

**6-DZFG-23**

**12V 23Ah<sub>(2hr)</sub> GRAPHENE VRLA BATTERY**



Chilwee BG (BLACK GOLD) Series high energy VRLA Battery is specially designed based on Graphene Technology, which has obviously improve the battery's capacity, output power, cycle life and high/low temperature performance. The Chilwee BG (BLACK GOLD) Series provides longer range, larger power and extremely long life for motive power applications, i.e. electric bicycles, electric tricycles, electric motorcycles and other device require DC power source.

**FEATURES & BENEFITS**

- \* Designed based on Graphene Technology enables the BG (BLACK GOLD) series Battery with the the features of excellent long range, larger power and extremely long life.
- \* Unique structure of battery container and lid to ensure excellent gas recombination efficiency, less gas released so that water loss rate is reduced.
- \* Sepcial grid alloy material and special lead paste prescription have been utilized to resist corrosion on plates, prolong the life of the battery.
- \* Increased positive active material to improve the battery's initial capacity and service life.
- \* Redesigned battery container and terminal, more attractive appearance and easy for installation.

**COMPARISON BETWEEN BG SERIES AND STANDARD BATTERY**

| TESTING ITEM                             | STANDARD BATTERY | BLACK GOLD SERIES | COMPARISON           |
|------------------------------------------|------------------|-------------------|----------------------|
| INITIAL CAPACITY, FOR THE FIRST 3 CYCLES | 20.2AH           | 23AH              | <b>10% IMPROVED</b>  |
| CAPACITY , AFTER 69 CYCLES               | 21AH             | 24.5AH            | <b>16% IMPROVED</b>  |
| DISCHARGE TIME @ END-VOLTAGE : 12V       | 65 MINUTES       | 90 MINUTES        | <b>34% IMPROVED</b>  |
| WATER LOSS RATE                          | 0.1 GRAM / CYCLE | 0.06 GRAM/ CYCLE  | <b>40% DECREASED</b> |
| DISCHARGE TIME @ -15 °C                  | 94 MINUTES       | 112 MINUTES       | <b>18% IMPROVED</b>  |
| CYCLE LIFE @ 100% DOD                    | 400 CYCLES       | 610 CYCLES        | <b>52% IMPROVED</b>  |

**SPECIFICATION**

|                                         |                          |                                             |
|-----------------------------------------|--------------------------|---------------------------------------------|
| Nominal Voltage (V)                     |                          | 12V                                         |
| Open Circuit Voltage (V/Block)          |                          | 13.1V - 13.45V                              |
| Number of Cells (Per Block)             |                          | 6 Cells                                     |
| Rated Capacity (Ah, 25°C)               | 2h rate (to 1.75V/Cell)  | 23Ah                                        |
|                                         | 3h rate (to 1.75V/Cell)  | 24Ah                                        |
|                                         | 5h rate (to 1.80V/Cell)  | 25Ah                                        |
|                                         | 10h rate (to 1.80V/Cell) | 27Ah                                        |
|                                         | 20h rate (to 1.85V/Cell) | 28Ah                                        |
| Nominal Weight (Kgs)                    |                          | Approx. 6.6 Kg                              |
| Dimension (L X W X H, Total Height. mm) |                          | (180mm±2) X (78mm±2) X (172mm±2), (172mm±2) |
| Container Material                      |                          | Enhanced ABS                                |
| Charge Voltage                          | Float (V/Block)          | 13.50V - 13.80V                             |
|                                         | Cycle (V/Block)          | 14.60V - 14.80V                             |
| Maximum Discharge Current (A)           |                          | 150A (5s)                                   |
| Maximum Charge Current (A)              |                          | 2.9 A                                       |
| Working Temperature(°C)                 | Operation (maximum):     | -20°C to 50°C                               |
|                                         | Operation (recommended): | 20°C to 30°C                                |
| Storage Temperature(°C)                 |                          | -20°C to 50°C                               |