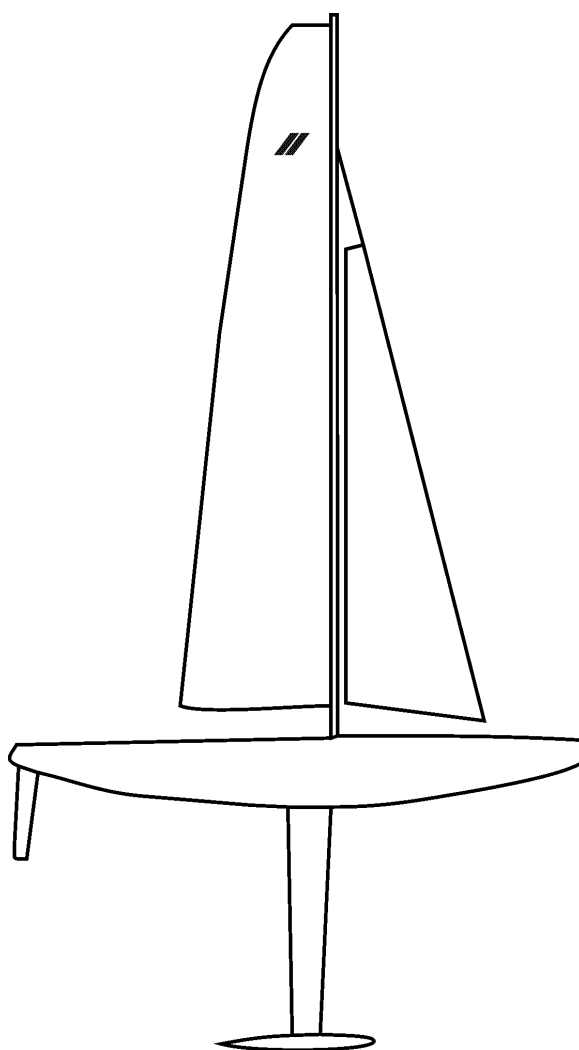




# 65 CLASS RULES



**(The 65 Class is an IRSA Supported Class)**



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## Introduction

*This introduction provides an informal background only and the 65 Class Rules proper begin on the next page.*

### Certification and alterations

*65 Class **hulls, hull appendages, rigs and sails** are **certified by certification control**.*

*65 Class **hulls, hull appendages, rigs and sails** may, after initial **certification control**, only be altered to the extent permitted in Section C of the **class rules**.*

### Responsibility

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

*It is the responsibility of the owner and any other person in charge to ensure that a boat is maintained to comply with her **class rules** and that her **certificate** remains valid (RRS 78.1).*

### Deviations outside of tolerances

*When an **equipment inspector** or **official measurer** acting for the technical committee for an event decides that a **boat** does not comply with the **class rules** RRS 60.4(a)(2) obliges him to protest the boat.*

*When a protest committee finds that deviations in excess of tolerances specified in the **class rules** are not caused by normal wear and tear and/or do improve the performance of the boat, it shall penalise her.*

*When deviations between a **boat's** measurements and her **certificate** cannot be corrected as required by RRS 64.3(a), a protest committee may consider accepting that the **boat** shall be brought into class in another configuration before racing again.*

*If a protest committee decides that a **class rule** has deliberately or knowingly been breached by an owner, competitor, or support person it may call a hearing under RRS 69.*

### Class rules

*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.*

*The **class rules** for the 65 Class are **open class rules** in which anything not specifically prohibited by the **class rules** is permitted, where individual rules require, limit, or prohibit as necessary.*

*Important note about these class rules*

The IRSA Executive Committee:

- 1 acknowledges that classes similar to the 65 Class are an active, vibrant and growing area of activity within the world of RC sailing;
- 2 wishes to assist those sailors who want an international 65 Class designated by IRSA (and therefore also World Sailing, WS) with a view to holding world and/or continental championships;
- 3 is willing to provide the technical expertise necessary to develop class rules that meet the minimum standard required for IRSA designated status;
- 4 has drafted 65 Class rules and measurement forms that meet the required standard;
- 5 invites all sailors to test the 65 Class rules and **certification control** forms and report their experiences;
- 6 invites all sailors and **official measurers** to give feedback on the **certification control** process;
- 7 plans to re-assess these 65 Class rules and **certification control** forms in December 2018.

Please send your feedback to:

IRSA Technical Committee, For the attention of Gerd Mentges  
Jan 2018

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# PART 1 – ADMINISTRATION

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## 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.1.3 Except where used in headings:  
when a term is printed in “**bold**” the definition in the current ERS applies;  
when a term is printed in “*italics*” the definition in the RRS applies; and  
when a term is printed “underlined” the definition in these **class rules** applies.

### A.1.4 DEFINITIONS

Spar The main structural part(s) of the **rig** to, or from, which **sails** are attached and/or supported.

### A.2 ABBREVIATIONS

A.2.1 WS World Sailing  
IRSA International Radio Sailing Association  
MNA WS Member National Authority  
DNM Designated National Member, IRSA Member  
ICA International Class Association  
NCA National Class Association  
ERS Equipment Rules of Sailing  
RRS Racing Rules of Sailing

### A.3 AUTHORITIES

A.3.1 Where one does not exist, the functions of the ICA, as specified in these **class rules**, shall be carried out by the IRSA.

A.3.2 The **class authority** is the IRSA which shall co-operate with the ICA in all matters concerning these **class rules**.

A.3.3 No legal responsibility with respect to these **class rules**, or accuracy of **certification**, rests with:

WS;  
the IRSA;  
any MNA;  
any DNM;  
the ICA;  
any NCA;  
any **certification authority**;

any **official measurer**.

No claim arising from these **class rules** can be entertained.

- A.3.4 Notwithstanding anything contained herein, the **certification authority** has the authority to withdraw a **certificate** and shall do so on the request of the IRSA.

#### **A.4 ADMINISTRATION OF THE CLASS**

- A.4.1 The IRSA has delegated its administrative functions of the class to DNMs. A DNM may delegate part or all of its functions, as stated in these **class rules**, to an NCA.
- A.4.2 In countries where there is no DNM, or the DNM does not wish to administrate the class, its administrative functions as stated in these **class rules** shall be carried out by the ICA which may delegate the administration to an NCA.

#### **A.5 SAILING INSTRUCTIONS**

- A.5.1 These **class rules** shall not be varied by sailing instructions except as provided by A.5.2.
- A.5.2 At World or Continental Championships the sailing instructions may vary these **class rules** only with the agreement of the ICA.

#### **A.6 CLASS RULES AMENDMENTS**

- A.6.1 Amendments to these **class rules** shall be proposed by the ICA, or a DNM, and require to be approved by the IRSA.

#### **A.7 CLASS RULES INTERPRETATION**

##### **A.7.1 GENERAL**

Interpretation of **class rules** shall be made in accordance with the IRSA Regulations.

##### **A.7.2 AT AN EVENT**

Any interpretation of **class rules** required at an event may be made by an international jury constituted in accordance with the RRS. Such interpretation shall only be valid during the event and the organising authority shall, as soon as practical after the event, inform the IRSA, the DNM and the ICA.

#### **A.8 HULL REGISTRATION NUMBERS**

Not applicable.

#### **A.9 CERTIFICATION**

- A.9.1 For the **certification** of a sail group all items required by the **certification control** form(s) to be **certified** shall be **certified** by an **official measurer** and the details entered onto the form(s).
- A.9.2 The **certification control** form(s), and **certification** fee if required, shall be sent to the **certification authority** in the country where the sail group is to be registered within 4 weeks after completion of **certification**.

A.9.3 Upon receipt of a satisfactorily completed **certification control(s)** and **certification** fee if required within the 4 week time limit, the **certification authority** may issue a **certificate**.

## **A.10 VALIDITY OF CERTIFICATE**

A.10.1 A valid **certificate** is issued using the IRSA approved **certification control** documentation in accordance with the procedures in A.9 and A.12. Certificates from other documentation or sources are invalid.

A.10.2 A **certificate** becomes invalid upon:

- (a) a change of ownership;
- (b) withdrawal by the **certification authority**.

## **A.11 COMPLIANCE WITH CLASS RULES**

A.11.1 A **boat** ceases to comply with the **class rules** upon:

- (a) use of equipment that does not comply, or causes the **boat** not to comply, with limitations in the **class rules**;
- (b) alteration or repair of equipment required by the **certification control** form(s) to be **certified**, except where permitted by the **class rules**;
- (c) a change of **class rules** that causes equipment in use to cease to comply, except where the equipment may comply with the **class rules** in force at the time of its previous **certification**.

A.11.2 A **boat** that has ceased to comply with the **class rules** may be brought into compliance by replacing equipment that does not comply with the **class rules** with equipment that does comply.

## **A.12 RE-CERTIFICATION**

A.12.1 A sail group may be issued with a new **certificate**, showing dates of re-**certification** and initial **certification** as applicable:

- (a) when a **certificate** becomes invalid upon change of ownership by application of the new owner to the **certification authority** in the country where the sail group is to be registered. The application shall include the old **certificate** and re-**certification** fee if required.
- (b) when a **certificate** has been withdrawn, or when the **certificate** and **certification control** form(s) cannot be located by application of the procedure in A.9.

## **A.13 RETENTION OF CERTIFICATION DOCUMENTATION**

A.13.1 The **certification authority** shall retain the original documentation upon which a **certificate** is based.

## 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) be in compliance with the **class rules**;
- (b) have valid sail group **certificate(s)**; and
- (c) have valid **certification marks** as required.

### B.2 CLASS ASSOCIATION MARKINGS

B.2.1 A valid Class Association Sticker, if required by the NCA or the ICA, shall be affixed to the **hull** in a conspicuous position.



## PART 2 – REQUIREMENTS AND LIMITATIONS

The competitor and the **boat** shall comply with the rules in Part 2 when *racing*.

**Certification control** to check compliance with rules of Section C is not part of **certification**.

**Certification control** shall be carried out in accordance with the current ERS except where varied in Part 2.

**Equipment Inspection** is used to check compliance with the rules of Section C.

### Section C – Conditions for Racing

#### C.1 GENERAL

##### C.1.1 RULES

The rules of Section B of the ERS shall not apply.

#### C.2 COMPETITOR

##### C.2.1 LIMITATIONS

- (a) One competitor only shall control the **boat**.
- (b) The competitor shall not be substituted during an event.

#### C.3 ADVERTISING

##### C.3.1 LIMITATIONS

The **boat** may display only such advertising as permitted by the WS Advertising Code.

#### C.4 HULL

##### C.4.1 LIMITATIONS

The geometry of the **hull** shell shall not be changed during an event.

##### C.4.2 DIMENSIONS

- (a) Maximum **hull** length in relation to the datum waterplane is 661 mm. See Figure J.1.
- (b) Minimum **hull** length in relation to the datum waterplane is 649 mm. See Figure J.1.

## C.5 HULL APPENDAGES

### C.5.1 LIMITATIONS

The same **hull appendages** shall be used during an event except when a **hull appendage** has been lost or damaged beyond repair.

Replacement may be made only with the approval of the race committee who shall then remove or cancel any **event limitation mark** attached to the replaced **hull appendage**.

### C.5.2 DEPTH RESTRICTION

The depth restriction gauge, when oriented transversely as in Figure J.2, shall be capable of being passed under the **hull appendages** without either of the two upper corners of the gauge losing contact with the **hull**.

### C.5.3 USE

The **hull appendages**:

- (a) containing or forming **ballast** shall not be rotated relative to the **hull**;
- (b) shall be attached to the **hull** at the centreplane;
- (c) shall not project fore or aft of the **hull** in relation to the datum waterplane as found in Figure J.1; and
- (d) shall not be shifted, articulated, retracted, or extended.

## C.6 RIG

### C.6.1 LIMITATIONS

- (a) Not more than three **rigs** shall be used during an event.
- (b) Spars lost or damaged beyond repair may be replaced only with the approval of the race committee who shall then remove or cancel any **event limitation mark** attached to the replaced item.

### C.6.2 USE

The **rig** shall not project fore or aft of the **hull** in relation to the datum waterplane as found in Figure J.1.

### C.6.3 DIMENSIONS

- (a) The deck **limit mark** to the **top point** dimension, ignoring any

wind indicator, shall not exceed 1100 mm.

- (b) The deck **limit mark** to the **top point** dimension, ignoring any wind indicator, shall not be less than 600 mm.

## C.7 SAILS

### C.7.1 LIMITATIONS

- (a) Not more than three sail groups, each consisting of one or two **sails**, shall be used.
- (b) Except when **certified** in more than one sail group, a **sail** of one sail group shall not be used with a **sail** of another sail group.
- (c) A **sail** shall not be omitted from a sail group.
- (d) Reefing is prohibited.
- (e) The dimensions of **sails** in a sail group shall not exceed those on the sail group **certificate**.
- (f) The dimensions of **sails** in a sail group shall not fall below those on the sail group **certificate** by more than 3 mm.
- (g) The race committee may attach **event limitation marks** to **sails** at an event.
- (h) When a **sail** has been lost or damaged beyond repair it may be replaced only with the approval of the race committee who shall then remove or cancel any **event limitation mark** attached to a replaced **sail**.

### C.7.2 IDENTIFICATION

- (a) The class insignia (Figure J.8) shall be displayed on the **mainsail**.
- (b) Sail identification marks shall comply with the RRS and Section K.

## C.8 EQUIPMENT

### C.8.1 EQUIPMENT

- (a) No more than two channels of radio control shall be used.
- (b) A **rudder** control unit shall control the **rudder** only.

- (c) A **sheet** control unit shall control the **mainsail sheet** and/or **headsail sheet** only.
- (d) Except where achieved by mechanical systems, automated control of **rig** and/or **sails** and automated steering and/or navigation are prohibited.
- (e) On board camera(s) and/or the use of images from any source while *racing* are prohibited.
- (f) Except for the establishment and maintenance of a radio control link, control unit positioning information, signal strength, and battery status information, radio transmissions from the boat while *racing* are prohibited.
- (g) During an event, remote control and related equipment:
  - (1) if temporarily removed, shall be refitted in the same position;
  - (2) if replaced, shall be replaced by equipment of similar weight.

## Section D – Hull

### D.1 GENERAL

#### D.1.1 RULES

The **hull** shall comply with the current **class rules**.

### D.2 HULL

#### D.2.1 DECK LIMIT MARKS

A deck **limit mark** for each sail group used at an event shall be displayed on the **hull** centreline near to the relevant **mast** position. Each **limit mark** shall be a minimum of 5 mm in diameter.

#### D.2.2 MATERIALS

- (a) Except in remote control equipment, the density of material shall not exceed that of lead (11,340 kg/m<sup>3</sup>).
- (b) The forward 4 mm shall be of elastomeric material.
- (c) The elastomeric material in D.2.2(b) shall be a minimum of

3 mm wide at one point.

#### D.2.3 CONSTRUCTION

- (a) The **hull** shall be a **monohull**.
- (b) Except for the trunking for **hull appendages**, the **hull** shall not have:
  - (1) voids in the waterplane;
  - (2) voids in the profile below the datum waterplane;
  - (3) hollows in the plan view that exceed 3 mm;
  - (4) hollows in the profile under the datum waterplane that exceed 3 mm;
  - (5) transverse hollows in the undersurface of the **hull** that exceed 3 mm when tested parallel to the waterplane as in Figure J.3.

#### D.2.4 FITTINGS

Fittings shall not project outboard of the **hull**.

## Section E – Hull Appendages

### E.1 GENERAL

#### E.1.1 RULES

**Hull appendages** shall comply with the current **class rules**.

### E.2 HULL APPENDAGES

#### E.2.1 MATERIALS

Materials of higher density than lead ( $11,340 \text{ kg/m}^3$ ) are prohibited.

## Section F – Rig

### F.1 PARTS

F.1.1 A **rig** shall have no more than one **mast**.

F.1.2 The following are prohibited:

spar section fairings, spar section extensions, or articulated flaps.

## F.2 GENERAL

### F.2.1 RULES

**Rigs** shall comply with the current **class rules**.

## F.3 SPAR

### F.3.1 MAST SPAR DIMENSIONS

The maximum permitted cross section of the main structural part of the **mast spar** above the deck **limit mark** is 12 mm.

### F.3.2 BOOM SPAR DIMENSIONS

The maximum permitted cross section of the main structural part of a **boom spar**, and the combined cross section at junctions of **boom spars**, is 12 mm (Figure J.4).

## Section G – Sails

### G.1 PARTS

A sail group is restricted to not more than one **mainsail** and one **headsail**.

## G.2 GENERAL

### G.2.1 RULES

**Sails** shall comply with the current **class rules**.

### G.2.2 CERTIFICATION

The **official measurer** shall **certify sails** and add the following marks at the **tack**:

- (a) the date of **certification control**;
- (b) the area of the **sail** in square metres and rounded to three places of decimals.

### G.2.3 CERTIFICATION CONTROL AND EQUIPMENT INSPECTION

During **certification control** and **equipment inspection**:

- (a) battens need not be removed;

- (b) stays not exceeding 1 mm in diameter inside luff **tabling** need not be removed;
- (c) tell tales overlapping the **sail edges** shall be ignored;
- (d) **sails** shall be measured as tri-lateral **sails**;
- (e) discontinuous attachments on the **luff** shall be disregarded provided their total length measured along the **luff** does not exceed 15% of the **luff** length and the longest attachment is no more than twice the shortest;
- (f) where the sail has no clearly defined **clew point**, ERS G.4 is altered and the **sail edges** shall be extended using a template with 450 mm radius. See Figure J.5;
- (g) where the **sail** has no clearly defined **tack point** a permanently marked point on the **sail edge** shall be used instead. See Figure J.5;
- (h) cross widths shall be taken:
  - (1) on a double luff sail:
    - with the supporting spar in place,
    - to the luff, or to the fore edge of the spar,
    - along the surface and whichever gives the greater dimension;
  - (2) on a sail with the luff set in a track in the spar, to the aft edge of the spar;
  - (3) on other sails, to the luff.

#### G.2.4 CONSTRUCTION

- (a) The construction shall be: **soft sails**.
- (b) **Sails** shall be marked at the **clew** with their sail group letter.

### G.3 SAIL AREA

#### G.3.1 LIMITATION

The measured sail area of each sail group shall not exceed 2250 cm<sup>2</sup>.

#### G.3.2 CALCULATION

The measured sail area of each sail group is the sum of the areas of the **sails** used together in each sail group, found using the method

prescribed in Section H and in the official **sail certification** documentation.



## PART 3 – APPENDICES

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**Certification control** shall be carried out in accordance with the current ERS except where varied in Part 3.

### Section H – Measurement

#### H.1 MEASUREMENT

- (a) The **sail** shall be placed over the measurement grid with the **clew point** on a grid line and with the **head point** and **tack point** on a line perpendicular to the grid lines. See figures J.6 and J.7.
- (b) If the **tack point** falls above the grid line on which the **clew point** is placed, the **sail** shall be moved vertically until the **tack point** is on a grid line. See Figure J.6 and J.7.
- (c) The upper limit of area A1 shall be marked at the **luff** and **leech** where they pass over the grid line. See Figure J.6.
- (d) Cross widths,  $c_0$  to  $c_n$ , shall be measured from the **leech** to the **luff** at and along all the horizontal grid lines which the **sail** cuts. See Figure J.6 and J.7.
- (e) Heights,  $h_0$  to  $h_n$ , shall be measured from the grid line to the **foot** at and along all the vertical grid lines which the **sail** cuts. See Figure J.6 and J.7.
- (f) Hollows in the **sail edges** shall be bridged by a straight line and cross widths and heights shall be taken to the bridging line. See Figure J.6.
- (g) Linear measurements shall be taken in millimetres and rounded up to the nearest whole number before being recorded on the **certification control** forms and/or **certificate**, used in subsequent calculations or compared with a limiting value.
- (h) Maximum and minimum values of limitations in the **class rules** or **certificate** shall be taken as absolute limiting values.

#### H.2 CALCULATION

- (a) The major area, A1, is calculated as:  
$$A1 = 50 (c_0 + c_n) + 100 (c_1 + c_2 + \dots c_{n-1})$$
- (b) The head area, A2, is found from  $c_n$ ,  $c_{n-1}$  and E using a calculation contained in the measurement form where E is the height of the **sail** above the uppermost grid line.
- (c) The area below the **luff perpendicular**, A3, is calculated as:  
$$A3 = 20 (h_0 + h_n) + 40 (h_1 + h_2 + \dots)$$
- (d) The sum of the areas,  $A_s$ , is calculated as:

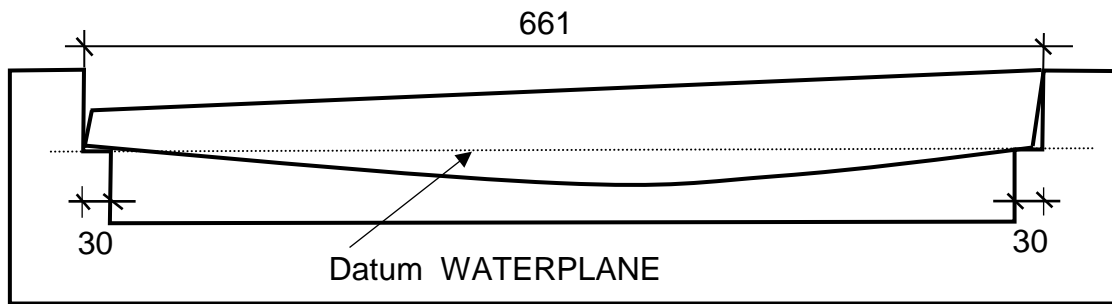
$$A_s = A_1 + A_2 + A_3$$

- (e) Calculated values in millimetres or square millimetres shall be rounded to the nearest whole number before being recorded on a **certification control** form or **certificate**, used in any subsequent calculations, or compared with any limitation in the **class rules** or **certificate**.
  - (f) Calculated values in square metres shall be rounded to the nearest sixth place of decimals before being recorded on the **certificate**.
-

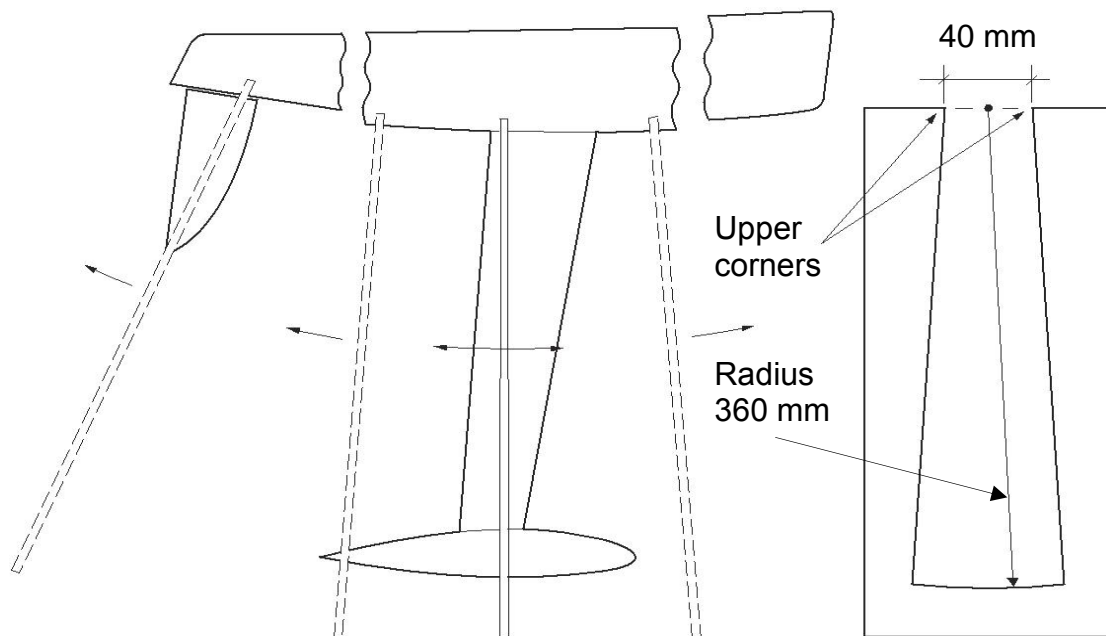
## Section J – Figures

### J.1. LENGTH RESTRICTION GAUGE

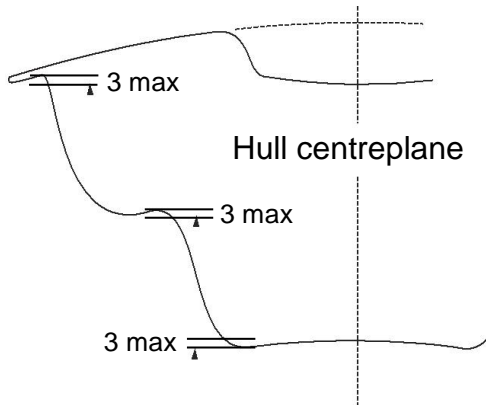
Gauge used to establish **hull** length and datum waterplane.



### J.2. DEPTH RESTRICTION GAUGE

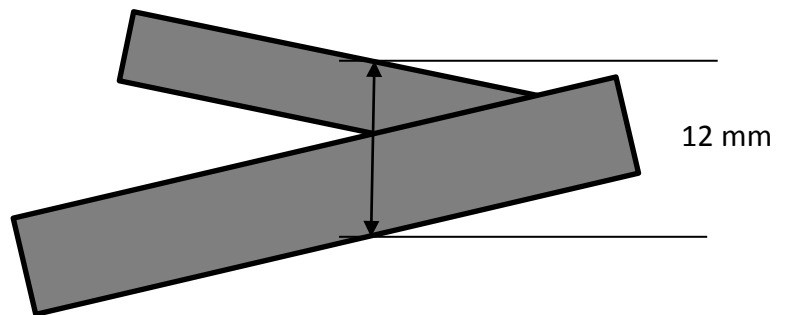
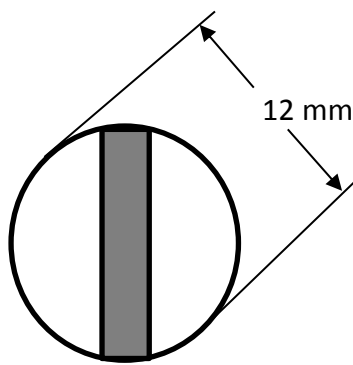


### J.3. TRANSVERSE HULL HOLLOW



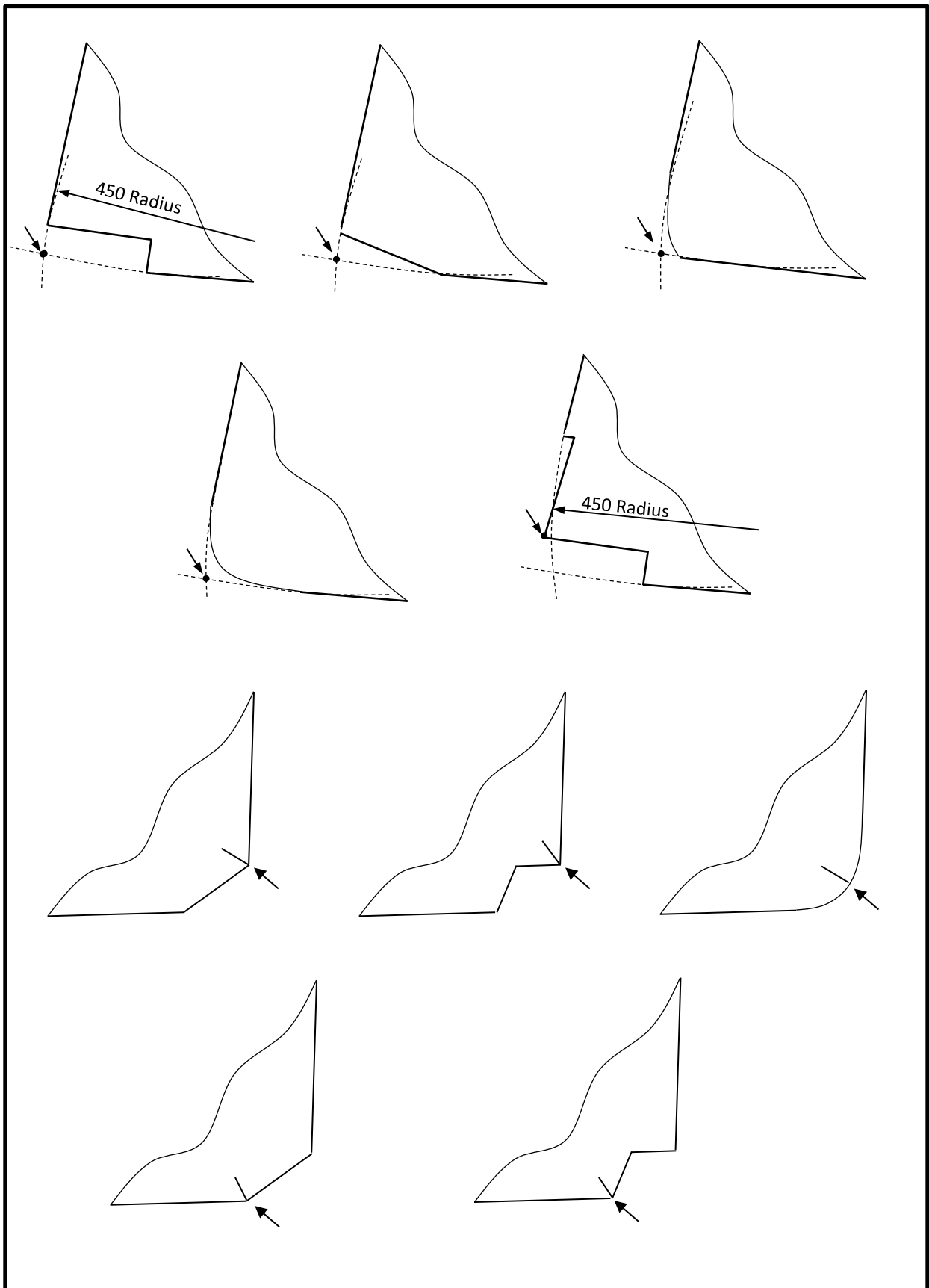
See rule D.2.3(b)(5)

### J.4. BOOM SPAR DIMENSIONS

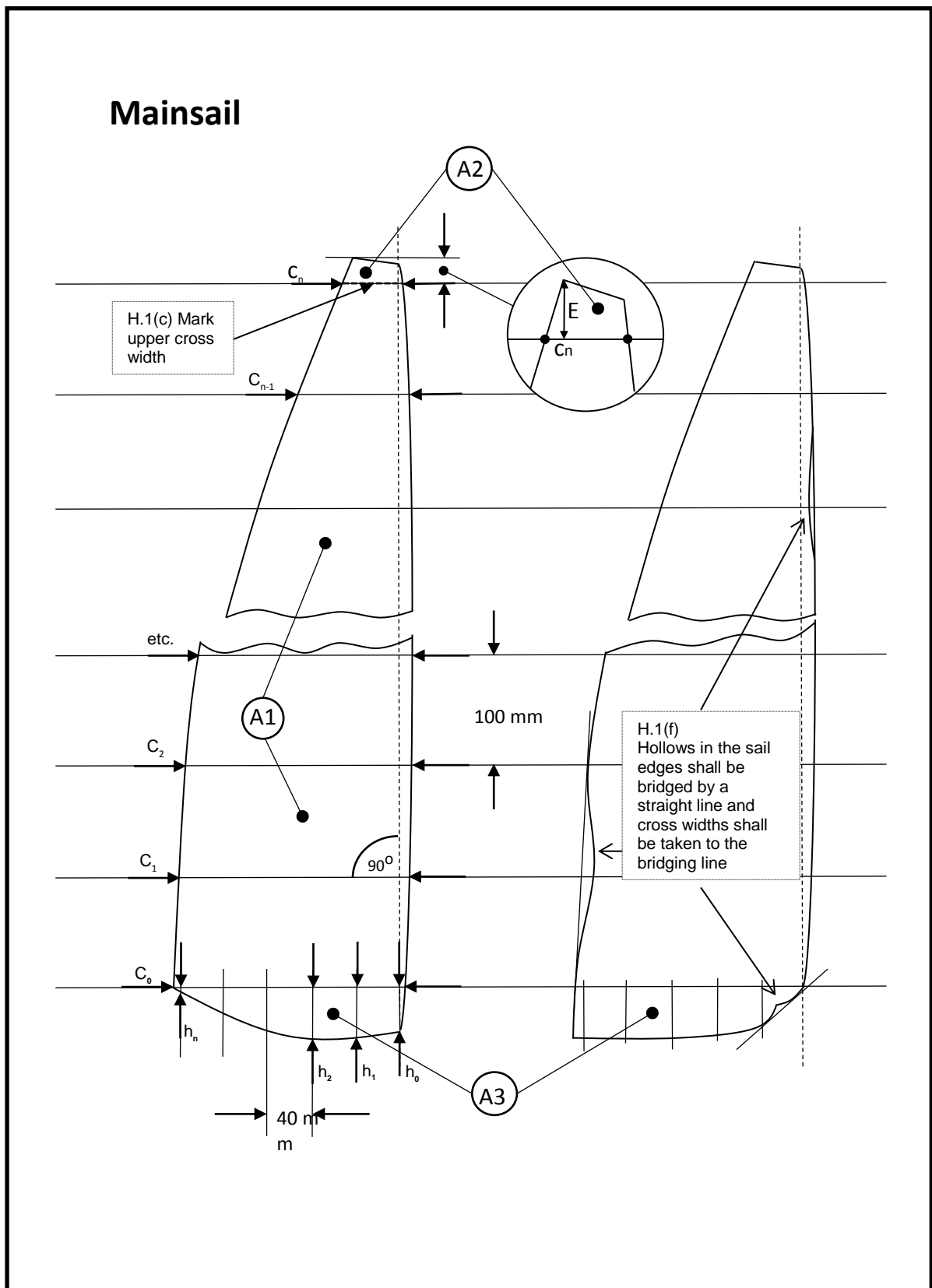


See rule F.3.2.

## J.5. CLEW POINT & TACK POINT

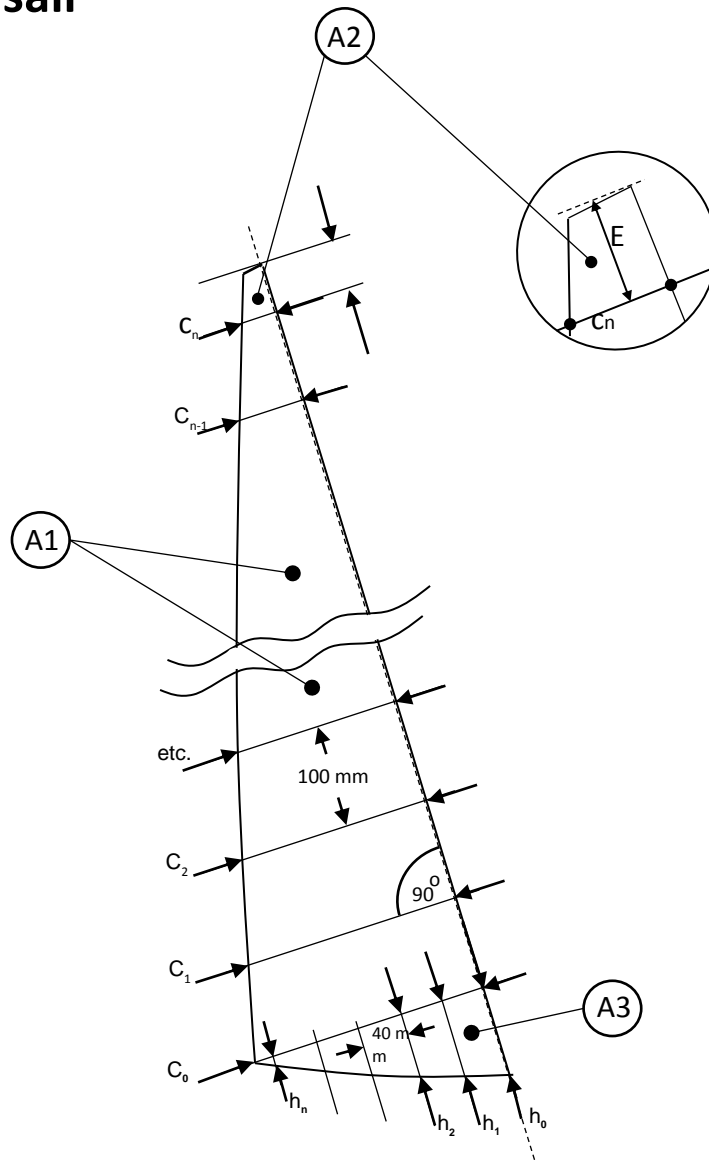


## J.6. SAIL MEASUREMENTS (Mainsail)



# J.7. SAIL MEASUREMENTS (Headsail)

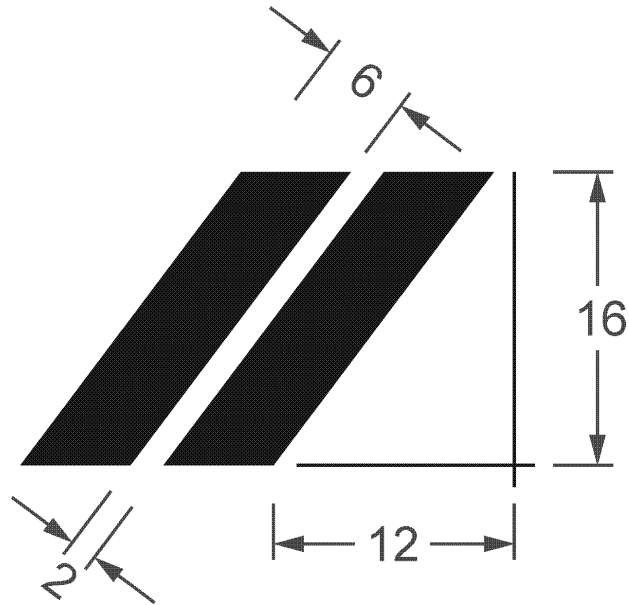
## Headsail



## J.8. Class Insignia

The dimensional tolerance on the dimensions in the following figure are:

- + or – 1 mm for dimensions of 10 mm or less
- + or – 3 mm for other dimensions.





## Section K – Sail Identification Marks

Please refer to the following document:

65 Class Sail Marks Rules, published by the IRSA.

end

Effective:	1 <sup>st</sup> April 2018
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Previous issue	1 <sup>st</sup> May 2017

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