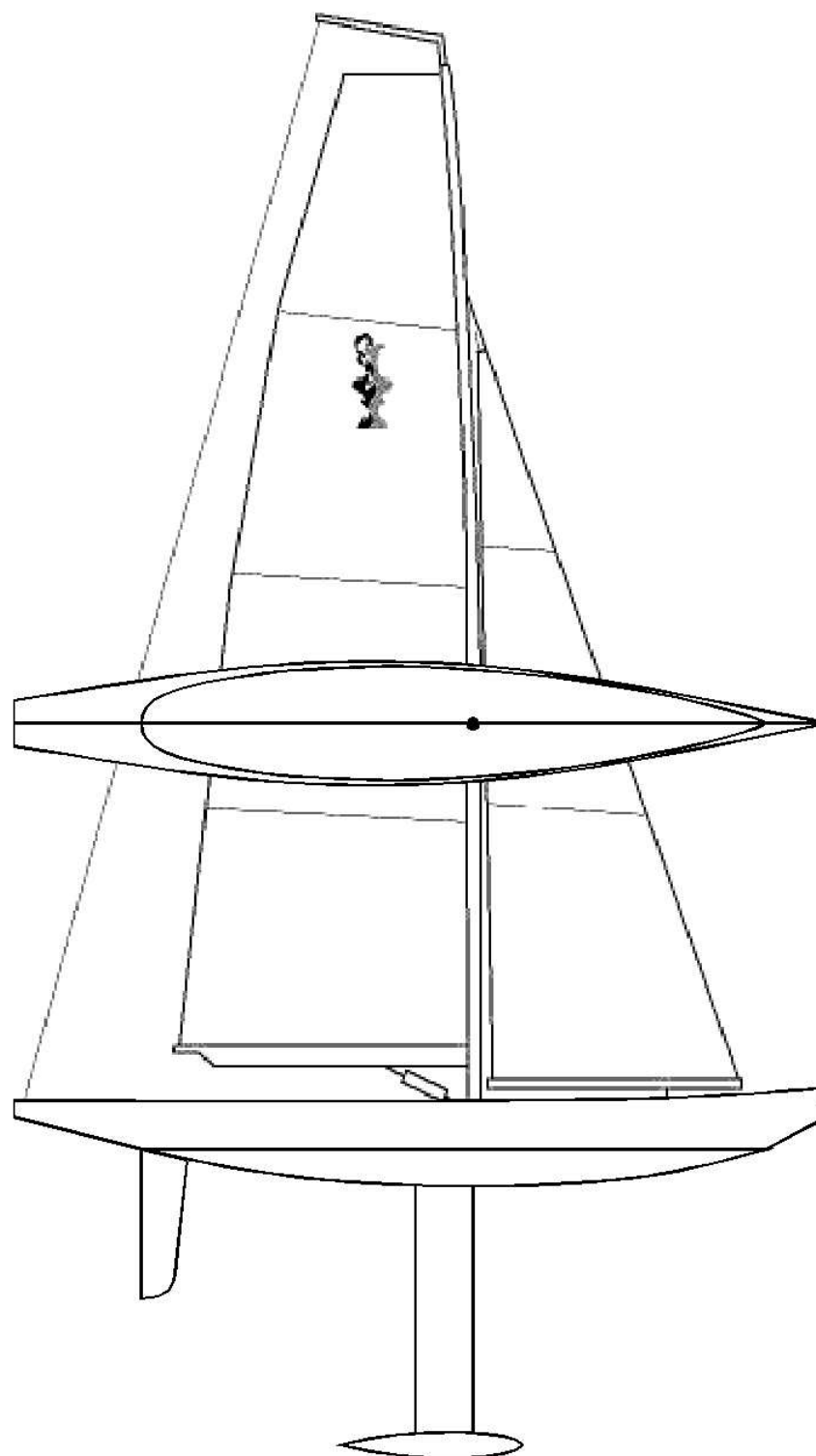


# AC 120 CUP

## CLASSE RULES

2009 issue 1.2



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# **PART I – AMMINISTRATION**

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## **Section A – General Conditions**

### **A.1 GENERAL**

This Class Rules aims to let sailing and racing RC Scale Models that reproduces similar boats as employed under the actual and previous AMERICA CUP Rules from AC1 to AC5 included. The scale used is 1:20. This scale factor obviously is not applicable to the hull displacement. The aesthetic apperance and graphics shall be as close as possible to the real AC boats. This point will of major importance for the acceptability of the models in accordance to this Rule . In other words, the educated spectator shall be capable to distinguish a Luna Rossa from an Oracle or an Alinghi. The modeler shall do his best to decorate his boat, the hull color shall be the same as one of the boat to be reppresented of the America Cup. The acceptance of the boat is agreed only if the boat is unequivocably inspired to the IACC Class. The hull shall have overhang and rake as close as to the ones of the IACC boats .

### **A.1.1 AUTORITY AND RESPONSIBILITY**

Each Club using the AC120 Class is responsible for the assurance of this Class Rules observations. The Regional Clubs shall designate a responsible Member for this purpose. Each owner will be first of all responsible for this Class Rules observation.

### **A.1.2 PUBBLICITY**

The boat and the decorations shall call the IACC Boat . Each owner is nevertheless responsible for any infringement of commercial laws forbidding the use of logos and marks in case of trade of the boat. Commercial Trading is discouraged without previous agreements of company represented in the logos and marks. Similar observation apply for the Class Insigna.

## **Section B – Boat Eligibility**

### **B.1 CERTIFICATE**

In order to be elected for racing, the Boat shall comply with the current Class Rules. The Boat shall have a valid Certificate released by the designated Club's Member that, in accordance with other Clubs, shall coordinate and maintains a chronological register. The Certificate Number shall appears on the deck . (sticker or paint)

### **B.2 CLASS ASSOCIATION STICKER**

A sticker or any graphic method representation of the Class Insigna, shall appears clearly on the top of the Main Sail

## PART II – REQUIREMENTS AND LIMITATIONS

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During Racing, the Boat shall be in conformance with the Class Rules as referred in Part II. Check to establish conformance to Section C, could be performed at any time of the Racing Day. The Rules of PART II are “**Closed Class Rules**”

### Section C – Conditions for Racing

#### C.1 GENERAL

##### C.1.1 RULES

The registered boat shall be a **Monohull** type . The boat shall either comply with the **Class Rules** in force at the time of its initial **fundamental measurement** or comply with the current **Class Rules**

#### C.2 CREW ( SKIPPER)

##### C.2.1 LIMITATIONS

The **Crew** shall be composed by a single person for all the duration of the **Racing Time**

#### C.3 BOAT

##### C.3.1 DIMENSIONS

With the Boat floating in fresh waters :

LOA	( with soft bumper included)	<b>1150 mm to 1200 mm +/- 10mm</b>
LWL		<b>1000 mm +/- 3%</b>

##### C.3.2 WEIGHT

The minimum weight, in dry conditions, shall be : **4500 g** (wind flame excluded)

##### C.3.3 CORRECTOR WEGHT(S)

Additional weights, to reach the minimum weight shall be installed inside the hull or on deck at the discretion of the Crew/Skipper.

#### C.4 HULL

##### C.4.1 IDENTIFICATION

Each boat shall carry a dedicated and single Number released by one of the Regional Club Authority also designated at National level for the Chronology sequence.

##### C.4.2 MAINTENANCE

It is allowed normal maintenance to the boat as to remove Batteries and accessories of the Radio Control assembly and substitute adhesive covers. Washing, painting, shining , etc. without the need for **re-certification**

##### C.4.3 RADIO CONTROL EQUIPMENT

###### USE

(1) The servo rudder control unit shall be limited to the **rudder** only.

- (2) The Winch servo shall be used exclusively for the control of the **Main and Jib sheets**.
- (3) For those who are intending to use a **genoa**, it is allowed to employ a dedicated additional servo to control the **genoa sheet only**.
- (4) No radio transmission from the boat shall be made.

## C.5 HULL APPENDAGES

### C.5.1 LIMITATIONS

The appendages are composed by one Fin/Bulb assembly and by one Rudder.

The Fin/Bulb assembly shall be dismountable in order to permit control of weight specifications.

During a race, only one Fin/Bulb assembly and one Rudder are permitted, except in case of loss or not repairable damage during navigation. The substitution shall be approved by the Race Committee.

The Fin/Bulb assembly length shall be : **420 mm maximum**

From the bottom of the hull to the bottom of the bulb

### C.5.2 USE

(a) The Fin shall not move or rotate with respect of the boat axes except for a normal design deflection

(b) The appendages shall not protrude over the LOA limits

### C.5.3 WEIGHTS

**Fin/ BULB** (complete)

**3000 g maximum**

**Rudder** (including axis)

**75 g maximum**

## C.6 RIG

### C.6.1 LIMITATIONS

During a race, it can be authorised one mast, one boom for the main and one boom for the Jib/head sail (the genoa for the user) for each one of the two Rigs, except in case of loss or unrepairable damage. The substitution shall be approved by the Race Committee.

The use of a **SwingRig** is forbidden.

Automatic control of main or headsail are forbidden (see butterfly).

### C.6.2 USE

Any Rig element shall not overhang the boat length limits

### C.6.3 ADDED WEIGHT

(a) Corrector weights may be positioned in and /or on a Mast spar below the lower point mark

(b) Such weights may be removed or added at any time in accordance with **C.3.1** and **C.3.2**.

## C.7 SAILS

### C.7.1 MAINTENANCE

Routine maintenance such as replacement of battens or patching over damaged areas is permitted without re-measurement and re-**Certification**.

### C.7.2 LIMITATIONS

Except when a Sail has been lost or damaged beyond repair, no more than one mainsails and one headsail, for each Rig, shall be used during a race event. Replacement may be approved only by the Race Committee.

#### C.7.2.1 SAIL AREA

RIG 1	80 dm <sup>2</sup>	maximum
	73 dm <sup>2</sup>	minimum
RIG 2	60 dm <sup>2</sup>	maximum
Main Top width	60 mm to 200 mm.	

### C.7.3 IDENTIFICATION

The Class Insignia is mandatory and shall appear on the main

C.7.4 For those who reproduce the full graphics of an IACC Boat on the sails it will be authorised to use the original symbols and numbers, nevertheless it will be necessary to verify, before the start of the race, that in case of identical decorations used by different boats, a different colored sticker or flag shall be positioned on the mainsail top.

### C.7.5 USE

(a) MAINSAIL

The LUFF shall be : **1750 mm maximum**

(b) HEADSAIL

The Headsail forestay Top **shall not** be above **80% of the Main Luff length**

(c) GENOA

As above for the Headsail forestay.

## Section D – HULL

### D.1 GENERAL

#### D.1.1 RULES

The boat shall either comply with the **Class Rules** in force at the time of its initial **fundamental measurement** or comply with the current **Class Rules**.

#### D.1.2 CERTIFICATION

See rule B.1.1

### D.2 HULL

### D.2.1 MATERIALS

No limitations are defined for the use of materials employed for the construction  
Except that, materials shall not be of density higher than 11300kg/m<sup>3</sup> (Lead)

### D.2.2 COSTRUCTION

The construction is unrestricted except for the following :

- (a) The Hull shall be a **Monohull** type
- (b) Except for trunking for the Fin and Rudder, the hull shall not have :
  - (1) voids in the waterplane and/or the underwater profile
  - (2) hollows in the plan view and/or the underwater profile that exceed 3 mm
  - (3) transverse hollows in the undersurface of the Hull that exceed 3 mm when tested parallel to the waterplane.
- (c) the forward 10mm of the Hull shall be of elastomeric material
- (d) the Hull shall have two marks at the waterplane level, one in front and the other to the back. These marks are used for the LWL length measurement.

### D.2.3 FITTINGS

The fitting are unrestricted except that :

- (a) The fitting shall not project outboard of the Hull shell or the deck

### D.2.4 REMOTE CONTROL EQUIPMENT

The following is permitted:

- (1) One receiver
- (2) One rudder servo
- (3) One servo for sheet control ( main & jib)
- (4) One (additional) servo for Genua sheet control
- (5) Battery cells assembled in one or more packs
- (6) Electrical cables, connectors and switches

## Section E – Hull Appendages

### E.1 PARTS

#### E.1.1 MANDATORY

- (a) **Keel** is composed of a **Fin** and a **Bulb**.
- (b) **Rudder**

### E.2 GENERAL

#### E.2.1 RULES

Hull Appendages shall comply with these Class Rules

### E.3 KEEL AND RUDDER

#### E.3.1 MATERIALS

As per **D.2.1**

**E.3.2 BULB**

For **ecological and biological protection**, the bulb shall be coated with composite materials or painted.

**E.3.3 CONSTRUCTION**

The construction is unrestricted except for :

- (a) The Keel and Rudder shall be removable from the Hull.
- (b) The Keel and Rudder shall not :
  - (1) be connected or linked together,
  - (2) be articulated
  - (3) have openings through which water could flow when in use

## **Section F – RIG**

**F.1 GENERAL**

**F.1.1 RULES**

The RIG shall comply with the present Class Rules

**F.1.2 LIMITATIONS**

Only TWO SET of sails are permitted at the time of Race Registration

**F.2 MAST**

**F.2.1 MATERIALS**

As per **D.2.1**

**F.2.2 CONSTRUCTION**

The Mast shall have the **Limit Marks** inside which the LUFF of the main shall not be greater than 1750 mm. The Headsail **Limit Mark** shall correspond to **80%** of the Main luff length, The forestay hooking will be fixed below the **Limit Mark**.

The Mark's identification can be applied as per :

- (1) paint
- (2) self adhesive band

Mark's Height (any color) **3 mm to 10 mm**

**F.3 BOOMS**

**F.3.1 MATERIALS**

As per **D.2.1**

**F.3.2 COSTRUCTION**

Construction is unrestricted, except for automatic or semi-automatic mechanisms controlling the Mainsail and Headsails like "butterfly" or similar devices, **are forbidden**.



## Section G – SAILS

### G.1 PARTS

#### G.1.1 MANDATORY

- (a) MAINSAIL
- (b) HEADSAIL
- (c) GENOA (permitted as Headsail replacement)

### G.2 GENERALS

#### G.2.1 RULES

The Sails shall either comply with the **Class Rules** in force at the time of its initial **fundamental measurement** or comply with the current **Class Rules**.

#### G.2.2 CERTIFICATION

The Club's responsible nominated Member shall **Certificate** the Sails close to the Tack with date and signature .

### G.3 MAINSAIL

#### CONSTRUCTION

Construction is unrestricted

#### G.3.1 The Main is generally composed of several material sheets (see drawing at page 8)

Luff length	<b>1750 mm</b>	<b>maximum</b>
Main head width	<b>60 mm</b>	<b>to 200 mm</b>

### G.4 HEADSAIL

#### G.4.1 COSTRUCTION

Construction is unrestricted

#### G.4.2 SURFACE

The Headsals surface shall not be lower than **35%** and not higher than **55%** of the Mainsail surface area.

### G.5 GENOA

#### G.5.1 COSTRUCTION

Construction is unrestricted

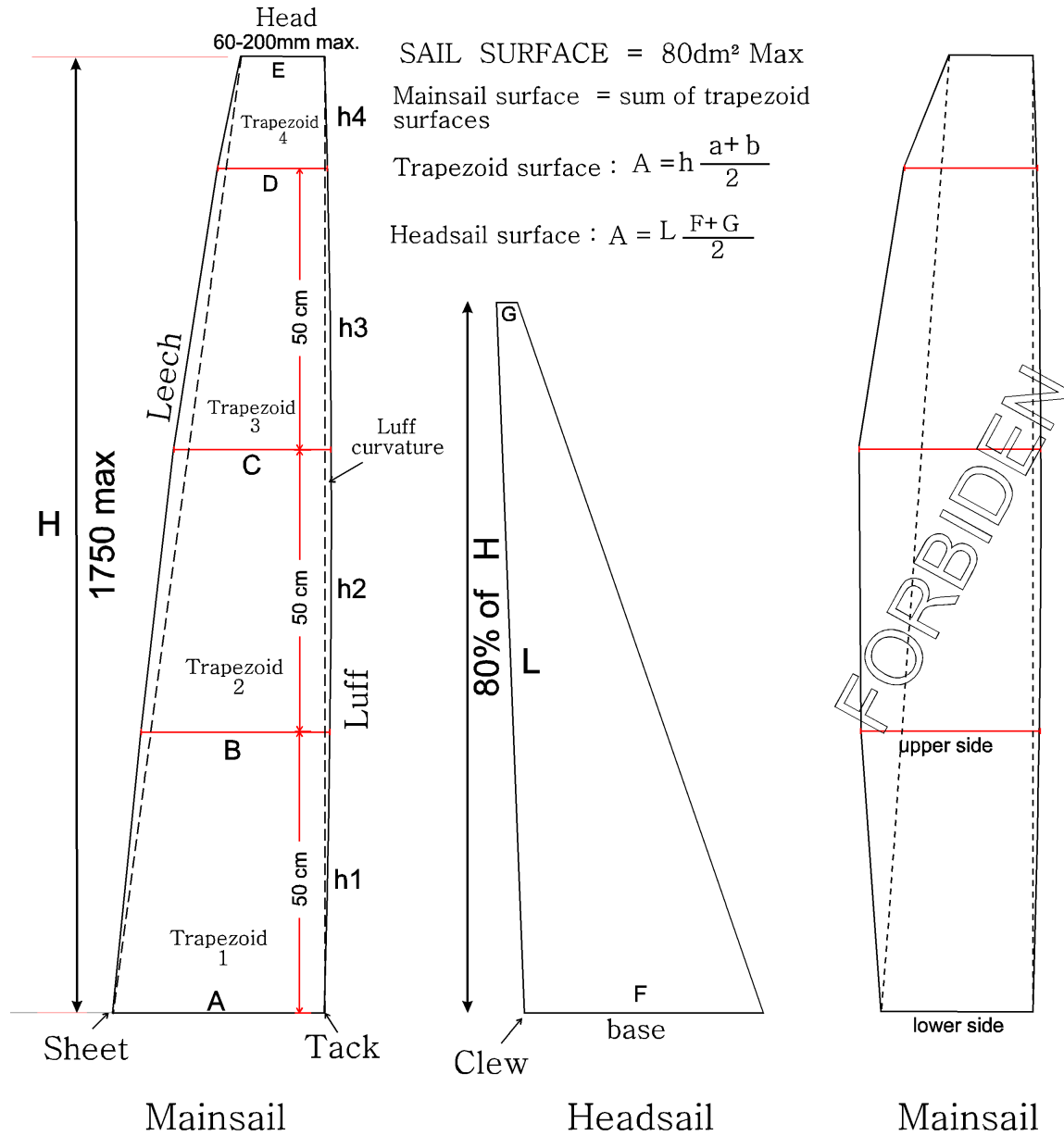
#### G.5.2 SURFACE

The Headsals surface shall not be lower than **35%** and not higher than **55%** of the Mainsail surface area.

The surface projecting over the Mast is not calculated.  
 The Genoa Luff length shall not be greater than **80%** of Mainsail Luff length

## Section H – DRAWINGS

### H.1 Sail's Drawings



**G.6.1** The Club Responsible Member will make use of the formula defined in the above drawing in order to verify the sail's surface areas.  
 The Sails Omologation Certificate will include the measured dimensions of the following parameters :

A, B, C, D, E, F, G, H, L, and the heights h 1, 2, 3, 4

The first calculation will be performed for the Mainsail by adding the surfaces of the various trapezoidal sheets composing the Mainsail and the Headsail shall comply with the requirement defined in G.4.2. and G.5.2.

**G.6.2 FORBIDDEN Shape**

Each trapezoid shall have the upper side shorter than the lower side.

## PART III – CLASS INSIGNA

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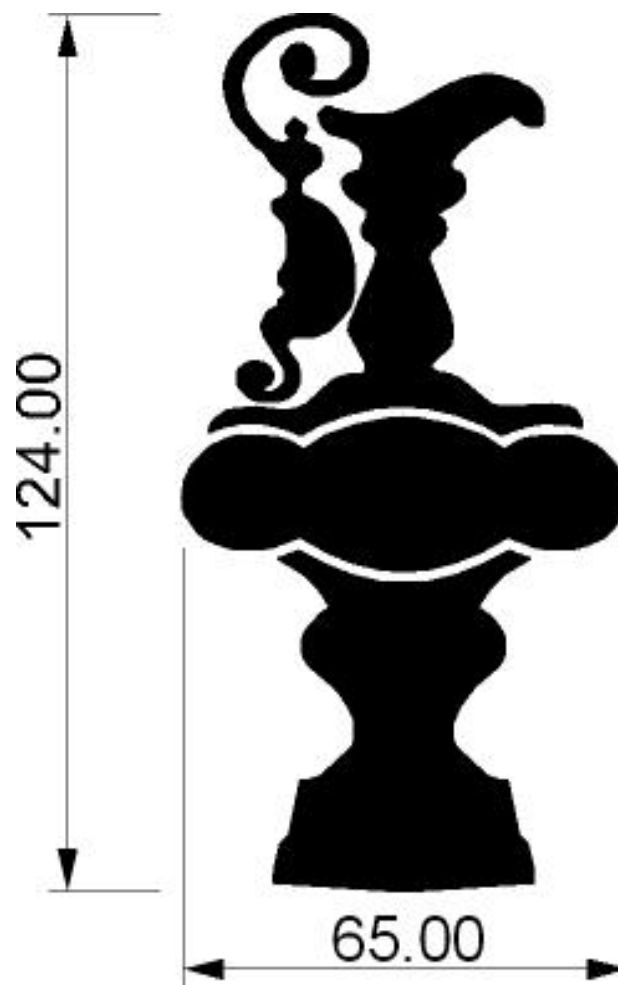
### Section I – Illustrations

#### I.1 CLASS INSIGNA

##### I.1.1 MANDATORY

To be applied or drawn on the Main

##### I.1.2 Sizes



## PART IV – INFORMATIONS

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