

RAD

The most advanced electric propulsion systems on the market



www.radpropulsion.com

**RAD builds
the marine
products
of the
future**



Our mission is to deliver:



**Exceptional user
experience**



**Pioneering
product design,
engineering
and technology**



**Sustainable
products**



**Brand trust
and first-rate
customer care**

We build drives to fit a range of boat configurations for driven, hybrid, and autonomous operations. Both current and future products connect through our drive-by-wire control architecture.

Our products



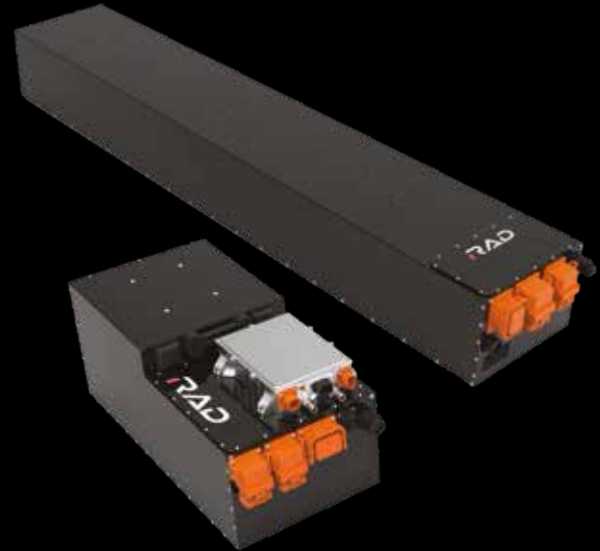
RAD 40



RAD 120



Power console/Power console+



RAD batteries

✚ Also available is our RAD tag, RAD throttle and steering wheel, battery interface and VCU, and RAD autonomy.

Designed to deliver



Ultra-compact

Purpose-built for electric power, our drives have a compact, lightweight form factor that maximises onboard space, boosts efficiency, and enables seamless, low-profile integration with new transom designs.



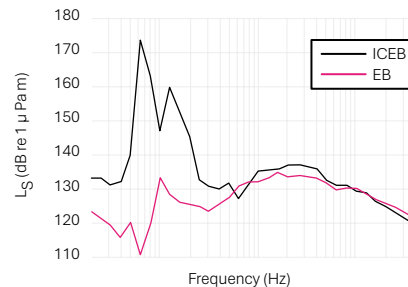
Low thermal signature

Minimal heat generation compared to combustion outboards. Ideal for applications where stealth and reduced environmental impact are key.



Reduced sound and signature

Exceptionally low airborne noise and underwater signature minimises disturbance and detection.



Underneath signature of RAD 40 vs. combustion engine. UCL research 2024.

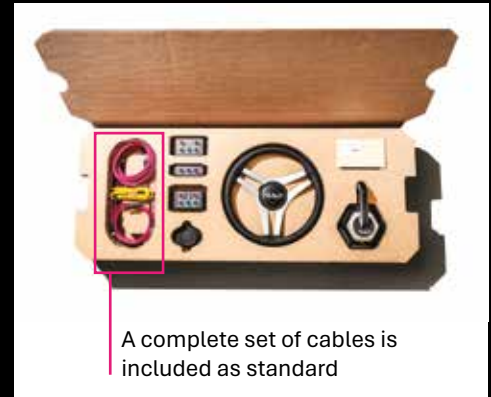


180° integrated steering

Fully integrated steering with $\pm 90^\circ$ rotation delivers exceptional manoeuvrability, supports future driving aids, and eliminates the need for separate steering systems. Resulting in reduced build time and costs.

The RAD system

Our electric propulsion system is designed to adapt to a wide range of operational needs, with a flexible package of options that allows each solution to be precisely tailored to its application. Whether powering commercial vessels, enhancing leisure craft, supporting defence operations, or integrating into autonomous platforms. The system delivers the performance, efficiency and reliability required, without compromise.



Throttle units are available to suit either single or twin drives



Multi-function display options

Our multi-function displays are available in a broad range of sizes from 10" to 24" and come with custom RAD gauges showing all the data you need in an easy to read format.



Battery management system (BMS) interface for RAD or third-party batteries

Vessel control unit (VCU) with GPS, Wi-Fi, GSM, and NMEA connectivity



RAD 40

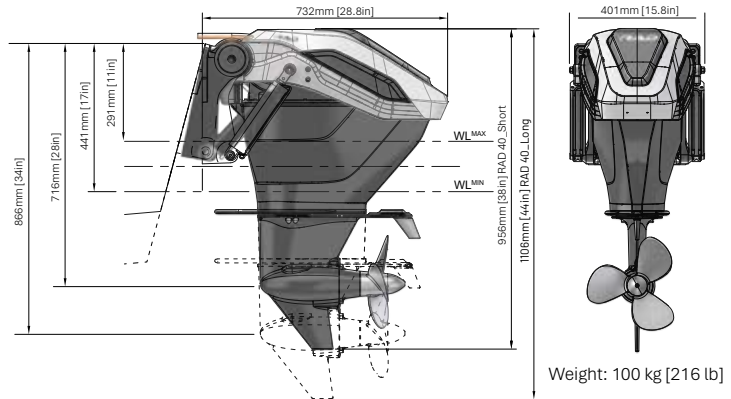
The super compact RAD 40 delivers the precision engineering and quiet efficiency that define our products.

Available in single or twin drive set ups with a choice of propeller to suit your vessel.



Specification

Power	40 kW continuous	
Operating voltage	350 – 450V	Compatible with automotive fast charging standards
Shaft length options	Long and short	
Max propeller RPM	2600	Up to 350 mm diameter propellers available
Weight	100 kg	Excluding battery and power distribution
Steering angle	+ -90 degree	Fully integrated electro-hydraulic system



RAD 120

The 120 kW compact electric drive combines exceptional power, efficiency, and near-silent operation, redefining propulsion for larger vessels.

With 180° manoeuvrability and intelligent control, it offers exceptional handling and precision in any environment.



Specification

Power	120 kW	
Operating voltage	350 – 450V	Compatible with automotive fast charging standards
Shaft length options	Long and extra long	
Max propeller RPM	3500	
Weight	175 kg	Excluding battery and power distribution
Steering angle	+90 degree	Fully integrated electric steering system

Power console

The Power console packages deliver a complete electric propulsion solution in one integrated system.

Combining the all-in-one console unit with the RAD outboard, they enable efficient, rapid deployment with seamless performance.



Specification

Console weight	230 kg
Deck footprint	1076mm l x 451mm W x 568 H (battery box inc. seat)
Overall dimensions	1412mm l x 490 W x 1155 H (battery box inc. seat and binnacle)
Battery capacity	21 kWh
Range (low speed, 20°C / 3°C air)	21 / 19 nm
Range (high speed, 20°C / 3°C air)	10 / 8 nm
Max. charge rate (DC)	21 kW
Max. charge rate (AC)	6.6 kW

Power console+

Specification

Console weight	420 kg
Deck footprint	1998mm L x 451mm W x 568 H (battery box inc. seat)
Overall dimensions	Overall dimensions 2333mm L x 490 W x 1155 H (battery box inc. seat and binnacle)
Battery capacity	42 kWh
Range (low speed, 20°C / 3°C air)	41 / 37 nm
Range (high speed, 20°C / 3°C air)	18 / 15 nm
Max. charge rate (DC)	6.6 kW



Mechanical

- Drive weight: **100 kg** (RAD 40)
- Materials: **HDPE / aluminium**
- Deck mounting: **Quick release latch**

Operating conditions

- Air temperature: **-10°C to +55°C**
- Water temperature: **-5°C to 35°C**
- Storage temperature (air): **-25°C to 60°C**

Performance

- Propulsion power: **40 kW (~55hp)**
- Max speed (light load): **22 knots**
- Max speed (full load): **18 knots**

⊕ Low speed deemed to be 5 knots or less, high speed 15 knots or more.

Fast charging batteries

RAD batteries are available in 21 kWh and 61 kWh sizes, to fit a variety of boat configurations and requirements. The advanced BMS (battery management system) ensures the cells are kept in peak condition, reporting state of charge and cell health through the RADBus system. At 400 V the batteries can be charged by the onboard AC bi-directional charger or a DC fast charger. The batteries also provide 12 V power via the onboard DC-DC converter.



RAD 61 kWh battery

RAD 21 kWh battery

Specification

Capacity	Dimensions	Weight	Charging
21 kWh (can be linked to provide up to 80kWh)	377W x 832.5D x 332.2H mm	130 kg	AC 7 kW and DC fast charging via CCS2
61 kWh	372W x 2147D x 268H mm	358 kg	AC 7 kW and DC fast charging via CCS2

“The RAD 40 is efficient, unobtrusive, and aesthetically current and cool. It’s the sort of product you’d be proud to own”

Nic Compton
Professional Boatbuilder magazine



Pangolin houseboat operating on the
River Chobe, powered by four RAD 40s.



RAD

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