

Electric Motorcycle Battery Pack Engineering & Production

Full-pack design, autonomous BMS strategy, and production delivery - proven in the S Company 72V45Ah program.



72V
45Ah

ScapePhoton Energy

72V / 45Ah

Program platform

FULL PACK

Design + production

BMS

Design + control strategy

AFRICA FIRST

Swap-duty orientation

SIX CAPABILITY DIMENSIONS

The value is a repeatable delivery system, not one battery specification.

Swap-duty definition

Route, payload, climate, swap cadence, service policy and vehicle interfaces translated into battery requirements.

Pack + BMS architecture

Voltage/capacity, protection, communication, SOC/SOH strategy and interface control managed as one system.

Structure + thermal safety

Enclosure, vibration, sealing, thermal path, connector and lock integration designed for repeat swap use.

Validation + certification

DV/PV and market-specific compliance evidence defined before customer-facing claims are made.

Manufacturing + quality

Supplier qualification, process controls, EOL testing, traceability and change management for repeatable supply.

Operations + data loop

Field events, diagnostics, corrective actions and design feedback fed into the next revision.

EVIDENCE AVAILABLE FOR QUALIFIED REVIEW

Project specification | Pack/BMS architecture | DV/PV and certification records | Production and EOL records | Traceability | Customer acceptance and field data where release approvals allow

Boundary: pack design and BMS strategy are in-house; cells and certified key components use qualified supply-chain partners.

72V45Ah battery pack specification

Program designation: 72V45Ah. Nominal voltage in the specification: 73.6V.



Item	Rating	Note
Battery type	LiFePO ₄ battery	
Pack method	23S3P	
Nominal capacity	45Ah (Min. 42.75Ah)	Charge/discharge: 0.5C Cut-off voltage: 57.5V
Nominal voltage	73.6V	
Energy	3312Wh (Min. 3146.4Wh)	
Charge method	CC/CV	
Charge cut-off voltage	83.95V	
Discharge cut-off voltage	57.5V	
Standard charge current	9A	
Max. charge current	50A	
Standard discharge current	9A	
Max. continuous discharge current	90A	
Cycle life	≥2000 cycles	80% retention 25°C / 0.5C
Internal impedance	≤50mΩ	
Dimension	L324 × W310 × H258 mm	
Weight	Approx. 33.0kg	
Working temperature range	Charge: 0°C–55°C Discharge: -20°C–55°C	
Storage temperature	0°C–35°C	