

Baltic Yachts Oy Ab Ltd • Balticvägen 1 • FI-68555 Bosund (Main office) / Laukkovägen 1 • FI-68600 Jakobstad
Tel: +358-6-7819200 • Fax: +358-6-7819222 • VAT NO. FI07843270 • www.balticyachts.fi • info@balticyachts.fi

BALTIC 112 REICHEL-PUGH NAUTA

- Silence is golden, but so is speed

The Baltic 112 Custom designed by Reichel-Pugh is set to be one of the most high-performance sailing boats of its size. The owner of this ambitious boat has a strong background in racing, so it was inevitable that he would want a superyacht that could deliver high performance with all the pedigree of a stripped-out racer.




NAUTA DESIGN

When high performance is high on the priorities, carbon-fibre composite construction is the obvious way to go. However, for all but the most uncompromising of race boats, some element of noise reduction is essential to help mask the worst of those unwanted noises, especially when the engine is running.

Baltic has faced this dilemma many times before in previous projects. Performance versus sound insulation is a common challenge in superyacht construction, but the noise reduction requirements on the Baltic 112 RPN project were particularly demanding. So Baltic Yachts called in some leading marine noise reduction experts from the Netherlands.

Baltic Yachts Oy Ab Ltd • Balticvägen 1 • FI-68555 Bosund (Main office) / Laukkovägen 1 • FI-68600 Jakobstad
Tel: +358-6-7819200 • Fax: +358-6-7819222 • VAT NO. FI07843270 • www.balticyachts.fi • info@balticyachts.fi

Project Manager Pekka Laurila says this project has involved finite element analysis to predict vibrations, and that they have drawn on the experience of the luxury motor yacht industry where engine noise creates all kinds of noise reduction challenges.

However, motor yachts tend to have more space available for installing noise insulation, points out Laurila. That's a luxury that's not available in this project. "Spare space is in very short supply on Baltic 112 RPN. The freeboard height is low, so there's not much room below the floor boards, and not much height above the ceiling. In the aft areas of the hull it will be a challenge to put in much noise-reducing material, where the bilge is non-existent, and there is just 20mm gap between the floorboards and the hull."

Whereas many motor yacht projects might specify 300mm of noise insulation thickness, that was never an option with the Baltic 112 RPN, where the isolation thickness has been specified at 30-40mm. After all, most of the time this boat will be under sail, not least because the owner is a passionate racing sailor who wants to enjoy the performance of his yacht as a sailing machine. Noise insulation comes at a cost, not just in terms of space but also in added weight, and this boat has been built with speed in mind. The Baltic 112 RPN will have a displacement of just 90 tons, a low figure considering that this boat also incorporates a lifting keel, capable of reducing the maximum draft of 5.50 metres to just 3.50 metres.

As with many Baltic projects there are a number of high-profile, very experienced collaborators involved in the design and build of the 112. Designers of many of the world's best-known race boats, Reichel-Pugh, have drawn the sleek lines of the Baltic 112 RPN Custom, while Nauta Yachts in Milan has been responsible for much of the styling, the colours, the choice of woods, and the many other details that will contribute to a spectacular looking superyacht. Nigel Ingram of MCM Construction Management has been working closely with Laurila and the other partners in the project management of the 112 build, of which 95% of the structure is now complete.

Ingram is used to working on larger projects, but the challenge of composite construction and the attention to detail was what attracted him to the Baltic 112 RPN project. "The owner has been very well served by his choice of builder and designer. He has put together a good team, and a very workable budget, and I'm sure the boat will turn out very well. There are many challenges, mostly to do with weight. Keeping weight down and achieving the performance goals we're aiming for with this boat has certainly kept us on our toes, but we're confident all these goals will be reached."

Baltic Yachts Oy Ab Ltd • Balticvägen 1 • FI-68555 Bosund (Main office) / Laukkovägen 1 • FI-68600 Jakobstad
Tel: +358-6-7819200 • Fax: +358-6-7819222 • VAT NO. FI07843270 • www.balticyachts.fi • info@balticyachts.fi

With the owner as racing and performance focused as he is, the team has put a lot of thought into getting the deck layout right for this boat, as Laurila explains. “We have put a lot of effort into making the deck simple but functional for racing. The deck gear is racing oriented, with many custom-made items from Harken. Some of the blocks they have made for this boat are beautiful. We went through three revisions of the deck layout to get things as close to perfection as we can.”

While the boat has been designed very much from a racing sailor’s point of view, it is also able to be handled by as few as two or three people. There is an underdeck Reckmann furler for genoa, with the sail hoisted on halyard lock, with tension applied to the jib luff through a Cunningham system. The mainsail will also be hoisted on to a halyard lock to remove some of the compression from the mast, allowing for a slightly lighter carbon-fibre section than would otherwise have been possible. A removable bowsprit can be put in place if gennakers are required for racing or fast long-distance passages at sea.



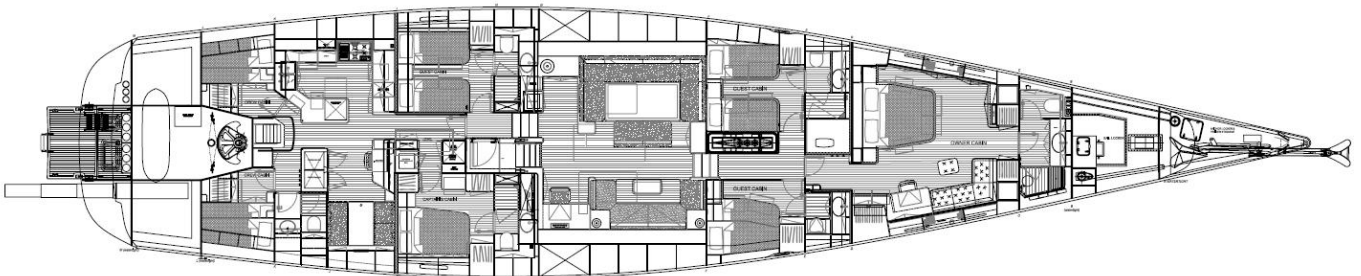
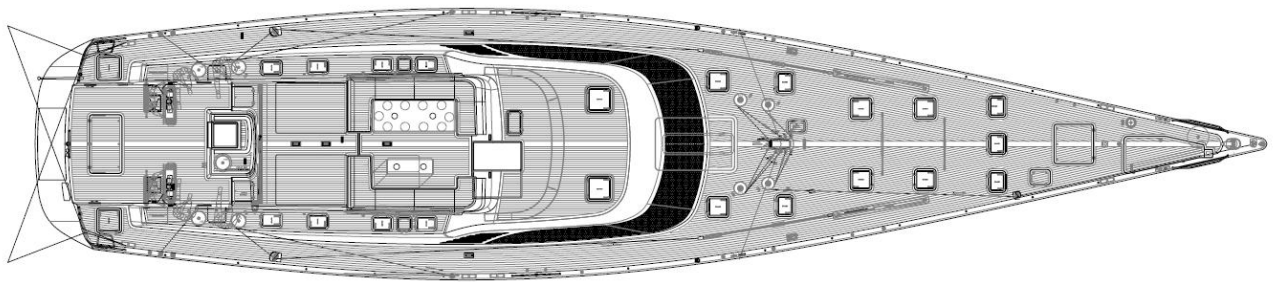
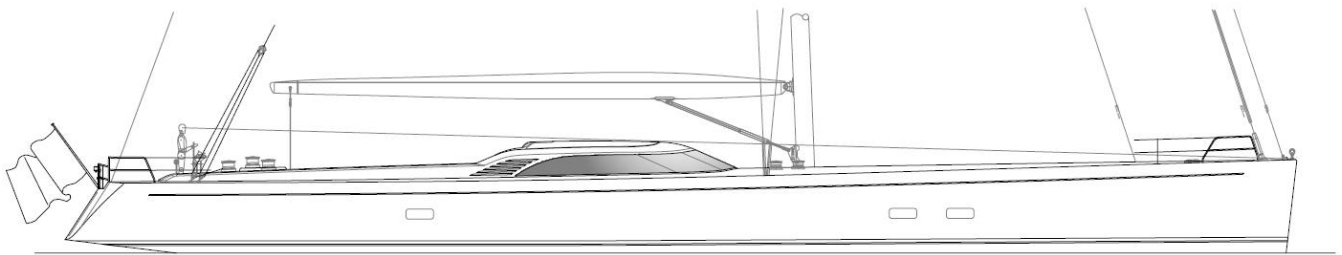

NAUTA DESIGN

Laurila and his team have spent a lot of time and effort making the steering system as sensitive as possible. “We have a good in-house programme to predict rudder loads, and we spent a couple of intensive weeks trying to get the theoretical loads as light as possible, reviewing and improving the rudder geometry until we

Baltic Yachts Oy Ab Ltd • Balticvägen 1 • FI-68555 Bosund (Main office) / Laukkovägen 1 • FI-68600 Jakobstad
Tel: +358-6-7819200 • Fax: +358-6-7819222 • VAT NO. FI07843270 • www.balticyachts.fi • info@balticyachts.fi

reached a figure that we felt was acceptable. We have got the maximum predicted loads down to 36kg on the wheel, which may sometimes occur when the boat is sailing at high speed. Keeping the loads at a low level means we don't need a gear box, which is normally found in most steering systems of boats this size. We tried to build dinghy-like steering to make the helming of this boat as light, sensitive and enjoyable as possible. We look forward to seeing if we have succeeded in this, and all the other interesting aspects of this boat.”

The Baltic 112 Reichel-Pugh Nauta Custom is due for launch in Summer, 2010.



Baltic Yachts Oy Ab Ltd • Balticvägen 1 • FI-68555 Bosund (Main office) / Laukkovägen 1 • FI-68600 Jakobstad
Tel: +358-6-7819200 • Fax: +358-6-7819222 • VAT NO. FI07843270 • www.balticyachts.fi • info@balticyachts.fi



Main Characteristics (preliminary)

Naval Architect	Reichel-Pugh
General Engineering	Nauta Yachts
Interior and Deck Design	Nauta Yachts

LOA	34,135m
LWL	30,758m
Beam	7,520m
Draft	5,50/3,50m
Displacement	87000 kg
Ballast	24000 kg
IM	43,400m
J	12,470m
P	41,900m
E	13,900m

Hull construction Hull is built in advanced composite construction using Carbon/Aramid.
Sandwich material is Core-Cell.

Deck construction Deck is built in advanced composite construction using prepreg Carbon.
Sandwich to be Core-Cell foam.

Keel Lifting keel

Interior Bulkheads and structural panels from Carbon/Epoxy/Core laminate. Visible
surfaces covered with light wood.

Mast and rigging Hall spars mast and boom. Standing Rigging PBO

Main engine Cummins QSB59 -355 Hp at 2800 RPM

Baltic Yachts Oy Ab Ltd • Balticvägen 1 • FI-68555 Bosund (Main office) / Laukkovägen 1 • FI-68600 Jakobstad
Tel: +358-6-7819200 • Fax: +358-6-7819222 • VAT NO. FI07843270 • www.balticyachts.fi • info@balticyachts.fi

Propeller	Brunton Varifold 4-blade
Bow thruster	Max Power R450
Tanks	6000 litres (fuel) 2800 litres (fresh water)
Air Conditioning	Condaria Tropical
Batteries	Starting batteries 24 V 200 Ah Service batteries 24 V1200 Ah
Accommodation	14 persons, 7 cabins
Launch date	Summer 2010

To get more information or renderings please contact:

Elisabet Holm

elisabet.holm@balticyachts.fi

Phone: +358-6-7819214 /Fax +358-6-7819261

EH 16.1.2009