

MK12-590W 12V180Ah

introduce



MK12-590W is a high power valve-regulated sealed lead-acid battery. The most suitable for high-rate discharge requirements of the UPS, EPS and other emergency backup power equipment and uninterruptible power supply equipment. As with all Baace batteries, all are rechargeable, highly efficient, leak proof and maintenance free.



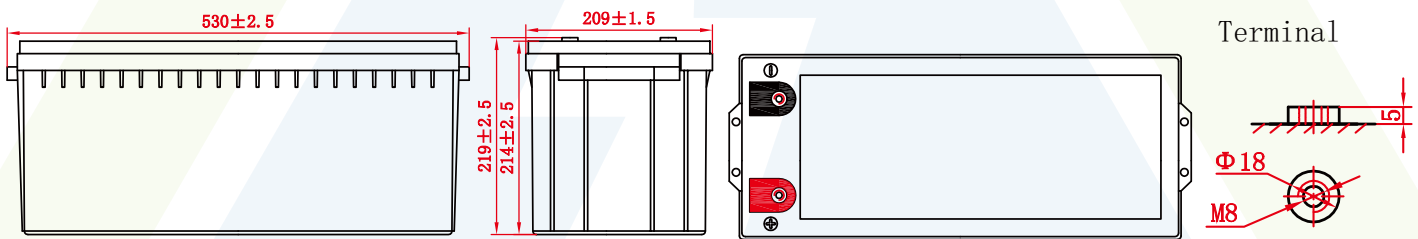
MK-manufactured VRLA (Absorbent Glass Mat type) batteries are UL-recognized components under UL2000.

Specification

Cells Per Unit	6
Voltage Per Unit	12
Capacity	590W@15min-rate to 1.67V per cell @25°C (77°F)
Weight	Approx. 53.5 kg(117.9lbs)
Maximum Discharge Current	1800A (5sec)
Internal Resistance	Approx. 3.7mΩ
Operating Temperature Range	Discharge: -15°C~50°C (5°F~122°F) Charge: -15°C~40°C (5°F~104°F) Storage: -15°C~40°C (5°F~104°F)
Nominal Operating Temperature Range	25°C±3°C (77°F±5°F)
Float Charging Voltage	13.5 to 13.8 VDC/unit Average at 25°C (77°F)
Recommended Maximum Charging Current Limit	45A
Equalization and Cycle Service	14.4 to 15.0 VDC/unit Average at 25°C (77°F)
Self Discharge	Baace Batteries can be stored for more than 6 months at 25°C (77°F). Please charge batteries before using. For higher temperatures the time interval will be shorter.
Terminal	Thread lead alloy recessed terminal to accept M8 bolt
Container Material	ABS(UL 94-HB) & Flammability resistance of (UL 94-V0) can be available upon request.

Dimensions :	Overall Height (H)	Container height (h)	Length (L)	Width (W)
Unit: mm	219±2.5	214±2.5	530±2.5	209±1.5

Unit: mm



Constant Current Discharge Characteristics Unit:A(25°C/77°F)

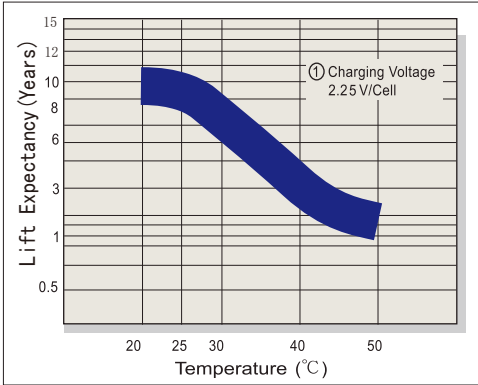
F.V/Time	5MIN	8MIN	10MIN	15MIN	20MIN	30MIN	60MIN	90MIN	120min
1.85V	363	328	288	250	209	159	96.9	71.0	60.5
1.80V	394	355	315	268	220	168	100	73.7	64.0
1.75V	424	378	340	284	230	174	103	75.6	66.1
1.70V	452	400	362	298	237	180	105	77.2	66.8
1.67V	474	416	377	308	246	185	108	79.4	68.1
1.60V	514	444	402	325	262	193	112	82.8	69.2

Constant Power Discharge Characteristics Unit: W/cell(25°C/77°F)

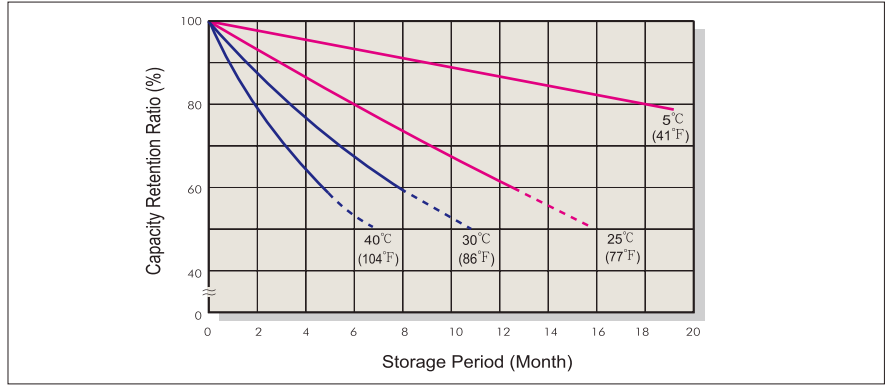
F.V/Time	5MIN	8MIN	10MIN	15MIN	20MIN	30MIN	60MIN	90MIN	120min
1.85V	703	642	572	448	415	321	194	143	127
1.80V	752	681	612	497	431	332	198	146	131
1.75V	799	715	648	543	448	341	202	148	134
1.70V	841	749	684	575	462	349	205	151	135
1.67V	868	769	702	590	470	352	207	153	136
1.60V	926	809	737	609	486	360	210	156	137

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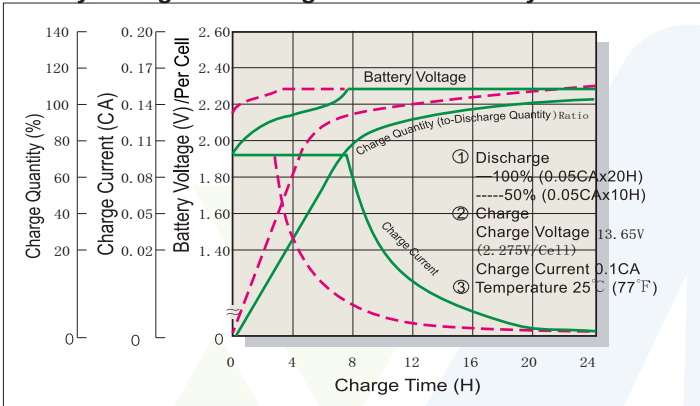
Trickle(or Float)Design Life



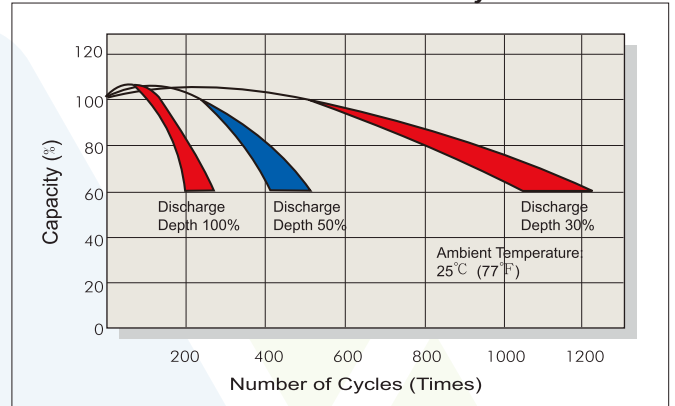
Capacity Retention Characteristic



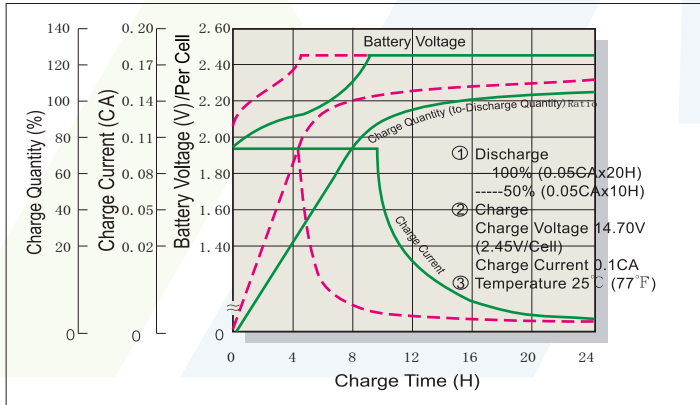
Battery Voltage and Charge Time for Standby Use



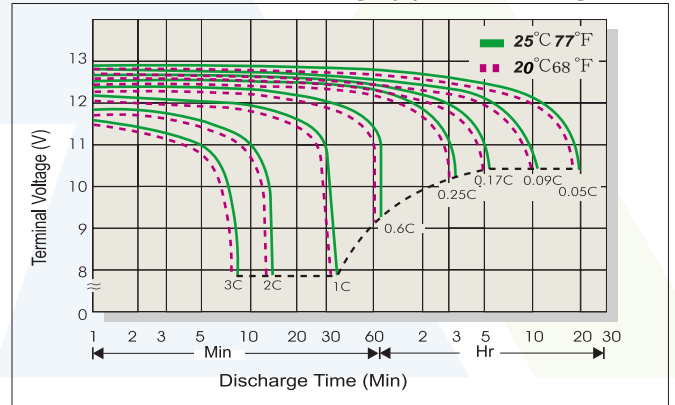
Cycle Service Life



Battery Voltage and Charge Time for Cycle Use



Terminal Voltage (V) and Discharge Time



Charging Procedures

Application	Charge Voltage (V/Cell)			Max. Charge Current
	Temperature	Set Point	Allowable Range	
Cycle Use	25°C (77°F)	2.45	2.40~2.50	0.25C
Standby	25°C (77°F)	2.275	2.25~2.30	

Discharge Current VS. Discharge Voltage

Final Discharge Voltage V/Cell	1.75	1.70	1.65	1.60
Discharge Current (A)	0.2C > (A)	0.2C < (A) < 0.5C	0.5C < (A) < 1.0C	(A) > 1.0C

Effect of temperature on capacity (20HR)

Temperature	Dependency of Capacity (20HR)
40 °C	102%
25 °C	100%
0 °C	85%
-15 °C	65%

Self-discharge Characteristics

Storage time	Preservation rate
3 Months	91%
6 Months	82%
12 Months	64%

