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# Class Rules

## International Nacra 15 Class Association



The Nacra 15 was designed in 2014 by Nacra and Morrelli & Melvin and was adopted as a World Sailing class in 2018. Appointed International Youth Multihull by World Sailing in 2015.

sport / nature / technology



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## INTRODUCTION

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*This introduction only provides an informal background and the International Nacra 15 Class Rules proper begin on the next page.*

*Nacra 15 hulls, hull appendages, cross beams, trampoline, rigging and sails are manufacturer controlled.*

*Nacra 15 hulls, hull appendages, cross beams, trampoline, rigging and sails shall only be manufactured by Nacra Sailing B.V.– in the class rules referred to as ‘Nacra licensed suppliers’. Equipment is required to comply with the International Nacra 15 Building Specification and is subject to World Sailing approved manufacturing control system.*

*Nacra 15 hulls, hull appendages, cross beams, trampoline, rigging sails may, after having left the manufacturer, only be altered to the extent permitted in Section C of the class rules.*

*Owners and crews should be aware that compliance with rules in Section C is the responsibility of the competitor, as this is NOT checked as part of the in-house 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.*

PLEASE REMEMBER:

THESE RULES ARE **CLOSED CLASS RULES** WHERE IF IT DOES NOT

**SPECIFICALLY SAY THAT YOU MAY – THEN YOU SHALL NOT.**

COMPONENTS, AND THEIR USE, ARE DEFINED BY THEIR  
DESCRIPTION.

## PART I – ADMINISTRATION

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### Section A – General

#### A.1 LANGUAGE

- A.1.1 The official language of the class is English and in case of dispute over translation the English text shall prevail.
- A.1.2 The word “shall” is mandatory and the word “may” is permissive.
- A.1.3 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.2 ABBREVIATIONS

- A.2.1 WS World Sailing
- MNA WS Member National Authority
- NS Nacra Sailing B.V.  
also referred in the rules as NACRA the copy right holder.
- IN15CA International Nacra 15 Class Association
- ERS Equipment Rules of Sailing
- RRS Racing Rules of Sailing
- IM International Measurer

#### A.3 AUTHORITIES

- A.3.1 The international authority of the class is World Sailing, which shall co-operate with the IN15CA in all matters concerning these **Class Rules**.
- A.3.2 Notwithstanding anything contained herein, the **certification authority** has the authority to withdraw a **certificate** and shall do so on the request of World Sailing.

#### A.4 ADMINISTRATION OF THE CLASS

- A.4.1 World Sailing has delegated its administrative functions of the class to the IN15CA.

#### A.5 CLASS RULES CHANGES

- A.5.1 World Sailing Regulation 10.11 applies.

#### A.6 CLASS RULES AMENDMENTS

- A.6.1 In accordance with World Sailing Regulations, amendments to the **Class Rules** require the approval of World Sailing after their adoption by a simple majority vote of the members in a general meeting of the IN15CA held in accordance with its constitution.

## **A.7 CLASS RULES INTERPRETATIONS**

- A.7.1 Interpretation of **Class Rules** shall be made in accordance with World Sailing Regulations in consultation with the IN15CA and NS.
- A.7.2 Interpretation of **Class Rules** at an event shall be carried out in accordance with the RRS. The event organising authority shall inform World Sailing and IN15CA of any such interpretations.

## **A.8 INTERNATIONAL CLASS FEE AND WORLD SAILING BUILDING PLAQUE**

- A.8.1 The licensed manufacturer shall pay the International Class Fee.
- A.8.2 World Sailing shall, after having received the International Class Fee for the **hull**, send the World Sailing Building Plaque to the licensed manufacturer.

## **A.9 LICENSED MANUFACTURER**

- A.9.1 Nacra 15 equipment shall only be manufactured by Nacra or any of its licensed manufacturers unless otherwise specified by these **Class Rules**.

## **A.10 SAIL NUMBERS & CLASS INSIGNIA**

- A.10.1
  - (a) The sail number shall correspond to the first three digits on the World Sailing plaque of the **hull** racing or the **hull** owned by any member of the crew, except where (b) applies.
  - (b) Where the helm has finished in the top 3 in the preceding Nacra 15 World Championship the **sail** number shall be that place, single digit.
  - (c) The national letters and the sail numbers shall be black in colour and applied according to the dimensions as defined in Appendix Section K immediately under batten number 4. The national letters and numbers shall comply with the RRS Appendix G except where specified otherwise in Class Rules Appendix K.

## 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) have a World Sailing Building Plaque
- (b) have been manufactured by Nacra Sports BV or an approved licensed manufacturer.
- (c) be in compliance with the **Class Rules**.

### B.2 EVENT INSPECTION

B.2.1 A role of **Equipment Inspectors** at an event is to verify that equipment has been produced by Nacra and has not been subsequently altered (other than as is permitted within these **class rules**) using whatever inspection methods they deem appropriate, including comparison with a reference sample of the type of equipment presented for inspection. Should this comparison reveal deviation greater than the **Equipment Inspector** considers being within manufacturing tolerances, the matter shall be reported to the Race Committee. Such occurrences shall be reported to World Sailing and the IN15CA Technical Committee for investigation and a ruling on the eligibility of the equipment for racing.

### B.3 EVENT LIMITATION MARKS

B.3.1 If an event uses **event limitation marks** these marks shall not be removed during the event. If the **event limitation mark** becomes damaged or lost this shall be reported to the event Technical Committee as soon as possible.

## PART II – REQUIREMENTS AND LIMITATIONS

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

The Class Rules in Part II are **closed class rules**, where anything that is not specifically allowed in **Class Rules** is prohibited.

**Equipment 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) RRS 49.1 is amended such that both members of the **crew** may use a trapeze.

##### C.1.2 LIMITATIONS

- (a) The Nacra 15 shall only be raced with equipment supplied by a Nacra licensed manufacturer , except where otherwise authorized by these **Class Rules**.
- (b) Where replacement equipment other than from Nacra licensed suppliers is authorized, it may be obtained from any supplier provided that the replacement is of a similar weight, size, type and performs the same function within the tolerances set by Appendix section H and I. Replacement fittings shall be fitted in the same position, or as close as technically possible to maintain the original function, of the original fitting.

#### C.2 CREW

##### C.2.1 LIMITATIONS

- (a) The **crew** shall consist of two persons.
- (b) A **crew** member using a trapeze shall be in contact with the **hull** at all times except in the situation of accidental movement and/or a manoeuvre.

##### C.2.2 MEMBERSHIP

During all international events each **crew** member shall be a current member of the IN15CA.

#### C.3 PERSONAL EQUIPMENT

##### C.3.1 PERSONAL FLOATATION DEVICE

- (a) Both **crew** shall wear a **personal floatation device** to the minimum standard ISO 12402-5 (Level 50), or USCG Type III, or AUS PFD 1, or EN 393, unless an alternative standard is prescribed otherwise in the Notice of Race or Sailing Instructions.
- (b) The use of inflatable personal flotation devices is not permitted.

##### C.3.2 PERSONAL SAFETY EQUIPMENT

- (a) Each **crew** member shall carry a cutting device with a blade length of no more than 150mm.
- (b) Each **crew** shall carry a SOLAS approved whistle.
- (c) The use of helmets (conform EN1385 standard) for both helm and crew is strongly recommended at all times whilst sailing-

The Notice of Race may change this rule to make the use of these helmets mandatory.

#### **C.4 ADVERTISING**

- C.4.1 Advertising shall only be displayed in accordance with World Sailing advertising Code
- C.4.2 For the purpose of World Sailing Advertising Code, the gennaker shall be deemed a spinnaker.
- C.4.3 The area between the second from the top and third batten of the **mainsail** shall be kept free of competitor advertising, and shall be reserved for the Class Insignia, as specified in Appendix Section K.

#### **C.5 PORTABLE EQUIPMENT**

##### **C.5.1 OPTIONAL**

- (a) Timing devices.
- (b) A maximum of one compass with bracket which may include a timing device. If electronic, only a compass with heading, heading memory and timing functions is permitted.
- (c) Spare parts and tools.
- (e) Camera recording equipment and attachments and/or race tracking equipment (GPS) where permitted by the IN15CA, Notice of Race and/or Sailing Instructions.

#### **C.6 BOAT**

##### **C.6.1 MODIFICATIONS MAINTENANCE AND REPAIR**

###### **MODIFICATIONS**

- (a) The use of the following items is in general unrestricted, except that such items shall not be used in such a way as to create a fitting or extend a function of a permitted fitting:
  - (i) Shockcord, with a maximum diameter of 5 mm.
  - (ii) Adhesive tape.
  - (iii) Rings.
  - (iv) Protective coverings made of any soft material over exposed fittings-
  - (v) Plastic balls.
  - (vi) Blocks from Nacra Licenced suppliers, with a maximum sheave diameter of 29mm may be added provided it does not create a new function.
- (b) To facilitate advertising, the application of vinyl, mylar or other plastic film over the surfaces of the **hull, sails and spars**, provided that the film shall not be specially textured or otherwise manufactured in a way that could improve the character of the flow of water or air inside the boundary layer.
- (c) The righting line with a min diameter of 8mm and minimum length of 4100mm may be led under the trampoline with both ends fixed directly or indirectly via the front cross beam at either sides of the **hulls** and held under tension by the use of shockcord.

###### **MAINTENANCE**

- (d) Maintenance may be carried out provided that the essential shape, characteristics and function of the original component are not affected.

- (e) Any attachment for blocks may be replaced. Attachments for blocks shall be of substantially the same size and design as the original.

#### REPAIR

- (f) Repairs may be carried out provided that the essential shape, characteristics and function of the original component is not affected.
- (g) Fasteners may be replaced or added if the function of the fitting or part is not altered and where required to facilitate a repair. The fitting maybe modified to accommodate slightly larger fixings.
- (h) Any fitting may be replaced with a fitting of same type and manufacturer in the same position or close as technically possible as the standard fitting and substantially of the same size and design.

#### C.6.2 WEIGHT

The weight of the **boat** in dry condition shall be a minimum of 141 kg. The weight of the boat shall be taken including: **hulls**, the fully assembled platform, **hull appendages**, **rig**, fittings and the righting line. But excluding **rig** fittings not permanently fixed, the tiller extension, **sails** and all optional **portable equipment** listed in C.5. The compass bracket shall be included if permanently fixed.

#### C.6.3 CORRECTOR WEIGHTS

- (a) When the **boat** weight is less than the minimum requirement, **Corrector weight** of a solid, non-absorbant material shall be used, fastened to the inside of the dolphin Striker (V Bar) at locations avoiding the intersection of the front cross beam and the dolphin stricker rod. The location must allow to apply event limitation marks and allow visual inspections
- (b) The total weight of such **corrector weight** shall not exceed **4 kg**. The weight of materials used to fasten the **corrector weights** shall not be included in the **corrector weights** calculation.

#### C.6.4 LIMITATIONS

- (a)

### C.7 HULL

#### C.7.1 MODIFICATIONS MAINTENANCE AND REPAIR

The watertight integrity of the **hull** shall be maintained.

#### MODIFICATIONS

- (a) Additional non-skid tape may be applied to
  - (i) The upper deck areas in front of the front cross beam.
  - (ii) The cross beams.
  - (iii) The upper deck areas behind the rear cross beam.
- (b) Stand-up springs or boots may be fitted between the gennaker blocks and the eye-straps on the **deck**.
- (c) Two foot-straps may be fitted to each **hull**, aft of the rear cross beam.
- (d) No holes shall be made in the **hull** or **deck** mouldings except;
  - (i) For the purpose making repairs.
  - (ii) To fit foot-straps.

- (e) Re-finishing of the daggerboard **bearings** is only permitted to facilitate localised repair and provided that the essential shape, characteristics and function of the original component are not affected. An International Measurer or member of the Event Technical Committee may use templates to verify compliance with these limitations.

#### MAINTENANCE

- (f) The outermost surfaces of the **hulls** may be cleaned and polished.

#### REPAIR

- (g) Repairs may be carried out provided such repairs are made in such a way that the essential shape, characteristics or function of the original are not affected.
- (h) The serial number shall remain legible.
- (i) Areas of damage repair may be filled, sanded and polished over.
- (j) Replacement of non-skid 'pro-grip' (type: EVA Foam 3mm thickness) of the same type to the deck moulding is permitted. The pro-grip shall be supplied by Nacra licenced suppliers only.

#### C.7.2 LIMITATIONS

- (a) Only one starboard **hull** and one port **hull** shall be used in an event, except when lost or damaged beyond repair. Any replacement shall only be made with the approval of the Event Technical Committee.
- (b) A breather hole in the centre of the top-hatch of each **hull** shall be present and remain open.
- (c) The Manufacturers Mark (Nacra 15 Logo) shall be present on the outside of the stern of each hull.

### C.8 HULL APPENDAGES

#### C.8.1 MODIFICATIONS MAINTENANCE AND REPAIR

##### MODIFICATIONS

- (a) The rudder winglet screw heads may be filled and faired.
- (b) The tiller extension may be replaced by any tiller extension provided that it is compatible with the Nacra Licenced supplied Tiller Connector Bar Universal Joint.

##### MAINTENANCE

- (c) The outermost surfaces of the **daggerboards** and **rudders** may be cleaned, sanded and polished provided that the essential shape, characteristics and function of the original component are not affected.
- (d) The rope handle of the **daggerboard**, may be replaced by a different rope, with a maximum length of 600 mm and minimum 6 mm of thickness.
- (e) Polish or friction-reducing compounds (E.g. McLube or Teflon) may be applied to the surfaces only prior to racing.

##### REPAIR

- (f) Repairs to chips and scratches in the leading and trailing edges of the **daggerboards** and **rudders** may be filled and faired.
- (g) Re-finishing and fairing of a **hull appendage** surface is permitted only to facilitate localised repair.

**C.8.2 LIMITATIONS**

- (a) Only one starboard **daggerboard**, one starboard **rudder**, one port **daggerboard** and one port **rudder** shall be used in an event, except when an item has been lost or damaged beyond repair. Any replacement shall only be made with the approval of the Event Technical Committee.

**C.9 BEAMS**

**C.9.1 MODIFICATIONS MAINTENANCE AND REPAIR**

**MODIFICATIONS**

- (a) The **jib** sheet and **mainsail** downhaul trim line retraction system may be modified to make them a continuous system to the opposite side of the platform. Additional blocks may be used as specified in Appendix Section I.
- (b) The beam bolts bedding inside the beam extrusion and casting shall not be adjusted and no filler shall be applied.
- (c) No additional holes shall be made in the beam extrusions.

**MAINTENANCE**

- (e) Routine maintenance such as cleaning, polishing and the replacement of broken fittings is permitted.

**REPAIRS**

- (f) Localised repairs to damaged equipment may be undertaken. Any repair shall not be used to reinforce an existing part or add a function.

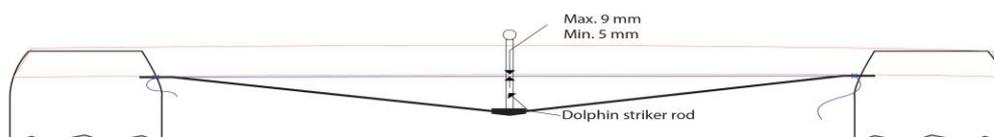
**C.9.2 LIMITATION**

- (a) **USE**

	Minimum	Maximum
Front cross beam deflection	5mm	9mm

Front cross beam deflection is the greatest distance between:

The cross beam and a straight line from the port and starboard underside of the beam, at the intersection with the hull, taken at 90° to the straight line. Taken with the dolphin-striker tensioned, the mast either removed or standing with 0 rig tension, and the cross-beam horizontal and both crossbeams tightened into their beam beddings.



## C.10 RIG

### C.10.1 MODIFICATION MAINTENANCE AND REPAIRS

The following is permitted without the approval of the IN15CA Technical Committee unless stated otherwise items mentioned in the section may be obtained from any manufacturer.

#### MODIFICATIONS

- (a) To protect the **mast** from the **rigging**, any tape may be used.
- (b) The terminals of the forestay and shrouds and their attachment fittings may be covered with tubular protective covering however the function of the fittings shall not be changed.
- (c) Calibration marks may be used.
- (d) The trapeze wires may also be fitted through the upper terminal of the shrouds
- (e) Tell-tales or ribbons in the **rigging** may be used.
- (f) Mechanical wind indicators may be used
- (g) A protective cover made only by tape or sail cloth and attached by adhesive tape with a max size of 300mm by 350mm may be fitted over the hounds.
- (h) Any fitting may be replaced with a fitting of same type and manufacturer in the same position or close as technically possible as the standard fitting and substantially of the same size and design.

#### MAINTENANCE

- (i) Routine maintenance such as cleaning, polishing and the replacement of broken fittings is permitted.

#### REPAIR

- (j) Localised repairs to damaged equipment may be undertaken. Any repair shall not be used to reinforce an existing part or add a function.

### C.10.2 LIMITATIONS

- (a) Only one **mast** and one **boom** and **standing rigging** shall be used during an event, except when an item has been lost or damaged beyond repair. Any replacement shall only be made with the approval of the Event Technical Committee.
- (b) Lower hole of the hounds shall be used to fit the forestay and shrouds
- (c) The middle and top hole of the hounds shall be used to fit the trapeze wires.
- (d) No additional holes shall be drilled in the **mast** section
- (e) The **forestay** length is controlled by laying the **forestay**, including the chainplate or turnbuckle (C.10.7 (a)(2)), along the forward face of the **mast** section and measuring the maximum extension possible of the **forestay** with the chainplate or turnbuckle. This distance shall be taken between the lower trimming line of the **mast** section and the bearing surface of the **forestay** pin and shall be a minimum of 295 mm.

### C.10.3 STANDING RIGGING

#### (a) MODIFICATION, MAINTENANCE AND REPAIR.

(i) **Standing rigging** may be replaced and shall comply with the following:

Standing rigging	Qty	Diam.	Material	Associated Hardware	options or restrictions
		mm			
<b>Forestay</b>	1	4.0	Standard 1 x 19 stainless steel wire		±0.05 mm in diam. Length minimum 5570mm & maximum 5590mm
	1			Stay Adjuster	C.10.3 (a) (ii), <b>Grandfathering: Until 31<sup>st</sup> Dec 2020</b>
<b>Bridle</b>	2	3.0	Standard 1 x 19 stainless steel wire		Nacra Licensed suppliers only
	1			Bridle fitting NA31698	Nacra Licensed suppliers only
<b>Shrouds</b>	2	4.0	Standard 1 x 19 stainless steel wire		diam. ±0.05 mm.
	2			Stay Adjuster	C.10.3 (a) (ii)
<b>Diamonds</b>	2	3.0	Standard 1 x 19 stainless steel wire		diam. ±0.05 mm.
<b>Bowsprit bridle</b>	2	2.5	Standard 1 x 19 stainless steel wire		Nacra Licensed suppliers only
<b>Bowsprit mid-bridle</b>	2	3.0	Dyneema or Polyester		±0.2 mm diam.
<b>Tramp laces rear</b>	1	3.0	Dyneema or Polyester		±0.2 mm diam.
<b>Tramp laces side</b>	2	3.0	Dyneema or Polyester		±0.2 mm diam.
<b>Trapeze lines</b>	4	2.5	1 x 19 stainless steel wire	Open, see C.10.4 (a)(v)	±0.2 mm diam.

<sup>(1)</sup> Length is the distance taken between the bearing surfaces of the rigging.

(ii) The stay adjusters of **forestay** and **shrouds** may be replaced by a turnbuckle of the following manufactures:

- Ronstan Calibrated Turnbuckles RF1575
- NavTec Quickfit lifeline Turnbuckle 316
- C.S. Johnson 12-100 Stay Adjuster – Calibrated.
- Stay Master 1/8"

Note: Nacra may authorize the use of comparable turnbuckle products from other manufacturers provided those products meet comparable requirements for product standardization, compliance, and testing.

(iii) The **shrouds** and **forestay** terminal wire connectors shall be a fitting from any manufacturer in the same position as the standard fitting and substantially of the same size, weight and structural design.

(iv) The ring of the **Jib** halyard locking system shall be in the same position as on the standard forestay and of the same size and structural design.

#### (b) LIMITATIONS

(i) **Standing rigging** shall not be adjusted while racing.

### C.10.4 RUNNING RIGGING

#### (a) MODIFICATION, MAINTENANCE AND REPAIR.

- (i) **Running rigging** may be replaced and shall comply as specified in Appendix section I.
  - (ii) The mainsheet system reeving or number of sheaves may be altered to achieve a maximum purchase of 10:1 and a minimum purchase of 8:1, only one ratchet block is allowed in the mainsheet system.
  - (iii) The Mainsail downhaul system is to achieve a maximum of 8:1 purchase.
  - (iv) The four supplied blocks for the **Gennaker** sheets, may be changed to any type of block with a minimum sheave diameter of 40mm and a maximum of 57mm.
  - (v) The **trapeze** system arrangement is open and may be modified to include an adjustable hook height system provided that the adjustment rope is a minimum of 5mm. Attachment methods by shockcord are to use the hull trapeze fairlead and via the end caps in the front cross beam.
  - (vi) The Mainsail Downhaul trim line may be led through a ring or block with a maximum sheave diameter of 29mm attached to the **trapeze** system by rope.
  - (vii) A shackle or snap-shackle may be fitted at the end of the main sheet where it attaches the mainsail.
  - (viii) A shackle or snap-shackle may be fitted at the end of the jib sheet where it attaches to the clew of the jib.
  - (ix) Additional gennaker tack-line inboard end turning blocks may be attached by rope to the **shrouds**, gennaker strap-eye or front cross beam or beam casting with a maximum sheave diameter of 29mm.
  - (x) The Mast rotation line may be modified to a continuous system.
  - (xi) A rope with a ring may be fitted to the gennaker clew for the purpose of leading the gennaker retrieval line through this ring.
- (b) USE
- (i) **Running rigging** shall be led through and attached to the fittings supplied for their function.

## C.11 SAILS

Modifications, Maintenance and Repair.

### C.11.1 MODIFICATIONS,

- (a) Additional tell-tales may be applied.
- (b) Additional camber stripes may be applied.

### MAINTENANCE

- (c) Routine maintenance such as sewing and patching is permitted.
- (d) Mclube, Holmenkol or similar sail treatments may be used.

### REPAIR

- (e) Sails shall not be recut.
- (f) Localised repairs to sails may be undertaken. Any repair shall not be used to reinforce an existing part or add a function.

#### C.11.2 LIMITATIONS

Not more than 1 **mainsail**, 1 **jib** and 1 **gennaker** shall be used during an event except when a **sail** has been lost or damaged beyond repair. Any replacement shall only be made with the approval of the Event Technical Committee.

#### C.11.3 MAINSAIL

##### (a) MODIFICATION.

The application of paint, ink, vinyl, mylar or other plastic film over the surfaces of the **mainsail** is permitted to facilitate advertising, provided that it shall not cover the window panels (blue coloured panels in Appendix Section K).

##### (b) LIMITATION.

(1) **Sail** numbers shall be any of the following:

- (i) The number shown on the ISAF/World Sailing International Class building plaque of the **boat**, or of any **boat** owned by the **crew** members.
- (ii) Where the helm has finished in the top 3 in the preceding Nacra 15 World Championship the **sail** number shall be that place, single digit.
- (c) The national letters and the sail numbers shall be black in colour and applied according to the dimensions as defined in Appendix Section K immediately under batten number 4. The national letters and numbers shall comply with the RRS Appendix G except where specified otherwise in Class Rules Appendix K.

#### BATTENS

The **Mainsail** battens shall be of the standard set supplied by Nacra Licensed manufacturer only and shall not be altered. A standard batten set shall consist of six battens.

Battens shall be inserted in their matching **batten pocket** and no more than one batten shall be placed in each **batten pocket**.

##### (d) NATIONAL FLAGS

- (i) All teams when racing shall display their national flag. The flag shall be either single sided on the starboard side or placed back to back on the starboard and port side of the mainsail between the 3rd and 4th battens from the head point of the **sail**. National Flag fitting dimensions can be found in Section K.
- (ii) The National Flag shall be corresponding to the Country Code displayed in the **sail** number.

##### (e) LIMITATIONS

The **sail** shall be hoisted on the **halyard**. The Nacra licensed supplied arrangement shall permit hoisting and lowering of the **sail** whilst afloat.

#### C.11.4 JIB

##### (a) MODIFICATIONS

The application of paint, ink, vinyl, mylar or other plastic film over the surfaces of the **Jib** is permitted to facilitate advertising, provided that it shall not cover the window panels (blue coloured panels in Appendix Section K).

(b) **BATTENS**

The **jib** battens shall be of the standard set supplied by Nacra Licensed manufacturer only and shall not be altered. A standard batten set shall consist of a lower, middle and top batten.

Battens shall be inserted in their matching batten pocket and no more than one batten shall be placed in each **batten pocket**.

(c) **LIMITATIONS**

The **sail** shall be hoisted on the **halyard**. The Nacra licensed supplied arrangement shall permit hoisting and lowering of the sail whilst afloat.

C.11.5 **GENNAKER**

(a) **MODIFICATION**

The gennaker may be painted or printed for graphics.

## Section D – Platform

### D.1 **PARTS**

#### D.1.1 **MANDATORY**

- (a) Starboard **hull**
- (b) Port **hull**
- (c) Front cross beam
- (d) Rear cross beam
- (e) Trampoline

### D.2 **MODIFICATIONS, MAINTENANCE AND REPAIR**

The alterations contained in D.2.1. to D.2.2 may be made by Nacra, or by anybody after a formal request has been made to the Nacra and written approval is received by the owner. This shall require the manufacturer's declaration to be re-issued

- (a) If any **hull** is damaged and requires repaired in any other way than described in section C the details shall be recorded on the Manufacturers declaration.

#### D.2.1. **MODIFICATIONS**

- (a)

#### D.2.2. **MAINTENANCE**

- (a)

### D.3 **MANUFACTURERS**

The parts of section D.1.1 shall only be manufactured by Nacra Licensed Manufacturers.

### D.4 **IDENTIFICATION**

The **Hull** shall carry the licensed manufacturer's serial number displayed on the transom of the starboard hull.

Items (c), (d) and of section D.1.1 shall carry identification stickers.

## **D.5 MATERIALS, CONSTRUCTION AND DIMENSIONS**

D.5.1 Shall comply with the World Sailing approved Builders Construction Manual.

## **Section E – Hull Appendages**

### **E.1 PARTS**

#### **E.1.1 MANDATORY**

- (a) Starboard **Daggerboard**
- (b) Port **Daggerboard**
- (c) Starboard **Rudderblade**
- (d) Port **Rudderblade**
- (e) **Rudder** upper-casting including tiller-arm
- (f) **Rudder** lower-casting
- (g) **Tiller-bar**

### **E.2 MANUFACTURERS**

The parts of section E.1 shall only be manufactured by Nacra Licensed Manufacturers.

### **E.3 IDENTIFICATION**

The **daggerboard** and **rudder blades** of items (a), (b), (c) and (d) carry the licensed manufacturer's serial number displayed on the blade.

**Rudder** castings items (e) and (f) and shall carry imbedded Nacra logos.

Tiller bar item (g) shall carry a Nacra 15 identification stickers.

### **E.4 MATERIALS, CONSTRUCTION AND DIMENSIONS**

Shall comply with the World Sailing approved Builders Construction Manual.

## **Section F – Rig**

### **F.1 PARTS**

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

- (a) **Mast**
- (b) **Spreaders**
- (c) **Boom**
- (d) **Bowsprit** including snuffer ring and bridles
- (e) Compression post
- (f) **Spi** snuffer bag

### **F.2 MANUFACTURERS**

The parts of section F.1 shall only be manufactured by Nacra Licensed Manufacturers.

### **F.3 IDENTIFICATION**

Items (a), (b), (c), (d) and (e) shall carry a Nacra 15 identification stickers.

### **F.4 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**
  - (i) Standard batten set
- (b) **Jib**
  - (i) Standard batten set
- (c) Gennaker

### G.2 MANUFACTURERS

Sails of section G.1.1 shall only be manufactured by Nacra Licensed Manufacturers.

### G.3 IDENTIFICATION

The **mainsail**, **jib** and **gennaker** shall carry the licensed manufacturer's serial number displayed on the sails.

### G.4 MATERIALS, CONSTRUCTION AND DIMENSIONS

Shall comply with the World Sailing approved Builders Construction Manual.

## 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: MANUFACTURED PART LIST

The following components shall comply with the building specification in force at the time of manufacture. As required, components shall have identification stickers attached by the builder at the time of manufacture or by the measurer:					
Qty	Component	Associated Hardware	Iden. sticker	Ident. Nr.	Options or tolerances
<i>(Where no comment as per class rules)</i>					
2	<b>Hull</b>		Required	Yes	Nacra Licensed suppliers only
2		Mast rotation Clamcleat CL268			CL823 Wedge
2		Gennaker Sheet Block			40-57mm Harken Licensed suppliers only
		Pro Grip			Nacra Licensed suppliers only
2		Rear Inspection Hatch			5" / 125mm cut out, Open Manufacturer
1	<b>Front Cross beam</b>		Required	No	Nacra Licensed suppliers only
2		Gennaker Sheet Block			40-57mm Harken Licensed suppliers only
1		Tack-line cheek HK233			Harken Licensed suppliers only
1		Gennaker Tack-line cleat HK468			Harken Licensed suppliers only
2		Jib sheet swivel base HK241			Harken Licensed suppliers only
1		Jib track Car HK2700 + HK 406			Harken Licensed suppliers only
1		Jib strop block HK406			Harken Licensed suppliers only
1		Jib track			Nacra Licensed suppliers only
1	<b>Rear Cross Beam</b>		Required	No	Nacra Licensed suppliers only
1		Traveller track car HK2738			Harken Licensed suppliers only
1	<b>Mast</b>		Required	No	Nacra Licensed suppliers only
		Gennaker Halyard Cleat HK2156			Harken Licensed suppliers only
2		Downhaul sheave micro HK160			Harken Licensed suppliers only
1		Downhaul single HK348			Harken Licensed suppliers only
2		Downhaul Pivoting HK395 Or Spinlock PXR0206/VP			Harken / Spinlock Licensed suppliers only
1	<b>Spreaders (6 components)</b>		Required	No	Nacra Licensed suppliers only
1	<b>Boom</b>		Required	No	Nacra Licensed suppliers only
1		Clamcleat Outhaul CL277			Nacra Licensed suppliers only
1		Boom Gooseneck U-fitting			Nacra Licensed suppliers only
1	<b>Compression Post</b>		Required	No	Nacra Licensed suppliers only
1	<b>Trampoline</b>		Required	No	Nacra Licensed suppliers only
2		Gennaker Haylard Guiders			16 – 29mm Harken Licensed suppliers only
2					Kickbars, Nacra Licensed suppliers only
1	<b>Gennaker Pole</b>		Required	No	Nacra Licensed suppliers only
1		Snuffer ring			Nacra Licensed suppliers only
1		Tack-line stand-up HK349			Harken Licensed suppliers only
1		Jib Car Clamcleat CL211			
1		Jib sheet cheek block HK416			Harken Licensed suppliers only
		Jib Tack Downhaul			Clamcleat CL236
1	<b>Gennaker Snuffer Bag</b>		Required	No	Nacra Licensed suppliers only
2	<b>Daggerboard</b>		Required	Yes	Nacra Licensed suppliers only
2	<b>Rudder Blade</b>		Required	Yes	Nacra Licensed suppliers only
2	<b>Rudder system - upper - incl. rudder arm</b>				Nacra Licensed suppliers only
2	<b>Rudder system - lower</b>				Nacra Licensed suppliers only
1	<b>Tiller-Bar inc Mechanical Universal Joint</b>		Required	No	Nacra Licensed suppliers only
1	<b>Tiller Extension</b>		None		Open excluding Tiller Ext UJ

Section H Continued.

1	Mainsail		Required	Yes	Nacra Licensed suppliers only
		Batten set	Required	No	Nacra Licensed suppliers only
1		Country Flag	Required		Nacra Licensed suppliers only
1	Jib		Required	Yes	Nacra Licensed suppliers only
		Batten set	Required	No	Nacra Licensed suppliers only
1	Gennaker		Required	Yes	Nacra Licensed suppliers only

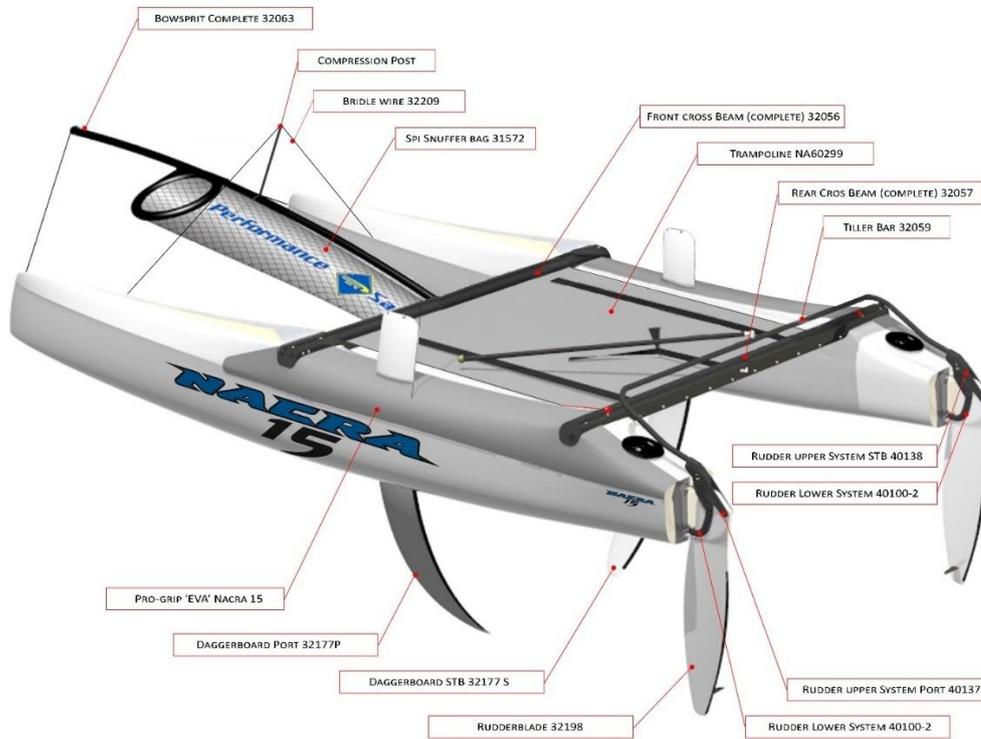
## Section I: RIGGING LIST

Running Rigging	Size			Material/Associated Hardware		Options or tolerances
	Qty	length	Min diam	core	cover	
		mm	mm			<i>(Where no comment as per class rules)</i>
<b>Mainsheet standard 1:8</b>	1		8			8mm - 6mm Tapering allowed within blocks and split tail.
<i>(optional with split-tail)</i>	1			HK2141+HK2650		Harken Licenced Suppliers Only
	1			HK2631		Harken Licenced Suppliers Only
<b>Mainsheet with split-tail 1:10</b>	1		8			8mm - 6mm Tapering allowed within blocks and split tail.
<i>(optional)</i>	1			HC8454		Harken Licenced Suppliers Only
	1			HK2762		Harken Licenced Suppliers Only
<b>Gennaker Halyard</b>	1		6			6mm - 4mm taper upwards of Gennaker cleat with sail hoisted
<b>Main Halyard</b>	1	17000	5			±0.5 mm diam. and ±2000 mm rope length
	1			Ring w/shackle		Nacra Licensed suppliers only
<b>Jib Halyard</b>	1		2			
	1			S-hook jib		Nacra Licensed suppliers only
<b>Mainsail Downhaul</b>	1		4			Max 8:1 Purchase
<b>Mainsail Downhaul tail</b>	2		6			
	2			HK406		Harken Licenced Suppliers Only
				Optional Continuous System		16 – 29mm Harken Licensed suppliers only
<b>Mainsail Outhaul</b>	1		4			
<b>Gennaker Sheet</b>	1		8			Min 4mm taper max 500mm from sheet ends or mid point tail min 4mm x max 500mm
	4			Genneker Sheet blocks		40-57mm Harken Licensed suppliers only
<b>Gennaker Tack-line</b>	1		5	Dyneema®	Poly/Nylon	5mm - 3 mm taper forward of tack-line cleat.
				Optional Tack Line turning blocks		16 – 29mm Harken Licensed suppliers only
<b>Jib sheet</b>	1		6			
	1			HK 404		16 – 29mm Harken Licensed suppliers only
<b>Jib Sheet Thin</b>			3			
	1			HK 348		Harken Licensed suppliers only
	1			Shackle		Screw or snap shackle
<b>Jib Tack Line</b>	1		3			Max 3:1 purchase
<b>Jib Tack tie</b>	1					Soft material only
<b>Gennaker block line</b>	1		3	Dyneema®		
	1			HK 348 29mm		±2mm diam. sheave
<b>Gennaker Bale</b>	1		3	Dyneema®		

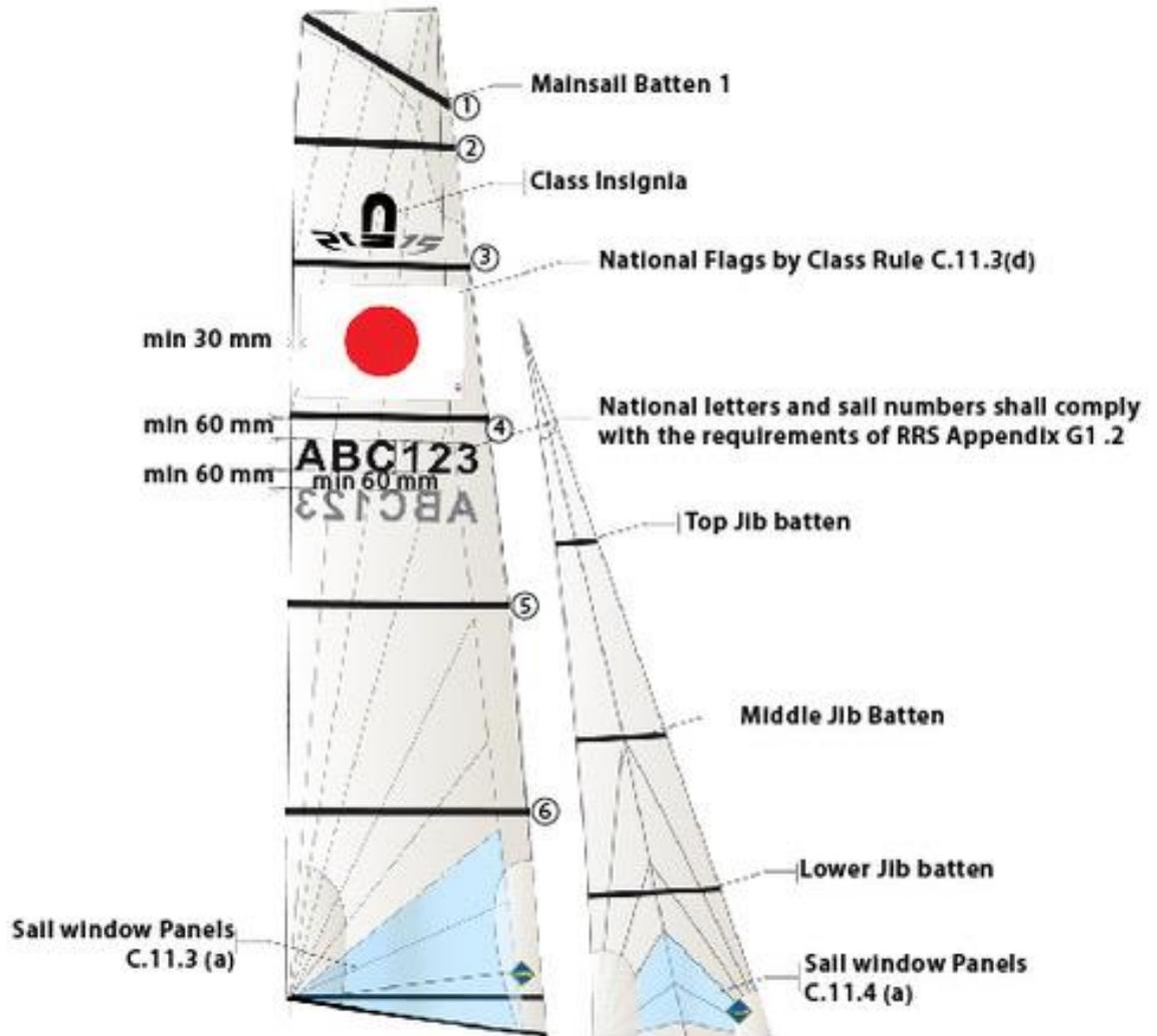
<b>Mast Rotation line</b>	<b>1</b>		<b>3</b>		
	<b>1</b>			Ring max. diameter 30mm	±5mm inside diam.
				Optional continuous system	16 – 29mm Harken Licensed suppliers only
<b>Gennaker Tack-line release</b>	<b>1</b>		<b>3</b>		
	<b>1</b>			Ring max. diameter 30mm	±5mm inside diam.
<b>Hiking strap tie</b>	<b>3</b>		<b>3</b>		
<b>Righting line</b>	<b>1</b>	<b>4100</b>	<b>8</b>		As per C.6.1 (c)
<b>Trapeze shockcord</b>	<b>2</b>		<b>4</b>	Shockcord	±0.5 mm diam. shockcord.
<b>Gennaker halyard shockcord</b>				Shockcord	
<b>Gennaker Tack-line shockcord</b>				Shockcord	

<i>Running Rigging</i>	Size (mm)			Material/Associated Hardware		<i>Options or tolerances</i>
	<i>Qty</i>	<i>Length</i>	<i>Diam</i>	<i>Core</i>	<i>Cover</i>	
<i>Front cross beam rigging</i>						
<i>(optional) Jib Sheet and Mainsail Downhaul retraction system</i>	<b>2</b>			HK 406		Harken Licensed suppliers only
<i>(optional for continuous system)</i>	<b>2</b>			HK404 / HK406		C.9.1 (a) 16-29mm Harken Licensed suppliers only
<b>Shockcord block line</b>	<b>2</b>					
<b>Retraction shockcord</b>	<b>2</b>			Shockcord		
<b>Trapeze shockcord</b>	<b>1</b>		<b>4</b>	Shockcord		
<b>Trapeze adjuster ropes</b>	<b>4</b>		<b>5</b>			
<i>Rear cross beam rigging</i>						
<i>(optional) Chicken line</i>	<b>2</b>		<b>5</b>			
	<b>2</b>			HK 404		Harken Licensed suppliers only
<i>(optional) Retraction shockcord</i>	<b>1</b>					
<i>(optional) Shockcord block tie rope</i>	<b>2</b>					

## SECTION J: NACRA 15 HULL ARRANGEMENT



## Section K: NACRA 15 SAIL ARRANGEMENT



Effective Date : **08-04-2019**  
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