

**PHRF-MA Rules Governing
Handicaps and Certificates
2019 Edition**

- I. Overview**
- II. Obtaining a Rating**
- III. Handicapping Procedure**
 - A. Non-One Design boats**
 - B. One-Design Boats**
 - C. Crew Limits**

- IV. Changes and Adjustments to Handicaps**
 - A. Request for Rating Adjustment**
 - B. Appeals**
 - C. Adjustment guidelines**
 - 1. Sails**
 - a) Mainsails**
 - b) Headsails**
 - c) Spinnakers**
 - 2. Spinnaker Poles and Whisker Poles**
 - 3. Mast, Boom, and Standing Rigging**
 - 4. Appendages**
 - 5. Draft**
 - 6. Propulsion**

I. Overview

In this document, the terms “handicap” and “rating” are used interchangeably. PHRF-MA handicaps are intended to reflect the potential speed of a boat. Conversely, PHRF-MA handicaps are not intended to reflect the ability of skipper and crew. By itself, consistently poor performance does not justify a more favorable handicap (and vice-versa).

The handicap of an individual boat is expressed in seconds per nautical mile (SPM). This handicap is divided into two parts. The first part is a “base handicap,” which is the handicap that any boat of that type sailing in a “standard” configuration would receive. That base handicap may then be adjusted to account for ways in which the boat varies from the standard configuration.

At the completion of a race, a boat’s overall handicap is multiplied by the rated distance of the course to obtain a time allowance. This allowance is then subtracted from the yacht's total (elapsed) time required to sail the course. The result is a "corrected time" required to sail the course. A yacht with a lower corrected time on a given course scores better than a yacht with a higher corrected time. This is commonly referred to as “time-on distance” handicapping.

There is also a less-often used “time on time” calculation method that attempts to account for differences between light air and heavy air days. The time-on-time method recommended by US Sailing on its web site may be used with PHRF-MA ratings provided it is properly described in the Notice of Race or Sailing Instructions.

To the extent possible, PHRF-MA handicaps are based on observations of previous racing experience. However, the handicaps also incorporate performance data from many years of experience from thousands of boats nationally. Handicaps also may be made or adjusted based on the physical characteristics of a boat that are believed to affect performance.

PHRF-MA handicaps are intended to be applied to daytime closed course races as well as offshore and overnight races where there is a balance of windward, reaching, and leeward legs and the entire sail inventory carried by each boat may be used.

Recognizing that windward-leeward courses have become more common in recent years, exceptional windward or leeward performance is taken into account.

PHRF-MA handicaps are assigned based on very specific assumptions about the boat's overall configuration and measurements. Each handicapped yacht is issued a rating certificate that officially documents the boat's rating, as well as these key measurements and configuration assumptions. Each boat owner must keep a copy of this certificate and be able to produce it when required by race officials.

PHRF-MA only issues handicaps for monohull boats.

II. Obtaining a Rating

To obtain a new rating certificate or a renewal of an existing certificate, individuals should complete and submit the appropriate application, which can be found on PHRFMA.org. Applications are not complete unless accompanied by any fees required. New ratings for boats not in the PHRFMA database will typically be issued within 45 days of a complete application being received.

III. Handicapping Procedure

A temporary rating may be issued by an Area Vice President, Executive Vice President, or the President, when a completed, signed application has been received . The temporary rating will be reviewed at the next scheduled meeting and may be revised at that time.

In assigning a rating, PHRF-MA may use any data sources that the handicapper(s) deem appropriate including (but not limited to):

- measurements of the yacht as submitted by the applicant;
- observed performance and race results of the yacht or other yachts that are similar;
- rating and boat configuration data maintained by US Sailing; and,
- ratings for the boat or similar boats in other areas of the country. In using such information, the PHRF-MA Committee shall consider the similarity of sailing conditions in those other areas relative to New Jersey, the number of boats in those other regions, the currency of those ratings, and the level of activity in those fleets. PHRF-MA is not required to honor the rating of boats from other areas or to use the rating from another area in assigning a rating.

PHRF-MA handicaps a yacht as if it were equipped to race. There are no allowances made for boats being in non-race configuration. At this time, PHRF-MA does not issue ratings specifically for boats sailing in non-spinnaker configuration. That is, all boats are rated as if they sail with a spinnaker unless they are a one-design that does not use a spinnaker.

Ratings may be based on either one-design or non-one-design configuration. Unless specifically assigned a one-design rating, all boats shall be assumed to be non-one-

design. Likewise, boats not conforming to the standard configuration for their one-design class may be rated as non-one-design boats.

A. Non-One-Design Boats:

Non-one-design boats SHALL meet the following characteristics for their certificate to be valid:

- the boat shall be self-righting;
- no trapezes, hiking straps, movable athwartships ballast, or other hiking devices are permitted;
- any ballast used as self-righting ballast shall be fixed throughout the race;
- the boat shall have an auxiliary propulsion system capable of propelling the boat at hull speed;
- spars shall be banded (black band on white spars, white band on black spars) for the proper P (mainsail luff) and E (mainsail foot) dimensions listed on the PHRF certificate. Ketch rigs will have P_y and E_y banded; and,
- the boat shall have pulpits and lifelines that are taut as defined in ISAF Special Offshore Regulation 3.14.2.

Base handicaps for non-one-design boats are based assume the following configuration:

- the boat has a spinnaker or whisker pole, with SPL equal to the J dimension;
- the spinnaker's largest symmetrical spinnaker has a maximum width of 180% of SPL;
- the largest symmetrical spinnaker luff is less than or equal to $0.95 \cdot (I_2 + J_2) \cdot 5$;
- the genoa LP dimension is less than or equal to 155% of the J dimension.
Traditionally, most "cruiser racers" were assumed to have a 155% genoa. This has changed in recent years as a growing number of boats are designed to use, and sold with, smaller jibs. PHRFMA makes every effort to determine what the default jib is for each design and build that into the base handicap for that boat

- the boat has a folding or feathering propeller or outboard motor;
- the hull and appendages are unmodified from the manufactured version, except that an owner may fair the hull, keel, and rudder to original design specifications without penalty; and,
- Interiors are in the configuration that comes standard from the manufacturer. Cushions may be removed.

B. One-Design Boats:

PHRFMA may, at its discretion, assign a one-design base rating to boats with similar design and configuration. The presence of a national or international class association does not guarantee a one-design base rating will be assigned. Nor does the assignment of a one-design base rating constitute certification that the boat is class-legal. For yachts rated as one-designs (OD), base ratings shall assume:

- Each boat being assigned the rating shall meet all applicable class standards, except that it need not have a current class measurement certificate and the owner need not be a current member of the class association; and,
- PHRF crew limits described below in these guidelines shall apply, unless the sailing instructions or notice of race specifically call for use of class rules governing crew number and/or weight.

C. Crew:

The maximum number of crew allowed shall be based on the LOA for the boat, as follows:

**Maximum Crew,
by Length of Boat**

| Up to LOA | Maximum Crew |
|------------------|-------------------------|
| 25 | 6 |
| 27 | 7 |
| 30 | 8 |
| 33 | 9 |
| 35 | 10 |
| 38 | 11 |
| 40 | 12 |
| 43 | 13 |
| 45 | 14 |
| 50 | 15 |
| 55 | 16 |
| 60 | 17 |
| 65 + | 18 |

Up to one-fourth (rounding up to the next whole number) may include children under the age of 17 and/or adults over the age of 75 who shall not be counted for the purposes of crew limits.

IV. Changes and Adjustments to Handicaps

Changes in ratings shall be made whenever an adjustment is needed to provide equitable handicap racing. Each rating change must be voted on separately.

If there are changes to the hull, rig, sails, or other factors upon which a yacht's rating is based, they must be reported immediately to PHRF-MA.

If a boat races in a configuration that is inconsistent with assumptions used to establish its rating, whether or not those items are specifically listed on its certificate, that certificate is invalid. If possible deviations on the part of an owner become apparent, other contestants are urged to protest the yacht directly in accordance with The Racing Rules of Sailing Rule 64.3, or to bring such deviations to the attention of PHRF-MA.

To prevent yachts from being reconfigured for specific races, no yacht shall be allowed to change its rating more than once in any given year except in extraordinary cases where the changes reported are clearly permanent. This means that if a yacht changes its configuration during the course of a year and its rating is reviewed, it must sail in that configuration for the remainder of the year. This shall not prevent an owner or competitors from requesting a rating adjustment or appealing a rating decision as described below, or prevent PHRF-MA from changing the rating in order to maintain equitable racing.

A. Request for Rating Review:

Any person holding a current handicap certificate issued by the PHRF-MA may request a rating review of his/her boat, or of another boat holding a current PHRF-MA Certificate. Boats are required to sail in at least six (6) races after a rating is issued before a review will be considered.

Requests for rating review shall be made using the request for rating review form available on the PHRF-MA website (PHRFMA.org). The Area Vice President will notify the requester within ten (10) days of receipt of the forms. The review will be reviewed at the next regular meeting or earlier.

B. Appeals:

Any PHRF-MA certificate holder whom has been denied a rating adjustment by PHRF-MA or whom disagrees with the amount of the adjustment may appeal that decision, provided that the base rating of the appellant's boat differs from the national average base rating for boats of that class/type by at least 4.5 seconds.

The documentation accepted by Appeals Committee is limited to the data requested in the PHRF-MA request for rating adjustment form, supporting documents provided in that request, PHRF-MA race results, plus an additional two (2) page written narrative describing the reason for the appeal. The appeal shall be accompanied by a fee of \$25.

When a complete appeal is received, the appellant will be notified of the date of the hearing. The appellant's appeal to the committee will be decided solely on the basis of his/her written supplied documentation, and these PHRF-MA Rules Governing Handicaps and Certificates. PHRF will provide the appellant a written decision on the appeal within ten (10) days of the hearing.

If an appellant disagrees with the decision of the PHRF-MA Appeals Committee, s/he may appeal the decision to the US PHRF National Appeals Committee using eligibility rules and following the procedures established by US Sailing.

C. Adjustment Guidelines

The following sections shall guide the Handicap Committee in making adjustments to base handicaps where needed to ensure equitable handicaps. Adjustments shall be made in 3 second increments. Adjustments for potential speed increases and speed decreases are generally treated symmetrically (a potential speed increase and similar potential speed decrease receive adjustments of similar magnitude, but opposite sign).

1. Sails:

Except as described in part c below, any increase in I, J, P, E, ISP, or SPL from standard configuration shall incur a minimum -3 seconds per mile (SPM) penalty. Each additional 10% increase in I, J, P, E, or SPL shall be assessed an additional -3 SPM.

a). *Mainsails:*

i. A +6 SPM adjustment will be made if there is a mainsail luff roller furling.

b) *Headsails:*

i. Headsail adjustment is based on the largest jib/genoa and is determined by the LP/J ratio stated as a percent. Please review the chart below for the specific credits/debits associated with the largest headsail carried:

Headsail Size Adjustments

For a “traditional” boat configuration using a genoa with LP/J of 155%, a +6 second adjustment is made for jibs with LP/J ratios of 111%-135%. An additional + 3 secs is made for headsails smaller than 110%. The same base boat increasing headsail size to an LP/J of 156% to 170% would incur a penalty of – 3 secs, with additional 3 seconds subtracted for sails between 171% and 180%. Models which CANNOT fly a larger headsail, or where the base rating includes a smaller class-standard headsail, should have the smaller size “built in” to the base rating, and may not see an adjustment. Adjustments may also be expressed with these tables.

Handicap Adjustments for Non-Standard Headsail Sizes

By Base Headsail Size (expressed as LP/J%)

| Headsail LP/J of Base Rating | Adjustment in secs/mile for New Headsail with LP/J of: | | | |
|------------------------------|--|------------|------------|------------|
| | 111 – 135% | 136 – 155% | 156 – 170% | 171 – 180% |
| <=110% | -3 | -9 | -12 | -15 |
| 111% - 135% | 0 | -6 | -9 | -12 |
| 136% - 155% | 6 | 0 | -3 | -6 |
| 156% - 170% | 9 | 3 | 0 | -3 |
| 171% - 180% | 12 | 6 | 3 | 0 |

ii. A +3 SPM adjustment is provided full-time use of furling systems with the drum above deck, and all headsails fitting and operating on the system. Sails must be mounted on the roller furling drum, hoisted using the swivel, and be able to be fully furled. Changing of sails is permitted. However for purposes of sailing downwind with a spinnaker, the jib must remain hoisted (but may be furled) when not in use.

c) Spinnakers:

i. Any increase in spinnaker luff length shall be adjusted as if there were a change in the hoist, with a -3 SPM adjustment for every 10% increase, or fraction thereof, in spinnaker hoist. Spinnaker adjustments are based on the largest spinnaker.

ii. For symmetrical spinnakers, adjustments are determined by the girth/SPL ratio stated as a percent as referenced below:

Symmetrical Spinnaker Size Adjustments

| Spinnaker Girth /SPL | Adjustment |
|----------------------|------------------|
| < 180% | No Adjustment |
| >180% - 190% | -3 SPM |
| > 190% - 200% | -6 SPM |
| > 200% | TBD by committee |

iii. Asymmetrical Spinnaker Pole Sprit:

Boats not originally manufactured with sprits, or where a sprit was not offered as optional equipment may be modified to use a sprit and asymmetrical spinnaker

tacked on centerline. Assuming the boat carries only asymms, and that the size of the spinnaker meets the regulations specified in this rule and in part 2c above, the boat's rating shall be adjusted as follows:

| TPS/J% | Adjustment in Secs/Mi |
|---------------|-------------------------------|
| Up to 100 | +6 |
| >100 to 108 | +3 |
| >108 to 116 | 0 |
| >116 to 124 | -3 |
| >124 to 132 | -6 |
| >132 to 140 | -9 |
| >140 | To be determined by committee |

Additional adjustments may be made to reflect such features as retractability, articulating sprits, carrying both asymmetrical and symmetrical spinnakers, etc. Such details must be reported when declaring the change, as well as whether there is any change in spinnaker size and whether jibs/genoas will be tacked to the sprit. Credit will not be given for undersized spinnakers.

iv. When a boat's rating is based on a symmetric spinnaker, it may nonetheless carry an asymmetric spinnaker without penalty, providing that:

- the total area of the asymmetric spinnaker is less than or equal to the maximum allowed symmetrical spinnaker area;
- The sail shall be flown from the bow or from the spinnaker pole;
- If flown from the bow, the sail may be flown from a tack line; and,
- the SMG dimension is larger than 75% the SP dimension.

iv. If a yacht's base rating assumes a symmetrical spinnaker, and the yacht sails only with asymmetrical spinnakers, it shall be entitled to a +6 adjustment, subject to the following:

- The adjustment does not apply when the yacht is sailing in a non-spinnaker class;

- Such spinnakers meet the measurement criteria specified elsewhere in this section; and,
- The sail is flown from the bow on centerline (i.e., no sprit or pole, although an optional tack line is allowed).

2. Spinnaker/Whisker Pole

- a) Any spinnaker pole which exceeds the J dimension by 0-10.0%, shall be assessed an adjustment of -3, unless part of a one design standard.
- b) Any spinnaker pole that exceeds the J dimension by more than 10%, shall be considered by the Committee of Handicappers, and assessed an appropriate adjustment.
- c) Boats rated with over-sized spinnaker poles will use the JC dimension for computing the percent of maximum girth for spinnakers rather than J, and will not be assessed spinnaker adjustment unless they exceed the JC dimension by more than 180%.

3. Mast, Boom, and Standing Rigging

A carbon fiber mast substituting for an aluminum mast will be penalized as follows:

- If the I is greater than 50 feet, -6 SPM; and,
- If the I is less than or equal to 50 feet, -3 SPM.

A -3 SPM adjustment will be made for each additional set of spreaders over the original design number.

PBO or other synthetic rigging in place of standard wire or rod rigging will be penalized based on the I dimension.

- If the I is greater than 50 feet, -6 SPM; and,
- If the I is less than or equal to 50 feet, -3 SPM.

4. Appendages:

Keels and rudders may not be modified from the designer's original specifications, but may be faired to conform with those specifications unless otherwise allowed by applicable one-design rules. A damaged keel, centerboard, or rudder may be repaired, providing the repair does not change the weight, shape, or balance characteristics of the original. Modifications to appendages will be reviewed on an individual basis.

5. Draft

Draft changes and modifications will be reviewed on an individual basis.

6. Propulsion

There is no adjustment made for an outboard engine when it is retracted or in the water. Adjustments for boats with inboard engines will be made based on the type of prop and will be made as follows:

Propeller Adjustments

| Prop Type | Adjustment |
|--------------------------------|-----------------------------|
| Outboard | No Adjustment |
| Folding/Feathering/Geared | No Adjustment |
| Solid 2-Blade, in aperture | No Adjustment |
| Solid 2-Blade, out of aperture | +3 SPM |
| Solid 3-Blade | +6 SPM |
| Other | To be determined by PHRF-MA |

Boats without an inboard engine may be rated differently than from those in its class having them.