ZEROJET

EXALTO EMIRATES
MARINE EQUIPMENT



GO FAST. GO CLEAN.

The highest performance and lowest weight EV marine powertrains the world has ever seen.

www.exalto-emirates.com

ZEROJET

Battery Systems

ZeroJet is committed to replacing combustion engines on water with clean, efficient electric power. Based in Auckland, New Zealand, our team of engineers have developed the **world's highest-performance, low-weight EV powertrains.**

While ZeroJet systems are battery agnostic, an integral part of making our jet and outboard systems so dominant is a power source that can meet our safety and performance criteria, maximising system performance and efficiency.



Winning combination of key battery choices:

High Performance

Supports up to 360A (10kWh systems) and 280A (5kWh systems) continuous current draw for full power propulsion.

Weight Optimisation

Weight matters, and especially so when lifting tenders onto larger vessels or dragging them onto the beach. ZeroJet battery options have 97 & 110 Wh per kg, respectively. 5kWh option is split into two 27kg packs for an easy single person lift.

Safety

Utilises $LiFePO_4$ batteries, combined with state-of-the-art Battery Management Systems to minimise risks like thermal runaway and overheating. Many captains and insurance companies ban volatile competing technologies.

Full Integration

ZeroJet battery packs are fully integrated into the ZeroJet propulsion systems with full functional support for SoC, charge/operation temperature and performance management all available via the propulsion system display. This is crucial for maximising ride duration and limp mode.

Peace of Mind Certification

Compliance with DNV-GL and CE certification requirements, including ISO16315 for small craft electrical propulsion systems, ensures standards for battery safety and insurance risk assessment are met.

Charging Efficiency

The BMS manages the charge process efficiently. In the 48V ZJ20 system, the BMS ensures that all internal cells are balanced during charging, preventing overcharging and extending battery life.

Super B inside

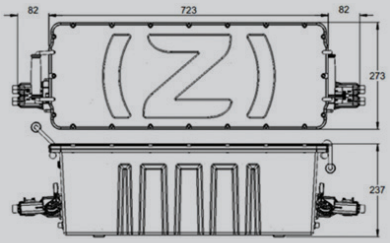
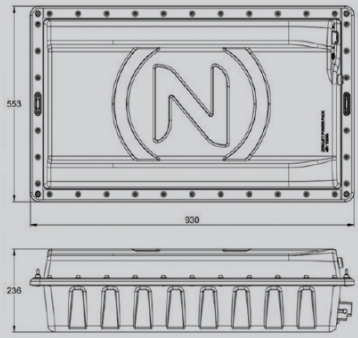
ZeroJet has partnered with Super B, a Netherlands-based leader in advanced lithium battery technology. Specialising in Lithium Iron Phosphate ($LiFePO_4$) batteries, Super B is known for safety, longevity, and exceptional performance.

SUPER B lithium batteries



ZEROJET BATTERY SYSTEMS

Specifications

ZJ BATTERY PACK	5kWh	10kWh
		
Description	The 5kWh battery option is packaged in two enclosures (allowing the batteries to be easily removed by the user with single person lift, where required.	The 10kWh battery box interfaces with the vessel at a mating face around the outer edge of the enclosure. Designed such that the battery box may be semi-recessed into the deck.
Weight	55kg (27.5kg each)	97kg
Total Capacity	5376Wh, 105Ah @48V Nom	10,752Wh, 210Ah @48V Nom
Charge Time (Standard | Fast Charge)	Standard 75min | Fast 33min	Standard 150min | Fast 75min
Dimensions	723 x 273 x 232	553 x 930 x 236
IP Rating	67	67
Chemistry	$LiFePO_4$	$LiFePO_4$
High Current Drive Connection	280A	360A
High Current Charge Port	100A	100A
Auxiliary Port (fused)	48V 5A	48V 5A
Mount Arrangement	Seated strap	Bolt flange
Communications	CANopen	
Hibernate system on/off	On/off system switch for hibernation mode and system restart	
ZeroJet support	ZeroJet system control, motor pre-charge and charger interlock Supported Models : ZJ20HP Jet, ZJ20HP Outboard	

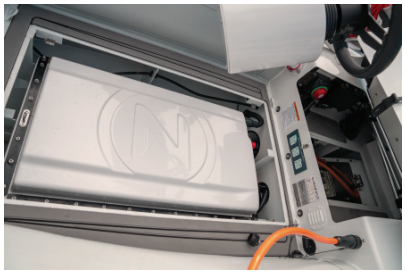
Frequenty Asked Questions

- **What does it mean that ZeroJet is "battery agnostic"?**
  ZeroJet's battery agnostic approach means that our systems work with a variety of off-the-shelf batteries. We believe in offering flexibility and while we recommend ZeroJet batteries to efficiently deliver the maximum performance of the ZeroJet system from the safest lithium chemistry on the market, we do not restrict our energy solutions to one specific supplier.

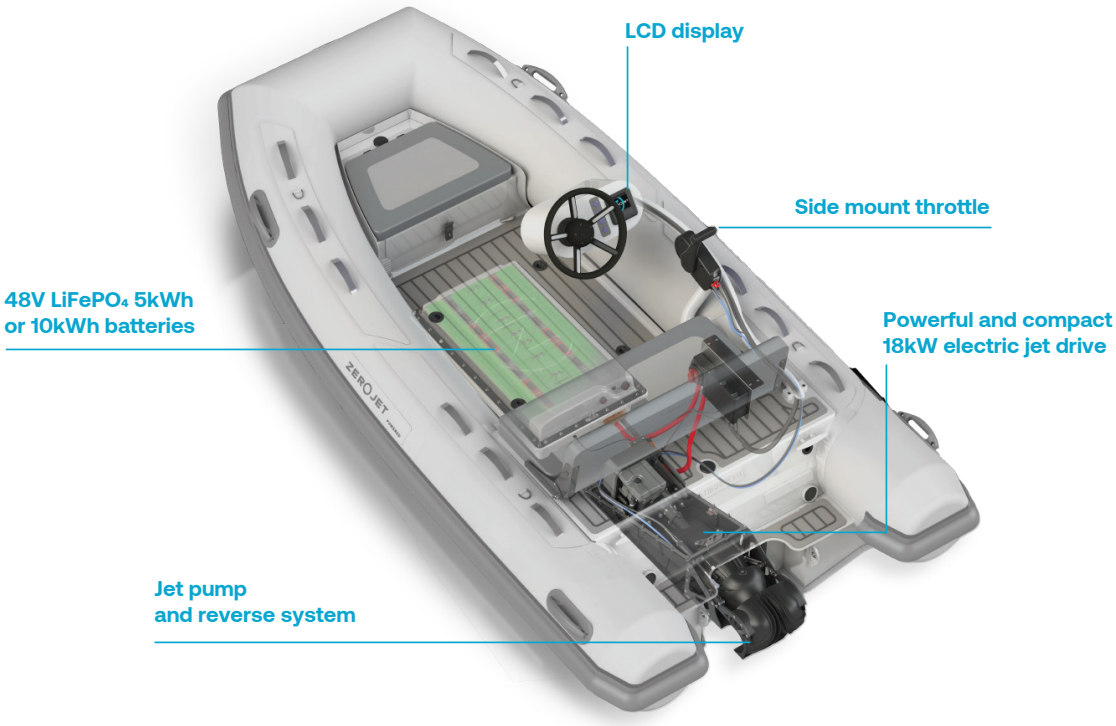
- **How do you connect a non ZeroJet battery?**
  We offer the Power Interface Module to support connection to non-ZeroJet batteries. These ensure that our systems can be integrated with a range of batteries. System performance and level of integration will vary based on the chosen battery – refer to the non-ZeroJet battery technical requirements document for further information (Available Oct 2024).

- **How easy is it to integrate ZeroJet's battery system into different hulls?**
  Our battery systems are designed with versatile mounting options and can be securely fitted using a bolt flange arrangement or a ratchet tie-down. The compact dimensions and lightweight design of the battery packs facilitate easy integration into a range of hull









Plug and play design in process for boat builders:

1. Book a consultation session with the ZeroJet team
2. CAD models are provided to make your initial design task easy
3. We work with you to optimise your design and testing process
4. We ship systems direct to your boat factory for easy 2 hour installation

Why ZeroJet Systems

- Easy plug and play module
- Access to electric market without expensive R&D
- Rapid design and installation
- Brand protection: reliability & performance

ZEROJET POWERED

ZeroJet Electric Jet System

SPECIFICATIONS*

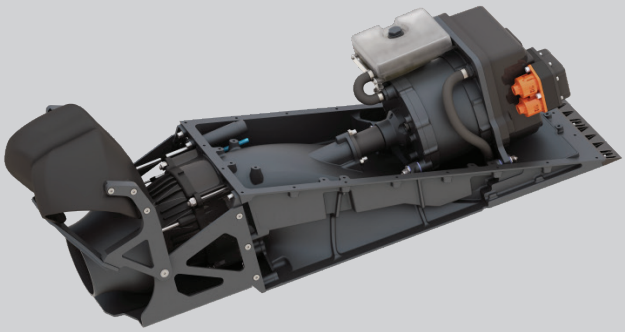
- System Voltage: 48V Nominal
- Impeller Diameter: 150mm
- Power: 18kW Continuous rated
- Motor Type: Closed loop-liquid cooled, Brushless DC, Integrated controller
- Mount Chassis: 294 x 655 x 205mm
- Max Speed: 20knots
- Range: 12 nautical miles @18knots
- Max Operating Water Temp.: 35°C
- Control Software: ZeroJet proprietary, updates through USB
- IP Rating: IP67
- Compliance: CE rated
- System installation time: 2 hours

Mass (Subsystems)

- Jet Unit: 44kg
- 10kWh Battery Pack: 98kg
- 5kWh Battery Pack: 55kg
- Helm Throttle: 2.1kg
- Tiller: 4.3kg

Additional Features

- Integrated motor safety stop tether
- Removable intake grate for debris clearing
- Shaft seal, shaft, coupling and bearing arrangement designed for reliability and ease of maintenance
- GPS for accurate speed readout
- Jet clear function
- Screen functions - SoC, battery voltage, current draw, charging status, system status, temperature, throttle/RPM and alarms

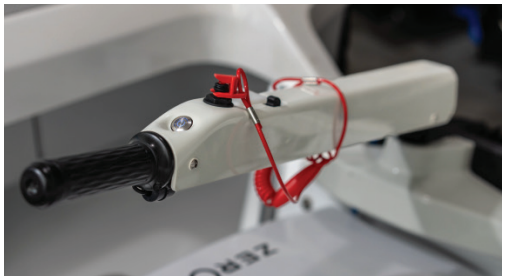


Options

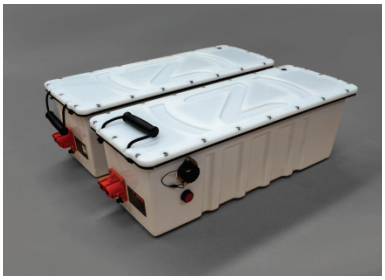
- Steering: Tiller/Helm cable
- Battery: 5kWh/10kWh $LiFePO_4$
- Auxiliary port: 48V, 5A. Can be used for third party DC-DC convertors to support 12V accessories.
- CAN interface (batteries & Throttle): CANopen, NMEA2000*
- Reverse bucket: Cable and electric*

*2025 onwards

*CONTACT ZEROJET FOR FULL TECHNICAL SPECIFICATION

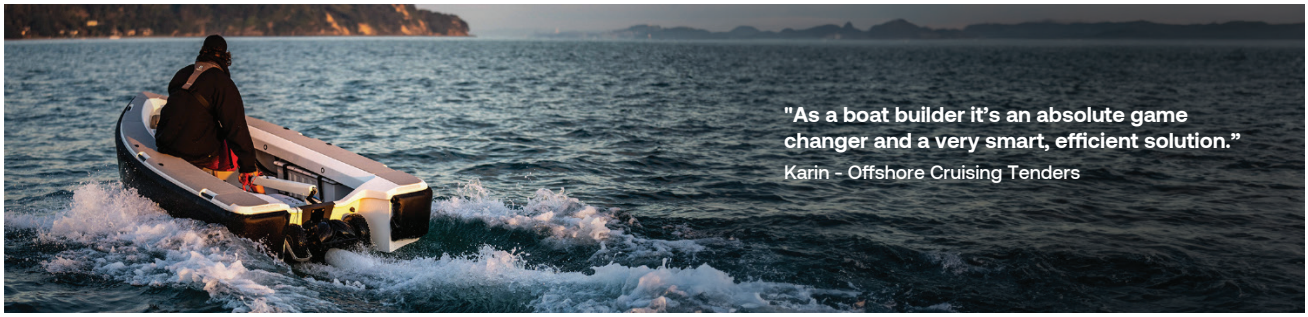


ZeroJet's patented tiller steer provides compact steering option maximising usable space in the boat.





ZeroJet's battery solutions provide compact, ultrasafe, low weight $LiFePO_4$ maximising drive performance and efficiency. IP67 rated batteries: 10kWh 360A continuous, 5kWh 280A continuous.





Finally an electric outboard to challenge petrol performance.

The ZeroJet Electric Outboard offers unmatched power-to-weight efficiency, delivering an electric-drive dynamic, with better than petrol performance, and without the petrol downsides. Its lightweight design ensures easy lifting onto the beach or mother yacht, making it perfect for any adventure. Enjoy the safety and reliability of a low-maintenance, petrol-free system with instant torque. **It's as fun as it is functional, without compromise on performance. Now is the time to make the switch.**

48V matters

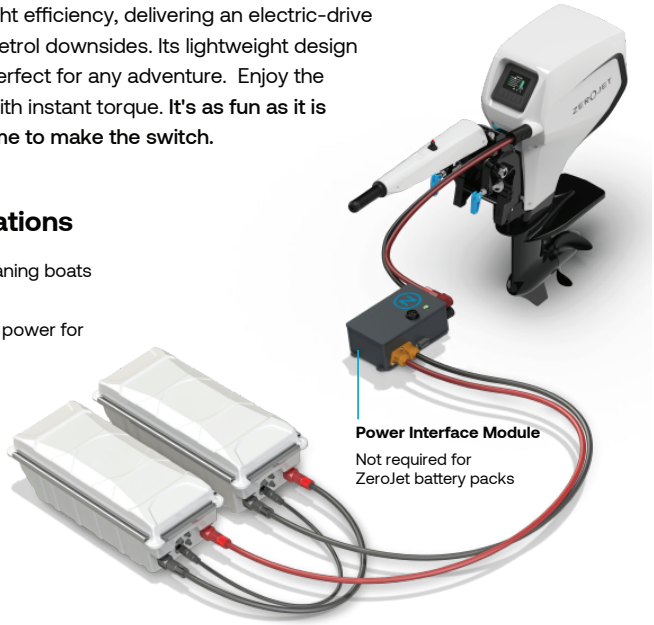
- Safer for boats, minimizing the risk of electric shock.
- Ease of maintenance with no need for high voltage qualified technicians

Applications

- Small planing boats
- Tenders
- Auxiliary power for yachts

Weight matters

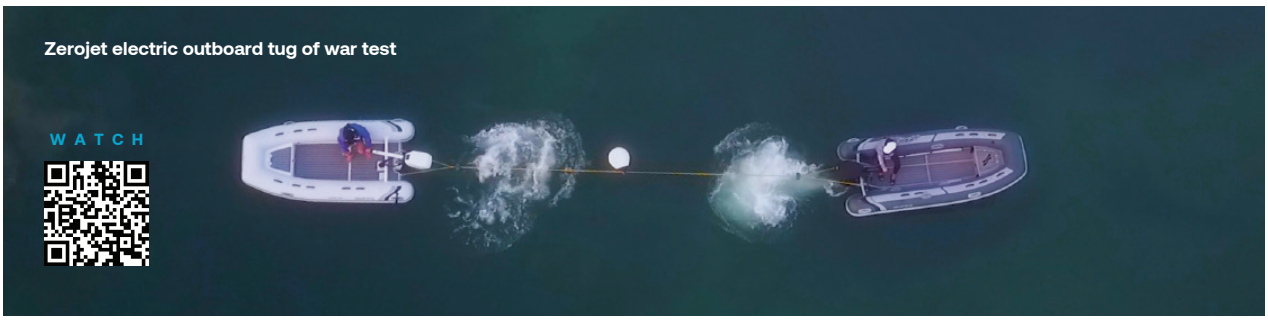
- Lifting onto your yacht or saling boat
- Dragging up the beach



No petrol, more power.

At ZeroJet, we create the best performing electric jet propulsion systems in the world. The same proven electric technology that is in production and loved by our customers in our jet systems has been adapted to suit the universal application and ease of an outboard.

ZeroJet's systems stand above all electric propulsion systems and are the true challenger to petrol marine combustion engines.



ZeroJet Outboard
Wins Power to Weight

Our products have the highest power to weight ratios and outperform all electric or combustion engine equivalents.

SPECIFICATIONS

- Rated power: 18kW (25HP equivalent)
- Voltage: 48V
- Outboard unit weight: 38kg
- Charge time: 1 hour fast charging, 3 hours regular charge
- Top speed: 20 knots (Tested on 3.3m Aluminium RIB)
- Reduced maintenance and servicing
- Quiet operation at all speeds
- Warranty: 2 years

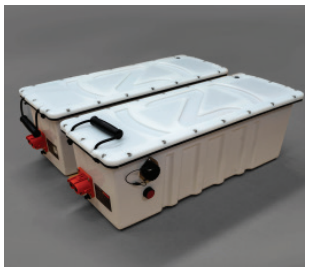
Options

- Battery: ZeroJet 10kWh (360A continuous) = 18kW / ZeroJet 5kWh (280A continuous) = 15kW / 3rd Party battery support kit
- Controls: Tiller or remote (console)
- Propeller: Diverse range of interchangeable options, from high thrust to high speed to suit your specific needs
- Shaft configurations: S (15-17") L (20-22") - Short and long to suit all transom heights



Batteries

ZeroJet's battery solutions
Compact, ultrasafe low weight $LiFePO_4$ maximising drive performance and efficiency





3rd Party connection kits
Inputs: 48V and CAN: CANopen/ NMEA 2000

Connection points:

- Isolator switch
- Motor precharge
- Automated isolation

Frequenty Asked Questions

- **Are third party batteries compatible with the Outboard?**
  Yes, although some system performance may be compromised. We recommend ZeroJet $LiFePO_4$ batteries for high continuous discharge current, safety, weight, performance and system integration.

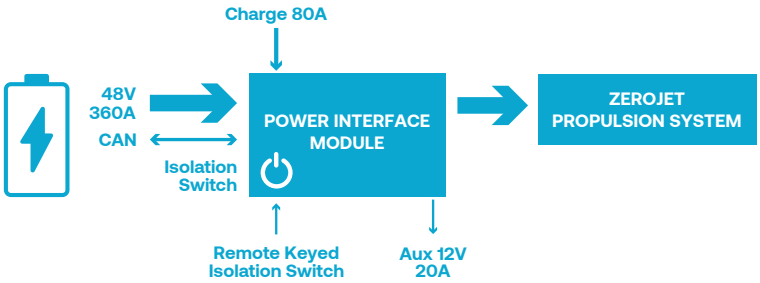
- **What's the warranty term?**
  Two years.



The Power Interface Module is your battery interface point and provides power distribution and isolation for your propulsion unit:

Features:

- **Battery Connection** (via 8mm lugs and glands)
- **Power on/off switch**
- **Remote wired on/off switch** (allows connection of key operated on/off switch)
- **Battery CAN interface passthrough**
- **ZeroJet propulsion system connection and pre charge**
- **12V 20A Auxiliary power output** (navigation lights, bilge pump, sound system etc.)
- **IP67 enclosure**



The level of CAN software integration determines functionality:

The level of performance and functionality of the ZeroJet propulsion system is directly influenced by the features provided by the non ZeroJet battery's CAN implementation and its maximum rate of discharge. The propulsion systems will operate with all levels of integration, but may be feature limited. Fully integrated systems will allow for the ZeroJet Propulsion system to maximise monitor, control and display battery and system performance. In cases where the battery has no CAN features, battery monitoring, safety and user information will need to be supported externally to the ZeroJet system.

A software customisation service is available for high volume OEM customers to have their chosen battery supported. Over time, support for popular batteries will be included.

BATTERY INTERFACE	ZJ CERTIFIED	ZEROJET PROPULSION FUNCTIONALITY						
		Basic Run operation	Max Power	Battery State of Charge	Battery Temp	Time remaining	Limp mode	Charging Support
ZeroJet	**Y**	**Y**	**18 kW**	**Y**	**Y**	**Y**	**Y**	**Y**
NMEA 2000 Battery*	**TBC**	**Y**	**Battery dependant**	**Y**	**Y**	**Y**	**Y**	**TBC**
Full ZJ CANopen support	**TBC**	**Y**	**Battery dependant**	**Y**	**Y**	**Y**	**Y**	**Basic Switching only**
Battery X		**Y**	**TBC**	**TBC**	**TBC**	**TBC**	**TBC**	**TBC**
No CAN port interface	**N**	**Y**	**Battery dependant**	**X**	**X**	**X**	**X**	**Basic Switching only**

ZEROJET

Power Interface Module

SPECIFICATIONS

Enclosure

- IP Rating: IP67
- Dimensions: 250mm x 155mm x 100mm

Battery requirement:

- 48V 360A Continuous – Lower system output power for batteries with lower continuous discharge ratings
- $LiFePO_4$ chemistry recommended
- High current interface: Lugs – M8 – $95mm^2$
  Cable: unshielded $95mm^2$ insulation Ø17.2 ±0.3mm
- CAN plug: Deutsch DT04-06

Charger connection:

- Separate cable required (connector AHDP06-18-06SN-WTA). Charger interlock disconnects propulsion system high current interface and provides battery connectivity
- ZeroJet charger cable part nº: SA-0103-01A

Note: when using non-ZeroJet batteries, use a charger recommended by the battery manufacturer.



CAN interface*

- CANopen
- NMEA 2000 (July 2025 Release)

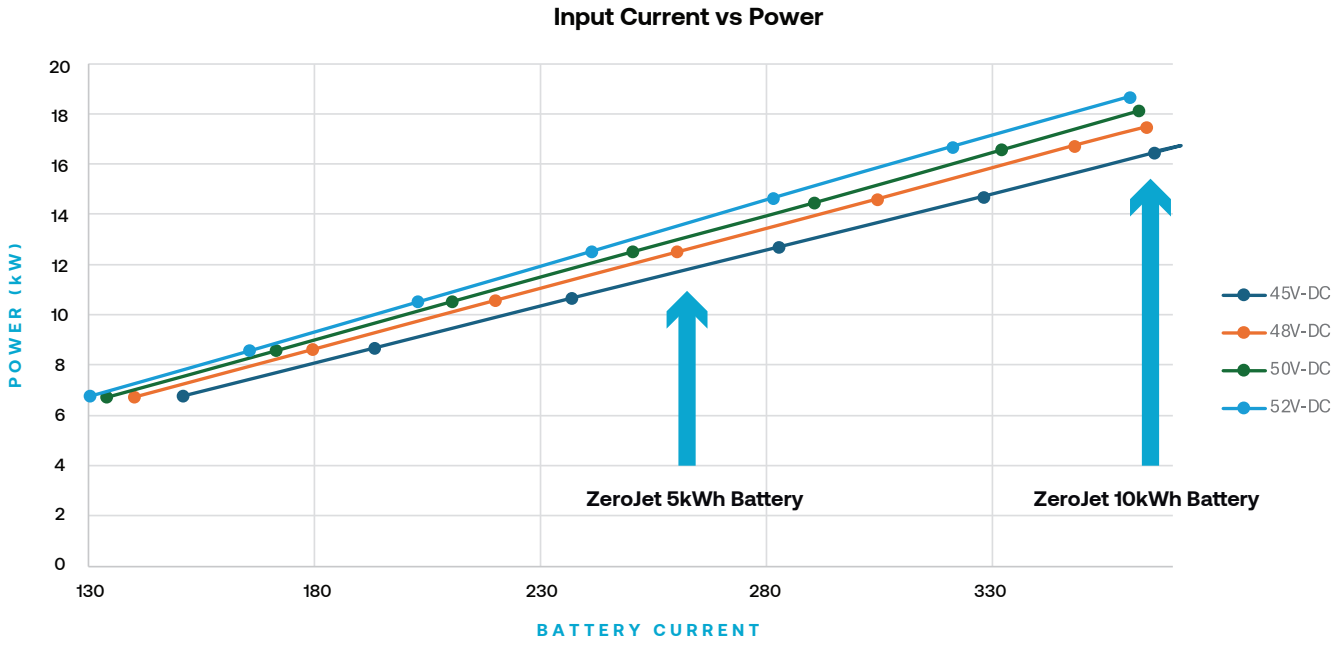
Remote on/off switch

- Controls isolation contactor coil (200mA 48V) switch

*CONTACT ZEROJET FOR SUPPORTED MESSAGE SPECIFICATION

Battery choice will set you maximum power.

Select a battery that will meet your power output requirements.



ZEROJET



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