Lithium-ion Batteries For Electric Golf Caddy

12V 16Ah~22Ah LiFePO4 Lithium Golf Trolley Battery

POWERFUL, LIGHTWEIGHT, HIGHLY EFFICIENT

AESON POWER

Powerful, lightweight, lithium-ion battery for any make and model of electric golf caddy

1 Lithium-ion Battery Overview

The special designed Lithium batteries are advanced and lightweight. It is a complete revolution for the electric golf caddy market. No more lifting and maneuvering a 24 lb weight into your trolley, and in and out of your vehicle. They are less than 1/3 the weight of a lead acid battery and less than 1/3 the size !

12V 16Ah/22Ah LiFePO4 Lithium Golf Trolley Battery

High cycle life
>2000 cycles @80% DoD for effectively lower total cost of ownership.

Wider Compatibility
Suitable for all mainstream Golf Trolleys

Built in circuit protection
Protection Circuit Module (PCM) is incorporated against abuse.

Better storage
up to 6 months thanks to its extremely low self discharge (LSD) rate and no risk of sulphation.

Quickly recharge
Can be fully charged in 2.5 hours with specified charger.

Extreme heat tolerance
Can work properly at the ambient temperature up to +60°C.

Lightweight
Lithium batteries provide more Wh/Kg while also being up to 1/3 the weight of its SLA equivalent.

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2 Technical Speci ications

Three sizes of lithium-ion battery kits are available			
Model	SPF12V16-ST	SPF12V20-ST	SPF12V22-ST
Nominal Voltage	12.8 V	12.8 V	12.8 V
Nominal Capacity	16Ah	20 Ah	22Ah
Capacity @ 4A	300 min	300 min	300 min
Energy	205 Wh	256 Wh	282Wh
Resistance	≤50 mΩ @ 50% SOC	≤50 mΩ @ 50% SOC	≤50 mΩ @ 50% SOC
Self Discharge	<3% / Month	<3% / Month	<3% / Month
Cells	IFR26650	IFR26650	IFR26650
Recommended Charge Current	4A	4 A	4 A
Maximum Charge Current	10 A	20 A	10 A
Recommended Charge Voltage	14.6 V	14.6 V	14.6 V
BMS Charge Cut-Off Voltage	15.6 V (3.9V/Cell)	15.6 V (3.9V/Cell)	15.6 V (3.9V/Cell)
Reconnect Voltage	>14.4 V (3.6V/Cell)	>15.2 V (3.8V/Cell)	>14.4 V (3.6V/Cell)
Balancing Voltage	<14.4 V (3.6V/Cell)	<14.4 V (3.6V/Cell)	<14.4 V (3.6V/Cell)
Maximum Continuous Discharge Current	15 A	20 A	15 A
Peak Discharge Current	25 A (5 min)	40 A (3 s)	25 A (5 min)
BMS Discharge Cut-Off Current	55A ± 10 A (5 ~ 13 ms)	55 A ± 10 A (5 ~ 13 ms)	55A ± 10 A (5 ~ 13 ms)
Recommended Low Voltage Disconnect	11 V	11 V	11 V
BMS Discharge Cut-Off Voltage	8.0 V (10 ~ 400 ms) (2.0V/Cell)	8.0 V (120 ~ 180 ms) (2.0V/Cell)	8.0 V (10 ~ 400 ms) (2.0V/Cell)
Reconnect Voltage	10.8 V (2.7V/Cell)	8.64 V (2.16V/Cell)	10.8 V (2.7V/Cell)
Short Circuit Protection	200 ~ 800 µs	200 ~ 600 µs	200 ~ 800 µs
Dimension (L x W x H)	168x 128 x 76 mm 6.61 x 5.04 x 2.99”	181 x 76 x 169 mm 7.1 x 3.0 x 6.7”	168x 128 x 130 mm 6.61 x 5.04 x 5.12”
Approx. Weight	4.62 lbs (2.1 kg)	5.6 lbs (2.55 kg)	6.83 lbs (3.1 kg)
Terminal Type	T-Bar	M6	T-Bar
Case Material	ABS	ABS	ABS
Enclosure Protection	IP65	IP65	IP65
Storage Temperature	23 ~ 95 ºF (-5 ~ 35 ºC)	23 ~ 95 ºF (-5 ~ 35 ºC)	23 ~ 95 ºF (-5 ~ 35 ºC)
Accessories	T-bar, bag and 12V charger	Torberry to Anderson connector, bag and 12V charger	T-bar, bag and 12V charger
Duration	18 Holes	36 Holes	36 Holes

3 Key Features

• Three sizes of lithium-ion battery kits are available

- The SPF12V16-ST is suitable for all single-motor caddies with manual operation for 18-27 holes+.
- The SPF12V20-ST is suitable for all caddies with manual operation for 36-holes, and all 2-motor remote operation caddies for 18+ holes.
- The SPF12V22-ST is suitable for all caddies with manual operation for 36-holes, and all 2-motor remote operation caddies for 27+ holes.

• Lightweight

- The SPF12V16-ST 2.1 kg.
- The SPF12V20-ST 2.55 kg.
- The SPF12V22-ST 3.1 kg.

• Complete with special dedicated super-fast charger

- Each Lithium battery is delivered complete with a special matched intelligent charger.
- Half the charging time of the regular lead-acid batteries!

• Fast charging time

- A lead-acid battery requires over 10 hours charging to reach its maximum capacity.
- Superpack's lithium batteries use specially designed, electronically controlled chargers which will charge your Lithium battery in less than 5 hours.

• Deeper use of battery capacity

- Unlike a normal Sealed Lead Acid battery, which at best can access about 55% of its capacity, Superpack lithium battery is designed to be able to access 90% of its capacity. This makes for more efficient operation and avoids being stuck out on the course.
- Cycle life data for a lithium-ion pack compared to a SLA battery in a moderate climate (average temperature of 77°F) is influenced by depth of discharge. The SLA battery must be limited to a 30% depth of discharge to get comparable life to a lithium-ion that is at 75% depth of discharge. This means that the SLA battery must be 2.5 times larger in capacity than the lithium-ion to get comparable life.

• Extended life

- The standard SLA battery is rated at around 200 charging cycles. Superpack's battery system will provide you with many more charging cycles over the lifetime of the battery (dependent upon golf course terrains).

• Built in circuit protection

- Battery Management Systems (PCM) are incorporated against abuse.