

كتالوج البطاريات

BATTERY CATALOGUE

MOTORCYCLE / MOBILITY / AUTOMOTIVE / STORAGE

TCS BATTERY RANGE



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Sealed, gel and dry charge battery models.

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AGM start-stop, maintenance-free and dry charge.

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04 STORAGE & BACKUP POWER

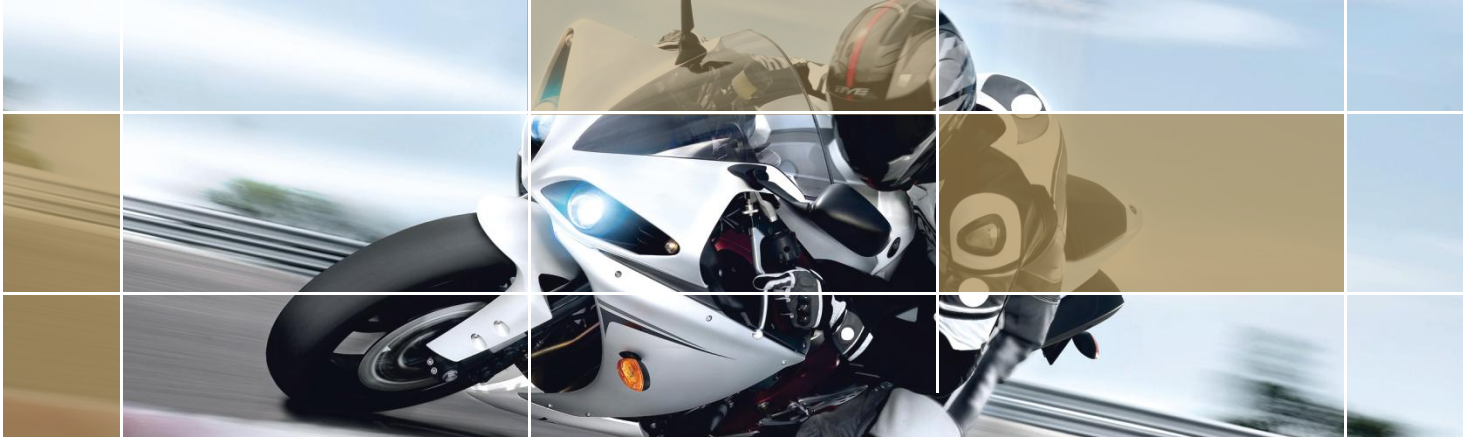
بطاريات التخزين والطاقة الاحتياطية

VRLA, gel, deep cycle, front terminal, OPzS / OPzV.

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Model numbers, product images and technical tables retained from the source catalogue.



MOTORCYCLE BATTERY

Motorcycle Battery, there are four main categories: Dry Charged Conventional Lead Acid Battery, Dry Charged Maintenance-free Lead Acid Battery, Sealed Maintenance-free Lead Acid Battery, Sealed Maintenance-free Gel Lead Acid Battery.

BATTERY BASICS AND SAFETY

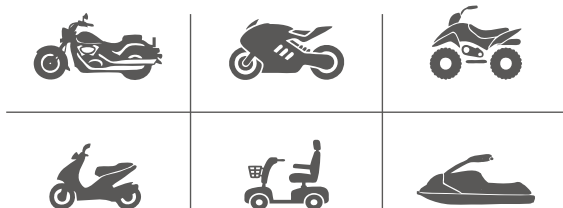
The Lead Acid Battery

Let's look first at the battery basics; what a battery is and how it works.

Lead acid batteries are used as a power source for vehicles that demand a constant and uninterrupted source of energy. Just about every vehicle today does. For example, street motorcycles need lights that operate when the engine isn't running. They get it from the battery-driven. Starting your vehicle depends on a battery.

Technically speaking, the battery is an electrochemical device that converts chemical energy to electrical energy. The first thing you notice inside a battery is the cells. Each cell has about two volts (actually, 2.12 to 2.2 volts, measured on a DC scale). A 6-volt battery will have three cells. A 12-volt battery, six cells.

Applicable models:



Color Box



Outer Box

BATTERY TYPE



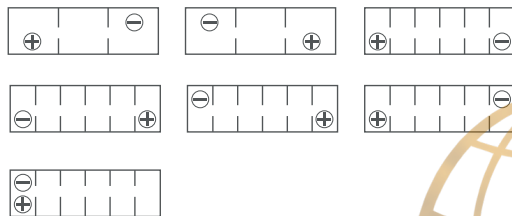
Dry Charge Conventional
Lead Acid Battery

Dry Charge Maintenance Free
Lead Acid Battery

Sealed Maintenance Free;
Lead Acid Battery

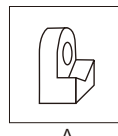
Sealed Maintenance Free;
Gel Battery

TERMINAL DIRECTION:

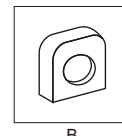


TERMINAL SHAPE:

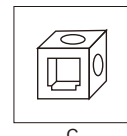
Lead



A

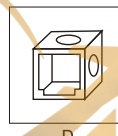


B

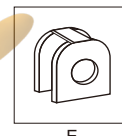


C

Copper



D



E

BATTERY STRUCTURE



1

1. Cover Plate

2

2. Terminal Post

3

3. Rubber Valve

4

4. Welding

5

5. Terminal

6

6. Negative Plate

7

7. Separator

8

8. Positive Plate

9

9. Battery Container

10

10. Battery Container

11

11. Positive Plate

12

12. Separator

13

13. Negative Plate

CHARGING MATTERS NEEDING ATTENTION

Read the instruction of charger carefully before use. Charger for motorcycle use usually adopts chargers with method of alternate constant-current/ voltage, which enjoy advantages of short-time recharge and high-efficiency.

- > Charging time: 10-12 hours usual
- > Charging current: Charging current value (A)=capacity of battery (Ah)*1/10

For example

Model	Capacity	Charging current
12N3-BS	3Ah	0.3A
GT4B-5	4Ah	0.4A
12N7A-BS	7Ah	0.7A
YT9A-BS	9Ah	0.9A

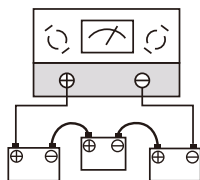


Fig.3 charging in series

- > Charger is required to be used under guidance of instructions to the charger lest damaging charger or battery.
- > When connecting charger and battery, be aware not misconnecting polar wrongly and bear principle of linking positive polar of charger to positive polar of battery, and linking negative polar of charger to negative polar of battery.
- > If several batteries are subject to recharge together, number of batteries should depend on capacity of the charger (see the instruction to charger), and series connection is required. NOTE: Battery long-term stored in status of discharge may lose function due to rejecting recharge.
- > Temperature during recharge: temperature in the course of recharge will increase and over-high temperature will impose adverse effect on battery. If the temperature is higher than 45°C, cooling of the battery is required.
- > Fire spark is forbidden during recharge: a great amount of mixed gases as oxygen and hydrogen will appear during course of recharge, if fire spark appears in the near, it may cause explosion of the battery.

BATTERY'S FAULTS AND HANDLING

Location	Status	Causes	Tactics
Electrolyte	Terminal voltage is lower than 2.10V/cell (3 cells sustain 6V and 6 cells sustain 12V)	<ul style="list-style-type: none"> Insufficient recharge: There have faults in the motorcycle's recharge system Over-discharge: Overload, insufficient capacity of generator or of the motorcycle. 	Recharge
	Insufficient electrolyte	<ul style="list-style-type: none"> Over-recharge Flowing away of electrolyte due to upside-down of the motorcycle 	Supplementation of water and electrolyte
	Normal display of the voltage but discharge fails	<ul style="list-style-type: none"> Poor contact of terminals Short-circuit in connecting line 	Repair and maintenance
Battery container and cover	<ul style="list-style-type: none"> Damaging Cracks Electrolyte leakage 	<ul style="list-style-type: none"> Bounced at landing Exploration by fire spark Over-loose or over-tight assemblage Clogged air outlet opening Loosed bolt of electrolyte opening 	Repair and discard
	Deformation	<ul style="list-style-type: none"> Over-heat of electrolyte due to over-current recharge Over-tight assemblage at bearing Over-high preset of voltage output at motorcycle's adjuster Over-high temperature of surroundings 	Repair and discard
Filling ports	<ul style="list-style-type: none"> Rift Electrolyte leakage 	<ul style="list-style-type: none"> Over-tight screwed Poor seal packing ring Over-loose screwed 	Adjusting or displacing parts
Terminals	Erosion	<ul style="list-style-type: none"> Electrolyte leakage Electrolyte leakage at perforation part between cap and polar pole 	Repair or discard
	Melting damage	<ul style="list-style-type: none"> Over-heat or breakdown due to motorcycle's short-circuit Electric erosion at contact areas Recharge with over-big current 	
	Damaging	<ul style="list-style-type: none"> Misuse 	

Sealed Maintenance Free Lead Acid Battery



Model: 6N4-BS

Voltage(V) : 6
Capacity(Ah) : 4
Weight(kg) : 0.75
Dimension(mm) : 71*71*94



Model: 12N2.5-BS

Voltage(V) : 12
Capacity(Ah) : 2.5
Weight(kg) : 1.11
Dimension(mm) : 80*77*105



Model: 12N3-BS

Voltage(V) : 12
Capacity(Ah) : 3
Weight(kg) : 1.16
Dimension(mm) : 98*56*110



Model: GT4B-5-BS

Voltage(V) : 12
Capacity(Ah) : 2.3
Weight(kg) : 0.87
Dimension(mm) : 115*39*87



Model: YT4L-BS

Voltage(V) : 12
Capacity(Ah) : 4
Weight(kg) : 1.38
Dimension(mm) : 113*69*89



Model: YTZ5S-BS

Voltage(V) : 12
Capacity(Ah) : 4.5
Weight(kg) : 1.45
Dimension(mm) : 113*69*85



Model: YTZ7S-BS

Voltage(V) : 12
Capacity(Ah) : 5.8
Weight(kg) : 1.75
Dimension(mm) : 113*69*105



Model: YT5L-BS

Voltage(V) : 12
Capacity(Ah) : 5
Weight(kg) : 1.75
Dimension(mm) : 113*69*105



Model: 12N5-BS

Voltage(V) : 12
Capacity(Ah) : 5
Weight(kg) : 1.88
Dimension(mm) : 119*60*129



Model: 12N6.5-BS

Voltage(V) : 12
Capacity(Ah) : 6.5
Weight(kg) : 1.98
Dimension(mm) : 138*66*101



Model: 12N7A-BS

Voltage(V) : 12
Capacity(Ah) : 7
Weight(kg) : 2.25
Dimension(mm) : 113*69*132



Model: 12N7B-BS

Voltage(V) : 12
Capacity(Ah) : 7
Weight(kg) : 2.20
Dimension(mm) : 147*59*130



Model: 12N7C-BS

Voltage(V) : 12
Capacity(Ah) : 7
Weight(kg) : 2.58
Dimension(mm) : 136*76*123



Model: YT7-BS

Voltage(V) : 12
Capacity(Ah) : 7
Weight(kg) : 2.48
Dimension(mm) : 149*85*93



Model: 12N9-BS

Voltage(V) : 12
Capacity(Ah) : 9
Weight(kg) : 2.81
Dimension(mm) : 136*76*134



Model: YT9-BS

Voltage(V) : 12
Capacity(Ah) : 8.5
Weight(kg) : 2.62
Dimension(mm) : 150*86*107



Model: 12N12-BS

Voltage(V) : 12
Capacity(Ah) : 11
Weight(kg) : 3.40
Dimension(mm) : 150*86*131



Model: 12N14-BS

Voltage(V) : 12
Capacity(Ah) : 11
Weight(kg) : 3.8
Dimension(mm) : 132*89*163

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The company reserves the final interpretation.

No.	Model No.	Volts (v)	Capacity (Ah) 10HR	Dimension (±2mm)			Dry Weight (Kg±3%)	Polarity
				L	W	H		
1	6N4-BS	6	4	71	71	94	0.75	+ -
2	12N2.5-BS	12	2.5	80	77	105	1.11	+ -
3	12N3-BS	12	3	98	56	110	1.16	- +
4	GT4B-5-BS	12	2.3	115	39	87	0.87	?
5	YTR4A-BS	12	3.2	115	50	85	1.07	?
6	YT4L-BS	12	3.5	113	69	89	1.28	- +
7		12	4				1.36	- +
8		12	4				1.36	- +
9		12	4				1.40	- +
10	YTZ5S-BS	12	4.2	113	69	85	1.45	- +
11		12	4.3				1.48	- +
12	YT5L-BS	12	4.5	113	69	105	1.63	- +
13		12	5				1.75	- +
14		12	5				1.75	- +
15	YTZ7S-BS	12	5.8	113	69	105	2.00	- +
16	12N5(S)-BS	12	5	118	58	129	1.85	- +
17	12N5-BS	12	4.5	119	60	129	1.78	- +
18			5				1.88	- +
19	12N6.5-BS	12	5	138	66	101	1.80	- +
20			6.5				1.98	- +
21	YT7B-BS	12	6.5	150	65	95	2.15	+ -
22	YTZ7V-BS	12	7	113	69	122	2.15	- +
23	12N7A-BS	12	7	113	69	132	2.25	- +
24	12N7B-BS	12	7	147	59	130	2.20	- +
25	12N7C-BS	12	7	136	76	123	2.58	+ -

*The battery weight only for reference

No.	Model No.	Volts (v)	Capacity (Ah) 10HR	Dimension (±2mm)			Dry Weight (Kg±3%)	Polarity
				L	W	H		
26	YT7-BS	12	7	149	85	93	2.48	+ -
27	YTZ10S-BS	12	8.6	150	87	95	2.75	+ -
28	12N9-BS	12	8.5	136	76	134	2.62	+ -
29			9				2.81	+ -
30	YT9-BS	12	7.2	150	86	107	2.62	+ -
31			8.5				3.00	+ -
32	YTZ12S-BS	12	10	150	86	110	3.30	+ -
33	YB10L-BS	12	10	132	88	145	3.4	+ -
34	12N10-BS	12	10	194	59	112	3.2	+ -
35	YT12B-BS	12	10	150	70	130	3.57	+ -
36	12N12-BS	12	11	150	86	131	3.40	+ -
37			13				3.80	+ -
38	12N14-BS	12	11	132	89	163	3.80	- +
39			14				4.40	- +
40	YB14L-BS	12	14	134	88	166	4.80	- +
41	YTZ14S-BS	12	11.2	150	87	111	3.52	+ -
42	YT14B-4-BS	12	12	152	70	145	3.80	+ -
43	YT14B-BS	12	14	151	87	145	4.54	+ -
44	YTX16-BS	12	16	151	87	161	5.17	+ -
45	YTX20H-BS	12	20	175	87	155	6.21	- +
46	YTX24HL-BS	12	24	205	87	162	7.40	- +
47	12N28-BS	12	21	185	125	170	6.50	- +
48			28				7.05	- +
49	12N30L-BS	12	29	168	127	177	8.50	- +
50			30				9.43	- +

*The battery weight only for reference

Sealed Maintenance Free Gel Battery



Model:12N2.5-BS

Voltage(V) : 12
Capacity(Ah) : 2.5
Weight(kg) : 1.11
Dimension(mm) : 80*77*105



Model:12N3-BS

Voltage(V) : 12
Capacity(Ah) : 3
Weight(kg) : 1.16
Dimension(mm) : 98*56*110



Model:YT4L-BS

Voltage(V) : 12
Capacity(Ah) : 4
Weight(kg) : 1.36
Dimension(mm) : 113*69*87



Model:YTZ5S-BS

Voltage(V) : 12
Capacity(Ah) : 4.5
Weight(kg) : 1.45
Dimension(mm) : 113*69*87



Model:YT5L-BS

Voltage(V) : 12
Capacity(Ah) : 5
Weight(kg) : 1.73
Dimension(mm) : 113*69*105



Model:12N5-BS

Voltage(V) : 12
Capacity(Ah) : 5
Weight(kg) : 1.88
Dimension(mm) : 119*60*129



Model:12N6.5-BS

Voltage(V) : 12
Capacity(Ah) : 6.5
Weight(kg) : 1.96
Dimension(mm) : 138*66*101



Model:12N7A-BS

Voltage(V) : 12
Capacity(Ah) : 7
Weight(kg) : 2.20
Dimension(mm) : 113*69*130



Model:12N7B-BS

Voltage(V) : 12
Capacity(Ah) : 7
Weight(kg) : 2.18
Dimension(mm) : 147*59*130



Model:12N7C-BS

Voltage(V) : 12
Capacity(Ah) : 7
Weight(kg) : 2.58
Dimension(mm) : 136*76*123



Model:YT7-BS

Voltage(V) : 12
Capacity(Ah) : 7
Weight(kg) : 2.45
Dimension(mm) : 149*85*93



Model:12N9-BS

Voltage(V) : 12
Capacity(Ah) : 9
Weight(kg) : 2.77
Dimension(mm) : 136*76*134



Model:YT9-BS

Voltage(V) : 12
Capacity(Ah) : 7.5
Weight(kg) : 2.62
Dimension(mm) : 150*86*107



Model:12N12-BS

Voltage(V) : 12
Capacity(Ah) : 12
Weight(kg) : 3.40
Dimension(mm) : 150*86*131

GEL Battery

Nano-colloidal technology and Automatic aluminothermic welding technology



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No.	Model No.	Volts (v)	Capacity (Ah) 10HR	Dimension (±2mm)			Dry Weight (Kg±3%)	Polarity
				L	W	H		
1	12N2.5	12	2.1	80	77	103	0.98	+ -
2	12N2.5	12	2.5	80	77	103	1.11	+ -
3	12N3	12	3	98	56	110	1.16	- +
4	YT4L	12	3.5	113	69	87	1.28	- +
5	YT4L	12	4	113	69	87	1.36	- +
6	YTZ5S	12	4.2	113	69	87	1.45	- +
7	YT5L	12	5	113	69	105	1.73	- +
8	12N5	12	4.5	119	60	129	1.75	- +
9	12N5	12	5	119	60	129	1.88	- +
10	12N6.5	12	6.5	138	66	101	1.96	- +
11	YTZ7V	12	5	113	69	124	1.92	- +
12	YTZ7V	12	7	113	69	124	2.12	- +
13	12N7A	12	7	113	69	130	2.20	- +
14	12N7B	12	5.2	147	59	130	2.03	- +
15	12N7B	12	7	148	59	130	2.18	- +
16	12N7C	12	7	136	76	123	2.58	+ -
17	YT7	12	7	149	85	93	2.45	+ -
18	12N9	12	8.5	136	76	134	2.62	+ -
19	12N9	12	9	136	76	134	2.77	+ -
20	YT9	12	7.2	150	86	107	2.62	+ -
21	YT9	12	8.5	150	86	107	3.00	+ -
22	12N12	12	11	150	86	131	3.40	+ -

MORE COLOR TYPE



Dry Charge Maintenance Free Lead Acid Battery



Model: YTX3L-BS

Voltage(V) : 12
Capacity(Ah) : 3
Weight(kg) : 0.94
Dimension(mm) : 97*56*108



Model: YTX4L-BS

Voltage(V) : 12
Capacity(Ah) : 4
Weight(kg) : 1.10
Dimension(mm) : 112*68*86



Model: YTZ5S-BS

Voltage(V) : 12
Capacity(Ah) : 4
Weight(kg) : 1.17
Dimension(mm) : 112*68*86



Model: YT5AL-BS

Voltage(V) : 12
Capacity(Ah) : 5
Weight(kg) : 1.40
Dimension(mm) : 119*60*126



Model: YTX5L-BS

Voltage(V) : 12
Capacity(Ah) : 5
Weight(kg) : 1.43
Dimension(mm) : 113*69*105



Model: YTX6.5L-BS

Voltage(V) : 12
Capacity(Ah) : 6.5
Weight(kg) : 1.55
Dimension(mm) : 138*65*100



Model: DB7B-BS

Voltage(V) : 12
Capacity(Ah) : 7
Weight(kg) : 1.69
Dimension(mm) : 150*67*93



Model: YTX7L-BS

Voltage(V) : 12
Capacity(Ah) : 7
Weight(kg) : 1.78
Dimension(mm) : 113*70*126



Model: YTX7A-BS

Voltage(V) : 12
Capacity(Ah) : 7
Weight(kg) : 1.80
Dimension(mm) : 148*86*93



Model: YTX7BL-BS

Voltage(V) : 12
Capacity(Ah) : 7
Weight(kg) : 1.75
Dimension(mm) : 150*60*130



Model: YT9A-BS

Voltage(V) : 12
Capacity(Ah) : 9
Weight(kg) : 2.12
Dimension(mm) : 135*75*134



Model: YT9B-BS

Voltage(V) : 12
Capacity(Ah) : 9
Weight(kg) : 2.10
Dimension(mm) : 150*68*105



Model: YTX9-BS

Voltage(V) : 12
Capacity(Ah) : 9
Weight(kg) : 2.22
Dimension(mm) : 150*86*105



Model: YTZ10-BS

Voltage(V) : 12
Capacity(Ah) : 10
Weight(kg) : 2.48
Dimension(mm) : 150*87*95



Model: YTZ12-BS

Voltage(V) : 12
Capacity(Ah) : 12
Weight(kg) : 2.93
Dimension(mm) : 150*87*110



Model: YTX12-BS

Voltage(V) : 12
Capacity(Ah) : 12
Weight(kg) : 2.65
Dimension(mm) : 150*85*130



Model: YTX14-BS

Voltage(V) : 12
Capacity(Ah) : 14
Weight(kg) : 3.05
Dimension(mm) : 150*87*145



Model: YTX20-BS

Voltage(V) : 12
Capacity(Ah) : 20
Weight(kg) : 4.04
Dimension(mm) : 175*85*154

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No.	Model No.	Volts (v)	Capacity (Ah) 10HR	Dimension (±2mm)			Dry Weight (Kg±3%)	Polarity
				L	W	H		
1	YTX2.5L-BS	12	2	79	70	105	0.67	- +
2	YTX2.5L-BS	12	2.5				0.72	
3	YTX3L-BS	12	2.5	97	56	108	0.84	- +
4	YTX3L-BS	12	3				0.94	
5	YTX4L-BS	12	3.5	112	68	88	1.02	- +
6	YTX4L-BS	12	4				1.10	
7	YTX5L-BS	12	4.2	113	69	105	1.17	- +
8	YTX5L-BS	12	5				1.43	
9	YTX6.5L-BS	12	6	119	60	128	1.56	- +
10	YTX6.5L-BS	12	4.5				1.25	
11	YTX6.5L-BS	12	5	138	65	100	1.40	- +
12	YTX6.5L-BS	12	5.5				1.55	
13	YTX7BL-BS	12	6	150	60	130	1.75	- +
14	YTX7A-BS	12	7	148	86	93	1.80	+ -
15	YTX7L-BS	12	7	113	70	126	1.78	- +
16	DB7B-BS	12	6.5	150	67	93	1.69	+ -
17	DB7L-BS	12	7	135	75	135	1.88	+ -
18	DB7L-BS	12	8				1.87	
19	YT9A-BS	12	9	150	86	105	2.12	+ -
20	YT9A-BS	12	7				2.08	
21	YTX9-BS	12	9	150	86	105	2.22	+ -
22	YTX9-BS	12	8	150	68	105	2.07	+ -
23	YT9B-BS	12	8.6	150	87	95	2.48	+ -
24	YTX10-BS	12	8	150	86	130	2.35	+ -
25	YTX10-BS	12	10				2.65	
26	YTX12-BS	12	10	150	70	130	2.63	+ -
27	YT12B-BS	12	10	150	87	110	2.93	+ -
28	YT12B-BS	12	11.2	150	87	106	2.31	+ -
29	YT12A-BS	12	9.5	150	87	106	2.31	+ -
30	YTX14-BS	12	12	150	87	145	3.05	+ -
31	YTX14L-BS	12	12				3.05	- +
32	YTX16L-BS	12	14	150	87	159	3.85	- +
33	YTX20-BS	12	18	175	85	154	4.04	+ -
34	YTX20L-BS	12	18				4.04	- +
35	YTX30L-BS	12	28	168	127	177	5.60	- +

*The battery weight only for reference

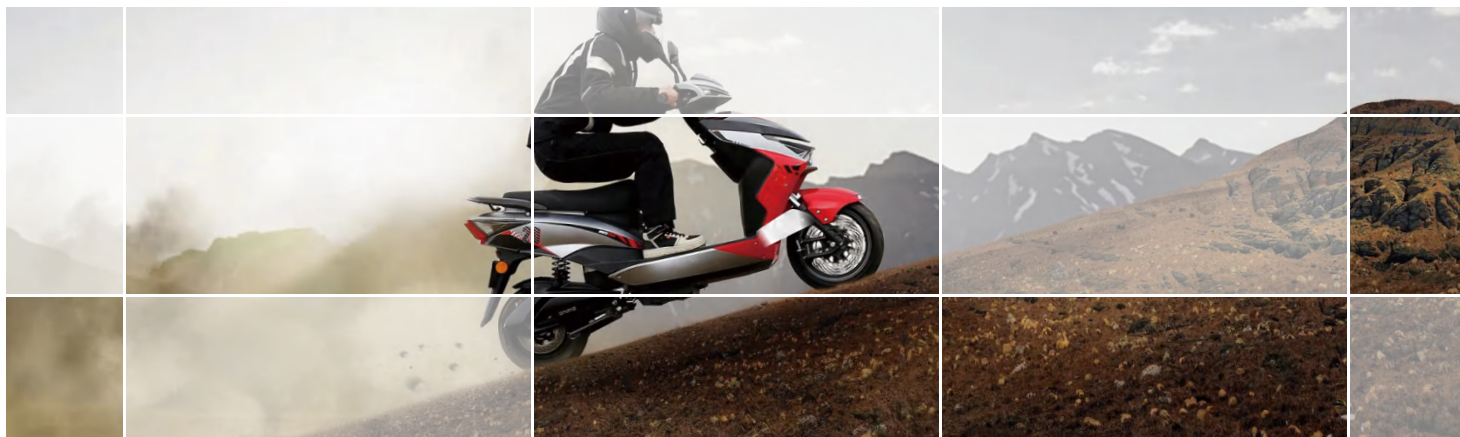
Dry Charge Conventional Lead Acid Battery

 <p>Model: 6N2-2A</p> <p>Voltage(V) : 6 Capacity(Ah) : 2 Weight(kg) : 0.37 Dimension(mm) : 70*46*95</p>	 <p>Model: 6N4</p> <p>Voltage(V) : 6 Capacity(Ah) : 4 Weight(kg) : 0.44 Dimension(mm) : 71*71*95</p>	 <p>Model: 12N3</p> <p>Voltage(V) : 12 Capacity(Ah) : 3 Weight(kg) : 0.96 Dimension(mm) : 98*56*110</p>
 <p>Model: 12N4-3B</p> <p>Voltage(V) : 12 Capacity(Ah) : 4 Weight(kg) : 1.15 Dimension(mm) : 120*70*93</p>	 <p>Model: 12N5-3B</p> <p>Voltage(V) : 12 Capacity(Ah) : 5 Weight(kg) : 1.36 Dimension(mm) : 120*62*130</p>	 <p>Model: 12N6-3B</p> <p>Voltage(V) : 12 Capacity(Ah) : 6 Weight(kg) : 1.43 Dimension(mm) : 137*72*94</p>
 <p>Model: 12N6.5-3B</p> <p>Voltage(V) : 12 Capacity(Ah) : 6.4 Weight(kg) : 1.54 Dimension(mm) : 140*68*102</p>	 <p>Model: 12N7-4A</p> <p>Voltage(V) : 12 Capacity(Ah) : 7 Weight(kg) : 1.75 Dimension(mm) : 137*75*133</p>	 <p>Model: 12N7B-3A</p> <p>Voltage(V) : 12 Capacity(Ah) : 7 Weight(kg) : 1.72 Dimension(mm) : 150*60*131</p>
 <p>Model: 12N7B-4B</p> <p>Voltage(V) : 12 Capacity(Ah) : 7 Weight(kg) : 1.80 Dimension(mm) : 149*87*96</p>	 <p>Model: 12N9-4B</p> <p>Voltage(V) : 12 Capacity(Ah) : 9 Weight(kg) : 1.95 Dimension(mm) : 135*75*136</p>	 <p>Model: 12N10-3B</p> <p>Voltage(V) : 12 Capacity(Ah) : 10 Weight(kg) : 2.30 Dimension(mm) : 135*92*146</p>
 <p>Model: 12N12A-4A</p> <p>Voltage(V) : 12 Capacity(Ah) : 12 Weight(kg) : 2.65 Dimension(mm) : 134*81*160</p>	 <p>Model: 12N14-3A</p> <p>Voltage(V) : 12 Capacity(Ah) : 14 Weight(kg) : 3.06 Dimension(mm) : 134*89*166</p>	 <p>Model: YB7-A</p> <p>Voltage(V) : 12 Capacity(Ah) : 7 Weight(kg) : 1.90 Dimension(mm) : 137*75*133</p>
 <p>Model: YB16CL-B</p> <p>Voltage(V) : 12 Capacity(Ah) : 16 Weight(kg) : 3.75 Dimension(mm) : 175*100*175</p>	 <p>Model: YB30L-B</p> <p>Voltage(V) : 12 Capacity(Ah) : 30 Weight(kg) : 5.70 Dimension(mm) : 168*131*176</p>	 <p>Model: Y60-N30L-A</p> <p>Voltage(V) : 12 Capacity(Ah) : 30 Weight(kg) : 5.70 Dimension(mm) : 185*130*170</p>

Notice: All the data in the brochure are just for your reference. If the actual data differ from the expected data, the former should prevail.
The company reserves the final interpretation.

No.	Model No.	Volts (v)	Capacity (Ah) 10HR	Dimension (±2mm)			Dry Weight (Kg±3%)	Polarity
				L	W	H		
1	6N2-2A	6	2	70	46	95	0.37	+ -
2	6N4	6	4	71	71	95	0.44	+ -
3	6N4B-2A	6	4	100	47	96	0.51	+ -
4	6N6	6	6	99	57	111	0.83	- +
5	6N11A-1B	6	11	121	59	129	1.31	- +
6	12N3	12	3	98	56	110	0.96	- +
7	12N4-3B	12	4	120	70	93	1.15	- +
8	12N5-3B	12	2.9	120	62	130	0.84	- +
9		12	4.7				1.18	- +
10	12N5-3B	12	5	120	62	130	1.36	- +
11	12N5.5	12	5.5	138	61	131	1.59	- +
12	12N6-3B	12	6	137	72	94	1.43	- +
13	12N6.5-3B	12	3	140	68	102	0.84	- +
14		12	4.8				1.12	- +
15	12N6.5-3B	12	6.5	140	68	102	1.54	- +
16	12N7-3A/3B	12	7	137	75	133	1.75	- +
17	12N7-4A/4B	12					1.75	+ -
18	12N7B-3A	12	6.5	150	60	131	1.51	+ -
19		12	7				1.72	+ -
20	12N7B-4B	12	7	149	87	96	1.80	+ -
21	12N9-4B	12	6.2	135	75	136	1.53	+ -
22		12	7				1.72	+ -
23	12N9-3B/4B	12	8	135	75	136	1.88	+ -
24	12N9-4B	12	9				1.95	+ -
25	12N10-3B	12	10	135	92	146	2.30	- +
26	12N12A-4A	12	12	134	81	160	2.65	+ -
27	12N12-3B	12	12	200	75	135	2.65	- +
28	12N14-3A	12	14	134	89	166	3.06	- +
29	12N18-3	12	20	205	90	160	4.00	- +
30	12N24-3	12	24	182	124	172	4.87	- +
31	12N28-3	12	10.5	185	125	177	2.8	- +
32		12	28				5.50	- +
33	YB2.5L	12	2.5	79	70	105	0.73	- +
34	YB7-A	12	8	137	75	133	1.90	+ -
35	YB14A-A	12	14	134	89	166	3.06	+ -
36	YB16B-A	12	16	158	89	160	3.45	+ -
37	YB16CL-B	12	17	175	100	175	3.75	- +
38	Y60-N30L-A	12	30	185	130	170	5.70	- +
39	YB30L-B	12	30	168	131	176	5.70	- +

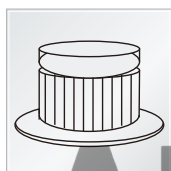
*The battery weight only for reference



ELECTRIC BIKE / SCOOTER BATTERY

TCS DZM/EVF Series VRLA Gel Battery is specially designed for motive power applications, i.e. electric bikes/scooters, electric tricycles, electric motorcycles and other device require DC power source. The 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.

TERMINAL SHAPE/DIRECTION:



A



B



Outer Box

STRUCTURAL FEATURES

- 1. Precision valve design**
Safe valve to ensure battery reaction gas to escape, and effective to control water loss of the battery.
- 2. Special alloy formula**
No cadmium lead calcium alloy formula, ensure the battery cycle life.
- 3. Long life lead paste recipe**
Improved the system of the active material additives to make the battery has a large capacity, high specific energy, good low temperature performance characteristics.
- 4. AGM separator**
AGM separator to ensure the battery reaction efficiency, no need to add water in the life cycle.
- 5. Grid aging**
The battery has long cycle life after the special grid aging



Sectional view

Electric Motorbike Battery



6-DZM-12 (12Ah)

Voltage(V) : 12
Capacity(Ah) : 12
Weight(kg) : 3.93
Dimension(mm) : 151*99*99
Q'ty/Ctn(pcs) : 3/4/5
Polarity Direction : 



6-DZM-20 (22Ah)

Voltage(V) : 12
Capacity(Ah) : 22
Weight(kg) : 6.55
Dimension(mm) : 178*77*170
Q'ty/Ctn(pcs) : 3/4/5
Polarity Direction : 



6-EVF-33

Voltage(V) : 12
Capacity(Ah) : 33
Weight(kg) : 9.35
Dimension(mm) : 267*77*170
Q'ty/Ctn(pcs) : 3/4/5
Polarity Direction : 



6-EVF-48

Voltage(V) : 12
Capacity(Ah) : 48
Weight(kg) : 12.85
Dimension(mm) : 223*120*177
Q'ty/Ctn(pcs) : 2/3
Polarity Direction : 

No.	Model No.	Volts (v)	Capacity (Ah) 2HR	Dimension (±2mm)			Dry Weight (Kg±3%)	Polarity	Color
				L	W	H			
1	6-DZM-12	12	12	151	99	99	3.93	±	Black Base Orange Top
2	6-DZM-12	12	12.2	151	99	99	4.20	±	Black Base Orange Top
3	6-DZM-12	12	13	151	99	99	4.32	±	Orange Base Black Top
4	6-DZM-20	12	20	178	77	170	6.20	- +	Black Base Orange Top
5	6-DZM-20	12	22	178	77	170	6.55	- +	Black Base Orange Top
6	6-DZM-24	12	24	181	77	170	7.00	- +	Orange Base Black Top
7	6-EVF-33	12	33	267	77	170	9.35	- +	Black Base Orange Top
8	6-EVF-35	12	35	267	77	170	9.85	- +	Black Base Orange Top
9	6-EVF-45	12	45	223	122	175	12.50	±	Black Base Orange Top
10	6-EVF-48	12	48	223	122	175	12.85	±	Black Base Orange Top
11	6-EVF-52	12	52	223	135	177	14.00	±	Black Base Orange Top
12	6-EVF-54	12	54	223	135	177	14.20	±	Black Base Orange Top



MOTIVE BATTERY

TCS motive battery has the main characteristics of no cadmium, maintenance free, long life, high power, large capacity, high and low temperature environment adaptability.

It is widely used on electric vehicles (electric forklifts, golf carts, tour cars, sanitation trucks and scooters).

-The plate material is made of corrosion resistant, low gas production, excellent deep cycle life alloy.

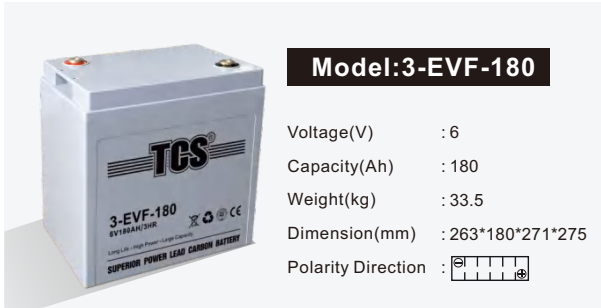
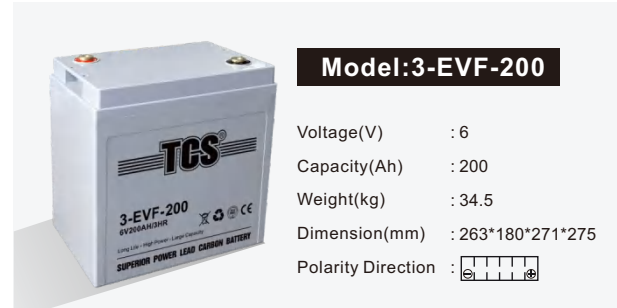
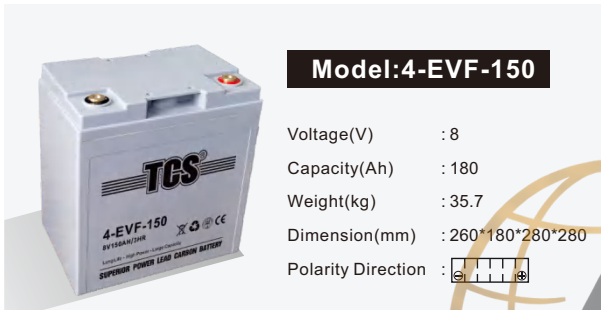
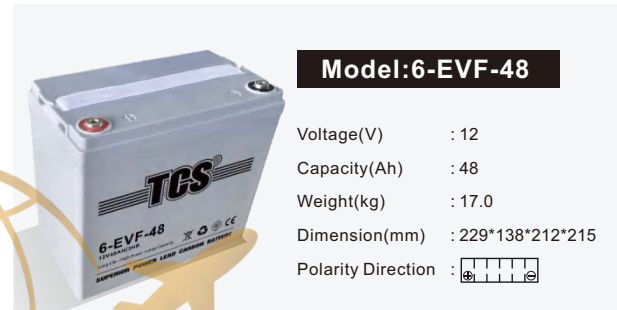
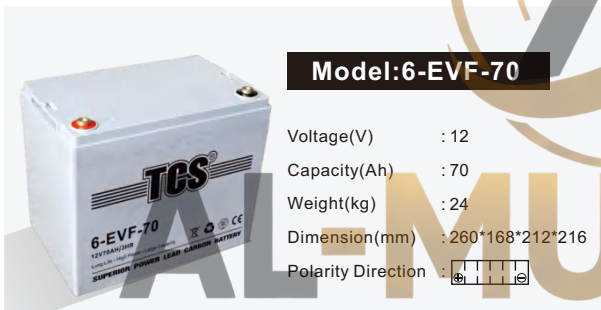
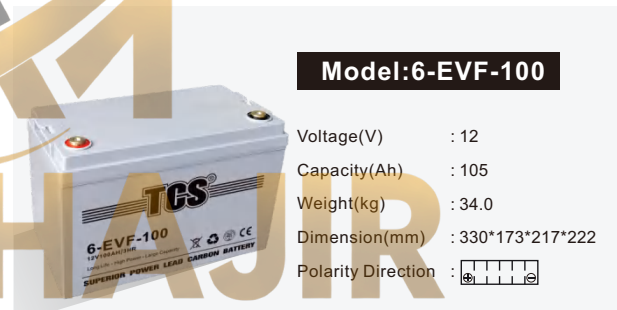
-Apply with high density, special deep cycle life lead paste formula material.

-Adopt high strength ABS plastic shell and valve control seal structure design.

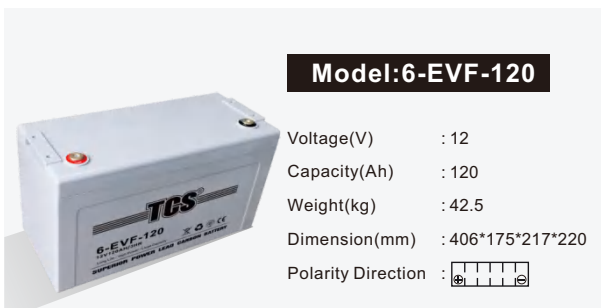
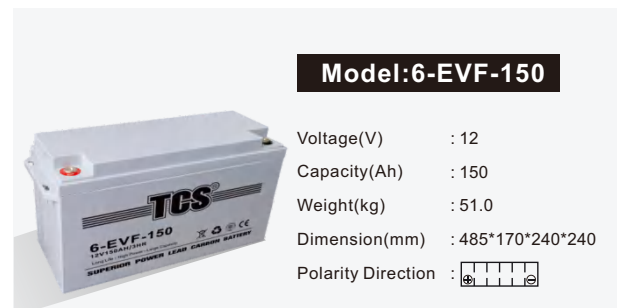


No.	Model No.	Volts (v)	Capacity (Ah) 3HR	Dimension (±2mm)				Dry Weight (Kg±3%)	Terminal Type	Colour
				L	W	H	TH			
001	6-EVF-48	12	48	229	138	212	215	17.0	Ø14	Gray
002	6-EVF-55	12	55	229	138	212	215	19.0	Ø14	Gray
003	6-EVF-70	12	70	260	168	212	216	24.0	Ø14	Gray
004	6-EVF-75	12	75	260	168	212	216	24.5	Ø14	Gray
005	6-EVF-80	12	80	260	168	212	216	26.5	Ø14	Gray
006	6-EVF-90	12	90	330	173	217	222	31.5	Ø20	Gray
007	6-EVF-100L	12	100	330	173	217	222	33.0	Ø20	Gray
008	6-EVF-100	12	105	330	173	217	222	34.0	Ø20	Gray
009	6-EVF-120	12	120	406	175	217	220	42.5	Ø20	Gray
010	6-EVF-150	12	150	485	170	240	240	51.0	Ø20	Gray
011	4-EVF-150	8	150	260	180	280	280	35.7	Ø20	Gray
012	4-EVF-170	8	170	330	180	221	221	37.6	Ø20	Gray
013	3-EVF-150	6	150	260	180	247	251	28.5	Ø18	Gray
014	3-EVF-170	6	170	260	180	247	251	31.5	Ø18	Gray
015	3-EVF-180	6	180	263	180	271	275	33.5	Ø20	Gray
016	3-EVF-200	6	200	263	180	271	275	34.5	Ø20	Gray
017	3-EVF-225	6	225	263	180	271	275	35.7	Ø20	Gray

MOTIVE BATTERY



— IMPORT • EXPORT • CUSTOMS CLEARANCE —



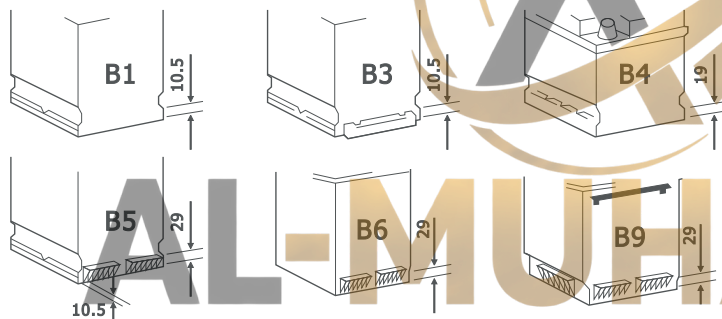
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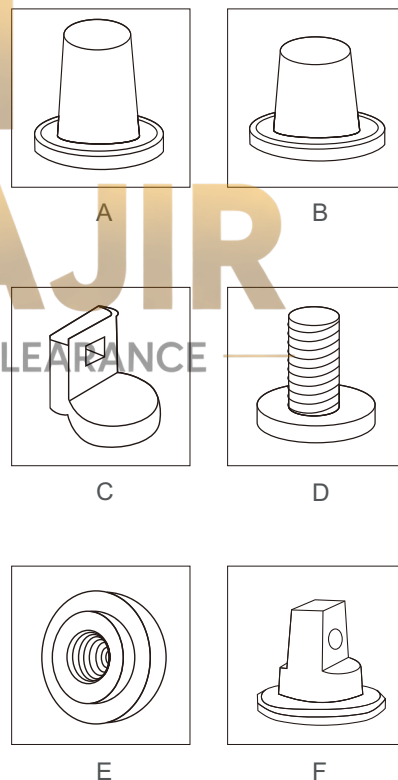
CAR BATTERY

TCS BATTERY has always been dedicated to the research and development of high-performance, long-life, wide temperature range, high security starting battery products, including AGM starts and stops battery, sealed maintenance-free battery and dry charged battery.

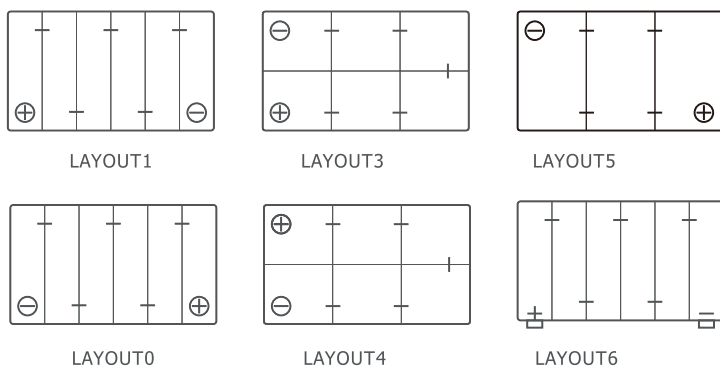
HOLD DOWNS:



TERMINAL TYPE:



CELL LAYOUT:



AGM TECHNOLOGY FOR START-STOP



AGM Start stop battery



Model:6-QTF-60

Voltage(V) : 12
Capacity(Ah) : 60
Weight(kg) : 17.3
CCA(-18°C) : 660
Dimension(mm) : 242*175*192*192



Model:6-QTF-70

Voltage(V) : 12
Capacity(Ah) : 70
Weight(kg) : 20.0
CCA(-18°C) : 720
Dimension(mm) : 277*175*192*192



Model:6-QTF-80

Voltage(V) : 12
Capacity(Ah) : 80
Weight(kg) : 23
CCA(-18°C) : 800
Dimension(mm) : 316*175*192*192



Model:6-QTF-92

Voltage(V) : 12
Capacity(Ah) : 92
Weight(kg) : 25.8
CCA(-18°C) : 850
Dimension(mm) : 353*175*192*192

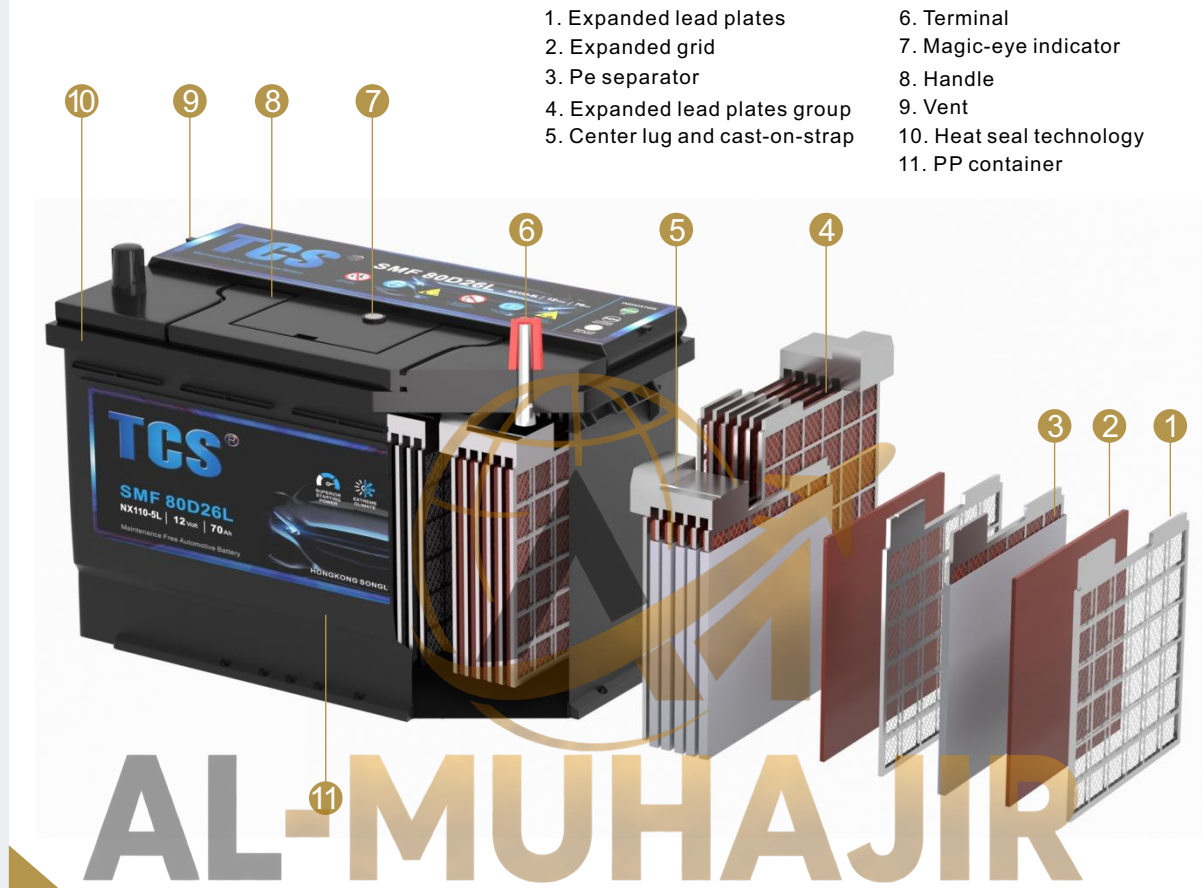
Model No.	Volts (v)	Capacity (Ah)	Dimension (±2mm)				Weight (Kg±3%)	Terminal	CCA - 18°C	Warranty (Months)
			L	W	H	T H				
High performance										
6-QTF-60	12	60	242	175	192	192	17.3	F28	660	24
6-QTF-70	12	70	277	175	192	192	20.0	F28	720	24
6-QTF-80	12	80	316	175	192	192	23.0	F28	800	24
6-QTF-92	12	92	353	175	192	192	25.8	F28	850	24
6-QTF-105	12	105	393	175	192	192	28.8	F28	950	24

Ordinary type										
6-QTF-60	12	60	242	175	192	192	17.3	F28	528	12
6-QTF-70	12	70	277	175	192	192	20.0	F28	624	12
6-QTF-80	12	80	316	175	192	192	23.0	F28	704	12
6-QTF-92	12	92	353	175	192	192	25.8	F28	784	12

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SEALED MAINTENANCE-FREE BATTERY

BATTERY STRUCTURE & CHARACTERISTICS



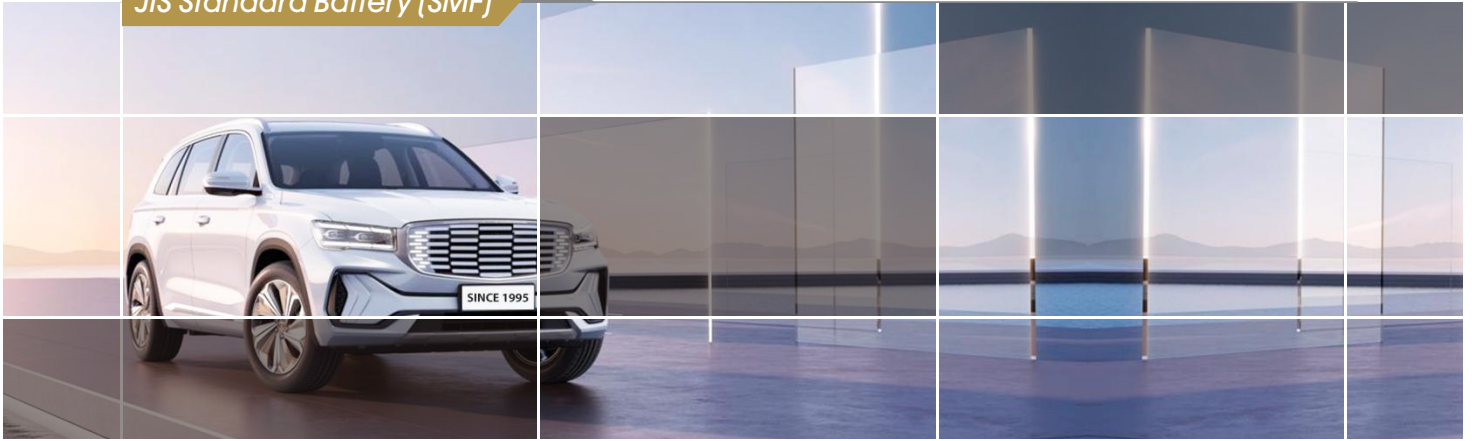
— IMPORT • EXPORT • CUSTOMS CLEARANCE —

The Characteristic, Usage And Maintenance:

1. For new battery, it's no need to charge, to add liquid, you can use it after fitting on the car. During the usage, liquid is never in need.
2. When using, keep the battery clean, make sure the connection contacts well. Coated some Vaseline on connection between the pole and line and fasten the batteries well.
3. Strong polypropylene container, advance lead calcium alloy and special diachylum method, anti-acid mist filter plate, anti-shake, prevent coldness, low discharge, less water losing, well cold starting capability.
4. If need to offload the battery to charge, you can charge it with constant current of less than 0.1C20A, and keep the voltage in 14.2~14.6v.
5. Keep batteries in a dry place, avoiding the sunshine. Batteries with half year storage, before use, you should charge them. Charging method: 0.1C20A. Eg: 60AH battery: charging with 6A for 6 hours.
6. The battery is suitable for a car with 14.2-14.4v charging voltage.



JIS Standard Battery (SMF)



Model:36B20R

Voltage(V)	: 12
Capacity(Ah)	: 36
Weight(kg)	: 9.03
CCA(RT)	: 340
Dimension(mm)	: 195*127*200*220



Model:55B24L

Voltage(V)	: 12
Capacity(Ah)	: 45
Weight(kg)	: 11.92
CCA(RT)	: 380
Dimension(mm)	: 240*129*199*220



Model:48D26R

Voltage(V)	: 12
Capacity(Ah)	: 50
Weight(kg)	: 15.0
CCA(RT)	: 400
Dimension(mm)	: 258*173*200*220



Model:80D26L

Voltage(V)	: 12
Capacity(Ah)	: 70
Weight(kg)	: 17.0
CCA(RT)	: 550
Dimension(mm)	: 258*173*200*220



Model:65D31R

Voltage(V)	: 12
Capacity(Ah)	: 70
Weight(kg)	: 18.6
CCA(-18°C)	: 500
Dimension(mm)	: 304*173*200*220



Model:105D31R

Voltage(V)	: 12
Capacity(Ah)	: 90
Weight(kg)	: 21.0
CCA(RT)	: 650
Dimension(mm)	: 304*173*200*220



Model:54459MF

Voltage(V)	: 12
Capacity(Ah)	: 54
Weight(kg)	: 12.2
CCA(RT)	: 400
Dimension(mm)	: 207*174*188



Model:55559MF

Voltage(V)	: 12
Capacity(Ah)	: 55
Weight(kg)	: 13.5
CCA(RT)	: 440
Dimension(mm)	: 243*174*188



Model:56219/20MF

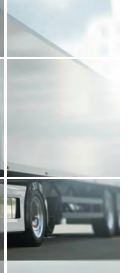
Voltage(V)	: 12
Capacity(Ah)	: 62
Weight(kg)	: 15.1
CCA(RT)	: 550
Dimension(mm)	: 243*174*188



Model:57512/13MF

Voltage(V)	: 12
Capacity(Ah)	: 74
Weight(kg)	: 16.7
CCA(RT)	: 700
Dimension(mm)	: 276*174*190

EN&Truck Standard Battery (SMF)



Model:60038MF

Voltage(V)	: 12
Capacity(Ah)	: 100
Weight(kg)	: 23
CCA(RT)	: 830
Dimension(mm)	: 352*175*190



Model:135F51

Voltage(V)	: 12
Capacity(Ah)	: 120
Weight(kg)	: 33.9
CCA(RT)	: 1020
Dimension(mm)	: 509*180*195*220



Model:160G51

Voltage(V)	: 12
Capacity(Ah)	: 150
Weight(kg)	: 39.5
CCA(RT)	: 1080
Dimension(mm)	: 517*221*195*221



Model:210H52

Voltage(V)	: 12
Capacity(Ah)	: 200
Weight(kg)	: 47.5
CCA(RT)	: 1270
Dimension(mm)	: 510*250*215*240

JIS Standard Battery (SMF)

MAINTENANCE FREE BATTERY

No.	JIS Gr.No	Model No.	Nameplate Capacity (AH) 20HR	Actual Capacity (AH) 20HR	Dimension (mm)				Weight (Kg)	CCA (RT)	Layout	Terminal	Pallet Types
					L	W	H	TH					
1	B20	32B19R(NS40)	32	24	195	127	200	220	8.4	340	1	A	—
				27					8.8	380	1		—
				30					9.03	420	1		—
		32B19L (NS40ZL)	32	24					8.4	340	0		—
				27					8.8	380	0		—
				30					9.03	420	0		—
		36B20R (NS40Z)	36	30					9.03	420	1		—
				38					9.91	440	1		—
		36B20L (NS40ZL)	36	30					9.03	420	0		—
				38					9.91	440	0		—
													—
													—
2	B24	50B24R (N40)	40	30	240	129	199	220	10.18	440	1	A,B	—
				36					10.82	510	1		—
		50B24L (N40L)	40	30					10.18	440	0		—
				36					10.82	510	0		—
		55B24R (NS60)	45	36					10.82	510	1		—
				45					11.92	550	1		—
		55B24L (NS60L)	45	36					10.82	510	0		—
				45					11.92	550	0		—
				36					14	400	1		—
				41					14.63	450	1		—
		48D26R (N50)	50	45					15	500	1		—
				36					14	400	0		—
3	D26	48D26L (N50L)	50	41	258	173	200	220	14.63	450	0	B	—
				45					15	500	0		—
		55D26R (N50Z)	60	45					15	500	1		—
				54					16	600	1		—
		55D26L (N50ZL)	60	45					15	500	0		—
				54					16	600	0		—
		75D26R	65	54					16	600	1		—
				59					16.6	650	1		—
		75D26L	65	54					16	600	0		—
				59					16.6	650	0		—
		80D26R (NX110-5)	70	59					16.6	650	1		—
				63					17	680	1		—
		80D26L (NX110-5L)	70	59					16.6	650	0		—
				63					17	680	0		—
													—
													—

JIS Standard Battery (SMF)

MAINTENANCE FREE BATTERY

No.	JIS Gr.No	Model No.	Nameplate Capacity (AH) 20HR	Actual Capacity (AH) 20HR	Dimension (mm)				Weight (Kg)	CCA (RT)	Layout	Terminal	Pallet Types
					L	W	H	TH					
4	D23	55D23R	60	41	230	173	200	220	13.58	450	1	B	—
				45					13.96	500	1	B	—
				54					14.84	600	1	B	—
		55D23L	60	41	230	173	200	220	13.58	450	0	B	—
				45					13.96	500	0	B	—
				54					14.84	600	0	B	—
5	D31	65D31R (N70)	70	45	304	173	200	220	17	500	1	B	—
				54					18	580	1	B	—
				59					18.6	620	1	B	—
		65D31L (N70L)	70	45	304	173	200	220	17	500	0	B	—
				54					18	580	0	B	—
				59					18.6	620	0	B	—
		75D31R (N70Z)	75	59	304	173	200	220	18.6	620	1	B	—
				63					19	680	1	B	—
		75D31L (N70ZL)	75	59	304	173	200	220	18.6	620	0	B	—
				63					19	680	0	B	—
		95D31R (NX120-7)	80	68	304	173	200	220	19.6	720	1	B	—
				81					21	860	1	B	—
		95D31L (NX120-7L)	80	68	304	173	200	220	19.6	720	0	B	—
				81					21	860	0	B	—
		105D31R	90	68	304	173	200	220	19.6	720	1	B	—
				81					21	860	1	B	—
		105D31L	90	68	304	173	200	220	19.6	720	0	B	—
				81					21	860	0	B	—
6	E41	95E41R (N100)	100	77	402	172	209	229	23.5	780	1	B	—
		95E41R (N100)	100	81					24	820	1	B	—
				99					25.8	1000	1	B	—
		95E41R (N100)	100	110					27.04	1100	1	B	—
7	BCI	BCI31-1000R	100	99	326	172	219	240	24.8	860	1	D/G	—
				110					26	960	1	D	—
8	BCI	BCI31-1000L	100	99	326	172	219	240	24.8	860	0	G	—
				110					26	960	0	D/G	—
9		65-650MF	75	59	290	190	170	190	16.6	650	1	B	—

EN Standard Battery (SMF)

MAINTENANCE FREE BATTERY

No.	DIN Gr.No	Model No.	Nameplate Capacity (AH) 20HR	Actual Capacity (AH) 20HR	Dimension (mm)			Weight (Kg)	CCA (RT)	Lay out	Term inal	Pallet Types
					L	W	H					
1	LB1 DIN36	53646MF	36	32	207	174	173	10.5	350	0	B	B3
2	L1 DIN44	54459MF	44	45	207	174	188	12.2	500	0	B	B3
3	LB2 DIN50	55047MF	50	36	243	174	175	11.9	400	0	B	B1/B3
				45				12.9	500	0	B	B1/B3
4	L2 DIN55	55559MF	55	27	243	174	188	11.5	300	0	B	B1/B3
				36				12.5	400	0	B	B1/B3
				45				13.5	500	0	B	B1/B3
		55565MF	55	45	243	174	188	13.5	500	0	B	B1/B3
5	L2 DIN62	56219MF	62	54	243	174	188	14.5	600	0	B	B1/B3
				59				15.1	650	0	B	B1/B3
		56220MF	62	54	243	174	188	14.5	600	1	B	B1/B3
				59				15.1	650	1	B	B1/B3
6	LB3	48R-590	65	54	276	174	180	15.3	600	1	B	B3
		48L-590	65	54				15.3	600	0	B	B3
7	L3-DIN66	56638MF	66	36	276	174	190	13.7	400	0	B	B3
				41				14.3	450	0	B	B3
				45				14.7	500	0	B	B3
				54				15.7	600	0	B	B3
				63				16.7	680	0	B	B3
8	L3 DIN74	57512MF	74	63	276	174	190	16.7	680	0	B	B3
		57513MF	74	63				16.7	680	1	B	B3
9	L4 DIN88	58043MF	88	63	314	175	190	18.5	680	0	B	B3
				72				19.5	770	0	B	B3
10	L5 DIN100	60038MF	100	54	352	175	190	18.4	580	0	B	B3
				77				21	780	0	B	B3
				95				23	930	0	B	B3

Truck Battery Specification

MAINTENANCE FREE BATTERY

No.	Gr.No	Model No.	Nameplate Capacity (AH) 20HR	Actual Capacity (AH) 20HR	Dimension (mm)				Weight (Kg)	CCA (RT)	Layout	Terminal	Pallet Types
					L	W	H	TH					
1	F51	7135F51 (N120)	120	91	509	180	195	220	28.4	650	3	B	—
				98					29.2	700	3	B	—
				107					30	720	3	B	—
				120					31.3	810	3	B	—
				146					33.9	970	3	B	—
2	G51	160G51 (N150)	150	104	517	221	195	221	33.9	720	3	B	—
				120					35.5	810	3	B	—
				133					36.8	900	3	B	—
				146					38.2	940	3	B	—
				159					39.5	1000	3	B	—
3	H52	210H52 (N200)	200	143	510	250	215	240	43.3	920	3	B	—
				159					44.9	1000	3	B	—
				172					46.4	1060	3	B	—
				185					47.5	1100	3	B	—
4	H52	SMF 73011 (DIN230MF)	230	213	510	250	215	240	54.5	1200	3	B	—
	H52	SMF 73011 (DIN230MF) Parking Air-Conditioned Car Only	230	228					56.1	1300	3	B	—



DRY CHARGED CAR BATTERY

BEST BATTERY FOR THE **BETTER JOURNEY**

Truck Battery Specification

DRY CHARGED BATTERY

No.	Gr.No	Model No.	Capacity (Ah) 20HR	Dimension (mm)				Weight (Kg)	CCA (RT)	Lay out	Term inal	Pallet Types
				L	W	H	TH					
1	F51	135F51 (N120)	120	515	185	200	220	19.7	830	3	B	—
2		135F51 (N120)	120					20.4	880	3	B	—
3	G51	160G51 (N150)	150	515	210	208	230	23.4	950	3	B	—
4		160G51 (N150)	150					24	1000	3	B	—
5	H52	210H52 (N200)	200	545	276	215	238	27.6	1050	3	B	—
6		210H52 (N200)	200					29.5	1200	3	B	—
7		210H52 (N200)	200					31	1300	3	B	—

For Japanese Vehicles(JIS)

DRY CHARGED BATTERY

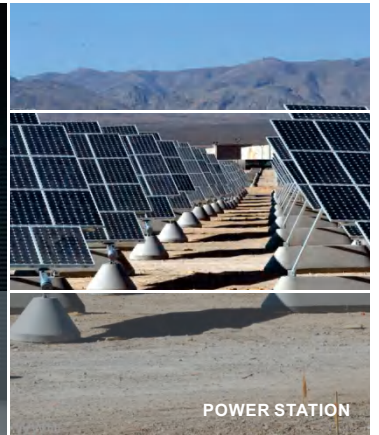
No.	JIS Gr.No	Model No.	Capacity (Ah) 20HR	Dimension (mm)				Weight (Kg)	CCA (RT)	Lay out	Term inal	Pallet Types
				L	W	H	TH					
1	B20	36B20R (NS40)	32	195	130	200	223	5.8	250	1	A	—
2		36B20L (NS40L)	32					5.8	250	0	A	—
1		36B20R (NS40)	32					6.43	270	1	A	—
2		36B20L (NS40L)	32					6.43	270	0	A	—
3		36B20R (NS40Z)	36					6.7	300	1	A	—
4		36B20L (NS40ZL)	36					6.7	300	0	A	—
5	B24	50B24R (N40)	40	235	130	200	220	7.4	310	1	A/B	—
6		50B24L (N40L)	40					7.4	310	0	A/B	—
9		55B24R (NS60)	45					7.9	340	1	A/B	—
10		55B24L (NS60L)	45					7.9	340	0	A/B	—
11		55B24RS (NS60(S))	45					8.4	390	1	A/B	—
12		55B24LS (NS60L(S))	45					8.4	390	0	A/B	—
13	D26	48D26R(N50)	50	257	170	208	230	9.1	420	1	B	—
14		48D26L (N50L)	50					9.1	420	0	B	—
15		55D26R (N50Z)	60					9.6	450	1	B	—
16		55D26L (N50ZL)	60					9.6	450	0	B	—
17		75D26R (NS70)	65					10.6	500	1	B	—
18		75D26L (NS70L)	65					10.6	500	0	B	—
27	D31	65D31R (N70)	70	300	170	210	230	11	520	1	B	—
28		65D31L (N70L)	70					11	520	0	B	—
29		75D31R (N70Z)	75					11.3	550	1	B	—
30		75D31L (N70ZL)	75					11.3	550	0	B	—
31		95D31R (NX120-7)	80					12.4	600	1	B	—
32		95D31L (NX120-7L)	80					12.4	600	0	B	—
35	E41	95E41R (N100)	100	415	170	208	232	14.7	650	1	B	—
36		95E41L (N100L)	100					14.7	650	0	B	—
37		115E41R (NS120)	110					16.2	720	1	B	—
38		115E41L (NS120L)	110					16.2	720	0	B	—



ATM (automatic teller machine)



SERVER ROOM



POWER STATION

STORAGE BATTERY APPLICATIONS

- Engine starter
- Electric tools
- Electric toys
- Electric power system
- Marine equipment
- Computer backup power
- Solar system/Wind system
- Emergency lightening system
- Communication equipment
- Fire & Security & Alarm system
- Cable TV
- Control system
- Nuclear power plant
- Generating station
- Telecom system
- Peak load compensation energy storage device
- Uninterrupted Power Supply(UPS)
- Backup & Standby power

PRODUCT DESCRIPTION

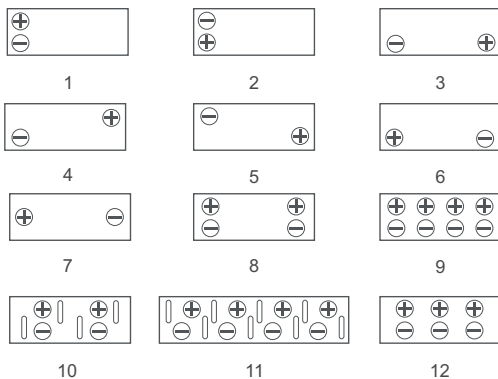
- ◆ **Safety:** no leakage on battery terminal, ensure using in safe and reliable
- ◆ **Maintenance free:** due to all internal generated gas restore to water, do not need water replenishment
- ◆ **Exhaust air system:** it can exhaust excess gas and make air pressure up to normal range when battery overcharges and internal pressure is over high, this time safe valve will close by itself, so there will be not additional gas accumulate.
- ◆ **No free acid:** special separator adsorb electrolyte, so there is no free acid inside battery, then battery can be installed in various position.



Outer Box

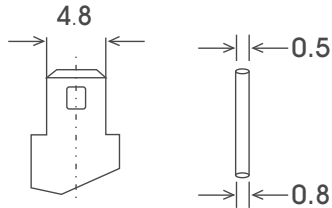
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TERMINAL DIRECTION:

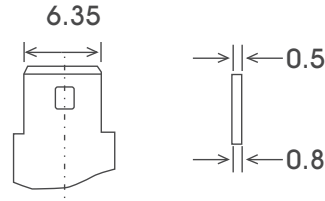


Battery

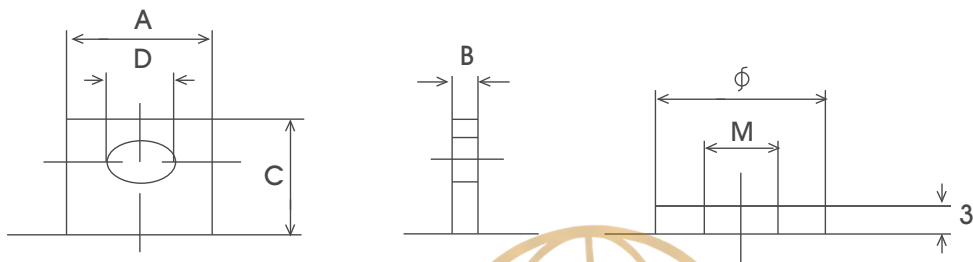
TERMINAL DIMENSIONS(mm):



F1(187)



F2(250)

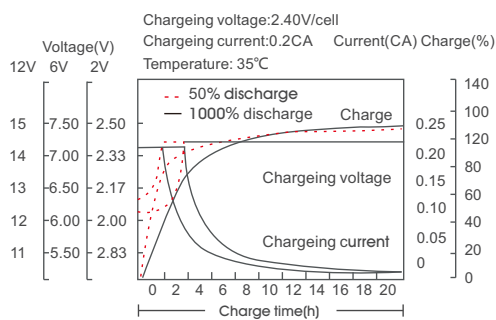


Type	A	B	C	D	Material
F5	16.5	6	15	6.2	Lead
F6	18	3	19	7	Copper
F7	18	9.6	18	9.5	Lead
F8	26	8	24	8.6	Lead
F9	26.5	10	23	8.5	Lead
F10	26	8.3	23	8.5	Lead
F11	27	8.3	26	9	Lead
F17	12	2	14	5.5	Copper

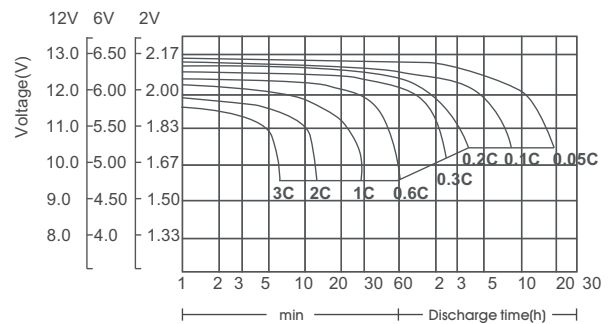
Type	M	Φ	Material
D1	4	10	Copper
D2	5	10	Copper
F12	8	20	Copper
F13	8	16	Copper
F14	6	14	Copper
F15	8	18	Copper
F16	10	18	Copper
F18	5	12	Copper
F19	6	16	Copper
M6	6	14/16	Copper

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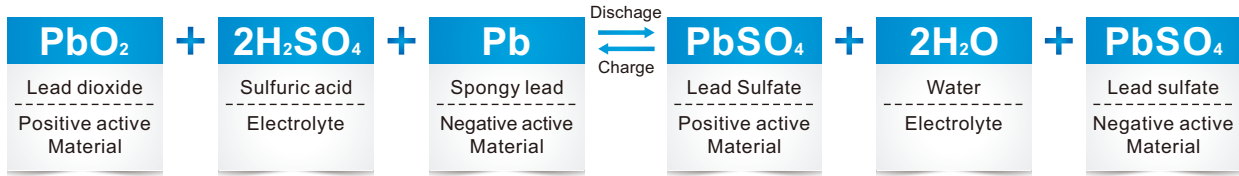
● Charge characteristic curve as follows



● Small size battery Discharge characteristic curve



CHEMICAL REACTION IN VRLA BATTERY AS FOLLOWS



While battery is discharged, the concentration of sulfuric acid is gradually decreased and lead sulfate is formed under the reaction between lead dioxide of positive electrode, spongy lead of negative electrode and the sulfuric acid in the electrolyte. While charging, lead sulfate in the positive and negative electrode is transformed to lead dioxide and spongy lead, and with the separation of sulfuric ions, the concentration of sulfuric acid will increase.

During the last charging period of traditional lead acid battery, water is consumed by the reaction of hydrogen evolution. So it requires compensation of water. With the application of moist spongy lead, it promptly reacts with oxygen, which effectively controls the decrease of water.

It is same as the traditional batteries from the beginning of charge to before the final stage, but when it is over-charged and in the last period of charge, the electric power will start to decompose water, negative electrode will be in discharge condition because oxygen from the positive plate reacts with spongy lead of negative plate and sulfuric acid of electrolyte. That restrains the hydrogen evolution on the negative plates.

The part of negative electrode in discharge condition will transform to spongy lead while charging. The quantity of spongy lead formed from charging equals to the quantity of sulfate lead as the result of absorbing the oxygen from positive electrode, which keeps the balance of negative electrode, and also make it possible to seal battery.

Reaction after the final stage of charge and chemical equation as below:

Fig.3: Reaction From Beginning Of Charge To Before the Final Stage

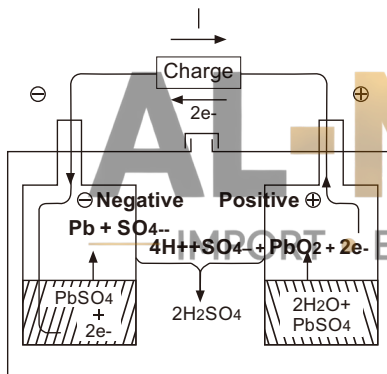
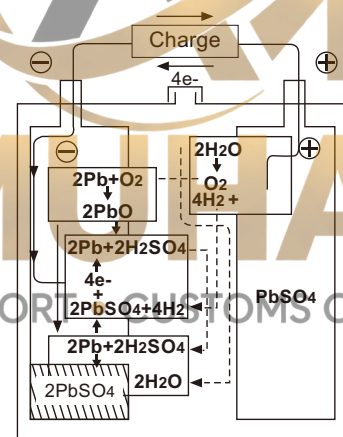
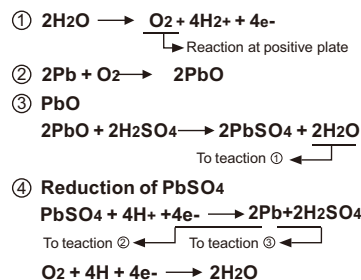


Fig.4: Reaction after final stage of charge:



As show, the positive electrode and the charge state of oxygen produced the negative electrode active material, rapid response to regenerate water, so the water little loss, so that the battery reaches the seal.



Reaction at positive plate (oxygen generation)

Migrates to negative plate surface
Chemical reaction of spongy lead with oxygen

Chemical reaction of pbo with electrolytes

Chemical reaction of pbo with electrolytes

MAINTENANCE In order to prevent battery troubles, inspect the battery regularly in the following manner and keep records.

Monthly check			
What to inspect	Method	Stand spec	.Measures in case of irregularity
Total battery voltage during float charge	Measure total voltage by voltmeter	Float charge voltage* number of batteries	Adjusted to the float charge voltage number of batteries
Half year check			
Total battery voltage during float charge	Measure total battery voltage by voltmeter of class 0.5 or better	Total battery voltage shall be product of float charge voltage with battery quanting	Adjust if the voltage value is outside standard
Individual battery voltage during float charge	Measure total battery voltage by voltmeter of lass 0.5 or better	Within 2.25+_ 0.1V/cell	Contact us for remedy; Any battery showing errors greater than permissible value shall be repaired or replaced
Appearance	Check for damage or leakage at container and cover	Replaced by electric tank or roof without damage or leakage acid	If leakage is found verify the cause, for container and cover having cracks, the battery shall be replaced
	Check for contamination by dust, etc	Battery no dust pollution	If contaminated, clean with wet cloth.
	Check for rust in the cubicle, battery stand, connecting plates, connecting wires and terminals	Battery holder Plate Connecting cable Termination rust	Perform cleaning, rust preventive treatment, painting of touch up.
One-year inspection (following inspection shall be added to six-months inspection)			
Connecting parts	Tighten bolts and nuts	Checking (connecting screw stud books and torque)	

BATTERY CONSTRUCTION

Safety valve

Synthesized with EPDM rubber and Teflon, the function of safety valve is to release gas when the internal pressure rises abnormally which can prevent water losses and protect battery from explosion by over-pressure and over-heat.

Electrolyte

Electrolyte is compounded with sulfuric acid, deionized water or distilled water. It takes part in the electrochemical reaction and plays as the medium of positive and negative ions in liquid and temperature between plates.

Grid

To collect and transfer current, grid-shape alloy (PB-CA-SN) plays a part of supporting active materials and distributing current in active materials equally.

Container&cover

Battery case includes container and cover. Container is used to hold positive and negative plates and electrolyte. Preventing impurities entering cells, cover also can avoid acid leakage and venting. Containing all materials relating charge and discharge, ABS and PP material are chosen as battery case because of their well performance in insulativity, mechanical strength, anti-corrosion and heat resistance.

Separator

Separator in VRLA battery should consist of porous mass and adsorb massive electrolyte to make sure the free movement of electrolyte, positive and negative ions. As the carrier of electrolyte, separator also should prevent the short circuit between positive and negative plates. Providing the shortest distance for negative and positive electrode, separator prevents lead paste to be damaged and dropped, and prevents the contact between the cast and electrode even when the active materials is off the plates. It also can stop the spread and shift of hazardous substance. Glass fiber, as the normal and frequent choice, is characterized with strong adsorbability, tiny aperture, high porosity, large pore area, high mechanical strength, strong resistance to acid corrosion and chemical oxidizing.



SINCE 1995

BRIGHTEN UP YOUR LIFE

STORAGE BATTERY

AL-MUHAJIR

— IMPORT • EXPORT • CUSTOMS CLEARANCE —



SMALL SIZE BATTERY SERIES

storage battery

No.	Factory Model No.	TCS Brand Model No.	MHB Brand Model No.	Volts (V)	Capacity (Ah) 20HR	Dimension (mm)				Weight (KG)	Polarity	Terminal Type
						L	W	H	TH			
1	3-FM-4F	SL6-4	MS4-6	6	4	70	47	100	106	0.68	+ -	F1/F2
2	3-FM-4G									0.70		
3	3-FM-4									0.71		
4	3-FM-4.5D	SL6-5	MS4.5-6	6	5	70	47	100	106	0.75	+ -	F1/F2
5	3-FM-5	SL6-5	MS5-6	6	5	70	47	100	106	0.80	+ -	F1/F2
6	3-FM-7	SL6-7	MS7-6	6	7	151	35	94	100	1.17	+ -	F1/F2
7	3-FM-9	SL6-8.6	MS9-6	6	8.6	151	35	94	100	1.33	+ -	F1/F2
8	3-FM-12	SL6-12	MS12-6	6	12	151	50	94	100	1.75	+ -	F1/F2
9	6-FM-1.3无台阶	SL12-1.2	MS1.2-12	12	1.2	97	43	52	57	0.55	- +	F1
10	6-FM-2.3-1	SL12-2.2	MS2.2-12	12	2.2	70	48	99	102	0.76	+ -	F1
11	6-FM-2.3	SL12-2.3	MS2.3-12	12	2.3	179	35	61	66	0.92	+ -	F1
12	6-FM-2.9	SL12-2.7	MS2.9-12	12	2.7	80	56	99	103	1.20	- +	F1
13	6-FM-3.5	SL12-3.5	MS3.5-12	12	3.5	134	67	61	66	1.33	- +	F1/F2
14	6-FM-4	SL12-4	MS4-12	12	4	90	70	101	105	1.40	+ -	F1/F2
15	6-FM-4I (铸焊)									1.41	+ -	
16	6-FM-4.5C (铸焊)	SL12-4.5	MS4.5-12	12	4.5	90	70	101	105	1.44	+ -	F1/F2
17	6-FM-5F (铸焊)	SL12-5	MS5-12	12	5	90	70	101	105	1.52	+ -	F1/F2
18	6-FM-5		MS5-12							1.60		
19	6-FM-5C		HR1223W							1.83		
20	6-FM-6D	SL12-6	HR1225W	12	6	151	51	94	98	1.95	+ -	F1/F2
21	6-FM-6.3A(铸焊)	SL12-6.2	MS7-12	12	6.2	151	65	94	98	1.85	+ -	F1/F2
22	6-FM-7I (铸焊)	SL12-6.5	MS6.5-12	12	6.5	151	65	94	98	2.00	+ -	F1/F2
23	6-FM-7F (铸焊)	SL12-7	MS7-12	12	7	151	65	94	98	2.05	+ -	F1/F2
24	6-FM-7E (铸焊)									2.08		
25	6-FM-7.2E (铸焊)	SL12-7.2	MS7-12	12	7.2	151	65	94	98	2.10	+ -	F1/F2
26	6-FM-7.5C (铸焊)	SL12-7.5	MS7.2-12	12	7.5	151	65	94	98	2.16	+ -	F1/F2
27	6-FM-7.5 (铸焊)	SL12-7.5	MS7.5-12	12	7.5	151	65	94	98	2.28	+ -	F1/F2
28	6-FM-7.5A (铸焊)									2.35		
29	6-FM-9C (铸焊)	SL12-8.4	MS9-12	12	8.4	151	65	94	98	2.45	+ -	F1/F2
30	6-FM-9B (铸焊)	SL12-8.5	MS9-12	12	8.5	151	65	94	98	2.55	+ -	F1/F2
31	6-FM-9F (铸焊)	SL12-9	MS9-12	12	9	151	65	94	98	2.65	+ -	F1/F2
32	6-FM-10B	SL12-10	MS10-12	12	10	151	65	110	115	3.10	+ -	F1/F2
33	6-FM-12B	SL12-12	MS12-12	12	12	151	98	94	98	3.30	+ -	F1/F2
34	6-FM-12									3.60		
35	6-FM-17C	SL12-17	MS17-12	12	17	181	77	167	167	4.70	- +	T1
36	6-FM-17CT									4.70		B1
37	6-FM-17	SL12-18	MS17-12	12	18	181	77	167	167	5	- +	T1
38	6-FM-17T									5		B1
39	6-FM-18	SL12-18	MS18-12	12	18	181	77	167	167	5.3	- +	T1
40	6-FM-18T									5.3		B1
41	6-FM-18B	SL12-18	MS20-12	12	18	181	77	167	167	5.5	- +	T1
42	6-FM-18BT									5.5		B1
43	6-FM-20B	SL12-20	MS20-12	12	20	181	77	167	167	5.7	- +	T1
44	6-FM-20BT									5.7		B1
45	6-FM-22B	SL12-22	MS22-12	12	22	181	77	167	167	6.2	- +	T1
46	6-FM-22BT									6.2		B1
47	6-FM-18D	SL12-18	HR1270W	12	18	181	77	167	167	5.7	- +	T1
48	6-FM-18DT									5.7		B1



MIDDLE SIZE BATTERY SERIES

Storage Battery

No.	Factory Model No.	TCS Brand Model No.	MHB Brand Model No.	Volts (v)	Capacity (Ah) 20HR	Dimension (mm)				Weight (KG)	Polarity	Terminal Type
						L	W	H	TH			
1	6-GFM-24立式-1-Q	SL12-26	MS26-12	12	26	165	126	174	174	8.00	- +	T3
2	6-GFM-24立式-1-T	SL12-26	MS26-12	12	26	165	126	174	174	8.00	- +	B2
3	6-GFM-28立式-1-Q	SL12-28	MS28-12	12	28	165	126	174	174	8.30	- +	T3
4	6-GFM-28立式-1-T	SL12-28	MS28-12	12	28	165	126	174	174	8.30	- +	B2
5	6-GFM-24卧式-1-Q	SL12-26	MS26-12	12	26	175	166	125	125	7.25	- +	T3
6	6-GFM-24卧式-1-T	SL12-26	MS26-12	12	26	175	166	125	125	7.25	- +	B2
7	6-GFM-26卧式-1-Q	SL12-26	MS26-12	12	26	175	166	125	125	7.60	- +	T3
8	6-GFM-26卧式-1-T	SL12-26	MS26-12	12	26	175	166	125	125	7.60	- +	B2
9	6-GFM-28卧式-1-Q	SL12-28	MS28-12	12	28	175	166	125	125	7.90	- +	T3
10	6-GFM-28卧式-1-T	SL12-28	MS28-12	12	28	175	166	125	125	7.90	- +	B2
11	6-GFM-30卧式-1A-Q	SL12-30	MS30-12	12	30	175	166	125	125	8.20	- +	T3
12	6-GFM-30卧式-1A-T	SL12-30	MS30-12	12	30	175	166	125	125	8.20	- +	B2
13	6-GFM-30卧式-1-Q	SL12-30	HR12105W	12	30	175	166	125	125	8.70	- +	T3
14	6-GFM-30卧式-1-T	SL12-30	HR12105W	12	30	175	166	125	125	8.70	- +	B2
15	6-GFM-33-1A-T	SL12-33	MM33-12	12	33	196	133	161	170	10.00	+ -	B3
16	6-GFM-33-1-T	SL12-33	MM33-12	12	33	196	133	161	170	10.80	+ -	B3
17	6-GFM-38-4-TE	SL12-34	MM34-12	12	34	196	165	170	170	11.30	- +	B4
18	6-GFM-38-2-TE	SL12-37.5	MM38-12	12	37.5	196	165	170	170	12.00	- +	B4
19	6-GFM-38-1-T	SL12-38	MML38-12	12	38	196	165	170	170	12.80	- +	B4
20	6-GFM-40-1-T	SL12-40	MM40-12	12	40	196	165	168	168	13.20	- +	T11
21	6-GFM-42-1-T	SL12-40	MM42-12	12	40	196	165	170	170	13.80	- +	B4
22	6-GFM-48-1-T	SL12-45	MM48-12	12	45	196	165	170	170	14.00	- +	B4
23	6-GFM-48-1-T	SL12-50	HR12175W	12	50	196	165	170	170	14.60	- +	B4
24	6-GFM-55-2-T	SL12-50	MM50-12	12	50	230	137	210	215	16.10	+ -	B4
25	6-GFM-55-1A-T	SL12-55	MM55-12	12	55	230	137	210	215	16.50	+ -	B4
26	6-GFM-55-1-T	SL12-55	MM50-12	12	55	230	137	210	215	17.50	+ -	B4
27	6-GFM-65-2-TE	SL12-60	MM60-12	12	60	350	167	174	174	19.00	- +	B5
28	6-GFM-65-1B-T	SL12-65	MM65-12	12	65	350	167	174	174	20.00	- +	B5
29	6-GFM-65-1A-T	SL12-65	MML65-12	12	65	350	167	174	174	21.00	- +	B5
30	6-GFM-65-1-T	SL12-65	HR12220W	12	65	350	167	174	174	23.50	- +	B5

No.	Factory Model No.	TCS Brand Model No.	MHB Brand Model No.	Volts (V)	Capacity (Ah) 20HR	L	W	H	TH	Weight (KG)	Polarity	Terminal Type
31	6-GFM-75-3-T	SL12-65	MM65-12	12	65	260	167	213	216	20.00	- +	B4
32	6-GFM-75-1A-T	SL12-75	MM75-12	12	75	260	167	213	216	21.50	+ -	B4
33	6-GFM-75-1-T	SL12-80	MM80-12	12	80	260	167	213	216	22.50	+ -	B4
34	6-GFM-90-2-T	SL12-90	MM90-12	12	90	305	167	210	213	26.50	+ -	B4
35	6-GFM-90-1A-T	SL12-100	MM100-12	12	100	305	167	210	213	27.50	+ -	B4
36	6-GFM-90-1-T	SL12-100	MM105-12	12	100	305	167	210	213	28.50	+ -	B4
37	6-GFM-100-2-TE	SL12-90	MM90-12	12	90	330	173	217	220	27.50	+ -	B5
38	6-GFM-100-1D-T	SL12-100	MM100-12	12	100	330	173	217	220	28.00	+ -	B5
39	6-GFM-100-1C-T	SL12-100	MM100-12	12	100	330	173	217	220	29.00	+ -	B5
40	6-GFM-100-1B-T	SL12-100	MM100-12	12	100	330	173	217	220	29.50	+ -	B5
41	6-GFM-100-1A-T	SL12-110	MM110-12	12	110	330	173	217	220	30.80	+ -	B5
42	6-GFM-100-1-T	SL12-110	MML100-12	12	110	330	173	217	220	32.50	+ -	B5
43	6-GFM-120-1B-T	SL12-110	MM110-12	12	110	406	173	207	236	32.80	+ -	B5
44	6-GFM-120-1A-T	SL12-120	MM120-12	12	120	406	173	207	236	34.50	+ -	B5
45	6-GFM-120-1-T	SL12-120	MML120-12	12	120	406	173	207	236	36.00	+ -	B5
46	6-GFM-150-1B-T	SL12-150	MM150-12	12	150	486	171	243	243	43.00	+ -	B5
47	6-GFM-150-1A-T	SL12-145	MM150-12	12	145	486	171	243	243	45.50	+ -	B5
48	6-GFM-150-1-T	SL12-152	MML150-12	12	152	486	171	243	243	47.00	- +	B5
49	6-GFM-200-1B-T	SL12-200	MM200-12	12	200	523	240	219	223	58.00	- +	B5
50	6-GFM-200-1A-T	SL12-200	MM200-12	12	200	523	240	219	223	60.00	- +	B5



FRONT TERMINAL BATTERY SERIES

Storage Battery

No.	Factory Model No.	TCS Brand Model No.	MHB Brand Model No.	Volts (V)	Capacity (Ah) 20HR	Dimension (mm)				Weight (KG)	Polarity	Terminal Type
						L	W	H	TH			
1	6-FT-50	SL12-50FT	MR50-12	12	50	291	106	223	230	17.00	- +	B3
2	6-FT-75	SL12-72FT	MR75-12	12	72	562	115	187	194	19.50	- +	B4
3	6-FT-75C	SL12-75FT	MR75-12	12	75	562	115	187	194	26.00	- +	B4
4	6-FT-100	SL12-100FT	MR100-12	12	100	394	110	286	286	30.00	- +	B4
4	6-FT-100B	SL12-100FT	MR100-12	12	100	394	110	286	286	33.00	- +	B4
5	6-FT-100A	SL12-100FT	MR100-12	12	100	507	110	223	238	34.00	- +	B4
5	6-FT-105	SL12-105FT	MR105-12	12	105	507	110	223	238	32.00	- +	B4
6	6-FT-105-B	SL12-105FT	MR105-12	12	105	507	110	223	238	31.80	- +	B4
7	6-FT-110	SL12-110FT	MR110-12	12	110	394	110	286	286	33.00	- +	B4
8	6-FT-125	SL12-125FT	MR125-12	12	125	545	105	315	315	40.20	- +	B4
9	6-FT-155	SL12-155FT	MR155-12	12	155	551	110	288	288	48.50	- +	B4
10	6-FT-170	SL12-170FT	MR170-12	12	170	561	125	316	316	51.00	- +	B4
11	6-FT-180	SL12-180FT	MR180-12	12	180	561	125	316	316	53.80	- +	B4



DEEP CYCLE GEL BATTERY SERIES

Storage Battery

No.	Factory Model No.	TCS Brand Model No.	MHB Brand Model No.	Volts (V)	Capacity (Ah) 20HR	Dimension (mm)				Weight (KG)	Polarity	Terminal Type
						L	W	H	TH			
1	6-FM-18	SLDG12-18	MSDG18-12	12	18	181	77	167	167	5.3	- +	T1
2	6-FM-18T											B1
3	6-GFM-40-1-T	SLDG12-40	MMDG40-12	12	40	196	165	168	168	13.2	- +	B4
4	6-GFM-75-5-T	SLDG12-55	MMDG55-12	12	55	260	167	213	216	16.5	+ -	
5	6-GFM-75-3-T	SLDG12-65	MMDG65-12	12	65	260	167	213	216	20	+ -	
6	6-GFM-75-1-T	SLDG12-80	MMDG80-12	12	80	260	167	213	216	22.5	+ -	
7	6-GFM-100-1D-T	SLDG12-100	MMDG100-12	12	100	330	173	217	220	28	+ -	B5
8	6-GFM-100-1C-T									29		
9	6-GFM-100-1B-T									29.5		
10	6-GFM-100-1A-T									30.8		
11	6-GFM-100-1-T									32.5		
12	6-GFM-120-1A-T	SLDG12-120	MMDG120-12	12	120	406	173	207	236	34.5	+ -	B5
13	6-GFM-150-1A-T	SLDG12-150	MMDG150-12	12	145	486	171	243	243	45.5	+ -	B5
14	6-GFM-150-1B-T				150					43		
15	6-GFM-150-1-T				150					47		
16	6-GFM-200-1C-T	SLDG12-200	MMDG200-12	12	190	523	240	219	223	55.5	- +	B5
17	6-GFM-200-1B-T				200					58		
18	6-GFM-200-1A-T				200					60		
19	6-GFM-200-1-T				200					62		
20	6-GFM-250-1-T	SLDG12-250	MMDG250-12	12	250	520	269	220	224	69	- +	T16

DEEP CYCLE BATTERY SERIES

Storage Battery

No.	Factory Model No.	TCS Brand Model No.	MHB Brand Model No.	Capacity (Ah) 20HR	Volts (V)	Dimension (mm)				Weight (KG)	Polarity	Terminal Type
						L	W	H	TH			
1	6-FM-5	SLD12-5	MSD5-12	12	5	90	70	101	105	1.6	+ -	F1/F2
2	6-FM-5I			12	5					1.66		
3	6-GFM-40-1-T	SLD12-40	MMD40-12	12	40	196	165	168	168	13.2	- +	B4
4	6-GFM-75-5-T	SLD12-55	MMD55-12	12	55	260	167	213	216	16.5	+ -	B4
5	6-GFM-75-3-T	SLD12-65	MMD65-12	12	65	260	167	213	216	20	+ -	B4
6	6-GFM-75-1-T	SLD12-80	MMD80-12	12	80	260	167	213	216	22.5	+ -	B4
7	6-GFM-100-1D-T	SLD12-100	MMD100-12	12	100	330	173	217	220	28	+ -	B5
8	6-GFM-100-1C-T			12	100					29		
9	6-GFM-100-1B-T			12	100					29.5		
10	6-GFM-100-1A-T			12	100					30.8		
11	6-GFM-100-1-T			12	100					32.5		
12	6-GFM-120-1A-T	SLD12-120	MMD120-12	12	120	406	173	207	236	34.5	+ -	B5
13	6-GFM-150-1A-T	SLD12-150	MMD150-12	12	145	486	171	243	243	45.5	+ -	B5
14	6-GFM-150-1B-T			12	150					43		
15	6-GFM-150-1-T			12	150					47		
16	6-GFM-200-1C-T	SLD12-200	MMD200-12	12	190	523	240	219	223	55.5	- +	B5
17	6-GFM-200-1B-T			12	200					58		
18	6-GFM-200-1A-T			12	200					60		
19	6-GFM-200-1-T			12	200					62		
20	6-GFM-250-1-T	SLD12-250	MMD250-12	12	250	520	269	220	224	69	- +	T16

GEL BATTERY SERIES

Storage Battery

No.	Factory Model No.	TCS Brand Model No.	MHB Brand Model No.	Capacity (Ah) 20HR	Volts (V)	Dimension (mm)				Weight (KG)	Polarity	Terminal Type
						L	W	H	TH			
1	6-FM-18	SLG12-18	MSG18-12	12	18	181	77	167	167	5.3	- +	T1
2	6-FM-18T			12	18					5.3	- +	B1
3	6-GFM-40-1-T	SLG12-40	MMG40-12	12	40	196	165	168	168	13.2	- +	B4
4	6-GFM-75-5-T	SLG12-55	MMG55-12	12	55	260	167	213	216	16.5	+ -	B4
5	6-GFM-75-3-T	SLG12-65	MMG65-12	12	65	260	167	213	216	20	+ -	B4
6	6-GFM-75-1-T	SLG12-80	MMG80-12	12	80	260	167	213	216	22.5	+ -	B4
7	6-GFM-100-1D-T	SLG12-100	MMG100-12	12	100	330	173	217	220	28	+ -	B5
8	6-GFM-100-1C-T			12	100					29		
9	6-GFM-100-1B-T			12	100					29.5		
10	6-GFM-100-1A-T			12	100					30.8		
11	6-GFM-100-1-T			12	100					32.5		
12	6-GFM-120-1A-T	SLG12-120	MMG120-12	12	120	406	173	207	236	34.5	+ -	B5
13	6-GFM-150-1A-T	SLG12-150	MMG150-12	12	145	486	171	243	243	45.5	+ -	B5
14	6-GFM-150-1B-T			12	150					43		
15	6-GFM-150-1-T			12	150					47		
16	6-GFM-200-1C-T	SLG12-200	MMG200-12	12	190	523	240	219	223	55.5	- +	B5
17	6-GFM-200-1B-T			12	200					58		
18	6-GFM-200-1A-T			12	200					60		
19	6-GFM-200-1-T			12	200					62		
20	6-GFM-250-1-T	SLG12-250	MMG250-12	12	250	520	269	220	224	69	- +	T16



OPzV BATTERY SERIES

Storage Battery

No.	TCS&MHB Model No.	Voltage	Capacity	Dimensions(mm)				Terminal Type	Terminal Position	Weight (Kg)±5%
		(V)	(Ah)	(L)±1.5	(W)±1.0	(H)±2.0	(TH)±2.0			
1	OPzV 200	2	200	103	206	355	390	B7	7	18.2
2	OPzV 250	2	250	124	206	355	390	B7	7	22.4
3	OPzV300	2	300	145	206	355	390	B7	7	26.4
4	OPzV350	2	350	124	206	471	506	B7	7	29.0
5	OPzV 420	2	420	145	206	471	506	B7	7	34.5
6	OPzV 490	2	490	166	206	471	506	B7	7	39.0
7	OPzV 600	2	600	145	206	646	681	B7	7	48.0
8	OPzV 800	2	800	191	210	646	681	B7	8	65.0
9	OPzV 1000	2	1000	233	210	646	681	B7	8	78.5
10	OPzV 1200	2	1200	275	210	646	681	B7	8	93.0
11	OPzV 1500	2	1500	275	210	796	931	B7	8	115
12	OPzV 2000	2	2000	397	212	772	807	B7	12	155
13	OPzV 2500	2	2500	487	212	772	807	B7	9	192
14	OPzV 3000	2	3000	576	212	772	807	B7	9	228

OPzS BATTERY SERIES

Storage Battery

No.	TCS&MHB Model No.	Voltage	Capacity	Dimensions(mm)				Terminal Type	Terminal Position	Weight(Kg±5%)		
		(V)	(Ah)	(L)±1.5	(W)±1.0	(H)±2.0	(TH)±2.0			Dry weight	Wet weight	Acid weight
1	OPzS 200	2	200	103	206	355	410	B8	7	12.9	17.4	4.5
2	OPzS 250	2	250	124	206	355	410	B8	7	15.4	20.4	5.0
3	OPzS 300	2	300	145	206	355	410	B8	7	17.8	23.8	6.0
4	OPzS 350	2	350	124	206	471	526	B8	7	21.3	28.3	7.0
5	OPzS 420	2	420	145	206	471	526	B8	7	24.5	32.7	8.2
6	OPzS 490	2	490	166	206	471	526	B8	7	28.2	38.0	9.8
7	OPzS 600	2	600	145	206	646	701	B8	7	33.4	45.4	12.0
8	OPzS 800	2	800	191	210	646	701	B8	8	46.9	62.9	14.0
9	OPzS 1000	2	1000	233	210	646	701	B8	8	57.4	77.4	20.0
10	OPzS 1200	2	1200	275	210	646	701	B8	8	67.7	91.7	24.0
11	OPzS 1500	2	1500	275	210	796	851	B8	8	83.8	113.8	30.0
12	OPzS 2000	2	2000	397	212	772	827	B8	12	110	150	40.0
13	OPzS 2500	2	2500	487	212	772	827	B8	9	139.4	189.4	50.0
14	OPzS 3000	2	3000	576	212	772	827	B8	9	164.8	224.8	60.0



2V BATTERY SERIES

Storage Battery

No.	Factory Model No.	TCS Brand Model No.	MHB Brand Model No.	Capacity (Ah) 20HR	Volts (V)	Dimension (mm)				Weight (KG)	Polarity	Terminal Type
						L	W	H	TH			
1	GFM50	SL2-50	ML50-2	2	50	161	50	166	175	3.30	B5	+ -
2	GFM100	SL2-100	M100-2	2	100	170	72	205	228	5.90	T18	+ -
3	GFM150	SL2-150	ML150-2	2	150	172	102	208	223	8.60	T18	+ -
4	GFM-200A	SL2-200	ML200-2	2	200	170	110	334	365	13.40	B6	+ -
5	GFM-250A	SL2-250	ML250-2	2	250	171	151	340	365	18.20	B5	- +
6	GFM-300A	SL2-300	ML300-2	2	300	171	151	340	365	19.50	B5	+ -
7	GFM-350A	SL2-350	ML350-2	2	350	171	151	340	365	20.50	B5	+ -
8	GFM-400A	SL2-400	ML400-2	2	400	210	175	334	365	27.00	B5	+ -
9	GFM-450A	SL2-450	ML450-2	2	450	240	173	338	365	30.00	B5	+ -
10	GFM-500A	SL2-500	ML500-2	2	500	240	173	338	365	31.00	B5	- +
11	GFM-500AH	SL2-500	ML500A-2	2	500	240	173	338	365	34.50	B5	- +
12	GFM-600A	SL2-600	ML600-2	2	600	300	175	335	365	38.50	B5	+ -
13	GFM-800A	SL2-800	ML800-2	2	800	410	175	331	365	53.20	B5	±
14	GFM-1000A	SL2-1000	ML1000-2	2	1000	474	173	329	366	61.50	B5	+ -
15	GFM-1500A	SL2-1500	ML1500-2	2	1500	398	350	341	383	97.00	B5	±
16	GFM-2000A	SL2-2000	ML2000-2	2	2000	490	350	342	381	129.00	B5	+ -
17	GFM-2500A	SL2-2500	ML2500-2	2	2500	712	353	341	382	171.00	B5	+ -
18	GFM-3000A	SL2-3000	ML3000-2	2	3000	712	353	341	382	188.00	B5	+ -

APPLICATION FIELD

— IMPORT • EXPORT • CUSTOMS CLEARANCE —





للاستفسار وطلب عروض الأسعار

REQUEST A QUOTATION

Send the model number, quantity and destination.

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www.almuhajir.co

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