

PHRF OF EASTERN CONNECTICUT

The Performance Handicap Racing Fleet of the Eastern Connecticut Sailing Association

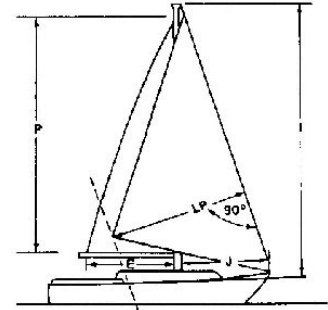
2005 REGULATIONS

I. General Regulations

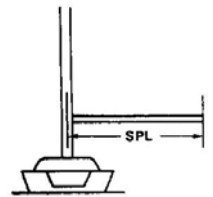
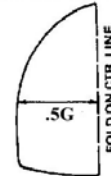
Handicap ratings are based on boat speed potential, determined from the demonstrated speed of "standard" boats, that are expertly sailed, well equipped, and conditioned. A standard boat **must** be equipped to the degree intended by the manufacturer, including those appointments and equipment supplied or intended by the manufacturer, such as joiner work, cushions, galley equipment, etc. It is the responsibility of the applicant to provide details of **all** changes that could possibly affect boat speed. To qualify for a handicap, a boat must be single-hulled and self-righting. Also, the use of a trapeze, hiking straps, hiking boards, or any other hiking aid is not permitted. A boat shall not have more than one current Eastern Connecticut PHRF Certificate at any time. Rating changes based on a change in headsail size will be limited to one per season.

II. Definitions

DRAFT	Distance from bottom of keel to LWL. Also include draft with board down if centerboard vessel.
DISP	Displacement of vessel in pounds, without any water, fuel, etc.
BAL	Ballast of vessel in pounds.
LOA	Length overall of hull.
LP	Distance perpendicular from the luff to the clew of the jib.
LWL	Load water line.
MAT	Construction material of the keel or mast, e.g., lead, iron, carbon, alu.
BEAM	Maximum width of the vessel.
SPL	Spinnaker pole length measured from centerline of mast to outboard end of pole when set in a horizontal position, athwartship.
WPL	Whisker pole length. Measured similarly to SPL.
G	Maximum symmetric spinnaker girth measured luff to leech (IMS SMW).
SL	Length of symmetric spinnaker measured along either luff, with only enough tension to remove wrinkles. Sail to be stretched flat while measuring.
SLU	Asymmetric spinnaker luff, measured from head to tack.
SLE	Asymmetric spinnaker leech, measured from head to clew.
I	The distance from the deck height to the point of intersection of the headstay and the mast.
ISP	The distance from the deck height to the highest headsail halyard (if above the intersection of the headstay and the mast).
J	Horizontal distance from the foreside of the mast to the point of intersection of the forestay and deck. Use the design "J" dimension for unmodified series production boats.
JSP	Horizontal distance from foreside of mast to outboard end of sprit when fully extended.
P	Fully stretched or banded luff limit of mainsail.
E	Fully stretched or banded foot limit of mainsail.
PY	Fully stretched or banded luff limit of mizzen sail.
EY	Fully stretched or banded foot limit of mizzen sail.
LLY	Luff length of the largest mizzen staysail (mule, etc.).
LPY	Distance perpendicular from the luff to the clew of the largest mizzen staysail.
SLIM	Measurement equal to $.95\sqrt{(I^2 + J^2)}$, (or $.95\sqrt{(ISP^2 + J^2)}$, if applicable).
AMG	Asymmetric spinnaker mid-girth, measured from the midpoint of the luff to the midpoint of the leech.
ASF	Asymmetric spinnaker foot length, measured in a straight line from tack to clew.
DECK HEIGHT	The height of the sheer line abreast of the mast.



SPIN. GIRTH MEAS.



III. Handicap Adjustments

Non-Spinnaker Rating

Non-Spinnaker ratings are based on the ratio of mainsail size (including mizzen sails, if applicable), to foretriangle size as follows: Ratio = (P x E + [PY x EY] + [.6LLY x LPY]) / (ISP x J).

<u>Ratio</u>	<u>Rating Adj.</u>	<u>Ratio</u>	<u>Rating Adj.</u>	<u>Ratio</u>	<u>Rating Adj.</u>
.3 but less than .4	+26	1.2 but less than 1.3	+17	2.2 but less than 2.4	+8
.4 but less than .5	+25	1.3 but less than 1.4	+16	2.4 but less than 2.6	+7
.5 but less than .6	+24	1.4 but less than 1.5	+15	2.6 but less than 3.0	+6
.6 but less than .7	+23	1.5 but less than 1.6	+14	3.0 but less than 3.4	+5
.7 but less than .8	+22	1.6 but less than 1.7	+13	3.4 but less than 4.0	+4
.8 but less than .9	+21	1.7 but less than 1.8	+12	4.0 but less than 4.0	+3
.9 but less than 1.0	+20	1.8 but less than 1.9	+11	5.0 but less than 6.0	+2
1.0 but less than 1.1	+19	1.9 but less than 2.0	+10	6.0 but less than 7.0	+1
1.1 but less than 1.2	+18	2.0 but less than 2.2	+ 9	7.0 + greater	0

Headsail Adjustments

(Headsail handicap adjustments shall not apply to boats with one-design ratings.)

Spinnaker Class

<u>Size Range</u>	<u>Rating Adjustment</u>
Up to 1.10	+7
Greater than 1.10 to 1.35	+4
Greater than 1.35 to 1.51	+1
Greater than 1.51 to 1.55	0
Greater than 1.55 to 1.60	-1
Greater than 1.60 to 1.65	-2
Greater than 1.65 to 1.70	-3
Greater than 1.70 to 1.75	-4
Greater than 1.75 is adjusted proportionally.	

Non-Spinnaker Class

<u>Size Range</u>	<u>Rating Adjustment</u>
Up to 1.10	+16
Greater than 1.10 to 1.20	+13
Greater than 1.20 to 1.30	+10
Greater than 1.30 to 1.40	+ 7
Greater than 1.40 to 1.48	+ 4
Greater than 1.48 to 1.51	+ 1
Greater than 1.51 to 1.55	0
Greater than 1.55 to 1.60	- 1
Greater than 1.60 to 1.65	- 2
Greater than 1.65 to 1.70	- 3
Greater than 1.70 to 1.75	- 4
Greater than 1.75 is adjusted proportionally.	

Asymmetric Spinnakers

(The following does not apply to spinnakers flown from sprits.)

The average of the SLU and SLE shall not exceed SLIM. The foot length (ASF) shall not be greater than 180% of the foretriangle J. The mid-girth (AMG) shall not exceed 175% of J, or be less than 75% of ASF. Asymmetric spinnakers not in conformance with these dimensions shall not be permitted. Sails built prior to 2004 are grandfathered to a maximum AMG of 180% of J.

If a yacht has only an asymmetric spinnaker, and it is only flown from the jib tack or bow pulpit (never a pole), then there is a 9 second/mile handicap credit. A 2-foot maximum tack pennant is permitted. If a yacht has both symmetric and asymmetric spinnakers, then either may be flown from a pole, but there will be no handicap adjustment.

Symmetric Spinnakers

Spinnaker rating adjustment is based on the largest spinnaker measured by the G/J ratio and the SL/SLIM ratio. A luff length equal to SLIM is standard. The maximum girth without penalty is equal to 1.8 x J. If spinnaker luff length is greater than standard, excess length is converted to excess girth. Convert the excess luff to excess girth using the following formula: $G/J \text{ Rated} = (G/J \text{ Actual}) (SL/SLIM)$.

Girth Adjustments for symmetric spinnakers

<u>G/J</u>	<u>Rating Adjustment</u>
Up to 1.80	0
Greater than 1.80 to 1.85	-1
Greater than 1.85 to 1.90	-2
Greater than 1.90 to 1.95	-3
Greater than 1.95 to 2.00	-4
Greater than 2.00 to 2.05	-5
Greater than 2.05 to 2.10	-6
Greater than 2.10 is adjusted proportionally.	

Maximum spinnaker pole length (SPL) without a penalty:

For spinnakers where G is less than or equal to 1.8 x J, $SPL=J$.

For spinnakers where G is larger than 1.8 x J, $SPL=G/1.8$.

If SPL exceeds both J and G/1.8, use the Girth Adjustment Tables (substituting 1.8 SPL/J for G/J) to determine penalty.

Whisker Poles Maximum permitted whisker pole length (WPL) shall be .8 LP of largest headsail, or J, whichever is greater.

Modified Appendages All modified rudders shall initially be given -3 sec. penalty until reviewed by the council. Modified keels must be reported to the handicapper.

Mast Height Adjustments

(Only applicable when "I" & "P" change equally.)

Standard Mast Height is "I"
Excess or deficient height is measured by mast ratio. Mast Ratio= Actual "I"/Std. "I"

<u>Mast Ratio</u>	<u>Rating Adj.</u>
Greater than .91 to .93	+12
Greater than .93 to .95	+ 9
Greater than .95 to .97	+ 6
Greater than .97 to .99	+ 3
Greater than .99 to 1.01	0
Greater than 1.01 to 1.03	- 3
Greater than 1.03 to 1.05	- 6
Greater than 1.05 to 1.07	- 9
Greater than 1.07 to 1.09	-12
Greater than 1.09 to 1.11	-15
Greater than 1.11 is adjusted proportionally.	

Engine or prop too small to drive vessel at KTS = .8 (1.3√LWL)

-6

Propeller Adjustments

Inboard Engine

2 or 3 blade folding or feathering	0
Solid 2 blade aperture	0
AutoProp	+ 3
Solid 2 blade exposed to water	+ 6
Solid 3 blade in aperture	+ 6
Solid 3 blade exposed to water	+12

Outboard Engine Propellers

Std. retracted when racing 0

Engine not retracted, prop immersed on both tacks:

2 blade	+ 6
3 blade	+12

Rating adjustments for other hull and rig modifications are handled individually.