

Colorado Sail and Yacht Club

PHRF Time on Time Calculator

May 2016 by Larry Durham - Lone Ranger

Your Rating:

Boat Name:	PHRF	200	201	221	225	237	241	246	250	272
Paradiso	200	0.00	0.10	2.04	2.42	3.52	3.88	4.32	4.67	6.54
Lone Ranger	201	(0.10)	0.00	1.94	2.32	3.42	3.78	4.23	4.58	6.45
Kaija / Moku	221	(2.04)	(1.94)	0.00	0.39	1.71	1.89	2.35	2.71	4.63
Soggy Paws	225	(2.42)	(2.32)	(0.39)	0.00	1.14	1.70	1.97	2.34	3.72
Gael Force	237	(3.52)	(3.42)	(1.71)	(1.14)	0.00	0.38	0.85	1.22	3.00
Rainbow Chaser	241	(3.88)	(3.78)	(1.89)	(1.70)	(0.38)	0.00	0.47	0.84	2.82
Autumn Wind	246	(4.32)	(4.23)	(2.35)	(1.97)	(0.85)	(0.47)	0.00	0.37	2.54
Healing Time	250	(4.67)	(4.58)	(2.71)	(2.34)	(1.22)	(0.84)	(0.37)	0.00	2.00
Azure Luna	272	(6.54)	(6.45)	(4.63)	(3.72)	(3.00)	(2.82)	(2.54)	(2.00)	0.00

Numbers above are seconds per minute (you owe) or are owed you

How to use this chart

1. Find the Column with your Rating. This will always be your Column
2. Find the Row containing the competitor to which you want to compare your boat
3. The number in the cell at the intersection between your Column and your competitors Row is the number of seconds (you owe) or your competitor owes you per minute you race.
4. At any time on the course, multiply the number of minutes you have been on the course times the number in that cell to determine where you stand on corrected time against that competitor.

Example

1. Your rate is 201 and your competition rates 225. At intersection of Row 201 and Column 225 you see that you owe the competitor 2.32 seconds per minute.
2. 30 minutes into the race you note that at a mark rounding you are 90 seconds ahead. You calculate you owe him $30 \times 2.32 = 69.6$ seconds and determine you are 20 seconds ahead.
3. You finish at exactly 70 minutes, and quickly calculate that to win you must beat him by $70 \times 2.32 = 163$ seconds.

Assumptions for Chart

1. Corrected time (CT) equals elapsed time (ET) times the Time Correction Factor (TCF), that is $CT = ET \times TCF$
2. The Time Correction Factor (TCF) is calculated by the equation $TCF = 715 / (B + PHRF)$, Where B = 515 and PHRF is the boats rating