

PHRF Ratings for Hunter Sailboats in Chesapeake Bay

Several club members have inquired about PHRF ratings for Hunter sailboats. This document is a compilation of inputs from several knowledgeable sailors/racers in the club.

The United States Performance Handicap Racing Fleet Committee (USPHRF) is a technical rule committee of US SAILING that promotes performance handicap racing for monohull and multihull sailing yachts applying the PHRF[®] rule.

Hunter has nothing to do with ratings. They do not maintain ratings or polars for their boats.

The PHRF (Performance Handicap Rating Fleet) ratings are determined by U.S. Sailing out of Newport, RI. <http://www.ussailing.org/phrf/> They use a computer algorithm with input such a sail area, displacement, lwl, beam, etc. All this sort of stuff and ratios are cranked into the computer and a "base" rating is kicked out.

It is not clear what the formula is, but there is a "Schell regression formula" developed by Terry Schell <http://www.well.com/~pk/YRAphrf-sf.html> that is often referred to.

$$\text{Rating} = 610 - 8.36 * (\text{SA} / \text{DISP}^{0.333}) + 0.0000511 * (\text{SA}^2) - 55 * (\text{P} / (\text{J} + \text{E})) - 30.8 * (\text{LWL}^{0.5}) - 602 * (\text{DRAFT}^2 / \text{SA})$$

$$\text{where SA} = 0.5 * (\text{I} * \text{J}) + 0.5 * (\text{P} * \text{E})$$

Then, the base ratings may be adjusted by local racing authorities such as "PHRF of the Chesapeake". <http://www.phrfchesbay.com/> Here, local conditions are taken into consideration and a local rating is established. For example, a heavy boat may do well on San Francisco Bay, but poorly on the Chesapeake Bay. How well the boat is sailed (skill) does not enter into it.

U.S. Sailing publishes a book each year with base ratings for each boat they have measured. Most local race committees subscribe to this book and once in awhile one of us is able to obtain a previous year's copy. I had one from many years ago but it's very obsolete now. All the ratings given below were found thru much time researching yacht club's web sites. It's not perfect...but then PHRF itself is far from perfect.

The compilation of PHRF ratings is given in the following table.

Hunter PHRF Ratings as of 2003

Model	Rating
20	288
22 center board	258
23 center board	240
25	231
25.5	210
26.5	204
27	219
27 shoal draft	225
27 tall mast	210
28	183
28.5	183
28.5 shoal draft	189
29.5	189
30	177
30 shoal draft	183
31	174
31 shoal draft	177
32 vision	171
33	156
33.5	147
34	144
34 shoal draft	150
35	156
35 legend	132
35.5	141
36	132
36 vision	138
37	132
37 legend	108
37 legend wing keel	114
37.5	111
37.5 legend wing keel	120
40	96
40 shoal draft	102
42 passage	102
45 shoal draft	99
54	42
310	162
320	174
376	108
380	108
405	114
450 passage	102