

Buster®

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BUSTER XXL



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OMISTAJAN KÄSIKIRJA
ÄGARENS HANDBOK
BOOTSEIGNER-HANDBUCH
OWNER'S HANDBOOK
MANUEL DU PROPRIÉTAIRE
HANDLEIDING voor de EIGENAAR
НАСТОЛЬНАЯ КНИГА ВЛАДЕЛЬЦА
OMANIKU KÄSIRAAMAT

www.buster.fi

Buster®

OWNER'S HANDBOOK

Buster XXL

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Your Buster dealer:

ENGLISH

Versio 1-2008

PREFACE

Dear owner of the Finnish Buster boat! We thank you for choosing Buster and hope you have many enjoyable experiences on board.

The purpose of this handbook is to help you use your boat safely and with peace of mind. The manual includes details of the boat itself, the equipment and systems installed in it as well as information related to operating and maintaining the boat. We urge you to read this manual carefully and familiarise yourself with the boat before starting to use it.

Naturally, the owner's manual is not a primary source of seamanship skills or boating safety. If Buster is your first boat or you have changed to a type of boat that you are not yet familiar with, for the sake of your comfort and safety, make sure that you acquire handling and operating experience before you take on the responsibility of command. The seller of the boat, a boat club or national motorboat and yachting associations will be happy to provide you with information about local boating schools or recommend competent teachers.

Make sure that the prevailing wind and sea conditions correspond to the design category of your boat and that you and your crew are capable of handling it under such circumstances. The wind conditions and sea swells corresponding to design category C cover situations from a gale to heavy winds with an exceptional risk of high waves and gusts. In such dangerous conditions, only a competent and fit crew can satisfactorily operate a well-maintained boat.

This owner's handbook is not a detailed guide to maintenance and fault diagnosis. If a problem occurs, contact your nearest Buster dealer. If there is a need for repairs, use only enterprises

recommended by the Buster dealership. Alterations that affect the safety characteristics of the boat can be carried out only on the written approval of the manufacturer. The manufacturer of the boat cannot be held responsible for changes it has not approved.

In some countries, driving a boat requires a license or the authority to drive. Country-specific regulations may also be in force.

Always maintain your boat in good condition and bear in mind the consequences of wear resulting from ageing, rough treatment and improper use. Any boat, no matter how strong, can be significantly damaged by improper use. Inappropriate boating habits do not accord with safe seamanship. Always adapt the speed and course of your boat in relation to the conditions at sea.

If your boat is equipped with a life raft, carefully read the operating instructions. The boat should have appropriate on-board safety equipment (life jackets, safety harnesses etc.) that corresponds to the boat type and the weather conditions etc. In some countries such equipment is mandatory. The crew must be familiar with the operation of all safety equipment and emergency manoeuvres (rescuing a man overboard, towing etc.). Rescue exercises are regularly organised by sailing schools and clubs.

All persons on board must use an appropriate flotation aid (e.g. lifejacket/life vest) when on deck. Note that in some countries the law demands that flotation aids be used at all times when on board.

STORE THIS HANDBOOK IN A SAFE PLACE AND HAND IT OVER TO THE NEXT OWNER WHEN YOU RELINQUISH THE BOAT.

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BOAT MODEL: _____
SERIAL NUMBER OF THE HULL - CIN: _____
MAKE AND MODEL OF THE ENGINE _____
SERIAL NUMBER OF THE ENGINE: _____

I Owner
First name: _____
Surname: _____
Residence: _____
Year of purchase: _____

II Owner
First name: _____
Surname: _____
Residence: _____
Year of purchase: _____

III Owner
First name: _____
Surname: _____
Residence: _____
Year of purchase: _____

IV Owner
First name: _____
Surname: _____
Residence: _____
Year of purchase: _____

Please inform us the above changes in ownership via Buster web page:
www.buster.fi/Contact_us.846.0.html.
This helps us and you in case of guarantee to find right contact information
from our guarantee register.

BEFORE DEPARTURE...

Read this Owner's Handbook thoroughly.

Always check the following before departure:

- **Prevailing weather conditions and the weather forecast**

Assess the wind conditions, the state of the sea and visibility. Is your boat's design class, size and on-board equipment as well as the skills of the helmsman and crew sufficient for the waterways you intend to use?

- **Load capacity**

Do not overload the boat. Distribute the load properly. Do not position heavy objects too high, so as to diminish the stability of the boat.

- **Passengers**

Make sure there are life vests for all persons on board. Before departure, agree on the duties each person is responsible for during the trip.

- **Fuel**

Check that there is enough fuel on board, including enough reserve for bad weather etc. The amount of fuel on board should exceed the necessary amount at least by 20% in case of unforeseen circumstances.

- **Engine and equipment**

Check that the steering, electrical devices and the battery function properly and are in good condition. Carry out the required daily engine inspection procedures in accordance with the engine manufacturer's instruction manual. Check the seaworthiness of the boat, i.e. no fuel- or water leaks, adequate safety equipment on board etc. Check that the level of bilge water is at minimum.

- **Ventilation**

Ensure the fuel space is ventilated to minimise the risk of fire.

- **Securing on-board equipment**

Ensure that all articles are stowed properly so that they remain in place in a heavy sea and in a high wind.

- **Sea charts**

If you are not fully acquainted with the route, be sure to take charts that cover a sufficiently large area.

- **Manoeuvring during departure**

Plan with the crew who is responsible for casting off each rope etc. Ensure that when departing and arriving, mooring or other lines do not get entangled in the propeller.

For further instructions on the engine, see the manufacturer's instruction manual.

1 General

The owner's manual will help you become familiar with the characteristics of your new boat. Instruction manuals for equipment fitted to the boat are attached and are frequently referred to. You can, of course, complement this handbook by acquiring other equipment instruction books. Space is reserved at the end of the handbook for notes.

2 Definitions

The warnings and specific remarks in this handbook are defined as follows:

DANGER!: *Indicates grave danger highly likely to lead to death or permanent injury if appropriate precautionary actions are not taken.*

WARNING!: *Indicates danger likely to lead to injury or death, if appropriate precautionary actions are not taken.*

ATTENTION!: *Is a reminder to operate in a safe manner or to be aware of dangerous operation methods that can lead to injury or damage to the boat or its parts.*

The units of measurement used in this handbook are in accordance with the SI system. In some cases, other units have been included in parenthesis. An exception to this is wind speed, which is designated in Beaufort scale as in the EU directive on recreational craft.

3 Warranty

The guarantee is provided for the boat and any equipment that has been installed in the boatyard in accordance with the enclosed warranty conditions. The respective manufacturers of engine, trim tabs, compass, possible navigation equipment and other post-production installations are directly responsible for any warranty concerns of the devices in question. The separate warranty cards and contact information of the manufacturer of these devices are enclosed. For other matters of warranty please contact the Buster dealer indicated on the cover of this handbook.

4 Before launching

4.1 Registration

In many countries, it is mandatory to register even small motor boats. Contact your local authorities for the information on the registration requirements of your country. There is usually a minimum age for operating a registered boat and the operator might need a special boating license.

4.2 Insurance

The boating insurance might compensate for damages on water or during transportation and dry-docking. Check the insurer's liability for hoisting the boat. Insurance also affect the safety on board indirectly: in case of a serious accident you may concentrate on saving the people. Insurance companies will provide more information on different insurance alternatives.

4.3 Training

Ample literature on boating is available. In addition, boating clubs and navigation courses are plentiful sources of useful and practical information on boating. Together they will provide a sound basis for your boating skills, but confidence in handling, navigating, mooring and anchoring a boat is best acquired through long practice.

5 Boat characteristics and operation

5.1 General

This *Owner's Handbook* is not a complete maintenance guide or repair manual. The aim of the handbook is to help owners familiarise themselves with the characteristics of their new boat and learn to use it properly.

5.2 Basic information of the boat

The basic information of Buster XXL:

Boat model:	Buster XXL
Design category:	C (coastal waters)
Maximum recommended load:	680 kg

See also section 5.4 "Loading".

Design category C is defined as follows:

Category C: The boat has been designed to be used in conditions of up to a maximum wind velocity of 6 on the Beaufort scale (approx. 14 m/sec.) and a corresponding swell (a significant wave heights of up to 2 meters and maximum occasional wave heights of 4 meters). This kind of weather conditions can occur in open water on lakes, estuaries and in coastal water in moderate weather.

ATTENTION! *The significant wave length is the average height of the upper third of the swell, which roughly corresponds to the wave height estimated by an experienced observer. Some occasional waves are two times the height.*

Main dimensions and capacity:

The length, the beam, the draught, total weight, etc. and fuel tank volume are shown in the Appendix 1: Technical specifications.

Type approval plate:

Some of the information above is recorded on the type approval plate attached to the vicinity of the steering console. More comprehensive information is given in the respective sections of this handbook. Please note that, for example, fuel is not calculated in the maximum load mentioned on the type approval plate, unlike in the maximum load recommended by the manufacturer.

5.3 Recommended maximum number of people on board

The recommended maximum number of people on board is 7.

Designated seats are shown in Diagram 1.

WARNING! *Do not exceed the recommended maximum number of people on board. Irrespective of the number of people on board, the total weight of people and gear should never exceed the recommended maximum load (see section 5.4 Loading). Use only the seats in the boat. If your boat has not been equipped with seats for seven people, the extra people have to sit on the floor as shown in the diagram.*

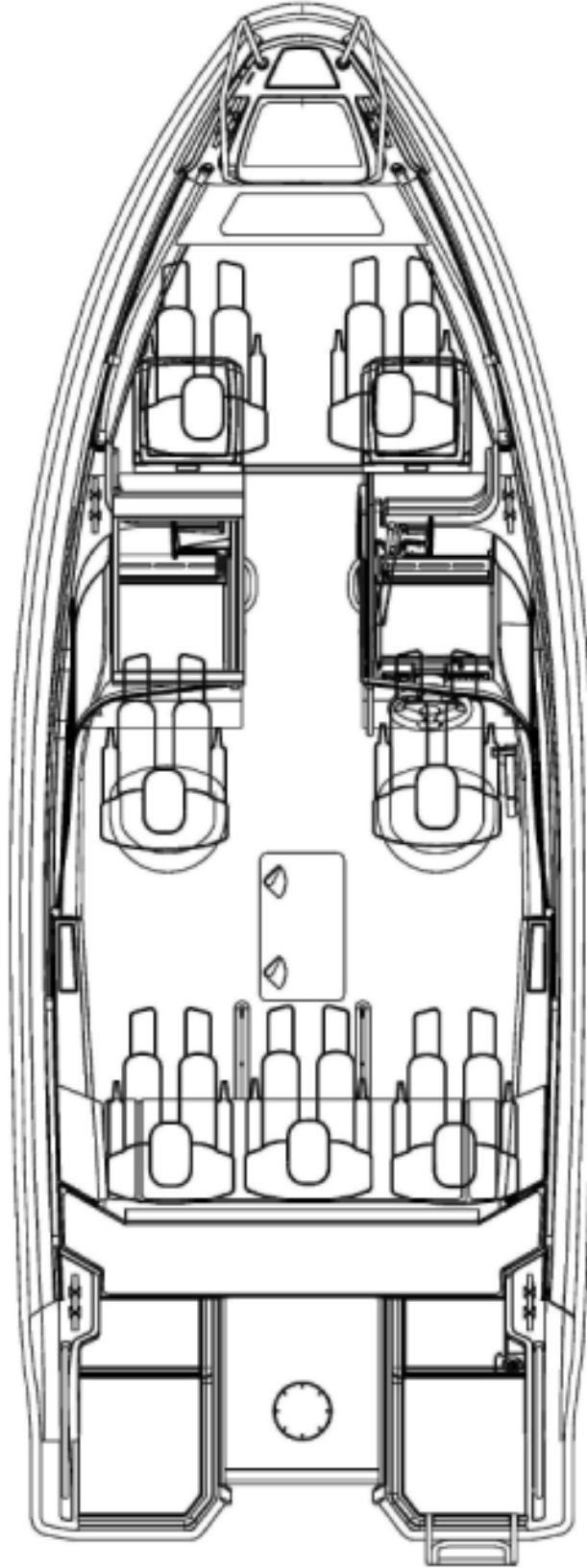


Diagram 1. Seating for the maximum number of people on board.

5.4 Loading

The recommended maximum load capacity for the Buster XXL is 680 kg.

An adult's weight is taken to be 75 kg and a child's 37,5 kg. In addition to the aforementioned maximum weight of people on board, the following load can be taken on board: 15 kg of basic equipment, total weight of 110 kg of fuel in the boat's fixed tank and a life raft weighing 30 kg.

The recommended maximum load includes only the aforementioned load components.

WARNING: *When loading the boat, never exceed to maximum recommended load. Always load you boat carefully and distribute the load evenly to maintain the design trim (approx. even keel). Avoid placing heavy weights at too high an elevation.*

5.4 Engine and propeller

The largest recommended engine capacity for Buster XXL is 111 kW (150 hp)

Normally, the outboard engine is designed to be installed so that the cavitation plate above the engine is at the same level with the keel of the boat. Follow manufacturer's guides when installing the engine and choosing the propeller. Also read the engine manual thoroughly.

When turning on the engine, make sure that the cooling water flows freely and the gear is on neutral. If the engine get started when the gear is not on neutral, contact engine service.

5.6 Preventing water getting on board and stability

5.6.1 Hull and deck opening

The location of deck opening and its plug is shown in Diagram 2.

Buster XXL has one outlet for draining water from the cockpit. Plug the outlet if you observe that water is flows to the cockpit through the drain outlet while loading the boat. Otherwise the outlet should be kept open and cleared regularly to prevent it from being blocked by debris. The boat has a drain plug in the aft section screwed to the lower corner of the transom, which can be used to drain the boat when docked or loaded on a trailer.

ATTENTION! *The outlet is for the water to flow out from the cockpit. However, some rainwater of the water condensating in the bilge might flow to the bilge. DO NOT LEAVE THE BOAT UNGUARDED ON WATER FOR A LONG TIME. CONTROL THE FLOAT POSITION AND EMPTY THE BILGE WHEN NECESSARY. Leaving the boat unguarded on water for a long time may lead to damage.*

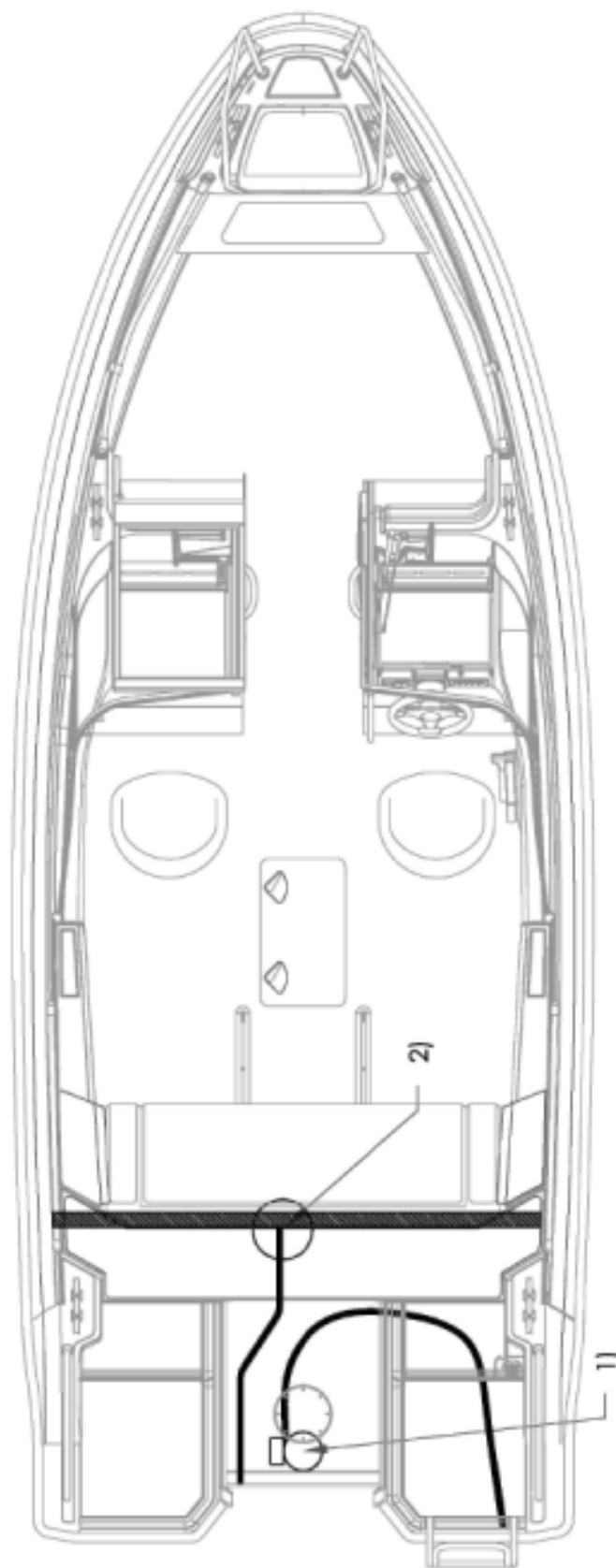


Diagram 2. Location of outlets, cut-off valves and the bilge pump. 1) Automatic bilge pump, 2) Cockpit drain plug for draining rainwater.

5.6.2 Bilge pumps and drainage

The location of the boat's drainage device is shown in Diagram 2. The bilge pump is located as close to the bottom plate as possible. However, a small amount of water inevitably remains in the bilge where it cannot be discharged by the pump. The drain outlet for draining off this water is located in the right-hand corner of the boat's stern.

Buster XXL is equipped with electrical, automated bilge pump. When the surface sensor detects water in the bilge, the pump discharges the water. The draining capacity of the electrical bilge pump is approx. 38 litres/min. The automated pump is always on stand-by regardless of the position of the main power switch, provided the battery is connected. The bilge pump activates when the sensor has been fully submerged for 5 seconds and deactivates when the sensor is dry. The pump can also be used manually by activating the spring-loaded switch on the switch board.

The suction head of the electrical bilge pump should be checked and possibly cleaned of the debris regularly. Access to the pump is through the service hatch in the engine well.

WARNING! *The bilge pump system is not designed to control the leakages resulting from running aground or other damages.*

ATTENTION! *Always check the amount of bilge water by emptying the bilge manually using the spring-loaded switch on the switch boardw before using the boat. It is the user's responsibility to keep at least one bucket or scoop on board.*

ATTENTION! *Check the operation of the bilge pump regularly. If you notice any malfunction in the bilge pump, clean the suction hose of debris and, if necessary, contact your local Buster dealer.*

5.6.3 Stability and buoyancy

The stability of a Buster boat is excellent thanks to the hull form and weight distribution. However, please note that large breaking waves always represent a serious danger to the boat's stability.

The stability of the boat compromises whenever any additional weight is placed too high in the boat. All changes resulting from positioning bulky objects may influence significantly the boat's stability, trim and performance. If you intend to make such changes, please contact the boat manufacturer.

The amount of water in the bilge should be kept at minimum, since the free movement of water in the boat always decreases stability.

Please note that stability can diminish when towing or being towed.

Buster XXL is equipped with pontoons with which the boat carries the load mentioned in section 5.4 even if the boat is filled with water.

5.7 Prevention of fire or explosion

5.7.1 Engines and fuel systems

Buster XXL has a fixed fuel tank which is fitted to the bilge under the engine well and the stern part of the cockpit. Before refuelling turn off the engine and cigarettes and avoid naked flames. Do not use any electrical devices.

The fuel inlet for the fuel tank (⛽) is located on the right-hand side of the stern deck of the boat, partly covered by the hatch of the storage. Open the hatch when filling the tank. The portable tank must be lifted out of the boat for filling to avoid any fuel getting into the bilge in the event of fuelling results in an overflow.

When refuelling at a petrol station, do not use a plastic funnel, which will prevent the discharge of static voltage between the filler pistol and the bushing of the fuel inlet. After filling the tank (see tank capacity in *Appendix 1: Technical specifications*), check that no fuel has leaked into the bilge or into the engine well. Immediately wipe off any fuel splashes.

Do not keep canisters of reserve fuel in any unventilated space or loose in the boat, or any equipment containing petrol in a place not designed for it.

At least once a year, check there has been no wear and tear in the fuel feed pipes.

5.7.2 Fire extinguishing and fire prevention

Buster XXL is equipped with 2 kg hand-held powder extinguisher, which is of power class 8A68B. The extinguisher is placed in the storage space on the left side of the prow (Diagram 3). Its position is indicated by a clearly visible symbol in the cockpit.

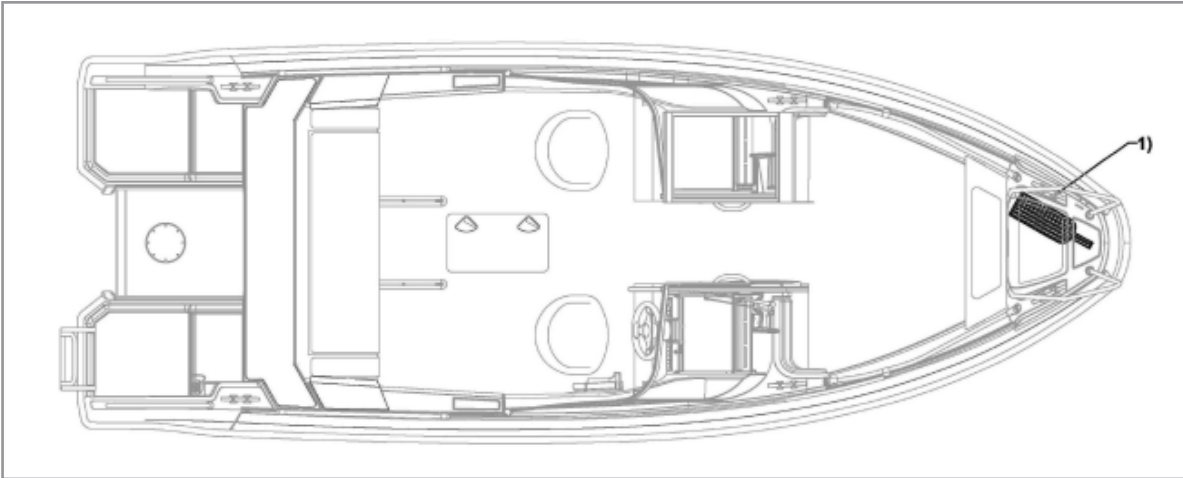


Diagram 3. 1) The hand-held fire extinguisher.

Depending on the legislation of the country of residence, hand-held fire extinguishers should be tested regularly. Contact your local authorities for information on control practises. If the control legislation of your country is not clear, check the operation of the device every year. The manufacture date of the hand-held fire extinguisher is on the label attached to the extinguisher. More than ten years old extinguishers are not approved unless the pressure chamber has been re-tested. When changing hand-held fire extinguishers, the new device should have at least the same extinguishing capacity as the old one.

The owner/user of the boat should make sure that there is at least one easily accessible fire bucket with an attached rope in the boat.

Make sure that the fire extinguishers are easily accessible even when the boat is loaded. Notify all the crewmembers of the loca-

tion of fire extinguishers and their operation.

Keep the bilge clear of fuel and check regularly for possible fuel leaks. The smell of petrol is a clear sign of a fuel leak.

ATTENTION! *If your boat has been equipped with a heater, read its precautionary instructions in its manufacturer's manual.*

Never

- obstruct the access to the safety equipment, for example, the extinguisher and the main power switch. Remember to unlock the possible lock in the bow (the storage space for the extinguisher) every time you use the boat.
- block any ventilation holes of the boat, since they vent fuel vapour. ATTENTION! The narrow gap in the lower edge of the bow hatch is part of the ventilation system.
- make alterations to the boat's electrical or fuel systems or permit any unqualified person to make changes to any system on the boat.
- detach the fuel line from the portable tank when the engine is running.
- fill the fuel tank or handle fuel when the engine is running.
- smoke or handle naked flames when handling fuel.

5.8 Electrical system

The circuit diagram of the boat's electrical system is represented in Appendix 3.

The main power switch is located on the rear bulkhead on the left hand side of the boat. The circuitry functions when the switch key is turned clockwise and latched. When the key is in vertical position, the circuitry does not function and the key can be taken out of the ignition. However, the automated bilge pump functions whenever the battery is connected. When the circuitry is turned on, the devices can be operated sitting on the captain's seat by using the switch panel.

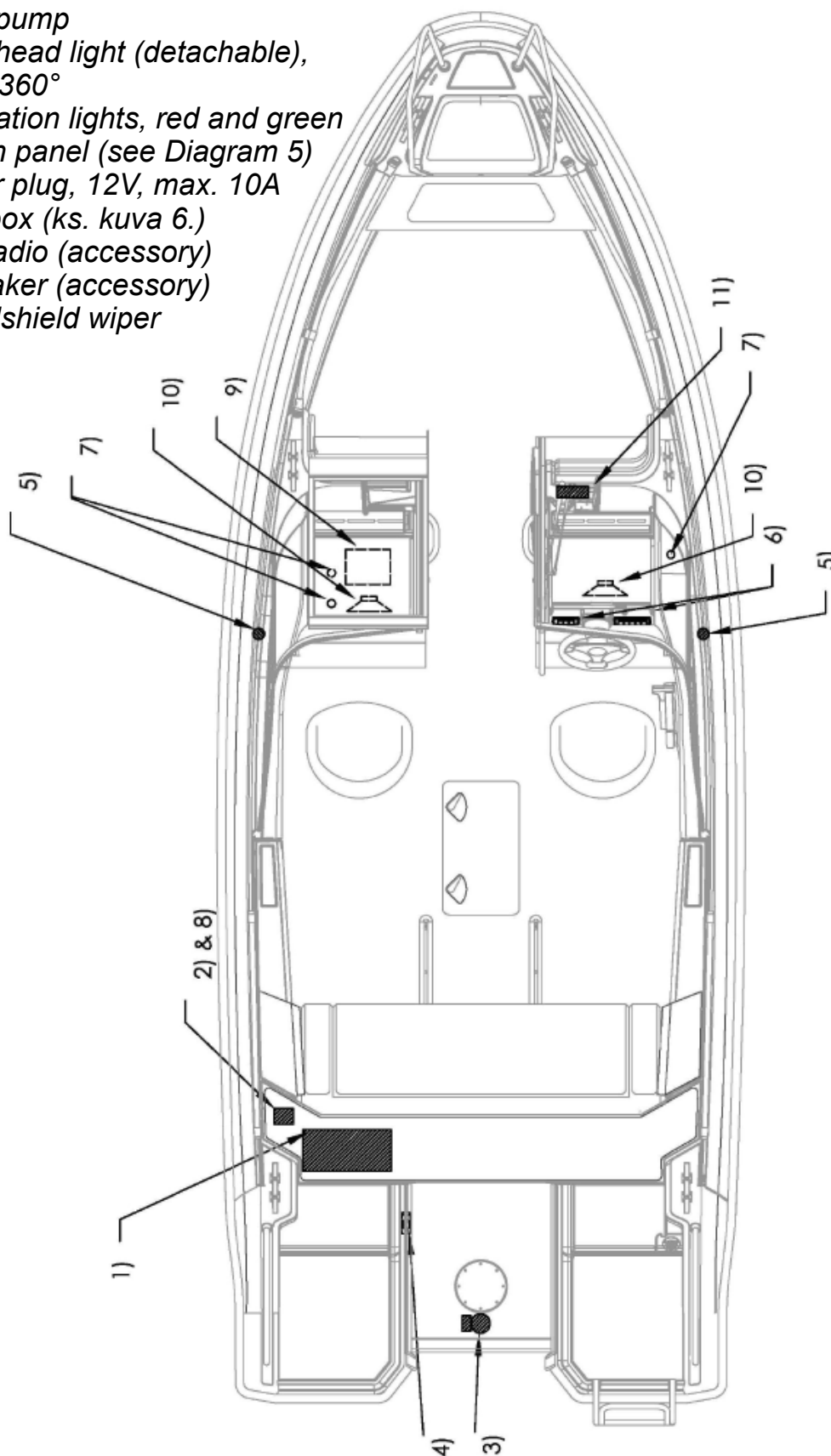
The navigation lights are turned on with the switch "LIGHTS". Remember to attach the detachable mast-head light. When using the navigation lights, the hood should not be used, since it obstructs light from the front sector. There is a windshield wiper on the captain's side, which is turned on with the switch "WIPER". Bilge water can be checked by pressing the pump on with the switch "BILGE". If there is no gurgle of water on the rear right side of the boat, the automatic bilge pump has emptied the bilge.

The electrical system has extra circuitry for several accessories installed in post-production; there are circuitries for radio player and two speakers. See more information on installing a radio in section 7.2.3 CD/Radio player. The boat also has limited capacity for an installation of a fuel-operated heater. See more information on installing a heater in section 7.2.1 Heater. The panel on the right side of the steering pulpit is meant for switch of devices installed in post-production.

The operational switch and electrical devices are located as show in Diagram 4.

Diagram 4. Locations of electrical devices:

- 1) Battery case
- 2) Main power switch
- 3) Bilge pump
- 4) Mast-head light (detachable), white 360°
- 5) Navigation lights, red and green
- 6) Switch panel (see Diagram 5)
- 7) Power plug, 12V, max. 10A
- 8) Fusebox (ks. kuva 6.)
- 9) CD/Radio (accessory)
- 10) Speaker (accessory)
- 11) Windshield wiper



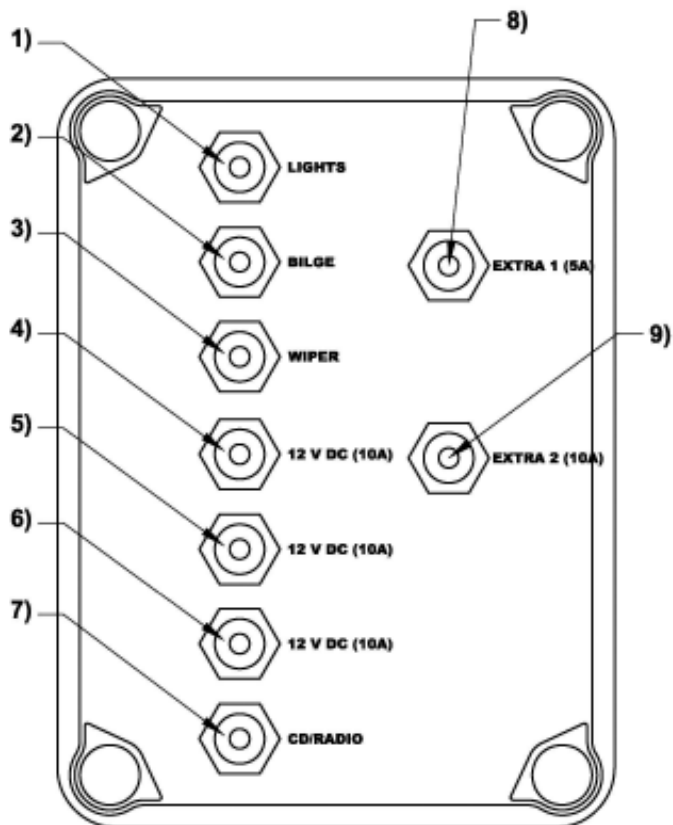


Diagram 6. Fusebox:
 1) Navigation lights 5A,
 2) Bilge pump 5A,
 3) Windshield wiper 5A,
 4) Power plug 12 V DC 10A,
 5) Power plug 12 V DC 10A,
 6) Power plug 12 V DC 10A,
 7) CD/Radio 10A,
 8) Extra 1 5A,
 9) Extra 2 10A.

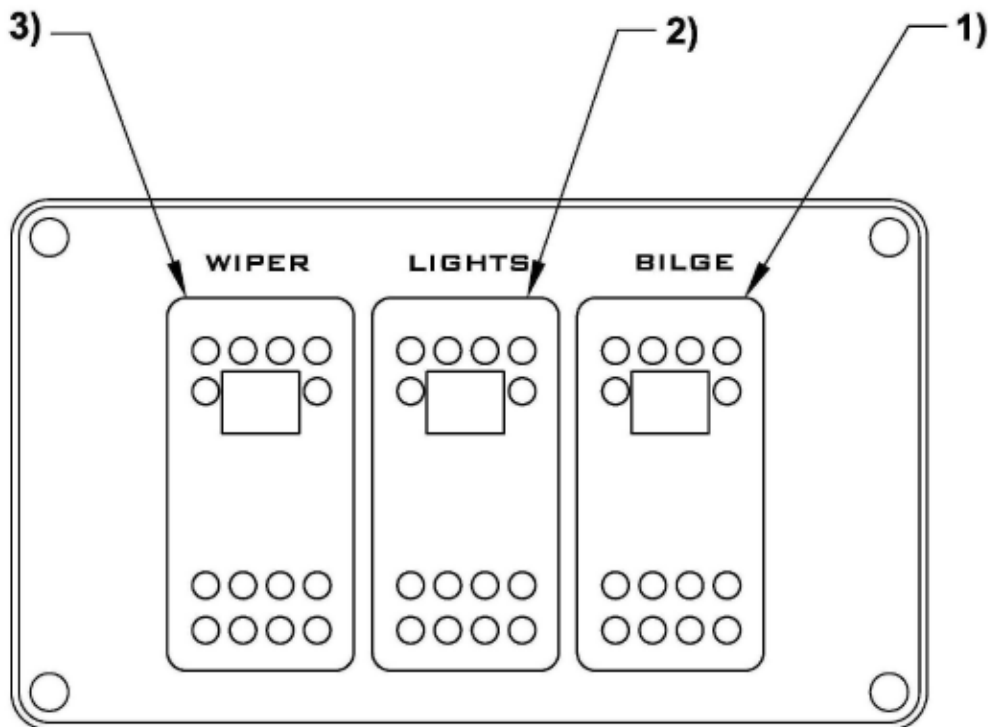


Diagram 5 Switch panel:
 1) The bilge pump
 2) The navigation lights
 3) The windshield wiper

The circuitry fuses are located in a specific fusebox on the rear bulkhead on the left-side of the boat, below the main power switch. So-called automated fuses are used in all Buster boats. After being triggered by an overload, the fuses can be reactivated by pressing down the spring-loaded button. The electrical system has two extra circuits equipped with fuses (Extra 1 5A and Extra 2 10A), to which the accessories installed in post-production can be connected. The leads for these circuits are behind the switch panel on the steering pulpit. Do not replace normal fuses with fuses intended for a higher current feed. Components that exceed the nominal ampere value of the respective circuit should not be installed to the electrical system.

ATTENTION! *When you are installing post-production accessories to the boat, use Extra 1 or Extra 2 circuitry. Connect the device to current feed and negative wires. The hull of the boat may not be used as grounding mat.*

When leaving the boat unattended for a long period, switch off the current at the main switch. Also switch off the power when carrying out electrical installations. When detaching or installing batteries, take care not to touch both terminal leads of the battery simultaneously or the aluminium surfaces of the boat with a metal tool.

Charge the battery only with the engine or the battery charger. Charging with too high a current can lead to an explosion. Make sure the battery space is ventilated. If the ventilation is obscured, the hydrogen releasing during the charging might explode.

ATTENTION! *Never switch off the power at the main switch while the engine is running. This could damage the engine.*

Do not make alterations to the boat's electrical system or any diagrams associated with it. Changes and service must be carried out by qualified electricians specialised in marine electrical systems.

5.9 Control characteristics

5.9.1 Driving at high speeds

The recommended maximum engine output of the boat is 111 kW (150 hv)

Do not use a boat if it has greater engine output than the output indicated on the type approval plate.

The rules for using the engine's power trim are as follows:

- when raising the boat to plane, go to the "bow down" position
- when the boat is planing and in a moderate swell, raise the bow until the boat begins to buck, and the propeller loses its grip (ventilates) or the engine approaches the upper limit of the normal area of adjustment. Thereafter, lower the prow slightly until the boat stabilises. The power trim can be optimised with the aid of the log.
- In a counter swell, lower the bow for a smoother ride. In a favourable swell, and in a very high counter swell, raise the bow slightly so that it does not submerge.
- Do not drive the boat at high speed when the engine power trim is at a negative angle – i.e. with the bow low – as the boat may heel and the steering become unstable.

Read also the engine manufacturer's instructions for adjusting the power trim.

WARNING! *At high speeds, adjust the power trim carefully, as it radically changes the behaviour of the boat. Do not drive with the bow too low as the boat can suddenly deviate from its path.*

WARNING! *Controllability is diminished at speeds above 30 knots. Rapid turns can lead to loss of control. Reduce speed before sharp turns in whatever direction you are going. Avoid quick moves in high speed. Do not drive in full speed on busy boat routes.*

WARNING! *Waves reduce the boat's controllability, causing it to heel. Bear this in mind and reduce speed in a rising swell.*

Learn the rules of navigation and follow them. Also observe and follow the requirements of COLREG (Convention on the International Regulations for Preventing Collisions at Sea). According to the rules, it is necessary to navigate at all times and follow the right of passage. Navigate carefully and use new or updated sea charts.

Always adjust your speed in accordance with prevailing conditions and the environment. Bear in mind:

- the state of the sea (ask your passengers for their opinions on a comfortable speed)
- your own wake (greater when rising to plane, smaller at displacement speed, i.e., below 6 knots). Observe prohibitions associated with a swell. Reduce your speed and your wake as a matter of courtesy, and also for the safety of yourself and others.
- visibility (islands, fog, rain, blinding sun)
- knowledge of the route (time required for navigation)
- narrowness of the route (other traffic on the waterway, noise, and the effect of backwash on the shoreline)
- the space needed for coming to a halt and for evasive manoeuvres.

5.9.2 Dead-man's grip

Attach the line for the dead-man's grip to yourself as soon as you have cast off the mooring rope. Read the more detailed instructions in the engine manual. Particularly when driving alone, it is very important that the boat stops if for any reason you have fallen overboard or stumble while on board. However, to avoid unintentionally turning off the engine during landing manoeuvres, remember to detach the line from your hand beforehand.

WARNING! *A rotating propeller is extremely dangerous for anyone who has fallen overboard or to a swimmer. Use the dead-man's grip to switch off the engine until the swimmer or water-skier has climbed back on board.*

5.9.3 Visibility from the steering position

In beautiful and calm weather, driving is simple provided you keep a sharp lookout as required by COLREG. Always take care to have the best possible visibility from the steering position:

- Position passengers so that they do not obstruct visibility.
- Do not drive continuously at planing threshold speed, as the rising prow impedes visibility.
- Use the engine's power trim and possible trim tabs to adjust the boat's position in such a way that the rising prow does not obstruct visibility.
- Remember also to look astern in case of approaching vessels, particularly while boating in shipping lanes.

At the approach of darkness and in any situation with limited visibility

(fog, heavy rain, etc.) use the appropriate navigation lights.

5.10 Good seamanship – other recommendations and instructions

5.10.1 How to avoid falling overboard and how to get back on board

The boat's work areas are marked on Diagram 7. Do not sit, stand, or walk on other parts of the boat while it is in motion. Before departure, make sure the moving back seat is in an immobile position and that the detachable seat boxes are attached properly to the boat's floor.

If someone falls overboard, the easiest way to get back on board is via the swim ladder at the transom. The ladder can be pulled down also by the person in the water.

5.10.2 Securing loose equipment

Secure all weighty items, such as the anchor, in place before departure. Bear in mind that wind and turbulence can easily snatch away lighter objects. Keep all the boat's hatches closed while in motion.

5.10.3 Respect for the environment

Shorelines and lakes are a precious natural resource and their preservation is a matter of honour for boaters as well. Therefore avoid:

- fuel and oil leaks
- disposing rubbish and waste in the water or on the shoreline
- discharging washing detergents or solvent into the water
- loud noise on the water and in harbours
- generating backwash especially in narrow passages and shallow waterways.

Pay special attention to local environmental laws and regulations. Familiarise yourself with international regulations on preventing the contamination of the marine environment (MARPOL) and comply with them as much as possible.

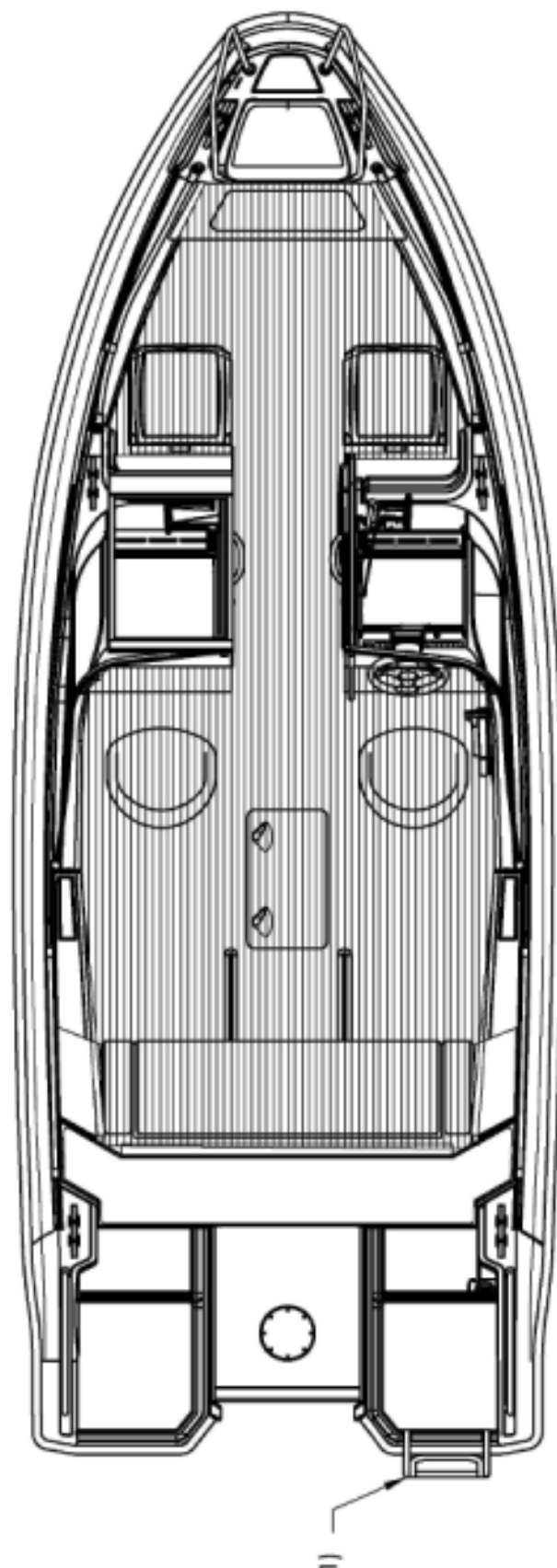


Diagram 7. The location of work areas (dashed area) and the swim ladder 1).

5.10.4 Anchoring, mooring and towing

Always anchor your boat carefully even in sheltered spots, as conditions can change suddenly. The mooring lines should be equipped with a spring-loaded device to cushion the effect of jerking. See the attaching points in *Diagram 8*. Do not use other parts of the boat for mooring, towing, or anchoring. Use sufficiently large fenders to avoid chaffing and friction.

The eyelet on the prow is for docking on a slipway or mounting on a trailer, *not* for pulling the boat sideways when mooring to a jetty. The boat also has a thief-proof, hardened-steel eyelet attached to the foredeck. The eyelet is for a locking chain only and should not be used for any purpose other than locking the boat.

The strength of the attaching points is also shown in *Diagram 8*. It is the responsibility of the owner/user to ensure that mooring, towing and anchor ropes, anchor chains and anchors are appropriate for the boat and that the breaking strength of the ropes and chains does not exceed 80% of the strength of the corresponding attaching point. However, rope wear and knots that weaken the strength of ropes should also be kept in mind. When towing, bear in mind that the strength of bow cleats is different from that of stern and deck cleats.

When anchoring in a natural harbour, ensure that the depth of the water is sufficient and DROP THE ANCHOR AT A SUFFICIENT DISTANCE FROM THE SHORE. A reasonable grip can be achieved when the rope is 4–5 times the water depth. The grip also gets better the more the rope is extended. Grip also improves significantly if the first 3–5 metres of the anchor rope is weighted rope or chain.

WARNING! *Do not try to stop the boat's motion by using your hand or placing your hand or foot between the boat and the jetty, the shore, or another boat. Practise mooring and anchoring in good conditions and use engine power with restraint but resolutely.*

ATTENTION! *When mooring your boat, always bear in mind wind change, tidal effects, backwash from other boats, etc. Further information, for example, from your insurance company.*

When towing another boat or being towed, move at a low speed and use a sufficiently strong, floating tow rope. Initiate the towing procedure carefully, avoid jerks, and do not overload the engine. Make sure the rope does not get tangled in the propeller. If the boat being towed has a displacement hull, never exceed its hull speed. If you are towing a small dinghy, adjust the length of the tow rope so that the dinghy rides the wake of your boat favourably. However, in narrow channels and in a heavy swell tow the dinghy close to the transom to minimise the twisting motion. Securely batten down the equipment in the dinghy in case it capsizes. In a swell in open water, cover the dinghy to avoid it filling with splash water.

If you tow another boat, or your boat needs to be towed, attach the tow rope to the attaching points shown in Diagram 8. The tow rope should be attached so that it is detachable when loaded.

WARNING!

The tow rope is subject to high tension. If it snaps, the recoiling speed at the breaking point can be highly dangerous. Always use a sufficiently thick rope and stay well clear of it.

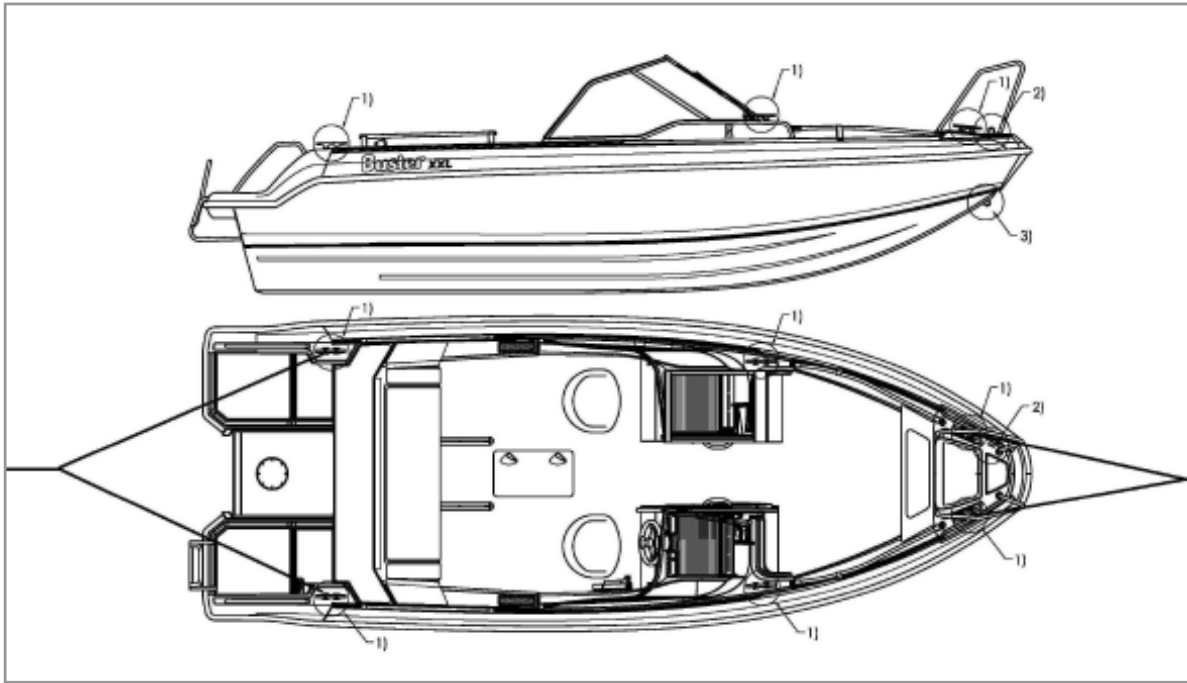


Diagram 8. 1) Attaching points (cleats) for towing, anchoring and mooring to a jetty, (attaching point strength is 17,1 kN for bow cleats and 11,9 kN for stern and deck cleats), 2) locking chain attaching point (hardened steel eyelet) and 3) trailer eyelet.

5.10.5 Trailer towing

Before lifting your Buster boat onto a trailer, make sure the trailer is appropriate for the boat: the support is adequate to minimise the load at each individual point, and that the trailer's carrying capacity is sufficient for the boat, its engine, equipment, battery, all boating accessories and the fuel load. Familiarize yourself with your local road traffic regulations on combined transport and the required driving permits. Make sure the hauling capacity of your car is sufficient for the combination in question.

Remove unnecessary articles and drain the bilge before lifting the boat onto the trailer. Adjust the side supports of the trailer so that the keel supports bear most of the weight of the boat and the side supports only keep the boat in balance. Raise the boat onto the trailer only by utilising the towing eyelet on the prow of the boat – the other attaching points cannot bear the weight of the boat when lifting. Fasten the boat securely to the trailer before transportation. Protect the boat by attaching suitable padding between

the fastening straps and the hull. Check instructions related to trailer transportation in the engine manual.

Pay attention also to the boat's accessories during trailer transportation. Ensure that all loose equipment is secured tightly in the boat. Do not cover the boat with hood, boat cover, or any other cover during trailer transportation. At high speeds on the road, the hood or the cover might come loose and cause danger or damages to the boat or other traffic. During transportation, the hood or other cover might sway in road draught and damage the boat's surface. During trailer transportation, keep the hood in its storage space or detach the hood entirely if necessary. Make sure the door of the boat is closed properly during transportation.

ATTENTION! *The trailer should be slightly front-weighted. Ensure that the boat is firmly fastened to the trailer, that it cannot move to any direction, and that its weight is evenly distributed along the trailer supports. During transportation a swaying boat will buffet against the supports and damage the hull.*

WARNING! *In terms of carrying capacity, an inadequate or poorly maintained trailer can break down during transportation and be dangerous. Ensure the load capacity of the trailer is sufficient for the weight of the boat, its engine, fuel, and all equipment.*

WARNING! *Do not cover the boat with hood, boat cover, or any other cover during trailer transportation. At high speeds on the road, the hood or the cover might come loose and cause danger or damages to the boat or other traffic.*

5.10.6 Navigation

There should always be a compass and an up-to-date sea chart on board, even if the navigation were done with the help of, for example, GPS chart plotter. GPS should only be used to support navigating and not used as a primary means of navigation. The captain of the vessel should master at least the basic navigational skills.

6 Service, repairs and winter storage

More information on maintenance, winter storage, service and repairs can be found on the Internet at www.buster.fi and is provided by your nearest Buster dealership.

Major damage to the aluminium surface or other surfaces should always be repaired by an authorised Buster dealership.

In the event of engine defects or faults in post-production accessories, contact the supplier of the respective accessory.

ATTENTION! *Ensure that the cleansers, surface treatment agents and protective agents you use are suitable for aluminium and other untreated surfaces. Follow the instruction provided by the manufacturer of the chemical.*

7 Accessories

7.1 General

ATTENTION! *If not carried out properly, many post-production installations and alterations can cause structural damage to the boat or compromise safety. Contact the manufacturer before you or anyone else on your behalf carries out, for example, new groundings, hatches, or equipment installations, or attaches other metal alloys to the aluminium surface of the boat.*

ATTENTION! *If you install or get installed accessories to the boat, use insulation plates made of non-conducting substances under the surfaces that are connected to the treated aluminium surfaces (installation surface of an accessory or a screw-head).*

7.2 Installing accessories

It is possible to install several electrical accessories to Buster XXL. Circuitry and wiring are ready. In the following sections, the locations of possible accessories and wiring are listed. See more instructions on installing and operating the accessories in manufacturer's instructions on each accessory in question.

7.2.1 Heater

A space for a post-production diesel- or kerosene-operated heater has been reserved on the boat. The heater itself and its systems are to be installed inside the steering pulpit. See more instructions in the manufacturer's installation instructions and in the installation instructions of the Buster XXL heater installation instructions.

7.2.2 Refrigerator

The space under the boat's left pulpit is designed for refrigerator. There is a 12V power plug inside the pulpit, which is meant primarily for refrigerator.

7.2.3 Radio/CD player

The boat is equipped with a ready-made wiring harness for installing auto radio type of player. The player is meant to be installed in the left pulpit under the sliding cover. The radio's memory current, which passes the main power switch, the main current through the main power switch and the leads for two speakers have been connected to the Euro connector in the wire harness. The ends of the speakers' wires are attached to each pulpit and the speakers are to be installed in the legroom's panel wall.

Appendices

APPENDIX 1: TECHNICAL SPECIFICATIONS

The boat has a consecutive serial number, or CIN code (Craft Identification Number). The code is shown on the hull of the vessel on the right-hand side of the stern, on the exterior of the transom next to the moulding strip. For your own information, record the CIN code in the following table. When dealing with the boatyard or dealer, tell them the CIN code and boat type to facilitate delivery of the correct spare parts.

Type of notation:	Buster XXL
CIN code:	FI-BUS
Engine brand and model:	
Engine serial number:	
Boat's hull material:	Marine aluminium EN AW-5754 H14 (AlMg3)

TECHNICAL DETAILS OF THE BOAT

Buster XXL	
Main dimensions	
Length overall, m	6,35
Hull length, m	6,10
Max. beam, m	2,40
Weight unloaded, kg	955
Maximum total weight*), kg	1600
CAPACITY	
Recommended maximum number of people	7
Recommended maximum load, kg **)	680
VOLUMES	
Fuel tank, l	153
Pontoon foam, l	1004
PERFORMANCE	
Max. recommended engine output, kW (hp)	111(150)
Performance at max. output, knots	44
ELECTRICAL SYSTEM	
Voltage	12 V DC
Recommended battery capacity, Ah	100
CONTROL CABLES	
Hydraulic steering cables, m (feet)	5,20 (17)
Remote control cables, m (feet)	4,20 (14)

*) The maximum overall weight is the boat's unloaded weight plus maximum recommended load.

**) When loading, only the following are considered as incidental loads:

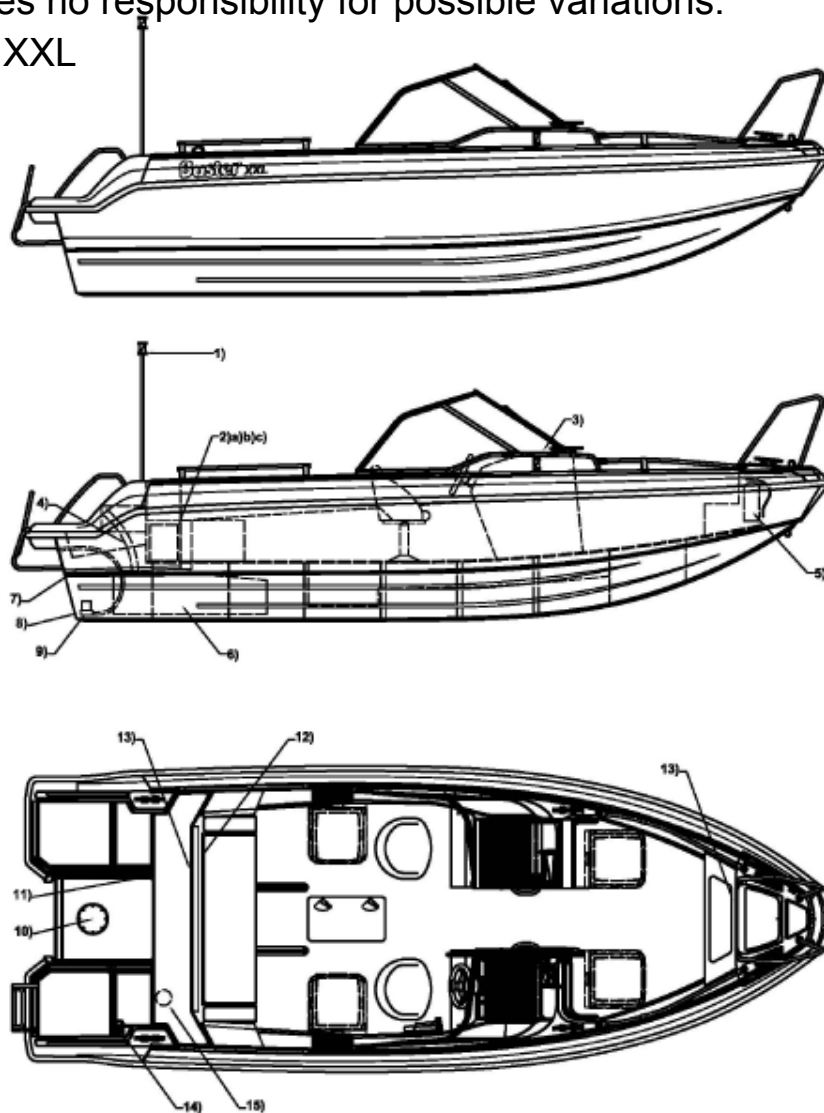
PARTIAL LOAD	
Total weight of persons on board, kg	525
Basic equipment, kg	15
Contents of fixed fuel tank, kg	110
Raft, kg	30

Due to the production process, there may be small variations in the main dimensions and volumes. Note that the full capacity of tanks cannot be utilised since capacity depends on the trim angle and angle of heel.

APPENDIX 2: THE OVERALL ARRANGEMENT OF BUSTER XXL

The overall arrangements of the diagrams are not in scale. Because of the modular nature of the fittings available for the boat, the diagrams represent the maximum number of fittings available for a given arrangement. The boat may not be equipped with all the fittings shown. Due to continuous product development, the manufacturer assumes no responsibility for possible variations.

Buster XXL



- | | |
|---|--|
| 1) Mast navigation light; visible all-round, white, output 10W | 10) Service hatch for fuel tank and bilge pump |
| 2) a) battery housing, b) fuse box and c) main power switch | 11) Breather valve for fuel tank |
| 3) Navigation lights; 112,5° (red) and 112,5° (green), output 10W | 12) Cockpit draining well |
| 4) Fuel filler hose | 13) Ventilation opening for bilge |
| 5) Powder extinguisher, 2 kg; output 8A68B | 14) Fuel filler bushing |
| 6) Fuel tank | 15) Fuel filter/water separator |
| 7) Cockpit draining hose | |
| 8) Stern drain plug | |
| 9) Bilge pump | |

Circuit diagram for Buster XXL. Symbols and terminology on page 41.



SYMBOLS AND TERMINOLOGY

(RED)	Red lead
(BLK)	Black lead
(BRN)	Brown lead
(GRY)	Grey lead
(R/W)	Red/white lead
BILGE	Electrical bilge pump
WIPER	Motor for windshield wiper
LIGHT W	Mast light, 360° white
LIGHT R/G	Navigation light red and green 112,5°/112,5°
LIGHT GRN	Navigation light, green 112,5°
LIGHT RED	Navigation light, red 112,5°
(MAIN) FUSE	(Main) fuse
BATTERY	Battery
ENGINE	Engine
MAIN SWITCH	Main power switch
FUEL SENSOR	Fuel sensor
FUEL GAUGE	Fuel gauge
RCU	Remote control unit, ignition key

Due to continuous product development, the manufacturer assumes no responsibility for possible variations in the circuit diagram.

APPENDIX 4: DECLARATION OF CONFORMITY

DECLARATION OF CONFORMITY

The recreational craft directive 94/25/EC and 2003/44/EC

MANUFACTURER

Manufacturer's name:	Inhan Tehtaat Oy Ab
Address:	Saarikyläntie 21
Postal code:	FIN-63700
Town:	Ähtäri
Country :	Suomi
Module adopted:	B (EC type inspection)

AUTHORITY NOTIFIED

Name:	VTT Tuotteet ja tuotanto
Identification code:	0537
Address:	PL1000, Kemistintie 3
Postal code:	FIN-02044
Town:	Espoo
Country	Suomi

RECREATIONAL CRAFT INFORMATION

Make and model of the boat:	Buster XXL
Design category:	C - coastal
Type inspection and certificate number:	VTT-C-2186-10-vene-001-07
Boat type:	Open, single-hull outboard motorboat
Construction material:	Aluminimu alloys, reinforced plastic, PE-HD
Maximum engine capacity, kW:	111
Length/width/draught, m:	6,35/2,42/0,35

References to the appropriate uniform standards and regulations are listed overleaf.

I declare that the aforementioned recreational boat complies with all appropriate and essential safety requirements in accordance with the specifications overleaf and the EU type inspection certificate.

Jukka Suonperä
Managing director
Date: 01/01/08

General requirements		
Basic information		EN ISO 8666:2002
2.1	Hull markings	ISO 10087:1996 / A1:2000
2.2	Manufacturer's plate	RCD annex I, 2.2
2.5	Owner's handbook	EN ISO 10240:2004
Arrangements and equipment		
2.3	Prevention of falling overboard	EN ISO 15085:2003
3.7	Stowing life raft	RSG Guidelines
3.8	Emergency exit	-
3.9	Anchoring and towing	EN ISO 15084:2003
5.7	Navigation lights	1972 COLREG
5.8	Prevention of emissions and discharges	-
Installations		
5.1	Engines and engines spaces	-
5.2	Fuel system	EN ISO 10088:2001, EN ISO 11105:1997
5.3	Electrical system	EN ISO 10133:2000, ISO 8846:1990
5.4	Steering system	EN ISO 10592:1994/A1:2000
5.5	Gas equipment	-
5.6	Fire prevention	EN ISO 9094-1:2003
Dimensions		
3.1	Structure	RSG Guidelines, NBS-VTT Extended rule
Hydrostatics		
3.2	Stability and freeboard	EN ISO 12217:2002
3.3	Buoyancy	EN ISO 12217:2002
3.6	Maximum permitted load	EN ISO 12217:2002, EN ISO 14946:2001
3.4	Hull and deck openings	EN ISO 9093-1:1997
3.5	Filling with water	EN ISO 15083:2003, ISO 8849
Drive characteristics		
4	Drive characteristics	EN ISO 11592:2001
2.4	Visibility from steering position	RSG Guidelines, EN ISO 11591, NBS F10

- = is not relevant for the security of the particular boat model, or the relevant system is not used in the boat.

[illegible]

Buster®

BY FISKARS®



Inha Works Ltd.
FI-63700 Ähtäri
Finland

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