

# KBC121000 12V 100Ah



The Kaise cyclic batteries were developed for deep discharges with very heavy non-porous battery plates to withstand major discharging and charging cycles (deep cycle). These batteries use different chemistry combinations for the plates with active paste material and a slightly stronger than normal electrolyte, which allows for a much longer life in deep cycle applications.



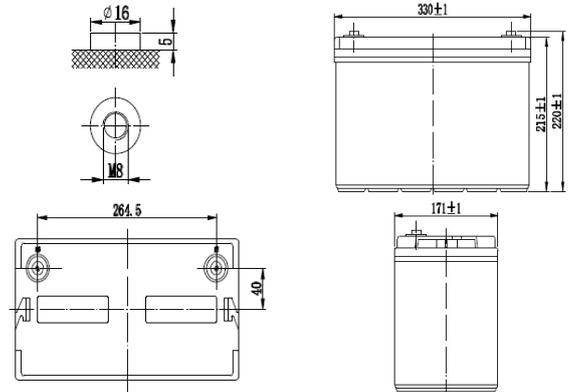
## Performance Characteristics

|                                  |  |                                    |
|----------------------------------|--|------------------------------------|
| Nominal Voltage                  | 12V  |                                    |
| Dimensions                       | Length (mm / inch)   | 330 / 12.99                        |
|                                  | Width (mm / inch)  | 171 / 6.73                         |
|                                  | Height (mm / inch)   | 215 / 8.46                         |
|                                  | Total Height (mm / inch)   | 220 / 8.66                         |
| Approx Weight                    | (Kg / lbs) 32 / 70.5   |                                    |
| Design Life                      | 10 years   |                                    |
| Terminal                         | M8   |                                    |
| Container Material               | ABS  |                                    |
| Rated Capacity                   | 96.5Ah / 9.65A   | (10hr, 1.70V / cell, 25°C / 77°F)  |
|                                  | 60.6Ah / 60.6A   | (1hr, 1.70V / cell, 25°C / 77°F)   |
|                                  | 32Ah / 192A  | (10min, 1.70V / cell, 25°C / 77°F) |
| Max. Discharge Current           | 900A (5s)  |                                    |
| Internal Resistance              | Approx 5mΩ   |                                    |
| Operating Temp. Range            | Discharge : -15 ~ 55°C (5 ~ 131°F)   |                                    |
|                                  | Charge : 0 ~ 40°C (32 ~ 104°F)   |                                    |
|                                  | Storage : -15 ~ 40°C (5 ~ 104°F)   |                                    |
| Nominal Operating Temp. Range    | 25 ± 3°C (77 ± 5°F)  |                                    |
| Cycle Use                        | Initial Charging Current less than 20A   |                                    |
|                                  | Voltage: 2.30VPC ~ 2.35VPC at 25°C (77°F)  |                                    |
|                                  | Temp. Coefficient: -30mV/°C  |                                    |
| Standby Use                      | Initial Charging Current less than 20A   |                                    |
|                                  | Voltage: 2.25VPC ~ 2.30VPC at 25°C (77°F)  |                                    |
|                                  | Temp. Coefficient: -20mV/°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 Deep Cycle 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      | 168   | 139   | 88.7  | 56.5 | 25.1 | 17.1 | 9.50 | 5.00 |
| 1.75V      | 180   | 148   | 90.7  | 59.6 | 26.6 | 17.4 | 9.60 | 5.05 |
| 1.70V      | 192   | 159   | 93.6  | 60.6 | 26.9 | 17.9 | 9.65 | 5.10 |
| 1.60V      | 220   | 180   | 105   | 65.2 | 27.6 | 18.9 | 9.75 | 5.20 |

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



## Applications

- Solar power systems
- Electric wheel chairs
- Golf carts
- Maritime equipment
- Power plants
- Railway systems
- Telecommunications systems
- Cable TV systems
- Emergency power systems

## Certifications

ISO 9001:2008 ISO 14001:2008



## Discharge Current vs. Discharge Voltage

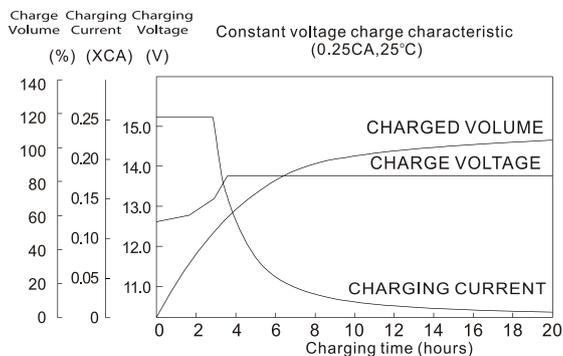
| Final discharge voltage V/CELL | 1.8            | 1.75                    | 1.7                      | 1.6          |
|--------------------------------|----------------|-------------------------|--------------------------|--------------|
| Discharge current (A)          | $I \leq 0.1CA$ | $0.25CA \geq I > 0.1CA$ | $0.55CA \geq I > 0.25CA$ | $I > 0.55CA$ |

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

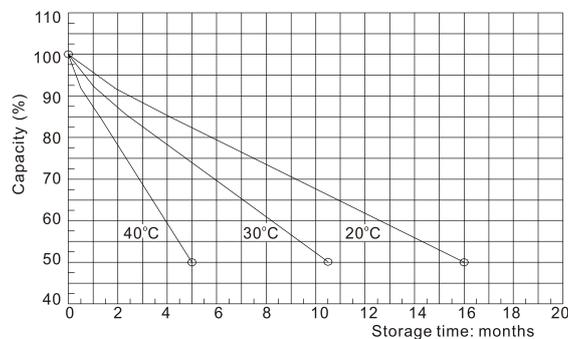
| Volts/cell | 10min | 15min | 30min | 1h  | 2h   | 3h   | 5h   |
|------------|-------|-------|-------|-----|------|------|------|
| 1.80V      | 316   | 271   | 167   | 102 | 61.7 | 48.0 | 33.8 |
| 1.75V      | 339   | 285   | 173   | 109 | 63.7 | 48.6 | 34.2 |
| 1.70V      | 346   | 290   | 178   | 112 | 65.9 | 50.4 | 34.8 |
| 1.60V      | 376   | 311   | 194   | 122 | 69.7 | 52.3 | 35.6 |

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

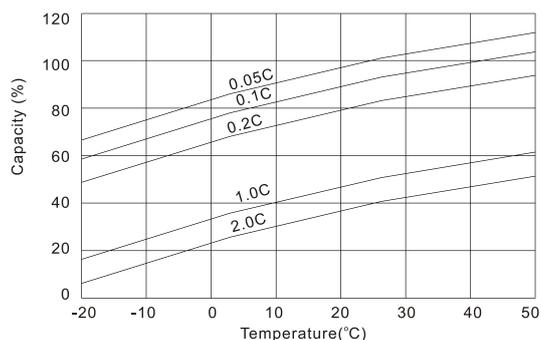
## Charging Characteristics (standby use)



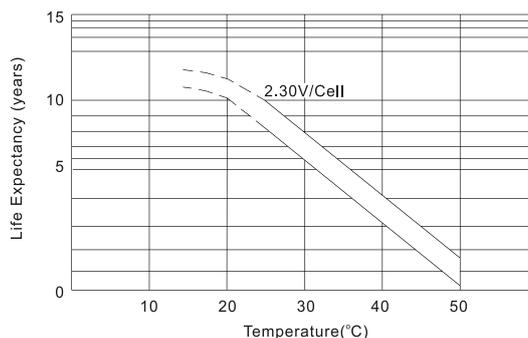
## Self Discharge Characteristics



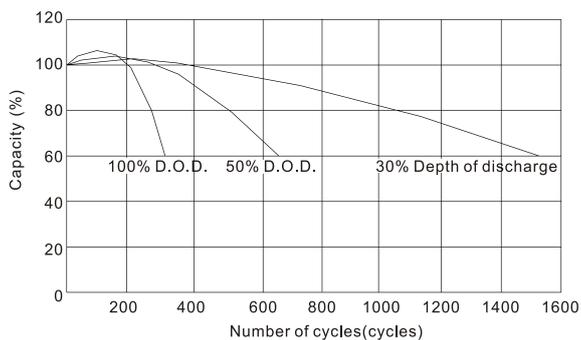
## Temperature Effects in Relation to Battery Capacity



## Temperature Effects on Float Life



## Cycle Life in Relation to Depth of Discharge



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

