

BÜRGERMEISTER BRAUER – Patrol and SAR boat developed for high performance



Shipbuilder:.....**Baltic Workboats**
 Designer:.....**Baltic Workboats**
 Vessel's name:.....**Bürgermeister Brauer**
 Owner/Operator:.....**Flotte Hamburg**
 Country:.....**Germany**
 Flag:.....**Germany**
 Total number of sister ships
 already completed:.....**1**
 Total number of sister ships
 still on order:.....**1**
 Contract date:.....**2022**
 Delivery date:.....**December 2024**

Designed for high-speed patrol and search and rescue (SAR) missions, *Bürgermeister Brauer* is equipped with a next-generation hybrid propulsion system integrating two Volvo Penta D16 diesel engines directly connected to shaftlines via ZF 3311 gearboxes, each providing 625kW of power. These work in conjunction with two Volvo Penta D13 588kW diesel engines connected to Danfoss EM-PMI540 500kW generators, from which the power can be transferred to the shaftline via Danfoss EM-PMI540 500kW electric motors connected to both gearboxes' PTI/ PTO slots.

This set-up allows the vessel to operate in multiple power modes, maximising performance while minimising fuel consumption and emissions. Baltic Workboats comments: "The ability to operate in electric mode reduces fuel consumption and emissions, making it an ideal choice for operators whose operating speeds vary significantly depending on the mission. Additionally, the reduction in engine runtime extends maintenance intervals, lowering overall operational costs."

The hybrid propulsion system is managed through an advanced power management system that ensures seamless transitions between operational modes. It also optimises energy use in real time, automatically selecting the most efficient

power source based on speed, mission profile and environmental considerations. The system monitoring and configuration is integrated into Baltic Workboats' Integrated Automation Monitoring and Control System (IAMCS) where all of the vessel's main and auxiliary systems can be controlled from a single touch screen.

TECHNICAL PARTICULARS

Length, oa29m
 Breadth, moulded6.7m
 Gross tonnage143
 Displacement110tonnes
 Design, draught2.2m
 Service speed
 (in full electric mode)20knots (7knots)
 Max speed
 (in full electric mode)25knots (10knots)

Propulsion

Main engine(s):
 - 2 x Volvo Penta D16 MH + 2 x Volvo Penta D13
 with Danfoss generators
 - 2 x Danfoss electric motors at gearbox PTI

Make.....Volvo Penta/Danfoss
 Model.....D 16 MH / D13 generators
 Output of each engine625kW (D16 MH)
 588kW (D13)

Generator(s)/ Electric motors:

Number of electric generators 4 x PM motors
 Make.....Danfoss Editron
 Model.....EM-PMI540
 Output of each motor500kW

Gearbox(es):

Number of gearboxes.....2
 Make.....ZF
 Model.....311 with PTI/ PTO function

Propeller(s):

Number of propellers.....2
 Make.....CJR
 MaterialNi-Al-Bronze CU3

Number of blades5
 Fixed/controllable pitch.....Fixed

Deck machinery

Crane(s):
 Number of cranes1
 Make.....Palfinger
 Model.....PK11001M
 Capacities/SWL.....1.4tonnes@5.9m

Other deck machinery/equipment:

- Viking Metis 700 daughter boat (launched
 from dedicated boat slip)
 - EST-Floattech 440kWh battery ESS

Bridge electronics:

Radar(s)JRC X-band and S-band
 AutopilotAlphatron Alphaslot
 GMDSSSailor 7222
 GPSJRC JLR-21
 Chart plotter.....JRC JAN ECDIS,
 3 x Hatteland 24" displays

Engine monitoring systemPower
 Management System
 Danfoss Editron (integrated
 into Baltic Workboats Integrated
 Automation Control and Monitoring
 System for the entire vessel)

Fire detection systemDeckma AFMS3000

Onboard capacities:

Fuel oil11,000litres
 Fresh water1,900litres
 Sullage2,300litres

Complement:

Number of crew.....3-5
 Number of passengers12
 Number of cabins.....3

Classification

Classification societyLloyd's Register
 Notations.....✠100 A1 SSC Patrol,
 Mono, HSC, G3, MCH,
 Hybrid power, UMS.

BÜRGERMEISTER BRAUER

