



SODIUM ION BATTERY

A MORE COST-EFFECTIVE OPTION



Fuel-efficient



Wide Voltage Range



Support 0V Charging



Wide Temperature Range



Fuel-efficient

High Cost Performance

WHAT IS SODIUM ION BATTERY?

Composition Information

The anode (negative electrode) is often made of materials such as hard carbon, which can effectively store and release sodium ions during charging and discharging processes.

The cathode (positive electrode) commonly uses materials like sodium transition metal oxides or sodium layered oxides. These materials facilitate the insertion and extraction of sodium ions.

The electrolyte plays a crucial role in enabling the movement of sodium ions between the anode and cathode. It usually consists of a solvent and a salt, such as sodium hexafluorophosphate (NaPF₆) dissolved in an organic solvent.

The separator is a thin membrane that prevents direct contact between the anode and cathode while allowing the passage of sodium ions.

Chemical Name	Percent of Content	CAS No.
Sodium copper iron manganese layer oxid	34.2-38.2%	7440-50-8
Hard carbon	30.5-34.5%	7440-44-0
Aluminium	14.26-15.64%	7429-90-5
Sodium hexafluorophosphate	0.31-0.51%	21324-39-0
Sodium perchlorate	0.11-0.35%	7601-89-0
Dimethyl Carbonate	0.12-0.39%	616-38-6
Ethyl carbonate	0.17-0.26%	105-58-8
Ethyl-methylcarbonat	0.16-0.28%	623-53-0
Carboxymethyl cellulose	0.12-0.51%	9004-32-4

COMPARE TO DIFFERENT TYPE BATTERY:



Lead-Acid



Sodium ion



LiFePO4

Battery Type	Lead-acid	Sodium Ion	LiFePO4
Voltage Range	2-12V	6-16V	10-14.6V
Temperature Range	0~50°C	-30~70°C	0~55°C
Fast Charging	No	Support	Support
Gasoline	Waste Fuel	Fuel Saving	Fuel Saving
Maintenance Period	Need Add Acid	Support 0V Charger	3-6Month to Charge
Weight	2-3 Times of LI&SIB	1-3 Heavy of lead acid	Light than SIB
Size	2-3 Times of LI&SIB	2-3 Size of Lead Acid	2-3 Size of SIB
Warranty	12 Month	5 Years	6 Years
Cycle Life	500 Times	3000 Times	4500 Times
Energy Density	Lower	High	Higher than SIB
Environmentally	Release Toxic Acidic Gas	ECO-Friendly & Gren	ECO-Friendly & Green
CCA	LOW	Very High	Higher than Lead-acid

ADVANTAGES

8

Advantages of Sodium ion Battery



1. Save fuel and improve performance

The battery charges quickly and saves fuel. Compared with lead-acid batteries, it can save 3-5% fuel and increase power by 5-8%



3. High performance

CCA is 3 times that of lead-acid batteries and 2 times that of lithium batteries, for example :12V10Ah: up to 350CCA



5. Cost performance

The performance is comparable to lithium batteries, and the price is comparable to lead-acid batteries



7. Support 0V charging

When the battery is not used for a long time, even when it reaches 0V, it can still wake up the battery with a small current



2. Wide temperature range

The battery operating temperature range is -30°C-70°C, suitable for different seasons of temperature, no longer have to worry about the battery will be affected by temperature.



4. Wide voltage range

The voltage range is 8V-15.8V and is suitable for all types of engines and mounted three-electric system vehicles



6. Light weight

It has a higher energy density than a lead-acid battery and weighs half as much.



8. Battery life

>3000 cycles @ 80% rest. Motorcycle warranty 2 years, the first year free replacement, the second year free maintenance. Car battery warranty 5 years, the first two years free replacement, the last three years free care.



MAIN PRODUCT

Our sodium-ion batteries are available for all motorcycle and automotive brands



MOTORCYCLE STATER BATTERY



H2W-12V3.9Ah

Energy: 46.8Wh; Weight: 650g
CCA: 120; Size: 112*69*88mm



H2W-12V5.2Ah

Energy: 62.4Wh; Weight: 850g
CCA: 140; Size : 112*69*106mm



H2W-12V6.5Ah

Energy: 78Wh; Weight: 1050g
CCA: 160; Size: 150*86*94mm



H2W-F-12V6.5Ah

Energy: 78Wh; Weight: 1050g
CCA: 160; Size: 137*77*123mm

MOTORCYCLE STATER BATTERY



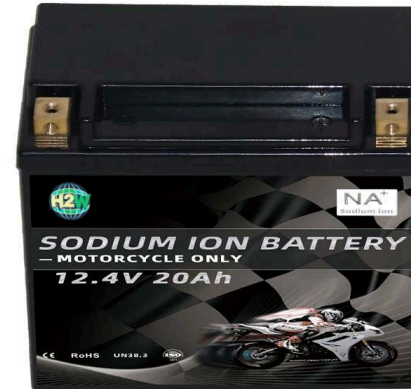
H2W-12V10Ah

Energy: 120Wh; Weight: 1500g
CCA: 300; Size: 150*86*105mm



H2W-12V17.5Ah

Energy: 210Wh; Weight: 1950g
CCA: 450; Size: 150*86*166mm



H2W-12V20Ah

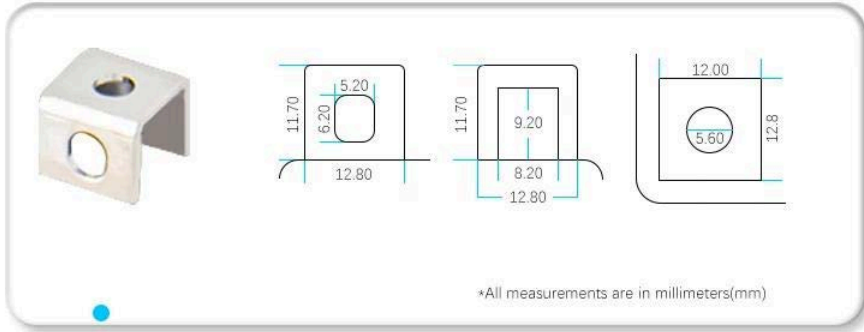
Energy: 240Wh; Weight: 3800g
CCA: 560; Size: 176*87*156mm



H2W-12V30Ah

Energy: 360Wh; Weight: 4800g
CCA: 900; Size: 165*126*175mm

SPECIFICATION (FOR EXSAMPLE)



12.4V3.9Ah (for example)

Nominal voltage	12.4V
Nominal capacity	3.9Ah
Working voltage	6V-15.8V
Energy	46.8Wh
Battery chemistry	Sodium ion
Series connectable	No
CCA	120
Dimension LxWxH	112x69x88mm
Terminal	Square/Round/customize
Weight	650g
Recom. charging current	1A
Max charging current	2A
Max continuous discharge	10A
Peak discharge	120A(3S)
Suitable Motocycle Brand	1:1 lead acid replacement

CAR STATER BATTERY (JIS/JAPANESE INDUSTRIAL STANDARD)



36-12V30Ah

Energy: $12.4 \times 30 = 372\text{Wh}$

Weight: 4.25kg

CCA: 1000

Terminal: L/R

Size: 197*128*220mm



45-12V40Ah

Energy: $12.4 \times 40 = 496\text{Wh}$

Weight: 5.5kg

CCA: 1200;

Terminal: L/R

Size: 238*133*222mm



70D23-12V50Ah

Energy: $12.4 \times 50 = 620\text{Wh}$

Weight: 6.8kg

CCA: 1400;

Terminal: L/R

Size: 230*1174*219mm

CAR STATER BATTERY (JIS/JAPANESE INDUSTRIAL STANDARD)



213-12V60Ah

Energy: $12.4 \times 60 = 744\text{Wh}$
Weight: 7.75kg
CCA: 1600;
Terminal: L/R
Size: 230*175*183mm



55D23-12V60Ah

Energy: $12.4 \times 60 = 744\text{Wh}$
Weight: 7.75kg
CCA: 1600;
Terminal: L/R
Size: 230*175*200mm



60-12V70Ah

Energy: $12.4 \times 70 = 868\text{Wh}$
Weight: 8.95kg
CCA: 1700;
Terminal: L/R
Size: 260*175*221mm



70-12V80Ah

Energy: $12.4 \times 80 = 992\text{Wh}$
Weight: 10.2kg
CCA: 1800;
Terminal: L/R
Size: 306*174*220mm

CAR STATER BATTERY (DIN/GERMAN INDUSTRIALSTANDARD)



35A-12V50Ah

Energy: $12.4 \times 50 = 620\text{Wh}$

Weight: 6.8kg

CCA: 1400

Terminal: L/R

Size: 207*175*189mm



L2-400-12V60Ah

Energy: $12.4 \times 60 = 744\text{Wh}$

Weight: 7.7kg

CCA: 1600;

Terminal: L/R

Size: 244*176*172mm



57217-12V70Ah

Energy: $12.4 \times 70 = 868\text{Wh}$

Weight: 8.9kg

CCA: 1700;

Terminal: L/R

Size: 279*175*189mm

CAR STATER BATTERY (JIS/JAPANESE INDUSTRIAL STANDARD)



58043-12V80Ah

Energy: $12.4 \times 80 = 992\text{Wh}$

Weight: 10.2kg

CCA: 1800

Terminal: L/R

Size: 318*176*187mm



60038-12V90Ah

Energy: $12.4 \times 90 = 1116\text{Wh}$

Weight: 11.45kg

CCA: 1900

Terminal: L/R

Size: 355*175*188mm



60038-12V100Ah

Energy: $12.4 \times 100 = 1240\text{Wh}$

Weight: 12.35kg

CCA: 2000

Terminal: L/R

Size: 355*175*188mm



110A-12V120Ah

Energy: $12.4 \times 120 = 1488\text{Wh}$

Weight: 15.45kg

CCA: 2100

Terminal: L/R

Size: 398*175*220mm

SPECIFICATION (FOR EXSAMPLE)



12.4V100Ah (for example)

Nominal voltage	12.4V
Nominal capacity	100Ah
Working voltage	8V-15.8V
Energy	1240Wh
Battery chemistry	Sodium ion
Series connectable	No
CCA	2000
Dimension LxWxH	355x175x188mm
Terminal	M8 & L/R
Weight	12.45kg
Recom. charging current	20A
Max charging current	100A
Max continuous discharge	150A
Peak discharge	600A(3S)
Suitable Auto Brand	1:1 lead acid replacement

CUSTOMIZED--SHELLS



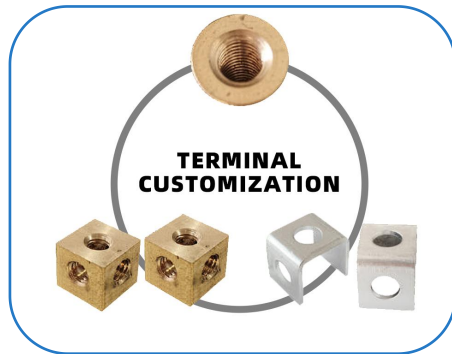
Double Terminal Design



Customized the color of case
(MOQ200)



Rubber Painting Case



Different Terminal Design



Different Top Case Choice



Monitor Model choose

CUSTOMIZED---ACCESSORIES



Round/Square Monitor



Bluetooth Function



Label/Silk-screen Design



Waterproof Vent

MODEL LIST FOR YOUR REFERENCE

MOTORCYCLE/JET SKI/SPEAKER STARTER BATTERY							
Model	Lead-acid NO.	Dimension(mm)	Weight(KG)	Nominal Voltage(V)	Nominal Capacity(Ah)	Energy(Wh)	CCA
NA -12039S	YTX4A	112*69*88	0.65	12	3.9	46.8	120
NA -12052S	YTX5A	112*69*106	0.85	12	5.2	62.4	140
NA -12065S	YTX7A	150*86*94	1.05	12	6.5	78	160
NA -12065S	12N7F	137*77*123	1.05	12	6.5	78	160
NA -1210S	YTX9A	150*86*105	1.50	12	10	120	280
NA -1213S	YTX14A	150*86*149	1.95	12	13	156	250
NA -1220S	YTX20A	176*87*156	3.80	12	20	240	600
NA -1230S	YTX24A	165*126*175	4.80	12	30	360	1000

TRUCK STARTER BATTERY							
Item NO.	TYPE	BATTERY DIMENSION(mm)	WEIGHT(KG)	VOLTAGE(V)	Capacity(Ah)	Energy(Wh)	CCA
1	NA-2450S(ES12-100A)	330*172*215	14.18	24	50Ah	1200	1600
2	NA-2460S(ES12-120)	406*173*236	15.85		60Ah	1440	1800
3	NA-24100S(ES12-160)	532*207*215	26.31		100Ah	2400	2000
4	NA-24120S(ES12-200)	522*240*218	31.58		120Ah	2880	2300
5	NA-24150S(ES12-250)	520*269*220	39.52		150Ah	3600	2500
6	NA-24200S(ES12-250)	520*269*220	52.68		200Ah	4800	2800

MODEL LIST FOR YOUR REFERENCE

CAR/MARINE STARTER BATTERY								
TYPE	Lead-acid No.	Battery Dimension(mm)	Terminal	CCA	Voltage(V)	Capacity	Energy(Wh)	Weight(KG)
JIS/Japanese industrial standard								
NA -1230S(36)	60B20L	197*128*220	L/R	1000	12	30	360	4.25
NA -1240S(45)	65B24L	238*133*222		1200		40	480	5.55
NA-1250S(70D23)	65D23	230*174*219		1300		50	600	6.85
NA-1260S(213)	86-61080-650/85610	230*175*162/183		1500		60	720	7.75
NA-1260S(55D23)	60D23/86610R/86550	230*175*181/200		1600		70	840	8.95
NA -1270S(60)	80D26/55D26/65D26	260*175*221		1800		80	960	10.2
NA -1280S(70)	95D31/95D26/105D31	306*174*220						
DIN/German industrial standard								
NA -1250S(35A)	DIN44/LN1/54315	207*175*189	L	1300	12	50	600	6.85
NA -1260S(L2-400)	DIN55/LN2	244*176*195	L/R	1400		60	720	7.75
NA -1270S(57117)	066-27/DIN66/LN3/55415/56318T6 -54	278*176*172		1500		70	840	8.95
NA -1270S(57217)	AGM-H6-70/57069/20-72	279*175*189		1600		80	960	10.2
NA -1280S(58043)	AGM-H7-80/082-20/DIN77/LN5	318*176*187		1700		90	1080	11.45
NA -1290S(60038)	AGM-92/H8-92/60038/100-20	355*175*188		1900		100	1200	12.35
NA-12100S(60038)	DIN100/LN5			2100		120	1440	15.45
NA-12120S(110A)	20-110/110-20	398*175*188						

DIVERSE APPLICATION SCENARIOS



Suitable for various motorcycle brands such as Honda, Yamaha Suzuki Kawasaki and other old or new types



Suitable for trucks and stereos of all sizes



Applicable to various car brands such as Toyota, Honda, Nissan, Mazda, Suzuki, Hyundai, BMW, Mercedes-Benz and others



WHY CHOOSE YICHEN SIB?



CAR STARTING BATTERY SOLUTION

H2W NA series adopt the newest Sodium-ion battery technology, created an advanced series starting batteries with ultra-long using life and ultra-strong starting ability for motorcycles and cars. High C-rate small capacity cylinder cell, more powerful, safer. Perfect intruction design, carefully aseemble, quality is more better, using longer.

Our batteries are designed with 1:1 same size case of lead-acid batteries, can be replaced directly, without unnecessary modification, more convenient, and no need of any maintenance on the whole using. At present, our products cover all models of common motorcycle batteries and automotive starter batteries in the market, and can be used in more than 99% car or motorcycles.

We support distribution, supply warranty service, having branch office abroad, if you have interesting, please do not hesitate to contact us.

WARRANTY & AFTER-SALES

**3 / 5 YEARS
WARRANTY
≤ 0.1% after-
sales rate**

