AESON
POWER

Safer, Stronger, Go Longer

SODIUM ION
TECHNOLOGY

SAFE POWER
THERMAL STABILITY

SODIUM ION STARTING BATTERY

www.aesonpower.com.au

Company Profile

Aeson Power is an Australian company taking sodium ion technology globally. We are a major partner with the China based XuPai Group to delivery factory direct supply of lead-acid, lithium-ion and sodium-ion batteries for every application.

Manufacturing

Aeson Power delivers safe, reliable and high-quality products. We have 7 specialist factories with over 30 years of experience in R&D and manufacturing. Our manufacturing team has developed secure supply chains and rigorous quality control to ensure every product meets the highest global standards.

30 GWh
Annual Production Capacity

90
Production Lines

1.1M sqm
Area Covered

7
Manufacturing Centres

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Sodium Ion Technology

Sodium Ion Technology will provide you with many benefits. Its energy is derived from one of the most clean and common materials on the planet – salt (Sodium Chloride = NaCl). Its performance exceeds any lead battery and is like a lithium battery.

However, it is different in some key areas, chiefly it does not suffer from very cold or very hot temperatures, and crucially, it does not suffer from thermal runaway, which results in battery fires.

Why Sodium-Ion Batteries?

Technical Landscape of Mainstream Cathode Materials

Positive Electrode Technology Routes	Advantages	Disadvantages
Layered Oxides (NFM)	High energy density	Poor safety, high cost, and poor cycle life
Polyanion Compounds(NFPP)	Good cycle life	Low energy density
Prussian Blue Analogs (PBA)	High energy density	Difficulty in removing moisture during manufacturing, and toxic gases generated under specific conditions

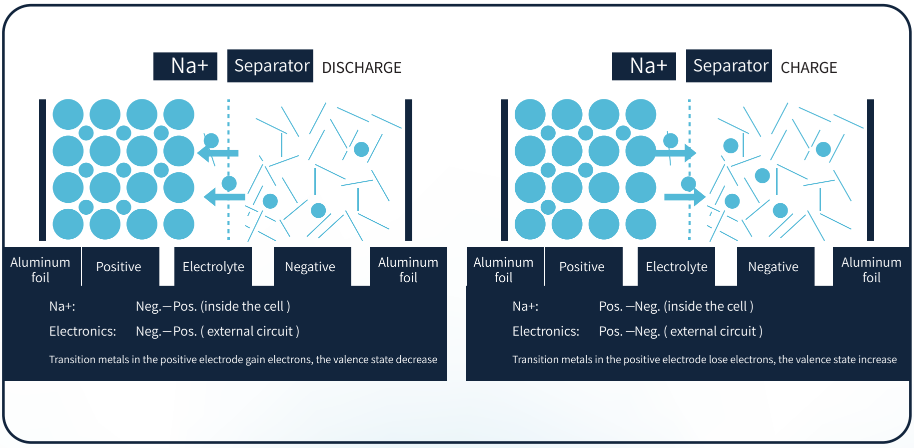
Sodium-Ion Starting Batteries

Lead-Acid, Lithium, and Sodium-Ion Batteries Comparison

	Lead Acid = Pb	LFP	NFPP
Energy Density (Wh/kg)	30~50	120~200	100~130
Cycle Life	＞700	5000~6000	＞5000
Voltage Range	1.5~2.4V	2.5~3.65V	1.5~3.65V
High-Temperature Performance	Moderate	Moderate	Good
Low-Temperature Performance	Poor	Poor	Good
Cost	Low	Relatively High	Low

Working Principle

Sodium−ion starting batteries store and release electrical energy by moving sodium−ion between positive and negative electrodes.



Sodium-Ion Cell Materials

Positive Electrode: Poly−anionic compounds (NFPP)

Negative Electrode: Hard carbon

Electrolyte: $NaPF_6$

Separator: PP/ PE

Shell: PP+Aluminium+Nylon

Tab: Aluminium

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ADVANTAGES OF SODIUM-ION STARTING BATTERY

Light Weight– 60% of a Traditional Lead Battery

High Temperature Operation up to 80°C

Long Warranty

Recovers from 0 Volts Without Severe Damage

80% Depth of Discharge @ 25°C

Fast Charge/Discharge

Recycling Friendly

Use Lithium Charger

Non Toxic

Maintenance Free

No Acid

WATER or CO_2

Super High Cycles

Safe/Fire Resistant Thermal Stability

Vibration Resistance Improved

SODIUM-ION BATTERIES SERIES

StratoForse

StratoForse-SS

StratoForse-SS+

StratoForse-24V

What is StratoForse Series?

Strato comes from the Greek stratos (στρατός), meaning “army” or “layer”. In modern use (e.g., stratosphere), it conveys elevation, stability, and high performance. Our sodium-ion cathode material provides a unique 3-D layer for reliable strength.

Forse is a stylized form of the Latin-derived fortis (via Italian forza), meaning “strong”, “forceful”, or “powerful”.

StratoForse suggests “elevated power” or “layered strength”—ideal for a sodium-ion battery brand.

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Passenger car

StratoForse
StratoForse-SS
StratoForse-SS+

1 Container:
PC+ABS, accommodation and fixation of internal structures

2 Lid:
PC+ABS

3 Cells:
Sodium−ion cells (2.85V per cell), 4 cells in series

4 Fix kit:
Holding cells and control bar

5 Fuse:
Automatic circuit break during extreme current

6 Terminals:
Copper/aluminum terminal

StratoForse

Start battery

Safe
Fire Resistant

2700Cycles
@50%DoD

FAST
Recharge

Temp.
Operation up to 80°C

60%
Lighter than lead-acid

0V
Recovery

Vibration Resistance
Improved

120000
Start-stop cycles

StratoForse Model	Capacity (Wh)	Voltage (V)	CCA (A)	Dimensions (mm) L * W * H (TH)	Weight (Kg)	Case Size
H4/LN1	198	12	360	207*175*190(190)	3.5	L1
H5/L2-400L	240	12	450	242*175*190(190)	4.0	L2
NS40L	198	12	350	196*127*200(220)	3.5	NS40
NS60L	198	12	370	238*129*200(220)	3.7	NS60
NS60-Pro	240	12	420	238*129*200(220)	4.0	NS60
55D23L	240	12	450	232*173*200(220)	4.0	D23L
55D26L	240	12	450	260*173*200(220)	4.5	D26L
55D26R	240	12	450	260*173*200(220)	4.5	D26R
80D31R	312	12	520	306*173*200(220)	5.0	D31R
95D31L	396	12	650	306*173*200(220)	5.9	D31L
95D31R	396	12	650	306*173*200(220)	5.9	D31R
95D31R-Pro	594	12	800	306*173*200(220)	7.7	D31R

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StratoForse-SS

Stop-Start battery

STOP START BATTERY

Safe
Fire Resistant

3000Cycles
@50%DoD

FAST
Recharge

Temp.
Operation up to 80°C

60%
Lighter than lead-acid

0V
Recovery

Vibration Resistance
Improved

180000
Start-stop cycles

StratoForse- SS Model	Capacity (Wh)	Voltage (V)	CCA (A)	Dimensions (mm) L * W * H (TH)	Weight (Kg)	Case Size
Q85L	396	12	650	232*173*200(220)	5.5	D23
S95L	480	12	720	260*173*200(220)	6.5	D26
H5/LN2	396	12	650	242*175*190(190)	5.6	L2 AGM
H6/LN3	480	12	750	278*176*185(185)	6.5	L3 AGM
H7/LN4	480	12	800	315*175*190(190)	6.7	L4 AGM
H8/LN5	594	12	850	354*175*190(190)	8.0	L5 AGM
H9/LN6	720	12	950	394*175*190(190)	9.5	L6 AGM

UN38.3

StratoForse-SS+

AESON POWER

Stop-Start battery with extra 10Ah and 5 year warranty

STOP START BATTERY

SAFE POWER THERMAL STABILITY

Safe
Fire Resistant

3000Cycles
@50%DoD

5C RATE FAST CHARGE

FAST
Recharge

-30℃+80℃ EXTREME TEMPERATURES

Temp.
Operation up to 80°C

60%
Lighter than lead-acid

DEAD FLAT RECOVERY ZERO VOLTS

0V
Recovery

Vibration Resistance
Improved

180,000 ENGINE STARTS

180000
Start-stop cycles

StratoForse-SS+ Model	Capacity (Wh)	Voltage (V)	CCA (A)	Dimensions (mm) L * W * H (TH)	Weight (Kg)	Case Size
H6/LN3	594	12	850	278*175*185(185)	7.7	L3 AGM

UN38.3 RoHS

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Commercial

StratoForse-24V

1 Container:
PC+ABS, accommodation and fixation of internal structures

2 Lid:
PC+ABS

3 Cells:
Sodium−ion cells (2.85V per cell), 8 cells in series

4 Fix kit:
Holding cells and control bar

5 Fuse:
Automatic circuit break during extreme current

6 Terminals:
Copper/aluminum terminal

StratoForse−24V

Start battery replaces 2×12V with 1×24V

Safe
Fire Resistant

2700Cycles
@80%DoD

FAST
Recharge

Temp.
Operation up to 80°C

60%
Lighter than lead-acid

0V
Recovery

Vibration Resistance
Improved

120000
Start-stop cycles

StratoForse -24V Model	Capacity (Wh)	Voltage (V)	CCA (A)	Dimensions (mm) L * W * H (TH)	Weight (Kg)	Case Size
H5/LN2-24	480	24	450	242*175*190(190)	6.1	L2
H9/LN6-24	960	24	850	394*175*190(190)	11.5	L6

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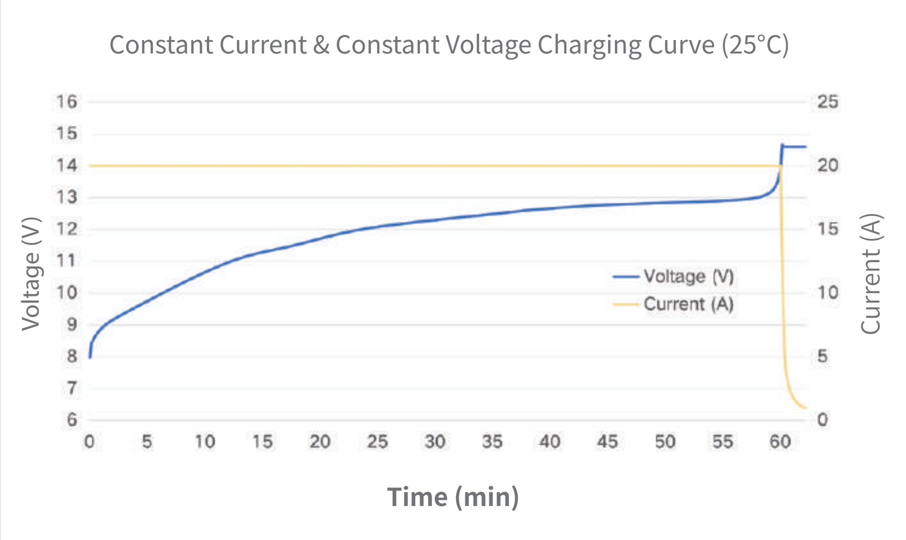
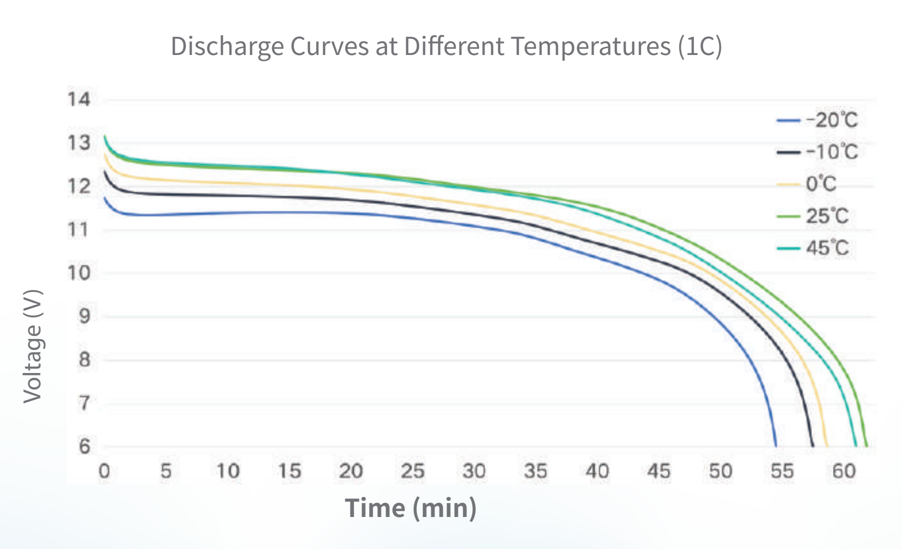
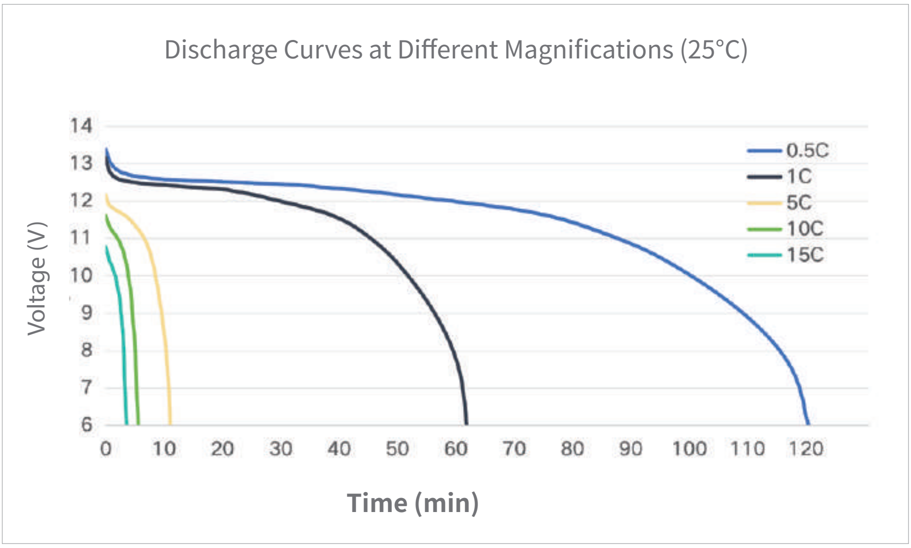
Sodium Ion Start Battery Performance



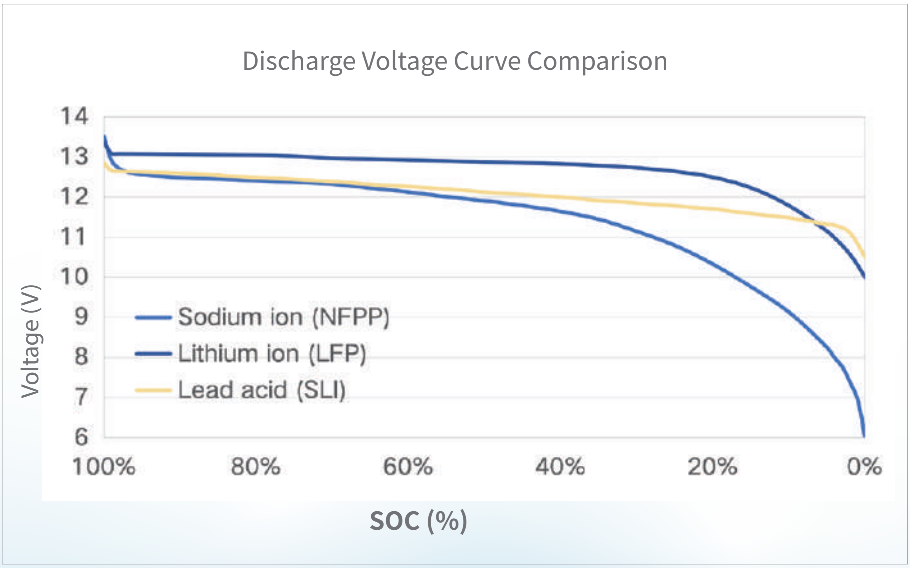
Sodium Ion Start Battery Performance



Discharge Curve 0.5 ~ 15C Rate



Comparison Graphs – Sodium Ion vs Lead vs Lithium



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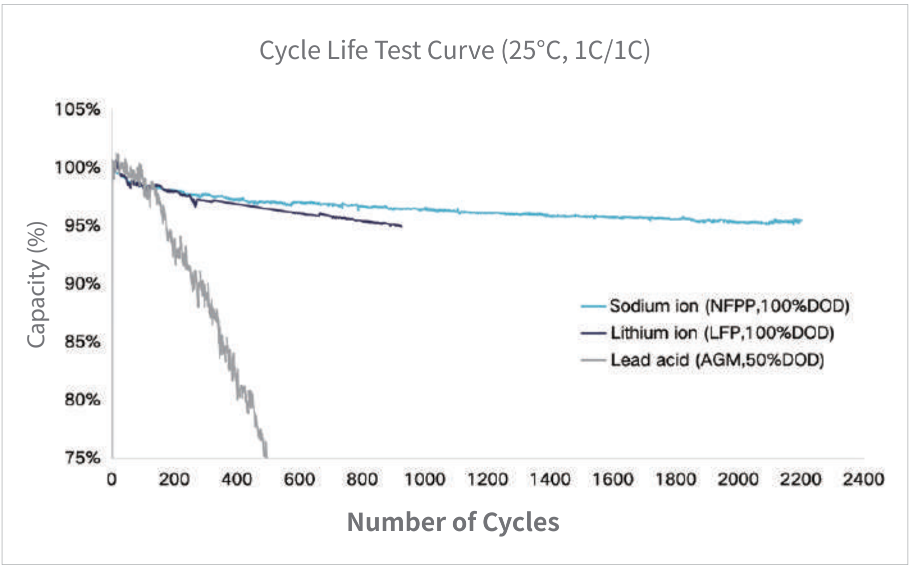
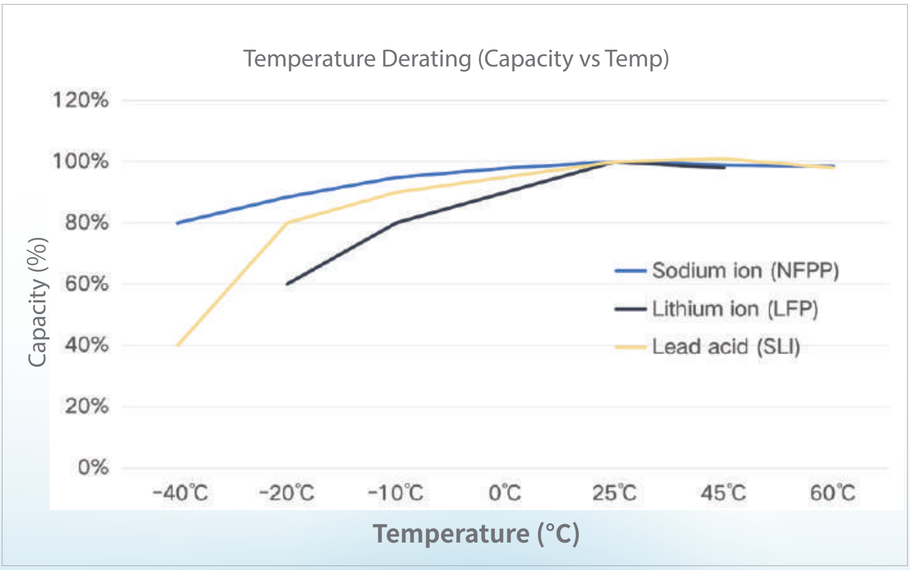


Comparison Graphs –
Sodium Ion vs Lead vs Lithium



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