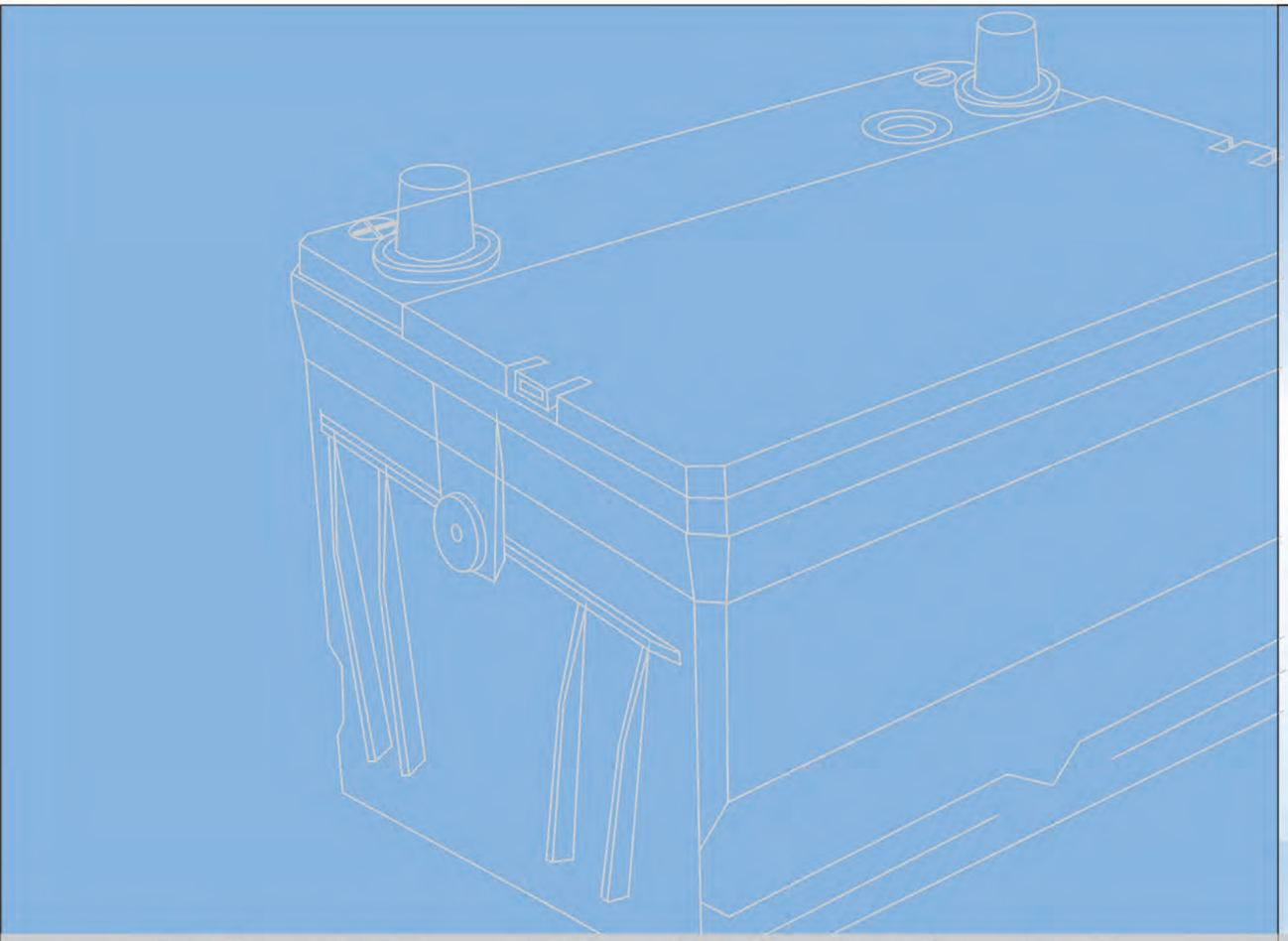

广州市虎头实业有限公司
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VRLA BATTERY

※ AGM BATTERY

※ GEL BATTERY

※ LAWN-MOWER BATTERY

广州市虎头实业有限公司
Guangzhou Tiger Head Industrial Co., Ltd

COMPANY INTRODUCTION

Guangzhou Tiger Head Industrial Co., Ltd is the backbone enterprise of Tiger Head Group, with a long history traced back to 1928.

As a large government-owned company, Tiger Head Industrial focuses on diversified development and makes huge investment in R&D, purchasing, producing and marketing. Now we deal with various products including lead acid storage batteries, solar products, lighting products, polymer li-lion batteries, jump starters, battery electric appliances, battery raw material, tomato paste, baby diapers, etc.

We pay much attention to quality. All products are under strict quality control in every process from raw material purchasing to final product testing. With high quality and good service, we win our customers' faith and our products sell well in the world, especially in Africa, Middle East, Asia, South America, Europe, etc.

Tiger Head Industrial and its parent company Tiger Head Battery Group share some famous brands, such as "Tiger Head", "555", "TIHAD", "Lighting", "funmily", "Wivin", etc.

Tiger Head Industrial devotes to strengthening our brands and continuing to develop excellent products. We optimize allocation of resources globally and build core competitiveness, striving to realize a win-win business with our partners.

Look forward to the future, with your trust and support, Tiger Head Industrial continues to develop excellent products and offering the best service. Let' s work together, embrace a flourishing future!

Production Capacity

TIGER HEAD GROUP has four production bases, and importiog equipment from Canada, Italy, Germany and Korea to make sure all products are well controlled and it has a stable high production capacity.

To strive for high-grade product quality, our company makes strict inspection and selection on materials which are ensuring high-quality and high-standard materials used in assembling production for all products.

Expander Machinery

Automatic Equipment

VRLA-AGM BATTERY

INTRODUCTION

TIGER HEAD VRLA-AGM Batteries indicate Valve-Regulated Lead-Acid batteries with Absorbed Glass Mat (AGM) separators. Since 2004, TIGER HEAD GROUP has made rapid progress. By using the matured technology invented more than half century , TIGER HEAD GROUP is now able to design, build and market high quality, long life VRLA-AGM batteries from 2V to 24V, and 0.5AH to 3500AH. TIGER HEAD GROUP produces batteries from scratch and is capable of engineering tool and mold upon on customers special requests. TIGER HEAD GROUP is now one of the fastest developing lead-acid battery manufacturers in the world.

DEFINITIONS OF VRLA-AGM BATTERY

A VRLA-AGM battery is an electric storage lead-acid battery

- Sealed with special compound epoxy and using pressure controlled vent valves.
- Starved electrolyte design - acid solution is absorbed in separators .
- Using a recombination reaction to prevent the escape of hydrogen and oxygen gases.
- Non spillable - can be operated in any position. But, upside-down installation is not recommended.
- Maintenance free. But connections must be retorqued and the batteries should be cleaned periodically.

A VRLA-AGM battery uses recombinant technology. The oxygen produced from the positive plates of the battery is absorbed by the negative plates. This suppresses the generation of hydrogen at the negative plates. The recombination of oxygen and hydrogen leads to Water (H_2O), retaining the electrolyte amount within the battery. Water filling is never required. Battery should never be opened as this would damage the battery with additional oxygen from the air. The warranty will be void if the battery is opened.

APPLICATIONS

• All Purpose Battery Needs • UPS • EPS • Emergency Light • Signal • Security System • Electronic Equipment • DC Power Supply • Tele-communication • Power System • Network Communication

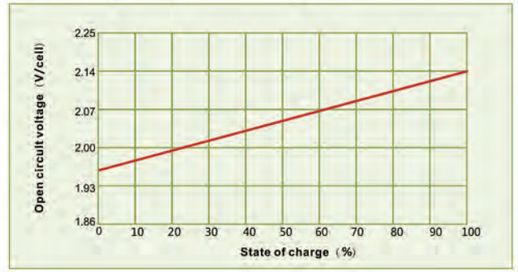
FEATURES

- Maintenance-free, no water adding required.
- Sealed Valve-Regulated
- Spill proof / leak proof
- Deep discharge protection
- Plate grids from lead-calcium alloy, free of antimony
- No corrosion
- Installs vertically or horizontally
- Low gassing (unless overcharged)
- Good cycling and stationary performance
- Good high rate discharges
- Long shelf life
- Rugged and vibration-resistant

Charge Voltages and Temperature Ranges

Temp (°F)	Boost Charge(V/cell)		Float Charge(V/cell)		Temp (°C)
	Optimum	Maximu m	Optimum	Maximu m	
⩾120	2.23	2.28	2.15	2.18	⩾49
110-120	2.27	2.32	2.17	2.22	43-49
100-11	2.28	2.33	2.18	2.23	38-43
90-100	2.30	2.35	2.20	2.25	32-38
80-90	2.32	2.37	2.22	2.27	27-32
70-80	2.35	2.40	2.25	2.30	21-27
60-70	2.38	2.43	2.28	2.33	16-21
50-60	2.40	2.45	2.30	2.35	10-16
40-50	2.43	2.48	2.33	2.38	4-10
30-40	2.46	2.51	2.34	2.39	(-1)-4
20-30	2.49	2.54	2.36	2.41	(-6)-(-1)
10-20	2.53	2.58	2.38	2.43	(-12)-(-6)
⩽10	2.58	2.63	2.39	2.44	⩽-12

State of charge VS.open circuit voltage

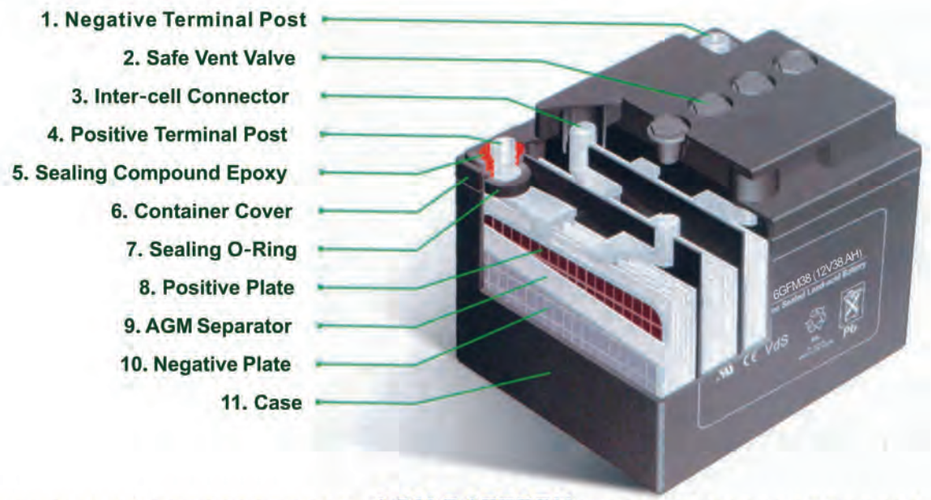


BATTERY OPERATION THEORY

$$PbO_2 + 2H_2SO_4 + Pb \underset{\text{Charging}}{\overset{\text{Discharging}}{\rightleftharpoons}} PbSO_4 + 2H_2O + PbSO_4$$

PbO_2	$2H_2SO_4$	Pb	$PbSO_4$	$2H_2O$	$PbSO_4$
Porous Lead Dioxide Positive Plate Active Material	Sulfuric Acid Electrolyte	Porous Lead Negative Plate Active Material	Lead Sulfate Positive Plate Active Material	Water Electrolyte	Lead Sulfate Negative Plate Active Material

VRLA BATTERY CONSTRUCTION



FM SERIES - GENERAL PURPOSE(AGM)

General Features

- Using oxygen recombination technology: maintenance-free
- PbCaSn alloy for plate grids: less gassing, less self-discharging
- High quality AGM separator: extend cycle life and prevent micro short circuit
- ABS material: increase the strength of battery container. (Flame-retardant ABS is optional)
- High purity raw material: ensure low self discharge rate
- Silver-coated copper terminals (T1, T2 terminal), brass insert terminals and lead terminals improve the electric conductivity

FM Models and Parameters (Small size)

Typical Applications

- All purpose
- Uninterruptable Power Supply (UPS)
- Electric Power System (EPS)
- Emergency backup power supply
- Emergency light
- Railway signal
- Aircraft signal
- Alarm and security system
- Electronic apparatus and equipment
- Communication power supply
- DC power supply
- Auto control system

Model	Nominal Voltage (V)	Rated Capacity (Ah)				Approx Dimension								Approx Weight		Terminal type
		20HR	10HR	5HR	1HR	Length		Width		Height		Total Height				
		1.80V/cell	1.80V/cell	1.75V/cell	1.60V/cell	mm	in.	mm	in.	mm	in.	mm	in.	kg	lbs	
2FM3.5	4	3.50	3.26	2.94	2.12	90.0	3.54	34.0	1.34	59.0	2.32	65.0	2.56	0.45	0.99	T1
2FM4.5	4	4.50	4.19	3.78	2.73	52.5	2.07	48.0	1.89	94.0	3.70	100.0	3.94	0.60	1.32	T1
2FM5.0	4	5.00	4.65	4.20	3.04	91.0	3.58	50.0	1.97	74.0	2.91	74.0	2.91	0.66	1.46	T1
2FM8.0	4	8.00	7.44	6.80	5.02	91.0	3.58	50.0	1.97	101.0	3.98	101.0	3.98	0.97	2.14	T2
2FM10	4	10.0	9.30	8.50	6.28	101.5	4.00	50.0	1.97	94.0	3.70	100.0	3.94	1.14	2.51	T2
3FM1.0	6	1.00	0.93	0.84	0.607	51.0	2.01	42.0	1.65	51.0	2.01	57.0	2.24	0.25	0.55	T1
3FM1.2	6	1.20	1.12	1.01	0.728	97.0	3.82	24.0	0.94	51.5	2.03	57.5	2.26	0.29	0.64	T1
3FM2.0	6	2.00	1.86	1.68	1.21	43.0	1.69	37.0	1.46	76.0	2.99	76.0	2.99	0.34	0.75	/
3FM2.8	6	2.80	2.60	2.35	1.70	66.0	2.60	33.0	1.30	97.0	3.82	103.0	4.06	0.57	1.26	T1
3FM3.2	6	3.20	2.98	2.69	1.94	134.0	5.28	34.0	1.34	60.0	2.36	66.0	2.60	0.67	1.48	T1
3FM4.0	6	4.00	3.72	3.36	2.43	70.0	2.76	47.0	1.85	100.0	3.94	106.0	4.17	0.74	1.63	T1
3FM4.0H	6	4.00	3.72	3.36	2.43	70.0	2.76	47.0	1.85	100.0	3.94	106.0	4.17	0.73	1.61	T1
3FM4.5	6	4.50	4.19	3.78	2.73	70.0	2.76	47.0	1.85	100.0	3.94	106.0	4.17	0.81	1.79	T1
3FM4.5H	6	4.50	4.19	3.78	2.73	70.0	2.76	47.0	1.85	100.0	3.94	106.0	4.17	0.75	1.65	T1
3FM4.5S	6	4.50	4.19	3.78	2.73	67.0	2.64	67.0	2.64	96.0	3.78	109.0	4.29	0.81	1.79	S
3FM5.0	6	5.00	4.65	4.20	3.04	169.0	6.65	35.0	1.38	70.0	2.76	74.0	2.91	0.95	2.09	T1
3FM5.4	6	5.40	5.02	4.53	3.28	70.0	2.76	47.0	1.85	100.0	3.94	106.0	4.17	0.80	1.76	T1
3FM6.0	6	6.00	5.58	5.05	3.64	70.0	2.76	47.0	1.85	100.0	3.94	106.0	4.17	0.88	1.94	T1
3FM7.0	6	7.00	6.51	5.95	4.40	151.0	5.94	34.0	1.34	94.0	3.70	100.0	3.94	1.10	2.43	T2
3FM7.2	6	7.20	6.70	6.12	4.52	151.0	5.94	34.0	1.34	94.0	3.70	100.0	3.94	1.20	2.65	T2
3FM7.5	6	7.50	6.98	6.40	4.71	151.0	5.94	34.0	1.34	94.0	3.70	100.0	3.94	1.26	2.78	T2

Note:model number followed with H-tall version and L-long version

FM Models and Parameters Continued （Small Size）

Model	Nominal Voltage (V)	Rated Capacity (Ah)				Approx Dimension								Approx Weight		Terminal type
		20HR	10HR	5HR	1HR g	Length		Width		Height		Total Height				
		1.80V/cell	1.80V/cell	1.75V/cell	1.60V/cell	mm	in.	mm	in.	mm	in.	mm	kn.		lbs	
6FM0.8	12	0.80	0.74	0.67	0.486	96.0	3.78	25.0	0.98	62.0	2.44	62.0	2.44	0.35	0.77	/
6FM1.2	12	1.20	1.12	1.01	0.728	97.0	3.82	43.0	1.69	52.0	2.05	58.0	2.28	0.57	1.26	T1
6FM1.9	12	1.90	1.77	1.60	1.15	178.0	7.01	35.0	1.38	60.0	2.36	66.0	2.60	0.87	1.92	T1
6FM2.2	12	2.20	2.05	1.85	1.34	70.0	2.76	48.0	1.89	98.0	3.86	104.0	4.09	0.80	1.76	T1
6FM2.3	12	2.30	2.14	1.93	1.40	178.0	7.01	35.0	1.38	60.0	2.36	66.0	2.60	0.96	2.12	T1
6FM2.8	12	2.80	2.60	2.35	1.70	132.0	5.20	33.0	1.30	98.0	3.86	104.0	4.09	1.18	2.60	T1
6FM2.9	12	2.90	2.70	2.44	1.76	79.0	3.11	56.0	2.20	99.0	3.90	105.0	4.13	1.10	2.43	T1
6FM3.2	12	3.20	2.98	2.69	1.94	134.0	5.28	67.0	2.64	60.5	2.38	66.5	2.62	1.35	2.98	T1
6FM4.0L	12	4.00	3.72	3.36	2.43	195.0	7.68	47.0	1.85	70.0	2.76	76.0	2.99	1.60	3.53	T1
6FM4.0	12	4.00	3.72	3.36	2.43	90.0	3.54	70.0	2.76	101.0	3.98	107.0	4.21	1.45	3.20	T1
6FM4.5	12	4.50	4.19	3.78	2.73	90.0	3.54	70.0	2.76	101.0	3.98	107.0	4.21	1.48	3.26	T1
6FM5.0	12	5.00	4.65	4.20	3.04	151.0	5.94	53.0	2.09	93.0	3.66	99.0	3.90	1.75	3.86	T1
6FM5.4	12	5.40	5.02	4.54	3.28	90.0	3.54	70.0	2.76	101.0	3.98	107.0	4.21	1.65	3.64	T1
6FM6.0	12	5.80	5.58	5.05	3.64	90.0	3.54	70.0	2.76	101.0	3.98	107.0	4.21	1.88	4.15	T1
6FM6.0H	12	6.00	5.58	5.05	3.64	140.0	5.51	48.0	1.89	102.0	4.02	103.0	4.06	1.61	3.55	NTI/PT2
6FM6.5	12	6.50	6.05	5.55	4.08	151.0	5.94	65.0	2.56	93.5	3.68	99.0	3.90	2.06	4.54	T1
6FM7.0	12	7.00	6.53	5.80	4.26	151.0	5.94	65.0	2.56	93.5	3.68	99.0	3.90	2.18	4.81	T2
6FM7.2	12	7.20	6.72	6.00	4.38	151.0	5.94	65.0	2.56	93.5	3.68	99.0	3.90	2.35	5.18	T2
6FM7.5	12	7.50	7.00	6.25	4.56	151.0	5.94	65.0	2.56	93.5	3.68	99.0	3.90	2.45	5.40	T2
6FM7.8	12	7.80	7.28	6.50	4.74	151.0	5.94	65.0	2.56	93.5	3.68	99.0	3.90	2.50	5.51	T2
6FM8.5	12	8.50	7.93	7.15	5.31	151.0	5.94	65.0	2.56	93.5	3.68	99.0	3.90	2.45	5.40	T2
6FM10	12	10.0	9.30	8.50	6.28	151.0	5.94	98.0	3.86	95.0	3.74	101.0	3.98	3.25	7.17	T2
6FM10H	12	10.0	9.30	8.50	6.28	151.0	5.94	65.0	2.56	111.0	4.37	117.0	4.61	3.20	7.06	T2
6FM12	12	12.0	11.2	10.2	7.54	151.0	5.94	98.0	3.86	95.0	3.74	101.0	3.98	3.50	7.72	T2
6FM14	12	14.0	13.0	11.9	8.79	151.0	5.94	98.0	3.86	95.0	3.74	101.0	3.98	4.05	8.93	T2
6FM15	12	15.0	14.0	12.8	9.42	181.5	7.15	77.0	3.03	167.5	6.59	167.5	6.59	4.70	10.4	T3
6FM18	12	18.0	16.7	15.3	11.3	181.5	7.15	77.0	3.03	167.5	6.59	167.5	6.59	5.40	11.9	T3
6FM20	12	20.0	18.6	17.0	12.6	181.5	7.15	77.0	3.03	167.5	6.59	167.5	6.59	5.78	12.7	T12
6FM24	12	24.0	22.3	20.4	15.1	166.0	6.54	175.0	6.89	125.0	4.92	125.0	4.92	7.20	15.9	T3
6FM24H	12	24.0	22.3	20.4	15.1	165.0	6.50	125.0	4.92	175.0	6.89	175.0	6.89	8.70	19.2	T12
6FM26	12	26.0	24.2	22.1	16.3	166.0	6.54	175.0	6.89	125.0	4.92	125.0	4.92	7.80	17.2	T12

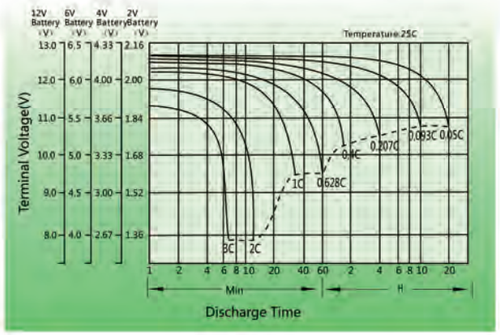
SUCCESS FROM HARD WORK

BUSINESS NEEDS GOOD MORALITY

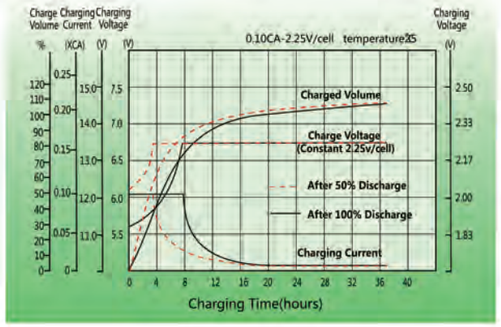
Model	Nominal Voltage (V)	Rated Capacity(Ah)				Approx Dimension								Approx Weight		Terminal type
		20HR	10HR	5HR	1HR	Length		Width		Height		Total Height				
		1.80V/cell	1.80V/cell	1.75V/cell	1.60V/cell	mm	in.	mm	in.	mm	in.	mm	in.	kg	lbs	
6FM28	12	28.0	26.0	23.8	17.6	166	6.54	175	6.89	125	4.92	125	4.92	8.1	17.9	T3/T12
6FM28H	12	28.0	26.0	23.8	17.6	165	6.5	125	4.92	175	6.89	175	6.89	9.5	20.9	T3/T10
6FM30	12	30.0	27.9	25.5	18.8	166	6.54	175	6.89	125	4.92	125	4.92	8.6	19.0	T12
6FM30H	12	30.0	27.9	25.5	18.8	195	7.68	130	5.12	164	6.46	178	7.01	9.7	21.4	T5
6FM33	12	33.0	30.7	28.1	20.7	195	7.68	130	5.12	164	6.46	180	7.09	10.5	23.2	T5
6FM35	12	35.0	32.6	29.8	22.0	195	7.68	130	5.12	164	6.46	178	7.01	11.2	24.7	T5/T6

FM Performance Characteristics (Small size)

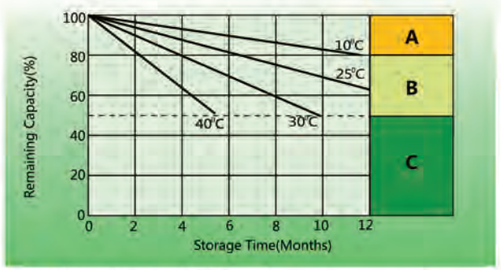
DISCHARGE CHARACTERISTICS



CHARGING CHARACTERISTICS(STANDBY USE)



SELF DISCHARGE CHARACTERISTICS

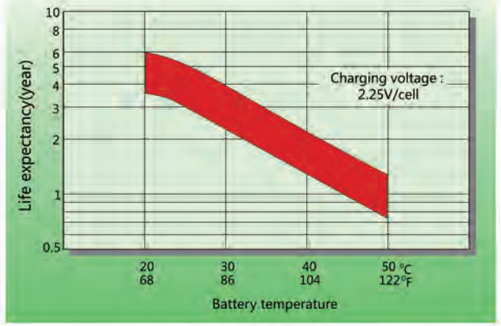


A No supplementary charge required
(Carry out supplementary charge before use if 100% capacity is required.)

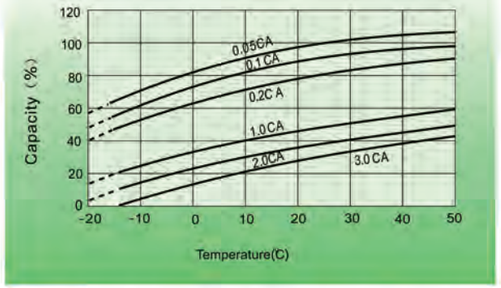
B Supplementary charge required before use. Optional charging way as below:
1.Charged for above 3 days at limited current 0.25CA and constant voltage 2.25V/cell.
2.Charged for above 20hours at limited current 0.25CA and constant voltage 2.45V/cell.
3.Charged for 8~10hours at limited current 0.05CA .

C Supplementary charge may often fail to recover the capacity.
The battery should never be left standing till this is reached.

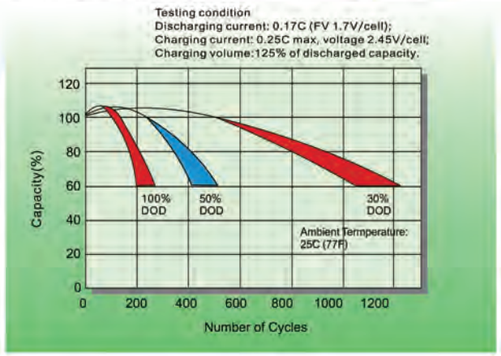
EFFECT OF TEMPERATURE ON LONG TERM FLOAT DESIGNED LIFE



TEMPERATURE EFFECTS IN RELATION TO BATTERY CAPACITY



CYCLE SERVICE LIFE IN RELATION TO THE DEPTH OF DISCHARGE



GFM Models and Parameters (Middle size)

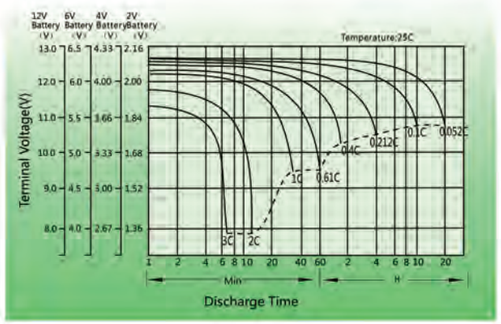
Typical Applications

- All purpose
- Uninterruptable Power Supply (UPS)
- Electric Power System (EPS)
- Emergency backup power supply
- Emergency light
- Railway signal
- Aircraft signal
- Alarm and security system
- Electronic apparatus and equipment
- Communication power supply
- DC power supply
- Auto control system

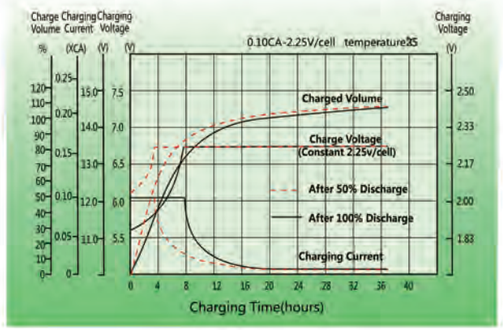
Model	Nominal Voltage (V)	Rated Capacity(Ah)				Approx Dimension								Approx Weight		Terminal type
		20HR	10HR	5HR	1HR	Length		Width		Height		Total Height				
		1.80V/cell	1.80V/cell	1.75V/cell	1.60V/cell	mm	in.	mm	in.	mm	in.	mm	in.	kg	lbs	
3GFM60	6	62.4	60.0	51.5	36.6	185.0	7.28	112.0	4.41	205.0	8.07	205.0	8.07	9.10	20.1	T2
3GFM120	6	124.8	120.0	103.0	73.2	280.0	11.0	128.0	5.04	203.0	7.99	203.0	7.99	16.8	37.0	T6
3GFM150	6	156.0	150.0	129.0	91.5	260.0	10.2	180.0	7.09	247.0	9.72	253.0	9.96	21.2	46.7	T7
3GFM200H	6	210.0	200.0	172.0	122.0	306.0	12.0	168.0	6.61	222.0	8.74	228.0	8.98	28.2	62.2	T8
6GFM38	12	40.0	38.0	32.7	23.2	197.0	7.76	165.0	6.50	170.0	6.69	170.0	6.69	12.2	26.9	T6
6GFM40	12	40.0	38.5	33.1	23.5	255.0	10.0	97.0	3.82	203.0	7.99	203.0	7.99	12.5	27.6	T7
6GFM45	12	46.8	45.0	38.7	27.5	197.0	7.76	165.0	6.50	170.0	6.69	170.0	6.69	14.2	31.3	T6
6GFM50	12	52.0	50.0	43.0	30.5	257.0	10.1	132.0	5.20	200.0	7.87	200.0	7.87	16.0	35.3	T6
6GFM55	12	57.2	55.0	47.3	33.6	229.0	9.02	138.0	5.43	205.0	8.07	211.0	8.31	16.5	36.4	T6
6GFM60	12	62.4	60.0	51.5	36.60	260.0	10.2	168.0	6.61	208.0	8.19	214.0	8.43	18.5	40.8	T6
6GFM65	12	65.0	62.1	53.6	37.5	348.0	13.7	167.0	6.57	178.0	7.01	178.0	7.01	19.2	42.3	T6
6GFM70	12	72.8	70.0	60.0	42.7	348.0	13.7	167.0	6.57	178.0	7.01	178.0	7.01	21.6	47.6	T6
6GFM75	12	78.0	75.0	64.5	45.8	260.0	10.2	168.0	6.61	208.0	8.19	214.0	8.43	22.3	49.2	T6
6GFM80	12	83.2	80.0	69.0	48.8	260.0	10.2	168.0	6.61	208.0	8.19	214.0	8.43	24.0	52.9	T6
6GFM90	12	93.6	90.0	77.5	54.9	330.0	13.0	173.0	6.81	212.0	8.35	220.0	8.66	28.0	61.7	T11
6GFM100	12	104.0	100.0	86.0	61.0	330.0	13.0	173.0	6.81	212.0	8.35	220.0	8.66	30.4	67.0	T11
6GFM120	12	124.8	120.0	103.2	73.2	408.0	16.1	177.0	6.97	225.0	8.86	225.0	8.86	35.0	77.2	T11
6GFM135	12	140.4	135.0	116.0	82.4	345.0	13.6	172.0	6.77	274.0	10.8	280.0	11.0	41.2	90.8	T11
6GFM150	12	156.0	150.0	129.0	91.5	483.0	19.0	170.0	6.69	238.5	9.39	238.5	9.39	43.5	95.9	T11
6GFM180	12	187.2	180.0	155.0	109.8	532.0	20.9	207.0	8.15	214.0	8.43	220.0	8.66	52.8	116.4	T11
6GFM200	12	208.0	200.0	172.0	122.0	522.0	20.6	240.0	9.45	218.0	8.58	224.0	8.82	60.2	132.7	T11
6GFM250	12	260.0	250.0	215.0	152.5	522.0	20.6	268.0	10.6	220.0	8.66	226.0	8.90	73.0	161.0	T11

GFM Performance Characteristics (Middle size)

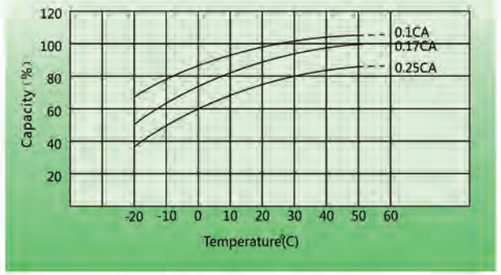
DISCHARGE CHARACTERISTICS



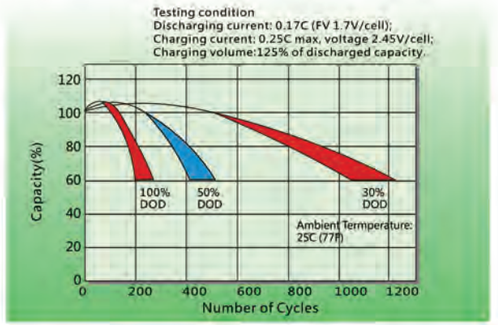
CHARGING CHARACTERISTICS(STANDBY USE)



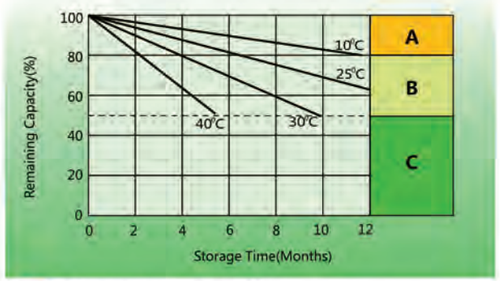
TEMPERATURE EFFECTS IN RELATION TO BATTERY CAPACITY



CYCLE SERVICE LIFE IN RELATION TO THE DEPTH OF DISCHARGE



SELF DISCHARGE CHARACTERISTICS

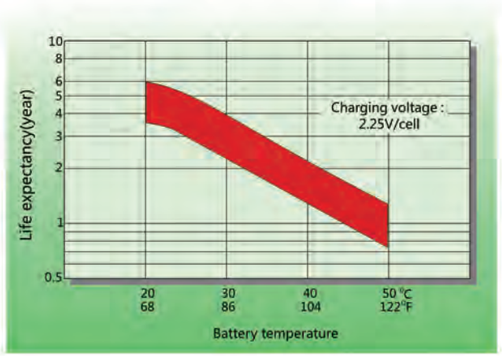


A No supplementary charge required
(Carry out supplementary charge before use if 100% capacity is required.)

B Supplementary charge required before use. Optional charging way as below:
1.Charged for above 3 days at limited current 0.25CA and constant voltage 2.25V/cell.
2.Charged for above 20hours at limited current 0.25CA and constant voltage 2.45V/cell.
3.Charged for 8~10hours at limited current 0.05CA .

C Supplementary charge may often fail to recover the capacity.
The battery should never be left standing till this is reached.

EFFECT OF TEMPERATURE ON LONG TERM FLOAT DESIGNED LIFE



FM Models and Parameters (2V Series)

Model	Nominal Voltage (V)	Rated Capacity (Ah)				Approx Dimension								Approx Weight		Terminal type
						Length		Width		Height		Total Height				
		20HR	10HR	5HR	1HR											
		1.80V/cell	1.80V/cell	1.75V/cell	1.60V/cell	mm	in.	mm	in.	mm	in.	mm	in.	kg	lbs	
FM65	2	68.2	65.0	56.5	39.5	170.0	6.69	72.0	2.83	205.0	8.07	212.0	8.35	4.7	10.4	T6
FM72	2	75.6	72.0	62.5	43.7	170.0	6.69	72.0	2.83	205.0	8.07	212.0	8.35	5.5	12.1	T6
FM100	2	105.0	100.0	87.0	60.7	170.0	6.69	72.0	2.83	205.0	8.07	212.0	8.35	6.0	13.2	T6
FM120	2	126.0	120.0	104.5	72.8	170.0	6.69	98.0	3.86	205.0	8.07	212.0	8.35	7.6	16.8	T7
FM150	2	157.6	150.0	130.5	91.1	170.0	6.69	98.0	3.86	205.0	8.07	212.0	8.35	8.5	18.7	T7
FM200	2	210.0	200.0	174.0	121.4	170.0	6.69	110.0	4.33	328.0	12.91	350.0	13.78	12.7	28.0	T11
FM250	2	262.0	250.0	217.5	151.8	170.0	6.69	110.0	4.33	328.0	12.91	350.0	13.78	13.8	30.4	T11
FM300	2	316.0	300.0	261.0	182.1	170.0	6.69	150.0	5.91	328.0	12.91	350.0	13.78	17.7	39.0	T11
FM350	2	368.0	350.0	304.5	212.5	170.0	6.69	150.0	5.91	328.0	12.91	350.0	13.78	19.3	42.6	T11
FM400	2	420.0	400.0	348.0	242.8	210.0	8.27	175.0	6.89	330.0	12.99	350.0	13.78	24.3	53.6	T11
FM450	2	472.0	450.0	391.5	273.2	210.0	8.27	175.0	6.89	330.0	12.99	350.0	13.78	27.0	59.5	T11
FM500	2	526.0	500.0	435.0	303.5	240.0	9.45	175.0	6.89	327.5	12.89	347.5	13.68	29.0	63.9	T11
FM600	2	630.0	600.0	522.0	364.2	300.0	11.8	175.0	6.89	330.0	12.99	350.0	13.78	35.7	78.7	T11
FM800	2	840.0	800.0	696.0	485.6	410.0	16.1	175.0	6.89	330.0	12.99	350.0	13.78	47.0	103.6	T11
FM1000	2	1050.0	1000.0	870.0	607.0	475.0	18.7	175.0	6.89	328.0	12.91	350.0	13.78	59.0	130.1	T11
FM1200	2	1260.0	1200.0	1044.0	728.4	475.0	18.7	175.0	6.89	328.0	12.91	350.0	13.78	66.4	146.4	T11
FM1500	2	1576.0	1500.0	1305.0	910.5	403.0	15.9	354.0	13.9	339.0	13.35	349.0	13.74	96.0	211.7	T11
FM2000	2	2100.0	2000.0	1740.0	1214.0	490.0	19.3	350.0	13.8	339.0	13.35	349.0	13.74	120.5	265.7	T11
FM2500	2	2626.0	2500.0	2175.0	1517.5	490.0	19.3	350.0	13.8	339.0	13.35	349.0	13.74	133.6	294.6	T11
FM3000	2	3150.0	3000.0	2610.0	1821.0	709.0	27.9	350.0	13.8	337.0	13.27	347.0	13.66	180.0	396.9	T11

BATTERY CARE AND MAINTENANCE(AGM)

Top-charge and precautions

Any VRLA-AGM battery will be damaged by continual undercharging or overcharging (Capacity is reduced and life is shortened), although **TIGER HEAD** batteries accept a charge very well due to their low internal resistance. Overcharging is extremely harmful to any VRLA battery because of the sealed design. Overcharging dries out the electrolyte by driving the oxygen and hydrogen out of the battery through the pressure relief valves which will lead to less capacity and shorter lifetime. If a battery is continually undercharged, a barrier layer of sulfate will build up on the positive plate which will impact recharging acceptability. Premature plate shedding can also happen. Performance is reduced and life is shortened.
It is critical that a charger be used that limits voltage. The charger must be temperature-compensated to prevent under or overcharging due to ambient temperature changes (Please refer to the table titled as "Charge Voltage and Temperature Ranges" on Page 4). The warranty is void if improperly charged. Use a good constant potential, temperature-compensated, voltage-regulated charger. Constant current chargers should never be used on VRLA batteries.

Battery storage

If the battery has high temperature or poor ventilation during storage and delivery, the self-discharge will increase. So, keep good ventilation and keep away from fire, flame, heat supply etc. When storing the battery, take it off from the charger and load and keep it in the dry and cool place. Please supplement charge before use when the battery has been kept for a long time.

Cautions:

1) Keep batteries in a place, where children can not reach.
2) Do not attempt to disassemble, revise, damage, impacte, dispose batteries, otherwise the battery can leak, be overheated, or explore.
3) Do not dispose of the batteries in water , fire, and do not heating the batteries.
4) Do not short batteries.
5) Do not put your face near the top of batteries. Please wear gloves, eye protection when you measure or repair batteries.
6) There is sulfuric acid in the battery. Do not make contact with sulfuric acid in skin, clothes, or especially in eyes. If eyes make contact with sulfuric acid, please wash with a lot of clean water, and consult a physician immediately.
7) The suitable temperature is -15℃～+50℃, but it will have longer life in the temperature from+20℃～+30℃. The operation circumstances are defined as: discharging temperature range -15℃～+50℃; charging temperature range 0℃～+40℃.

Specifications subject to change without notice.

VRLA-GEL BATTERY

INTRODUCTION

VRLA Gel batteries are based on true gel technology which has more than half century experience. This type of batteries have gel electrolyte usually produced by the homogeneous distributed SiO_2 in a diluted sulfuric acid named as gel SOL with thixotropic properties. The special designed vent valves are also used to control the gassing and water losing rate. Since no maintenance is required and valve regulated, they are classified as one type of VRLA batteries (The other type is VRLA-AGM batteries).

With 5 years development, TIGER HEAD GROUP now has built up two series and 40 gel battery models, from 2V to 12V in the voltage range, and from 24Ah to 3500 Ah in the capacity range, which can be used for general purpose application (named as THG Series) TIGER HEAD GROUP can produce batteries from scratch and is capable of engineering tool and mould upon customer's special requests.

APPLICATIONS

Applications of THG Series-General Purpose Gel Batteries

1) Cycle applications

- Golf trolleys
- Garden equipments
- Portable equipments
- Wheel chairs
- Solar and wind mill units
- Medical equipments
- Flash units also for mining (head flash)
- Portable video/radio
- Military
- Railway crossing
- Traffic lights
- Street signs
- Boats or buoys
- Cottage camping
- SOS pillars
- Toys and hobby applications
- Portable equipments for communication, testing, distance measuring ··· etc.
- Pump system

2) Standby applications

- Telecommunication backup
- Power plants
- Burglar alarms
- Medical equipments (stationary and portable i.e. X- ray)
- Computer back-up (high power)
- Communication systems
- Fire alarm systems
- Transmitter systems
- Cash register systems
- Emergency lights signal systems
- Telephone systems
- Clocks systems
- Uninterrupted
- Power supplies
- Elevators emergency power supply (skyscrapers)
- Solar applications
- Mobile stations
- Airport / runway emergency illumination
- Emergency power supply for hospitals
- Radar and satellite stations

FUNDAMENTAL BASICS OF VRLA GEL BATTERIES:

What is gel?

Gel is usually produced by homogeneous dispersion of pyrogenic silica in diluted sulfuric acid. Pyrogenic silica is a kind of powder of very well dispersed SiO_2,which absorb more than 10 times of its weight liquids, producing gel. Because of the thixotropic properties of gel (liquid by stirring and solid by resting), after a certain gelling time, the agglomerates are connecting themselves together to form a network which keeps the liquid inside and gives the gel structure. This form can be broken by stirring to single agglomerates giving again a liquid form.

Main difference from AGM batteries

- Using gel SOL as electrolyte
- Using the extra microporous separator which can: reduce the depolarization of the negative electrode and avoid the PCL 3 effect (premature capacity loss due to negative plate sulphation); significantly decreases thermal runaway; during deep discharge or pole reversal, help to prevent short circuits by dendrite growth between the plates
- Plate thickness tolerance is not critical since the high compression of plate group assembly is not required
- More electrolytes for better contact with plates and active materials and container walls, good for releasing internal heat and cooling battery temperature
- Better vent valve design to lower gassing rate and water losing rate to extend battery lifetime

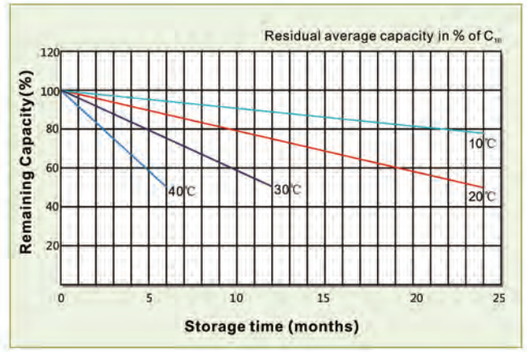
ADVANTAGE OF GEL BATTERIES

- No electrolyte adjustment needed
- Do not need quick recharging after discharging
- Insensitive to occasional deep discharge. Deep discharging resistance is high and much higher than in case of AGM since AGM has less electrolyte (only about 66% in comparison to gel)
- Extremely low gas extrication during charging
- Low self-discharge: 50% of the nominal capacity after a 12 months' storage in room temperature
- High charge acceptance
- High energy at low temperature
- Higher operating reliability and longer lifetime, as mistakes due to wrong maintenance will not occur
- The tendency to thermo-runaway-effect is strongly reduced for gel batteries since the higher electrolyte content than AGM (b/c the contact between plates and container walls for heat dispersion through the surrounding gel)
- Can be stored and used in upright or on side position (side position may give less capacity)
- No pollution problems if container is damaged
- Approved for air transport (IATA)
- Almost no acid stratification which can occur in AGM and conventional wet cells, especially on the tall batteries
- Self-resealing valves with adapter to reduce severe water losing and extend battery life
- Low cost rate (cost vs. life time and cost vs. Cycles)

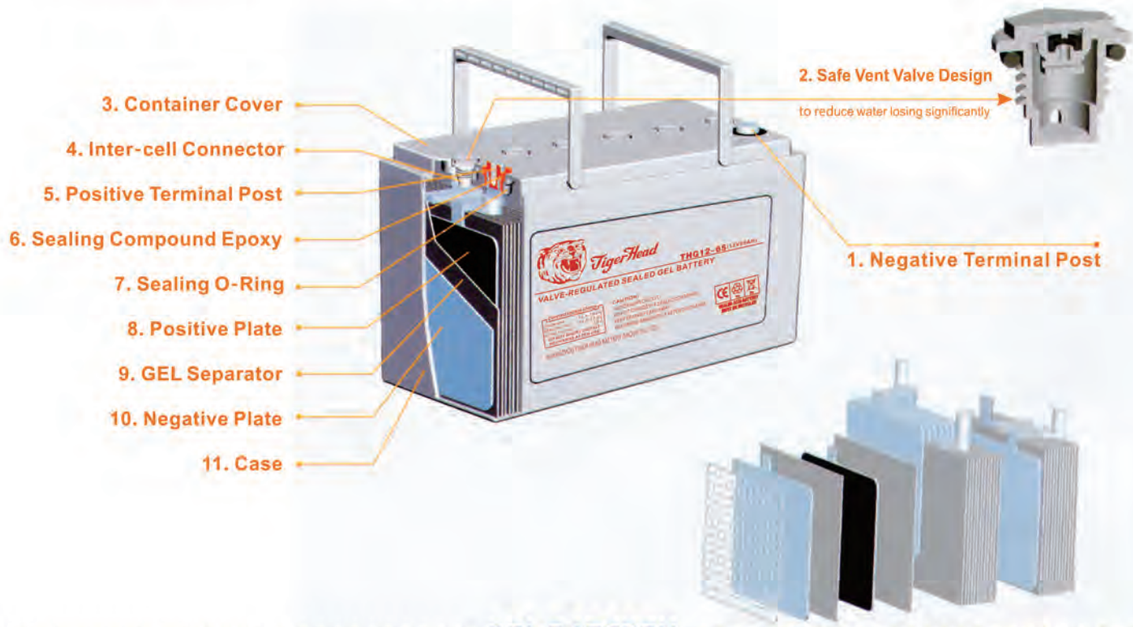
Charge Voltages and Temperature Ranges

Temp (°F)	Boost Charge(V/cell)		Float Charge(V/cell)		Temp (°C)
	Optimum	Maximum	Optimum	Maximu m	
≥120	2.23	2.28	2.15	2.18	≥49
110-120	2.27	2.32	2.17	2.22	43-49
100-11	2.28	2.33	2.18	2.23	38-43
90-100	2.30	2.35	2.20	2.25	32-38
80-90	2.32	2.37	2.22	2.27	27-32
70-80	2.35	2.40	2.25	2.30	21-27
60-70	2.38	2.43	2.28	2.33	16-21
50-60	2.40	2.45	2.30	2.35	10-16
40-50	2.43	2.48	2.33	2.38	4-10
30-40	2.46	2.51	2.34	2.39	(-1)-4
20-30	2.49	2.54	2.36	2.41	(-6)-(-1)
10-20	2.53	2.58	2.38	2.43	(-12)-(-6)
≤10	2.58	2.63	2.39	2.44	≤-12

General relation of Capacity vs. Storage time



VRLA GEL BATTERY CONSTRUCTION



THG SERIES - GENERAL PURPOSE(GEL)

General Features

- Long discharge time
- Suitable for standby power and energy storage power use
- Special plate design, long cycle lifetime
- Using special lead-calcium alloy to boost up the grid anti-corrosive performance and extend the battery using lifetime
- Special separator to boost up the battery internal performance
- High thermal capacity, reduce the risk of thermal runaway and drying up, can be used in poor environment
- High gas recombination efficiency
- Little water losing, no electrolyte stratification phenomenon
- Long storage time
- Good deep discharge resilience performance
- Using nano-fumed silica,with small particle size,and big specific surface area.

Typical Applications

1) Cycle applications

Golf trolleys • Garden equipments • Portable equipments • Wheel chairs • Solar and wind mill units • Medical equipments • Flash units also for mining (head flash) • Portable video/radio • Military • Railway crossing • Traffic lights • Street signs • Boats or buoys • Cottage camping • SOS pillars • Toys and hobby applications • Portable equipments for communication, testing, distance measuring...etc. • Pump system

2) Standby applications

Telecommunication backup • Power plants • Burglar alarms • Medical equipments (stationary and portable i.e. X-ray) • Computer back-up (high power) • Communication systems • Fire alarm systems • Transmitter systems • Cash register systems • Emergency lights signal systems • Telephone systems • Clocks systems • Uninterrupted power supplies • Elevators emergency power supply (skyscrapers) • Solar applications • Mobile stations • Airport / runway emergency illumination • Emergency power supply for hospitals • Radar and satellite stations

THG Models and Parameters (Small, Middle Size)

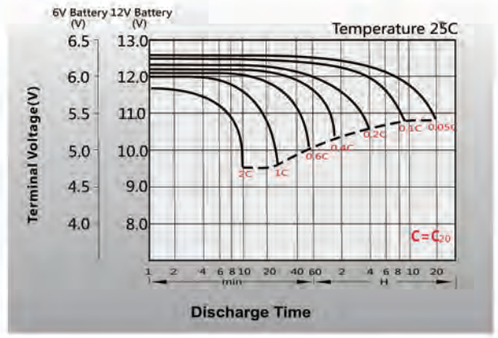
Model	Nominal Voltage (V)	Rated Capacity(AH)				Approx Dimension								Approx Weight		Terminal type
		20HR	10HR	5HR	1HR	Length		Width		Height		Total Height				
		1.80V/cell	1.75V/cell	1.75V/cell	1.67V/cell	mm	in.	mm	in.	mm	in.	mm	in.	kg	lbs	
THG12-17	12	17	15.5	13.6	9.35	181.5	7.15	77	3.03	167.5	6.59	167.5	6.59	5.80	12.79	T12
THG12-26	12	26	24.2	20.8	14.3	166.0	6.54	175	6.89	125	4.92	125	4.92	8.70	19.18	T12
THG12-31	12	30	27.9	24.0	17.1	195	7.68	130	5.12	164	6.46	180	7.09	10.7	23.59	T5/T6
THG12-38	12	38	35.3	30.4	20.9	197	7.76	165	6.50	170	6.69	170	6.69	13.5	29.77	T6
THG12-45	12	45	40.0	36.0	24.7	257	10.1	132	5.20	200	7.87	200	7.87	16.2	35.72	T6
THG12-50	12	50	46.5	40.0	27.5	229	9.02	138	5.43	205	8.07	211	8.31	16.6	36.60	T6
THG12-60	12	60	55.8	48.0	33.0	325	12.8	167	6.57	174	6.85	174	6.85	21.5	47.41	T6

Model	Nominal Voltage (V)	Rated Capacity (AH)				Approx Dimension								Approx Weight		Terminal type
		20HR	10HR	5HR	1HR	Length		Width		Height		Total Height				
		1.80V/cell	1.75V/cell	1.75V/cell	1.67V/cell	mm	in.	mm	in.	mm	in.	mm	in.	kg	lbs	
THG12-65	12	65.0	60.5	52.0	35.8	325	12.79	167	6.57	174	6.85	174	6.85	24.0	52.92	T6
THG12-70H	12	70.0	65.1	56.0	38.5	259	10.2	168	6.61	208	8.19	214	8.43	23.0	50.72	T6
THG12-85	12	85.0	78.0	68.0	46.8	305	12.01	168	6.61	207	8.15	213	8.39	26.7	58.90	T6
THG12-100	12	96.0	90.0	80.0	55.0	330	12.99	173	6.81	212	8.35	218	8.58	31.0	68.36	T11
THG12-110	12	110	102.3	88.0	60.5	410	16.14	177	6.97	225	8.86	225	8.86	36.0	79.38	T11
THG12-125	12	130	120.0	104	71.5	345	13.58	172	6.77	274	10.79	280	11.02	47.3	104.30	T11
THG12-140	12	135	125.6	108	74.3	485	19.09	170	6.69	240	9.45	240	9.45	44.2	97.46	T11
THG12-200	12	200	186.0	160	110	522	20.55	240	9.45	218	8.58	224	8.82	62.9	138.69	T11
THG6-200	6	200	185.0	160	110	322	12.68	178	7.01	228	8.98	234	9.21	31.3	69.02	T11

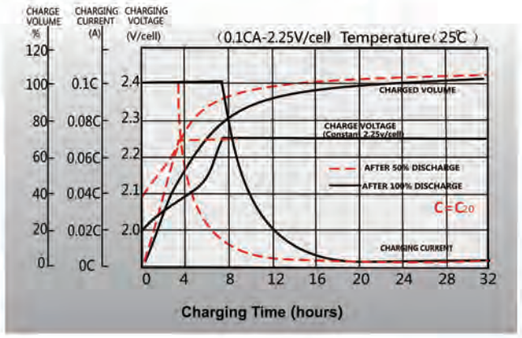
Note:model number followed with H-tall version and L-long version

THG Performance Characteristics (Small, Middle size)

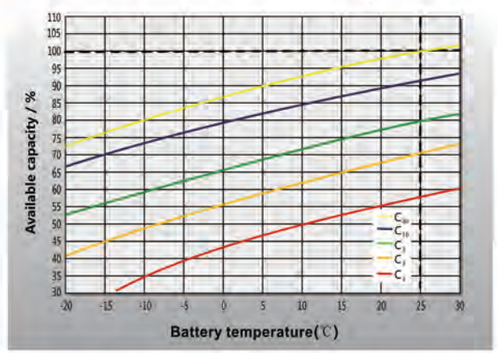
DISCHARGE CHARACTERISTICS



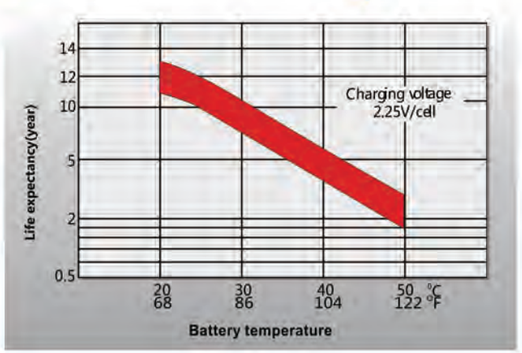
CHARGING CHARACTERISTICS



TEMPERATURE EFFECTS IN RELATION TO BATTER CAPACITY



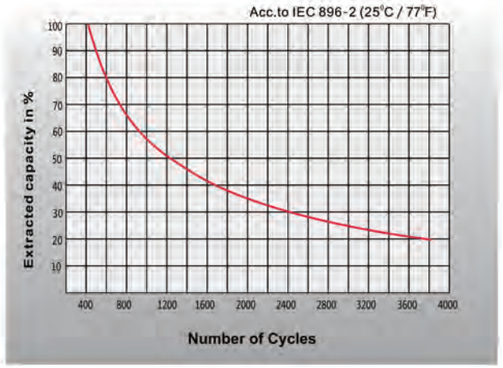
EFFECT OF TEMPERATURE ON LONG TERM FLOAT LIFE



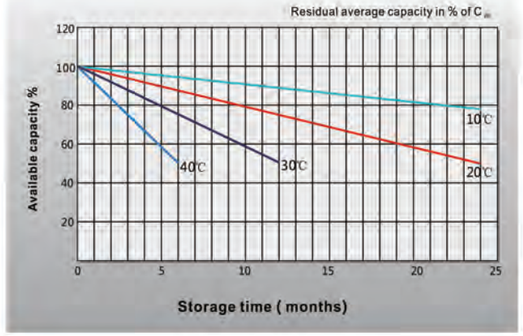
REASONABLE PRICE RELIABLE QUALITY

TIMELY DELIVERY FRIENDLY SERVICE

CYCLE LIFE IN RELATION TO DEPTH OF DISCHARGE



GENERAL RELATION OF CAPACITY VS STORAGE TIME

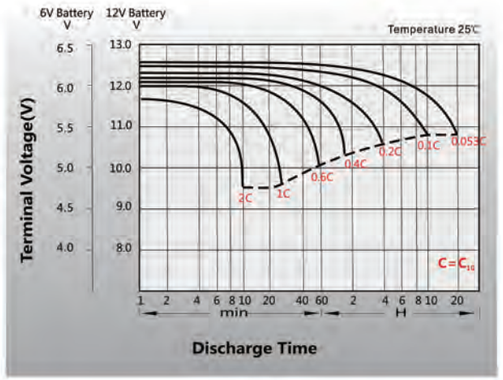


THG Models and Parameters (2V Series)

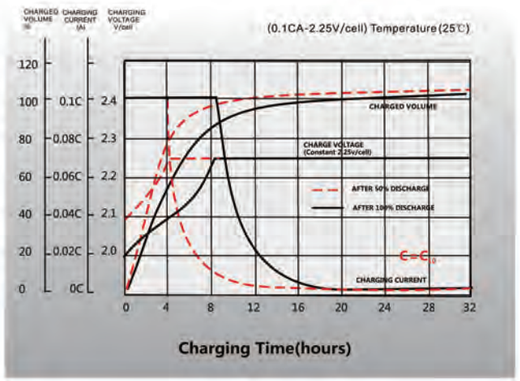
Model	Nominal Voltage (V)	Rated Capacity (AH)				Approx Dimension								Approx Weight		Terminal type
		20HR	10HR	5HR	1HR	Length		Width		Height		Total Height				
		1.80V/cell	1.75V/cell	1.75V/cell	1.67V/cell	mm	in.	mm	in.	mm	in.	mm	in.	kg	lbs	
THG2-65	2	65.0	60.0	51.6	35.2	170	6.69	72	2.83	205	8.07	212	8.35	5.2	11.47	T6
THG2-100	2	96	90	77.4	52.8	170	6.69	72	2.83	205	8.07	212	8.35	6.2	13.67	T6
THG2-150	2	144	135	116.1	79.2	170	6.69	98	3.86	205	8.07	212	8.35	8.8	19.40	T7
THG2-200	2	213.3	200	172	117.3	170	6.69	110	4.33	328	12.91	340	13.39	13.7	30.21	T11
THG2-300	2	320	300	258	176	170	6.69	150	5.91	328	12.91	340	13.39	19.0	41.90	T11
THG2-400	2	426.7	400	344	234.7	210	8.27	175	6.89	330	12.99	339	13.35	27.5	60.6	T11
THG2-500	2	533.4	500	430	293.3	240	9.45	175	6.89	330	12.99	340	13.39	30.0	66.15	T11
THG2-600	2	640	600	516	352	300	11.81	175	6.89	330	12.99	340	13.39	36.5	80.5	T11
THG2-800	2	853.4	800	688	469.3	410	16.14	175	6.89	330	12.99	340	13.39	50.6	111.6	T11
THG2-1000	2	1067	1000	860	586.7	475	18.7	175	6.89	328	12.91	338	13.31	61.3	135.17	T11
THG2-1500	2	1600	1500	1290	880	403	15.87	354	13.94	339	13.35	349	13.74	90.5	199,6	T11
THG2-2000	2	2133	2000	1720	1173	490	19.29	350	13.78	339	13.35	349	13.74	132.5	292.2	T11
THG2-3000	2	3200	3000	2580	1760	709	27.91	350	13.78	337	13.27	347	13.66	190.0	419.0	T11

THG Performance Characteristics (2V Series)

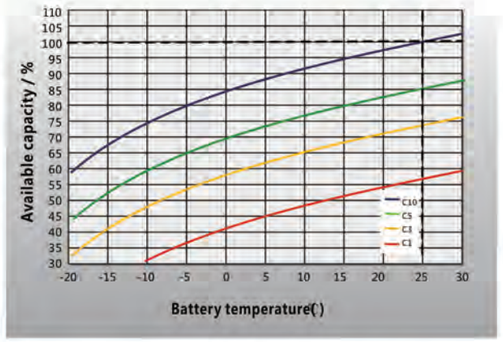
DISCHARGE CHARACTERISTICS



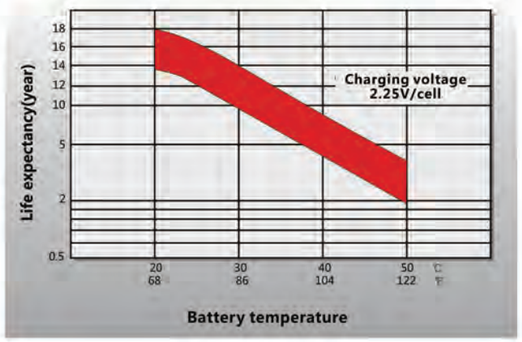
CHARGING CHARACTERISTICS



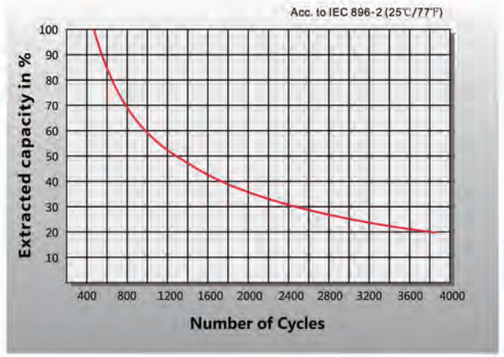
TEMPERATURE EFFECTS IN RELATION TO BATTER CAPACITY



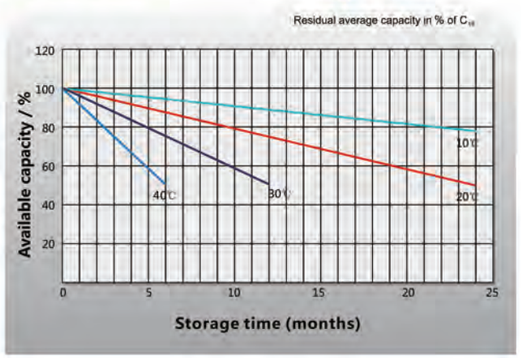
EFFECT OF TEMPERATURE ON LONG TERM FLOAT LIFE



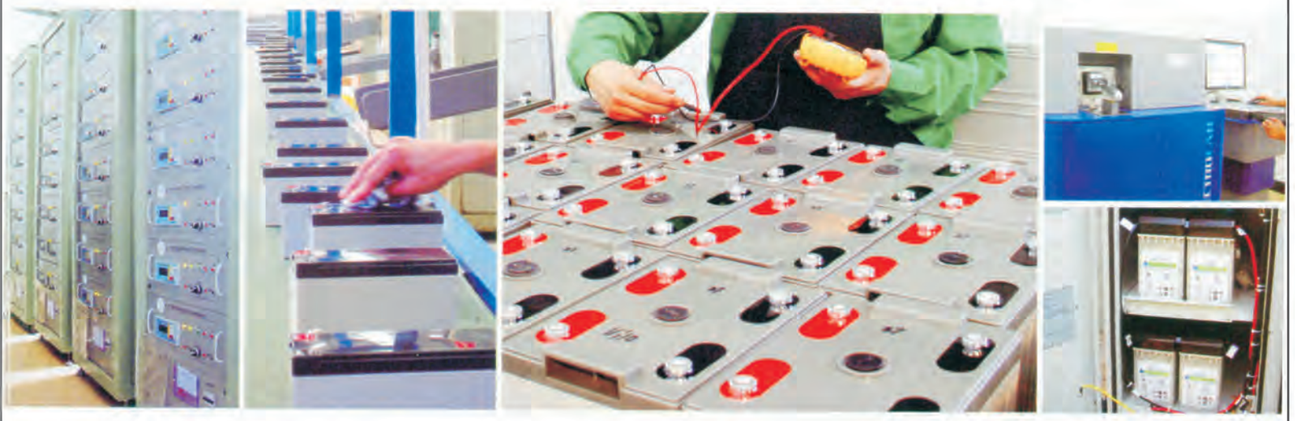
CYCLE LIFE IN RELATION TO DEPTH OF DISCHARGE



GENERAL RELATION OF CAPACITY VS STORAGE TIME



BATTERY CARE AND MAINTENANCE(GEL)



Influence of Temperature

These Gel batteries are designed to operate within a temperature range between -30 °C and +50°C. Below -15℃, there is a risk of freezing the equipment. On the other hand it is possible to use the batteries at lower temperatures, under specific conditions (contact your representative). The use of VRLA batteries at high temperatures affects their service life. The service life is divided by factor 2 for an increasing of temperature of 10 °C. The optimum operating temperature is 20° C.

The battery temperature affects the available capacity (please refer the chart on this subject in each series). Above 35 °C, the increasing of capacity is negligible.

Top-charge and precautions

Any VRLA-GEL battery will be damaged by continual undercharging or overcharging (Capacity is reduced and life is shortened), although **TIGER HEAD** batteries accept a charge very well due to their low internal resistance. Overcharging is extremely harmful to any VRLA battery because of the sealed design. Overcharging dries out the electrolyte by driving the oxygen and hydrogen out of the battery through the pressure relief valves which will lead to less capacity and shorter lifetime. If a battery is continually undercharged, a barrier layer of sulfate will build up on the negative plate which will impact recharging acceptability. Premature plate shedding can also happen. Performance is reduced and life is shortened.

It is critical that a charger be used that limits voltage. The charger must be temperature-compensated to prevent under or overcharging due to ambient temperature changes (Please refer to the table titled as "***Charge Voltage and Temperature Ranges***" on Page 11). The warranty is void if improperly charged. Use a good constant potential, temperature-compensated, voltage-regulated charger. Constant current chargers should never be used on VRLA-GEL batteries.

Maintenance for Battery Storage

The location in which the batteries are being stored must be clean and well maintained.
Appropriate inventory turnover, will entrain in a higher operating quality of the products.
Before their installation the battery casings needs to be cleaned, never use solvents or abrasives.
For longer storage periods, it is recommended to check the open circuit voltage (OCV) at the following intervals:
Storage at 20 ℃: after a storage period of 12 months, then charge batteries every 3 months afterwards
Storage at 30 ℃: after a storage period of 6 months, then charge batteries every 2 months afterwards.

Specifications subject to change without notice.

Portable Solar Gel Battery

Battery specifications:

ITEMS	Voltage	Capacity C_{10}	Dimension(mm)				Gross Weight	Input	Output
NO.	Volt	AH/10HR	Length	Width	Height	T.Height	(kg)		
6-GFM-33G	12	33	196	131	152	183	8.5	1 Solar Charge: 18V30W 1 DC:12-18V 5A	USB:2pcs 5V2A DC:2pcs 12V5A
6-GFM-39G	12	39	198	166	170	170	11.1		

Applications:

DC Fan,Mobile Phones,DV,DVD,IPAD,Computer,Nail painting Machine,Inflating Pump,Washing Machines, Vehicle Starting,lighting, Router,Moniter,DVR,MP3/MP4/GPS/Radio,DC TV,DC Projector,Audio and Other Electrical products.

Specifications subject tochange without notice.

VRLA BATTERY TERMINAL OPTIONS (1-2)

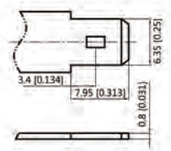
Unit:mm[inch]

T1 Terminal

FASTON TYPE (Copper) quick disconnect tabs; silver coating for better conductivity

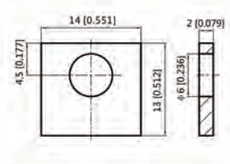
T2 Terminal

FASTON TYPE (Copper) quick disconnect tabs; silver coating for better conductivity



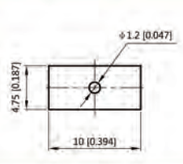
T3 Terminal

Brass Coated With Tin
Torque: 3.9 ~ 5.4 N*m(34.39 ~ 47.75 in*lbs)



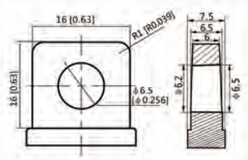
T4 Terminal

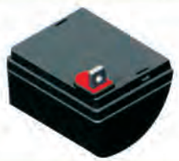
Brass Coated With Tin



T5 Terminal

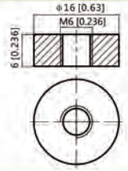
Lead
Torque: 3.9 ~ 5.4 N*m(34.39 ~ 47.75 in*lbs)

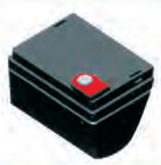




T6 Terminal

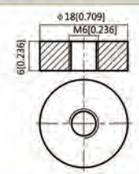
Brass Coated With Tin; Threaded Insert 6mm STUD
Torque: 3.9 ~ 5.4 N*m(34.39 ~ 47.75 in*lbs)





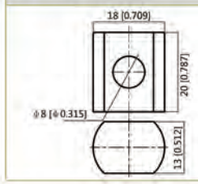
T7 Terminal

Brass Coated With Tin; Threaded Insert 6mm STUD
Torque: 3.9 ~ 5.4 N*m(34.39 ~ 47.75 in*lbs)



T9 Terminal

Lead
Torque: 11 ~ 14.7 N*m(97.28 ~ 130.0 in*lbs)

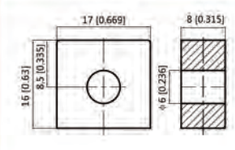


VALVE REGULATED LEAD-ACID BATTERY, RECHARGABLE

VRLA BATTERY TERMINAL OPTIONS(2-2)

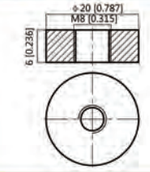
T10 Terminal

Lead
Torque: 3.9 ~ 5.4 N*m(34.39 ~ 47.75 in*lbs)



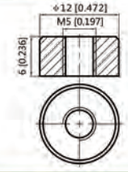
T11 Terminal

Brass Coated With Tin; Threaded Insert 8mm STUD
Torque: 11~14.7 N*m(97.28 ~ 130.0 in*lbs)



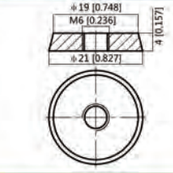
T12 Terminal

Brass Coated With Tin; Threaded Insert 5mm STUD
Torque: 2.0 ~ 3.0 N*m(17.69 ~ 26.53 in*lbs)



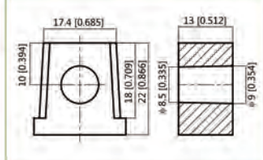
T13 Terminal

Brass Coated With Tin; Threaded Insert 6mm STUD
Torque: 3.9 ~ 5.4 N*m(34.39 ~ 47.75 in*lbs)



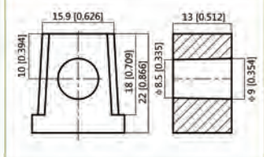
T14-1 Positive

Lead
Torque: 11 ~ 14.7 N*m(97.28 ~ 130.0 in*lbs)



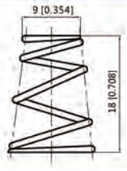
T14-2 Negative

Lead
Torque: 11 ~ 14.7 N*m(97.28 ~ 130.0 in*lbs)



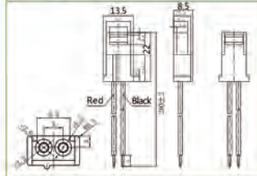
Spring Terminal

Spring Steel
Fully Collapsible



Connector

Toy Battery Connector
H-Connector



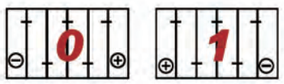
MAINTENANCE-FREE, SEALED WITH AGM SEPARATOR

LAWN-MOWER BATTERY

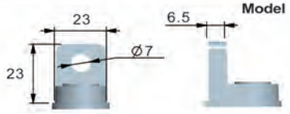
Application

- Garden Tractors
- Lawn Tractors
- Riding Movers
- Rear Engine Riders
- Zero – Turn Movers
- Small Engine

Cell layout



Terminal



Advantage

- Design for lawn mower
- Extreme startup ability and high capacity
- Absolutely maintenance-free due to modern
- Leakage and spill proof.
- Vibration proof
- Long service life

Maintenance Free (MF) Type

	Voltage (V)	C_{20} (Ah)	C_{10} (Ah)	CCA 0°F(-18°C)	CA 32°F(0°C)	Maximum Overall Dimension(mm)				Cell Layout	Approx Wet Weight (Kg)
						L	W	H	TH		
U1L-140	12	11.0	10.3	140	168	196	132	159	185	1	6.3
U1L-175	12	15.0	14.0	175	210	196	132	159	185	1	6.7
U1L-215	12	17.0	16.0	215	258	196	132	159	185	1	7.1
U1L-250	12	20.0	18.8	250	300	196	132	159	185	1	7.4
U1L-285	12	23.0	21.6	285	342	196	132	159	185	1	7.9
U1R-320	12	27.0	25.4	320	384	196	132	159	185	1	8.1
U1L-355	12	29.0	27.3	355	426	196	132	159	185	1	8.4
U1R-140	12	11.0	10.3	140	168	196	132	159	185	0	6.3
U1R-175	12	15.0	14.0	175	210	196	132	159	185	0	6.7
U1R-215	12	17.0	16.0	215	258	196	132	159	185	0	7.1
U1R-250	12	20.0	18.8	250	300	196	132	159	185	0	7.4
U1R-285	12	23.0	21.6	285	342	196	132	159	185	0	7.9
U1R-320	12	27.0	25.4	320	384	196	132	159	185	0	8.1
U1R-355	12	29.0	27.3	355	426	196	132	159	185	0	8.4

Dry Charge Type

Model	Voltage (V)	C_{20} (Ah)	C_{10} (Ah)	CCA 0°F(-18°C)	CA 32°F(0°C)	Maximum Overall Dimension(mm)				Cell Layout	Dry Weight (Kg)	Approx Wet Weight (Kg)
						L	W	H	TH			
U1-5	12	12.6	12.0	120	144	195	130	180	180	1	3.65	6.30
U1R-5	12	12.6	12.0	120	144	195	130	180	180	0	3.65	6.30
U1-6(J)	12	16.8	16.0	130	156	195	130	180	180	1	3.70	6.25
U1R-6(J)	12	16.8	16.0	130	156	195	130	180	180	0	3.70	6.25
U1-7	12	19.0	18.0	200	240	195	130	180	180	1	4.52	7.00
U1R-7	12	19.0	18.0	200	240	195	130	180	180	0	4.52	7.00
U1-9(J)	12	25.3	24.0	200	240	195	130	180	180	1	5.03	7.53
U1R-9(J)	12	25.3	24.0	200	240	195	130	180	180	0	5.03	7.53
U1-11	12	31.6	30.0	270	360	195	130	180	180	1	5.97	8.34
U1R-11	12	31.6	30.0	270	360	195	130	180	180	0	5.97	8.34

ETL SEMKO Intertek CE EMC tested TS16949 ISO14001 ISO9001

Based on China

Tiger Head is on her way to the global market

We have a good team, including our workers, our every customer and consumer. We are together to make efforts and to enjoy the achievement.

In Overseas market, we open selling branches in West Africa and Middle East. And our products are widely exported to Canada, Italy, Germany, Netherland, Greece, Cyprus, Spain, Russia, etc; In South America, we have customers in Chile, Peru, Cuba, Jamaica, Suriname, etc; In Africa, South Africa, Nigeria, Cameroon, Ghana, Angola, Algeria, Sudan etc, In Middle east, UAE, Saudi Arabia, Yemen, Iraq, Kuwait, Iran etc..