

Nacra Class Rules

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0.	ISAF	International Sailing Federation
	MNA	ISAF Member National Authorities
	Nacra	Nautical Sports by and their licensees
	INCA	International Nacra Class Association
	NNCA	National Nacra Class Association
	ERS	Equipment Rules of Sailing.
	RRS	Racing Rules of Sailing.

1. OBJECT OF CLASS RULES

- 1.1 The international Nacra Class Catamarans are each a one design manufacturers class. The rules, official and specifications are intended to ensure that the catamarans of these named classes are as nearly as possible the same in regard to shape, weight of hulls, daggerboards, rudders, spars, sails, and that equipment is simple, functional and dependable. The ultimate intent is the use of only racing tactics and sailing skill to increase boat speed.

2. PROTECTION OF INTERNATIONAL NACRA CLASS DESIGNS

- 2.1 **THE HULLS**, daggerboards, rudders, stocks, standing rigging, spars and sails are strictly controlled, while the running rigging and associated fittings are not controlled except as specified in these rules.

Interpretation of these class rules shall be given by NNCA in consultation with proper committees of INCA.

In the event of a conflict between rules, official plans, measurement form and/or measurement diagrams, the matter shall be referred to INCA.

NOTE: To double guard against "loophole destruction's" of these international Nacra Class Catamarans and there potential for lasting racing pleasure, every deviation from past practice or precedent which is not specifically spelled out by plans, specifications or Design Rule is assumed illegal until approved and thus recorded in writing by those administering the Nacra Class Design Rules.

2.2 MOLDS.

All molds, patterns and templates for the hulls, daggerboards and rudders shall be constructed solely by Nacra for INCA.

- 2.3 **ALTERATIONS OF MOLDS:** No alteration shall be made to any mold, official pattern or template.

- 2.4 **MEASUREMENTS OF MOLDS:** Tolerances are given to allow for minor variations not inconsistent with good building practice and distortion through age. Any intentional variation within these tolerances is prohibited.

Each mold shall be measured prior to commencement of production and thereafter annually by a measurer approved by INCA.

3. HULLS, DAGGERBOARDS AND RUDDERS

- 3.1 **THE MANUFACTURE** of hulls, daggerboards and rudders is strictly controlled by INCA. Licenses to build these components are issued by Nacra, for INCA.

3.2 ALTERATIONS TO HULLS, DAGGERBOARDS AND RUDDERS.

Grinding, planing, sanding and/or application of putty, fillers and coating on the outside surface is permitted provided that it is undertaken to fair local imperfections in these surfaces or to improve the surface finish provided that no part of the catamaran is thereby caused to be outside the measurement tolerances.

3.3 LIGHTENING OF THE HULLS.

The hulls shall not be lightened in any manner. A maximum of three inspection ports per hull is allowed, with the exception of Nacra 6.0 SE, which will have only one inspection port per hull.. Inspection ports are not permitted forward of the main beam. None shall have an opening larger than 155 mm .

3.4 RUDDERS.

The rudder and rudder assembly, including the method of attachment to the transom is not to be modified. Rudders may be raked to attain helm balance.
Length of the stock assembly shall not be altered but the material of the stock is free.

3.5 DAGGERBOARDS.

The top of the daggerboard shall not be inserted below the deck level. Hand holds in the daggerboards may be added. The bottom of the handholds will then be considered the top of the daggerboard and may not be inserted below deck level..

No part of the daggerboard well may be removed or added for the purpose of varying rake. All daggerboards manufactured by Nacra are legal for racing except ones which require modification of daggerboards or daggerboards well to accommodate them.

4. SPARS

4.1 CONSTRUCTION.

The material, method of construction and design of the spars shall be in accordance with these rules and official Spar Plan. The mast, spreader, boom, tiller and tiller tie bars shall be manufactured only by Nacra, for INCA.

4.2 MAST.

The extrusion length and position of the mast head, mast hound, jib halyard strap eye, spreader and mast base are not to be altered in any manner.
The gooseneck shall not be lower than 255 mm from the bottom of the extrusion. Diamond wire tangs shall not be raised or lowered but may be moved either to the front or side of the mast.

4.3 SPREADERS.

The spreader arm lengths shall not be altered. Only Nacra adjustable rake spreaders are allowable on all models. The diamond wires are to be securely attached at the spreader ends.

4.4 BOOM.

The extrusion length and the method of attachment to the gooseneck are not to be altered. The mainsheet blocks are to be hung from permanently fixed bales. On the Nacra 5.2 bales shall not be affixed aft of the original position. All other running rigging hardware is optional. No booms shall be used on boomless designed rigs.

4.5 BRIDLE FOILS.

Bridle foil lengths, hardware and fittings shall not be altered.
The fittings for the tension rod/cable may be altered. Attachment point of the forestay may be replaced.

4.6 MAIN BEAM.

The extrusion length, mast step and dolphin striker assembly are not to be altered.
Internal controls may be installed.

4.7 REAR BEAM.

The rear beam shall not be altered with the following exceptions: The traveler may be replaced by one of another design but it must not exceed the length of, and must be in straight line mounted to the rear beam.
The stops under the beam may be altered to allow hull alignment.
Internal controls may be installed.

4.8 LIGHTENING OF THE SPARS.

No holes shall be drilled, filled or cut into any manufacturer supplied component, spar or casting for the purpose of reducing weight.

5. RIGGING

5.1 CONSTRUCTION.

All standard rigging (excluding diamond wires) shall conform with the wire types and diameters shown in the manufacturers rigging schedule. Oversized diamond wire diameter of 4 mm is allowed

Running rigging and associated fittings, sizes, types and lengths are optional.

If available, only with maximum reduction of :

Main sheet 10:1

Jib sheet 2:1

The trapeze wire diameters shall not be less than these shown in the rigging schedule.

Rope tails on halyards are permitted.

Jib halyard shall not be led internally.

Halyards must be long enough to raise and lower the sails while the boat is in an upright position.

Rigging schedule

Wire type	Wire	Diameter
Shrouds	1x19	4 mm
Forestay	1x19	4 mm
Diamond Wire	1x19	3 mm
Trapeze Wires	1x19	2,5 mm
Bridle	1x19	4 mm

5.2 MAIN AND JIB LUFFS tension systems are optional but may not be led inside the mast.

If available:

Main downhaul reduction must not exceed the 8.1 purchase (4.1 for the Nacra 4.5)

Jib downhaul reduction must not exceed the 3:1 purchase.

5.3 TRAPEZE.

Double trapeze is allowed on all but the Nacra 4.5, 4.5uni, 5.5 uni and 18² models.

No continuous trapeze systems are allowed.

5.4 FOOT STRAPS, SAFETY LINES, or the like may be added to assist the crew to trapeze.

Hiking assist inboard is optional.

5.5 ALTERATIONS.

Lengths of bridle wires are not to be altered. Jib tack attachment shall not be below bridle intersection. The forestay or its extrusion is to be attached at the bridle intersection. The forestay, shrouds, and diamond wires shall not be adjusted while racing.

5.6 EQUIPMENT may be added or changed to the strict same as the current or previously supplied Nacra series production equipment. All such equipment supplied by Nacra and approved by INCA shall be considered class legal.

5.7 RACING.

If during a racing series, failure of a part appears imminent or is damaged or broken, only the affected equipment may be repaired or replaced.

Repair or replacement shall only be made using class legal equipment.

6. SAILS AND BATTENS

6.1 CONSTRUCTION.

The material, method of construction and design of the sails shall be in accordance with the sail plan.

The sails for all Nacra models shall be build for INCA from patterns and sail cloth approved by INCA.

Sails shall be manufactured by builders licensed by Nacra, for INCA.

Battens shall be of wood, foam or fiberglass. A set may consist of a combination of these types.

All but the bottom batten must be used for racing (only one batten per pocket is permitted).

6.1a SAILS.

Sails of the following sail makers are allowed:

- Elliott/Pattison
- Performance Sails.

The Nacra 6.0, 5.5 Raid and 6.0 Raid may be sailed with an Arjan Kooy, Arjan Kooy/EQUATOR or Performance Sails jib, provided this jib is in accordance with the measurement certificate, and is marked and signed by the class measurer or the yardstick committee.

6.2 ALTERATIONS.

The mainsail and the jib shall only be repaired by a Nacra licensed sail maker and in accordance with the sail plan.

Windows, telltale windows and chart pockets are optional.

Class insignias shall not be repositioned or altered in any manner.

6.3 LUFF ROPE.

The entire mainsail luff rope must be in the mast luff grooves except where the sail extends below the bottom of the extrusion on boomless rigs.

6.4 CLEW TRAVELERS.

A clew traveler may be added to any boomless sail plan. The clew track shell not exceed 760 mm in length and can only be added below the bottom batten.

The main block attachment point shall not travel beyond the leech.

No battens shall be added below the bottom batten. A suspended track may be used. No additional sailcloth shall be used to lower the clew track assembly.

6.5 MAXIMUM SPINNAKER AREA'S

Only allowed on:

Nacra 5.0	14.00 m ²	Optional
Nacra 5.2	16.30 m ²	Optional
Nacra 5.5 SL	19.60 m ²	Optional
Nacra 5.7	16.00 m ²	Optional
Nacra 5.8	24.00 m ²	Optional
Nacra 6.0	24.00 m ²	Optional
Nacra 5.5 Raid :	21.00 m ²	Spinnaker and gear must be on board during all races
Nacra 6.0 Raid :	25.00 m ²	Spinnaker and gear must be on board during all races
Nacra SE	25 .00m ²	Spinnaker and gear must be on board during all races

Spinnaker-pole may reach to a maximum of 80 cm in front of the bow of the hull. This is measured in a diagonal line from the attachment of the point of the pole on the main beam.

- RRS 50.2 (last sentence) shall not apply.

It is allowed to attach the spinnaker pole to the main beam.

- RRS 50.4 shall be amended to read 75%.

7. BOAT WEIGHTS: Class Legal Minimums

7.1 All boats shall have a fixed number of crew and a minimum class legal weight as given in 7.1a to 7.1m.

	Type	Crew	Minimum Boat weight
7.1a	4.5 uni	1	139 kg
7.1b	4.5	2	143 kg
7.1c	5.0	2	154 kg
7.1d	5.2	2	163 kg
7.1e	5.5 uni	1	166 kg
7.1f	5.5 SL	2	175 kg
7.1g	5.7	2	168 kg
7.1h	5.8	2	191 kg
7.1i	6.0	2	200 kg
7.1j	18 ²	1	150 kg
7.1k	5,5 Raid	2	182 kg
7.1l	6.0 Raid	2	206 kg
7.1m	6.0 SE	2	200 kg

7.2 BOAT WEIGHT.

Boats shall be weighed in accordance with the official INCA measurement certificate.

Boats must always meet their respective class legal weight when racing as a one design class.

An official INCA measurement certificate must be made available when racing as a class.

All boats may be weighed at National and International Nacra Class events.

7.3 CORRECTION WEIGHTS.

Boat correction weights (lead) must be secured on the outside of the starboard side of the main beam and be easily accessible for inspection.

8 SAFETY EQUIPMENT.

8.1a An **approved flotation device** must be worn by each crewmember while racing.

8.1b A **righting line** of 10 mm minimum diameter and 4.25 m minimum length.

8.1c **One paddle per crewmember.** Only if required by the Sailing Instructions

8.1d **One compass.** Only if required by the Sailing Instructions.

9 COMMUNICATIONS, RULE INTERPRETATION AND AMENDMENTS

9.1 Valid questions must be (e)mailed to NNCA or to INCA

9.2 Class rules may vary slightly from one country to another.

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