



T.Y.L

BATTERY APPLICATIONS AND SPECIFICATIONS



GUANGDONG TONGLI GROUP

ABOUT TONGLI



Guangdong Tongli Group was founded in Guangzhou, the capital of Guangdong province, in 1999 by Mr. Tony. It's a comprehensive hi-tech enterprise focusing on R & D, manufacturing and trade of lead-acid batteries, solar panel systems and electrical products.

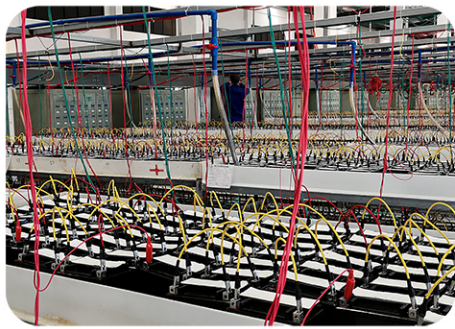
Now Tongli headquarters in the international metropolis - Guangzhou, with Guangzhou factory, Shaoguan factory, Wengyuan factory, Dhaka factory (Bangladesh) and International trading department. Our products such as batteries, solar panel systems and related electrical products are exported to Europe, the Middle East, West Asia, Africa, South America, Southeast Asia and so on. The enterprise has advanced production and testing equipment, high-quality management team and high-level experts team, which ensures the advanced technology, scientific management and reliability of product quality. Our trademarks such as HIS and T.Y.L have received a good reputation from our distributors and users at home and abroad.

Our batteries are designated as the matching products of leading automotive and motorcycle makers such as Dongfeng, Zongshen, Locin, Lifan, Junhao and so on.



SHAOGUAN FACTORY

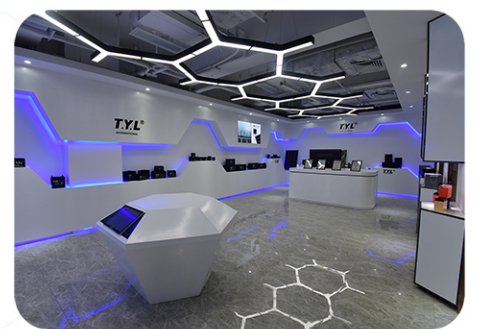
**To satisfy customers
To please sellers
To bliss producers**



PRODUCTION
LINE



MARKETING
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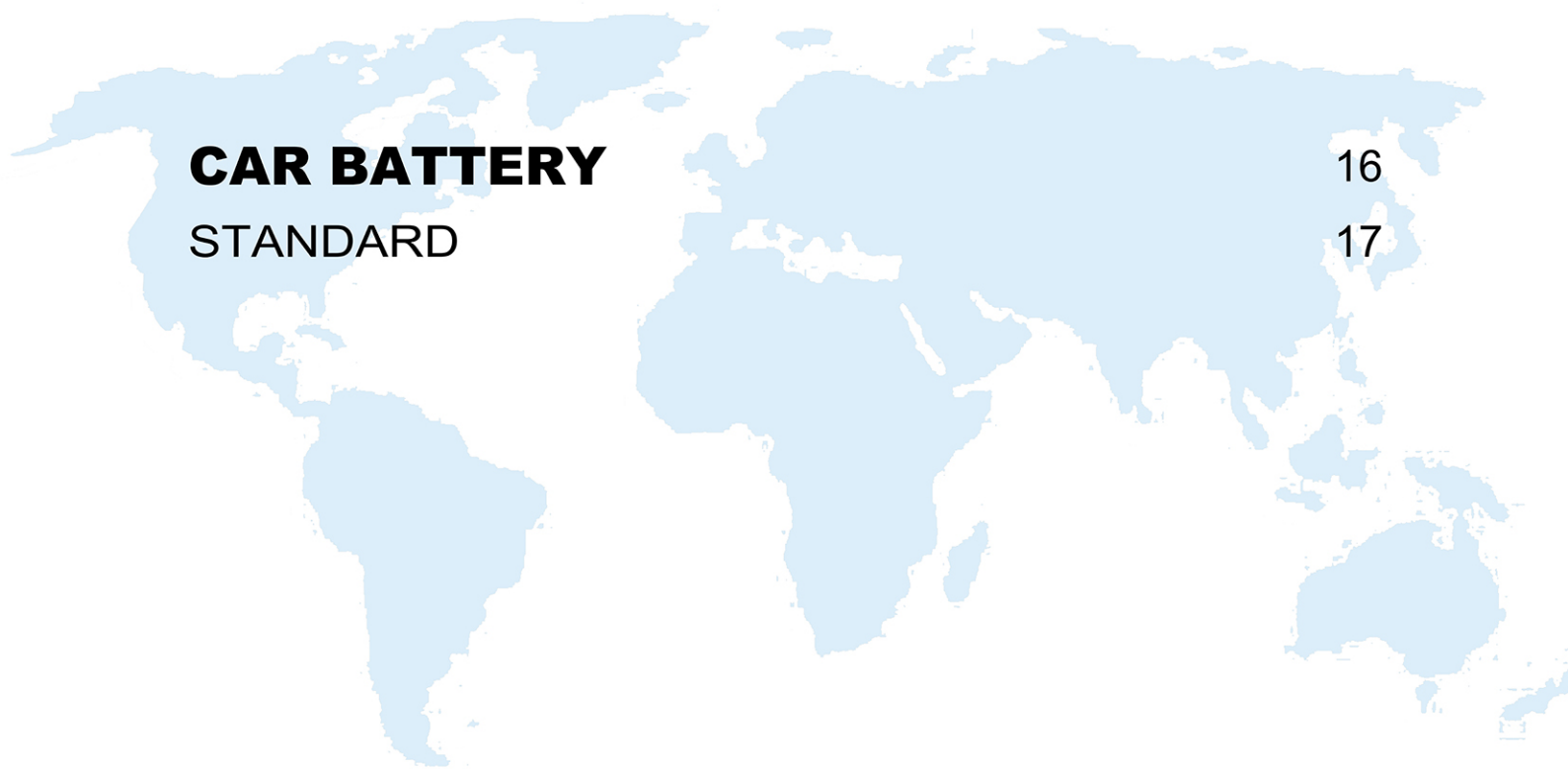


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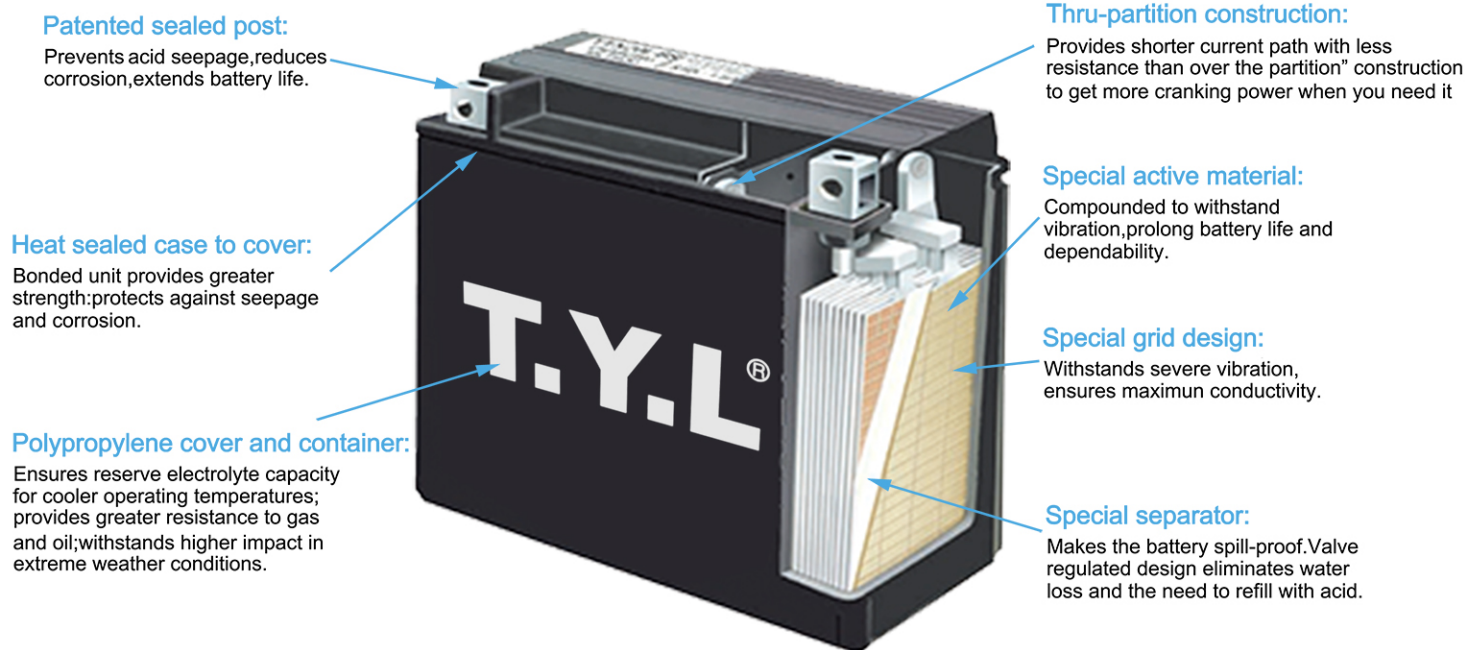
MOTORCYCLE BATTERY

COOPERATIVE PARTNERS



MOTORCYCLE BATTERY

CUTAWAY DIAGRAM



FEATURES AND BENEFITS

Component	Features	Benefits
Cast grid	Special grid design	Severe vibration resistance and improved conductivity
Active material	Proprietary formulation	Reduced shedding, maximum utilization and long service life
Pasted plates	Specified thickness and weight	Ensures vibration resistance through precise compression and proper service life through specified active material balance
Dried-charged plates	Tank formed & dried plates	Properly dried plates in a sealed battery have a virtually limitless shelf-life
Top lead connections	Through-partition construction; large straps	Shorter current path for increased electrical conductivity and higher starting currents, heavier parts for maximum durability
Case-cover seal	Thermal bonded plastic	Air tight seal to prevent air ingress and acid seepage
Terminal-cover seal	Patented poly-seal terminal	Eliminates acid seepage, reduces corrosion and extends battery life
Separator	AGM (absorbed glass mat)	High puncture resistant separator for increased service in high vibration applications
Top lead alloy	Calcium alloy	Increased weld strength and severe vibration resistance
Vent system	Valve and flame arrestor	Valve relieves excess pressure to prevent bursting, flame arrestor prevents internal combustion

MOTORCYCLE BATTERY

Type	Terminal			Battery Type
	Front	Side	Top	
1				12N5-BS 12N6.5-BS 12N7B-BS 12N7-BS 12N8-BS 12N9-BS
2				YTX4L-BS YTX5L-BS YTX7L-BS YTX7A-BS YTX9-BS YTX12-BS YTX14-BS YTX20L-BS YT7B-BS YT9B-BS YT12B-BS YTZ7S YTZ10S YTZ12S YTZ14S YB4L-A YIX30-BS YTX14AH-BS YB30CL-B 12N10-BS
3				YB3L-A YB3L-B 12N5-3B 12N5-4B YB5L-B 12N7-4B 12N7-3B 12N7-4A YB7-A YB7L-B 12N9-4B 12N9-3B YB9-B YB9L-B 12N6-3B 6N6-3B B38-6A B49-6 6N11A-1B 12N6-3B YB7B-B 12N7B-3A YB10L-B 12N3-BS YB12A-A 12N18-3A 12N12-4A-1 YB16-B YTX5AL-BS YTX6.5-BS YTX9A-BS YTX7E-BS YTX7D-BS
4				YTR4A-BS
5				YT4B-BS
6				YB10L-A2 YB14A-A2 12N14-3A YB12AL-A2 YB14-A2 YB14L-A2
7				Y50-N18L-A YB16AL-A2
8				YB9L-A2

DESIGNATION OF BATTERY TYPE NUMBERS

12	N	7	-	B	S	
12	N	7	B	-	B	S
a		b	c			

Y	T	X	12	-	B	S
			b			

12	N	9	-	4	B
a		b		d	e

Designations:

a - nominal voltage

b - battery capacity at 10 hour rate

c - indication of different size of the same capacity batteries

d - polarity location (see Fig.1), configuration

e - location of opening for exhaust(see Fig.2)

Fig.1

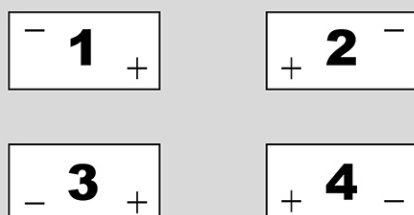
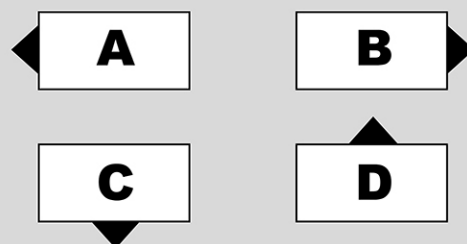


Fig.2



MOTORCYCLE BATTERY

WET CHARGED MF BATTERY

Battery Type	Voltage V	Capacity Ah(10HR)	Dimensions-Millimeters (±2mm)			Approx Weight Kg	Acid Volume L	Regular Charge Current A	C.C.A 0°F (-18°C)
			L	W	H				
6N4-BS	6	4	71	71	92	0.75	N/A	0.40	40
6N6-BS	6	6	99	58	107	0.95	N/A	0.60	60
12N2.5-BS	12	2.5	81	71	104	1.13	N/A	0.25	25
12N3-BS	12	3	92	56	109	1.03	N/A	0.30	30
YTX4L-BS	12	4	113	70	85	1.43	N/A	0.40	40
YTZ5-BS	12	4	113	70	85	1.43	N/A	0.40	40
YTX5L-BS	12	5	113	70	109	1.78	N/A	0.50	50
YTZ7-BS	12	5	113	70	109	1.78	N/A	0.50	50
12N5-BS	12	5	120	61	123	1.88	N/A	0.50	50
12N6.5-BS	12	6.5	139	66	103	2.02	N/A	0.65	65
YTX7L-BS	12	7	113	70	133	2.24	N/A	0.70	70
YTX7A-BS	12	7	149	86	94	2.44	N/A	0.70	70
YTZ10-BS	12	7	149	86	94	2.44	N/A	0.70	70
12N7-BS	12	7	136	76	122	2.38	N/A	0.70	70
12N7B-BS	12	7	147	61	126	2.27	N/A	0.70	70
12N8-BS	12	8	136	76	126	2.70	N/A	0.80	80
12N9A-BS	12	9	136	76	129	2.76	N/A	0.90	90
YTX9-BS	12	9	150	86	107	2.83	N/A	0.90	90
YTZ12-BS	12	11	150	86	107	3.25	N/A	1.10	110
YTX12-BS	12	12	150	86	130	3.60	N/A	1.20	120
YTX14-BS	12	14	150	86	146	4.36	N/A	1.40	140
YTX20L-BS	12	20	175	87	156	5.80	N/A	2.00	200
YIX30L-BS	12	30	165	127	176	8.25	N/A	3.00	300
YTX24HL-BS	12	24	206	88	162	6.83	N/A	2.40	240
YT4B-BS	12	2.3	113	38	85	0.92	N/A	0.23	23
YTR4A-BS	12	2.3	114	49	85	0.98	N/A	0.23	23
YT7B-BS	12	7	149	65	93	2.07	N/A	0.70	70
YT9B-BS	12	9	150	70	105	2.45	N/A	0.90	90
YT12B-BS	12	12	150	70	131	3.10	N/A	1.20	120
YTX14AH-BS	12	14	134	89	166	4.12	N/A	1.40	140
12N10-BS	12	10	134	89	145	3.34	N/A	1.00	100
YTX15-BS	12	15	175	87	130	4.44	N/A	1.50	150
YTX16-BS	12	16	151	87	164	4.76	N/A	1.60	160
12N28-BS	12	28	179	126	163	7.35	N/A	2.80	280
12N32-BS	12	32	179	126	163	8.10	N/A	3.20	320

MOTORCYCLE BATTERY

DRY CHARGED MF BATTERY

Battery Type	Voltage V	Capacity Ah(10HR)	Dimensions-Millimeters (±2mm)			Approx Weight Kg	Acid Weight g	Reguler Charge Current A	C.C.A 0°F (-18°C)
			L	W	H				
YTX2.5L-BS	12	2.5	80	71	105	0.93	238	0.25	25
YTX3L-BS	12	3	98	57	109	0.89	206	0.30	30
YT4B-BS	12	4	112	38	84	0.79	174	0.40	40
YTX4L-BS	12	4	112	69	85	1.17	253	0.40	40
YTZ5-BS	12	4	112	69	85	1.17	253	0.40	40
YTX5L-BS	12	5	112	69	106	1.38	356	0.50	50
YTX5AL-BS	12	5	119	61	127	1.47	444	0.50	50
YTX7L-BS	12	7	112	70	127	1.75	507	0.70	70
YTX7D-BS	12	7	147	59	129	1.80	523	0.70	70
YTX6.5-BS	12	6.5	138	66	98	1.59	467	0.65	65
YTX7E-BS	12	7	135	76	122	1.90	618	0.70	70
YTX7A-BS	12	7	149	87	93	1.86	554	0.70	70
YTX9-BS	12	9	149	87	104	2.15	600	0.90	90
YTX9A-BS	12	10	135	75	137	2.40	756	1.00	100
YTX12-BS	12	12	149	87	129	2.67	808	1.20	120
YTX14-BS	12	14	149	87	146	3.29	878	1.40	140
YTX14AH-BS	12	13	134	89	166	3.01	1120	1.30	130
YTX20L-BS	12	20	174	87	152	4.10	1414	2.00	200
YT7B-BS	12	7	149	66	94	1.68	428	0.70	70
YT9B-BS	12	9	150	70	105	1.94	507	0.90	90
YT12B-BS	12	12	150	70	130	2.31	649	1.20	120
YTX24L-BS	12	24	205	87	162	5.16	1505	2.40	240
YIX30L-BS	12	30	166	126	175	6.05	1900	3.00	300

DRY CHARGED CONVENTIONAL BATTERY

Battery Type	Voltage V	Capacity Ah(10HR)	Dimensions-Millimeters			Approx Weight	Acid Weight	Reguler Charge	C.C.A 0°F
			L	W	H				
6N4-2A	6	4	71	70	92	0.43	317	0.40	40
6N6-3B	6	6	99	57	109	0.66	317	0.60	60
YB4L-B	12	4	117	70	92	1.21	502	0.40	40
YB2.5L-C	12	2.5	81	71	105	0.80	317	0.25	25
12N3-3B	12	3	97	57	108	0.88	317	0.30	30
12N5-3B	12	5	120	62	129	1.45	502	0.50	50
12N5.5-3B	12	5.5	137	61	129	1.65	554	0.55	55
12N6-3B	12	6	134	71	100	1.60	554	0.60	60
12N6.5-3B	12	6.5	138	72	105	1.67	554	0.65	65

MOTORCYCLE BATTERY

DRY CHARGED CONVENTIONAL BATTERY

Battery Type	Voltage V	Capacity Ah(10HR)	Dimensions-Millimeters (±2mm)			Approx Weight Kg	Acid Weight g	Regular Charge Current A	C.C.A 0°F (-18°C)
			L	W	H				
12N7B-3A	12	7	148	60	131	1.81	713	0.70	70
YB7B-B	12	7	148	60	131	1.81	713	0.70	70
12N7-4B	12	7	134	75	132	2.06	634	0.70	70
12N9-4B	12	9	134	75	134	2.25	792	0.90	90
YB12A-A	12	12	134	75	139	2.54	1108	1.20	120
YB12AL-A2	12	12	134	80	160	2.57	1108	1.20	120
YB14-A2	12	14	134	89	166	3.26	1108	1.40	140
12N14-3A	12	14	134	89	166	3.25	1108	1.40	140
12N24-3	12	24	184	125	157/173	4.90	2216	2.40	240
6N11A-1B	12	11	121	68	138	1.33	502	1.10	110
Y50-N18L-A	12	18	206	90	162	3.67	1948	1.80	180
12N18-3A	12	18	206	90	162	3.67	1948	1.80	180

INTELLIGENT TESTER



To reduce the mistaken returning rate

Since many batteries were returned by mistake, the intelligent tester was invented.

It would be used to check if the problem is with the charging system or the battery

MOTORCYCLE BATTERY

COMMON MODELS



12N2.5-BS



12N3-BS



12N5-BS



12N6.5-BS



12N7-BS



12N9-BS

MOTORCYCLE BATTERY

COMMON MODELS



YTX4L-BS



YTX5L-BS



YTX7A-BS



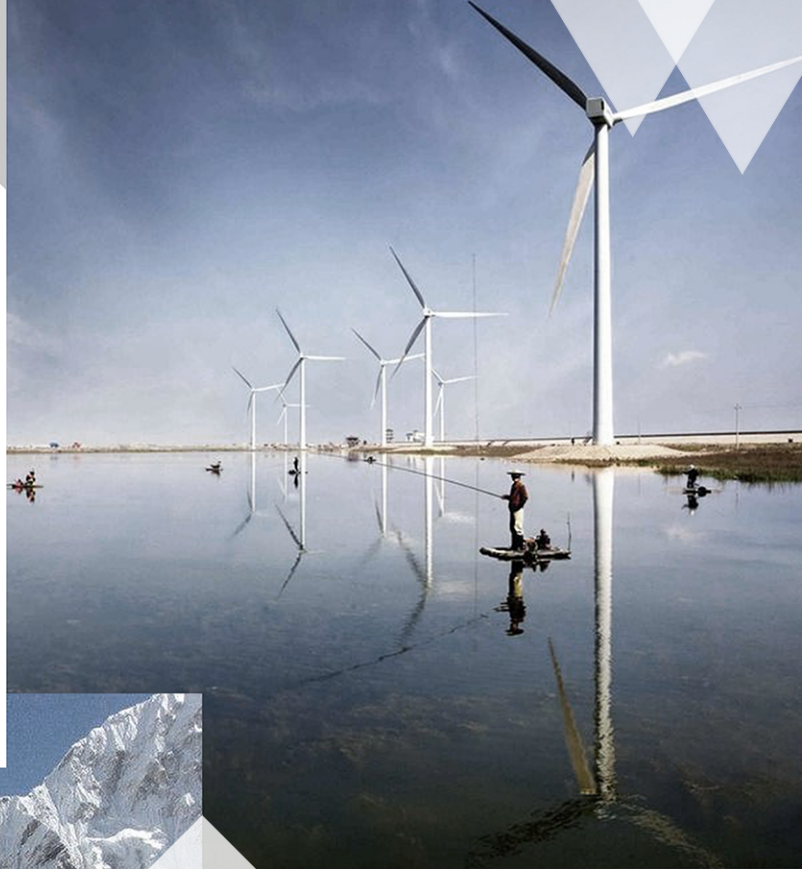
YTX7L-BS



YTX9-BS



YTX20-BS



Valve-Regulated Lead-Acid Battery

VLRA BATTERY

VRLA BATTERY

Battery Type	Voltage V	Capacity Ah(10HR)	Dimensions-Millimeters (±2mm)				Approx Weight Kg	Internal Resistance 25°C
			L	W	H	TH		
6FM2.6	12	2.6	71	47	96	102	0.80	56mΩ
6FM3	12	3	91	71	100	106	1.25	50mΩ
6FM3.5	12	3.5	91	71	100	106	1.32	45mΩ
6FM4	12	4	91	71	100	106	1.38	41mΩ
6FM4.5	12	4.5	91	71	100	106	1.44	40mΩ
6FM5	12	5	91	71	100	106	1.48	39mΩ
6FM5.5	12	5.5	91	71	100	106	1.62	37mΩ
6FM6	12	6	149	65	96	102	1.90	21.3mΩ
6FM7	12	7	149	65	96	102	2.02	21.3mΩ
6FM7.5	12	7.5	149	65	96	102	2.13	21.0mΩ
6FM9	12	9	149	65	96	102	2.38	19.8mΩ
6FM12	12	12	150	98	97	102	3.22	20mΩ
6FM17	12	17	181	77	167	-	4.96	18mΩ
6FM18	12	18	181	77	167	-	5.25	17mΩ
6FM24Y	12	26	165	175	124	-	7.50	13mΩ
6FM24P	12	24	166	125	175	-	8.10	13mΩ
6FM33	12	32	195	130	156	168	9.70	11mΩ
6FM40	12	40	197	165	175	-	12.50	9mΩ
6FM50	12	50	228	138	211	215	16.20	8mΩ
6FM55	12	55	228	138	211	215	16.90	7mΩ
6FM65	12	65	350	166	180	-	20.20	6mΩ
6FM80	12	80	258	168	210	214	23.50	5.6mΩ
6FM100	12	100	327	172	211	215	28.60	5.0mΩ
6FM120	12	120	406	174	210	234	34.70	4.3mΩ
6FM150	12	150	484	171	240	-	41.60	3.8mΩ
6FM200	12	200	524	238	220	224	58.50	3.2mΩ
6FM250	12	250	520	268	219	223	69.50	2.5mΩ

DESIGNATION OF BATTERY TYPE NUMBERS

6	FM	7
a	b	c

Designations:

a - quantity of cells

b - valve-regulated

c - battery capacity at 20 hour rate

VLRA BATTERY

COMMON MODELS





CAR BATTERY

DRY CHARGED CONVENTIONAL BATTERY

Battery Type	Voltage V	Capacity Ah(10HR)	Dimensions-Millimeters (±2mm)				Approx Weight Kg	Reguler Charge Current A	C.C.A 0°F (-18°C)
			L	W	H	TH			
N36	12	36	199	128	201	221	6.9	3.6	360
N45	12	45	236	133	195	215	8.4	4.5	450
N60	12	60	260	169	199	220	10.8	6	600
N80	12	80	309	171	201	223	12.7	8	800
N105	12	100	405	171	205	227	16.2	10	1000
N135	12	120	506	180	207	228	18.7	12	1200
N165	12	150	508	221	210	231	22.6	15	1500
N200	12	200	506	264	213	234	28.5	20	2000

WET CHARGED MF BATTERY

Battery Type	Voltage V	Capacity Ah(10HR)	Dimensions-Millimeters (±2mm)				Approx Weight Kg	Regular Charge Current A	C.C.A 0°F (-18°C)
			L	W	H	TH			
38B20	12	36	195	127	158	177	9.8	3.60	360
46B24	12	40	237	127	200	220	11.5	4.00	400
55B24	12	40	237	127	200	220	12.4	4.00	400
55D23	12	60	230	173	200	220	14.6	6.00	600
75D23	12	65	230	173	200	220	15.3	6.50	650
34-60	12	60	259	173	182	203	14.8	6.00	600
55D26	12	60	258	173	200	220	15.6	6.00	600
80D26	12	70	258	173	200	220	16.1	7.00	700
95D31	12	80	304	173	200	220	19.6	8.00	800
86-610	12	60	230	173	180	200	13.9	6.00	600
95E41R	12	105	404	171	199	219	24.0	10.50	1050
115F51	12	120	506	180	208	231	32.0	12.00	1200
145G51	12	150	506	221	210	233	39.0	15.00	1500
190H52	12	200	515	265	215	238	48.5	20.00	2000
54434	12	44	207	173.5	188	-	12.5	4.40	440
58500	12	48	233	173	157	175	12.5	4.80	480
55515	12	55	240	175	173	-	13.3	5.50	550
78-60	12	60	259	178	182	-	15.8	6.00	600
L2-400	12	60	240	174	190	-	14.0	6.00	600
57117	12	71	286	175	175	-	14.9	7.10	710
55415	12	54	276	174	175	-	14.8	5.40	540
57217	12	72	276	174	190	-	15.5	7.20	720
56618	12	66	276	174	190	-	16.3	6.60	660
58043	12	80	314	175	188	-	19.2	8.00	800
58815	12	88	351	174	180	-	19.5	8.80	880
60038	12	100	352	174	193	-	20.8	10.00	1000
20-110	12	100	352	173	193	-	24.0	10.00	1000
6-QTF-50	12	50	207	173.5	193	-	15.5	5.00	500
6-QTF-60	12	60	240	173	193	-	18.4	6.00	600
6-QTF-70	12	70	276	174.5	193	-	20.7	7.00	700
6-QTF-80	12	80	313	173	193	-	23.4	8.00	800
6-QTF-92	12	92	350	173	193	-	26.2	9.20	920

CAR BATTERY

COMMON MODELS



38B20



46B24



55D23



55D26



86-610



95D31

CAR BATTERY

COMMON MODELS



55415



56618



57117



57217



58043



58500

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