

## 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.



**Maxton Power Tech Co.,Ltd**  
www.maxtonpower.com  
info@maxtonpower.com

**MP12-90 (12V90Ah)**

## Specifications

Nominal Voltage		12V	
Rated capacity (10 hour rate)		90 Ah	
Dimensions (±2mm)	Total Height	T16	216 mm (8.50 inches)
		T10	234 mm (9.21 inches)
	Height	211 mm (8.30 inches)	
	Length	307 mm (12.1 inches)	
Width		169 mm (6.65 inches)	
Weight Approx (±3%)		26.5Kg (58.4 lbs)	

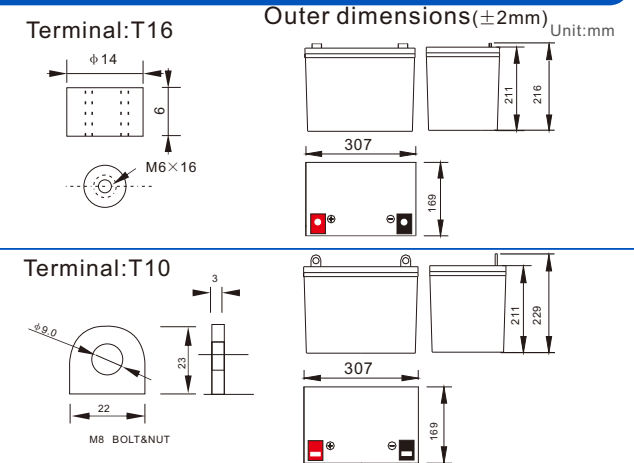
## Battery picture and construction



### 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(9.0 A,10.8V) 5 hour rate(14.4A,10.5V) 1 hour rate(54 A,9.6V)	90 Ah 72Ah 54Ah
Internal Resistance	Full charged battery at 25°C(77°F)	Approx 5.0 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 T10)	
Max. Discharge current 25°C/(77°F)	800A (5Seconds)	
Nominal operating temperature	25°C ±5°C(77°F ±9°F)	
Operating Temperature Range	Discharge: -15°C ~50°C (5°F ~122°F) Charge: -10°C ~50°C (14°F ~122°F) Storage: -20°C ~50°C (-4°F ~122°F)	
Charge methods (constant Voltage) At 25°C(77°F)	Cycle use: Initial Charging Current less than 22.5 A Voltage 14.5-14.9V Temperature compensation:-30mV/°C Standby use: 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

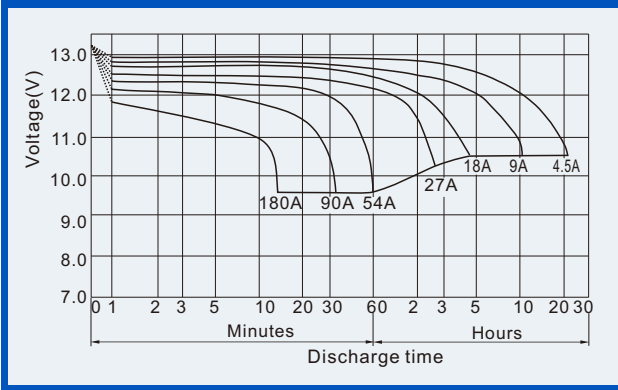
Unit:watts

Time	5min	10min	15min	30min	1h	2h	3h	4h	5h	8h	10h	20h
9.60V	A	288	190	153	102.6	54.0	31.5	23.1	18.0	14.9	10.53	5.10
	W	2975	2028	1641	1103	583	346	257	203	169	121	59.3
10.20V	A	279	171	144	98.1	50.8	30.1	22.5	17.6	14.6	10.26	4.95
	W	2982	1913	1613	1101	574	346	261	204	170	120	58.1
10.50V	A	270	153	126	91.8	49.1	29.3	22.0	17.3	14.4	10.17	4.95
	W	2949	1744	1439	1056	569	340	256	202	169	120	58.5
10.80V	A	260	144	117	84.6	47.5	28.6	21.4	17.0	14.0	9.90	4.86
	W	2920	1666	1350	980	553	335	253	201	166	117	57.9
11.10V	A	252	135	108	75.6	45.9	27.9	20.7	16.6	13.7	9.63	4.59
	W	2853	1567	1259	885	540	330	246	197	163	115	55.6

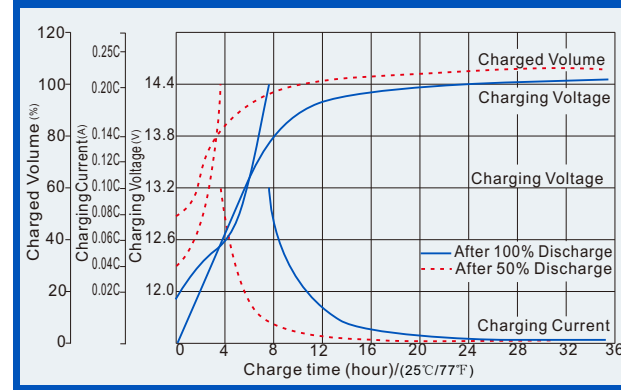
(Above characteristics data are average values obtained within three charge/discharge cycles,not the minimum values.)

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

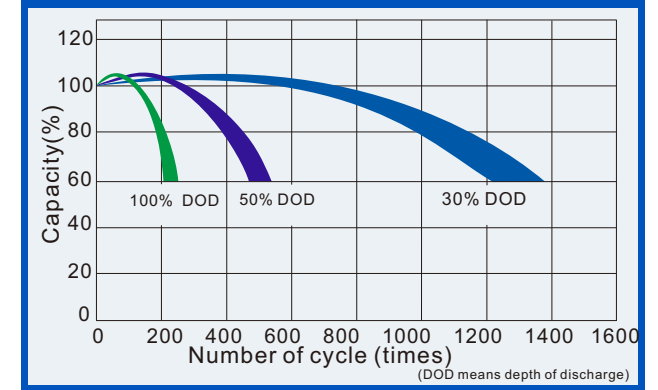
**Discharge characteristics (25°C, 77°F)**



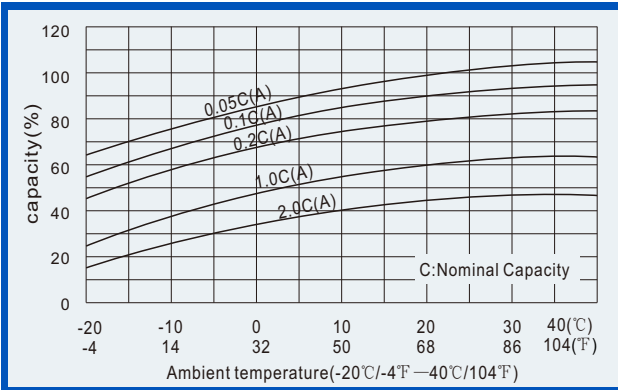
**Charge characteristics (25°C, 77°F)**



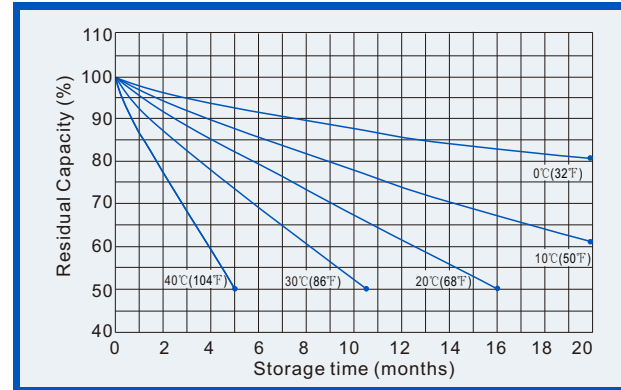
**Life characteristics of Cyclic Use (25°C, 77°F)**



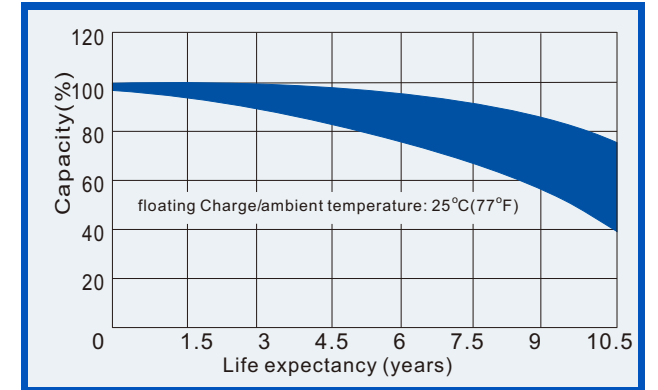
**Effect of Temperature on capacity**



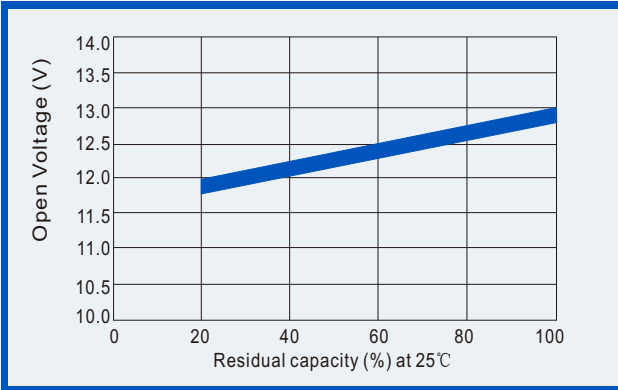
**Self-discharge characteristics**



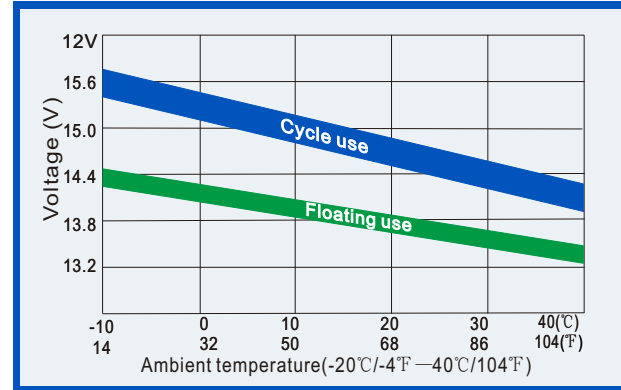
**Life Characteristics of float service (25°C, 77°F)**



**Relationships for open voltage and remained capacity (for reference)**



**Relationship for charging voltage and temperature**



**Temperature effects on floating life**

