OWNERS MANUAL

DRAGONFLY

35 Swing Wing

INTRODUCTION

We are delighted to welcome you to the family of DRAGONFLY sailors with our warmest congratulations on your new DRAGONFLY.

This manual is meant to help you enjoy sailing and understand the comfort and safety of your boat. The manual describes the boat, the equipment and includes maintenance guidance. Before you and your crew take off to sea, we strongly recommend reading the manual carefully to avoid any mistakes and/or damages. Make yourself at home onboard your boat before going sailing.

We keep improving our boats as we want you to benefit from new technology and breakthroughs, new equipment, materials and, of course, our experience. Therefore, the characteristics and information hereby provided are not binding and can be changed without prior notice or updated obligation.

DRAGONFLY is built with more than 40 years of experience in multihulls, and we feel today that we are delivering a consistent product of high quality and design. Quorning Boats endeavours to deliver a perfect product. If minor problems should occur, we kindly ask you to contact your dealer.

Please keep your DRAGONFLY in respectable condition as well at sea as ashore.

We wish you, your family and crew all the best and lots of fun with your DRAGONFLY,

QUORNING BOATS ApS

Jens Quorning

REGISTRATION FORM

Type of boat: Dragonfly 35 Swing Wing
(Trimaran sailboat)

CE-certification: Category A + B

Date of delivery: _____

Name of boat: _____

Homeport: _____

Owner's name and address

Name: _____

Address: _____

City: _____

Country: _____

Registration No

Hull No: _____

Hull ID-No: _____

Engine serial No: _____

YOUR DEALER:

_____

QUORNING BOATS ApS
Skærbækvej 101, DK-7000 Fredericia, Tel. + 45 75 56 26 26, info@dragonfly.dk

DOCUMENT AND RECEIPT FOR DRAGONFLY 35

Hull No: _____ *Hull ID-No:* _____

Owner's name and address

Name: _____

Address: _____

City: _____

Country: _____

Owner of this craft hereby certifies that I have accepted delivery and read the information in the Owner's Manual delivered with the boat – before using the boat.

Date: _____ *Signature:* _____

Hull No: _____ *Hull ID-No:* _____

Owner's name and address

Name: _____

Address: _____

City: _____

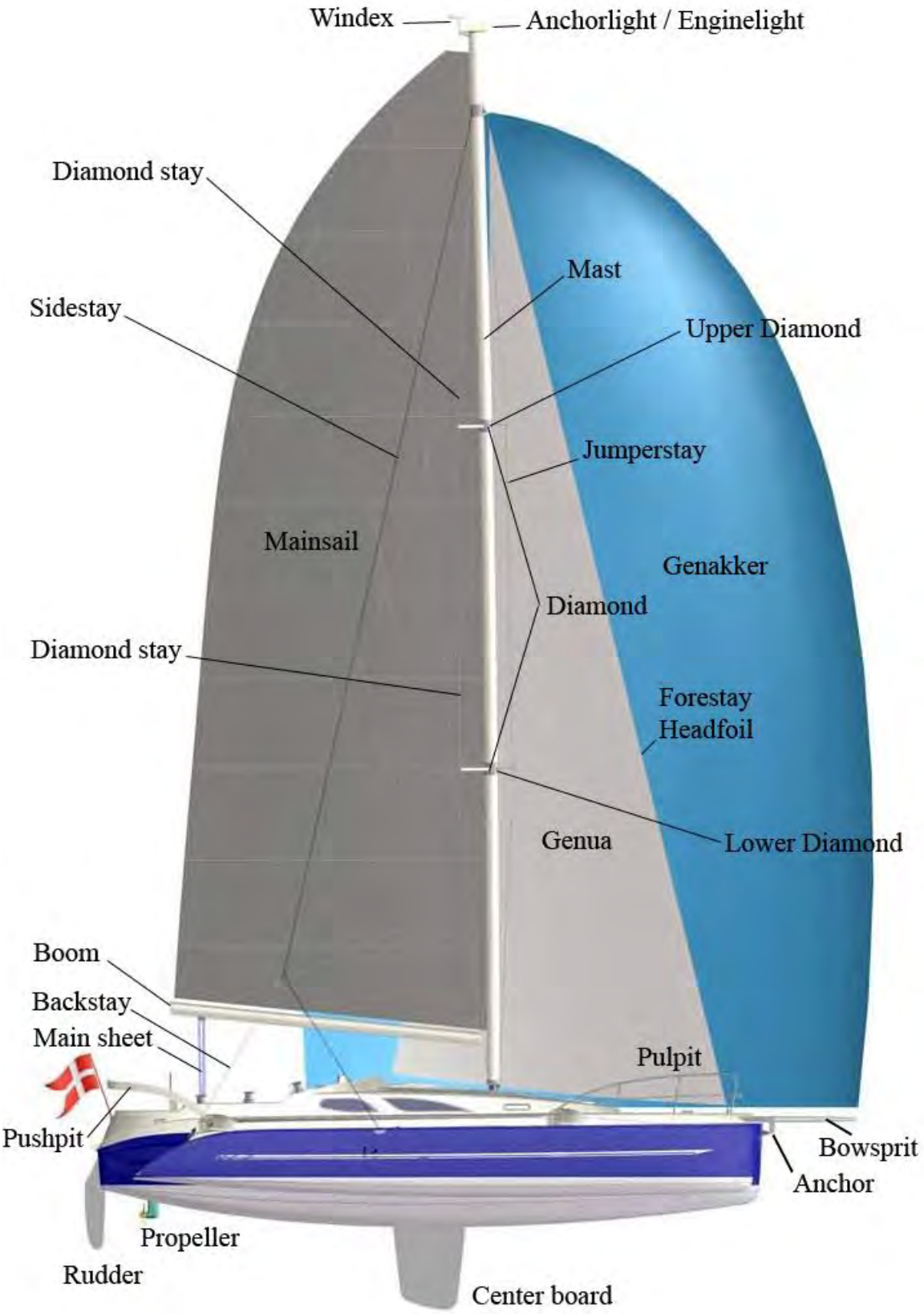
Country: _____

Owner of this craft hereby certifies that I have accepted delivery and read the information in the Owner's Manual delivered with the boat – before using the boat.

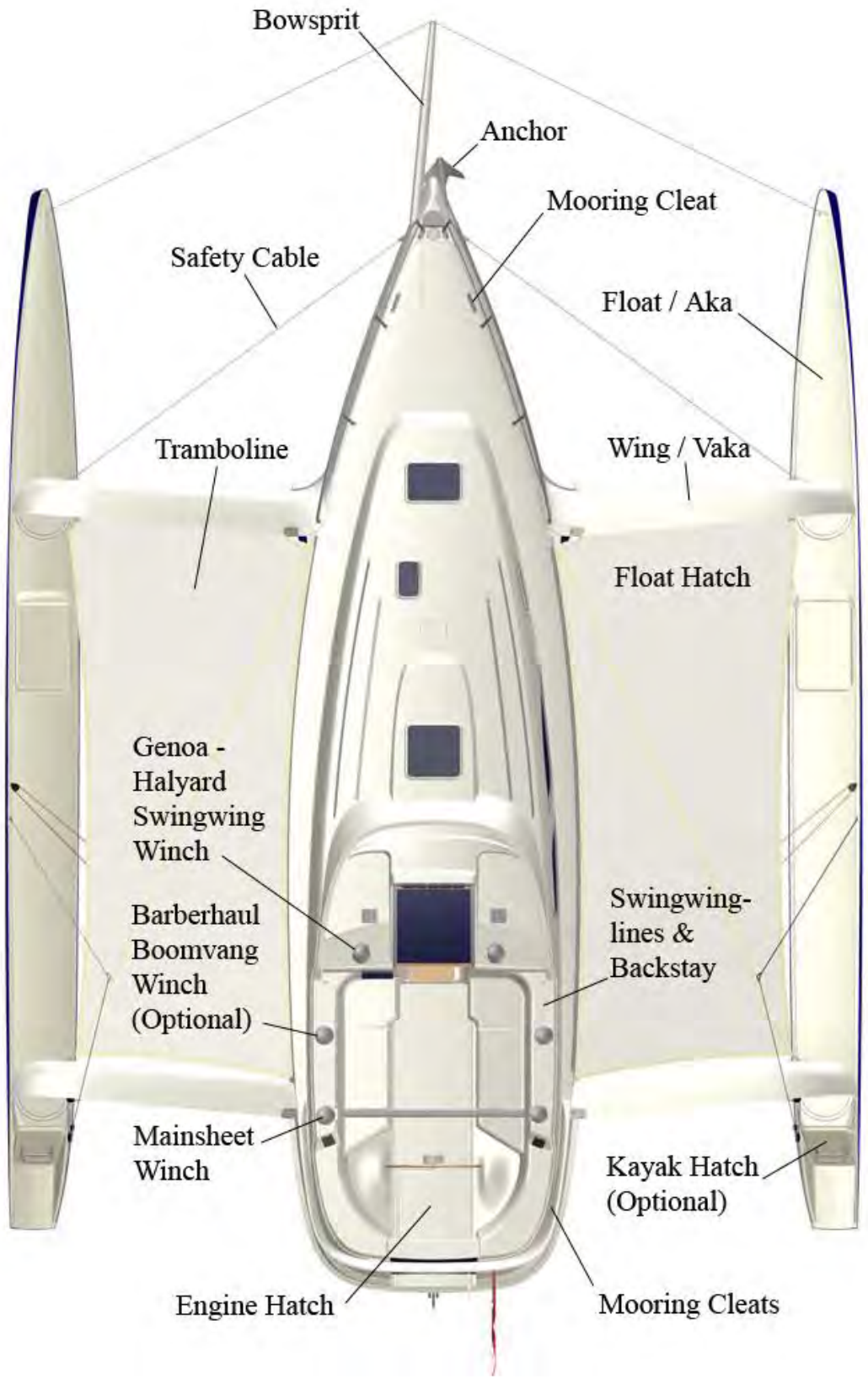
Date: _____ *Signature:* _____

Before use of the craft, please return this slip to:
QUORNING BOATS ApS, Skærbækvej 101, DK-7000 Fredericia.
If not, Quorning Boats ApS cannot be held responsible of any kind of damage or injury.

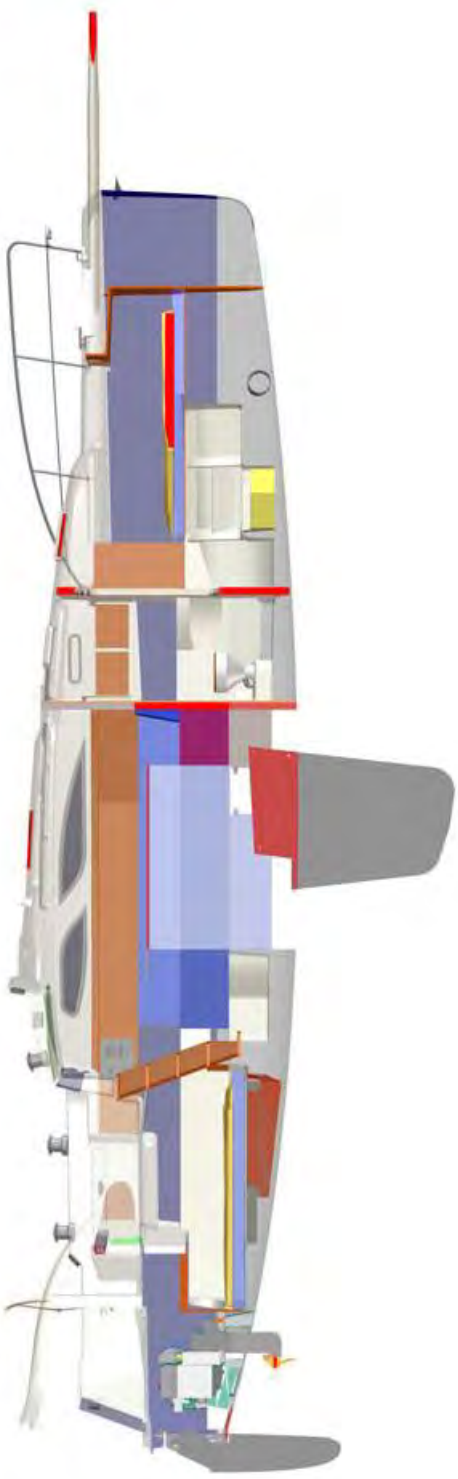
DRAGONFLY 35 – SIDE VIEW

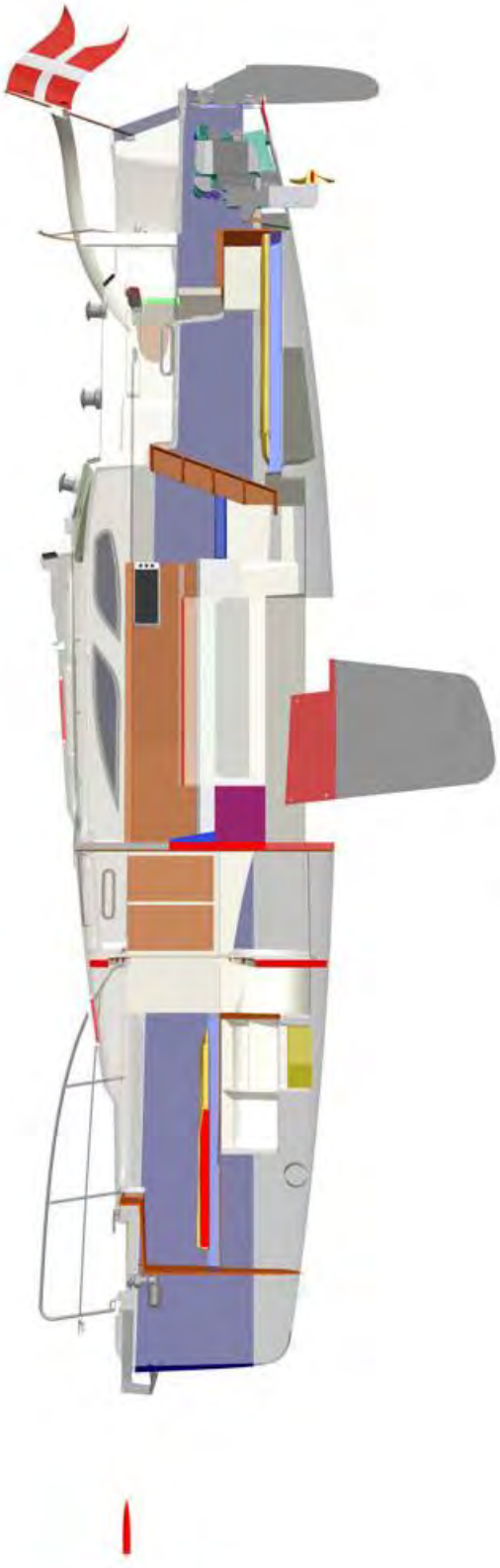


DRAGONFLY 35 – TOP VIEW

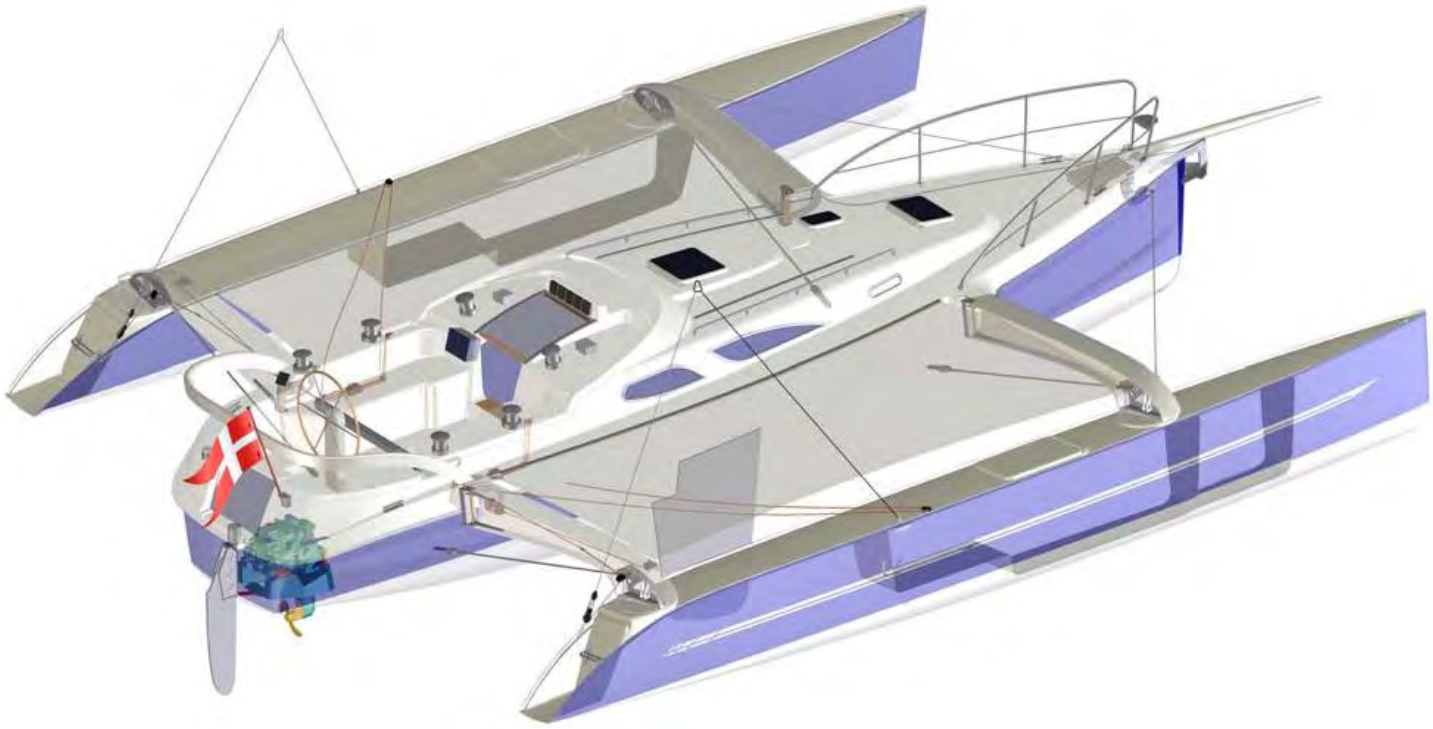


DRAGONFLY 35 – SIDE VIEWS





DRAGONFLY 35 – PERSPECTIVE VIEW



DRAGONFLY 35 SWING WING ULTIMATE

General specifications

Length overall "centre hull"	10.77	m
Length waterline "centre hull"	10.60	m
Length folded	12.60	m
Beam max	8.20	m
Beam folded	3.85	m
Draft incl centreboard	1.90	m
Draft excl centreboard	0.55	m
Draft folded excl centreboard	0.50	m
Weight – basic boat incl sails, standard batteries and inboard engine, but excl fuel, water, anchor equipment, personal gear and other extra options	3,900	kgs
Payload, incl crew	1,500	kgs
Max total weight excl crew	4,800	kgs
Water tank	120	l
Hot-water boiler tank (optional)	20	l
Fuel tank – diesel	80	l
Holding tank	60	l
Engine	29 Hp/20.9	kW
Max engine Hp	40 Hp/29	kW
Mast section total, excl antennas over deck level	17.70	m
Mast height over water level, excl antennas	19.50	m
Mainsail	65	m²
Standard genoa	35	m²
Spinnaker asymmetric, max	120	m²
Light wind genoa, furling	55	m²
Bowsprit length	1.50	m

CE-Design category	B
Max No of persons in category B	8

CE-Design category	A
Max No of persons in category A	6

DRAGONFLY 35 SWING WING TOURING

General specifications

Length overall "centre hull"	10.77	m
Length waterline "centre hull"	10.60	m
Length folded	12.60	m
Beam max	8.20	m
Beam folded	3.85	m
Draft incl centreboard	1.90	m
Draft excl centreboard	0.55	m
Draft folded excl centreboard	0.50	m
Weight – basic boat incl sails, standard batteries and inboard engine, but excl fuel, water, anchor equipment, personal gear and other extra options	3,900	kgs
Payload, incl crew	1,500	kgs
Max total weight excl crew	4,800	kgs
Water tank	120	l
Hot-water boiler tank (optional)	20	l
Fuel tank – diesel	80	l
Holding tank	60	l
Engine	30 Hp/22	kW
Max engine Hp outboard with special bracket	40 Hp/29	kW
Mast section total, excl antennas over deck level	16.20	m
Mast height over water level, excl antennas	18	m
Mainsail	54	m²
Standard genoa	30	m²
Spinnaker asymmetric	95	m²
Light wind genoa, furling	50	m²
Bowsprit length	1.50	m

CE-Design category	B
Max No of persons in category B	8

CE-Design category	A
Max No of persons in category A	6

CHECK LIST BEFORE YOU GO SAILING:

- Check the weather forecast
- Check water tank level
- Check fuel tank level
- Check the power on your batteries are adequate
- Check engine oil and cooling water on the engine
- Check and make sure that the water intake filter to the engine is clean
- When starting up the engine, check and make sure that cooling water is coming out of the exhaust system at the transom (if not, check that sea cork for engine water intake is open – and not blocked) If not, stop the engine
- Check that you have enough propane for cooking (for longer trips)
- Make sure that all equipment is stowed correctly and has been secured
- Check that waterstays and rigging are intact
- Check that ALL hatches are closed – especially on the floats. If the kayak hatch (optional) back on the float is not closed, this can cause the boat to capsize – even when moored in a marina
- If the boat is new, please note that electronics are not calibrated when the boat leaves the yard

IMPORTANT NOTICE

Beware of the following:

- Make sure that there always are lifejackets and/or life preservers onboard for the whole crew – and use them!
- Always as minimum we strongly recommend to use lifebelts outside the cockpit when sailing or even motoring at night
- No persons are allowed on neither trampolines, wings nor floats when sailing offshore in strong wind conditions
- High tension/voltage cables. Mast height above sea level is 19.5 metres/65 feet – with no antennas
- For ocean crossings we recommend carrying a life raft in case of fire
- For ocean crossings and long distance offshore sailing we recommend either a safety hatch in case of capsize and/or in main cabin a fixed joint watertight flash light a reasonable size hammer or axe to cut your way through the aft of the galley area by the entrance
- In case of capsize stay calmly inside the boat and cut your way through the freeboard. DO NOT try to dive out, as the risk of getting strangled in ropes hanging down is too risky. Make sure to store cutting device inside and outside accessible

- By long distance sailing, make sure that all on board are aware of the above-mentioned procedures
- For long distance sailing or ocean crossings, make sure to have up-to-date flayers and other safety devices, like Epirp etc.
- For longer crossings – carry onboard extra impellers and belts for the engine

If this is your first multihull we highly recommend before ”taking command” to get some training in controlling the boat while sailing as well as motoring (manoeuvring) to ensure your safety and comfort. Your dealer will give you this basic information. We strongly advise when receiving the boat to get to know the boat well first under easy calm conditions, especially also manoeuvring the boat under engine, try this out in ”open” water first using a fender or similar and manoeuvre the boat around this floating object, get to learn how the boat turns, stops and how it manoeuvres in reverse etc. This is a very important exercise. This boat is not more difficult to handle than a conventional yacht and many times easier, but it behaves differently, before you get to know the boat. The propeller is close to the water line. Thus, going into reverse is not as efficient as you may expect. Thus, use low RPM in reverse to start with and when you feel that the propeller has a grip, you can speed up.

IMPORTANT – when the boat is folded, the boat and propeller are lifted 7 to 8 cm higher and, when folded, the propeller has even less effect. Test this out well in controlled conditions, so you really get familiar with this. For your information, the standard 30 Hp engine can motor against the wind in up to 30 knots on flat water and against waves up to 25 knots of wind. If you need to motor against strong wind only, we recommend assisting with only a bit of sail.

We recommend starting with max. 5 Beaufort = 20 knots of true wind.

IMPORTANT:
Always before taking the boat out: Pull down the centre board for better manoeuvring without the centre board down the boat can not make a sharp turn and will drift much quicker. And again, check that all float hatches are closed safely.

CLASSIFICATION:

The DRAGONFLY 35 is classified according to the CE-standards in category A.

DRAGONFLY 35 is designed for offshore trips with max 6 persons onboard, during which the wind may rise to more than max 8 Beaufort on the Beaufort scale = 40+ knots = 20+ m/sec. true wind and the waves may rise to more than 4 m significant wave height.

For CE-certification category B you can also sail offshore with max 8 persons onboard, during the wind may rise to 8 Beaufort (40 knots/20 m/sec of true wind) and waves may rise to max 4 m significant wave height.

The craft is certified for the CE by notified organisation (body) IMCI No 0609 under the design module Aa – internal factory control and external control of bouancy, stability and flotation.

Sails must be set according to our wind/sail diagram. Please see page 6.

MANOEUVRING AND MOORING – RECOMMENDATIONS:

IMPORTANT NOTICE
Wear your lifejacket
In heavy weather wear the safety harness on deck all times
Make sure to have functional lifejackets for the whole crew
When sailing in windy conditions, stay on the centre hull only

Minimum four mooring lines, of adequate dimensions (min 14 mm x 14 metres) and suitable for the environment should be on board.

- Always manoeuvre the boat by the engine only in harbour areas
- Handle the boat consistent with the current and wind
- Protect the boat with suitably-sized fenders
- Always keep the ropes unfold and home
- Handle the boat at slow speed – in harbour 2 to 4 knots
- Beware it can be difficult to stop the boat downwind – espeically when the boat is folded, where the propeller is closer to the water surface

DANGER
Never try to stop the boat with your foot, your hand or a boat hook.

When taut:
- Protect the ropes from chafing with for example plastic sleeves
- Make allowance for the tide, as the case may be
- Make sure to use spring lines before you leave the boat alongside a dock

PRECAUTION:

- Be well acquainted with the boat before going sailing in more than 5 Beaufort (20 knots – 10 m/sec)
- Learn to handle the boat well under power to make safe harbour manoeuvring – note that sometimes it can be difficult to stop the boat in reverse downwind
- Be aware that the boat maybe can capsize in folded condition by winds exceeding 10 Beaufort (50 knots – 25 m/sec). In that case secure sideways the stability with one halyard to each side, or fold minimum one side out
- We do not recommend leaving the boat folded on a mooring
- Never let the boat dry out in folded position
- The boat is at all times unsinkable. If anything should happen, always stay with the boat
- In capsized position the boat will stay afloat approx where hull and deck are assembled, if the floats are intact

- By each wing base you will find a stainless eye for lifelines
- For longer offshore passages, life raft is recommended, for example in case of fire
- All three hulls have watertight crash bulkhead forward to prevent flooding of the hulls, if the bow area gets damaged

IMPORTANT USER INFORMATION:

- When folding in or out in strong winds, power up or even better downwind. In strong winds only downwind, if you have waves
- Never keep or power the boat in folded condition where wave heights exceed max. 1 foot or 30 cm, otherwise the folding system can get damaged and by bigger sideway waves the boat can even capsize
- Be aware that the boat can capsize if not handled correctly and sailing instructions are not followed
- All sails must be down before folding position and well secured

SAILING BY AUTOPILOT:

- IMPORTANT - Depending on wind and wave conditions, using Autopilot in winds exceeding 10 m/sec (20 knots) true wind is difficult and not recommendable
- Autopilot can be used in stronger winds, but only when reefed even more conservatively than the sail to wind diagram
- Quorning Boats cannot be held responsible for any damages or problems caused by sailing using Autopilot, as this at times can be unreliable

IMPORTANT INFORMATION ON THE RIGGING:

- Always check the rigging, halyards, reefing lines, water stays, rudder downhaul and swing-wing system before taking the boat out to sea
- Every season or min. once a year shorten all halyards, reefing lines and swing wing lines by approx 20 cm/8", if signs of chafing on the line is seen. After some years, you can for example turn them around or change these with new lines
- Standing and running rigging we recommend changing every 10 years using the same quality of products. We recommend changing the water stays after 5 years and/or by max 10,000 NM of sailing
- Mast tension is set from the factory on new boats

- Never use shackles or similar on the boats man chair without back-up line tied
- Never climb the rigging when the boat is in folded position
- Tension on the rigging, please see rig diagram. The diamond stays must be checked minimum twice a year according to tension diagram as well as before making long-distance trips
- Never change the tension on the diamonds without checking tension with a tension meter according to rig tension diagram, changing the rig tension can cause the mast to break
- Never drill holes in the carbon mast section without asking your dealer or Quorning Boats beforehand
- Never wrap the mast in any plastic, as this can cause the paint to bubble up. If covering is needed, use only breathable textile materials
- When stepping the mast, never secure the mast sideways with only halyards in folding position, as the angle is too narrow – when folded out, it is OK

OPERATING THE SWING WING SYSTEM:

- IMPORTANT – The Swing Wing system must only be used in protected harbour areas. Max. total wave height of 0.3 m/1 foot. Any use elsewhere at owner's own risk
- ALWAYS use the Swing Wing system WITHOUT SAILS. The sails must NEVER be hoisted when the floats are folded in, or when operating the folding system
- ALWAYS pack down and secure the sails safely BEFORE you start operating the Swing Wing system
- ALWAYS point the boat into the wind when operating the Swing Wing system, and, or even better point downwind in strong winds
- Max. boat speed in folded position under power is 6 knots – more speed can damage the folding system

Procedure how to fold out the floats:

1. Take away all the fenders and mooring lines

2. Prepare the endless swing wing line by the stainless double block under the foldable GRP-cover on the cockpit coaming and make sure the line has no kinks

3. Take the marked "fold out" line three turns around the (electrical optional) winch on the cabin top. If your boat has one electrical winch only, then use the "correct" winch on the same side of where the swing wing lines come from and let the swing wing line go around once this winch to lead across to the one electrical winch on the other side – same goes for when operating the backstays

4. Point the boat into or off the wind

5. Release (fully up) the double rope stopper (Easylock) in the side hand locker

6. Slowly activate the electrical winch to begin with, and the float/ama will start to come out (fold only one side at a time)

7. Keep an eye that the lines do not jam between the wings and the centre hull. Once again ensure that the endless swing wing line has no kinks. Keep the inhaul line in the hand to prevent kinks, while folding out

8. If something jams – stop winching immediately

9. As the ama is almost full out, hold a “bit back” in the inhaul line, so the float does not fold fully out too hard – when the forward part of the wing touches the wing base, it is then fully opened. Check that the trampoline is nice tight. By continued use of the electrical winch, this can damage the swing wing system, which is why you have to winch gentle the last bit out

10. Stop when the forward edge of the wings touches the forward edge of the wing base of the main hull. Now this side is folded fully out – close the rope stopper before easing off the swing wing line of the winch

11. Tighten by hand only the slack of the backstay on the side you just folded out

12. Do the same procedure on the other side

13. Now tighten both backstays by the winch and check that both sides approx. are pulled similar by checking visually the angle of the sidestays/backstays – this does not have to be 100 % perfect

14. VERY IMPORTANT – When both sides have been folded out, fix the forward safety cables that come from the centre hull bow to the forward wing U-bolt on the front outside. These forward safety cables are a vital part of the Swing Wing system – which, together with the Swing Wing outhaul line system – will hold and secure the boat fully opened. If these safety cables are not installed, the boat can/will fold in and collapse while sailing

15. No persons are allowed on the float/ama and wings when operating the folding system. Keep hands away from the wing/hull joint and moving parts

Procedure to fold in the floats:

1. Release the forward safety cables on both port and SB-side at the end of the forward two wings and pull the bowsprit back in

2. Prepare the endless swing wing line by the stainless double block by the cockpit coaming and make sure the line has no kinks

3. IMPORTANT - Release the backstay only in the same one side; release the backstay slowly by easing the backstay line out around a winch. Also ease off the other backstay by approx. one meter on the backstay line, to this has enough slack, when the first one side is folded in

4. Take the line marked "fold in" four turns around the winch so it is ready to operate

5. Release the double rope stopper (Easylock) for the swing-wing system. The float can now be winched in towards the centre hull – make sure that the swing wing lines do no kink and that the backstay line is slack also

6. The waterstays and trampolines "take care" of themselves

7. Immediately stop winching in the float when the inside rub rail touches the GRP-support under the aft wing base on the centre hull

8. To protect the swing wing outhaul line, we recommend only to put tension on the outhaul line by the winch, before opening the Easylock clutch, as this will not put as much friction on the swing wing line, and it will last longer

IMPORTANT INFORMATION FOR USE OF THE SWING WING SYSTEM:

Max. tension on the backstays is ONLY what one person can pull by using the winch handle.

By sailing in hard wind and wave conditions the leeward backstay will get slack – but only pull this slack by hand in leeward side – never use the winch to leeward, as this can put too much tension on the rigging and cause rigging faileure.

The swing-wing system must not be operated in winds exceeding 12 m/s or 25 knots by true wind speed in open areas.

The boat will stay stabile in a slip as long as waves are max. 0.3 m/1 foot and wind speeds from sideway do not exceed 25 m/s or 50 knots of true wind speed. If higher winds are expected either make sure the boat faces into the wind, or secure the mast sideways – or, in worst case (like heavy storm or hurricane warning), take the mast down or move the boat to a place, where it can be folded out. Or, take the boat out of the water, take the mast down and secure the boat.

Never keep the boat folded on mooring or at anchor.

Never let the boat dry out in folded position.

Never hoist any person up into the rigging when folded.

Never set sails when folded.

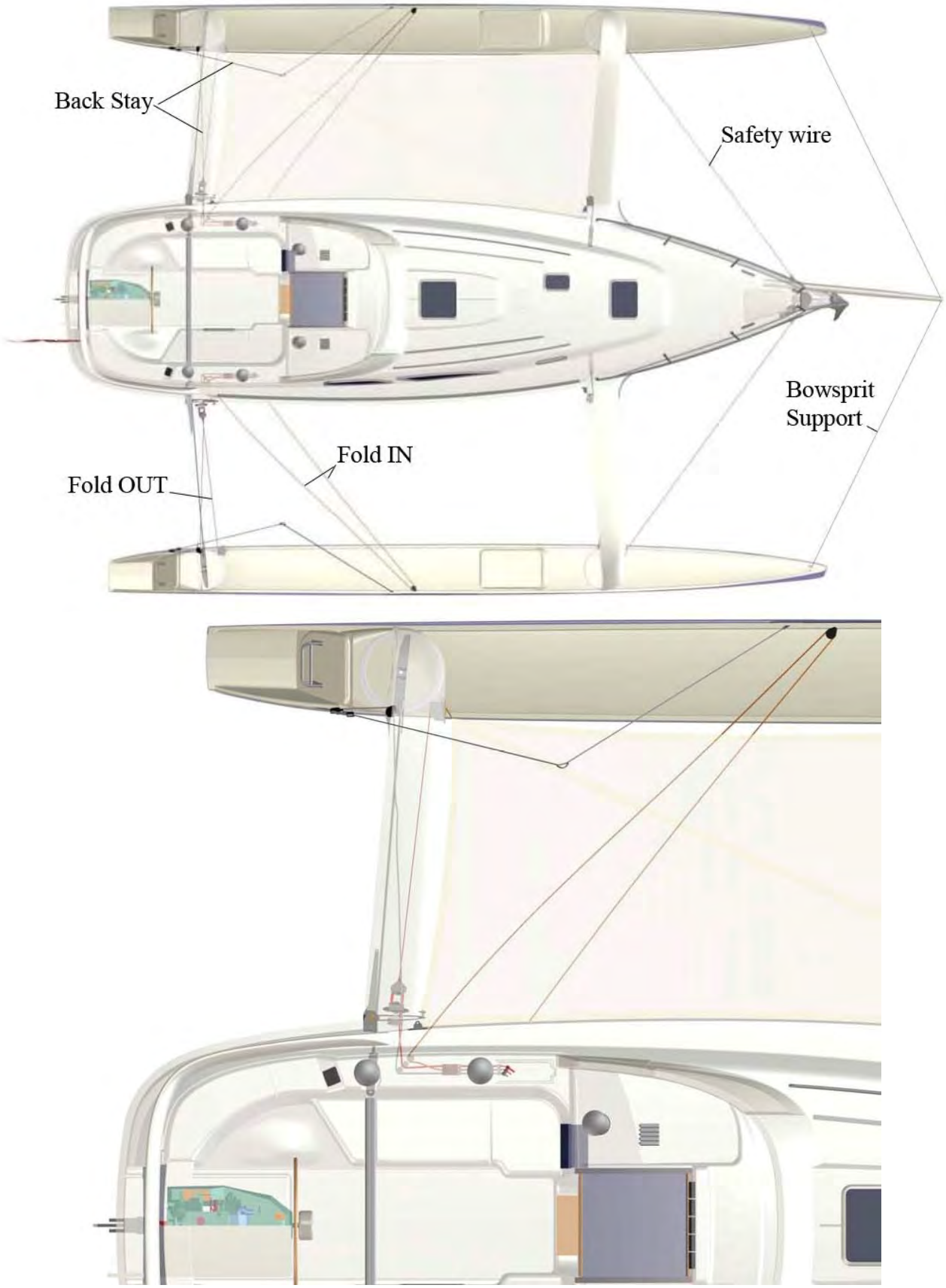
Only use the Swing Wing system in harbour or wave protected areas.

On dry land never fold out by using the folding system only. On dry land you have to push by hand the float approx half the way out, before you winch it out with the swing wing system. This is due the fact that the floats are missing their buoyancy.

When folding in on dry land, it is very important to hold the “fold-out” line in your hand to control that the float does not fall in/down by itself. This can damage the boat, and people around the boat can be injured.

ALWAYS remember to install the safety cables forward. If not, the boat will collapse while sailing.

TOP VIEW



LAUNCHING THE BOAT:

When launching or handling the boat, for example for transport or winter storage, the lifting eyes and straps are guaranteed to hold ONLY when provided from Quorning Boats and used under the following conditions:

Before craning: lift and turn the GRP aft rail forward over the companionway, so it clears away of the aft lifting eyes – SHORTER STRAPS AFT AND LONGER FORWARD.

1. Lifting eyes and straps are designed for single hook system use only – not for individually use or use elsewhere, i.e. all four straps to one crane hook

2. Lifting straps must not be used elsewhere

3. When lifting you must check and make sure that the lifting eyebolts are facing and line up with the lifting cables. If not, this can cause break of the lifting eyes, and for this Quorning Boats cannot be held responsible

4. Make sure that NOBODY is in or under the boat when craning. If work has to be done under the hull, make sure that your support can take the full load of the boat, if the lifting straps should fail

5. The lifting straps are designed for the boat only – NO crew onboard and the bilges MUST be empty. If the total weight exceeds 4,800 kgs/10,500 pounds, the straps should not be used

6. No persons are allowed on the boat while craning

7. Before craning the boat out of the water, make sure to lift up and secure the centreboard and release the rudder downhaul, so this can be lifted up when setting the boat down on the cradle

8. When craning with the lifting straps the boat MUST be in folded position. The mast can either stay up or not – no difference in the balance

9. IMPORTANT – before launching the boat, check that log and depth sounder are fitted correctly in place to avoid flooding the centre hull. Travel lift can be used if this is not too small. The belts should be mounted forward of the forward crossbeam and aft of the aft crossbeam around the centre hull only. Be careful not to get the belt around the propeller

10. IMPORTANT – lifting straps must be checked once a year by professionals. If lifting straps are damaged, they must not be used. Lifting straps must not be used after 5 years from purchase – use otherwise is at own risk

SAILING TIPS:

MANOEUVRING IN HARBOUR. If the water is deep enough always sail or motor with the swing keel DOWN for better manoeuvring. The boat manoeuvres the same way in folded and/or unfolded position. Remember the boat is light and by wind it drifts easier than conventional yachts. Please note when the boat is folded in, it can be difficult to stop the boat, because the propeller is now up higher and closer to the water surface.

ASSEMBLY OF THE DRAGONFLY 35 SWING WING

WINGS:
First of all, mount the wings in respective places with the big pin bolts. The pin bolts must be mounted with the thread down, and the nut secured with a cleves pin. Fold the wings out by holding the wings with a line diagonal forward.

FLOATS:
Either lift up the float by hand (6 people) or by fork lift or similar – ratchet spanners can be helpful also. When mounting the float to the wing – first place a brass washer and a nut on each bolt. Then tighten the nut at each wing by the big "key" No 32 just so that the floats lie against the under side of the wing, not tight! You must regularly look after and make sure that these are **always** tightened correctly. The nut is secured by a small Allan screw in the nut.

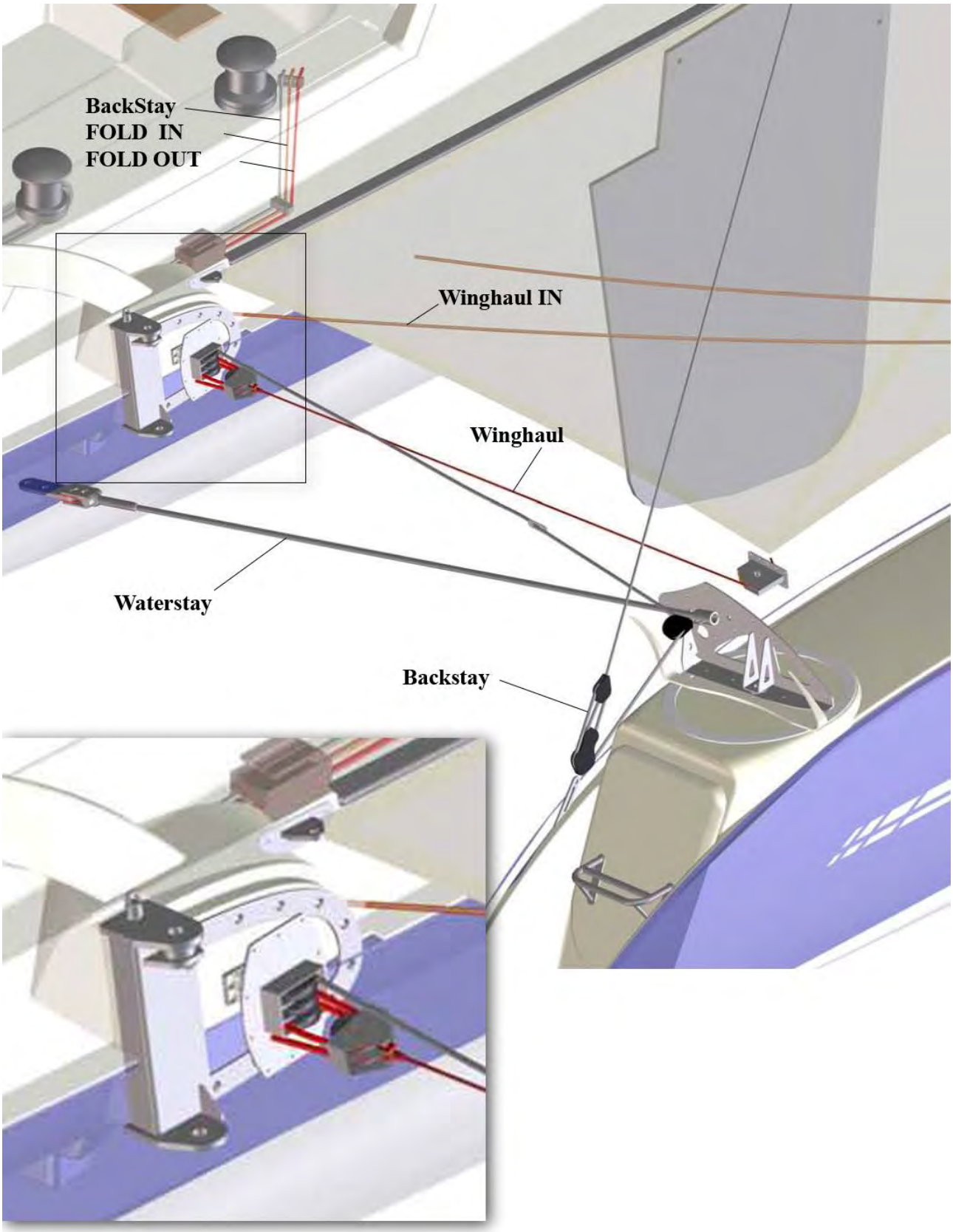
WATERSTAYS:
There are two long stays for the forward wings and two short ones for the aft wings. The thread part of the waterstay you turn into the big stainless steel fitting in the end of the wing where the ama is mounted. Then you adjust the waterstay so that the waterstay is well hand-tight, it must not feel "loose". The waterstays must be checked regularly to make sure they have the correct tension and are free from failures. Make sure that the threads are clean and have no sand grains.

After first season, the waterstays normally need one full extra turn.

IMPORTANT: Waterstays must be changed every 5 years or by max. 10,000 NM of sailing.

Always assemble the boat on land.

SWING WING AND BACKSTAY LINEDRAWING



For much easier mounting use oil or grease in the thread. For easier adjusting of the water stays you can fold the wings back about 50 to 60 cm (2') aft and fit the water stays at this position and they will fit hand tight, when back in forward position.

If Quorning Boats has adjusted/assembled the boat at the yard before delivery, the waterstays normally need ½ a turn after the first season/summer.

NETTING:
The trampoline netting's are marked for either BB (port) or SB (starboard) mounting on the under side forward. Pull them into the netting tracks, starting from aft track along side the cabin sides and then into the forward wings. The wire in the netting is fastened at the front outside wing by the quick link to the stainless eyebolt on "the wing fitting" – and at the aft wing/main hull connection by the stainless triangle fitting is mounted to the fork toggle terminal in the netting. The swing wing cable by the outer end of the aft beam is mounted to the stainless block in the aft outer corner of the netting. Make sure the cable in the netting goes between the "wheel" and the pin bolt in the block. At the forward beam/hull assembly there is a shackle in the trampoline that has to be secured to the eye bolt on the centre hull – this is very important. Check regularly that the outhaul cable is not damaged, as this effect the safety of the boat as well as the lines for the swing wing system.

STEPPING THE MAST:
When stepping the mast, if possible, both floats should be folded out, which gives more working space and more clearance (slack) to fit the sidestays.

Should this not be possible, you can fold the one side up against the dock, which is the most popular procedure though.

NEVER step the mast with both floats folded, as it is extremely difficult to fit the stays and rigging, as everything is too tight.

Remember to secure the rigging bolts in the sidestays and forestay with cleves pins.

FORESTAY AND SIDESTAYS:
Forestay and sidestays are mounted in the same fitting on the upper part of the mast, where the four upper diamond stays are. Each sidestay is mounted with a 10 mm quick link and 12 mm quick link for the forestay that has to be tightened with a wrench.

SETTING THE GENOA:
Before hoisting the genoa make sure to roll furling line on the drum. Turn the head-foil clockwise until you have only 2 to 3 metres (approx. 8 feet) line left in the cockpit. This way you are able to furl the genoa at once when it is hoisted. The luff is mounted by the shackle over the furling drum. Tension is adjusted via the jib halyard.

MOUNTING THE MAINSAIL:
The sail is placed on the trampoline and start from the top of the sail. Hold the boat up into the wind. Mount the headboard (the top of the sail) into the top double Ronstan batten car on the mast. Then hoist the sail to the next batten and fit the next stainless bolt into the batten car with the nut on top and etc.

Remember to fit the two reefing lines in the sail.

By taking the mainsail off again **never** take off the Ronstan batten cars, all the balls will fall out – just loosen the bolt and nut, which is connected to the sail.

IMPORTANT: The reefing line in the back end of the boom comes out from a sheave and through the block in the sail and is tied with a bolen knot forward of the main sail clew webbing, so it does not slide aft out of the boom end.

REEFING LINES:
The reefing lines are installed through the mast with pilot lines and same is when rigging down the boat for the winter – pull only reefing lines out by pulling a new pilot line through the mast again. The reefing lines stay with the boom at all times.

Deck plugs must be greased for better connection and to avoid corrosion. Important is to cover the deck plugs on the deck over the winter, when the plugs have been taken off.

SAIL DIAGRAM

DIAGRAM OF SAIL AREA TO TRUE WIND SPEED:

m/sec.	Knots	Beaufort	Upwind and beam reach
0 – 8	0 – 16	4	Full main + full genoa
8 – 10	16 – 20	5	Full main + genoa 1 reef
10 – 12	20 – 24	5+	Main 1 reef + genoa 2 reefs
12 – 14	24 – 28	6	Main 2 reefs + genoa 2 reefs
14 – 16	28 – 32	7	Main 2 reefs + genoa 3 reefs
16 – 20	33 – 40	8	Main 3 reefs + genoa 4 reefs
20 – 24	40 – 47	9	Main 3 reefs + genoa almost or completely furled – sailing upwind is difficult
25 – 28	48 – 55	10	Upwind sailing not recommended – only with very good experience

Beware that the mainsail has two cockpit-operated reefs only and that the third reef is manual operated.

m/sec.	Knots	Beaufort	Downwind
0 – 10	0 – 20	4	Full main + full genoa or spinnaker/Code 0
10 – 12	18 – 22	5	Main 1 reef + full genoa (wing/wing)
12 – 14	24 – 28	6	Main 1 reef + genoa 1 reef
14 – 16	28 – 32	7	Main 2 reefs + genoa 2 reefs
16 – 20	32 – 40	8	Main 3 reefs (or no main) + genoa 2 reefs (or less)
20 – 24	40 – 47	9	No main + almost fully furled genoa
25 – 28	48 – 55	10	No sails – maybe use of drift anchor or similar

For a new inexperienced crew we do not recommend sailing in more wind than max 25 knots or 5 Beaufort of true wind!

IMPORTANT – If this diagram is not respected Quorning Boats ApS and dealers cannot be held responsible for boat, crew and/or gear. Beware that the boat can capsize if not handled correctly. For downwind sailing if "solid" seawater gets over the centre hull bow – this is the first warning to reduce sail. If winds are "gusty", make sure to be ready to release the sheets quickly – by holding the sheets in your hands.

IMPORTANT – asymmetric or Code 0 can max be used beam reach safely up to 6 m/sec or 12 knots of true wind. Lightwind genoa can max be used upwind to 5 m/sec or 10 knots of true wind – use upwind in stronger wind, will damage either the boat or the sail.

SAILING AND TRIMMING

IMPORTANT – It is of great importance always to keep your sheets and halyards tidy when sailing because all lines come to the cockpit. This is an important safety factor and improves the joy of sailing.

TRIMMING THE GENOA:
The luff tension is to be adjusted by the genoa halyard. In light winds of course only little tension to avoid wrinkles along the luff. In more wind the luff needs more tension, but only to keep the luff tight, more is not necessary – over tensioning can damage the sail.

Under normal conditions the genoa car on the cabin roof should be placed in the aft end of the track, if the genoa ”closes” in the aft leach, move the genoa car aft, and if the genoa "opens" further up in the aft leach, pull the genoa car forward. You can adjust the genoa car from the cockpit via the genoa track outhaul on the easylock, and also the genoa sheet goes through the easylock on the outside, marked GENOA. The easylock is normally always left open, and ONLY used if the winch is needed for another purpose. In case you need to put a reef in the genoa you must pull the genoa car forward for right trim. For reef 1 the genoa car is pulled approx. 50 to 60 cm = 2' forward on the track, and for reef 2 it is pulled approx. 100-120 cm = 3½-4' forward, approx lined up with the mast, if the genoa is reefed more, the traveller is pulled approx. up to the forward end of the track. For your information, only use the barberhaul on beam reach or downwind.

- To pull out the genoa, open/release the furling line on its jammer/clutch
- Only furl the genoa when the genoa sheet is released

MAST TRIMMING:
The mast is always in trim from the yard, but generally the mast must bend approx. 7 cm over the aft edge in full length. When holding the main halyard close tight and to the aft end of the mast ends, the distance to the mast should be approx. 7 cm = 3" between the two diamonds.

Do not change the trim of the diamond stays, as this can cause mast failure.

REEFING THE MAIN SAIL:
Check the lazy jack line is secured in its cleat on the side of the boom (works also as topping lift). In order to reef the main you loosen the main sail sheet and halyard and it is recommended to mark on the halyard where ”reef 1” and where reef 2 has to be locked, when on the easylock. The halyard is loosened and the reef line is pulled hard so that the reefing block by the luff is approx. 25 cm = 10" above the boom.

Continue upwind by the genoa and ease off completely the main sheet, the main halyard is loosened till the mark reef 1 and then you pull the line reef 1 which is marked on port easylock. This line will then automatically reef the luff first and then the leach. Same procedure applies to reef 2 and the reverse when reefing out. After each reef the sail ought to be ”packed” with chock cords for less wind resistance.

Pulling the reef line, procedure is completed when the reef block in the aft leach is touching the boom.

Check that the reefing block at the luff is not chafing the sail. Normally, it does not, but some times you have to go up and "arrange" the sail at the luff.

On the Dragonfly 35, there is a third reef, which can only be used "manually" by tying this down with a separate line.

For long distance sailing, we recommend to prepare a reefing line from the third reef on the sail down to reef II, so you easier can control the third reef by hand. When using the third reef, the conditions are of course not the easiest.

Avoid reefing downwind, as the mainsail can be blown past the sidestays and also brake the battens. Of course, if there is no other way out, you can do it.

MAIN SAIL:
The main needs much more trimming than on a monohull, especially on the main sheet as the boat has many speed potentials, depending on the wind speed. This calls for concentrated trimming if you want maximum speed and fun with your boat. Generally the leach seen from the boom end to the mast top must be almost straight, no matter what wind force: the roach must absolutely not ”fall out” or twist unless the boat is pressed too hard. Trimming the main in a breeze takes great effort for maximum performance, but makes sailing more fun.

TACKING:
When tacking the boat, it sometimes helps to ease off the main sheet a little (especially in strong winds and waves). If you stall the boat after a tack it also helps to ease the main sail until the boat builds up speed. If the boat starts to go backwards after a tack, then immediately turn the rudder blade reverse to windward, this helps the bow to bear off and get wind into the sails again. Do not turn the rudder to ”normal” again until the boat starts moving forward again.

MAIN SAIL FOOT:
- is trimmed normally. Light wind when tacking, light curve approx. max. 12 cm = 5'. Downwind, big curve. Medium air tacking, flat foot. And downwind, large curve. Hard wind tacking, flat foot max. 10 cm = 4', and downwind also flat foot - this has little effect only and it is much more important to focus using main sheet and preventer (boomwang).

MAIN SAIL LUFF TENSION:
In light wind you set the main halyard easy only to avoid "wrinkles" in the sail, which has the effect that you easier can help the main when tacking so that the battens are turned right for the new tack.

In medium air the main halyard is tightened harder, so that the wrinkles in the sail are gone and the luff straight.

IMPORTANT
In heavy wind the main halyard is tightened hard to flatten the sail and avoid wrinkles in the luff – this can sometimes not be avoided. By tensioning the mainsail luff upwind in winds exceeding 6 m/s (12 knots), you must ease off the main sheet when tensioning the luff.

If for example you are anchoring or beaching for a short time with the main sail set, then loosen the main halyard a bit to release the tension in the mainsail luff, and the mainsail will not so easy catch the wind.

MAIN SHEET TRAVELLER CAR:
Mulithulls have a rule that goes: the mainsheet car must NEVER pass the centre line to windward. Not even in light air. If the wind is increasing when tacking upwind and you find the main has too much power and whether helm try sheeting the traveller, approx. 10-15 cm = 4-6" to leeward instead for slackening the main sheet and therefore not make the mainsail deeper. Doing this the boat can take more wind without reefing. Eventually you can also ease off the sheet and "open" the roach.

USING THE BACKSTAY:
The combined top shroud backstay has been developed because of the swing wing system to enable easy and quick trimming of the top shrouds, when folding.

When sailing ALWAYS set the backstays in both sides to obtain the right tension on the top shrouds (sidestays). In light wind, you can set them only easy and lock them in their Easylocks.

In more wind, set the backstays on the self tailing winch with the handle. In heavy wind you set the backstays on the self tailing winch as hard as you directly can, turning the winch handle by hand – never pull leeward backstay by force under sail. Only pull the slack in by hand.

Downwind, we strongly recommend using a boom vang or preventer for better control of the roach on the main.

IMPORTANT – when jibing in stronger winds, make sure to make a fully controlled jibe, which means, set the traveller car in the centre and pull the mainsail fully in centre, as you jibe. After jibing, quickly ease off the mainsail again and set the boomwang/preventer again. If you are not careful when jibing in strong winds, you can damage the mainsail or, even worst case, the rigging.

ASYMMETRIC SPINNAKER SAILING:
Sailing with the spinnaker is a fantastic third dimension in sailing, which a lot of people dread, caused by bad earlier monohull experiences. On a trimaran spinnaker sailing is fun and a comfortable adventure. A trimaran is not heeling over from one side to the other (rolling), and the spinnaker pole is nonexistent. With a little practice you can actually handle the spinnaker alone, but always handle it with respect!!! If you respect the spinnaker and use it with reason it is great – also when cruising.

SPINNAKER SHEET:
Is led from the cockpit to the block on the middel of the aft wing and directly inside the top shroud to spinnaker clew and "inside" between the kite and the forestay.

SETTING THE SPINNAKER:
You can best set the spinnaker either from the leeward trampoline or directly from the float hatch. Make sure the lines run correctly, that the spinnaker halyard for example is not twisted round the forestay or the diamond spreader. Keep sailing downwind and hoist the spinnaker in the sock behind the mainsail in the big "wind shade".

CAUTION – If you feel any resistance hoisting it or sheeting it, stop pulling immediately. It does not take much to rip it apart if it is stuck! When the spinnaker is full, roll up the genoa. It is very important that your spinnaker fills first or you will find yourself rolling it into the genoa. It seldom pays sailing with both genoa and spinnaker at the same time.

JIBING WITH SPINNAKER:
Go downwind – pull over the endless spinnaker sheet, so you now see the clew 2-3 metres on the windward side and now jibe the mainsail, while you keep pulling the spinnaker sheet – you will see that it works perfectly. Important is to start pulling over the spinnaker before you jibe the mainsail.

TAKING DOWN THE SPINNAKER:
NEVER sail the spinnaker without main sail!!! It can become very difficult and dangerous to get it down without the wind shade behind the mainsail.

If the wind increases, it is more difficult to take down the spinnaker. Practice can eliminate this problem. Prepare the spinnaker halyard tackline and the sheets so that they can "run" out without any problems. Bear off to downwind, slacken tack line completely off first, and from the trampoline netting you pull down the sock close behind the main, like a folded curtain to take out the wind. This way you can control the spinnaker, easily and elegantly. Now you can ease off the halyard and pull the spinnaker down. Do not ease off faster than it is pulled down, so it drops into the water.

NEVER ease off the leeward spinnaker sheet when taking it down.

IMPORTANT – jibe between forestay and luff of spinnaker and bowsprit.

Normally, we recommend downwind course approx 160° with a jibing angle of 40° - in stronger winds it pays of well to go even deeper downwind. For longer downwind course, pull up the centreboard.

ANCHORING:

The anchor bracket on the bow is designed for max 15 kgs Bruce type anchor or Spade type anchor A-100 (8,5 kgs).

Use chain (8 mm diameter) or 16 mm rope with internal led up front. Recommended length of anchor line should be 5-10 times the depth – depending on the depth and the condition of the seabed.

PRECAUTION - Before anchoring check the depth of water, current and nature of the seabed.

By beaching or drying out the boat beware of rocks and stones, only beach the boat on sand.

When anchoring secure the anchor line to the cleats or make a bridle, which you can fasten on the stainless pad eye on the front of each forward wing. Using a bridle prevents the boat from "fishtailing".

ALWAYS anchor in protected areas!!

Note that multihulls have more windage than conventional yachts.

By anchoring off the stern the engine should be stopped to prevent the anchor line from getting into the propeller.

IMPORTANT – if your Dragonfly 35 is equipped with a bowsprit, pull first back in the bowsprit, before you set the anchor, as this does conflict.

The anchor is close to the bow, so be careful the last bit when the anchor comes out of the water and up to the anchor fitting.

SWING KEEL – KICK UP SYSTEM

The centre board has been constructed in such a way that even the slightest touch of ground makes it kick up automatically via the release cleat on the cabin top aft. To remount the release cleat there is a small pawl on the lower end, which you push in, and the clam cleat can be repositioned, or just slam it down.

Up- and downhaul you can adjust from the cockpit cabin top. Just like you can trim a dinghy on the centreboard you can also profitably do that on the Dragonfly.

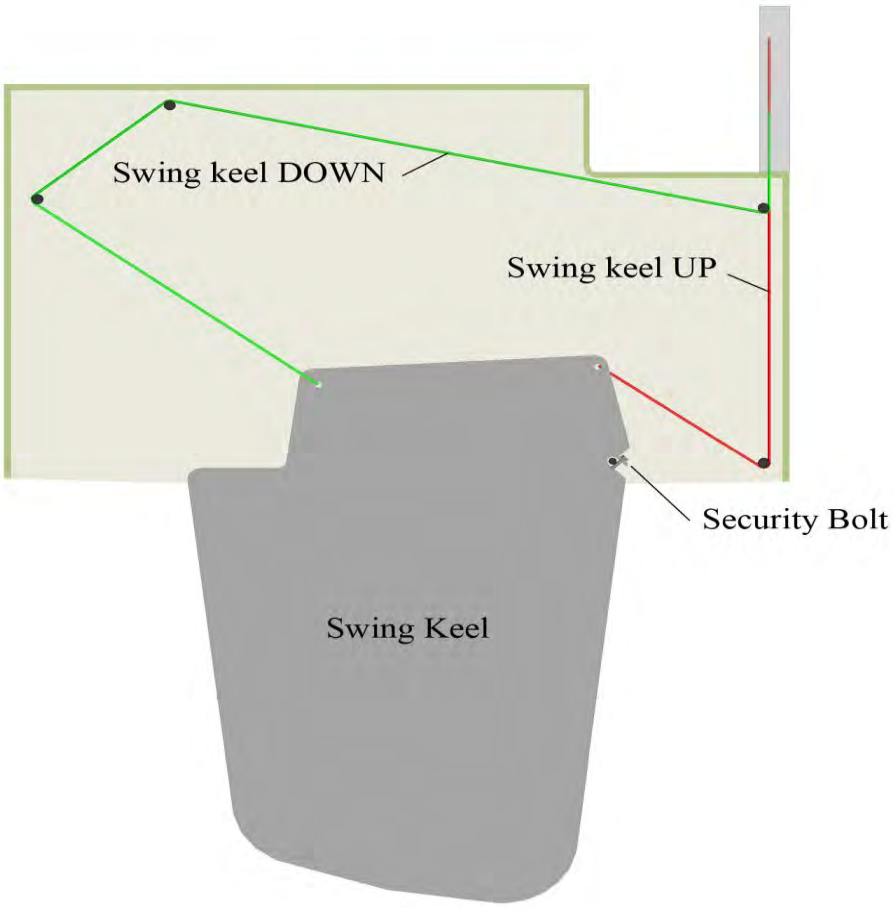
Generally we always recommend placing the centre board all the way down when tacking. On a reach half way down and sailing downwind all up.

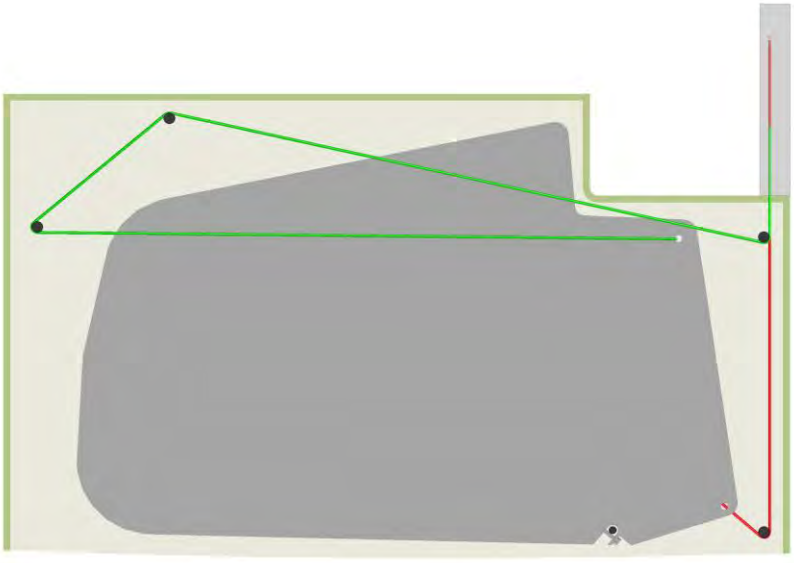
IMPORTANT – do remember, though, lowering the centreboard before going upwind again. Under sail pressure you cannot possibly adjust the centreboard you will have to either luff into the wind or bear off to dead downwind to adjust the centreboard. Downwind you will seldom find adjusting problems.

By trying to pull the centre board down while sailing, you can break the blocks or control lines to the centre board system.

The centreboard, if fully down, when the knot on the “board up” line on SB-side is touching the Easylock – never change the position of this knot, as this adjusts the position of how far down the centreboard max can go down safely. Please see centreboard diagram.

Always open the "board up" line when pulling the board down.


Swing keel DOWN
Swing keel UP
Security Bolt
Swing Keel



RUDDER SYSTEM

The rudder also has a ”kick-up” system, so by hitting the ground the rudder will always kick up. The downhaul line and release cleat is placed in the SB aft cockpit locker.

IMPORTANT – Be sure that the rudder is always fully down in position, otherwise the rudder gets hard weather helm.

Do regularly check the downhaul cable for kinks or damage. The rudder is not designed to be used while sailing in no other position than fully down, otherwise the rudder system will bend and be loose or even break off.

To pull up the rudder, release the downhaul line and pull the lifting line in the back. Also regularly check the bolt where the rudder is bolted to the rudder head, that this nut is tight.

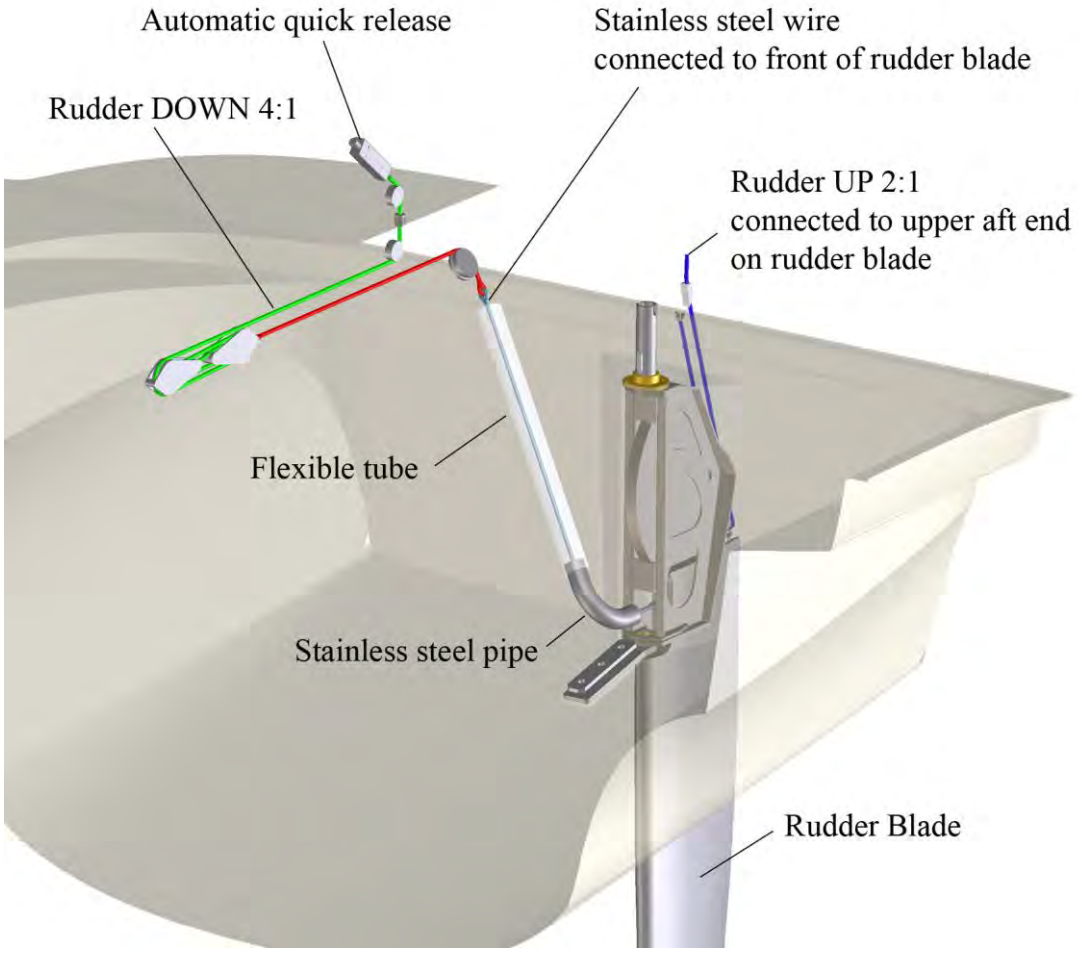
Always make sure that the downhaul line is always ready to release with no kinks or knots on the line and that the line always is led into the aft locker via the hole above the release cleat.

When beaching the Dragonfly just release the downhaul line so it goes up easier and makes less damage on the rudder.

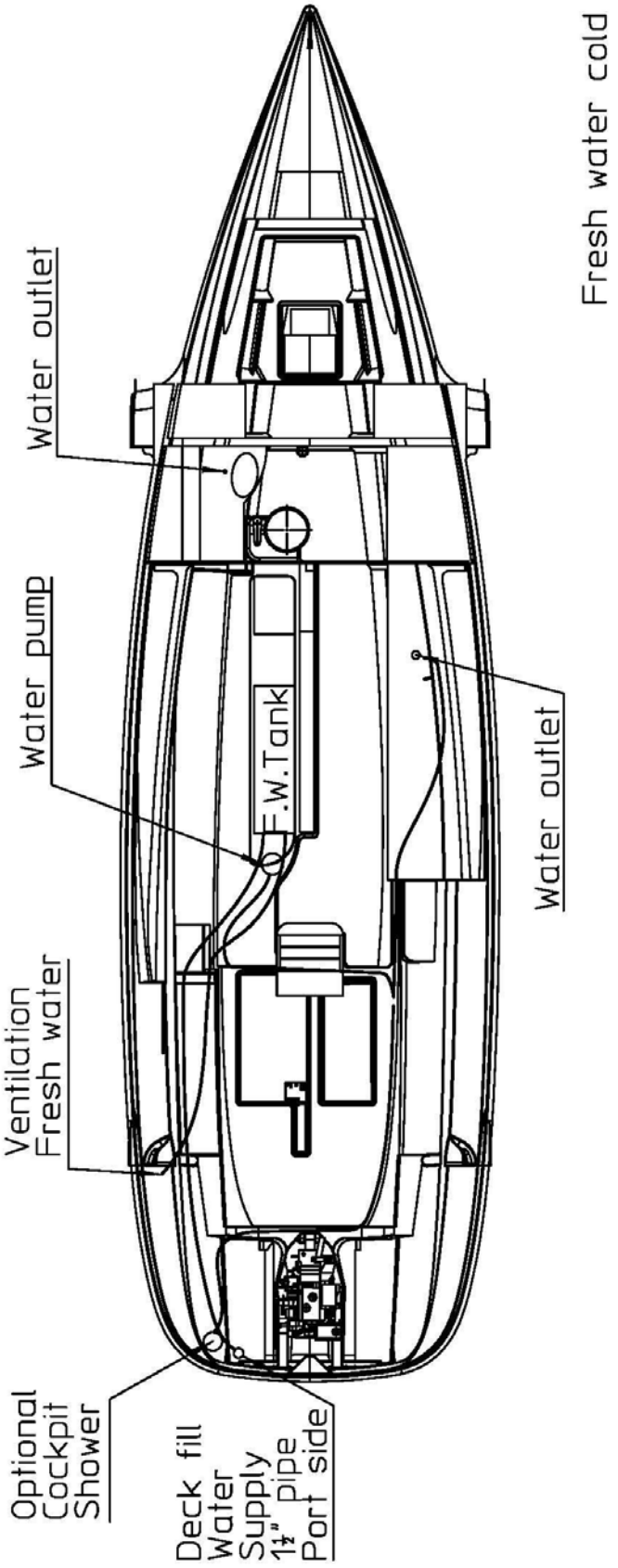
The automatic quick release cleat can be adjusted lighter and/or harder, if needed.

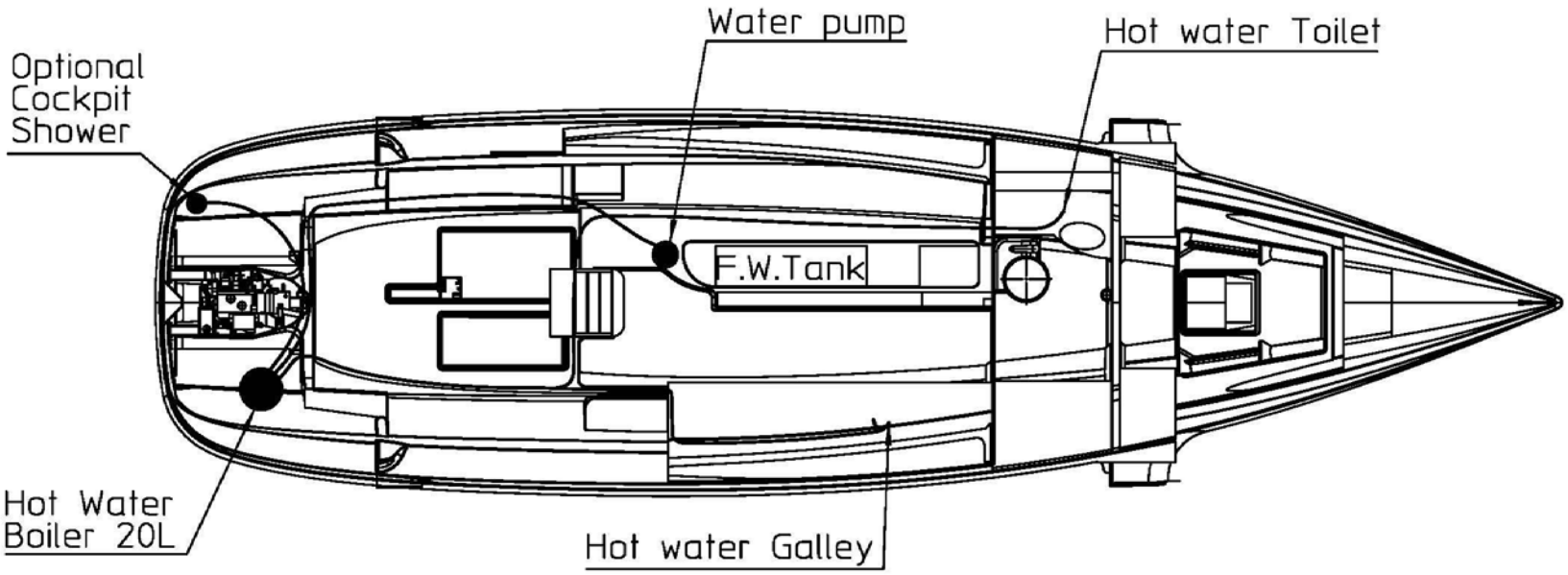
If the rudder is bolted too tight, it can be difficult to move it up and down – just bolt it easy tight, so there is no slack sideways in the rudder.

Boats with wheel steering are equipped with an extra external emergency tiller to be fitted just over the rudder in the backend cockpit floor.

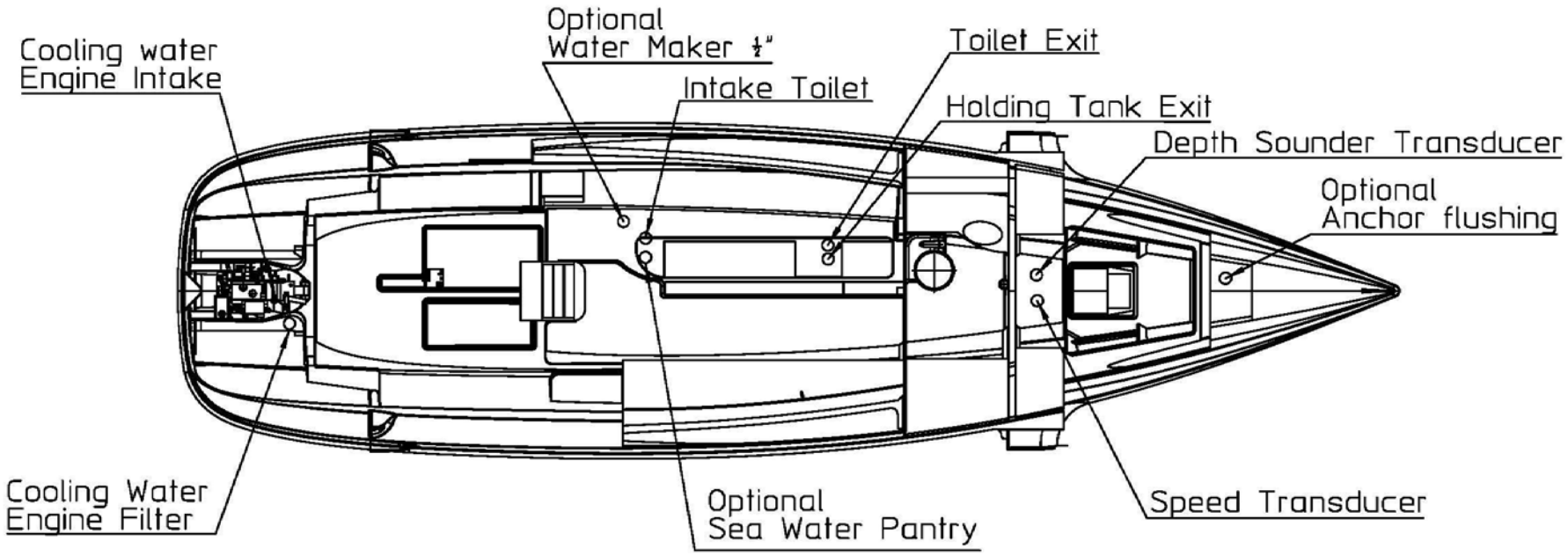

Automatic quick release
Stainless steel wire
connected to front of rudder blade
Rudder DOWN 4:1
Rudder UP 2:1
connected to upper aft end
on rudder blade
Flexible tube
Stainless steel pipe
Rudder Blade

Water installations

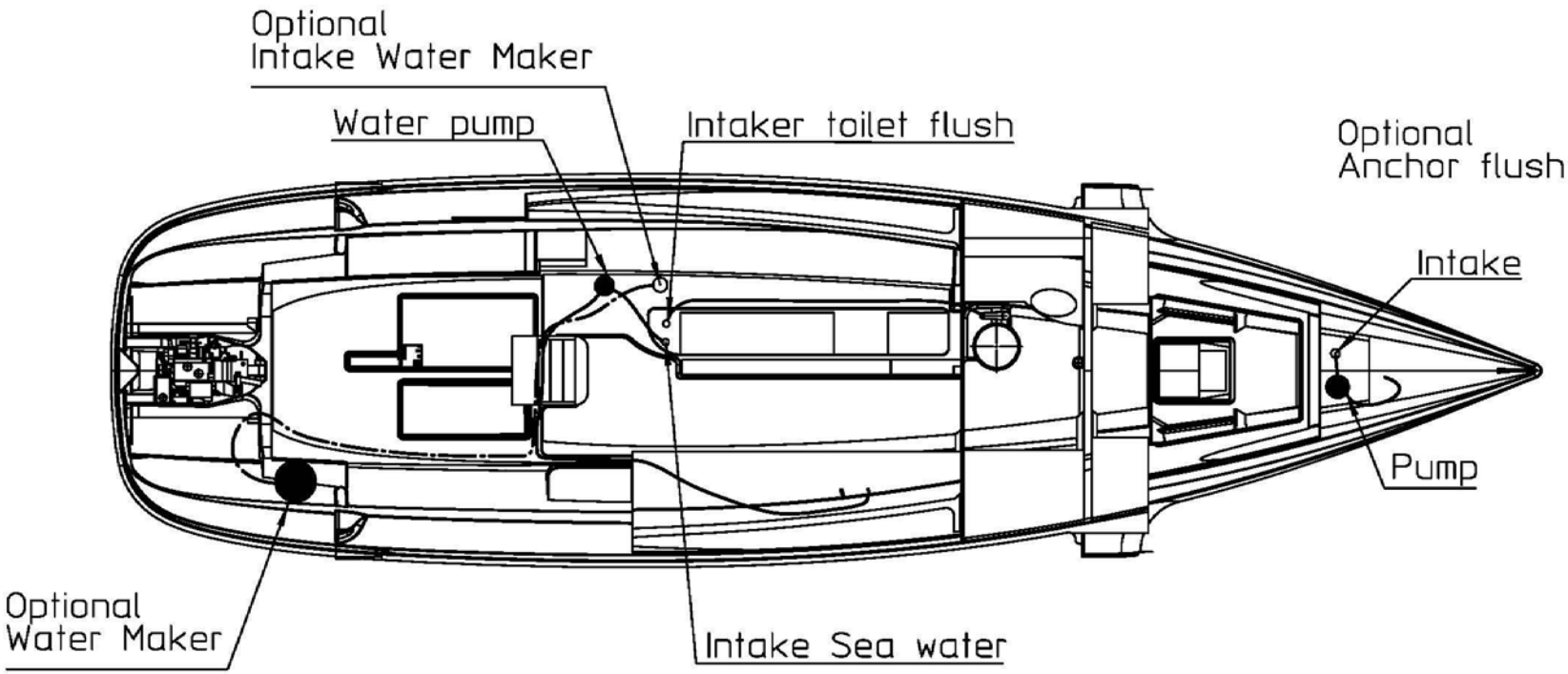




Fresh water Hot

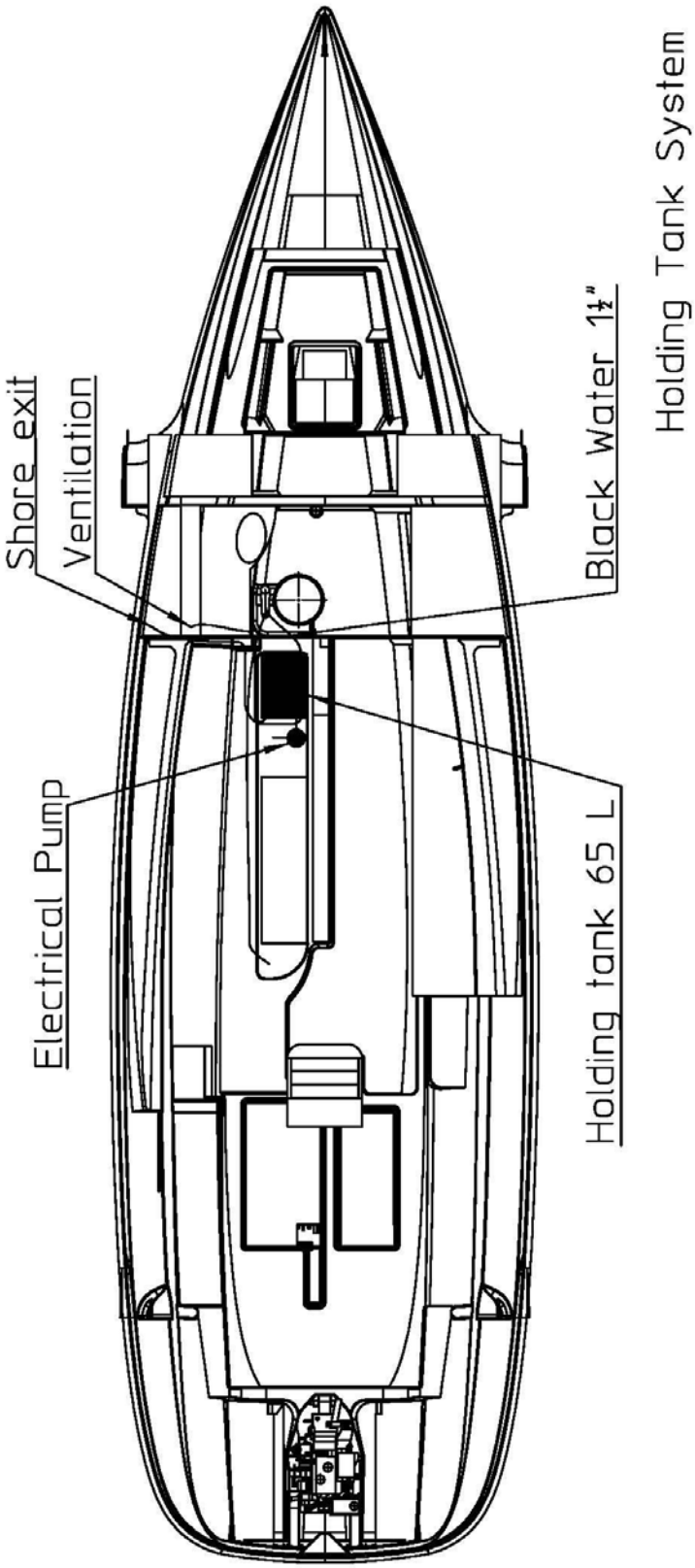

Cooling water
Engine Intake
Optional
Water Maker ½"
Intake Toilet
Toilet Exit
Holding Tank Exit
Depth Sounder Transducer
Optional
Anchor flushing
Cooling Water
Engine Filter
Optional
Sea Water Pantry
Speed Transducer

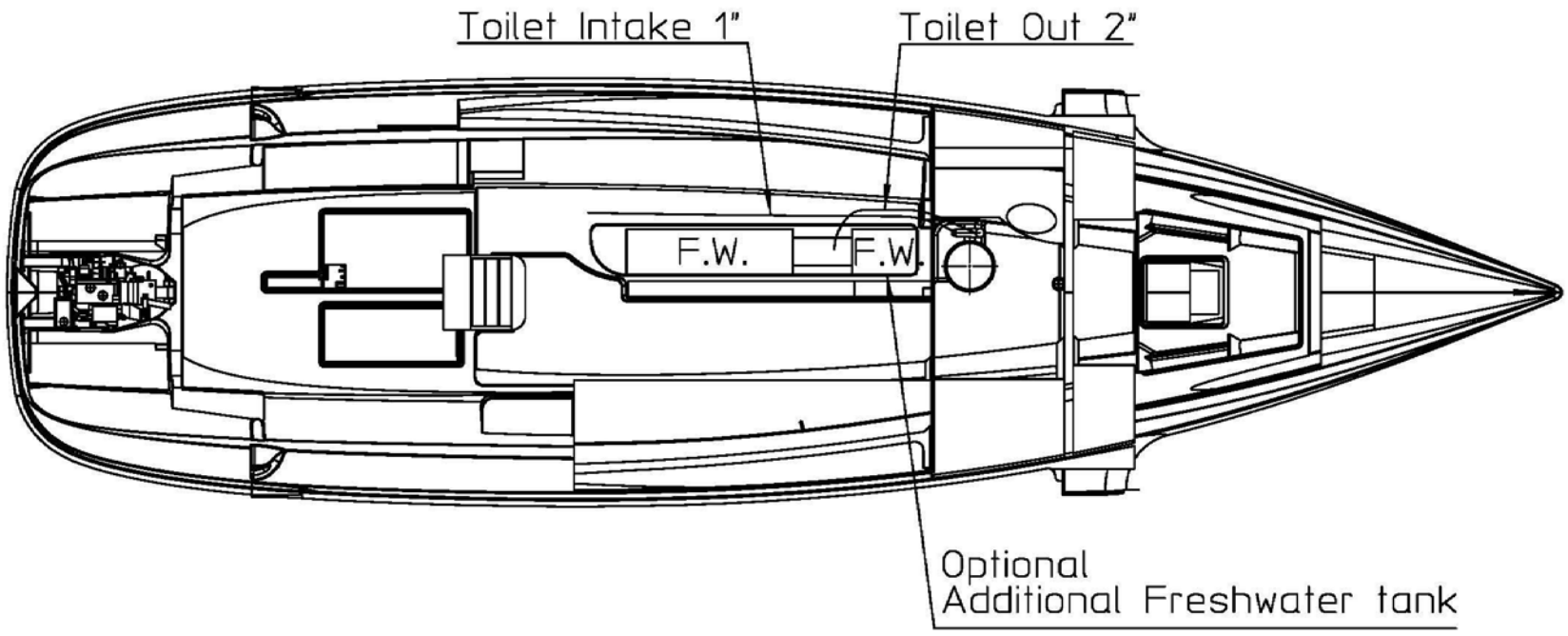
Sea Coarks



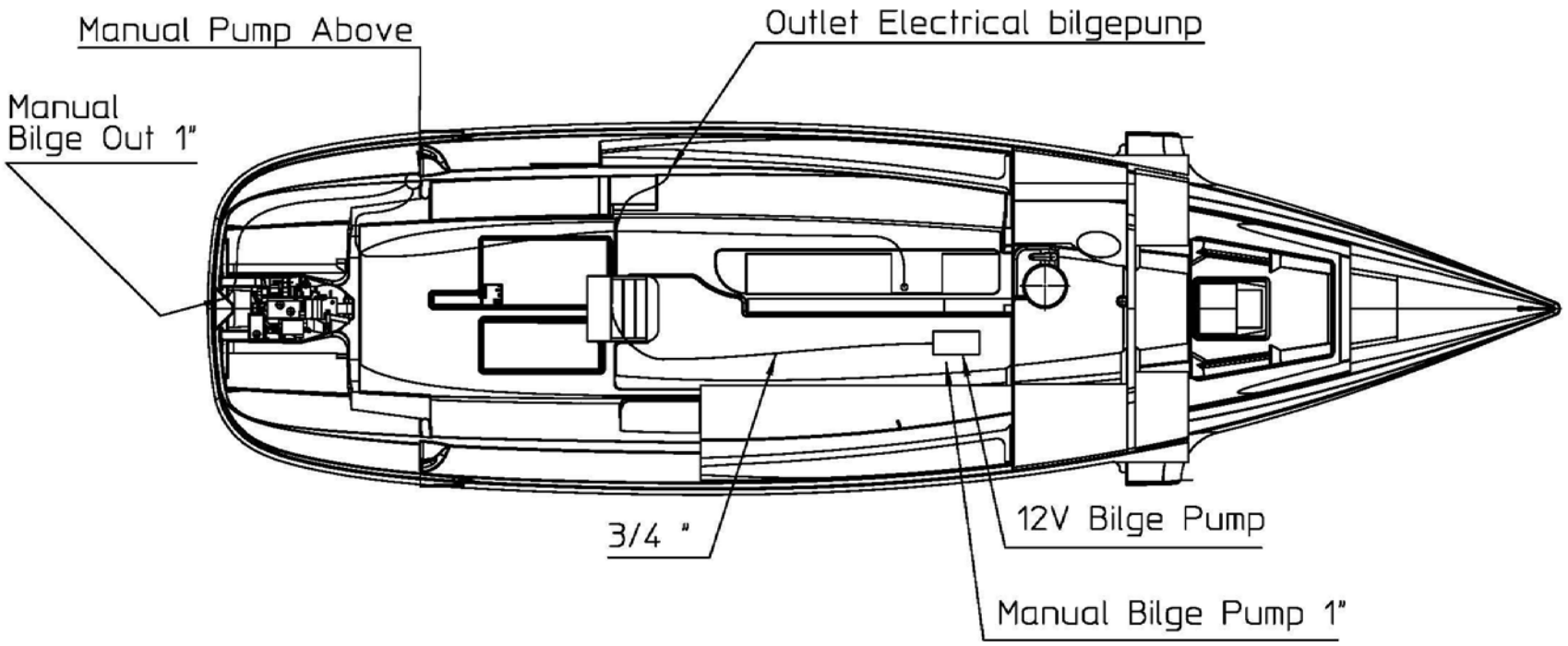
Sea Water Flush

Tank systems



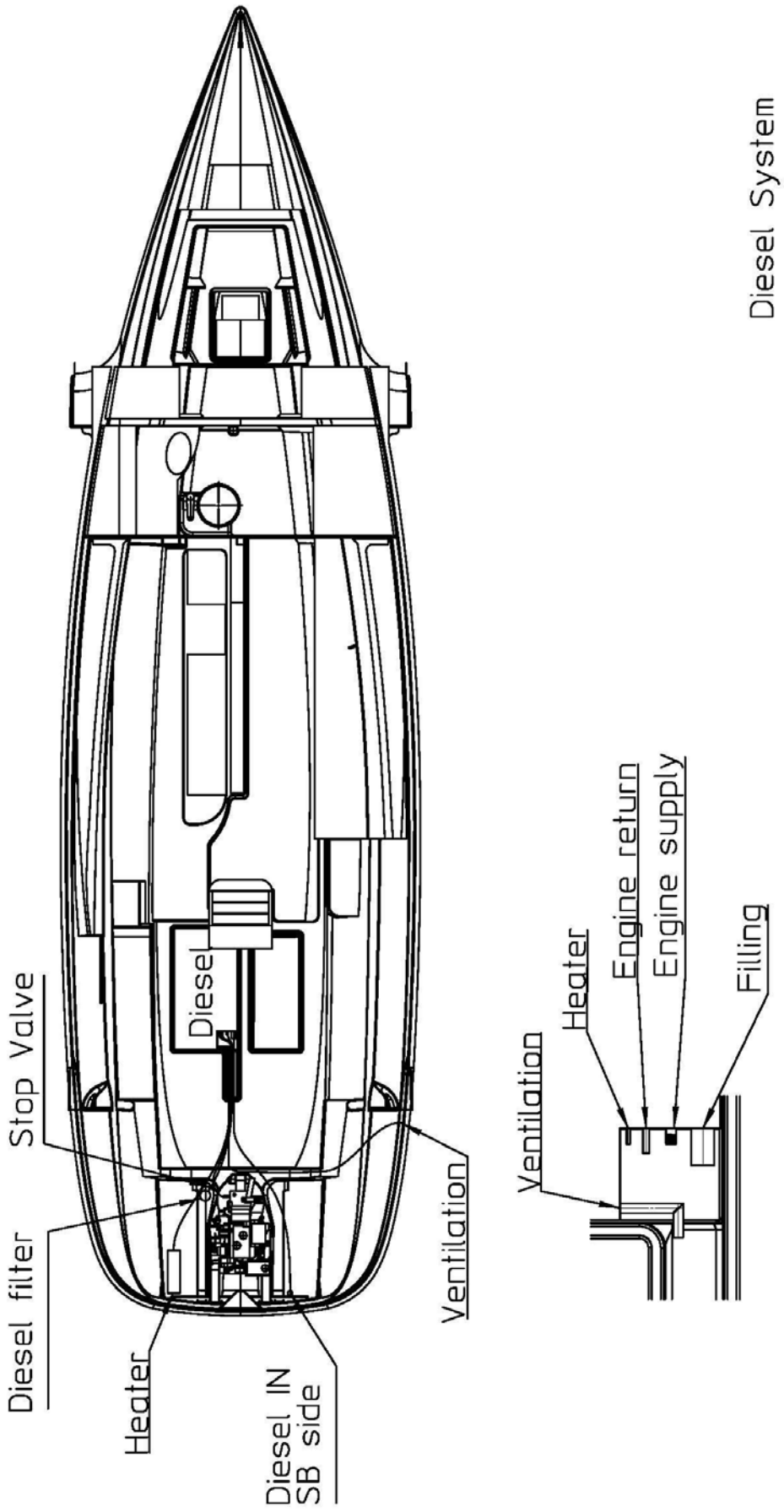


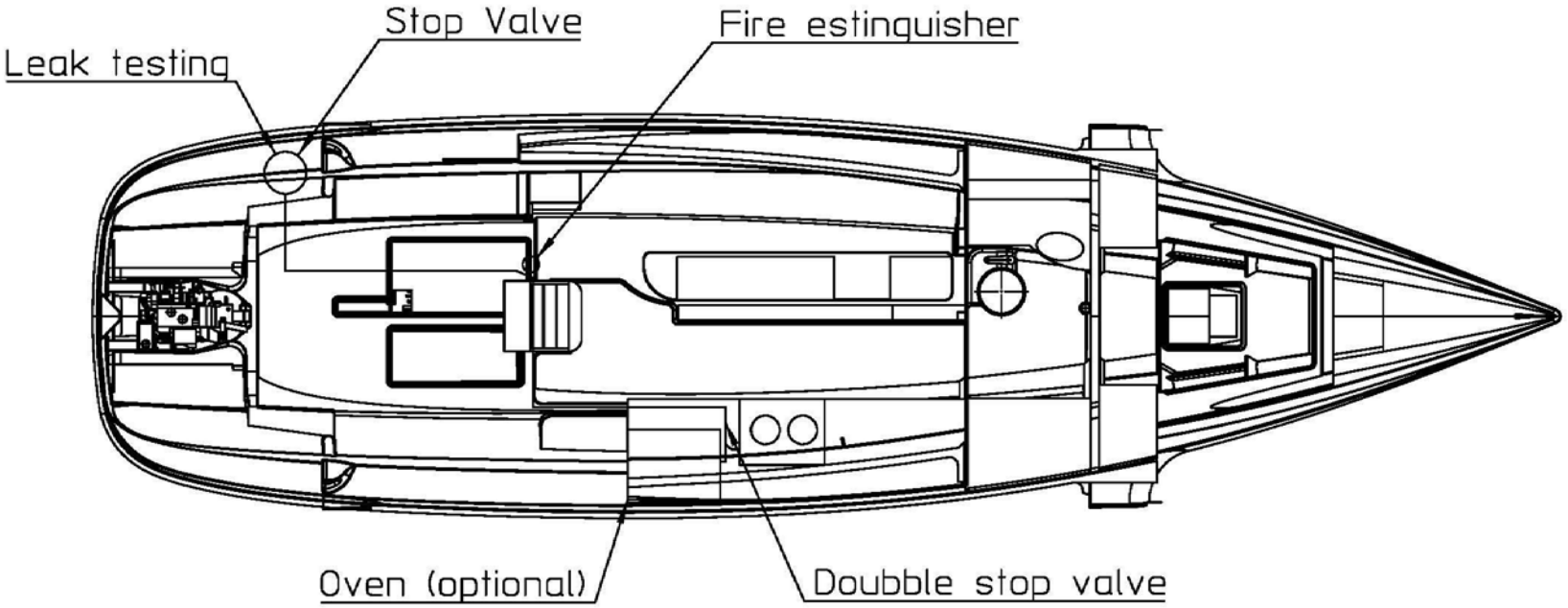
Without Holding Tank


Manual Pump Above
Outlet Electrical bilgepunp
Manual
Bilge Out 1"
3/4 "
12V Bilge Pump
Manual Bilge Pump 1"

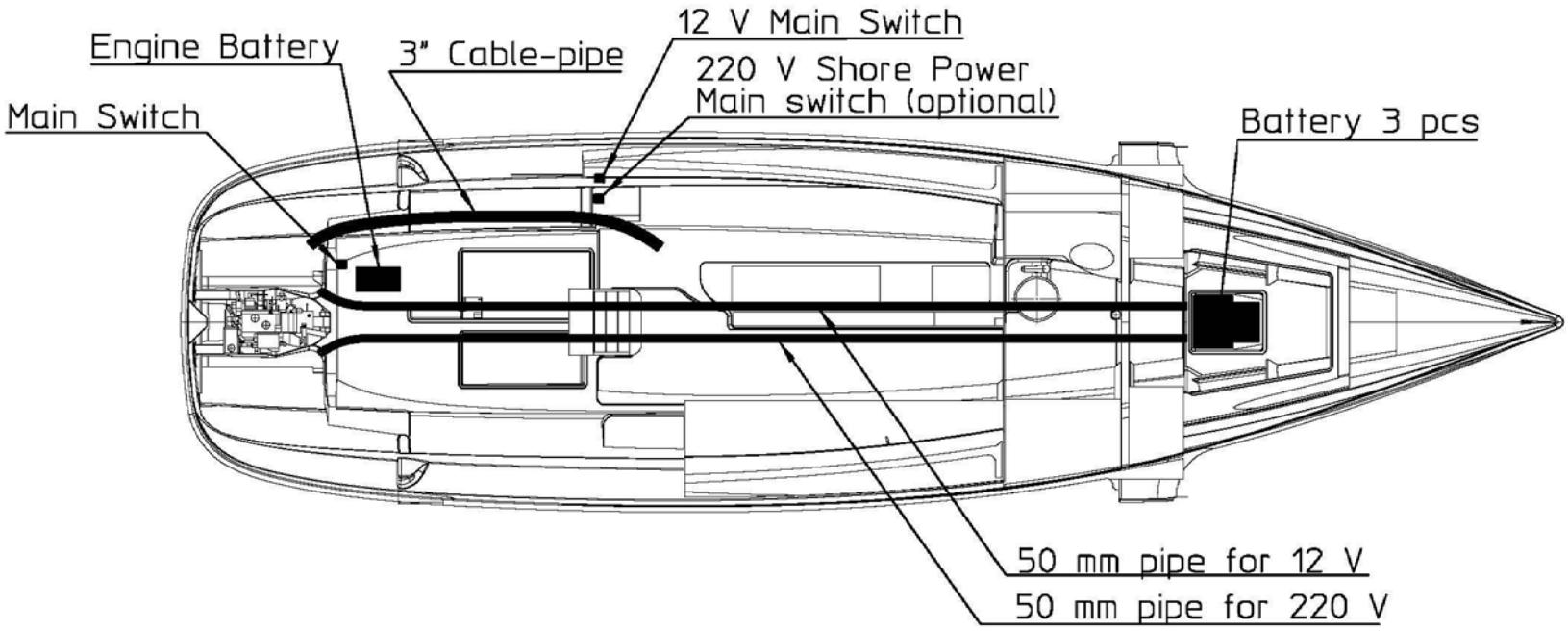
Bilge Pumps

Installation Fuel- Gas- Heating





GAS instalation



Electrical System - 050607

PRACTICAL INFORMATION –
ON THIS BOAT IN PARTICULAR

Engine type: _____

Engine No: _____

Gelcoat RAL hull colour: _____

Gelcoat RAL deck colour: _____

Gelcoat RAL non-skid colour: _____

Propeller: *Type* _____ *Size* _____

Stripe work colour: _____

Epoxy barrier under water: _____

Antifouling: _____

Mast colour RAL No: _____

INFORMATION ABOUT PRODUCTS USED FOR DRAGONFLY

The woodwork in the cabin is varnished with two part satin varnish. To varnish again sand with grit 180 or finer sandpaper. You can use either one or two component varnish with satin finish.

Dragonfly is built of hand-laid, reinforced fibreglass and polyester combined with 15-20 mm PVC sandwich foam core with closed cells, which do not absorb water.

For eventual repairs use ONLY products on polyester basis. Epoxy can be used in an emergency, but cannot be cosmetically improved later with gel coat as you can with the polyester products.

Electronic equipment is not calibrated by the yard.

It is the responsibility of the skipper/owner to ensure that all the electronics are calibrated and reliable.

BY ANY DAMAGE TO THE BOAT

Contact your dealer or the yard for instructions. If not, you could endanger your safety and/or loose your warranty.

GELCOAT REPAIRS:
IMPORTANT – Successful repairs require dry weather and a temperature between +15° – 25° C.

- Ratio of hardener is min 2% and max 3%
- Gel setting time is approx. half an hour
- Never work in direct sun when applying gel coat or Polyester repairs

How to make gel coat repairs:
- First sand the actual repair with grit 80
- Then sand the area around it with grit 180-240
- Apply gel coat by 2 or 3 layers
- When completely dry sand it down with 120-240, thereafter with 500 – 800 – 1,200
- After that polish with rubber compound and finally wax the whole area
- Use lots of ventilation, gloves, glasses and dust mask
- Keep children away

WARNING
- The catalyst is a dangerous product and should not be left within children's reach.
- Avoid contact with skins and mucosa
- In case of contact, wash with soapy water and rinse liberally

Clean all tools with acetone.

GENERAL SERVICING

- Clean blocks and sheets well in freshwater regularly
- Lubricate blocks and easylocks every 2-3 months
- Clean all tracks frequently where travellers are functioning. Also the mast track
- Min once a year clean and grease the winches and check the springs
- Keep the sails covered at all times when not in use to protect from the sun
- Keep the sails dry and rinse regularly with freshwater. If sails get damaged immediate repair is required
- Let a sail maker check the sails once a year
- Have the engine serviced
- Be sure to have antifreeze cooling on the engine
- Check that sea corks are working
- Empty water and holding tank before the winter
- Empty the hot water boiler before the winter
- Check engine oil
- Check diesel fuel filter
- Make sure always to keep the Teflon rings on the float decks clean. If they start squeezing (making noises), spray these with Teflon spray every now and then
- Lubricate regularly the swing wing sheave block at the aft wing, where the cable is working
- Check that the handles on the hatches ar not loose. If so, just tighten the screw on the "inside" of the handle

SPRING CLEANING

1. Exterior: Wash and wax the boat. (Do not wax the non-skid areas).
   Interior: Clean the boat everywhere

2. Antifouling:
   Main hull. First wash the bottom of the boat with freshwater, if necessary, high-pressure washing. Let it dry out and apply antifouling with a lacquer roll – maybe sand the antifouling surface first

   The centre board has enough antifouling for the first two max three seasons; you will then have to lift the boat with a crane

3. It is recommended that all blocks, wheels and Easylocks are greased with Teflon spray

4. Mast, boom and head foil must be washed and waxed. If you do not immediately succeed in cleaning the aluminium you can use polish cream.

5. Wash and rinse the batten cars well, incl the mast track

CLEANING UP FOR THE WINTER

1. You are recommended to wash the boat completely clean, wax and polish all surfaces except the non-skid

2. Make sure to take off the sails, sprayhood and cockpit tent. Wash and rinse out dirt and salt. Everything must be completely dry, before stowed away for the winter and kept in a dry place

3. Cushions:
   For cleaning cushions you can remove the cover by unfastening the zip on the back of the cushion. For washing or dry-cleaning, check which material your cushions are made of, before cleaning. Best to store the cushions in dry suroundings. If the cushions stay inside the boat – set them vertically

4. Various steel wires can be washed in warm soap and water, rinsed clean, dried and afterwards wiped with an oilcloth

5. All ropes and blocks should be washed in warm soap and water, rinsed and dried

6. Rigging and boom:
   Make sure all lines and halyards are intact. Should a halyard have a failure at the end, turn it over. Every year all halyards and reefing lines should be shortened approx. 25 cm

7. The water tank must be emptied and cleaned – it is easy accessible on port side of the centreboard trunk

8. During the winter, open all lockers for best ventilation and make sure that the boat is ventilated

9. The engine:
   Please contact your local engine dealer

10. The marine batteries can stay in the boat over the winter. But better charge them full before the winter

11. Dry out the hulls completely to avoid frost damage

12. Make sure that ventilation is good before storing the boat for the winter. The best thing to do is to store the boat indoors for the winter period, if

you use a canvas cover make sure it does not touch the boat as it might scratch it

13. Flush the holding tank and empty this before you haul out the boat – best two times

Any damages and lacks on boat, sails or instrumentation should be fixed in the autumn; everybody can give the best service at that time of the year.

IMPORTANT MAINTENANCE INFORMATION ON THE RIGGING:
Always check the rigging, halyards, reefing lines, water stays and rudder down haul cable, as well as the cable operating the swing wing system in the aft wing.

Minimum once a year shorten all halyards, reefing lines and swing wing lines by approx 25 cm. After some years turn them around or replace the lines.

Water stays we recommend changing every 5 years using the same quality of products, or at max. 10,000 NM.

Side stays should be changed latest after 10 years or by max 15,000 NM.

Diamond stays on the mast should be changed latest after 10 years or by max 20,000 NM.

We recommend changing the 7 mm swing wing cable in the aft wing every 3 years.

Never climb the rigging when the boat is in folded position.

Tension on the rigging, please see rig diagram.

Never change the tension on the diamonds without checking tension with a tension meter according to rig tension diagram, changing the rig tension can cause the mast to break.

Never drill holes in the carbon mast section without asking your local dealer or Quorning Boats beforehand.

Never wrap the mast in any plastic, as this can cause the paint to bubble. If wrapping is needed, use breathable textile.

IMPORTANT INFORMATION ON THE ENGINE:

- Check zink on the sail drive every 4 months
- Saildrive rubber gasket must be changed every 7 years
- Service engine according to Volvo's service programme
- Always check that the engine gets cooling water by checking visually that the exhaust has water coming out
- Always keep a spare impeller and drive belt onboard

ROPE DIAGRAM DRAGONFLY 35 TOURING

1 x main sheet	10 mm Polyester	34 m
2 x backstay	10 mm Dyneema	14 m
1 x genoa sheet	12 mm Polyester	26 m
1 x main traveller outhaul	8 mm Dyneema	14 m
2 x genoa traveller outhaul	8 mm Dyneema	9 m
1 x asymmetric spinnaker halyard	10 mm Polyester	50 m
1 x genoa furler	10 mm Dyneema	21 m
1 x tack line	10 mm Dyneema	24 m
2 x swing wing line	10 mm Dyneema	19 m
2 x barberhaul	10 mm Polyester	28 m
1 x centreboard up	8 mm Polyester	9 m
1 x centreboard down	8 mm Polyester	12 m
2 x preventer/boomwang	10 mm Polyester	20 m
1 x lazy-jack	6 mm Polyester	36 m
2 x lazy-jack mast	8 mm Polyester	2 m
4 x mooring lines	16 mm PP-Blue	14 m
Main halyard	10 mm Dyneema	60 m
Jib halyard	10 mm Dyneema	35 m
Spinnaker halyard	10 mm Dyneema	45 m
Reef I	10 mm Dyneema	25 m
Reef II	10 mm Dyneema	35 m

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ROPE DIAGRAM DRAGONFLY 35 ULTIMATE

1 x main sheet	10 mm Polyester	34 m
2 x backstay	10 mm Dyneema	14 m
1 x genoa sheet	12 mm Polyester	26 m
1 x main traveller outhaul	8 mm Dyneema	14 m
2 x genoa traveller outhaul	8 mm Dyneema	9 m
1 x asymmetric spinnaker sheet	10 mm Polyester	50 m
1 x genoa furler	10 mm Dyneema	21 m
1 x tack line	10 mm Dyneema	24 m
2 x swing wing line	10 mm Dyneema	19 m
2 x barberhaul	10 mm Polyester	28 m
1 x centreboard up	8 mm Polyester	9 m
1 x centreboard down	8 mm Polyester	12 m
2 x preventer/boomwang	10 mm Polyester	20 m
1 x lazy-jack	6 mm Polyester	36,5 m
2 x lazy-jack mast	8 mm Polyester	2 m
4 x mooring lines	16 mm PP-Blue	14 m
Main halyard	10 mm Dyneema	60 m
Jib halyard	10 mm Dyneema	38 m
Spinnaker halyard	10 mm Dyneema	48 m
Reef I	10 mm Dyneema	31 m
Reef II	10 mm Dyneema	41 m

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OWNER'S LIST

First owner:

Name: _____

Address: _____

City: _____

Country: _____

Date of purchase: _____

Second owner:

Name: _____

Address: _____

City: _____

Country: _____

Date of purchase: _____

Third owner:

Name: _____

Address: _____

City: _____

Country: _____

Date of purchase: _____

Keep this manual in a safe place onboard and hand it over to the new owner, if you sell the boat!!