

# Manual for Owners and Skippers



## Sailing yacht „Bavaria Cruiser 33“



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## Introduction

This manual will help you to handle your yacht safely and with joy. Apart from information on the boat itself and supplied equipment or installed accessories the manual also contains information on operation and maintenance. Please familiarise yourself with everything before going on your first voyage.

If this is your first sailing yacht, or if you are not really familiar with the special characteristics of a keel yacht, for your own safety and comfort, please make sure to get proper training before putting it into operation. Do not hesitate to contact your dealer for information on further training possibilities.

As the scope of delivery may vary depending on the order the equipment of your yacht may deviate from some descriptions and illustrations. To be able to constantly upgrade our yachts to state-of-the-art status we reserve the right to changes in form, equipment and technology. For that reason no claims can be derived from data, illustrations and descriptions contained in this manual.

**PLEASE KEEP THIS MANUAL IN A SAFE PLACE  
AND HAND IT OVER TO THE NEW OWNER IF YOU SELL THE YACHT.**

**BAVARIA** would like to welcome you to the circle of **BAVARIA** owners and would like to thank you for placing your confidence in our products by acquiring this yacht.

Your contract partner and the management and staff of Bavaria Yachtbau GmbH hope you will enjoy your new yacht.

**We do wish you a safe journey at all times and may there always be enough water  
beneath your keel.**

BAVARIA Yachtbau GmbH  
Management



J. Ludmann

Category of design

Following the European Recreational Craft Directive each boat has to be classified according to a category of design.

**All sailing yachts of BAVARIA belong to the category of design A / B,**

**'A' OCEAN:** Designed for extended voyages where conditions may exceed wind force 8 (Beaufort scale) and significant wave heights of 4 m and above but excluding abnormal conditions, and vessels largely self-sufficient.

**'B' OFFSHORE:** Designed for offshore voyages where conditions of up to, and including, wind force 8 (Beaufort scale) and significant wave heights up to, and including, 4 m may be experienced.

**Certification**

For yachts with a length of less than 12m hull length the EC-Directive intends the certification module **Aa**.

For yachts with a length of more than 12m hull length the EC-Directive intends the certification module **B+C**.

**Germanischer Lloyd**, headquartered in Hamburg, was authorised to do the necessary certification as a notified body (see: Declaration of conformity).

**Build by:** **Bavaria Yachtbau GmbH**  
**Bavariastr. 1**  
**D – 97232 Giebelstadt**



The boat Bavaria Cruiser 33 "has been tested according to ISO 12217-2 regarding stability and freeboard, buoyancy and swimming ability. Hence the various stipulations about the number of people and the payload. The builder's plate which is mounted on the dashboard next to the steering position, looks as follows:

**Explanations**

Category of design A / B : Ocean / Offshore

Max. = 6 / 10 : Maximum number of persons recommended by the manufacturer for which the boat was designed to carry when under way.

Max + = 725 kg / 950kg : Maximum recommended load including 6/10 persons, stores, provisions and personal equipment (excluding tank capacities).

CE : CE marking which indicates the conformity of the yacht with all provisions of the Directive.

## Identification

The hull identification was formed into the transom on starboard side. This is a unique sequence of digits and letters.

## Warnings

Many chapters of this manual will inform on trouble free operation, maintenance or draw your attention to signs of dangers. To find them more easily they are specially marked (in boxes or in bold). We advise you to study them carefully although the experienced skipper might be quite familiar with many of them. The following chapters contain such warnings/notes or other important information for operating the yacht.



**Always observe seaman's duty of care!**



**Danger**

Means, that an extreme real hazard which will lead to the death or too irreparable injuries with great probability exists if no adequate precautions are found.



**Warning**

Means, that a hazard which can lead to injuries or death exists if no adequate precautions are found.



**Caution**

Means a reminder of safety measures or draws the attention to procedures, which might be not safe or lead to personal injuries or damage of the vessel or its components.

## Security advice



**Attention!**

From wind force 6 the hatch in the cab entrance is to be closed.



**Attention!**

Starting from wind force 6 the cab windows in the cockpit are to be closed.



**Attention!**

Check the extinguisher regularly!  
Schools you are in fire fighting!  
Always the maritime duty of care!



**Attention!**

In case of fire are as described in 1.2.2 of this manual the hatches and Sliding hatches to use as an escape route. In the fore are the shelves as accession assistance for the exit to use.



**Attention!**

During operation of the bathing platform: Danger of pinching!  
Maximum capacity 2 persons (150 kg)



**Warning!**

The re-boarding device cannot be deployed from the water. It should be deployed whenever the craft is used singlehanded-whether anchored, moored or under way.



**Attention!**

During the loading of the vessel, the maximum recommended load never exceeded. The loading must be done carefully, with the burden must be distributed appropriately to the draft to get trim. Gravity loads must be placed as low as possible.



**Attention!**

The maximum recommended number of persons must not be exceeded. Regardless of the number of persons on board, the total weight of persons and equipment, never exceed the recommended maximum load.



**Attention!**

Lots of equipment (eg, lying around fenders, mooring, etc.) before departure should be safely in the designated stowages away.



**Attention!**

- Any change in the distribution of the masses on board (eg, affix a fishing pole, a radar or davits), the transverse, the trim and the driving of the vehicle significantly affect water.
- The transverse is stored by each high weight reduced.
- The transverse can be reduced by pulling or lifting heavy loads with the davit
- breaking waves represent a serious threat to the stability.



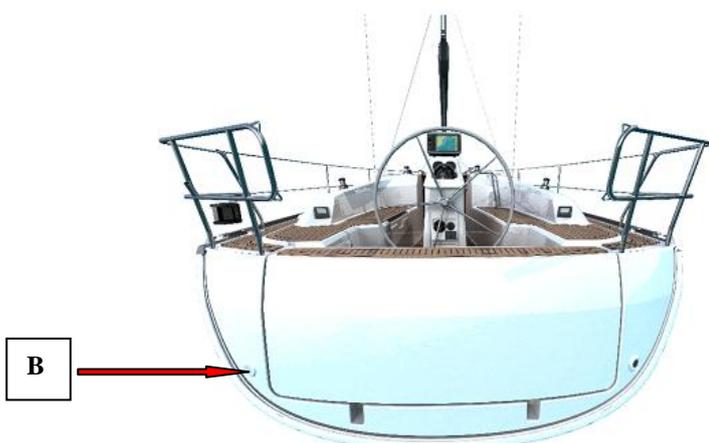
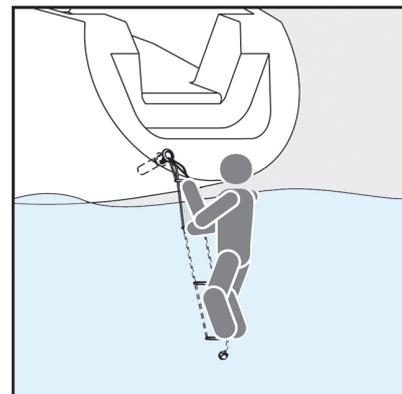
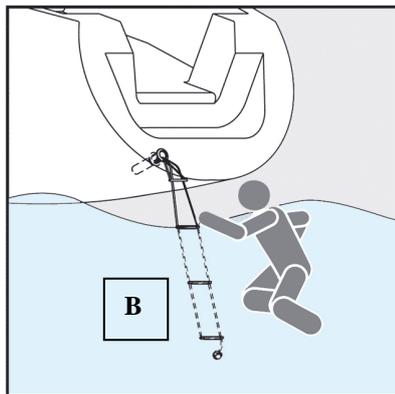
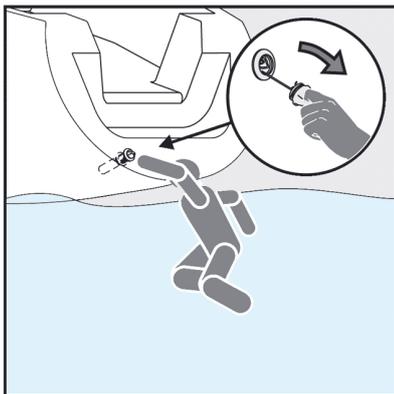
**Attention!**

Before using the bathing ladder turn the engine off!



**Attention!**

The swim ladder **A** or emergency ladder **B** is intended as a means of rescue for man over Board accidents.



**Declaration of Conformity of Recreational Craft with the Design, Construction and Noise Emission requirements of Directive 94/25/EC as amended by Directive 2003/44/EC**  
(To be completed by boat builder)

Name of craft manufacturer: Bavaria Yachtbau GmbH  
 Address : Bavariastr. 1  
 Town: Giebelstadt Post Code: 97232 Country: DE

Name of Authorised Representative (if applicable): \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Town: \_\_\_\_\_ Post Code: \_\_\_\_\_ Country: \_\_\_\_\_

Name of Notified Body for design and construction assessment (if applicable): Germanischer Lloyd SE  
 Address: Brooktorkai 18  
 Town: Hamburg Post Code: 20457 Country: DE ID Number: 0098  
 EC type-examination Certificate number: 92083-1, 92083-1/1 Date: (yr/month/day) 2012 / 08 / 27

Name of Notified Body for noise emission assessment (if applicable): \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Town: \_\_\_\_\_ Post Code: \_\_\_\_\_ Country: \_\_\_\_\_ ID Number: \_\_\_\_\_

Module used for construction assessment:  A  Aa  B+C  B+D  B+E  B+F  G  H  
 Module used for noise emission assessment:  A  Aa  G  H  
 Other Community Directives applied: \_\_\_\_\_

**DESCRIPTION OF CRAFT**

Craft Identification Number

D	E	B	A	V	G	3	3	X	X	X	X	1	3
---	---	---	---	---	---	---	---	---	---	---	---	---	---

Brand name of the craft: Bavaria Type or number: Cruiser 33

Type of craft:  sailboat  motorboat  
 inflatable  
 other (specify): \_\_\_\_\_  
 Type of hull:  monohull  multihull  
 other (specify): \_\_\_\_\_  
 Construction material:  aluminium, aluminium alloys  plastic, fiber reinforced plastic  
 steel, steel alloys  wood  
 other (specify): \_\_\_\_\_  
 Type of main Propulsion:  sails  petrol engine  
 diesel engine  electric motor  
 oars  
 other (specify): \_\_\_\_\_  
 Type of engine:  outboard  inboard  
 z or sterndrive without integral exhaust  
 z or sterndrive with integral exhaust  
 other (specify): \_\_\_\_\_  
 Deck:  fully decked  partly decked  
 open  
 other (specify): \_\_\_\_\_  
 Maximum Design Category: A  B  C  D   
 Engine power: Max. Recommended: 21 kW  
 Installed: 14 kW (if applicable)  
 Length of hull L<sub>1</sub>: 9,75 m  
 Beam of hull B<sub>1</sub>: 3,42 m  
 Draught T: Kat A: 1,96/1,557 Kat B: 1,98/1,59 m

This declaration of conformity is issued under the sole responsibility of the manufacturer. I declare on behalf of the craft manufacturer that the craft mentioned above complies with all applicable essential requirements in the way specified (and is in conformity with the type for which above mentioned EC type examination certificate has been issued) – delete text between brackets if no EC type examination certificate has been issued.

Name and function: J. Ludmann (Manager)  
 (identification of the person empowered to sign on behalf of the manufacturer or his authorised representative)

Signature and title: \_\_\_\_\_  
 (or an equivalent marking)

Date and place of issue: (yr/month/day) 2013/01/08

Essential requirements (reference to relevant articles in Annex IA & IC of the Directive)	Standards	Other normative document/ methods	Technical file	
<b>General requirements (2)</b>				
Hull Identification Number – HIN (2.1)	<input checked="" type="checkbox"/>			EN ISO 10087:2006
Builder's Plate (2.2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	EN ISO 14945:2004/AC:2005
Protection from falling overboard and means of reboarding (2.3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	EN ISO 15085:2003/AC:2009
Owner's manual (2.5)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	EN ISO 10240:2004
<b>Integrity and structural requirements (3)</b>				
Structure (3.1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	EN ISO 12215-1:2000 EN ISO 12215 Teil 2-4:2002 EN ISO 12215 Teil 5+6:2008 EN ISO 12215 Teil 8:2009/AC:2010
Stability and freeboard (3.2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	EN ISO 12217 – 2:2002
Buoyancy and floatation (3.3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	EN ISO 12217 – 2:2002
Openings in hull, deck and superstructure (3.4)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	EN ISO 12216:2002 EN ISO 9093 – 1:1997
Flooding (3.5)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	EN ISO 11812:2001 EN ISO 8849:2003 EN ISO 15083:2003
Manufacturer's maximum recommended load (3.6)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	EN ISO 14946:2001/AC:2005
Liferaft stowage (3.7)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Annex I 94/25/EG-2003/44/EG
Anchoring, mooring and towing (3.9)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	EN ISO 15084:2003
<b>Handling characteristics (4)</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
<b>Engines and engine spaces (5.1)</b>	<input checked="" type="checkbox"/>			EN ISO 16147:2002
Inboard engine (5.1.1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	EN ISO 9094-1:2003 EN ISO 7840:2004 EN ISO 10088:2001 EN ISO 10133:2000
Ventilation (5.1.2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	EN ISO 11105:1997
<b>Fuel system (5.2)</b>				
General – fuel system (5.2.1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	EN ISO 10088:2001 EN ISO 7840:2004 EN ISO 9094-1:2003
Fuel tanks (5.2.2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	EN ISO 10088:2001 EN ISO 7840:2004 EN ISO 9094-1:2003
<b>Electrical systems (5.3)</b>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	EN ISO 10133:2000 EN ISO 13297:2000
<b>Steering systems (5.4)</b>				
General – steering system (5.4.1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	EN ISO 13929:2001 EN ISO 8847:2004/AC:2005
Emergency arrangements (5.4.2)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
<b>Gas systems (5.5)</b>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	EN ISO 10239:2008
<b>Fire protection (5.6)</b>				
General – fire protection (5.6.1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	EN ISO 9094-1:2003 EN ISO 12216:2002
Fire-fighting equipment (5.6.2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	EN ISO 9094-1:2003
<b>Navigation lights (5.7)</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	COLREG/CEVNI
<b>Discharge prevention (5.8)</b>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	EN ISO 8099:2000
<b>Annex I.B – Exhaust Emissions</b>	see the Declaration of Conformity of the engine manufacturer			
<b>Annex I.C – Noise Emissions</b>	see the Declaration of Conformity			



## EC Type Examination Certificate

on examination subject to the Directive for Recreational Craft (94/25/EC), amended by 2003/44/EC, as per June 2003

Record-No.:	<b>92083-1</b>
Manufacturer:	Bavaria Yachtbau GmbH Bavariastraße 1 97232 Giebelstadt
Manufacturer's marking:	Bavaria Cruiser 33
CIN-No.	DE-BAV G33A1 G 2 13
Description:	Sailing Yacht, $L_H = 9,75$ m, $B_H = 3,42$ m, $T_{\text{deep keel}} = 1,96$ m, $T_{\text{shallow keel}} = 1,57$ m
Boat design category:	A - "Ocean"
Module:	B - „EC type-examination“, Annex VII of the Directive
Basis of examination:	EN ISO 10087, EN ISO 14945, EN ISO 15085, EN ISO 10240, EN ISO 12215, EN ISO 12217-2, EN ISO 12216, EN ISO 9093, EN ISO 11812, EN ISO 15083, EN ISO 14946, EN ISO 9094-1, EN ISO 15084, EN ISO 10088, EN ISO 10133, EN ISO 13297, EN ISO 13929, EN ISO 10239 and EN ISO 8099
Number of persons recommended:	6
Loaded displacement mass (mLDC), kg:	6624 (deep keel), 6826 (shallow keel)
Maximum load (mMTL), kg:	812
Maximum rated engine power, kW:	21

### Results of examination:

The product described above meets the essential safety requirements of Directive 94/25/EC, amended by 2003/44/EC, Annex I

### A.2.1 Craft Identification (CIN) - A.5.8 Discharge Prevention.

### Other documentation:

Examination reports Nos. 1/29 to 29/29 including pertinent design documents according to the annex of this certificate.

Hamburg, 27.08.2012

**Germanischer Lloyd**  
EU-Certification for Recreational Craft  
Code-No. 0098  
Head of Certification Body

  
\_\_\_\_\_  
(Dirk Brügge)

The present Certificate remains the property of Germanischer Lloyd SE and may be used without any modifications only. Any texts and advertising material published must not be contrary to contents of this Certificate. Quoting of extracts, copying and circulation of the Certificate are not admissible.

Germanischer Lloyd SE, P.O.B. 11 16 06, 20416 Hamburg, Germany



## EC Type Examination Certificate

on examination subject to the Directive for Recreational Craft (94/25/EC), amended by 2003/44/EC, as per June 2003

Record-No.:	<b>92083-1/1</b>
Manufacturer:	Bavaria Yachtbau GmbH Bavariastraße 1 97232 Giebelstadt
Manufacturer's marking:	Bavaria Cruiser 33
CIN-No.	DE-BAV G33A1 G 2 13
Description:	Sailing Yacht, $L_H = 9,75$ m, $B_H = 3,42$ m, $T_{\text{deep keel}} = 1,985$ m, $T_{\text{shallow keel}} = 1,593$ m
Boat design category:	B - "Offshore"
Module:	B - „EC type-examination“, Annex VII of the Directive
Basis of examination:	EN ISO 10087, EN ISO 14945, EN ISO 15085, EN ISO 10240, EN ISO 12215, EN ISO 12217-2, EN ISO 12216, EN ISO 9093, EN ISO 11812, EN ISO 15083, EN ISO 14946, EN ISO 9094-1, EN ISO 15084, EN ISO 10088, EN ISO 10133, EN ISO 13297, EN ISO 13929, EN ISO 10239 and EN ISO 8099
Number of persons recommended:	10
Loaded displacement mass (mLDC), kg:	7148 (deep keel), 7350 (shallow keel)
Maximum load (mMTL), kg:	1336
Maximum rated engine power, kW:	21

### Results of examination:

The product described above meets the essential safety requirements of Directive 94/25/EC, amended by 2003/44/EC, Annex I

### A.2.1 Craft Identification (CIN) - A.5.8 Discharge Prevention.

### Other documentation:

Examination reports Nos. 1/29 to 29/29 including pertinent design documents according to the annex of this certificate.

Hamburg, 27.08.2012

**Germanischer Lloyd**  
EU-Certification for Recreational Craft  
Code-No. 0098  
Head of Certification Body

  
(Dirk Brügge)

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Germanischer Lloyd SE, P.O.B. 11 16 06, 20416 Hamburg, Germany

# VOLVO PENTA

**Declaration of Conformity for Recreational Craft Propulsion Engines with the exhaust emission requirements of Directive 94/25/EC as amended by 2003/44/EC**

## D1-13, D1-20, D1-30, D2-40

**Engine manufacturer:**

AB Volvo Penta  
Gropegårdsgatan  
405 08 Göteborg  
Sweden

**Body for exhaust emission assessment:**

NKIP  
Nipkowweg 9  
Postbus 65  
8500AB Joure  
Netherlands  
**ID Number:** 0613

**Module used for exhaust emission assessment** ..... B, EC Type Examination acc to Annex VII  
**Other Community Directives applied** ..... EMC 89/336/EEC

**Description of engine(s) and essential requirements**

**Engine Type** ..... 4 stroke diesel engine

Engine model(s) covered by this declaration	EC Type certificate number
D1-13 .....	CE-RCD-540
D1-20 .....	CE-RCD-540
D1-30 .....	CE-RCD-541
D2-40 .....	CE-RCD-541

Essential requirements	Standards Used	Other normative document used
<b>Annex I.B – Exhaust Emissions</b>		
Engine identification	Volvo Penta std	Annex 1.B.1
Exhaust emission requirements	EN ISO 8178-1:1996	Annex 1.B.2
Durability	Volvo Penta std	Annex 1.B.3
Operator's manual	ISO 10240:2004	Annex 1.B.4
<b>EMC Directive</b>	EN 61000-3-2, EN 61000-3-3, CISPR 25	

This declaration of conformity is issued under the sole responsibility of the manufacturer. I declare on behalf of the engine manufacturer that the engine(s) will meet the requirements of above mentioned directives when installed in a recreational craft, in accordance with the engine manufacturer's supplied instructions and that this (these) engine(s) must not be put into service until the recreational craft into which it is (they are) to be installed has been declared in conformity with the relevant provisions of the above mentioned Directives.

**Name and function:** Sam Behrmann, Product Liability  
(identification of the person empowered to sign on behalf of the engine manufacturer or his authorised representative)

**Signature and title:**  
(or an equivalent marking) 

Date and place of issue: (yr/month/day) 2005/12/16 Göteborg

PL-80/05

## 1. Description of the yacht

### 1.1 Main particulars

#### 1.1.1 Principal dimensions

Length overall	$L_{OA}$	9.99 m	Length of hull	$L_H$	9.75 m
Length on waterline	$L_W$	8.85 m	Breadth max.	$B_{max}$	3.42 m
<b>Cast keel depth (deep keel) <math>D_{max}</math></b>			<b>Cast keel (flat keel) <math>D_{max}</math></b>		
Category A		1.96 m			1.57 m
Category B		1.98 m			1.59 m
Payload max. (Category A)					1052 kg
Payload max. (Category B)					1624 kg
Headroom (without antenna and similar things)			$H_D$ abt		4.10 m
Headroom (for transport) *			$H_T$ abt		14.830 m

\*The air draft may well be the critical dimension if we look at passing under bridges or high voltage electrical lines or other items. This dimension denoted the distance between the water surface and the top of the boat and its superstructures. Please note that this is give without optional equipment such as radar antennas or navigation lights or wind indicators. Please do correct the dimension given in this manual if you change anything that reflects on that dimension. Please note this change in this owner's manual and make sure this note is also transferred into any other copy of this manual together with the date.

#### 1.1.2 Displacement and weights

Weight of the empty yacht -incl. safety equipment	Deepkeel	5243 kg
Weight of the empty yacht -incl. safety equipment	Flatkeel	5442 kg
Weight of the fully equipped yacht- ready for sailing with crew, Category A, Deepkeel		6624 kg
Weight of the fully equipped yacht- ready for sailing with crew, Category B, Deepkeel		7148 kg
Weight of the fully equipped yacht- ready for sailing with crew, Category A, Flatkeel		6826kg
Weight of the fully equipped yacht- ready for sailing with crew, Category B, Flatkeel		7350kg
Ballast normal keel 30%		1300 kg
Ballast lead keel 30%		1500 kg

#### 1.1.3 Motorisation

Diesel engine:

Manufacturer Volvo:	Type	D1-20 13.8 kW
		D1-30 21 kW

Cooling indirect (sea-/fresh-water)

Reverse-reduction gear Saildrive Saildrive 130S/2.19:1

Propeller: 2-bladed fixed propeller made from an aluminium alloy

#### 1.1.4 Electrical installation

##### 230V (option) AC-installation

Shore connection safety contact plug box (meeting the CEE-norm) 230 V

Battery charger 115V/230 V AC / 12 V DC with 45 A max. current

##### 12 V DC-system

1 x starter battery 12 V 88 Ah 1 x service battery 12 V 135 Ah

Motor generator (alternator) battery charger

The distribution is effected via switchboard, electric circuits with electronic protective switches and LED.

#### 1.1.5 Tank capacities

1 fresh water tank	abt 150 l	the tank is in the bow.
1 fuel tank	abt 150 l	the tank is on starboard side under the aftcabin.
1 holding tank	abt 70 l	the tank is in the toilet room
1 gas cylinder (option)	abt 3 kg cyl.	in cockpit

#### 1.1.6 Fixing points for cranes, resting-points for slipping and transport

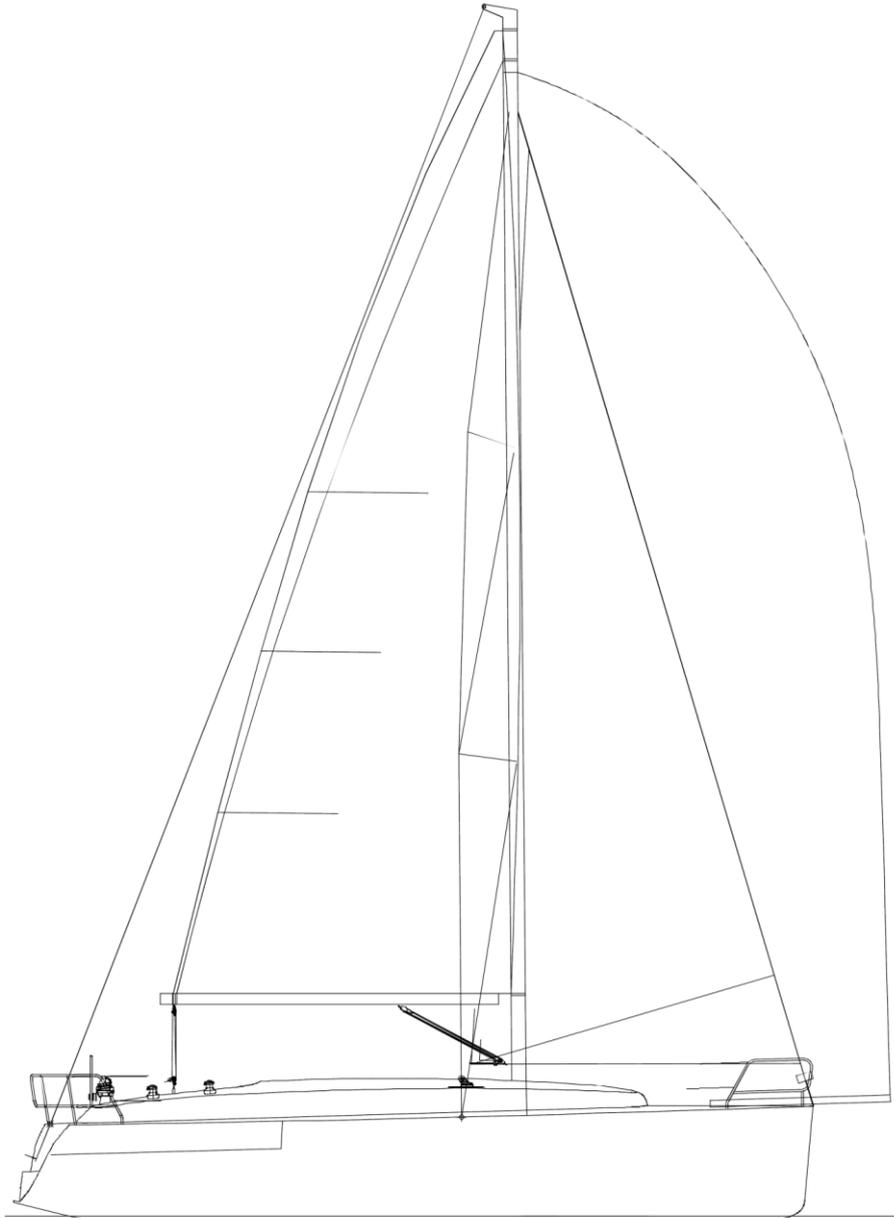


##### Attention

The rear belt will be placed in the area of the sail drive. The rear belt should be placed between shaft and keel, the front belt in front of the keel.

**1.2 General arrangement plan**

**1.2.1 Rigging plan**

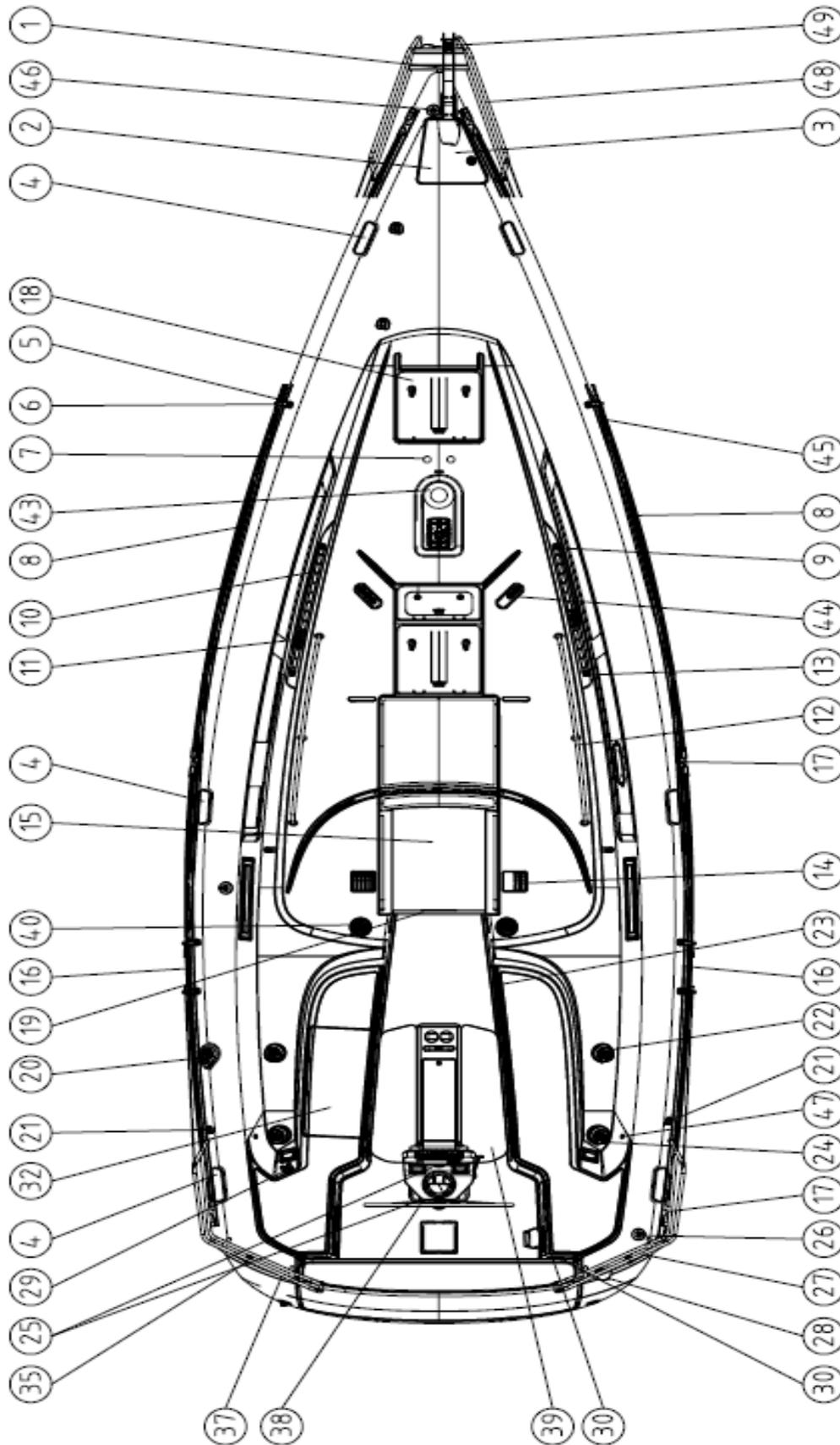


**Note**

The valid measurement of the foresail reefing gear is on the instruction leaflet at the carton of the Furlex-foresail reefing gear.

	<b>Minimum operating condition (<math>m_{MOC}</math>) Flatkeel / Deepkeel</b>	<b>Loaded displacement condition (<math>m_{LDM}</math>) Flatkeel / Deepkeel</b>
<b>STIX</b>	32,05 / 32,2	29,13 / 29,34
<b>Angle of vanishing (degree)</b>	125,8 / 126,1	120,0 / 120,3

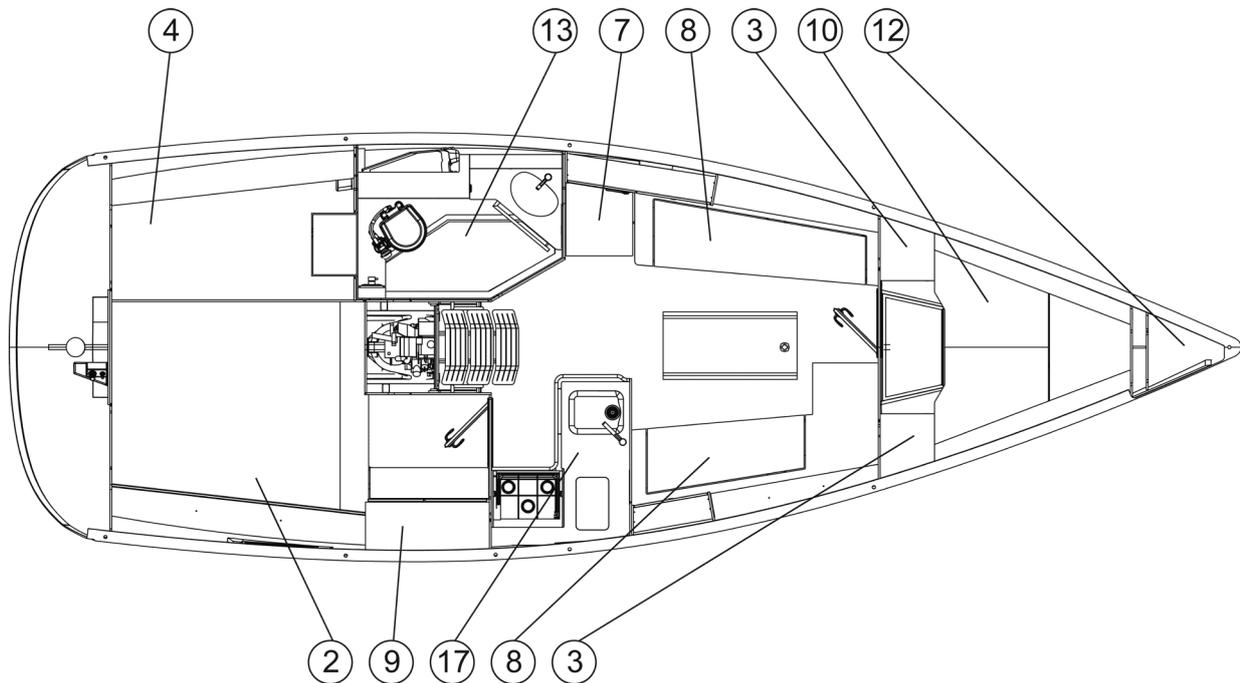
1.2.2 Deck arrangement



1	Bugbeschlag	Bow fitting
2	Ankerkasten	Anchor chain bail
3	Elektrische Ankerwinde	Electric windlass
4	Belegklampe	Mooring cleats
5	Relingfuss	Stanchion base
6	Relingstütze	Stanchion
7	Kabeldurchführung	Cable penetration
8	Wantenpütting	Main shrouws + aft kiwers cgk
9	Schienenendstück	Front end stop (g. track)
10	Genuaschiene	Genoa track
11	Genuaschlitten	Genoa track car
12	Handreling	Hand hold
13	Schienenendstück mit Umlenckblock	Aft end stop (g. track)
14	Stopper	Stopper
15	Schiebeluk	Sliding hatch
16	Relingdurchstieg Bb/ Stb	Rail passage
17	Durchführung Fussreling (Klüse)	Hawse
18	Vorschiffsluke	Op. hatch
19	Niedergangstür	Companion way
20	Liegender Block mit Stopper	Foot block with lock off
21	Decksauge Bb/ Stb	Padeye
22	Genuawinde	Genoa winch
23	Cockpitfenster	Cockpit portlight
24	Spinnakerwinde	Spinnaker winch
25	Motorinstrumententafel/ Kartenplotter	Engine panel/ Chart plotter
26	Dieseinfüllstutzen	Fuel inlet
27	Heckkorb Stb	Aft starboard pushpit
28	Hecklaterne	Stern light
29	Landanschlusssteckdose 230 V	Shore socket 230 V
30	Handlenzpumpe	Hand operated bilge pump
32	Backskiste m. Notpinne	Locker with emergency tiller
35	Achterstagbeschlag	Backstay chain plate
36	Cockpitdusche (hinter Badeplattform)	Shower
37	Heckkorb Bb	Aft port pushpit
38	Steuerrad	Steering wheel
39	Cockpittisch	Cockpit table
40	Fallwinde	Winch
43	Deckslüfter	Ventilator
44	Decksorganizer	Deck organizer
45	Fussreling	toeboard
46	Wassereinfüllstutzen	Water inlet
47	Tankentlüftung	Tank venting
48	Bugkorb	Bow pulpit
49	Bugleuchte Stb/ Bb	Bow navigation light

- Storage place for the life raft an swim ladder is in the cockpit locker.
- The work deck is confined to the cockpit, the cabin roof to the mast and the whole area of the running deck to the cabin roof.

## 1.2.3 Accommodation plan



<b>2</b>	Double bed	Doppelbett
<b>3</b>	Bow locker	Vorschiffschrank
<b>4</b>	Ship's hold	Stauraum
<b>7</b>	Navigational seat/ table	Navigationssitz/ -tisch
<b>8</b>	Seating and saloon table	Sitzgruppe mit Tisch
<b>9</b>	Wardrobe	Kleiderschrank
<b>10</b>	Double bed	Doppelbett
<b>12</b>	Chain locker	Ankerkasten
<b>13</b>	Head-/ Shower room	Toiletten-/ Duschaum
<b>17</b>	Kitchen with cooker/ oven, sink	Küche mit Herd/ Backofen, Spüle

### 1.3 Drive systems

#### 1.3.1 Sails

The SY Bavaria Cruiser 33 is equipped with the following standard sails:

Main sail - fully-battened	abt 28,3 sqm
Main sail - standard	abt 22,6 sqm
Fock (100 %)	abt 22,3 sqm

Cruiser 33	P	E	I	J
Standard	11840 mm	4120 mm	12340 mm	3500 mm
Furling	11470 mm	4080 mm	12340 mm	3500 mm

#### 1.3.2 Rigging

**Mast:** LM- Profile, without taper; – 18 deg. double spreaders , angular; - 2 halyards, topping- and boom lifts,  
- tripping line and fittings.

#### Boom

- LM-Profile; - clew outhaul; - 2 reefing lines; - eye for mainsheet; - eye for tripping line.

**Standing rigging** (made of 1x19-lace, material 4401), consisting of:

Forestay with overlength (headsail reef system)	1x	Intermediate shroud	2x
Backstay	1x	Lower shroud	2x
Permanent backstay tackle + crow's foot	1x	Upper shroud	2x

#### Running Rigging

Inside the mast:

- Main halyard
- Genoa halyard
- Boom lift

Option:

- Spinnaker halyard (attached)
- Spinnaker uphaul
- Spinnaker downhaul

In boom drawn in: 2 reefing lines and 1 clew outhaul

*Additionally we draw your attention to the enclosed trim instructions of the manufacturer.*



#### Attention

##### Before each sailing trip:

Check all wires, ropes and lines, rigging screws and splints.

The latter should be secured with tape or by bending them. Exchange damaged or deformed bolts.

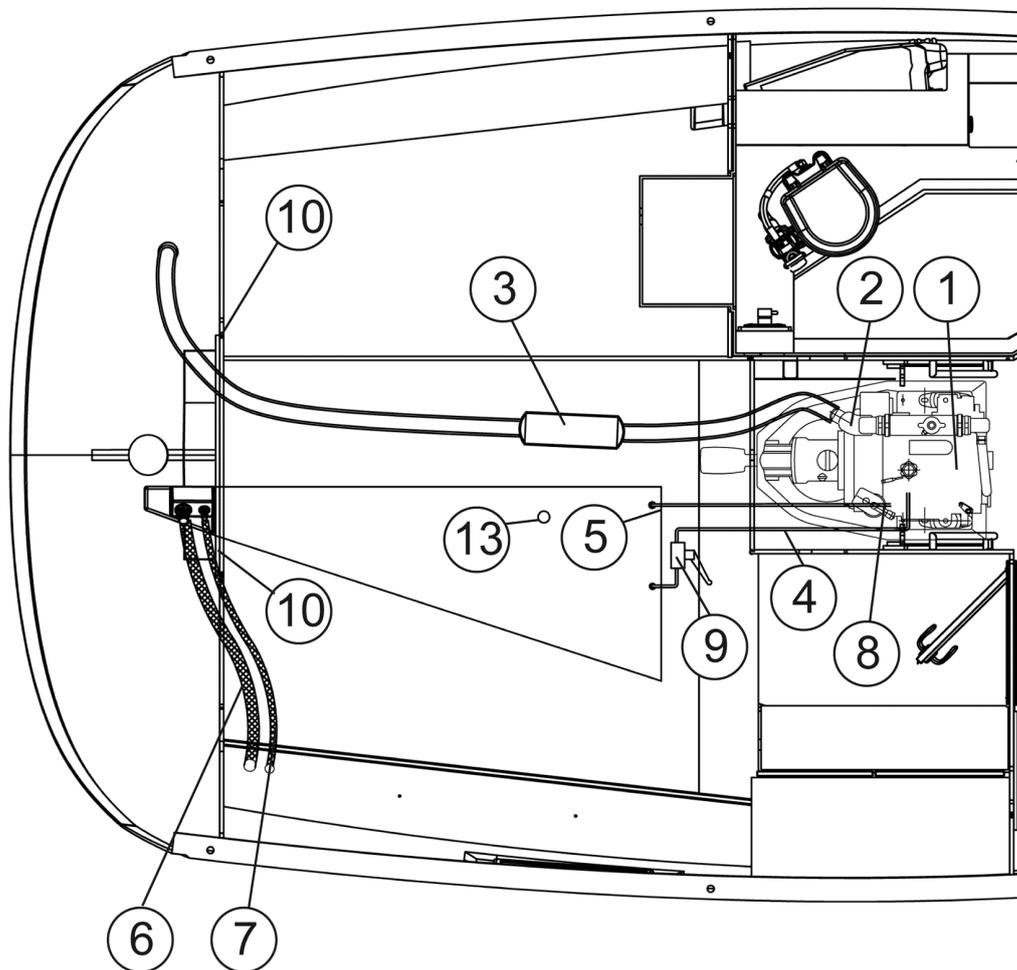
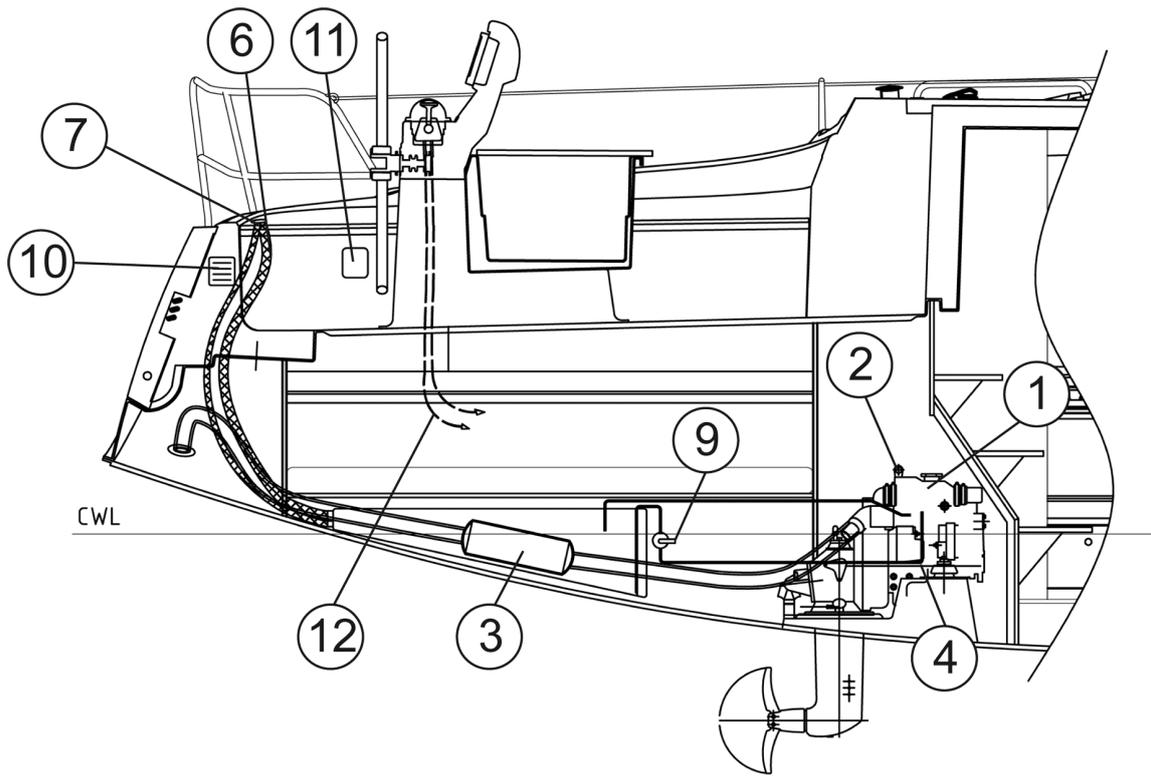
#### 1.3.3 Motorisation, engine room, gear, and propeller

This yacht is equipped with a inboard diesel engine with sail-drive and a fixed propeller. The engine room is separated from living quarters by plywood-bulkheads covered with sound-insulating material. An access is possible through:

- a shutter below the companion way,
- detachable bulkhead in the aft cabin beside the engine room

Cooling-water supply to the engine is realised via the saildrive-gear.

Engine plant



<b>1</b>	Engine Volvo	Motor Volvo
<b>2</b>	Engine exhaust system	Motorauspuffsystem
<b>3</b>	Exhaust water lock	Abgaswassersammler
<b>4</b>	Engine fuel intake	Kraftstoffzulauf
<b>5</b>	Feed back fuel	Kraftstoffrückführung
<b>6</b>	Fuel tank filling hose	Kraftstoffeinfüllstutzen
<b>7</b>	Fuel tank ventilator	Tankentlüftung
<b>8</b>	Fuel filter	Kraftstofffilter
<b>9</b>	Fuel cock	Kraftstoffabsperrhahn
<b>10</b>	Ventilator grille	Belüftungsroste
<b>11</b>	Engine panel	Motorinstrumententafel
<b>12</b>	Engine control cables	Motor-Fernbedienungskabel
<b>13</b>	Fuel gauge	Vorratgeber für Kraftstofftank

## 2. Installations and circuits

### 2.1 Tanks and piping - water

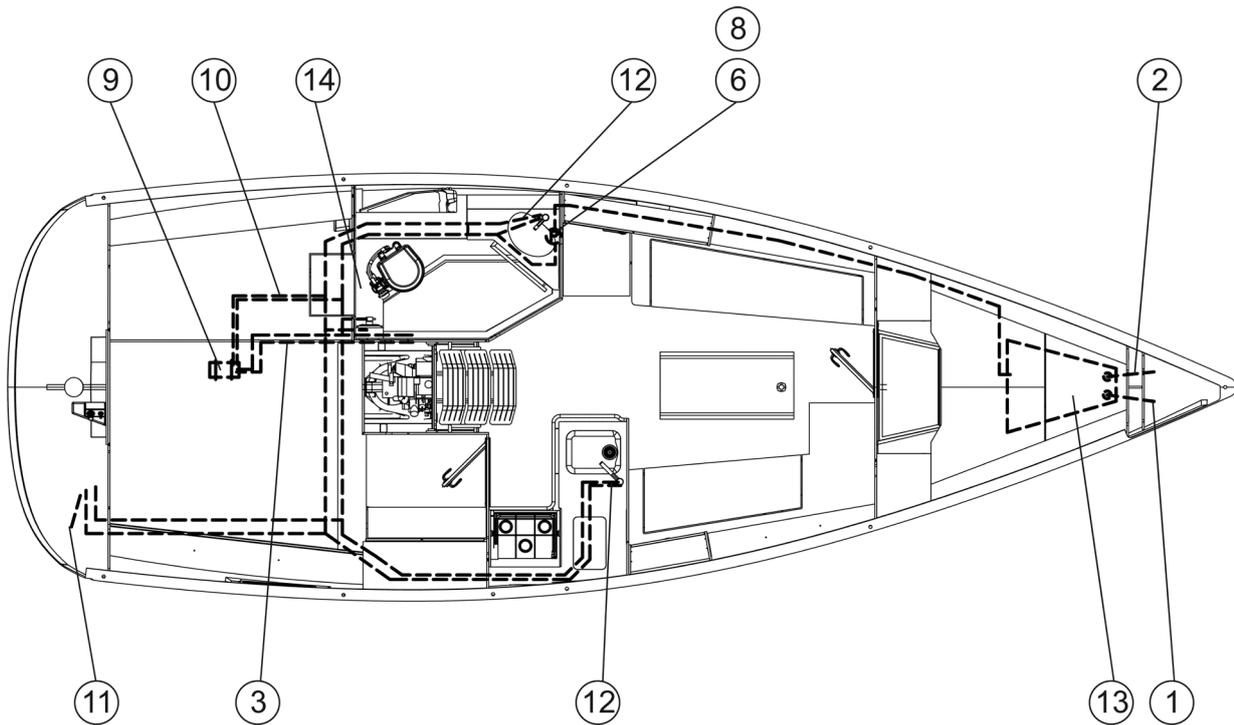
#### 2.1.1 Fresh water, drinking water –cold

The yacht has a water tank in the aft with a capacity of abt. 150 l. The positions of the fresh water supply, please refer to the Deck Plan 1.2.2. You can take water from the tank over a hose connection leading to the pressure water-pump.

This pump, realising the complete cold water circulation, is fitted in the head. An interruption of the operation of the pressure pump is done by cutting off all ducts. All pipes/hoses should be checked for leaks if the pump continues working after all ducts were cut off properly.

The pump is protected by a filter which should be regularly checked and cleaned if necessary.

**Components:**



<b>1</b>	Deck plate (inlet)	Einfüllstutzen
<b>2</b>	Tank ventilation	Tankentlüftung
<b>3</b>	Engine connection	Motoranschluss
<b>6</b>	Accumulator tank and pressure switch	Druckgefäß und Druckschalter
<b>8</b>	Fresh water pump	Frischwasserpumpe
<b>9</b>	Water heater	Boiler
<b>10</b>	Backflow of water heater	Rückfluss Boiler
<b>11</b>	Shower	Cockpitdusche
<b>12</b>	Basin	Waschbecken
<b>13</b>	Fresh water tank	Frischwassertank
<b>14</b>	Shower	Dusche



**Note**

Exchange the water in tank from time to time.  
Additionally you should use common purifiers.



**Attention!**

Hot water – Danger of scald

### 2.1.2 Sea-water circulation

Sea-water is necessary for both WC flushing and engine cooling (see: 2.9).

### 2.1.3 WC –installation: see enclosed directions for use

See enclosed manual

Each toilet of the yacht possesses of a built-in holding tank with a capacity of about 70 litres. The tanks are in the toilet rooms with fitted and have a sea cocks to empty the tank on the open sea and a nozzle to the pump in the harbour.



#### Attention

If you are not aboard you should close all sea-valves.



#### Regard!

- Do not empty toilets or holding tanks near the coast or in any protected area
- Use pump down mechanism in ports and marinas
- Follow the local regulations.
- Follow the instructions for use of the toilet.
- Close sea cocks after use.
- open sea cocks before emptying the holding tanks
- Close WC and discharge valves after use.



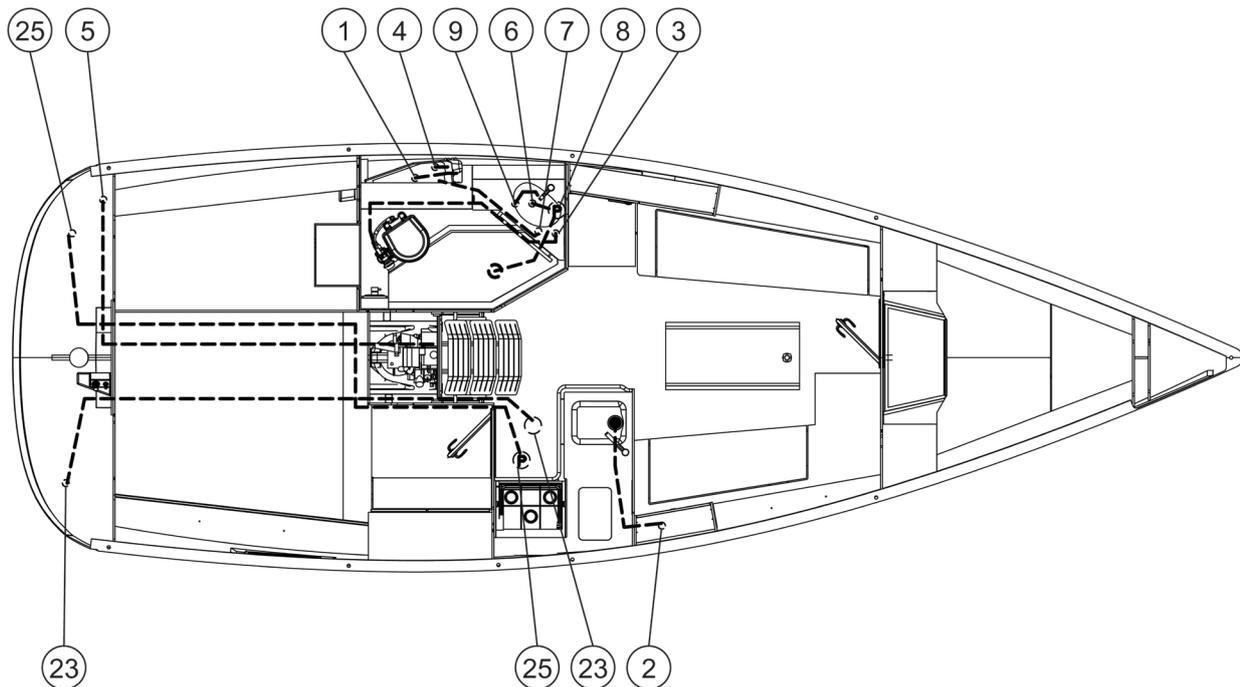
#### Note!

In areas where it is prescribed that no faeces may reach into the water, the skipper has the possibility to close the valve with simple clips which cannot be opened by hand. He must brief all crew members that the valve must be closed.  
Familiarize yourself with the operation and maintenance of the system familiar.  
The system is not resistant to aggressive acids and alkalis.

Please refer the position of the sea cocks to the system drawing (2.12) in this manual.

**Suction of the tanks:** First open ports on deck and then mount suction on the landside

**Regard:** Check the vent pipe before vacuuming the sewage tanks.

**Components: waste-water system**

1	Waste water tank ventilation	Fäkalientankentlüftung
2	Wash basin drain valve	Ausgang Waschbecken
3	Toilet water inlet valve	Eingang WC
4	Deck exhaust waste water tank	Decksabsaugung Fäkalientank
5	Motor drain valve	Ausgang Motor
6	Electric shower drain pump valve	Ausgang elektrische Duschpumpe
7	Waste water drain valve	Ausgang Fäkalientank
8	Electric shower drain pump	Elektrische Duschpumpe
9	Wash basin drain valve	Ausgang Waschbecken
23	Hand operated bilge pump	Handlenzpumpe
25	Electrical bilge pump	Elektrische Lenzpumpe

**2.2 Tanks and pipes - fuel****Storage tank**

A 150 l plastic diesel tank is installed below the aft berths on starboard-side. It is filled via a fuel inlet with a chrome cover (marked with DIESEL) under the cockpit floor plate on the port side of the yacht. Supply line: fire-proof fuel hose according to ISO 7840. The vent line is led to above deck.

**Supply of the engine**

The engine is supplied via a suction pipe from the upper edge of the tank. Due to the short distance a fire proof fuel pipe is used. This is led via a wide-meshed filter/ water separator, fuel pump and fine filter to the engine and then back to the tank. The fuel shut-off valve is mounted before the tank (under the aft berths on starboard-side ).

**Attention**

- A trouble free operation of the engine and heating is only possible, if the fuel is clean. That's why a regular inspection and cleaning of filter/water separator is unavoidable.
- The fuel tank should be completely emptied and cleaned once a year.

**Warning**

When refilling the tank:

- Switch off the engine, heating and stove!
- Do not smoke or use open lights!

## 2.3 Steering gear

### 2.3.1 Description of the system

The rudder is a suspended, balanced mid ship rudder (profiled rudder). It is operated by hand from the steering wheel at the steering position in the cockpit. Transmission of power is realised by means of chain control to the rudder quadrant. With the autopilot (option) there is an electric motor installed.

### 2.3.2 Rudder blade and rudder bearings

The rudder blade is a profiled one. It consists of a FRP-body. The rudder post is made of sea-water resistant stainless steel (V4A) and is laminated into the blade. The post runs in two easy-going special rudder bearings. The rudder is fixed by a clamping nut at the upper end of the post. The emergency tiller is placed on top of the square-end of the post

**Attention**

Check regularly and repair if necessary: Tight hold of the clamping nut on the rudder post.

The rudder bearings used by **BAVARIA YACHTBAU** are self-setting bearings. Since rudder bearings are subject to wear and tear they should be inspected and maintained regularly.

### Emergency tiller

The emergency tiller is stored in the starboard locker seat.

In case of failure of the steering gear remove the steering wheel, the rudder quadrant for rudder bar and/or the quadrant for the auto pilot (option). Moreover the rudder head-cover has to be removed and the emergency tiller to be mounted and secured.

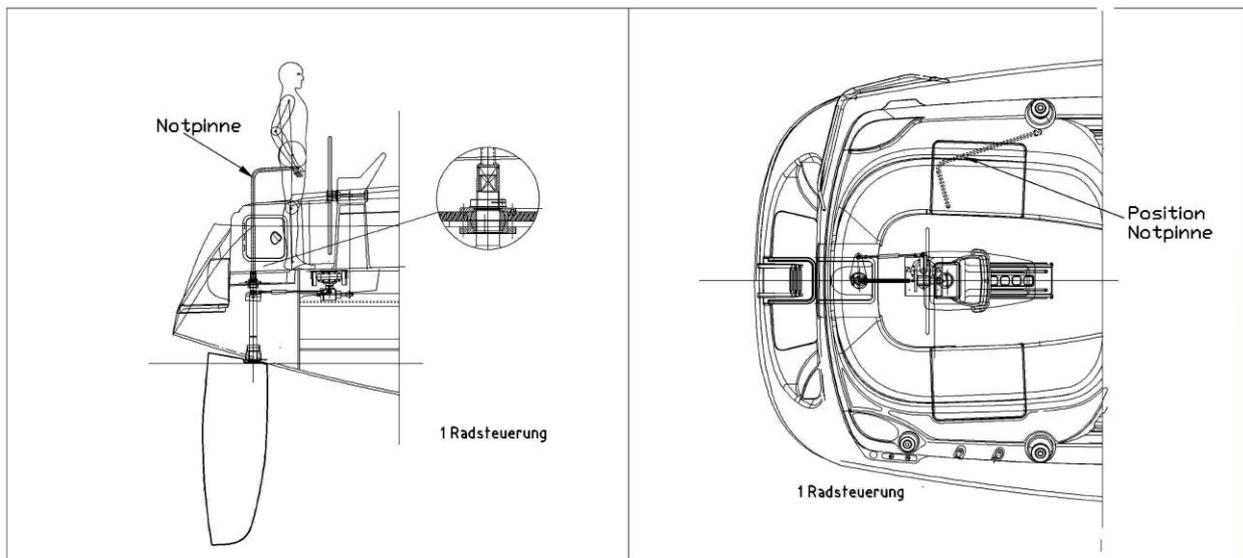
**Attention**

Please ensure a suitable bearing lubrication of the necessary parts of the rudder installation with water-proof lubricants (or Teflon).

Bearing clearance has to be avoided and can be adjusted at the top bearing.

The post must have no clearance but should not need heavy movements.

The brake at the steering wheel can be drawn by turning a screw home. Make always sure that this brake is not tight especially when sailing with the auto pilot. This would mean an overload for the electric motor.



## 2.4. Bilge pumps, bilge lines

The chain locker is made watertight. It is self-bailing through two holes in the skin.

All **BAVARIA** yachts have got a self-bailing cockpit, too. Water in the cockpit is led outboard through the aft trim to the outlet in the transom.

### 2.4.1 Description of the pumping arrangement

At BAVARIA Yachts the cockpit is self bailing. Furthermore there is the possibility of bailing water from the yacht's interior. Both strainers are in the Bilge in the deepest place in the saloon. Floor timbers in the saloon are connected by drillings, so that in case of possible ingress of water both pumps can be used. The bail lines are shifted by means of hose aft to the transom (outlet).

The water outlet for the self-bailing cockpit is in the transom.

The anchor box has bilge openings on both sides, covered with a screen. In addition your yacht is equipped with a manual bilge pump as well as an electrical bilge pump (capacity 33 l/min.).

When using the manual bilge pump the pump lever is to be pulled out. Bailing is effected by pumping movements.

The electrical bilge pump is started by pressing the symbolically marked switch at the panel. – Before doing so turn on the main switch in any case –

We recommend using the electrical bilge pump only with the machine running; the full capacity of the electrical bilge pump will be reached then.

**A draw bucket is an ideal means for bailing out water. It should always be ready in a cockpit seat locker.**

**Attention**

Close all sea valves if you leave your yacht. Valves being not clearly visible, like e.g. in the toilet room, should only be opened before use and closed afterwards.

**Warning**

In a serious situation, e.g. in case of a heavy inrush of water as a consequence of a collision, the pumping capacity might not be sufficient. Take measures for damage control with collision mats or other suitable means.

**Note:**

Bilge Pumps & Strainers have to be serviced and cleaned regularly.  
Bilge water should be kept to a minimum.

**Note**

How to determine whether ball valves are closed or open:  
CLOSED: Lever in transverse direction to hose or pipe.  
OPEN: Lever in line with hose or pipe.

**Maintenance Note**

The tightness of board ducts is to be inspected regularly. Check and retighten all hose clips and gland nuts of valves if necessary.

**Leakage-pot**

For the case of a damage of a seacock or an on-board passage we recommend to carry on the yacht leakage potting from soft wood, whose diameter is co-ordinated with the different sizes of the on-board passages and can with those each opening be locked surely

**Note**

How to determine whether ball valves are closed or open:  
CLOSED: Lever in transverse direction to hose or pipe.  
OPEN: Lever in line with hose or pipe.

**Maintenance Note**

The tightness of board ducts is to be inspected regularly. Check and retighten all hose clips and gland nuts of valves if necessary.

Components of the bilge pumping installation: **see drawing 2.1.3**

## 2.5 The electric installation

### 2.5.1 The AC-installation (230 Volt / 115 Volt) (option)

The yacht has got a shore connection (option) by which it can be supplied with electric power from ashore when being berthed in a port. The plug box (meeting the CEE-norm) is installed at the portside locker seat of the yacht. The power is supplied into a shore connection unit, placed under the chart table.

### 2.5.2 The DC-board net 12 Volt

All electric devices aboard are supplied with the 12 V DC. A main-switch is installed in the electric panel under the chart table. Power distribution is effected by a switchboard above the chart table. The lettering next to each switch refers to the corresponding consumer-group.

You can find all the switches for the 12 V consumers at the switchboard. By this you can operate different consumer-groups, being marked with logos or lettering, separately. Some of the switches are designed for an installation of additional electric devices. The motor vehicle flatconnectors are arranged on the back of the panel.

### 2.5.3 Operating the installation and specific features

The combination of an AC- with a DC installation offers a clearly higher comfort but requires some special knowledge.



- Make sure that your standardized CEE plug is compatible with the phases of the land plug socket.
- Control and renew regularly the wear condition of the underwater anode of the potential equalization.

### Charging the batteries

All batteries are maintenance-poor and drain-protected. They are charged via a buffer diode by the motor-generator. Charging the starter battery always takes priority to ensure a safe start of the engine.

### AC-consumers

The safety contact plug-box at the electric panel is designed for electric tools to be used for small repair work ashore. Further plug sockets are in the toilet areas, the pantry and at the water heater.

### DC-consumers

The essential consumers are:

- |                             |                     |
|-----------------------------|---------------------|
| - navigation lights         | -bilge pumps        |
| - engine displays           | -tank display       |
| - VHF-radio wiring (option) | -electronic devices |
| - devices for comfort       |                     |

Navigation lights have absolute priority. In case of a lack of capacity all other consumers have to be switched off first. By a stand-by operation of the engine, even when under sail, the batteries can be brought up rather quickly. After a while you can switch on the other consumers again.

### 2.5.4 Important warnings on the DC-installation (12 Volt)



**Never**

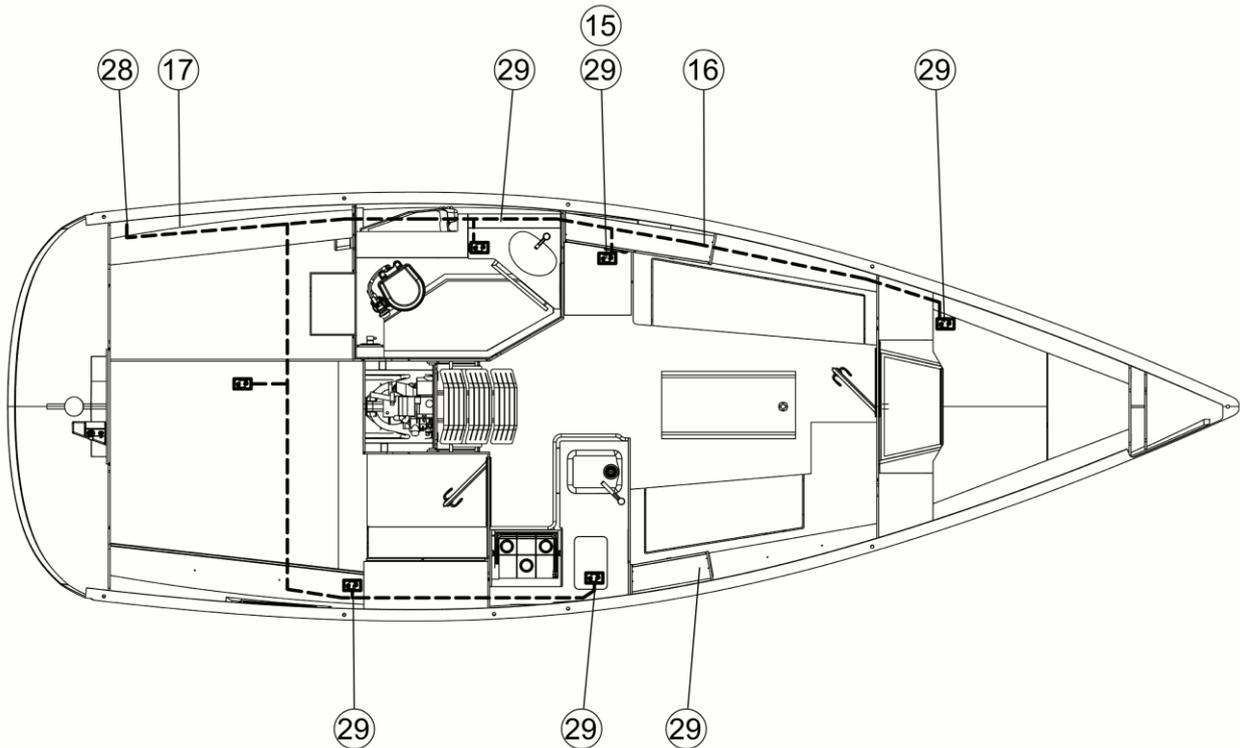
- a) work on electric installation while the system is energized
- b) modify the craft's electrical system or relevant drawings: installation, alterations and maintenance should be performed by a competent marine electrical technician.
- c) alter or modify the rated current amperage of overcurrent protective devices;
- d) install or replace electrical appliances or devices with components exceeding the rated current amperage of the circuit;
- e) leave the craft unattended with the electrical system energized, except automatic bilge-pump, fire protection and alarm circuits.

### 2.5.5 Important warnings on the AC-installation (230 Volt / 115 Volt) (option)



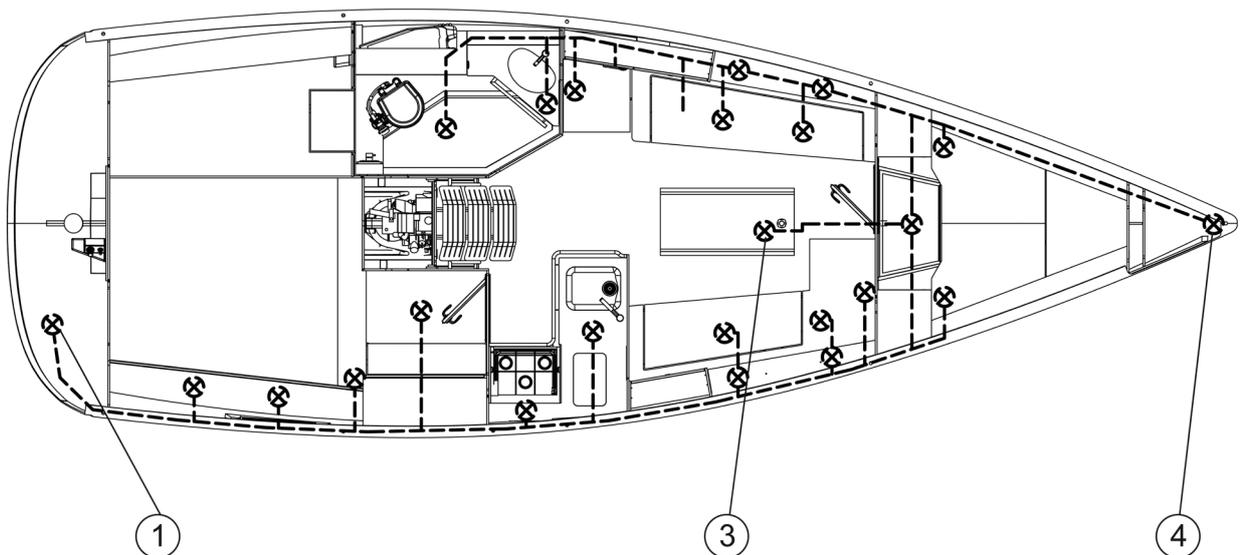
- a) Never work on electric installation while the system is energized
- b) Do not modify the craft's electrical systems or relevant drawings. Installation, alterations and maintenance should be performed by a competent marine electrical technician. Inspect the system at least biennially.
- c) Disconnect shore-power connections when the system is not in use and while working at the electrical system.
- d) Connect metallic housings or enclosures of installed electrical appliances to the protective conductor system in the craft (green or green with a yellow stripe conductor).
- e) Use double insulated or grounded (earthed) electrical appliances.
- f) **WARNING:** Do not allow the shore-power cable end to hang in the water. An electrical field can be caused which can cause injury or death to nearby swimmers.
- g) **WARNING:** To minimize shock and fire hazards:
  - Turn off craft's shore-power connection switch before connecting or disconnecting shore-power cable.
  - Connect shore-power cable to craft's inlet before connecting to shore-power source.
  - Close shore-power inlet cover tightly.
  - Do not alter shore-power cable connectors, use only compatible connectors.

**2.5.6 Distribution of electric devices (230 Volt / 115 Volt) (option)**



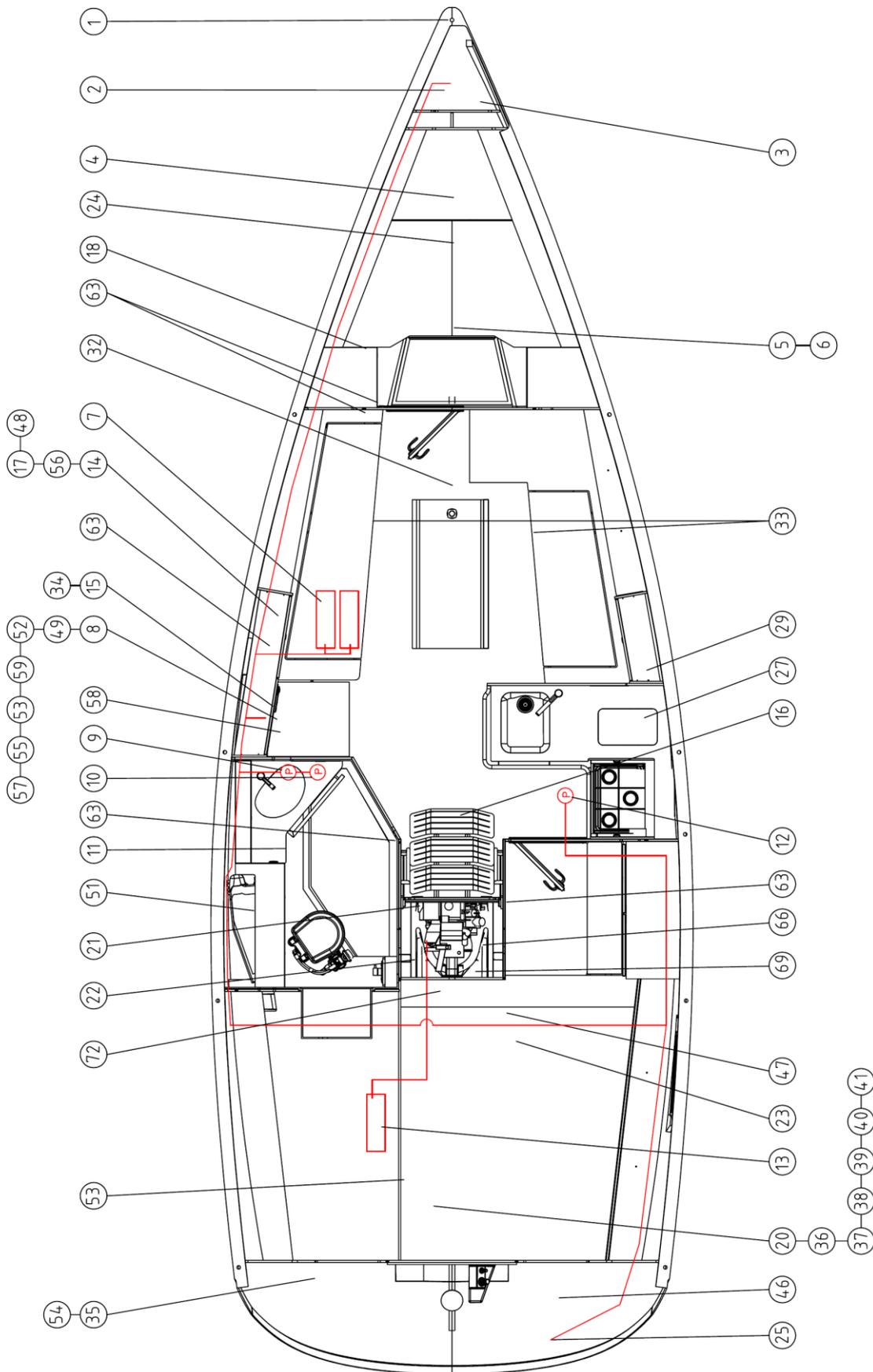
<b>15</b>	Electric panel	Elektro Panel
<b>16</b>	Charger	Ladegerät
<b>17</b>	Fuse	FI-Schutzschalter
<b>28</b>	Shore socket 230/115 V	Landanschluss 230/115 V
<b>29</b>	Socket 230/115 V	Steckdose 230/115 V

**Light / navigation lights:**



<b>1</b>	Stern light	Hecklaterne
<b>3</b>	Top light (mast)	Topplicht (Mast)
<b>4</b>	Bow light	Buglaterne

Distribution of electric devices (12V)



1	Bugleuchte Stb/ Bb	Navigation light
2	Elektr. Ankerwinde	Windlass
3	Bedienteil Ankerwinde / Steckdose	Windlass switch / connection
4	Frischwassertankgeber	Fresh water gauge
5	Echolot Geber	Through-hull depth sounder
6	Sumlog Geber	speedometer
7	Verbraucherbatterie 135Ah	Board battery (140 Ah)
8	Hauptschalter Verbraucher	Main switch (board/ bow thruster)
9	Frischwasserpumpe	Fresh water pump
10	Duschpumpe	Shower drain pump
11	Duschschalter	Shower pump switch
12	Elektr. Lenzpumpe	Bilge pump
13	Batterie (Motor 88 Ah)	Batteries group (engine battery 88 Ah)
14	Batterieladegerät (Option)	Battery charger
15	Elektropanel	Electric panel
16	Hauptschalter Motor	Main switch (engine; generator)
17	Kurscomputer Autopilot (Option)	Computer autopilot (option)
18	Kompass Autopilot (Option)	Compass autopilot (option)
20	Motor Autopilot (Option)	Motor autopilot (option)
21	Anlasser Motor	Engine starter
22	Gleichrichter	Rectifier
23	Dieseltankgeber	Fuel gauge
24	Bugstrahlruder	Bow thruster
25	Heckleuchte	Stern light
27	Kühlaggregat / Gefrierschrank (Option)	Ice box
32	Kabeldurchführung	Mast light cable penetration
33	Lautsprecher (Option)	Speaker (option)
34	Radio (Option)	Radio (option)
35	Antennenkabel Radio (Option)	Radio antenna (option)
36	Motorpanel	Motor panel
37	Tankuhr mit Beleuchtung	Fuel gauge
38	Tridata Bedienteil	Tridata panel
39	Wind Bedienteil	Wind panel
40	Autopilot Bedienteil (Option)	Autopilot panel (option)
41	Kompass / Kompassbeleuchtung	Compass
46	Heizung (Option)	Heating system (option)
47	Dieselpumpe Heizung (Option)	Air heater- diesel pump (option)
48	Thermostat Heizung (Option)	Air heater thermostat (option)
49	Fühler Heizung (Option)	Air heater (option)
51	Fäkalientankgeber	Waste water gauge
52	Sicherung Ankerwinde	Windlass fuse
53	Kartenplotter (Option)	Chart plotter (option)
54	GPS Antenne (Option)	GPS antenna (option)

55	Relais Autopilot	Relais autopilot
56	Sicherung Ladegerät	Charger fuse
57	Relais Ankerwinde	Relais windlass
58	Leselampe/ Strahler/ Leuchte	Lamp
59	Sicherung Verbraucher/ Heizung/ Autopilot	Board fuse/ heating system/ autopilot
63	Lichtschalter	Light switch
66	Lüfter Motor	Engine vent
69	Erdungsanode	Anode
72	Masse Motorblock	Earth engine

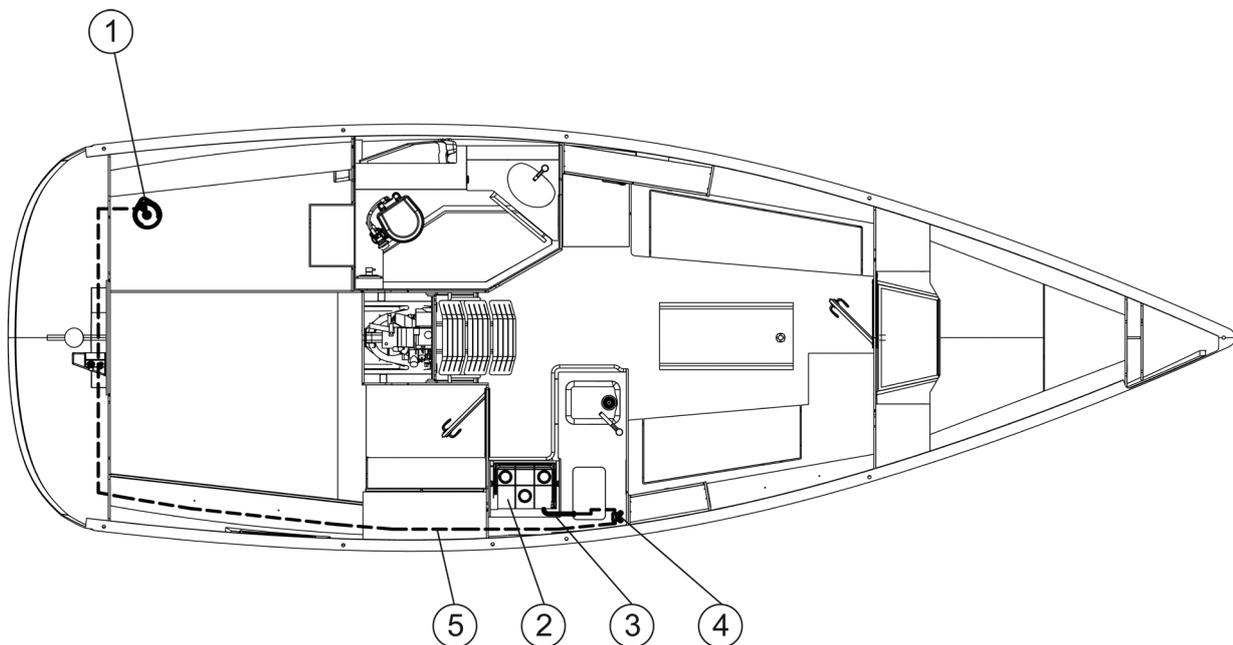
## 2.6 L.P.G. installation

The gas installation for the stove meets the European norm EN 10239. The test-certificate is attached.

The gas pipe leading to the stove from the standard 3 kg-gas cylinder is an 8 mm copper pipe. It is placed into a self-bailing casing moulded into the deck in the rear cockpit area. All gas pipes have been installed according to the German safety regulations. The best-by date for the soft connection hoses between the gas cylinder and the copper pipe and between copper pipe and stove is printed onto the hoses. They have to be replaced after the expiry date.

The reducing valve in the gas cylinder casing has a service pressure of 30 mbar. The flow rate is 1 kg/h.

### 2.6.1 The components



1	Gasflasche mit Reduzierventil	Gas tank with valve
2	Kocher mit Backofen	Gas stove with oven
3	Gummischlauch	Rubber hose
4	Gaskugelhahn	Gas stop valve
5	Kupfer Rohr	Copper tube

#### Leakage Test of LPG System

- With appliance valves closed!
  - Open the cylinder valve, close the cylinder valve.
  - Allow indicated gauge pressure to stabilize.
  - Observe pressure on gauge for 3 min.
  - If pressure remains constant, no leak is present.
  - If pressure falls, a leak exists.
- **Do not use LPG system until leak is repaired!**



## 2.6.2 Operation

Gas installations require care. That's why you should follow this sequence:



### Attention

- Open the stop valve in the gas cylinder casing
- Open the valve in front of the stove
- Open a stove valve and lighten the gas
- Keep the valve open until the glow timer allows further burning.



### Attention

- For finishing follow the same (above mentioned) sequence from the valve in the gas cylinder casing to the stove valve to allow all gas in the piping to escape and burn.



### Attention:

- Do not use liquids containing ammonia for checking the pipe.
- Never handle with open light and do not smoke when looking for a leakage or connecting a new gas cylinder.

**GAS SYSTEM:**  
Working pressure 30 mbar

**GASANLAGE:**  
Betriebsdruck 30 mbar

**ATTENTION!**  
Gas shut-off valve in locker

**ACHTUNG!**  
Gasabstellhahn im Schrank!

### And here is some more advice on how to prevent difficulties with the gas installation:

- Close all gas valves if the stove is not in use. In a case of emergency you should close the valves immediately.
- The stove valves have to be closed before the gas cylinder valve is opened.
- Check the L.P.G. installation for possible leakages regularly. Check all connections with soap suds or the like (for doing so the stove valves have to be closed – all other valves of the installation have to be open).
- If you find any leakages close all valves and have the installation repaired by a specialist before further use.
- Since the flames consume oxygen a proper airing and de-aeration is necessary. Do not use the stove for heating the cabin.
- Valves of empty gas cylinders have to be closed and disconnected from the installation. Have the covers ready.
- Do not use the gas cylinder casing for storing other equipment.
- **Never leave your yacht unattended if the stove is in use.**
- Check the hose pipes at least once a year. Let these replace periodically.
- If you install a new stove make sure that it has got the same working pressure.
- Check the elements at least once a year. Let these periodically replace.



Open exhausts and hatches while using the stove.  
The stove must not be used as heating.

## 2.7 Fire protection

When building the yacht special attention was paid to avoid the risks of fire. This includes the choice of materials, the distance of stove flames to the surrounding built-in furniture and an island position of the engine. The engine room has got a lining with fire resistant insulating material.

As the owner of the yacht you should keep this state and pay attention to the following advice:



### Attention:

- Keep the bilge clean and check regularly if there is a smell of fuels or gas.
- Do not have any freely suspended curtains above or close to the stove or other devices with open fire.
- Inflammable material must not be stored in the engine room. If you store non-inflammable materials in the engine room make sure that they are protected against falling into the engine installation or are in the way.
- Follow the national equipment requirements for fire-fighting equipment.

Furthermore you and your crew can support fire protection if you follow the following advice:



### Never

- obstruct any exits or hatches
- alter safety installations like fuel- and gas valves and electric switches and the like
- leave the yacht unattended if the stove or the heating is in use

### Never

- use gas lights in the yacht
- fuel the tank or replace gas cylinders if the engine is running or if the stove or heating is used
- smoke or use open lights while handling with fuel or gas

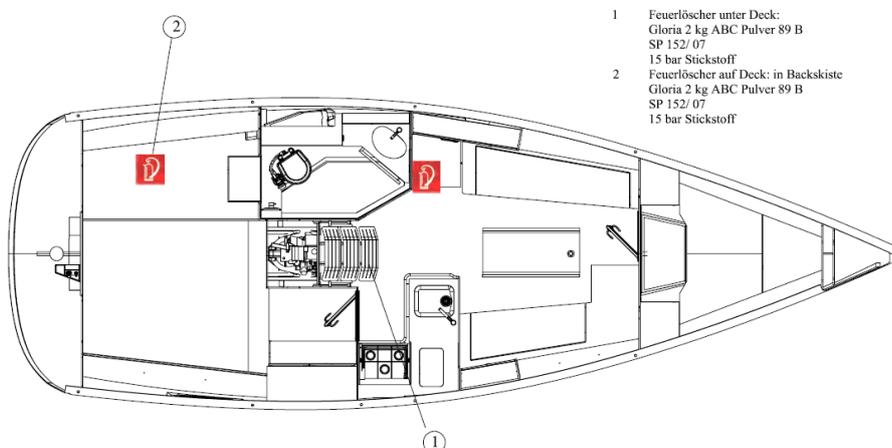
The well-known sources of danger on board are the stove in the pantry and the engine room.

If, despite all precautionary measures, a fire should break out aboard, there are 3 fire extinguishers a board which are fixed at the following places:

Nr. 1: **Powder extinguisher** in the cockpit stowage space, minimum fire extinguishing capacity 10A/68B

Nr. 2: **Powder extinguisher** under the chart table, minimum fire extinguishing capacity 10A/68B

Nr. 3: **Powder extinguisher** in the locker in the pantry, minimum fire extinguishing capacity 10A/68B



- 1 Feuerlöscher unter Deck:  
Gloria 2 kg ABC Pulver 89 B  
SP 152/07  
15 bar Stickstoff
- 2 Feuerlöscher auf Deck: in Backskiste  
Gloria 2 kg ABC Pulver 89 B  
SP 152/07  
15 bar Stickstoff

Additionally a light **fire retarding cloth** is provided, which is made of glass cloth and is very useful in the case of fire caused by overheated fat.

**It is the yacht owners duty**

- to have all fire extinguishers regularly checked and maintained
- to have fire extinguishers replaced after the expiry date. They also have to be replaced once they have been used. The new fire extinguishers must have at least the same extinguishing capacity as the replaced ones.

**It is the yacht owners or skippers duty**

To make sure that

- all extinguishers are freely accessible
- to inform all persons on board about:
  - the position and use of all fire extinguishers and the fire retarding cloth,
  - the position and function of the opening for the extinguishers nozzle in the engine room bulkhead,
  - the exit through the escape hatch above the fore-berths.

**Caution**

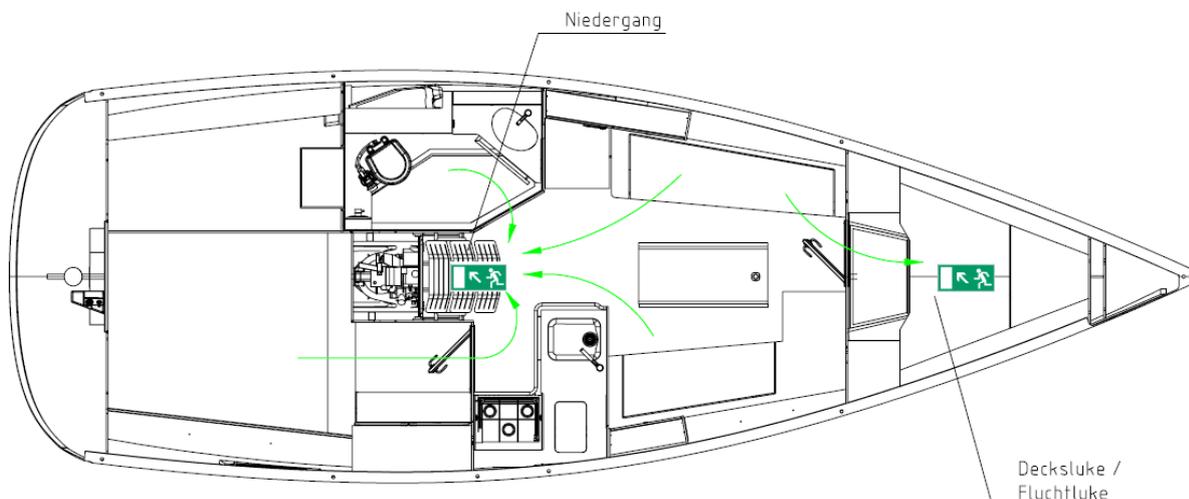
Regularly check the fire extinguishers!

Train yourself in fire fighting.

**Always observe seaman's duty of care!**

**Attention!**

In case of fire are described in 1.2.2 of this manual to use the hatch door and the decline as escape route. In the forecabin the shelves as a step assistance for the exit must be used.



## 2.8 Anchor (option)-, towing- and warping facilities

The bower anchor (option), about 15 kg, hot-galvanised, (is known for its high holding power). It is ready-to-fall in the bow fitting. The chain (option) has a length of 50 m and a nominal thickness of 8 mm. It is run out by an electric anchor windlass operated with a remote control. The remote control is placed in the chain locker before use and its function is activated at the switch board.

You should always use a claw or anchor chain hook to relieve the anchor winch, which is then placed on the cleat.

Furthermore it is recommendable to have a stern anchor (possibly swivel armature) as well as sufficient mooring- and towing lines with the necessary strength on board:

1 stern folding anchor (4-fluke grapnel anchor), 10 kg, hot-galvanised, fixed at the aft guard-rail. 6 m chain forerunner, thickness 6 mm, 34 m polyamide anchor rope, 16 mm, 3-strand hawser laid. It is stored in the port transom seat.

The rope is cleated aft.

**Warning!**

Always tow or be towed at a slow speed. Never exceed the hull speed of a displacement craft when being towed.

**Warning!**

A tow line shall always be made fast in such a way that it can be released when under load. Attach the tow line to two pairs of bollards on the bow.

**Warning!**

It is the owner's/operators responsibility to ensure that mooring lines, towing lines, anchor chain(s), anchor lines and anchor(s) are adequate for the vessel's intended use, i.e. the lines or chains do not exceed 80 % of the breaking strength of the respective strong point. Owners should also consider what action will be necessary when securing a tow line on board.

## 2.9 Engine cooling system

### Engine cooling

The engine has got a two-circuit cooling system. Water enters through the saildrive, is led to the heat exchanger and then injected into the exhaust gas pipe. Together with the exhaust gas the cooling sea water is exhausted via the silencer and the exhaust pipe at the stern. This guarantees a trouble-free engine operation. Moreover the engine noise is reduced.

All hose connections of the system are secured with double stainless steel clips.



#### Attention

- Check and clean the sea water filter in regular intervals, depending on the water quality.
- Before starting the engine, make sure that the cooling water inlet is open.
- Have a short look into the engine room for possible leakage.
- When the engine is running it is highly recommendable to check regularly if cooling water is escaping with the exhaust gas.
- If the sea-cooling water cycle precipitates, the optical and acoustic warning responds. Turn in this case engine off immediately and check the cooling system.

## 2.10 Exhaust gas system

The yacht is fitted with a "wet" exhaust gas system, i.e. cooling sea water is injected into the exhaust gas elbow causing a cooling of exhaust gases. This mixture is led down into a silencer/water lock, runs through a pipe in the locker seat on the starboard side of the aft cabin, is led upwards at the stern and escapes to the side above the water-line.

The exhaust gas hose consists of a synthetic rubber material with an integrated steel spiral.

The hose is heat-resistant (for some time) and should be checked and replaced if necessary.

A constant flow of sea water has to be guaranteed. The hose is secured at its joints with two clips.

If there is an interruption of the sea water flow, the temperature sensor in the exhaust gas hose will release an optical and acoustic warning. In this event you should stop and switch off the engine immediately until the problem has been settled (see manual of the engine manufacturer).



#### Attention

A regular inspection if seawater comes out of the exhaust is urgently advisable.

## 2.11 Ventilation/Airing

We have taken the following measures for a proper ventilation of all rooms:

### Chain locker

Certain ventilation is realised through its bilge holes at the bottom.

### Living cabins / Salon

1 deck ventilator, 1 side windows and 1 deck hatch

### Bow

Total 1 deck hatch

### Aft cabin

1 side light, 1 side light showing to the cockpit, 1 folding hatch

### Toiletroom

1 side window to the outside,

### Components

1 side light, 2 deck hatches, 4 side light

## 2.12 Board ducts, sea water valves

Openings below the water line are possible weak spots. That is why we pay special attention to them. All board ducts in the underwater part, with the exception of the duct for the transmitter of the echo sounder, consist of screwed joints with spherical sea valves and hose nipples. All hose connections are secured with two clips each.



### Attention

Close all sea valves if you leave the yacht for a longer time. Valves being not clearly visible, like e.g. in the toilet room, should only be opened for use.



### Maintenance note

The tightness of board ducts should be inspected regularly.  
Check and retighten all hose clips and stuffing boxes of valves if necessary.



### Note

How to determine whether ball valves are closed or open:  
CLOSED: Lever in transverse direction to hose or pipe.  
OPEN: Lever in line with hose or pipe.



### Attention

At Grounding:

Immediately check watertight integrity of the entire hull, first of all the areas of the ballast keel attachment and the rudders!

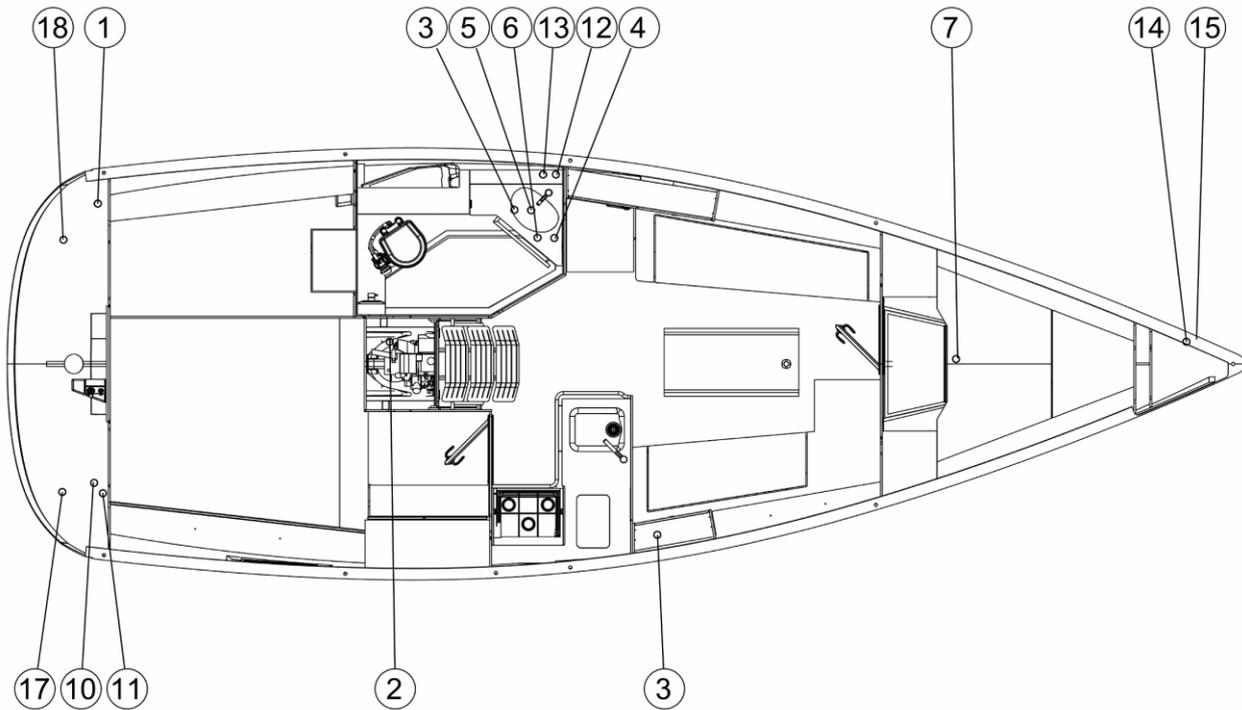
If you have a two-piece keel have the screw connection between the top and bottom keel checked immediately.

If wing keels experience one-sided load (through grounding or while parking ashore) also check all bolts!

Also check the condition of the fasteners and joints of the rig!

Check everything again after having returned to port.

When returning to port drive at reduced speed only and take the boat ashore to inspect the underwater area!

**Board ducts:**

<b>1</b>	Ausgang Auspuff	Exhaust drain
<b>2</b>	Ansaugung Kühlwasser	Inlet cooling water
<b>3</b>	Ausgang Waschbecken	Wash basin drain valve
<b>4</b>	Eingang WC	Toilet water inlet valve
<b>5</b>	Ausgang Duschpumpe	El. shower drain pump
<b>6</b>	Ausgang Fäkalientank	Waste water drain valve
<b>7</b>	Echolot / Geschwindigkeitsmesser	Echo sounder / log
<b>10</b>	Entlüftung Dieseltank	Venting fuel tank
<b>11</b>	Befüllung Dieseltank	Inlet fuel tank
<b>12</b>	Decksabsaugung Fäkalientank	Pump out opening waste water tank
<b>13</b>	Entlüftung Fäkalientank	Venting waste water tank
<b>14</b>	Befüllung Frischwasser	Inlet fresh water
<b>15</b>	Entlüftung Frischwasser	Venting fresh water
<b>17</b>	Borddurchlass Handlenzpumpe	Board duct manual bilge pump
<b>18</b>	Borddurchlass el. Lenzpumpe	Board duct electrical bilge pump

### **3. Environmental protection**

**BAVARIA YACHTBAU** has already met the legal requirements referring to exhaust gas regulations with its choice for the inboard diesel installed. An exhaust gas type-examination certificate can be handed in or sent on later upon request.

#### **3.1 Fuel and oil**

You should be especially careful when filling the tank. A (wet) cloth around the fuel inlet can prevent fuel from dripping into water. In your engine manual you can also find a diagram with a curve about the specific fuel consumption thus offering you some good hint on the most favourable engine speed.

For a necessary exchange of oil you should use a suction pump, because you cannot drain it off like a car. The oil has to be exchanged at least once a year, even in case of a little operation time of the engine.

A well-maintained engine should never leak. But in order to prevent even smallest amounts of oil being discharged overboard with the pumped out bilge water, the engine bed has been designed in form of a closed oil sump. All water from this sump, being possibly mixed with oil, has to be pumped into a separate canister and has to be deposited ashore.

In any case there should be oil-binders aboard.

#### **3.2 Waste**

For all water sportsmen it goes without saying: waste is not thrown overboard. This is also true for biodegradable waste. There should be a regular waste bag or -bin in a locker seat.

#### **3.3 Sound**

The wet exhaust pipe of the diesel engine reduces the engine sound considerably. Additionally rubber bearings, elastic couplings and the engine room insulation minimise sound emissions. Nevertheless you should not turn up the engine too quickly and, please, reduce the engine speed in waters with dense traffic.

#### **3.4 Swell**

Natural bank areas are sensitive against swell. Please keep sufficient berth. Formation of waves, caused by your yacht, is an indicator of where and when you should reduce your speed to avoid unnecessary swell. Pay attention to relevant signs.

#### **3.5 Exhaust gas**

Check the escaping exhaust gas regularly. The exhaust gas should show neither black smoke nor blue clouds. In such a case you should either clean the air filter or have a repair shop readjust the engine.

#### **3.6 Antifouling coatings**

The underwater part of the hull of each yacht has to be protected with an antifouling coating because marine growth means more energy for propulsion. Today there is a wide range of protective paint with various effects for different bodies of water. Trust the recommendations of specialists for your decision. Coatings that are effective for years without any grinding in between are especially recommendable.

But if the coating has to be sanded to some extent you should arrange these activities with the port officials. Generally the ground under the yacht has to be covered with some plastic cloth to collect the rubbed down dust and dispose it.

#### **3.7 Varnish removers**

Most varnish removers contain aggressive substances and should not be used or as little as possible. A mechanical removal of paint is the much better way.

## 4. Maintenance

### 4.1 Maintenance, cleaning

#### 1. Mast and rigging

See: Notes of the manufacturer

#### 2. Sails

The sails are made of Dacron. This material is very robust and resistant. Thus the sails keep their form for a very long time.

Inspect all your running and standing rigging carefully for sharp edges, splints, protruding ends of wire and the like because laminated cloth is especially sensitive against touching them. Those parts of the cloth that can chafe at spreaders or shrouds should be protected on both sides by sticking self-adhesive cloth to them. The same goes for the foot of the sail if there is the possibility of chafing at the rails.



**Note:**

- Please remember: Damage to the cloth is mainly caused if it is incorrectly treated or handled. Especially if you let it shake, expose it to UV rays constantly or store it improperly.
- If there are any questions on the cloths do not hesitate to contact the manufacturer or your sail maker.
- Never remove track cars with ball bearings from the tracks carelessly. Always use sheet tracks with end stops.

#### Cleaning

Please clean your yacht immediately after you have taken it out of the water. High pressure cleaning devices will remove any growth. This is followed by an up keeping of the surface of the yacht. All paint manufacturers provide detailed instructions for their coating systems.

For ships sailing in salt waters: remains of salt absorb water and can cause a faster corrosion. Where- and whenever it is possible you should rinse the yacht and parts of it with fresh water.

#### Care and maintenance of decks

Untreated wood weathers to a natural silver-grey colour, with no detriment to the timber's strength or other mechanical/physical properties. Because of wood's inherent durability and weather-resistant properties, the use of protective paints or coatings is partly necessary.

Practical tips on care and maintenance:

*Protective wood care oils* – penetrate deep into the timber, and under the influence of heat and moisture can adversely affect the adhesion of the caulking material to the sides of the joint. As a result, the seal between the caulking material and the sides of the joint may break down, allowing water to enter.

*Paints and lacquers* are decorative coatings which, when applied to a wooden deck, dry to form a continuous film over the caulking material as well. Some paints will not dry properly where they come into contact with the caulking material, leaving the surface tacky. In time most paints will flake away along the line of the joint. This spoils the appearance of the wooden deck and causes cracks to open up along the joints.

*Teak cleaners* should be used only if they contain no other active ingredients apart from normal soap. Additives such as phosphoric or oxalic acid, which are often incorporated as brighteners, are corrosive substances which attack both the caulking material and the timber, causing them to age rapidly.

We therefore recommend that wooden decks be swabbed down with a mop and clean fresh water, to which a small quantity of normal soap may be added if desired. Heavy soiling may be removed by scrubbing with a hard sponge. The use of a power washer is not recommended. The *high-pressure water jet* will remove areas of sapwood and break the seal between the caulking material and the sides of the joint.

In extended periods of hot, dry weather wooden decks should be watered at regular intervals to prevent the timber from drying out completely. Excessive loss of moisture will cause the timber to shrink, placing the joints under stress. Under unfavourable conditions this can lead to premature ageing or failure of the joint seal.

If these simple rules are strictly followed the durability of your wooden deck will increase significantly.

### **Stainless steel**

The corrosion resistance of all fittings is based on their ability to constitute a thin skin together with the air oxidant, which makes a positive electrical potential. Specialists call it a CR-passive (CR is standing for chrome). But chrome is in the galvanic contact series negative and a bit less valuable than iron. If the thin protection skin is damaged the stainless CR will be active and less good than pure chrome. The corrosion can start.

Who is not disappointed about little brown spots on the fittings? They are caused by flying rust or particles of iron, which are in the air and in all harbours placed near big towns. As soon as the flying rust settles onto the protective coat of the stainless steel, it destroys the CR-passivity aggressively and fast.

Stainless steel only stays good looking for a long time, if there's taken good care of it.

Make it your habit, if you are washing your boat with clear water, to also clean the rail stanchions, pulpits and push pits and all stainless fittings thoroughly too. Clear water will wash away the salt, rust and flying rust, the protective coat will be "ventilated" and its function is guaranteed again.

If you have already brown spots, you can use most of all available metal cleanings to take care of the stainless steel fittings or you take normal polish like you use it for the hull.

Of course – all the best care cannot help, if in the first place the fittings are not made out of the right material or the stainless steel has not been treated correct. Before you will buy the fitting, ask for example if the fitting has been polished electrically.

### **4.2 Coatings**

Talk to your warehouse operations or the construction place if you have paint issues. If possible, you should stick with one of the coordinated system of a manufacturer.

### **4.3 Wearing- and spare parts**

As an experienced skipper you will not have difficulties in getting original spare parts. If you need any help, please contact the yard.

If you need any spare parts but cannot get the original ones you have to pay attention to the stability values to keep the yacht at the high technical standard it used to have at the time of delivery.

### **4.4 Repair work**

Repairs at the hull (polyester full laminate and polyester sandwich laminate) can be carried out by a certified specialist considering the general rules for the processing of polyester resin. The interior construction was designed in such a way that a non-destructive elimination of defects can be realised. In regard to the technical equipment do not hesitate to contact a certified specialist or your dealer.

### **4.5 Winter storage**

We have already given some well-directed advice on winter storage in different paragraphs of this manual. Generally speaking all firms offering winter storage should meet the latest technological standard as far as environmental conditions, storage blocks, fire protection and accessibility of your yacht is concerned. Moreover there should be fixed rules for work, done by the owner himself, to prevent any interference with other sportsmen.

If possible the following objects should be taken from board and stored in a dry and frost-free place:

- Ship's papers and other relevant documents
- Charts, books and instruments
- Mattresses, upholstery, blankets and sleeping bags
- Sails and lines/ropes
- Foodstuffs
- Gas cylinders
- Safety equipment
- Life raft and rubber dinghy
- Batteries

**Advice:**

**Before wintering you should pay special attention to the following parts and protect them correspondingly:**

- Rinse and clean the transmitters of the speedometer and echo sounder.
- Maintain the electrical systems and clean them with suitable materials.
- Water pipes can be successfully cleaned with soft acids, e.g. white vinegar.
- Water valves should be taken to pieces and greased.
- The toilet and corresponding pipes are cleaned with fresh water.
- The rudder should be fixed that no movements are possible (e.g. by fixing the tiller or wheel).

**Engine:**

- Fill the fuel tank completely
- Exchange the propeller's sacrificial anode (if necessary).
- Empty all cooling-water of the engine and follow the instructions of the manufacturer.
- Slacken all belts (lighting engine and other engine driven devices).

**Winter storage**

- Observe all notes in the engine manual.
- Store the fully charged batteries at a ventilated frost-free place.
- Grease the steering wire and –components
- Remove all water out of the ship and protect it against rainwater entering it.
- Replace all components which seem not to be reliable any longer.

**Mast and rigging**

It may not always be possible, but it is recommendable:

- Unship the mast,
- Refit all standing and running rigging,
- Inspect the cables and other wires,
- Inspect bolts, spanners and other tie points for possible fatigue of material or cracks,
- Rinse all aluminium parts with fresh water
- Rinse all lines/ropes with fresh water and store them in a dry place,
- Rinse and grease all guide rollers of the mast and the boom.

**Attention!**

The toilet facility will be and all the fresh water system must be emptied when danger of frost.

The circulation of sea water will be an engine unit must be emptied at risk of frost.

## 5. Final remarks and notes

This manual is in conformity with the directives of the harmonised European Norm EN 10240. Much of it might go without saying for you. Nevertheless we hope that dealing with the different chapters of this manual will help you to understand the technical systems and the ideas behind them. As already mentioned in the introduction, the purpose of this manual is to contribute to an unspoilt use of the yacht.

Among the things that are not dealt with is e.g. the personal safety equipment. This solely belongs to the responsibilities of the skipper. It goes without saying that there have to be means of rescue for all persons on board. But this also includes the procurement and maintenance of a life raft, of signalling means, a first-aid-as well as a tool-kit.

Since the European Recreational Craft Directive pays special attention to fire protection it shall also be mentioned, that fire extinguishers have to be maintained in regular intervals and that it belongs to the duties of a skipper to introduce his crew into their operation.

Those being prepared for an emergency are normally never involved. But just in case: the yacht is properly equipped for those situations with suitable means.

We are constantly working on further developments of our sailing yachts. We hope you will understand that we have to reserve the right to changes in form, equipment and technology. For that reason no claims can be derived from data, illustrations and descriptions contained in this manual.

If your yacht should be equipped with any details not being referred to in this manual or in the owner's file, your party to the contract will inform you about the correct operation and maintenance.

Since all yachts, manufactured by **BAVARIA Yachtbau GmbH**, are exclusively sold by official dealers there is no contractual relationship between the yard and the customer/owner.

Thus **BAVARIA Yachtbau GmbH** is not familiar with details of the contract between the dealer and the customer. That's why it is not urgently necessary that your party to the contract takes over the full extent of our warranty conditions.

So, if you have to make a claim it is unavoidable to contact your party to the contract.

## **6. List of manuals supplied**

- manual with declaration of conformity
- engine warranty card with corresponding instruction
- gas test document with corresponding working instruction
- release checklist
- leaflets and description of production work
- working instructions

**Proof of identity**

(To be completed by the dealer or party to the contract)

- 1. First launch : .....
- 2. Date of delivery to the owner: .....
- 3. Type of boat: .....
- 4. Hull identification number: .....
- 5. Commission number: .....
- 6. Name of the yacht: .....
- 7. Manufacture and type of engine: .....
- 8. Engine number: .....
- 9. Gear (manufacture, type, gear ratio): .....
- 10. Propeller (manufacture, type, dim.): .....
- 11. Dealer, representative (name/address): .....  
.....  
.....
- 12. Signature/stamp dealer: .....

## 7. Warranty

See warranty conditions of the dealer

Dealer:

Name:

Address:

is the representative of our firm who will offer you the necessary help should any problems arise. As soon as you are the owner, please fill in the following acknowledgement of receipt and give (or send) it back to the dealer with your signature, so you are able to claim your warranty.

### Warranty conditions

see contract

**Please return signed to:**

(Address of the dealer)

**Acknowledgement of receipt**

**Name:**

**Address:**

**Owner of the yacht**      *BAVARIA Cruiser 33*  
**HIN DE-BAVG33XXXX13**

**Signature:** \_\_\_\_\_