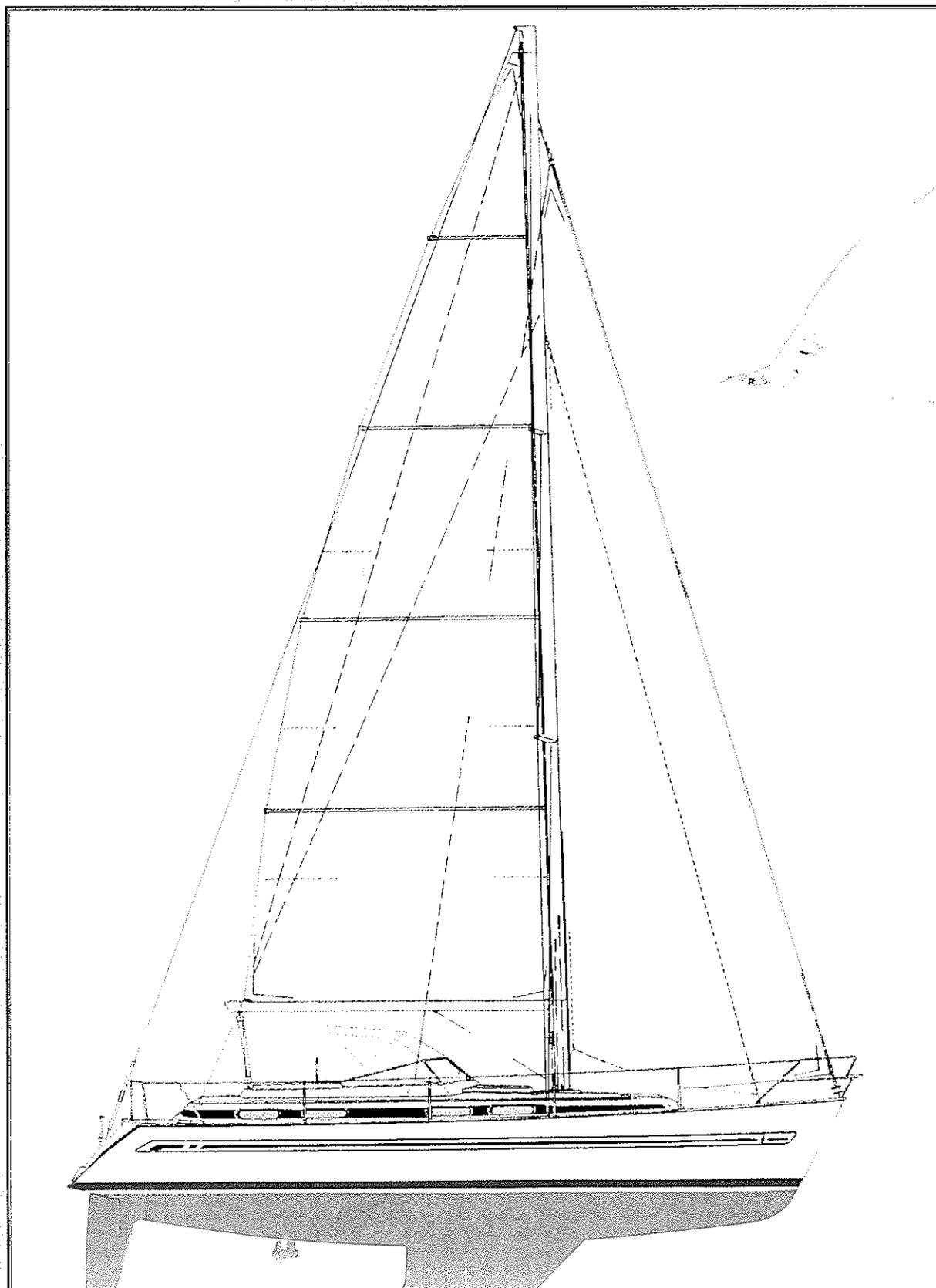


BAVARIA 38 OCEAN

Serienbaubeschreibung / Standard specification



Serienausstattung

Deck

- Laufdeck und Decksaufbau mit Antirutschstruktur
- Teak auf Sitzduchten und Cockpitboden
- Bugkorb
- Heckkorb
- Seereling
- Seitlicher Relingsdurchstieg
- Bugbeschlag mit Ankerrolle
- 4 Belegklampen
- 2 Arbeitswinden, 2-Gang, selbstholend
- 2 Genuawinden, 2-Gang, selbstholend
- 1 Windenkurbel
- Strecker- und Leinenumlenkung ins Cockpit
- Selbstlenzender Ankerkasten
- Segelstauraum
- 2 Backskisten im Heck
- Selbstlenzender Gasflaschenkasten
- Cockpitdusche (warm und kalt)
- Badeleiter
- Deckslüfter
- Windschutzscheibe
- Elektrische Lenzpumpe
- Handlenzpumpe
- Positionslampen
- Elektrisches Ankerspill
- Decksleuchte
- 3 Feuerlöscher 2kg, Pulver

Segel

- Großsegel, abgestimmt auf konventionelles Rigg
- Genua I, abgestimmt auf serienmäßige Vorsegelreifeinrichtung

Rigg

- Konventionelles Rigg
- Rollreifeinrichtung für Vorsegel

Ballast

- Kiel aus Blei mit Antimon in moderner Lateralforn
- Tiefgang 1,95 bzw. 1,55 Meter (Option)

Rudieranlage

- Steuersäule
- Profiliruder mit Vorbalance
- Ruderwelle mit selbstrichtenden Pendellagern
- Steuerrad mit Lederbezug

Elektrische Einrichtung

- Bordnetzschalttafel
- Sicherungsautomaten mit Kontrolleuchten
- Motorstromkreis / Bordstromkreis
1 x 88 Ah / 1 x 140 Ah
- Landstromanschluß 220 V mit Vorbereitung für Batterieladegerät
- 220 V-Steckdose an Bordnetzschalttafel
- 12 V-Steckdose an Bordnetzschalttafel
- Voltmeter
- Amperemeter

Inneneinrichtung

- 2 Kabinen mit 4 festen Kojen zzgl. Messe
- Salon mit komfortabler Sitzgarnitur
- Aufwendig gestalteter Messetisch
- Sideboards mit Ablagen und Schränken
- Kartentisch mit großem Fach für Seekarten und Navigationsbesteck
- Kartentischsitz mit Stauraum für Werkzeug
- Bücherfach
- Pantry mit 2-flammigem Gasbackofen, halbkardanisch
- Isolierte Kühlbox mit elektrischem Kühlaggregat 12 V
- VA-Spülbecken
- Stauräume mit Schubladen und Klappen
- Stauräume für Geschirr, Töpfe und Mülleimer
- Toilettenraum mit pflegeleichten Flächen aus Kunststoff
- Pump-WC
- Naßzelle mit separater Duschkabine
- Warmwasseraufbereitung

Frischwasserversorgung

- Tank mit ca. 380 l Inhalt
- Füllstandsanzeige
- Elektrische Druckwasserpumpe mit Pumpenfilter

Instrumentierung

- Sumlog
- Echolot
- Kompaß

Motoranlage

- Volvo-Perkins MD 22 L, 36,5 kW / 50 PS mit Sail-Drive
- Zweikreiskühlung
- Betriebsstundenzähler
- Drehzahlmesser
- Dieseltank mit ca. 230 l Inhalt
- Füllstandsanzeige
- Dieselfilter
- Wasserpumpe

Standard fittings and equipment

Deck

- Side deck and coach roof with anti-slide structure
- Teak on seat thwards and cockpit floor
- Pulpit
- Pushpit
- Guardrail
- Rail opening on both sides
- Bow fitting with anchor roller
- 4 Cleats
- 2 Self-tailing halyard winches, two-speed
- 2 Self-tailing genoa winches, two-speed
- 1 Winch handle
- Tensioners and lines led to the cockpit
- Self-draining anchor locker
- Stowage for sails
- 2 Locker seats astern
- Self-draining gas cylinder container
- Cockpit shower (hot and cold)
- Boarding ladder
- Deck vents
- Wind screen
- Electric bilge pump
- Manual bilge pump
- Navigation lights
- Electric windlass
- Deck light
- 3 Fire-extinguishers 2 kg, powder

Sail

- Mainsail, coordinated with conventional rig
- Genoa I, coordinated with standard foresail reefing gear

Rigging

- Conventional rig
- Roller reefing gear for foresail

Ballast

- Keel of lead with antimony in modern profile Draught 1.95 or 1.55 m (option)

Rudder

- Steering pedestal
- Streamlined rudder with forebalance
- Rudder stock with self-adjusting pendulum bearings
- Steering wheel with leather cover

Electrical system

- Boat's power supply switch board
- Automatic fuses with control lamps
- Engine circuit / Boat circuit
1 x 88 Ah / 1 x 140 Ah
- Shore supply 220 V with facility for battery charger
- 220 V-socket at switch board
- 12 V-socket at switch board
- Voltmeter
- Ammeter

Interior Arrangement

- 2 cabins with 4 berths plus saloon
- Saloon with comfortable settee
- Luxuriously styled saloon table
- Sideboards with stowage space and lockers
- Chart table with large compartment for nautical charts and navigation instruments
- Chart table seat with stowage for tools
- Book shelf
- Galley: cooker with 2 burners and oven, half-cardanic
- Insulated cooling box with electrical refrigeration unit 12 V
- Sink of stainless steel
- Stowage with drawers and drop doors
- Stowage for dishes, pots and waste bucket
- Marine head with easy-care synthetic surfaces
- Pump toilet
- Sanitary area with separate shower cabin
- Warm water

Fresh water supply

- Tank with appx. 380 l content
- Water level indicator
- Electric pressure water pump with pump filter

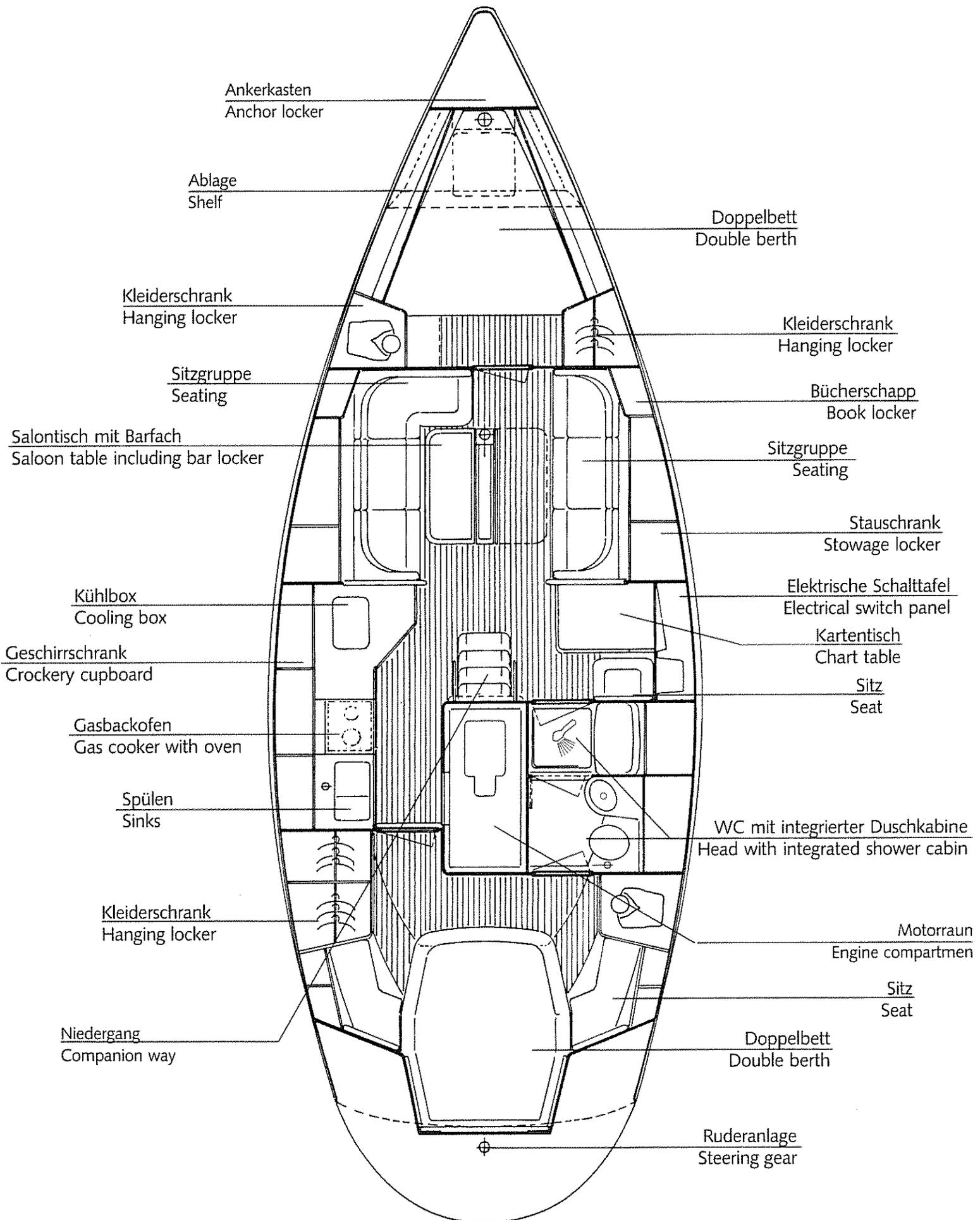
Instruments

- Electronic log
- Echo sounder
- Compass

Power plant

- Volvo-Perkins MD 22 L, 36.5 kW / 50 hp with sail drive
- Dual circuit cooling
- Engine hours counter
- Rev-counter
- Diesel tank with appx. 230 l content
- Fuel level indicator
- Fuel filter
- Seawater filter

BAVARIA 38 OCEAN



Technische Daten		Technical data
Gesamtlänge	11,90 m	Length overall
Länge Rumpf	11,45 m	Length hull
Länge Wasserlinie	9,95 m	Length waterline
Breite	3,95 m	Beam
Tiefgang	ca. I 1,95 m appx. ca. II 1,55 m appx. (Option)	Draught
Leergewicht	ca. 8.200 kg appx.	Displacement
Ballast	ca. 2.900 kg appx.	Ballast
Motor	MD 22 L 36,5 kW / 50 PS/hp	Engine
Wassertank	ca. 380 l appx.	Water tank
Treibstofftank	ca. 230 l appx.	Fuel tank
Segelflächen		Sail areas
Rollgroß	ca. 30,30 m ² kg appx.	Furling mainsail
Lattengroß	ca. 36,20 m ² kg appx.	Battened mainsail
Genua	ca. 43,40 m ² kg appx.	Genoa
Masthöhe über Wasserlinie	ca. 16,95 m appx.	Height of mast above waterline

Konstruktion / Construction
J & J Design

Werft / Shipyard
Bavaria Yachtbau GmbH

BAVARIA YACHTS

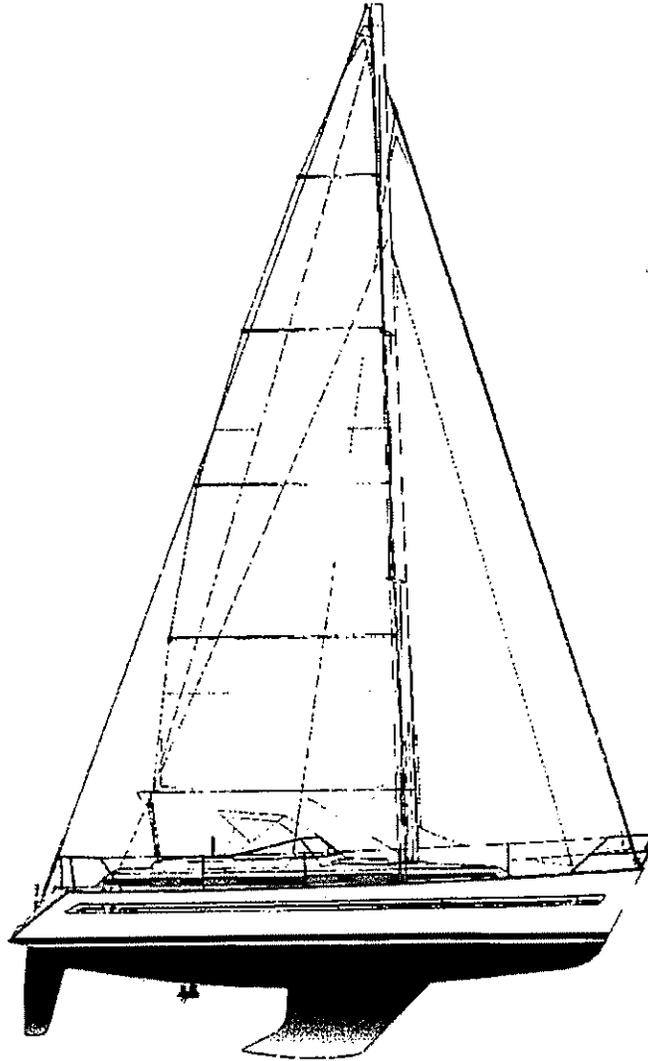


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Alle Maße und Gewichte sind rechnerische Werte aufgrund von Konstruktionsunterlagen. Bildliche und textliche Darstellungen entsprechen dem derzeitigen Entwicklungsstand und sind für die künftige Serienausführung nicht verbindlich.

All weights and measures have been calculated on the basis of construction documents. Graphic and textual descriptions are in accordance with the present development status and without engagement for the future standard version

Manual for owners and skippers



Sailing yacht „BAVARIA 38 – Ocean“

BAVARIA YACHTS



Bavaria Yachtbau GmbH • Industriestraße 11 • D – 97232 Giebelstadt
Tel.: +49 (0) 9334 942 – 0; Fax: +49 (0)9334 942 - 116

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Introduction

This manual will help you to handle your yacht safely and with pleasure. Apart from information about the yacht itself this manual contains a number of useful information about installed or additionally supplied fittings as well as about its operation and maintenance. Please familiarize yourself with all this before you start your voyage with the yacht.

We recommend you to copy essential parts like warning notes or some diagrams of this manual and have these copies always available to be of help in case of troubleshooting and/or repair.

If this yacht is your first one or in case you are not really familiar with the special characteristics of a keeled yacht please make sure that you get properly trained before you put it into operation. Do not hesitate to contact our shipyard for information about further training possibilities.

A manual is a technical document describing the yacht and its technical systems. It supports the skipper to operate the yacht and its systems safely and might support troubleshooting and repair. Furthermore it helps the owner to maintain the yacht and to keep up its value.

But remember: a manual cannot replace necessary knowledge and skills of seamanship.

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

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

1. Your sailing yacht is a product being produced according to the latest technical knowledge and technologies in combination with many years of experience of a highly qualified and motivated staff. This yacht has got a **EC type-examination certificate** as well as a **serial certificate of Lloyd's Register Quality Assurance GmbH – Yacht Services** - in form of a type examination, a manufacturer's approval and a series building supervision. Moreover this manual contains the necessary Declaration of Conformity according to the rules of the European Union. Since both the manufacturer and the notified body are German firms, the identification, the builder's plate, the Declaration of Conformity and the certificates are made out in German. Please understand that we can hand over complete manuals in either German or English only. Explanations for most plans and drawings are made in both languages.
2. For each of our products please find attached a proof of identity with all important data of your yacht, as for example a hull identification number, engine number, commission number, details of the inboard diesel engine etc.

3. Our R&D Department makes a lot of efforts to improve our products constantly taking recommendations and wishes of our customers into account thus keeping our yachts at an up to date level.
4. Our representatives are always at your disposal in respect to a proper use, questions on warranty conditions, improvements, retrofitting and novelties.

Do not miss to read this manual carefully and you will find out that it contains a lot of important information and notes. Thus operating the yacht will be facilitated and you will familiarize yourself with the function of its technical equipment.

Your partner to the contract as well as the management and staff of **Bavaria Yachtbau GmbH** wish you much pleasure with your new sailing yacht.

Always have a safe and pleasant voyage.

BAVARIA Yachtbau GmbH
management-



W. Herrmann

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,

designed for extended voyages where conditions may exceed wind force 8 (Beaufort scale) and significant wave heights of 4 m and above, and vessels largely self-sufficient.

Certification

Actually the EC Directive intends for yachts of this size the certification module Aa only. That means that the manufacturer certifies the correspondence of construction and equipment with the Directive itself but stability and buoyancy is checked by another notified body.

Lloyd's Register Quality Assurance GmbH – Yacht Services im Hamburg (a 100% subsidiary of Lloyd's Register of Shipping; London) was put into charge as a notified body (see: Declaration of Conformity).

For reasons of safety for the crew LRQA GmbH was also put into charge to carry out extensive EC type-examinations following the Directive 94/25/EG as well as the series building supervision. For yachts with a length of more than 12m hull length the EC-Directive intends the certification module B (EC type-examination) in combination with module C (Check of the stock boat in regard to its conformity with the specimen).

Lloyd's Register Quality Assurance GmbH – Yacht Services was also put into charge to carry out the complete EC type-examination as well as the series building supervision.

Identification

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

DE-BAVC38T0E000

This sequence of digits and letters stands for the following information:

DE	Country of production: Germany
BAV	Unique code of the manufacturer
C38T0	Unique serial number chosen by the manufacturer
E	Start of construction in May (A- January, B-February a.s.o.)
0	Final digit of the year 2000, in which construction began
00	Final digits of the year 2000, in which the yacht was delivered/sold

Builder's plate

The builder's plate on the front wall of the cockpit is a demand of the Directive because certain information are required which will be explained in the following.

Builder's plate

Bavaria Yachtbau GmbH Industriestraße 11; D - 97232 Giebelstadt Segelyacht "Bavaria 38 Ocean"	
Entwurfskategorie A	
Max. 	= 8
Max.  + 	= 1.000 kg
 0525	

Explanations

- **Category of design A** : Ocean

- **Max.  =8** : Maximum number of persons recommended by the manufacturer if the yacht is situated in the sea area corresponding to the category of design. The number of crew can be increased under consideration of the maximum additional loading capacity if the yacht is on a voyage in non-ocean areas.

- **Max  +  = 1000kg** : Maximum additional loading including 8 persons, stores, provisions and personal equipment (excluding tank capacities).

- **CE 0525** : CE marking which indicates the conformity of the yacht with all provisions of the Directive. The sequence of digits is the code number of the certifying body, in this case the **Lloyd's Register Quality Assurance GmbH – Yacht services** - (see: Declaration of Conformity).

Warnings

Many chapters of this manual will support a troublefree operation, maintenance or draw your attention to warnings of dangers. To find them more easily they are especially 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.

- 1.1.9 Fixing points for cranes, resting points for slipping and transport
- 1.3.9 Further advice
- 2.1.2 Sea-water circulation
- 2.1.3 Toilet, holding tank
- 2.2.1 Fuel - main engine
- 2.2.2 Fuel - heating
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- 2.10 Exhaust gas system
- 2.12 Heating system
- 2.13 Board ducts and sea-water valves

EC-Declaration of Conformity
corresponding to the EC- Recreational Craft Directive 94/25/EC, Annex Q

With this we declare that the design and type of the following characterized yacht as well as the carried out product that was brought into service by us is conform to the essential health and safety requirements of the European Recreational Craft Directive.

This declaration will lost its validity if anyone carries out changes on board which touch the 'essential safety requirements' and are not settled amongst ourselves.

Description of the boat: Bavaria 38 - Ocean

Type: : Keelyacht

Serial number of the hull: *DE-BAVC38T0E000*

Category of design: A (OCEAN)

Module of certification: Aa

Relevant Directives: EC Recreational Craft Directive (94/25/EC)
EC Directive (92/31/EEC)
EC Directive (98/37/EC)
EC Directive (73/23/EEC)

Used standards: see annex

Examining authority: Lloyd's Register Quality Assurance GmbH
- Yacht Services -
Address: Mönckebergstr. 27; D - 20095 Hamburg

Modul: Aa EC-Certificate of Conformity no.: 60/99

Date / Signum of manufacturer



21.06.2000 Winfried Herrmann
manager

Manufacturer: Bavaria Yachtbau GmbH; Industriestraße 11; 97232 Giebelstadt; GERMANY

Declaration of conformity
Applied harmonized standards or drafts for standards, respectively,
corresponding to the EC-Recreational Craft Directive 94/25/EG

EC-Directive	ISO-Norm
1. Principal Data	8666
2.1. Identification of hull	<u>10087</u>
2.2. Manufacturer's plate	14945
2.3. To go over the side protection	15085
2.4. Visibility from main steering position	11591
2.5. Owner's manual	<u>10240</u> ; 11192
3.1. Structure	12215 Teil 1
3.2. Stability and freeboard	12217 Teil 2
3.3. Buoyancy and flotation	12217 Teil 2
3.4. Openings in the hull	12216; 9093
3.5. Flooding	11812; 12217; 12216; <u>8849</u> ; 15083
3.6. Manufacturer's maximum recommended load	14946
3.7. Place for liferafts	Sicherheitsrichtlinie des DSV
3.8. Emergency exit	9094 Teil 1, 12216
3.9. Anchoring, mooring and towing	15084
4. Handling characteristics	<u>8665</u> ; 11592
5.1. Engine and engine spaces	<u>7840</u> ; 9094; 10088; <u>8846</u> ; <u>4585</u> ; 11812; <u>4566</u>
5.2. Fuel system	<u>7840</u> ; <u>8469</u> ; 9094; 10088
5.3. Electrical system	<u>8846</u> ; <u>8849</u> ; <u>9097</u> ;
5.4. Steering system	<u>8847</u> ; <u>8848</u> ; <u>9775</u> ; <u>10592</u> ; 13929
5.5. Gas system	10239
5.6. Fire protection	9094
5.7. Navigation lights	KVR
5.8. Discharge prevention	8099

(e.g. 8847 - harmonized standards)

1. Description of the yacht

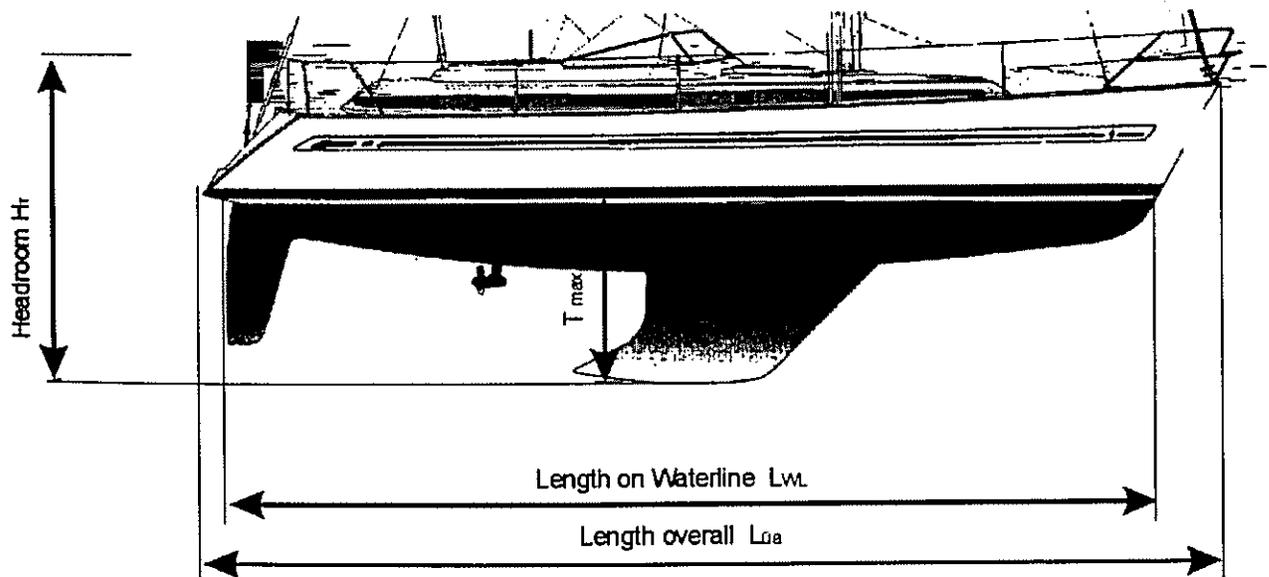
1.1 Main particulars

1.1.1 Principal dimensions

Length overall	LOA		11,90 m
Length of hull	LH		11,45 m
Length on waterline	LW		9,95 m
Breadth max.	B max		3,95 m
Light weight /Displacement		abt	8.200 kg
Ballast			2.900 kg
Draught - normal keel	D max	abt	1,95 m
Draught - flat keel	D max	abt	1,55 m
Headroom **	H _D	abt	16,95 m

** The headroom can become a critical dimension when passing bridges etc. It is the height between waterline and mast top (without antennas or radar reflector, and don't include top lights or other attachments).

Please enter the real headroom into the owner's manual after the installation of devices.



1.1.2 Sail plan

The cruising version of the yacht is equipped with the following standard sails:

	Standard Rigg
	[m²]
Main sail (standard)	abt 36,50
Main sail (fully-battened)	abt 36,50
Main sail (mast reffing gear)	abt 31,50
Genoa	abt 40,70

1.1.3 Displacement and weights

Weight of the empty yacht	
-incl. safety equipment	8.200 kg
Weight of the fully equipped yacht	
- ready for sailing with crew	9.810 kg
Ballast	2.900 kg

1.1.4 Motorization

Diesel engine:	
Manufacturer	Volvo Perkins
Type	MD 22 L
Output	37 kW/3000 rpm
Cooling	indirect (sea-/fresh-water)
Reverse-reduction gear	Saildrive 120S-D
Reduction ratio	2.48 : 1
Max. inclined position (continuously)	30 deg.

(for further details please see : engine operation manual)

1.1.5 Electrical installation

110 V AC-installation

The yacht is equipped with a battery charger (option) to recharge the batteries. Furthermore you will find a plug box for the operation of household appliances and electric tools.

For details please see 2.5.1

12 V DC-system

Normal on-board power supply of navigation- and cabin lights, pumps, and other devices is realized by a common 12 V DC-system.

For details please see 2.5.2

1.1.6. Battery capacities

The yacht is equipped with 3 batteries.

Starter battery	12V, 88 Ah, maintenance-free, drain-protected
Load batteries	2 x 12V, 140 Ah, maintenance-free, drain-protected

The batteries are charged via a buffer diode by a generator. Charging the starter battery always takes priority to ensure a safe start of the engine. As soon as a battery charger (option) is connected, it takes over charging of the load battery.

1.1.7. Tank capacities

1 fresh water tank	abt 230 l	on port side below the aftcabin berth.
1 fuel tank	abt 230 l	on starboard side below the aftcabin berth.
1 fresh water tank	abt 150 l	into the bow.
1 holding tank (option)	abt 60 l	in the engine room.
1 gas cylinder	abt 3 kg cylinder (Butan)	

For more details on tanks and the complete installation please see 2.2

1.1.8 Maximum number of persons, additional loading

Maximum number of persons

The Directive requires that for each boat there is a recommendation for the maximum number of persons being aboard if the boat is cruising in relevant waters. This yacht is designed for ocean-navigation, i.e. for extended voyages between ports. Therefore the recommendation is the following:

- For ocean voyages, lasting several days, not more than 8 persons should be aboard.

Note: There should be life jackets for each person on board. The inflatable life raft should have a capacity of 8 persons.

- For day-cruises not more than 12 persons should be on board for which there is enough room in the cockpit and on deck.

Note: There should be life jackets for all persons aboard.

Additional loading

The Directive requires that the maximum additional loading is recommended by the yard. It includes persons, personal equipment and provisions. It is recorded on the builder's plate. For the BAVARIA 38-Ocean the maximum additional load is 1.000 kg. The stability of the yacht is designed for this load.

1.1.9. Fixing points for cranes, resting-points for slipping and transport

Craning

In many ports yachts are launched or put on ashore with cranes and hoisting gear. The webbings must be placed so, that the stability of the hull and the stability by weights is paid attention to. If you frequently use the same crane we recommend to mark the correct position of the webbings with stickers (to be found in the chart table) right the toe-rail.

The position of the sail drive is generally marked with stickers.



Attention ! The rear webbing will be placed in the area of the sail drive.

Slipping

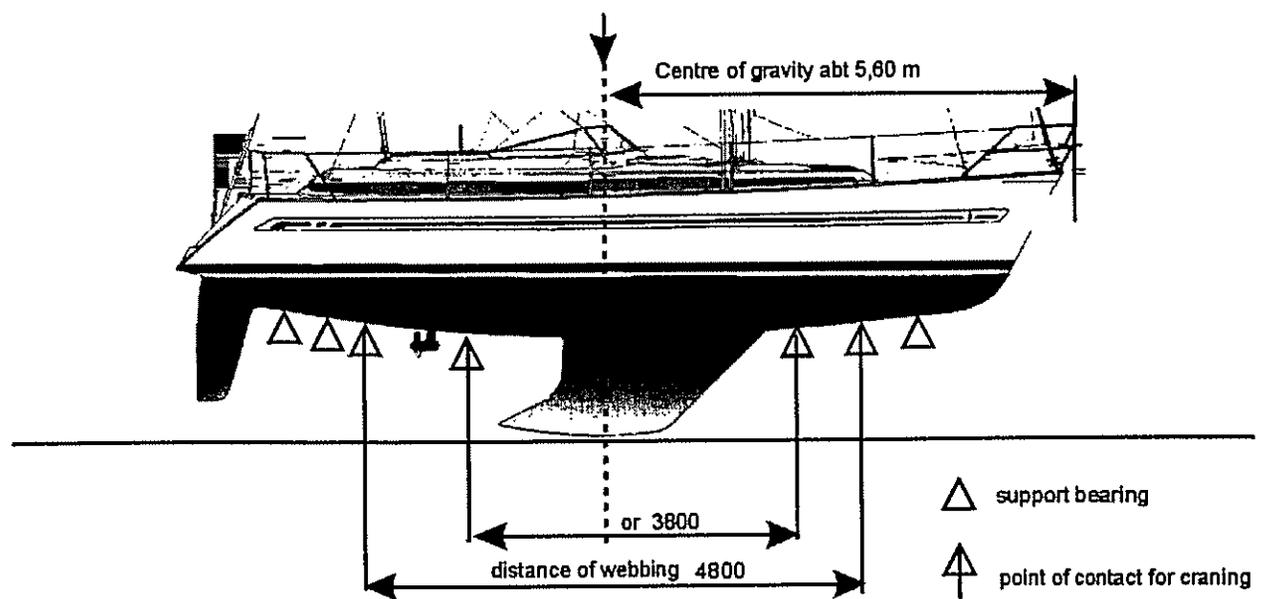
If the yacht is slipped with a conventional marine railway it may stand on its keel. At this moment the yacht is in an unstable position and has to be protected against tipping over. Therefore is recommendable to slip the yacht with a suitable railway cradle.

If the yacht is put ashore on its keel for a longer period, bow- and stern section should be supported effectivley to prevent the overhangs to subside and to relieve the strain from the construction.

The position of suitable resting points can also be taken from the below figure. It is strongly recommended to use a transport- and store trestle for a longer storage.

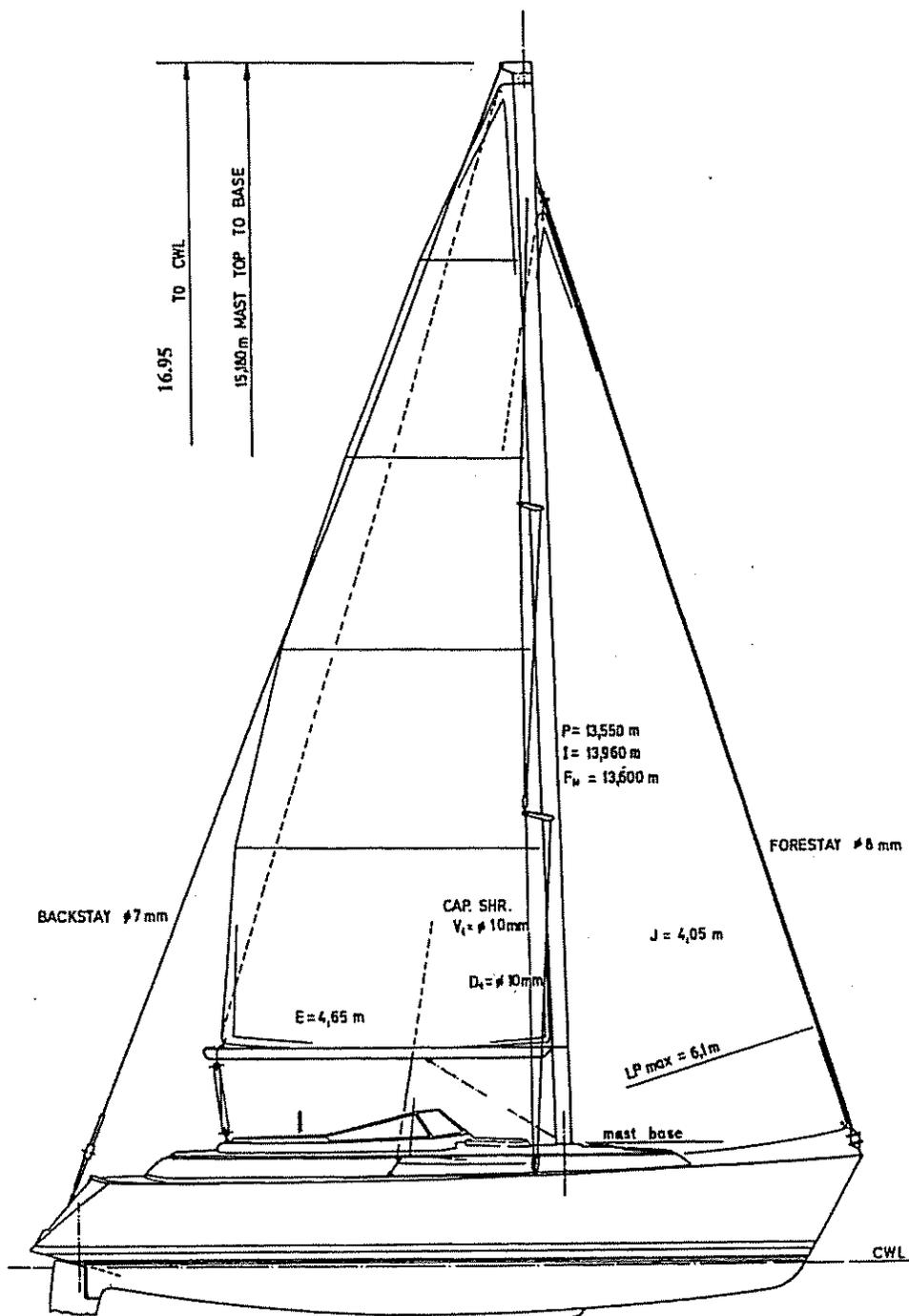
Transport

The guidelines for transport are generally the same as for slipping and storage, too.

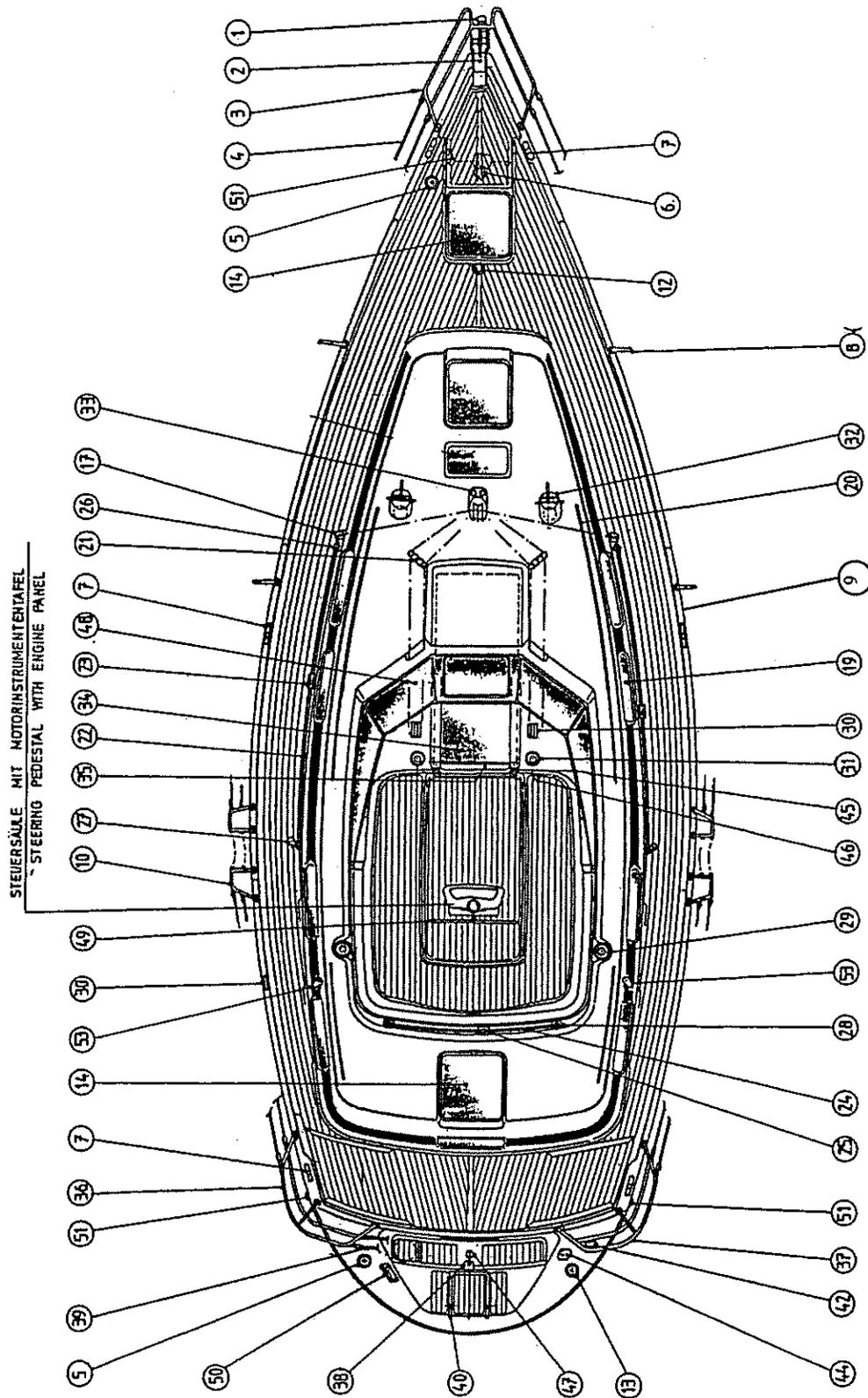


1.2 General arrangement

1.2.1 Rigging plan



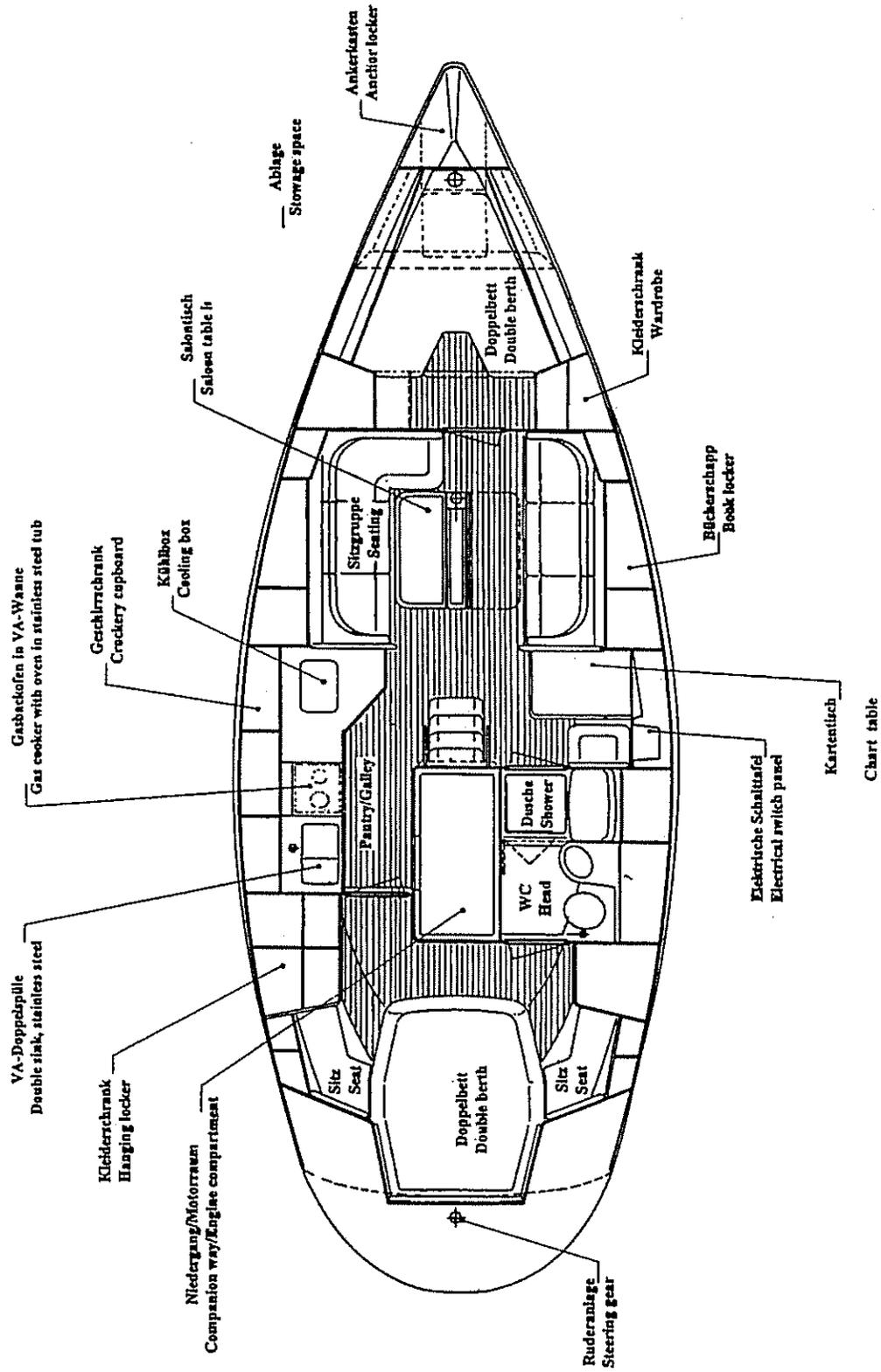
1.2.2 Deck arrangement



Explanations in the deck plan

BAVARIA 38 – Ocean			
	Description	Beschreibung	Stk
1	Bow navigation light	Zweifarbennleuchte	1
2	Bow fitting	Bugbeschlag	1
3	Bow pulpit	Bugkorb	1
4	Life lines	Relingsdurchzüge	2
5	Water inlet	Wassereinfüllstutzen	2
6	Anchor locker	Ankerkasten	1
7	Mooring cleats	Belegklampe	4
8	Stanchion	Relingstütze	6
9	deck coaming	Decksstül	0
10	Passage	Relingsdurchgang	2
12	toggle bolt (option)	Knebelbolzen (Option)	1
13	Fuel inlet	Dieseleinfüllstutzen	1
14	Hatch	Luken	4
16	Forward lowers chainplate	Vorstagpütting	1
17	Main shrows + aft kiwers cgk	Wantenpütting	2
19	Opening portlight	Decksfenster	9
20	Grabrails	Handreling	2
21	Deckorganizer	Umlenkblöcke	2
22	Genoa track	Genuaschiene	2
23	Genoa track car	Genuaschlitten	2
24	Mainscheet track car	Großschotschiene	1
25	Mainscheet track	Großschotschlitten	1
26	Front endstop (g. track)	Vorderes Schienenendstück	2
27	Aft endstop (g. track)	Achteres Schienenendstück mit Umlenkblock	2
28	Endstops mainscheet track	Schienenendklappe	2
29	Genoa winch	Genuawinde	2
30	Stopper	Stopper	8
31	Halyard winch	Fallwinde	2
32	Ventilator	Deckslüfter	2
33	Trough deck cable fitting	Kabeldurchführung	1
34	Sliding hatch	Schiebeluke	1
35	Washboard	Steckschott	1
36	Aft port pushpit	Heckkorb links	1
37	Aft Starboard pushpit	Heckkorb rechts	1
38	Backstay chainplatte	Achterstagpütting	1
39	Aft pushpit life line	Heckkorbsicherung mit Pelikanhaken	2
40	Swim ladder	Badeleiter	1
41	Cockpit portlight	Cockpitfenster	1
42	Stern light	Heckleuchte	1
43	Hand operater bilge pump	Handlenzpumpenhebel	1
44	Shore supply 220 V	Landanschluß 220 V	1
45	Engine ventilation inlet	Belüftungsroste für Motorenraum	2
47	Tiller fitting	Pinnenbeschlag	1
48	Windscreen	Windschutzscheibe	1
49	Steering wheel	Steuerrad	1
50	Shower	Cockpitdusche	1
51	Tank venting	Tankentlüftung	3
53	Stopper	Reefstopper	1

2.3. Accomodation plan



1.2.4 Brief description

Type

The SY Bavaria 38 Ocean is a sloop rigged round-framed sailing yacht with separating lateral plan, a suspended hydrofoil rudder and a fixed ballast keel with a bulb.

Type of construction

The yacht is made in a GRP-construction. All hull- and deck was solely made in hand laid-up polyester works. The deck is a sandwich construction. The hull above the waterline is a sandwich construction, below the waterline it is a massive laminate construction. The hull was strengthened by securely laminated main bulkheads made of plywood and by GRP- fittings.

Preservation

Osmosis formation is prevented by the use of isophthalical gel coat and isophthalical resin for the fiberglass mats of the body of the yacht. Additionally inside laminate surfaces, exposed to water, are preserved with a topcoat.

Ballast

The yacht has got a ballast keel made of grey cast iron. Both types of keel are safely fixed to the hull by a bolted and glued flange connection thus withstanding highest operational stress in heavy seas and storm. But we want to point out that collisions with underwater obstacles may affect this connection badly.

Stability

Moulding, distribution of weight, dimensioning and ballast shares have been put into consideration for the determination of stability. The yacht has a sufficient stability. Even in a critical situation with a tilt of 95 deg. the yacht has an enormous righting moment. Only at 118 deg. the righting moment becomes zero. This generally fulfills the criteria of seaworthiness for ocean navigation.

Deck covering

The running areas on deck as well as the cockpit seats are covered with an anti-slip covering made from a polyurethane-resin mixture, or teakwood is used (option).

Fittings and hatches

All fittings and hatches are made of stainless- and sea-water resistant material. They are screwed together with the deck and are made watertight carefully. Reinforcements from plywood or sea-water resistant aluminium are laminated into the deck at the mounting points so that existing forces can be discharged into it safely.

Woodwork and other components

Detachable bulkhead and handrails on the cabin roof are made of marine plywood or massive teakwood. The sliding hatch consists of plexiglass.

Guardrail

The yard is fitted with bow- and stern pulpit made of stainless steel (Nirosta). In between there is a guardrail with a general height of 610 mm. The stanchion sockets are connected with the toe-rail and are properly screwed with the deck. The rail stanchions are conically fixed and the two life lines of manted stainless steel wire (\varnothing 5 mm/3 mm) leading through them are put up with railing turnbuckles.

Notes for upkeeping and maintenance

- **Stainless steel fittings:** Please polish mat and dark patches, so stainless steel can keep its corrosion resistant quality
- **Winches, blocks:** For winter store you should at least dismount, clean and treat them with a suitable oil
- **Windows, hatch windows:** Please rinse with fresh water and polish them with a soft cloth.
- **Teakwood:** Please rinse with fresh water regularly. If you want richer colours rub it down slightly and soak it with teak oil.

1.3 Drive systems

1.3.1 Sails

The SY Bavaria 38 Ocean is equipped with the following standard sails:

Main sail - standard	abt 36,50 sqm weight of cloth: 240 g/sqm
Main sail (fully-battened)	abt 36,50 sqm weight of cloth: 240 g/sqm
Main sail (mast reefing gear)	abt 30,30 sqm weight of cloth: 240 g/sqm
Furling genoa	abt 43,40 sqm weight of cloth: 240 g/sqm

The sail cloth quality was chosen in correspondence to the wind load. All necessary mast- and deck-fittings for setting a spinnaker (option) or other downwind sails are mounted.



Attention!

Viewpoint is limited among sails.

1.3.2 Rigging

The dimensions of mast- and main boom profiles are higher than the necessary moment of inertia and the resisting moment. All halyards, tack tackles, reefing- and tripping lines on the conventional mast are led into the cockpit via guide rollers. The mast is placed in a mast step on deck.

Mast

- 1m- profile, without taper; - 18 deg. double spreaders , angular; - 2 halyards, topping- and boom lifts,
- tipping line and fittings.

Boom

- 1m-profile; - clewouthaul; - 2 reefing lines; - eye for mainsheet; - eye for tipping line.

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

forestay with excessive footage (headsail reef system)		1x	
upper shroud	2x	intermediate shroud	2x
lower shroud	2x	backstay shackle (simple)	1x

Running rigging

inside the mast:

- main halyard
- genoa halyard
- boom lift
- 3 additional weighing lines

option:

- spinnaker halyard (included)
- spinnaker boom uphaul
- spinnaker boom downhaul

drawn into main boom: two reef lacings, one foot jig

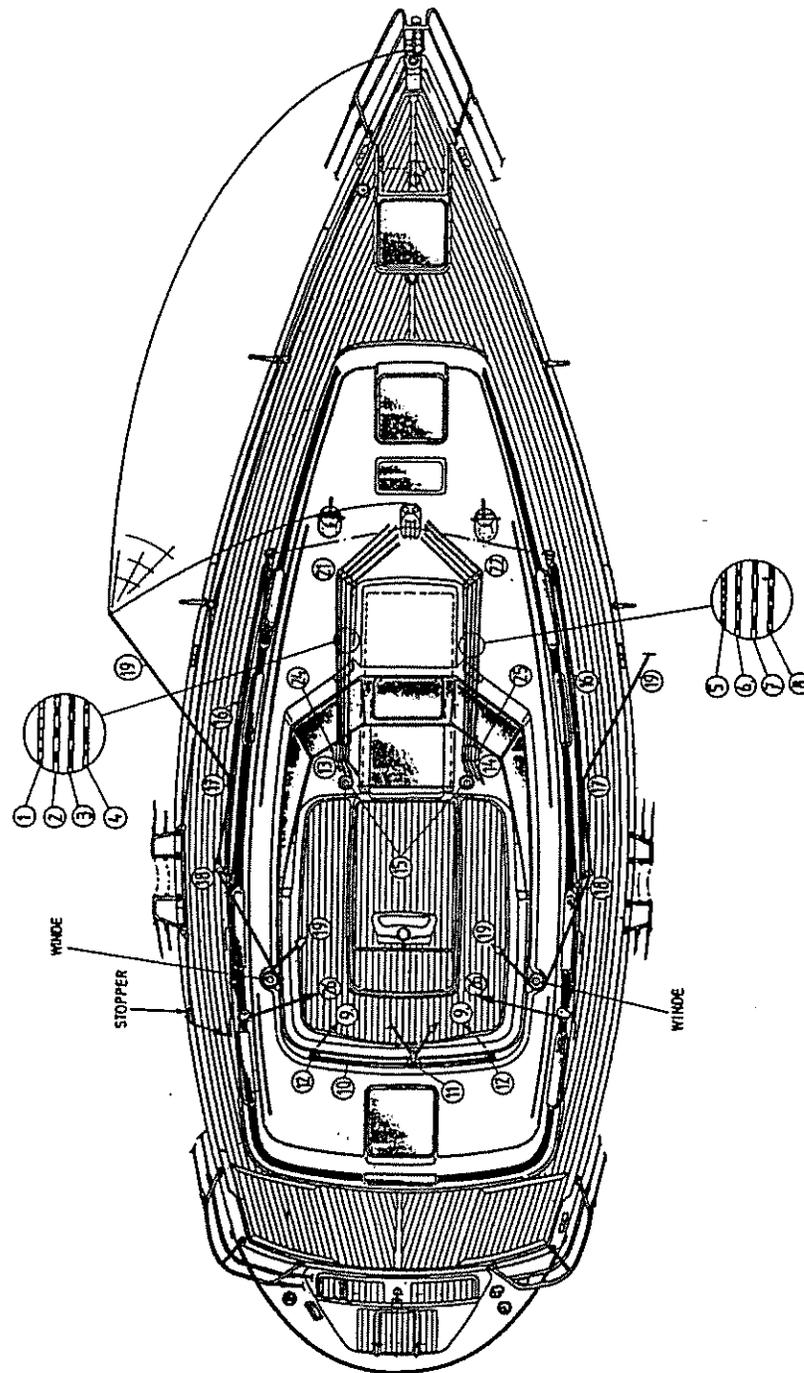
Rigging screws:

fork terminals

for 5mm wire: 3/8'', breaking load 3.400 kg

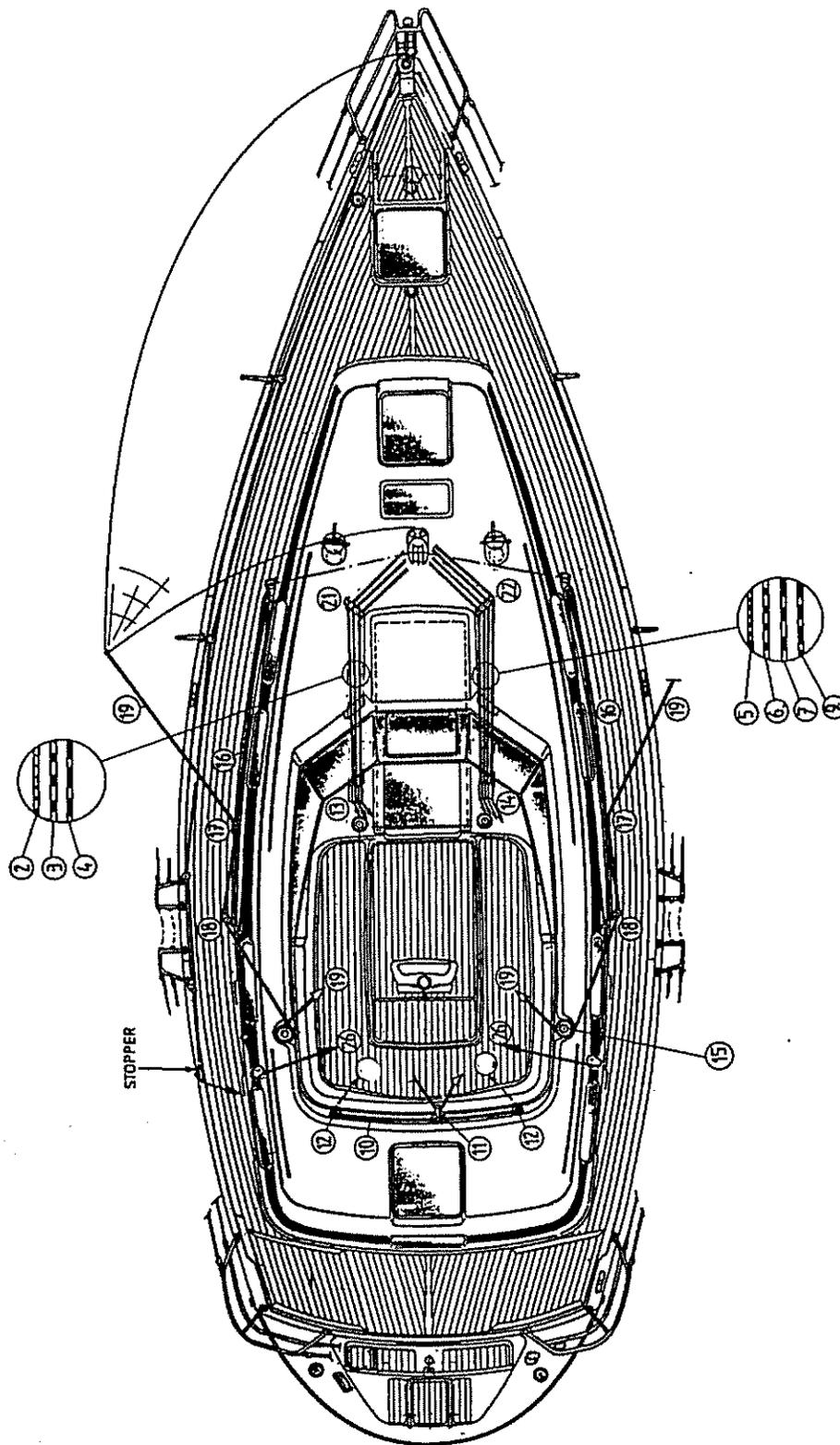
for 6mm wire: 7/16'', breakink load 4.700 kg

1.3.3 Halyard- and sheet leading at conventional mast



- | | | |
|-----------------|-----------------------------|------------------------------------|
| 1 genoa halyard | 9 car shift rope | 17 genoa sheet track adjustable |
| 2 reef 1 | 10 mainsheet track car | 18 genoa sheet track fast |
| 3 clewouthaul | 11 mainsheet track | 19 genoa sheet |
| 4 reef 2 | 12 front endstop (g. track) | 20 redirection roller with stopper |
| 5 boom hauldown | 13 stopper port 4x | 21 organizer port |
| 6 mainsheet | 14 stopper stb 4x | 22 organizer stb |
| 7 lift | 15 halyard winch | 24 stopper spi (option) |
| 8 main halyard | 16 genoa track | 25 stopper main halyard |
| | | 26 variable rope genoa sheet |

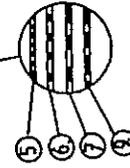
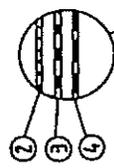
1.3.4 Halyard- and sheet leading at inmast furling and reefing mast



- 17 genoa track car adjustable
- 18 genoa track car fast
- 19 genoa sheet
- 20 redirection roller with stopper
- 21 organizer port
- 22 organizer stb

- 9 mainsheet track
- 10 mainsheet car
- 11 mainsheet track
- 12 front endstop (m. track)
- 13 3stopper port 3x
- 14 stopper stb 4x
- 15 halyard winch

- 2 outhaul
- 3 scrolling rope
- 4 scrolling rope
- 5 mainsheet
- 6 tipping line
- 7 boom lift



25 stopper main halyard
26 variable rope genoasheet

16 genoa track

8 main halyard

1.3.5 Option:

includes:

spinnaker-lifting system, rodkick with gas-pressure spring, mast tack slides for battened sail

1.3.6. Option: Furling rigg

Standing rigging (1x19- lace, material 4401), contains:

forestay with excessive length	1x	intermediate shroud	2x
lower shroud	2x	permanent backstay with strainer	1x
upper shroud	2x		

Running gear:

drawn into mast:

- main halyard and reserve
- genoa halyard

- option: spinnaker equipment
- spinnaker halyard (included)
 - spinnaker boom uphaul
 - spinnaker boom downhaul

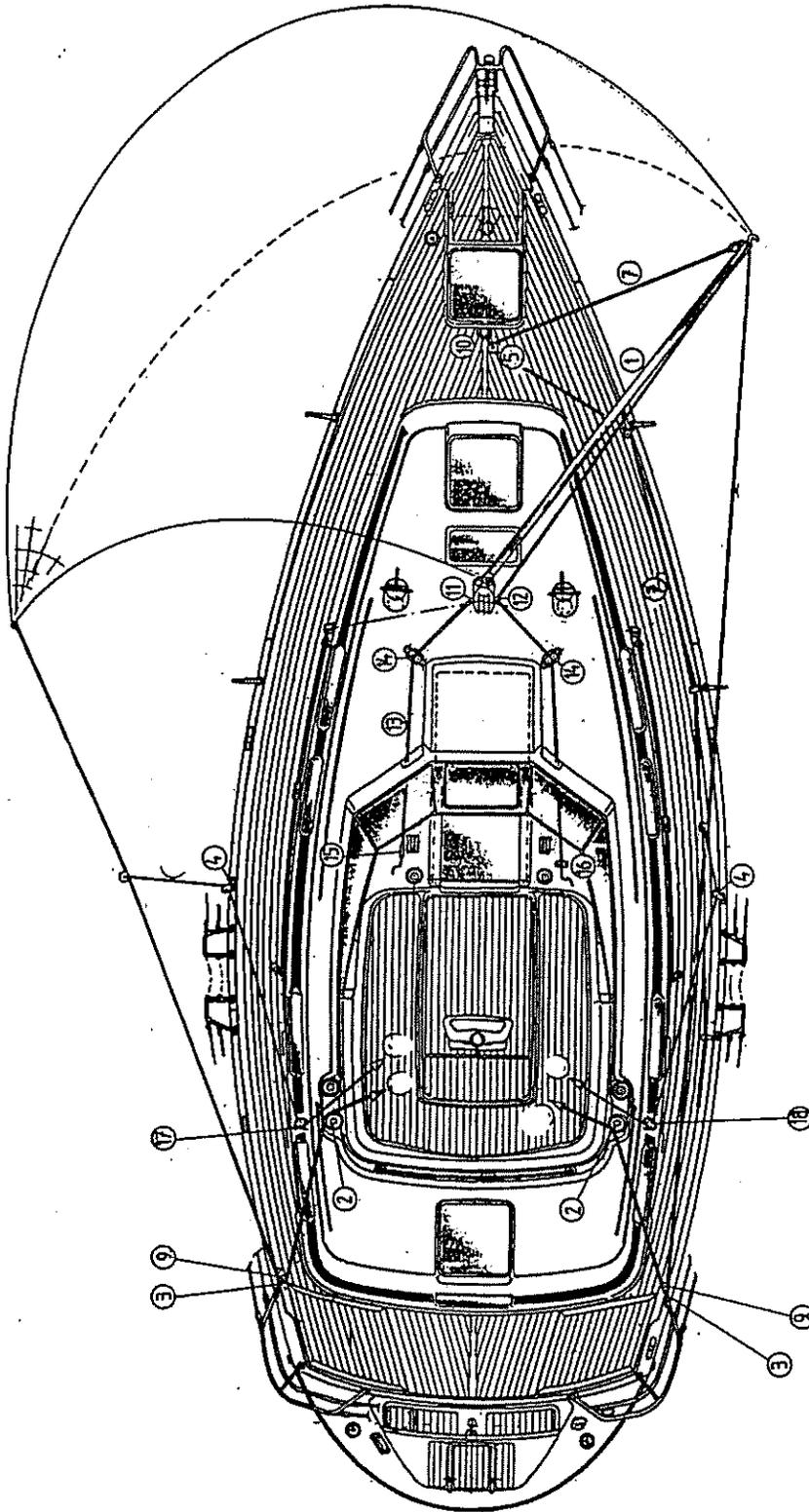
inside the boom: outhaul line

1.3.7 Option:

Including single or together: spinnaker elevator system,
rod kick with gas pressure spring,

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

1.3.8 Option Spinnaker



- 13 organizer with stopper
- 14 organizer
- 15 stopper
- 16 stopper for topping lifts
- 17 downhaul with organizer
- 18 downhaul with organizer

- 7 spinnaker boom downhaul
- 9 block
- 10 block for spinnaker downhaul
- 11 spinnaker halyard
- 12 topping lift

- 1 spinnaker boom
- 2 spinnaker winch
- 3 attachment for spinnaker block
- 4 attachment for tipping line
- 5 attachment for spinnaker downhaul

1.3.9 Further remarks:

Rigging:

- Rinse the complete rigging carefully with fresh water before winter storage.
- Check the running- and standing rigging, blocks, halyard sheaves and rigging screws. If bolts of guide rollers show striations it is very important to exchange them.
- Grease all movable parts with suitable lubricants. For rigging screws graphite is especially commendable. From time to time you should spray the mast slides with a special lubricant.
- Chafing spots at mast and boom should be cleaned and covered with a clear varnish suitable for aluminium.
- Polish all stainless steel fittings showing films of rust to keep their quality.

Sails:

- On long term synthetic sail cloth is sensitive against UV rays. So if sails are not removed from the boom they should be covered.
- All sails should be rinsed with fresh water before winter store to avoid stains of rottenness.
- Seams and thimbles should be inspected carefully and mended if necessary.
- Do not accumulate the sails for a long time in wet state



Attention

Before you start a sailing turn:

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.

1.3.10 Motorizing, engine room, gear, propeller

This yacht is equipped with an inboard diesel engine with a sail-drive gear and a fixed propeller.

Engine and saildrive gear are mounted as a unit on a common basement.

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,

The fuel tank is placed under a cover at starboard-side below the aft-berths. Cooling-water supply to the engine is realized via the saildrive-gear.

Propeller

An original propeller, adapted to the type of boat and the normal working speed is fitted.

Standard: 2-bladed fixed propeller
made from an aluminium alloy.

Notes for maintenance:

For operation and maintenance of the engine plant please follow the instructions of the engine-manufacturer's manual.

Notes for maintenance of the propeller

Please inspect the propeller before winter storage and clean it if there is marine growth. You should repair possible deformations, dents or nicks. After that you should have the propeller balanced again.

2. Installations and circulations

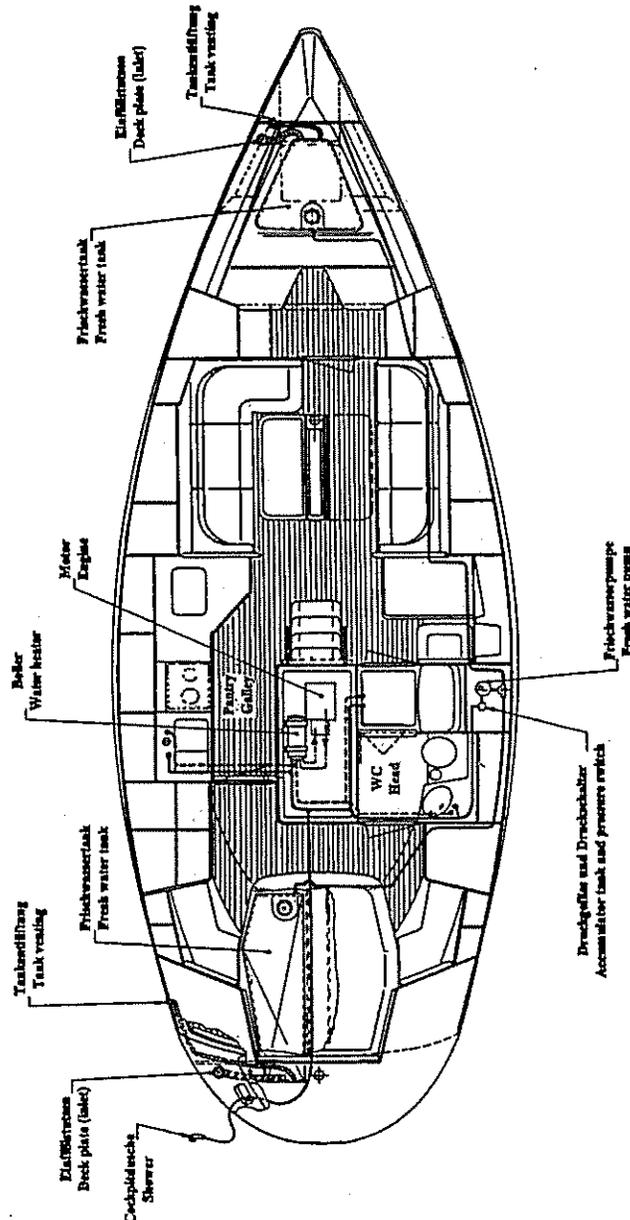
2.1 Tanks and piping - water

2.1.1 Fresh water, drinking water – cold

The yacht has two water tanks with a capacity of 370 l. Fresh water is supplied via a water inlet (with a blue cover) at the transom, port side and on the forecastle near the chain locker. You can take water from the tank over a hose connection leading to the pressure water-pump.

This pump, realizing the complete cold water circulation, is fitted below the pantry. 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 continuous working though all ducts were cut off properly. The pump is protected by a filter which should be regularly checked and cleaned if necessary.

Components:



Note

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

2.1.2 Sea-water circulation

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

WC – installation:

Waste water is pumped outside by means of a hand pump next to the toilet through a gastight hose (diameter 1 ½ '' or 38 mm resp.) and a WC-trap. When sailing or motoring all valves should generally be locked (lever-position crosswise to the hose). The same goes for the sea-water hose supplying flushing water. The hose has a diameter of ½ '' or 12,7 mm resp. and is protected by a spherical safety-valve.

Option: Shower water installation

Shower water is collected in the moulded tub/tray and pumped outboard with an electrical pump. The switch for operating it is next to the wash-basin.

**Attention**

If you are not aboard for a longer time you should close all sea-valves.

2.1.3 WC installation, holding tank (option)

The ship's toilet is a commercial pump-WC. For flushing the supply valve is opened and the content of the bowl is pumped out into the holding tank (if installed) or outboard, resp.

Holding tank (option)

It is a high-grade steel tank and therefor resistant against corrosion to a large extent. This tank is pumped out via a hose pipe to a standard deck connection, via the sea valve or in combination of both.



Attention

Open supply hoses to WC only for use (lever in direction of the hose).

One pump lift carries about ½ l of water. For flushing you will need about 2.5 l. The tanks capacity is designed for at least 20 uses.

The valve of the discharge hose is normally closed (lever-position crosswise to the hose)

In this position the lever may be sealed in ports or sea areas where waste water must not be pumped outboard.

Tank cleaning

Do not fill chemicals into the flush-water. Once a year the tank should be cleaned inside with environment-friendly household detergents. Do not use aggressive WC-cleaners.

For incompatible cleaners see 7 "Information on yacht toilets".

A correct use of the WC installation is always a difficult procedure....

That's why it is highly recommendable to instruct guests about the use carefully, especially if this is their first stay aboard. Simply show them, on due time, how to operate the installation.

The necessary valves are below the wash-basin in the toilet room. At the hand pump there is a small lever for choosing the two functions of the pump:



Attention

Take notice of the referrals by the manufacturer

- 1 – pumping out and flushing simultaneously or
- 2 – pumping out only.

For flushing the bowl after use:

- 1 – open both valves,
- 2 – pump about 10 times in position 1.
- 3 – pumping out and cleaning : pump about 15 times in position 2.

By that the waste water hose will be cleaned entirely.

We recommend to fill the bowl with a little bit of sea-water before using the toilet.

Important:

Never ever use the hand-pump with valves closed.

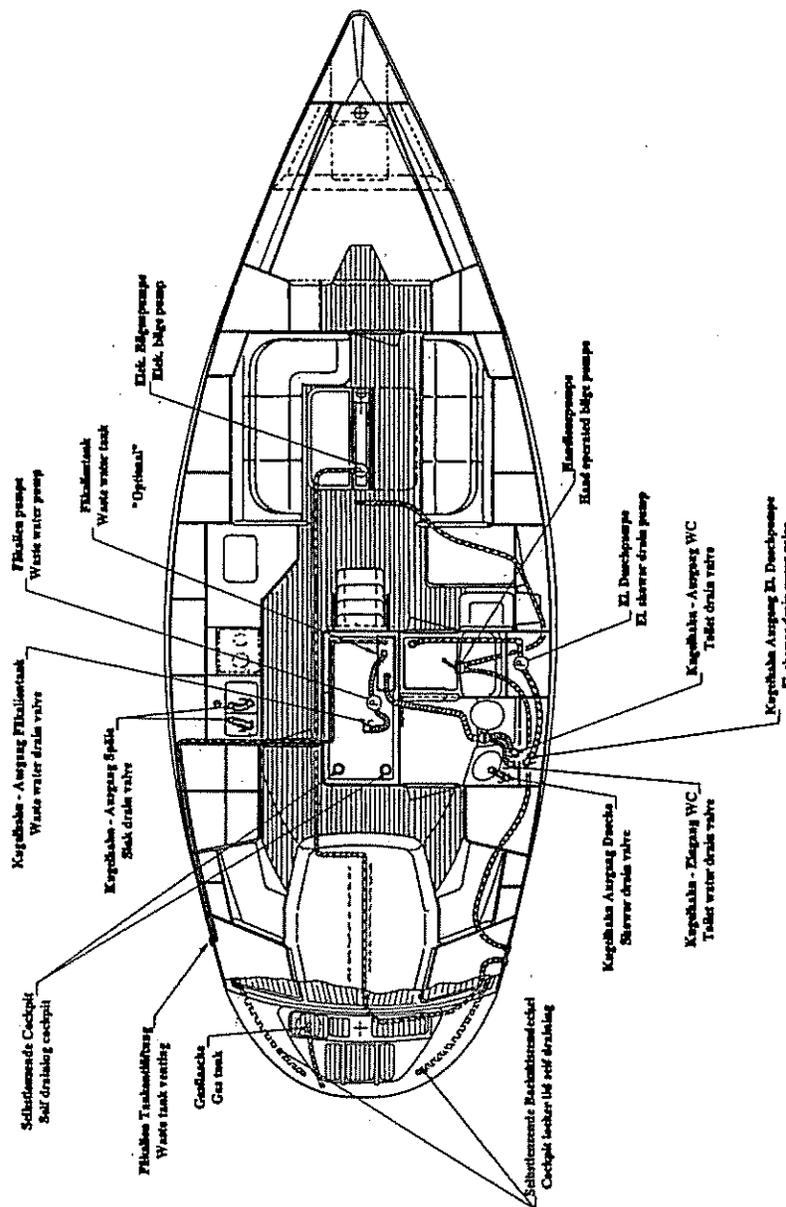
Do not throw larger or solid objects into the bowl (see instructions for the use of WC-installations with optional holding tank).

Note

Since the capacity of the holding tank is limited you should use shore toilets as often as possible.
 You need not use deodorizers, because the system is a closed one.

Moreover the yacht is fitted with a "Y"-waste valve (optional if a waste holding tank is installed). In this case you have the choice either to let the waste water from the toilet run outboard directly or to hold it in the holding tank (option).

Components: WC-flushing



2.2 Tanks and pipings - fuel

2.2.1 Fuel for main engine

2.2.2 Fuel for heating

Storage tank

There is a 230 l plastic diesel tank with an inspection opening on starboard-side below the aft berths. It is filled via a fuel inlet with a red cover (marked with FUEL) at the transom of the yacht. The tank pickup is situated on the tank. The supply is made of a 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 throughout. This is led via a wide-meshed filter/ water separator, fuel pump and fine filter to the engine and then back to the tank. In the aft cabin on starboardside in front of the tank is a manually operated stop valve.

Circulation Heating (option)

The heating is supplied via a fire proof suction hose from the upper edge of the tank. The secondary return to the tank is led via a valve at the heating device with a built-in filter and the fuel pump.



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 !



Attention

If there is a danger of fire:

- Close the fuel stop valve immediately!

2.3 Steering gear

2.3.1 Description of the system

The rudder is a suspended, balanced hydrofoil midship rudder . It is operated by hand from the steering weel at the steering post in the cockpit. Transmission of power is realized by means of rope pulls and fairleads to the rudder quadrant. With the autopilot (option) there is a 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 with a diameter of 60mm is made of a sea-water resistant aluminium alloy and is laminated into the blade. The post runs in two easy-going and special rudder bearings. The rudder is fixed by a mounting clip at the upper end of the post that also serves for the keeping of the rudder tiller. The mounting clip is additionally secured with a straight stud bolt on the rudder post.



Attention

Check regularly and repair if necessary:
- tight hold of the mounting clip 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.

Exchanging the liners requires a dismantling of the rudder blade:

- unscrew the lock-up srew cap (on top of the emergency tiller fitting),
- unscrew or -bolt the rudder quadrant,
- pull off the rudder blade,

Emergency tiller

The emergency tiller is stored in the starboard locker seat.

In case of emergency remove the steering wheel, the rudder quadrant for rope pulls 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.

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

But when steering manually with a small crew you will learn quickly how to use this brake to keep the yacht on a constant course for a short time. When berthed in a port this brake should always be drawn to reduce the effect on the steering gear, caused by the wash of the waves. The socket of the steering gear is integrated into the deck's form. On the socket there is the casing of the wheel hub. A chain is laid over a tooth-wheel of the hub. Both the rope pulls are run from the rudder quadrant via fairleads to the ends of this chain, where they are fixed crosswise by means of wire-rope grips, protected with an elastic covering. For both ends of the rope pulls there is one shroud adjuster each fixed at the rudder quadrant. It is recommendable to check these ropes from time to time and to retighten if necessary.

2.4. Bilge pumps, bilge lines

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

All **BAVARIA** yachts have got a self-bailing cockpit, too. The drain wells are situated at the rear and lowest part of the cockpit and are led outboard through the transom with hoses.

2.4.1 Description of the pumping arrangement

The yacht is equipped with both a manual pump and an electric bilge pump. The main line bilge suction has a capacity of 75 l/min.

Manual pumping

The suction strainer of the manual pump is placed in the bilge behind the mess-room table. The electric bilge pump is placed next to this suction strainer. The frame floors in the mess are connected by openings to let water through so that in case of an inrush of water both pumps can be operated. Before using the manual pump in the wet room the pump's cover has to be opened and the pump handle, which is placed in a small shelf under the chart table, is put into the provided opening and then moved to start pumping.

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



Attention

The yacht is equipped with a manual pump. The pump handle is on the latch in a small shelf under the chart table. It is put into the pump's opening and then moved to start pumping.

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.

Fothering means

In case of damage to a sea valve or any board ducts we recommend you to have leak plugs with different diameters on board for damage control. They should be made of soft wood and go well with the different sizes of ducts to close every opening safely.



Attention

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

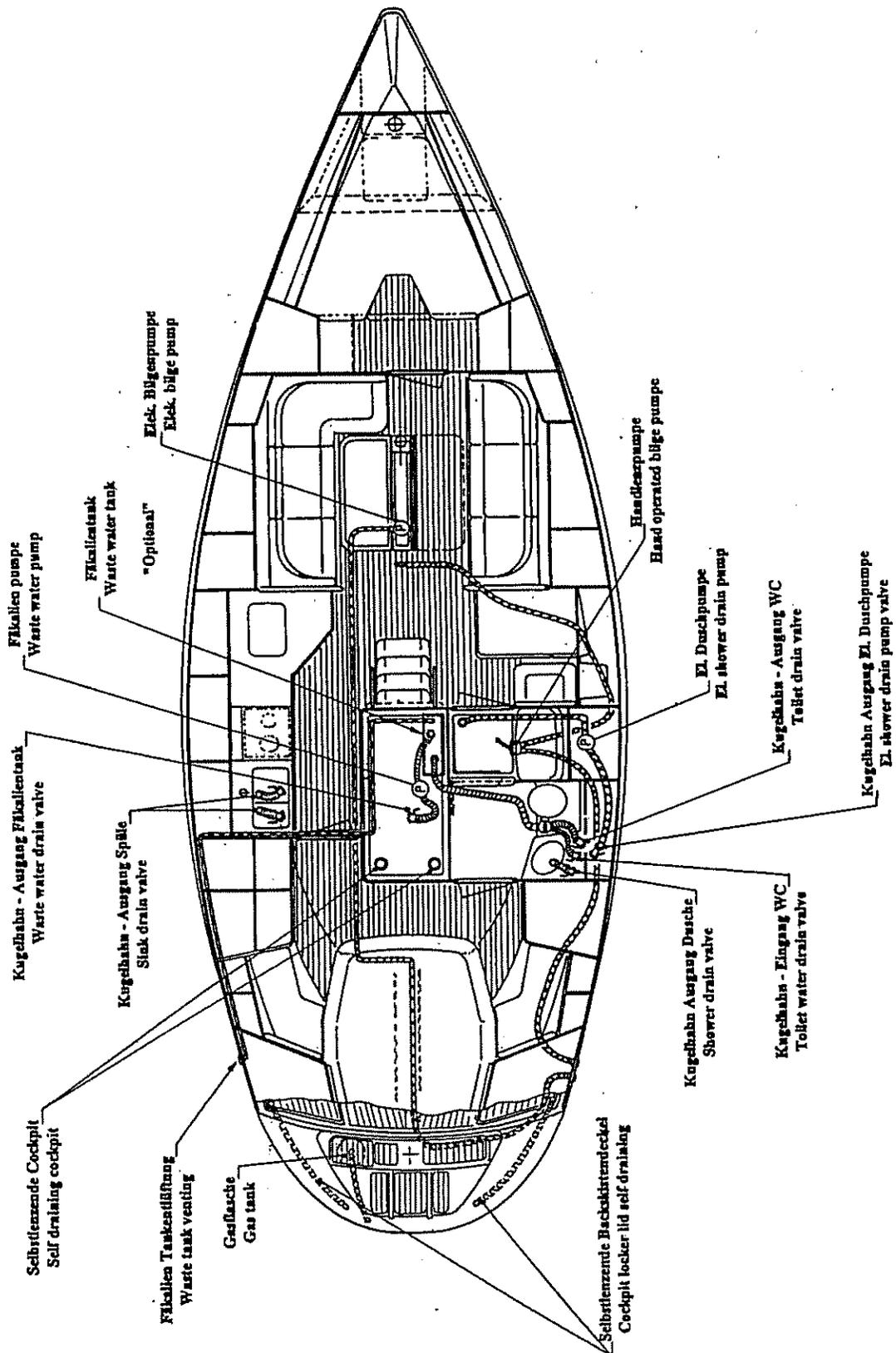
Note

In case of spherical valves a transverse lever-direction indicates:
CLOSED
and a longitudinal ones means : OPEN

Maintenance note

The tightness of ducts should be inspected regularly.
Retighten all hose clips and the stuffing boxes of valves

Components of the bilge pumping installation:



2.5 The electric installation

2.5.1 The AC-installation

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 transom of the yacht.

The power is supplied into a shore connection unit, placed at the chart table, and has the following components:

- earth-leakage circuit breaker
- 110 V safety contact plug box
- battery charger (option)

The plug box is operational as soon as the shore supply cable has been plugged in. It only serves the operation of electric machines. The battery charger's data are as follows:

110V AC/12 V DC with 27 or 48 A max. (option).

2.5.2 The DC-board net

All electric devices aboard are supplied with the 12 V DC. A main-switch is installed in the electric panel at the chart table. The board net consists of the following main components:

Power sources:

- starter battery
- service battery
- motor generator (lighting generator)
- charger (option)

Power distribution is effected by a switchboard above the chart table.

Its data are as follows:

- electric panel
- electric circuits with thermal safety switches
- LED-display
- tumbling switches
- voltmeter with throw-over switch

The lettering next to each switch refers to the corresponding consumer.

You can find all the switches for the 12V consumers at the switchboard. By this you can operate different consumer-groups ,being marked with logos or letterings, seperately. Some of the switches are designed for an installation of additional electric devices. There are only automatic fuses used. So you only have to press them in case of a breakdown. If a fuse blows repeatedly you should spot the cause or consult a specialist (electrician).

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.

Charging the batteries

The yacht is equipped with three batteries:

- a starter battery, 12 V, 88 Ah
- two service batteries, 2 x 12 V 140 Ah.

All batteries are maintenance-free 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 only fixed link is the one to the battery charger (option). The safety contact plug-box at the electric panel is designed for electric tools to be used for small repair work.

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 first all other consumers have to be switched off. 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.

Engine- and fuel observation

A tank level indicator is installed for fuel observation. The engine operation is observed with the displays at the motor-panel in the steering post.

Of special importance is the exhaust-gas temperature display when cruising in shallow- or tidal waters. If a seawater filter is blocked or water-supply is affected by any other reason an overheating of the engine would be the consequence. An acoustic alarm will warn you in such a situation.

Devices for comfort

First of all these are the cabin lights and plug boxes. Each lamp has its own switch allowing a selective consumption of energy.

2.5.4 Important warnings on the DC-installation

Warning

- To avoid freezing also maintenance-free batteries have to be recharged in winter if their capacity becomes less than 50%.
- Once a year all contacts should be checked and protected with a special spray.
- Familiarize yourself with the electric installation in due time to be able to react properly in case of disturbances.
- If a device should fail, check first if it is defective.

Attention



You should never

- work at the electric installation if it is in operation,
- alter fuses or overload switches,
- change the electric wiring and/or wiring plans; this has to be done by specialists only,
- install electric devices or add parts that exceed the allowed load limit,
- leave the yacht unattended with the electric installation in operation. This does not go for automatic bilge pumps, fire protection and -alarm devices.
- As long as the diesel engine is in operation, you must not disconnect the 12 V charging circuit.

Before starting a voyage you should always check

- the battery voltage,
- the correct function of navigation lights .

Have spare lamps for all navigation lights aboard.

2.5.5 Important warnings on the AC-installation



Attention

- the electric wiring of the yacht and/or corresponding wiring plans must not be changed.
- Service and maintenance must be carried out by a qualified specialist.

Warning

To avoid the danger of a rush of current or fire :

- The shore connection cable must never hang into water.
- Plug the shore connection cable first aboard and then ashore.
- Do not alter plugs of shore connection cables

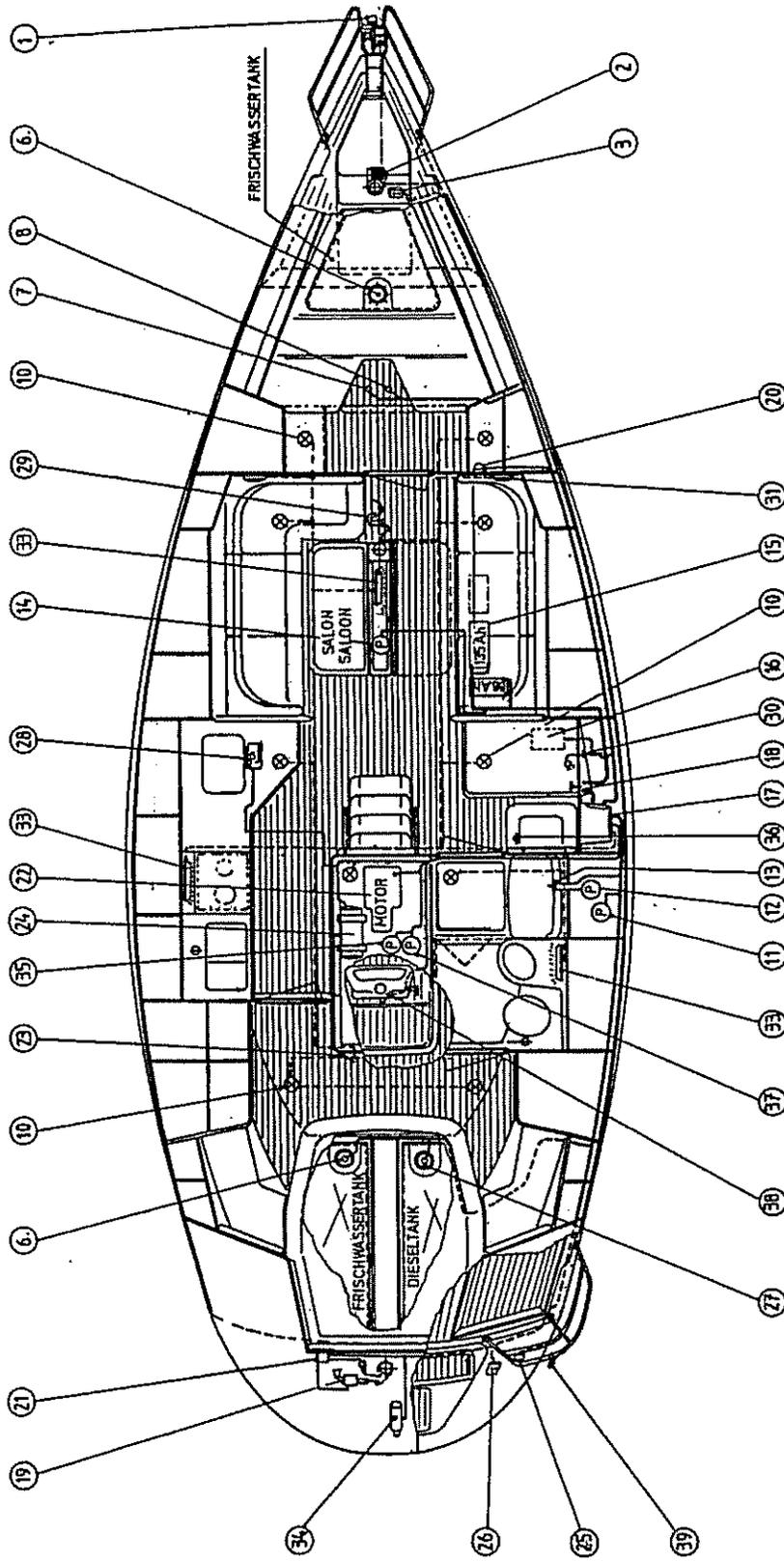
Disconnecting the shore connection cable:

First disconnect the shore connection cable ashore and then aboard.

Explanations on the distribution of electric devices

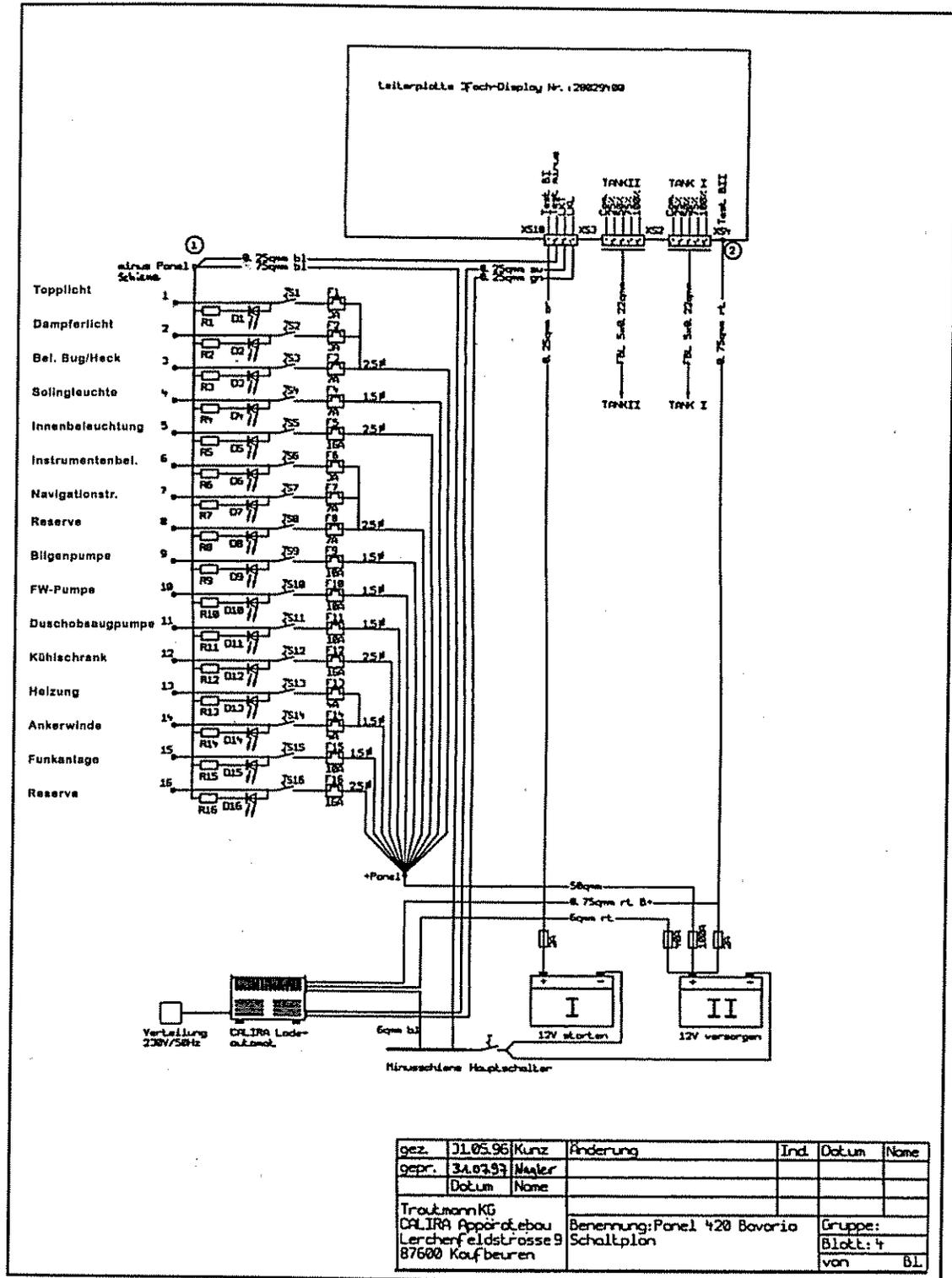
BAVARIA 38 – Ocean				
	Description	Beschreibung	Stück/ PCS	Kabel/Wire
1	Navigation light	Zweifarbeneleuchte	1	2 x 2,5
2	el. windlass	Elektrische Ankerwinde	1	2 x 25
3	Windlass switch	Ankerwinde - Bedienteil	1	2 x 25
4				
5				
6	Fresh water gauge	Messgeber für Frischwassertank	2	5 x 0,75
7	echo depth sounder	Echolot – Geber	1	
8	hull speedometer	Sumlog – Geber	1	
10	Ceiling light	Deckenleuchte	11	2 x 2,5
11	Fresh water pump	Frischwasserpumpe	1	2 x 2,5
12	Shower drain pump	Duschpumpe	1	2 x 6
13	Shower pump switch	Duschpumpenschalter	1	2 x 6
14	Bilge pump	Lenzpumpe	1	2 x 6
15	Batteries group	Batterie		
	Engine battery 88 Ah	Motorstromkreis-Batterie 88 Ah	1	70
	Bord battery 140 Ah	Bordstromkreis-Batterie 140 Ah	10,2	70
16	Battery charger (option)	Batterieladegerät (Option)	1	1 x 10; 2 x 2,5
17	Electric panel	Elektro Paneel	1	
18	Main switch	Batterie-Hauptschalter	1	95
19	Auto pilot (option)	Autopilot (Option)	1	2 x 2,5
20	Electronic compass (option)	Elektronischer Kompass (Option)	1	5 x 0,75
22	Engine start	Anlasser	1	70
24	Water heater	Boiler	1	3 x 1,5
25	Stern light	Heckleuchte	1	2 x 2,5
26	Shore connection 110 V	Landanschluß 110 V	1	3 x 1,5
27	Fuel gauge	Messgeber für Kraftstofftank	1	5 x 0,75
28	El. re Fridgeration	El. Kühlschrank	1	2 x 6
29	Cable opening (navigation light)	Kabeldurchführung		4 x 2,5 + VHF
30	Reading light	Kartentischlampe	1	2 x 2,5
31	Speaker (option)	Lautsprecher (Option)	2	2 x 1,5
32	Engine room light	Motorraumlampe	1	
33	Neon lamp	Neonlampe	4	2 x 2,5
34	Air heater (option)	Heizungsfühler (Option)	1	2 x 1,5
35	Air heater – fuel pump (option)	Heizungsdieselpumpe (Option)	1	2 x 2,5
36	Air heater – thermostat (option)	Heizungsthermostat (Option)	1	2 x 6
37	Waste water pump (option)	Fäkalienpumpe (Option)	1	2 x 6
38	Engine instrument panel	Motorinstrumententafel	1	
39	antenna cabling (option)	Antennenkabel (Option)	1	VHF

2.5.6 Distribution of electric devices:



Wire
2,5
5
5
7,5
2,5
5
5
6
2,5
5
7,5
5
5
7,5
VHF
5
5
5
5
5

2.5.7 Wiring plans



gez.	01.05.96	Kunz	Aenderung	Ind.	Datum	Name
gepr.	31.03.99	Maier				
	Datum	Name				
Trautmann KG CALIRA Apparatbau Lerchenfeldstrasse 9 87600 Kaufbeuren			Benennung: Panel 420 Bavaria Schaltplan		Gruppe: Blatt: 4 von 61	

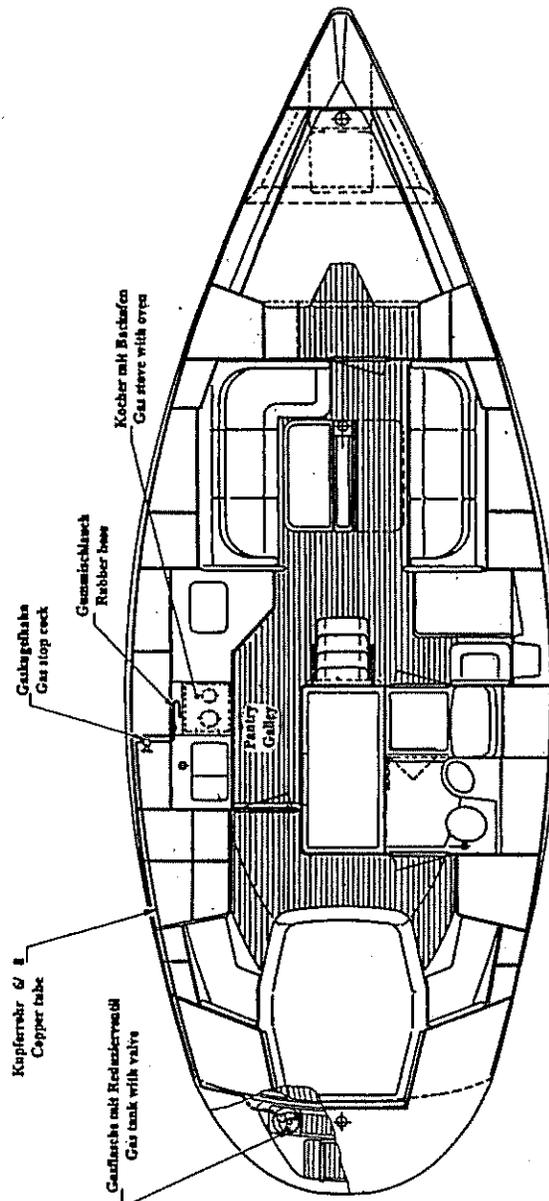
2.6 L.P.G. installation

The gas installation for the stove meets the European norm EN 10239. Attached please find the test-certificate.

The gas pipe leading to the stove from the standard 3 kg-gas cylinder is an 8mm 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 mb. The flow rate is 1 kg/h.

2.6.1 The components



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 before 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.

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 deaeration 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. Have them replaced if necessary.
- If you install a new stove make sure that it has got the same working pressure.
- Check the exhaust gas pipes at least once a year. Replace them if they are defective.



Attention:

- Do not use liquids containing ammonia for checking the pipe.
- Never handle with open light and do not smoke if you look for leakages or if you connect a new gas cylinder.

2.7 Fire protection

2.7.1 Precautionary 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.

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



Never

- obstruct any exits or hatches.
- alter safety installations as there are 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.

2.7.2 Active fire protection

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 three fire extinguishers on board which are fixed at the following places:

- Nr. 1 and 2 : **Powder extinguisher** in the starboard locker seat, at least fire grade 10A/68B
Nr. 3 : **Powder extinguisher** at the navigational seat, at least fire grade 10A/68B

Additionally in the pantry you should place a light **fire retarding cloth**, which is made of glass cloth and is very useful in the case of fire caused by overheat fat.

2.7.3 Fire fighting

If, despite all precautionary measures, there is an outbreak of fire aboard you should behave as following:

All persons, which cannot fight the fire actively, should go on deck

- through the companion-way, or,
if the fire broke out in the pantry or engine room:
- through the escape hatch above the fore-berths.

In case of a fire in the pantry:

First close the gas valve !

Then smother the flames with the fire retarding cloth . It can be used again after this.

If the fire has reached parts of the furniture use the fire extinguishers.

In case of fire in the engine room:

First close the fuel valve !

Do not open the erection hole behind the companion way !

Under the companion way is situated a small opening. Lead the nozzle of the extinguisher through this hole and empty it completely.

Wait for some minutes before you open the erection hole/hatch to assess the damage.

In case of a fire in the living cabin:

The fire retarding cloth can be effective in this case, too. A draw bucket should be ready to hand in the locker seat of the cockpit. Use the fire extinguishers only in case of emergency.

2.7.4 Important notes

It is the yacht owner's duty

- to have all fire extinguishers regularly checked and maintained ;
- to have fire extinguishers replaced after the expiry date. The same goes if the extinguishers should have been used. The new extinguishers should at least have the same capacity as the discussed ones.

It is the yacht owner's or skipper's 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 extinguisher's nozzle in the engine room bulkhead,
 - the exit through the escape hatch above the fore-berths.

2.8 Anchor-, towing- and warping facilities (recommendation)

For using the anchor-, towing- and warping facilities it is recommended to follow the Yacht Rules of Lloyd's Register:

2.8.1 Anchor (option)

The bower anchor (plough anchor), abt. 21 kg, hot-galvanized, (is known for its high holding power). It lays ready-to-fall in an anchor stowage device and is secured with a bolt. The chain (option) has a length of 50 m and a nominal thickness of 8 mm. It is weighed and 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.

When using the electric windlass the diesel engine should always be in a stand-by operation. You can support weighing by going slow ahead under engine into the pull direction of the anchor chain. Doing so you protect your battery. Moreover the yacht is manageable right after the anchor is apeak (see also description of the manufacturer).

Furthermore it is recommendable to have a stern anchor as well as sufficient mooring- and towing lines with the necessary strength on board.

1 stern folding anchor (4-fluke grapnel anchor), 12 kg, hot-galvanized, fixed at the aft guardrail. 6m chain forerunner, thickness 7mm, 34 m polyamide anchor rope, 18 mm, 3-strand hawser laid. It is stored in the port transom seat.

The rope is cleated aft.

2.8.2 Mooring lines (recommendation)

- 2 x 2 polyamide lines, 18 mm, 16 m long.

These lines can be replaced by other materials: either by polyester (18 mm diameter) or by polypropylene (20 mm diameter).

2.8.3 Towing lines (recommendation)

In case the yacht has to accept towage service you should have a towing line on board which should only be used for this purpose: 20 mm diameter, length 42 m, 3-stranded hawser laid. This line is married with a second one of the same qualities. Both ends have eyes to be fixed at mooring bitts. This results in a crowfoot when towing.

Attention:



Before starting a voyage the skipper has to make sure that:

- the windlass is in working order,
- the anchor chain is bend to the bower anchor,
- the necessary mooring- and towing lines are on board and in a suitable condition.

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.

Cooling sea water circuit

Sea water enters the sail drive through a duct with a sea valve. This is followed by a filtration with the highly positioned sea water filter. Via a sea water pump at the engine and the highly positioned vacuum valve sea water is pumped through the engine. Then the sea water leaves the engine block, is injected into the exhaust gas elbow pipe and finally it leaves via the exhaust gas outlet at the stern.

Fresh water circuit

In the engine there is an internal fresh water circulation with a corresponding expansion tank. The branchings to the hot water heater are made of heat- and fire-proof hoses. The secondary return is made into the engine.

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 leakages.
- When the engine is running it is highly recommendable to check regularly if cooling water is escaping with the exhaust gas.

Maintenance note

Before winter storage:

- Free the fresh- and sea water circuits from water according to the detailed instructions in the engine maintenance manual and care for an airing of the pipes and hoses.
- Dismount and clean the vacuum valve twice a season according to the instructions of the engine manufacturer.

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 steal 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 ist 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 visual and accustic 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 saltwater 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

A certain ventilation is realized through the hawser port in the cover of the chain locker and through its bilge holes.

Living cabins/ Salon and forward quarter

two ventilator

Engine room

Two openings in the aft area of the cockpit, two suction openings next to the companion hatch.

Aftcabin

3 side lights /bull's eye showings to the cockpit

Components:

2 deck ventilator, 9 side lights

2.12 Heating (option)

To become more independent from weather influences during the seasons and in order to make the stay aboard more pleasant as well as to avoid formation of condensed moisture an diesel-operated hot air heating is installed. It is situated at the engine room. Its operation panel is situated in the bulkhead over the chart table.

Combustion air:

The intake air for the combustion chamber comes from the locker seat. This results in an additional ventilation. The gas exhausts through a lockable outlet at the transom.

Fresh air:

Fresh air is sucked up through openings in the locker seat, heated and led through a flexible piping system to the outlets. The amount can be controlled by individual throttles.



Warning !

The exhaust gas outlet is hot - danger of burning !

Attention

- Keep the hot air hoses in the locker seats free from equipment and stores.
- Do not obstruct the outlets .

2.13 Bord ducts, sea water valves

Openings below the water line are possible weak spots. That is why we pay special attention to them.

All bord ducts in the underwater part, with the exception of the duct for the transmitter of the echo sounder, consist of brass-made screwed joints with spherical sea valves and hose nipples. All hose connections are secured with two clips each. For the cockpit drain special plastic joints are used.

Cockpit draining

The cockpit is drained through two outlets with a clear diameter of 38 mm (1 ½ ") in the rear and lowest end of the cockpit. They are permanently open and screwed with the cockpit sole and the skin.

Leak plugs

In case of a damage of a sea water valve or a board duct we recommend you to have leak plugs on board. They should be made of soft wood in various diameters to go well into the different sizes of board ducts and could close every opening safely.



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.

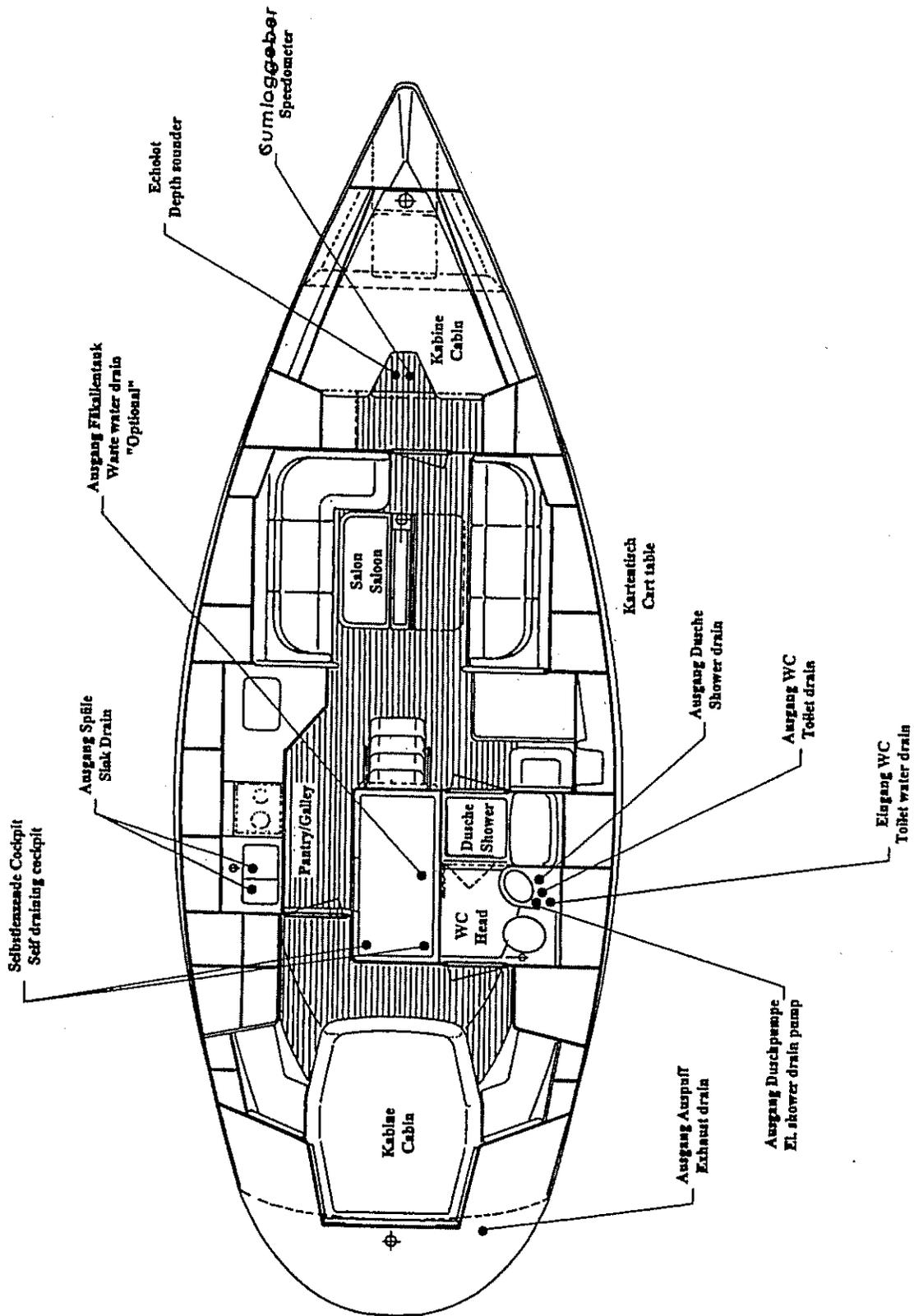
Maintenance note

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

Note

In case of spherical valves a transverse lever-direction indicates : CLOSED
And a longitudinal direction means : OPEN .

Board ducts:



3. Delivery

The yacht will be transported to the place of destination by lorry. After the arrival several preparations have to be made for launching, rigging and to put the yacht into operation. All this can only be carried out successfully, if it is done under the supervision of a competent and experienced person. That is why we recommend you to have it done by your BAVARIA trader or to place an order with a professional team. Nevertheless there are some tasks and duties which can be done by you, the owner. If you follow the steps recommended by this manual you will be successful:

3.1 Unloading the lorry

In larger marinas unloading and storage is mostly performed in a suitable frame (floor stand). A travellift and experienced personnel will mostly be available. If you use a mobile crane or a common port crane, please follow our recommendations for a safe reloading as follows:

- For lifting the yacht you should use suitable strops or belly bands only.
- Check the quality and bearing capacity of the strops.
- Sling all strops and ropes in such a way that the yacht remains in a level position.
- Fend the strops off.
- To prevent the strops from slipping they should be connected with ropes or belly bands.
- Pay attention to the rails and rail stanchions if they have already been fitted.
- If the strops run closely around the toe-rail you should place blocks of wood below the toe-rail in order to protect it.
- Check, whether the transmitters of the speedometer and the echo sounder do not rise from their casings.
- The yacht should stand in a level position on its keel and should be additionally protected with four wooden blocks or steel pillars.
- The size of the seats to the hull should be not less than 25x25 cm and they should be covered with a soft material to avoid scratches into/at the gel coat.

3.2 Checking the completeness of the yacht

For checking the completeness of the yacht please refer to the description of the serial construction and the invoice or order confirmation of your party to the contract.

3.3 Underwater coating

An antifouling coating of the underwater hull is recommendable because marine growth would reduce the performance of the yacht enormously within a short period.

If the yard did not supply you with a suitable antifouling-paint you should follow the advice of the manufacturer.

If the antifouling coating has to be slightly grinded you should consult the harbour officials or any other person responsible for the estate in before. Always cover the ground under the yacht with plastic cloth to collect the dust as toxic waste.

3.4 Mast and rigging

Composition of the rigging:

The mast belonging to the basic version is a 9/10 sporting rig with two pairs of spreaders with angular. The backstay with a straining rig serves as an additional protection and is used for bending the mast.

Preparations and erecting the mast

- The mast should be placed on wooden or softly coated frames in a proper working-height.
- The supports for the instruments (wind gauge, antennas), which are fitted after the erection of the mast, are mounted.
- Pass the cables for the instruments through the mast (when ordered at the yard, the cables have already been passed through).
- Devices or instruments, which have to be fitted in before, should be protected against damage.

Mounting the spreaders

- Fasten the spreaders at the designed mast-fittings.
- Safeguard the locking bolts and its wires with strong tape to prevent a damage to luffing sails (especially the spinakker).

Fitting the standing rigging

- Unpack the wires and prearrange them.
Please make sure that the turnbuckles are not damaged by dragging them along hard ground. Best is you protect them in before by winding some tape round.
- Grease the threads of the turnbuckles properly.
- Fix the single wires at the corresponding mast-positions.
- Give medium tension to the upper shrouds, pay attention to same lengths and secure them. The spreaders should keep their given positions and should not be pressed up or down by the shrouds.
- The fitting of the supplied furling stay is done according to the manufacturer's instructions (enclosed in the box). The completed furling stay is fitted at the mast and secured.
- Also the shrouds should be protected so that they cannot cause any damage to the mast and its anodized coating when erecting the mast.

3.5 Preparation of the engine and propeller

- Check the oil level in the engine and the gear, refill them if necessary.
- Check the screwed connection of the propeller and its locking.

3.6 Launching

If the rails have not been fitted by the yard:

- Fit the bow pulpit and secure it.
- Insert the stanchions into the stanchion bases and secure them. Draw all rails through the stanchions (with the strainers aft).
- Fit the cross-wires at the aft pulpit.

- Close all board ducts.
- Insert the transmitters of the speedometer and the echosounder (if that has not been done by the yard yet).
- Fix sufficient fenders at the rails.
- Prepare the mooring lines.
- Pay attention to the instructions of the handling party during launching with a travellift. If a (mobile) crane is used, you should observe the items of 3.1 (unloading the lorry).

Futhermore it is important:

- To control the ship's movements when hanging freely in the air by means of two lines, fixed at the bow and the stern each .
- During craning nobody must be on board the yacht.



Attention : Never stay under pendulous loads.

As soon as the yacht is flowing for the first time you should take the following precautionary measures before removing the strops:

- Open all sea valves and check them for tightness.
- Check the transmitters of the speedometer and the echo sounder in the fore hull for tightness.
- Open the cooling water valve for the engine.
- Start the engine and check if cooling water is escaping.
- Test the mechanism and functioning of the control lever for the built-in diesel engine.
- Check the rudder mechanism und the lower bearing for tightness.

3.7 Sails

Main sail

Furling

- Bend it to the main halyard and slide it carefully into the slot of the furling system.
- One person pulls the main halyard slowly over the halyard winch, a second person cares for a non-crumpled slide into the slot.
- As soon as the sail has been completely lifted , fasten the tack of the sail at the mast gosseneck and set up the halyard again.
- For "splicing the furling line" see instructions in the owner's file.

Furling genoa

- The reeving line should already have been coiled up in the furling drum.
- Lead the fore leech through the feeder that is fitted at the upper part of the furling device.
- Bend the genoa halyard.
- Pull the genoa slowly over the halyard winch. Fasten the genoa tack after lifting and set the sail up again.
- Bend the genoa sheet to the sail with a bowline knot and furl it slowly without crumpling. Lead the sheet through the track car to the winch.

There may be some technical changes which are referred to in our technical description and plans.

3.8 Before setting sail for the first time

- a) Deck fittings and running gear
- b) Mast and standing gear
- c) Engine and propulsion systems

Recommendation:

If possible you should go on the first trial-leg together with your party to the contract/ sales person (see check list for handing-over). The same goes for running in the engine. Your inboard engine is an essential, sometimes even a vital part of the equipment of your yacht:

- it's a untiring workhorse,
- it's irreplaceable for port manoeuvres,
- it's emitting heat,
- it allows to enter a port even if the yacht is calmed,
- it can become a true help in case of emergency.

For these reasons the engine should always be maintained carefully. (see: operational instructions of the manufacturer)

Starting the engine:

- Close the power circuit with the main-switch.
- Step on the gas slowly with the throttle control and check if gear and propulsion are in neutral position.
- Realize the contact to the engine panel with the key or the press-button.
- Press the start-button at the engine panel after a few seconds.
- If the engine does not start do not try for longer than 10 seconds. Wait for another 30 seconds and try again.
- Do not run the engine too high.
- Check if the control lights gleam.
- Check if the cooling water circuit is working.
- During engine operation the main switch must not be switched off to avoid a damage to the light engine.

4.5 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 readjusted the engine.

4.6 Antifouling coatings

The underwaterpart 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 grinded to some extend 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 .

4.7 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.

4.8 Waste water

If the yacht is equipped with a holding tank on a temporary basis in areas of use where the discharge of human waste is restricted or prohibited you should make sure that the direct outlets are closed.

The tank's capacity is limited. That's why you should use shore toilets where- and whenever possible.

4.9 Nature conservation

Please follow all official as well as unofficial rules for a practical nature conservation.

Especially in nature reserves that are allowed for navigation you should follow all regulations strictly.

Watch and take photographs of animals only from a clear distance.

Do not enter the area of seal banks in mud flats to avoid any disturbances or expulsion of the animals. Keep a distance of at least 300 m to seal banks and bird sanctuaries. Stay close to the marked fairways. Go only with 'dead slow ahead' in such areas.

Ten golden rules for water-sportsmen

1. Avoid entering reeds belts as well as all other densely grown bank areas, gravel-, sand- and mud banks (resting spots of birds). Also avoid shallow waters, especially those with water plants (spawning grounds).
2. Keep sufficient minimum berth to reeds belts and other grown bank areas – on wide rivers this distance should be about 30–50 m.
3. In nature reserves you should strictly follow the official rules. Often watersports in nature reserves is temporarily or generally prohibited or only allowed under special conditions.
4. Please take “damp areas of international importance“ into special account. These regions serve as life-areas for rare kinds of animals and plants and are especially worth protecting.
5. For berthing use such places where you obviously can not cause any damage.
6. Also from shoreside you should not enter the above mentioned areas for the same reasons.
7. Watch and take photographs of animals only from a clear distance.
8. Do not enter the area of seal banks to avoid any disturbance or expulsion of animals. Keep a minimum distance of 300 – 500m to seal banks and bird sanctuaries. Stay close to the marked fairways. Go through such areas only with ‘dead slow ahead’.
9. Help keeping waters clean. Do not throw any waste, especially those of chemical toilets, overboard. These kind of waste, as well as used oil or the like, have to be deposited at collecting points in ports. While staying in a port you should generally use sanitary installations ashore. When being berthed you should not operate the engine unnecessarily to prevent any additional stress by noise or exhaust gas.
10. Make these rules your own and inform yourself about corresponding regulations in force in the area you intend to navigate. Your own positive environmental behaviour will have a great influence on young as well as non-organized watersportsmen.

5. Maintenance

5.1 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, especially if you follow the recommendations for a right handling as mentioned below:

- **for rolling sails with a furling device:**

Please do not roll up the cloth too tightly to avoid formation of harmful creases. Such creases can also be caused if the furling stay has not been set up properly. To avoid a loosening and shaking of the clew in strong wind it should be secured with the sheets and additional earings or lanyards.

- **for rolled up sails:**

When being berthed you should generally protect the sail with a sail cloth. This is also true for UV-resistant cloth. Like any other cloth it should not unnecessarily be exposed to harmful environmental influences. The cloth-hose of the genoa should not be too wide in diameter to avoid shaking in strong wind and it should be made of breathing cloth to allow a proper ventilation of sails.

- **for folding sails:**

If the main sail is taken in or unbent for winter storage it should be folded slightly and stowed in a spacious sail bag.

Pressing the cloth into a small bag causes harmful creases and lasting negative effects on the stability by form.

Best is to fold the cloth gently into about 60 cm wide widths parallel to the foot of the sail.

And: It must not be stowed in a wet condition because this can cause mouldy spots.

- **for storing sails:**

Try to store sails always in a dry and well ventilated place.

- **for removing stains and mouldy spots:**

Rinse the sails with fresh water regularly to free them from salt. Lukewarm water and a mild detergent mostly do, even to clean very dirty cloth. Mouldy spots should be removed as soon as possible because they can weaken the laminate. Best is to treat them with a 1% chloride solution. First soak the spots for about two hours and then scrub them with fresh water and a soft brush.

- **for avoiding damages:**

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.

- **for handling sails:**

This is especially true for laminated sails: Keep to the recommended wind force the sails can stand. Think of it: One heavy squall can be enough to damage the aerodynamic shape of your sails forever.

- **for halyard tension:**

Be careful with the tension of the halyards because laminated cloth reacts much more sensitive to overstretching than traditional cloth.

As a general rule you should tighten the halyard only to such an extent that the cross pleats at the luff have just disappeared.

- **for hauling points:**

Please do not forget to shift the hauling points after reeving or unfurling the sail. If you don't do so, a wrong direction of pull prevents an optimum standing of the sail.

For example after reeving this may result in an overstretching of the foot while the leech is twisted heavily causing its shaking. The sail cannot pull properly and it wears early. That's why it is recommendable to attach different coloured marks on or close to the tracks, e.g. for a 130% genoa: green at 100%, yellow at 70% and red at 40%. Things can also be made easier if you adjust the track cars with low-strain lines which might also be marked with coloured whippings.

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 sailmaker.
- Never remove track cars with ball bearings from the tracks carelessly. Always use sheet tracks with endstops.

Hull and deck

Winter is the right season to inspect the hull and all load-bearing members of your yacht. If the gelcoat or the protective coatings are damaged you should repair them or renew them completely. For that you will get well-directed advice by the yard. You will find manufacturer's notes for maintenance and upkeep for all parts of the technical equipment in relevant paragraphs of this manual.

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 upkeep of the surface of the yacht. All paint manufacturers provide detailed instructions for their coating systems. For ships sailing in salt waters: Left-overs 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.

Furniture and upholstery

Moisture is the worst enemy of all inner spaces of the yacht. For the life time of furniture and upholstery it is important that the ship is well aired or ventilated constantly or at least as often as possible.

Deck ventilators belong to the standard equipment of all **BAVARIA** yachts (see deck arrangement and equipment). But nevertheless it is important that you do something against humidity and moisture in the yacht. . First of all inspect the yacht for possible leakages and repair them immediately. Secondly the bilge should always be kept dry and clean. Dirt can damage to the bilge pump and cause a breakdown. All furniture is made of high-quality mahogany wood as has been varnished several times. They should not be cleaned with aggressive cleaning agents.

Note

It is recommendable to revarnish all scratches or other damage immediately to protect the wood from water and salt. Those spots should be grained with fine-grain abrasive paper in before and varnished for three times afterwards.

Airing

Independent of the place where your yacht is stored during winter (in a shed or open air): Well airing prevents corrosion, mouldy spots and mildew. The low humidity in clear winter weather dries the yacht out very well.

Rigging

During the winter storage also the rigging should be inspected carefully. This includes not only all running and standing rigging but also halyard sheaves as well as mast and boom themselves. Small damage can be repaired easily if the rigging is stored in a horizontal position.

Electrical installation

Contacts must be free of corrosion and connected tightly. Please check all connecting parts once a year. The batteries require special care. The inscription "maintenance free" should not tempt you to leave the batteries connected on board if it is freezing. Only a well charged battery, disconnected from the mains, will guarantee a trouble-free operation in the next season.

Hose clips

All water-containing systems below the water line are secured with double hose clips. Check whether they are tightly fixed.

Tanks

Fuel tank: If there are only left-overs of diesel in the tank you should empty and air it.

Water tank: Empty the fresh-water tank completely and open it.

Wastewater (holding) tank and -pipes/hoses: Clean them with a light cleaning agent and open them.

Open the tanks; pipes and hoses should be covered with a cloth or gauze at their ends (air = yes, dirt = no).

5.2 Coatings

You may contact your marina or the yard if you have any questions concerning the coatings. Preferably you should rely on one system of one manufacturer that goes on well together.

5.3 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.

5.4 Repair work

In need of repair of the hull you may consult a reliable workshop. The interior construction was designed in such a way that a non-destructive elimination of defects can be realized.

In regard to the technical equipment you may contact a reliable work shop or the shipyard, too.

5.5 Winter storage

We have already given some well-directed advice on winter storage in different paragraphs of this manual. Generally speaking all firms offering winterstorage 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 overwintering 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).

Winterstorage

- 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.

6. Final remarks and notes

This manual is in conformity with the directives of the harmonized 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 are 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 signaling 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 carry out changes as far as form, equipment and technology is concerned. For these reasons you cannot lay claim to a complete correspondence of your yacht with the information, figures and descriptions 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.

7. List of manuals supplied

- manual with declaration of conformity
- engine assurance board with corresponding operating instruction
- gas test document with corresponding working instruction
- release checklist
- leaflets and description of production work
- working instructions: hand operated bilge pump
compass
bilge pump
WC-instruction
elapsed-time indicator

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:

Please return signed to:

(address of the dealer)

Acknowledgement of receipt

Name:

Address:

Owner of the yacht *BAVARIA 38 Ocean HIN DE-BAVC38T0E000*

This recreational craft gets the guarantee mentioned with the yacht.

This guarantee begins on _____ (date of commencement)

Signature: _____