



Chilwee Plus Series VRLA Gel Battery is designed based on DZM series supported with **Direct Cast-Welding Technology**, which enables the battery with an excellent large current discharge capability and larger capacity. The Chilwee Plus 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 DZM series with the features of reliability, safety and high cost efficiency. Thicker plate design enables longer service life.
- * Direct Cast-Welding Technology is applied to connect each cell, which makes the battery has lower internal resistance. Large current discharge/charge is enabled, and no risk of short-circuit between cells
- * Fully sealed and enhanced Polymer Gel is applied to ensure no leaking
- * Increased positive active material to improve the battery's initial capacity and service life
- * Thick AGM separator design to prevent short-circuit

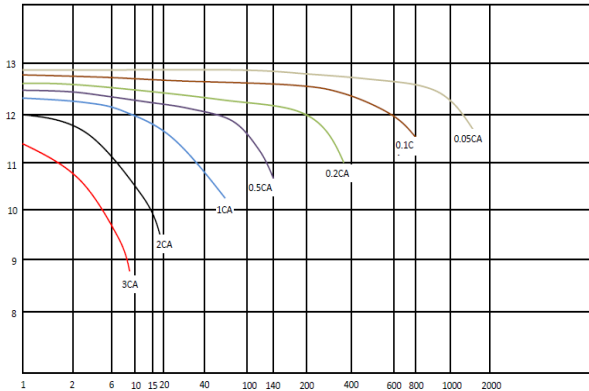
SPECIFICATION

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)	21Ah
	3h rate (to 1.75V/Cell)	23Ah
	5h rate (to 1.80V/Cell)	25Ah
	10h rate (to 1.80V/Cell)	27Ah
	20h rate (to 1.85V/Cell)	29Ah
Nominal Weight (Kgs)		Approx. 7.2 Kgs
Dimension (L X W X H, Total Height. mm)		(181mm±2) X (77mm±2) X (170mm±2), (170mm±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)		2.7A
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

6-DZM-20A+

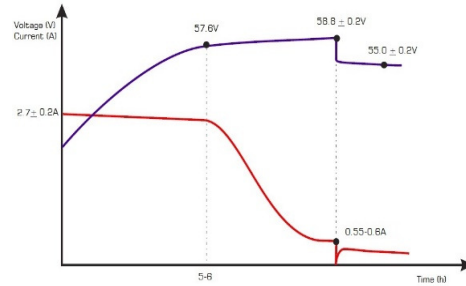
12V 20Ah(2hr) VRLA GEL BATTERY

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



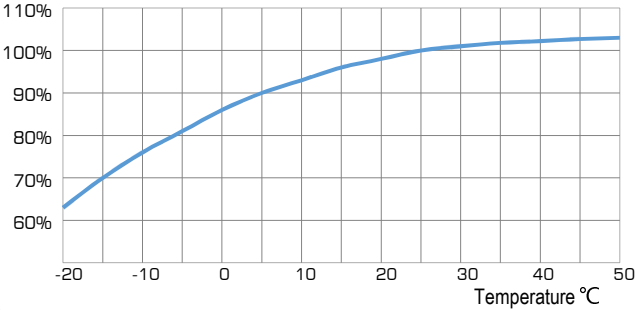
Discharge Time (minutes)

Charge Curve for 6-DZM-20A+ (4 Blocks/String)

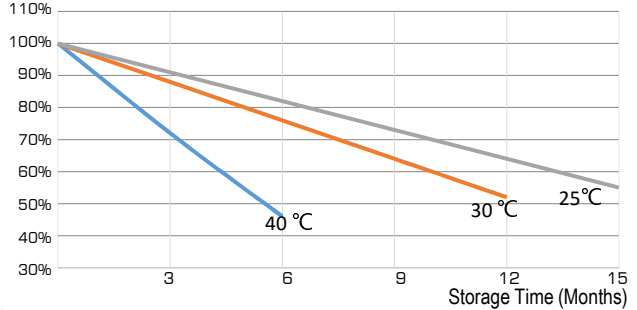


Phase 1: The Max. charge current is 2.7A, and the charge voltage is gradually risen up to 57.6V;
Phase 2: The charge voltage is gradually risen up to 58.8V+ 0.2V. When the charge current has dropped to 0.55A-0.6A, shifting to float charge.
Phase 3: The constant float charge voltage is 55.0V+ 0.2V.

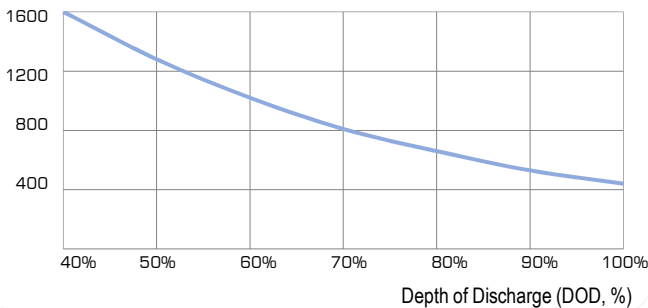
Effect of Temperature on Capacity



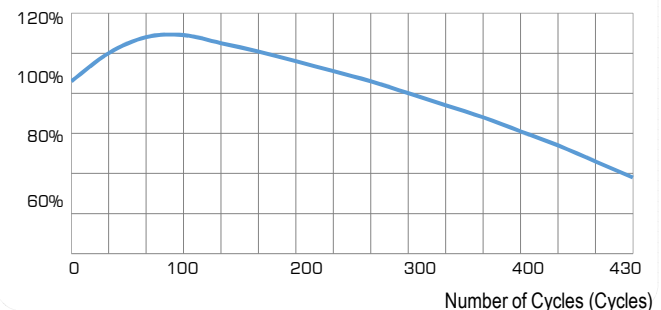
Capacity Retention Characteristics



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-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)	2.3A-2.7A	2.3A-2.7A	2.3A-2.7A
	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.

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