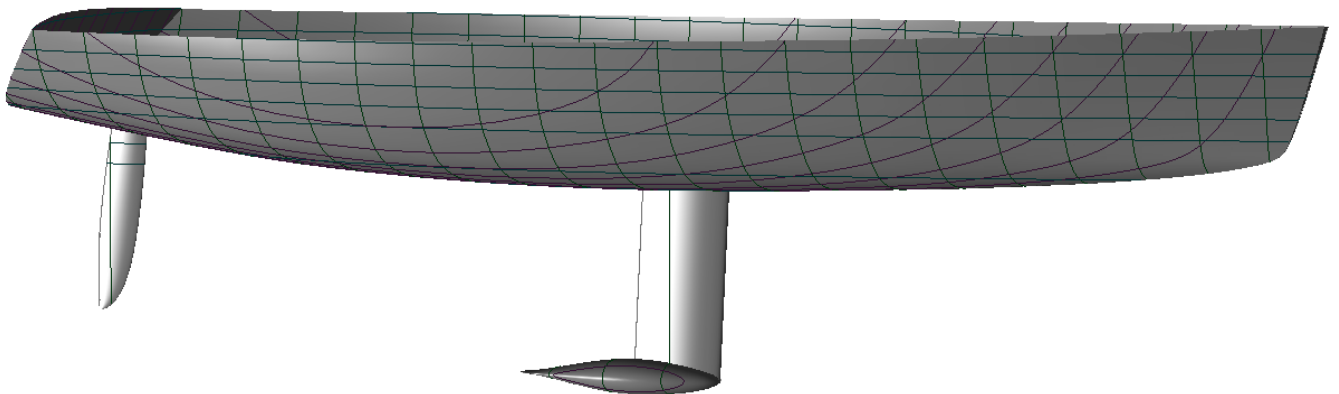


Baltic Yachts



BALTIC 66

NEW PROJECT

CONCEPT STUDY

The new Baltic 66 is the latest development from Baltic Yachts. The idea is to create a very high performance sailing yacht suitable for family cruising as well as competitive racing. The main concept is a development along the lines of Baltic Yachts traditional thinking utilizing the latest technology and know how gained from the last years super high-tech projects.

At this stage the Baltic 66 is a concept study hence allowing extensive input from prospective clients. One of the main ideas with this concept is to build fairly simple hull and deck moulds that will give the advantage of cost reduction and time saving in comparison to full custom projects but still not be locked in to identical yachts but rather allow for maximum flexibility in layouts and general concepts.

The basic thinking is that clients will have the possibility together with Baltic Yachts to create their own yacht, tailor made to meet their own needs and without going to the full extent of building a 100% one-off project.

GENERAL SPECIFICATION

Design Dimensions:

LOA	20.100 m	65.94 FT
DWL	18.100 m	59.38 FT
BEAM	5.460 m	17.91 FT
DRAFT	3.600 m / 2.70 m	11.81 FT
DISPLACEMENT	21.370 kg	47.113 lbs
BALLAST	8.157 kg	17.983 lbs

Sail Plan:

IM	27.100 m	88.91 FT
J	7.724 m	25.34 FT
LP	8.496 m	27.87 FT
P	24.530 m	79.72 FT
E	8.200 m	26.90 FT

Designers:

Concept and styling: R&J Design and Baltic Yachts
Naval Architect: To be decided.

Hull and Deck Construction:

Hull and deck are built in advanced composite construction using Epoxy vacuum bagged sandwich laminates that are post-cured in order to achieve optimum characteristics and strength. Main reinforcements in all laminates are unidirectional and multi-axial Carbon. Hull outer skin to incorporate layers of Aramid fibers for added impact resistance and safety.

Keel System:

For the keel there are two basic alternatives. The fixed keel has a stainless steel construction keel fin with a lead bulb. The stainless steel fin will allow

for a light but very strong construction resulting in the possibility to place more weight in the bulb giving higher stability alternatively achieving required stability with less weight.

The lifting keel has also a stainless steel keel shaft and a heavy lead keel bulb attached. Twin hydraulic cylinders built in for the lifting function plus a hydraulic keel position locking system This configuration will give the required sailing draft for performance but also allow for reducing draft for harbors and getting into shallow draft areas.

Deck Fittings:

Windows:

Windows in cabin trunk are made of tempered glass, securely attached and sealed off to the deck.

Sliding Hatches:

Companionway hatches are custom made, Perspex with lock and washboards.

Hatches and Port lights:

Hatches to be Carbon flush type. Numbers and positions as per deck drawings.

Sheeting System and Blocks:

Deck fittings are Harken, Lewmar or equal.

Mainsheet track and traveler. One boom block twin blocks on traveler.

Two X-haul blocks and two X-haul cheek blocks.

Four Genoa tracks. Four Genoa cars and two padeye cars.

- Double sheave foot blocks
- Double sheave foot blocks
- Foreguy snatch blocks
- Foreguy turning blocks
- Halyard blocks
- Triple fairlead blocks
- Spreacher blocks
- Aft guy blocks
- Runner blocks
- Extra snatch blocks
- Jammers for trim lines
- Mooring cleats: 2 forward, 2 amidships, 2 aft
- Halyard cleats
- Primary cleats
- Secondary cleats

Winch Specification:

Winch equipment Lewmar or equal.

- | | |
|----------------|--------------------------|
| - Primaries | 2 x 88-3ST OR Electrical |
| - Secondaries | 2 x 88-3ST OR Electrical |
| - Mast winches | 2 x 62 AST OR |

Interior:

Advanced lightweight construction techniques used in construction of the interior. A custom made high technology laminating press is used for the lamination of the main bulkheads and interior panels. The use of this press results in bulkheads and panels with very high laminate quality and surface

smoothness enabling application of thin wood veneer on visible surfaces without excessive use of filler.

Mast and Rigging:

Final mast and rig configuration to be developed together with the client tailor making the specification and concept to suite the clients requirements. The final mast manufacturer and relating price to be decided between the client and Baltic Yachts. Baltic Yachts will obtain and supply a mast comparison including both technical and price information as a base for the decision.

General Preliminary Specification:

The mast to be a four-spreader mast with swept back spreader arrangement, none overlapping headsails with chain plates outboard.

Main mast, boom, spreaders and as much of the fittings as possible to be made in pre-preg carbon Autoclave laminated and cured.

SECTION:

- Approx size 180 x 360 mm
- T300 carbon fiber.
- Unidirectional pre-preg carbon fiber.
- Autoclave cured (85 PSI).
- Section manufactured utilizing male tooling.

MASTHEAD:

- Carbon fiber crane to support backstay loads.
- Provision for topmast backstay.
- Two (2) main halyard sheaves.
- Chafe protection for all halyards.
- Two (2) jib halyard sheaves.
- Two (2) spinnaker halyard sheaves.

LIGHTS AND ELECTRONICS:

- Windex light on extension with wiring.
- Tri-color anchor light.
- Steaming deck light with guard.
- All wiring to be contained in lightweight Dacron conduit.
- "Messenger" line to masthead.
- Spreader light under S1.

SPREADER SYSTEM:

- Four spreader rig. (Swept 20°.)
- Adjustable spreader connection.
- Diagonal shrouds terminate in aft hanger pin.
- Carbon spreaders with molded tips to accept discontinuous rod rigging.
- Flag halyard eye plates under first spreaders.

RUNNER TANGS:

- Runner tangs.

CUTTER STAY:

- Provision for Cutter inner stay.
- One (1) staysail halyard sheave.
- One (1) spinnaker pole topping lift sheave.

MAINSAIL TRACK SYSTEMS:

- Fredericksen dual-purpose aluminum track.

SPINNAKER TRACK:

- Harken 1847 "Air Track".
- Harken 783 ball bearing spinnaker car.

CAR LIFT SYSTEM:

- 3:1 Up/ down control system complete with cheek blocks, Spectra line control, Harken cam cleats and fairleads.

HALYARD EXIT SLOTS:

- Seven (7) exit slots with chafe protection.
- Halyards to lead to deck mounted blocks.
- Messengers installed.

BOOM GOOSENECK:

- Molded carbon gooseneck.
- Stainless steel shoulder bushings.
- Machined aluminum "box" toggle.

REACHING STRUT PADEYES:

- Strut receptacles port and starboard for Quick Connect attachment of inboard end.

CUSTOM CARBON INSTRUMENT BRACKET:

- Number of maxi repeaters to be confirmed.
- Special water guard is integral with bracket.
- All cutouts made to accept repeaters.
- Foot steps port and starboard.
- Awlgrip finish to match.

VANG GOOSENECK:

- Molded carbon gooseneck.
- Hard anodized aluminum toggle with s/s bushing.

MAST STEP:

- Hydraulic mast jack.
- Aluminum mast heel and base plate.
- Aluminum lifting bar.
- Screw adjuster for step.
- Aluminum mast shims (bricks).
- All aluminum is hard coat anodized.
- Pump and gauge.

FINISH: Standard Awlgrip, non-metallic color.

BOOM: CARBON FIBER CANOE TYPE

- Autoclaved cured pre preg carbon fiber (T300).
- Tapered outboard end.

VANG LUG:

- Carbon attachment point to accept hydraulic vang.
- Stainless steel clamp bushings.

OUTHHAUL SYSTEM:

- Hydraulic cylinder attached direct to outhaul car.
- Outhaul track and car.

INBOARD END:

- Two (2) sheaves to lead reef lines to deck.
- Hydraulic hose for outhaul.

OUTBOARD END:

- Three (2) sheave internal type.
- Boom set up for loose footed main.
- Harken High Load Sheaves.

MAINSHEET BAIL:

- Attachment point as required.

TRACK FOR SAIL COVER:

- Bolt rope track port and starboard for sail cover.

LAZY JACK HARDWARE:

- Hardware installed to match lazy jack system.

FINISH:

- Awlgrip to match mast.
- Measurement bands painted on boom.

SPINNAKER POLE: CARBON FIBER

- Autoclave cured pre preg carbon fiber.
- Kevlar cloth at outboard end for impact and abrasion resistance.
- Double tapered.
- Trip lines.
- Awlgrip finish to match spars.
- Outboard end Quick Trip.
- Inboard end Quick Connect.

REACHING STRUT

- Autoclave cured pre preg carbon fiber.
- Double tapered construction.
- Custom “duck bill” outboard end (carbon) with sheave.
- Quick Connect inboard end.
- Awlgrip finish to match spars.

ROD RIGGING:

Series 800 Navtec rod system with micro tip cups and C800 turnbuckles.

<u>Item</u>	<u>Size</u>	<u>Quantity</u>
- V1	-76	2
- V2	-48	2
- V3	-30	2
- V4	-17	2
- D1	-40	2
- D2	-22	2
- D3	-17	2
- D4	-15	2
- D5	-17	2
- Headstay	-48	1
- Backstay	-30	1
- Inner forestay	20T	1
- Runners	5T	1

RUNNING RIGGING LIST

All running rigging to be in Spectra:

Item :	Dia. mm
- 1 main halyard w. screw shackle.	12

- 1 gangway halyard / spare mainsail 12
- 1 main sheet 14
- 2 main traveler adjusting sheets 10
- 2 Genoa halyards, with snap shackles 14
- 2 Genoa sheets with J lock 16
- 2 light sheets 10
- 1 staysail halyard 12
- 2 staysail sheets 18
- 2 spin halyards, with snapshackles 14
- 2 spin sheets, with snapshackles and ring 12
- 2 spin aft guys, with snapshackles 14
- 1 spin foreguy, tackle 2: 1 w. boom end block 12
- 2 reefing lines 16
- 1 cunningham line 12
- 1 kicking strap (preventer) 14
- 1 Roller furling on headstay, Harken type 3.5
- Lazy Jacks.

Engine and Transmission:

The main engine is a YANMAR 4LH-DTE diesel with following characteristics:

- 125 kW (170 hp) at 3300 rpm
- 4 in-line vertical cylinders, 4-stroke engine. 3.455 Liters.
- Direct injection.
- Electrical starting 12 V DC
- Fresh water cooling for marine application with a heat exchanger and a seawater pump.

Alternators:

- 80 A 12 V for starting batteries
- 150 A 24 V for service batteries

Engine instrument panel with:

- RPM meter
- Low pressure alarm
- High temp alarm
- Starting switch.
- One engine hour meter is located at the nav. station on the main electrical panel.

Gearbox and Clutch (varies depending on interior layout):

Reduction gearbox with reverse gear, KM 5-A on the engine, reduction is 2.07:1.

Propeller and Propeller shaft:

The propeller shaft is made of corrosion resistant steel AISI 329 The outboard end is supported with a composite shaft strut including water lubricated cutlass bearing.

The stuffing box has a hose connection to the stern tube. Zinc anodes and a mechanical are installed on the shaft.

Three-bladed folding propeller.

Fuel System:

Fuel tanks

Two (2) Stainless Steel fuel tanks, each with its own level indicator.
Total tank capacity approx. 700 liter
Each tank will have a dedicated fill pipe, vent pipe and inspection port.
Stainless steel pickup tubes.
Each supply port to be fitted with a shut-off valve.
The capacities to be read-out on analog display at nav. station.
Tanks shall be baffled and insulated.

Fuel Manifold

A fuel manifold system, with all necessary components, shall be located in the engine room. The system shall be designed to allow flexibility in the supply and return of fuel from the storage tanks to the machinery.

Fuel Filters

A duplex fuel filter with water alarm will be installed for the main engine.
A single fuel filter with water alarm will be installed for the generator.
When installing the filter body, adequate clearance will be given to allow easy removal and service of the filter elements. Drip trays shall be installed under the filters.

Fuel Piping

All fuel piping made in stainless steel precision pipe with flexible, fireproof connections to generator and main engine. Flexible hosing shall be armored to protect against chafe.

Freshwater System:

Freshwater Tanks

The vessel will have two (2) Stainless Steel freshwater tanks. Each tank will have an electronic level indicator with a level gauge located at the nav station. Each tank will have a dedicated fill pipe, vent pipe and inspection port. Both tanks will have single outlet leading to the fresh water manifold. Total tank capacity approx. 1.100 liter.

Freshwater Pump:

G&R Ecoinox 2 55 BB

Bilge pumps:

- Two diaphragms type manual bilge pumps with removable handles. Locations, one at main companionway and one in the aft cockpit.
- One self-priming 24 V DC heavy-duty bilge pump with automatic switch.

Water Heater:

Water heater. Heater capacity is 80 L.

The water heater to have both an AC heater element and a heat exchanger connected to the main engine's cooling system.

Piping

All freshwater piping is to be made of polybutylene. Connections to heater and pumps are to be made of reinforced, heavy wall rubber hose.

Electrical:

Main switchboard.

Baltic Yachts custom made with automatic safety circuit breakers. Indication diodes, amp. meters, voltmeters and tank level meters are provided. A 12 V DC for starting system, 24 V DC for service system.

Letters engraved in electrical panel.

Batteries:

All batteries are Sonnenshine, Dryfit, Sportline, heavy-duty deep cycle marine type or equal. Batteries are type Gel-cell maintenance free and has the following capacities:

- Main engine starting batteries 12 V DC 1 * 108 Ah
- Service batteries 24 V DC 650 Ah

AC System:

- Shore connection 230 V/AC 50 Hz
- DC/AC Inverter, Mastervolt. Model Mass 24/3500
- Battery charger, Mastervolt 100 A.

System including panel with automatic safety circuit breakers, powering all AC units and outlets in toilets and galley.

Lighting:

Following lights are provided:

Interior:

- Navigator's light
- Dome light red/white at nav. Station
- Dome lights white in ceiling
- Fluorescent lights white
- Reading lights white
- Foot lights red (night lights) in all cabins
- Indirect light in saloon with dimmer
- Lights in all hanging lockers
- Lights in refrigerator and freezer compartments

Exterior:

- Pair bow lights red/green
- Stern light white
- Steaming light white
- Tri-color masthead light
- Anchor light
- Two deck lights under spreaders
- Compass light
- Boom lights.

Steering System:

The steering is provided by two light weight Titanium steering wheels.

Custom made composite steering pedestals.

Steering wheels connected to a composite quadrant by means of Spectra/Kevlar ropes/cables.

One aluminum alloy tube emergency tiller, storage in cockpit locker.

Equipment:

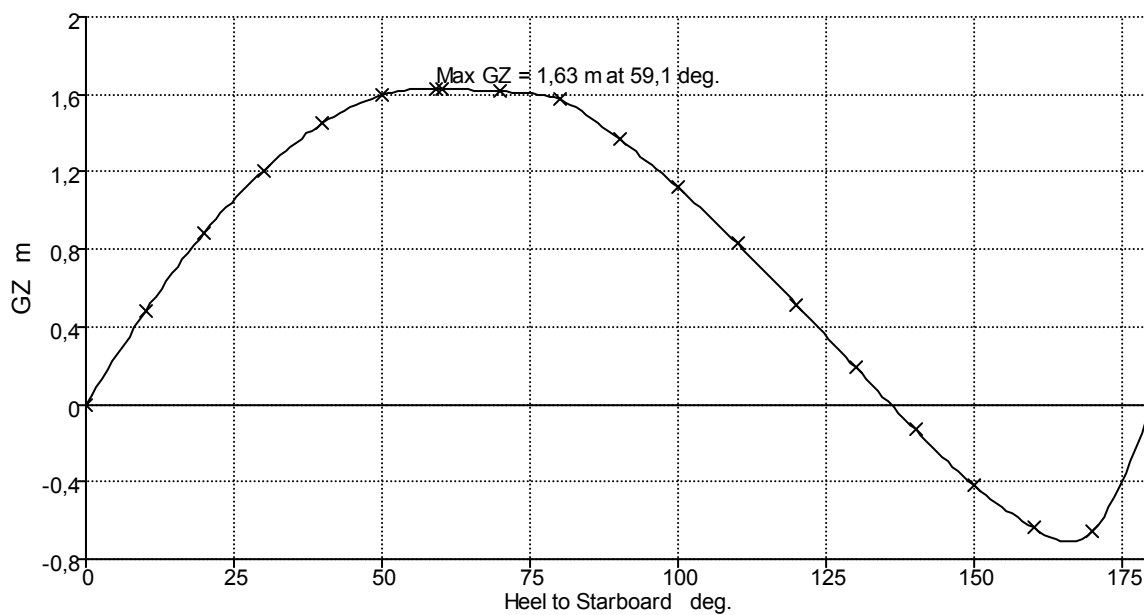
Following items will be provided:

- 2 steering compasses, one for each steering wheel
- 8 fenders
- Flagstaff
- Bosuns chair
- Boat hook
- 6 docking lines

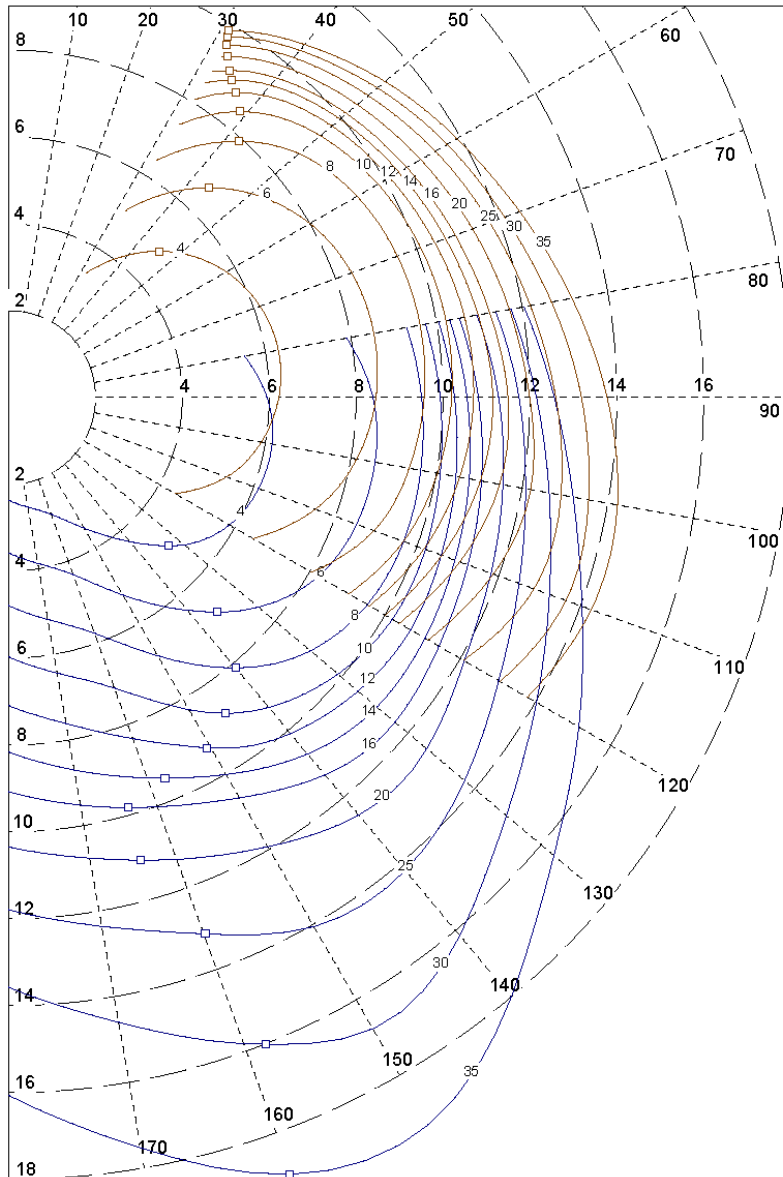
- Instruction manuals for engine, plumbing and electrical system
- Tool set for small onboard repairs
- Service spare part kit for rig, plumbing, engine and electric's
- ORC safety kit including flares
- Barograph, Watch, Hygrometer.
- Windex

PERFORMANCE

The high technology used in this concept has allowed not only for a very strong and safe construction but also enable us to build the boat light and with a very low VCG (Vertical Center of Gravity). The enclosed graph shows a very good stability curve with a high angle of vanishing stability.



This low VCG and high stability also reflects very positive on the yachts sailing potentials. The Polar curve below show potential performance levels.

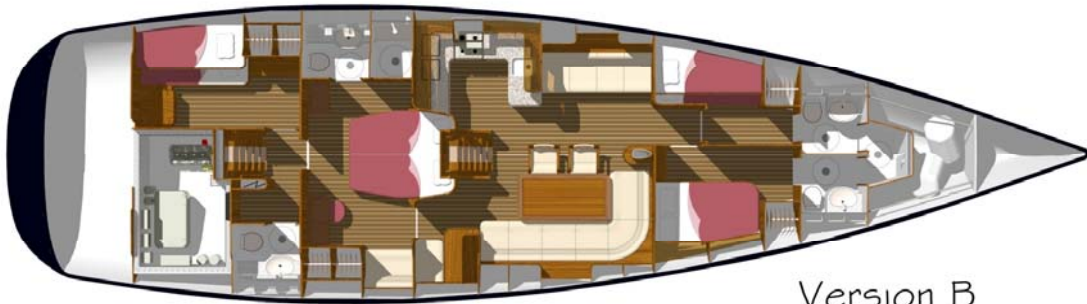


LAYOUTS

Interior:



Version A



Version B



Version C

Version A

This layout goes together with the twin cockpit deck layout. The navigation area is just forward of the aft entrance making communication between the helm and the nav. station very easy. This is a good feature also for the short-handed crew. In rough conditions the forward entrance could be kept closed and the aft one used as the sole entrance giving a dry and comfortable boat with large oilskin lockers near to the entrance.

Version B

Version B has the owners cabin in the center of the boat under the center cockpit area. This position of the owners cabin is close to the pivot of movement during sailing hence very comfortable in a heavy seaway and the fact that it is also positioned in a very volume rich area makes it an extremely large, and luxurious cabin.

Version C

This is a version that requires to be combined with the single cockpit deck layout. This will enable also to have the navigation area just forward of the entrance giving the same communication benefits between helm and nav. station as Version 1. One feature with this layout is that a lifting keel system can be applied if so required without interfering with the layout.

The different forward layouts shown can be combined freely between all the layouts. In addition the basic idea with this concept is to allow for high freedom to create layouts to suite individual clients wishes and needs. These layouts represent more starting platforms for discussions with clients than firm and fixed alternatives/options.

Deck layouts:



Sail plan:

