SILENT SAILING









ELECTRIC PROPULSION

www.eptechnologies.dk

EPTechnologies
Energy Power Technologies

EPTechnologies



Kasper Falkenberg
CEO & Founder



Marco Ottiker
COO & Co-Owner



What EPTechnologies offers you

EPTechnologies has been in the field of electric propulsion for over 18 years. As long-time sailors and boat owners we are well aware of the problems that can occur on a daily basis. Therefore, we believe in systems designed with backup options and design systems to be as simple as possible.

- Silent sailing. Representing the smartest and most cost-efficient systems available today.
- Real quiet time. Environmentally friendly and luxurious boats with no engine noise so you can enjoy your journey.
- We keep it simple. Beautiful design, easy to maintain and cost effective. Most of our systems, including batteries and electric motors, are designed and produced in Germany and Denmark.
- One exception though are our EPT battery pack designs. The exception is the battery cells inside, which we source from one of the top suppliers in Asia. The raw materials are from Australia, China and Indonesia.
- We are a complete system provider where you get all out of one hand.

Extraordinary products with consistent high quality

- Lightweight and compact.
- Powerful permanent magnet AC motors, with efficiency of up to 96%.
- Motors with very high torque for direct drive on shafts. As low as from 300 rpm, no gearbox neaded.
- EPT designs/manufactures Solid State NCM and LFP batteries 24-800 VDC.
- EPT junction box for easy plug and play installations.
- EPT produces variable speed PM DC generators, for direct charge on the battery packs.
- EPT designs touchscreens based on Raymarine, SIMRAD, or on our own HMI for bigger systems, integratable in upper bridge control IAMCS via mod bus if needed.







SHAFT DRIVES

- Power 15 to 1000 kW
- RPM 300 to 4200
- Voltage 24 to 800 VDC



VARIABLE SPEED DC GENERATORS

- Power 8 to 450 kW
- RPM 1000 to 3200
- Voltage 48 to 800 VDC



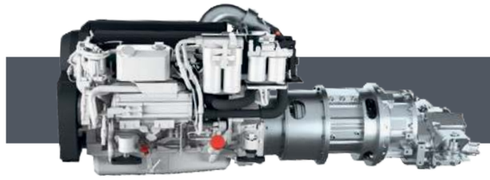
DNV EPT SOLID STATE BATTERY

- The worlds safest marine batterie passes 5mm nail test with no fire
- Extrem tolerance to overcharge factor 6, de-charge 0V and heat
- Voltage up to 900 V
- IP 65, 67 on request
- With pre-charge, fuses, main relays and sate of the art BMS
- Parallel strings can have optional redundant slave master pack controller SMPC
- DNV in progress propagation test passed DNV 4.4.1 option 1. No propagation



EPT HV MARINE BATTERIES

- One of the worlds lightest batteries made with these power ratings
- 5.2 kg per kWh
- Voltage up to 900 V
- IP 65, 67 on request
- ALU casings, powder coated. Stainless steel top cover, powder coated.
- With pre-charge, fuses, main relays and state of the art BMS
- Parallel strings can have optional redundant slave master pack controller SMPC
- DNV homologation in process
- More than 25 MWh manufactured and sold already



PARALLEL HYBRID

- e-Power up to 600 kW
- Diesel Power: max 1700 hp
- Boost Power: 2500 hp
- SAE Type: 1 to 4



PARALLEL HYBRID ON V-GEARBOX

- Thermal engines based on Yanmar, or Volvo Penta, from 45 to 270 HP
- E-motor up to 150 kW
- Generator up to 100 kW



SILENT NIGHT MODE SET FOR YACHTS AND SUPER YACHTS

- EPT variable speed DC Geneator 15 to 450 kw
- EPT EMS/PMS control system including 15” HMI
- EPT Battery 622 V, 110 kWh, factor x of according to yacht size
- Optional aircon system, direct from the HV DC link
- IMO Stage III, if needed

Service and support

At EPTechnologies we stand by our service and won’t let you down. We offer wide-ranging and creative options in warranty service worldwide. We understand the customer needs for quick repair and on-site support, even at the far reaches of the world. We believe that this approach makes us unique.

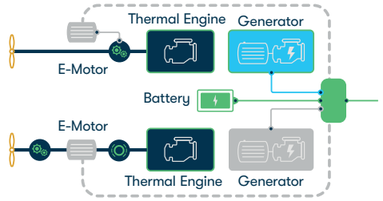
We also offer full remote technical support and online diagnostics for our systems. Depending on the issue, it will be solved either remote, or an EPT technician, or affiliate comes onboard on the vessel world wide.

QUALITY

Demonstration of a parallel set up in 2 variants, port as PTI/PTO, stbd as inline version. They have the same functionality but depending on the vessel, one or the other makes more sense.

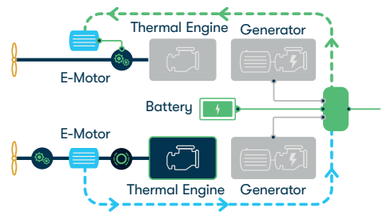
THERMAL DRIVE MODE

- E-motor OFF
- Propulsion by thermal engine
- Hotel load by battery or generator



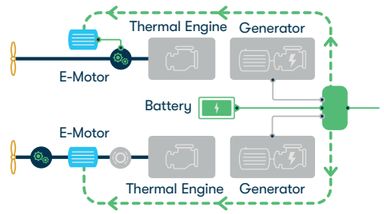
MULTI MODE

- E-motor port propulsion
- Thermal engine other side as propulsion
- E-motor stbd uses uses spare thermal
- Hotel load by battery or e-motor generation



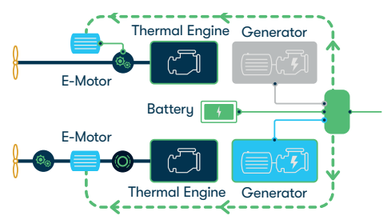
ELECTRIC DRIVE MODE

- E-motor ON
- Propulsion by electric motor
- Hotel load by battery or generator
- Second drive option via generator



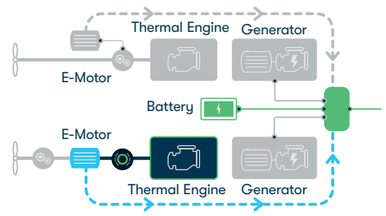
BOOST MODE

- E-motor ON
- Propulsion by electric motor and thermal engine
- Hotel load by battery or generator
- Hotel load by battery or generator



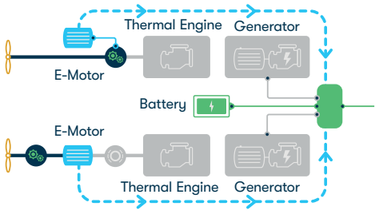
GENERATOR MODE

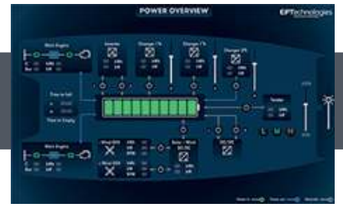
- E-motor in generator mode
- Propulsion by thermal engine
- Hotel load by battery
- Battery charged via E-motor generation
- Propulsion OFF
- Generator mode not possible with PTI/PTO



RECUPERATION MODE

- E-motor as generator
- Propulsion by wind
- Hotel load by battery or E-motor regeneration

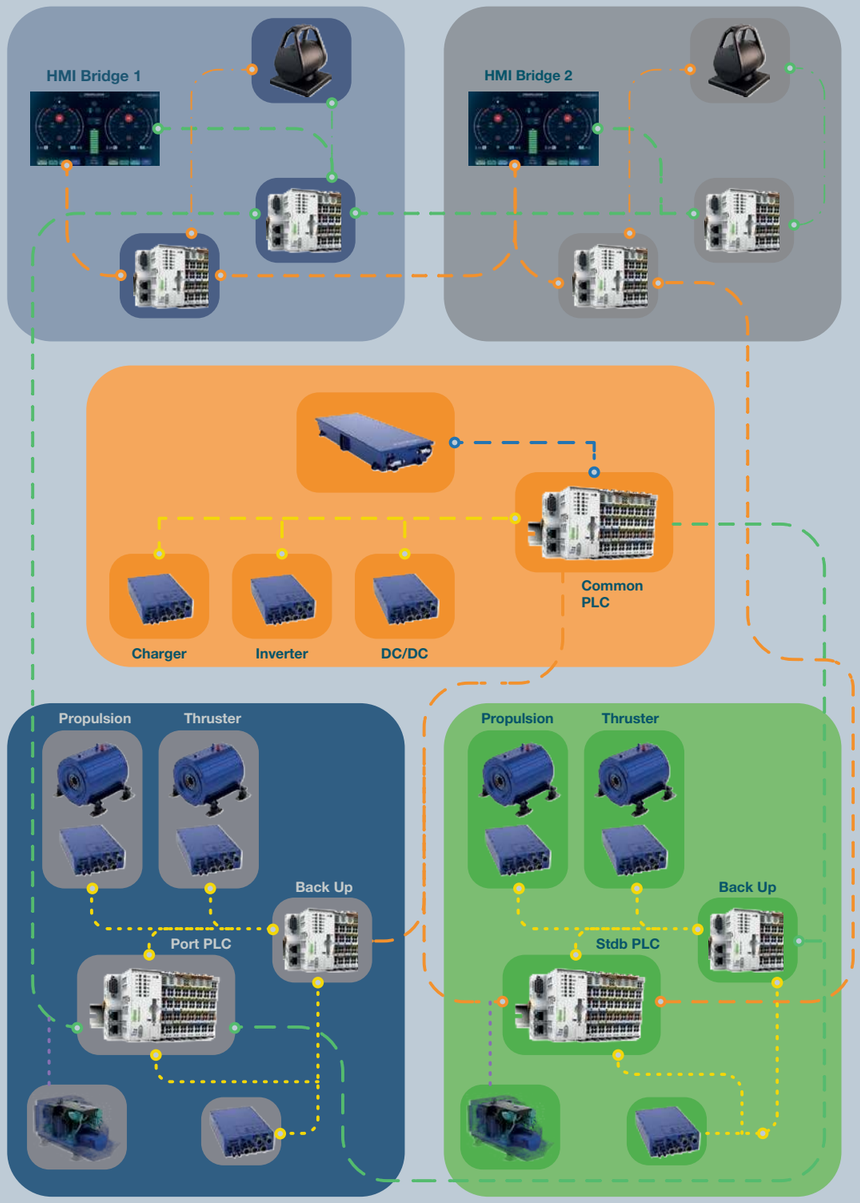


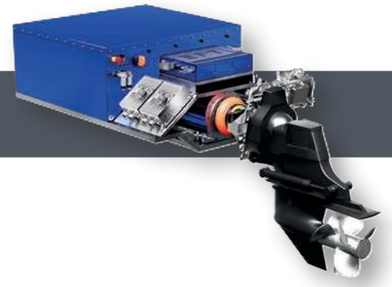


EPT THRUSTER AND ENERGY MANAGEMENT CONTROL SYSTEM

- Smart control logic for your vessel including alarm handling
- Energy/fuel saving
- Integrable to upper bridge control systems IAMCS via Mod buss
- Redundant network with back up control
- State of the art components
- Interface to E-motors and thermal engines
- Flexible customer options possible
- Remote monitoring and updates possible

EPT THRUSTER & EPMS CONTROL SYSTEM





FALCON

DROP-IN WITH BATTERY ON FRAME

- Power 50 – 400 kW
- Battery 65 – 500 kWh
- Voltage 48 – 800 VDC
- RPM 2000 – 6000
- Charger, DC/DC, throttle (lever with trim), cooling system, shore power, display, etc.
- Quick and easy installation



DROP-IN UNIT WITH BATTERY FOR SHAFT, Z-DRIVE, JET-DRIVE

- Power 40 – 400 kW
- Battery 65 – 500 kWh
- Costom Design battery boxes
- RPM 800 – 6000
- Quick and easy installation
- Watercooled
- Custom layout
- With thrust bearing for axle system



FALCON

FALCON 130/230

- Voltage 400-850 VDC
- Continuous power 130 kW – 230 kW 310 – 525 NM
- Continuous motor Speed 3600 - 4000 rpm
- Propeller ratio 3000 rpm
- Propeller hub 360° rotating
- Weight 130-XXX kg

Batteries

We are working on a proper life-cycle strategy for the lithium batteries as recycling is a part of our future strategy. This will be done in an ethical and an environmentally conscious way. The battery cells we acquire are from one of the best suppliers in Asia.

The raw materials for the batteries are coming from big industrial mines in Australia, China and Indonesia.



EPT HV BOW THRUSTER

- Power 15 to 400 kW
- RPM 1500 to 3000 according gear leg chosen
- Voltage 48 to 800 VDC



FENIX

ELECTRIC SAILDRIVES

- Power 7 to 37 kW
- RPM 500 to 1800 rpm
- Voltage 48 to 100 VDC
- Plug and play solution
- CE and EN 60034 type approval
- Capable of regeneration
- Glycol cooling in Saildrive leg itself
- No need of sea water intake to the boat
- No heat exchanger, sea water pump and filter required



FENIX

ELECTRIC TURNABLE SAILDRIVE

- Power 7 to 37 kW
- RPM 500 to 1800 rpm
- Voltage 48 to 100 VDC
- Plug and play solution
- CE and EN 60034 type approval
- Capable of regeneration
- High torque 360 degree complete turnable in 5 sec



EPT LV-LITHIUM BATTERIES

- Nominal 12.8, 25.6 and 51.2 VDC
- Capacity 3.58, 7.1 and 14.3 kWh
- Max continuous charge 220A/0.8C to 310A/1C
- Max continuous discharge 330A/1.2C to 500 A/1.6 C
- Life cycle 10000 80% DOD
- Stainless steel enclosure, IP65, weight 29, 54 and 108 kg
- 2 years warranty, CE certified, UN 38.3

INNOVATION

Our vision

EPTechnologies overall vision is to contribute to the transformation steps, of the marine industry into becoming greener and more sustainable. Our vision is further, to become the leading system provider/manufacturer for the propulsion of electric boats in applications as: Jet-, Stern-, Sail- or Shaft- drives for the pleasure boat market. We provide complete systems including batteries, DC generators and with a control system starting from 30 kW to 400 kW engine capacity.

Furthermore, it’s to be the leading company in the medium sized pleasure and ferry market, hence, to build complete electric or hybrid solutions for vessels from 12 m to 80 m in size. We aim to do so by producing the key elements ourselves, like batteries, DC generators and control systems as well as to find the utmost suppliers to develop the best solutions for the marine market.

As technical innovators, we create simple, cost-effective propulsion systems that combine high quality with economic viability.

The future is now and we know that with building hybrid and electric vessels it reduces the CO2 footprint drastically. The data is clear: our vessels save between 30% and 70% on diesel during operation.

Let us turn your dreams into reality.





EPT BOATCONTROL APP

- Monitor your boat systems from the fingertip of your phone
- Easy customizable
- Switching and alarms for functions you decide on
- Easy to integrate into NMEA 2000 network
- Remote dataloging and access



DC MINI GENERATOR

- Power 12– 17 kW
- Voltage 48 – 800 VDC
- Ultra kompact
- Light weigt, under 110 kg
- Variable speed
- With or without sound enclosure
- Fast fix fire extinguish hole
- Customisable air intake and exhaust openings.



EPT SHORE POWER INLET

- Various Voltages 110 V, 220 V and 400 V 1 to 3 Phase 50 and 60 Hz
- Selectable amp drawings from shore, 4 A to 32 A
- Remote controllable via the EPT BoatControl App
- Fast DC charging, up to 240 kW depending on the battery size

KISS

We believe in open architecture. At EPT you will not buy over-complicated systems or black boxes that no one, except the manufacturer, understands.

We want the customer to see what’s inside and to be able to understand how the system works, within some limits of course.

DURABILITY

Powered by
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