

Performance Handicap Racing Fleet Regulations-Updated 2021

Performance Handicapping

PHRF stands for Performance Handicap Racing Fleet, and it describes a group of sailboats of varying performance characteristics that are handicapped for racing on the basis of observed performance, rather than the measured dimensions. It is the purpose of the PHRF system to handicap yachts of various classes or types on the basis of the potential speed of a well-sailed, well-maintained, and well-equipped specimen of each type. It is not the purpose of the PHRF system to handicap skippers and crews. Where sailing skill (or lack of it) is the cause of the result, winning will not lead to a faster rating, nor losing to a slower one.

PHRF certification is open to any single-hulled, self-righting boat of any age, and almost any description. Boats that are not self-righting may be handicapped at the committee's discretion. The goal is to provide fair and equitable racing for as many boats as possible. In cases where a boat is of so radical a design that any rating assigned to it would impair the rating balance of the fleet as a whole, a handicap rating may be refused.

PHRF handicaps are assigned by the PHRF Committee, a committee of the YRA of LIS. The PHRF Committee usually meets on the second Thursday of each month throughout the year for the purpose of assigning new ratings, reviewing old ones, drafting or revising regulations, and transacting any other business before it. The time and place of the meetings, and meeting minutes, will be available to members and published on www.yralis.org

The YRALIS PHRF fleet is a designated U.S. Sailing racing "class" and the YRALIS PHRF rules and regulations should be viewed by all as stringent a classification as the most scrutinized one design fleet. Organizing authorities and race committees who have declared in their NOR and SI's that boats are sailing with declared YRALIS handicap ratings are obligated to abide by class rules in addition to RRS. RRS 87 CHANGES TO CLASS RULES states, "The sailing instructions may change a class rule only when the class rules permit the change or when written permission of the class association for the change is displayed on the official notice board."

Simply put, a club may NOT alter class rules without permission from the YRALIS PHRF Committee.

Administration

1. The PHRF-LIS class is administered by the PHRF Rating Committee, the PHRF Technical Committee and the Executive Committee of the YRA of LIS.
2. The duties of the PHRF Rating Committee are to set ratings for base boat classes, review ratings, enact and interpret rules that apply to boat ratings and rating adjustments (the Rating Rules), rate individual boats and issue and publish PHRF certificates.
 - 2.1. The PHRF Rating Committee is composed of members and handicappers. Handicappers are members, but not all members are handicappers.

2.2.Members participate in setting base boat ratings, enacting and interpreting the rules that apply to ratings and review ratings.

2.3.Handicappers have those duties plus they assign ratings to boats and issue certificates.

3. The duties of the PHRF-LIS Technical Committee (TC) are to receive inquiries concerning whether a boat is in compliance with her certificate. Inquiries are welcome from both current YRALIS members and Organizing Authorities. The TC will use various means to verify compliance, including inspection and measurement. The Technical Committee is not restricted by any specific event's protest deadline and may act on any information provided concerning whether a boat is in compliance with her certificate. The Technical Committee may call a hearing to determine if that were so and upon determination that a boat is not in compliance with its certificate, can then recommend that the Rating Committee revoke the certificate, including retroactively, and/or they may refer the certificate to the Rating Committee for review and revision. The Rating Committee may issue a new certificate, and upon consultation with the TC, the new certificate may be back dated. The TC or Rating Committee may order that races under its jurisdiction scored using the invalidated certificate shall be re-scored. Either committee may recommend that the boat not be scored for YRALIS season trophies for races in which she sailed with a revoked certificate. Depending on the facts found and the egregious nature of the offense, the TC, as required by the rules when there has been a gross breach of class rules or of good manners and sportsmanship, may refer the matter to the Executive Committee for further action.
4. The duties of the Executive Committee (EC) are to hear rating review appeals, and to act on any matters referred to them by the TC. For TC referrals, actions could include anything from simply continuing a certificate revocation for a period of time of their determination, up through Rule 69 actions.
5. If the YRA of LIS Technical Committee or PHRF Committee is notified or discovers that an owner is not, was not, may not have been, or may not be, in compliance with the above, then the informed Committee will notify the other of the purported violation and either Committee, or both, may impose an appropriate penalty or, depending on the egregious nature of a violation, file a complaint with the YRA of LIS Executive Committee and the Executive Committee may impanel three (3) US Sailing certified Judges to hear the complaint. The panel shall promptly inform the owner in writing of the claimed breach of YRA regulations and of the time and place of the hearing and follow the procedures in RRS 63.2, 63.3(a), 63.4 and 63.6 except that:
 - 5.1.the Executive Committee will appoint a person to present the complaint at the hearing; and
 - 5.2.the owner against whom a complaint has been made under these rules shall be entitled to have an advisor/ representative present at the hearing to act on his/her behalf.
6. The hearing panel may reschedule the hearing if there is good reason to do so. If good reason to reschedule a hearing is not provided and no one appears on the owner's behalf, the hearing panel may conduct the hearing without the owner or a representative being present. The standard of proof shall be a preponderance of the evidence. If the hearing panel determines that there was or is a breach of YRA regulations, it may:
 - 6.1.revoke or temporarily suspend the PHRF certificate in question;
 - 6.2.restrict the owner's and boat's ability to participate in any YRA of LIS event, or sanctioned event, for a prescribed period of time;
 - 6.3.impose such other penalty, or no penalty, as the hearing panel considers equitable under the circumstances.

6.4.Revocation or suspension may be made retroactively.

7. The failure to accurately report information on PHRF rating applications (or the failure to have a boat's rating reconsidered after any modifications are made that might affect that rating prior to the next race) is a clear breach of RRS 78.1 Compliance with Class Rules: Certificate and may also violate RRS 2 Fair Sailing.
8. Competitors and Race Committees are encouraged to protest (and Protest Committees to penalize) boats that fail in this regard, and Race and Protest Committees are requested to report any such penalties to the YRA of LIS for possible further action. If the YRA of LIS finds such violations to be intentional and/or part of a pattern of non-compliance, it may well consider that behavior or any attempt to cover it up as gross misconduct, and call a hearing to take further action under RRS Rule 69, as prescribed in that rule.
9. Organizing Authorities holding regattas which are subject to the YRA of LIS PHRF regulations or are qualifying events for YRA of LIS seasonal trophies, shall appoint a Technical Committee. The inclusion of the contact information for The YRA of LIS Technical Committee in the NOR's and SI's is sufficient. Compliance violations noted by competitors or Organizing Authorities do not have to be filed with the respective event's protest committee and should be brought to the attention of the Technical Committee.
10. OA's are subject to having trophy qualifying status revoked for those events due to non-compliance of these regulations.

PHRF Procedures

PHRF ratings are available to PHRF members of the YRA of LIS upon submitting an application via the YRA of LIS website (www.yralis.org). Guest certificates are also available at a reduced price for boats from out of the YRALIS area and are only valid for the event entered (Block Island Race Week, Block Island Race, Around Long Island or Vineyard Race). The application will then be assigned to one of the Handicappers. If the boat is one of a standard class or type, to which a "base rating" has already been assigned, the handicapper will assign that rating, adjusted where necessary for differences in sail area, propeller type, spinnaker pole length, etc., provided that such differences are within the range of the "standard modifications" as described below. Once it is completed, an automated e-mail will be sent to the applicant providing notification that the certificate can be downloaded or printed off the YRA website.

If the boat is one of a standard class or type to which no base rating has yet been assigned, or if the differences from the standard version are beyond the scope of the standard modifications, or if the boat is the only one of its kind, the handicapper will present the application to the entire PHRF Committee at its next regularly scheduled meeting, and the rating will be assigned by that group as a whole. Members or guests submitting an application that requires a handicapper or committee review, and where an imminent regatta requires the applicant to have a rating before the Committee's next regularly scheduled meeting, must complete all certificate fields and address the handicappers inquires at least one week prior to the regatta. Assuming that all the data has been provided by the member/guest, any handicapper is empowered, but not obliged, to issue a provisional rating, which is valid for all purposes until the next meeting. At that meeting, the provisional rating will be reviewed and either accepted as is or altered as the Committee may decide.

It must be recognized that no system of handicapping will adequately rate all types of boats on all points of sail and in all wind and sea conditions. It is the aim of this committee to assign ratings for conditions prevailing on Long Island Sound.

Rating Review

There is no such thing as a “final” PHRF rating. Any rating may be reviewed and challenged in either direction at any meeting without notice to the skipper. Before final determination of a rating change, the chairman of the fleet or class of boat, or the owners of the boat or boats under review may be invited to discuss the rating with the committee. Whenever the Committee is satisfied, on the basis of observed performance, that the rating of a particular boat or type of boat does not fairly reflect the speed potential of that boat or type, it will make whatever changes in the rating it finds to be fair. Changes to ratings that have been long established are seldom made. In the case of more recently rated boats, particularly where little data was available when the rating was first assigned, changes are more likely as experience accumulates.

Any current YRALIS PHRF member may request a review of any yacht's rating by writing to any member of the Committee. The letter will be more effective if it sets forth details of a boat's performance relative to another boat on various points of sail and in various wind speeds. Empirical data and information of this kind is more useful than race results because race results are influenced by factors in addition to boat speed. The Committee will consider every such application as soon as possible at a subsequent meeting. The Committee will not acknowledge anonymous letters or emails. A party requesting a review of another yacht's rating must identify themselves so that the rated yacht's owner may know who is requesting the review and has the opportunity to defend the current rating against data presented by the member requesting the review and any data determined valid by the PHRF Committee. In addition, the Committee may itself initiate a review of a rating whenever it considers such action warranted.

Any member who considers that he has not been fairly and reasonably treated by the Committee may bring his complaint before the Executive Committee of the YRA of LIS. While that group will not normally undertake to assign or change PHRF ratings, it will investigate actions of the PHRF Committee with respect to the complainant's case and take whatever steps are necessary to ensure a fair and reasonable disposition.

The effective date of any rating change made at a PHRF Committee meeting is the first Monday following that meeting. If this results in a yacht's rating being changed during a regatta series, the rating used for that series is at the discretion of the Race Committee of the sponsoring organization. The organization may at their discretion use changed ratings in races that occur the weekend after a meeting.

PHRF Committee

The names and email addresses and LIS region represented of all the members of the current PHRF Committee are available on the YRALIS website.

All of these committee members are working hard to make this program a success. Feel free to call on any of them for advice or help when you need it.

Owner's Obligation to Disclose Alterations

PHRF ratings, and the racing that relies on them, is entirely dependent on accurate information being provided to the Handicapping Committee, and on a boat being maintained to continue her compliance with that rating. The PHRF Committee takes that accuracy and compliance very seriously. It is the sole responsibility of each boat owner to advise the PHRF Committee of any modifications to their boat, that in any way alters the configuration of the hull, foils, internal structure, sail plan, mast or rigging of the boat or that could potentially affect the sailing performance of the boat when compared to the rated standard boat.

Proper Racing Trim

Yachts shall race as rated with at least all the equipment and furnishings supplied as standard by the manufacturer. A yacht that has altered or has removed bulkheads, permanently attached furniture, or structural interior components shall be considered a custom yacht. Drawers, headliners, cabinet and locker doors, steps, ladders, and engine enclosures shall remain in place as supplied as standard equipment. If they do not so remain, then the yacht shall be considered a custom yacht and rated accordingly. Passageway doors, cushions, dining tables, and carpets are specifically exempted, and are alterable or removable provided all safety standards are met. Lifting keels (not designed to be adjusted while racing) must be fixed and locked in the lowered position while racing.

Modifications

A modified boat is any standard boat that has been changed in some way that might affect its performance from the original design. Changes to the hull shape or structure, appendages, spars or sail plan, boat weight or propulsion are often created to make a boat more competitive. While older boats may require significant restorations in order to be maintained as safe and competitive, any and all of these should be noted where the restoration does not replicate the original design.

Modifications Which Must be Reported for Evaluation:

1. Hull, Transom, Keel, Board or Rudder: Changes that alter either the weight of the boat or the flow of water over wetted surfaces such as size, shape, length, materials, weight, location, center of gravity, etc.
2. Internal Structure: Changes or additions to the original manufactured design and construction that affect strength or stiffness of the hull, keel sump, rigging, weight, or weight distribution. This includes interior bulkheads, longitudinal stringers, keel sump bracing, tie rods, and compression struts.
3. Spars: Changes to weight, length, cross section, design, materials (Carbon Fiber, etc.), external support structure, standing rigging design or materials (PBO), etc.
4. Sail Plan: Changes to the original dimensions of the rated sails (Mainsail, largest headsails, largest asymmetric spinnaker for each different tack location, largest spinnaker)
5. Mechanical Propulsion: Changes from original production installation that affect location, weight and/or underwater drag (different strut, prop, or sail drive configurations).

Modifications Which Need Not be Reported:

1. Fairing and smoothing of the hull, rudder, keel or centerboard that conform to the original design except as limited by One Design class rules.
2. Additional sails no bigger than the rated sails.
3. Sail material such as Mylar, Kevlar, Dacron, etc.
4. Cosmetic changes to the hull, interior, or rigging of the boat not affecting the weight, trim, or speed of the boat.

5. Passageway doors, cushions, dining tables, and carpets are specifically exempted, and are alterable or removable provided all safety standards are met.

PHRF Regulations

The “base rating” is the rating assigned to a “standard” boat of a class or type. It assumes:

1. the standard rig dimensions for the class, a genoa whose LP dimension is in the range of greater than 145%, up to and including 155% of J or if smaller, of a size as designed for the boat,
2. a folding propeller if exposed or a two-bladed fixed one if in an aperture. If propulsion is by an outboard engine, it assumes the engine is dismantled and stowed in an optimum location aboard when racing.
3. that the boat is equipped with a spinnaker. If symmetrical, that the spinnaker pole length (SPL) is equal to the width of the base of the fore triangle (J), and that the maximum girth (SMW) of the spinnaker at any point is in the range of greater than 168%, up to and including 183% of J. If asymmetrical, that the dimensions of the sprit and spinnaker are within the dimensions as designed for the boat
4. Finally, that the boat is in all other respects similar to the standard boat of its type as originally supplied by its manufacturer.

Certain variations from these norms are not uncommon. They are set forth in the following tables from which departures from the “base rating” on account of differences in genoa and spinnaker size, propeller type, etc. can be determined. Variations affecting performance which are not set forth in these tables require action by the entire Committee at a meeting. When the Committee feels that the table or other noted adjustments does not properly reflect the performance change in the boat, the Committee reserves the right to assign an appropriate adjustment.

The resulting handicap rating will be the sum of the base rating and any adjustments. In addition, there are provisions to provide the following types of ratings:

- **Spinnaker** - the rating to be used when racing on courses where spinnakers are permitted to be used.
- **Non-spinnaker** - the calculated rating excluding spinnaker related adjustments. Handicappers may also compensate for performance considerations when a boat's observed performance differs greatly from the majority of the fleet when not using a spinnaker. Non-spinnaker ratings are intended to be used in races against other boats without spinnakers, not in mixed classes where only some boats may use them.
- **Distance** - the base rating adjusted to include approximately 60% windward/leeward and 40% reaching in a wind range of 10 to 12 knots true. This rating is intended for use in distance races, such as the Block Island Race, Vineyard Race, Around Long Island Race, etc.
- **Double-handed** - The above certificates assume a full crew and they are valid for Double-handed racing, subject to the limitation of there being only two crew. A member who wishes to use a different configuration when racing Double-handed can also apply for a separate Double-handed certificate which will be marked for Double-handed racing only. A double handed racing certificate may describe a completely different configuration from the Fully crewed certificate.

Handicap Adjustments

A. HEADSAILS

Adjustment is based on the largest headsail and is determined by the LP/J ratio stated as a percentage. The following table is relative to a boat designed to carry a 155% headsail.

LP/J%	Adjustment
Greater than 195	Determined by the PHRF Committee
Greater than 185 to 195	-12
Greater than 175 to 185	-9
Greater than 165 to 175	-6
Greater than 155 to 165	-3
Greater than 145 to 155	0
Greater than 135 to 145	+3
Greater than 115 to 135	+6
Greater than 95 to 115	+9
Up to 95	+12

No headsails may be set to extend aft of the LP line used to establish the handicap without adjustment.

Up to four battens may be used to support the leech of headsails with an LP of 110% or less. Variations, or more than four battens must be reported to the Committee for consideration on a case by case basis.

Boats equipped with self-tacking jibs should alert the Committee for consideration of possible credit for their arrangement.

Non-Overlapping Jib Boats

A boat whose largest upwind headsail is constrained by the construction configuration of the boat and/or rig. These boats may not declare an LP of greater than 115% and the LP/J% adjustment table above does not apply.

Whisker Pole

Any boat (including sprit boats) may use a whisker pole on a jib or genoa. Whisker poles may not be longer than LP without penalty. Extendable poles must be banded to indicate their maximum permitted length. Spinnaker poles may be used as whisker poles. Credits will not be given for undersized whisker poles in spinnaker ratings.

Roller Furling

A three (3) second credit will be given, if requested, for having headsails set on an above-deck roller furling system. In order to obtain the credit, the furling system must be fully functional and in use whenever a headsail is hoisted. All headsails (except storm sails, spinnaker staysails, spinnakers and Free Flying Headsails) must be set using the furling system and must be able to be furled using the system. Sail changes are allowed. Sails may also be dropped and re-hoisted.

B. SPINNAKER

Symmetric Spinnaker

A symmetric spinnaker is to be defined as having luff and leech within 2% of each other and being symmetric about the centerline in shape and material.

The maximum, un-penalized spinnaker luff length (SL) shall be equal to $.95 \sqrt{(ISP^2 + JC^2)}$. If SL exceeds this length, then excess length shall be converted to girth (SMW) for handicapping purposes, using the following formula: Rated Girth = $(SMW/J) (SL / (.95 \sqrt{(ISP^2 + JC^2)}))$. This Rated Girth will be used in place of the standard SMW/J ratio (stated as a percentage) to assess penalties in accordance with the table below.

Adjustment is normally based on the largest spinnaker and for symmetric spinnakers is determined by the SMW/J ratio stated as a percentage.

SPIN %	Adjustment
Greater than 228	Determined by the PHRF Committee
Greater than 213 to 228	-9
Greater than 198 to 213	-6
Greater than 183 to 198	-3
Greater than 168 to 183	0

NOTE: For symmetric spinnakers, if the spinnaker pole (SPL) is greater than J, then the SPIN % is equal to SMW / J or $1.8 \times SPL / J$ whichever is greater.

Asymmetric Spinnaker

An asymmetric spinnaker shall have over 5% difference in luff and leech lengths.

The following shall be reported for asymmetric spinnakers.

1. How the sail will be attached to the boat (i.e., centerline tacked on bow, on fixed sprit, on retractable sprit, on laterally articulating sprit, pole, etc.) If a boat has multiple asymmetric spinnakers that are attached in different manners, the largest of each must be reported separately.
2. The luff, leech, SMG, and foot dimensions for the largest sail and also for all sails with an SMG/SF ratio of 90% or less.
3. The area of the largest sail as measured using the IRC formula. $Area = ((SLU + SLE) / 2) * ((SF + (SMG * 4)) / 5) * .83$

One design boats with their standard asymmetric spinnaker, and other boats that come standard with a sprit, will have such reflected in their base ratings.

The Committee will consider the need for an adjustment for all other boats on a case-by-case basis. In evaluating adjustments, the goal of the committee will be to presume that in order for identical hulls, each with different asymmetric spinnaker configurations (fixed sprit, articulating sprit, centerline, pole) to all go the same speed (averaged across a variety of wind strengths and angles), the sail area of the more efficient configurations will have to be reduced compared to that of the standard symmetric configuration.

Asymmetric spinnakers that meet the following conditions will be considered as standard and not subject to penalty:

When tacked to standard spinnaker pole (SPL):

1. The average of the lengths of the luff and leech do not exceed the luff length permitted for a standard symmetric spinnaker, $(.95 \sqrt{(ISP^2 + JC^2)})$
2. Neither SMG nor SF exceed $1.8 \times JC$.

3. The point at which the sail is tacked is not at a greater distance from the mast than the value reported for SPL on the certificate.
4. If SPL exceeds J, then a spinnaker shall be rated based on SMG/J, or $1.8 \times \text{SPL}/J$, whichever is greater.

When tacked to a standard, factory installed sprit, or on deck (J or less) in conjunction with a standard spinnaker pole (SPL) and:

5. The average length of the leech and luff do not exceed the luff length permitted for a standard asymmetric spinnaker ($1.15\sqrt{(\text{ISP}^2 + \text{TPS}^2)}$)
6. Neither SMG nor SF exceed $1.8 \times \text{TPS}$
7. The point at which the sail is tacked is not at a greater distance from the mast than the value reported for TPS on the certificate.

Note- where the base rating notes have a spinnaker area recorded for classes with factory sprits, that area is the maximum allowed.

Special Reaching Sails

The measurements of all specialist reaching and downwind sails shall be declared. These are defined as any sail set forward of the headstay with an SMG/SF ratio of 90% or lower. Examples of sails in this group include Code Zeros, Large Roach Headsails (LRH), Free-Flying Headsails (FFH) and many cruising spinnakers. Adjustment is based on dimension and SMG/SF ratio and will be applied to the spinnaker distance racing handicap only.

Sail Type	Adjustment
Spinnakers - 75% SMG/SF ratio and higher, (but note that all sails with an SMG/SF ratio of 90% or lower need to be documented on the certificate for their use to be permitted)	0
Free Flying Headsail (FFH) - a sail set flying free, forwards of the headstay, and of LP and overall area no larger than the largest headsail used to establish the handicap	-3
Any sail set forwards of the headstay with an SMG/SF ratio of 75% or less, except FFH	-6
Specialized reaching sails may incorporate battens in the leech. If battens are used they must be declared and will be subject to an additional adjustment.	-3

When a boat carries only a single off-the-wind sail, whether that be a spinnaker, Code Zero, Free Flying Headsail, or Large Roach Headsail, the -6 adjustment for SMG/SF ratios of < 75% may not apply. Owners must declare this configuration to the handicapper and the Committee will consider requests on a case-by-case basis.

These specialist reaching sails will be measured as asymmetric spinnakers for the purpose of defining the maximum dimensions and as a headsail when LP is required to be declared in the case of an FFH. Specialist reaching sails exceeding the standard unpenalized sizes will be adjusted by the Committee on a case by case basis.

Special Note - In cases where the 2020 YRALIS PHRF Certificate included a FFH that measured into the zero-adjustment bracket in that year (specifically, a Free Flying Headsail set flying free, forwards of the headstay, and of each dimension and overall

area no larger than the largest headsail used to establish the handicap) the owner may elect to include that sail on their certificate for the 2021 and 2022 season. If they do so that sail will receive the same zero-adjustment for the 2021 and 2022 season. From the 2023 season onwards, this grandfathered relief will be eliminated. These grandfathered sails may not be transferred (sold or reassigned to a different boat via any means), nor replaced if damaged beyond repair.

Retro-fitted Sprits

When tacked on or near the centerline, either to the deck, an anchor roller (or equivalent), or to a retro-fitted sprit, and:

1. The average length of the leech and luff do not exceed $1.15\sqrt{(ISP^2 + TPS^2)}$
2. Neither SMG nor SF exceed $1.8 \times TPS$
3. The point at which the sail is tacked is not at a greater distance from the mast than the value reported for TPS on the certificate

The following table will be used to adjust for TPS:

TPS/J %	W/L Adjustment	Distance Adjustment
Greater than 148	Determined by PHRF Committee	
Greater than 140 to 148	-6	-12
Greater than 132 to 140	-3	-9
Greater than 124 to 132	0	-6
Greater than 116 to 124	+3	-3
Greater than 108 to 116	+6	0
Up to 108	+9	+3

Note: The previous table does not apply to:

1. Boat models manufactured with sprits as standard equipment
2. Laterally articulating sprits
3. Boats that will also use a symmetrical spinnaker.

Boats with laterally articulating sprits, or with asymmetric spinnaker dimensions in excess of those shown above, will be rated by the Committee on an individual basis.

Additional Spinnaker Regulations

Boats that wish to use a mixture of spinnaker pole flown and bowsprit flown sails must report that to the Committee. The handicapper will explicitly note this configuration on the certificate. In general, boats rated for this configuration will carry a penalty. Boats which are fitted with a bowsprit but elect to use spinnaker pole flown sails only must not use the bowsprit in any manner, even temporarily during maneuvers.

Credit will not be given for undersized spinnakers or any sail set forwards of the headstay.

C. MAST and RIG

The effect on performance of changes from standard rig dimensions varies from boat to boat to such a great extent that no rational table of rating changes based on rig size can be formulated. Accordingly, these changes are treated on a case by case basis. If your boat is one of a class and your rig differs from the standard for that class, you

must notify the Committee of that fact. If you have a custom boat and your rig is changed from that described on your prior rating application, you must notify the Committee of the changes. A “change” refers not only to length, but also to material, weight, wire size, number of spreaders, diameter, or aramid/carbon standing rigging.

D. PROPULSION

Adjustment is based on propeller type and its installation. An out of aperture installation is either an exposed shaft or a sail drive. In aperture is a traditional installation in a cutout behind a full keel.

<u>Prop/Installation</u>	<u>Adjustment</u>
Folding/Feathering Out of Aperture	0
Fixed 2-Blade In Aperture	0
Outboard Retracted When Racing	0
Fixed 2-Blade Out of Aperture	+6
Fixed 3-Blade In Aperture	+6
Fixed 3-Blade Out of Aperture	+12
Non-Standard	(as estimated by handicapper)

NOTE: If the propeller or installation type is not included in the adjustment table, then the Committee will assign the adjustment based on the assumed relation to the table and indicate the action in its notes.

Retractable drive systems must all be declared to the Committee. When installed as standard equipment the Committee anticipates no adjustment.

E. OPTIONAL CREW WEIGHT LIMITS

YRA LIS PHRF offers race organizers the option of using crew weight limits in their races. Usually only the more significant regattas would use these limits. To be used, this section must be invoked in the Notice of Race and noted in the Sailing Instructions.

<u>Up to and Including LOA(ft.)</u>	<u>Base Weight Limit (lbs.)</u>
24	900
27	1080
30	1260
33	1440
35	1620
38	1800
40	1980
43	2160
45	2340
50+	Add 180 lbs. for each 5 feet of LOA over 45 feet.

LOA shall be mathematically rounded to the nearest whole number. For example, a 24.49 foot boat is rounded to 24 feet LOA and is allowed a base crew weight of 900 lbs., and a 24.5 foot boat is allowed a base crew weight of 1080 lbs.

The base weight limit is for everyone aboard, including the skipper. Double handed certificates will be issued for two people, regardless of weight.

The base weight limit will be printed on the PHRF Certificate.

F. BALLAST & FOILS

YRALIS PHRF will permit the following exceptions to RRS rule 51 (Ballast) and will rate boats with these exceptions on a case by case basis:

Canting keels – vessels that are produced with canting keels may seek a PHRF rating. Ratings for the canted position will consider the percentage of ballast relative to total displacement and the change in righting moment as a result.

Water Ballast – vessels built with internal water ballast may seek a PHRF rating. Rating for the vessel will consider the location and % of total displacement of the water ballast.

Any other movement of internal weights for the purpose of improving stability is not permitted and will not be rated.

Foil systems of any type must be declared for individual consideration. Any design which incorporates foils as part of the standard equipment will have the specifics of those foils detailed in the Base Rating notes.

G. MANUAL POWER

G.1 RRS 52, Manual Power, shall not apply. This Rule may be amended by Notice of Race.

G.2(a) The use of stored power for the hoisting of mainsails, or the reefing or furling of sails need not be declared.

G.2(b) Boats using stored power solely for the adjustment or operation of backstays shall declare this to the Committee.

G.2(c) Boats using stored power for the adjustment or operation of running rigging other than as noted in Rules G.2 (a) & (b) shall declare this to the Committee.

H. OTHER REGULATIONS

Annual Declaration of LP and Stated Configuration

The LP dimension declared for a yacht at the time her certificate was issued or renewed is intended to remain in effect for the duration of the year for which the certificate was issued. Rating changes resulting from changes in the LP dimension, typically the result of buying a new sail after the season's certificate has been issued, may be made only once a year, upon written application to the PHRF Committee, stating the reasons for the change. Such applications will not be approved if the Committee finds that the proposed change is an attempt to fine tune the yacht's rating for anticipated weather conditions in any specific race, series, or time of year. The effective date of any such rating change is the first Monday following the approval of such change. If this results in a yacht's rating being changes during a regatta series, the rating used for that series is at the discretion of the sponsoring Organizing Authority.

Any other changes to the configuration of the boat after a season's certificate has been issued are not typically allowed. If an owner finds themselves in unique circumstances and an in-season change to something on their certificate is necessary, then the handicapper who rated the boat should be contacted and the boat will be reviewed at the next PHRF committee meeting as if it were a new application. Regardless of circumstances, this will only be allowed in rare situations and only once a year.

Sail Measurement Limitations

The ratings assigned by the PHRF Committee assume that sail dimensions not specifically stated on the certificate conform either to the yacht's class or to limitations that have long been standard in all measurement rules. Any departure from these limitations amounts to a change from the standard or norm. Therefore, notice of the departure must be given to the Committee. Sails are to be measured in accordance with the World Sailing Equipment Rules of Sailing, and any sail may be measured at any time by a Technical Committee.

In the case of yachts not belonging to a one-design class, attention is specifically directed to the following:

1. Mainsail headboards may not exceed in width the greater of 6 inches or 4% of E. The dimensions of a square top or "fathead" mainsail must be declared and will be noted on the certificate by the handicapper.
2. Any Mainsail or Mizzen where the MUW is greater than
3. 22% of E, or the three-quarter width MTW is greater than 38% of E or the half-width MHW is greater than 65% of E girth limitations shall be declared. The increase in sail area above the maximums shall be stated as a percentage of increase. This data can be obtained from the sailmaker.
4. Mainsails with full battens are allowed without penalty if the roach of the mainsail has not been increased from the above limits.
5. A sail may not be measured or used as a spinnaker unless its mid-girth is at least equal to 75% of its foot length, and any sail flown forward of the headstay with a mid-girth measurement of less than 90% of its foot length must be declared and their measurements noted on the certificate.
6. The difference between a headsail and a spinnaker is that the width of a headsail, measured between the midpoints of its luff and leech, is less than 75% of the length of its foot. A sail tacked down behind the foremost mast is not a headsail.

Non-Spinnaker Regulations

The following regulations supplement the YRA of LIS PHRF Fleet regulations:

1. Non-Spinnaker YRA of LIS PHRF ratings: Participating yachts must have valid YRA of LIS PHRF certificates. Each YRA of LIS PHRF certificate bears both spinnaker and non-spinnaker ratings.
2. The intent of Non-Spinnaker racing is that boats sail off the wind with the same sails they use to sail on the wind. Therefore, ketches and yawls may not fly staysails off the wind unless such sails are used when sailing upwind.
3. Headsails must be attached along their luff to the headstay, unless the boat has no headstay.
4. Pole Length: Whisker poles may not be longer than "LP" without penalty. Extendable poles must be banded to indicate their maximum permitted length. Spinnaker poles may be used as whisker poles. When a competitor declares a LP greater than 135% and a pole of J length, a +6 credit may be claimed. If the declared LP is from 120% to 135% with a J length pole, +3 credit may be claimed. No credit is available when the declared LP is less than 120% with a J length pole.
5. Jib Limitations: Non-spinnaker racing is defined, for this purpose, as prohibiting the use of any headsail whose mid-girth (mid-luff to mid-leech) measurement is more than 50% of its foot measurement. Except when changing headsails, participating

yachts may not fly more than one headsail at a time. (Yachts that are permanently cutter rigged may fly their staysails.)

To apply for a PHRF handicap, please visit the YRA website, YRALIS.org.

AREA Area of asymmetric spinnaker as calculated by the IACC formula. Contact your sailmaker

BAL Ballast of the yacht in pounds. Note any additions or deletions from the standard and the locations.

BEAM Maximum beam of the vessel.

CREW "STD" if to use base boat maximum weight. Otherwise, declare maximum weight desired.

DISPL Displacement of the yacht in pounds, without crew, water, fuel, or stores aboard.

DRAFT Draft of the hull and keel. Also include draft with the board down if a centerboard yacht.

E The maximum, unpenalized length of the foot of the mainsail. The boom shall be marked with a black band, at a distance equal to E, measured from the back of the mast.

I Height of fore triangle. Measured from deck sheer line abeam the mast to the highest point of headsail attachment.

ISP Spinnaker halyard height. Measured from deck sheer line abeam of the mast to the top of the spinnaker halyard sheave.

J Distance perpendicular from the foreside of the mast line to the point of intersection of the forestay with the deck.

JC The greater of J or SPL or SMW / 1.8.

LOA Length overall of the hull. Note bowsprit and/or boomkin separately.

LP Distance perpendicular from the luff to the clew of the largest jib.

LWL Load waterline length.

MATERIAL Construction material of the hull, keel, rudder, and mast (e.g., fiberglass, lead, iron, aluminum, carbon fiber, etc.)

MHW Mainsail girth measurement from a point along the leech, halfway between the clew and the head, to the nearest point of the luff.

MTW Mainsail girth measurement from a point along the leech, three-quarters of the distance from the clew to the head, to the nearest point of the luff.

MUW Mainsail girth measurement from a point along the leech, seven-eighths of the distance from the clew to the head, to the nearest point of the luff.

P The maximum, unpenalized length of the luff of the mainsail. The mast shall be marked with a black band, at a distance equal to P, as measured from the top of the boom.

SL **Symmetric** spinnaker luff length.

S. Area Symmetric spinnaker area. Consult your sail maker.

SMW For symmetric spinnakers only, maximum girth leech to leech. (Fold on centerline, measure max. width, and multiply by two.)

SMG For asymmetric spinnakers only, the mid-girth, found by measuring between the mid-points of the luff and leech.

SPL Spinnaker pole length measured with the pole in its fitting and set in a horizontal position athwartship, as measured from the center of the mast, to the outermost end of the pole.

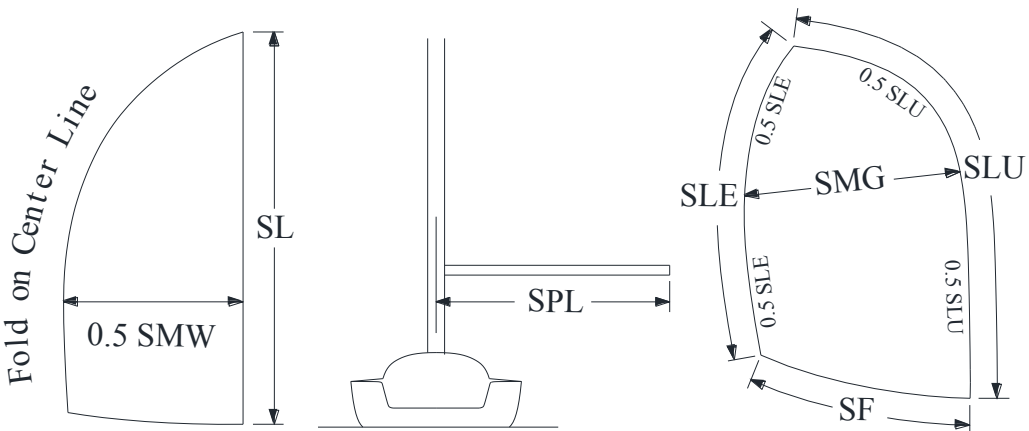
SF Asymmetric foot length.

SLU Asymmetric luff length.

SLE Asymmetric leech length.

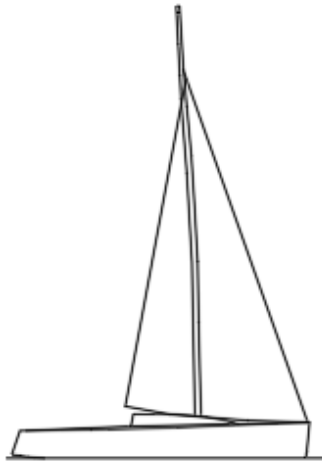
TPS Tack point of an asymmetric tacked on the centerline, to the deck or to a sprit, measured from the tack point, to the front of the mast, parallel to the water.

WPL Whisker pole length, measured from front of mast..

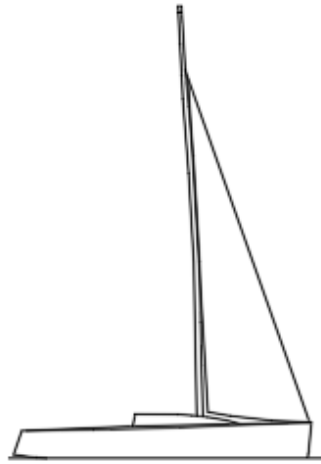


Definitions

HEADSAIL TYPE



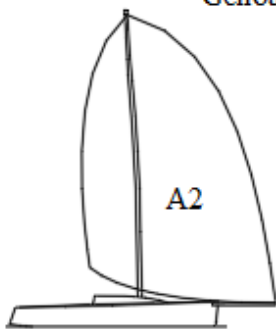
Genoa



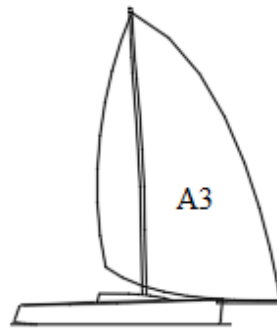
Jib

Genoa/Jib

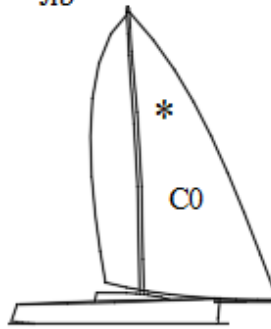
LP of largest sail is the key variable impacting rating.



SMG/SF ~ 180%



SMG/SF ~ 100%



SMG/SF > 75%

Spinnakers

A2, A3, A5 etc.

Code Zero

SMG/SF ratio is the key variable. If ratio > 75% no further rating adjustment.



SMG/SF ~ 65%

Large Roach Headsail/ Tweener

SMG/SF ratio is the key variable < 75%

Note: Jib tops are not included as they are not free flying sails.



SMG/SF ~ 50%

Free Flying Headsails

LP measurement and overall area must be < largest jib/genoa declared.

If LP or overall area > declared jib/genoa, it is considered LRH/Tweener.

*** These free flying sails with the SMG/SF ratios under 90% must all be declared**