

Chilwee EVF/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 EVF/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.

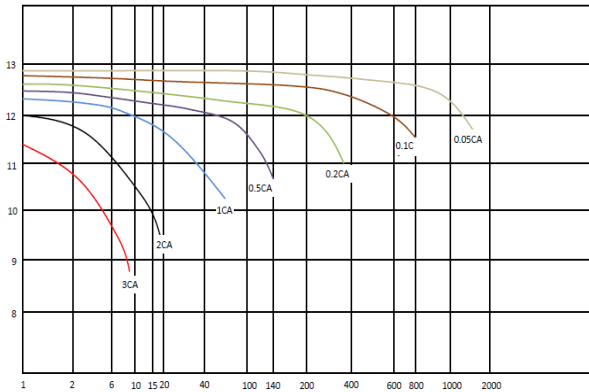
SPECIFICATION

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)	44Ah
	3h rate (to 1.75V/Cell)	48Ah
	5h rate (to 1.80V/Cell)	50Ah
	20h rate (to 1.85V/Cell)	52Ah
Nominal Weight (Kgs)		Approx. 15.1Kgs
Dimension (L X W X H, Total Height. mm)		(197mm±2) X (165mm±2) X (165mm±2), (165mm±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)		320A (5s)
Maximum Charge Current (A)		5A

6-EVF-48

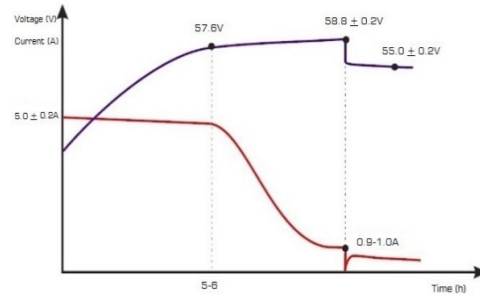
12V 48Ah(3hr) VRLA GEL BATTERY

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



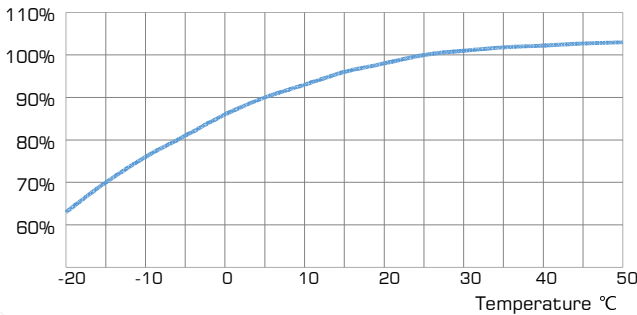
Discharge Time (minutes)

Charge Curve for 6-EVF-48 (4 Blocks/String)

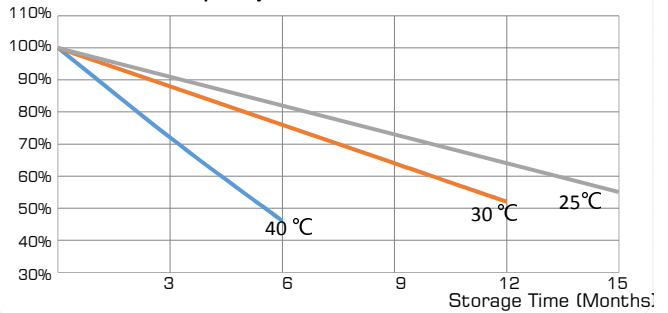


Phase 1: The Max. charge current is 5A, and the charge voltage is gradually risen up to 57.6V;
Phase 2: The charge voltage is gradually risen up to 58.8V+ 0.2V. When the charge current has dropped to 0.9A-1.0A, shifting to float charge.
Phase 3: The constant float charge voltage is 55.0V+ 0.2V.

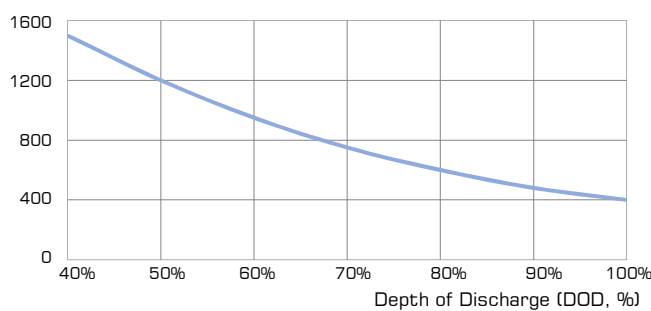
Effect of Temperature on Capacity



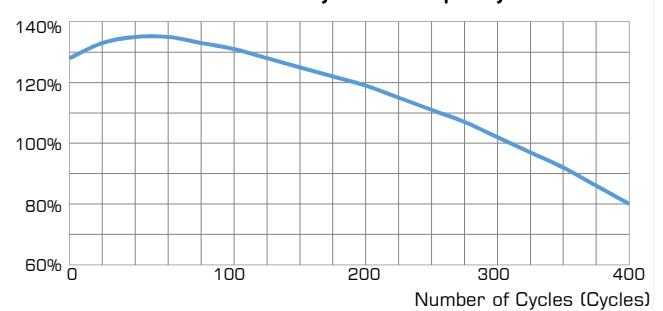
Capacity Retention Characteristics



Cycle Life vs. Depth of Discharge



Number of Cycles vs. Capacity



RECOMMENDED SETTING PARAMETERS

Item		48V Battery Bank	60V Battery Bank	72V Battery Bank
Charger Parameters	Max. Charge Voltage (V)	58.6V-59.0V	73.3V-73.7V	88.0V-88.2V
	Float Charge Voltage (V)	54.8V-55.2V	68.6V-68.9V	82.3V-82.7V
	Max. Charge Current (A)	4.5A-5.0A	4.5A-5.0A	4.5A-5.0A
	Shifting Current (A)	0.9A-1.0A	0.9A-1.0A	0.9A-1.0A
	Temperature Compensation Coefficient (mV/°C/Cell)	2.5~4.0mV/°C/Cell	2.5~4.0mV/°C/Cell	2.5~4.0mV/°C/Cell
Controller Parameters	Under-voltage Protection (V)	42V±0.5V	52.5V±0.5V	63V±0.5V
	Limited Current (A)	≤40A	≤40A	≤40A
	Turn-on Lock Current (A)	≤0.3A	≤0.3A	≤0.3A
Electrical Motor Parameters	Average Current (A)	≤20A	≤20A	≤20A
	Motor Power (W)	≤700W	≤750W	≤800W

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

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