

RS21

CLASS RULES

2021

V1.15



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INTRODUCTION

This introduction only provides an informal background and statement of the class objective and the International RS21 Class Rules proper begin on the next page.

Background -

The RS21 is a one-design racing keelboat, suitable for adult and youth sailors for training, racing and general fun.

Spirit of the Class -

The design principle of the class is that the racing results should depend solely on the attributes and skills of the crew rather than differences between boats and the way that they are rigged. The objective of these class rules is to implement this concept in practice.

If you want to make a change ask yourself "why?"; if the answer is "to make the boat faster", then check these Rules because it is likely to be illegal.

General -

RS21 hull, hull appendages, rig and sails shall only be manufactured by licensed manufacturers. Equipment is required to comply with the RS21 Building Specification and is subject to an approved manufacturing control system.

Rules regulating the use of RS21's during a race are contained in section C of these Class Rules, and in the Racing Rules of Sailing.

PLEASE REMEMBER:

**THESE RULES ARE CLOSED CLASS RULES meaning:
ANY CHANGE NOT SPECIFICALLY PERMITTED BY THESE CLASS RULES
IS PROHIBITED.**

**COMPLIANCE WITH THESE CLASS RULES IS DEMONSTRATED
THROUGH MANUFACTURING CONTROL:**

**THUS CONTROL OF COMPONENT AND EQUIPMENT SPECIFICATION IS
UNDERTAKEN BY THE LIC**

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 words “shall” and “will” are mandatory and the word “may” is permissive.
- A.1.3 The use of “**Bold**” and “*Italic*” in this document is only being used to make reading the document easier. There is no other intention by the use of this.

A.2 DEFINITIONS

As used in this document, the following terms shall have the following meanings:

- A.2.1 MNA - World Sailing Member National
- Authority ICA - RS21 International Class Association
- NCA - National RS21 Class Association
- ERS - Equipment Rules of Sailing
- RRS - Racing Rules of Sailing
- LIC - Licensors, namely Copyright Holder and RS Sailing
- LM - RS
- NOR - Notice of Race
- SI - Sailing Instructions
- Copyright Holder - Jo Richards
- RS Sailing - H Taylor & Son (Brockley) Limited trading as RS
- Sailing Class Rules - these rules for the RS21
- Rigging Manual - the Rigging Manual provided by LIC and submitted to World Sailing and displayed on the ICA website documents section at www.rs21sailing.org.
- Building Specification - specification for building the RS21 as provided by LIC and submitted to World Sailing

A.3 AUTHORITIES

- A.3.1 The international Class Rules authority of the class is World Sailing which shall co- operate with the LIC in all matters concerning these Class Rules and regulation of the RS21.
- A.3.2 None of World Sailing, the ICA, an NCA, an MNA or LIC have any liability for losses (direct or consequential) or otherwise in respect of these Class Rules or the RS21 or events.

A.4 ADMINISTRATION OF THE CLASS

- A.4.1 World Sailing has delegated administration of the Class to the ICA which shall co- operate in all respects with the LIC and not act contrary to LIC's interests. The ICA may delegate Part of its administrative functions to the NCAs subject to the NCAs abiding by these Class Rules.
- A.4.2 In countries where there is no NCA, or the NCA does not wish to have an administrative function, its administrative functions shall be carried out by the ICA in co-operation with the NCA or the MNA.
- A.4.3 Board of the class will consist of a Technical Officer, Chairman, Treasurer and a Class Coordinator.

A.5 WORLD SAILING RULES

- A.5.1 These Class Rules shall be read in conjunction with the ERS and RRS.
- A.5.2 Except where defined in sections A1.3 & A.2.1 above to the extent that they are consistent with these Class Rules the definitions in the ERS and RRS apply. The definition in the RRS applies and when a term begins with a capital letter the definition in these Class Rules applies.

A.6 CLASS RULES VARIATIONS

- A.6.1 At Class events RRS 87 and World Sailing Regulation 10.11 apply.

A.7 CLASS RULES AMENDMENTS

- A.7.1 Amendments to these Class Rules are subject to the approval of World Sailing

A.8 INTERNATIONAL CLASS FEE AND WORLD SAILING BUILDING PLAQUE

- A.8.1 RS Sailing shall pay the International Class Fee and shall send the Building Plaque to the LM

A.9 CLASS RULES INTERPRETATION

- A.9.1 Interpretations of these Class Rules may be made from time to time and shall be made in accordance with World Sailing Regulation 10.

A.10 SAIL NUMBERS

- A.10.1 Sail numbers shall be issued by the LIC.
- A.10.2 Sail numbers shall correspond to the hull number. However, competitors may request permission in writing to the Race officer (or at a regatta for that regatta only, the Technical officer) to use a different sail number to the hull number. Permission will only be granted in exceptional cases and the Committee/Technical officer decision shall be final.

A.11 MANUFACTURE

- A.11.1 All hulls, mast sections, boom, sails, hull appendages, tillers shall only be manufactured by a LM (and only to the extent permitted by license) and only supplied by RS, or an RS licensed distributor for the class and shall carry a LIC equipment label certifying it as originally supplied.
- A.11.2 All production moulds used for manufacture of the boat shall be prior approved by the LIC and taken from the Master Plug governed by the Building Specification.

Section B – Boat Eligibility

For a Boat to be eligible for *racing*, it shall comply with the rules in this section.

B.1 CLASS ASSOCIATION MARKINGS

- B.1.1 A valid Class Association Sticker, if required by the ICA and/or NCA, shall be affixed to the hull on the transom.
- B.1.2 A valid Class Association certification needs to be available, supplied by the LM. When asked to see it by the ICA or NCA at any time.

B.2 CLASS RULES & BUILDING SPECIFICATION COMPLIANCE

- B.2.1 The Boat and all equipment shall comply in all respects with the Class Rules, the Building Specification (save as permitted to be varied by these Class Rules) in force at the time of manufacture, and to the extent that they are not inconsistent, the ERS and RRS. The Boat and all equipment shall comply with class registration documents supplied by the builder, specifically provided for the boat.
- B.2.2 All hulls, mast sections, booms, keels, rudder blades, tillers:
 - (i) only be manufactured by an LM who shall only produce them from moulds taken from the Master Plugs in accordance with the Building Specification; the moulds and products from the moulds shall not be altered other than as prior approved in writing by LIC;
 - (ii) only supplied by RS, or an RS authorised distributor for the Boat; and
 - (iii) shall carry a LIC equipment label certifying it as Originally Supplied.
 - (iv) sails must come from a licensed manufacturer set by LIC.

B.3 B.3 EQUIPMENT INSPECTIONS

- B.3.1 All equipment inspections shall be carried out in accordance with the ERS except where varied in these Class Rules.
- B.3.2 Equipment Inspectors at an event will as required verify that equipment has been produced by LMs and has not been subsequently altered (other than as is permitted within these Class Rules) using whatever inspection methods they deem appropriate, including discussions with the ICA Technical officer, LIC and/or comparison with a reference sample of the type of equipment presented for inspection. Should this comparison reveal deviation greater than what the Equipment Inspector considers being within manufacturing tolerances, the following procedure shall be adopted:
 - (a) the LIC or Technical officer of the ICA (if the LIC cannot be contacted) shall be consulted and provided with full details of the specification or item in question of the offending Boat.
 - (b) the LIC or the Technical officer will, after taking direction from the LIC, give a final ruling in line with the LIC's direction regarding the correct specification or interpretation of the Building Specification as the case may require. That ruling will be referred to the Race Committee for actioning

- (c) If the LIC or Chief Measurer is not contactable prior to the end of a Regatta, the matter will be reported to Race committee, who may make a ruling and will also promptly report full details of all items of equipment lying outside the accepted deviation, corresponding Building Specification/s or Class Rules to the LIC.
- (d) If any specification/s of the disputed Boat or item of equipment does not comply with the Class Rules or deviates from the Building Specification/s or is not supplied by RS, an RS licensed distributor for the class or an LM (where required by the Class Rules) then the LIC will make a final decision regarding use of the equipment at future events.

PART II – REQUIREMENTS & LIMITATIONS

The crew and the Boat shall comply with these Class Rules and the Building Specification including without limitation the following Part II when racing. In case of conflict the following section C shall prevail.

These Class Rules are closed class rules where anything not specifically permitted by the Class Rules is prohibited: compliance with these Class Rules is demonstrated through original design control.

Section C – Conditions for Racing

C.1 GENERAL

C.1.1 RULES

- (a) RRS G1.3(a) is changed so that only one Class insignia on one side of the sail is required.
- (b) RRS G1.3(a) is changed so that national letters and sail numbers are not required to be wholly above an arc whose center is the head point and whose radius is 60% of the leech length.

C.1.2 SUPPLIED EQUIPMENT

Where Boats and/or equipment is supplied to the entire fleet by the LIC for a regatta series:

- (i) Competitors shall use the equipment as supplied.
- (ii) Competitors may use their own ropes (including mainsheet, control lines, halyard), shock cord, compass, wind vane and tiller extension.
- (iii) Removal or alteration of fittings and repairs are prohibited without the permission of the race committee.
- (iv) Changes, additions, or alterations to the spars, hull, appendages and fittings are prohibited except (i) as provided in C.6 below, and (ii) for the fitting of a compass and wind indicator supplied by the competitor provided that they can be fitted without asking the LIC of where these should be properly added and must be done with the LM blessing.
- (v) The use of waxes, polishing compounds or similar is prohibited. Competitors may wash their boat with detergent and water.
- (vi) Plastic tape, shockcord or similar may be used in accordance with these Class Rules.

C.2 ADVERTISING & DECORATION

- C.2.1 Advertising is permitted in accordance with World Sailing Regulation 20 (advertising code) but the sail window shall not be covered by advertising or other material.
- C.2.2 Vinyl or other plastic film or paint may be added to the hull above and below the chine, and/or to the sail, solely for the purpose of displaying advertising, the boat name or decoration, provided that the film/paint shall not be specially textured or otherwise used in a way that could improve the character of the flow of water or air inside the boundary layer.
- C.2.3 Any advertising on the sail will only be displayed in Annex 1 in the area above an imaginary line which is an extension line of the top of the bottom batten to the luff and a imaginary line that is an extension line of the bottom of the second batten to the luff.
Any advertising that involves cutting or any alteration to a sail other than painting, printing or attaching film shall only be put in place by a LM.

C.3 CREW

C.3.1 LIMITATIONS ON THE CREW

- (a) The crew shall consist of 3 or more persons. The number of crew shall not be changed during an event.
- (b) No crew member shall be substituted during the world championship and any event of 6 or less consecutive days, without the approval of the Race Committee or event Technical officer.
- (c) If the crew member holds a valid Group 3 Categorization or is not categorized must register him/herself in the "Not Group 1 Register" through the payment to the ICA of a fee decided by ICA.

C.3.2 LIMITATIONS ON THE DRIVER

The driver shall be a current class member in good standing and meet the following criteria except in the event of an emergency involving the safety of the boat or crew where the boat may be steered by any crew member. Any such incident shall be reported to the event Technical officer or Race Committee, which may protest the boat. The penalty may be less than disqualification.

- (a) Permitted drivers: The driver shall hold a valid Group 1 Categorization in accordance with World Sailing Regulation 22 (see www.sailing.org/classification) except that a Group 3 owner who owns and pays for at least 100% of a RS21 may drive after approval of the ICA. The ICA can only approve after proposal of the NCA.

C3.3 CREW POSITIONING

- (a) Except for momentary sail handling and/or repair needs, crew shall remain aft of the mast while on deck.
- (b) Crew shall not stand or lean out over the cockpit safety lines or stern rails to promote roll tacking, roll gybing or to increase hiking leverage, or for any other reason, other than for temporary needs to make repairs or correct problems.
- (c) No crew may have their legs outboard of the shearline, and generally facing to the center of the boat.
- (d) When tacking or gybing, crew shall not hang, push or pull on the shrouds, mast, cockpit safety lines, stanchions, mainsheet hoop or any other item to promote the maneuver.
- (e) Except for a medical emergency or momentary sail handling and/or repair needs, crew heads and shoulders shall remain above deck.

C.3.4 MEMBERSHIP

To be eligible to compete in events run under the auspices of an NCA or ICA the owner and drivers must be a current member of their NCA, or ICA where no NCA is in place.

- (a) The class executive committee shall be the sole interpreter of who qualifies as an owner.
- (b) No owner may charter or borrow more than one boat at any event.

C.4 PERSONAL EQUIPMENT

C.4.1 MANDATORY

The boat shall be equipped with a personal flotation device (PFD) for each crew member to the minimum standard ISO 12402-5, (level 50, or USCG Type III, or AUS PFD II or equivalent).

C.4.2 COMPETITOR CLOTHING AND EQUIPMENT

- (a) Each crew member may wear a helmet that shall be to the minimum standard EN1385 or EN1077 or equivalent. This may be made mandatory by the Notice of Race and/or Sailing Instructions.
- (b) Each crew member may wear body protection, if the body protection also acts as a personal flotation device it shall be to the minimum standard in C.4.1(a). This may be made mandatory by the Notice of Race and/or Sailing Instructions.

C.5 PORTABLE EQUIPMENT

C.5.1 OPTIONAL

The following optional equipment and items may be used and attached to the hull or rig providing that attachments do not puncture and are not bonded to the surface of the boat:

- (i) one or more devices may be used with mounting brackets which have the capability to measure, display, record and broadcast information relating to the boat's position, heading, header and lift information, vmg, time, and/or speed. The mounting bracket for the compass and displays shall be fixed to the mast by the means, or screws, cable ties, self-adhesive strips or any mechanical tightening device
- (ii) Non-electronic maps, charts, port/starboard stickers, a racing signal code flags chart, and a marking pencil or pen for recording courses and compass headings
- (iii) Bags, drink bottle/s, safety equipment, paddle, loose clothing, food and/or drinks.
- (iv) Any additional equipment required by the Sailing Instructions for the event.
- (v) GPS tracking and recording may be used.
- (vi) Camera to record video and pictures provided that the data and output is not viewed or used by the crew until he/she is onshore after a race has finished and not during a race; it may be used for producing broadcasts to the general public during a race but it must not be viewed or used by the crew during a race.
- (vii) Up to 2 mechanical wind indication devices may be fitted to the mast.
- (viii) One anchor and chain combined not less than 5kg in weight with at least 40m of rode with minimum diameter of 8mm.
- (ix) One bucket of not less than 9-liter capacity
- (x) Navigation lights.
- (xi) Tactical and navigational charts.
- (xii) Power source for optional electronics.
- (xiii) Mooring lines, fenders, spare lines, spare equipment, tool kit, and other personal items that provide no sailing performance advantage.
- (xiv) clips or keepers to retain running rigging in place when it is not being used.
- (xv) The mounts for items (i) to (vii) may be attached to the boat using tape, rope, shock cord, Velcro, cable ties, providing that attachments do not puncture the surface of the boat, spars, sail, or hull appendages, and can be removed without damage to any of them.
- (xvi) Spare tiller extension.
- (xvii) Rig tension gauge
- (xviii) Shroud adjusting spanner.

C 5.2. MANDATORY

- (i) One manual bilge pump, In working Order.
- (ii) One marine first aid kit, NOT expired.
- (iii) One operational VHF radio, In working order
- (iv) One functioning electric outboard engine supplied by the LM and battery with a minimum weight of 8kg). To be used only in the mid-engine box as per the rigging manual.

C.5.3 LIMITATIONS

Other items may be added depending on event Sailing instructions if deemed for safety.

C.5.4 ELECTRONIC EQUIPMENT

In addition to the optional equipment referred to in C.5.1, where stipulated in the SI and were supplied by the Organising Authority.

C.6 BOAT**MODIFICATIONS, MAINTENANCE AND REPAIR****C.6.1 MODIFICATIONS**

- C.6.1.1 The boat, spars, sails, hull appendages, control lines, attachment points, blocks, cleats mainsheet, halyard, Vang, Cunningham, gooseneck, outhaul and shall be rigged, arranged, and have the purchases as Originally Supplied and as shown in the Rigging Manual save as otherwise allowed to be changed by these class rules.
- C.6.1.2 Wet or dry sanding or Fairing of the hull, hull appendages, or any other Originally Supplied equipment other than as specifically permitted in these Class Rules is prohibited.
- C.6.1.3 No sealant/glue/adhesive or gasket of any type can be used on the engine door to attempt to seal the engine compartment.
- C.6.1.4 The following is permitted without approval, unless stated otherwise. Items mentioned in this section may be obtained from any manufacturer or supplier providing that any replacement is a like for like type, weight and size as the Originally Supplied item, and performs the same function and does not modify the effective purchase, or rigging or sheeting position:
 - (i) Polishing of the hull, hull appendages, mast and boom is permitted provided that the intention or effect is not to lighten the equipment or improve or alter the material shape from that Originally Supplied.
 - (ii) Lubricant on fittings, gooseneck, gooseneck pulleys, boom end (to enable the clew strap to slide more easily); boom end pulley, mast

- track, and sails (only in the direct vicinity of the tell-tales) only; it shall not be used on the hull, hull appendages or elsewhere.
- (iii) The tips of the surface ridges of the non-slip on the deck and/or cockpit floor may be very lightly sanded to reduce its sharpness and make it less abrasive; however, only the tops of the peaks may be abraded, the texture must be maintained. If the texture becomes relatively smooth (however this occurs), it must be reinstated to its Originally supplied state. NOTE: the grip may not be substantially reduced, and the areas may not be sanded smooth.
 - (iv) The use of: -
 - (v) flexible adhesive tape to secure knots in rope and shock cord, or stop the end of the rope fraying, or to secure the toe strap, or to protect the surface of the hull from wear by blocks, and
 - (vi) (ii) "Velcro" type fastening, hooks, hooked blocks, and snap shackles to facilitate connection of the outhaul primary line to the block, Vang block to the mast, and outhaul and Cunningham shockcord; - provided that this does not modify the intended purpose, purchase or action of any equipment and provided that such material shall not be used to create a fitting or extend a function of a permitted fitting or alter the shape of the boat.
 - (vii) Calibration marks of any kind.
 - (viii) Packing wedges, no thicker than 5mm may be fitted under cleats.
 - (ix) A single tiller extension of any material and length may be used.
 - (x) Shockcord of maximum diameter 6mm to retract or reduce slack in ropes when released/un-cleated (including to pull the outhaul and Cunningham controls off).
 - (xi) Any of the mainsheet blocks may be replaced by up to two ratchet blocks of similar size to the block as Originally Supplied.
 - (xii) Silicon sealant, elastic polyurethane, or adhesive may be used to retain and seal screws and/or bolts in place and placed on the ends to cover exposed sharp edges.
 - (xiii) Padding of maximum thickness of 6mm may be stuck (using adhesive to the cockpit floor, but if it is, it must cover the entirety of the non-slip in that area and follow the outline of that non-slip. It is permitted to sand the non-slip surface to obtain a good adhesion surface for the padding, however, if the padding is removed, the non-slip must be reinstated to its Originally supplied state. NOTE: it may not be used elsewhere and must be stuck in place over its entire surface.
 - (xiv) Antifoul may be added to the hull, and any appendages as per the rigging manual. It is permitted to sand the hull surface to obtain a good adhesion surface for the Antifoul, provided that the paint shall not improve the character of the flow of water the boundary layer.
 - (xv) The cockpit back straps (safety lines) shall not deflect more than so they touch the deck when a force of 20 kg is applied at the point of maximum deflection.
 - (xvi) Lashings used to attach safety lines shall be made of at least 3mm

diameter polyester or Polytec covered Dyneema (or equivalent) and shall pass around the principal portion of the pushpit and/or the forward attachment point at least three times. Lashings shall be taped to secure knots.

- (xvii) The stanchion fast pin may be replaced for a 5mm bolt and nyloc.
- (xviii) A hatch cover may be added to the front hatch to avoid any leaking but must be held in by using elastic and must be easily removeable.
- (xix) Only 1 x Compass bracket can be added to the mast.

C.6.2 MAINTENANCE

- C.6.2.1 Maintenance of the rig, fittings, fastenings, ropes and shockcord is permitted and includes:
- (i) the replacement of fastenings and fittings with alternatives provided that the equipment is replaced in the Originally Supplied position using the same fitting and fastening as that Originally Supplied unless otherwise permitted by these Class Rules; and
 - (ii) upgrading of one or more parts from those Originally Supplied when the boat was purchased to those as supplied on new boats by an LM which were not supplied with the original boat.
- C.6.2.2 The following parts or equipment may be replaced using parts obtained from any supplier provided that the replacement is placed in the same position and attached in the same way and is a like for like type, weight and similar size as the Originally Supplied item and does not alter the velocity ratio or purchase and performs the same function.
- (i) Blocks
 - (ii) Cam and clam cleats (but only on a like for like basis)
 - (iii) Control lines, running rigging, ropes, and lashings.
 - (iv) Shackles, swivels, clips and pins
 - (v) the keel case gasket may be replaced provided it is with a soft compliant fibrous material or a like for like material and does not extend more than 30mm into the case from the top or bottom, or beyond the surface defined by a straight edge held perpendicular to the centerline and dragged along the bottom of the hull.
- C.6.2.3 The watertight integrity of the hull shall be maintained. It is the responsibility of the owner to ensure all times the watertightness and sea worthiness of the Boat.
- C.6.2.4 The breather holes shall all remain open, operational, and unrestricted.
- C.6.2.5 Maintenance may include re-application of moulded deck non-slip areas with a similar material providing similar grip to the Originally Supplied in the event of wear.

C.6.3 REPAIR

- C.6.3.1 Repairs may be carried out provided the repair:
- (a) arises because of genuine and unintended damage,

- (b) is only made to the minimum extent necessary to reinstate the item to its Originally Supplied condition and shape,
- (c) only uses Permitted material,
- (d) complies with these Class Rules, and
- (e) is done in such a way that the shape, weight distribution, characteristics, performance, and function of the item as Originally Supplied are not affected.

C.6.3.2 Appendages may be painted only for cosmetic reasons and not used to change profile or shape or as permitted in C.2 above for advertising. Provided that the paint shall not improve the character of the flow of water the boundary layer.

C.6.4 LIMITATIONS

Only one hull, rudder, tiller, tiller extension, keel, set of spars shall be used during a race series or championship. Any replacement shall only be made with the approval of the Race Committee.

C.7 HULL

MODIFICATIONS, MAINTENANCE AND REPAIR

- C.7.1 Modifications, repairs and maintenance may be carried out but only in accordance with these Class Rules.
- C.7.2 Chips and scratches in the hull, deck and hull appendages may be filled. The Repair must comply with C.6.3. (Advisory note: re- finishing and fairing of the hull is not permitted except to the extent required for localised repair according to this rule.)

C.8 HULL APPENDAGES

C.8.1 USE

C.8.2 MODIFICATIONS

- (a) Modifications, maintenance, and repairs may be carried out but only in accordance with these Class Rules.
- (b) A kelp cutter may be added to the front of the leading edge, supplied by the LM
- (c) If the kelp cutter system is removed the lead edge can be filled with a GRP bar and glued in using VE resin and can be faired only, as long as it does not change the original profile of the leading edge.
- (d) The location and size of any holes in the rudder, and keel as Originally Supplied shall not be altered.
- (e) It is not permitted to vary the designed chord width or profile shape of

- either the rudder or the keel from that Originally Supplied.
- Ⓒ The leading edge of each foil below the stock (but not the front of the head of the foil) may be sanded, filled and/or painted provided that such work shall not extend more than 10mm aft of the leading edge.
 - Ⓒ All join lines in the keel and rudder may be sanded smooth as long as it does not change profile of the original designed shape.
 - Ⓒ LIC, NCA hold profile jigs to check profiles and can be done at any event.
 - Ⓒ The trailing edge of each foil (but not the head) may be sanded to an angle on one side to create less than a 2mm flat trailing edge. This can be filled and/or painted provided that such work shall not extend more than 10mm from the rear edge
 - Ⓒ Modification of the keel wedges is prohibited unless done by the LIC as an upgrade.
 - Ⓒ Appendages may be painted only for cosmetic reasons and not used to change profile, shape or weight outside the tolerances. provided that the paint shall not improve the character of the flow of water the boundary layer.

C.9 RIG

MODIFICATIONS, MAINTENANCE AND REPAIR

- C.9.1 Modifications, maintenance and repairs may be carried out but only in accordance with these Class Rules.
- C.9.2 The mast may be painted with a UV protective coat if it does not change the bend characteristics of the mast.

C.10 BOWSPRIT

- C.10.1 The bowsprit shall always be fully retracted except when the gennaker is being set, is set, or is being retrieved, and shall be retracted at the first reasonable opportunity after the retrieval.
- C.10.2 An extended bowsprit shall not be considered part of the boat for the purposes of
 - (a) establishing an overlap, or
 - (b) establishing right of way, unless the gennaker is set.
- C.10.3 A batten not to exceed 150mm added to the end of the bowsprit as a preventer for the gennaker sheet.

C.11 RUNNING RIGGING

C.11.1 MODIFICATIONS, MAINTENANCE AND REPAIR

RS21 Class Rules 2021 v1.15

- (a) The total purchase ratio in each of the control line systems shall not exceed: Vang –16:1, Cunningham – 4:1 outhaul – 4:1, Mainsheet- 4:1
- (b) The mainsheet, jib sheets and spinnaker sheets and halyards and spinnaker tack line shall be minimum 6mm thick diameter 50% of the length and the other 50% may be tapered.
- (c) The Main Halyard and Jib halyard may have 3:1 Purchase system with cleats which is instead of the cleats on the mast, which is attached to the mast step. As per the rigging guide.
- (d) The main and jib halyard may have spliced loops in the rope to connect to a purchase system.
- (e) A device that allows you to tighten/adjust the first stage of the backstay is allowed, but only using rope and metal rings.
- (f) A ring such as a carabiner attached to the underside of the boom for the gennaker halyard to run through to allow the spinnaker not to re-cleat is permitted.

C.11.2 USE

- (a) Save as permitted in C.6.1.1, running rigging shall be led through and attached to the fittings supplied for the function as shown in the Rigging Manual, Unless stated in C.11.1
- (b) The crew may control the mainsheet from any section of the mainsheet system.
- (c) The gennaker sheets shall be led through the blocks in their standard locations as per the rigging manual.
- (d) The Mainsheet blocks on the hoop must always retain the same height as per the rigging manual.

C.12 STANDING RIGGING

C.12.1 USE

- (a) The forestay shall be a fixed length and only supplied by the LM as part of A.11 and B.2. No adjustable forestays may be used. See Annex 2 for fixed length

C.12.2 MODIFICATIONS

- (a) A pin known as a “scar pin” can be added to the turnbuckles to stop them over rotating and loosening.
- (b) A plate and bar known as “third hands” can be fixed to the lowers and shroud bottle screw to aid in adding tension
- (c) A cover can be added to the front forestay and the shrouds as long as it only covers the swage.
- (d) The backstay can be min of 4mm and max of 5mm rope.

C.13 SAILS**C.13.1 MODIFICATIONS AND MAINTENANCE**

Routine maintenance such as sewing, mending and patching is permitted without re-certification.

C.13.2 LIMITATIONS

- (i) Not more than 1 mainsail, 1 headsail and 1 gennaker shall be used during an event of 6 or less consecutive days except when a sail has been lost or damaged beyond repair.
- (ii) Not more than 1 mainsail, 1 headsail and 2 gennakers shall be carried aboard, the 2nd gennaker may only be used if the first one has been significantly damaged during the previous race.
- (iii) Not more than 1 mainsail, 1 headsail and 2 gennakers shall be presented for event measurement.

C.13.3 IDENTIFICATION

- (a) The mainsail shall carry as sail identification the national letters and sail number. The sail number to be carried on the sails shall correspond to boat number issued by RS Sailing. The national letters and sail number size and position shall comply with the RRS Appendix G.1.2 and 1.3 except where otherwise prescribed in these class rules.
- (b) Each sail shall display an RS Sailing Label from the official "RS 21 Identification Pack". The RS 21 Identification Pack is available from RS Sailing.
- (c) Each sail shall display sail royalty badge that will arrive with the label pack and must always be displayed.

C.13.4 MAINSAIL**C.13.4.1 IDENTIFICATION**

- (a) The sail identification shall be supplied by The LM and securely attached. It shall be placed as shown in the Figure "Sail Identification Location" in Annex1 and in accordance with RRS Appendix G, in addition to the class rules C.13.4 (c) & (d) below.
- (b) The National letters and Sail numbers shall be in White.
- (c) The National letters and Sail numbers shall be placed between Batten pockets 2 & 3. and according to the position that is shown in the Rigging Manual and Annex 1 below.
- (d) The Mainsail shall display the RS Logo, Sailmakers Logo, and Cloth Manufacturers Logo in a horizontal line, within 250mm of an imaginary line between the Tack point and Clew point. As per Annex 1

C.13.4.2 USE

- (a) The sail shall be hoisted on a halyard. The arrangement shall permit hoisting and lowering of the sail at sea with the boat upright.
- (b) The Luff bolt rope shall be in its mast.

- (c) Battens shall be fitted, except in the case of accidental loss.

C.13.5 JIB

C.13.5.1 IDENTIFICATION

The Jib shall display the, RS Logo, Sailmakers Logo, and Cloth Manufacturers Logo in a horizontal line, within 150mm of an imaginary line between the Tack point and Clew point. As per Annex 1

C.13.5.2 USE

- (a) The jib shall be hoisted and lowered on a halyard. The arrangement shall permit hoisting and lowering of the sail at sea with the boat upright.
- (b) Battens shall be fitted, except in the case of accidental loss.

C.13.6 GENNAKER

IDENTIFICATION

The Gennaker shall display the RS Logo, Sailmakers Logo, Logo in a horizontal line, within 350mm of an imaginary line between the Tack point and Clew point. As per Annex 1

C.13.7 NATIONAL FLAGS

13.7.1 Where stipulated in the NOR or SI, all crew when racing in any Class World Championship or Continental Championship shall display the national flag of the owner in the relevant area shown in the drawing in Annex 1 below. The national flag is optional at all other events.

13.7.2 Flags shall only be ordered and purchased through the ICA and shall not be trimmed or cut.

C.13.8 REPAIRS

- (a) If any sail is damaged and requires substantial repair, the sail will require re-certification which may require fundamental measurement.
- (b) Repair to the sail exceeding 5% of the area or which are to the luff or bolt rope shall only be made by LIC or its designated repairer or Licensed sailmakers.
- (c) Replacement of the entire window on a like for like basis is permitted if it is damaged beyond repair.
- (d) If you are in doubt whether the damage may be repaired by you without approval of LIC you will refer full details to and consult the board of the class

Section D – Hull

D.1 MANUFACTURERS

Hulls shall be manufactured in compliance with Class Rules A.11 & B.2 above

D.2 IDENTIFICATION

Each **hull** shall carry at least one moulded CIN (Craft Identification Number).

Sail numbers on bow as per annex 3

D.3 MATERIALS, CONSTRUCTION AND DIMENSIONS

Shall comply with the World Sailing approved Builders Construction Manual

Section E – Hull Appendages

E.1 MANUFACTURERS

Hull appendages shall be manufactured in compliance with Class Rules A.11 & B.2 above

E.2 PARTS

- (a) Keel
- (b) Rudder Blade
- (c) Tiller

E.3 MATERIALS, CONSTRUCTION AND DIMENSIONS

Shall comply with the World Sailing approved Builders Construction.

Section F – Rig

F.1 MANUFACTURER

Rigs shall be manufactured in compliance with Class Rules A.11 & B.2 above.

F.2 PARTS

- (a) Mast comprising of a single tube with spreaders.
- (b) Boom
- (c) Running rigging

F.3 MATERIALS, CONSTRUCTION AND DIMENSIONS

Shall comply with the World Sailing approved

Builders

Construction Manual.

Section G – Sails

G.1 PARTS

G.1.1 MANDATORY

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

G.2 GENERAL

G.2.1 RULES

- (a) **Sails** shall comply with the **class rules** in force at the time of **certification**.
- (b) Any OEM North Sails made before the 1st Jan 2022 may be used, without penalty and do not have to have license stickers attached but will need to be signed off by the measurer.

G.2.2 CERTIFICATION

- (a) The **official measurer** or **In-House Official Measurer** shall **certify mainsails** and **headsails** in the **tack** and spinnakers in the **head** and shall sign and date the **certification mark**.
- (b) Sails shall carry the sail label issued by the RS 21 Class Association to show that the class fee has been paid
- (c) World Sailing or an MNA may appoint one or more **In-House Official Measurers** to measure and **certify sails** produced by that manufacturer.

G.2.3 SAILMAKER

- (a) A license is required to Build RS21 sails. The License shall be obtained from RS Sailing Ltd.
- (b) For gennakers the material name of the **body of the sail** shall be indelibly marked near the **head point** by the sailmaker, together with the RS license royalty badge.

G.2.4 RS21 CLASS SAIL ROYALTY LABEL

Is the Round RS sailing logo, this has a consecutive number and provided in the RS 21 Identification Pack.

G.2.5 MODIFICATIONS, MAINTENANCE AND REPAIR

- (a) If any sail is damaged and requires substantial repair, the sail will require re-certification which may require fundamental measurement.

- (b) Repair to the sail exceeding 5% of the area or which are to the luff or bolt rope shall only be made by LIC or its designated repairer.
- (c) Replacement of the entire window on a like for like basis is permitted if it is damaged beyond repair. If you are in doubt whether the damage may be repaired by you without approval of LIC you will refer full details to and consult LIC for determination by LIC.

G.3 MAINSAIL

G.3.1 INSIGNIA

- (a) The class insignia is available from RS Sailing in the logo pack. The mainsail shall carry the RS 21 insignia in white, black and pink vinyl or other durable material, securely attached.
- (b) The RS 21 insignia shall be placed approximately parallel to, and within 900mm of, the 3rd batten pocket and shall conform to the Figure “RS 21 Insignia” with a tolerance of 5mm. as per Annex 1

G.3.2 MATERIALS

- (a) The **Mainsail** body shall be built from C1002 – 1500 polyester laminate cloth, available from RS Sailing or Dimension-Polyant.
- (b) **Sail reinforcement** shall consist of C1002 – 1500 or woven polyester (for example Dacron and must be black).
- (c) Battens shall be fiberglass and can be tapered.

G.3.3 CONSTRUCTION

- (a) The construction shall be: **soft sail; single ply sail**, with sail panels radiating out from the sail corners.
- (b) The **body of the sail** shall be constructed of C1002 – 1500 throughout.
- (c) The **mainsail** shall have five **batten pockets** in the **leech**. The top three **batten pockets** shall be full length, extending from luff to leech.
- (d) The following are permitted: Stitching, glues, tapes, bolt ropes, corner eyes, straps, headboard with fixings, Cunningham eye or pulley, **batten pocket patches**, **batten pocket** elastic, **batten pocket** end caps, mast slides, adjustable foot and leech lines, **windows**, tell tales, sail shape indicator stripes and items as permitted or prescribed by other applicable *rules*.
- (e) **Batten pockets**, **batten pocket patches**, **leech tabling** and **foot tabling** shall be Black.
- (f) Reef points are optional.
- (g) Safety **Windows** Shall be placed below the **quarter width**. The windows shall not cross **seams** between panels.
- (h) If a Spreader **Window** is fitted, one side should be parallel to luff.

- (i) The **leech** shall not extend aft of straight lines between:
- (i) The **aft head point** and the intersection of the **leech** and the upper edge of the second **batten pocket**,
 - (ii) The intersection of the **leech** and the lower edge of a **batten pocket** and the intersection of the **leech** and the upper edge of an adjacent **batten pocket** below,
 - (iii) The **clew point** and the intersection of the **leech** and the lower edge of the fifth **batten pocket**.
- (j) **Head Control point** shall be 250mm along the **Head** from the **Head Point**.
- (k) **Luff Control point** shall be 250mm down the **Luff** from the **Head Point**.

G.3.4 DIMENSIONS

Mainsail	Minimum	Maximum
Leech length	8100mm	8215mm
Foot length	2800mm	3020mm
Top width	250mm	360mm
Head Diagonal Measurement (Measured between Head control Point and Luff control point)	350mm	365mm
Seven-Eighths width		857mm
Three-quarter width		1385mm
Half width	2000mm	2155mm
Quarter width		2665mm
Total Window area	1.5m ²	2.5m ²
Intersection of centre line of Batten pocket 1 and Leech from Aft Head Point		50mm
Intersection of centre line of Batten pocket 2 and Leech from Aft Head Point	1120mm	1200mm
Intersection of centre line of Batten pocket 3 and Leech from Aft Head Point	2820mm	2930mm
Inside batten pocket length - battens 4 and 5		1245mm
Primary Reinforcement		275mm
Secondary Reinforcement	Not restricted	

G.4 HEADSAIL

G.4.1 MATERIALS

- (a) The **Headsail** body shall be built from C1002 – 1500 polyester laminate cloth, available from RS Sailing or Dimension-Polyant.
- (b) **Sail reinforcement** shall consist of C1002 – 1500 or woven polyester (for example Dacron).
- (c) Battens shall be fiberglass and can be tapered.

G.4.2 CONSTRUCTION

- (a) The construction shall be: **soft sail; single ply sail**.
- (b) The **body of the sail** shall be constructed of C1002 – 1500 throughout.
- (c) The **headsail** shall have 3 **batten pockets** in the **leech**. The top **batten pocket** shall be full length, extending from luff to leech.
- (d) The following are permitted: Stitching, glues, tapes, corner eyes, straps (except as an **attachment** at the **clew**), batten pocket elastic, **batten pocket patches**, **batten pocket** end caps, adjustable leech and foot lines, **windows**, tell tales, sail shape indicator stripes, and items as permitted or prescribed by other applicable *rules*.
- (e) The **headsail** shall be fitted with non-adjusting hanks of uniform length.
- (f) The **headsail** clew may be fitted with up to two **headsail** sheet blocks having a sheave diameter not larger than 40mm.
- (g) The fitting at the **headsail clew** adjustment point shall be a single pressed ring, fitted in the body of the **sail**.
- (h) **Stiffening**, including battens and corner boards, are not permitted in the **clew** area of the **headsail**.

G.4.3 DIMENSIONS

Headsail	Minimum	Maximum
Luff Length	6750mm	6830mm
Leech length	6300mm	6400mm
Foot length	2230mm	2330mm
Top width		95mm
Three-quarter width	650mm	695mm
Half width	1150mm	1225mm
Quarter width	1625mm	1725mm
Foot Median		6660mm
Total Window area		1.5m ²
Intersection of centre line of each Batten pocket from nearest Leech Measurement Point		75mm
Inside batten pocket length - battens 2 and 3		505mm
Primary Reinforcement		325mm
Secondary Reinforcement	Not restricted	

G.5 GENNAKER**G.5.1 MATERIALS**

The **ply** of the **body of the sail** shall be manufactured from Contender Dynakote75 nylon.

G.5.2 CONSTRUCTION

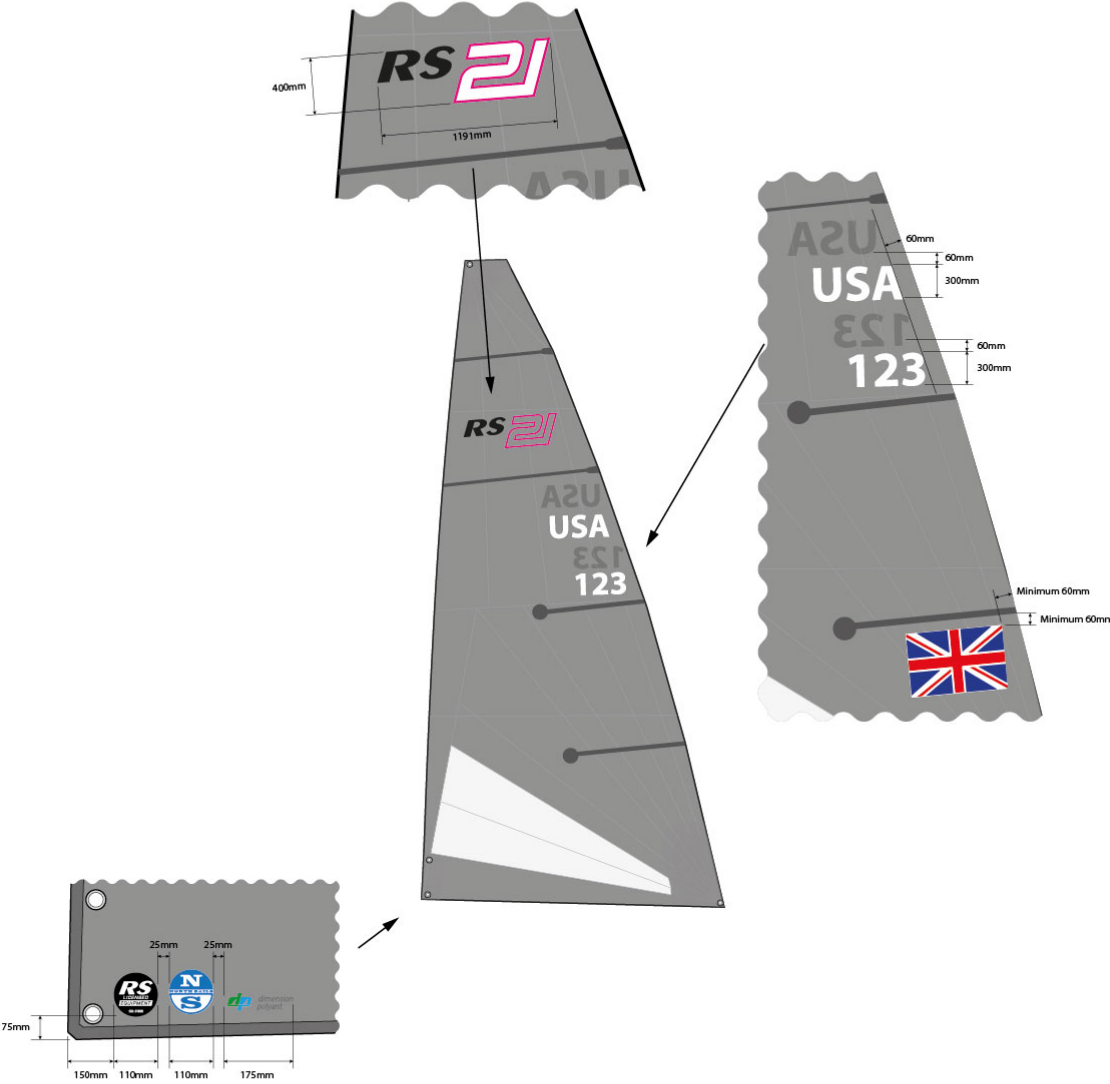
- (a) The construction shall be: **soft sail, single ply sail**.
- (b) The **body of the sail** shall consist of the same **woven ply** throughout.
- (c) The following may be fitted: Adjustable leech and luff and foot lines.
- (d) The following are permitted: Stitching, glues, tapes, corner eyes, straps, tell tales and items as permitted or prescribed by other applicable *rules*.
- (e) The Gennaker sailcloth colour must be white, apart from the front two full length panels down the luff which can be any colour.

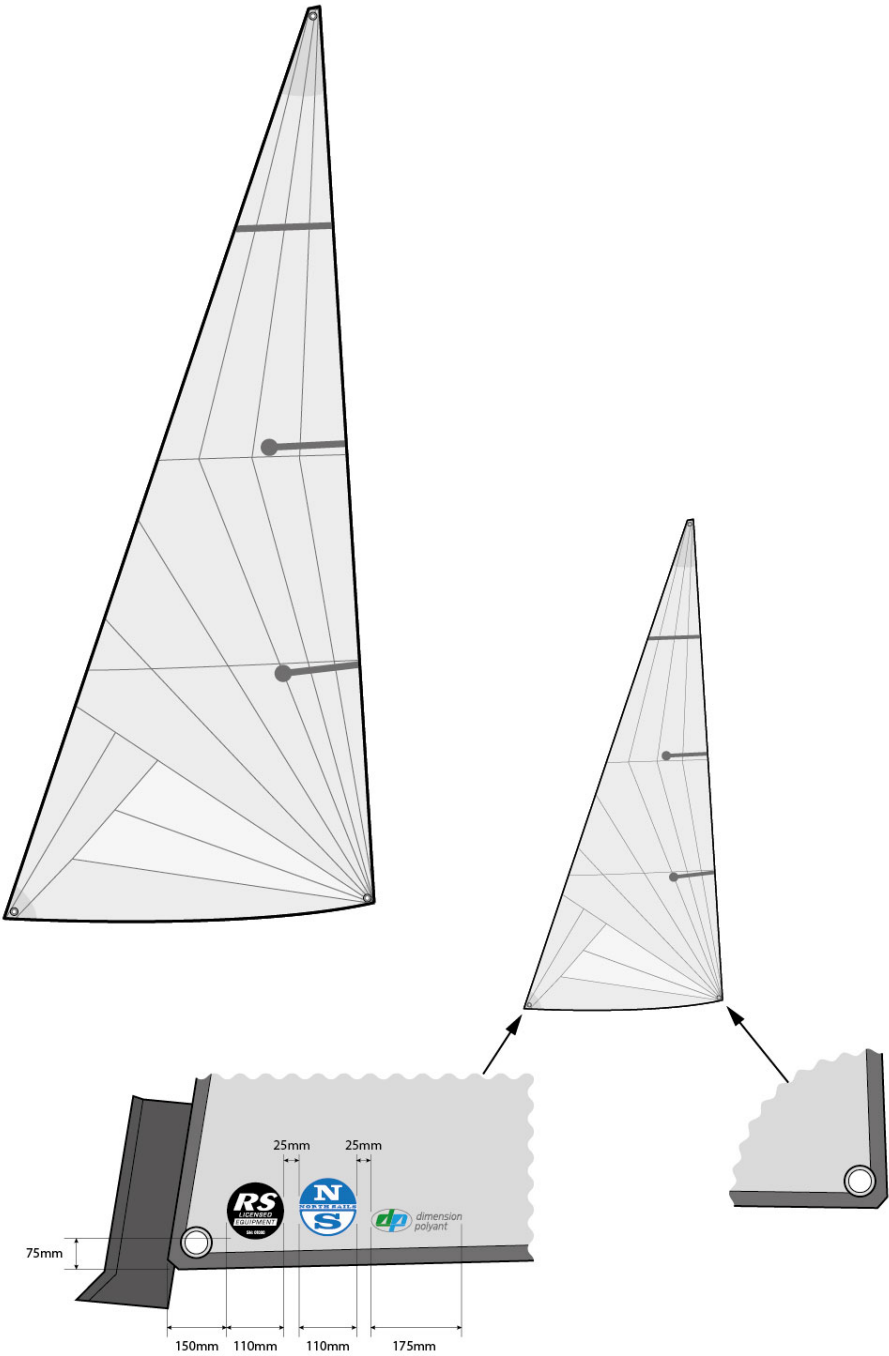
G.5.3 DIMENSIONS

Gennaker	Minimum	Maximum
Luff Length	10040mm	10210mm
Leech length	7980mm	8100mm
Foot length	5300mm	5400mm
Foot Median	9400mm	9550mm
Three-quarter width		2910mm
Half width	5100mm	5220mm
Primary Reinforcement	Not restricted	
Secondary Reinforcement	Not restricted	

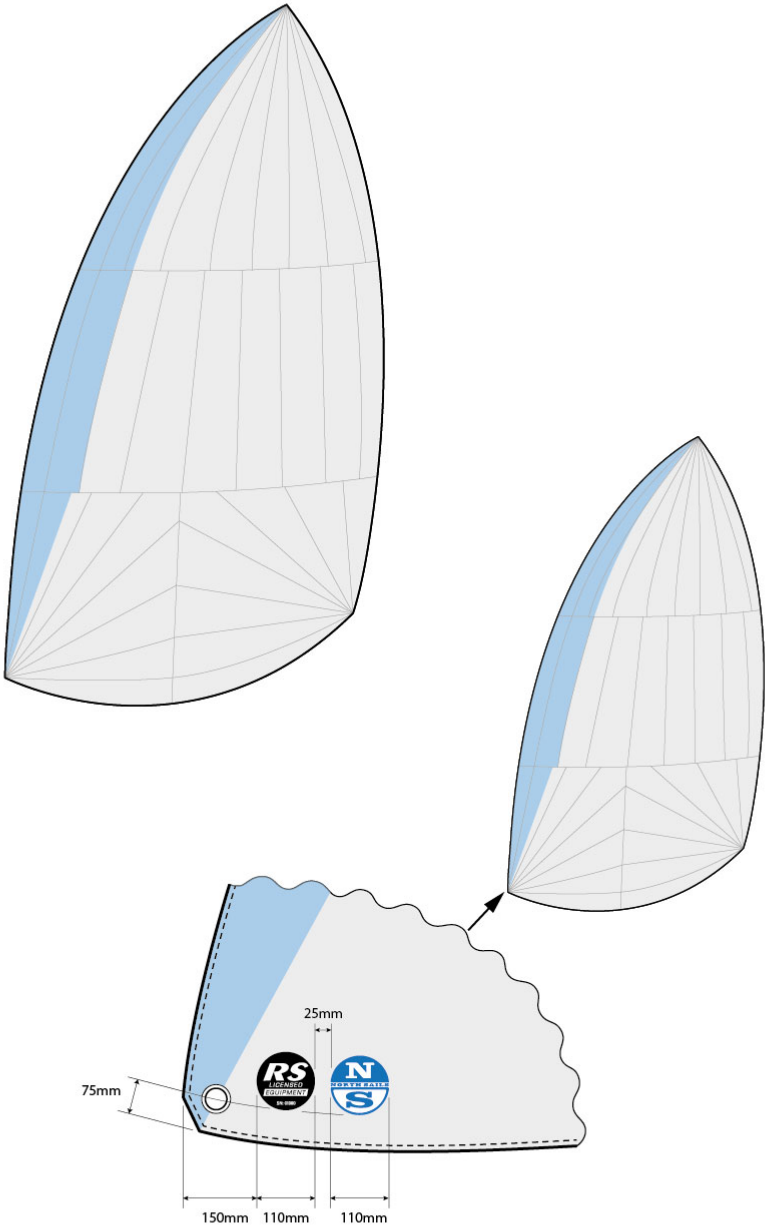
Annex 1

SAIL DIMENSIONS AND IDENTIFICATION LOCATION



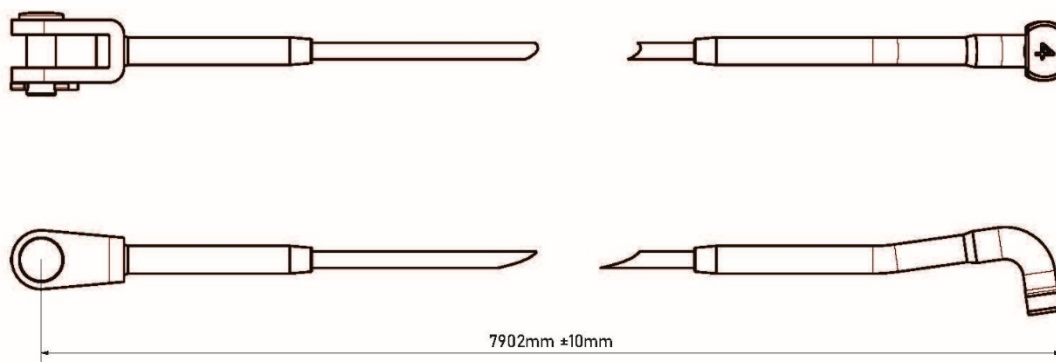


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Annex 2

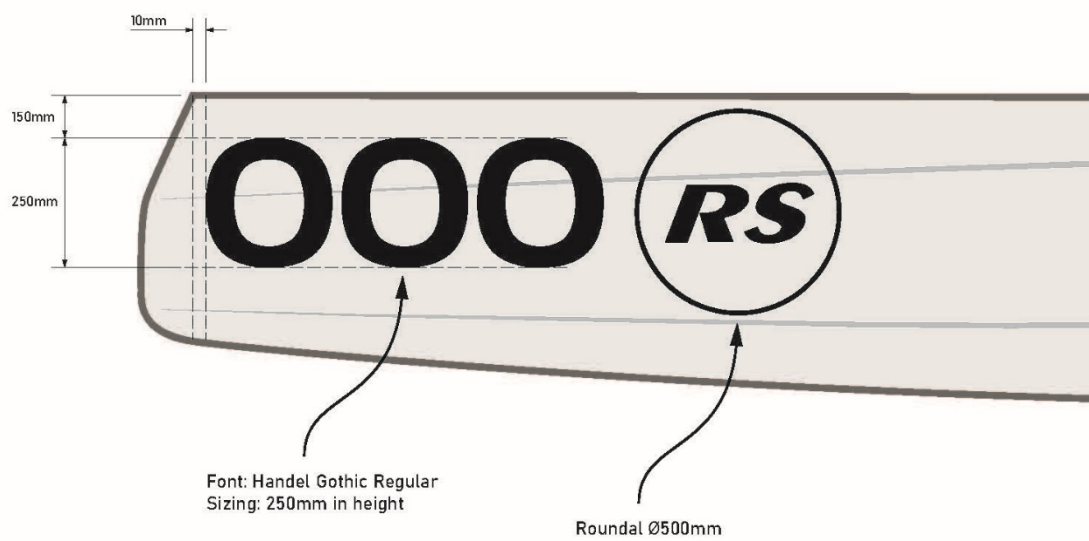
FORESTAY DIMENSIONS



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Annex 3

BOAT / SAIL NUMBER LOCATION ON BOW



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PART III – EVENT RULES

NOTE: For World, World Sailing, or continental championship the rules of this Part H may not be invoked. For National championships one or more rules of this Part H may be invoked in the SIs. For Area and Seasonal (eg Spring, Winter) championships, local club racing and other minor events the following may apply.