超威 CHILWEE

A Reliable Power Solution Provider

6-EVF-120 12V 120Ah(3hr) VRLA GEL BATTERY

Chilwee EVF Series VRLA Gel Battery is specially designed for electric vehicles, i.e. electric automobiles, electric road vehicles, golf cart, low speed electric cart,etc. and other devices require DC power source. The EVF 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

Extra Long Life: Chilwee EVF Series are designed with high quality grid alloy enables the grid with features of anti-corrosion, low gas emission and excellent deep cycle performance, as well as hign density and special deep cycle lead paste prescription is adopted to ensure extra long cycle life. The cycle life may reach 600+ cycles @ 80% DOD.

High Capacity and High Energy Density: Chilwee EVF Series are designed with adequate active material and higher electrolyte density to increase the battery's capacity within certain dimension and weight, so as to keep the battery with high energy density to be compatible with most of the electric vehicle without providing extra space to install batteries.

High Reliability and Safety: High strength ABS battery container and lid, perfect safety valve design, and high strength & excellent large current electroconductivity copper terminal design are adopted to ensure the Chilwee EVF Series with high reliability and safety at extreme condition.

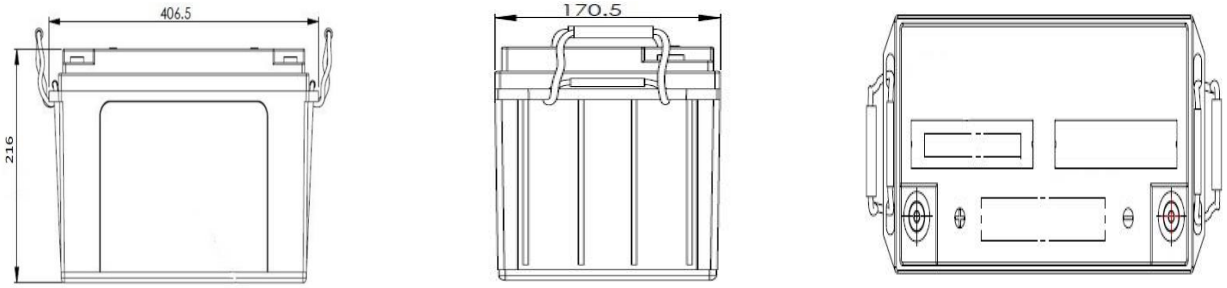
High Environmental Adaptability: Chilwee EVF Series adopts special fumed silica Gel in electrolyte and special Gel type separator to prevent electrolyte sratification. This can significantly improve the battery's service life and environmental adptability.

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.

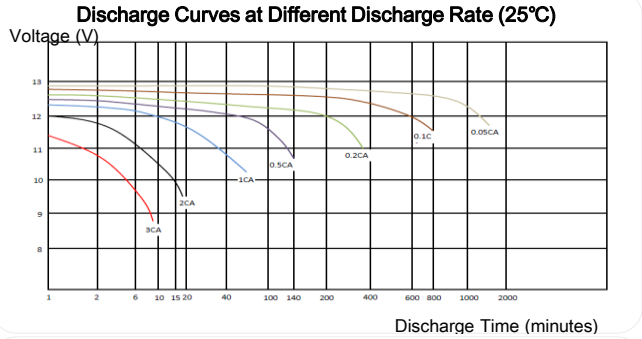
SPECIFICATION

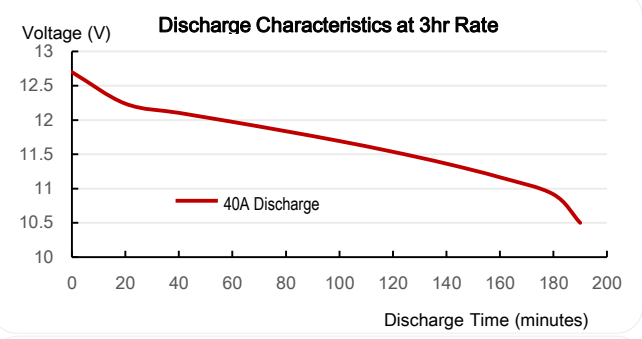
Nominal Voltage (V)		12V
Open Circuit Voltage (V/Block)		12.8V - 13.4V
Number of Cells (Per Block)		6 Cells
Rated Capacity (Ah, 25℃)	2h rate (to 1.75V/Cell)	106Ah
	3h rate (to 1.75V/Cell)	120Ah
	5h rate (to 1.80V/Cell)	130Ah
	10h rate (to 1.85V/Cell)	150Ah
	20h rate (to 1.85V/Cell)	160Ah
Nominal Weight (Kgs)		Approx. 42 Kgs
Dimension (L X W X H, Total Height. mm)		(407mm±3) X (170mm±3) X (209mm±3), (216mm±3)
Container Material		Enhanced ABS
Charge Voltage	Float (V/Block)	13.80V
	Cycle (V/Block)	14.65V - 14.75V
Maximum Discharge Current (A)		600A (5s)
Maximum Charge Current (A)		20A

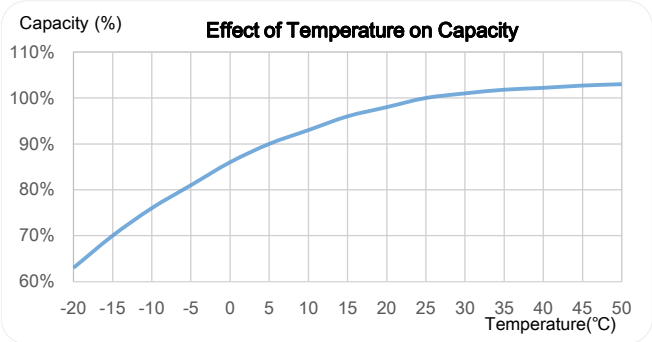
DIMENSION

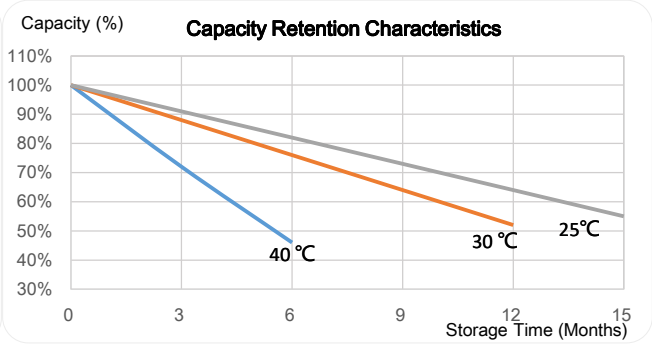


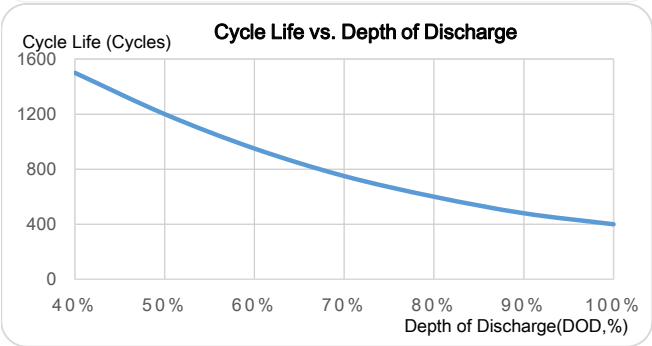
TECHNICAL CURVES

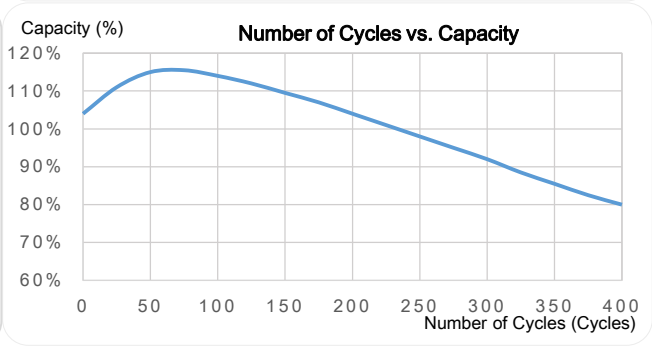




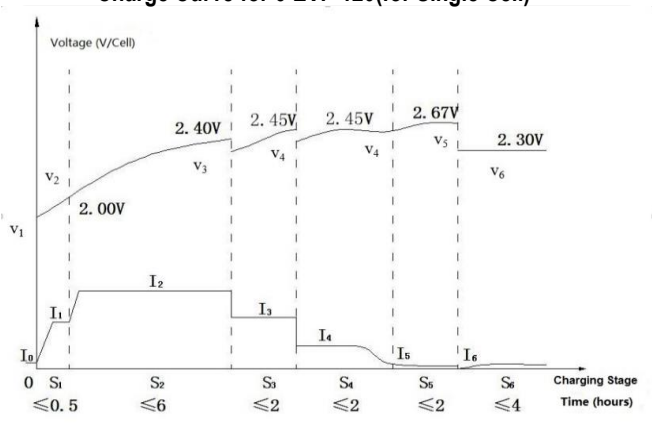








CHARGE CURVE & METHOD



Charge Method

1. Pre-charge Stage: When the battery is connected to the charger, the charger shall detect the voltage of the battery. For the battery's voltage at between V1-V2 or the battery pack is pre-charged at a current beweent I0-I1. When the battery's voltage reaches V2 or the charge time reaches S1, the charge enters into next stage. Parameters refer to Table 1, Appendix.

2. Constant Current Charge Stage: Charge current is I2; When the charge voltage reaches V3 or the charge time reaches S2, the charge enters into next stage. Parameters refer to Table 2, Appendix.

3. Constant Current Charge Stage: Charge current is I3; When the maximum voltage reaches V4 or the charge time reaches S3, the charge enters into next stage.Parameters refer to Table 3, Appendix.

4. Constant Voltage Limited Current Charge Stage: The constant charge voltage is V4, limited current is I4.When the charge current drops to the lower limit value of I4 as Table 4 shown, or the charge time reaches S4, the charge enters into next stage. Parameters refer to Table 4, Appendix.

5. Trickle Charge Stage: When the charge time S2 is less than 3 hours, trickle charge is not activated. Otherwise the limited voltage is V5 the constant current is I5 or the charge time reaches S5,the charge enters into next stage.Parameters refer to Table 5, Appendix.

6. Float Charge Stage: Constant voltage is V6, limited current is I6.The charger shall be cut off while the charge time is within 4 hours.Parameters refer to Table 6, Appendix.

Detailed Charging Parameters please refer to "APPENDIX II: CHARGE PARAMETERS FOR EVF SERIES"

** 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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APPENDIX II: CHARGE PARAMETERS FOR EVF SERIES

Table 1 - Parameters for Pre-charge Stage

Battery Model	Voltage Range: V_1 - V_2 (V per Block)	Constant Current: I_0～I_1 (A)	Pre-Charge Time: S_1 (h)	Temperature Compensation (V/℃)
3-EVF-180A	3.0V - 6.0V	3.1A - 18.0A	⩽ 0.5h	
3-EVF-200A / 3-EVF-200T				
4-EVF-150A/4-EVF-150	4.0V - 8.0V	2.2A - 14.0A		
6-EVF-60	6.0V - 12.0V	2.0A - 6.0A		
6-EVF-70T	6.0V - 12.0V	2.0A - 7.0A		
6-EVF-80	6.0V - 12.0V	2.0A - 8.0A		
6-EVF-100A / 6-EVF-100T	6.0V - 12.0V	2.5A - 10.0A		
6-EVF-110T	6.0V - 12.0V	2.5A - 11.0A		
6-EVF-120	6.0V - 12.0V	2.5A - 12.0A		
6-EVF-150A / 6-EVF-150T	6.0V - 12.0V	2.5A - 15.0A		

Table 2 - Parameters for Constant Current Charge Stage

Battery Model	Voltage Range: V_3 (V per Block)	Constant Current: I_2 (A)	Charge Time: S_2 (h)	Temperature Compensation (V/℃)
3-EVF-180A	7.2V	30.0A	⩽ 6h	-0.012
3-EVF-200A / 3-EVF-200T				
4-EVF-150A/4-EVF-150	9.6V	25.0A		-0.016
6-EVF-60	14.4V	10.0A		-0.024
6-EVF-70T	14.4V	12.0A		-0.024
6-EVF-80	14.4V	14.0A		-0.024
6-EVF-100A / 6-EVF-100T	14.4V	15.0A		-0.024
6-EVF-110T	14.4V	20.0A		-0.024
6-EVF-120	14.4V	20.0A		-0.024
6-EVF-150A / 6-EVF-150T	14.4V	25.0A		-0.024

Table 3 - Parameters for Constant Current Charge Stage

Battery Model	Voltage Range: V_4 (V per Block)	Constant Current: I_3 (A)	Charge Time: S_3 (h)	Temperature Compensation (V/℃)
3-EVF-180A	7.35V	30.0A	⩽ 2h	-0.012
3-EVF-200A / 3-EVF-200T				
4-EVF-150A/4-EVF-150	9.80V	25.0A		-0.016
6-EVF-60	14.70V	10.0A		-0.024
6-EVF-70T	14.70V	12.0A		-0.024
6-EVF-80	14.70V	14.0A		-0.024
6-EVF-100A / 6-EVF-100T	14.70V	15.0A		-0.024
6-EVF-110T	14.70V	20.0A		-0.024
6-EVF-120	14.70V	20.0A		-0.024
6-EVF-150A / 6-EVF-150T	14.70V	25.0A		-0.024

Table 4 - Parameters for Constant Voltage Limited Current Charge Stage

Battery Model	Voltage Range: V_4 (V per Block)	Limited Current: I_4 (A)	Charge Time: S_4 (h)	Temperature Compensation (V/℃)
3-EVF-180A	7.35V	10.0A - 3.2A	⩽ 2h	-0.012
3-EVF-200A / 3-EVF-200T	7.35V	10.0A - 3.6A		-0.012
4-EVF-150A/4-EVF-150	9.80V	7.5A - 2.7A		-0.016
6-EVF-60	14.70V	3.0A - 1.1A		-0.024
6-EVF-70T	14.70V	3.5A - 1.3A		-0.024
6-EVF-80	14.70V	4.0A - 1.5A		-0.024
6-EVF-100A / 6-EVF-100T	14.70V	5.0A - 1.8A		-0.024
6-EVF-110T	14.70V	6.0A - 2.0A		-0.024
6-EVF-120	14.70V	6.0A - 2.2A		-0.024
6-EVF-150A / 6-EVF-150T	14.70V	7.5A - 2.7A		-0.024

Table 5 - Parameters for Trickle Charge Stage

Battery Model	Voltage Range: V_5 (V per Block)	Limited Current: I_5 (A)	Charge Time: S_5 (h)	Temperature Compensation (V/℃)
3-EVF-180A	8.01V	1.8A	⩽ 2h	-0.012
3-EVF-200A / 3-EVF-200T	8.01V	2.0A		-0.012
4-EVF-150A/4-EVF-150	10.68V	1.5A		-0.016
6-EVF-60	16.02V	0.6A		-0.024
6-EVF-70T	16.02V	0.7A		-0.024
6-EVF-80	16.02V	0.8A		-0.024
6-EVF-100A / 6-EVF-100T	16.02V	1.0A		-0.024
6-EVF-110T	16.02V	1.1A		-0.024
6-EVF-120	16.02V	1.2A		-0.024
6-EVF-150A / 6-EVF-150T	16.02V	1.5A		-0.024

Table 6 - Parameters for Float Charge Stage

Battery Model	Voltage Range: V_6 (V per Block)	Limited Current: I_6 (A)	Charge Time: S_6 (h)	Temperature Compensation (V/℃)
3-EVF-180A	6.9V	1.8A	⩽ 4h	-0.012
3-EVF-200A / 3-EVF-200T	6.9V	2.0A		-0.012
	9.2V	1.5A		-0.016
6-EVF-60	13.8V	0.6A		-0.024
6-EVF-70T	13.8V	0.7A		-0.024
6-EVF-80	13.8V	0.8A		-0.024
6-EVF-100A / 6-EVF-100T	13.8V	1.0A		-0.024
6-EVF-110T	13.8V	1.1A		-0.024
6-EVF-120	13.8V	1.2A		-0.024
6-EVF-150A / 6-EVF-150T	13.8V	1.5A		-0.024