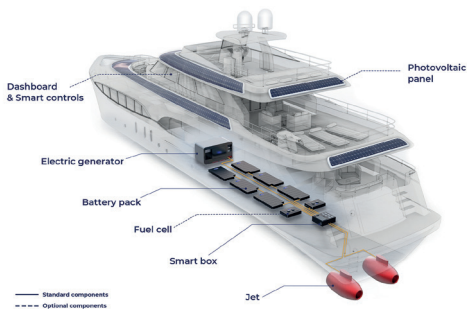


RAD products will still be very easy to operate but will also have a number of connectivity features such as geo-fencing and a proprietary communications protocol. This can link all the units from a central server for software updates and performance feedback and will still be compatible with standard NMEA multi-function displays.”

RAD had planned to have a product launch at the now cancelled Dusseldorf Boat Show but has since focussed on rolling out its 40kW RAD40 and 2kW RAD2 designs. To encourage more people afloat, a 1kW design for paddleboards and kayaks will appear later in 2021.

DEEPSPEED



Italian company Sealence is targeting a gap in the market for electric drives for larger pleasure craft. Here is a typical DeepSpeed hybrid set-up for a yacht, where generators work at peak efficiency to recharge a bank of lithium-ion batteries. This combination keep emissions below current Tier 4 Marpol rules

Sealence has identified its leisure market as yachts from 12-24m, but it is also working towards 36m too. DeepSpeed’s distinctive design looks rather like an aeronautical jet engine, but whereas a jet engine compresses air, adds fuel and ignites it, the DeepSpeed compresses water with an electric drive before ejecting it at high pressure. Also unlike a jet, the DeepSpeed will be remarkably quiet, hence the company’s name ‘Sealence.’

The innovators are keeping the actual mechanics involved a closely guarded secret, and although the technology is intended mainly for commercial applications, engineers have been trialling various horsepowers on pleasure craft. The prototypes range from pods on outdrives to fixed and pivoting underwater installations.

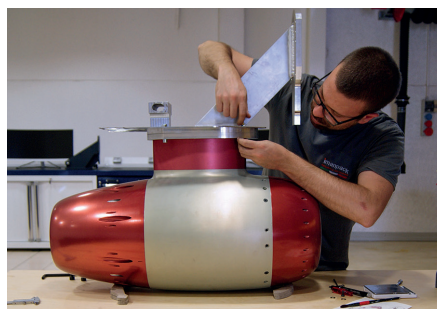
“Our point of arrival has always been

commercial boating,” said director William Gobbo.

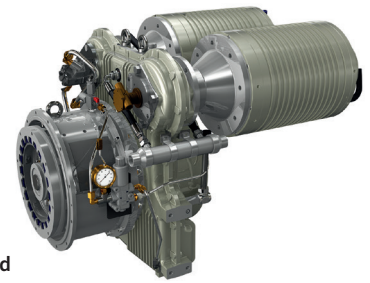
“We started exclusively with pleasure boating because it was easier to manage the experimentation on smaller hulls. We are currently carrying out the first trials in the water on passenger ferries, but at the moment everything is highly confidential. Despite the tightening emission regulations, we should be able to guarantee outputs beyond 3,000hp by 2022 and more than 5,000hp by 2023, all of which will be ‘Tier 5’ compliant. This is because our advances in fluid dynamics have been combined with a ‘series’ hybrid, so the generator required to charge the batteries is always running at its most fuel-efficient setting, and smaller than a propulsion type. We expect that by 2022, somewhere in the world, you will take a ferry propelled by DeepSpeed and be surprised by its silence and the absence of even the slightest vibration.”

The qualities won’t be lost on the ecologically-aware owners of superyachts, especially the Explorer class. When venturing into ice-strewn waters, or those awash with hurricane debris (superyachts are often first responders in the Caribbean) there is a much-reduced risk of propeller damage.

The DeepSpeed units by Sealence resemble a commercial jet engine and can be directly bolted to a hull, or to a steerable outdrive leg. Here a Sealence design engineer is assembling a DeepSpeed 420 model



DeepSpeed’s director William Gobbo says outputs beyond 3000hp should be available by 2022



Transfluid has developed a parallel hybrid to give a great deal of redundancy. The electric system is powerful enough for many of the general deck duties, thus saving fuel and engine hours, with the ability to recharge the batteries when under diesel power. This image is of the HM2000 model, the second size up in the HM range and offering 435kW. Transfluid can provide outputs to 1,250kW

HYBRIDS - FOR WHEN YOU NEED POWER AND RANGE

A hybrid system is seen by many owners as the ideal solution for yachts than need plenty of power and range, but also want to be able to use electrical propulsion at various times. Electrics are used where possible, but the ICE installation takes over for passage-making, or to spin up the motor as a generator. The electric motor can also be used to boost performance of the ICE when needed.

“Our new Auxilia system covers what we referred to as the ‘big five’ advantages,” said sales manager Daniele Torretta. “It significantly reduces exhaust gas, eliminates noise and vibration for more comfort ➡

Commercial (and private) Transfluid installations can use a proprietary Remote Management System(RMS) that allows the OEM, owners and fleet operators to monitor large numbers of vessels simultaneously. The system is based on the mobile phone network (GSM) with GPS an option to protect commercial interests. If the vessel is outside GSM range, the data is stored and downloaded when a connection is made again. The system uses CANopen and can interface easily with all standard marine displays by converting to NMEA2000

