

General features for MPF Series (AGM) battery

- * Thick pasted plates with high quality lead-tin-calcium alloy grids for long service life, design life 10+years in float service.
- * Battery comply to the most popular international standards, like IEC60896-21/22, etc.
- * Centralized venting system for gas ventilation.
- * High conductivity connectors and terminal. High reliability terminal sealing.
- * Self regulating relief valve: Lower-pressure self-return valve prevents ingress of oxygen in the atmosphere.
- * Thick positive plates and balanced negative plates.
- * Scientific grids designed to resist corrosion and increase battery service, also ensure optimum recombination efficiency.
- * Low resistance microporous glassfibre, the electrolyte is absorbed within this materials.
- * flame retardant ABS is available upon require.
- * Easy installation: robust copper terminals providing high conductivity, easy connection, front access terminals for easy & quick connection.



Maxton Power Tech Co., Ltd

www.maxtonpower.com

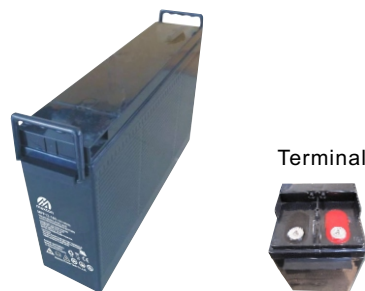
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MPF12-180 (12V180Ah)

Specifications

Nominal Voltage		12V
Rated capacity (10 hour rate)		180 Ah
Dimensions (±2mm)	Total Height	316 mm (12.44 inches)
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	Length	560 mm (22.05 inches)
	Width	125 mm (4.92 inches)
Weight Approx (±3%)		54.0 Kg (119.05 lbs)

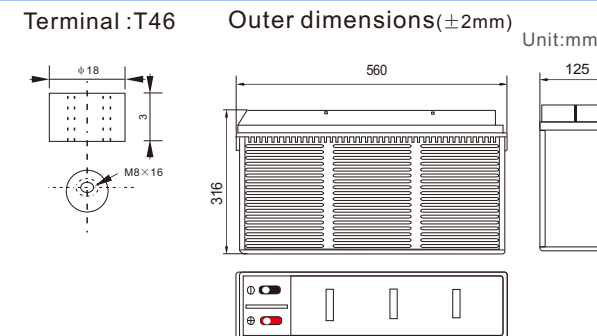
Battery picture and construction



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	Fibreglass	Rubber	Copper

Outer dimension and terminal



Characteristics

Capacity 25°C(77°F)	10 hour rate(18A,10.8V) 5 hour rate(28.8A,10.5V) 1 hour rate(108 A,9.6V)	180Ah 144Ah 108Ah
Internal Resistance	Full charged battery at 25°C(77°F)	Approx 3.8 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	T46	
Max. Discharge current 25°C/(77°F)	1300A (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	Initial Charging Current less than 45A 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)

Unit:A

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

Unit:watts

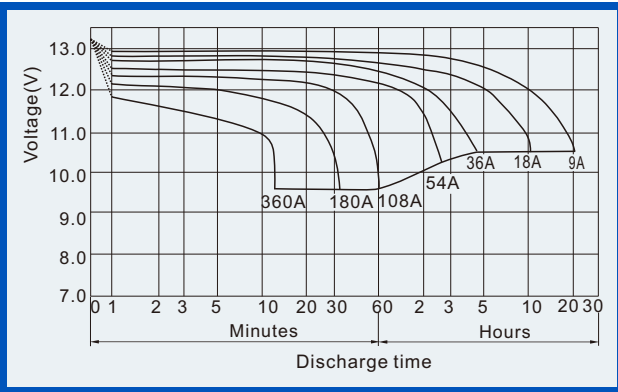
Constant Current(Amp) and Constant Power(Watt) Discharge Table at 25°C(77°F)

Time		5min	10min	15min	30min	1h	2h	3h	4h	5h	8h	10h	20h
		9.60V	A	577	380	306	205.2	108.0	63.0	46.3	36.0	29.7	21.06
	W	5950	4056	3283	2206	1166	692	515	405	338	241	218	118.7
10.20V	A	558	343	288	196.2	101.5	60.1	45.0	35.1	29.2	20.52	18.54	9.90
	W	5963	3827	3227	2203	1148	693	521	408	340	240	218	116.1
10.50V	A	540	307	252	183.6	98.3	58.7	43.9	34.6	28.8	20.34	18.18	9.90
	W	5899	3487	2878	2113	1138	681	512	404	338	239	215	117.0
10.80V	A	521	289	234	169.2	95.0	57.2	42.8	34.0	28.1	19.80	18.00	9.72
	W	5841	3332	2700	1960	1106	670	505	402	332	235	214	115.8
11.10V	A	503	271	216	151.2	91.8	55.8	41.4	33.1	27.4	19.26	17.10	9.18
	W	5705	3135	2518	1769	1080	660	492	394	327	231	206.4	111.3

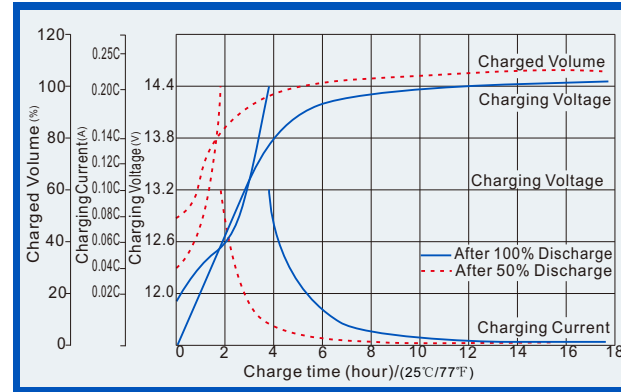
(Above characteristics data are average values obtained within three charge/discharge cycles, not the minimum values.)

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

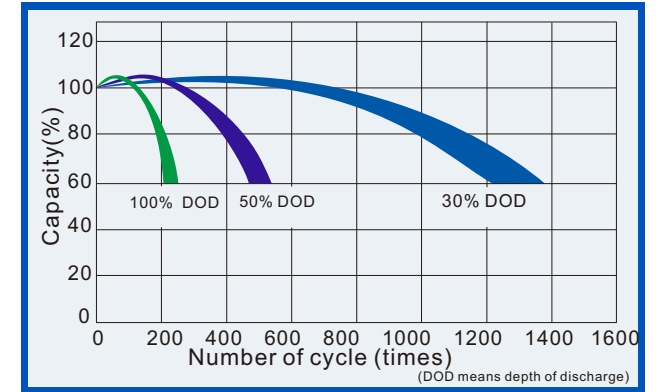
Discharge characteristics (25°C, 77°F)



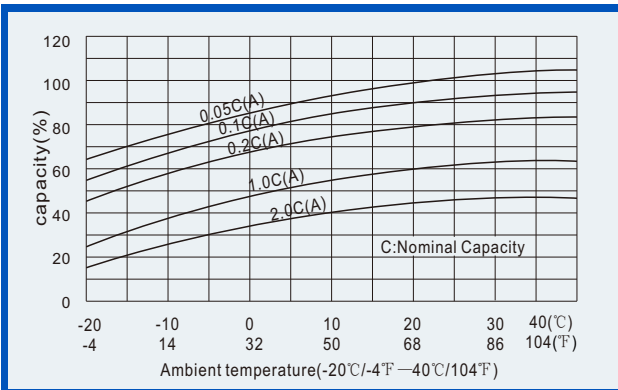
Charge characteristics (25°C, 77°F)



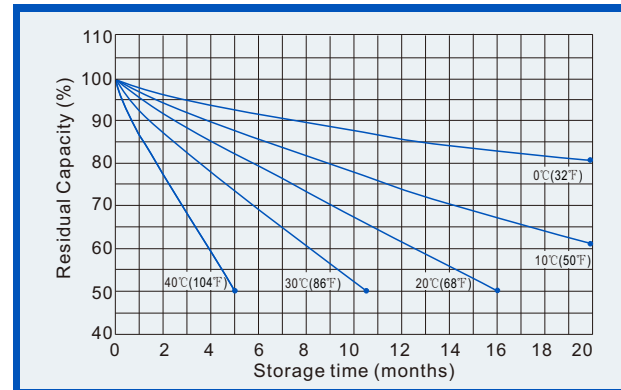
Life characteristics of Cyclic Use (25°C, 77°F)



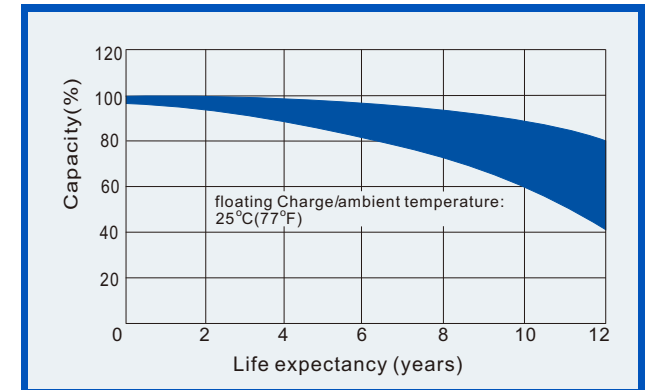
Effect of Temperature on capacity



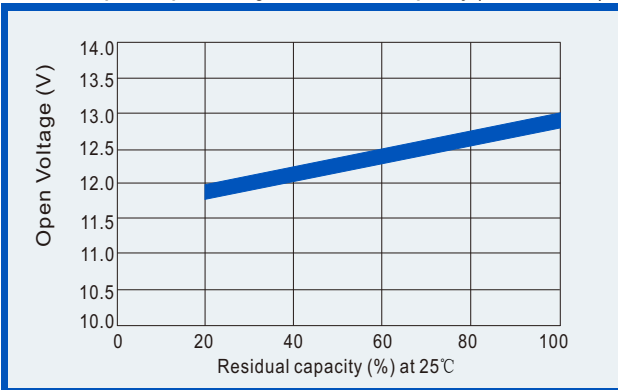
Self-discharge characteristics



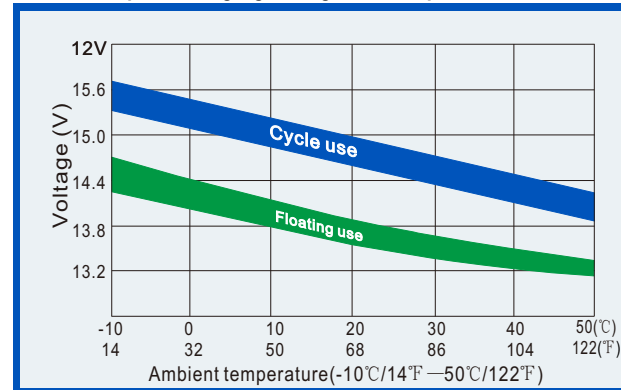
Life Characteristics of float service (25°C, 77°F)



Relationships for open voltage and residual capacity (for reference)



Relationship for charging voltage and temperature



Temperature effects on floating life

