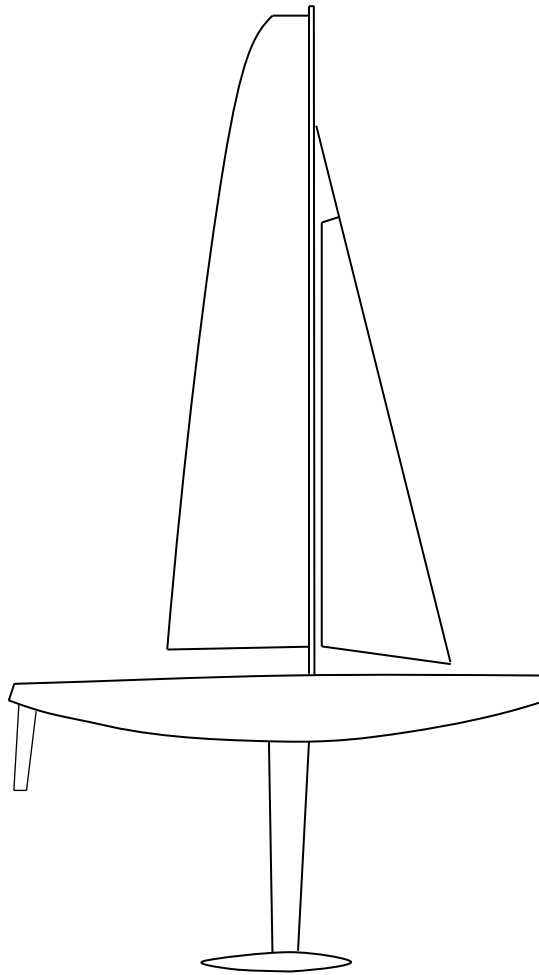




# NANO PROVISIONAL CLASS RULES TO SCR FORMAT

Draft v14 February 2017



**Version 1.4**

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## Introduction

*This introduction provides only an informal background and the NANO Class Rules to the World Sailing Standard Class Rules format proper begin on the next page.*

### No certification

*NANO Class **hulls, hull appendages, rigs and sails** are not subject to **certification** but are controlled by **equipment inspection** at events.*

### Equipment Inspection

*As **equipment inspection** is the only means by which compliance with the **class rules** is checked it is important that this process is used by race committees.*

*Competitors are reminded of their option to protest a boat that does not comply with the **class rules**. Exercising this option, when felt necessary, is an important contribution to achieving and maintaining fairness in the sport.*

### Responsibility

*Owners and competitors should be aware that compliance with rules in Section C is the responsibility of the owner and any other person in charge. They shall ensure that a **boat** is maintained to comply with her **class rules**.*

### Deviations outside of tolerances

*When an **equipment inspector** or **official measurer** acting for the technical committee for an event decides that a **boat** does not comply with the **class rules** RRS 60.4 (a)(2) obliges him/her to protest the boat.*

*When the protest committee finds that deviations in excess of tolerances specified in the **class rules** are not caused by normal wear and tear and/or do improve the performance of the boat, it shall penalise her.*

*If the protest committee decides that a **class rule** has deliberately or knowingly been breached by an owner, competitor, or crew they may call a hearing under rule 69.*

### Class rules

*Rules regulating the use of equipment during a race are contained in Section C of these **class rules** and in the Racing Rules of Sailing.*

*The **class rules** for the NANO Class are **open class rules** in which anything not specifically prohibited by the **class rules** is permitted, where individual rules require, limit, or prohibit as necessary.*

# 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 current ERS applies and when a term is printed in “*italics*” the definition in the RRS applies.

### A.2 COMPETITOR REGISTRATION NUMBERS

- A.2.1 Competitor registration numbers shall be issued by the **certification authority**.
- A.2.2 Each competitor shall have a unique registration number which shall include the national letters and the **certification authority**’s sequential registration number. Under no circumstances may a registration number be transferred to another competitor.

Other sections of Section A and Section B - to be developed.

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Important note about these provisional class rules

The IRSA Executive Committee:

- 1 welcomes the use of these class rules,
- 2 draws attention to the Objectives for the class listed in the Appendix,
- 3 welcomes feedback on their use.

Please send your feedback to:

Graham Bantock  
Chairman, IRSA Technical Committee  
graham@sailsetc.com

March 2017

## PART II – REQUIREMENTS AND LIMITATIONS

The competitor and the **boat** shall comply with the rules in Part II when *racing*.

### Section C – Conditions for Racing

#### C.1 GENERAL

##### C.1.1 RULES

The rules of Section B.1 and B.2 of the ERS shall not apply.

#### C.2 COMPETITOR

##### C.2.1 LIMITATIONS

- (a) One competitor only shall control the **boat**.
- (b) The competitor shall not be substituted during an event.

#### C.3 ADVERTISING

##### C.3.1 LIMITATIONS

The **boat** may display only such advertising as permitted by the WS Advertising Code Regulation 20.

#### C.4 HULL

##### C.4.1 RULES

The **hull** shall comply with the rules of Section D.

##### C.4.2 LIMITATIONS

The geometry of the **hull** shell shall not be changed during an event.

##### C.4.3 IDENTIFICATION

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

## C.5 HULL APPENDAGES

### C.5.1 RULES

The **hull appendages** shall comply with the rules of Section E.

### C.5.2 LIMITATIONS

- (a) The same **hull appendages** shall be used during an event except when a **hull appendage** has been lost or damaged beyond repair.
- (b) Such replacement may be made only with the approval of the race committee who shall then remove or cancel any **event limitation mark** attached to the replaced **hull appendage**.

### C.5.3 DEPTH RESTRICTION

The depth restriction gauge, when oriented transversely as in Figure H.2., shall be capable of being passed under the **hull appendages** without either of the two upper corners of the gauge losing contact with the **hull**.

### C.5.4 USE

The **hull appendages**:

- (a) containing or forming **ballast** shall not be moved or rotated relative to the **hull**,
- (b) shall be attached to the **hull** at the centreplane,
- (c) shall not project fore or aft of the **hull** in relation to the datum waterplane as in Figure H.1 and
- (d) shall not be moved, articulated, retracted or extended.

## C.6 RIG

### C.6.1 RULES

The **rig** shall comply with the rules of Section F.

### C.6.2 LIMITATIONS

**Spars** lost or damaged beyond repair may be replaced only with the approval of the race committee who shall then remove or cancel any **event limitation mark** attached to the replaced item.

### C.6.3 USE

The **rig** shall not project fore or aft of the **hull** relative to the datum

waterplane as in Figure H.1.

## C.7 SAILS

### C.7.1 RULES

The **sails** shall comply with the rules of Section G.

### C.7.2 LIMITATIONS

- (a) Not more than three sail groups, A, B, or C, each consisting of one or two **sails** shall be used.
- (b) The race committee may attach **event limitation marks** to **sails** at an event.
- (c) When a **sail** has been lost or damaged beyond repair it may be replaced only with the approval of the race committee who shall then remove or cancel any **event limitation mark** attached to a replaced **sail**.

### C.7.3 DIMENSIONS

The longest **luff** length of a **sail** in a sail group shall comply with the following limitations:

Rig	Minimum	Maximum
Sail group A	850	900
Sail group B	650	700
Sail group C	450	500

### C.7.4 IDENTIFICATION

- (a) The class insignia (Figure. H.4) shall be displayed on the **mainsail**.
- (b) Sail identification marks shall comply with the RRS and Section K.

## C.8 EQUIPMENT

### C.8.1 REMOTE CONTROL EQUIPMENT

- (a) No more than two channels of radio control may be used.
- (b) A **rudder** control unit shall control the **rudder** only.
- (c) A **sheet** control unit shall control the **mainsail sheet** and/or **headsail sheet** only.

- (d) Except where achieved by mechanical systems, automated control of **rig** and/or **sails** and automated steering and/or navigation are prohibited.
- (e) On board camera(s) and/or the use of images from any source while *racing* is prohibited.
- (f) Except for the establishment and maintenance of a radio control link, control unit positioning information, signal strength and battery status information, radio transmissions from the boat while *racing* are prohibited.
- (g) During an event, remote control and related equipment:
  - (1) if temporarily removed and/or replaced shall be replaced by equipment of similar weight
  - (2) may be moved to change trim or stability without infringing RRS 51.



## Section D – Hull

### D.1 GENERAL

#### D.1.1 MATERIALS

- (a) Except as in (b), (c), (d) and (f) materials for the **hull**, excluding fittings and remote control equipment but including any supports and containers for such items, are limited to those that can be printed on a 3D printer.
- (b) Printed components may be joined using adhesives.
- (c) Material used to coat the **hull** is limited to:  
un-pigmented varnish; un-pigmented resin.
- (d) Film covering materials which may be reinforced by means of polyester fibres,
- (e) Except in remote control equipment, the density of material shall not exceed that of lead (11,340 kg/m<sup>3</sup>).
- (f) Elastomeric material.

#### D.1.2 CONSTRUCTION

- (a) The **hull** shall be a **monohull**.
- (b) Except for trunking for **hull appendages**, the **hull** shall not have:  
transverse hollows in the undersurface of the **hull** that exceed 2 mm when tested parallel to the waterplane as in Figure H.3.
- (c) Except as in (d), (e) and (f) the **hull**, excluding fittings and remote control equipment but including any supports and containers for such items, is limited to parts that are printed using a 3D printer.
- (d) Parts of the **hull** may be joined using adhesives.
- (e) The inside and/or outside surface of the **hull** may be coated with material permitted by D.1.1 (c) in order to reduce porosity.
- (f) Openings in the **hull** may be covered with film covering material.
- (g) The forward 6 mm, or more, shall be of elastomeric material and may be formed by 3D printing.

#### D.1.3 DIMENSIONS

Maximum **hull** length in relation to the datum waterplane is 500 mm.

#### D.1.4 FITTINGS

Fittings shall not project outboard of the **hull**.

## Section E – Hull Appendages

### E.1 GENERAL

#### E.1.1 MATERIALS

Materials of higher density than lead ( $11,340 \text{ kg/m}^3$ ) are prohibited.

## Section F – Rig

### F.1 MAST

#### F.1.1 LIMITATIONS

A **rig** shall have no more than one **mast spar**.

### F.2 MAST SPAR

#### F.2.1 DIMENSIONS

The **spar**, not including its fittings, of a cantilevered **mast**:

- (a) shall have a round cross section where
- (b) at any point along the **spar** the largest cross section of the **spar**, not including its fittings, shall not be more than 0.5 mm larger than the smallest cross section, not including its fittings, at the same point.

### F.3 RIGGING

#### F.3.1 STANDING RIGGING

**Shrouds** may be used where the **mast** is not cantilevered.

## Section G – Sails

### G.1 GENERAL

#### G.1.1 LIMITATIONS

A sail group, A, B or C, is restricted to not more than one **mainsail** and one **headsail**.

#### G.1.2 SOFT SAILS

For a **soft sail** and parts of a **sail** that meet the definition of a **soft sail**:

- (a) the **body of the sail** shall:
  - (1) have a minimum thickness of 0.030 mm,
  - (2) **consist** of one **ply** of flat material and
  - (3) not be given three-dimensional shape by: **seams, broad seams**, heat or pressure.
- (b) The overlapping part of a **double luff sail** shall comply with G.1.2 (a).
- (c) Material between the **body of the sail** and the overlapping part of a **double luff sail** at the luff shall not exceed 10 mm in width.

#### G.1.3 OTHER SAILS

For parts of a **sail** that do not meet the definition of a **soft sail**, G.1.2 does not apply.

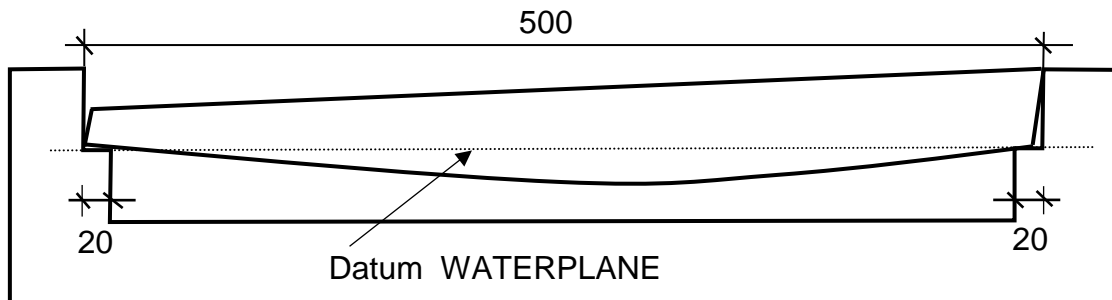
#### G.1.4 IDENTIFICATION

**Mainsails**, or the **headsail** where there is no **mainsail**, shall be marked at the **clew** with their sail group letter, A, B or C.

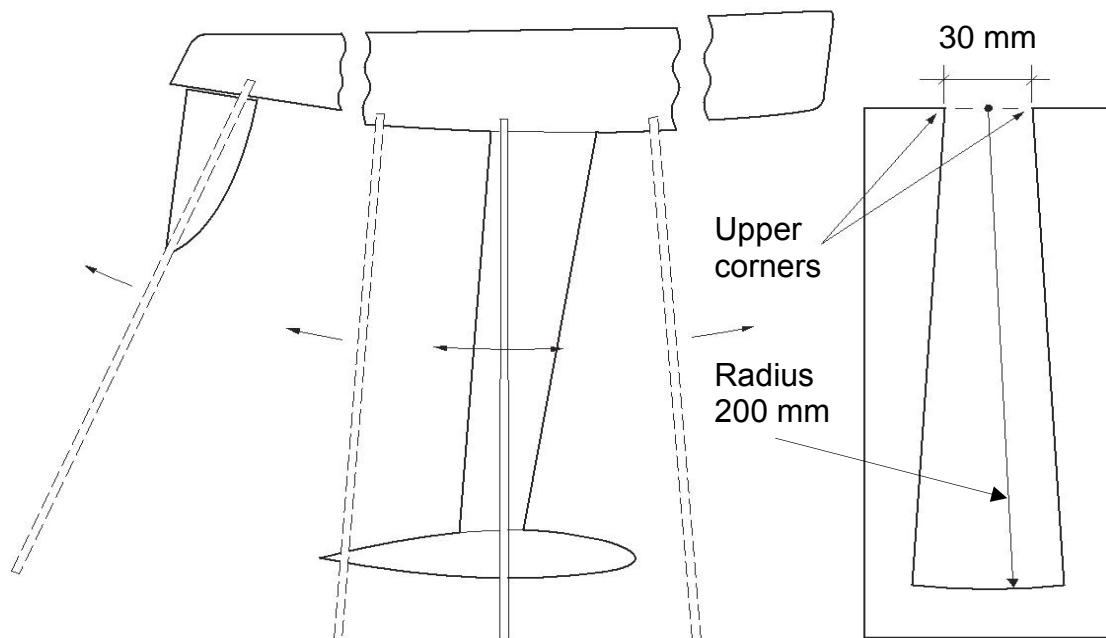
## Section J – Figures

### H.1. LENGTH RESTRICTION GAUGE

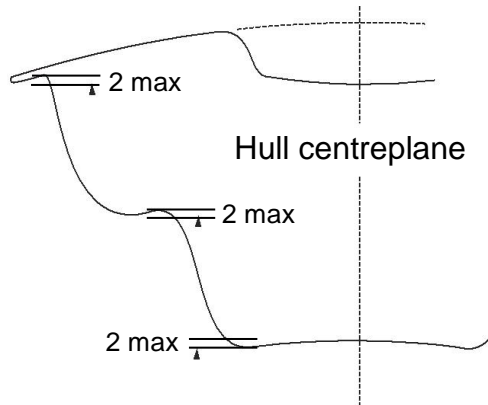
Gauge used to establish **hull** length and datum waterplane.



### H.2. DEPTH RESTRICTION GAUGE



### H.3. TRANSVERSE HULL HOLLOW



See rule D.1.2 (b)

#### H.4. Class Insignia

The class insignia:

- (a) shall be the capital letter N,
- (b) of minimum height 25 mm and
- (c) may be reversed on the port side of the sail if placed back to back.

**N**

## Section K – Sail Identification Marks

Refer to the following document:

RG65 Provisional Sail Marks Rules, published by IRSA.

end

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Previous issue            none

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