

# MKBG121200 12V 120Ah (C<sub>10</sub>)



Gel battery shows some distinctive advantages over flooded battery or AGM battery, such as super thermal stability, high deep discharge capability, good recovery from deep discharge, even if the battery is left discharged for three days, it will recover to 100% of capacity. With the above-mentioned advantages, the gel battery has long service life, specially suitable for motive power applications, such as golf trailer, scrubber, folklift, etc. The deep discharge cycles increased 50% as compared with the AGM battery.



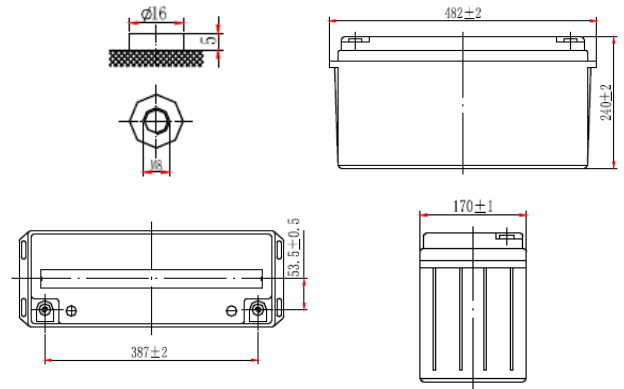
## Performance Characteristics

Nominal Voltage	12V		
Design Life	12 years		
Dimensions	Length (mm / inch)	482 / 19.0	
	Width (mm / inch)	170 / 6.69	
	Height (mm / inch)	240 / 9.45	
	Total Height (mm / inch)	240 / 9.45	
Approx. Weight	(Kg / lbs)	44.5 / 98.2	
	Terminal	M8	
Container Material	ABS		
Rated Capacity	122Ah / 12.2A	(10hr, 1.70V / cell, 25°C / 77°F)	
	108Ah / 21.6A	(5hr, 1.70V / cell, 25°C / 77°F)	
	69.6Ah / 69.6A	(1hr, 1.70V / cell, 25°C / 77°F)	
Max. Discharge Current	750A (5s)		
Internal Resistance	Approx 6.0mΩ		
Operating Temp. Range	Discharge :	-20 ~ 60°C (-4 ~ 140°F)	
	Charge :	-10 ~ 60°C (14 ~ 140°F)	
	Storage :	-20 ~ 60°C (-4 ~ 140°F)	
Nominal Operating Temp. Range	25 ± 3°C (77 ± 5°F)		
Cycle Use	Maximum charging current	24A	
	Voltage:	14.1V ~ 14.4V at 25°C (77° F)	
	Temp. Coefficient:	-20mV/°C	
Standby Use	Maximum charging current	24A	
	Voltage:	13.5V ~ 13.8V at 25° C (77° F)	
	Temp. Coefficient:	-30mV/°C	
Capacity affected by Temperature	40°C (104°F)	103%	
	25°C ( 77°F)	100%	
	0°C ( 32°F)	86%	
Self Discharge	Fully charged Kaise Gel Series batteries may be stored for up to 6 months at 25°C (77°F) and then a freshening charge is required. For higher temperatures the time interval will be shorter.		

## Discharge Constant Current (Amperes) at 77°F (25°C)

Volts/cell	10min	15min	30min	1h	3h	5h	10h	20h
1.80V	194	154	108	63.6	28.0	20.4	12.0	6.30
1.75V	209	168	113	67.2	29.2	21.1	12.1	6.42
1.70V	223	182	115	69.6	29.6	21.6	12.2	6.48
1.65V	238	192	118	72.0	30.4	22.1	12.4	6.60
1.60V	252	206	120	74.4	31.2	22.8	12.6	6.72

## Dimensions and Terminal (Unit: mm (inches))



## Applications

Wind and solar energy systems  
 Cable TV systems  
 Telecommunications  
 Electric wheel chairs  
 Military equipment  
 Emergency lighting  
 Power plants  
 Medical equipment  
 Golf carts

## Certifications

ISO 9001:2008 ISO 14001:2008



## Discharge End Voltage vs. Discharge Current

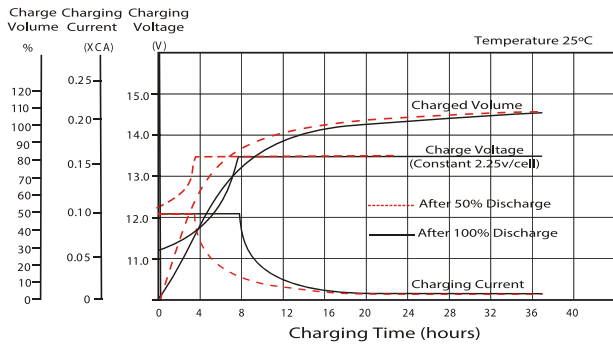
Final discharge voltage V/CELL	1.8	1.75	1.7	1.6
Discharge current (A)	≤ 0.1CA	0.25CA ≥ I > 0.1CA	0.55CA ≥ I > 0.25CA	I > 0.55CA

## Discharge Constant Power (Watts per cell) at 77°F (25°C)

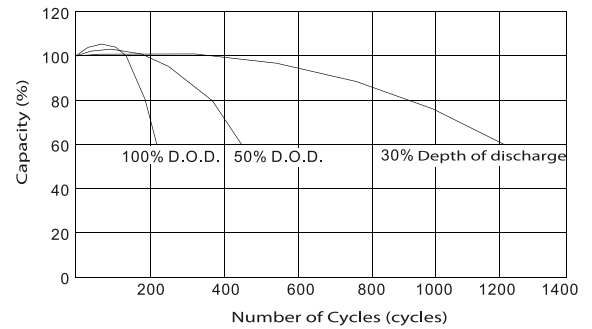
Volts/cell	10min	15min	30min	1h	3h	5h	10h	20h
1.80V	361	295	190	117	47.0	35.9	19.6	11.1
1.75V	380	312	199	123	50.0	38.5	20.9	11.5
1.70V	400	333	205	127	52.6	39.4	21.7	11.9
1.65V	411	347	215	132	55.4	41.3	23.2	12.5
1.60V	431	350	225	139	58.4	43.8	24.4	13.2

(Note) The above characteristics data are average values obtained within three charge/discharge cycles not the minimum values.

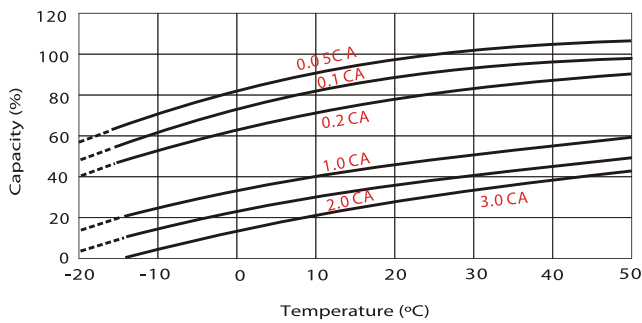
## Charging Characteristics (cycle use)



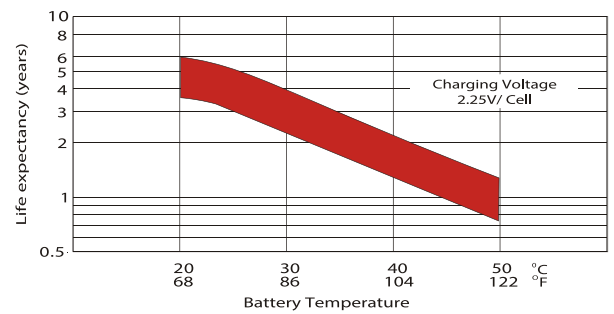
## Cycle Life in Relation to Depth of Discharge



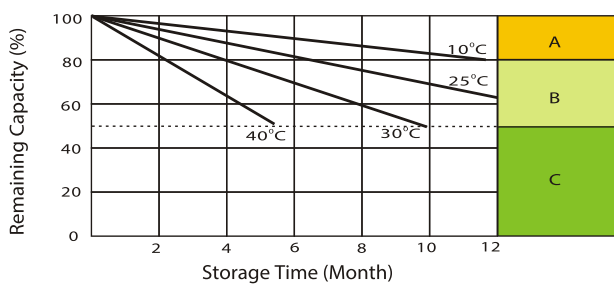
## Temperature Effects in Relation to Battery Capacity



## Effect of Temperature on Long Term Float Life



## Self Discharge Characteristics



- A** No supplementary charge required  
(carry out supplementary charge before use if 100% capacity is required)
- B** Supplementary charge required before use. Optional charging way as below:
  1. Charged for above 3 days at limited current 0.25 CA and constant voltage 2.25V / cell.
  2. Charged to above 20 hours limited current 0.25CA and constant voltage 2.45V / cell.
  3. Charged for 8-10 hours at limited current 0.05 CA.
- C** Supplementary charge often fail to recover the capacity.  
The battery should never be left standing till this is reached.

IMPORTANT NOTE: The specifications presented herein are subject to revision without notice.

