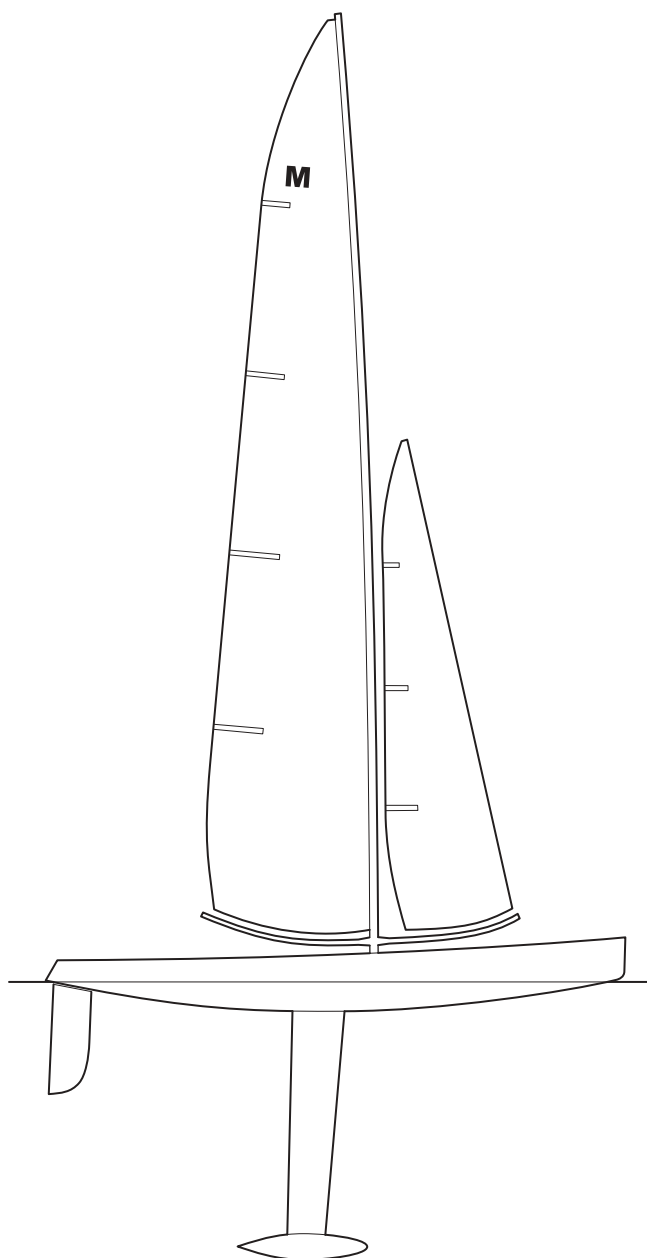


INTERNATIONAL MARBLEHEAD CLASS RULES

2002



I S A F



The Marblehead was developed by Roy L. Clough of the Marblehead Model Yacht Club in Marblehead, Massachusetts, USA, and was given international status by the predecessor of the ISAF–RSD in 1937

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Introduction

Marblehead 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 open class rules which means that anything not specifically prohibited is permitted.

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 Marblehead Class Rules proper begin on the next page.

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

A.2.1	ISAF	International Sailing Federation
	ISAF–RSD	ISAF – Radio Sailing Division
	MNA	ISAF Member National Authority
	DM	ISAF–RSD Member
	ICA	International 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 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, or a DM, and require to be approved by the 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.11.5 The dimensions of no more than three rig/sail groups shall be recorded on the **certificate**. The “A” dimensions of rig/sail groups A, B and C recorded on the **certificate** shall be in descending order.

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 **fundamental measurement**.

A.14 RE-CERTIFICATION

A.14.1 A **hull** may be issued with a new **certificate**, showing dates of initial and new **fundamental measurement** 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 **fundamental measurement** 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 **fundamental measurement** of affected equipment,

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

by carrying out **fundamental measurement** 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

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 **fundamental measurement**.

The rules in Part II are **open 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: B.7.1 Mainsail, Foresail and Mizzen Booms set on a Mast and 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 HULL

C.4.1 IDENTIFICATION

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

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

C.5.2 DEPTH RESTRICTION

The depth restriction gauge, when oriented transversely as in figure H.1, 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

- (a) The **hull appendages** containing or forming concentrated ballast shall not be moved or rotated relative to the **hull**.
- (b) The **hull appendages** shall not be attached to the **hull** more than 15 mm from the **hull** centreplane.
- (c) The **hull appendages** shall not project fore or aft of the **hull** shell and deck in relation to the datum waterplane described in figure H.2.

C.6 RIG

C.6.1 LIMITATIONS

Not more than six **rigs** shall be used during an event. A **spar** lost or damaged beyond repair may be replaced only with the approval of the race committee who shall then remove or cancel any **equipment limitation mark** attached to the replaced **spar**. The race committee may attach **equipment limitation marks** to **spars** before the first race of an event.

C.6.2 USE

The **rig** shall not project fore or aft of the **hull** shell and deck in relation to the datum waterplane described in figure H.2.

C.6.3 DIMENSIONS

	minimum	maximum
Deck limit mark to lower limit mark	G - 10 mm	G + 10 mm
Deck limit mark to lower edge of forestay limit mark		I
Deck limit mark to upper limit mark		2160 mm
Upper point to lower limit mark		A

C.7 SAILS

C.7.1 LIMITATIONS

- (a) Not more than six mainsails and six headsails, with a maximum of three mainsails and three headsails from any rig/sail group, shall be used during an event except as in (b). The race committee may attach **equipment limitation marks** to **sails** before the first race of an event.
- (b) 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 **equipment limitation mark** attached to a replaced **sail**.
- (c) A **sail** of one rig/sail group shall not be used with a **sail** from another unless it is marked with the appropriate rig/sail group letter and it complies with C.7.2.

C.7.2 DIMENSIONS

The dimensions of the **sails** in each rig/sail group shall not exceed those on the **certificate**.

C.7.3 IDENTIFICATION

- (a) Identification shall comply with the RRS.
- (b) The class insignia shall be the letter “M” of dimensions: height and width 25–30 mm, thickness 6–8 mm and shall be displayed on the mainsail above a straight line between the **three-quarter leech point** and the nearest point on the **luff**.

C.7.4 USE

- (a) When an **upper limit mark** is required, the **head point** of the mainsail shall not be set above the **upper limit mark**.
- (b) The **foot** of a mainsail, extended as necessary, shall intersect the **mast spar** above the **lower limit mark**.
- (c) When a forestay **limit mark** is required, a line taken through the **tack point** and **head point** of the headsail shall cut the forward face of the mast **spar** lower than the lower edge of the forestay **limit mark** when the headsail **clew point** is on the **hull** centreplane.
- (d) When a **sail** has a **luff** bolt rope or spar sliders they shall be set in a track in the **spar**.

C.8 REMOTE CONTROL EQUIPMENT

C.8.1 USE

Except for control unit positioning information, no radio transmissions from the **boat** shall be used.

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 **fundamental measurement** or comply with the current **class rules**.

D.1.2 CERTIFICATION

See rule A.11.

D.1.3 BUILDERS

No licence is required.

D.1.4 IDENTIFICATION

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

D.2 HULL

D.2.1 DECK LIMIT MARKS

A deck **limit mark** for each rig/sail group, A, B and C recorded on the **certificate**, shall be displayed on the **hull** centreplane near to the relevant mast position. Each shall be a minimum of 5 mm in diameter.

D.2.2 MATERIALS

Except in remote control equipment, the density of material shall not exceed that of lead (11,300 kg/m³).

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 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.3.
- (c) The forward 13 mm shall be of elastomeric material.

D.2.4 DIMENSIONS

	minimum	maximum
Hull length in relation to the datum waterplane described in figure H.2	1275 mm	1290 mm

D.2.5 FITTINGS

Fittings shall not project outboard of the **hull** shell and deck in relation to the waterplane described in figure H.2.

Section E – Hull Appendages

E.1 GENERAL

E.1.1 RULES

- (a) Measurement shall be carried out in accordance with the ERS except where varied in these **class rules**.
- (b) **Hull appendages** shall comply with the current **class rules**.

E.1.2 BUILDERS

No licence is required.

E.2 HULL APPENDAGES

E.2.1 MATERIALS

Materials shall not be of density higher than lead (11,300 kg/m³).

E.2.2 CONSTRUCTION

Hull appendages shall not be:

- (a) articulated,
- (b) retractable.

Section F – Rig

F.1 PARTS

F.1.1 A **rig** shall consist of no more than:

- (a) one **mast**,
- (b) one headsail luff spar,
- (c) four **booms**,
- (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 CONSTRUCTION

- (a) A fitting attached to a rotating **spar** shall be no bigger than is reasonably required for its purpose.
- (b) Fittings faired into a **spar** shall be considered to be part of the **spar**.

F.3 MAST

F.3.1 MEASUREMENT

The **mast spar cross section** shall be taken to include: fairings, extensions, articulated flaps. Movable parts shall be set to give the greatest dimension.

F.3.2 CONSTRUCTION

Three **limit marks** shall be placed on each mast **spar**, as in H.6, except that:

- (a) the **upper limit mark** may be omitted where the **rig** construction makes it impossible to exceed the “A” measurement recorded on the **certificate**.
- (b) the forestay **limit mark** may be omitted where the **rig** construction makes it impossible to exceed the “I” measurement recorded on the **certificate**.

F.3.3 DIMENSIONS

See F.3.1 Measurement.

	minimum	maximum
Deck limit mark to upper point		2160 mm
Mast spar cross section above lower limit mark		20 mm
Mast spar cross section below lower limit mark		40 mm
Mast limit mark width.....	3 mm	10 mm

F.4 BOOMS

F.4.1 MEASUREMENT

A **boom** which extends fore and aft of the **mast** is to be taken as two **booms**.

F.4.2 DIMENSIONS

	minimum	maximum
Length of junction where boom spars meet		100 mm
Minimum combined boom spar cross section over the length of a junction, as in figure H.4		40 mm
Boom spar cross section within 100 mm of one end only of spar		40 mm
Boom spar cross section at other points		20 mm

F.5 HEADSAIL LUFF SPARS

F.5.1 DIMENSIONS

	minimum	maximum
Spar cross section		20 mm

Section G – Sails

G.1 PARTS

G.1.1 The sail plan is restricted to no more than:

- (a) one mainsail,
- (b) one headsail.

G.2 GENERAL

G.2.1 RULES

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

G.2.2 CERTIFICATION

The **official measurer** shall **certify sails** at the **tack** and shall date each with the date of **fundamental measurement**.

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) **sails** may be attached to **spars**.
- (3) forestays inside headsail luff **tabling** need not be removed.

(b) The **luff perpendicular**, **quarter width**, **half width** and **three-quarter width** shall be taken:

- (1) on a **double luff sail** with supporting **spar** or stay in place:
to the **luff**, or to fore edge of **spar**, whichever gives the greater dimension,
- (2) on a **sail** attached to **spar** section fairings, extensions and/or articulated flaps:
to their foremost edges,
- (3) on a **sail** with the **luff** set in a track in a **spar**:
to the aft edge of the **spar**,
- (4) on other **sails**:
to the **luff**. Discontinuous attachments on the **luff** shall be disregarded provided their total length measured along the **luff** does not exceed 10% of the **luff length** and the longest attachment is no more than twice the shortest.

(c) The upper and lower **leech** profile is controlled as shown in H.5.

(d) Parts of **stiffening** which are less than 2 mm in diameter and not covered by sail material shall not be taken as parts of the **sail**.

G.2.6 CONSTRUCTION

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

(b) **Stiffening** is only permitted:

- (1) For battens
- (2) At the **head**.

(c) **Sails** shall be marked at the **clew** with their rig/sail group letter, or letters if the **sail** is to be used with more than one rig/sail group.

G.2.7 DIMENSIONS

	minimum	maximum
Top width		
on a double luff sail		40 mm
on a sail with luff rope or sliders		25 mm
on other sails		20 mm
Extension of stiffening at head from a point 20 mm forward of aft head point at a line through aft head point and head point		20 mm
Foot round taken from foot to a straight line between tack point and clew point		25 mm
Foot irregularity		3 mm
Batten length.....		105 mm
Batten width		20 mm
Variation in the following measurements: between batten pocket point and adjacent batten pocket point(s), between clew point to adjacent batten pocket point, between head point to adjacent batten pocket point		25 mm

G.3 MAINSAILS

G.3.1 CONSTRUCTION

There shall be no more than four battens which shall be in the leech.

G.4 HEADSAILS

G.4.1 CONSTRUCTION

There shall be no more than three battens which shall be in the leech.

G.5 SAIL AREA

G.5.1 LIMITATION

The measured sail area of each rig/sail group shall not exceed 0.5161 m².

G.5.2 CALCULATION

The measured sail area of a rig/sail group is taken as the sum of the following areas for that rig/sail group:

mainsail area	$A \times B / 2$
excess mainsail area	$A \times (2X + Y + 2Z) / 6$
headsail area	$Q \times R / 2$
excess headsail area	$Q \times (2x + y + 2z) / 6$

where for that rig/sail group:

A, B, Q and R are the largest dimensions and

X, x are the largest excesses in the **quarter widths** and

Y, y are the largest excesses in the **half widths** and

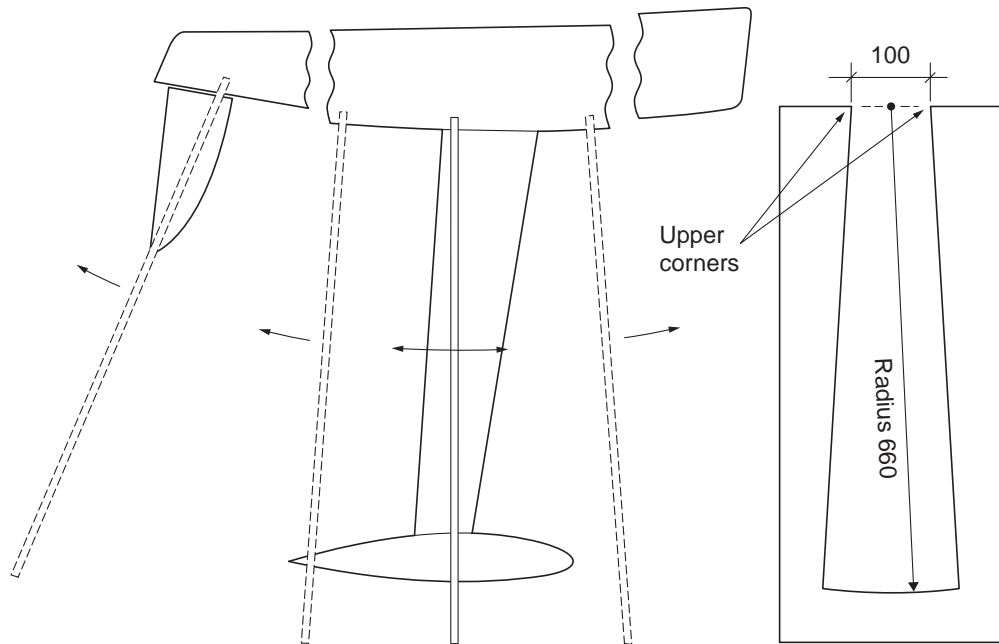
Z, z are the largest excesses in the **three-quarter widths** as in Fig H.6.

PART III – APPENDICES

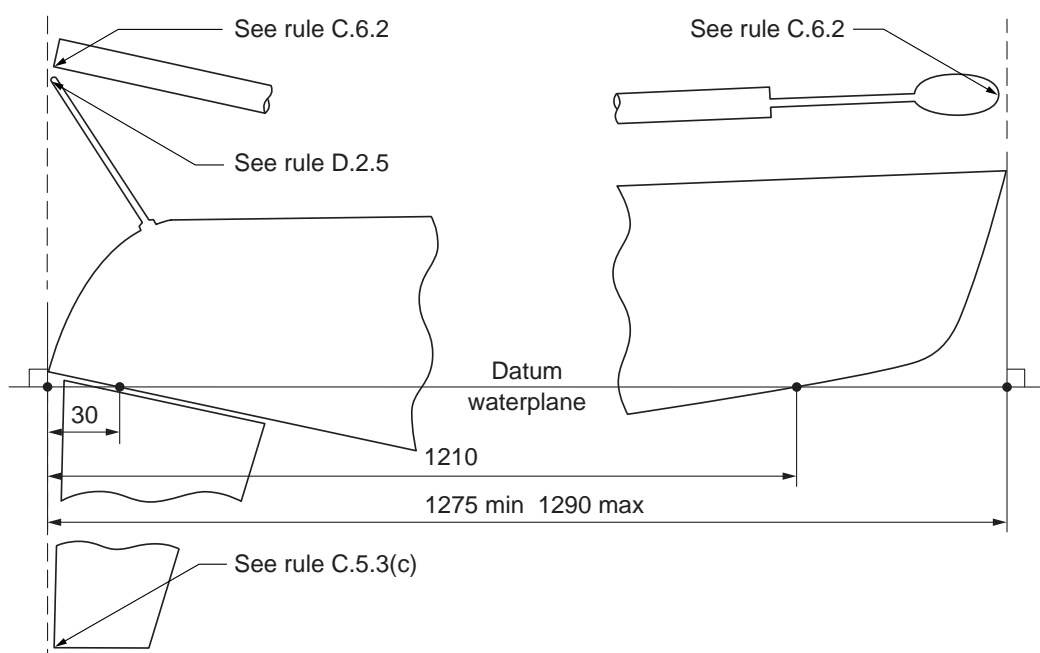
The rules in Part III are **open class rules**. Measurement shall be carried out in accordance with the ERS except where varied in this Part.

Section H – Figures

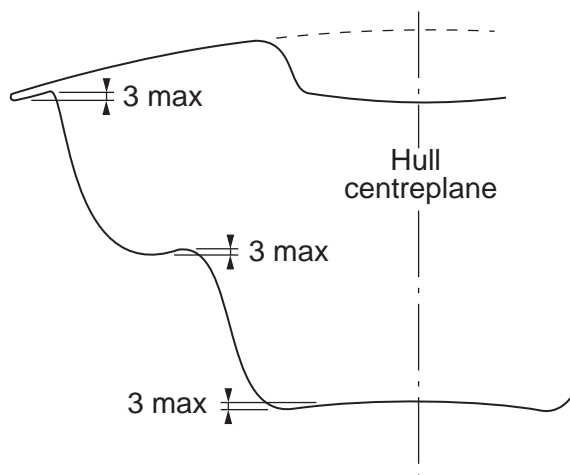
H.1 DEPTH RESTRICTION GAUGE



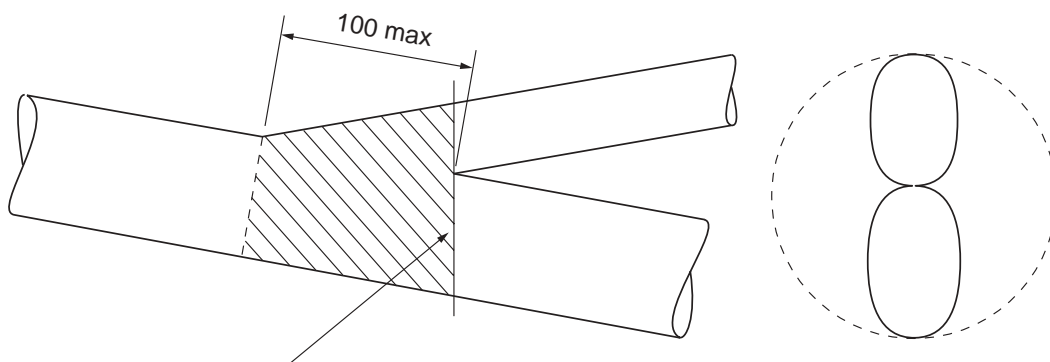
H.2 DATUM WATERPLANE



H.3 TRANSVERSE HULL HOLLOWS



H.4 COMBINED BOOM SPAR CROSS SECTION



The largest minimum combined **boom spar cross section** over the length of the junction is found in this section and it shall not exceed 40 mm.

H.5 CONTROL OF THE UPPER AND LOWER LEECH PROFILE

THE TEMPLATE

A template of 900 mm radius shall be used for this measurement.

AT THE HEAD

The template shall be placed to touch the **aft head point** and a straight line through the two nearest **leech points**.

AT THE CLEW

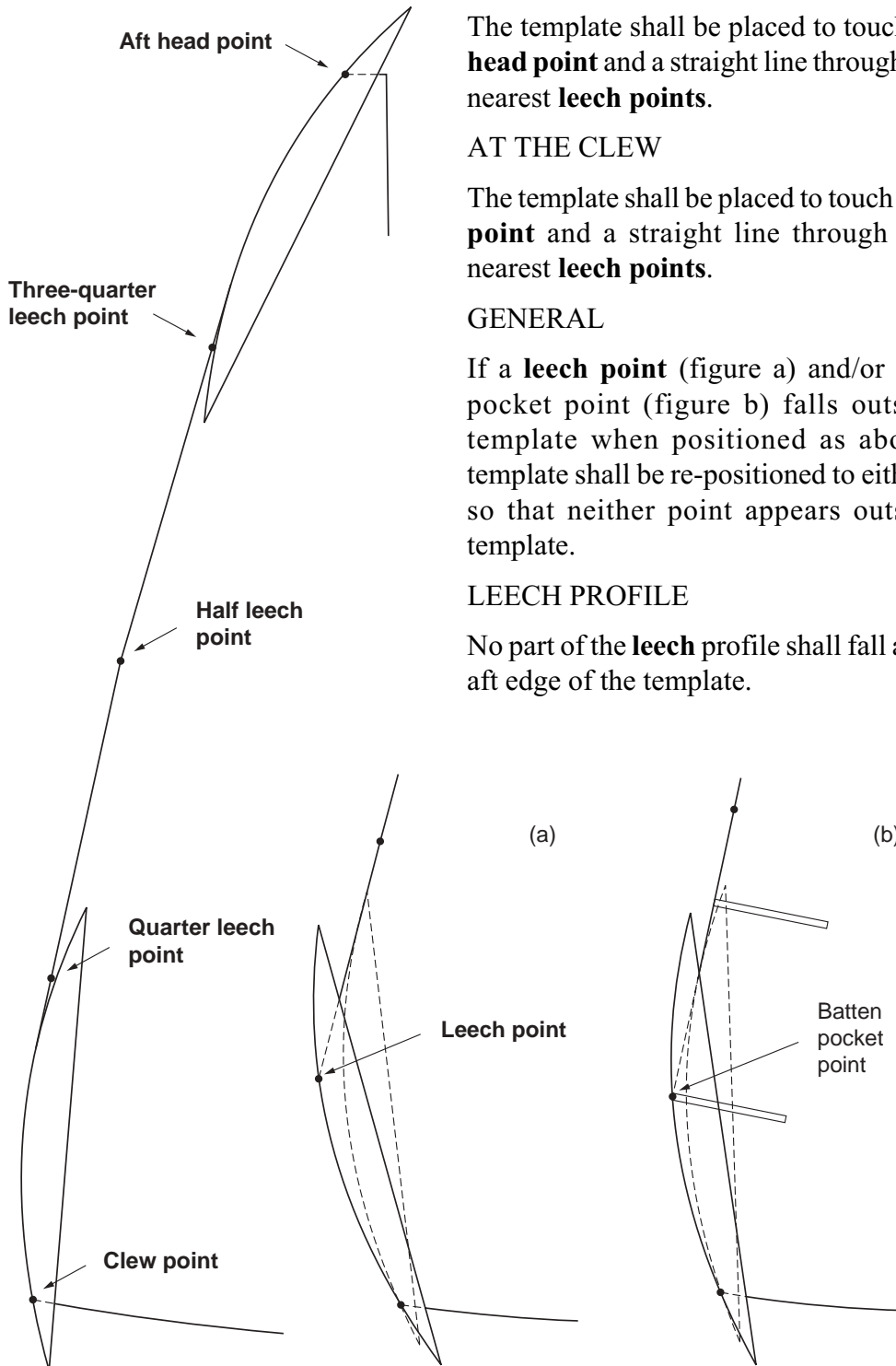
The template shall be placed to touch the **clew point** and a straight line through the two nearest **leech points**.

GENERAL

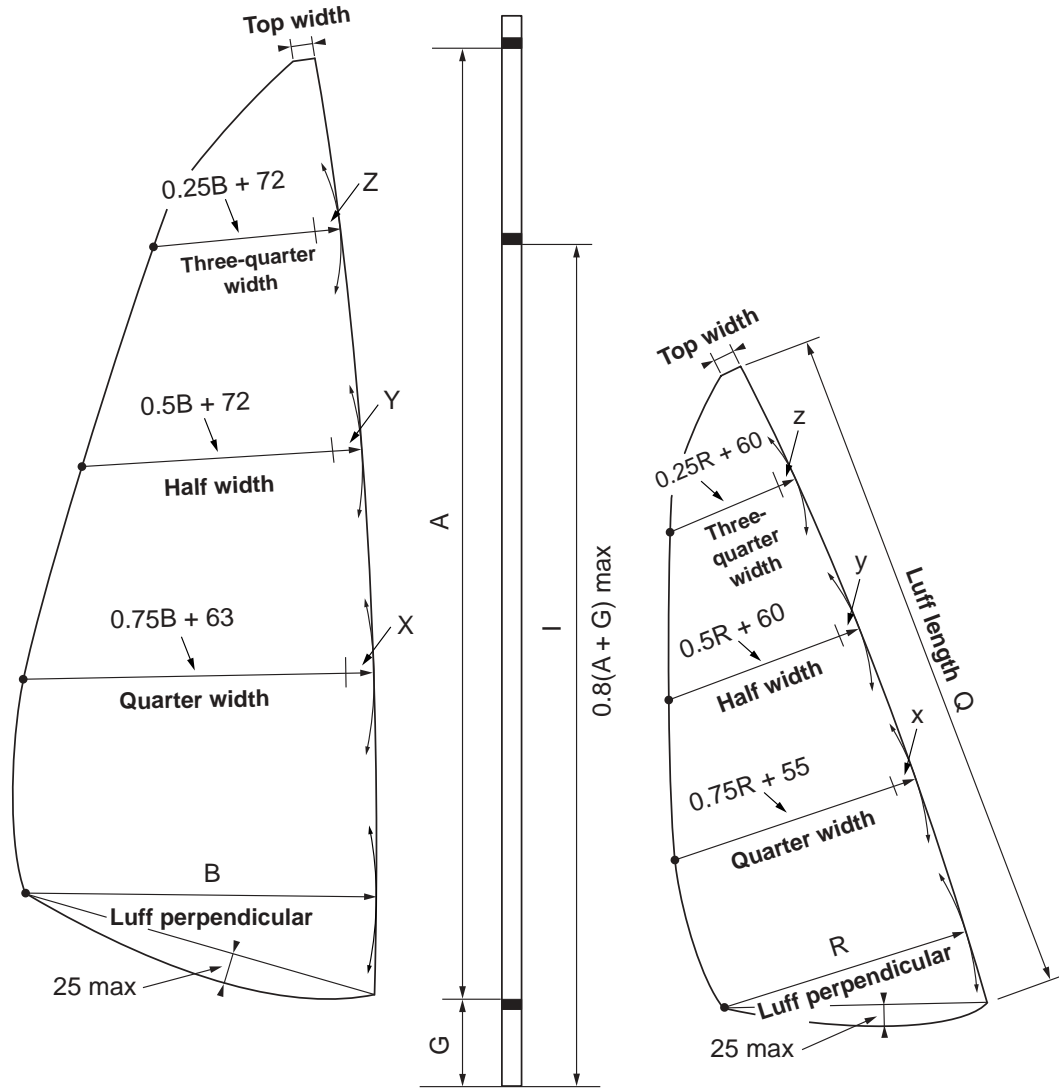
If a **leech point** (figure a) and/or a **batten pocket point** (figure b) falls outside the template when positioned as above, the template shall be re-positioned to either point so that neither point appears outside the template.

LEECH PROFILE

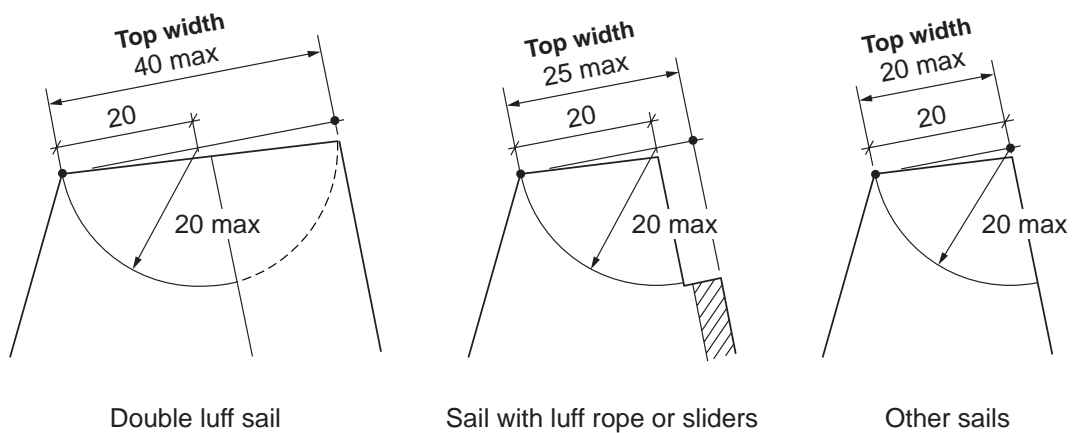
No part of the **leech** profile shall fall aft of the aft edge of the template.



H.6 SAIL AREA MEASUREMENT



H.7 TOP WIDTH AND STIFFENING AT HEAD



Effective: 1 March 2002

Previous issues: 1 June 1996 with amendments 1 March 2000.

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