

SEALEGS AMPS UP

Sealegs has been making amphibious craft for 17 years, driving a continuous process of development and improvement. The latest iteration, the 7.3m Electric E4, is battery-powered.





feature

Sealegs Electric E4

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AND **SUPPLIED**

E

lectric propulsion is nothing new for the company – the very first Sealegs, built in 2001 by company founder Maurice Bryham in his garage, had electric motors driving the wheels. Two later versions, termed E2 and E3, also used electricity, the E3 employing an electric motor to power the hydraulic pump driving the wheels.

Hydraulic propulsion is standard across the rest of Sealegs' model range, a petrol engine powering a hydraulic pump to drive the wheels. But the Electric E4's combination of brushless electric wheel motors and lithium battery technology quite possibly represents the future of amphibious boating. Sealegs calls its electric drivetrain AmpTracs – Amphibious Traction and Control System.

In many ways the new E4 is the best Sealegs yet. It's quieter,

faster and provides longer run times than conventional Sealegs models. Released at the recent Auckland on Water Boat Show, the Electric E4 was intended as a show-stopper, its sleek Euro styling aimed at international markets as much as domestic customers. With its Bentley-quality upholstery, striking graphics, steeply raked one-piece windscreen, high-tech glass bridge and stylish rear arch, it looks like a superyacht tender.

SHOW BOAT

This is a show boat, explained Sealegs' Global Sales and Marketing Manager Peter Small, presented for maximum visual impact.

"Quite a few visitors to the show asked us where the rod holders are, but in many ways, this is a concept boat that's meant to turn heads."

CAD work and styling studies began in 2017.

Operating the Electric E4 is essentially the same as a conventional Sealegs, but it's much quieter.



ABOVE A Glass Bridge offers impressive functionality and control at your fingertips.

RIGHT The stylish XLounge in the E4's cockpit.

The styling has been extremely well received internationally...



“The styling has been extremely well received internationally, but fifth generation production boats, which will be sold as Electric E5s, will be available in a variety of layouts and in two- or all-wheel-drive variants,” explained Peter.

Without having to accommodate a secondary petrol engine, Sealegs has more flexibility when configuring the boat’s interior. This boat features the luxury XLounge, which completely fills the cockpit. Featuring a folding table topped with the same graphic motif as the tubes (but in white with embedded colour-changing LEDs), it has an aft-facing bench seat with storage underneath, corner seats and padded seats on the tubes.

All the seating, as well as the raised sun bed in the bow, is upholstered in diamond-stitched black vinyl using contrasting blue thread. The XLounge can easily seat eight in a social situation.

Blue highlights extend to the diagonal pattern cut into the dark-grey U-Dek on the cockpit sole and to the boat’s graphic motif, which is laser-cut and embedded in the Hypalon tubes.

The 200hp E-TEC outboard is matching charcoal and grey with a cowling highlight panel in blue.



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All-in-all the Sealegs E4 is an impressive piece of engineering that's both innovative and evolutionary



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The E4 looks smart on and off the water. An E-Tec 200hp ensures sharp performance, but the E4 will achieve 40 knots with a standard 150hp outboard.



SAME BUT DIFFERENT

If you're already familiar with a Sealegs amphibian, operating the Electric E4 will pose few problems. Even if you are not, it's simple to drive – simpler than a conventional Sealegs, because there are fewer knobs and levers to worry about. The new digital interface is superb, and intuitive as well – it not only looks the business, it is the business.

Under electric power the E4 is very quiet – there's no petrol engine roaring away in the cockpit or helm console. Drive time on land is around 1.5 hours on a full charge, depending on speed, payload and terrain. That's typically 20 return trips for most Sealegs users, increased further by regenerative braking and the outboard charging the lithium battery. All the usual safety features are included, such as emergency braking.

Considerable development went into the electric wheel hub motors which feature the latest brushless technology, especially their seals. Sealegs has 17 years' experience with marinisation techniques, so it's confident the AmpTracs system is bulletproof.

The E4 is two-wheel-drive but production models will roll out with either two-wheel or all-wheel-drive, which has advantages when tackling difficult terrain and soft mud or sand. Driving the E4 across the beach and into the water at Castor Bay was trouble-free, with good traction all the way, but if one wheel loses traction, software-controlled automatic torque vectoring will lock the wheels to maintain overall grip.

On land, speed in forward or reverse is controlled by an electronic joystick on the dash while the fancy Italian steering wheel turns the front wheel and the outboard at the same time – no need for separate steering systems for terrestrial and marine operation.

Boundary lines approximate

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Tender closes 3.00pm Friday 30th November 2018 (Unless Sold Prior)

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GLASS BRIDGE

Functions such as raising and lowering the wheels and much else besides are controlled and monitored from the 24-inch Simrad display, or you can use automotive style push-buttons on the steering wheel, which also control the Fusion Apollo multi-speaker stereo system. The Apollo mounts flush in the dash, accentuating the glass bridge theme.

Simrad's largest MFD offers all the usual functionality, including fishfinder and chart-plotting, but Sealegs has developed its own software for the AmpTracs system with an attractive interface that's very easy to use. Software upgrades will come regularly.

The stylish centre-console houses not only the electronics, but also the 48-volt, 7kWh lithium battery and the vessel's PLC. The battery takes four to five hours to fully recharge using integrated mains charging – simply plug it in to a 240-volt mains supply. The outboard also feeds charge to the battery via the VSR and a PowrFlow step-up charger, as does the regenerative braking system. Solar charging is another option.

Petrol for the V6 Evinrude E-Tec 200hp outboard is stored in a 180-litre tank under the floor.

SNAPPY PERFORMANCE

As with other Sealegs-built boats, the hull is aluminium, engineered for terrestrial operation as well as marine. That means

plenty of structure under the floor to stiffen the hull laterally and longitudinally, plus extra strengthening at the corners where the leg and wheel assemblies attach.

"It's not just a hull, it's a chassis," said Peter.

This hull is based on Sealegs' popular 7.1m. On the water the 5mm thick deep-vee hull performs as you would expect, smoothing out the bumps to deliver a dry, comfortable ride.

Because of all the additional technology required for driving on land – wheels and hub motors, hydraulic legs, pumps, battery pack and extra hull strengthening – the E4 is relatively heavy at 1390kg dry, but very similar in weight to a conventional all-petrol 7.1m Sealegs. Nonetheless, performance with the 200hp E-Tec is pretty snappy. Top speed is well over 40 knots – with a 150hp outboard, recommended power for this model, you could expect a top speed around 40 knots.

SEALEGS FOR THE FUTURE

All-in-all the Sealegs E4 is an impressive piece of engineering that's both innovative and evolutionary. Taking full advantage of advances in electric motor design and lithium battery technology, and drawing on years of amphibious boating experience, the Sealegs Electric E4 is recognisably an evolutionary design, but with its many innovative features, it feels very much like the Sealegs for the future. **BNZ**



Sealegs Electric E4

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HIGHLIGHTS

Extended drive time on land – up to 1.5 hours per charge

Charging options include plug-in and solar, while the outboard motor and regenerative braking also supply charge

Glass Bridge offers a intuitive touch-screen controls and a full suite of operations data

SPECIFICATIONS

loa 7.3m
beam 2.71m
draft 0.41m
weight (dry) 1390kg
deadrise 21 degrees
max hp 150hp
fuel 180 litres
payload 700kg
max speed (water) 40 knots
max speed (land) 10 knots

WATCH IT

