



Chesapeake Racer Cruiser Association (CRCA) Class Rules

CRCA Technical Committee

February 1, 2024
Prior editions are superseded by this document.

Class Rules

1. Incorporated Rules

- a. The CRCA Class Rules incorporate by reference the ORR-Ez Rulebook and RMS Glossary, which can be found at:
 - i. <https://offshoreracingrule.org/orr-ez/orr-ez-rulebook>, and
 - ii. https://www.regattaman.com/cert_glossary.php
- b. To the extent that the CRCA class rules are inconsistent with the current ORR-Ez Rulebook, the CRCA class rules shall apply.

2. Common Definitions and Rules

- a. Owners must purchase or renew an ORR-Ez rating certificate for their boat each year. The certificate must be completed and ready for use before they begin racing.
- b. Sail Definitions
 - i. Headsail. Attached to the headstay with mid-girth measurement less than 50% of the foot length. The largest headsail used for the season must be registered on the boat's ORR-Ez certificate.
 - ii. Large Roach Headsail (LRH). Mid-girth measurement between 50% and 75% of the foot length. These sails are allowed under ORR-Ez and in CRCA classes per the Sail Use Requirements. See ORR-Ez Rules for additional LRH usage requirements. The largest LRH's must be registered on the boat's ORR-Ez certificate.
 - iii. Spinnaker. Includes both symmetrical, asymmetrical, and Code Zero either tacked to the centerline or flown from a spinnaker pole, with a mid-girth measurement greater than 75% of the foot length. The largest symmetrical spinnaker and largest asymmetrical spinnaker must be registered on the boat's ORR-Ez certificate, if those sails are in the boat's inventory.
- c. The clew of a Headsail or Asymmetrical Spinnaker may be attached to a whisker pole on the windward side of the boat only. There is no restriction on the length of the whisker pole. The inboard end of the whisker pole must be attached on the mast when being used on the headsail. The attachment points and the side being flown of the whisker pole may deviate from these restrictions during maneuvers for brief periods of time.
- d. A boat using a Non-Spinnaker rating may only fly a mainsail and single Headsail at any given time, except that cutters with a fixed inner forestay may use a staysail, and two-masted boats may use a mizzen mainsail.
- e. When racing with a Non-Spinnaker rating, an LRH may not be used.
- f. CRCA members shall declare their largest headsail, Large Roach Headsail (LRH), and largest spinnaker that would be used for racing on their ORR-Ez certificates.
- g. CRCA members shall use actual sail measurements on their certificates as soon as they can be reasonably obtained. Boat manufacturer measurements or estimates may be used in the interim.

- h. Delivery sails in excess of a class's sail use requirements may be carried on races longer than 100 nm, but must be clearly marked and not used during the race.
 - i. Storm sails do not count against any sail limits.
 - j. The use of power winches and auto-pilots is allowed, except that an auto-pilot must be disengaged when within 500 ft. of any boat, mark, or other obstruction.
 - k. Boats will carry sufficient fuel and water for normal and safe operation.
 - l. Boats shall be wet-sailed and will be in the water during the sailing season except for required maintenance. Exceptions may be granted by the CRCA Executive Committee if an owner/member requests such from the CRCA Executive Committee.
 - m. There are no crew weight requirements or limitations.
2. CRCA Division Class Assignments

- a. Boats in CRCA are divided into the following classes:
 - i. CRCA Racer
 - ii. CRCA Cruiser
- b. The division between CRCA Cruiser and Racer is intended to group boats of similar performance characteristics for their rated length. The ORR VPP is the most sophisticated tool available for evaluation of boat performance, and hence output from the VPP is to be used for guidance in grouping the Cruiser and Racer classes. The weighted average Froude number (Fn) is computed using the Random Leg TOD ratings from each boat's certificate using the following equation:

$$Fn = V / (gL)^{1/2} \quad (\text{dimensionless Froude number})$$

where,

$$V = 6076.1 / \{ 0.21(R_{vl}) + 0.35(R_l) + 0.32(R_m) + 0.12(R_h) \}, \text{ ft/sec}$$

$$g = 32.2, \text{ (ft/sec}^2\text{)}$$

$$L = \text{boat's rated length on certificate, (ft)}$$

$$R_{vl} = \text{boat's Random Very Light TOD rating, (sec / nm)}$$

$$R_l = \text{boat's Random Light TOD rating, (sec / nm)}$$

$$R_m = \text{boat's Random Medium TOD rating, (sec / nm)}$$

$$R_h = \text{boat's Random Heavy TOD rating, (sec / nm)}$$

The Fn values of the 2023 CRCA Fleet were plotted against the axis of rated length and are shown below (Figure 1). Figure 1 also shows an exponential fit of the data given by:

$$Fn_{fit} = 0.2927189e^{-0.00705065(L)}$$

Boats above the $F_{n_{fit}}$ curve are faster for a given rated length, and boats below the curve are slower for a given rated length.

- i. If a boat falls above the $F_{n_{fit}}$ curve, the default class assignment is "Racer".
- ii. If a boat falls below the $F_{n_{fit}}$ curve, it is eligible to race in "Cruiser" provided all other Cruiser Class requirements are met as described in Sections 3 and 4.
- iii. An intuitive term, "potential speed number" or PSN, is introduced here:

$$PSN = F_{n_{boat}} / F_{n_{fit}}$$

such that $F_{n_{boat}}$ and $F_{n_{fit}}$ use a given boat's rating and rated length terms as defined above in section 2.b. If a boat's $PSN > 1.0$ then the default class assignment is CRCA Racer. If a boat's $PSN \leq 1.0$ then the default class assignment is CRCA Cruiser.

The plot in Figure 1 is intended as a guide. If a boat is equipped with comprehensive cruising accommodations and meets the Cruiser Class requirements, but falls above the $F_{n_{fit}}$ curve by a small margin, it may still be eligible to race in the Cruiser Class provided approval is requested by the owner and granted by the CRCA Technical Committee.

Any boat may race in the Racer class even if that boat's Froude number falls below the $F_{n_{fit}}$ curve, provided that boat meets all other requirements to race as a CRCA Racer.

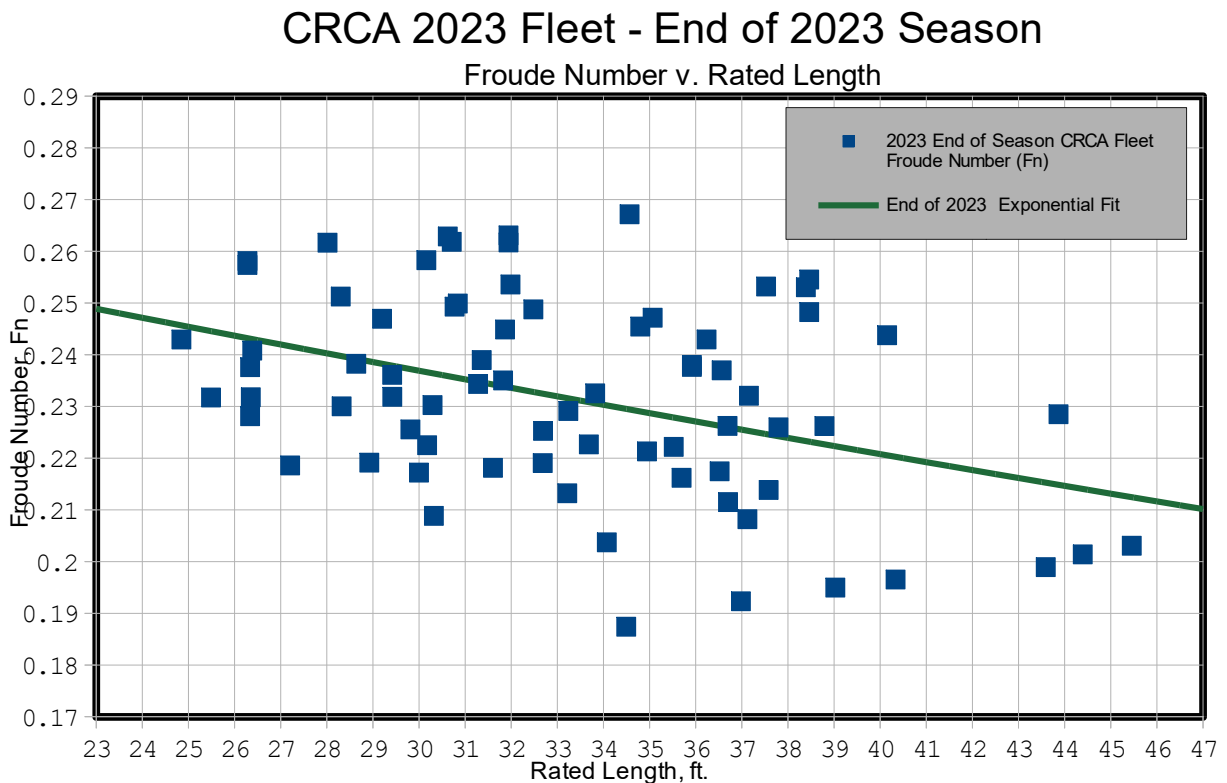


Figure 1: CRCA 2024 Class Split

3. Requirements for all CRCA Classes

- a. The downwind sail area to displacement ratio as shown on the boat's valid ORR-Ez certificate must be less than or equal to 60 to race in any CRCA class.
- b. Working head (i.e., a bucket is not acceptable).
- c. Interior accommodations and equipment typical for the boat are expected to be present in a working cruising order in the appropriate locations onboard. Equipment such as (but not necessarily limited to or required) galley stove, locker and stateroom doors, compartment hatches and covers, berth cushions, etc. are expected to be installed and in their normal places while racing. Some interior equipment may not be standard depending on the size and type of boat. Final judgment of the acceptability of interior accommodations and equipment will be at the discretion of the CRCA Technical Committee. Boats may be subject to inspection by the CRCA Technical Committee for compliance, and disciplinary action may be taken in the case of repeated non-compliance.

4. CRCA Cruiser

- a. The CRCA Cruiser class is for boats that have lower speed potential for their rated length than the Racers as measured through the assessment process described in Section 2.b.
- b. CRCA Cruiser Class Requirements
 - i. A maximum of two (2) headsails may be carried onboard. Headsails must be on either a roller-furler, or attached to the headstay or forestay by hanks.
 - ii. The sum of Spinnakers and LRHs carried onboard shall total 2 or less.
 - iii. A maximum of one Group 3 sailor is allowed onboard, who may not drive unless there is an emergency situation where there is imminent threat of injury to the crew or damage to the boat. If a boat is owned by a single person and they are a Group 3 sailor, then the driving exclusion does not apply.
 - iv. Headsail changes must be bare-headed, i.e. when a new headsail is hoisted to supplant the previously hoisted headsail, the previously hoisted headsail must be fully lowered to the deck before the new headsail is hoisted.
- c. As long as a boat meets the criteria of the Cruiser Class, and permission to be a Cruiser is requested by the owner and granted by the CRCA Technical Committee, it may race in the Cruiser Class.

5. CRCA Racer Class

- a. The CRCA Racer Class is for boats that have higher speed potential for their rated length than the Cruisers, as measured through the assessment process described in Section 2.b.
- b. CRCA Racer Class Requirements
 - i. A maximum of three (3) headsails may be carried onboard.
 - ii. The sum of Spinnakers and LRHs carried onboard shall total 3 or less.
 - iii. Headsail changes are NOT required to be bare-headed.

6. CRCA Class Designation Appeals

- a. Appeals regarding any boat's Class assignment may be made to the CRCA Technical Committee by any CRCA Full Member. The Technical Committee is the final arbiter regarding any appeal.

7. Races / Scoring

- a. For each race, the decision to go spin or non-spin must be declared by the end of registration, or four (4) days before the race, whichever is later.
- b. CRCA uses ORR-Ez certificates for scoring. A CRCA representative will be assigned to each CRCA class sanctioned race. In coordination with a race's Organizing Authority (OA), Race Committee, or assigned Scorer, as designated by the OA, a CRCA representative will assist the OA in determining the appropriate rating to be used to score a race, provided the OA requests assistance from CRCA.
- c. If after a race the CRCA Technical Committee believes that the rating used to score was significantly incorrect, then for the purposes of CRCA series scoring, CRCA may re-score a race with more appropriate ratings.
- d. Safety requirements are specified by the Organizing Authority. Except for major ocean races, these are typically one of the 3 categories of US Sailing Safety Equipment Requirements (SER) which are Nearshore, Coastal, and Ocean. Check the race NOR for specifics and exceptions. The most recent SER can be found at <https://www.ussailing.org/competition/offshore/safety-information/ser-world-sailing-special-regulations/>
- e. Unless amended by a race's Sailing Instructions, entrants in the CRCA Cruiser Class will fly a white class flag, entrants in the CRCA Racer Class will fly a green class flag.

8. Risk Statement

Per the 2024 Green Book General Sailing Instructions (GSI): "RRS 3 states: 'The responsibility for a boat's decision to participate in a race or to continue to race is hers alone.' By participating in this event each competitor agrees and acknowledges that sailing is a potentially dangerous activity with inherent risks. These risks include strong winds and rough seas, sudden changes in weather, failure of equipment, boat handling errors, poor seamanship by other boats, loss of balance on an unstable platform and fatigue resulting in increased risk of injury. Inherent in the sport of sailing is the risk of permanent, catastrophic injury or death by drowning, trauma, hypothermia or other causes."