

Custom Baltic 147 built by Baltic Yachts LTD, Finland

A 147 FT super high-tech sailing yacht that completed construction in 2002 at Baltic Yachts, Finland. This exiting new project is the result of one and a half years of studies, planning and research. The owner is a very experienced performance sailor and had a clear idea of what he wanted. His requirements were to have an extremely high performance yacht designed and engineered specifically for cruising but with the appearance of a sleek modern racing yacht. The most important requirement however was that the performance should be outstanding in its size.

The development of this project started one and a half year prior to production start with a preliminary base hull design followed by a number of preliminary layout proposals, specifications and detailed weight calculations all in close cooperation with the owner. Extensive VPP studies were carried out on variations from the base design, lighter, heavier, wider, narrower, higher and lower prismatic etc. In addition VPP studies were run on Sloop versus Ketch rigs, water ballast version, canting/lifting keel versus deep lifting keel etc. Based on the outcome of the research the decision was taken to go ahead with the project.

The interior consists of a large salon, an owners suite just aft of the salon, two large guest cabins forward of salon and two crew cabins aft. The yacht will be equipped with diesel generator, air-condition, water maker etc. giving all the cruising comfort and self – supporting capability expected from a yacht this class.

In order to reach the light displacement numbers the most modern building techniques and materials are used. Structurally this yacht will be significantly more advanced than what is normally seen in the yachting scene. The hull and deck laminates will be built out of Intermediate modulus pre-preg Carbon laminates using mostly Nomex honeycomb as sandwich material. The interior bulkheads and paneling will also be from the same basic materials as hull and deck with just a thin layer of veneer on visible surfaces. A lot of fittings and detailing will be manufactured using pre-preg carbon in order to keep weight down.

The lifting keel will have a high strength machined Stainless Steel keel fin enabling the designers to go down in size on the fin in order to minimize wetted surface but still maintain ample strength.

Baltic Yachts in-house design team, R&J Design, designed the preliminary deck and interior layouts. Final layouts and styling is made as cooperation between R&J Design and Design Unlimited

The naval architect for the project is Reichel/Pugh from San Diego, well known for their high performance racing and cruising projects. This is the third cooperation between Reichel/Pugh and Baltic Yachts with the two previous ones also being super high performance and high-tech.

Dimensions and Weights

L.O.A.	44.85 m	147.15 ft
D.W.L.	37.66 m	123.56 ft
BEAM	8.28 m	27.17 ft
B.W.L.	7.11 m	23.33 ft
DRAFT	6.80 / 4.10 m	22.315 / 13.45 ft
DISPLACEMENT (SAILING)	113,650 kg	250,555 lb
BALLAST	53,470 kg	109,680 lb
IM	49.750 m	163.22 ft
J	16.500 m	53.94 ft
P	47.000 m	154.20 ft
E	16.200 m	53.15 ft

Construction

HULL	Built using intermediate Modulus prepreg Carbon fibers. Aramide fibers in the outside skin below water line for added impact resistance. Nomex honeycomb and Core cell core. Cured under vacuum and high temperature, 85°C (185°F) for 24 hours.
KEEL	Lifting keel. Stainless steel fin with a lead bulb.
STEERING SYSTEM	Edson twin station steering system with 2-speed gearboxes in titanium and quadrant in carbon fiber. Rudderstock and blade in prepreg carbon fiber, rudderstock cured in autoclave.
DECK	Built using intermediate modulus prepreg Carbon fibers. Nomex honeycomb and Core cell core. Cured under vacuum and high temperature, 85 °C (185 °F) for 24 hours.
DECK FITTINGS	Pulpit, pushpit and lifeline stanchions made of Titanium tubes. Cleats and fairleads in Titanium. Large spray hood/cabriolet over forward cockpit.
TRANSOM HATCH	Opening in transom. Hydraulic hatch/platform including dinghy storage, etc.
DECK WINCHES	Harken hydraulic winches with Aluminum drums and Carbon fiber tops.
CAPTIVE WINCHES	Rondal RW12000 and RW8000 reel winches. Custom built with Titanium parts.
ANCHORING SYSTEM	CQR type 117 kg anchor with through hull launching system. Additional bow- and stern anchors.
INTERIOR	Structural bulkheads in prepreg Carbon fiber laminates. Laminates made in special laminating press. Visible surfaces are teak faced.
FUEL TANKS	6,000 l (1,585 gal)
WATER TANKS	2,500 l (660 gal)
WATER MAKER	MT Freshwater 4500 SSH. Capacity 190 l/h (50 gal/h)
AIR-CONDITIONING / HEATING	Condaria PCWM/FCL 22503 Reverse cycle.
MAIN ENGINE	CAT 3406E 700 hp (522 kW) at 2200 rpm.
GEAR BOX	Steibel pump drive with PTO hydraulic pumps for main propulsion, bow thruster, stern thruster and central hydraulic.

MAIN PROPULSION UNIT	Hydraulically driven. Four bladed feathering propeller with carbon blades and titanium/Carbon hub.
SPEED BY MOTORING, CRUISING	12 kn
SPEED BY MOTORING, MAXIMUM	15 kn
RANGE BY MOTORING, MAXIMUM	1100- 1300 nm (at 10 kn)
MAST AND RIGGING	Hall Spars four-spreader Carbon mast. Main boom with in-boom-furling system. Running backstays. OYS rod rigging and Navtec hydraulics.
HYDRAULIC SYSTEM	Bosch Rexroth central hydraulics. DC power pack and PTO hydraulic pumps on both main engine and diesel generator.
BOW THRUSTER	Max Power R600, 75 kW
STERN THRUSTER	Max Power R450, 60 kW
BATTERIES	Sonnenshine Dry fit Gel-cell batteries. Service batteries 24 V/DC 1,600 Ah. Radio batteries 24 V/DC 400 Ah. Main engine and diesel generator starting batteries.
AC SYSTEM	Diesel generator Northern Lights 45 kW 230 V/AC 50Hz 1-phase. Custom made electrical system for 230 V 50 Hz powered from shore connection and DC/AC inverters approximately 10 kW. Battery chargers 4 x 24 V 100 A.
ELECTRONICS	B&G Radar GPS Weather fax SSB VHF Satellite phone Inmarsat C Cell phone Epirb, MOM, SART Monitoring system
NAVAL ARCHITECT	Reichel/Pugh Yacht Design
INTERIOR DESIGN	R&J Design and Design Unlimited
STRUCTURAL ENGINEERING	R&J Design and SP Technologies
DECK DESIGN	Reichel/Pugh Yacht Design and Design Unlimited
CLASSIFICATION	ABS Class notation A1 Yachting Service
YEAR OF DELIVERY	2002
BUILDER	BALTIC YACHTS LTD. FIN-68555 Bosund Finland

