Rechargeable Sealed Lead-Acid Battery

MS20-12 (12V20Ah)

General Series battery

General (GP) Series VRLA batteries are designed with AGM (Absorbent Glass Mat) technology, High performance plates and electrolyte to give extra power output for common power backup system. GP Series Batteries are the general purpose batteries with 8 years floating design life at 25℃, Meet with IEC,BS,JIS and Eurobat standard,UL(MH62092),CE approved.

Application

* Emergency Power System
* Communication equipment
* Telecommunication systems
* Uninterruptible power supplies
* Electric toy car and wheelchairs, etc.
* Power tools
* Alarm system
* Marine equipment
* Medical equipment
* Fire and Security System

General Features

* Heavy Duty Grid
* Mechanized assembly
* Non-spillable construction
* High Reliability and Stability
* Sealed and Maintenance-free
* Long Life and low self-discharge design

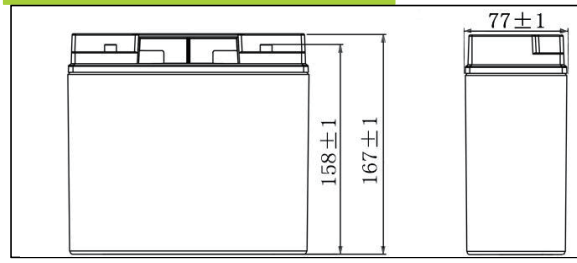
Construction

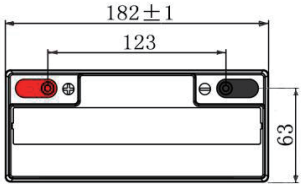
* Positive ····· Lead dioxide
* Electrolyte ···· Sulfuric acid
* Separator ···· Fiber glass
* Container ····· ABS(UL94-HB) / Flame Retardant ABS (UL94-V0)
* Negative ····· Lead
* Safety Valve ···· EPDR
* Terminal ····· Copper

Specification

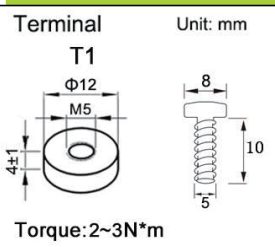
Battery Model	Nominal Voltage		12V (6 cells per unit)	
	Rated capacity (20 Hour rate)		20Ah	
Dimension	Length	Width	Height	Total Height
	182mm (7.16 inches)	77mm (3.03 inches)	167mm (6.57 inches)	167mm (6.57 inches)
Approx Weight	5.35kg(11.79 lbs) ± 3%			
Internal Resistance	Full charged at 25℃(77℉):Approx 11.6mΩ			
Maximum Charge Current	6.0A			
Max.discharge current	300A (5Sec.)			
Short-circuit current	620A			
Operating Temperature Range	Nominal Operating Temperature	Discharge	Charge	Storage
	25℃(77℉)	-15℃~ 50℃(5℉~122℉)	-15℃~ 40℃(5℉~104℉)	-15℃~ 40℃(5℉~104℉)
Capacity @ 25℃ (77℉)	20 hour rate(1.012A,10.5V)	10 hour rate(1.892A,10.5V)	3 hour rate(5.35A,10.2V)	1 hour rate(13.20A,9.6V)
	20.24Ah	18.92Ah	16.05Ah	13.20Ah
Capacity affected by Temp.(20HR)	40℃ (104℉)	25℃ (77℉)	0℃ (32℉)	-15℃ (5℉)
	102%	100%	85%	65%
Charge method at 25℃(77℉)	Float Charging Voltage	Equalization Charging Voltage	Cycle Use Voltage	
	13.5~13.8 VDC (-3mV/cell/℃)	14.1~14.4 VDC (-4mV/cell/℃)	14.4~15.0 VDC (-5mV/cell/℃)	

Outer dimension (mm)





Terminal Type



Constant Current(Amp) and Constant Power(Watt) Discharge Table at 25℃(77℉)

F.V/Time		5min	10min	15min	20min	30min	1h	2h	3h	5h	8h	10h	20h
1.85V/cell	A	56.6	39.2	30.5	24.9	19.4	11.90	6.95	5.05	3.25	2.180	1.832	0.980
	W	107.3	75.4	59.3	48.6	38.2	23.68	13.86	10.08	6.50	4.373	3.692	1.978
1.80V/cell	A	61.9	41.7	32.5	26.4	20.3	12.25	7.14	5.16	3.32	2.231	1.864	0.997
	W	115.6	79.6	62.8	51.3	39.8	24.31	14.20	10.27	6.64	4.465	3.748	2.008
1.75V/cell	A	66.8	44.2	34.3	27.8	21.1	12.57	7.30	5.26	3.39	2.274	1.892	1.012
	W	123.1	83.8	65.9	53.7	41.2	24.88	14.48	10.44	6.75	4.542	3.797	2.034
1.70V/cell	A	71.5	46.6	36.0	29.1	21.7	12.86	7.44	5.35	3.44	2.312	1.916	1.025
	W	130.0	87.7	68.8	55.9	42.5	25.39	14.73	10.60	6.85	4.611	3.839	2.057
1.67V/cell	A	73.8	47.8	36.9	29.7	22.2	13.00	7.50	5.39	3.47	2.326	1.925	1.030
	W	133.5	89.7	70.1	56.9	43.1	25.63	14.83	10.67	6.89	4.636	3.853	2.066
1.60V/cell	A	77.5	49.9	38.3	30.6	22.8	13.20	7.60	5.45	3.50	2.350	1.940	1.038
	W	139.0	93.0	72.4	58.5	44.0	25.98	15.00	10.77	6.95	4.679	3.880	2.080

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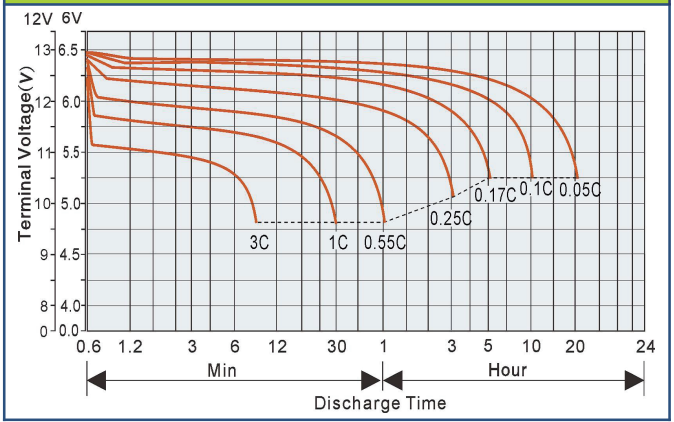
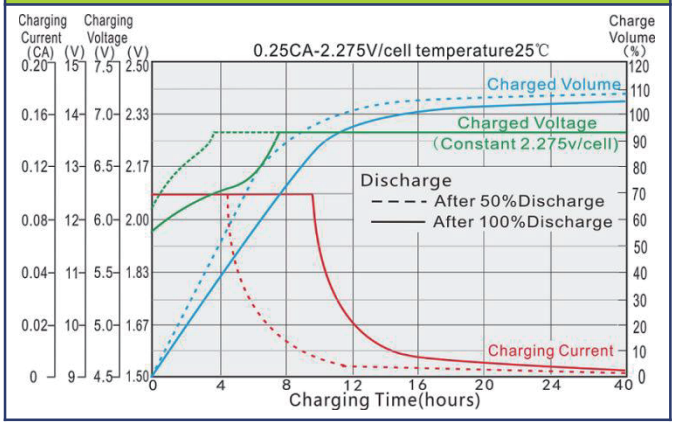
MS20-12 (12V20Ah)

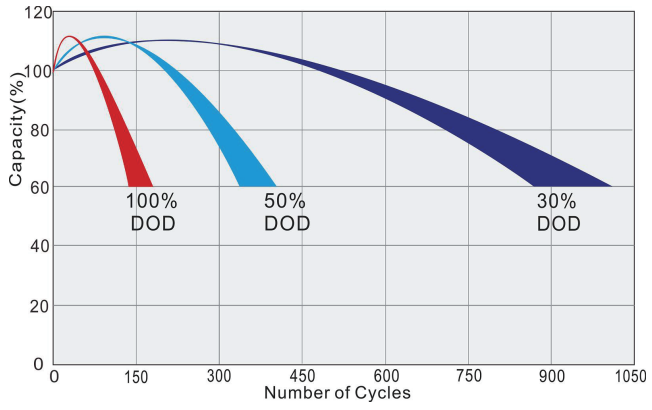
Discharge characteristic curve (25℃/77℉)



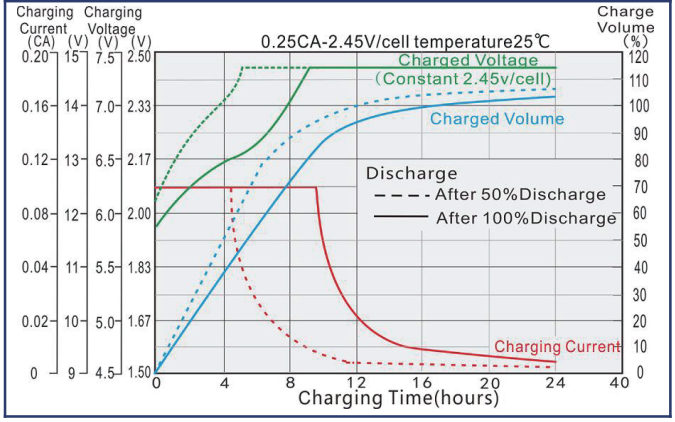
Charging characteristic curve of floating charge(25℃/77℉)



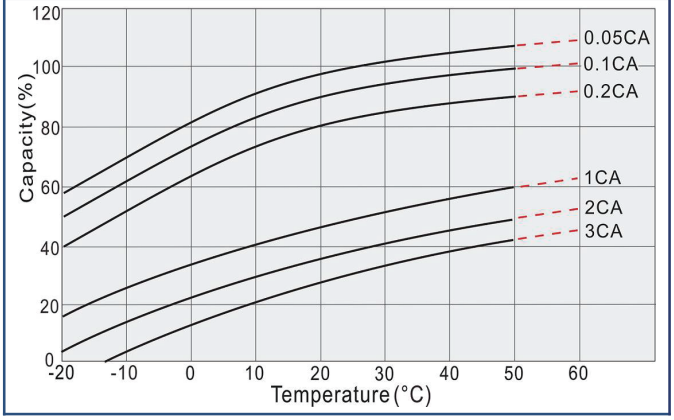
Cycle service life in relation to depth of discharge



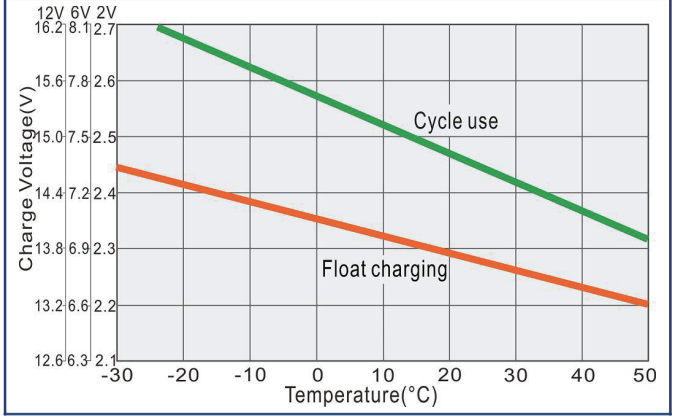
Cyclic charging characteristic curve (25℃/77℉)



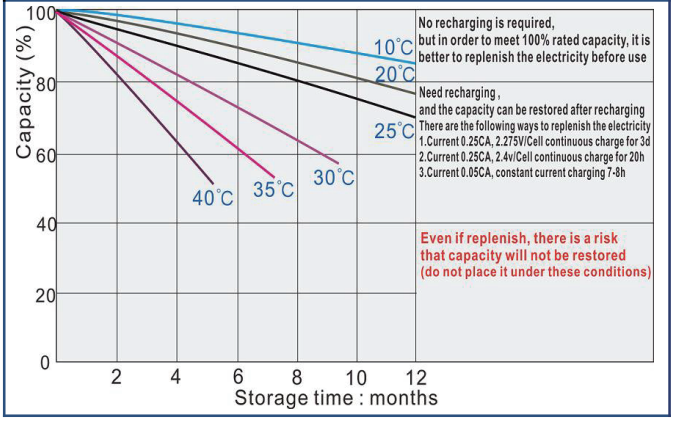
Relationship between temperature and capacity



Relationship between charging voltage and temperature



Self discharge characteristics



Temperature vs Float Life