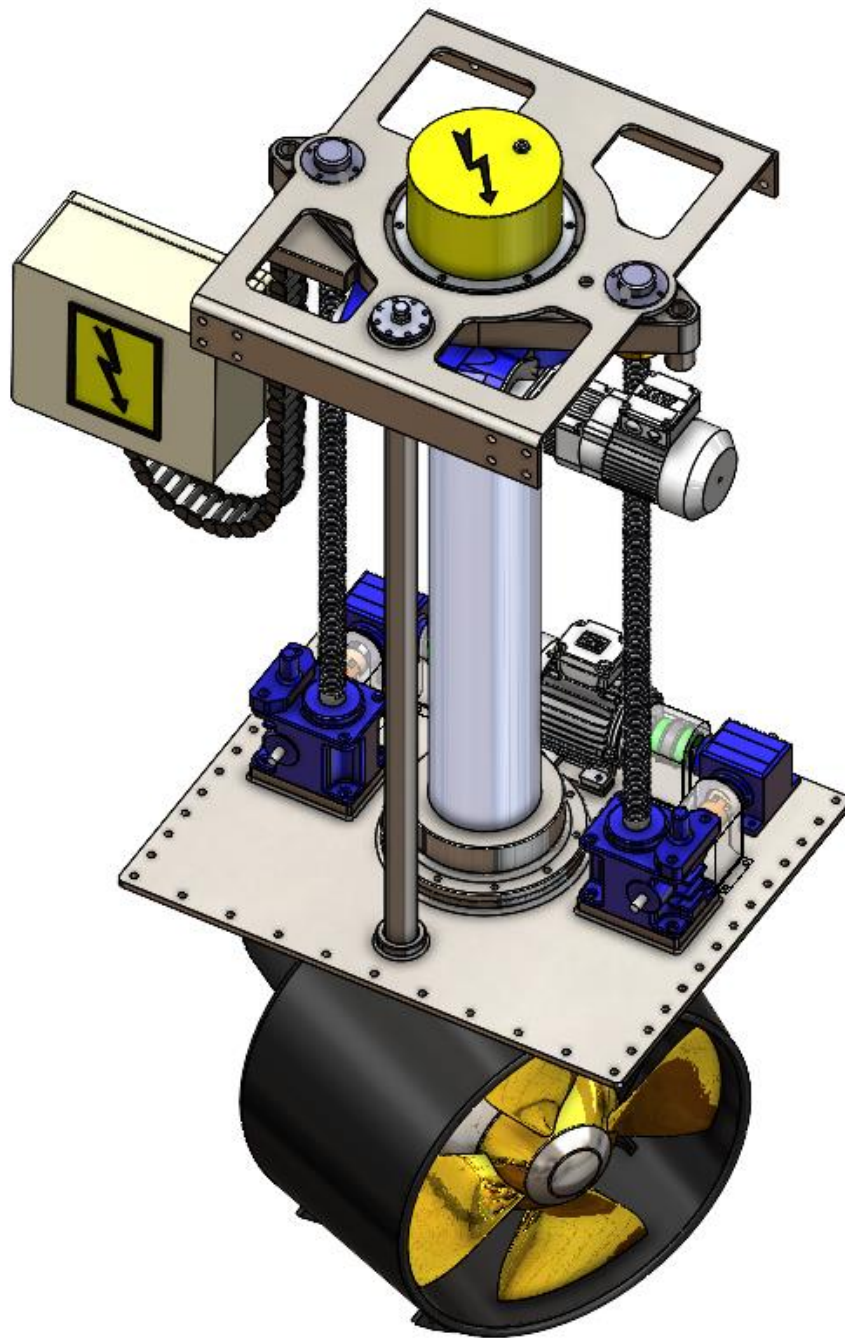


E-Pod® PROPULSION

E-Pod® RETRACT & ROTATE

AUXILIARY THRUSTERS



Made in Singapore

50 Kian Teck Road, Singapore- Email: mailbox@epod.com.sg

INTRODUCTION – 2020 and BEYOND!

E-Pod® Technology - Electric Induction Motor Innovation that delivers silent THRUST. Contact E-Pod® Propulsion or your Agent for your customised needs and advice. We will guide you on the best system for new or retro-fitting of your vessel. Our equipment is a 'plug and play' design to avoid delayed installation costs.

We carry 2 popular models in our 'LIGHT' range. 25kW for vessels up to 20 metres and our 50kW for vessels up to 35 metres.

Our Retractable Thrusters are ideal for vessels where a bow thruster is limiting the manoeuvrability of the vessel. A closure plate ensures the hull is not hydrodynamically compromised.

These units can be used as emergency 'bring me home' propulsion.



ELECTRIC to the Core

E-Pod® Technology has evolved from the humble Electric Induction Motor.

Careful selection of the winding set allows us to deliver the required torque at the fixed pitch propeller at the designed speed.

We do not use gearing to reduce the RPM. Our speed is regulated by the Motor Controller or VFD by varying the frequency and voltage supplied to the windings.

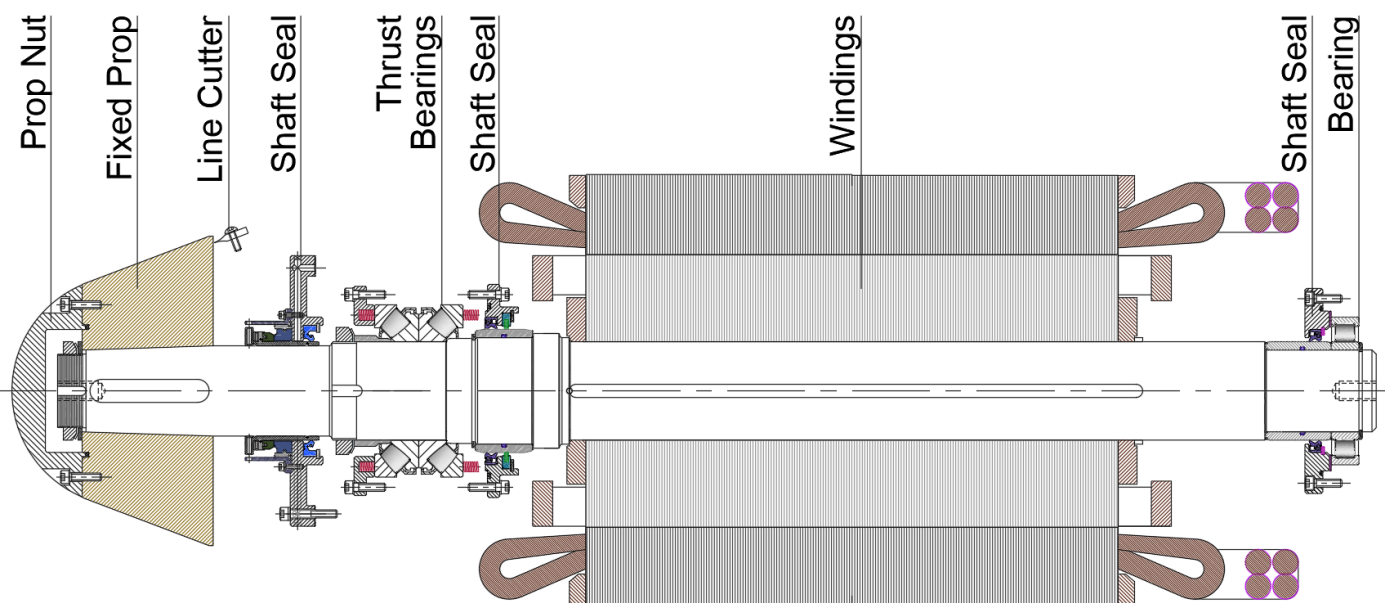
Tighter control of the variable speed means less energy used.

Less energy spells less fuel. With basic Power Management systems available, we can add and disconnect gensets to the power grid on demand.

Our windings are double dipped and baked in varnish resin to ensure the insulation is adequate. So adequate that they can run in the presence of moisture.

Bearing and Seal selection is carefully chosen for your application.

Maintenance is kept to a minimum with a recommended seal and bearing overhaul every 5 years in service. Seal sleeves are reversible allowing for reuse.

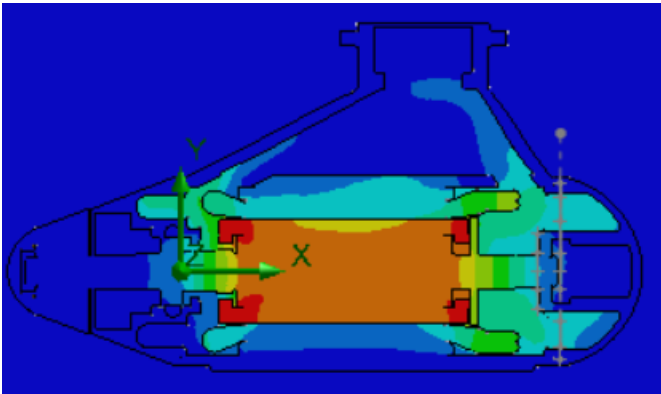


GEAR & BEARING SELECTION

- **Drive End Thrust Bearings are grease lubricated during assembly and only replenished during service.**
- **Thrust bearing are selected to suit the application and service conditions of the vessel. These are protected from the sea water by our very own shaft seal that has proved itself in service.**
- **Non-Drive End Roller Bearings are greased on assembly and only replenished during service.**
- **The selection of the roller bearing on the Non-Drive end allow for thermal expansion of the Rotor Shaft. Lip seals contain the generous amount of grease ensuring they do not run dry.**
- **Our Retract and Rotating equipment used is all OEM equipment and available worldwide to ensure damaged equipment is quickly replaced.**
- **Easy Monitoring of the Unit can be quickly understood by trained personnel. This training we do on commissioning the unit.**
- **No special equipment or consumables are necessary on board. Spares are readily available worldwide for quick turn-around service.**
- **In the case of power loss during deployment, the thruster can be returned to its parked position by manually turning the geared screws.**
- **The Stem Seal is a combination of 3 Lip Seals and 2 Bronze Wear Rings. These can be re-greased from inside the thruster room.**

HEAT GENERATION

Extensive research has been undertaken to manage the heat produced by the Electric Motors.



- The heavy cast steel housings perform as a 'Heat Sink' with a contact surface finish of 3.2 microns as well as an interference fit of the Stator to Housing. Heat build-up is dissipated through the heavy cast housing and water surrounding the E-Pod®.
- The End Bearing Castings are ribbed so as to increase the surface area in contact with the heated air generated from the Rotor.



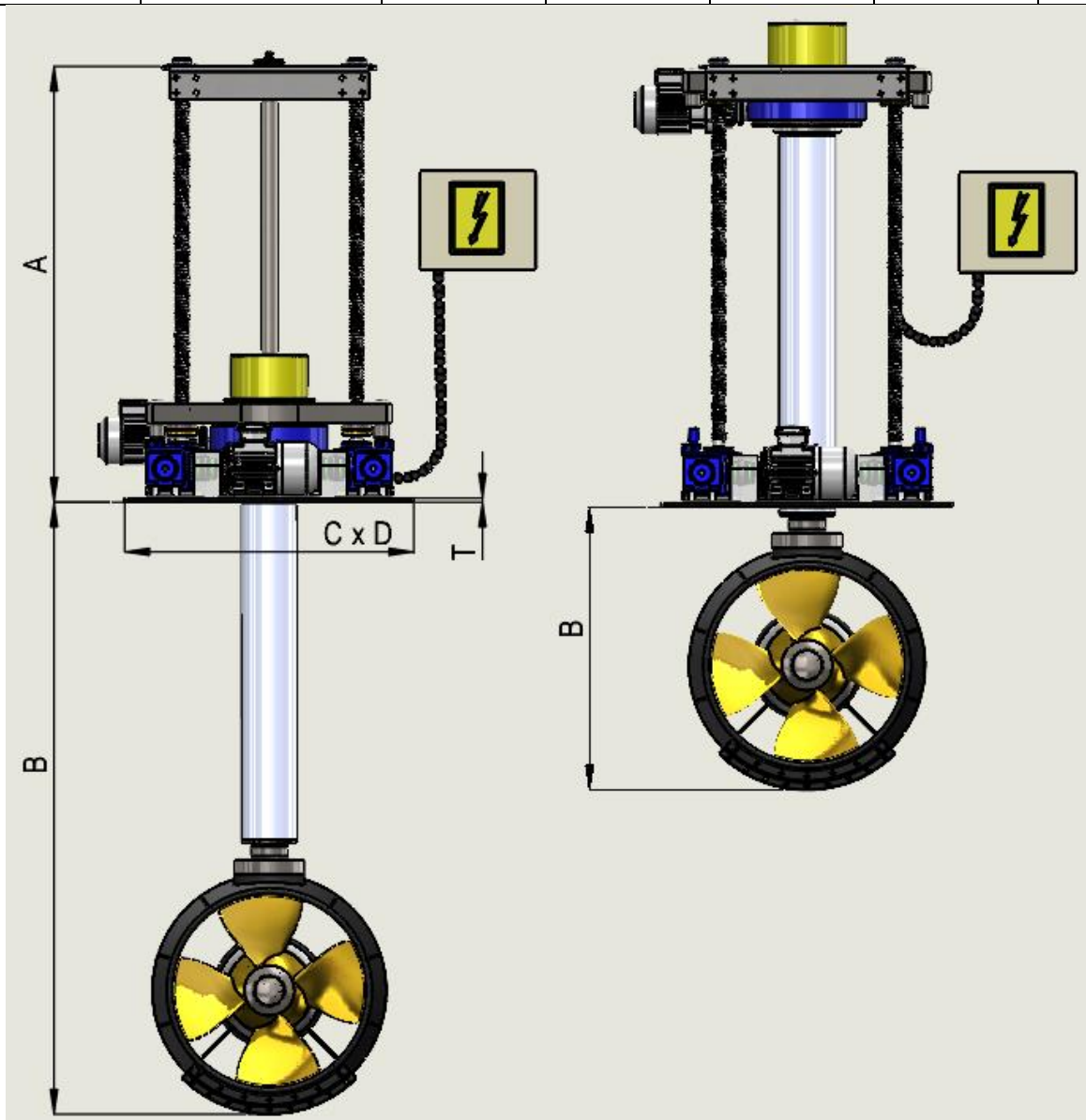
- The power Leads extending off the Stator Windings are selected to withstand heat in the region of 200°C. Other qualities are superior flexibility and suitability for Varnish dip and bake.
- Our Stator windings are monitored by the placement of PT100 Temperature Resistors in the phase coils.

POWER RANGE 25kW & 50kW

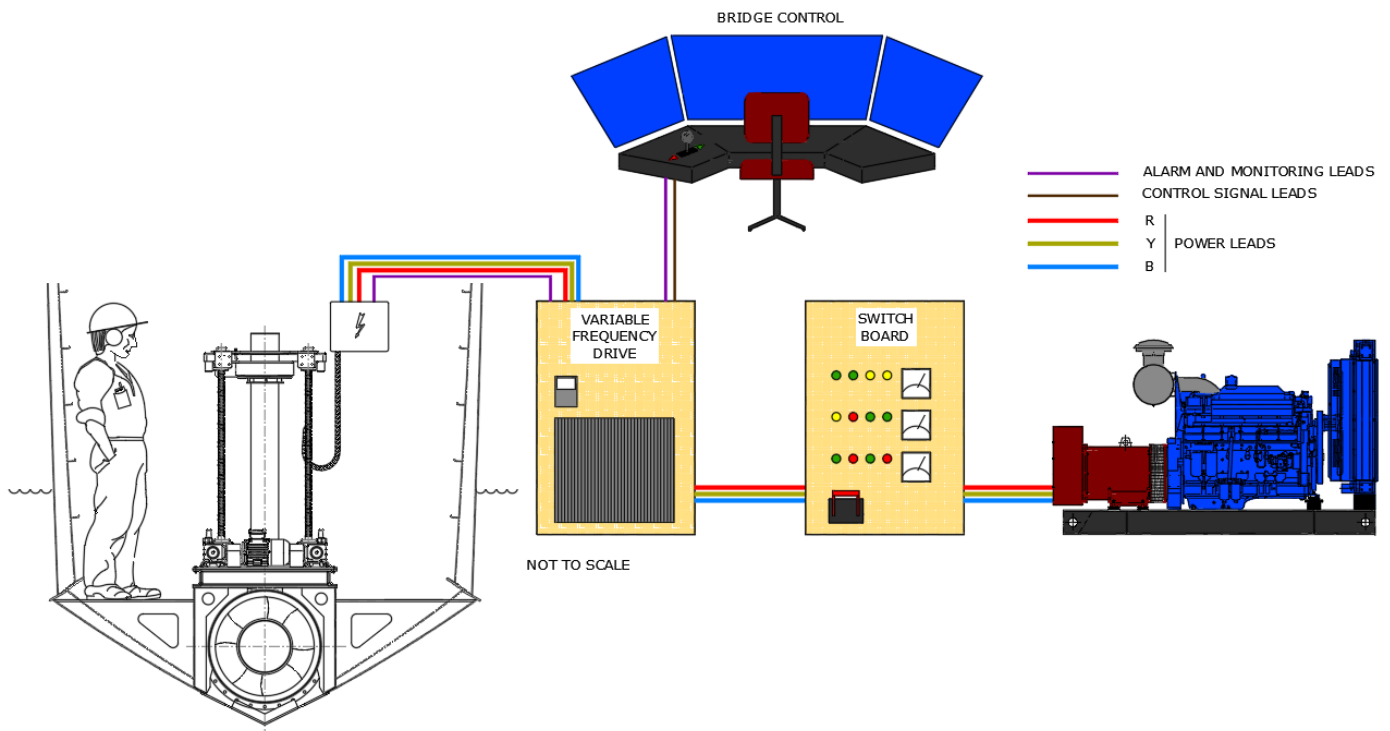
POWER kW	MAX RPM	PROP OD mm	THRUST kN OPEN	THRUST kN NOZZLE
ADAPTATIONS ARE POSSIBLE TO SUIT CLIENT REQUESTS				
25	1050	400	35	40
50	1050	575	75	85

DIMENSION SHEET

POWER kW	PROP OD mm	A	B	C	D	T
USED AS A SELECTION GUIDE ONLY. CERTIFIED DRAWING WILL BE ISSUED						
25	400	1115	1600 - 600	650	550	10
50	575	1315	1845 - 845	800	700	12



EQUIPMENT



ORDERING INFORMATION:

Size of Thruster System kW Power and Vessel Voltage

Use our thrust table to select your required system. We offer full 360 degree continuous rotation.

Structural changes

Our design office will assist your Technical Department in the modifications required for the new units. Adaptations are possible to ensure customer satisfaction.

Cable Laying Specifications

We will work closely with your Electrical Department to ensure the correct cables are installed. The purchase and installation of cables and routing is the yards supply.

Control Station

Various options for the controlling of your thruster are available to suit your bridge design. Multiple station options are available.

Classification

Our units meet all the Classification Standards of your choice.

ADVANTAGES

For the Vessel Owner

- An opportunity to 'go green' helping the environment.
- Increased Cargo and Cabin space by eliminating traditional shaft lines.
- Increased fuel saving. Power used only when required.
- Advanced VFD and power Management Controlled technology equals fuel saving.

For the Vessel Captain

- Control your vessel with manoeuvrability at your fingertips by installing our Thrusters. We offer a combination of E-Pod® Thrusters to compliment your Retractable Thruster.
- Propeller speed is independent of main engine speed leading to instant manoeuvrability.
- Increased propulsion system redundancy. Can be run off its own Genset.
- Reduced vessel turning circle. Full Azimuth-Reversible steering.
- 'Bring me Home' advantage for added redundancy.

For the Vessel Engineers

- Reduced noise & vibration levels due to the absence of Shaft Lines and Gears.
- Minimum on board maintenance.
- Flexible machinery arrangement.

CONTACT

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