute sulfuric acid	Fiberglass	Rubber	Copper

### Outer dimension and terminal



### Characteristics

Capacity 25°C(77°F)	10 hour rate(4.4 A,10.8V) 5 hour rate(7.0A,10.5V) 1 hour rate(26.4A,9.6V)	45Ah 35Ah 26.4Ah
Internal Resistance	Full charged battery at 25°C(77°F)	Approx 8 mΩ
Capacity affected by Temperature (10hour rate)	40°C (104°F) 25°C (77°F) 0°C (32°F) -15°C (5°F)	102% 100% 85% 65%
Remaining capacity Self-Discharge At 25°C(77°F)	Capacity after 3 month storage Capacity after 6 month storage Capacity after 12 month storage	91% 82% 64%
Terminal type	T16 (Option T9)	
Max. Discharge current 25°C/(77°F)	440A (5Seconds)	
Nominal operating temperature	25°C ±5°C(77°F ±9°F)	
Operating Temperature Range	Discharge Charge Storage	-15°C ~50°C (5°F ~122°F) -10°C ~50°C (14°F ~122°F) -20°C ~50°C (-4°F ~122°F)
Charge methods (constant Voltage) At 25°C(77°F)	Cycle use Standby use	Initial Charging Current less than 13.2A Voltage 14.5-14.9V Temperature compensation:-30mV/°C Voltage 13.5-13.8V Temperature compensation:-18mV/°C

### Constant current discharge (25°C , 77 °F)

### Constant power discharge (25°C , 77 °F)

Unit:A

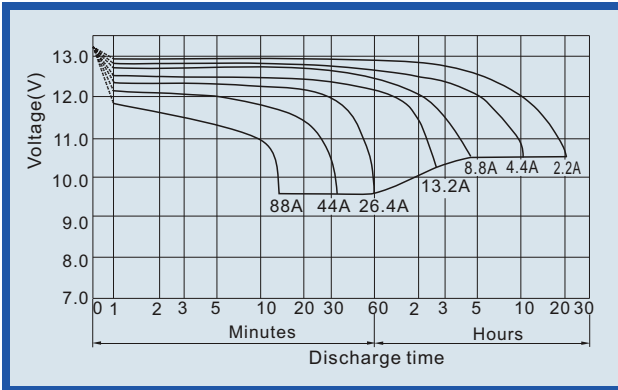
Unit:watts

Constant Current(Amp) and Constant Power(Watt) Discharge Table at 25°C(77°F)													
Time		5min	10min	15min	30min	1h	2h	3h	4h	5h	8h	10h	20h
9.60V	A	163	119	84	51	26.4	15	11.3	8.8	7.3	5.1	4.6	2.49
	W	1729	1262	888	537	306	178	131	102	84	59	53	28.9
10.20V	A	143	108	75	48.0	24.8	14.7	11.0	8.6	7.1	5.0	4.5	2.43
	W	1592	1201	830	532	287	170	127	99	83	58	52	28.2
10.50V	A	138	103	70	47	24.0	14.3	10.7	8.4	7.0	5.0	4.4	2.40
	W	1567	1168	798	529	278	166	124	98	82	58	52	27.8
10.80V	A	133	98	66	45	23.0	14.0	10.5	8.3	6.9	4.8	4.4	2.38
	W	1547	1137	768	528	270	163	122	96	80	56	51	27.7
11.10V	A	128	92	62	44	22.0	13.6	10.1	8.1	6.7	4.7	4.18	2.26
	W	1518	1100	733	524	267	162	120	95	80	56	50	26.9

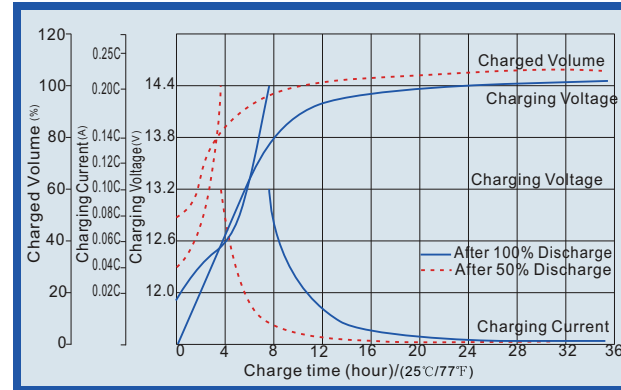
(Above characteristics data are average values obtained within three charge/discharge cycles,not the minimum values.)

# VRLA Battery (AGM technology) Maintenance-free Sealed Lead Acid Rechargeable Battery

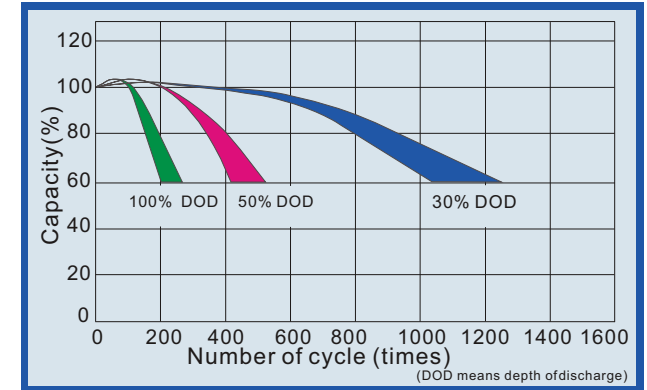
Discharge characteristics (25°C, 77°F)



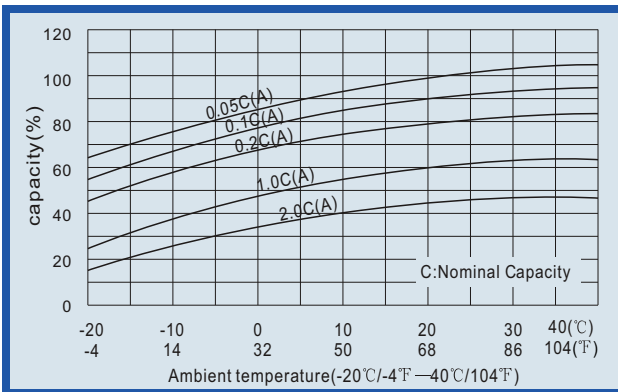
Charge characteristics (25°C, 77°F)



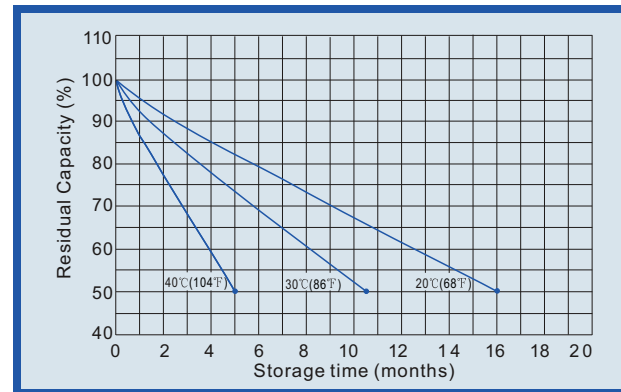
Life characteristics of Cyclic Use (25°C, 77°F)



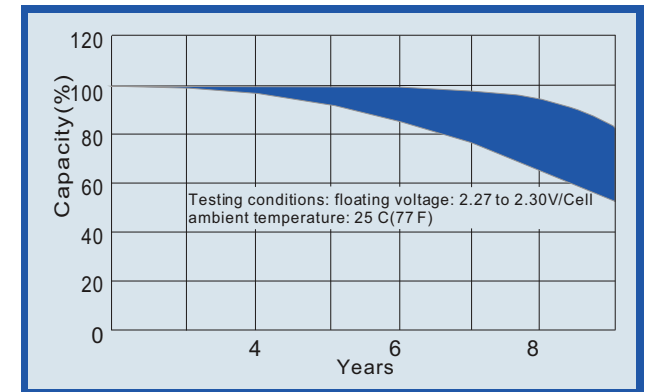
Effect of Temperature on capacity



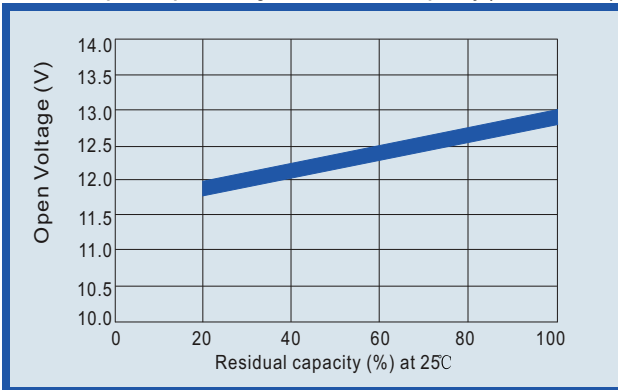
Self-discharge characteristics



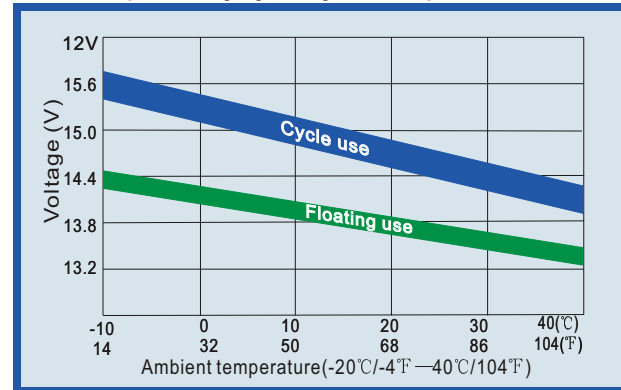
Life Characteristics of float service (25°C, 77°F)



Relationships for open voltage and remained capacity (for reference)



Relationship for charging voltage and temperature



Temperature effects on floating life

