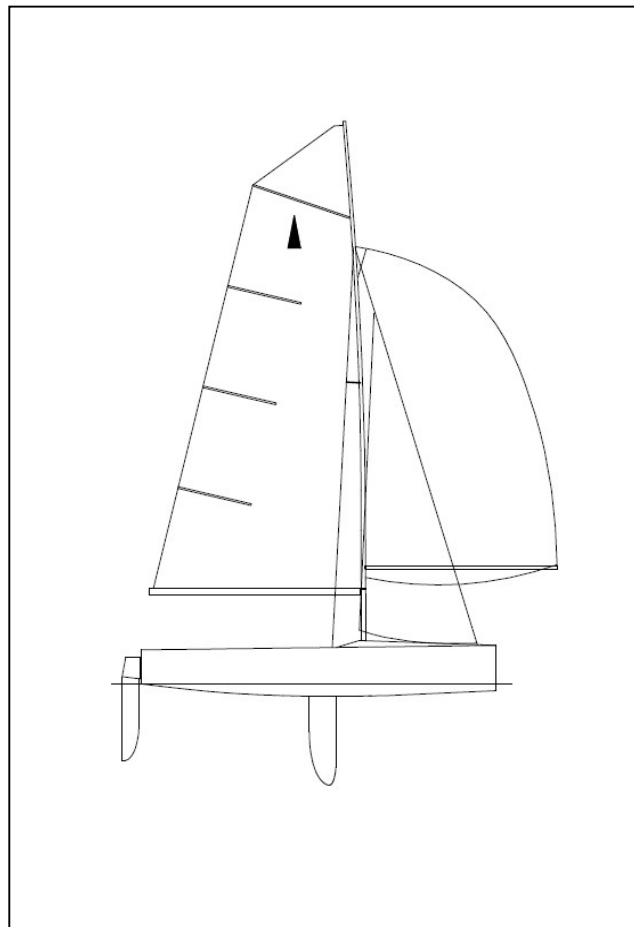


**NATIONAL
MERLIN ROCKET
CLASS RULES
2017**

The Merlin and Rocket Classes amalgamated in 1951 and in the same year, the Merlin Rocket was adopted as a National Class by the Yacht Racing Association.



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INTRODUCTION

The Merlin-Rocket is a development class where design and ingenuity is rewarded within the spirit of the rules.

*These Rules are **Open Class Rules**. Owners and manufacturers are strongly urged by the MROA to read the ERS definition of **Open Class Rules** to fully understand the implication and philosophy of the class.*

Merlin Rockets are controlled by measurement.

*Merlin Rocket **hulls**, rigs, appendages and sails may, after having left the manufacturer, only be altered to the extent that they still comply with these class rules.*

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

The Merlin-Rocket class permits IHC (In House Certification) as approved by the RYA for sails in Section G only. (Subject to Class Ratification)

This introduction only provides an informal background and the National Merlin Rocket Class Rules 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 WS World Sailing
- MROA Merlin Rocket Owners Association
- RYA Royal Yachting Association
- ERS Equipment Rules of Sailing
- RRS Racing Rules of Sailing
- IHC In-House Certification

A.3 AUTHORITIES

- A.3.1 The **Class Rules Authority** of the class is the RYA which shall co-operate with the MROA in all matters concerning these **class rules**.
- A.3.2 Notwithstanding anything contained herein, the **certification authority** has the authority to withdraw a **certificate**.
- A.3.3 The **Certification Authority**, **Class Rules Authority**, the MROA and any **Official Measurer** is under no legal responsibility in respect of these Rules or accuracy of measurement and no claims arising therefrom can be entertained.

A.4 ADMINISTRATION OF THE CLASS

- A.4.1 The class shall be administered by the RYA in cooperation with the MROA.

A.5 WORLD SAILING 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.7 CLASS RULES AMENDMENTS

- A.7.1 Amendments to these **class rules** are subject to the approval of the **Class Rules Authority**.
- A.7.2 **Class Rule** amendments are highlighted with an underline

A.8 CLASS RULES INTERPRETATION

- A.8.1 Interpretation of **class rules** shall be made by the **Class Rules Authority** in consultation with the MROA.

A.9 NATIONAL CLASS FEE

- A.9.1 The **hull** builder shall pay the National Class Fee (Building Fee) to the RYA at the commencement of building whether or not it is subsequently measured or certified.
- A.9.2 The RYA shall, after having received the National Class Fee for the **hull**, paid in pounds sterling, issue a Building Fee Receipt, sail number & for boats built after 01/01/2013 a building fee plaque to the hull builder.
- A.9.3 Replacement building fee plaques may be issued at the discretion of the RYA.

A.10 SAIL NUMBERS

- A.10.1 Sail numbers shall be issued sequentially by the RYA.

A.11 BOAT CERTIFICATION

A.11.1 A **certificate** shall record the following minimum information:

- (a) Class.
- (b) **Certification authority.**
- (c) Boat name (no duplications within the class are permitted)
- (c) Sail number
- (d) Owners name and address.
- (e) Boat Weight as per C.6.1
- (f) Number and weight of **corrector weights**
- (g) Shell material
- (h) Designer and design type
- (i) Maximum **headsail** area,
- (j) Maximum **Mainsail** Area
- (k) **Outer Point Distance** and **Upper Point Height** dimensions,
- (l) Maximum **Mainsail Half Width** & Maximum **Three Quarter Width** dimensions.
- (m) Name of Builder/Manufacturers
- (n) Date of last buoyancy test
- (i) Date of issue of initial **certificate.**
- (j) Date of issue of **certificate.**
- (k) Name of **Official measurer** from initial certification.

A.12 INITIAL BOAT CERTIFICATION

A.12.1 For a **certificate** to be issued to a boat not previously **certified**:

- (a) **Certification measurement** shall be carried out by an **official measurer** who shall complete the measurement form.
- (b) The documentation and **certification** fee, if required, shall be sent to the **certification authority.**
- (c) Upon receipt of satisfactorily completed documentation and **certification** fee, the **certification authority** may issue a **certificate.**

A.13 VALIDITY OF CERTIFICATE

A.13.1 A boat **certificate** becomes invalid upon:

- (a) The change to any items recorded on the boat **certificate** as required under A.11.1
- (b) Withdrawal by the **certification authority,**
- (c) The issue of a new **certificate.**
- (d) Any alteration or major repair to items listed on the boat measurement form.

A.14 BOAT RE-CERTIFICATION

A.14.1 The **certification authority** may issue a **certificate** to a previously certified boat:

- (a) When it is invalidated under A.13.1(a), after receipt of the old **certificate** where practical, and **certification** fee.
- (b) When it is invalidated under A.13.1 (b), at its discretion.
- (c) When it is invalidated under A.13.1 (d), having been re-measured by an **official measurer** and by application of the procedure in A.12.
- (d) In other cases, by application of the procedure in A.12.

A.15 RETENTION OF CERTIFICATION DOCUMENTATION

A.15.1 The **certification authority** shall retain the original documentation upon which the current **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 a valid **boat certificate**.
- (c) have valid **certification marks** as required by **class rules**.

B.2 FLOTATION CHECKS

B.2.1 The boat **certificate** shall carry a satisfactory buoyancy endorsement as per Section H.

B.2.2 A race committee may require that a **boat** shall pass a flotation test in accordance with Section H.

B.3 CLASS ASSOCIATION MEMBERSHIP

B.3.1 The owner of the boat shall be a current member of the MROA.

PART II – REQUIREMENTS AND LIMITATIONS

The **crew** and the **boat** shall comply with the rules in Part II when *racing*. In case of conflict Section C shall prevail.

The rules in Part II are **open class rules**. **Certification measurement** and **Equipment inspection** 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

- (a) The ERS Part I – Use of Equipment shall apply.

C.2 CREW

C.2.1 LIMITATIONS

The **crew** shall consist of 2 persons. The Notice of Race or Sailing Instructions for an event may amend this rule.

C.3 PERSONAL EQUIPMENT

C.3.1 MANDATORY

- (a) The boat shall be equipped with a personal floatation device for each crew member to the minimum standard ISO 12402-5 (CE 50 Newtons) or EN 396.

C.4 ADVERTISING

C.4.1 LIMITATIONS

Advertising on the boat chosen by the person in charge is prohibited. The Notice of Race and or Sailing Instructions for an event may amend this rule.

C.5 PORTABLE EQUIPMENT

- C.5.1 (a) Any device which correlates and/or stores any of the following; heading, time or vmg is prohibited.

C.6 BOAT

C.6.1 WEIGHT

- (a) The minimum weight shall be 98kg.
(b) The weight in C.6.1 (a) shall be taken as the **Boat Weight** excluding the Rudder, Tiller, Rig, Sails but including running rigging, adjustment tackles for shrouds, lower shrouds, kicking strap and jib halyard, fixed bottom boards, buoyancy and its fastenings and **centreboard**.

C.6.2 LIMITATIONS

Internal ballast other than that listed in C.6.3, outriggers, **bowsprits**, **bumpkins**, **bilgeboards**, outside channels and other similar devices are prohibited.

C.6.3 CORRECTOR WEIGHTS

When the **Boat weight** as per C.6.1 is less than the minimum requirement, **corrector weights** shall be permanently and rigidly fastened to the **hull**. **Corrector weights** attached to the external surface of **hull** shell are prohibited.

C.6.4 MODIFICATIONS AND REPAIR

- (a) Routine maintenance such as painting, polishing and filling scratches that do not alter the shape of the hull are permitted without re-measurement and re-certification.
(b) Following any substantial repair or modification to the boat an official measurer shall check that the measurements of the boat conform to the current class rules. This will not necessitate a new measurement form, though the new measurements should be recorded on the boat's certificate and returned to the certification authority where required by A.14.1(a).

C.7 HULL

C.7.1 MODIFICATIONS, MAINTENANCE AND REPAIR

- (a) The hull shall not be altered in any way except as permitted by these class rules.
- (b) Only materials as listed in D.3.3 shall be used to carry out repairs to the hull.
- (c) Any alterations or repairs to the hull which affect or may affect its external shape shall be remeasured in accordance with Rule A13.

C.7.2 FITTINGS

Inspection hatch covers and drainage plugs shall be kept in place at all times.

C.7.3 DRAINAGE

The **hull** shall not be self draining other than by means of draining ports and/or suction bailers.

C.8 HULL APPENDAGES

C.8.1 The maximum projection of the centreboard below the lowest point of the keel shall not be greater than 1400mm. When fully raised the **centreboard** shall not extend below the lowest point of the keel or above the **sheer**.

C.8.2 **Daggerboards, bilgeboards, double rudders, winged rudders** and similar contrivances are prohibited.

C.8.3 The **centreboard** shall pivot only about a single pin, bush or bolt passing through the **centreboard** and located in the centreboard case. The location of the pin, bush or bolt shall either be fixed or be adjustable only along a line parallel to the fore and aft axis of the hull.

C.9 RIG

C.9.1 MAST

- (a) The **spar** may rotate through 90 degrees on each side of the **Centreplane** of the boat.
- (b) The **Mast Datum Point** (see F.2.2) shall measure between 630mm and 730mm above sheer.

C.9.2 SPINNAKER POLE

When set, a **spinnaker pole** may not project more than 2320mm from the forward face of the **mast spar**.

C.10 SAILS

C.10.1

- (a) **Sails**, shall not be altered in any way except as permitted by these **class rules**.
- (b) Routine maintenance such as repairing minor tears is permitted without re-measurement and re-**certification**.

C.10.2 LIMITATIONS

Only 1 spinnaker shall be carried aboard.

C.10.3 JIB

The **sheet** shall only be attached to a single point on the **sail**.

Section D – Hull

D.1 PARTS

D.1.1 MANDATORY

Hull which shall include the following: **centreboard** case, bilge keels, keel, and transom.

All openings of cutaways must meet the dimensional constraint except that no restriction is placed on the location of drain holes whose diameter does not exceed 30mm and of which not more than two are permitted.

D.2 GENERAL

D.2.1 RULES

(a) The **hull** shall comply with these **class rules** or the **class rules** in force at the time of initial **certification**. Any alteration, replacement or repair to the buoyancy apparatus shall comply with the current **class rules**.

(b) Outside channels are prohibited.

D.2.2 CERTIFICATION

(a) See Rule A.13.

D.2.3 IDENTIFICATION

(a) The registered sail number shall be permanently impressed into the centre thwart or into the hog aft of the **centreboard** case in figures not less than 25mm in height.

(b) In addition to D.2.3(a) boats built after 01/01/2013 shall carry the RYA Building fee plaque permanently attached to the inside starboard side of the transom below the **sheer**.

D.3 CONSTRUCTION

D.3.1

(a) **Hulls** shall be constructed in one of the following ways:

(i) Planked in wood and/or plywood.

(ii) Moulded or non-moulded composite construction

(b) Hulls shall meet dimensional constraints listed in D.6.3.

(c) In boats certificated prior to the 21 June 1988 there shall be no hollow greater than 8mm in the Topside of any transverse section more than 1500mm from the foreside of the stem. In boats certificated after the 21 June 1988 there shall be no hollow greater than 4mm in the Topside of any transverse section more than 1500mm from the foreside of the stem.

(d) There shall not be any surface within the **hull** lower than 80mm below the **sheer**, which can divert water overboard, or into the **centreboard** case, or through the transom openings, other than the inner surface of the skin of the **hull**.

(e) Partitions which could permanently contain a significant amount of water in any part of the boat are prohibited. This requirement does not apply to built-in buoyancy.

(f) One bilge keel or chafing piece shall be fitted over a land on each side, and so placed that the weight of the boat will bear on the main keel and one bilge keel only, when the boat is on a level surface. Each bilge keel shall be in contact with one plank only and no part of a bilge keel shall be within 4mm of any adjacent plank. In alteration to D.2.1 this rule applies to all boats.

(g) The **sheer** shall be a fair continuous curve.

(h) The aft face of the transom shall be flush with the topsides and bottom

D.3.2 **Hulls** may be built using either of the two construction methods but must satisfy the differing construction criteria according to the build method used.

D.3.2.1 Planked in Wood or Plywood:

(a) Each plank shall overlap the next plank nearer the garboard on the outside. Where the surface of the planks are in contact at the lands, only the plank nearer the keel may be bevelled except that

commencing at not more than 550mm from each of the extreme ends of the **hull**, the lands may be bevelled or rabbetted together towards the end of the boat. The exposed edges, whether inside or outside the **hull**, may be rounded off to a radius not exceeding the plank thickness.

- (b) The **hull** shall be built with a rabbetted keel or keel and hog-piece.
- (c) A boat certified in accordance with Rule D.3.2.1 may be modified to comply with D.3.2.2 and shall thereafter be remeasured in accordance with Rule A13.

D.3.2.2 Moulded or Non-Moulded Composite Construction.

- (a) The shape, features and components of the outside surface of the hull shall be measured as if it were constructed from, and must be capable of being reproduced using, wood or plywood planks not less than 6mm nor more than 12mm in thickness and shall be compliant with the relevant parts of Rule D.3.2.1 (a)
- (b) Except within 550mm of the ends of the hull and in those regions corresponding to the lands in a wood or plywood boat, the parts corresponding to the planking in a wood or plywood boat shall be uniform in thickness, manner of construction and density. The actual thickness between the inner and outer surfaces shall be not less than 6mm or more than 12mm.

In those regions corresponding to the lands in a wood or plywood boat additional filling and reinforcement is permitted between the inner and outer surfaces provided that it is uniform along the length of each "land".

- (c) The same materials shall be used throughout the construction of the bare hull shell except in areas subject to high local stress and/or within 550mm of the stem, within 100mm of the **sheerline**, in the centreboard case sides and the transom.

D.3.3 MATERIALS

- (a) Only wood, plywood, closed cell structural foam, glass, polyester and epoxy based resins, glues, metallic fastenings, paint and fillers shall be used to form the planking (or in composite boats, those parts corresponding to the planking in a wood or plywood boat), stem, transom, hog, bilge keels and centreboard case sides.
- (b) Any material may be used to form any other components of the **hull**.
- (c) **Hull** surface finishes shall be of paint, resin or fillers.
- (d) Any part of the **hull** surface finish (external or internal) may be reinforced by layers of woven or non-woven glass-fibre.

D.4 BUOYANCY

D.4.1 CONSTRUCTION

- (a) Flotation units shall be securely attached. Each unit, with the exception of a shaped bow unit, shall have a minimum of two retaining straps. The total number of straps being determined by the requirements of one strap per 350mm, or part thereof, of maximum overall length of each unit. Each strap shall be securely attached to the hull in two places.
- (b) There shall be not less than three individual buoyancy units. A unit contained within another unit shall be counted with that unit as a single unit. The flooding of any single unit shall be assumed to flood all units within it unless the latter are of the closed cell foam type.
- (c) Rigid units of permanent buoyancy may be placed only in those parts of the hull where built-in buoyancy is permitted.
- (d) Built-in buoyancy is permitted only as follows:
 - (i) In the bow not extending aft of the lines from the forward edge of the mast heel to the main shrouds (extended if necessary) at the height of the sheer.
 - (ii) In the stern extending not more than 1100mm forward of the aft side of the transom.
 - (iii) Provision shall be made for emptying all built-in units.

D.5 GUNWALE AND RUBBING STRAKES

Plan width outside the sheerline of gunwale. Rubbing strake assembly if fitted	Max.50mm
Extension below the sheerline of gunwale. Rubbing strake assembly if fitted,	Max 75mm

D.6 ASSEMBLED HULL

D.6.1 MATERIALS

Only the following materials may be used in the keel band;
Metal or Plastic.

For all other fittings, the material is optional.

D.6.2 FITTINGS

- A keel band shall run the whole length of the **hull**. In moulded boats it may form part of the hull moulding.
- There shall be no projection from the skin other than; gunwale rubbing strakes, lifting handles, shroud chain plates, sheet fairleads fitted to gunwales and or rubbing strakes so that no part of such fittings extends beyond the extreme edge of the gunwale and/or rubbing strake, shroud plates fitted to the outside of the planking, bilge keels, stem and keel bands, rudder fittings, suction bailers and drain plugs, transom draining port closing devices.

D.6.3 DIMENSIONS

	Minimum	Maximum
Hull length including stem band, but excluding rudder fittings, closing devices fitted to the draining ports in the transom and the overlap of a non-wooden deck.		4270 mm
Hull Beam including rubbing strakes.		2200mm
Beam , at midlength, measured 210mm above the points on the outside surface of the skin, 51mm from the longitudinal centreline. This measurement shall be taken to the straight line bridging adjacent lands on the outside of the skin along the side of the keel at 2135mm forward from the intersection of the gar plank and the aft face of the transom.	1170mm	
Depth, measured vertically from the sheer to the inside of the skin of the hull , at points 150mm each side of the centreline at a station 2135mm along the centreline horizontally forward from a vertical line at the aft face of the transom	500mm	
Height of the sheer at the aft face of transom, measured vertically above the point which is 50mm laterally from the longitudinal centreline	280mm	
Width of centreboard slot		50mm
External exposed width of any plank		160mm
Inside width of the keel or hog.		160mm
Width of the keel outside the hull.		100mm.
Exposed depth of the keel, inclusive of a keel-band from the aft face of the transom to the forward edge of the lowest planks at the bow.	20mm	30mm
Thickness of wood or plywood planking, uniform throughout.	6mm	
In moulded or non-moulded composite boats the thickness of those parts corresponding to the planking in a wood or plywood boat, uniform throughout.	6mm	12mm
Overlap of a non-wooden deck; Extension from bow Extension from stern Extension below sheerline		7mm 7mm 50mm
Opening of hull cutaways to the outside of the skin of the hull .	40mm	
Curvature measured across the external surface of any plank, at right angles to the outside land of the plank perpendicular to the planks surface.		1mm
Bilge keel or chaffing piece length with a cross section containing a rectangle not less than 20mm x 10mm.	1200mm	
Bilge keel extension forward of a transverse line formed by the keel and the transom.		2400mm
Radius of angles at the lands on the outside of the hull .		4mm
Total positive buoyancy after flooding of a single buoyancy unit.	135kg	
Keel band depth.	2mm	7mm

Section E – Hull Appendages

E.1 PARTS

E.1.1 MANDATORY

Centreboard

E.2 GENERAL

E.2.1 RULES

The **hull appendages** shall comply with these **class rules** or the **class rules** in force at the time of initial **hull certification**.

E.3 CENTREBOARD

E.3.1 WEIGHT

The **centreboard** weight shall not exceed 8 kg

Section F – Rig

F.1 PARTS

F.1.1 MANDATORY

- (1) One **mast spar**.
- (2) One **boom spar**.

F.1.2 OPTIONAL

- (1) Spinnaker Pole
- (2) Whisker Pole

F.2 GENERAL

F.2.1 RULES

The **Rig** shall comply with these **class rules** or the **class rules** in force at the time of initial **hull certification**

F.2.2 DEFINITIONS

The **Mast Datum Point** is the **Lower Point**.

F.3 MAST

F.3.1 DIMENSIONS

	Minimum	maximum
Lower point to upper point		6180mm
Height of headsail luff rigging point , extended if necessary.		4170
Spinnaker hoist height		4220mm
Limit Mark Width (only one set permitted)	10mm	
The mast with its track, if any, shall be capable of passing through a circle		130mm diameter

F.3.2 LIMITATIONS

The **mast** shall not be permanently bent.

F.4 BOOM
F.4.1 DIMENSIONS

Limit Mark Width (only one set permitted)	10mm	
Outer point distance -	as selected in G.2.3.(b)	
The boom, with its track, if any, shall be capable of passing through a circle		130mm diameter

Section G – Sails

G.1 PARTS

G.1.1 MANDATORY

- (a) **Mainsail**
- (b) **Headsail**

G.1.2 OPTIONAL

- (a) Spinnaker

Sails other than those permitted above are prohibited.

G.1.3 LIMITATIONS

Double luffed mainsail, including **mainsails** passed around the **mast** and back on to themselves, and similar methods, are prohibited.

G.2 GENERAL

G.2.1 RULES

- (a) The **Sails** shall comply with these **class rules** or the **class rules** in force at the time of initial hull **certification**
- (b) **Double luffed mainsails** are prohibited.
- (c) Battens other than the top batten shall be in the **sail** during **fundamental measurement**.

G.2.2 CERTIFICATION

- (a) The **official measurer** shall **certify mainsails** and **headsails** in the **tack** and **spinnakers** on the **head** and shall sign and date the **certification mark**.
- (b) The following shall be written legibly and indelibly in metric units not less than 20mm in height:
 - (i) The **headsail** area as defined in G.2.3(d) shall be marked adjacent to its **tack**
 - (ii) The **foot length** for a **mainsail** shall be marked adjacent to its **tack**.
 - (iii) The area of a spinnaker as defined in G.2.3(e) shall be marked on its **head**.
 - (iv) The maximum **headsail** area, and the maximum **boom outer point distance** shall be marked on the **boom spar** adjacent to the **outer limit mark**.

G.2.3 DEFINITIONS

- (a) The Total Sail Area in square metres is $13.80 - (0.6 \times (L + 0.68))$, but shall not exceed 10.2sqm.
- (b) **Mainsail** area shall be calculated as $(L \times F) / 2$, where L is the dimension between the **lower limit mark** and the **upper limit mark** on the **mast**, and F is the **boom outer point distance**. The **mainsail** area shall not exceed 80% of the Total Sail Area.
- (c) The maximum **headsail** area is the Total Sail Area less the **mainsail** area measured in G.2.3 (b).
- (d) The actual **headsail** area shall be calculated as $(\text{luff length} \times \text{luff perpendicular}) / 2$.
- (e) The spinnaker area shall be calculated as $0.25 \times \text{luff length} \times ((0.5 \times \text{Foot length}) + \text{quarter width} + \text{half width} + \text{three quarters width})$.

G.3 MAINSAIL

G.3.1 IDENTIFICATION

- (a) The class insignia, an isosceles triangle of height 400mm and base 150mm (both +/- 20mm), shall be carried on each side of the mainsail above the sail number and may be placed back to back.
- (b) The sail numbers shall comply with RRS 77.

G.3.2 MATERIALS

G.3.3 CONSTRUCTION

- (a) The construction shall be: **soft sail, single ply sail**.
- (b) The top **batten pocket** is unrestricted in length.
- (c) **Primary Reinforcement** can be of any material.
- (d) Other **reinforcement** shall be of soft sail.
- (e) The **leech** shall not be held out other than by the cut of the sail, the headboard or the battens
- (f) **Stiffening** shall consist of;
 - (1) A headboard maximum width 100mm measured perpendicular to the luff.
 - (2) A maximum of 4 battens in the leech are permitted.
- (g) **Double luffed mainsails** are prohibited.

G.3.4 DIMENSIONS

	Min	Maximum
Half width		F/2 + 500mm
Three-quarter width		F/4 + 640mm
Primary Reinforcement that is not soft sail from sail corner measurement points , Cunningham or at a reefing point adjacent to luff or leech		250mm + 3% Luff length
Head point to intersection of leech and centreline of uppermost batten pocket	1250mm	
Head point to intersection of luff and centreline of uppermost batten pocket	1000mm	1400mm
Top Width		130mm
Outwards extension of the leech from a straight line between the Aft head point and the intersection of the centerline of the top batten and the leech .		25mm
Clew point to intersection of leech and centreline of lowermost batten	1250mm	
Batten width		50mm
Batten length (outside) – intermediate and bottom		920mm
Distance between battens	600mm	

G.4 HEADSAIL

G.4.1 CONSTRUCTION

- (a) The **body of the sail** shall be: **soft sail, single ply sail**.
- (b) The **leech** shall not extend aft of a straight line between the **clew point** and the **aft head point**.
- (c) **Stiffening** is prohibited.
- (d) **Primary Reinforcement** can be of any material.
- (e) Other **reinforcement** shall be of **soft sail**.

G.4.2 DIMENSIONS

The actual sail area shall not exceed the maximum foresail area calculated in G.2.3(c)

	Min	Maximum
Primary reinforcement that is not soft sail.		250mm + 3% Luff length
Top width		130mm

G.5 SPINNAKER

G.5.1 MATERIALS

Sail reinforcement shall consist of:

- (1) **Primary reinforcement** of any material.

G.5.2 CONSTRUCTION

- (a) The construction shall be: **soft sail, single ply sail.**
- (b) The spinnaker shall be a three cornered sail, symmetrical about its vertical centreline.
- (c) The **sail** shall have no more than two recovery patches.

G.5.3 DIMENSIONS

The area of the spinnaker shall not exceed 10 sqm, as calculated in G.2.3(e).

	Min	Maximum
Primary reinforcement		500mm
Stiffening at head – measured in any direction		102mm

PART III – APPENDICES

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

Section H

H.1 FLOATATION TEST

H.1.1 NEW BOATS – INITIAL ENDORSEMENT

The date of satisfactory initial flotation test/inspection shall be entered on the measurement form and signed by the owner* who shall indicate what type of test/inspection has been carried out and arrange for such signature to be witnessed and endorsed by a club/class official prior to the issue of the initial measurement certificate. Such endorsement is valid for 12 months.

H.1.2 ANNUAL RENEWAL ENDORSEMENT

The dates of satisfactory renewal flotation test/inspection shall be entered on the measurement certificate and signed by the owner* who shall indicate what type of test has been carried out and arrange for such signature to be witnessed and endorsed by a club/class official. All such endorsements are valid for 12 months.

*In the case of the owner being under the age of 14 the responsibilities set out in this rule should be undertaken by a parent or guardian.

H.1.3 INSPECTION

- (a) New boats built of plywood, foam planks or GRP foam sandwich and having built-in buoyancy tanks shall satisfy the requirements of the Inspection detailed in rule H.1.4
- (b) New boats with any form of buoyancy other than a bow tank shall pass the requirements of the Immersion Test detailed in rule H.1.5.
- (c) The certificate shall thereafter be endorsed annually after fulfilling the requirements of the Inspection. Boats constructed with bow bags or rigid buoyancy units (e.g. polystyrene) may have their buoyancy endorsements renewed twice by Inspection after an Immersion Test, but every 36 months an Immersion Test is obligatory.
- (d) In all cases where there is doubt that the boat conforms to the rule, an Immersion Test shall be carried out.

H.1.4 INSPECTION: TEST

The fastenings of all attached buoyancy units shall be capable of restraining the units and all built-in tanks shall be capable of sustaining an overpressure of 1,25kPa (125mm of water) which shall not drop by more than 0,75kPa (75mm of water) within 30 seconds. Boats presented for inspection shall be provided with at least one hole of 20mm nominal diameter in each built-in unit. Such hole may be within a hatch cover. Inflatable units shall be seen to be properly inflated unless completely contained within another watertight unit.

H.1.5 IMMERSION TEST

The boat with the mast stepped but with boom, sails and all loose gear removed, shall, when swamped, float for 15 minutes approximately level with the whole length of the gunwale clear of the water with a weight of 200kg distributed as evenly as possible between 1500mm and 3400mm aft of the stem. The weight shall be made up of persons not immersed above the knees and/or cast iron or denser material.

Security and airtightness shall be further tested with the swamped boat floating on its beam ends for not less than 1 minute to port and 1 minute to starboard while supporting a minimum crew weight of 135kg. For this test the mast may be supported above its upper measurement band.

After these tests any defects shall be made good and retested and the buoyancy units shall be inspected for leakage and their fastenings for security. Built-in tanks may not contain more than 1 litre of water.

Effective: 01 September 2017
Previous Issues: 5 March 2016
11 December 2014
08 February 2013
02 January 2013
01 June 2012
09 August 2011
18 March 2011
17 March 2010
1 March 2003
1 March 2002
1 April 2001
1 March 2001
1 March 1996
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1 March 1974
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1 March 1969
1 March 1968
1 January 1968
1 April 1966
1 April 1965
1 April 1962

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