

Chilwee DZM Series VRLA Gel Battery is specially designed for motive power applications, i.e. electric bicycles, electric tricycles, electric motorcycles and other device require DC power source. The DZM Series adopts international leading technologies to ensure the batteries with features of long cycle life, large current discharge capability, high reliability and safety, and environmental-friendly.

FEATURES

Non-Cadmium Design, Environment-friendly: Chilwee Battery has adopted internationally leading technology - container formation non-cadmium production technology, which is in the leading position in the industry. It helps to save energy 28.5%, save water 90%, and non-discharge of waste water.

Super Long Voyage Ability: The discharge time of Chilwee battery is prolonged. Active additive has been added in positive plates, so as to good consistency of the formatted active material. This enables the battery has high charge/discharge efficiency, and the power output is elevated.

Strong Motive Power: Super thin plate design is adopted to increase the area of the plates macroscopic electrochemical reaction, which enables the battery has excellent large current discharge ability. Adopting cast-weld process to reduce the battery's internal resistance, and it improves battery charging acceptance capability. Battery's charge/discharge efficiency is high.

High Durability: The Chilwee battery has excellent cycle life which can reach 600 cycles @ 80% DOD. The battery banks has good consistency. Enhanced ABS material has been adopted on battery container and lid, and the battery is well sealed to prevent leakage.

High Reliability and Safety: Improved negative material prescription and increased micropoles structure at negative helps to improve a lot on low temperature charge/discharge performance. Low water loss rate, high temperature resistance, and the pressure value of Open/Close safety valve is accurate to prevent battery bulging. Safety valve and acid filter can efficiently prevent sparks splashed into battery to ensure safe operation.

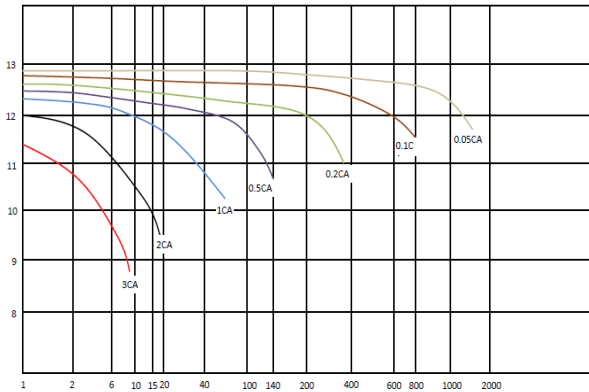
SPECIFICATION

| | | |
|---|--------------------------|--|
| 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) | 12Ah |
| | 3h rate (to 1.75V/Cell) | 12.7Ah |
| | 5h rate (to 1.80V/Cell) | 13.6Ah |
| | 20h rate (to 1.85V/Cell) | 16.5Ah |
| Nominal Weight (Kgs) | | Approx. 4.3 Kgs |
| Dimension (L X W X H, Total Height. mm) | | (151mm±2) X (99mm±2) X (97mm±2), (101mm±2) |
| Container Material | | Enhanced ABS |
| Charge Voltage | Float (V/Block) | 13.50V - 13.80V |
| | Cycle (V/Block) | 14.50V - 14.80V |
| Maximum Discharge Current (A) | | 100A (5s) |
| Maximum Charge Current (A) | | 2.0 A |

6-DZM-12

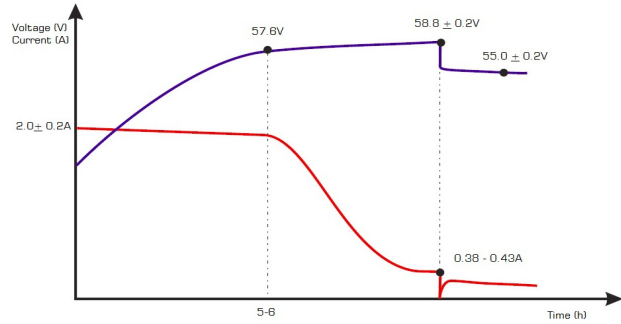
12V 12Ah(2hr) VRLA GEL BATTERY

Discharge Curves at Different Discharge Rate (25°C)
Voltage (V)



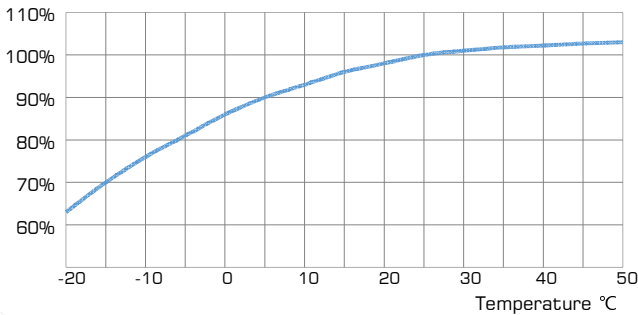
Discharge Time (minutes)

Charge Curve for 6-DZM-12 (4 Blocks/String)

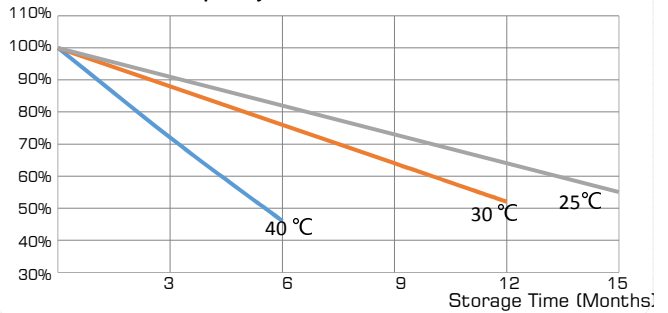


Phase 1: The Max. charge current is 2.0A, and the charge voltage is gradually risen up to 57.6V;
Phase 2: The charge voltage is gradually risen up to 58.8V+ 0.2V. When the charge current has dropped to 0.38A-0.43A, shifting to float charge.
Phase 3: The constant float charge voltage is 55.0V+ 0.2V.

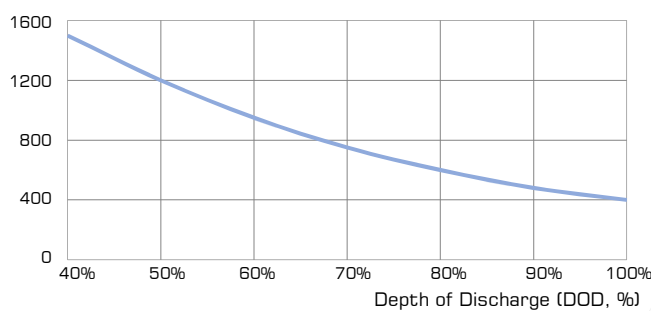
Effect of Temperature on Capacity



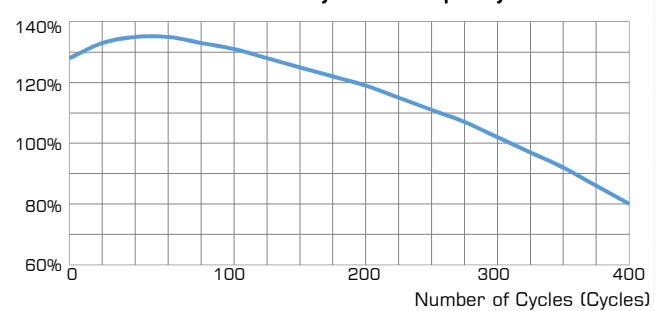
Capacity Retention Characteristics



Cycle Life vs. Depth of Discharge



Number of Cycles vs. Capacity



RECOMMENDED SETTING PARAMETERS

| Item | | 24V Battery Bank | 36V Battery Bank | 48V Battery Bank |
|-----------------------------|---|--------------------|-------------------|-------------------|
| Charger Parameters | Max. Charge Voltage (V) | 29.3V-29.5V | 43.8V-44.2V | 58.6V-59.0V |
| | Float Charge Voltage (V) | 27.4V-27.6V | 41.0V-41.4V | 54.8V-55.2V |
| | Max. Charge Current (A) | 1.8A-2.2A | 1.8A-2.2A | 1.8A-2.2A |
| | Shifting Current (A) | 0.38A-0.43A | 0.38A-0.43A | 0.38A-0.43A |
| | Temperature Compensation Coefficient (mV/°C/Cell) | 2.5~4.0 mV/°C/Cell | 2.5~4.0mV/°C/Cell | 2.5~4.0mV/°C/Cell |
| Controller Parameters | Under-voltage Protection (V) | 21V±0.5V | 31.5V±0.5V | 42V±0.5V |
| | Limited Current (A) | ≤15A | ≤15A | ≤15A |
| | Turn-on Lock Current (A) | ≤0.1A | ≤0.1A | ≤0.1A |
| Electrical Motor Parameters | Average Current (A) | ≤7A | ≤7A | ≤7A |
| | Motor Power (W) | ≤150W | ≤250W | ≤300W |

* All the data and technical curves are for customer's reference only. This information is subject to change without any prior notice.

For More Information, please contact:

CHAOWEI POWER CO., LTD.

No. 12 Zhizhou Ave., Zhicheng New Industrial Park, Changxing County, Zhejiang Province, China. 313100

Tel: +86 572 6200283

Fax: +86 572 6054410

Web: www.cnchaowei.com

Email: info@chaowei.biz