Effective date: tbd

Status:DRAFT

hat formatiert: Englisch (Vereinigtes Königreich)

hat formatiert: Englisch (Vereinigtes Königreich)

Feldfunktion geändert

Class Rules

International Vaurien Class Association



The Vaurien was designed in 1951 by Jean-Jaques Herbulot (FRA) and was adopted as a World Sailing International class in 1957.

sport / nature / technology

World Sailing
Class Association

INTRODUCTION

This introduction only provides an informal background about the VAURIEN class.

The International Vaurien Class Rules proper begin on the next page.

The VAURIEN is a One-Design class designed by Jean-Jacques Herbulot in 1951. It became an International Class in 1957.

VAURIEN hulls, hull appendages, rigs and sails are measurement or manufacturing controlled.

VAURIEN hulls, hull appendages, rigs and sails may, after having left the manufacturer, only be altered to the extent permitted in Section C of the class rules.

Owners and crew should be aware that compliance with rules in Section C is NOT checked as part of the certification process.

Rules regulating the use of equipment during a race are contained in Section C of these class rules, in ERS Part I and in the Racing Rules of Sailing.

VAURIEN Class permits In House Certification (IHC) of appendages, rigs, and sails; for hulls IVCA may give authorization in special cases.

Builders are strongly advised to clarify any doubt about these class rules before starting construction to avoid the possibility of boats being subsequently considered not complying.

PLEASE REMEMBER:

THESE RULES ARE CLOSED CLASS RULES WHERE IF IT DOES NOT SPECIFICALLY SAY THAT YOU MAY THEN YOU SHALL NOT.

COMPONENTS, AND THEIR USE, ARE DEFINED BY THEIR DESCRIPTION.

PART I - ADMINISTRATION

Section A - General

A.1 LANGUAGE

A.1.1 The official language of the class is English and in case of dispute over translation the English text shall prevail.

A.1.2 The word “shall” is mandatory and the word “may” is permissive.

A.2 ABBREVIATIONS

WS	World Sailing
MNA	World Sailing Member National Authority
IVCA	International Vaurien Class Association
CIV	Comité International du Vaurien
NVCA	National Vaurien Class Association
ERS	Equipment Rules of Sailing
RRS	Racing Rules of Sailing
MF	Measurement Form

A.3 AUTHORITIES

A.3.1 The international authority of the class is World Sailing who has delegated the administration of the class to the IVCA. IVCA shall cooperate with World Sailing in all matters concerning these **class rules**.

A.3.2 Neither World Sailing, an MNA, the IVCA, an NVCA, a **certification authority**, or an official measurer are under any legal responsibility in respect of these **class rules** and the accuracy of measurement, nor can any claims arising from these be entertained.

A.3.3 Notwithstanding anything contained herein, a **certification authority** has the authority to withdraw a **certificate** and shall do so on the request of World Sailing.

A.4 ADMINISTRATION OF THE CLASS

A.4.1 The Class is administered by the IVCA who may delegate part or all its functions to MNAs or NVCAs, as stated in these **class rules**.

A.4.2 In countries where there is no MNA, or the MNA does not wish to administer the class, its functions, as stated in these **class rules**, shall be carried out by the IVCA which may delegate the administration to a NVCA.

A.5 WORLD SAILING RULES

A.5.1 These c**lass rules** shall be read in conjunction with the ERS.

A.5.2 Except where used in headings, when a term is printed in **“bold”** the definitions in the ERS apply and when a term is printed in “*italics*” the definitions in the RRS shall apply.

A.5.3 These **class rules** are complementary to the Building Specification Plans and Measurement Form.

A.6 CLASS RULES VARIATIONS

A.6.1 Class Rules Variations shall be made in accordance with WS regulations.

A.7 CLASS RULES AMENDMENTS

A.7.1 Amendments to these **class rules** are subject to the approval of World Sailing in accordance with World Sailing Regulations.

A.8 CLASS RULES INTERPRETATIONS

A.8.1 Interpretations of these **class rules** shall be made in accordance with World Sailing Regulations.

A.9 INTERNATIONAL CLASS FEE AND WORLD SAILING BUILDING PLAQUE

A.9.1 The licensed hull builder shall pay the International Class Fee to IVCA that shall convey to World Sailing part of it.

A.9.2 World Sailing shall, after having received the International Class Fee for the hull, send the World Sailing Building Plaque to IVCA that shall forward it to the licensed hull builder accompanied by a measurement form.

A.10 SAIL NUMBERS

A.10.1 Sail numbers shall correspond to the number shown on to the World Sailing International Class building plaque except where stated otherwise in these **class rules** and shall be issued in consecutive order starting from 1.

A.10.2 In accordance with World Sailing RRS Appendix G.1.1(c), a NVCA may issue personal sail numbers of no more than 3 digits (sail numbers staying with the owner for every boat he legally possesses as long as he sails Vaurien) for which the IVCA and / or NVCA may raise a fee. This number shall not conflict with existing numbers of active boats. After the sale of the boat, the new owner shall use her original sail number or his own personal number on his sails.

Personal numbers are allotted from 1st January to 31st December of every year.

The issuing authority shall make public the list of active personal sail numbers.

A.11 HULL CERTIFICATION

A.11.1 A **certificate** shall record the following information:

(a) Class

(b) **Certification authority**

(c) Sail number issued by the **certification authority**

(d) Owner

(e) **Hull** identification

(f) Builder details

(g) Date of issue of initial **certificate**

(h) Date of issue of **certificate**

A.12 INITIAL HULL CERTIFICATION

A.12.1 For a **certificate** to be issued to a **hull** not previously **certified**:

(a) **Certification** control shall be carried out by an **official measurer** who shall complete the appropriate documentation.

(b) The documentation and **certification** fee if required shall be sent to the **certification authority**.

(c) Upon receipt of a satisfactorily completed documentation and **certification** fee, if required, the **certification authority** may issue a **certificate**.

A.13 VALIDITY OF CERTIFICATE

A.13.1 A **hull certificate** becomes invalid upon:

(a) change to any items recorded on the **hull certificate** as required under A.11.,

(b) date of expiry,

(c) withdrawal by the **certification authority**,

(d) issue of a new **certificate**.

A.14 HULL RE-CERTIFICATION

A.14.1 The **certification authority** may issue a **certificate** to a previously certified hull:

(a) when it is invalidated under A.13.1 (a) or (b), after receipt of the old **certificate**, and **certification** fee if required.

(b) when it is invalidated under A.13.1 (c), at its discretion,

(c) in other cases, by application of the procedure in A.12.

A.15 RETENTION OF CERTIFICATION DOCUMENTATION

A.15.1 The **certification authority** shall:

(a) retain the original documentation upon which the current **certificate** is based,

(b) upon request, transfer this documentation to the new **certification authority** if the **hull** is exported.

Section B - Boat Eligibility

For a **boat** to be eligible for *racing*, it shall comply with the rules in this section.

B.1 CLASS RULES AND CERTIFICATION

B.1.1 The **boat** shall:

(a) comply with the **class rules**,

(b) have a valid hull **certificate,**

(c) have valid **certification marks** as required.

B.2 BUOYANCY CHECKS

B.2.1 The **hull** shall be watertight according to Appendix 1.

B.2.2 A Race Committee may require that a **boat** shall pass a buoyancy test in accordance with Appendix 1.

B.3 CLASS ASSOCIATION MARKINGS

B.3.1 A valid Class Association marking, as required by the NVCA or the IVCA shall be affixed to the **hull** in a conspicuous position.

PART II - REQUIREMENTS AND LIMITATIONS

The **crew** and the **boat** shall comply with the rules in Part II while *racing*. In case of conflict Section C shall prevail.

The rules in Part II are **closed class rules**. **Certification control** and **equipment inspection** shall be carried out in accordance with the ERS except where varied in this part.

Section C - Conditions for Racing

C.1 GENERAL

C.1.1 RULES

(a) The ERS shall apply.

C.2 CREW

C.2.1 LIMITATIONS

(a) The **crew** shall consist of two persons,

(b) During an event, a **crew** member shall not be substituted unless authorized by the Race Committee,

(c) Junior **crew** shall be less than 22 years old before the 1st of January on the year of the competition.

C.3 PERSONAL EQUIPMENT

C.3.1 MANDATORY

The **boat** shall be equipped with **personal buoyancy** for each crew member to the minimum standard ISO 12402-5 (Level 50), EN 393:1995 (CE 50 Newtons), or USCG Type III, or AUS PFD 1.

Alternative or additional standards may be prescribed in the Notice of Race or sailing instructions.

C.3.2 TOTAL WEIGHT

The total weight of worn clothing and equipment shall comply with RRS 50 and shall be measured according to RRS, appendix H.

C.4 ADVERTISING

C.4.1 LIMITATIONS

(a) Advertising shall only be displayed in accordance with the World Sailing Advertising Code (see World Sailing Regulation 20).

(b) Any advertising on the mainsail shall be below the area reserved for sail numbers and class insignia as described in the RRS.

C.5 PORTABLE EQUIPMENT

C.5.1 MANDATORY

(a) FOR USE

(1) One hand bailer or bucket.

(b) NOT FOR USE

(1) Towing rope minimum 12 m long of not less than 8 mm in diameter attached to **hull** and to anchor when the latter is required by the Notice of Race.

(2) One paddle, minimum weight 0,250kg, a minimum length of 800mm and with a blade able to contain a rectangle of minimum dimensions 100x120mm, when required by the Notice of Race.

(3) One anchor of not less than 2kg in weight, if required by the Notice of Race.

C.5.2 OPTIONAL

(a) FOR USE

(1) Any mechanical and electronic timing devices.

(2) One magnetic or electronic compass with only heading function. Compass and timing device may be incorporated into a single device.

(3) Water bottle holders.

(4) Non electronic wind indicators

(5) on-board camera

(6) GPS tracking device only if required by the Sailing Instructions.

(7) A floatation device at the top of the **mast spar** to keep the masthead on the water.

(b) NOT FOR USE

(1) Mooring line.

(2) Spare parts such as blocks, shackles, ropes, etc.

C.6 BOAT

C.6.1 WEIGHT

No weight limitations apply to the fully rigged **boat.**

C.6.2 BUOYANCY

The owner is always responsible for the buoyancy. If in doubt regarding compliance with B.2.1, an **equipment inspector** may order a buoyancy test according to Appendix 1. If the buoyancy is deemed unsatisfactory, the **certificate** shall be withdrawn and not returned until satisfactory remedial measures have been taken.

C.6.3 FITTINGS

(a) The overall numbers of sheaves, cleats, hooks, swivels, and levers in the **boat**, excluding cleats installed on the sails, is limited as follows:

	Minimum	Maximum
Sheaves, single or assembled in blocks		18
Cleats and clam cleats		13
Ratchet block		1
Hooks		7
Swivels		4
Lever		1
Horn cleats		3

(b) Thimbles, rings, eye plates and fairleads are not restricted. The distribution of these fittings within the permitted mandatory and optional equipment is optional unless stated otherwise in these class rules.

(c) Sheaves as mentioned in C.6.3(a) comprise any fitting or device including a rotating part used as a sheave.

C.7 HULL

C.7.1 MODIFICATIONS AND MAINTENANCE AND REPAIR

(a) The parts of the **hull** listed in D.1 as supplied by the licensed builder shall not be altered in any way except as permitted by these **class rules**.

(b) Routine maintenance such as small repairs, painting, sanding, and polishing is permitted without re-measurement and re-certification.

(c) If any **hull** is repaired in any other way than described in C.7.1 (b) an **official measurer** shall verify that the external shape complies with these class rules and that no substantial advantage has been gained as a result of the repair. The **official measurer** shall note it on the **certificate** and describe the details of the repair.

(d) Non-slip material, tape and low-friction material not exceeding 4 mm in thickness may be applied to the **hull**.

(e) Local reinforcement for fittings and fastenings is permitted.

(f) Holes not bigger than necessary for the installation of fittings in the **hull** are permitted provided that the result is watertight.

C.7.2 FITTINGS

(a) USE

The type and dimensions of the fittings are mandatory or optional as stated in these **class rules**. The following restrictions apply:

(1) Handhole covers and drainage plugs shall be kept in place while *racing*.

(2) Fairleads for the **headsail** sheets shall be fixed to the **hull**. A piece of any material maximum 10mm thick may be used between fairlead and **hull**.

(3) Cleats for the **headsail** sheets may be placed on brackets placed inside the side deck.

(4) Cleats for all sheets shall be fixed in the **hull**.

C.7.3 WEIGHT

(a) The **weight** of the **hull** including all fittings in D.10.1 shall be a minimum of 73 kg.

C.8 HULL APPENDAGES

C.8.1 LIMITATIONS

C.8.2 Only one **centreboard** and one **rudder** blade shall be used during an event, except when a **hull appendage** has been lost or damaged beyond repair. A replacement shall be approved by the Race Committee.

C.8.3 CENTREBOARD

(a) USE

(1) The **centreboard** shall be led up or down as wished by the crew.

(2) The **centreboard** may be held in the centreboard case by any wedges or any shock cord.

C.8.4 RUDDER ASSEMBLY

(a) USE

(1) The rudder blade shall be in its fully lowered position while *racing*.

(2) The **rudder** assembly shall be fitted to the **hull** in such a manner that it will not detach from the **hull** if the **boat** capsizes.

(3) When the **rudder** assembly is set in the rudder fittings as shown in diagram C.8.4.1, the distance taken parallel to the baseline, between the **hull datum point** and the leading edge of the **rudder** blade shall be between 30 mm and 40 mm.

(4) The deepest point of the **rudder** blade shall be within an area enclosed between two circles with centre at the intersection point of the water line and the leading edge of the **rudder** blade. The radii of these circles are defined as

Rudder configuration	Minimum	Maximum
'traditional'	674 mm	684 mm
'vertical'	634 mm	644 mm

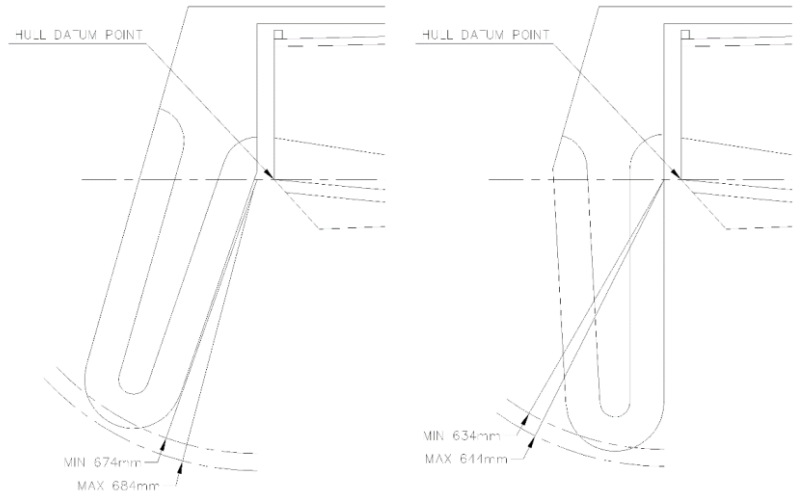


DIAGRAM C.8.4.1: RUDDER ASSEMBLY POSITION.

C.9 RIG

C.9.1 LIMITATIONS

(a) Only one set of **spars** and standing **rigging** shall be used during an event, except when an item has been lost or damaged beyond repair. A replacement shall be approved by the Race Committee.

C.9.2 MAST

(a) USE

(1) The **mast** shall be stepped in the mast step in such a way that the heel shall not be capable of moving more than 5 mm in any direction.

(2) Rotating **masts** are prohibited.

(3) The fore and aft bend of the **mast** may be controlled at or not more than 100 mm above the upper face of the mast thwart by any system.

(4) The mast heel position shall not be adjusted while *racing.*

(5) **Spreaders** may be adjustable but shall not be adjusted while *racing.*

(6) The **Mast Datum Point** shall be situated below the upper face of the mast thwart.

C.9.3 BOOM

(a) DIMENSIONS

	Minimum	Maximum
Outer Point Distance		2200 mm

(b) USE

(1) The **boom** shall be inserted into the gooseneck fixed to the **mast**.

C.9.4 SPINNAKER POLE

(a) USE

(1) When in use the **spar** shall be inserted into the fitting fixed to the fore face of the **mast** for the spinnaker or into the fitting to keep the **headsail** in position.

(2) Only one spinnaker pole may be carried aboard while *racing.*

C.9.5 STANDING RIGGING

(a) USE

(1) **Rigging** links and rigging screws shall not be adjusted while *racing*.

(2) The **shrouds** shall not be adjusted while *racing*.

(3) Shock-cord may be fitted to the **forestay**.

(4) The **forestay** under tension shall prevent the **mast** from disengaging from the mast partners. To meet this requirement the widest section of the **mast** shall be within the mast partners when the mast rakes under its own weight and the forestay comes under tension.

C.9.6 RUNNING RIGGING

(a) USE

(1) No **running rigging** except the **main halyard** shall go inside the **mast**.

(2) The **mainsail** and **headsail halyards** when tensioned shall be secured to the **hull** or to the **mast** below the **lower limit mark**.

(3) The way the **mainsail**, **headsail** and spinnaker sheets are led is optional.

(4) The **spinnaker pole** topping lift and downhaul may be led as wished by the crew.

(5) The kicking strap may be led as wished by the crew.

(6) The **mainsail** clew outhaul and downhaul control may be led as wished by the crew.

C.10 SAILS

C.10.1 MODIFICATIONS, MAINTENANCE AND REPAIR

(a) **Sails** shall not be altered in any way except as permitted by these class rules.

(b) Routine maintenance such as sewing, patching, and mending is permitted without re-**measurement** and re-**certification**.

C.10.2 LIMITATIONS

(a) Not more than one **mainsail**, one **headsail** and one spinnaker shall be used during an event, except when a **sail** has been lost or damaged beyond repair. A replacement shall be approved by the Race Committee.

C.10.3 IDENTIFICATION

(a) The national letters and sail numbers shall comply with the RRS except where prescribed otherwise in these **class rules**.

(b) Competitors may use the sail number of any **hull** owned by them or their valid personal number, on any boat chartered by them.

(c) As an alteration to RRS Appendix G, national letters and sail numbers on the spinnaker are optional.

(d) Winners of a Vaurien World Championship are allowed to display a gold-coloured 5-pointed star below the „flag" of the class insignia. The 5-pointed star maximum dimensions shall be less than 100 mm.

C.10.4 USE

(a) The sails shall be hoisted on halyards. The arrangements shall permit hoisting and lowering of every sail at sea while afloat.

(b) **Mainsail luff** bolt rope shall be inside the **spar** grooves or tracks.

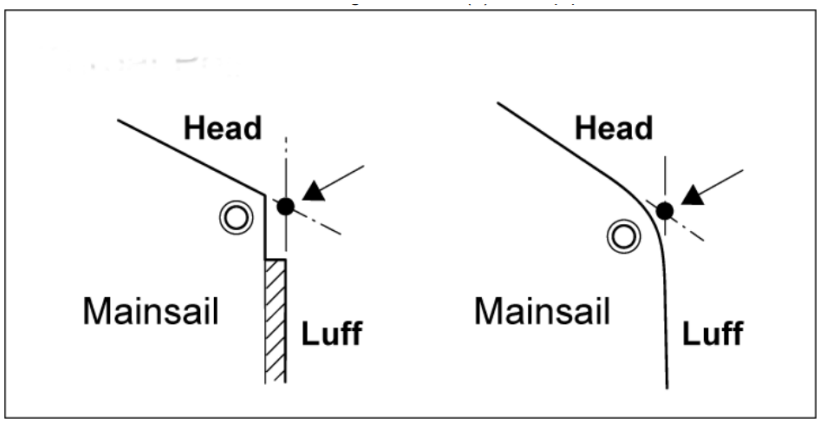
(c) **Mainsail foot** bolt rope or slide, if present, shall be inside the **spar** groove.

(d) **Mainsail clew** shall be attached to the **boom spar** by either using a slide, which shall be inside the **spar** groove, or a clew strap around the **boom spar**.

(e) **Main sail** battens shall be fitted into their respective **batten pockets** while *racing*, except in the case of accidental loss.

(f) **Headsail luff** wire shall be **connected** to the forestay fitting.

(g) The mainsail shall be set on the **mast** so that the luff top point indicated in Diagram C.10.4.1 shall not be higher than the **upper point**. This changes ERS B.1.1(a).



~~(h)~~ DIAGRAM C.10.4.1 DEFINITION OF LUFF TOP POINT.

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Kommentiert [PL1]: Amendment Three

Section D - Hull

D.1 PARTS

D.1.1 MANDATORY

(a) **Hull** shell

(b) Transom

(c) **Keel**

(d) **Skeg**

(e) Foredeck with coamings

(f) Buoyancy Tanks

(g) Gunwale Rubbing Strakes

(h) Side decks

(i) Bulkheads

(j) Mast thwart

(k) Main thwart

(l) Centreboard case

D.1.2 OPTIONAL

(a) Side benches

(b) Bilge keels

D.2 GENERAL

D.2.1 RULES

The **hull** shall comply with the **class rules** in force at the time of initial **certification**.

D.2.2 CERTIFICATION

(a) See Rule A.12.

(b) A World Sailing In-house Certification (IHC) Authorizing Authority may appoint one or more Internal Official Measurers at a builder to measure and certify **hulls** produced by that builder in accordance with World Sailing IHC guidelines.

Kommentiert [PL2]: We do not use ICH.

D.2.3 DEFINITIONS

(a) HULL DATUM POINT (HDP)

The **hull datum point** is the intersection of the **hull** centre plane at the transom external surface with the underside of the **hull** surface both extended as necessary as shown in diagram D.2.3.1.

(b) FORWARD MEASURING POINT 1 (FMP1)

The forward measuring point 1 (FMP1) is the **sheer point** on the stem as shown in diagram D.2.3.1.

(c) FORWARD MEASURING POINT 2 (FMP2)

The forward measuring point 2 (FMP2) is the intersection of the **hull** centre plane with the lowest point of the stem, excluding the external **keel**, as shown in diagram D.2.3.1.

(d) The **waterline** is the line formed by the intersection of the outside of the **hull** and the horizontal projection of the line formed by the **hull datum point** and FMP2.

(e) The **baseline** shall be on the projection of the **hull** centre plane connecting the following points:

Point 1 at 155 mm below the **hull datum point,**

Point 2 at 155 mm below **FMP2**.

(f) All measurements shall be taken parallel or perpendicular to the baseline.

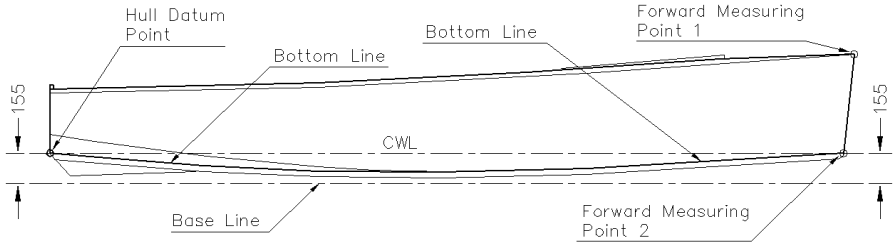


DIAGRAM D.2.3.1 HULL DATUM POINTS.

(g) GENERAL

The sections shall be taken as vertical, transverse planes at the following positions:

(1) Section 0: at FMP 1.

(2) Section 2: at 2720 mm from **hull datum point** (**HDP)**.

(3) Section 4: at 1360 mm from **hull datum point** (**HDP)**.

(4) Section 6: at **hull datum point**.

D.2.4 IDENTIFICATION

(a) The **hull** shall carry the World Sailing plaque permanently fixed on the starboard internal face of the transom or bulkhead.

(b) The **hull** shall carry, indelibly marked on the port side of the centreboard case, the sail number in figures not less than 25 mm high.

(c) The **hull** shall carry the label of the current year, as defined by the NVCA regulations, permanently fixed on the port side of the transom.

D.2.5 BUILDERS

(a) The **hull** shall be built by a builder licensed by IVCA.

(b) The **hull** may be built by bona fide amateur builders licensed by IVCA.

(c) All moulds shall be approved by IVCA after consultation with the MNA and the NVCA.

(d) Templates used for **certification control** of **hull** shall be approved by the IVCA.

D.2.6 MATERIALS

(a) The **hull** shall be built from one or more of the following options:

(1) Wood and/or plywood,

(2) Glass reinforced plastic (GRP) composed of E-Glass fibre for reinforcement and Polyester or polyvinyl or epoxy resins as laminating agent,

(3) Composites combining GRP as defined above for skin and for core closed-cell foam of nominal density not less than 65 kg/m^3.

D.3 HULL SHELL

D.3.1 CONSTRUCTION

(a) The external shape of the **hull** shall comply with these **class rules** and Measurement Diagrams.

(b) The external **hull** includes:

(1) bottom panels, **keel**, **skeg** and optional bilge keels,

(2) side panels and rubbing strakes,

(3) transom.

(c) Bottom surface shall not have any inflection in the curvature,

(d) Side panels may have curvature inflections between sections 0 and section 2.

(e) A straight edge 680 mm +/-25 mm long sliding along the sheerline and chine shall not show hollows against the measured surface.

(f) Rounding off exposed and internal edges of the **hull** is permitted with any shape and in an area of maximum 14 mm wide as shown in diagram D.3.2.1. Angles between keel and skeg can be filled as shown in Diagram D.3.2.2

(g) False and/or double bottom are prohibited. For the effect of this rule, sandwich type construction not thicker than 15 mm shall not be considered double bottom.

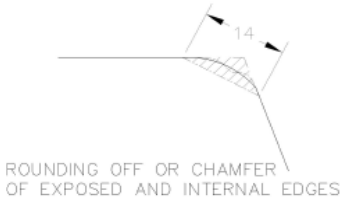


DIAGRAM D.3.2.1: EXPOSED EDGES

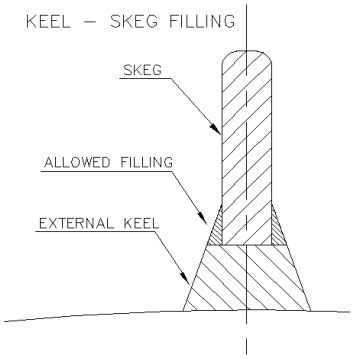


DIAGRAM D.3.2.2: SKEG FILLING

D.4 EXTERNAL KEEL

D.4.1 CONSTRUCTION DETAILS

External **keel** and **skeg** may be faired over a maximum length of 120mm from the aft most side as shown in diagram D.4.4.1. Altering the horizontal thickness of the **keel** at the junction with the stem is permitted.

D.4.2 EXTERNAL KEEL DIMENSIONS

Kommentiert [PL3]: Move to Assembled hull.

		Minimum	Maximum
1	Width at its intersection with the **hull** shell	52mm	95mm
2	Width of **keel** bottom side	32mm	
3	Height	28mm	

D.4.3 BILGE KEELS

Bilge keels are optional. If used, they shall be positioned between sections 2 and 4 and under the optional outer floor battens. They may be faired over a maximum length of 120 mm from the aft most side and fore most side.

D.4.4 SKEG

The dimensions of the skeg shall conform to those given in diagram D.4.4.1 and shall be measured with a template as specified in Appendix 2. A maximum of 5 mm tolerance is permitted. The thickness shall be between 20 mm and 24 mm.

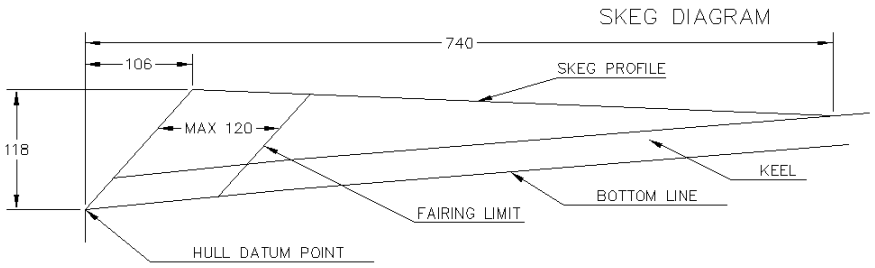


DIAGRAM D.4.4.: SKEG.

D.5 TRANSOM AND STEM

D.5.1 DIMENSIONS

(a) The bottom shape of the transom shall conform to diagram D.5.1 (a) and shall be measured with the transom bottom shape template as specified in Appendix 2. Measurements in the diagram include minimum and maximum.

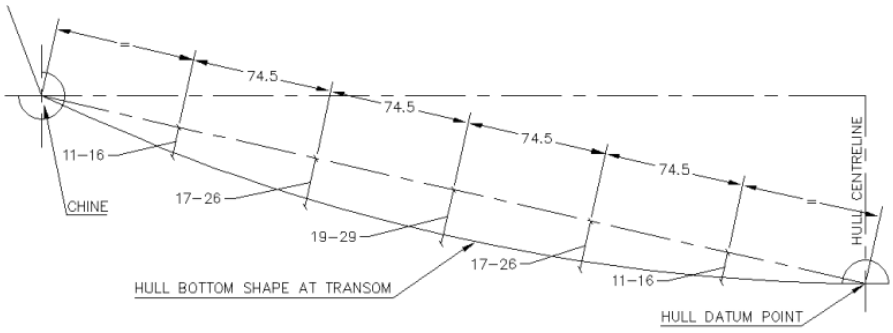


DIAGRAM D.5.1(a): TRANSOM SHAPE.

(b) The transom surface shall be flat and vertical with a tolerance of +/-5 mm as shown on diagrams D.5.1 (b).

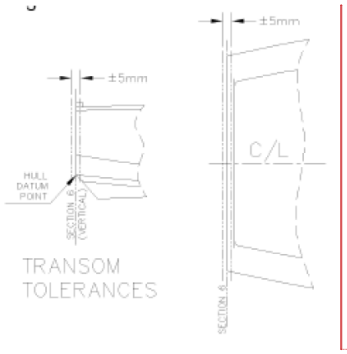


DIAGRAM D.5.1(b) – TRANSOM SURFACE.

(c) The shape of the stem 60mm below FMP1 and FMP2 shall be checked with the template as shown in Appendix 2. Templates shall touch the **hull** on both sides.

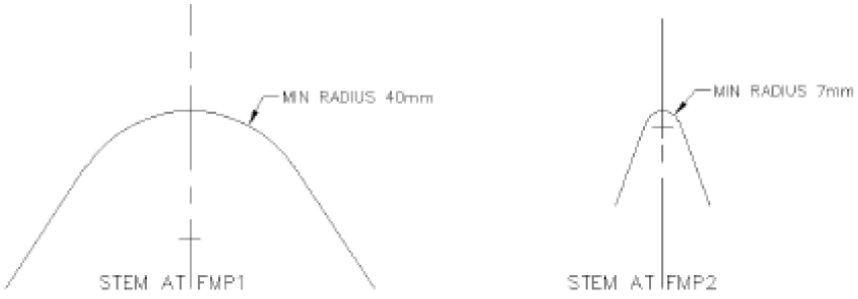


DIAGRAM D.5.1(c) – STEM SHAPE.

D.5.2 DRAINAGE PORTS

The transom shall have a maximum of two drainage ports in which case they shall be equidistant from the transom centreline with a maximum tolerance of 2mm. They shall have a minimum total combined area of 1950 mm^2 and be of any shape, with no dimension exceeding 120 mm in any direction and not less than 15 mm from the outside of the bottom skin.

If the boat is fitted with self-bailer/s the drainage port/s shall have a minimum section area of 760 mm^2.

Kommentiert [PL4]: Can we redraw the diagrams?

D.6 DECKS

D.6.1 CONSTRUCTION

(a) The foredeck shall contain the coamings,

(b) The foredeck may be prolonged to include the mast thwart,

(c) No part of the foredeck and side decks shall fall below a straight line connecting sheerlines athwartship,

(d) Side decks edges may be rounded athwartship.

(e) Side decks shall be flat athwartship with a tolerance of +/- 1 mm.

(f) Side deck width defined in CR D.10.2 (a) 19, 20 and 21 shall be measured from the sheerline to the inboard end of the flat surface.

D.7 BUOYANCY TANKS

D.7.1 MATERIALS

(a) In addition to rule D.2.6 buoyancy tanks shall comply with ISO 12217-3 Annex C.

D.7.2 CONSTRUCTION

(a) **Boats** shall be able to withstand a buoyancy test as described in Appendix 1.

(b) Built-in buoyancy compartments shall be placed under the side decks and the foredeck equally distributed on each side of the boat's centreline and fore and aft. There shall be not less than three compartments with a total minimum volume of 360 litres and the smallest compartment shall have a volume no less than 100 litres. Each compartment shall have an inspection hole with watertight covers capable of resisting accidental dislodgement. Each compartment may have drain watertight holes with detachable plugs secured to the **hull** against loss.

(c) **Hulls** manufactured without built-in buoyancy compartments are accepted with inflatable air bags as floatation devices. These shall additionally comply with ISO 12217-3 Annex D. The largest air tank shall not be included as a flotation element. They shall be not less than five and each shall give a minimum positive buoyancy of 350 Newtons. They shall be firmly secured to the **hull** under the side decks and the foredeck, and they shall be equipped with a nonreturn valve.

(d) For non-wooden hulls (rule D.2.6 (a) point (2) and (3)), compulsory secondary buoyancy shall be provided using 100 litres minimum solid foam divided into not less than three parts of approximately the same volume and securely attached to the **hull**, one forward of the **mast** and the other two aft of the **mast**, distributed equally on each side of the boat's centreline. For boats built in GRP-sandwich (rule D.2.6 (a) (3)), the sandwich core volume may be accounted as contributing to the secondary buoyancy minimum volume.

(e) Built-in buoyancy compartments shall have inspection holes.

(f) The minimum distance between buoyancy tanks 50 mm above the intersection of the cockpit with the buoyancy tank panels shall be 250 mm.

D.8 GUNWALE RUBBING STRAKES

D.8.1 CONSTRUCTION

(a) The rubbing strake shall run unbroken on each gunwale,

(b) The dimensions of the rubbing strakes shall not exceed those given in diagram D.8.2.1 and shall be checked with the template shown in Appendix 2.

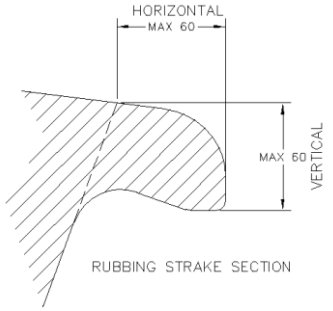


DIAGRAM D.8.2.1 - RUBBING STRAKE DIMENSIONS.

D.9 SPARE

D.10 ASSEMBLED HULL

D.10.1 FITTINGS

(a) Mandatory fittings to be positioned in accordance with the diagrams:

(1) One forestay fitting

(2) Two shroud plates

(b) Mandatory fittings which position is optional:

(1) One mast step

(2) Two gudgeons or two pintles

(3) Toe straps not capable of extending outboard

(4) A locking device for preventing the rudder assembly to be dislodged from gudgeons

(5) Two mainsail sheet blocks

(6) One headsail sheet fairlead and cleat per side.

(7) One inspection hole in each buoyancy compartment

(c) Optional fittings:

(1) Halyard tensioners

(2) **Mainsail** sheet blocks, fairleads, and cleats

(3) **Mainsail** downhaul blocks, fairleads, and cleats

(4) **Headsail sheet blocks**

(5) **Headsail** downhaul blocks, fairleads, and cleats

(6) **Headsail** barber hauler fairleads, blocks, and cleats

(7) Spinnaker fairleads, blocks, and cleats for sheet, halyard, and barberhauler

(8) Tiller lock

(9) Stowage clips for paddle, spinnaker pole, sail bags and other equipment

(10) A maximum of two self-bailers which may discharge through the **hull** shell

(11) One magnetic or electronic compass

(12) Draining holes in buoyancy compartments

(13) A maximum of two spinnaker bags

(14) Kicking strap and adjustment devices

(15) Any sealing strips for the centreboard slot

(16) Any adjusting system for the centreboard position at top and/or bottom of the centreboard case

(17) Laths placed inside the centreboard case to control the lateral play of the centreboard

Kommentiert [PL5]: Move to centreboard case section

(18) Any system connecting the mast heel or the keel directly below it to the mast thwart or mast thwart support to support the pressure loads from the mast to the hull bottom.

D.10.2 DIMENSIONS

(a) HULL MEASUREMENTS

		Minimum	Maximum
1	**Hull length**	4060 mm	4100 mm
	Beam of **hull**, excluding rubbing strakes and fittings, between sheerlines:		
2	at section 2	1262 mm	1282 mm
3	at section 4	1444 mm	1464 mm
4	at section 6	1030 mm	1050 mm
5	Longitudinal distance from **hull datum point** to forward side of mast notch in mast thwart	2705 mm	2735 mm
6	Longitudinal dimension of mast spar thwart forward of notch	70 mm	
7	Longitudinal distance between forward side of notch in mast thwart and the centre of the most forward hole in forestay fitting	1175 mm	1185 mm
8	Longitudinal distance from **hull datum point** to centre of shroud plate hole	2250 mm	2320 mm
	Gunwale rubbing strakes:		
9	Horizontal		60 mm
10	Vertical		60 mm
11	Diameter of buoyancy compartment holes	100 mm	
12	Internal diameter of buoyancy compartment draining holes	25 mm	

13	Distance between **hull datum point** and intersection of coamings	3380 mm	3420 mm
14	Distance between **hull datum point** and aft side of centreboard case	2065 mm	2095 mm
15	Internal length of centreboard slot		360 mm
16	Width of centreboard slot		28 mm
17	Height of upper edge of centreboard case and upper side of main thwart at boat centreline above external keel	324 mm	334 mm
18	Distance between transom and aft end of coamings	255 0mm	2650 mm
	Width of deck excluding thickness of rubbing strakes:		
19	at section 6	120 mm	140 mm
20	at section 4	150 mm	170 mm
21	at section 2	180 mm	200 mm
22	Width of notch in mast thwart		70 mm
23	Distance of any holes in mast thwart from centreline	35 mm	
24	Depth of mast thwart at notch from sheerline	11 mm	21 mm
25	Length of mast thwart aft of the forward leading edge of the mast notch	100 mm	
26	Length of main thwart	150 mm	
27	Width of side benches	150 mm	
28	Side benches rounding off radius		150 mm
29	Length of side benches	1060 mm	
30	Depth of side benches from main thwart upper face	0 mm	25 mm
31	Height of coamings from deck at boats centreline	20 mm	
32	Height of coamings at 50 mm from sheerline	5 mm	
33	Distance from HDP to FMP2	4005 mm	4045 mm
34	Horizontal distance between FMP1 and FMP 2	50 mm	55 mm
35	Vertical distance between FMP1 and FMP 2	505 mm	515 mm
36	Distance between aft of centreboard slot and HDP	2015 mm	2045 mm
37	Vertical distance from baseline to bottom line at section 2	60 mm	80 mm
38	Vertical distance from baseline to bottom line at section 4	58 mm	68 mm
39	Longitudinal distance from **hull datum point** to aft edge of main thwart	1865 mm	1895 mm

Kommentiert [PL6]: Amendment One

40	Hull beam between chines:		
41	at section 2	866 mm	886 mm
42	at section 4	1144 mm	1164 mm
43	at section 6	862 mm	882 mm
44	Vertical distance of any point of the bottom at section 2 from the reference line from chine to chine		10 mm
45	Height of chines above **keel** at transom	93 mm	103 mm
46	Distance between chine and sheerline at section 6	224 mm	234 mm
47	Distance between chine and sheerline at section 4	427 mm	437 mm
48	Distance between chine and sheerline at section 2	524 mm	534 mm
49	Side panels at section 6,4 and 2 shall be straight with a tolerance of		5 mm
50	The difference between the distance of axis of upper and lower pintles / gudgeons from the transom		5 mm

D.10.3 WEIGHT

		Minimum	Maximum
	Hull weight	70 kg	

The **hull** shall be weighed with only the mandatory fittings as listed in D.10.1 (a).

D.10.4 HULL CORRECTOR WEIGHTS

(a) A maximum of two corrector weights shall be permanently fastened to the inside of the hull transom when the **hull** weight is less than the minimum requirement.

(b) The total weight of such corrector weights shall not exceed 3 kg.

D.10.5 DIAGRAM 1: HULL UPRIGHT.

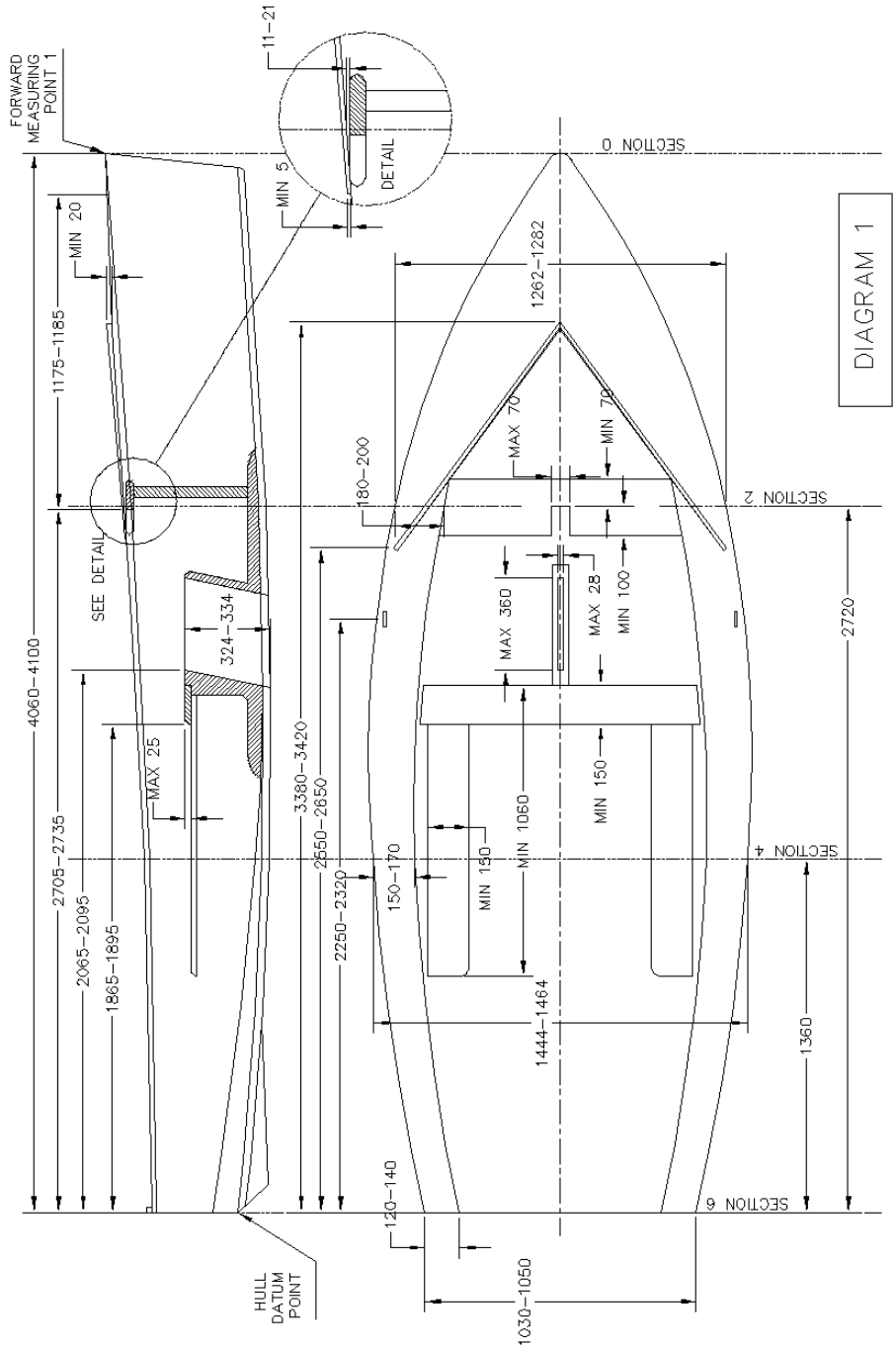
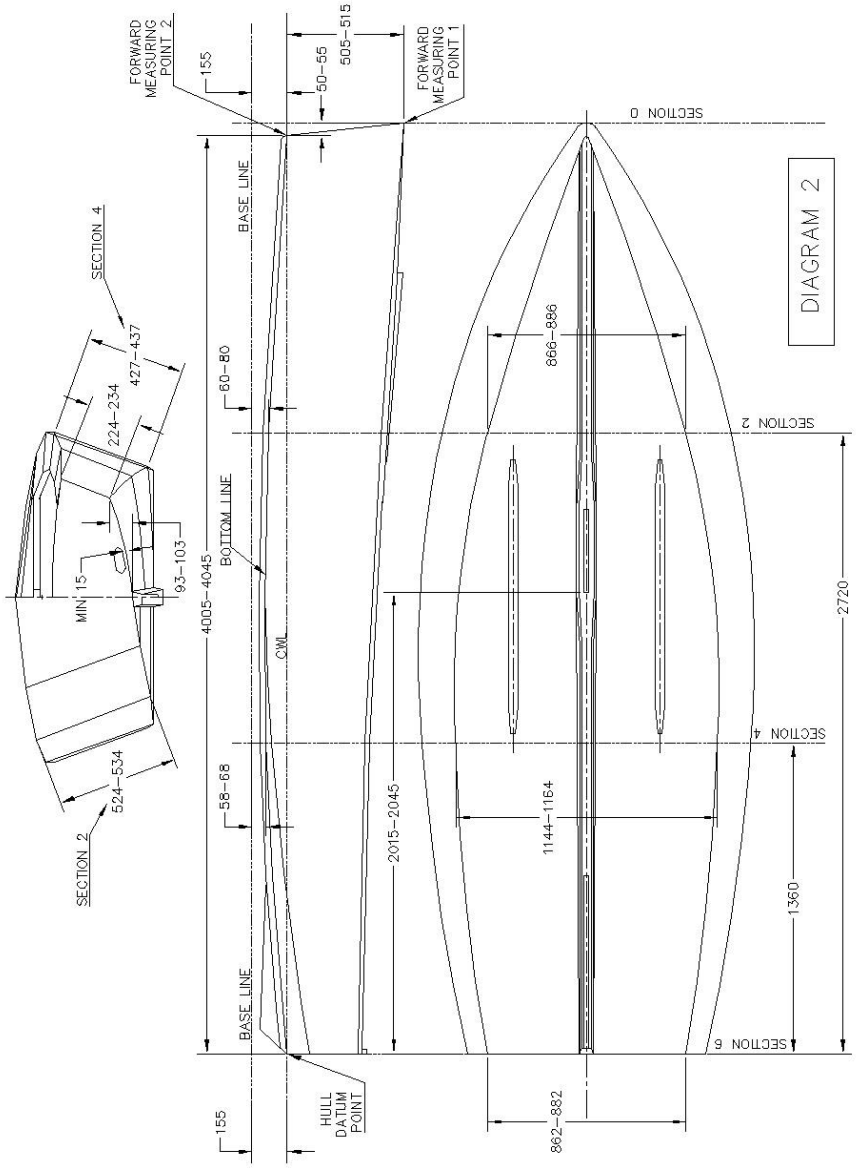


Diagram 2: HULL UPSIDE DOWN.



Section E - Hull Appendages

E.1 PARTS

E.1.1 MANDATORY

(a) **Centreboard**

(b) **Rudder** assembly

E.2 GENERAL

E.2.1 RULES

(a) **Hull appendages** shall comply with the current **class rules.**

E.2.2 CERTIFICATION

(a) No certification is required.

E.2.3 MANUFACTURERS

No licence is required.

E.3 CENTREBOARD

E.3.1 MATERIALS

(a) The **centreboard** shall be of materials as specified for the **hull** in D.2.6.

(b) No metal inserts are permitted.

E.3.2 FITTINGS

(a) MANDATORY

(1) Any handhold

(2) A centreboard stopper made of any material. The centreboard stopper shall be situated such that its aft most point touches the centreboard template not more than 30 mm from the trailing edge and its forward most point touches the centreboard template at least 60 mm forward of the trailing edge, measured along the handle-side edge of the template as shown in E.3.3.1.

(b) OPTIONAL

(1) Any lath and/or strips may be fitted to the upper part of the **centreboard**.

E.3.3 DIMENSIONS

(a) The **centreboard** shall be measured with a template and shall not exceed the template maximum profile as defined by diagram E.3.3.1.

(b) The thickness of the **centreboard** shall not vary more than 1 mm and shall be of a minimum thickness of 18mm except that the edges may be faired over a maximum distance of 80mm from the trailing, leading and lower edges as shown in E.3.3.1.

(c) The **centreboard** shall not be pierced by lightening holes.

(d) The **centreboard** trailing edge shall be straight with a maximum deviation of an edge from a straight line of 10mm.

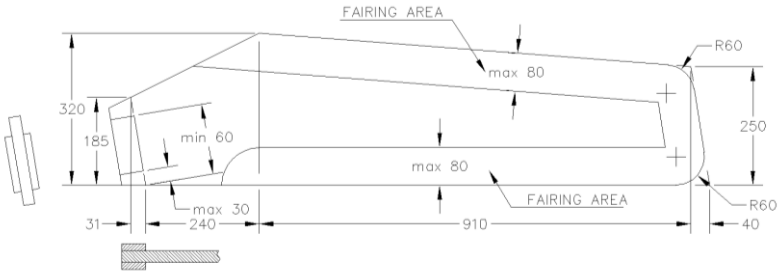


DIAGRAM E.3.3.1: CENTREBOARD TEMPLATE DIMENSIONS.

E.3.4 WEIGHT

The **centreboard** with fittings shall have positive buoyancy when immersed in fresh water.

E.4 RUDDER ASSEMBLY

E.4.1 MATERIALS

(a) The **rudder** blade shall be of materials as specified for the **hull** in D.2.6.

(b) Rudder head, tiller and tiller extension may be of any material.

E.4.2 CONSTRUCTION

(a) The **rudder** blade may be able to pivot around a transverse axis or slide along a vertical axis.

E.4.3 FITTINGS

(a) MANDATORY

(1) Any two gudgeons or two pintles.

(2) Any system to lock the rudder blade in fully lowered position.

(b) OPTIONAL

(1) Any system to lift the rudder blade from its lowered position.

E.4.4 DIMENSIONS

(a) The dimensions of the **rudder** blade shall be measured with a template and shall not exceed the template dimensions as defined by diagram E.4.4.1. Below the dashed line the **rudder** blade edges shall be within 10mm from the maximum permissible dimensions.

(b) The thickness of the **rudder** blade shall not vary more than 1mm and shall be of a minimum thickness of 18mm except that the edges may be faired over a maximum distance of 80mm from the trailing, lower and leading edges as shown in diagram E.4.4.1.

(c) When the rudder assembly is placed on the template with the rudder in its 'fully lowered' position, the difference between the distance of the axis of upper and lower pintles/gudgeons from the template maximum boundary shall not exceed 5 mm.

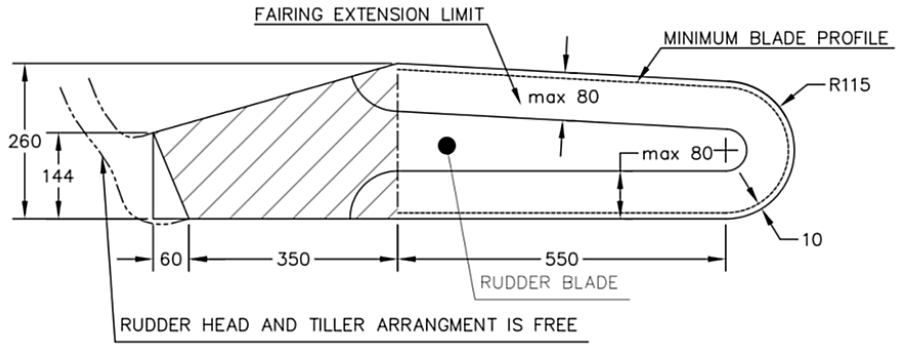


DIAGRAM E.4.4.1: RUDDER BLADE TEMPLATE DIMENSIONS.

Section F - Rig

F.1 PARTS

F.1.1 MANDATORY

(a) **Mast**

(b) **Boom**

(c) Standing **rigging**

(d) Running **rigging**

F.1.2 OPTIONAL

(a) **Spinnaker pole**

F.2 GENERAL

F.2.1 RULES

(a) The **spars**, their fittings and the **standing** and **running rigging** shall comply with the current class rules.

F.2.2 CERTIFICATION

(a) No **certification** of **spars**, **standing** and **running rigging** is required.

F.2.3 DEFINITIONS

(a) LIMIT MARK WIDTH

Limit marks shall be painted or indelibly marked on the **spars** in a contrasting colour 10mm minimum wide. Tape is not permitted.

(b) The **mast datum point** is the intersection of the lower edge of the **mast datum** limit mark and the aft edge of the **mast**.

F.2.4 MANUFACTURER

(a) No licence is required.

F.3 MAST

F.3.1 MATERIALS

(a) The **mast spar** shall be made of aluminium alloy.

F.3.2 CONSTRUCTION

(a) The **spar** extrusion shall include a fixed sail groove or a fixed track which may not be integral with the **spar** but shall be of the same material.

(b) Cleats shall not be fixed on the mast spar above the **lower limit mark**.

(c) Fairleads or conduits may be used for guiding **halyards**, but they shall not be placed higher than 3400mm above the **mast datum point**.

(d) The **mast spar** shall be of constant cross-section throughout its length except between the upper edge of the **lower point** and a point no more than 300mm above it.

(e) An opening for the main halyard exit is permitted below the **lower limit mark** with dimensions max 40 mm vertical and max 6 mm transversal.

F.3.3 FITTINGS

(a) MANDATORY

(1) Mast head fitting

(2) Shroud tangs or similar

(3) **Mainsail** halyard sheave

(4) **Headsail** halyard sheave

(5) Gooseneck

(6) Kicking strap attachments

(7) Heel fitting

(b) OPTIONAL

(1) Spinnaker halyard sheave or fairlead

(2) Spinnaker pole fitting

(3) Spinnaker pole lift block or fairlead

(4) Spinnaker pole downhaul block or fairlead

(5) Two **spreaders**

(6) One mechanical wind indicator

(7) Compass bracket

(8) Fairleads for guiding running rigging lines

(9) Wedges and/or chocks for positioning the mast between the partners

(10) Multiple hooks for main **halyard**

(11) Electronic or mechanical compass

(12) Timing device

(13) A fitting for preventing the mainsail from being set above the upper point to ensure compliance with C.10.43 ~~(b) (2)~~

Kommentiert [PL7]: Amendment Four

(14) The area between the **mast** and the mast partners may be protected with any material.

F.3.4 DIMENSIONS

		Minimum	Maximum
1	**Mast length**		6300 mm
2	**Mast spar** cross section between the **mast top point** and the **mast heel point** excluding fittings and the groove opening section		
	Fore and aft	46 mm	
	Transverse	46 mm	
3	**Mast Datum Point** to **lower point**	605 mm	607 mm
4	**Lower point** to **upper point**		5100 mm
5	**Lower Point** to lowest point of the groove		300 mm
6	**Forestay** and **shroud** height	4106 mm	4149 mm
7	Distance of any part of the spinnaker **halyard block or fairlead** at maximum projection from fore face of **mast**		100 mm
8	**Spinnaker pole fitting projection**		40 mm
9	**Spinnaker hoist height**	4130 mm	4222 mm

10	**Spreader height**	2179 mm	2233 mm

F.3.5 WEIGHT

		Minimum	Maximum
	Mast weight	7 kg	

The weight of the **mast** shall include rigging specified under F.6.2, F.7.2(a)(1), F.7.2(a)(4), F.7.2(b)(5), F.7.2(b)(7) , F.7.2 (b) (8) and fittings specified under F.3.3, but excluding wind indicator, compass or timing device.

If the **mast** weight is less than the minimum required, a maximum of 0.5 kg of corrector weights shall be permanently fastened to the **mast** at its centre of gravity.

F.4 BOOM

F.4.1 MATERIALS

(a) The **spar** shall be of aluminium alloy.

F.4.2 CONSTRUCTION

(a) The **spar** extrusion ~~shall~~ may include a fixed sail groove or track which may not be integral with the **spar** but shall be of the same material.

Kommentiert [PL8]: Amendment Two

(b) The **spar** aft end may be cut below its half height, maximum 300 mm from the outboard end.

F.4.3 FITTINGS

(a) MANDATORY

(1) One single sheave mainsheet block with attachments.

(2) One clew outhaul block with any attachments

(3) Kicking strap fitting

(4) Gooseneck attachment

(b) OPTIONAL

(1) Not more than two wire strops for mainsheet blocks.

(2) Spinnaker pole stowage fittings

(3) Two single sheaves or a double sheave block for mainsheet with attachment fittings.

(4) A system to adjust mainsail clew position

(5) Fitting to attach mainsail tack to boom

(6) Chafe protections of any material and dimensions, in the area where the boom touches the shrouds, provided they do not alter the stiffness of the boom spar.

(7) Shock cord to hold out the boom provided it does not alter the sail plan

F.4.4 DIMENSIONS

		Minimum	Maximum
	Boom Spar Cross Sections:		

1	**Vertical** including groove or track		90 mm
2	**Transverse**	32 mm	
3	Boom Length		2600 mm

F.4.5 WEIGHT

No weight limitations apply.

F.5 SPINNAKER POLE

F.5.1 MATERIALS

(a) The **spar** shall be made of aluminium alloy.

F.5.2 FITTINGS

(a) MANDATORY

(1) One hook at each end

(b) OPTIONAL

(1) Fittings approximately at the mid-point for attachment for lift and downhaul lines

(2) A fixed line between the fittings described in F.5.2 (a) (1), which may incorporate knots, toggles, or short tubes.

F.5.3 DIMENSIONS

		Minimum	Maximum
1	**Spinnaker pole cross section** at mid length	25 mm	
2	**Spinnaker pole length** including hooks		1750 mm

F.6 STANDING RIGGING

F.6.1 MATERIALS

(a) The **standing rigging** shall be of stainless steel.

F.6.2 CONSTRUCTION

(a) MANDATORY

(1) One **forestay**

(2) Two **shrouds**.

F.6.3 FITTINGS

(a) MANDATORY

(1) **Forestay** steel rigging link

(2) **Shroud** steel rigging links.

F.6.4 DIMENSIONS

		Minimum	Maximum
1	**Forestay** diameter	2,5 mm	
2	**Shroud** diameter	2,5 mm	

F.7 RUNNING RIGGING

F.7.1 MATERIALS

(a) Materials are optional.

F.7.2 CONSTRUCTION

(a) MANDATORY

(1) Mainsail halyard
(2) Mainsail sheet
(3) Kicking strap
(4) Headsail halyard
(5) Headsail sheets

(b) OPTIONAL

(1) Mainsail downhaul line
(2) Mainsail outhaul
(3) Headsail downhaul line
(4) Single line headsail barber haulers
(5) Spinnaker halyard
(6) Spinnaker sheets
(7) Spinnaker pole lift
(8) Spinnaker pole downhaul
(9) Spinnaker barber haulers

Section G - Sails

G.1 PARTS

G.1.1 MANDATORY

(a) **Mainsail**

(b) **Headsail**

G.1.2 OPTIONAL

(a) Spinnaker

G.2 GENERAL

G.2.1 RULES

(a) **Sails** shall comply with the **class rules** in force at time of **certification**.

G.2.2 CERTIFICATION

(a) The **official measurer** shall **certify mainsails** and **headsails** in the **tack** and spinnakers in the **head** and shall sign and date the **certification mark**.

(b) A World Sailing In-house Certification (IHC) Authorizing Authority may appoint one or more Internal Official Measurers at a sailmaker to measure and certify sails produced by that manufacturer in accordance with the World Sailing IHC guidelines.

G.2.3 SAILMAKER

(a) No licence is required.

(b) The date of manufacture, type, and weight in g/m2 of the **body of the sail** shall be indelibly marked near the **head point** by the sailmaker together with the date and his signature or stamp.

G.3 MAINSAIL

G.3.1 IDENTIFICATION

(a) The class insignia shall conform to the dimensions and requirements as detailed in diagram G.3.1.1 with a tolerance of +/-10 mm, be of a contrasting colour, and be placed in accordance with the following provisions:

(1) The corners may be rounded off.

(2) It shall be placed back-to-back with the "flag" pointing to the leech, above the **three-quarter leech point batten pocket** and not more than 100 mm from its upper edge.

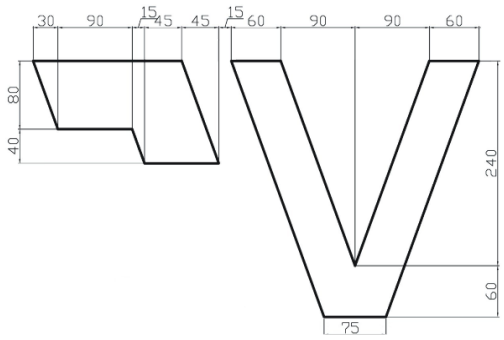


DIAGRAM G.3.1.1: CLASS INSIGNIA DIMENSIONS.

G.3.2 MATERIALS

(a) **Mainsails** shall be made from either

(1) **Woven ply** of optional weight

(2) **Laminated ply** of a weight of not less than 120 g/m^2

(b) The **ply** fibres shall be made of polyester, polyethylene, or aramid. The ply film shall be made of polyester.

(c) Battens may be made of any material,

(d) The boltrope shall be made of synthetic fibre and not be shock cord.

G.3.3 CONSTRUCTION

(a) The construction shall be: **soft sail**, **single ply sail**.

(b) The **body of the sail** shall consist of the same **woven** or **laminated ply** throughout, except for the window, foot panel and any **primary** and **secondary reinforcements**.

(c) The **body of the sail** shall be built from panels with optional panel distribution and orientation. Continuous layers or fibres crossing the seam are prohibited.

(d) The **sail** shall have a minimum of three and a maximum of four **batten pockets** in the **leech**.

(e) The following are permitted: stitching, glues, tapes, bolt-ropes, up to three corner eyes, headboard with fixings, downhaul eye or attachment, downhaul rope, **batten pocket patches**, batten pocket elastic, batten pocket end caps, mast, and boom slides, a maximum of two **windows**, tell tales, sail shape indicator stripes, tensioning devices at **leech** end of the two upper battens, **leech** and **foot** lines, **leech** and foot line cleats, **primary reinforcement** at **upper leech point**.

(f) The **leech** shall not extend aft of straight lines between:

(1) the **aft head point** and the intersection of the **leech** and the upper edge of the nearest **batten pocket**,

(2) the intersection of the **leech** and the lower edge of a **batten pocket** and the intersection of the **leech** and the upper edge of an adjacent **batten pocket** below,

(3) the **clew point** and the intersection of the **leech** and the lower edge of the nearest **batten pocket**.

~~(g)~~ The **leech** shall be edged by a **tabling**.

Formatiert: Standard

DIMENSIONS

		Minimum	Maximum
1	**Leech length**	5100 mm	5350 mm
2	Extension of **headboard** from **head point**		150 mm
3	**Three-quarter width**		1050 mm
4	**Half width**		1640 mm
5	**Primary reinforcement**		305 mm
	Secondary reinforcement		
6	**Flutter patch**		120 mm
7	**Chafing patch**		300 mm
8	**Batten pocket patch**		175 mm
9	Any other **secondary reinforcements**		915 mm
10	**Tabling width**		35 mm
11	Distance from **clew point** to **foot** bolt rope		300 mm
12	Distance from **tack point** to **foot** and **luff** bolt ropes		300 mm
13	Diameter of bolt rope	6 mm	
14	**Seam width**		30 mm
15	If **batten pocket** overlaps a panel **seam** the panel **seam width**		50 mm
16	**Window area**		0.15 m^2
17	**Window area** to **sail edge**	150 mm	
	Batten pocket length:		
18	Outside **quarter leech point batten pocket** and **half leech point batten pocket** length		700 mm
19	Outside **batten pocket width**		50 mm
20	**Head point** to intersection of **leech** and centreline of **upper leech point batten pocket** for sails with 4 **battens**	450 mm	500 mm
21	**Head point** to intersection of **luff** and centreline of **upper leech point batten pocket** for sails with 4 **battens**		750 mm
22	**Head point** to intersection of **luff** and centreline of **three-quarter leech point batten pocket**	1200 mm	1250 mm
23	Distance from the intersection of the centreline of the **batten pockets** and their closest **leech points**		40 mm

G.4 HEADSAIL

G.4.1 MATERIALS

(a) **Headsails** shall be made from either

(1) **Woven ply** of optional weight

(2) **Laminated ply** of a weight of not less than 120 g/m^2

(b) The **ply** fibres shall be made of polyester, polyethylene, or aramid. The ply film shall be made of polyester.

(c) The **luff** wire shall be made of a minimum of 7 strand stainless steel wire or of synthetic fibre.

(d) Battens may be made of any material.

G.4.2 CONSTRUCTION

(a) The construction shall be: **soft sail**, **single ply sail.**

(b) The **body of the sail** shall consist of the same **woven** or **laminated ply** throughout, except for the **window**.

(c) The **body of the sail** shall be built from panels with optional panel distribution and orientation. Continuous layers or fibres crossing the seam are prohibited. The following are permitted: stitching, glues, tapes, corner eyes, hanks, tell tales, flutter patches, a maximum of two **windows**, sail shape indicator stripes, **leech** lines, **leech** line cleat, zipper on **luff** pocket, **batten pocket patches**, **luff** wire

(d) The **leech** shall not extend beyond a straight line from the **aft head point** to the **clew point**,

(e) The **leech** and the **foot** shall be edged by a **tabling**.

(f) The headsail may have a maximum of three **batten pockets** in the **leech**.

G.4.3 DIMENSIONS

		Minimum	Maximum
1	**Luff length**		3750 mm
2	**Leech length**		3400 mm
3	**Foot length**		1650 mm
4	**Half width**		850 mm
5	**Top width**		50 mm
6	**Foot irregularity**		10 mm
7	**Primary reinforcement**		260 mm
	Secondary reinforcement		
8	**Chafing patch**		300 mm
9	Any other **secondary reinforcements**		780 mm
10	**Batten pocket patch**		150 mm
11	**Outside batten pocket length**		200 mm
12	Outside batten pocket width		50 mm
13	Total **Window** area		0.15 m2

14	**Window area** to **sail edge**	150 mm	
15	Stainless steel luff wire diameter	2.5 mm	
16	Synthetic fibre luff wire diameter	4 mm	
17	**Seam width**		30 mm
18	**Tabling width**		35 mm

G.5 SPINNAKER

G.5.1 MATERIALS

(a) The **ply** fibres shall consist of polyester or nylon.

G.5.2 CONSTRUCTION

(a) The construction shall be: **soft sail**, **single ply sail**.

(b) The **body of the sail** shall consist of the same **woven ply** throughout.

(c) The following are permitted: stitching, glues, tapes, corner eyes, recovery line eyes, tell tales.

(d) The **leeches** and the **foot** shall be edged by a **tabling**.

G.5.3 DIMENSIONS

		Minimum	Maximum
1	**Leech lengths**		4000 mm
2	**Foot length**		2400 mm
3	**Half width**		2650 mm
4	**Primary reinforcements**		260 mm
5	**Secondary reinforcements**		780 mm
6	**Tabling** width		30 mm
7	**Seam** width		30 mm

PART III - APPENDICES

The rules in Part III are **closed class rules**. Measurement shall be carried out in accordance with the ERS except where varied in this Part.

Appendix 1 - Buoyancy test

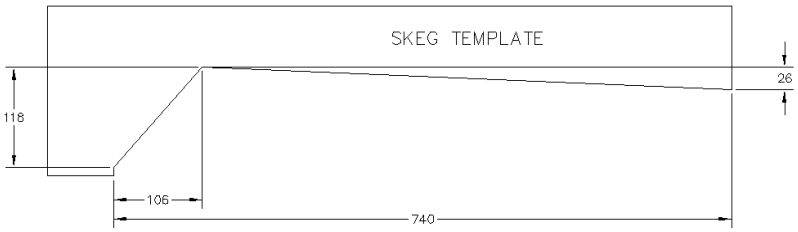
With sails, boom, rudder assembly and all loose gear removed from the boat, but with the centreboard and mast in position, the boat shall pass the following buoyancy test:

(1) With the boat on its side and the mast horizontal, it shall support not less than 100 kg placed entirely out of the water on the centreboard close to the bottom. The boat shall float for 5 minutes on each side, followed by 5 minutes upright swamped with water. At the end of this test and with the specified weight aboard, the boat must float with the gunwales clear of the water surface for its entire length.

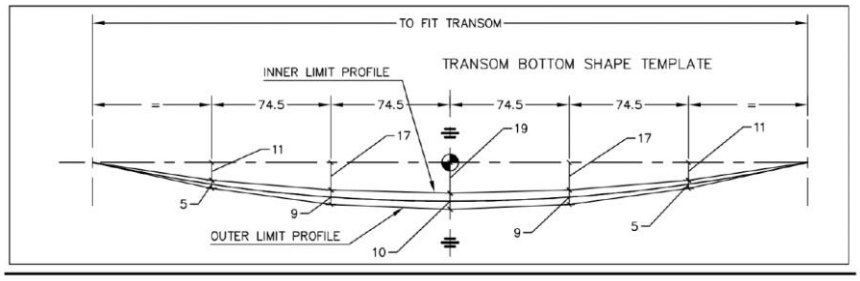
(2) With the boat out of the water, the Measurer shall check that all the buoyancy units contain no more than 1 litre of water overall. Air bags shall not be visibly deflated.

Appendix 2 - Templates

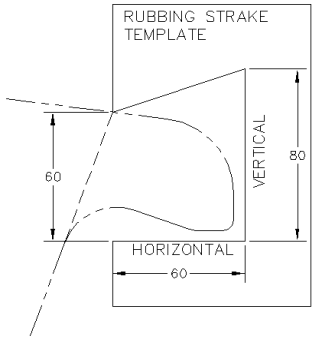
(1) Skeg template



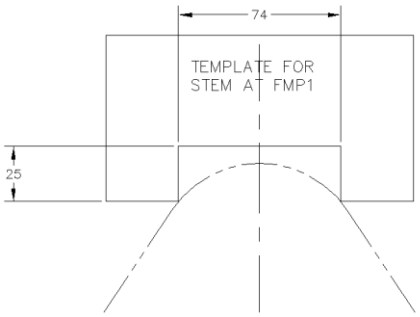
(2) Transom template

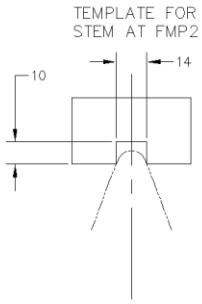


(3) Gunwale template



(4) Bow templates


74
TEMPLATE FOR
STEM AT FMP1
25


TEMPLATE FOR
STEM AT FMP2
14
10