

Rigging Instructions



INTRODUCTION

Dear customer and new owner,

Congratulations to your new boat – the B/one. Built with passion by Bavaria. We like to thank you for your decision to B/one of us! So let's get things started up and go sailing!

With this manual we would like to give you the information you need for the best possible and safe use of the boat – ensuring you will just enjoy sailing her for a long time.

We have splitted this manual into several chapters guiding you to the correct assembly and ending with some tips for trimming and sailing the boat.

Go through the following pages and take your time to understand all the information. In case you have any worry or question, please talk to your B/one Dealer or contact us via www.sail-b1.com

I wish you a lot of unforgettable experiences and picking up the passion for sailing as we all in Bavaria Yachtbau.

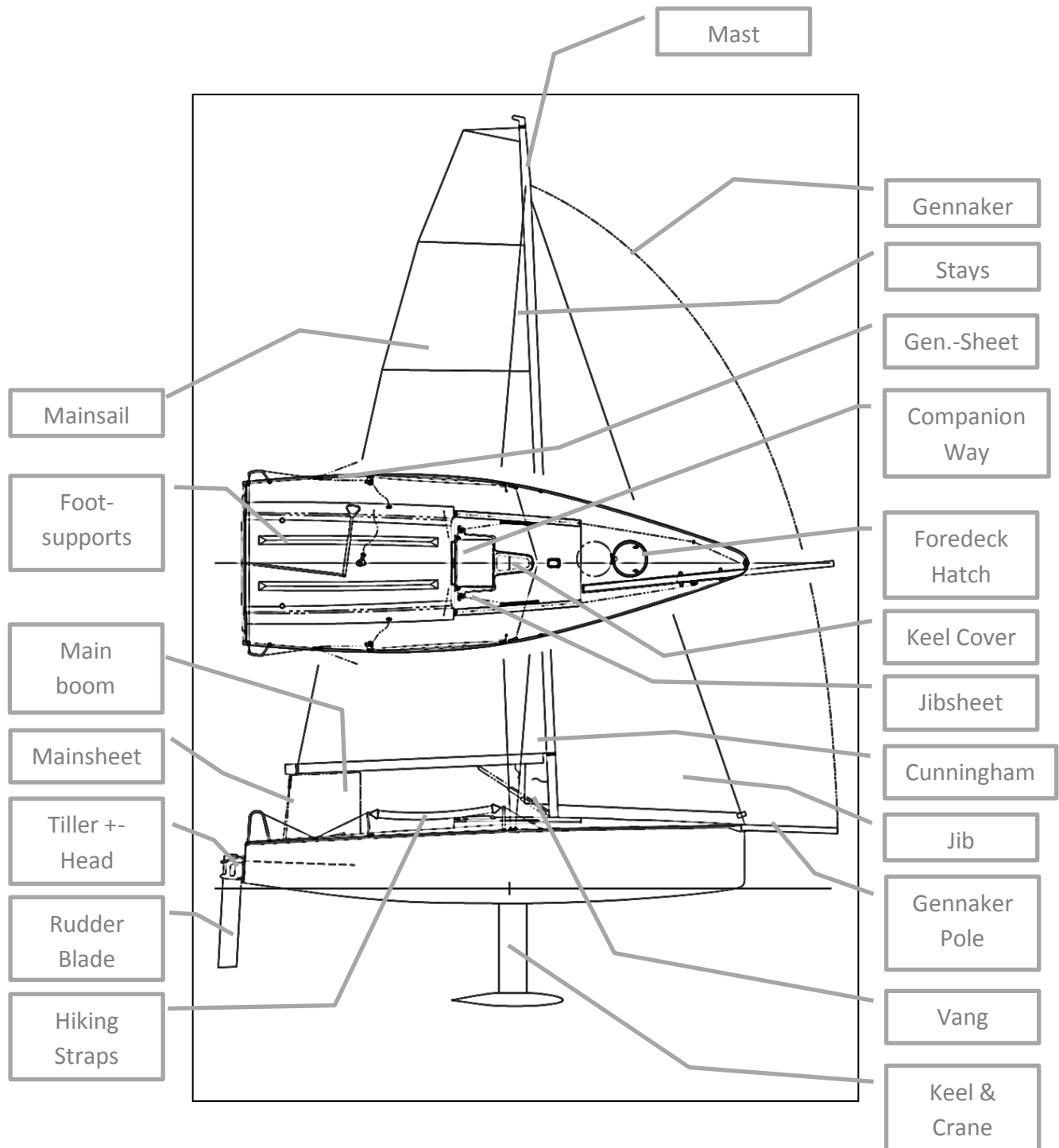
Take care but enjoy Bing/one of us!

Sincerely yours

Dr. Jens Ludmann
CEO Bavaria Yachtbau GmbH



General Boat Description



General Boat Description:

The B/one is consequently designed to be a pure One Design boat, which outperforms due to her simple handling and sportive excitement of a modern race boat.

B/one is a cross-over boat between a dinghy and a modern yacht which gave her the unique feature to be a „Dinghy-Yacht“.

A concept totally independent from any rule of ORC or IRC - exceptionally unique and simple to sail.

A Farr Yacht Design which is consequently designed to enjoy pure sailing with a state-of-the-art One Design boat. The same Team, who made ORACLE, Team Abu Dhabi and her bigger sister, the Farr 400 One Design very successful.

We offer you such a unique yacht for a decent and attractive price level!

The selection and choice of equipment and materials are fixed within the class rules to avoid unnecessary cost and budget fights to be able to win races.

The Boat:

The structure and stability of the boat relies on a hull liner which is also supporting and including the rugged lift keel construction as so the cockpit and mast compression posts linking hull & -liner together, while the deck incorporates a separate deck beam construction. All stability features which are essential for a modern and state-of-the-art yacht and assures a long-term maintenance of value of your boat.

Features the B/one has taken over from modern dinghies: Stern suspended tiller head with retractable rudder blade, main-sheeting, hull & deck joint, line routing, stern- and bow view. The jib-sheeting is already a cross over from dinghy to yacht (manual sheeting 2:1 – no winches) featuring a conventional genoa car system on a track as you find on big boats. The lift keel and it's T-shaped bulb is originated from the high tech ACC designs.

The B/one has received the genes of her hull lines, decklayout, Fat-Head mainsail, genaker sheeting, the moving genaker pole and general design in principle from a modern race yacht, her bigger sister "Farr 400". The synonym of a 2nd Millennium „One Design Yacht“.

The round foredeck hatch underlines the yacht character and offers one way to take down the genaker while racing or – in conjunction with the companionway a brighter interior and better cross ventilation when cruising. Speaking about `cruising`. Optional available are a double v-berth in the foreship (with slatted frame & storage underneath – also designated space for a chemical toilet) and two separate tube-berths for port and starboard amidships. An icebox or stove can slip underneath the companionway. In total a basic but more than complete specification for cruising. In case you need more space, a canopy tent can convert the cockpit area into further living space in bad weather conditions in the marina.

The rig is specified and designt for an easy and quick control – even without a backstay. Calibrated turnbuckles for the V1s & D1s on port and starboard offering a perfect trim of the rig and increase the fun factor in heavier winds.

All sails are trimmed without any winch. From the beginning of the project on our consensus for the boat has been to attract newcomers to sailing as so professionals for racing.

Generally 2 different B/one-Sail qualities do fulfill our strict class rules: Main and jib in Dacron Cross Cut for cruising, or Mylar Radial Cut for One Design racing. For the Genaker we certainly offer also a Cruising as a Racing Version for your selection. The mainsails do feature one reef in both versions.

The high righting moments of the B/one do assure a safe and fun handling of the boat with her small crew. For racing the crew weight is limited to 286kg. As a result of that the B/one will get raced by either 3 adults or 4 youngsters! No need for a 5 to 6 person crew to deal with. In reverse of that the crew will be more continuous and the cost is kept on a relatively low level to run a season. Ambitious racing can't be easier. With her 1.050kg weight the B/one can easily be trailered (trailer optionally available) to any race, event or just to sail her in other waters than usual. Simple fast sailing, flexible use of the boat. Versatile. Small crew. But big fun!

Specification Hull:

White topcoat applied by CNC, hand lay-up lamination, first layer using Isophthalic Resin to prevent from osmosis, all further layers of various materials using Polyester, sandwich core for lower weight but highest stability, hull liner glued into the hull (while still in the mould), keel dome modeled into the hull glued to the hull liner for waterproofness. Visible laminate surface topcoated light grey. No trim lines.

Specification Deck:

Anti-Skid pattern on all vertical surfaces, white topcoat applied by CNC, hand lay-up lamination, all layers of various materials using Polyester, sandwich PVC core for lower weight but highest stability, deck liner glued into the hull (while still in the mould), Aluminum backing plates for equipment. Visible laminate surface topcoated light grey.

Hull-Deck-Joint:

2 cockpit and 1 mast compression posts bearing the deck at the required height for optimum thickness of structural glue. Seams cleaned after components wedding. After curing the boat is trimmed and pre-drilled for any equipment using the 5 axis CNC milling technology. Each bit and part on the repeatable identical position – essential for one design boats.

Deck equipment:

Stern suspended tiller head with extension, retractable rudder blade, stern rails and padded webbing lifeline for hiking in stainless steel, mainsheet with adjustable bridle ending on swivel cleat, 2:1 jibsheet in cam cleat, genaker sheet via 2 auto-ratchet blocks each side for best possible handling.

Mast, standing & running rigging:

Front tapered single-spreader (through bar – not riveted fittings) mast, no backstay, main boom featuring integrated outhaul tackle and one reef line, adjustable genaker pole recessed into the deck – all made out of silver anodized marine grade aluminum (anodizing after CNC milling of the sections – maximum longevity and corrosion resistance). Standing rigging in 1x19 stainless steel wires. V1 & D1 featuring calibrated turnbuckles with handles for on-sail trimming. All lines upper quality from Liros. Genaker halyard and tackline routed to cockpit, jib halyard adjustable at the stay (zipper-cover above furler), main halyard cleated at the mast.

Sails

B/one Sails exclusively manufactured for One Design sailing are offered in two qualities: Dacron Cross Cut Main & Jib for cruising and Mylar Radial for Racing. Genaker available in Cruising & Racing layout/material. One Design rules down to the limited use of one set per season.

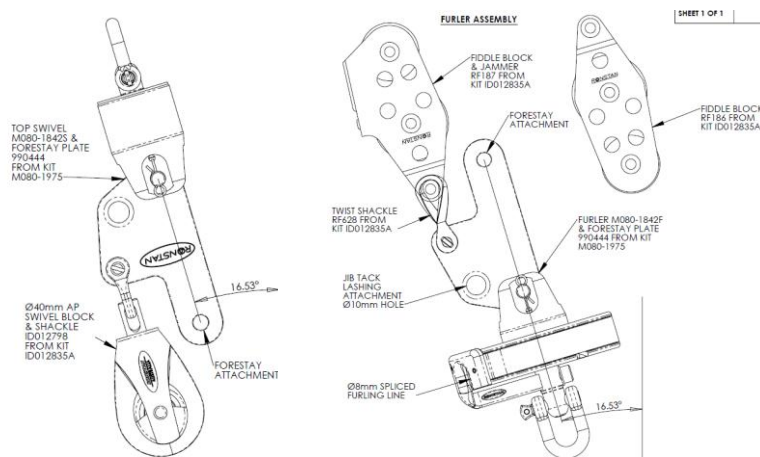
Scope of delivery:

Boat ready to sail with cruising main, jib, Liros ropes, complete rig with jib furler, keel winch for slipping, secure strop for keel, tiller steering with extension, stern rails, padded hiking lifeline, genoa tracks, genaker pole & blocks.

Rigging Preparations:

1. Unpack the mast, boom and rigging (V, D, headstay) and (separately packed Furler Unit and link plates.
2. Pull in Main- & Gennaker Halyard by using the pilot lines and shackle to the mast foot..
3. Fit Spinlock Cleat to the mast fitted bracket for the Gennaker Halyard – pull line through
4. Fit 2 Ronstan Cam Cleats to the mast on Port side. Cleats without fairlead.
5. Fit wind indicator to the mast head
6. Cable for a top light is included in the mast – detach in case you will not use it. Lamp & electrics is NOT included in the boat's spec!
7. Attach the V & D stays to the mast (secure the backing plates at the top ends of the shrouds with an allen key – use Loctite to secure in case the mast is standing for a longer period.
8. Attach spreaders to the through bar
9. Shackle the top swivel of the Furler Kit to the headstay toggle at the mast
10. Attach one link plate to the top swivel
11. Attach the headstay with the fork to the link plate
12. Attach the foot link plate to the fork of the headstay
13. Attach the furler drum to the link plate
14. Attach 40mm Single Block to top link plate for jib Halyard
15. Apply jib halyard (line set) to the top block
16. Attach Turnbuckle Bodies & Handle Kits (Block Set) to the swaged on thread terminals of V & D
17. Tape all shackles and screws/splines you might not reach after stepping the mast
18. Mast prepared for stepping.
19. Fit Z-Spars single block with thread stud & nut to the mast base on Port side.

Headstay & Furling Unit (including jib halyard tackle)



Stepping the mast:

NOTE: Make sure you are following all safety preparations and rules for stepping a mast at any time!

NOTE: Standing rigging is One Design!

On trailer/ashore – keel up:

When boat is on the trailer and keel is up, mast only can be stepped by using a crane as the keel blocks the access to the hinge pin at the mast base!

1. Before you start check that all halyards are pulled down, screws and splines/bolts are secured and safe, rigging is free and turnbuckles, hand grip of the turnbuckles & headstay are fitted correct.
2. Apply continuous line (line set) to the furler drum (use the slot machined into the sheave to insert the start of the line, full turn inserts the line around the sheave – also can be used to detach the line at a later stage)
3. Turnbuckles should be open 90% - and locked.
4. Pull hinge pin at mast base and stow in reach for locking after the mast is touching deck
5. Use the mainsheet (line set) to apply a 2:1 support tackle to the bow chainplate (stem) to create a harbor stay for headstay fitting to the boat at the lower end of the genaker halyard (adjust 2m above deck and knot the exiting line around the mast). Start the support tackle from chainplate, run up to the spliced eye of the genaker halyard (don't use shackle for safety reason), run it down to the stem chainplate, run the line across deck via jib ratchet block through the cleat. Make sure you have enough over length to move the mast over the boat.
6. Hang the mast upright over the boat – follow all safety rules and rigging checks before you start!
7. Lower the rig slowly and carefully until the mast is touching the deck.
8. Make sure the mast step sits over the supports of the mast base completely.
9. Attach the hinge pin (aft at the mast step & base) and secure the pin by the spline to avoid slipping out.
- 10.
11. Gently lean the mast slightly aft raked to attach Vs & Ds to the chainplates on deck (forward angled in for Ds, aft nearly straights for Vs). Secure pins with splines.
12. When shroud bolts are secured, pull in the harbor stay to secure the mast.
13. Pull headstay and furling drum forward towards the chainplate on deck (nose).
14. Lean into the harbor stay and push it forward to apply some pre-load to the rig to shackle the furler drum to the chainplate on the nose (as you do on a normal dinghy like 470 i.e.)
15. Apply load to the shrouds according your / the wind demand (calibration of the bodies do assist) by opening the locknut on top of the thread, fold out the handle and keep the black hand grip at the wire to turn the handle but not the wire.
16. When all bolts are checked and secured, take off the harbor stay.
- 17.
18. Drill and screw the bulls eyes to deck as drawn (need to be done now as they are spliced into the continuous loop).
19. When the mast is trimmed and tensioned as required (6-8% of the breaking load of the wire), ...
20. .. double check all bolts and splines to be safely applied and secure/tape them.
21. Mast stepped.



Stepping the mast:

NOTE: Make sure you are following all safety preparations and rules for stepping a mast at any time!

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In the water:

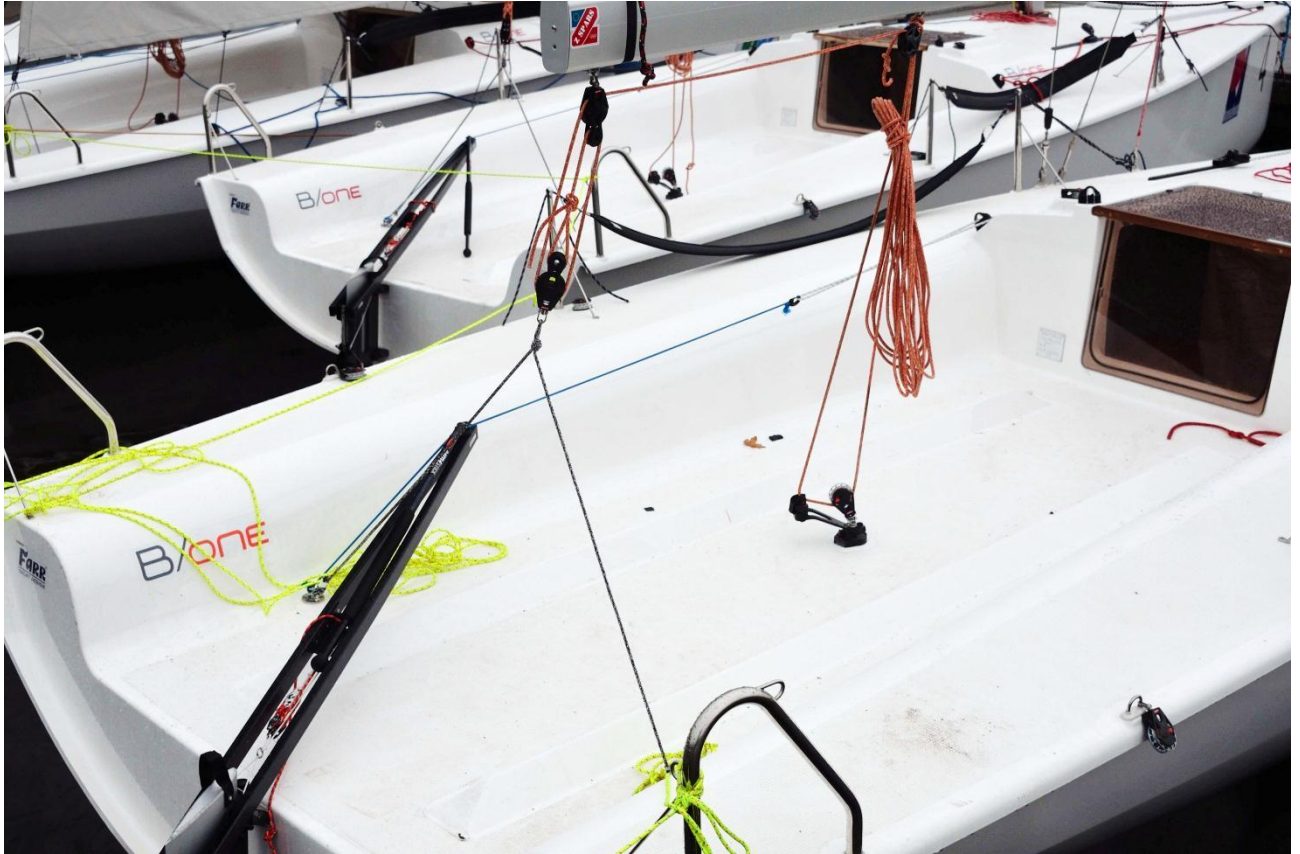
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6. Move the mast over the boat, foot forward, face up – follow all safety rules and rigging checks before you start!
7. Position the mast horizontal on deck to be able to attach the shrouds to the chainplates (forward angled in for Ds, aft nearly straights for Vs). Secure pins with splines.
8. With 2 persons position the mast aft to line-up the mast foot with the mast base.
9. Push the mast base down to deck to be able to attach the hinge pin (aft at the mast step & base) and secure the pin by the spline to avoid slipping out.
10. Raise the mast by pushing up and supporting with the harbor stay (2:1 line) until it is standing upright.
11. Make sure the mast step sits over the supports of the mast base completely.
12. When shroud bolts are secured, correct stepping checked, pull in the harbor stay to secure the mast. Tie knot the line to avoid opening the line while still rigging.
13. Pull headstay and furling drum forward towards the chainplate on deck (nose).
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20. Mast stepped.



Main Boom & -sheeting

Mount the main boom's gooseneck to the mast by using the bolt in the mast fitting – O-Ring top (clew lashing later)

Mainsheet is routed like expressed on the photo – utilizing the fixed bridle ending at the pad eyes mounted to the cockpit floor.



The vang...

... is designed to be a “cascade system”.

Blocks and lines are included in the kits.

Ends shackled to the boom and mast – for taking the rig down, leave the tackle together and undo the shackles.



Outhaul

The main outhaul is exiting the boom at the underside via a block guided into the Clamcleat. Use some of the over length genaker pole bungee to pull the line towards the boom and out of the cockpit.



Line has to be attached 2:1 at the booms end through the outhaul hole – where also the webbing clew-lock is applied.



Cunningham

The Cunningham tackle is using similar purchase components as for the jib halyard.

Line Routing:

Starting with the supplied spare rope (yellow 4mm line) from the pad eye at the mast on starboard, up to the Cunningham hole in the mainsail, than down to the top fiddle block with V-cleat. Shear fiddle tackle with spare line (red, 4mm). Lash the tackle with rope (yellow, 4mm) to the shackle of the Vang Cascade.

Done.



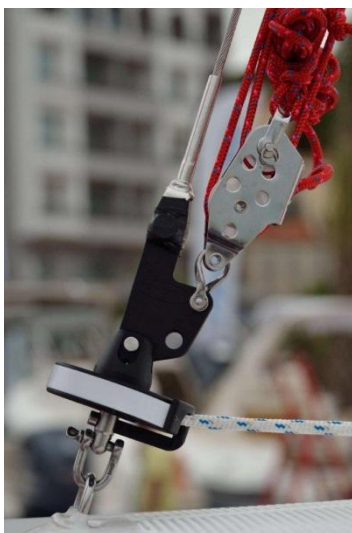
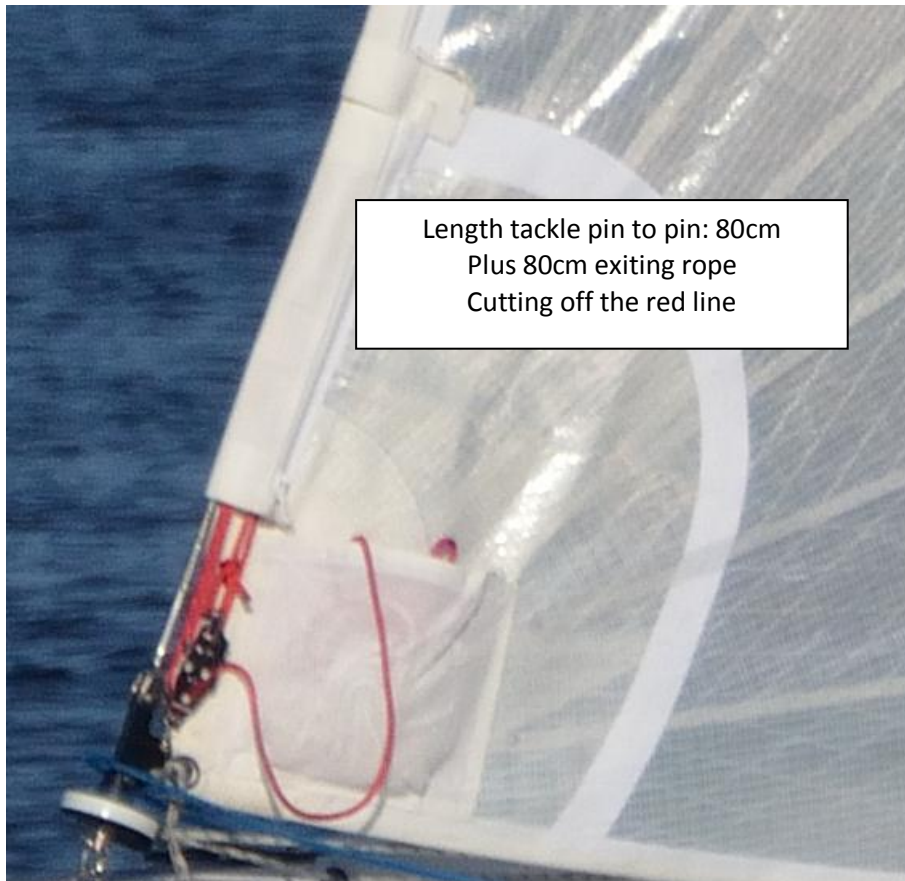
Length tackle:	50cm (+ 180cm exiting line for trimming)
Length foot line (to mast step)	25cm
Length top line (tackle-hole-pad eye)	50cm

Jib Halyard

The jib halyard (see mast stepping instruction for preparation) has to be linked to the jib head (shackle or knot), through the block at the linkplate of the top swivel, down to the halyard tackle using the stainless steel guide ring at jib head.

When hoisting the sail, the halyard & lower tackle is covered within the luff zip, lines from halyard and tackle are stowed in the pocket at the jib tack.

Jib Tack is just lashed to the lower link-plate (3mm line).



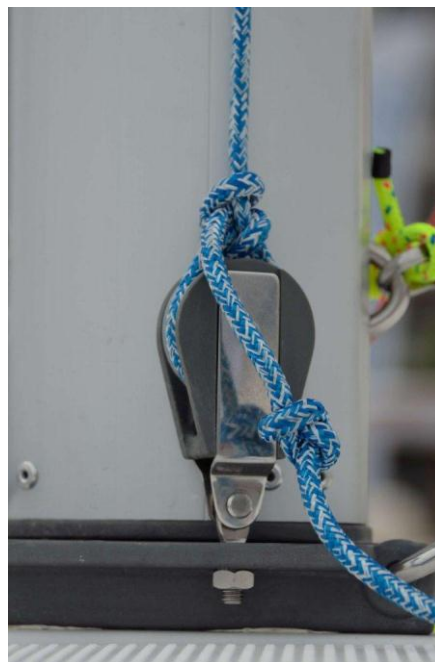
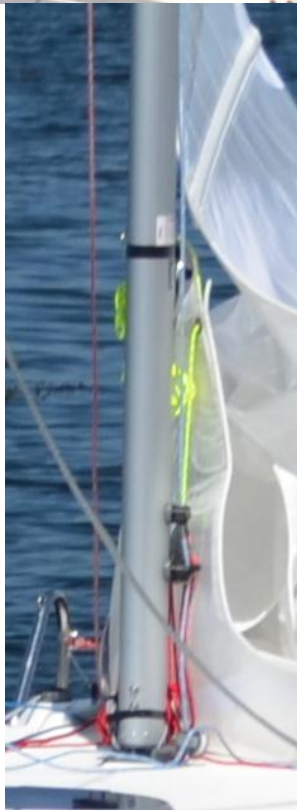
Main Halyard

The main halyard (blue line) is running exiting from the mast box on port down via the 2 cam cleats (to be bolted to the mast within rigging preparations) and through the single block with thread bolt & nut – positioned underneath the cleats in the mast step.

Hoisting the sail:

Simply attach the halyard to the mast head and pull the halyard vertically upwards until fully hoisted. Apply tension as requested for the given wind conditions.

Higher luff tension will be applied by the cunningham tackle.



Rudder & -blade

The Tiller Head is attached to the gudgeons mounted to the stern – using the center locking pin. The tiller extension (separately packed) has to be mounted to the tiller using the pre drilled and threaded holes.

The rudder blade is simply slipped into the tiller head – make sure the blocking cascade (tackle ending at the Clamcleat of the tiller) is fully open when inserting the blade.

A top-bolted webbing strap is creating the handle and locking of the blade to prevent slipping through. Webbing folded 4 times than bolted by 5mm tapered screw using Loctite to seal and lock the screw in the thread.



IMPORTANT NOTE: Check if the strap is fitted! This is also the locking device for the blade to prevent



Positioning, M5 hole:

- 1= 20mm from topside
- 2a= Port side = 185mm
- 2b= Starboard side = 195mm

IMPORTANT NOTE:

TOPSIDE can be identified by standing the rudder blade on the floor. Topside UP is when forward radius (wide) is pointing forward of the theoretical vertical.

Keel & Assembly

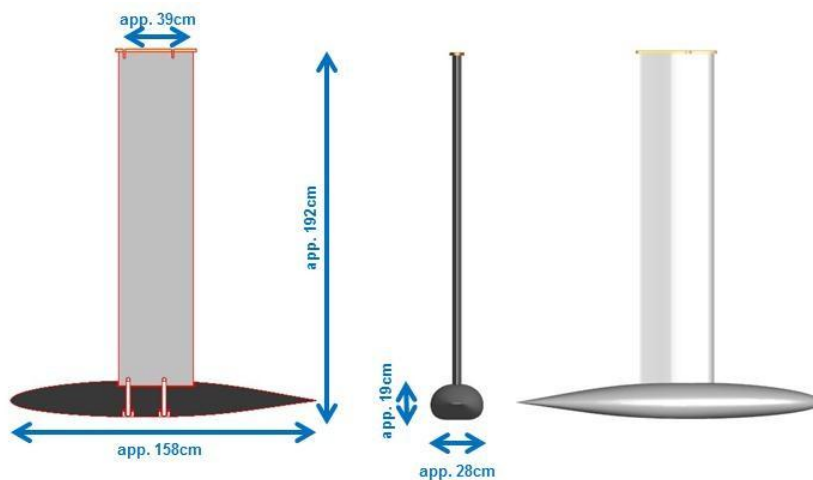
NOTE: Road / Overseas transport comes with keel lose – separately packed. To insert keel take off the top bearing, set the fin into the keel box (from below – boat in a crane) and carefully set the boat over the keel fin! Special care needs to get taken in respect to the top bearing! In case the boat slips down angled, the fin might hook up to the top bearing and may cause damage to it! If in doubt, contact your B/one dealer!

NOTE: Bolts for the top bearing need isolation from the Aluminum! Use appropriate sealant/Loctite to mount the top! **IMPORTANT: You need to assemble the top bearings correct! NOT DONE when shipped without keel inserted!**

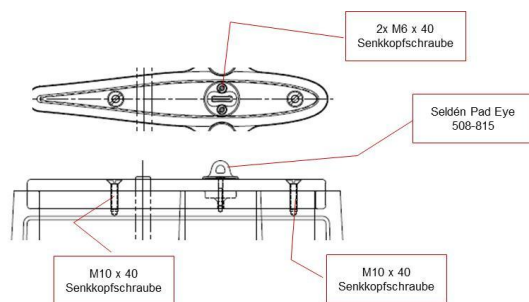
NOTE: Keel Bulb is UNCOATED! Any surface treatment is a subject of the dealer/owner!
Keel Fin is anodized Aluminum

NOTE: Keel Fin will be supplied pre-assembled! Graphics do show the finished keel / details.

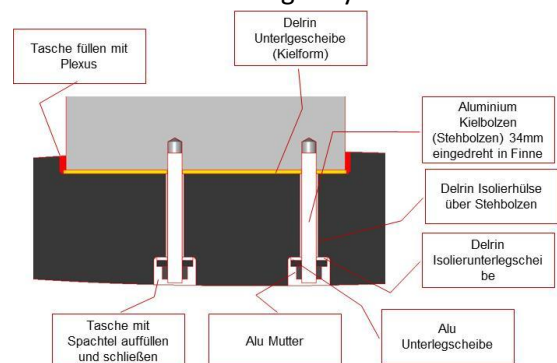
Keel Dimensions



Keel Top Bearing Assy

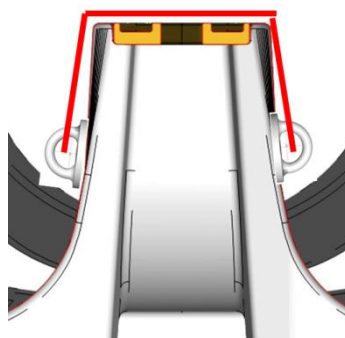


Bulb Mounting Assy



Keel Lock while sailing:

Using the Velcro Webbing strap to lock the keel down.



Inserting Keel after separate supply

In some cases the boats will arrive without the keel inserted – but stowed separately.

It is relatively easy to stick the boat over the keel fin, but some things need special attention when you do this:

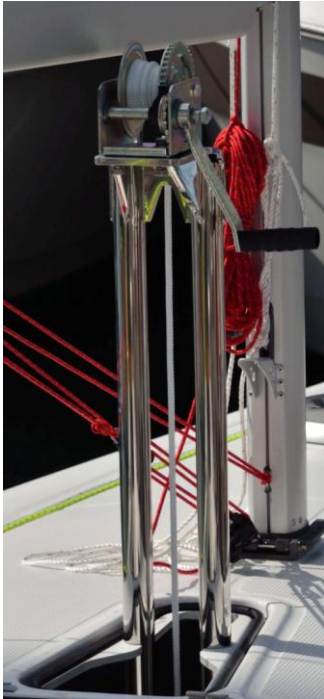
1. Keel standing upright (sole is flat at the center and will keep the keel vertical. Note: It is standing relatively secure but follow all applicable safety rules while you do this!
2. Insert two dummy bolts (M10 x 80mm i.e. into the forward and aft thread in the keel fin for guidance into the top bearing later / when the boat is lowering)
3. Make sure the keel lid is taken off deck
4. Make sure the 2x M10 allen bolts, 2x M6 philips head screws, pad eye , the aluminum top plate, appropriate tools and Loctite or marine grade sealant is ready to use in the boat once the keel is placed in the hull liner.
5. By following any safety rule one person should be located inside the boat as close as possible to the top bearing of the keel liner – amidships.
6. Lift the boat by crane over the keel
7. Make sure the boat is lined up horizontally to the surface of the lower keel bearing!
8. Lower the boat slowly and gently over the keel fin
9. Carefully guide the keel fin into the lower bearing
10. Carefully lower the boat until the rigger inside can see the dummy bolts coming up & is able to use them to guide the fin straight into the top bearing. NOTE: In case the fin might hook up to the bearing, lift the boat and gently try this again until the fin is slipping straight through.
11. Once the keel sticks out of the hull liner into the boat, fit the top plate as described and shown on the previous page. NOTE: Do not over tighten the screws! Hand warm torque in combination with Loctite or other isolating material (stainless steel bolts into Aluminum fin) is enough to securely hang the keel to the plate.
12. Once the top plate is fixed lift the boat straight into the water.
13. NOTE: In case you want to store the boat ashore you have to make sure the supports are located A) high enough to not sit the boat onto the bulb and B) are located at the correct and designed support areas of the hull.

In case you are not sure for handling this, contact your B/one Dealer!

Keel Crane

The boat comes in standard with the keel crane which is a solid stainless steel construction featuring a trailer winch to lower & lift the keel in the boat.

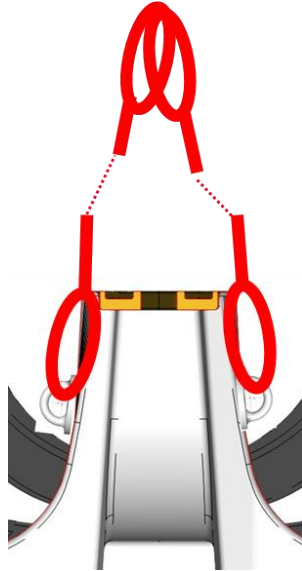
To use it, lower it through the deck hatch and locate it over the hull liner (two recesses accepting the legs of the crane). Then simply knot the line to the pad eye on the keel bearing and crank the keel up or down.



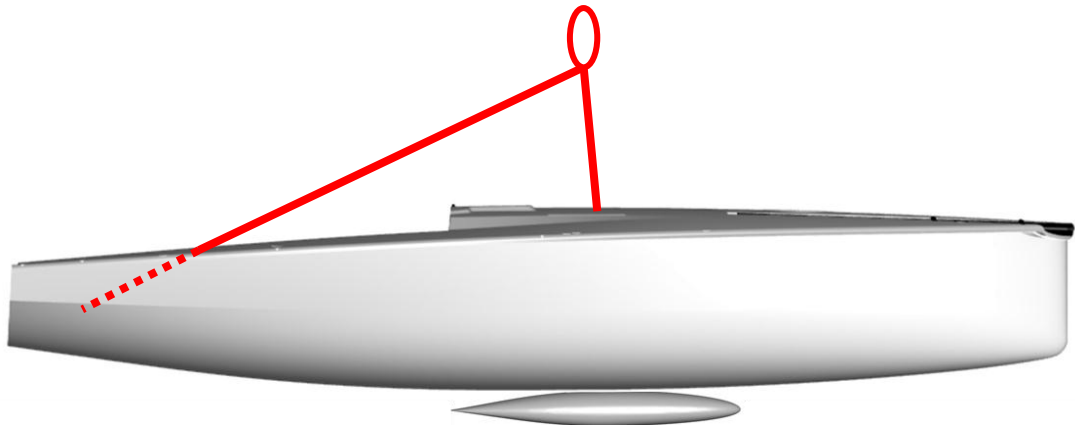
Boat Lifting

Lifting strops can get shackled to the pad eyes side-mounted to the hull liner/keel dome.

NOTE: Lifting Strops not included in standard supply! Optional!



When lifting the boat as described above, please shear a support line (sheet) to support the back of the boat while craning. Keel slips down while lifting the hull.

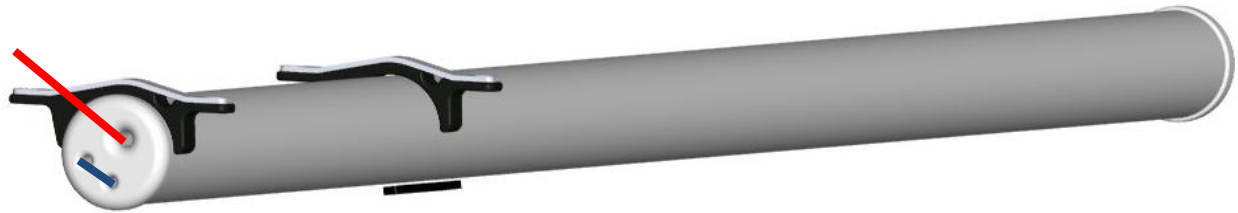


Genaker Pole

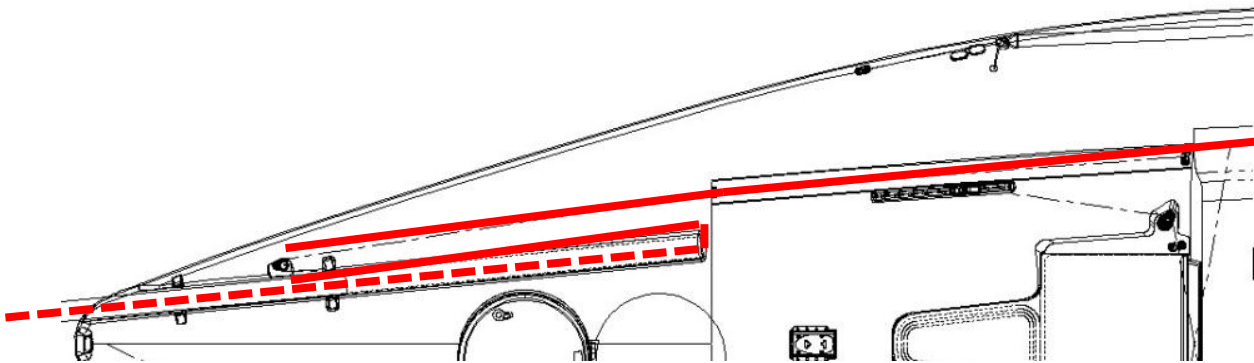
The boat comes with inserted Genaker Pole.
It needs to get rigged up for sailing:

RED line = Tackline Genaker

BLUE line = Pole Retriever/Bungee

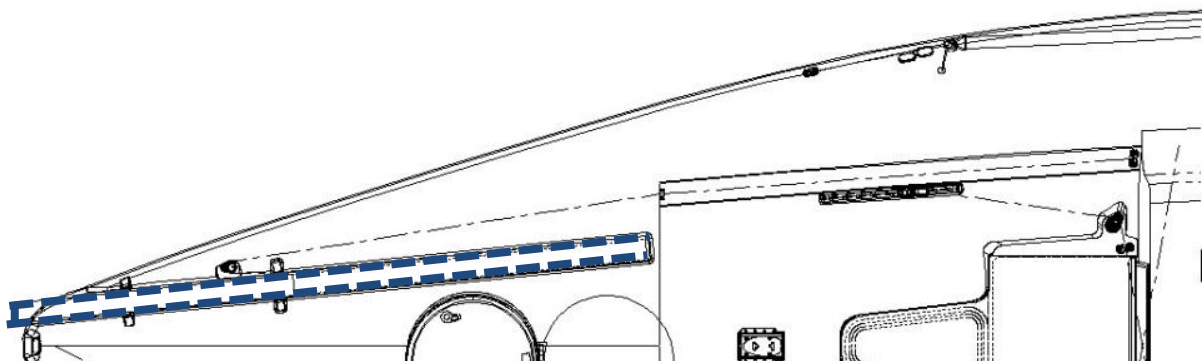


Tackline Routing: From front through pole to aft, around pole end, forward through the deck support onto the turning block, aft via the bulls eye onto the cleat with fairlead on starboard



Retriever Bungee Routing: Starting at dead eye in recess of the pole through the pole exiting at front, using second hole returning aft and fixed to the dead eye.

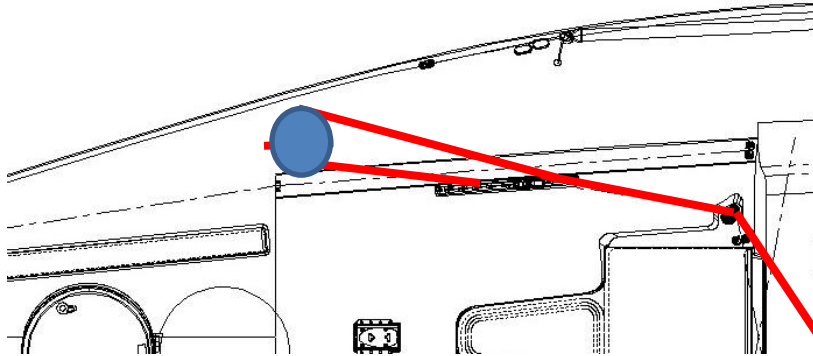
NOTE: Apply enough tension to retrieve and to allow the max movement of the pole when pulling tackline out.



Note: Easiest way to rig the retriever and tack line might be to unscrew an end cap for a direct and easy access

Jibsheet

The jibsheet is routed 2:1 starting from the car's dead eye towards one of the single blocks in the clew of the jib, back to the block on the jib car, aft to the ratchet block and into the cleat on the coachroof



Genaker Sheet

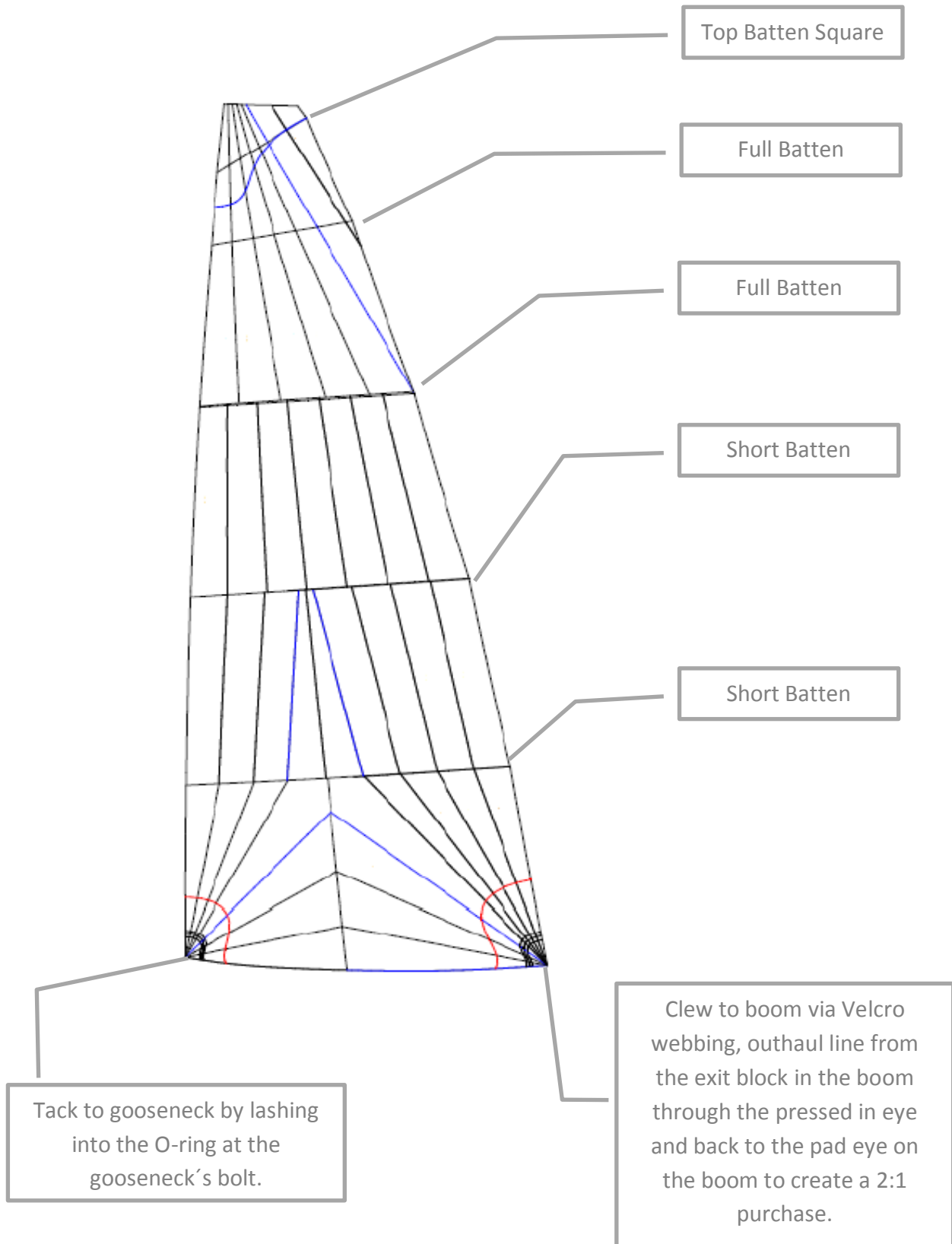
The genaker sheet is routed (start in Cockpit) with the tapered end (thin) into the ratchet block on deck, aft to the shackled in ratchet block and forward towards headstay / opposite tack.

NOTE: Check the correct turning direction of the ratchets when applying the sheet!



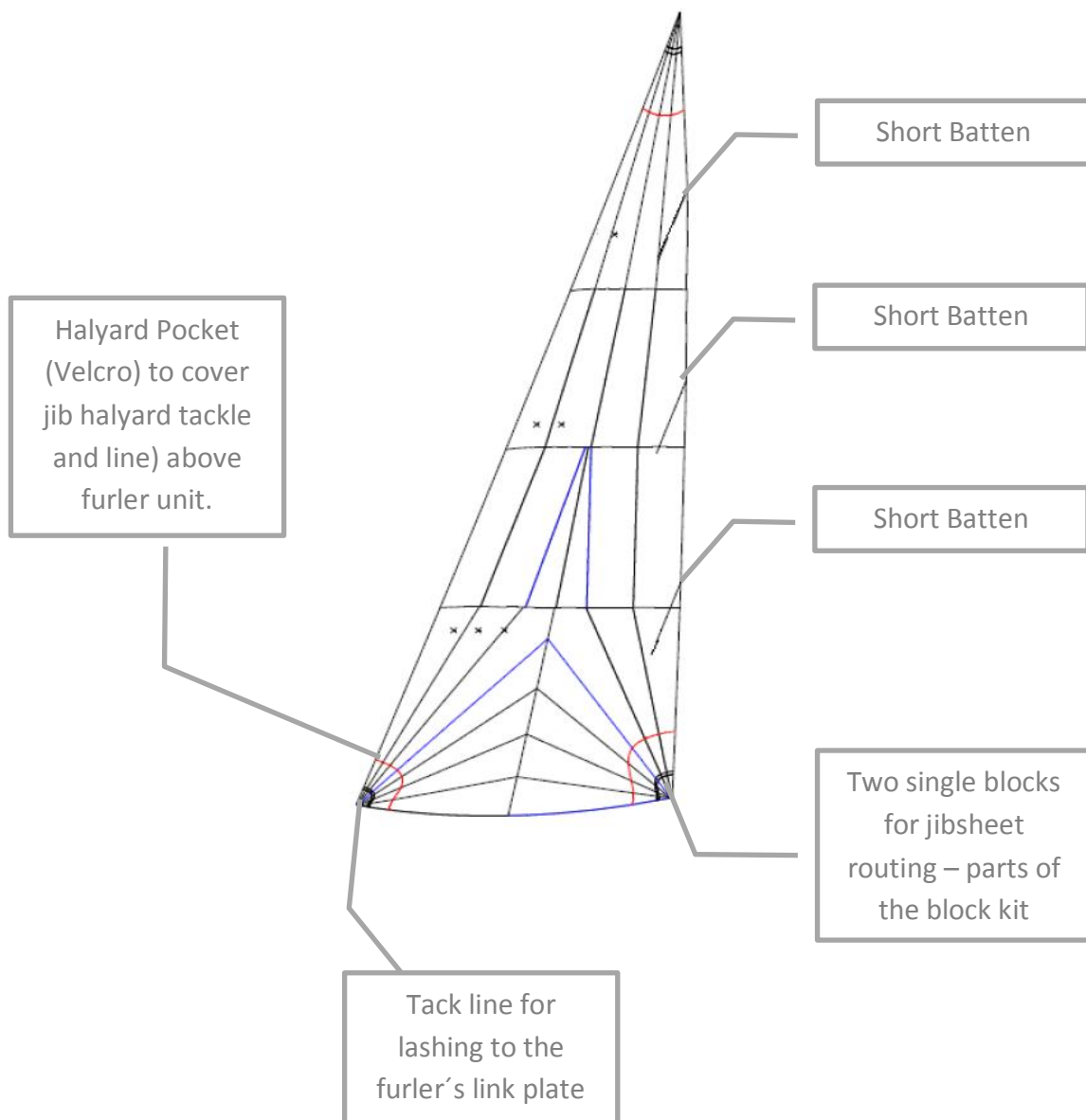
B/one Mainsail

The mainsail is featuring (Cruising & Racing):



B/one Jib

The jib features (Cruising & Racing):

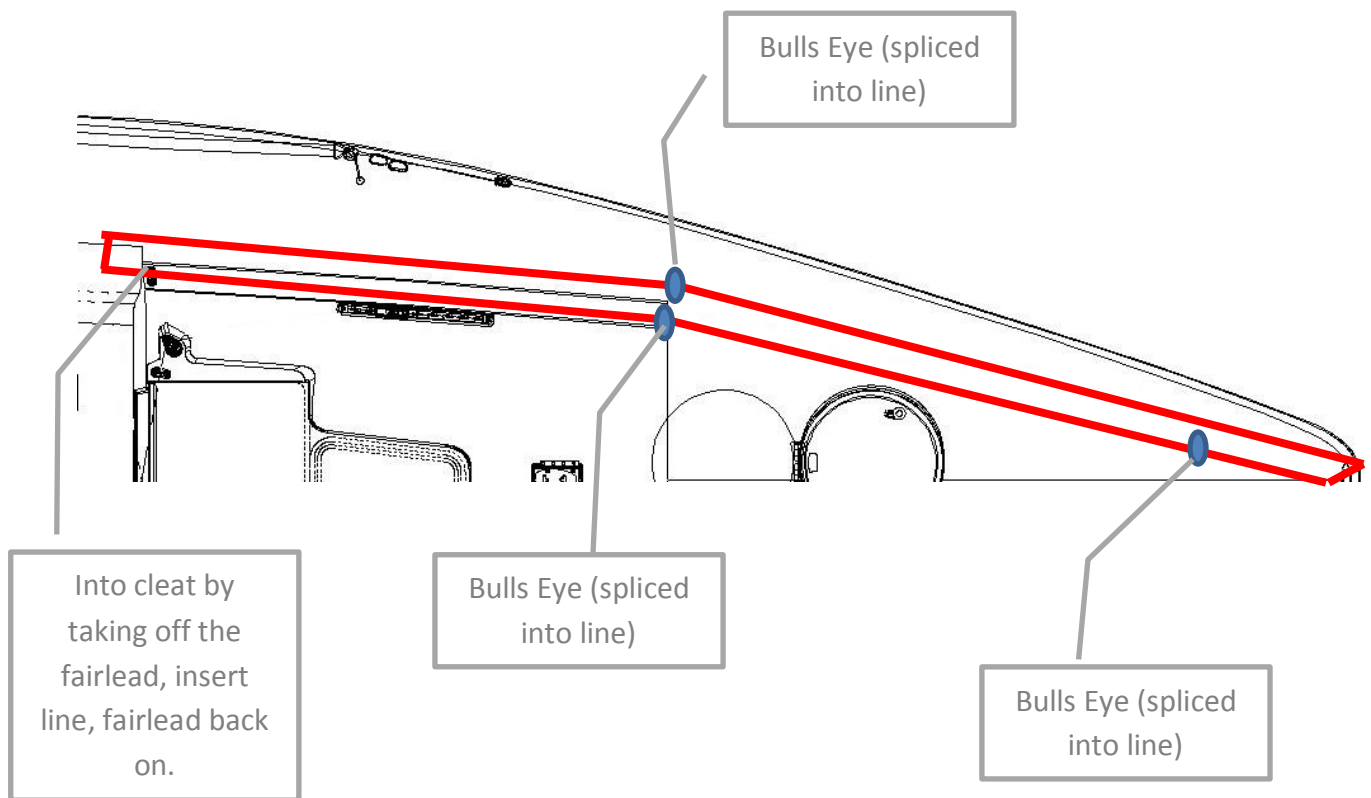


B/one Jib Furler

The jib Furler needs some extra installation before the first use of the boat.

The continuous furling line (part of the line set) has 3 bulls eyes spliced in. These parts need to get screwed to deck and the fairlead of the cleat on port side needs to come off once to insert the line.

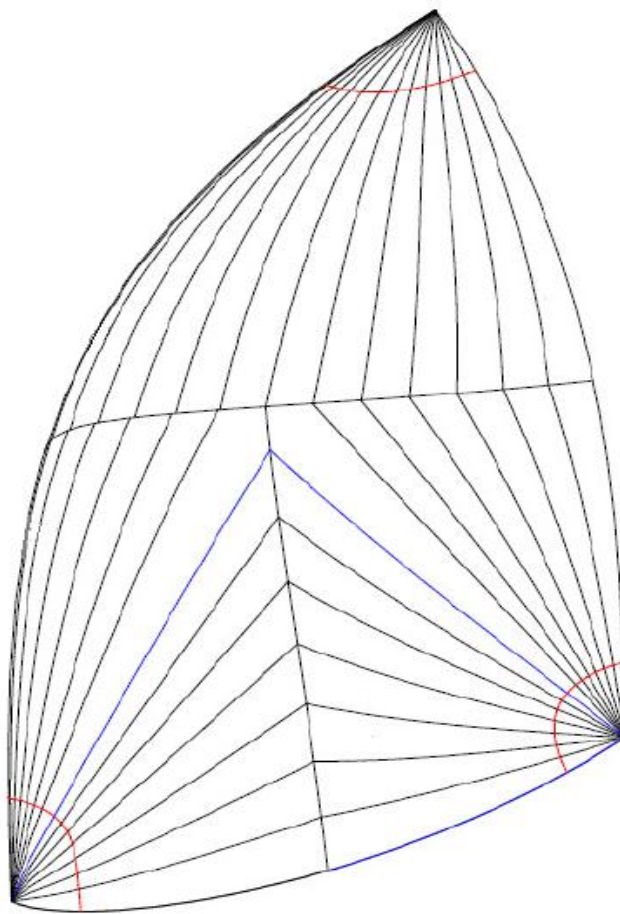
A piece of (over length) shock cord lashed into the furling line keeps the entering side of the ring under load and prevents slipping on the sheave.



To insert the line into the furler drum use the slot machined into the underside of the sheave to guide the rope into the unit by turning the sheave 360° until the rope fully covers the sheave.

B/one Genaker

Genaker features (Cruising & Racing):



BOAT LAUNCHING

When you launch the boat from a ramp prepare the following steps:

1. Prepare boat & trailer and an adequate line for launching the boat over the ramp
2. Fit tiller head & rudder blade – blade up
3. Apply the keel crane over the keel, stepped through the cut out in the deck in the recesses of the topside from the hull liner
4. Knot / shackle the winch line to the pad eye on the top of the keel
5. Lift keel to hang to the winch and off the trailer
6. Ramping the boat as usual – taking care for safety & handling issues while getting the boat afloat and driving the trailer into the water

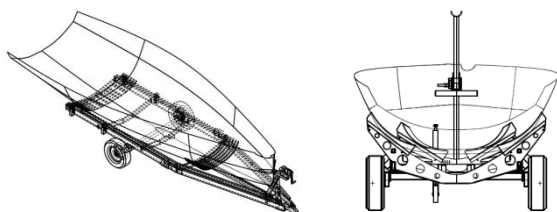
Trailer

Due to the structure and required support of the boat on the road, the trailer HAS TO BE EQUIPPED with correct shaped and positioned hull supports! This is absolutely necessary to bear in mind in case a second party trailer will be used!

The Fiberline B/one Trailer is strong, rugged and tailor made exactly for the boat. Featuring a maximum total weight of 1.800kg – with overrun brake – makes him towable by a standard mid-class vehicle. Supports are GRP constructions bolted to the chassis. The keel support pan has a forward stop bar for additional safety for the keel while trailering.



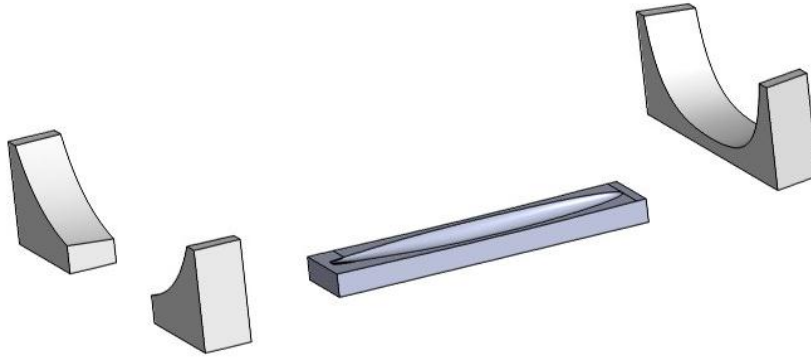
The Weber-Trailer can be supplied optional, upgrade premium for the weber type has to be paid extra.



Trailer Supports

Need to be positioned and shaped as designed! Any change needs to be discussed with the yard for approval to ensure a damage free transport of the boat on the road.

Yard offers support to eventual alternative trailer manufacturers.

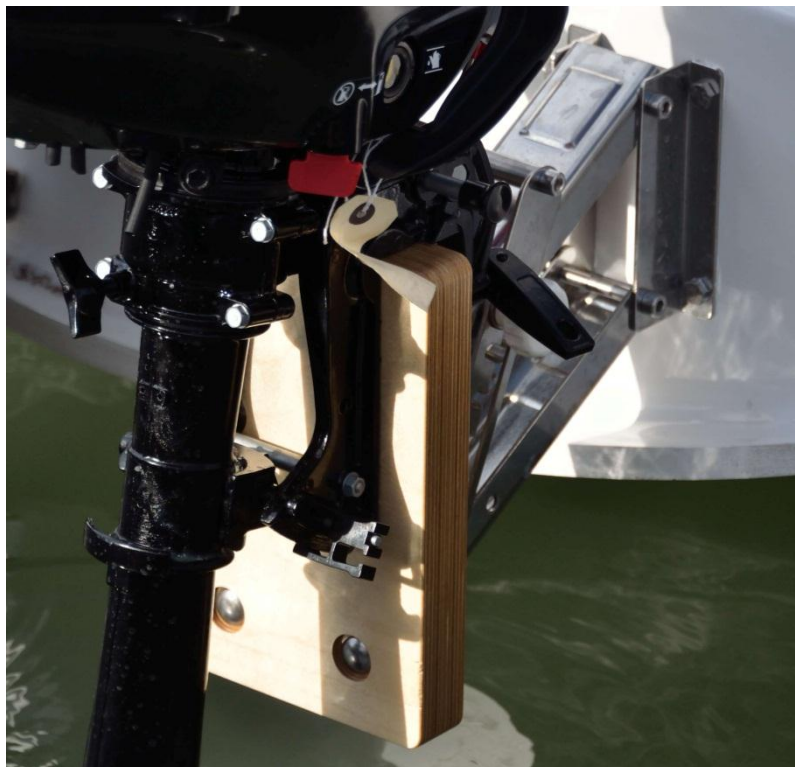


Outboard Engine

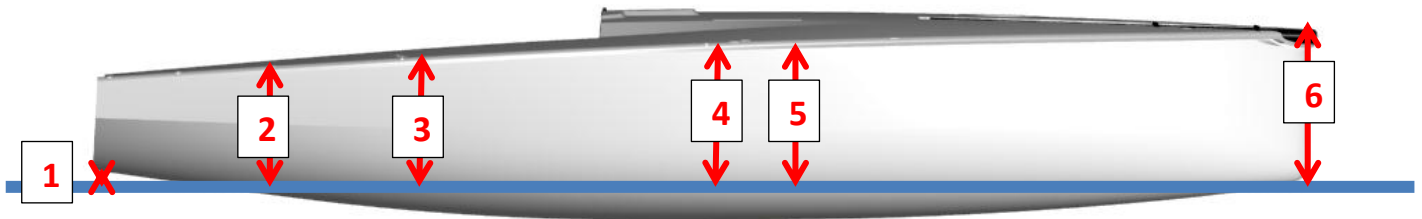
It is certainly possible to fit an outboard engine bracket of your choice. Stern construction is laid out accept this – up to 3.5HP at the maximum.

As the aft of the boat is open and empty, installation is quite easy.

Note: Please make sure you are using backings appropriate size for the mounting bolts – such as big-size washers i.e. as a minimum – from the inside.



Center Water Line – Antifouling Application



1=	74mm	Underside Center Stern to CWL
2=	700mm	Topside Deck at U-Bolt for Genaker Sheet to CWL
3=	738mm	Topside Deck at aft stanchion to CWL
4=	822mm	Topside Deck at forward stanchion to CWL
5=	839mm	Topside Deck at forward U-Bolt for hiking strap line to CWL
6=	890mm	Topside Deck at Headstay U-Bolt to CWL

Important note:

These are theoretical measurements and shows the theoretical CWL!
 Double check prior to start painting and/or apply under water coatings!
 No extra height given!

So. Now it's up to you to enjoy the boat!

In case you have any question or problem, feel free to contact your dealer for any support!

