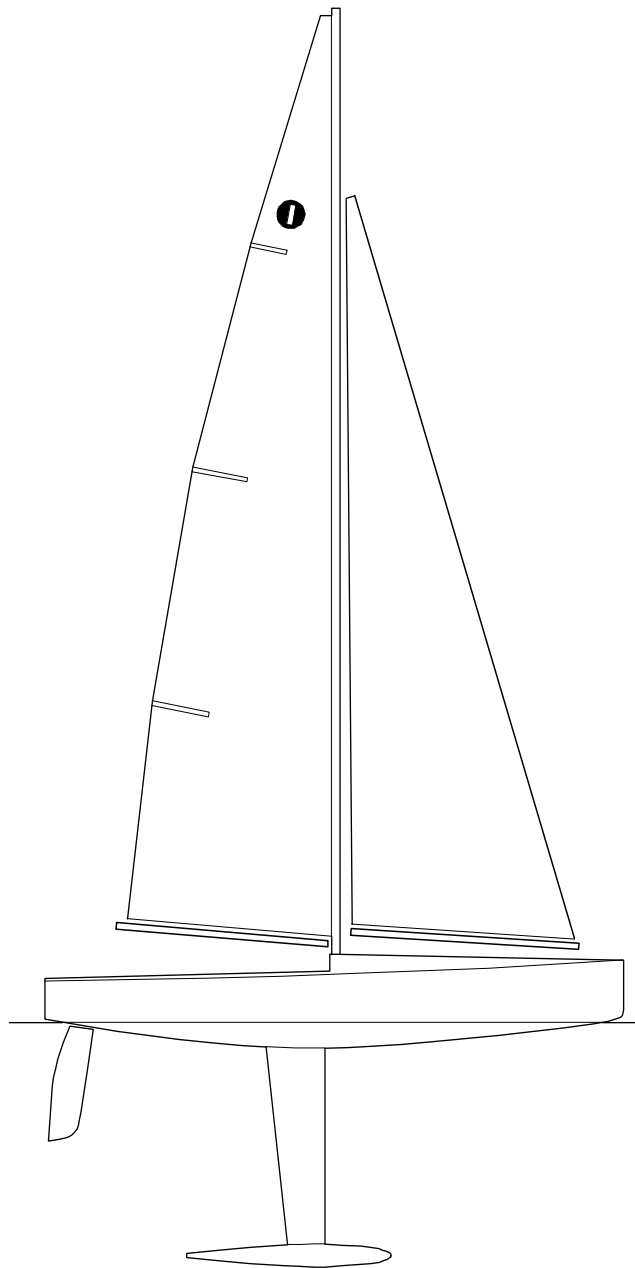


# INTERNATIONAL ONE METRE CLASS RULES

20097 v.1



The One Metre class was developed by the ISAF-RSD Permanent Committee  
and was adopted as an international class in 1988



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## ***Introduction***

*One Metre hulls, hull appendages, rigs and sails may be manufactured by any amateur or professional manufacturer without any requirement for a manufacturing license.*

*The rules in Part II and III are closed class rules which means that anything not specifically permitted is prohibited.*

*Owners and crews 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, Part I of the ERS and in the Racing Rules of Sailing.*

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

# PART I – 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.2 ABBREVIATIONS

- A.2.1 ISAF International Sailing Federation  
ISAF–RSD ISAF – Radio Sailing Division  
MNA ISAF Member National Authority  
DM ISAF–RSD Member  
ICA International One Metre Class Association  
NCA National Class Association  
ERS Equipment Rules of Sailing  
RRS Racing Rules of Sailing

### A.3 AUTHORITIES AND RESPONSIBILITIES

- 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 ISAF–RSD.
- A.3.2 The international authority of the class is the ISAF–RSD 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 measurement, rests with:  
the ISAF  
the ISAF–RSD  
the MNA  
the DM  
the ICA  
any NCA  
the **certification authority**  
an **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 ISAF–RSD.

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

- A.4.1 The ISAF–RSD has delegated its administrative functions of the class to DMs. A DM 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 DM, or the DM does not wish to administer 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 ISAF RULES**

- A.5.1 These **class rules** shall be read in conjunction with the 200~~95~~-200~~128~~ ERS.
- A.5.2 Except where used in headings, when a term is printed in “**bold**” the definition in the ERS applies and when a term is printed in “*italics*” the definition in the RRS applies.

## **A.6 CHAMPIONSHIP RULES**

- A.6.1 The Class Championship Rules shall apply at World and Continental Championships.

## **A.7 SAILING INSTRUCTIONS**

- A.7.1 These **class rules** shall not be varied by sailing instructions except as provided by A.7.2.
- A.7.2 At World or Continental Championships the sailing instructions may vary these **class rules** only with the agreement of the ICA.

## **A.8 CLASS RULES AMENDMENTS**

- A.8.1 Amendments to these **class rules** shall be proposed by the ICA and are subject to the approval of ISAF–RSD.

## **A.9 CLASS RULES INTERPRETATIONS**

### **A.9.1 GENERAL**

Interpretation of **class rules**, except as provided by A.9.2, shall be made in accordance with the ISAF–RSD Regulations.

### **A.9.2 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 ISAF–RSD, the DM and the ICA.

## **A.10 HULL REGISTRATION NUMBER**

- A.10.1 Registration numbers shall be issued by the **certification authority**.

- A.10.2 Registration numbers shall be issued in consecutive order starting at “1”.
- A.10.3 Each **hull** shall have a unique registration number which shall include the national letters and the **certification authority**’s sequential registration number. Under no circumstances may a registration number be used on a **hull** other than the **hull** on which it was first used.

## **A.11 CERTIFICATION**

- A.11.1 For a **hull** not previously **certified**, all items required by the measurement form(s) to be measured shall be measured by an **official measurer** and the details entered onto the form(s).
- A.11.2 The measurement form(s), and **certification** fee if required, shall be sent to the **certification authority** in the country where the **hull** is to be registered within 4 weeks after completion of measurement.
- A.11.3 Upon receipt of a satisfactorily completed measurement form(s) and **certification** fee if required within the 4 week time limit, the **certification authority** may issue a **certificate**.
- A.11.4 The **certification authority** shall retain the original measurement form(s), which shall be transferred to the new **certification authority** upon request if the **hull** is exported.

## **A.12 VALIDITY OF CERTIFICATE**

- A.12.1 A **certificate** becomes invalid upon:
- (a) a change of ownership,
  - (b) withdrawal by the **certification authority**,
  - (c) the issue of another **certificate**.

## **A.13 COMPLIANCE WITH CLASS RULES**

- A.13.1 A **boat** ceases to comply with the **class rules** upon:
- (a) use of equipment that does not comply with limitations in the **class rules**,
  - (b) use of equipment that does not comply, or that causes the **boat** not to comply, with limitations recorded on the **certificate**,
  - (c) alteration or repair of equipment required by the measurement form(s) to be measured, except where permitted by the **class rules**,
  - (d) a change of **class rules** that causes equipment in use to cease to be permitted, except where the equipment may comply with the **class rules** in force at the time of its initial **certification control**.

## **A.14 RE-CERTIFICATION**

- A.14.1 A **hull** may be issued with a new **certificate**, showing dates of initial and new **certification control** as applicable:

(a) WHEN A CERTIFICATE BECOMES INVALID UPON CHANGE OF OWNERSHIP

and the new owner applies to the **certification authority** in the country where the **hull** is to be registered. The application shall include the old **certificate** and re-**certification** fee if required. In the case of an imported **hull** the **certification authority** shall request the measurement form(s) from the previous **certification authority** and a new hull registration number shall be issued,

(b) WHEN A CERTIFICATE HAS BEEN WITHDRAWN, OR WHEN THE CERTIFICATE AND MEASUREMENT FORM(S) CANNOT BE LOCATED

and **certification control** as required for initial **certification** has been undertaken.

A.14.2 A **boat** that has ceased to comply with the **class rules** may be brought into compliance:

(a) WHEN THE LIMITATIONS AFFECTING THE EQUIPMENT ARE IN THE CLASS RULES

by carrying out **certification control** of affected equipment,

(b) WHEN THE LIMITATIONS AFFECTING THE EQUIPMENT ARE ON THE CERTIFICATE

by carrying out **certification control** of affected equipment as required for initial **certification**.

## Section B – Boat Eligibility

To be eligible to take part in *racing*, the rules in this section shall be complied with.

### B.1 CERTIFICATE

B.1.1 The **hull** shall have a valid **certificate**.

B.1.2 A **certificate** issued prior to the effective date of these **class rules** remains valid until any of the criteria in A.12.1 is met.

### B.2 CLASS ASSOCIATION STICKER

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 II – REQUIREMENTS AND LIMITATIONS

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The **crew** and the **boat** shall comply with the rules in Part II when *racing*. Measurement to check conformity with rules of Section C is not part of **certification control**.

The rules in Part II are **closed class rules**. Measurement 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

The following ERS rules shall not apply:

- (a) B.7.1 Mainsail, Foresail and Mizzen Booms set on a Mast
- (b) B.7.2 Headsail Booms.

### C.2 CREW

#### C.2.1 LIMITATIONS

The **crew** shall consist of one person.

### C.3 ADVERTISING

#### C.3.1 LIMITATIONS

The **boat** shall display only such advertising as permitted by the ISAF Advertising Code, Category C.

### C.4 BOAT

#### C.4.1 DIMENSIONS

With the **boat** floating in fresh water:

|   | minimum | maximum |
|---|---------|---------|
| Draught .....                                 | 370 mm  | 420 mm  |
| The depth of <b>hull</b> from waterline ..... |         | 60 mm   |
| <b>Hull length</b> .....                      |         | 1000 mm |

#### C.4.2 WEIGHT

|   | minimum | maximum |
|---|---------|---------|
| The weight of <b>boat</b> in dry condition excluding wind indicator if used ..... |         | 4000 g  |

#### C.4.3 CORRECTOR WEIGHT(S)

**Corrector weight(s)** to achieve compliance with C.4.2, if used, shall be fixed in/on the **hull** and not be altered or moved during an event<sup>[RG1]</sup>.

#### C.4.4 WATER

Water shall not be used to trim the **boat** and it may be removed at any time.

### C.5 HULL

#### C.5.1 IDENTIFICATION

The hull registration number shall be displayed on the external surface of the **hull** shell or deck clearly and legibly with a minimum height of 20 mm.

#### C.5.2 MAINTENANCE

Routine maintenance to the **hull** such as removing and adding fittings and remote control equipment, replacing **hull** patches, painting, polishing, smoothing etc., is permitted without re-measurement and re-**certification** provided the compliance with D.2 is not affected.

#### C.5.3 REMOTE CONTROL EQUIPMENT

##### USE

- (a) The rudder control unit shall control the **rudder** only.
- (b) The sheet control unit shall control the mainsail sheet and headsail sheet only.
- (c) Except for control unit positioning and radio link information, no radio transmissions from the **boat** shall be made.
- (d) During an event remote control and/or related equipment if temporarily removed and or replaced:
  - (1) shall be refitted in the same position.
  - (2) shall be replaced by equipment of similar weight<sup>[RG2]</sup>.

### C.6 HULL APPENDAGES

#### C.6.1 MAINTENANCE

The **hull appendages** may be altered after **certification control**, without undergoing new **certification control**, provided compliance with E.3 is not affected.

#### C.6.2 LIMITATIONS

Except when a **hull appendage** has been lost or damaged beyond repair, only one **keel** and one **rudder** shall be used during an event. Replacement may be made only with the approval of the race committee. Unless the **hull appendage** has been lost, the race committee shall remove or cancel any **Event Limitation Mark** attached to the **hull appendage** that has been replaced.

### C.6.3 USE

- (a) The **keel** shall not move or rotate relative to the **hull**, except by flexing.
- (b) The **hull appendages** shall not project outboard of the **hull**.

(c) If removed:

- (1) The **keel** shall be refitted in the same attitude and position in the **hull**.
- (2) Parts of the **keel** shall be refitted in the same attitude and position relative to the **keel**.
- (3) The **rudder** shall be refitted in the same attitude and position relative to the **hull**[RG3].

### C.6.4 WEIGHTS

|  | minimum | maximum |
|--|---------|---------|
| <b>Keel</b> , excluding fasteners to <b>hull</b> ..... | 2200 g  | 2500 g  |
| <b>Rudder</b> , including stock .....                  |         | 75 g    |

## C.7 RIG

### C.7.1 LIMITATIONS

Except when an item has been lost or damaged beyond repair, one **mast**, one mainsail **boom** and one headsail **boom**, for each of the three **rigs**, may be used during an event. Replacement may be made only with the approval of the race committee. Unless the **spar** is lost, the race committee shall remove or cancel any **Event Limitation Mark** attached to the **spar** that has been replaced.

### C.7.2 USE

The **rig** shall not project beyond the fore and aft ends of the **hull**.

### C.7.3 ADDED WEIGHTS

- (a) Weights of any material may be positioned in and/or on a mast **spar** below the **lower point**. Weights of density greater than 8.000 kg/m<sup>3</sup> may be positioned in and/or on a mast **spar** above the **lower point**.
- (b) Such weights may be removed or added at any time subject to C.4.1 and C.4.2.

### C.7.4 MAST

(a) DIMENSIONS

|   | minimum | maximum      |
|---|---------|--------------|
| <b>Lower point</b> to deck <b>limit mark</b><br>as defined in D.1.5 .....                       | 60 mm   | 100 mm       |
| Within these limits, the variation in height of<br><b>lower point</b> for each <b>rig</b> ..... |         | ± 5 mm       |
| <b>Mast spar curvature</b> between <b>lower point</b> and<br><b>upper point</b> .....           |         | unrestricted |

(b) USE

The **spar** stepping position and wind indicator position are optional.

C.7.5 BOOMS

DIMENSIONS

minimum maximum

**Boom spar curvature** measured between points on the top of the **spar** 10 mm from each end ..... 3 mm

C.7.6 STANDING RIGGING

USE

The headsail boom swivel shall be attached to the **hull** approximately on the **hull** centreplane. The alignment of the swivel between the **hull** and the headsail **boom** shall be controlled only by the **rigging** tension.

C.7.7 RUNNING RIGGING

USE

- (a) The mainsail sheet and the headsail sheet may be worked by a sheet control line attached to the sheet control unit.
- (b) The upper end of any headsail boom topping lift shall be attached to the headsail halyard and/or stay, or their mast **spar** fitting(s).
- (c) A headsail boom topping lift restraint line attached to, or passing around, the topping lift may be attached to and/or passed around any or all of the following: topping lift; headsail; headsail halyard; headsail stay; headsail boom.
- (d) A mainsail **tack** control line may be passed around or through the mast **spar**, the mainsail boom **spar** and/or their fittings.

C.8 SAILS

C.8.1 MAINTENANCE

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

C.8.2 LIMITATIONS

Except when a **sail** has been lost or damaged beyond repair, no more than one mainsail and one headsail, for each **rig**, shall be used during an event. Replacement may be made only with the approval of the race committee. Unless the **sail** is lost, the race committee shall remove or cancel any **Event Limitation Mark** attached to the **sail** that has been replaced.

C.8.3 IDENTIFICATION

Identification shall comply with the RRS. Sails certified before 1<sup>st</sup> January 2005 shall comply with the sail identification rules in force at that time or at the time of initial certification.

## C.8.4 USE

### (a) GENERAL

- (1) A **sail** of one **rig** shall not be used with another **rig**.
- (2) A **sail** may not be used alone, except where the other **sail** of that **rig** has been lost or damaged during the race.

### (b) MAINSAIL

- (1) The **tack point** shall not be set more than 25 mm forward of the forward end of the boom **spar** and the **clew point** shall not be set more than 25 mm aft of the aft end of the boom **spar**.
- (2) Any **luff** bolt rope or **luff** slides shall be set in a mast **spar** track.
- (3) **Luff tabling** may envelop a mast **spar** jackstay.

### (c) HEADSAIL

- (1) A line taken through the **tack point** and the **head point** shall cut the forward face of the mast **spar** lower than the lower edge of the headsail stay **limit mark** at the fore side of the **spar** when the boom **spar** is on the centreplane of the **hull**.
- (2) The **tack point** shall not be set more than 25 mm forward of the forward end of the boom **spar** and the **clew point** shall not be set more than 25 mm aft of the aft end of the boom **spar**.
- (3) **Luff tabling** may envelop the headsail stay.
- (4) Any **luff** slides shall be set on the headsail stay.

## Section D – Hull

### D.1 GENERAL

#### D.1.1 RULES

The **hull** shall either comply with the **class rules** in force at the time of its initial **certification control** or comply with the current **class rules**.

#### D.1.2 CERTIFICATION

See rule A.11.

#### D.1.3 BUILDERS

- (a) No building licence is required for **hulls** built in accordance with D.2.1.
- (b) A building licence may be granted to commercial builders who wish to use mass production methods to lower the cost of **hulls**, but which do not comply with D.2.1. Such licence shall be based on a building specification approved by the ICA and the ISAF–RSD and a contract between the ISAF–RSD and the builder.

#### D.1.4 IDENTIFICATION

The hull registration number shall be marked in an easily visible location on a non-removable part of the **hull** excluding fittings and **corrector weights** by any of the following means: painting on, engraving in, bonding in, moulding in.

#### D.1.5 DECK LIMIT MARK

The deck **limit mark** shall be displayed on the centreplane of the **hull** near to the mast position. It shall be a minimum of 5 mm in diameter.

### D.2 HULL

#### D.2.1 MATERIALS

(a) Subject to (b) and (c), the **hull**, excluding fittings and remote control equipment but including any supports and containers for such items, shall be made of and joined using one or more of the following materials:

- (1) metal,
- (2) wood; wood based products containing only permitted materials,
- (3) glass fibre reinforced plastic,
- (4) adhesive,
- (5) varnish; paint,
- (6) film covering materials which may be fibre reinforced,
- (7) elastomeric material,
- (8) thermoplastic, which may be moulded, containing only permitted materials.

(b) In glass fibre reinforced plastic:

- (1) an external gel coat is optional and may be pigmented,
- (2) an external paint coating is optional,
- (3) the laminating resin shall be unpigmented,
- (4) the reinforcement shall be glass fibre in any of the following forms: roving, tape, chopped strand mat and woven cloth,
- (5) the interior shall be un-coated to permit non-destructive examination for verification of the material content.

(c) With the exception of elastomeric materials, materials shall not be: expanded, foamed, honeycombed.

(d) Unrestricted by (a) and (b):

- (1) a builder's mark may be applied,
- (2) the hull registration number shall be applied.
- (3) A **hull** made with Texalium and with a date of initial **fundamental measurement**, prior to 1 September 2004 may be **certified**.

#### D.2.2 CONSTRUCTION

Construction is unrestricted subject to the following:

- (a) The **hull** shall be a monohull.
- (b) Except for trunking for the **keel** 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 as in figure H.2.
- (c) The forward 10 mm of the **hull** shall be of elastomeric material.
- (d) The **rudder** shall be attached to the **hull** aft of where the **keel** is attached.

### D.2.3 FITTINGS

Fittings are unrestricted except that:

- (a) Fittings that can contribute to the stiffness and/or strength and/or watertight integrity of the **hull** shall be of materials permitted by D.2.1.
- (b) Ball and/or roller bearings may be used for: sheet control line blocks, mainsail boom sheet blocks, headsail boom sheet blocks.
- (c) Fittings shall not project outboard of the **hull** shell or deck.

### D.2.4 REMOTE CONTROL EQUIPMENT

- (a) The following is permitted:
  - (1) One or more receiver<sup>S[RG4]</sup>.
  - (2) One rudder control unit.
  - (3) One sheet control unit.
  - (4) Battery cells assembled in one or more packs.
  - (5) Electric cables, connectors and switches.
  - (6) One device to indicate the battery voltage. This device may also be included in any of the previous items (1) to (5)[RG5]).
- (b) The rudder control unit and the sheet control unit may contain ball and/or roller bearings.
- (c) Remote control equipment may be fastened using hook and loop fasteners and/or the materials listed in D.2.1(a).

## Section E – Hull Appendages

### E.1 PARTS

#### E.1.1 MANDATORY

- (a) **Keel**, which may comprise a **fin** and a **bulb**.
- (b) **Rudder**

### E.2 GENERAL

#### E.2.1 RULES

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

#### E.2.2 BUILDERS

No licence is required.

## **E.3 KEEL AND RUDDER**

### **E.3.1 MATERIALS**

Materials shall not be of density higher than lead (11.300 kg/m<sup>3</sup>).

### **E.3.2 CONSTRUCTION**

Construction is unrestricted subject to the following:

- (a) The **keel** and **rudder** shall be removable from the **hull**.
- (b) The **keel** and **rudder** shall not
  - (1) be connected,
  - (2) be articulated,
  - (3) have openings through which water could flow when in use.

## **E.4 KEEL**

### **E.4.1 DIMENSIONS**

|  | minimum | maximum |
|--|---------|---------|
| The largest transverse dimension except for the lowest 60 mm ..... |         | 20 mm   |

## **Section F – Rig**

### **F.1 PARTS**

#### **F.1.1 MANDATORY**

- (a) **Mast**.
- (b) Mainsail **boom**.
- (c) Headsail **boom**.
- (d) Standing **rigging**.
- (e) Running **rigging**.
- (f) Fittings.

### **F.2 GENERAL**

#### **F.2.1 RULES**

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

#### **F.2.2 MANUFACTURERS**

No licence is required.

#### **F.2.3 LIMITATIONS**

The function of items shall be limited to what is normally provided by items of their type.

#### F.2.4 CONSTRUCTION

- (a) Fittings and/or control lines may be combined provided their function is not extended beyond what is permitted.
- (b) The position of parts, and the length and tension of **rigging**, may be adjustable unless otherwise restricted.
- (c) Ball and/or roller bearings may be used for: kicking strap fitting; gooseneck; mainsail boom sheet blocks; headsail boom sheet blocks; headsail boom swivel.

### F.3 MAST

#### F.3.1 MATERIALS

- (a) The **spar** shall be aluminium alloy of 2024, 6005, 6061, 6063, 6082 or 7075 grade, or wood.
- (b) Other permitted materials in the **spar** are: adhesive; paint; powder coat; varnish; wax. An aluminium alloy **spar** may be anodised.

#### F.3.2 CONSTRUCTION

- (a) A mast stub arrangement is permitted and, if used, shall be taken to be part of the **mast**.
- (b) Between the **lower point** and the **upper point** the **spar** section shall be:
  - (1) of circular outer shape,
  - (2) constantwithin the variations permitted by F.3.4 except for the following permitted items:
  - an internal sail track,
  - local cutaways for the insertion of a bolt rope or slides, openings for fittings and/or **rigging**, internal and/or external **spar** joiners.
- (c) **Limit marks** may be applied by the following means:
  - (1) paint,
  - (2) self adhesive tape,
  - (3) fittings.

#### F.3.3 FITTINGS

- (a) MANDATORY
  - (1) Mainsail halyard fitting or opening.
  - (2) Shroud fitting(s) or opening(s).
  - (3) Gooseneck.
  - (4) Kicking strap fitting.
- (b) OPTIONAL
  - (1) Wind indicator and/or its fitting.
  - (2) Backstay crane and its fitting.
  - (3) Headsail stay fitting or opening.
  - (4) Headsail halyard fitting or opening.

- (5) Pair of **spreaders** and their fittings(s) and/or opening(s).
- (6) Mast **spar** rings and/or loops to attach mainsail **luff** to the **spar**.
- (7) Mainsail jackstay fittings.
- (8) Mainsail **tack** fitting(s).
- (9) Mast strut and its fitting.
- (10) Checkstay fittings(s).
- (11) Deck fitting.
- (12) Heel fitting with or without mast jack.
- (13) Added weights.

(c) CONSTRUCTION

- (1) A mainsail halyard fitting may include one part that rotates with the **sail** about an axis located inside or outside the **spar** section.
- (2) The mainsail boom **spar** and the kicking strap pivot points shall be aft of the mast **spar** in the regions adjacent to these points.

F.3.4 DIMENSIONS

|  | minimum | maximum |
|--|---------|---------|
| <b>Lower point to upper point</b>  |         |         |
| mast 1 .....   |         | 1600 mm |
| mast 2 .....   |         | 1180 mm |
| mast 3 .....   |         | 880 mm  |
| Lower edge of headsail stay <b>limit mark</b> at fore side<br>of <b>spar</b> to <b>upper point</b>   |         |         |
| mast 1 .....   | 220 mm  |         |
| mast 2 .....   | 160 mm  |         |
| mast 3 .....   | 120 mm  |         |
| Height of checkstay <b>rigging point</b> above <b>heel point</b> .....   |         | 100 mm  |
| <b>Spar</b> between <b>lower point</b> and <b>upper point</b> ignoring<br>features permitted by F.3.2(b):  |         |         |
| diameter .....   | 10.6 mm |         |
| difference between largest and smallest diameter .....   |         | 0.3 mm  |
| for an aluminium <b>spar</b> , the difference between<br>largest and smallest value along the <b>spar</b> of<br>any wall thickness dimension ..... |         |         |
|  |         | 0.1 mm  |
| Length of <b>spar</b> joiners .....  |         | 100 mm  |
| Total length of local cutaways between <b>lower point</b><br>and <b>upper point</b> .....  |         |         |
|  |         | 100 mm  |
| <b>Limit mark width</b> .....  | 3 mm    | 10 mm   |

F.4 BOOMS

F.4.1 MATERIALS

- (a) **Spars** shall be aluminium alloy of 2024, 6005, 6061, 6063, 6082, 7075, 7068 or 7178 grade, or wood.

- (b) Other permitted materials in the **spar** are: adhesive, varnish, paint, wax, powder coat. An aluminium alloy **spar** may be anodised.

#### F.4.2 CONSTRUCTION

The **spar** section shall be constant within the variations permitted by F.4.5 except for

- (a) the last 10 mm at each end,
- (b) openings for fittings and **rigging**.

#### F.4.3 MAINSAIL BOOM FITTINGS

##### (a) MANDATORY

- (1) Mainsail **clew** fitting(s).
- (2) Mainsail boom sheet fitting(s).
- (3) Kicking strap fitting.

##### (b) OPTIONAL

- (1) Mainsail **tack** fitting(s).
- (2) Gooseneck fitting.

#### F.4.4 HEADSAIL BOOM FITTINGS

##### (a) MANDATORY

- (1) Headsail **tack** and **clew** fittings.
- (2) Headsail boom sheet fitting(s).
- (3) Swivel and/or its fitting(s).

##### (b) OPTIONAL

- (1) Headsail stay fitting(s) or opening.
- (2) Topping lift fitting(s) or opening.
- (3) Counterweight and its attachment.

#### F.4.5 DIMENSIONS

minimum    maximum

**Spar**, ignoring features permitted by F.4.2:

largest external dimension ..... 20 mm

difference between the smallest and largest value along the **spar** of any external dimension ..... 0.5 mm

for an aluminium **spar**, the difference between the largest and smallest value along the **spar** of any wall thickness dimension ..... 0.1 mm

## F.5 STANDING RIGGING

### F.5.1 MATERIALS

Except for terminations and the headsail boom swivel, the standing **rigging** shall be of steel and/or polymer.

## F.5.2 CONSTRUCTION

### (a) MANDATORY

- (1) Pair of shrouds.
- (2) Backstay.
- (3) Headsail boom swivel.

### (b) OPTIONAL

- (1) Pair of checkstays if a mast strut is not fitted.
- (2) A headsail stay less than 1 mm in diameter.
- (3) A mast **spar** jackstay less than 1 mm in diameter.

## F.5.3 FITTINGS

### OPTIONAL

- (a) Terminations.
- (b) Length and tension adjustments.

## F.6 RUNNING RIGGING

### F.6.1 MATERIALS

Materials of running **rigging** are unrestricted.

### F.6.2 CONSTRUCTION

#### (a) MANDATORY

- (1) Mainsail boom sheet.
- (2) Mainsail boom kicking strap.
- (3) Headsail halyard, if headsail stay is not fitted.
- (4) Headsail boom sheet.

#### (b) OPTIONAL

- (1) Mainsail halyard.
- (2) Mainsail **clew** control line.
- (3) Mainsail **tack** control line
- (4) Headsail halyard.
- (5) Headsail **clew** control line.
- (6) Headsail **tack** control line.
- (7) Headsail boom topping lift.
- (8) Headsail boom topping lift restraint line.

### F.6.3 FITTINGS

#### OPTIONAL

- (a) Terminations.
- (b) Length and tension adjustments.
- (c) Mainsail boom sheet blocks, headsail boom sheet blocks.

## Section G – Sails

### G.1 PARTS

#### G.1.1 MANDATORY

- (a) Mainsail.
- (b) Headsail.

### G.2 GENERAL

#### G.2.1 RULES

**Sails** shall comply with the **class rules** in force at the time of their initial **certification control**.

#### G.2.2 CERTIFICATION

- (a) The **official measurer** shall **certify sails** in the **tack** and shall date each with the date of **certification control**.
- (b) An MNA may appoint one or more persons at a sailmaker to measure and **certify sails** produced by that manufacturer. A special licence shall be awarded for that purpose.

#### G.2.3 SAILMAKERS

No licence is required.

#### G.2.4 DEFINITIONS

##### **Batten Pocket Point**

The batten pocket point is defined as the intersection of the extended centreline of the **batten pocket**, or batten if there is no **batten pocket**, and the **leech**.

#### G.2.5 MEASUREMENT

- (a) During measurement:
  - (1) battens need not be removed,
  - (2) mainsails with the **luff** not set in a mast **spar** track may be attached to **spars**,
  - (3) a headsail stay and mainsail mast **spar** jackstay need not be removed.
- (b) Where a mainsail has a **luff** bolt rope the **luff** shall be taken as the aft edge of the bolt rope.
- (c) **Luff** slides shall be ignored when measuring sail dimensions provided that their total length, measured along the **luff**, does not exceed 10% of the **luff length**.

### G.3 MAINSAIL

#### G.3.1 CONSTRUCTION

- (a) MANDATORY

- (1) The construction shall be: **soft sail, single ply sail.**
- (2) The **body of the sail** shall consist of the same **ply** throughout and of not more than four parts joined by **seams**.
- (3) **Seams** shall not deviate more than 10 mm from a straight line between **luff** and **leech**.
- (4) The **sail** shall have three **batten pockets**, or battens if there are no **batten pockets**, at the **leech**.
- (5) The **leech** shall not extend aft of straight lines between:
  - (i) the **aft head point** and the nearest batten pocket point,
  - (ii) adjacent batten pocket points,
  - (iii) the **clew point** and the nearest batten pocket point.
 where the batten pocket points are to be taken as defined in G.2.4.
- (6) The **foot** shall not extend below a straight line between **tack point** and **clew point**.
- (7) Class insignia.

(b) **OPTIONAL**

- (1) **Tabling** at the **luff** may form a pocket for a mast **spar** jackstay.
- (2) One or two cringles and/or openings at the **head**.
- (3) One cringle and/or openings at each of the **clew** and **tack**.
- (4) **Luff** openings for mast **spar** rings and/or loops for mast **spar** jackstay fittings.
- (5) **Luff** bolt rope.
- (6) **Luff** track slides.
- (7) **Luff** fittings for mast **spar** rings and/or loops.
- (8) **Luff** fittings for mast **spar** jackstay.
- (9) **Primary reinforcement** specified at G.3.3.
- (10) **Secondary reinforcement** specified at G.3.3.
- (11) Tell tales.
- (12) Not more than three sail shape indicator stripes, applied using paint or ink.
- (13) Sailmaker labels.

G.3.2 **CONSTRUCTION TECHNIQUES**

- (a) Only the following construction techniques shall be used where parts are joined or added as permitted in G.3.1 and G.3.3: welding; gluing; bonding with self adhesive tapes/materials; stitching.
- (b) Except for stitching, the joining techniques used at **seams** shall not extend beyond the edges of the **seam**.

G.3.3 **DIMENSIONS**

|                      | minimum | maximum    |
|----------------------|---------|------------|
| <b>Leech length:</b> |         |            |
| mainsail 1 .....     | 1610 mm | .. 1620 mm |
| mainsail 2 .....     | 1200 mm | .. 1210 mm |

|   |        |      |        |
|---|--------|------|--------|
| mainsail 3 .....  | 910 mm | .... | 920 mm |
| <b>Foot length:</b>   |        |      |        |
| mainsail 1 .....  | 350 mm | .... | 360 mm |
| mainsail 2 .....  | 340 mm | .... | 350 mm |
| mainsail 3 .....  | 310 mm | .... | 320 mm |
| <b>Quarter width:</b>   |        |      |        |
| mainsail 1 .....  | 305 mm | .... | 315 mm |
| mainsail 2 .....  | 295 mm | .... | 305 mm |
| mainsail 3 .....  | 265 mm | .... | 275 mm |
| <b>Half width:</b>  |        |      |        |
| mainsail 1 .....  | 235 mm | .... | 245 mm |
| mainsail 2 .....  | 225 mm | .... | 235 mm |
| mainsail 3 .....  | 205 mm | .... | 215 mm |
| <b>Three-quarter width:</b>                                     |        |      |        |
| mainsail 1 .....  | 135 mm | .... | 145 mm |
| mainsail 2 .....  | 130 mm | .... | 140 mm |
| mainsail 3 .....  | 115 mm | .... | 125 mm |
| <b>Top width</b> .....  |        |      | 20 mm  |
| <b>Primary reinforcement:</b>                                   |        |      |        |
| from nearest <b>sail corner measurement point</b> .....         |        |      | 125 mm |
| <b>Secondary reinforcement:</b>                                 |        |      |        |
| from nearest <b>sail corner measurement point</b> .....         |        |      | 125 mm |
| for <b>flutter patches</b> .....                                |        |      | 50 mm  |
| at <b>luff fittings, luff slides and/or luff openings</b> ..... |        |      | 20 mm  |
| <b>Tabling width</b> .....                                      |        |      | 15 mm  |
| <b>Seam width</b> .....   |        |      | 15 mm  |
| <b>Seam to nearest sail corner measurement point</b> .....      |        |      | 150 mm |
| <b>Batten length:</b>   |        |      |        |
| middle and lower .....  |        |      | 100 mm |
| upper .....   |        |      | 75 mm  |
| <b>Batten width</b> .....                                       |        |      | 10 mm  |
| <b>Batten pocket length outside:</b>                            |        |      |        |
| middle and lower .....  |        |      | 120 mm |
| upper .....   |        |      | 95 mm  |
| <b>Batten pocket width outside</b> .....                        |        |      | 25 mm  |
| <b>Batten pocket point, as defined in G.2.4, to nearest</b>     |        |      |        |
| <b>leech point</b> .....  |        |      | 20 mm  |
| <b>Largest cringle dimension</b> .....                          |        |      | 10 mm  |
| <b>With the exception for luff slides, largest luff fitting</b> |        |      |        |
| <b>dimension</b> .....  |        |      | 10 mm  |
| <b>Sail shape indicator stripe width</b> .....                  |        |      | 30 mm  |

## G.4 HEADSAIL

### G.4.1 CONSTRUCTION

#### (a) MANDATORY

- (1) The construction shall be: **soft sail, single ply sail.**
- (2) The **body of the sail** shall consist of the same **ply** throughout and of not more than three parts joined by **seams.**
- (3) **Seams** shall not deviate more than 10 mm from a straight line between **luff** and **leech.**
- (4) The **leech** shall not extend aft of a straight line between **the aft head point** and the **clew point.**
- (5) The **foot** shall not extend below a straight line between **tack point** and **clew point.**

#### (b) OPTIONAL

- (1) **Tabling** at the **luff** may form a pocket for a headsail stay
- (2) One or two cringles and/or openings at the **head.**
- (3) One cringle and/or openings at each of the **clew** and **tack.**
- (4) Headsail stay slides and/or loops.
- (5) **Primary reinforcement** specified at G.4.3.
- (6) **Secondary reinforcement** specified at G.4.3.
- (7) Not more than two **batten pockets**, or battens if there are no **batten pockets**, at the **leech.**
- (8) Tell tales.
- (9) Not more than two sail shape indicator stripes, applied using paint or ink.
- (10) Sailmaker labels.

### G.4.2 CONSTRUCTION TECHNIQUES

- (a) Only the following construction techniques shall be used where parts are joined or added as permitted in G.4.1 and G.4.3: welding; gluing; bonding with self adhesive tapes/materials; stitching.
- (b) Except for stitching, the joining techniques used at **seams** shall not extent beyond the edges of the **seam.**

### G.4.3 DIMENSIONS

|                      | minimum | maximum     |
|----------------------|---------|-------------|
| <b>Luff length:</b>  |         |             |
| headsail 1 .....     | 1320 mm | .. 1330 mm  |
| headsail 2 .....     | 980 mm  | .... 990 mm |
| headsail 3 .....     | 730 mm  | .... 740 mm |
| <b>Leech length:</b> |         |             |
| headsail 1 .....     | 1245 mm | .. 1255 mm  |
| headsail 2 .....     | 900 mm  | .... 910 mm |
| headsail 3 .....     | 655 mm  | .... 665 mm |
| <b>Foot length:</b>  |         |             |

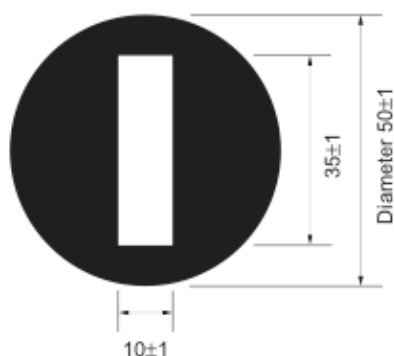
|   |        |      |        |
|---|--------|------|--------|
| headsail 1 .....  | 375 mm | .... | 385 mm |
| headsail 2 .....  | 340 mm | .... | 350 mm |
| headsail 3 .....  | 290 mm | .... | 300 mm |
| <b>Half width:</b>  |        |      |        |
| headsail 1 .....  | 185 mm | .... | 195 mm |
| headsail 2 .....  | 165 mm | .... | 175 mm |
| headsail 3 .....  | 140 mm | .... | 150 mm |
| <b>Top width</b> .....  |        |      | 20 mm  |
| <b>Primary reinforcement:</b>                                       |        |      |        |
| from nearest <b>sail corner measurement point</b> .....             |        |      | 125 mm |
| <b>Secondary reinforcement</b>                                      |        |      |        |
| from nearest <b>sail corner measurement point</b> .....             |        |      | 125 mm |
| for <b>flutter patches</b> .....                                    |        |      | 50 mm  |
| at headsail stay slides and/or loops .....                          |        |      | 20 mm  |
| <b>Tabling width</b> .....  |        |      | 15 mm  |
| <b>Seam width</b> .....   |        |      | 15 mm  |
| <b>Seam</b> to nearest <b>sail corner measurement point</b> .....   |        |      | 100 mm |
| Batten length .....   |        |      | 75 mm  |
| Batten width .....  |        |      | 10 mm  |
| <b>Batten pocket length</b> outside .....                           |        |      | 95 mm  |
| <b>Batten pocket width</b> outside .....                            |        |      | 25 mm  |
| <b>Clew point</b> to lower batten pocket point as defined in G.2.4: |        |      |        |
| headsail 1 .....  | 400 mm | .... | 430 mm |
| headsail 2 .....  | 285 mm | .... | 315 mm |
| headsail 3 .....  | 205 mm | .... | 235 mm |
| <b>Clew point</b> to upper batten pocket point as defined in G.2.4: |        |      |        |
| headsail 1 .....  | 820 mm | .... | 850 mm |
| headsail 2 .....  | 590 mm | .... | 620 mm |
| headsail 3 .....  | 425 mm | .... | 455 mm |
| Largest cringle dimension .....                                     |        |      | 10 mm  |
| Sail shape indicator stripe width .....                             |        |      | 30 mm  |

# PART III – APPENDICES

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## Section H – Illustrations

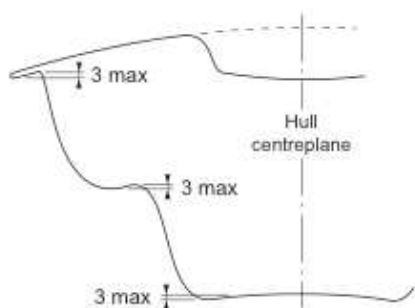
### H.1 CLASS INSIGNIA



### H.2 TRANSVERSE HULL HOLLOWES

Rule D.2.2(b)(3)

The **hull** shall not have transverse hollows in the undersurface of the **hull** that exceed 3 mm when tested parallel to the waterplane.



Effective: ~~1 April 2007~~, 5 October 2009<sup>[RG6]</sup>

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[\[RG1\] AGM 2009 Resolution 4.3](#)

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[\[RG2\] AGM 2009 Resolution 4.4](#)

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[\[RG3\] AGM2006 Resolution 2.14 which is not inserted in 2007 version of the IOM CR](#)

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[\[RG4\]AGM 2008 Resolution 2.3](#)

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[\[RG5\] AGM 2009 Resolution 4.2](#)

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[\[RG6\] IOM ICA Regulation 8.2](#)