



# **POWERSPORT BATTERY**

*For: Motorcycles, Scooters, Jet skis, Atvs, Snowmobile & more*





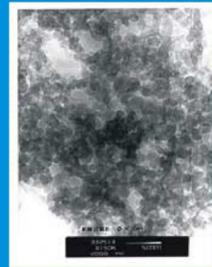
**KINVOLT**

# KINVOLT GEL Battery for Motorcycle

Japanese Standard: JIS D 5302-2004

**MF** SUPERIOR  
Motorcycle Battery

Copper terminal with argentums plating, which can avoid the negative terminal from broke and make the battery in higher conductivity.



Battery containers with ABS plastic which is high tenacity and the flame retardant level reaches II level.



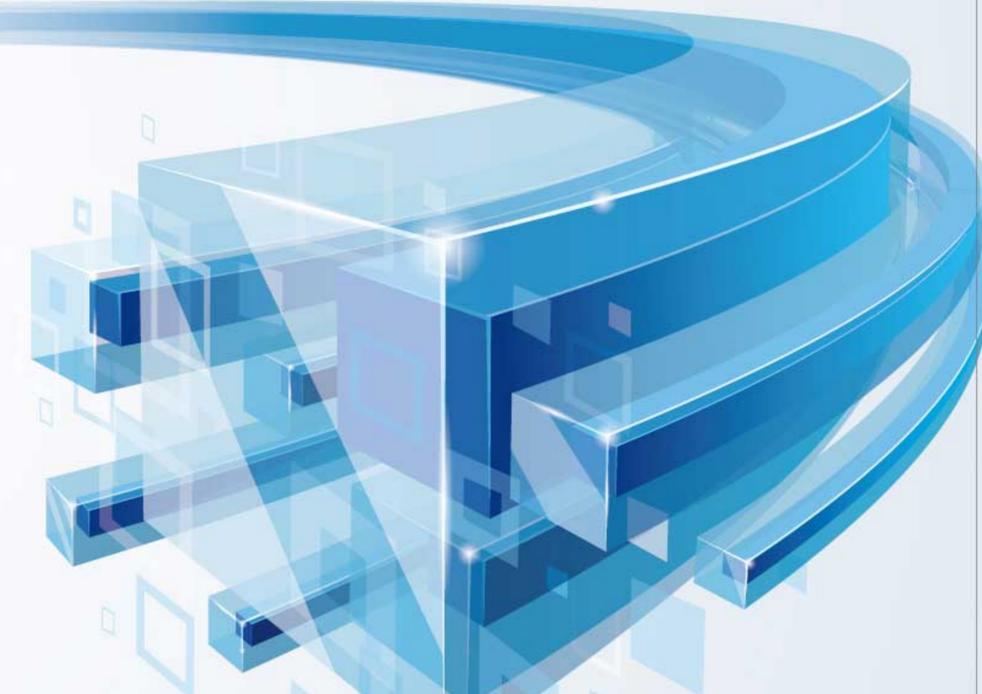
Adding acid for maintenance by opening lid cover to prolong the battery service life

With transparent top cover design, the inside structure is visible, which enhances the grade of products and assists market penetration

Injected with Gel electrolyte instead of acid, the battery is of super performance:

- Higher capacity
- Easy and safe to use
- More vibration-resistant
- Good performance in the low temperatures, can meet requirements of starting currents in  $-30^{\circ}\text{C}$  to  $-50^{\circ}\text{C}$ .
- Stable characteristic in high temperatures, can meet requirements of its usage in temperature of  $65^{\circ}\text{C}$  and even higher.
- Longer cycle service life than normal lead acid battery type.

[www.kineeds.com](http://www.kineeds.com)



## Lead-Calcium Plate

Lead plate, as the core technology of lead acid battery, which quality directly determines the battery performance. Generally, there are two types of plates, Pb-Ca plate and Pb-Sb plate.

For Pb-Sb plate battery, the Sb dissolved in acid electrolyte will form micro-cells with active materials at negative plate and speed up battery self-discharge. Comparing with Pb-Sb plate, Pb-Ca plate has better resistance to corrosion and reduce self-discharge rate. Besides, Pb-Ca alloy is featured with high hydrogen evolution overpotential, it slows down battery water loss due to less hydrogen generated from lead plate and improves battery service life.

Advantages of Pb-Ca plate

1. Low self-discharge rate.
2. Sufficient Capacity.
3. Low water loss.
4. Strong corrosion resistance.
5. Great Mechanical strength.
6. High conductive rate reduces power loss and improves starting power.
7. Excellent power reserve ability.

Our all series batteries adopt Pb-Ca plates. From lead ingot purchasing to finished plate, the whole processing line is rigidly conform to the GB/T organization standard.



# WITH YOU TO CREATE THE FUTURE

## COMPANY PROFILE

KINEEDS INDUSTRY LIMITED, established in 2000, is a professional lead acid motorcycle battery manufacturer which integrates R&D, manufacturing and sales in one. Our factory occupies an area of 60,000 square meters, with 16 professional engineers for R&D department, 50 management and marketing elites, and 520 employees. Our production output is approximately 500,000 pieces of motorcycle batteries per month.

We firmly believe that quality and innovation is the key for a company's healthy and continuous development. For material, we adopt highly pure lead ingot 99.994% and lead-calcium grids for all series of batteries, keeping strict inspections over each procession with precise facilities. For technology, all series of batteries are strictly executed following JIS standard. For production, we introduce auto assembly line and advanced equipment for charging, inspecting and testing, which ensure highest quality of products.

Under concept of "Quality First, Persist Innovation", we are expecting to be with you creating brilliant future.

### QUALITY CONTROL:

To assure stable and high quality, our QC team continually tests all finished products strictly adhered to JIS Standard as below:

- Capacity Test ( 10 Hr rate)
- 0° F / -18° C Cold Cranking Amps (CCA) Test
- Reserve Capacity Test
- Low Temp High Rate Discharge Test
- Dry Charge Test
- Cycle Life Test

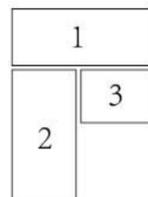
**ISO9001**  
**ISO14001**  
**OHSAS18001**



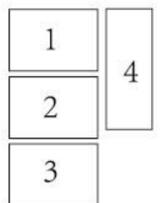
# PRODUCTION LINE



- 1 Grid Casting Workshop
- 2 Lead Powder Grinding Workshop
- 3 Curing Workshop



- 1 Formation Workshop
- 2 Formation Workshop
- 3 Assembly Workshop
- 4 Assembly Workshop



# TESTING EQUIPMENT



- 1** Laboratory Analysis of Lead Ingot, Lead Paste and Plate
- 2** Grid Inspection
- 3** Raw Material Analysis by Spectrum
- 4** Grid Inspection

1	2
3	4



- 1** Internal Short Circuit Test
- 2** Air-Tightness Test
- 3** Cycle charge & discharge test
- 4** AGM Separator Test

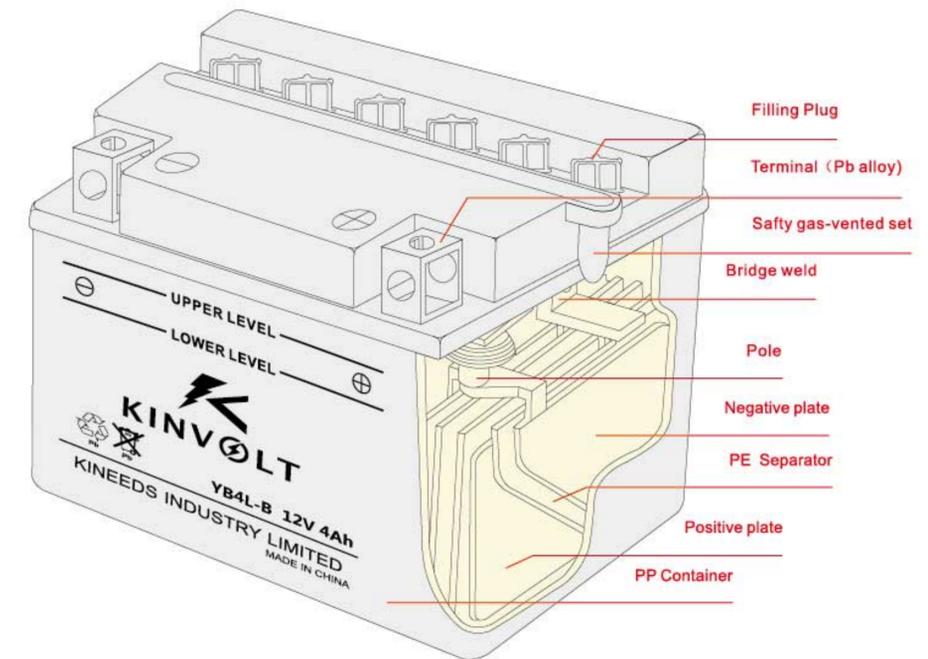
1	4
2	
3	

# N.YB Series Motorcycle Battery



## N.YB Series Battery

This product has a long history, lower production cost, long storage time, designed for motorcycle riders who want long-lasting performance at a reasonable price.



### Product Feature:

- ◆ Pb-Ca PLATE reduces self-discharge and water loss, long cycle life
- ◆ SAFETY GAS-VENT relieves excess pressure
- ◆ SEALED POST resists corrosion and extends battery life
- ◆ THROUGH-PARTITION CONSTRUCTION delivers maximum power
- ◆ POLYPROPYLENE COVER AND CONTAINER gives resistance to gas, oil and impact

### Conventional

No.	Model No.	Volts	Capacity (Ah) 10 HR	Appx. Dimension (mm)			Reference		Assembly Figure	Terminal Type	CCA -18° (A)
				L±2	W±2	H±2	Weight With Acid(Kg)	Acid Volume (L)			
001	6N2-2A	6	2	70	46	95	0.53	0.10		(+)310mmCA103 (-)145mmCA103	20
002	6N2-2A-1	6	2	70	46	95	0.50	0.10		(+)175mmCA103 (-)300mmCA103	20
003	6N2-2A-2	6	2	70	46	95	0.65	0.10		(+)100mmCA103 (-)150mmCB103	20
004	6N2-2A-3	6	2	70	46	95	0.50	0.10		(+)100mmCB104 (-)150mmLA106	20
005	6N2-2A-4	6	2	70	46	95	0.79	0.10		(+)100mmCB104 (-)100mmCB104	20
006	6N2-2A-5	6	2	70	46	95	0.83	0.10		(+)150mmCB104 (-)150mmLA106	20
007	6N2-2A-6	6	2	70	46	95	0.50	0.10		(+)150mmCA104 (-)150mmCB104	20
008	6N2-2A-7	6	2	70	46	95	0.66	0.10		(+)110mmCB104 (-)110mmCB104	20
009	6N2-2A-8	6	2	70	46	95	0.63	0.10		(+)270mmCB103 (-)140mmCA103	20
010	6N2-2D	6	2	70	46	95	0.50	0.10		(+)370mmCA103 (-)320mmCA103	20
011	6N2A-2C	6	2	70	46	105	0.50	0.10		(+)240mm (-)90mm	20
012	6N2A-2C-1	6	2	70	46	105	0.50	0.10		(+)240mm (-)90mm	20
013	6N2A-2C-2	6	2	70	46	105	0.50	0.10		(+)100mm (-)150mm	20
014	6N2A-2C-3	6	2	70	46	105	0.50	0.10		(+)230mm (-)95mm	20
015	6N4-2A	6	4	70	70	95	0.85	0.20		(+)90mmCB104 (-)90mmCB104	30
016	6N4-2A-1	6	4	70	70	95	0.80	0.20		(+)175mmCW104 (-)105mmCB104	30
017	6N4-2A-2	6	4	70	70	95	0.80	0.20		(+)100mmCB104 (-)150mmLA106	30
018	6N4-2A-3	6	4	70	70	95	0.80	0.20		(+)150mmCA104 (-)150mmCB104	30
019	6N4-2A-4	6	4	70	70	95	0.80	0.20		(+)310mmCA103 (-)145mmCA103	30
020	6N4-2A-5	6	4	70	70	95	0.80	0.20		(+)140mmCB104 (-)140mmLA106	30
021	6N4-2A-6	6	4	70	70	95	0.80	0.20		(+)320mm (-)180mm	30
022	6N4-2A-7	6	4	70	70	95	0.80	0.20		(+)270mmCB103 (-)140mmCA103	30
023	6N4-2A-8	6	4	70	70	95	0.80	0.20		(+)400mm (-)180mm	30
024	6N4A-4D	6	4	60	56	130	1.00	0.20		(+)80mmCB104 (-)140mmLA106	40
025	6N4A-4D-1	6	4	60	56	130	1.00	0.20		(+)95mmCB104 (-)95mmCB104	40
026	6N4B-2A	6	4	101	47	95	1.00	0.20		(+)95mmCB104 (-)95mmCB104	30
027	6N4B-2A-1	6	4	101	47	95	1.00	0.20		(+)300mmCA103 (-)80mmCA103	30
028	6N4B-2A-2	6	4	101	47	95	1.00	0.20		(+)80mmCB104 (-)250mmCA104 CB104 LA106	30
029	6N4B-2A-3	6	4	101	47	95	1.00	0.20		(+)100mmCB104 (-)100mmCA104	30
030	6N4B-2A-4	6	4	101	47	95	1.00	0.20		(+)265mmCB103 (-)165mmCA103	30
031	6N4B-2A-5	6	4	101	47	95	1.00	0.20		(+)400mm (-)55mm	30
032	6N4C-1B	6	4	70	70	104	0.80	0.20		(+)290mm (-)95mm	30
033	6N5.5-1D	6	5.5	89	69	99	1.16	0.26		(+)325mmCB103 (-)105mmLA106	45
034	6N5.5-1D-1	6	5.5	89	69	99	1.10	0.30		(+)370mmCW1-2 (-)328mmCA103	45
035	6N5.5-3D	6	5.5	89	69	99	1.10	0.30		(+)290mmCB103 (-)105mmLA106	45
036	6N6-1B	6	6	98	56	110	1.10	0.26		(+)190mmCB103 (-)135mmCA103	55
037	6N6-1B-1	6	6	98	56	110	1.10	0.26		(+)190mmCB103 (-)130mm	55
038	6N6-3B	6	6	98	56	110	1.24	0.26		6	55
039	6N6-3B-1	6	6	98	56	110	1.10	0.26		6	55
040	6N6-1D	6	6	98	56	110	1.10	0.26		(+)405mmCA104 CB103 CW1-1 (-)145mmLA106	55
041	6N6-1D-2	6	6	98	56	110	1.10	0.26		(+)150mmCW104 (-)50mmCA104	55
042	6N6-1C	6	6	98	56	110	1.10	0.26		(+)150mmCW104 (-)100mmCA104	55

### Conventional

No.	Model No.	Volts	Capacity (Ah) 10 HR	Appx. Dimension (mm)			Reference		Assembly Figure	Terminal Type	CCA -18° (A)
				L±2	W±2	H±2	Weight With Acid(Kg)	Acid Volume (L)			
043	B39-6(6N7-1)	6	7	126	48	126	1.60	0.30		6	70
044	B49-6	6	10	91	83	161	1.90	0.65		6	90
045	6N11-2D	6	11	149	69	99	2.10	0.40		6	100
046	6N11A-1B	6	11	120	60	130	2.10	0.40		6	100
047	6N11A-3	6	11	120	60	130	2.10	0.40		6	100
048	6N11A-4	6	11	120	60	130	2.10	0.40		6	100
049	6N11A-3A	6	11	120	60	130	2.10	0.40		6	100
050	6N11A-3B	6	11	120	60	130	2.10	0.40		6	100
051	6N11A-4A	6	11	120	60	130	2.10	0.50		6	100
052	6N12A-2C(B54-6)	6	12	155	56	115	2.00	0.40		6	110
053	6N12A-2D(B54-6A)	6	12	155	56	115	1.99	0.40		6	110
054	6N12-1B	6	12	104	75	140	1.80	0.40		6	110
055	B38-6A	6	13	119	83	161	2.30	0.70		6	120
056	6YB8-3B(6YB8L-B)	6	8	120	70	95	1.50	0.30		6	—
057	6YB11-2D	6	11	150	70	100	2.30	0.40		6	—
058	6N18-3B	6	18	122	86	142	2.50	0.60		—	—
059	12N3-3A	12	3	98	56	110	1.30	0.30		6	25
060	12N3A-3D(12N3-3D)	12	3	113	70	85	1.50	0.20		8	30
061	12N4-3B	12	4	120	70	92	1.60	0.30		5	30
062	12N5-3B	12	5	120	60	130	2.10	0.40		6	45
063	12N5-3B-2	12	5	120	60	130	1.70	0.40		5	45
064	12N5-4B	12	5	120	60	130	2.00	0.40		6	45
065	12N5.5-3B	12	5.5	135	60	130	2.10	0.50		6	50
066	12N5.5-4A	12	5.5	135	60	130	2.10	0.50		2	50
067	12N5.5-4A-1	12	5.5	135	60	130	2.10	0.50		6	50
068	12N5.5-4B	12	5.5	135	60	130	2.10	0.50		6	50
069	12N5.5A-3B	12	5.5	103	90	114	2.10	0.45		6	50
070	12N6-3B(YB6L-B)	12	5.5(6)	135	70	95	2.10	0.45		6	50
071	12N6-4A(YB6-A)	12	5.5(6)	135	70	95	2.10	0.45		6	50
072	12N6-4B(YB6-B)	12	5.5(6)	135	70	95	2.10	0.45		6	50
073	12N6A-4B	12	5.5(6)	150	80	95	2.10	0.50		8	50
074	12N6.5-3B	12	6(6.5)	137	66	100	2.00	0.50		6	55
075	12N6.5A-4B	12	6.5(7)	138	72	118	2.40	0.60		6	55
076	12N6.5B-4B	12	6.5(7)	150	87	95	2.90	0.60		8	55
077	12N7-3A	12	7	135	75	133	2.60	0.60		6	85
078	12N7-3B	12	7	135	75	133	2.60	0.60		6	85
079	12N7-3B2	12	7	135	75	133	2.60	0.60		4	85
080	12N7-4A	12	7	135	75	133	2.60	0.60		6	85
081	12N7-4A2	12	7	135	75	133	2.60	0.60		4	85
082	12N7-4B	12	7	135	75	133	2.60	0.60		6	85
083	12N7A(B)-3A	12	7	150	60	130	2.60	0.60		6	85
084	12N7A(B)-4A	12	7	150	60	130	2.60	0.60		6	85

**Conventional**

No.	Model No.	Volts	Capacity (Ah) 10 HR	Appx. Dimension (mm)			Reference		Assembly Figure	Terminal Type	CCA -18° (A)
				L±2	W±2	H±2	Weight With Acid(Kg)	Acid Volume (L)			
085	12N7C-3D	12	7	130	90	114	2.80	0.60		3	85
086	12N7CZ-3D	12	8	130	90	114	2.40	0.60		3	85
087	12N7D-3B	12	7	135	75	149	2.40	0.60		6	85
088	12N9-3A	12	9	135	75	139	3.10	0.70		9	100
089	12N9-3A-1	12	9	135	75	139	3.10	0.70		6	100
090	12N9-3B	12	9	135	75	139	3.10	0.70		6	100
091	12N9-4B-1	12	9	135	75	139	3.10	0.70		6	100
092	12N10-3A	12	10	135	90	145	3.30	0.72		6	110
093	12N10-3A-1	12	10	135	90	145	3.40	0.72		6	110
094	12N10-3A-2	12	10	135	90	145	3.40	0.72		8	110
095	12N10-3B	12	10	135	90	145	3.40	0.72		6	110
096	12N10-3B-1	12	10	135	90	145	3.40	0.72		6	110
097	12N11-3A	12	11	135	90	155	3.50	0.74		6	120
098	12N11-3A-1	12	11	135	90	155	3.50	0.74		8	120
099	12N11-3B	12	11	135	90	155	3.50	0.74		6	120
100	12N12-3A	12	12	200	75	133	3.50	0.74		6	130
101	12N12-3B	12	12	200	75	133	3.50	0.74		6	130
102	12N12A-4A-1	12	12	134	80	160	3.50	0.74		6	130
103	12N14-3A	12	14	134	89	166	4.30	0.95		8	150
104	12N14-3B	12	14	134	89	166	4.30	0.95		8	150
105	12N16-3A	12	16	175	100	155	5.80	1.40		6	145
106	12N16-3B	12	16	175	100	155	5.80	1.40		6	145
107	12N16-4B	12	16	175	100	155	5.80	1.40		6	145
108	51814	12	19	186	82	171	6.00	1.10		10	170
109	12C16A-3B(51913)	12	16-20	186	82	171	5.20	1.40		10	170
110	12N18-3	12	18	205	90	162	6.30	1.40		6	190
111	12N18-3A	12	18	205	90	162	6.30	1.40		6	190
112	12N18-3B	12	18	205	90	162	6.30	1.40		6	190
113	12N24-3	12	24	184	124	174	7.40	1.80		3	250
114	12N24-3A	12	24	184	124	174	7.40	1.80		3	250
115	12N24-4	12	24	184	124	174	7.40	1.80		3	250

**High Performance**

No.	Model No.	Volts	Capacity (Ah) 10 HR	Appx. Dimension (mm)			Reference		Assembly Figure	Terminal Type	CCA -18° (A)
				L±2	W±2	H±2	Weight With Acid(Kg)	Acid Volume (L)			
116	YB2.5L-C	12	2.5	80	70	105	1.10	0.24		(+)100mmCB103 (-)100mmCA103	20
117	YB2.5L-A	12	2.5	80	70	105	1.10	0.24		(+)100mmCB103 (-)100mmCA103	20
118	YB2.5L-C-1	12	2.5	80	70	105	1.10	0.24		(+)60mm (-)100mm	20
119	YB2.5L-C-2	12	2.5	80	70	105	1.10	0.24		(+)60mmCB103 (-)60mmCA103	20
120	YB3L-A	12	3	98	56	110	1.30	0.30		6	35
121	YB3L-B	12	3	98	56	110	1.30	0.30		6	35
122	YB4L-A	12	4	120	70	92	1.80	0.30		5	45
123	YB4L-B	12	4	120	70	92	1.60	0.30		5	45
124	YB5L-B	12	5	120	60	130	2.10	0.40		6	60
125	YB5L-B2	12	5	120	60	130	2.10	0.40		5	60
126	YB7-A	12	8	135	75	133	2.40	0.60		6	100
127	YB7-A2(GM7Z-4A2)	12	8	135	75	133	2.40	0.60		5	100
128	YB7A-A	12	8	135	75	150	2.40	0.60		6	100
129	YB7B-B	12	7	150	60	130	2.40	0.60		6	80
130	YB7C-A	12	8	130	90	114	3.00	0.50		3	90
131	YB7L-A	12	8	135	75	133	2.40	0.60		3	100
132	YB7L-B	12	8	135	75	133	2.40	0.60		3	100
133	YB9A-A	12	9	135	75	155	3.10	0.70		6	100
134	YB9-B	12	9	135	75	139	3.10	0.70		6	100
135	YB9L-B	12	9	135	75	139	3.10	0.70		6	100
136	YB9L-A2	12	9	135	75	139	3.10	0.70		2	100
137	YB10A-A2	12	11	135	90	155	3.30	0.72		8	160
138	YB10L-A2	12	11	135	90	145	3.30	0.72		8	160
139	YB10L-B	12	11	135	90	145	3.30	0.72		6	160
140	YB10L-B2	12	11	135	90	145	3.30	0.72		8	160
141	YB12A-A	12	12	134	80	160	3.70	0.74		6	155
142	YB12A-B	12	12	134	80	160	3.70	0.74		6	155
143	YB12AL-A	12	12	134	80	160	3.70	0.74		6	155
144	YB12AL-A2	12	12	134	80	160	3.70	0.74		8	155
145	YB12B-B2	12	12	160	90	130	4.10	0.74		8	165
146	YB12C-A	12	12	134	80	175	3.50	0.74		4	155
147	YB14-A2	12	14	134	89	166	4.90	0.95		8	185
148	YB14-B2	12	14	134	89	166	4.90	0.95		8	185
149	YB14A-A1	12	14	134	89	176	4.90	0.95		6	185
150	YB14A-A2	12	14	134	89	176	4.90	0.95		8	185
151	YB14L-A1	12	14	134	89	166	4.90	0.95		1	185
152	YB14L-A2	12	14	134	89	166	4.90	0.95		8	185
153	YB14L-B2	12	14	134	89	166	4.90	0.95		8	185
154	SYB14L-A2	12	14	134	89	166	4.90	0.95		8	185
155	SYB14L-B2	12	14	134	89	166	4.90	0.95		8	185
156	YB16L-A2	12	16	175	100	155	6.20	1.40		6	265
157	SYB16L-A2	12	16	175	100	155	6.20	1.40		6	265

**BATTERIES**


**High Performance**

No.	Model No.	Volts	Capacity (Ah) 10 HR	Appx.Dimension (mm)			Reference		Assembly Figure	Terminal Type	CCA -18° (A)
				L±2	W±2	H±2	Weight With Acid(Kg)	Acid Volume (L)			
158	YB16AL-A2	12	16	205	70	162	6.20	1.40		2	220
159	YB16B-A	12	16	160	90	161	6.20	1.40		4	210
160	YB16B-A1	12	16	160	90	161	6.20	1.40		1	210
161	YB16C-B	12	19	175	100	175	6.30	1.30		5	265
162	YB16CL-B	12	19	175	100	175	6.20	1.40		5	265
163	HYB16A-A (AB)	12	16	151	91	180	5.10	1.40		7	160
164	YB18-A	12	18	180	90	162	5.80	1.40		7	220
165	YB18L-A	12	18	180	90	162	5.80	1.40		7	220
166	YB18L-A2	12	18	180	90	162	5.80	1.40		7	220
167	Y50-N18A-A	12	20	205	90	176	6.50	1.40		7	250
168	Y50-N18L-A	12	20	205	90	162	6.50	1.40		7	250
169	Y50-N18L-A2	12	20	205	90	162	6.50	1.40		7	250
170	Y50-N18L-A3	12	20	205	90	162	6.50	1.40		4	250
171	SY50-N18L-A	12	20	205	90	162	6.50	1.40		7	250
172	SY50-N18L-A2	12	20	205	90	162	6.50	1.40		7	250
173	SY50-N18L-AT	12	20	205	90	162	6.50	1.40		7	250
174	Y60-N24L-A	12	28	184	124	175	8.00	1.80		3	320
175	Y60-N24AL-B	12	28	184	124	175	8.00	1.80		3	320
176	SY60-N24AL-B	12	28	184	124	175	8.00	1.80		3	320
177	Y60-N28L-A(52816)	12	28	187	130	170	8.60	1.80		10	320
178	Y60-N30L-A(53030)	12	30	187	130	170	8.60	1.80		10	320
179	Y60-N30-A(53034)	12	30	187	130	170	8.60	1.80		10	320
180	Y60-N30L-B	12	30	187	130	170	6.40	1.80		10	320
181	YHD4-12 (YHD-12)	12	28	205	130	165	8.60	2.00		9	320
182	YB30L-B	12	30	168	132	176	8.50	1.80		4	345
183	YB30CL-B	12	30	168	132	192	8.50	1.80		4	345

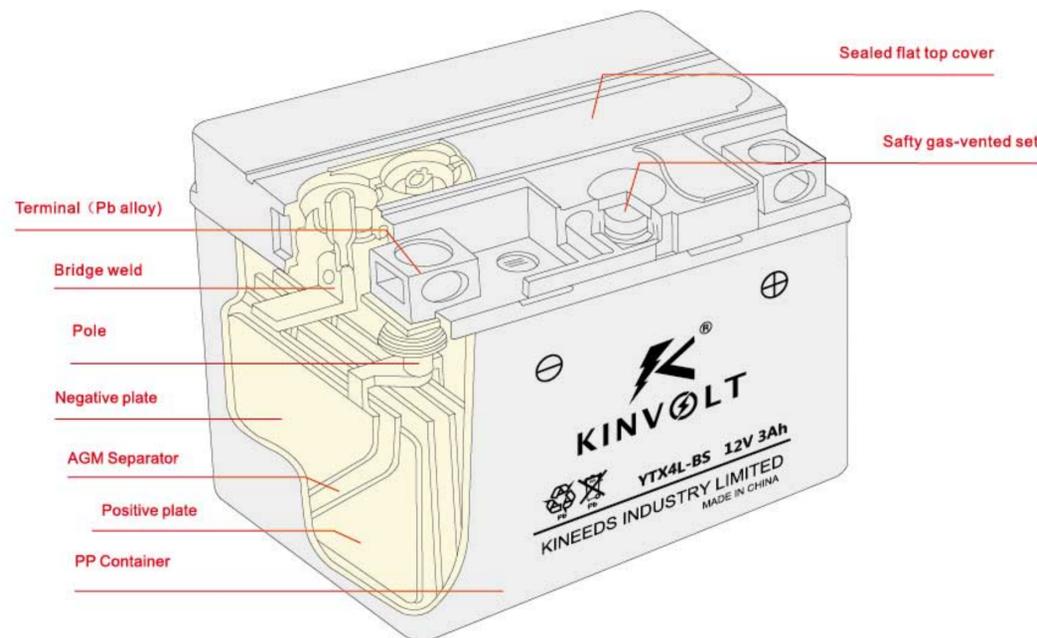
## MAINTENANCE FREE BATTERY (WITH ACID PACK)



# BATTERY

# MF Battery (With Acid Pack)

This product has a long storage period, superior performance of dry-charged, no PCL phenomenon. The battery becomes completely sealed and Maintenance-Free once filled with acid by customer.



## Product Feature:

- ◆ LEAD-CALCIUM DESIGN reduces self-discharge rate, provides more starting power
- ◆ BEING SHIPPED DRY ALONG WITH ITS OWN PACK OF ACID prolongs storage life, which overcomes the disadvantage of the activated-battery with acid that cannot stock for a long time.
- ◆ HEAT-SEALED CASE TO COVER gives extra strength with bonded unit, make the battery more vibration-resistance.

## MF With Acid Pack

No.	Model No.	Volts	Capacity (Ah) 10 HR	Appx.Dimension (mm)			Reference		Assembly Figure	Terminal Type	CCA -18° (A)
				L±2	W±2	H±2	Weight With Acid(Kg)	Acid Volume (L)			
001	6N4-BS	6	4.0	70	70	96	0.70	0.13		-	-
002	YB2.5L-BS	12	2.5	80	71	103	0.84	0.12		(+)100mmCB103 (-)100mmCA103	19
003	YTR4A-BS	12	2.3	113	48	85	1.00	0.14		G7	45
004	YT4B-BS	12	2.3	113	38	85.5	0.90	0.12		G6	40
005	YB3L-BS	12	3	99	57	108	1.03	0.28		G4	45
006	YTX4L-BS	12	3	113	70	85	1.40	0.21		G3	50
007	YTX4-BS	12	3	113	70	85	1.40	0.21		G3	50
008	YTX5L-BS	12	4	113	70	105	1.90	0.25		G3	70
009	YB5L-BS	12	5	119	60	128	1.62	0.44		G4	65
010	YTX7A-BS	12	6	150	87	93	2.35	0.53		G3	90
011	YTX7L-BS	12	6	113	70	130	2.40	0.35		G3	85
012	YTX6.5L-BS	12	6.5	138	66	100	1.90	0.47		G4	50
013	YB7BL-BS	12	6.5	148	59	130	2.30	0.52		G4	70
014	YT7B-BS	12	6.5	150	65	93	2.50	0.65		G5/G8	70
015	YB7-BS	12	7	135	75	132	2.55	0.59		G4	100
016	YTX9-BS	12	8	150	87	105	2.80	0.40		G3	120
017	YT9B-BS	12	8	150	65	105	2.60	0.50		G5/G8	90
018	YTR9-BS	12	8	150	87	105	2.80	0.40		G5	120
019	YTZ10S-BS	12	8.6	150	87	95	3.29	0.72		G8	130
020	YT9A-BS	12	9	135	75	137	2.65	0.48		G4	85
021	YT12A-BS	12	9.5	150	87	105	2.90	0.47		G5	140
022	YTX12-BS	12	10	150	87	130	3.95	0.57		G3	180
023	YT12B-BS	12	10	150	70	130	3.20	0.57		G5/G8	125
024	YTZ12S-BS	12	10	150	87	110	3.95	0.57		G8	140
025	YTZ14S-BS	12	11	150	87	110	3.95	0.57		G8	140
026	YTX14-BS	12	12	150	87	145	4.60	0.66		G3	200
027	YT14B-BS	12	12	150	70	145	4.00	0.69		G5/G8	140
028	YTX14AH-BS	12	12	135	87	165	4.32	0.78		G5	160
029	YTX14AHL-BS	12	12	135	87	165	4.32	0.78		G5	160
030	YTX15L-BS	12	13	175	87	130	4.70	0.70		G2	230
031	YTX16-BS	12	14	150	87	161	4.90	0.75		G3	230
032	YTX16-BS-1	12	14	150	87	161	4.90	0.75		G1	230
033	YTX20-BS	12	18	175	87	155	6.00	0.90		G2	270
034	YTX20L-BS	12	18	175	87	155	6.00	0.90		G2	270
035	YTX19CL-BS	12	19	175	100	175	6.32	1.35		G5	240
036	YTX24HL-BS (YTX18L-BS)	12	21	205	87	162	6.30	1.15		G2	350
037	YTX30L-BS	12	28	167	127	175	7.45	1.47		G5	280

# Factory Activated MF & GEL

## Rechargeable Lead Acid Battery



### ■ Factory Activated MF ■

No.	Model No.	Reference No.	Volts	Capacity (Ah) 10 HR	Appx.Dimension (mm)			Approx. weight (kg)	Assembly Figure	Terminal Type	CCA/ -18° (A)
					L±2	W±2	H±2				
001	6N4-BS(MF)	6N4-BS	6	4	71	71	93	0.75		-	-
002	6N6L-BS(MF)	6N6L-BS	6	6	95	55	117	1.18		C1	-
003	B49-6(MF)	B49-6	6	10	91	83	159	1.87		C2	-
004	B38-6A(MF)	B38-6A	6	13	119	83	161	2.37		C3	-
005	6N11A-BS(MF)	6N11A-BS	6	11	121	58	130	1.7		C1	-
006	YB2.5L-BS(MF)	YB2.5L-BS	12	2.5	80	77	105	1.03		-	19
007	YB3L-BS(MF)	YB3L-BS	12	3	98	56	109	1.26		C1	32
008	YB4L-BS(MF)	YB4L-BS	12	4	113	70	87	1.38		C4	45
009	YB4L-BS(MF)	YB4L-BS	12	4	113	70	87	1.46		C4	45
010	YB5L-BS(MF)	12N5L-BS	12	5	119	60	129	1.78		C1	65
011	YB5L-BS(MF)	12N5L-BS	12	5	119	60	129	1.93		C1	65
012	12M5D-BS(MF)	12M5D-BS	12	5	135	74	93	1.89		C1	65
013	YB6.5L-BS(MF)	12N6.5L-BS	12	6.5	138	65	100	1.95		C7	65
014	YB6.5L-BS(MF)	12N6.5L-BS	12	6.5	138	65	100	2.20		C7	65
015	YB7BL-BS(MF)	12N7BL-BS	12	7	148	60	128	2.21		C3	74
016	YB7-BS(MF)	12N7-BS	12	7	137	76	124	2.68		C3	74
017	YB7L-BS(MF)	12N7L-BS	12	7	137	76	124	2.68		C3	74
018	YB9-BS(MF)	12N9-BS	12	9	137	76	134	2.76		C3	85
019	YB9-BS(MF)	12N9-BS	12	9	137	76	134	3.00		C3	85
020	YB10L-BS(MF)	YB10L-BS	12	11	132	88	145	3.45		C6	120
021	YB12A-BS(MF)	YB12A-BS	12	12	134	78	156	3.63		C6	140
022	YB12AL-BS(MF)	YB12AL-BS	12	12	134	78	156	3.63		C6	140
023	YB14L-BS(MF)	YB14L-BS	12	14	130	87	160	4.58		C6	170
024	YB16L-BS(MF)	YB16L-BS	12	19	173	100	152	5.48		C6	190
025	YB16L-BS(MF)	YB16L-BS	12	19	173	100	152	6.15		C6	190
026	YB16CL-BS(MF)	YB16CL-BS	12	19	173	100	175	6.25		C6	250
027	Y50-N18L-BS(MF)	Y50-N18L-BS	12	20	205	90	159	5.95		C6	200
028	YTX24HL-BS(MF)	YTX24HL-BS	12	21	205	90	159	6.56		C5	250
029	U1-9(MF)	U1-9	12	24	195	130	180	7.50		L	220
030	U1-R9(MF)	U1-R9	12	24	195	130	180	7.50		L	220
031	YB30L-BS(MF)	YB30L-BS	12	30	166	126	176	8.55		C5	300

### ■ Factory Activated MF ■

No.	Model No.	Volts	Capacity (Ah) 10 HR	Appx. Dimension (mm)			Approx. weight (kg)	Assembly Figure	Terminal Type	CCA/ -18° (A)
				L±2	W±2	H±2				
032	YT4L-BS(MF)	12	4	113	70	87	1.32		C4	45
033	YTX4L-BS(MF)	12	4	113	70	87	1.46		C4	50
034	YT5L-BS(MF)	12	5	113	70	107	1.63		C4	65
035	YTX5L-BS(MF)	12	5	113	70	107	1.81		C4	70
036	YT7L-BS(MF)	12	7	113	70	131	2.18		C4	85
037	YTX7L-BS(MF)	12	7	113	70	132	2.30		C4	85
038	YTX7A-BS(MF)	12	7	150	87	94	2.47		C5	90
039	YTX9-BS(MF)	12	9	150	87	107	3.03		C5	120
040	YTX12A-BS(MF)	12	9.5	150	87	107	3.10		C5	120
041	YTX12-BS(MF)	12	12	150	87	130	3.32		C5	130
042	YTX12-BS(MF)	12	12	150	87	130	3.80		C5	160
043	YTX14-BS(MF)	12	12	150	87	145	4.65		C6	180
044	YTX16-BS(MF)	12	14	150	87	161	5.38		C6	200

### ■ YTZ Type (MF) ■

No.	Model No.	Volts	Capacity (Ah) 10 HR	Appx. Dimension (mm)			Approx. weight (kg)	Assembly Figure	Terminal Type	CCA/ -18° (A)
				L±2	W±2	H±2				
045	GT4B-5(MF)	12	2.3	113	39	87	0.86		C11	30
046	YTR4A-BS(MF)	12	2.3	113	49	87	0.97		C10	30
047	YTZ3S(MF)	12	3.5	113	70	87	1.27		C4	40
048	YTZ5S(MF)	12	4.0	111	70	87	1.43		C4	50
049	YTZ7S(MF)	12	6.0	113	70	107	2.00		C4	80
050	YTZ10S(MF)	12	8.6	150	87	94	2.91		C5	120
051	YTZ12S(MF)	12	11.0	150	87	110	3.35		C5	130
052	YTZ14S(MF)	12	11.2	150	87	110	3.35		C5	130
053	YT6B-3(MF)	12	6.0	113	70	107	2.00		C4	80
054	YT7B-4(MF)	12	6.5	150	65	94	2.15		C2	85
055	YT9B-4(MF)	12	8.0	150	70	105	2.64		C6	115
056	YT12B-4(MF)	12	10.0	150	70	130	3.21		C6	125
057	YT14B-4(MF)	12	12.0	150	70	145	3.80		C6	135
058	YT20-4(MF)	12	20.0	175	87	153	6.30		C6	240
059	YT20L-4(MF)	12	20.0	175	87	153	6.30		C6	240

### ■ Factory Activated GEL ■

No.	Model No.	Reference No.	Volts	Capacity (Ah) 10 HR	Appx. Dimension (mm)			Approx. weight (kg)	Assembly Figure	Terminal Type	CCA/ -18° (A)
					L±2	W±2	H±2				
001	6N4-BS(GEL)	6N4-BS	6	4	71	71	93	0.75		-	-
002	6N6L-BS(GEL)	6N6L-BS	6	6	95	55	117	1.18		C1	-
003	B49-6(GEL)	B49-6	6	10	91	83	159	1.87		C2	-
004	B38-6A(GEL)	B38-6A	6	13	119	83	161	2.37		C3	-
005	6N11A-BS(GEL)	6N11A-BS	6	11	121	58	130	1.7		C1	-
006	YB2.5L-BS(GEL)	YB2.5L-BS	12	2.5	80	77	105	1.03		-	19
007	YB3L-BS(GEL)	YB3L-BS	12	3	98	56	109	1.26		C1	32
008	YB4L-BS(GEL)	YB4L-BS	12	4	113	70	87	1.38		C4	45
009	YB4L-BS(GEL)	YB4L-BS	12	4	113	70	87	1.46		C4	45
010	YB5L-BS(GEL)	12N5L-BS	12	5	119	60	129	1.78		C1	65
011	YB5L-BS(GEL)	12N5L-BS	12	5	119	60	129	1.93		C1	65
012	12M5D-BS(GEL)	12M5D-BS	12	5	135	74	93	1.89		C1	65
013	YB6.5L-BS(GEL)	12N6.5L-BS	12	6.5	138	65	100	1.95		C7	65
014	YB6.5L-BS(GEL)	12N6.5L-BS	12	6.5	138	65	100	2.20		C7	65
015	YB7BL-BS(GEL)	12N7BL-BS	12	7	148	60	128	2.21		C3	74
016	YB7-BS(GEL)	12N7-BS	12	7	137	76	124	2.68		C3	74
017	YB7L-BS(GEL)	12N7L-BS	12	7	137	76	124	2.68		C3	74
018	YB9-BS(GEL)	12N9-BS	12	9	137	76	134	2.76		C3	85
019	YB9-BS(GEL)	12N9-BS	12	9	137	76	134	3.00		C3	85
020	YB10L-BS(GEL)	YB10L-BS	12	11	132	88	145	3.45		C6	120
021	YB12A-BS(GEL)	YB12A-BS	12	12	134	78	156	3.63		C6	140
022	YB12AL-BS(GEL)	YB12AL-BS	12	12	134	78	156	3.63		C6	140
023	YB14L-BS(GEL)	YB14L-BS	12	14	130	87	160	4.58		C6	170
024	YB16L-BS(GEL)	YB16L-BS	12	19	173	100	152	5.48		C6	190
025	YB16L-BS(GEL)	YB16L-BS	12	19	173	100	152	6.15		C6	190
026	YB16CL-BS(GEL)	YB16CL-BS	12	19	173	100	175	6.25		C6	250
027	Y50-N18L-BS(GEL)	Y50-N18L-BS	12	20	205	90	159	5.95		C6	200
028	YTX24HL-BS(GEL)	YTX24HL-BS	12	21	205	90	159	6.56		C5	250
029	U1-9(GEL)	U1-9	12	24	195	130	180	7.50		L	220
030	U1-R9(GEL)	U1-R9	12	24	195	130	180	7.50		L	220
031	YB30L-BS(GEL)	YB30L-BS	12	30	166	126	176	8.55		C5	300

**■ Factory Activated GEL ■**

No.	Model No.	Volts	Capacity (Ah) 10 HR	Appx. Dimension (mm)			Approx. weight (kg)	Assembly Figure	Terminal Type	CCA/ -18° (A)
				L±2	W±2	H±2				
032	YT4L-BS(GEL)	12	4	113	70	87	1.32		C4	45
033	YTX4L-BS(GEL)	12	4	113	70	87	1.46		C4	50
034	YT5L-BS(GEL)	12	5	113	70	107	1.63		C4	65
035	YTX5L-BS(GEL)	12	5	113	70	107	1.81		C4	70
036	YT7L-BS(GEL)	12	7	113	70	131	2.18		C4	85
037	YTX7L-BS(GEL)	12	7	113	70	132	2.30		C4	85
038	YTX7A-BS(GEL)	12	7	150	87	94	2.47		C5	90
039	YTX9-BS(GEL)	12	9	150	87	107	3.03		C5	120
040	YTX12A-BS(GEL)	12	9.5	150	87	107	3.10		C5	120
041	YTX12-BS(GEL)	12	12	150	87	130	3.32		C5	130
042	YTX12-BS(GEL)	12	12	150	87	130	3.80		C5	160
043	YTX14-BS(GEL)	12	12	150	87	145	4.65		C6	180
044	YTX16-BS(GEL)	12	14	150	87	161	5.38		C6	200

**■ YTZ Type (GEL) ■**

No.	Model No.	Volts	Capacity (Ah) 10 HR	Appx. Dimension (mm)			Approx. weight (kg)	Assembly Figure	Terminal Type	CCA/ -18° (A)
				L±2	W±2	H±2				
045	GT4B-5(GEL)	12	2.3	113	39	87	0.86		C11	30
046	YTR4A-BS(GEL)	12	2.3	113	49	87	0.97		C10	30
047	YTZ3S(GEL)	12	3.5	113	70	87	1.27		C4	40
048	YTZ5S(GEL)	12	4.0	111	70	87	1.43		C4	50
049	YTZ7S(GEL)	12	6.0	113	70	107	2.00		C4	80
050	YTZ10S(GEL)	12	8.6	150	87	94	2.91		C5	120
051	YTZ12S(GEL)	12	11.0	150	87	110	3.35		C5	130
052	YTZ14S(GEL)	12	11.2	150	87	110	3.35		C5	130
053	YT6B-3(GEL)	12	6.0	113	70	107	2.00		C4	80
054	YT7B-4(GEL)	12	6.5	150	65	94	2.15		C2	85
055	YT9B-4(GEL)	12	8.0	150	70	105	2.64		C6	115
056	YT12B-4(GEL)	12	10.0	150	70	130	3.21		C6	125
057	YT14B-4(GEL)	12	12.0	150	70	145	3.80		C6	135
058	YT20-4(GEL)	12	20.0	175	87	153	6.30		C6	240
059	YT20L-4(GEL)	12	20.0	175	87	153	6.30		C6	240

# LAWN MOWER RECHARGEABLE LEAD ACID BATTERY



**Terminal type**

Terminal				Battery Type
Type	Front	Side	Top	
J1				U1L-7 U1L-9 U1R-7 U1R-9 U1L-7(MF) U1L-9(MF)

**Parameter Chart**

No.	Model No.	Volts	Capacity (Ah) 10 HR	Appx.Dimension (mm)			Reference		Assembly Figure	Terminal Type
				L±2	W±2	H±2	Weight With Acid(Kg)	Acid Volume (L)		
001	U1L-7	12	18	196	131	184	6.70	2.04		J1
002	U1L-9	12	24	196	131	184	7.50	1.92		J1
003	U1R-7	12	18	196	131	184	6.70	2.04		J1
004	U1R-9	12	24	196	131	184	7.50	1.92		J1
005	U1L-7(MF)	12	18	196	131	184	6.64	1.84		J1
006	U1L-9(MF)	12	24	196	131	184	7.26	1.73		J1


**Terminal type**

Type	Terminal			Battery Type
	Front	Side	Top	
1				YB14L-A1 YB16B-A1
2				12N5.5-4A YB9L-A2 YB16L-A2 SYB16L-A2
3				12N7C-3D 12N7CZ-3D 12N24-3 12N24-3A 12N24-4 YB7C-A YB7L-A YB7L-B Y60-N24L-A Y60-N24AL-B SY60-N24AL-B
4				12N7-3B2 12N7-4A2 YB12C-A Y50-N18L-A3 YB16B-A YB30L-B YB30CL-B
5				12N4-3B 12N5-3B-2 YB4L-A YB4L-B YB5L-B2 YB16C-B YB7-A2(GM7Z-4A2) YB16CL-B
6				6N11A-3A 6N11A-3B 6N11A-4A 12N3-3A 6N6-3B 6N6-3B-1 B49-6 B38-6A 6N11-2D 6N11A-1B 6N11A-3 6N11A-4 6N12A-2C(B54-6) 6N12A-2D(B54-6A) 6N12-1B 6YB8-3B(6YB8L-B) 6YB11-2D 12N5-3B 12N5-4B 12N5.5-3B 12N5.5-4A-1 12N5.5-4B 12N5.5A-3B 12N6-3B(YB6L-B) 12N6-4A(YB6-A) 12N6-4B(YB6-B) 12N6.5-3B 12N6.5A-4B(12N7) 12N7-3A 12N7-3B 12N7-4A 12N7-4B 12N7A(B)-3A 12N7D-3B 12N7A(B)-4A 12N9-3A-1 12N9-3B 12N9-4B-1 12N10-3A 12N10-3A-1 12N10-3B 12N10-3B-1 12N11-3A 12N11-3B 12N12-3A 12N12-3B 12N12A-4A-1 12N16-3A 12N16-3B 12N16-4B YB3L-A YB3L-B YB5L-B YB7-A YB7A-A YB7B-B YB9A-A YB9-B YB9L-B YB10L-B YB12A-A YB12A-B YB12AL-A YB14A-A1
7				12N18-3 12N18-3A 12N18-3B YB18-A HYB16A-A(AB) YB18L-A YB18L-A2 Y50-N18A-A Y50-N18L-A Y50-N18L-A2 SY50-N18L-A SY50-N18L-A2 SY50-N18L-AT
8				12N3A-3D(12N3-3D) 12N6.5B-4B(12N7B-4B) 12N6A-4B 12N10-3A-2 12N11-3A-1 12N14-3A 12N14-3B YB10A-A2 YB10L-A2 YB10L-B2 YB12AL-A2 YB12B-B2 YB14-A2 YB14-B2 YB14A-A2 YB14L-A2 YB14L-B2 SYB14L-A2 SYB14L-B2
9				12N9-3A YHD4-12(YHD-12)
10				51814 12C16A-3B(51913) Y60-N28L-A(52816) Y60-N30L-A(53030) Y60-N30-A(53034) Y60-N30L-B

■ Terminal type ■

Type	Terminal			Battery Type
	Front	Side	Top	
C1				6N6L-BS(GEL) YB3L-BS(GEL)
C2				YB5L-BS(GEL) B49-6(GEL) 6N11A-BS(GEL)
C3				YB7BL-BS(GEL) YB7-BS(GEL) YB7L-BS(GEL) YB9-BS(GEL) B39-6A(GEL)
C4				YB4L-BS(GEL) YT4L-BS(GEL) YTX4L-BS(GEL) YT5L-BS(GEL) YTX5L-BS(GEL) YTX7L-BS(GEL) YTZ5S(GEL) YTZ7S(GEL) YT6B-3(GEL) YTZ3S(GEL)
C5				YTX7A-BS(GEL) YTX9-BS(GEL) YTX12A-BS(GEL) YTX12-BS(GEL) YTZ10S(GEL) YTZ12S(GEL) YTZ14S(GEL)
C6				YB10L-BS(GEL) YB12A-BS(GEL) YB14L-BS(GEL) YB16L-BS(GEL) Y50-N18L-BS(GEL) YTX24HL-BS(GEL) YT7B-4(GEL) YT9B-4(GEL) YT12B-4(GEL) YT14B-4(GEL) 12M5D-BS(GEL)
C7				YB6.5L-BS(GEL)
C8				YB5L-BS(GEL)
C9				YB7BL-BS(GEL) YB7-BS(GEL) YB7L-BS(GEL) YB9-BS(GEL)
C10				YTR4A(GEL)
C11				GT4B-5(GEL)

■ Terminal type ■

Type	Terminal			Battery Type
	Front	Side	Top	
G1				YTX16-BS-1
G2				YTX15L-BS YTX20-BS YTX20L-BS YTX24HL-BS(YTX18L-BS)
G3				YTX4L-BS YTX4-BS YTX5L-BS YTX7A-BS YTX7L-BS YTX9-BS YTX12-BS YTX14-BS YTX16-BS
G4				YB3L-BS YB5L-BS YTX6.5L-BS YB7BL-BS YB7-BS YT9A-BS
G5				YT7B-BS YT9B-BS YTR9-BS YT12A-BS YT12B-BS YT14B-BS YTX14AH-BS YTX14AHL-BS YTX19CL-BS YTX30L-BS
G6				YT4B-BS
G7				YTR4A-BS
G8				YT7B-BS YT9B-BS YT12B-BS YT14B-BS YTZ10S-BS YTZ12S-BS YTZ14S-BS



# Designations of Battery Type Numbers:

## Examples:

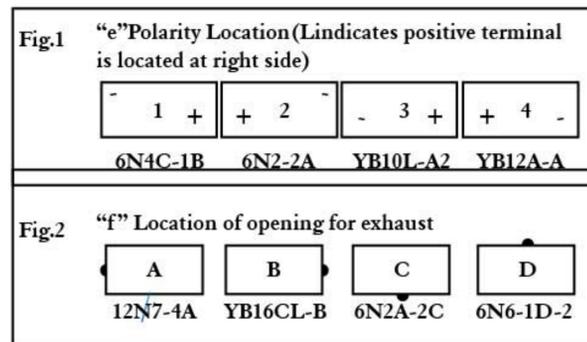
Conventional (6N-;12N-) Part Number								
6	N	2		-	2	A	-	8
12	N	12	A	-	4	A	-	1
a	b	c	d	-	e	f	-	9

Maintenance Free Part Number						
YT	X	7	L	-	B	S
YT	X	20	L	-	B	S
k	m	i	e		g	i

High Performance (CB-) Part Number								
Y	50	-	N	18	L	-	A	2
YB	16	A			L	-	A	2
h	j	d	b	i	e		f	g

Sealed Factory Activated Part Number							
YT	X	7	L	-	B	S	(MF)
YT	Z	10	S				
k	m	i	e		g	i	n

- a. Nominal voltage
- b. Vented type ( normal type)
- c. Battery capacity at 10 hour rate
- d. Indication of different size of the same capacity batteries
- e. Polarity location (see Fig.1), configuration
- f. Location of opening for exhaust (see Fig.2)
- g. Type of terminal
- h. Symbol of High Performance batteries
- i. Performance level
- j. Cranking or starting power
- k. Symbol of Maintenance Free batteries (YT)
- l. Sealed, non-spillable
- m. High performance
- n. "(MF)" means Factory Activated Sealed, non-spillable



### Metric Conversion Chart

1 inch=25.4 millimeters    1 millimeter=0.04 inches  
 1 ounce=0.03 liters        1 liter=33.8 ounces  
 1 pound=0.45 kilograms    1 kilogram=2.2 pounds



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