

Class Rules

AC-100



Rev. 01 September 2010

- **Introduction**

These Class Rules are Open type

The AC100 is a Monohull Class where all it is permitted except what it is specifically forbidden in these Class Rules.

The AC100 shall recall the typical forms and shapes of the America Cup Boats developed between 2000 and 2007.

- **Registration**

Each model shall have a registration alphanumeric Code inserted during lamination.

The personal identification Code shall be delivered by the National AC100 Class Authority or by the recognized National AC100 Club.

The owner or builder, after formal request to the authority, shall insert the Code between composites lamination layers. The Code can be a simple pencil marked paper or similar method and shall be after lamination visible from inside the hull , preferably close to the battery location area.

Only the boats carrying the registration Code shall be participating to official regatta.

- 1 – General

1.1 Specifications

It is confirmed that these Rules offer a wide freedom to the Designers, within the limits defined by the Rules, in order to develop design and build RC boats with the following characteristics:

LOA	1000 mm	+/-1%,
LWL	850 mm	max
Overhang (see DWG 5).....	55 mm	min *
Mast.....	1600 mm	max
Draft from hull bottom	450 mm	max
Bulbo weight.....	free	
Sail area.....	6000 cm2	max
Displacement	2650 g	min

1.2 Measurements.

1.2.1 All measurement are in mm with a tolerance of +/- 2mm for linear dimensions and +/- 2 cm² for surface dimensions

1.2.2 Max. and Min. are absolute values without tolerance.

1.3 Drawings and Graphics

1.3.1 The attachments DWG 1,2,3,4,5,6,7, are integral part of these Rules

- 2 - Administration.

2.1 According to these Rules

2.2 All materials are accepted up to the limit of lead specific weight of 11.34 kg/dm³

- 3 - Hull.

3.1 General

3.1.1 The "AC-100" are of the monohull type.

3.2 Hull.

3.2.1 In any place of the hull, bump and hollows over 3mm are forbidden

- 3.2.2 Front bumper of elastic material like elastomers or rubber are required at the bow to protect other boats from collision damages during sailing. The thickness shall be not less of 8mm. The LOA include the bumper.
- 3.2.3

- 4 – FIN, BULB and RUDDER.

- 4.1 FIN

- 4.1.1 The fin shall be laying on the boat central longitudinal reference line, and can be adjustable in height before start of official races **, angular orientations are forbidden. The Fin can be removable for easy the transportation. The Fin surface is **Free**

- 4.2 RUDDER

- 4.2.1 The Rudder shall stay along the central longitudinal reference line and kept in position by the vertical rudder stock only for angular rotation and no tilting. The surface and dimensions are **Free**, but cannot overpass the hull limits

- 4.3 BULB

- 4.3.1 Weight and Dimensions are **Free**.

- 5 - RIG

- 5.1 Definition.

- 5.1.1 The Rig is composed of : the Mast and accessories like forstay , backstay, shrouds, one Main and one Jib

- 5.1.2 Wind vane is not part of the Rig.

- 5.2 General

- 5.2.1 No parts composing the Rig shall overpass the Bow or the Stern. Mast height 1600mm **max**, wind vane escluded

- 5.2.2 Sail Area is limited to **6000 cm²**.

- 5.2.3 Two sets of Rigs or Sails are permitted :

- Set A : from **4800cm²** to **6000 cm²** max

- Set B : to **4800cm²** **max**.

- The Sails sets are not mixable

- 5.2.4 The sail's dimensions are declared in writing by the skipper to be compliant with the Rules before the daily race. The owner can exhibit a quoted paper pattern for control.

- The Jib surface shall not be greater then 50% of the Main surface

- 5.3 Rigging

- 5.3.1 All rigging parts used for mast and booms shall not be greater of 12mm

of diameters or a section of 20x6mm .
5.3.2 The Wang is part of the Rig.

- 6 - SAILS.

- 6.1 Dimension and Measure

- 6.1.1 For sail's area calculations see DWG 1. The sail is formed by trapezoid form or triangular panels, the sum of each single panel surface, define the sail's surface.

- 6.1.2 Linear dimensions are measured along the sides of various panels composing the sails.

- 6.1.3 A slight tension will be applied to the sail material to avoid creases along the dimension under measurement.

- 6.1.4 Measurement tolerance is 5mm for the full assembled and declared sail and 2mm for each single panel.

- 6.2 Identification marks.

- 6.2.1 The Hull Registration number shall be visible from the battery compartment.

- 6.2.2. The Sail's number and Class Insignia will dimensionally conform to DWG 1,2,3,4.

- 6.2.3. The measured sail area will be reported on the tack corner of the sail and signed by the Measurer.

- 6.2.4 The Class Insignia will be positioned on the first $\frac{1}{4}$ of the Main – see DWG 1

- 7 – Radio control. Equipment

- 7.1 General.

- 7.1.2 2 channels radio control equipment is permitted one for sails and one for rudder manoeuvres

- 7.1.3 During daily racing, the skipper will use only the declared RC equipment and frequency, one Fin and one Rudder

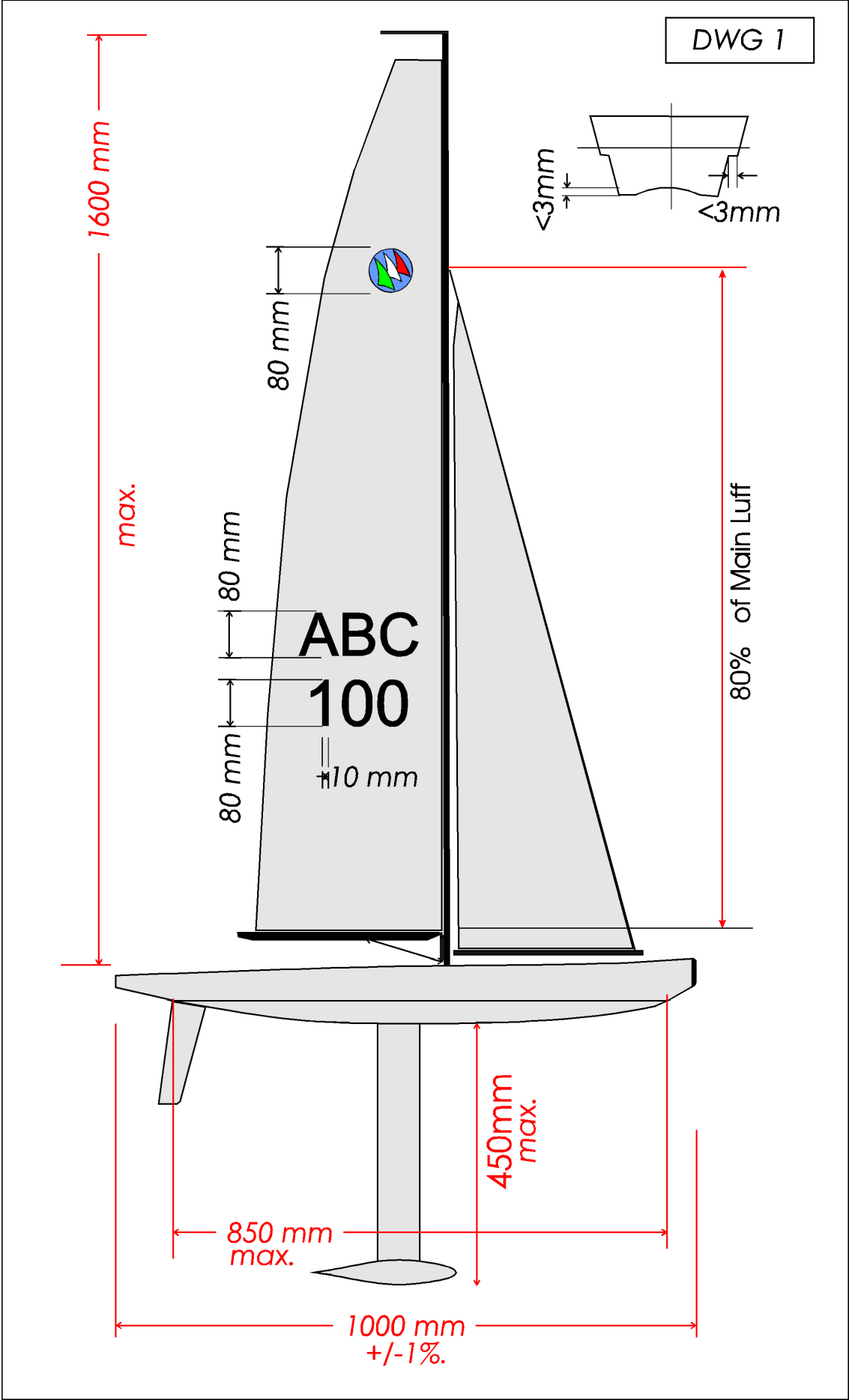
7.2 Substitutions

7.2.1 None, excluding batteries or broken or loose parts. Under severe meteo conditions, the Jury can agree, if requested, the substitution of the Sail Rig

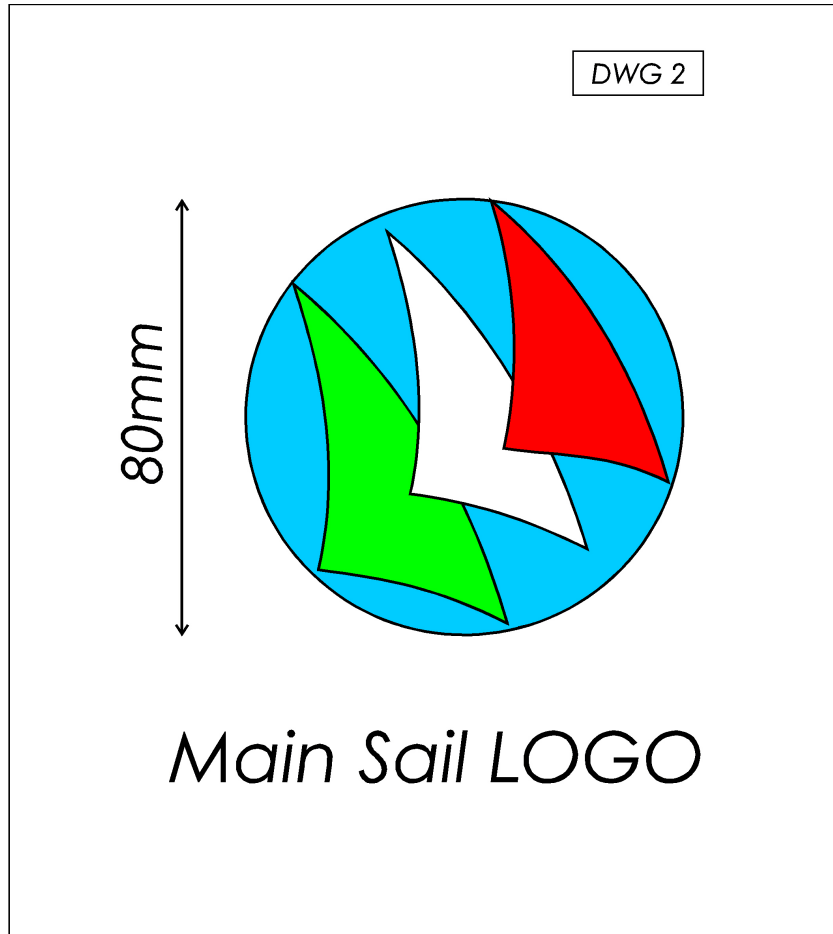
7.2.2 No restrictions about substitution of Battery type during daily racing.

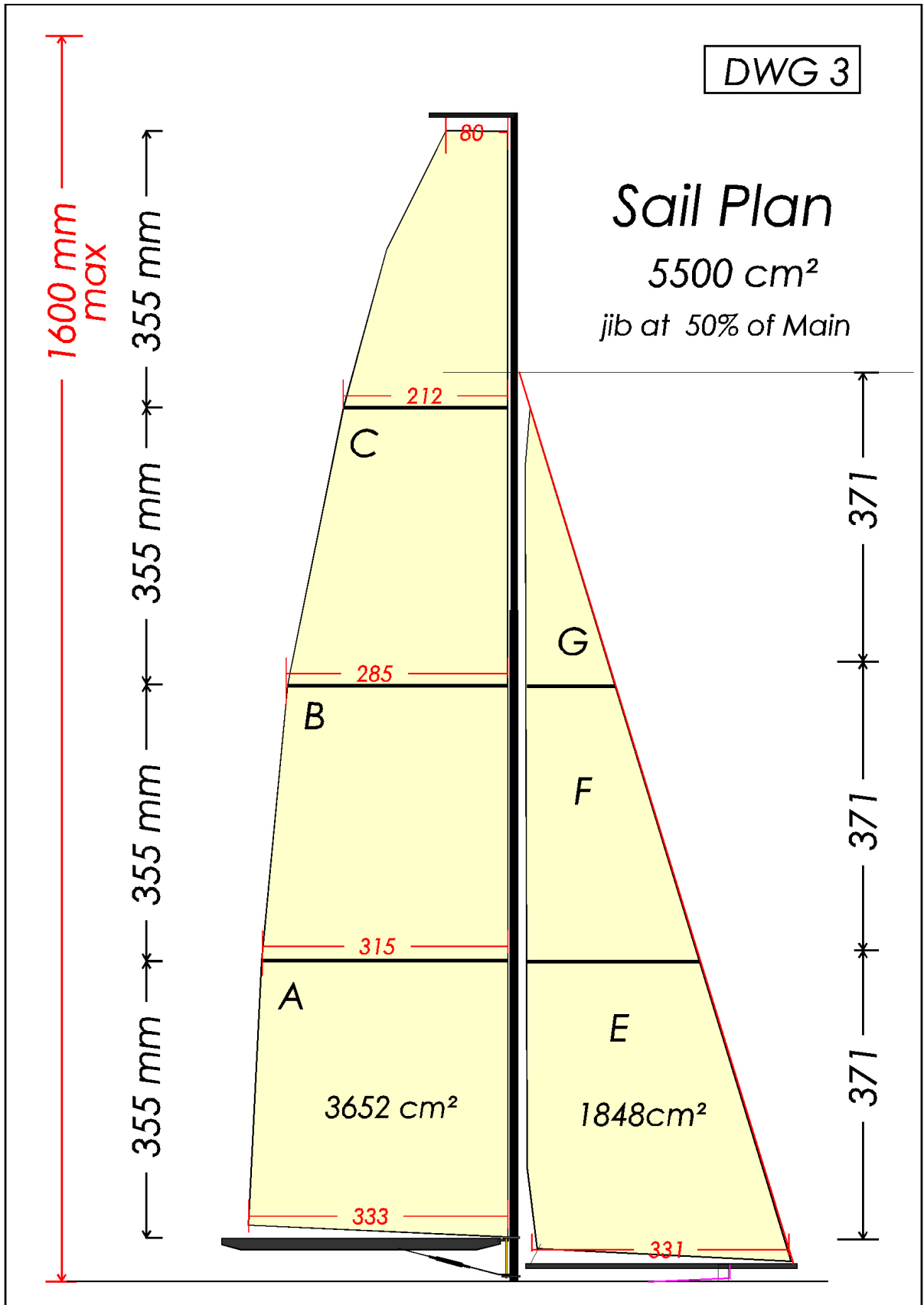
*DWG 5 Details about Overhangs

**DWG 7 Fin height adjustment



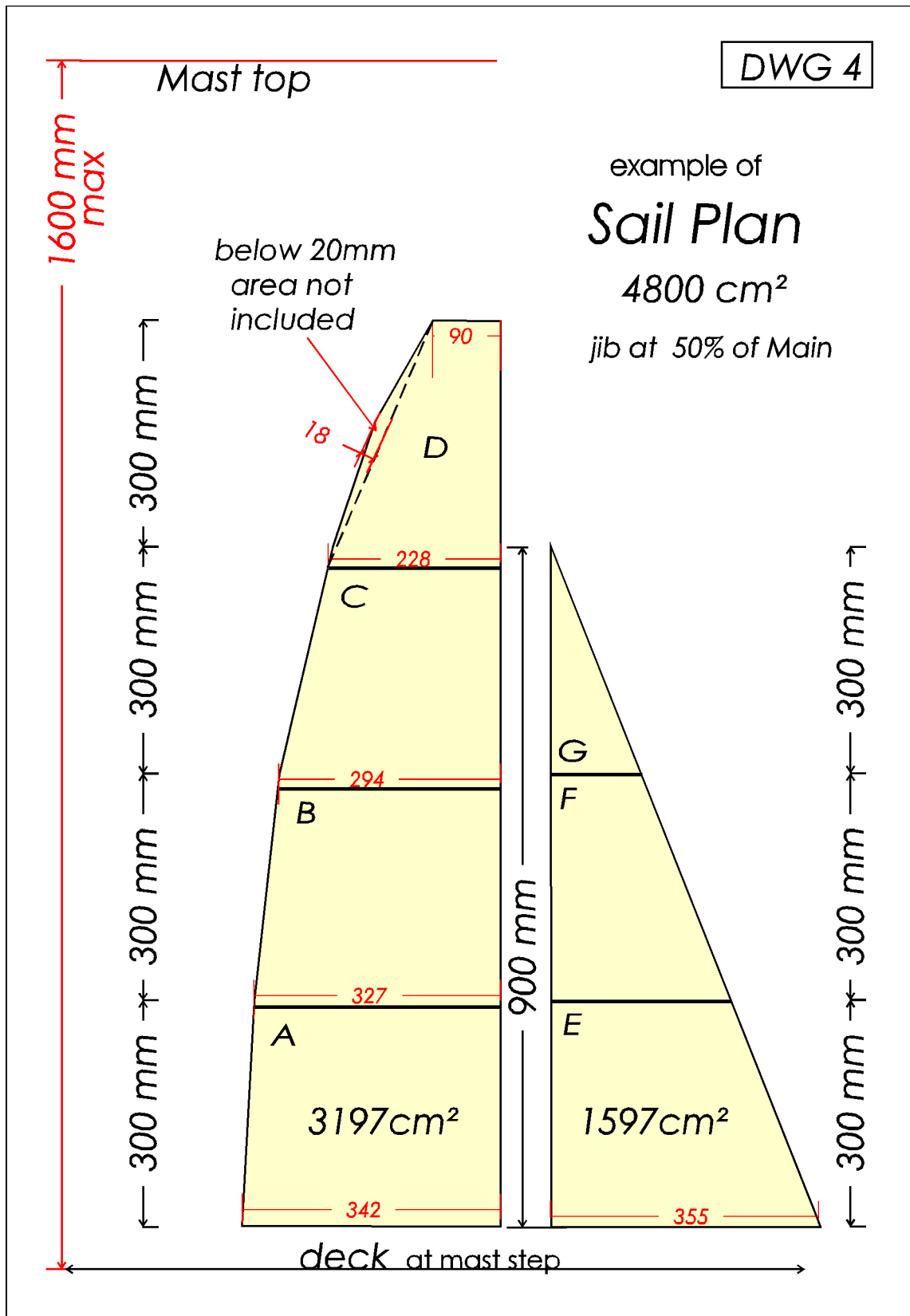
- INSIGNIA

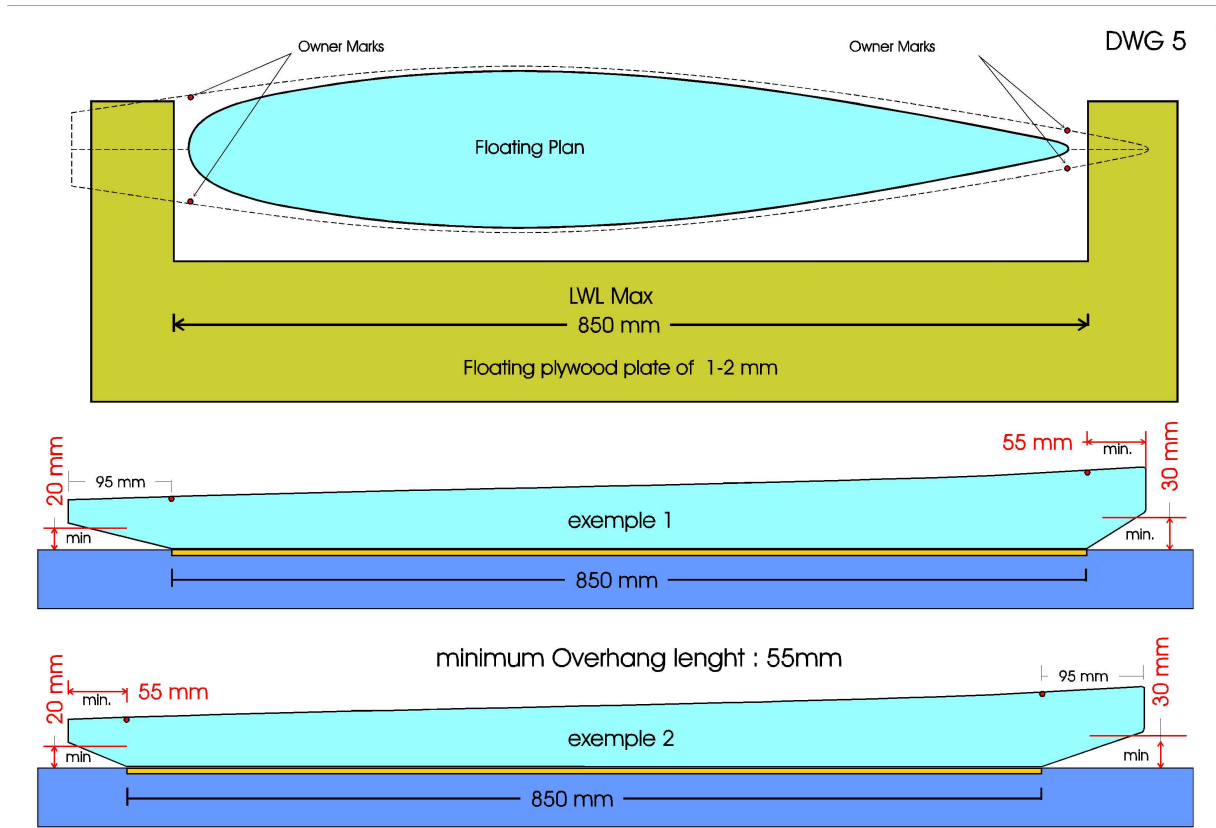




Typical sail plan for 5500CM

Typical Sail Plan for 4800cm²



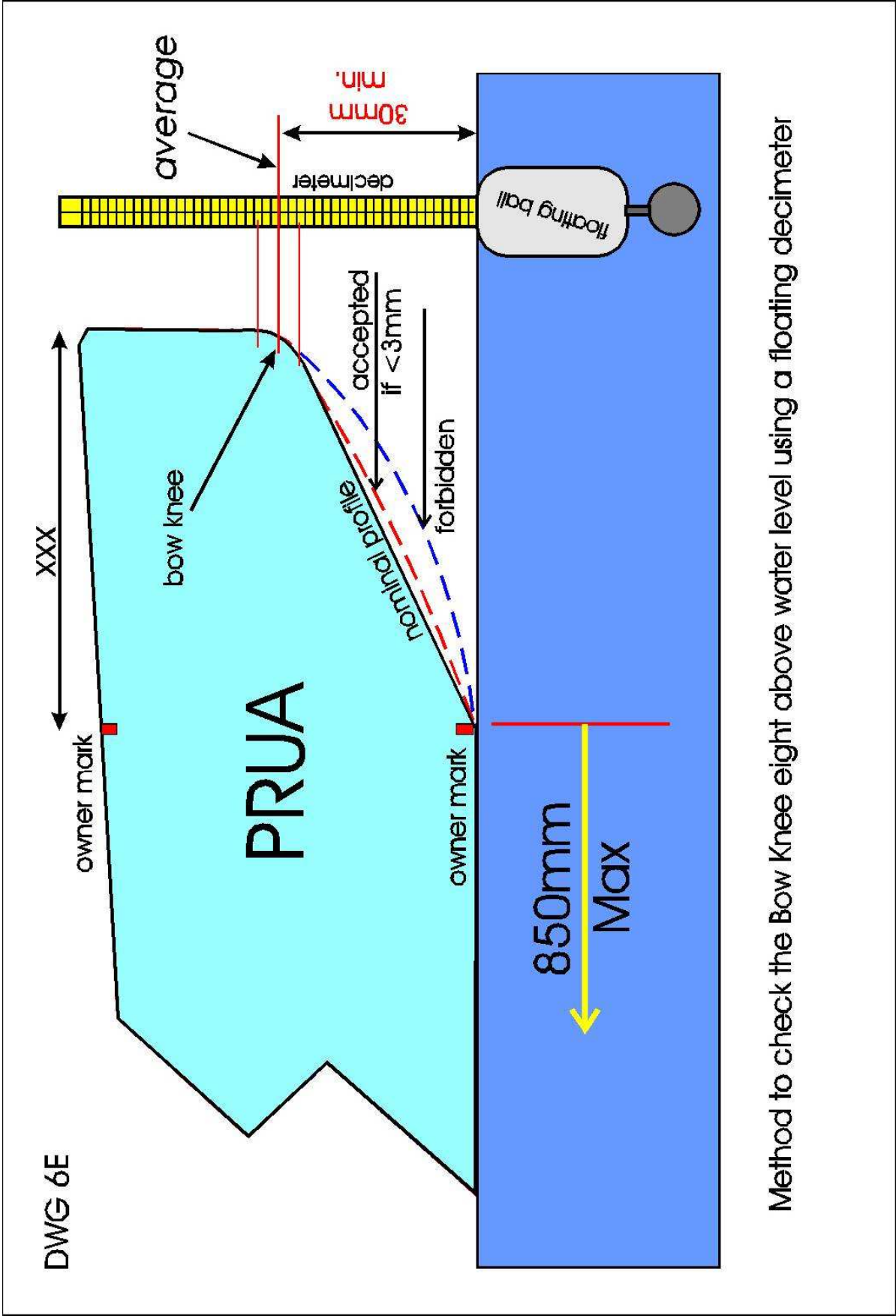


Acceptables exemples : (size in mm)

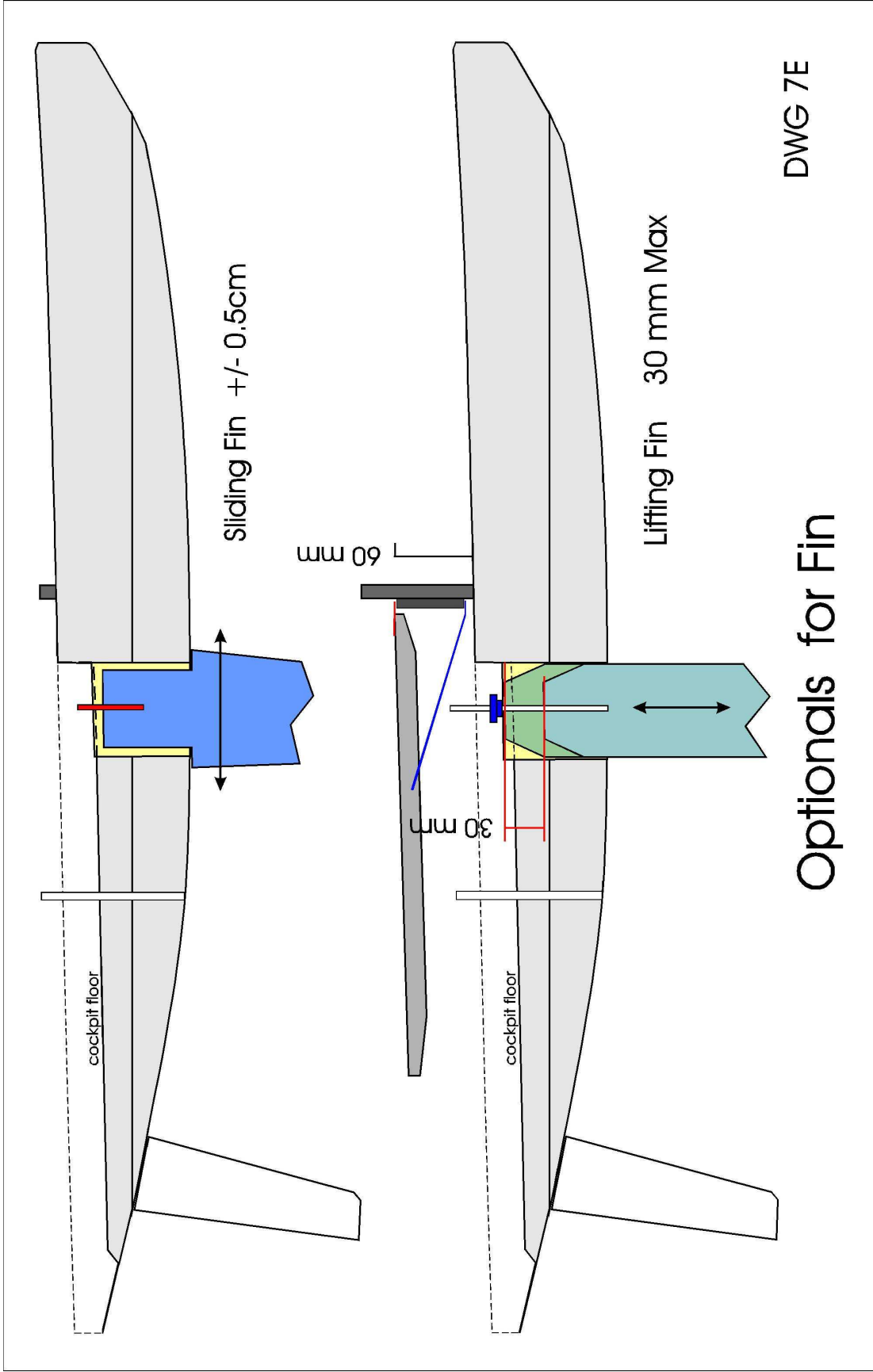
LOA	1° overhang + LWL	2° overhang	permitted
1000 -	(55 + 850) =	95	Yes
1000 -	(54 + 850) =	96	No
1000 -	(55 + 851) =	94	No
1000 -	(56 + 847) =	97	Yes

Summary :

- 1 – Overhang **not below** 55mm (either at bow or transom)
- 2 – LWL **not above** 850mm



Method to check the Bow Knee eight above water level using a floating decimeter



DWG 7E

Optionals for Fin