

NATIONAL
SCORPION
CLASS RULES
2020



The Scorpion was designed in 1960 by Taprell Dorling and was adopted as a recognised class in 1967.

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INTRODUCTION

*The National Scorpion Class Rules are **closed class rules** (previously known as one-design class rules) where anything not specifically allowed by the class rules is prohibited. The rules are intended to ensure that boats in the National Scorpion Class are as nearly as possible the same as regards shape and weight of hull, hull appendages, spars and sails, and in all respects affecting performance.*

Scorpion hull appendages, rigs and sails are measurement controlled. Provision is made within the class rules for In-House Certification (IHC) of sails in accordance with World Sailing guidelines.

Scorpion hulls built in GRP mouldings shall only be manufactured by RYA Licenced Builders, using materials and specifications as the RYA builders licence and agreement. Any other Scorpion may be built by either an amateur or professional builder and does not require a licence.

Scorpion hulls, hull appendages, rigs and sails may, after having left the manufacturer, only be altered to the extent allowed in Section C of the 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.

This introduction only provides an informal background and the National Scorpion Class Rules proper begin on the next page.

**PLEASE REMEMBER:
IF THESE RULES DO NOT SAY THAT YOU
CAN – THEN YOU CAN NOT.**

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
- RYA Royal Yachting Association
- NSCA National Scorpion Class Association
- ERS Equipment Rules of Sailing
- RRS Racing Rules of Sailing

A.3 AUTHORITIES

- A.3.1 The authority of the class is the RYA which shall co-operate with the NSCA 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.4 ADMINISTRATION OF THE CLASS

- A.4.1 The class shall be administered by the RYA in conjunction with the NSCA.

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.6 CLASS RULES VARIATIONS

- A.6.1 Safety requirements in notice of race or sailing instructions may vary these class rules. See RRS 87.

A.7 CLASS RULES AMENDMENTS

- A.7.1 Amendments to these **class rules** are subject to the approval of the RYA.

A.8 CLASS RULES INTERPRETATION

- A.8.1 Interpretation of **class rules** shall be made by the RYA.

A.9 BUILDERS FEE

- A.9.1 The hull builder shall pay the Builders Fee.

A.9.2 The RYA shall, after having received the Builders Fee for the hull, issue a sail number to the builder.

A.10 SAIL NUMBERS

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

A.11 HULL CERTIFICATION

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

- (a) Class
- (b) **Certification authority**
- (c) Sail number issued by the **certification authority**
- (d) Owner
- (e) Details of Measurer
- (f) Builder/Manufacturers details
- (g) Date of issue of initial **certificate**
- (h) Date of issue of **certificate**
- (i) **Hull weight** including details of any corrector weights
- (j) Details of material used for **hull shell** and deck
- (k) Buoyancy certification

A.12 INITIAL HULL CERTIFICATION

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

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

A.13 VALIDITY OF CERTIFICATE

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

- (a) the change to any items recorded on the hull **certificate** as required under A.11.
- (b) withdrawal by the **certification authority**,
- (c) the issue of a new **certificate**.

A.14 HULL RE-CERTIFICATION

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

- (a) when it is invalidated under A.13.1(a), after receipt of the **certification** fee.
- (b) when it is invalidated under A.13.1 (b), at its discretion.
- (c) in other cases, by application of the procedure in A.12.

A.15 RETENTION OF CERTIFICATION DOCUMENTATION

A.15.1 The **certification authority** shall:

- (a) 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 hull **certificate**.
- (c) have valid **certification marks** as required

B.2 FLOTATION CHECKS

B.2.1 The hull **certificate** shall carry a satisfactorily flotation check confirmation.

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 **closed class rules**. **Certification control** 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

- (a) The **crew** shall consist of 2 persons.
- (b) No **crew** member shall be substituted during an event, unless granted permission from the race officer.

C.3 PERSONAL EQUIPMENT

C.3.1 MANDATORY

- (a) The boat shall be equipped with **personal buoyancy** for each crew member to the minimum standard ISO 12402-5.

C.4 ADVERTISING

C.4.1 LIMITATIONS

- (a) Advertising on the boat chosen by the owner or person in charge is permitted.

C.5 PORTABLE EQUIPMENT

C.5.1 OPTIONAL

(a) FOR USE

- (1) Hand bailers
- (2) Electronic or mechanical timing devices
- (3) Compasses (which may be fitted in a recess in the deck provided that the recess is continuous with the deck and watertight)
- (4) Mechanical Wind Indicators

(b) NOT FOR USE

- (1) Anchor and line, Towing rope, Paddles.

(c) The Notice of Race or Sailing Instructions may amend rule C.5.1

C.6 HULL

C.6.1 MODIFICATIONS, MAINTENANCE AND REPAIR

- (a) The **hull** shall not be altered in any way except as permitted by these **class rules**.
- (b) Routine maintenance such as painting, polishing and filling scratches is permitted without re-measurement and re-**certification**.

C.6.2 FITTINGS

- (a) USE
 - (1) Inspection hatch covers and drainage plugs shall be kept in place at all times.

C.6.3 WEIGHT

	minimum	maximum
<u>The weight of the boat in dry condition</u>	<u>81 kg</u>	
<u>The weight shall include the centreboard, hatches and hatch covers, buoyancy apparatus, and any fittings permanently bolted or screwed directly to the hull.</u>		

C.6.4 CORRECTOR WEIGHTS

- (a) **Corrector weights** shall be permanently fastened to the underside of the thwart when the **boat** weight is less than the minimum requirement.
- (b) The total weight of such **corrector weights** shall not exceed 7 kg.

C.7 HULL APPENDAGES

C.7.1 MODIFICATIONS, MAINTENANCE AND REPAIR

- (a) The **hull appendages** shall not be altered in any way except as permitted by these **class rules**.
- (b) Routine maintenance such as painting, polishing and filling scratches is permitted without re-measurement and re-certification.

C.7.2 FITTINGS

- (a) The hull appendage fittings are optional.

C.7.3 LIMITATIONS

- (a) Only one **centreboard** shall be used during an event, except when it has been lost or damaged beyond repair.
- (b) When fully raised, the **centreboard** shall not project below the false keel.
- (c) The position and use of the tiller is optional.

C.8 RIG

C.8.1 MODIFICATIONS, MAINTENANCE AND REPAIR

- (a) The rig shall not be altered in any way except as permitted by these class rules.

C.8.2 LIMITATIONS

- (a) Only one set of spars shall be used during and event, except when an item has been lost or damaged beyond repair.
- (b) A maximum of two spinnaker poles may be carried.

C.8.3 MAST

(a) DIMENSIONS

	minimum	maximum
<u>The shortest distance between a line through the aft face of the transom on the hull centreplane extended as necessary and the forward face of the mast section at deck level. For the sake of this check the aft face of the transom is interpreted as a line which runs through the aft most point of the transom on the hull centreplane.</u>	2794 mm	2870 mm
Line joining intersection of shrouds extended if necessary, and sheer level, abaft fore side of mast	330 mm	

(b) USE

- (1) The **spar** shall be stepped in the mast step in such a way that the heel shall not be capable of moving more than 5 mm in the horizontal plane.

C.8.4 BOOM

(a) DIMENSIONS

	minimum	maximum
Limit mark width	10 mm	-
Outer point distance		2498 mm

(b) USE

- (1) The intersection of the aft edge of the mast **spar** and the top of the boom **spar**, each extended as necessary, shall not be below the upper edge of the mast **lower limit mark** when the boom **spar** is at 90° to the mast **spar**.

C.8.5 STANDING RIGGING

(a) LIMITATIONS

- (1) The shrouds shall be connected to the shroud plates with wire.

- (2) Any method is permitted to connect the **forestay** to the hull.
- (3) The **forestay** connecting point shall be no further forward than the intersection of the stem, projected if necessary, with the deck

C.8.6 RUNNING RIGGING

- (a) **Running rigging** is optional

C.9 SAILS

C.9.1 MODIFICATIONS, MAINTENANCE AND REPAIR

- (a) **Sails** shall not be altered in any way except as permitted by these **class rules**.
- (b) Routine maintenance such as small repairs are permitted without re-measurement and re-**certification**.

C.9.2 LIMITATIONS

- (a) Not more than one mainsail, one jib, and one spinnaker shall be carried aboard.

C.9.3 MAINSAIL

(a) USE

- (1) The **sail** may be hoisted on a **halyard**.
- (2) The highest visible point of the **sail**, projected at 90° to the mast **spar**, shall not be set above the lower edge of the mast **upper limit mark**. The intersection of the **leech** and the top of the boom **spar**, each extended as necessary, shall not be behind the fore side of the boom **outer limit mark**.
- (3) The **Luff** bolt rope shall be set in the **spar** groove or track.

C.9.4 JIB

(a) USE

- (1) The **sail** may be hoisted on a **halyard**.
- (2) The **tack** of the sail shall be attached to the hull no further forward than the intersection of the stem, projected if necessary, with the deck.

C.9.5 SPINNAKER

(a) USE

- (1) The **sail** shall be hoisted on a **halyard**.
- (2) The **sail** may be recovered using a retrieval line.

Section D – Hull

D.1 PARTS

D.1.1 MANDATORY

- (a) Hull Shell
- (b) Deck
- (c) Buoyancy Tanks
- (d) Gunwales

- (e) Forward Bulkhead
- (f) Thwart
- (g) False Keel
- (h) Transom

D.1.2 OPTIONAL

- (a) Aft Bulkhead
- (b) Spinnaker chute

D.2 GENERAL

D.2.1 RULES

- (a) The **hull** shall comply with the **class rules** in force at the time of initial **certification**.

D.2.2 CERTIFICATION

See Rule A.12.

D.2.3 MODIFICATIONS, MAINTENANCE AND REPAIR

- (a) The **hull** shall not be altered in any way except as permitted by these **class rules**.
- (b) Holes not bigger than necessary for the installation fittings and passage of lines may be made in the **hull**
- (c) Routine maintenance such as painting and polishing is permitted without re-measurement and re-**certification**.

D.2.4 DEFINITIONS

(a) HULL DATUM POINT

The **hull datum point** is defined as a point 203mm below the false keel in the plane of the aft face of the transom.

- (b) The Forward Measurement Point is defined as a point 203mm below the false keel at 3962mm from the **hull datum point**.

D.2.5 IDENTIFICATION

- (a) Wooden hulls shall carry the sail number, either cut into the hog, or inside skin immediately abaft the centreboard case in figures not less than 25mm in height.
- (b) GRP or composite hulls shall have a plate permanently fixed to the inner face of the transom or aft bulkhead, with the sail number stamped thereon.

D.2.6 BUILDERS

- (a) GRP moulded **hulls** or hull shell fabrications shall be produced only by builders licensed by the RYA.
- (b) Apart from the restriction above a Scorpion may be built by any professional or amateur builder.

D.2.7 MATERIALS

- (a) The hull shell shall be built from either;
wood, OR
glass reinforced plastic (GRP) OR
any combination of GRP and wood.

D.3 HULL SHELL

D.3.1 CONSTRUCTION

- (a) 'Stitch and glue' and/or 'epoxy resin' construction is permitted.
(b) Table of scantlings for wooden hull shells:

Dimensions are minimum, except for plywood which shall be nominal dimension as listed in BS 1088

Bottom skin	8mm ply or 6mm ply adequately reinforced in the cockpit area.
Side skin	5mm ply.
Transom	18mm hardwood or 8mm ply
Knees	22mm hardwood
False keel	9mm depth to 16mm, except at the bow where it may taper to nothing. Hardwood.
Centreboard case sides	6mm or 8mm ply
Side tank vertical panels	5mm ply
Breakwater	18mm thick solid or laminated hard wood.

D.4 DECKS

D.4.1 CONSTRUCTION

- (a) Table of scantlings for wooden decks:

Dimensions are minimum, except for plywood which shall be nominal dimension as listed in BS 1088

Fore and after decks	5mm ply.
Side decks	5mm ply with suitable support beams
Foredeck King beam	38mm depth x 25mm width
Foredeck beam	87mm depth x 12mm width at centre

D.5 BUOYANCY TANKS

D.5.1 CONSTRUCTION

- (a) Buoyancy equipment shall comprise of buoyancy in the form of tanks, except that the aft tank may be omitted and the side tanks carried through to the transom.
- (b) The upper surface of the bow buoyancy tank may be below deck level.
- (c) A spinnaker chute, if fitted, shall be constructed so that the forward buoyancy compartment remains watertight.
- (d) Inspection holes and drain holes may be fitted in the buoyancy tanks.

D.6 GUNWALES

D.6.1 MATERIALS

- (a) The gunwales shall be of timber or GRP.

D.6.2 CONSTRUCTION

- (a) Wooden gunwales shall have a minimum 22mm vertical depth at the junction with skin of the hull.

D.7 BULKHEADS

D.7.1 CONSTRUCTION

- (a) Bulkheads shall have a minimum thickness of 5mm, except when constructed of plywood, when the dimension shall be nominal dimension as listed in BS 1088.

D.8 THWARTS

D.8.1 CONSTRUCTION

- (a) The thwart shall be fitted to extend across the boat from side tank to side tank, and secured to the side tanks and centreboard case.
- (b) The longitudinal position of the thwart is optional.
- (c) Wooden thwarts shall be hard wood of minimum thickness 18mm.
- (d) The maximum aperture in a thwart, to allow the passage of fittings and control lines, shall be no greater than 110% of the maximum aggregate cross-sectional area of the fittings and lines which collectively pass through the thwart.
- (e) The top of the centreboard case aft of the thwart shall be closed.

D.9 TRANSOM

- (a) The transom may have a tiller port
- (b) The top of the transom shall not fall below the profile of the aft buoyancy tank.

D.10 ASSEMBLED HULL

D.10.1 CONSTRUCTION

- (a) The cockpit shall be open to the skin of the hull from the fore bulkhead to the aft bulkhead and, if no aft bulkhead is fitted, to the transom.
- (b) The remainder of the boat shall be decked to gunwale level ignoring the camber of the decks (i.e. the deck shall meet the side of the boat at gunwale level).

D.10.2 FITTINGS

(a) MANDATORY

- (1) Forestay fitting
- (2) Shroud plates
- (3) Mast step

(b) OPTIONAL

- (1) All Hull fittings
- (2) Stem and chine bands

(c) LIMITATIONS

- (1) A spinnaker catcher not more than 230 mm long and not more than 56g in weight.
- (2) Only safety lines, rudder fittings, shroud plates, bow plate, false keel, stem, chine bands and bailers can be fitted to the outside skin of the hull shell.

D.10.3 DIMENSIONS

The baseline shall be on the centre plane of the hull at the following points:

At the **hull datum point** as defined in D.2.4

At the Forward Measurement Point

The sections shall be taken as transverse planes, parallel to the aft face of the transom at the following positions measured along the baseline:

Section 1: at 0mm from **hull datum point** as defined in D.2.4

Section 2: at 914mm from **hull datum point** as defined in D.2.4

Section 3: at 2134mm from **hull datum point** as defined in D.2.4

Section 4: at 3353mm from **hull datum point** as defined in D.2.4

The Hull Length is defined as the distance along the baseline from **hull datum point** to the intersection of the baseline and the transverse plane, parallel to the aft face of the transom, which intersects the most forward edge of the bow plate, stem, or stem band.

At the transom, where the hull shell intersects the deck, a flange may project up to a maximum of 20mm aft of the transom to bond the deck to the hull shell. At

the bow, where the hull shell joints the deck, the joint may project up to a maximum of 30mm forward of the top of the stem.

For hulls where the joint between the hull shell and deck projects forward of the stem, the most forward edge of the bow is defined as the point where the projection of the stem, or stem band intersects with the upper surface of the deck.

Table 1		
	Minimum	Maximum
Hull Length	4266 mm	4300 mm
Hull shell/Deck bonding flange (at transom)		20 mm
Hull shell/Deck bonding flange (at bow)		30 mm
Distance from base line to underside of false keel:		
At section 1	203 mm	203 mm
At section 2	111 mm	127 mm
At section 3	50 mm	64 mm
At section 4	105 mm	121 mm
Distance from base line to the intersection between the foredeck and stem band.	696 mm	708 mm
Rake of stem (corrected by the difference between length overall and 4280mm)	4095 mm	4129 mm
Width at the skin of the hull 65 mm aft and 350 mm from the stem head, measured along the stem:	65 mm	85 mm
Distance from the stemhead of the intersection of the line of the chine when extended and the line of the stem		270 mm
Between the transom and the forward face of the forward bulkhead, no part of the outer surface of the topsides and bottom panels to within 25 mm of the underside of the rubbing beads and the false keel, shall be more than 4 mm from a straight edge placed athwart ships across the full width of the panel.		
Distance between chine and centreline measured along the hull shell		
At section 1	391 mm	403 mm

At section 2	521 mm	533 mm
At section 3	565 mm	577 mm
At section 4	344 mm	362 mm
Chine Height (height of chine above junction of hull shell and false keel):		
At section 1	50 mm	64 mm
At section 2	85 mm	99 mm
At section 3	115 mm	129 mm
At section 4	108 mm	130 mm
Width of the side (directly across hull shell from sheerline to chine):		
At section 1	219 mm	246 mm
At section 2	276 mm	305 mm
At section 3	346 mm	373 mm
At section 4	378 mm	405 mm
Depth of false keel between Section 1 and Section 4.	9 mm	17 mm
Depth of false keel Forward of Section 4 to lowest point of stem on hull shell.	0mm	17mm

Table 2		
	Minimum	Maximum
Distance from fore end of centreboard slot to section 1 along false keel	2406 mm	2432 mm
Length of centreboard slot along false keel	1181 mm	1207 mm
Internal height of centreboard case including the false keel		343 mm
Internal height of centreboard case at forward end of slot including the false keel	279 mm	305 mm
Internal height of centreboard case 38 mm forward of aft end of slot including the false keel		178 mm
Internal width of centreboard case (not keel slot)	25 mm	29 mm

Table 3		
	Minimum	Maximum
Beam of hull measured between sheerlines at:		
At section 1	876 mm	902 mm
At section 2	1181 mm	1207 mm

At section 3	1359 mm	1390 mm
At section 4	944 mm	970 mm
Width of rubbing bead measured in plan from the sheerline . Except for the first 152 mm from the stem to allow for fairing off.	28 mm	54 mm
Plan width of cockpit floor from centreline		
At fore bulkhead	305 mm	355 mm
At section 3	356 mm	406 mm
At aft bulkhead (or 737 mm from section 1 if no after bulkhead fitted)	255 mm	305 mm
At transom forward face if no aft bulkhead fitted	153 mm	203 mm
Camber of fore deck measured 1346 mm from stem along the centreline to the outside of the rubbing bead	146 mm	178 mm
Distance from section 1 to:		
aft face of fore bulkhead	2743 mm	2793 mm
fore face of after bulkhead (if fitted)		737 mm
aft edge of breakwater at gunwale		2590 mm
Distance of mast step bearing face above foredeck at the forward bulkhead.		76 mm
Distance of upper surface of bow buoyancy tank below sheer in any cross section.		192 mm
Vertical height of the transom, measured from the bottom of the false keel	160 mm	324 mm
Side decks extension in plan inboard from outer edge of skin at deck level.	178 mm	
Drop of side deck 229 mm inboard from outer edge of rubbing bead below sheerline.		51 mm
Distance of mast step bearing face above deck		76 mm
Distance of mast step bearing face above sheerline at the forward bulkhead.	150 mm	

Distance of the foreside of the breakwater above the foredeck at the mast step.(It may taper in a fair continuous curve towards the gunwale.)		25 mm
Area of spinnaker chute opening in the foredeck		0.04m2
Width of thwart	120 mm	132 mm
Thickness of thwart	16 mm	22 mm

Section E – Hull Appendages

E.1 PARTS

E.1.1 MANDATORY

- (a) Centreboard

E.1.2 OPTIONAL

- (a) Rudder

E.2 GENERAL

E.2.1 RULES

- (a) **Hull appendages** shall comply with these **class rules**.

E.2.2 MODIFICATIONS, MAINTENANCE AND REPAIR

- (a) Hull appendages shall not be altered in any way except as permitted by these class rules.
- (b) Routine maintenance is permitted without re-measurement.

E.3 CENTREBOARD

E.3.1 DEFINITIONS

- (a) The Root of the centreboard is defined as those parts of the centreboard which have not been faired to produce a hydrodynamic profile.

E.3.2 MANUFACTURERS

- (a) Any Manufacturer may be used

E.3.3 MATERIALS

- (a) The **centreboard** shall be made of solid or laminated wood or GRP.
- (b) The **centreboard** may be covered with GRP.

E.3.4 CONSTRUCTION

- (a) Protective edging of any material may be fitted.

E.3.5 FITTINGS

- (a) MANDATORY
 - (1) Handle

- (b) OPTIONAL
 - (1) Protective edging
 - (2) A friction device.

E.3.6 DIMENSIONS

The centreboard in profile shall fit between two parallel lines 369mm apart.

	minimum	maximum
The centreboard thickness at the root	22 mm	
Width of the centreboard		369 mm

E.4 RUDDER BLADE, RUDDER STOCK AND TILLER

E.4.1 RULES

- (a) The type and size of the rudder is optional.
- (b) The type, size and arrangement of the tiller and extension are optional

E.4.2 MANUFACTURERS

- (a) Any Manufacturer may be used

E.4.3 MATERIALS

- (a) The **rudder** blade may be of any material
- (b) The **rudder** stock may be of any material
- (c) The tiller may be of any material

Section F – Rig

F.1 PARTS

F.1.1 MANDATORY

- (a) **Mast**
- (b) **Boom**
- (c) Standing **rigging**
- (d) Running **rigging**

F.1.2 OPTIONAL

- (a) **Spinnaker poles.**

F.2 GENERAL

F.2.1 RULES

- (a) The **spars**, standing and running rigging shall comply with these **class rules**.

F.2.2 MODIFICATIONS, MAINTENANCE AND REPAIR

- (a) **Spars** shall not be altered in any way except as permitted by these **class rules**.

- (b) Routine maintenance such as replacement of fittings is permitted without re-measurement.

F.2.3 DEFINITIONS

(a) MAST DATUM POINT

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

F.2.4 MANUFACTURER

- (a) Any manufacturer may be used

F.3 MAST

F.3.1 MATERIALS

- (a) The **spar** shall be of wood or aluminium alloy.

F.3.2 CONSTRUCTION

- (a) The **spar** extrusion shall include a fixed sail groove or track which may or may not be integral with the **spar** but shall be of the same material or plastic.

F.3.3 FITTINGS

(a) MANDATORY

- (1) Mast head fitting
- (2) Shroud fittings
- (3) Mainsail halyard sheave box
- (4) Headsail halyard sheave box
- (5) Gooseneck
- (6) Mast Heel fitting
- (7) Permanently painted/taped **limit marks**

(b) OPTIONAL

- (1) One pair of spreaders: spreader and spreader bracket to be of metal construction. Thumbscrew adjusters, pin adjusters and end caps in any material are allowed
- (2) Spinnaker pole fittings
- (3) Spinnaker up-haul and downhaul fittings
- (4) One mechanical wind indicator
- (5) Compass brackets
- (6) All mast halyard fittings
- (7) One vang strut

F.3.4 DIMENSIONS

	minimum	maximum
Mast length	5942 mm	6096 mm
Mast spar curvature	-	40 mm

	minimum	maximum
Mast limit mark width	10 mm	
Distance between Lower Point and Heel Point	446mm	610mm
Upper point height	-	5486 mm
Forestay height		4038 mm
Spinnaker hoist height		4038 mm
Spinnaker halyard fitting projection		100 mm
Spinnaker pole fitting projection		45 mm

F.3.5 WEIGHT

	minimum	maximum
Mast Weight	7.5 kg	

F.4 BOOM

F.4.1 MATERIALS

(a) The **spar** shall be of wood or aluminium alloy.

F.4.2 CONSTRUCTION

(a) The **spar** extrusion shall include a fixed sail groove or track which may or may not be integral with the **spar** but shall be of the same material or plastic.

(b) The **spar** extrusion may also include a bottom track which may or may not be integral with the **spar** but shall be of the same material or plastic.

F.4.3 FITTINGS

(a) MANDATORY

(1) Permanently painted/taped **limit mark**

(b) OPTIONAL

All boom fittings are optional

F.4.4 DIMENSIONS

	minimum	maximum
Outer Point distance		2498 mm
Outer limit mark width	10 mm	
Boom spar curvature	-	20 mm
The Boom spar section shall pass through a circle of diameter.		120 mm

F.5 SPINNAKER POLE

F.5.1 MANUFACTURER

(a) Manufacturer is optional.

F.5.2 MATERIALS

(a) The **spar** may be of any material.

F.5.3 CONSTRUCTION

F.5.4 FITTINGS

(a) All spinnaker pole fittings are optional.

F.5.5 DIMENSIONS

	minimum	maximum
<u>Spinnaker pole projection when at 90 degrees in the vertical plane to the mast, and including all end fittings projected to maximum length – max dimension from forward face of mast</u>		<u>1950 mm</u>

F.6 STANDING RIGGING

F.6.1 MATERIALS

(a) The standing **rigging** shall be of wire

F.6.2 CONSTRUCTION

(a) MANDATORY

- (1) A forestay.
- (2) Two shrouds.

F.6.3 LIMITATIONS

- (a) The shroud adjustment system is optional, except that hydraulics are not allowed.
- (b) No additional standing rigging is allowed.
- (c) Mast rams or mast pullers of any type are prohibited.

F.6.4 DIMENSIONS

	minimum
Forestay diameter	2350 mm
<u>Forestay length</u>	<u>4100 mm</u>
Shroud diameter	2350 mm

F.7 RUNNING RIGGING

F.7.1 MATERIALS

(a) Materials are optional.

F.7.2 FITTINGS

(1) Running Rigging Fittings are optional except that any vang strut used shall be no longer than 500mm from the aft face of the **mast**, and may be made of any material.

Section G – Sails

G.1 PARTS

G.1.1 MANDATORY

- (a) Mainsail
- (b) Headsail

G.1.2 OPTIONAL

- (a) Spinnaker

G.2 GENERAL

G.2.1 RULES

- (a) **Sails** shall comply with the **class rules** in force at the time of **certification**.

G.2.2 CERTIFICATION

- (a) The **official measurer** shall **certify** mainsails and headsails in the **tack** and spinnakers in the **head** and shall sign and date the **Sail**.
- (b) The RYA may appoint one or more persons at a sailmaker to measure and **certify sails** produced by that manufacturer in accordance with the RYA In-house Certification Guidelines.

G.2.3 SAILMAKER

- (a) Any manufacturer may be used

G.3 MAINSAIL

G.3.1 IDENTIFICATION

- (a) The sail number, letter(s), and class insignia shall be placed as laid down in the Racing Rules of Sailing.

G.3.2 MATERIALS

- (a) The **ply** fibres are optional.
- (b) **Stiffening** is optional.

G.3.3 CONSTRUCTION

- (a) The construction shall be: **soft sail, single ply sail**.
- (b) The **body of the sail** shall consist of either **woven ply** or **laminated ply**.
- (c) The **sail** shall have 3 batten **pockets** in the **leech**.
- (d) The following are permitted: Stitching, glues, tapes, bolt ropes, corner eyes, headboard with fixings, Cunningham eye or pulley, **batten pocket patches**, batten pocket elastic, batten pocket end caps, top batten tensioner, mast and boom slides, leech line with cleat, one flatner eye on leech, one **window**, tell tales, sail shape indicator stripes and items as permitted or prescribed by other applicable *rules*.

G.3.4 DIMENSIONS

	minimum	maximum
Leech length		6045 mm
Quarter width		2260 mm
Half width		1670 mm
Three-quarter width		930 mm
Primary reinforcement		315 mm
Secondary reinforcement:		945 mm
Window area		0.28 m ²
Window to sail edge	150 mm	
Extension of headboard from head point		115 mm
Batten pocket lengths:		
Upper pocket inside length		1170 mm
Middle pocket inside length		945 mm
Lower pocket inside length		945 mm
Batten Pocket inside width		50 mm
Three-quarter leech point to centreline of upper batten pocket		50 mm
Half leech point to centreline of middle batten pocket		50 mm
Quarter leech point to centreline of lower batten pocket		50 mm

G.4 HEADSAIL

G.4.1 MATERIALS

- (a) The **ply** fibres are optional.

G.4.2 CONSTRUCTION

- (a) The construction shall be: **soft sail, single ply sail**.
- (b) The **body of the sail** shall consist of either **woven ply** or **laminated ply**.
- (c) Double luff sails are permitted.
- (d) The **leech** shall not extend beyond a straight line from the **aft head point** to the **clew point**.
- (e) The following are permitted: Stitching, glues, tapes, corner eyes, luff wire, hanks, one **window**, tell tales, one additional eye near the clew, sail shape indicator stripes and items as permitted or prescribed by other applicable *rules*.

G.4.3 DIMENSIONS

	minimum	maximum
Luff length		3970 mm

	minimum	maximum
Leech length		3790 mm
Foot length		1805 mm
Foot median		Mean of the Luff Length and Leech Length mm
Top width		120 mm
Primary reinforcement		269 mm
Secondary reinforcement:	-	807 mm
Window area		0.28 m ²
Window to sail edge	150 mm	

G.5 SPINNAKER

G.5.1 The sail number, shall be placed as laid down in the Racing Rules of Sailing Appendix G.

G.5.2 MATERIALS

(a) The **ply** fibres are optional

G.5.3 CONSTRUCTION

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

(b) The **body of the sail** shall consist of either **woven ply** or **laminated ply**.

(c) The following are permitted: Stitching, glues, tapes, corner eyes, headboard, stiffening, recovery line eyes, tell tales and items as permitted or prescribed by other applicable *rules*.

G.5.4 DIMENSIONS

Spinnaker

	minimum	maximum
Leech length		4270 mm
Luff length		4270 mm
Difference between diagonals		50 mm
Half width	2743 mm	3353 mm
Maximum width		3353 mm
Head board		102 mm
Primary reinforcement	-	278 mm
<u>for recovery line point</u>	-	<u>150 mm</u>
Secondary reinforcement:	-	834 mm
<u>for recovery line point</u>	-	<u>350 mm</u>

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 MEASUREMENT PROCEDURE (RECOMMENDED)

The dimensions in Table 1 and Table 2 of section D9.2 are measured with the hull upside down.

The dimensions in Table 3 of section D9.2 are measured with the hull the right way up.

H.2 RAKE OF STEM

The procedure for measuring the rake of stem in Table 1 of section D9.2 is as follows:

Lay a straight batten against stem band, just clear of the bow plate, and mark where it crosses the base line, measure distance along base line from transom to mark, correcting by the difference between **hull length** and 4280 mm

H.3 BUOYANCY TEST

The buoyancy of the boat shall be tested by the owner.

The owner shall carry out the initial buoyancy test as follows:

With the mast stepped, but with sails, boom, rudder, tiller and all loose gear removed, the boat floating on its beam end to port and to starboard, with the mast horizontal, shall support a minimum crew weight of 128 kg not immersed above the knee for a period of 5 minutes on each side, or such longer period as the owner may require. For this test the mast may be supported above the top measurement band.

For the boat to comply with the requirements of this rule after completion of the test not more than 3 litres of water shall have entered each of the buoyancy tanks.

For subsequent tests/inspections, the owner shall inspect the buoyancy and if he considers it unsatisfactory, he shall order a retest, in accordance with the initial test. On completion of satisfactory test/inspection, the owner shall sign and date the buoyancy endorsement, on the Measurement Certificate and arrange for such signature to be witnessed and endorsed by a club official. Buoyancy endorsements shall remain valid only for so long as no alteration, replacement or repair is carried out to the buoyancy equipment or for a period not exceeding 12 months from the last date of the last endorsement.

H.4 HULL WEIGHT TEST

Boats shall be weighed with the internal and external surfaces dry to the satisfaction of the measurer.

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