

6-DZF-23

12V 23Ah(2hr) VRLA GEL BATTERY



Chilwee Graphene Series VRLA Gel Battery is designed based on DZF series supported with **Chilwee Super Graphene Technology**, which enables the battery with an excellent large current discharge capability and larger capacity as well as fast charging. The Chilwee Graphene Series provides longer voyage and stronger power for motive power applications, i.e. electric bicycles, electric tricycles, electric motorcycles and other device require DC power source.

FEATURES

* Designed based on Graphene with the features of reliability, safety and high cost efficiency as well as fast charging. Thicker plate design enables longer service life.

Super Energy Density up to 60WH/KG

* Direct Cast-Welding Technology is applied to connect each cell, which makes the battery has lower internal resistance. **1.8C super large discharge current Up to 30 minutes.**

Super long cycle life. 50% Depth of discharge is up to 1500 cycles (at 25°C)

Super performance on High/Low temperature area. Cycle life is over 400cycles of 70% Depth of Discharge of temperature 45°C

Super fast charging. 30mintues fast charge into 70% nominal Capacity.

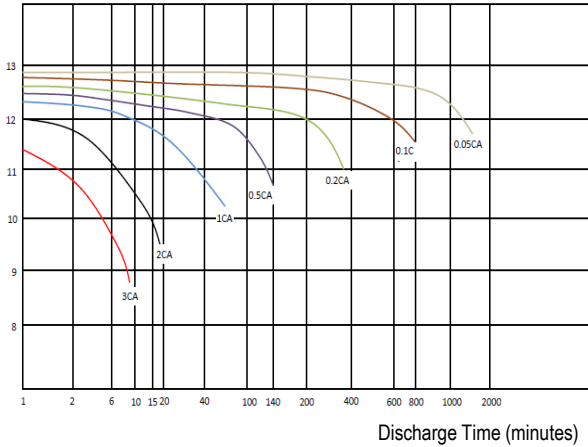
SPECIFICATION

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)	26Ah
	10h rate (to 1.80V/Cell)	28Ah
	20h rate (to 1.85V/Cell)	30Ah
Nominal Weight (Kgs)		Approx. 7.0±0.1 Kgs
Dimension (L X W X H, Total Height. mm)		(181mm±2) X (77mm±2) X (170mm±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)		3.5-4A
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

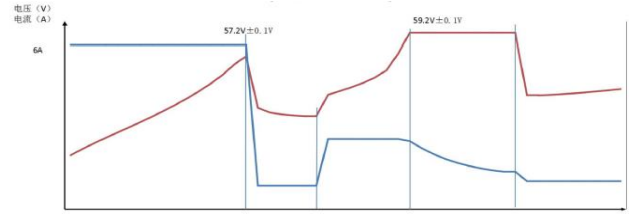
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Discharge Curves at Different Discharge Rate (25°C)
Voltage (V)



Charge Curve for 6-DZF-23 (4 Blocks/String)

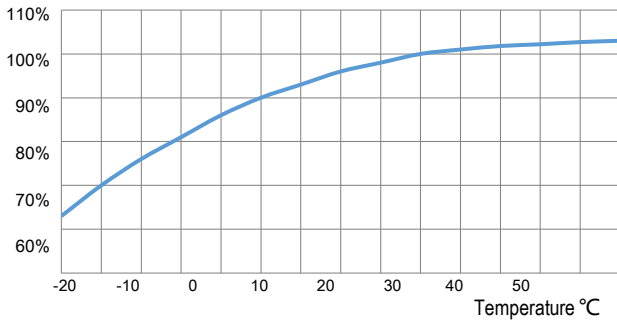


Phase 1: Constant charge current is 3.5-4A until charge voltage is gradually risen up to $57.2V \pm 0.1V$; keep still for 5 minutes

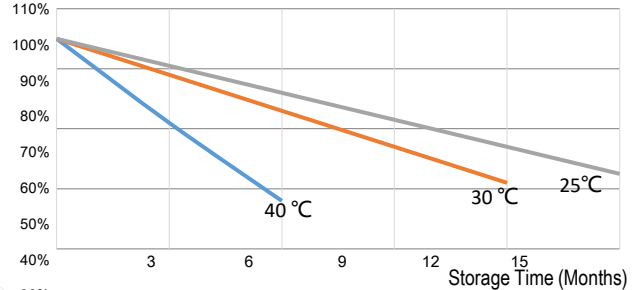
Phase 2: Constant voltage $59.2V \pm 0.1V$ and constant charge current 2A.

Phase 3: When charge current drops to 0.6A then turn to 0.2A constant current charge for 90minutes. Temperature compensation rate is 2.5-4.0mV (Cell/°C)

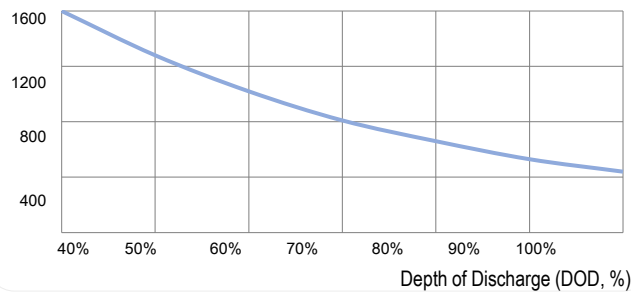
Effect of Temperature on Capacity



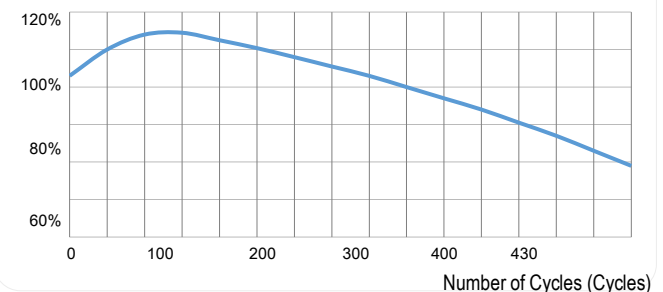
Capacity Retention Characteristics



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-59V	73.3V-73.7V	88.0V-88.4V
	Float Charge Voltage (V)	54.8V-55.2V	68.6V-69.0V	82.3V-82.7V
	Max. Charge Current (A)	3.5A-4.0A	3.5A-4.0A	3.5A-4.0A
	Shifting Current (A)	0.55A-0.6A	0.55A-0.6A	0.55A-0.6A
	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	Low-voltage Protection (V)	42V±0.5V	52.5V±0.5V	63V±0.5V
	Limited Current (A)	≤25A	≤25A	≤25A
	Lock Turn-on Current (A)	≤0.15A	≤0.15A	≤0.15A
Electric Motor Setting	Average Current (A)	≤10A	≤10A	≤10A
	Electric Motor Power (W)	≤450W	≤600W	≤650W

* 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:

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