

# FAQ

## I. General CRFMkII Questions

### **Q. What additional information is needed for the 2017 formula?**

**A.** All of the current information on your certificate will still be needed to calculate your 2017 rating. Additional data that you will need to provide on your application are:

- Maximum draft (with centerboard extended)
- Distance from the mast to the tack point of an asymmetrical spinnaker
- A “closet match to sample sketches” declaration for keel/rudder configuration

### **Q. How long will it take to get my rating certificate?**

**A.** Although the certificate is processed automatically for a rating, to ensure accuracy each certificate will be manually reviewed before it is issued. Once the system is fully operational, it should take 5-7 business days.

### **Q. How do I send my certificate to regattas?**

**A.** Once processed, you will receive a link to your certificate. You may send that link to regatta organizers so they have a copy of your ratings certificate.

### **Q. How often do I need to renew my rating?**

**A.** Ratings will need to be renewed annually.

### **Q. How much will it cost?**

**A.** For 2017, the fee for a rating certificate has been waived and is free compliments of the Classic Yacht Owners Association (CYOA). Thereafter, the annual cost for a rating will be \$50.

### **Q. I would like to switch my declared headsail choices and their related dimensions back and forth between events, depending on the expected conditions. Can I maintain more than one CRF MkII certificate at a time, and choose which one to use in advance of an event?**

**A.** No. A boat will be allowed one configuration change only during any one season. A new CRF MkII certificate reflecting that one change must be issued at least 10 days before the next race in which the boat competes, and the boat may not revert back to her original configuration later in the same season. (This ‘one change’ limitation does not preclude correcting errors or making minor updates to declarations, which may be accepted and a new certificate issued, at the discretion of CRF administration).

## **II. Hull and Underbody Questions:**

**Q. How do I make an appropriate declaration for Displacement on the CRF MkII application?**

**A.** The intent of CRF MkII is to rate your boat in the condition in which you typically race her. WRT Displacement, this implies a Displacement (DSPA) declaration equal to the estimated weight of your yacht in the condition that you typically present her for racing, in pounds, excluding crew weight. For yachts that are primarily raced and daysailed, this would be similar to a 'light ship' flotation (empty tanks, with minimal food and gear). For yachts that are equipped and provisioned for regular cruising and that race perhaps one race per year, this would be similar to 'half load' flotation (tanks half full, with ordinary food and gear).

**Q. The only information that I have on displacement for my yacht comes from original design specification. How can I update that to a current 'as raced' weight?**

**A.** Designers and builders typically provide displacement data referenced to the 'design waterline' that most often resembles a 'light ship' condition, with empty tanks and minimal food and gear. The weight added in equipping and provisioning for coastal cruising can increase that displacement by 10%. The boat hauling equipment in some yards can provide a boat weight, but these weights are typically not especially accurate, and should be used as a rough reality check only.

**Q. I have determined that the displacement of my yacht is heavier than that shown in the designer/builder specifications. How does this affect the other CHR MkII data declarations that I need to make?**

**A.** If you are declaring a displacement that is heavier than the designer/builder specification, it follows that your declaration for the LWL that corresponds to that heavier displacement should be longer, and that your declaration for Draft should be deeper, than the designer/builder specified values. One way to quantify the differences in LWL and Draft (DM) would be to estimate the sinkage resulting from the difference between the designer/builder spec and the declared displacement (DSPA). The '*Pounds per Inch Immersion*' (sink) for most boats can be approximated by:  $\text{Lbs/in Immer} = 1.1 \cdot \text{LWL}^2$ . It follows that actual sinkage (in inches) =  $\Delta \text{DSPA} / \text{Lbs per In Immer}$ . This estimated sinkage would equal to the amount added to the designer/builder specified Draft (DM) in inches, and for most boats multiplying this sinkage by 6 approximates the amount added to the designer/builder specified LWL, also in inches.

**Q. The 'Underbody Type' declaration is new with CRF MkII. Why has this been added to the rating application?**

**A.** Stability and wetted area are critically important performance parameters, but it is not reasonable or practical to ask owners to declare appropriate values for them. The 6 underbody types displayed on the CRF rating application work as surrogates for stability (via related keel volume, VCB and VCG), and for wetted area more directly. In addition, the various underbody type options help account for the advantages of a high aspect ratio fin with separated spade rudder over a lower aspect ratio configurations, including a full keel with an attached rudder.

**Q. Do the CRF MkII rating formulae deal directly with draft and displacement?**

**A.** Yes. The effect of draft on performance is addressed via a draft correction (DC) based on a comparison between actual draft (DM) and a base draft that varies with length. The effect of displacement (DSPA) is addressed via both a displacement/length factor (DLF) and a sail area/displacement factor (SaDF).

**Q. I have a yacht with a centerboard, and none of the keel profile sketches displayed in the rating application show a centerboard. What keel type should I declare?**

A. Check the box corresponding to the underbody profile that most closely resembles the fixed portion of your keel. CRF MkII accounts for the effect of the centerboard via the declared value for 'Draft Centerboard Down'.

### **III. Rig and Sail Questions:**

**Q. Can you clarify the difference between the declared heights of jib headed and gaff headed mainsails?**

A. The height of a jib headed mainsail is declared as 'P', which is essentially the luff length of the sail. The height of a gaff headed mainsail is declared as 'PG', which is the height from the mainsail tack to either the peak halyard block, or to head of a topsail (if carried), whichever is higher.

**Q. Some previously 'square head' mainsails in the Spirit of Tradition (SOT) class were converted to gaff headed sails and were rated as such in 2016. How will such conversions be dealt with under CRF MkII?**

A. Under CRF MkII, gaff headed mainsails in the SOT class will be rated as 'square headed'. Exceptions to this approach are possible in cases where the sail configuration is very intentionally designed to have an entirely traditional appearance, with the gaff length on the order of 2/3 that of the boom length. However, any such exceptions shall only be made after special consideration by, and at the discretion of, the rating authority.

**Q. What is the difference between a spinnaker and a headsail?**

A. A spinnaker is any sail set forward of the foremost mast whose width, measured between the midpoints of its luff and leech, is equal to or greater than 75% of its foot length. (See RRS 50.4)

**Q. In light air, I plan to fly a headsail whose mid girth is less than 75% of its foot length, but it is too big to fit inside the nominal foretriangle. What should my declarations be for foretriangle height (IG), foretriangle base (J), and longest perpendicular, LP?**

A. This sail is by definition a headsail and not a spinnaker (See RRS 50.4), and CRF MkII will rate it as a headsail. For such a sail, 'IG' would be declared as the vertical distance from the sheerline to the top of the sheave supporting its halyard, and not to the upper end of the nominal foretriangle headstay. Similarly, for such a sail, 'J' would be declared as the horizontal distance from the forward face of the mast to the attachment point for its tack on the deck or bowsprit, and not to the nominal forestay headstay tang at the deck. And finally, the LP of this sail would be the distance from its clew to its luff, measured perpendicular to the luff, and not the LP of a smaller sail set in the nominal foretriangle. Note that CRF MkII will rate the speed potential of the boat with this sail in its best condition, and that the rating with such a sail will be 'faster' than it would be with a smaller headsail set in the nominal foretriangle, even when only that smaller sail is flown. Note further that some race organizers will require that such a headsail must have its luff attached to a stay, and that it cannot be set free flying.

**Q. The declaration for the tack point of an asymmetrical spinnaker (TPS) is new. Can you explain its definition and use?**

A. 'TPS' is the distance from the forward face of the mast to the attachment point for an a-sail tack to the deck, to an anchor roller, to a bowsprit, or to a similar fixture. If an a-sail is tacked to the stem near the headstay tang, 'TPS' is nearly equal to 'J', the length of the foretriangle base. If an a-sail is tacked further forward to the end of an overhanging stem or to a bowsprit, 'TPS' will be significantly larger than 'J', the rated area of that a-sail will be bigger, and the rating will be faster. Under CRF MkII the change in rating for increasing 'TPS' is generally in line with that of other handicapping systems.

**Q. Can you explain the difference between a spinnaker pole and a whisker pole?**

**A.** Any pole used in trimming a spinnaker is a spinnaker pole, and it is rated as such with its overall length declared as 'SPL'. A whisker pole is a pole used to wing out headsails only, and its length is limited to not more than  $1.1 * J$ '. A spinnaker pole with a declared length not longer than  $1.1 * J$ ' can be used as a whisker pole to trim headsails. A boat can use a spinnaker pole with either symmetrical or asymmetrical spinnakers, but if a spinnaker pole is declared, the boat will be rated for an s-sail spinnaker area, whether or not she actually carries any s-sails.

**Q. Can I include both symmetrical and asymmetrical spinnakers in my inventory?**

**A.** Yes, as long as you declare a spinnaker pole length 'SPL'. If you declare both a pole length 'SPL' and a spinnaker tack point 'TPS', CRF MkII will calculate a spinnaker area for both an s-sail via SPL, and an a-sail via TPS, and it will calculate rating on whichever area is larger.

**Q. Can I use a spinnaker pole in flying my asymmetrical spinnaker?**

**A.** Yes, as long as you declare a spinnaker pole length 'SPL'. Note that a whisker pole can only be used to wing out a headsail, and not to trim a spinnaker. Also, be aware that if you do declare an 'SPL', your calculated spinnaker area will be larger, and your rating will be faster, than it would be if you declare just a centerline a-sail tack point 'TPS' with a length equal to that 'SPL'. This higher rating is due to the fact that being able to square back a spinnaker pole increases projected spinnaker area and in some conditions it allows a boat to sail at deeper true wind angles off the wind, resulting in potentially higher downwind VMG.

**This page will continuously be updated. Please continue to refer back to this page for additional information on the CRFMkII.**