



ORC Cruiser & ORC Club Certificate Seminar

Presenters:

Jonathan Bartlett, *Past Commodore*

John White, *AYC Sailing Committee Chair*

Ben Capuco, *AYC's ORC Class Liaison*



Seminar Agenda

ORC Cruiser Seminar – 1000

Jonathan	Opening remarks
Ben	What is ORC, scoring, etc.
John	ORC Cruiser (spinnaker & non-spinnaker) eligibility & requirements
John	ORC Cruiser schedule for 2022
Ben	ORC Club certificate process
Jonathan	Moderated Q&A
Jonathan	Closing remarks

ORC Full Crew and DH Seminar – 1100

Jonathan	Opening remarks
Ben	What is ORC, certificate options, scoring, etc.
John	ORC and ORC DH schedule for 2022
Ben	ORC Club certificate process
Jonathan	Moderated Q&A
Jonathan	Closing remarks

Reminders:

- Use the **Q&A** function (not chat) to type any questions you might have
- You can write in your questions at any time during the seminar
- The moderator will decide whether to address a question during the presentation or hold it until the end
- We are recording this seminar so you can re-watch later – the recording will be available on Monday



ORC Cruiser

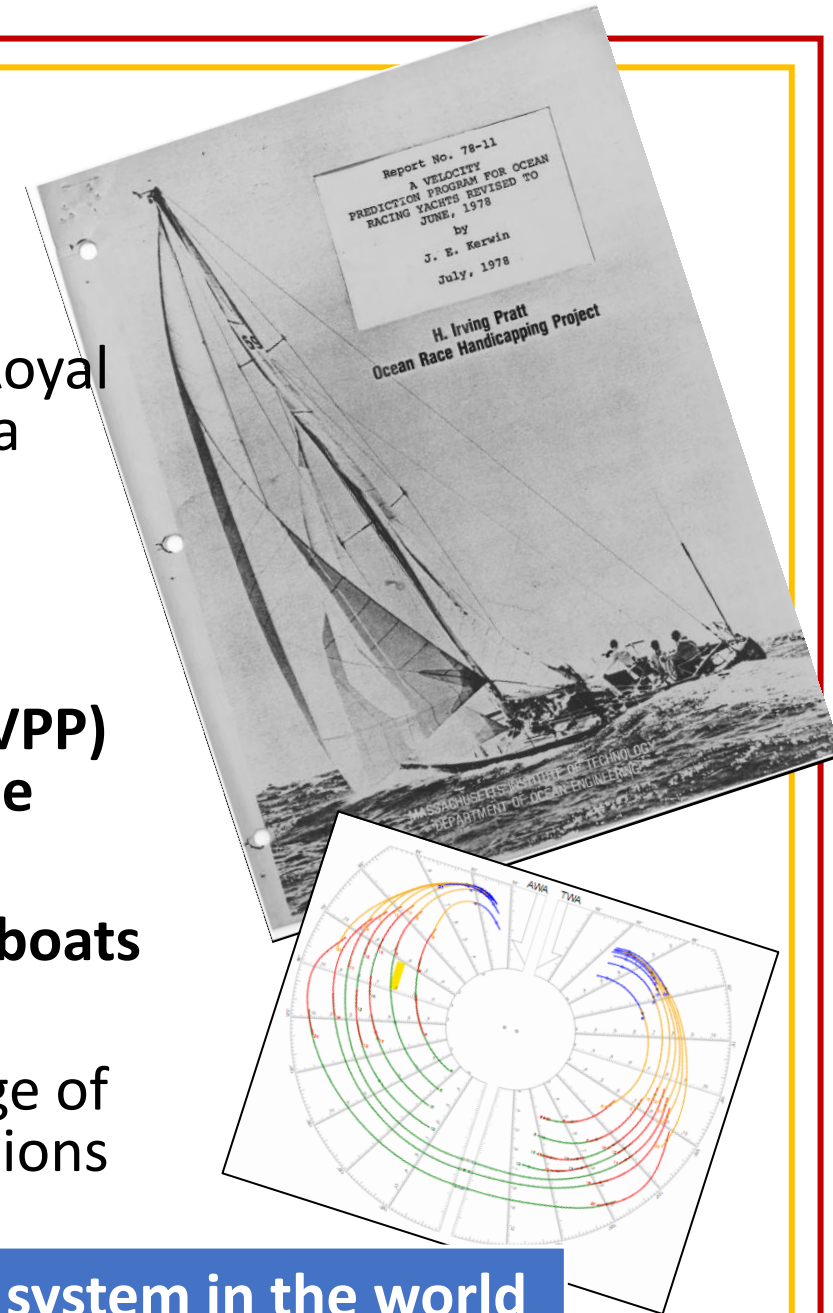
How to apply and manage the process for your boat





What is ORC?

- Offshore Racing Congress (ORC) - founded in 1969 by the Royal Ocean Racing Club (RORC) and the Cruising Club of America (CCA) to develop an international handicap standard
- ORC has supported IOR, IMS, and currently the ORC rating systems
- **ORC ratings are based off a Velocity Prediction Program (VPP) using hull, appendage, rig and sail measurements from the Universal Measurement System (UMS)**
- **The VPP is essentially a computer tool that predicts each boats performance in a full range of wind conditions**
- ORC ratings are based on these predictions for a given range of wind speeds over an assumed set of typical racecourse options



ORC is the most popular measurement-based rating system in the world



Scoring Options

- Single and Triple Number
 - Time on Time - Corrected time depends only on the elapsed time. The longer the race in time, the larger the handicap.
 - Low, Medium & High help refine accuracy of the ratings, create closer and more fair results
- Std options: All Purpose & W/L
- Other options: Predominant upwind, downwind, 5-band scoring etc.

Single Number	Time On Distance	Time On Time
Triple Number All Purpose Low	643.6	0.9323
Triple Number All Purpose Medium	510.5	1.1754
Triple Number All Purpose High	457.3	1.3121
Triple Number Windward/Leeward Low	836.9	0.7169
Triple Number Windward/Leeward Medium	632.1	0.9492
Triple Number Windward/Leeward High	560.3	1.0709
Predominantly Upwind	559.1	1.0731
Predominantly Downwind	513.4	1.1687
Predominantly Upwind Low	735.4	0.8158
Predominantly Upwind Medium	586.1	1.0237
Predominantly Upwind High	556.5	1.0782
Predominantly Downwind Low	736.0	0.8152
Predominantly Downwind Medium	572.2	1.0486
Predominantly Downwind High	521.9	1.1496

ORC offers multiple scoring options for better accuracy & closer results



ORC Cruiser Division Intent

To group like- performing, equipped, and prepared boats into classes based upon objective measures.

As the number of entries allows, AYC will divide the ORC Cruiser Division into classes based upon boat configuration and ORC data.



Configuration Requirements For ORC Cruiser Division

ORC DYNAMIC ALLOWANCE

- Valid ORC certificate **MUST** specify a value for Dynamic Allowance of **0.230% or greater**.
- Dynamic Allowance (DA) is a rating credit representing the dynamic behavior of a boat taking into account performance in unsteady states (i.e. while tacking) calculated on the basis of:
 - Upwind Sail Area/Volume ratio
 - Upwind Sail Area/Wetted Surface ratio
 - Downwind Sail Area/Volume ratio
 - Downwind Sail Area/Wetted Surface ratio
 - Length/Volume ratio.
- Dynamic Allowance is displayed on ORC certificates of boats which have met the requirements of the IMS Cruiser/Racer Division
 - Boats which have been assigned to the IMS Performance Division will have the Dynamic Allowance displayed when its Series Date is older than 30 years.



Where to find Dynamic Allowance



Club
Certificate
2021

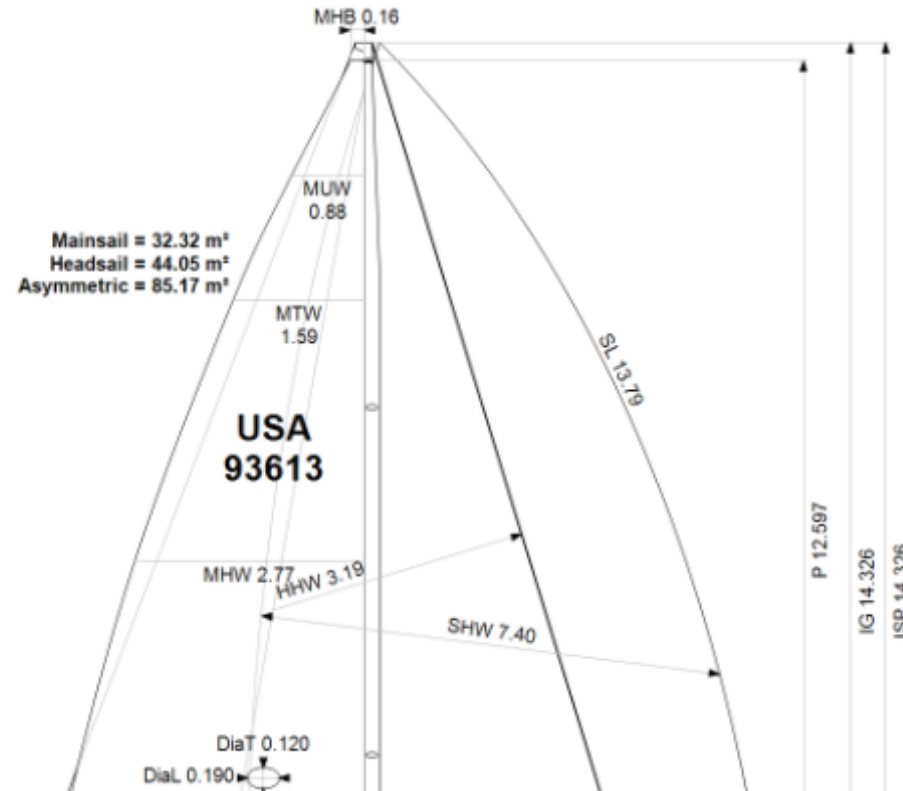
Boat
RESOLUTE
USA 93613

Offshore
Racing
Congress

Certificate number:US6038



GPH = **671.2** CDL = **8.193**



BOAT

Class	Tartan 3500 WK
Designer	Jackett
Builder	Tartan
Age Date	02/1993
Series Date	01/1991
Offset File	TR3500WK.OFF

HULL

Length Overall	10.668 m
Maximum Beam	3.627 m
Draft	1.542 m
Displacement	6,389 kg
DLR	7.6462
IMS Division	Cruiser/Racer
Dynamic Allowance	0.357%
Age Allowance	0.487%



Configuration Requirements For ORC Cruiser Division (cont.)

HEADSAILS

- A **maximum of two (2) headsails** (including staysails) may be carried onboard
- If two headsails are carried onboard, **one** headsail shall be **no larger than 110%** of the fore-triangle area
- The **full length of the luff of all headsails must be secured** or fastened to the forestay or inner forestay
- Headsails set flying are **not** permitted
- No more than **one** headsail may be flown at a time.

SPINNAKER

- (If applicable) A maximum of one spinnaker may be carried onboard
- The spinnaker maximum girth must be greater than 85% of the length of the foot of the sail.
Example: Code Zero sails are not permitted.

PROFESSIONAL SAILORS - A maximum of one (1) Category 3 sailor may be onboard who may not steer unless they are the owner of the boat, or a threatening emergency arises.

OWNER'S DECLARATION - Owner/skipper must affirm that all configuration requirements have been met and the boat will be sailed in compliance with the boat's valid ORC certificate.



2022 AYC & EYC Regatta Calendar - ORC Starts

Date	Club	Regattas	ORC Class Starts			Notes
			ORC (full crew)	Cruiser	Doublehanded	
April 27	AYC	Wednesday Night Racing (beings)	✓			
May 7	AYC	Spring Race to Oxford	✓	✓	✓	
May 14	Both	Helly Hansen Sailing World Regatta	✓			TBD (still in planning)
June 3	EYC	Annapolis to Bermuda Ocean Race	✓	✓		
July 9	EYC	Boomerang	✓	✓		
July 15-17		Screwpile Lighthouse Challenge	✓	✓		
July 23	AYC	Annual Regatta	✓	✓	✓	
July 31	AYC	Two Bridge Fiasco			✓	
August 20	EYC	CRAB Cup	✓	✓		
August 27	EYC	Race to Cambridge Lighthouses	✓	✓		TBD (still in planning)
September 3	Both	Annapolis Labor Day Regatta	✓	✓	✓	
September 24	AYC	Fall Race to Solomons	✓	✓	✓	
October 1-2	AYC	DH Distance Race			✓	
October 8-9	AYC	Fall Series	✓			
October 9	AYC	Fall Series		✓	✓	

Notes:

- ORC denotes full use of allowable sails and crew. Regattas will be windward/leeward, point to point, and fixed government marks. See NOR for each event.
- **ORC Cruiser subject to eligibility criteria and class rules. Single race per day using government marks or point to point. See NOR.**
- ORC DH Double-Handed crews only. Single race per day using government marks or point to point. See NOR.



Cruiser Applicable Certificates

ORC through US Sailing offers several options for cruiser-focused rating certificates:

1. ORC Club – Club Certificate:

- Allows for owner-declared measurements
- Relies on default and estimated measurements applied by US Sailing
- Sail measurements are still necessary

2. ORC Club – Non-Spinnaker

- Same VPP, more accurately recognizing the influence of headsails only downwind

ORC Club is simple, quick and NOT limited to “race boats”



2022 US Sailing certificate pricing (same as 2021)

ORC 2021 Fee Schedule					
LOA	<29.99 ft	30-39.99 ft	40-49.99 ft	50-59.99 ft	>60 ft
ORC Club New	\$3.00	\$4.00	\$5.00	\$6.00	\$7.00
ORC Club Renewal	\$2.55	\$3.40	\$4.25	\$5.10	\$5.95
ORC Club Amendment	\$1.50	\$2.00	\$2.50	\$3.00	\$3.50

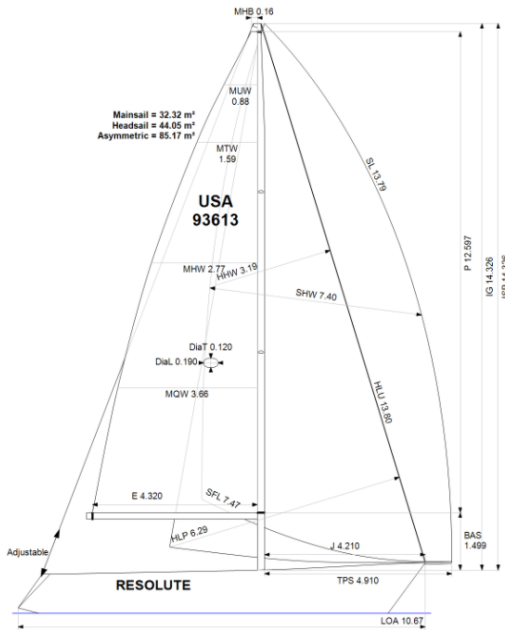
- US Sailing membership required
 - Club certs apply online
 - Sail measurements required
 - Processing time usually 1-2 weeks after receipt
- ✓ US Sailing is including a free speed guide and an additional Double Handed and/or Non-Spinnaker Certificate with new certificates

ORC Club certificates – Excellent Value



ORC Club certificate

- Scale drawing
- Basic hull dimensions
- Propeller type
- Rated boat speed table
- Crew weight: default or declared
- Sail limitations
- Stability: measured or unmeasured



Rated boat velocities in knots							
Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat Angles	45.0°	43.5°	43.5°	43.3°	42.4°	41.8°	42.0°
Beat VMG	3.11	3.73	4.20	4.52	4.68	4.76	4.76
52°	4.83	5.71	6.39	6.75	6.89	6.96	6.99
60°	5.18	6.06	6.66	6.95	7.10	7.17	7.21
75°	5.47	6.36	6.89	7.15	7.32	7.46	7.59
90°	5.62	6.60	7.08	7.37	7.61	7.80	8.02
110°	5.46	6.48	7.03	7.37	7.68	8.00	8.56
120°	5.19	6.24	6.92	7.29	7.63	7.99	8.67
135°	4.65	5.70	6.57	7.06	7.39	7.73	8.44
150°	3.96	4.97	5.81	6.47	6.88	7.16	7.67
Run VMG	3.43	4.31	5.03	5.60	6.01	6.57	7.23
Gybe Angles	146.0°	147.5°	147.0°	148.0°	170.0°	172.0°	178.0°

Offshore Racing Congress
 Certificate number: US6038

GPH = 671.2 CDL = 8.193

BOAT
 Class **Tartan 3500 WK**
 Designer **Jackett**
 Builder **Tartan**
 Age Date **02/1993**
 Series Date **01/1991**
 Offset File **TR3500WK.OFF**

HULL
 Length Overall **10.668 m**
 Maximum Beam **3.627 m**
 Draft **1.542 m**
 Displacement **6.389 kg**
 DLR **7.6462**
 IMS Division **Cruiser/Racer**
 Dynamic Allowance **0.357%**
 Age Allowance **0.487%**

PROPELLER
 Installation **Shaft exposed**
 Type **Folding 2 blades**
 Diameter **0.405m**

CREW
 Maximum weight **480 kg**
 Minimum weight **360 kg * when applied**
 Non Manual Power **No**
 Crew Arm Extension

SAIL AREAS (m²)

	Measured	Rated
Mainsail	32.32	32.93
Headsail Luffed	44.05	44.05
Headsail Flying		
Symmetric		
Asymmetric	85.17	85.17

 * 1 asymmetric(s) with SHW/SFL < 85%

SAIL LIMITATIONS
 Headsails **5**
 Spinnakers **4**

STABILITY
 Righting Moment **152.6 kg-m**
 Stability Index **113.3**

COMMENTS
 cushions on board except in forepeak

OWNER

The owner certifies that he/she understands his/her responsibilities under ORC Rule and Regulations.

Time Allowances in secs/NM							
Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat VMG	1155.9	965.7	858.1	796.2	768.7	756.4	757.0
52°	744.9	630.2	563.3	533.5	522.5	517.5	515.3
60°	695.0	593.9	540.7	517.7	506.9	502.1	499.1
75°	658.5	566.0	522.2	503.7	491.7	482.4	474.2
90°	640.8	545.6	508.4	488.2	472.8	461.8	448.9
110°	659.6	555.3	511.8	488.8	468.9	450.1	420.6
120°	693.9	577.3	520.3	493.6	471.9	450.5	415.1
135°	773.6	631.5	548.1	509.8	487.0	465.8	426.3
150°	908.6	723.8	620.0	556.4	523.0	502.6	469.3
Run VMG	1049.2	835.8	715.9	642.5	599.4	548.2	497.8
Selected Courses							
Windward / Leeward	1102.5	900.7	787.0	719.3	684.0	652.3	627.4
All purpose	839.2	695.6	619.0	576.9	553.8	536.3	517.4

Custom scoring options for United States of America

Single Number	Time On Distance	Time On Time
Triple Number All Purpose Low	767.5	0.7818
Triple Number All Purpose Medium	595.1	1.0083
Triple Number All Purpose High	533.6	1.1245
Triple Number Windward/Leeward Low	1001.7	0.5990
Triple Number Windward/Leeward Medium	748.1	0.8020
Triple Number Windward/Leeward High	650.9	0.9218
Predominantly Upwind	650.2	0.9228
Predominantly Downwind	605.8	0.9904
Predominantly Upwind Low	871.2	0.6887
Predominantly Upwind Medium	675.2	0.8886
Predominantly Upwind High	624.9	0.9601
Predominantly Downwind Low	832.1	0.7210
Predominantly Downwind Medium	602.0	0.9968
Predominantly Downwind High	508.9	1.1791
Chicago-Mac Upwind		0.9043
Chicago-Mac All Purpose		0.9370
Chicago-Mac Downwind		0.9737
Bayview-Mac Cove Island		0.8730
Bayview-Mac Shore		0.8785
Harvest Moon Regatta	521.9	1.1496
Victoria-Maui		1.0354


[AUT] [CAN] [DEN] [ESP] [EST] [FIN] [FRA] [GER] [GRE] [ISR] [ITA] [JPN]
 [KOR] [LTU] [NED] [NOR] [POR] [RSA] [RUS] [SLO] [SUI] [SWE] [UKR] [USA]

Single Number Scoring Options		
Course	Time On Distance	Time On Time
Windward / Leeward	751.8	0.7981
All purpose	598.7	1.0022

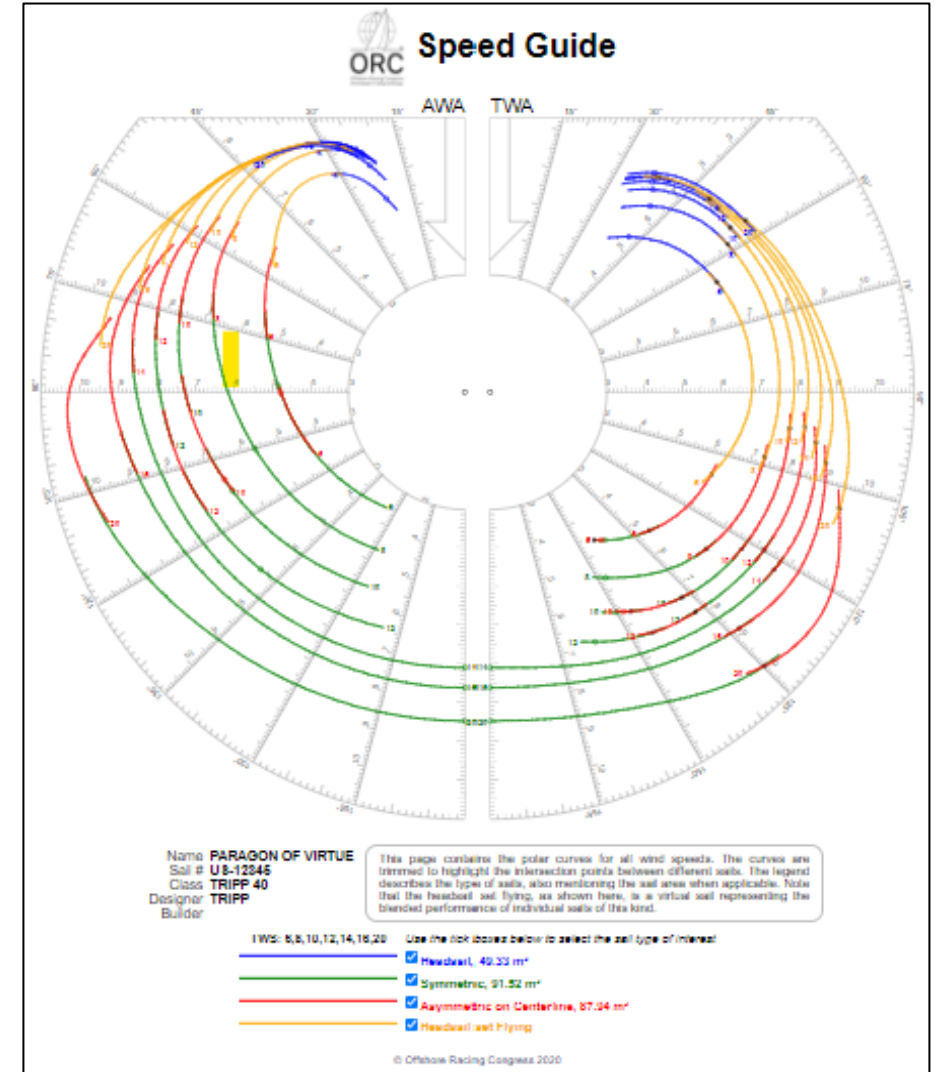


Other ORC Benefits

- Speed Guide
- Database of Certificates
- Target Speeds
- Trial Certificates

 **Target Speeds for PARAGON OF VIRTUE (US-12345)**
www.orc.org 2020

TWS	AWA UP	BS UP	TWA DN	BS DN
6	22°	5,39	142°	4,85
8	23°	6,35	148°	5,64
10	23°	6,73	150°	6,56
12	24°	6,87	157°	7,00
14	25°	6,97	180°	7,10
16	26°	7,01	180°	7,62
20	28°	7,10	180°	8,48



ORC Sailor Services offers a wealth of information



ORC Club Application Walk-Through

Online at US Sailing – *Stay tuned, new process being designed now*

All applications need sail measurements from sailmaker – forms are at:

<https://cdn.ussailing.org/wp-content/uploads/2018/12/UMS-Mainsail-Certificate-2019.xls>

<https://cdn.ussailing.org/wp-content/uploads/2018/12/UMS-Headsail-Certificate-2019.xls>

<https://cdn.ussailing.org/wp-content/uploads/2018/12/UMS-Symmetric-Spinnaker-Certificate-2019.xls>

<https://cdn.ussailing.org/wp-content/uploads/2018/12/UMS-Asymmetric-Spinnaker-Certificate-2019.xls>

Questions and help:

Offshore office US Sailing: offshore@ussailing.org

Dobbs Davis, certified measurer and ORC Communications Director: dobbs.davis@orc.org



Application Steps

<https://www.ussailing.org/>

2. Navigate to the Competition pulldown and ORC Page

1. Sign in or Join US Sailing

3. Scroll down to Applications, New ORC Club Application
*** Note ORRez to ORC is also an option**

MEMBERSHIP MY US SAILING CALENDAR SHOP DONATE CONTACT SIGN OUT

EDUCATION RECREATION **COMPETITION** OLYMPICS ABOUT NEWS EVENTS SAFESPORT

YOUTH

RACING

- Youth Racing Central
- Junior Olympics
- Youth Development
- US Sailing Championships
- Olympic Development Program
- Match Racing
- Team Racing
- One Design Central
- High School
- College

SIEBEL SAILORS PROGRAM

ADULT

RACING

- Adaptive Racing
- Small Boat Racing
- US Sailing Championships
- Match Racing
- Team Racing
- One Design Central

RESOURCES

- Regatta Safety
- Trophies
- SafeSport
- Regatta Management

OFFSHORE

MIXED OFFSHORE DOUBLES

RATING RULES

- IRC
- ORC**
- ORR**
- PHRF
- Portsmouth Yardstick

SERVICES

- US SER's and World Sailing Special Regulations
- Sail Numbers

SAFETY

RULES/OFFICIATING

RACE OFFICIAL TRAINING/CERTIFICATION

- Race Officers
- Judges
- Umpires
- Classifiers
- Measurers and Equipment Inspectors

RESOURCES

- Find a Race Official
- Student Materials
- Publications
- Trophies
- SOARS
- Area Map
- SafeSport & Background Checks
- RC 101

APPEALS

RACING RULES

- Rulebook 2021-2024
- US Prescriptions

NEWS

NSPS 2022 Postponed Due to Covid-19

It is with great disappointment that US Sailing has made the difficult decision to postpone the 2022 National Sailing Program.

MEMBERSHIP MY US SAILING CALENDAR SHOP DONATE CONTACT SIGN OUT

EDUCATION RECREATION **COMPETITION** OLYMPICS ABOUT NEWS EVENTS SAFESPORT

Copy Certificates

ORC provides free access to all measurements and any valid certificate issued by any rating office in the world since 2009 through the free ORC Sailor Services database. Measurements and copies of certificates in pdf format are available at no charge without limit. Copy certificates are NOT valid for racing.

ON THIS PAGE: ORC

- Offshore Racing Congress (ORC)
- Products
- Applications

QUICK LINKS

- Starboard Portal
- US Sailing Resource Library
- One Design Central
- Diversity, Equity & Inclusion
- Join US Sailing Today
- Donate
- SafeSport
- Insurance Solutions by Gowrie Group
- Calendar

Trial

To understand how a potential modification would impact a boat's rating, trials may be ordered through the Sailor Services system on the ORC website. There is no limit to the number of trial certificates issued in the ORC Sailor Services system. Trial certificates are NOT valid for racing.

Hydrostatics/Stability Data Sheet

Understanding the limitations of stability is important to every boat owner, but this information is also useful to offshore race organizers interested in defining relevant safety standards in their entry requirements.

For more: [ORC Stability Datasheet Explanation](#)

Speed Guide

The ORC Speed Guide uses the ORC APP to develop polar diagrams for your yacht. These diagrams are an asset to understanding relationships between performance, sail selection, wind speed, and wind angle. Speed Guides are provided with every US Sailing issued ORC certificate. Additional speed guides may be obtained via the ORC sailor services.

For more: [ORC Speed Guide Explanation](#), [ORC Speed Guide Sample](#)

Applications

- US Sailing ORC Policy and Pricing
- New ORC Certificate/Transfer of Owner- Request for Rating
- New ORC Club Application
- ORR to ORC Transfer
- ORC Revalidations
- ORC Amendment Request
- ORC Trials and Speed Guides

Other Resources

- ORC Homepage
- Explanation of Scoring options for US and Canadian Events.



Application Steps

OFFSHORE REQUEST A RATING

Request for Rating / Measurement

Thank you for your interest in being measured and rated for IRC, ORC and/or ORR through US Sailing!

Please confirm the rating rule used and whether measurement is required for the race(s) in which you plan to participate by reviewing the Notice of Race (NOR) for each race.

Please review the [US Sailing ORR Policy](#) / [US Sailing ORC Policy](#) and complete the following to begin the rating process.

For the measurement and rating process to be finalized, [sail measurement certificate](#) submitted from your loft to [US Sailing Offshore](#).

US Sailing Member ID *

12345x

Owner Name *

Ratty

Rat

First Name

Last Name

Boat contact email *

Requested Certificate Type(s) / Measurement *

- IRC Non-endorsed
- IRC Endorsed (measurement required)
- ORC Club
- ORC Double handed
- ORC Club Non-Spinnaker
- ORCi Non-Spinnaker
- ORC International (measurement required)
- ORR Partially Measured
- ORR Fully Measured (measurement required)

4. Enter owner contact info into on-line form

5. Select desired certificate type(s)

9. Submit – US Sailing will contact you for additional information including payment and sail measurement data

- ORC Club Non-Spinnaker
- ORCi Non-Spinnaker
- ORC International (measurement required)
- ORR Partially Measured
- ORR Fully Measured (measurement required)

ORC Promo Code

Boat Name *

Messabout

Sail Number *

12345

Racing Rules of Sailing require an official sail number

Class/Make and Model *

BENETEAU OCEANIS 31

Please note special production options (e.g. shoal or wing keel, deep draft, tall rig, etc.)

Year Built *

1965

Designer

Finot - Conq

Builder

Beneteau

Maximum Draft *

6'

Minimum Draft

6'

Displacement/Boat Weight

40,692 lbs

Boat Weight Source

brochure

Upload class certificate, brochure

Date and Race for which the Certificate is Needed *

5/7/22 Spring Oxford

Boat Location: Marina/YC, City, State *

Marina

Comments and Modification Notes *

Deep Keel version with Air Conditioning and forward cabin option

Please describe any modifications including sails, rigging, machinery, mast, appendages, heavy equipment, an influence on your vessel's performance.

Submit

6. Add best available technical data to help US Sailing identify correct model particulars

7. Note first event - leave time for processing

8. Include modification details and other helpful info



Application Steps

- US Sailing will respond with any questions or issues associated with issuing you a certificate
- Reach out to a sailmaker to have your sails measured and have these submitted to US Sailing
- Certificates can be issued in as little as one or two weeks, but apply early and try to avoid peak times before major events (Bermuda, Mackinac Race, etc.)

United States Sailing Association
Universal Measurement System (UMS)
Headsail Certificate
Version date: 2 Mar 2015

	Meters	Feet
Luff Length	15.80	51.84
Luff Perpendicular	6.88	22.57
Top Width	0.09	0.30
7/8 Width	0.86	2.82
3/4 Width	1.72	5.64
1/2 Width	3.44	11.29
1/4 Width	5.15	16.90
Leech Length	14.83	48.65
Foot Offset	0.35	1.15
Roach		
Area - IRC	54.44	585.37
Area - HPR & ORC	54.40	585.67

Boat Name: Shinnecock
Sail No.: 51334
Class/Model: J-120
Owner: James Praley
Sail Desc.: L/M Genoa
Sail ID No.: OUS105442-001

Measurement Units: Meters Feet

Loft: North Sails
Measurer Name: Mark Taylor
Date: 5/23/2016
Signature: _____

Sail plotted below from input data.

Sail shape is approximate.
Area calculated when all required dimensions provided.

North Sails
Downwind Measurement Form

Owner/Yacht Name: Capuco, Ben/Zuul
Boat Type: AERODYNE 38
Sail Type: Code Zero
OE#: OUS139452-002

SAILMAKER: **North Sails**
 SYMMETRICAL ASYMMETRICAL

ORC/IMS IRC ORR HPR PHRF
Luff Length SLU SLU/SL SLU/SL ALLU/SL
17.80 Mts

Leech Length SLE SLE/SL SLE/SL ALE/SL
15.49 Mts

Max Girth (Symmetrical) N/A N/A SMW SMG G
N/A Mts

Mid Girth SHW SHW/AMG AMG/AMG
6.37 Mts

Foot Length SFL SFL/SP ASF/SP AF
8.44 Mts

Weight 19.00 kgs

Signature: Richard Williams Date: 8/18/2020
Print Name: Richard Williams ORC#: NS Loft 21
World Sailing Sticker # (if required)



Application Steps

Already Have an ORR or ORRez Certificate?

ORR to ORC Transfer

In most cases the transfer of data from a previous ORR certificate to an ORC certificate is seamless, however there are a few key items that need to be updated to ensure the accuracy of the ratings. This is a complex form below to help us in the transfer of your rating information. Please note this is not for ORRez to ORC certificate Transfer. To transfer an ORRez certificate please complete the form at US Sailing Rating Request

I am trying to transfer the following type of certificate: *

ORRez

ORR standard

Name *

First Name Last Name

Email *

example@example.com

What is the Name of your Boat? *

Sail Number (including any country prefix) *

1. Enter Basic contact and boat info

2. Upload latest ORR or ORRez Certificate

3. Add additional details, note if sails are unchanged and submit

MEMBERSHIP MY US SAILING CALENDAR SHOP DONATE CONTACT SIGN OUT

EDUCATION RECREATION COMPETITION OLYMPICS ABOUT NEWS EVENTS SAFESPORT

Sail Number (including any country prefix) *

Please upload your last ORR certificate (copies can be downloaded by logging into <https://ucs.ussailing.org> *)

Browse Files
Drag and drop files here

(copies can be downloaded by logging into <https://ucs.ussailing.org>)

Do you fly asymmetric spinnakers? *

Yes

No

ORR and ORC calculate different default crew weights, please enter the weight of your crew you plan to race with (in Kilograms)

Leave blank if you wish to use the default

Do you fly any headsails ahead of the forestay (not in the luff groove or hanked to the stay)? *

Yes

No

Have you replaced, added or changed any of the largest sails not mentioned above since your last ORR certificate? *

No

Yes

Submit



Application Steps

- Join US Sailing (<https://www.ussailing.org/>)
- Complete online application for ORC rating or transfer of ORR Certificate (<https://www.ussailing.org/competition/offshore/orc/>)
- Have your mainsail, largest headsail and largest spinnaker measured
See sail measurement contact information on next slide
- Plan for completing online application and sail measurement 3-4 weeks in advance of need
- Pay fees and respond to any requests from US Sailing to complete measurement



Local Sail Lofts with registered US Sailing ORC measurers

**You must have a certified measurer measure your
main, largest genoa and largest downwind sail**

North Sails

Ridgely Mackenzie

ridgely.mackenzie@northsails.com

Quantum

Mike Crump

MCrump@quantumsails.com

Elvstrom

Chuck O'Malley

chuck@chesapeake-sailmakers.com

Ullman

Scott Steele

scott@ullmansailsannapolis.com

Evolution

Jerry Latell

jerry@latellsails.com



QUESTIONS?

Use the **Q&A** function in the menu (not chat)
to type any questions you might have



ORC in 2022 & ORC Club Certificate Seminar

Presenters:

Jonathan Bartlett, *Past Commodore*

John White, *AYC Sailing Committee Chair*

Ben Capuco, *AYC's ORC Class Liaison*

ORC Full Crew and Double Handed Seminar

How to apply and manage the process for your boat





Seminar Agenda

ORC Full Crew and DH Seminar	
Jonathan	Opening remarks
Ben	What is ORC, certificate options, scoring, etc.
John	ORC and ORC DH schedule for 2022
Ben	ORC Club certificate process
Jonathan	Moderated Q&A
Jonathan	Closing remarks

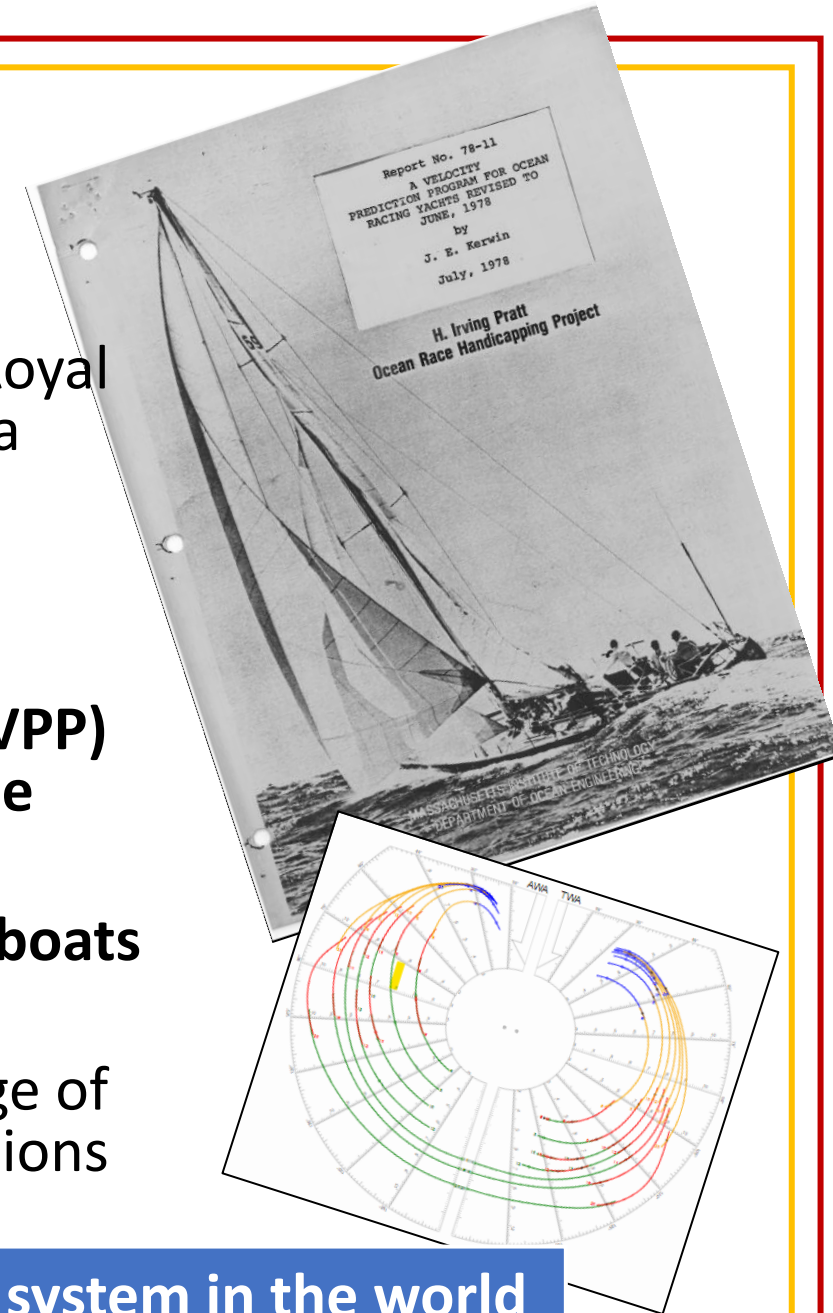
Reminders:

- Use the **Q&A** function (not chat) to type any questions you might have
- You can write in your questions at any time during the seminar
- The moderator will decide whether to address a question during the presentation or hold it until the end
- We are recording this seminar so you can re-watch later – the recording will be available on Monday



What is ORC?

- Offshore Racing Congress (ORC) - founded in 1969 by the Royal Ocean Racing Club (RORC) and the Cruising Club of America (CCA) to develop an international handicap standard
- ORC has supported IOR, IMS, and currently the ORC rating systems
- **ORC ratings are based off a Velocity Prediction Program (VPP) using hull, appendage, rig and sail measurements from the Universal Measurement System (UMS)**
- **The VPP is essentially a computer tool that predicts each boats performance in a full range of wind conditions**
- ORC ratings are based on these predictions for a given range of wind speeds over an assumed set of typical racecourse options



ORC is the most popular measurement-based rating system in the world



Certificate Options

- ORC through US Sailing offers two basic options for rating certificates
 - ORC Club – Club Certificate:
 - Allows for owner-declared measurements
 - Relies on default and estimated measurements applied by US Sailing
 - Sail measurements are still necessary
 - ORCi - International Certificate
 - Incorporates a full set of UMS Measurements
 - More accurate because no default values are used
 - Necessitates measurements carried out by a US Sailing Certified Measurer
 - ORC One Design *others coming soon
 - For a select set of one designs adhering to their one design class rules
 - Includes* Etchells; Fareast 28; Farr 30 and 40; J/22, 24, 70 and 80; Melges 20, 24, 32, 37
 - Double Handed ... Non-Spinnaker ... Superyacht ... & Multihull

ORC Club is simple, quick and NOT limited to “big boats”



2022 US Sailing Certificate Pricing

- US Sailing membership required
- Sail measurements required
- Processing time usually 1-2 weeks after receipt
- Club certs apply online
- Measurements req'd for ORCi – contact dobbs.davis@orc.org

ORC 2021 Fee Schedule					
LOA	<29.99 ft	30-39.99 ft	40-49.99 ft	50-59.99 ft	>60 ft
ORCi New or Owner Transfer (per foot)	\$7.50	\$8.50	\$9.50	\$10.50	\$11.00
ORCi Renewal (per foot)	\$6.40	\$7.25	\$8.10	\$9.00	\$9.35
ORCi Amendment (per foot)	\$3.75	\$4.25	\$4.75	\$5.25	\$5.50
ORC Club New	\$3.00	\$4.00	\$5.00	\$6.00	\$7.00
ORC Club Renewal	\$2.55	\$3.40	\$4.25	\$5.10	\$5.95
ORC Club Amendment	\$1.50	\$2.00	\$2.50	\$3.00	\$3.50


- ✓ US Sailing is including a free speed guide and an additional Double Handed and/or Non-Spinnaker Certificate with new certificates

ORC Club certificates – Excellent Value



ORC Club Certificate

- Scale drawing
- Basic hull dimensions
- Propeller type
- Rated boat speed table
- Crew weight: default or declared
- Sail limitations
- Stability: measured or unmeasured

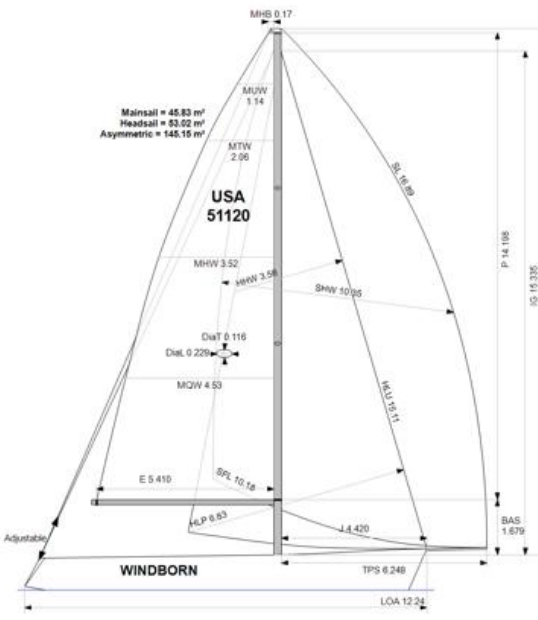


Club Certificate
2021

Boat
**WINDBORN
USA 51120**

Certificate number: **US6292**

GPH = **579.4** CDL = **10.610**



BOAT

Class: **J-120**
 Designer: **JOHNSTONE**
 Builder: **TPI**
 Age Date: **07/1994**
 Series Date: **06/1994**
 Offset File: **US30532.OFF**

HULL

Length Overall: **12.244 m**
 Maximum Beam: **3.670 m**
 Draft: **2.162 m**
 Displacement: **6,872 kg**
 DLR: **4,7709**
 IMS Division: **Cruiser/Racer**
 Dynamic Allowance: **0.018%**
 Age Allowance: **0.487%**

PROPELLER

Installation: **Shaft exposed**
 Type: **Folding 2 blades**
 Diameter: **0.436 m**

CREW

Maximum: **771**
 Minimum: **578 *when applied**
 Non Manual Power: **No**
 Crew Arm Extension: **0.00 m**

SAIL AREAS (m²)

	Measured	Rated
Mainsail	45.83	46.96
Headsail Luffed	53.02	53.02
Headsail Flying		
Symmetric		
Asymmetric	145.15	145.15

** All asymmetric spinnakers with SHW/SFL < 85%*

SAIL LIMITATIONS

Headsails: **6**
 Spinnakers: **4**

STABILITY

Righting Moment: **167.9**
 Stability Index: **N/A**

OWNER

The owner certifies that he/she understands his/her responsibilities under ORC Rule and Regulations.

Rated boat velocities in knots


Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat Angles	43.1°	41.8°	40.9°	39.0°	38.3°	37.9°	37.1°
Beat VMG	3.75	4.56	5.10	5.37	5.51	5.59	5.69
52°	5.74	6.84	7.43	7.63	7.73	7.79	7.85
60°	6.08	7.13	7.63	7.83	7.94	8.00	8.06
75°	6.37	7.33	7.78	8.05	8.24	8.36	8.50
90°	6.32	7.32	7.80	8.12	8.42	8.70	9.06
110°	6.14	7.38	7.97	8.36	8.65	8.91	9.42
120°	6.00	7.27	7.92	8.39	8.89	9.31	9.96
135°	5.30	6.68	7.61	8.10	8.60	9.18	10.58
150°	4.47	5.62	6.73	7.53	7.91	8.25	9.18
Run VMG	3.87	4.87	5.83	6.53	6.88	7.36	8.15
Gybe Angles	143.5°	147.0°	146.5°	150.5°	151.8°	176.0°	178.0°

ORC Ref **02940000U29**

Issued on **28/01/2021**

Valid until **31/12/2021**

VPP ver: 2021 1.00 | © ORC | www.orc.org



Club Certificate
2021

Boat
**WINDBORN
USA 51120**

Certificate number: US6292

Time Allowances in secs/NM

Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat VMG	959.5	790.0	705.4	670.1	653.3	644.3	632.2
52°	627.4	526.2	484.6	471.5	465.5	462.1	458.3
60°	592.0	504.8	472.1	459.7	453.6	450.0	446.9
75°	565.1	491.0	462.8	447.3	437.0	430.4	423.5
90°	569.9	492.1	461.3	443.2	427.6	413.8	397.2
110°	586.5	487.8	451.9	430.5	416.2	403.9	382.0
120°	599.5	494.9	454.7	429.2	405.0	386.8	361.3
135°	679.3	539.1	473.4	444.6	418.7	392.2	340.4
150°	806.2	640.2	535.0	477.9	455.0	436.2	392.3
Run VMG	930.9	739.2	617.7	551.7	523.4	489.1	441.7

Selected Courses

Windward / Leeward	945.2	764.6	661.6	610.9	588.4	566.7	536.9
All purpose	723.3	594.9	531.0	499.9	482.7	468.4	445.7

Single Number Scoring Options

Course	Time On Distance	Time On Time
Windward / Leeward	640.5	0.9368
All purpose	517.5	1.1595

Custom scoring options for United States of America

Single Number	Time On Distance	Time On Time
Triple Number All Purpose Low	659.1	0.9103
Triple Number All Purpose Medium	513.9	1.1676
Triple Number All Purpose High	463.5	1.2946
Triple Number Windward/Leeward Low	854.9	0.7018
Triple Number Windward/Leeward Medium	634.9	0.9450
Triple Number Windward/Leeward High	561.0	1.0696
Predominantly Upwind	558.4	1.0746
Predominantly Downwind	525.7	1.1414
Predominantly Upwind Low	737.6	0.8134
Predominantly Upwind Medium	579.3	1.0357
Predominantly Upwind High	544.1	1.1027
Predominantly Downwind Low	743.5	0.8070
Predominantly Downwind Medium	572.2	1.0485
Predominantly Downwind High	520.2	1.1535
Chicago-Mac Upwind		1.0423
Chicago-Mac All Purpose		1.0478
Chicago-Mac Downwind		1.0526
Bayview-Mac Cove Island		0.9879
Bayview-Mac Shore		1.0043
Harvest Moon Regatta	464.0	1.2930
Victoria-Maui		1.1055

ORC Ref **02940000U29**

Issued on **28/01/2021**


Valid until **31/12/2021**

VPP ver: 2021 1.00 | © ORC | www.orc.org




ORCi Certificate

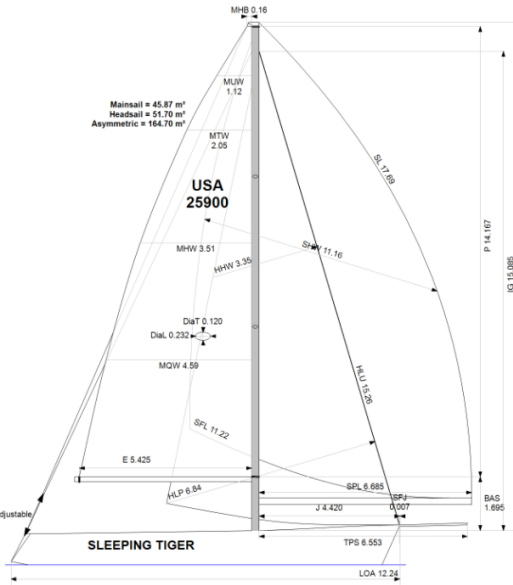
- Scale drawing
- Basic hull dimensions
- Propeller type
- Rated boat speed table
- Crew weight: default or declared
- Sail limitations
- Stability: measured or unmeasured



International Certificate 2021

Boat **SLEEPING TIGER**
USA 25900





BOAT

Class **J-120**
Designer **JOHNSTONE**
Builder **TILLOTSON-PEARSON**
Age Date **06/1994**
Series Date **06/1994**
Offset File **US30532.OFF**

HULL

Length Overall **12.240 m**
Maximum Beam **3.670 m**
Draft **2.167 m**
Displacement **7.009 kg**
DLR **4.8052**
IMS Division **Cruiser/Racer**
Dynamic Allowance **0.049%**
Age Allowance **0.487%**

PROPELLER

Installation **Strut**
Type **Folding 2 blades**
Diameter **0.428m**

CREW

Maximum weight **1,010 kg**
Minimum weight **758 kg * when applied**
Non Manual Power **No**
Crew Arm Extension **0.00 m**

SAIL AREAS (m²)

	Measured	Rated
Mainsail	45.87	47.00
Headsail Luffed	51.70	51.70
Headsail Flying		
Symmetric		
Asymmetric	164.69	164.69

* All asymmetric spinnakers with SHWS/FL > 85%

SAIL LIMITATIONS

Headsails **6**
Spinnakers **4 * Asymmetric may be tacked on the pole**

STABILITY

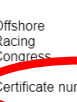
Righting Moment **186.1 kg-m**
Stability Index **121.6**

OWNER

The owner certifies that he/she understands his/her responsibilities under ORC Rule and Regulations.


Rated boat velocities in knots							
Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat Angles	43.1°	41.6°	40.5°	38.8°	37.5°	36.9°	36.6°
Beat VMG	3.73	4.53	5.15	5.47	5.64	5.74	5.81
52°	5.71	6.81	7.45	7.71	7.83	7.90	7.97
60°	6.07	7.11	7.64	7.89	8.03	8.12	8.22
75°	6.37	7.32	7.78	8.07	8.32	8.50	8.71
90°	6.28	7.31	7.80	8.12	8.43	8.75	9.26
110°	6.26	7.48	8.03	8.45	8.77	9.04	9.60
120°	6.14	7.40	8.00	8.49	9.02	9.47	10.15
135°	5.48	6.88	7.73	8.21	8.76	9.39	10.88
150°	4.64	5.79	6.92	7.72	8.17	8.66	9.85
Run VMG	4.02	5.01	5.99	6.79	7.34	7.86	8.75
Gybe Angles	142.1°	148.0°	147.5°	155.5°	169.0°	180.0°	180.0°

ORC Ref **03410001EF9** Issued on **02/07/2021** Valid until **31/12/2021**



International Certificate 2021

Boat **SLEEPING TIGER**
USA 25900



Certificate number: US7149

GPH = **570.3** CDL = **10.820**

BOAT

Class **J-120**
Designer **JOHNSTONE**
Builder **TILLOTSON-PEARSON**
Age Date **06/1994**
Series Date **06/1994**
Offset File **US30532.OFF**

HULL

Length Overall **12.240 m**
Maximum Beam **3.670 m**
Draft **2.167 m**
Displacement **7.009 kg**
DLR **4.8052**
IMS Division **Cruiser/Racer**
Dynamic Allowance **0.049%**
Age Allowance **0.487%**

PROPELLER

Installation **Strut**
Type **Folding 2 blades**
Diameter **0.428m**

CREW

Maximum weight **1,010 kg**
Minimum weight **758 kg * when applied**
Non Manual Power **No**
Crew Arm Extension **0.00 m**

SAIL AREAS (m²)

	Measured	Rated
Mainsail	45.87	47.00
Headsail Luffed	51.70	51.70
Headsail Flying		
Symmetric		
Asymmetric	164.69	164.69

* All asymmetric spinnakers with SHWS/FL > 85%

SAIL LIMITATIONS

Headsails **6**
Spinnakers **4 * Asymmetric may be tacked on the pole**


STABILITY

Righting Moment **186.1 kg-m**
Stability Index **121.6**

OWNER

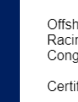
The owner certifies that he/she understands his/her responsibilities under ORC Rule and Regulations.

VPP ver: 2021 1.02 | © ORC | www.orc.org



International Certificate 2021

Boat **SLEEPING TIGER**
USA 25900



Certificate number: US7149

Time Allowances in secs/NM							
Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat VMG	964.1	794.6	698.9	657.8	638.2	627.2	619.1
52°	630.0	528.6	483.0	466.7	459.7	455.5	451.7
60°	593.0	506.3	471.5	456.2	448.3	443.3	438.2
75°	565.3	491.5	462.9	446.1	432.9	423.5	413.4
90°	572.9	492.7	461.8	443.5	426.8	411.2	388.8
110°	574.7	481.6	448.2	425.9	410.5	398.3	374.8
120°	586.0	486.7	449.9	424.0	399.3	380.3	354.5
135°	656.8	523.1	466.0	438.2	410.8	383.6	330.8
150°	776.5	621.9	520.6	466.4	440.7	415.7	365.5
Run VMG	896.6	718.1	601.1	530.5	490.3	458.2	411.4

Single Number Scoring Options		
Course	Time On Distance	Time On Time
Windward / Leeward	623.3	0.9626
All purpose	508.5	1.1799

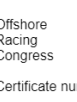
Selected Courses							
Windward / Leeward	930.3	756.3	650.0	594.1	564.3	542.7	515.2
All purpose	714.4	589.8	525.0	491.7	471.5	454.8	431.2

Custom scoring options for United States of America

	Single Number	Time On Distance	Time On Time
Triple Number All Purpose Low		652.1	0.9201
Triple Number All Purpose Medium		505.9	1.1860
Triple Number All Purpose High		450.1	1.3330
Triple Number Windward/Leeward Low		843.3	0.7115
Triple Number Windward/Leeward Medium		618.8	0.9696
Triple Number Windward/Leeward High		537.8	1.1157
Predominantly Upwind		551.8	1.0874
Predominantly Downwind		514.0	1.1672
Predominantly Upwind Low		731.8	0.8199
Predominantly Upwind Medium		569.5	1.0536
Predominantly Upwind High		528.2	1.1359
Predominantly Downwind Low		708.8	0.8465
Predominantly Downwind Medium		509.3	1.1781
Predominantly Downwind High		423.3	1.4176
Chicago-Mac Upwind			1.0692
Chicago-Mac All Purpose			1.1036
Chicago-Mac Downwind			1.1479
Bayview-Mac Cove Island			1.0242
Bayview-Mac Shore			1.0314
Harvest Moon Regatta	450.1		1.3329
Victoria-Maui			1.2278


AUS AUT BUL CAN CYP DEN ESP EST FIN FRA GER GRE ISR ITA
JPN KOR LTU NED NOR POR RSA RUS SLO SUI SWE UKR USA

ORC Ref **03410001EF9** Issued on **02/07/2021** Valid until **31/12/2021** VPP ver: 2021 1.02 | © ORC | www.orc.org



International Certificate 2021

Boat **SLEEPING TIGER**
USA 25900



Certificate number: US7149


ORC Ref **03410001EF9** Issued on **02/07/2021** Valid until **31/12/2021** VPP ver: 2021 1.02 | © ORC | www.orc.org



ORCi Certificate

Measurement data:

- Hull
- Rig
- Propeller
- Weight & Stability
- Sails




International
Certificate
2021

Boat
SLEEPING TIGER
USA 25900

Offshore
Racing
Congress

Certificate number: US7149



Data in meters/kilograms (Metric)

HULL AND APPENDAGES

Class	LOA	VCGD	LCG	LCG	VCGM
J-120	12.240	-0.043	0.00	0.00	-0.118
Measurement 28/04/2018	Max. Beam 3.670	VCGM -0.118	FF 1.234	FA 0.878	W3 90.7
Measurer HIN 15	Draft 2.167	RM Measured (kg m) 186.1	LCFcl 6.775	LCFsh 7.014	W4 90.7
Plan review	Displacement 7.009	RM Default (kg m) 164.2	SG 1.0000	HBI 1.073	
Hull construction Cored	Wetted area 30.97	Limit of positive stability(*) 117.9			
Carbon Rudder No	IMS L 11.337	Stability Index 121.6			
Light stanchions No	LSM0 11.341	Bligeboard Yes			
Trim tab No	Acc. length 11.928				
	Sink (kg/mm) 23.53				

PROPELLER

Propeller Type	PRD	EDL	ST3	ST4	ST5
Folding 2 blades	0.428	1.042	0.262	0.057	0.168
Installation Strut	PBW 0.100	ST1 0.039	ST4 0.057		
Twin screw No		ST2 0.039	ST5 0.168		
PIPA 0.0012					

RIG

Forestay tension	P	E	IG	J	ISP	BAS
Aft 14.167		5.425	15.085	4.420	15.995	1.695
Inner stay None Fitted						
Carbon mast Yes						
Headsail furler No	MDT1 0.120	FSD 0.028				
Mainsail furler No	MDL1 0.232	SFJ 0.007				
Articulated bowsprit No	MDL2 0.120	SPL 6.685				
Non-circular rigging No	MDL2 0.232	TPS 6.553				
Fiber rigging No	TL 5.145	BD 0.162				
Runners/Checkstays 1	MW 0.232	MWT 158.76				
Spreaders 2	GO 0.254	MCG 4.886				

FLOTATION AND STABILITY

Inclining Test	SFFP	SAFP	W1	PD1	WD
Poles Inclining	0.915	11.630	90.7	230.0	13.465
Flotation Date 28/04/2018	FFM 1.217	FAM 0.876	W2 90.7	PD2 230.0	PLM 2029.30
Measurer	FF 1.234	FA 0.878	W3 90.7	PD3 230.0	GSA 91.5
Comment	LCFcl 6.775	LCFsh 7.014	W4 90.7	PD4 230.0	RSA 6939.8
	SG 1.0000	HBI 1.073			

MEASUREMENT INVENTORY


Id	Tank Type	Capacity	LCG	VCG	Condition	Description
			0.00	0.00	26-0	
Id	Item Description	Weight	LCG	VCG		
a	Anchor (d)	0.0	0.00			

ORC Ref 03410001EF9

Issued on 02/07/2021

Valid until 31/12/2021

VPP ver: 2021 1.02 | © ORC | www.orc.org




International
Certificate
2021

Boat
SLEEPING TIGER
USA 25900

Offshore
Racing
Congress

Certificate number: US7149



MAINSAIL

Id	MHB	MUW	MTW	MHW	MQW	Area	Measurer	Meas.Date	Maker	Material	Comment
1831794	0.16	1.12	2.05	3.51	4.59	45.87			Mike Boston		2016 Class Main
2511464	0.16	1.12	2.05	3.51	4.59	45.87			MIKE BOSTON ULLMAN		2019 CLASS MAINSAIL

HEADSAIL

Id	HHB	HUW	HTW	HHW	HQW	HLP	HLU	Btn	Flying	FT	Area	Measurer	Meas.Date	Maker	Material	Comment
2511473	0.06		1.65	3.35	5.06	6.84	15.26	No	No		51.70			MIKE BOSTON ULLMAN		2019 ULLMAN CLASS GENOA

ASYMMETRIC SPINNAKER

Id	SLU	SLE	SL	SHW	SFL	Ratio	Area	Measurer	Meas.Date	Maker	Material	Comment
2962205	19.67	15.71	17.69	11.16	11.22	99%	164.69			Al DeClercq		2020 A2 DOYLE

ORC Ref 03410001EF9

Issued on 02/07/2021

Valid until 31/12/2021

VPP ver: 2021 1.02 | © ORC | www.orc.org



Scoring Options

- Single and Triple Number
 - Time on Time - Corrected time depends only on the elapsed time. The longer the race in time, the larger the handicap.
 - Low, Medium & High help refine accuracy of the ratings, create closer and more fair results
- Std options: All Purpose & W/L
- Other options: Predominant upwind, downwind, 5-band scoring, Performance Curve Scoring (PCS), Custom courses, etc.

Single Number	Time On Distance	Time On Time
Triple Number All Purpose Low	643.6	0.9323
Triple Number All Purpose Medium	510.5	1.1754
Triple Number All Purpose High	457.3	1.3121
Triple Number Windward/Leeward Low	836.9	0.7169
Triple Number Windward/Leeward Medium	632.1	0.9492
Triple Number Windward/Leeward High	560.3	1.0709
Predominantly Upwind	559.1	1.0731
Predominantly Downwind	513.4	1.1687
Predominantly Upwind Low	735.4	0.8158
Predominantly Upwind Medium	586.1	1.0237
Predominantly Upwind High	556.5	1.0782
Predominantly Downwind Low	736.0	0.8152
Predominantly Downwind Medium	572.2	1.0486
Predominantly Downwind High	521.9	1.1496

ORC offers multiple scoring options for better accuracy & closer results



Scoring Options

- Windward Leeward –
 - 50% upwind VMG
 - 50% Downwind VMG
- All Purpose –
 - Equal distribution of all wind angles
- Single Number –
 - Wind speed distribution:

TWS (kt)	6	8	10	12	14	16	20
Time Allowance percentage	5%	10%	20%	30%	20%	10%	5%

- Triple Number W/L and AP –

TWS (kt)	6	8	10	12	14	16	20
Low	50%	50%					
Medium		8.4%	33.3%	33.3%	25%		
High					25%	37.5	37.5%

- Single Number Predominantly upwind / downwind

	Upwind			Downwind			
TWS (kt)	8	12	16	TWS (kt)	8	12	16
Beat VMG	10%	15%	7%	Beat VMG	3%	4%	1%
52°	10%	15%	9%	52°	4%	5%	2%
90°	5%	7%	3%	90°	5%	7%	3%
135°	4%	5%	2%	135°	10%	15%	9%
Run VMG	3%	4%	1%	Run VMG	10%	15%	7%

- Triple Number Predominately upwind / downwind

	up			down		
TWS (kt)	6	8		TWS (kt)	6	8
Beat VMG	20%	25%		Beat VMG	5%	5%
52°	15%	10%		52°	5%	5%
90°	5%	5%		90°	5%	5%
135°	5%	5%		135°	15%	10%
Run VMG	5%	5%		Run VMG	20%	25%


	Med				High			
TWS (kt)	8	10	12	14	TWS (kt)	14	16	20
Beat VMG	5%	15%	15%	12%	Beat VMG	12%	18%	18%
52°	3%	12%	12%	8%	52°	8%	12%	12%
90°	0.4%	4.3%	4.3%	3%	90°	3%	5.5%	5.5%
135°	0	1%	1%	1%	135°	1%	1%	1%
Run VMG	0	1%	1%	1%	Run VMG	1%	1%	1%

Multiple scoring options for course and weather increase accuracy

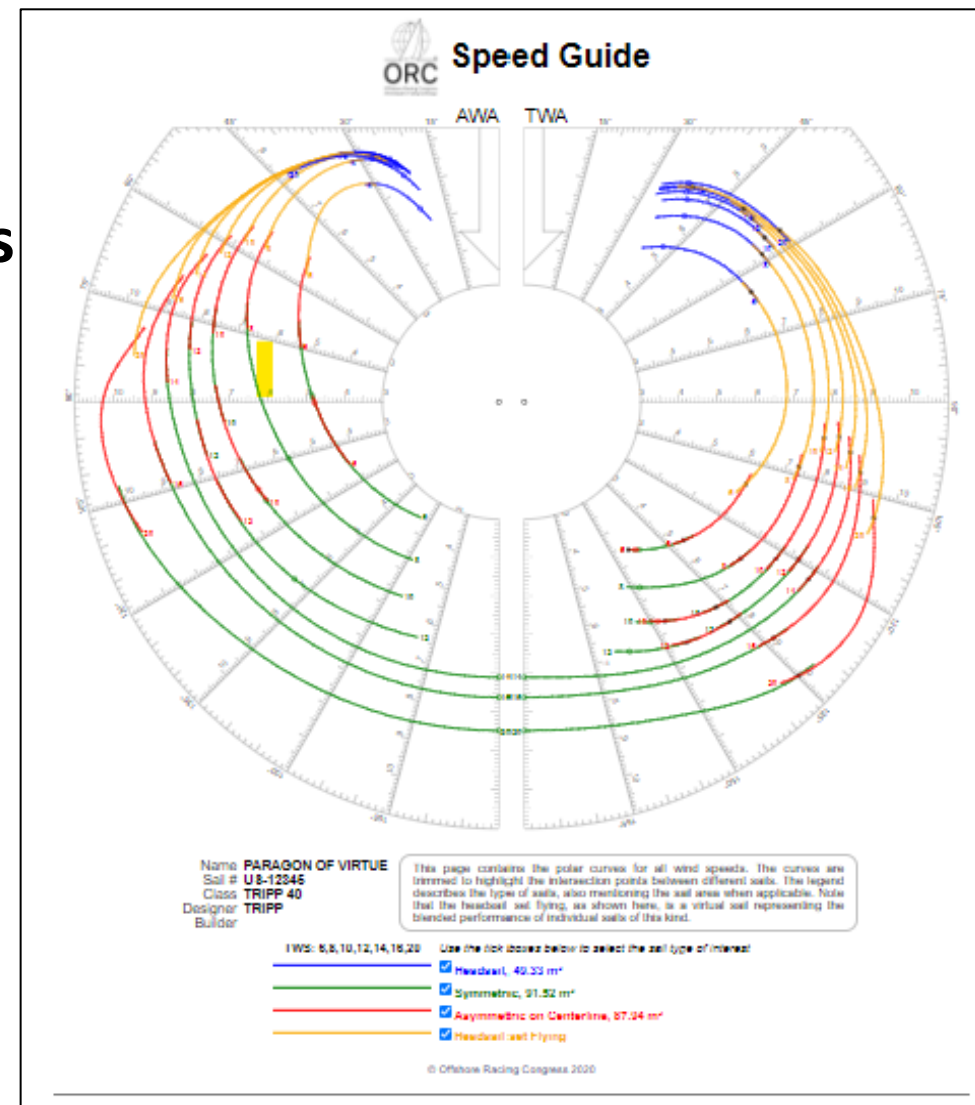


Other ORC Benefits

- Speed Guide
- Database of Certificates
- Target Speeds
- Trial Certificates

 **Target Speeds for PARAGON OF VIRTUE (US-12345)**
www.orc.org 2020

TWS	AWA UP	BS UP	TWA DN	BS DN
6	22°	5,39	142°	4,85
8	23°	6,35	148°	5,64
10	23°	6,73	150°	6,56
12	24°	6,87	157°	7,00
14	25°	6,97	180°	7,10
16	26°	7,01	180°	7,62
20	28°	7,10	180°	8,48



ORC Sailor Services offers a wealth of information



2022 AYC & EYC Regatta Calendar - ORC Starts

Date	Club	Regattas	ORC Class Starts			Notes
			ORC (full crew)	Cruiser	Doublehanded	
April 27	AYC	Wednesday Night Racing (beings)	✓			
May 7	AYC	Spring Race to Oxford	✓	✓	✓	
May 14	Both	Helly Hansen Sailing World Regatta	✓			TBD (still in planning)
June 3	EYC	Annapolis to Bermuda Ocean Race	✓	✓		
July 9	EYC	Boomerang	✓	✓		
July 15-17		Screwpile Lighthouse Challenge	✓	✓		
July 23	AYC	Annual Regatta	✓	✓	✓	
July 31	AYC	Two Bridge Fiasco			✓	
August 20	EYC	CRAB Cup	✓	✓		
August 27	EYC	Race to Cambridge Lighthouses	✓	✓		TBD (still in planning)
September 3	Both	Annapolis Labor Day Regatta	✓	✓	✓	
September 24	AYC	Fall Race to Solomons	✓	✓	✓	
October 1-2	AYC	DH Distance Race			✓	
October 8-9	AYC	Fall Series	✓			
October 9	AYC	Fall Series		✓	✓	

Notes:

- **ORC denotes full use of allowable sails and crew. Regattas will be windward/leeward, point to point, and fixed government marks. See NOR for each event.**
- ORC Cruiser subject to eligibility criteria and class rules. Single race per day using government marks or point to point. See NOR.
- **ORC DH Double-Handed crews only. Single race per day using government marks or point to point. See NOR.**



ORC Club Application Walk-Through

Online at US Sailing

New certs: www.ussailing.org/competition/offshore/request-a-rating

Re-validate previous year ORC certs for 2022: www.ussailing.org/competition/offshore/orc/orc-revalidation

Conversion from ORR certs: www.ussailing.org/competition/offshore/orc/orr-to-orc-transfer

All applications need sail measurements from sailmaker – forms are at:

<https://cdn.ussailing.org/wp-content/uploads/2018/12/UMS-Mainsail-Certificate-2019.xls>

<https://cdn.ussailing.org/wp-content/uploads/2018/12/UMS-Headsail-Certificate-2019.xls>

<https://cdn.ussailing.org/wp-content/uploads/2018/12/UMS-Symmetric-Spinnaker-Certificate-2019.xls>

<https://cdn.ussailing.org/wp-content/uploads/2018/12/UMS-Asymmetric-Spinnaker-Certificate-2019.xls>

Questions and help:

Offshore office US Sailing: offshore@ussailing.org

Dobbs Davis, certified measurer and ORC Communications Director: dobbs.davis@orc.org



Application Steps

<https://www.ussailing.org/>

2. Navigate to the Competition pulldown and ORC Page

1. Sign in or Join US Sailing

3. Scroll down to Applications, New ORC Club Application

MEMBERSHIP MY US SAILING CALENDAR SHOP DONATE CONTACT SIGN OUT

EDUCATION RECREATION **COMPETITION** OLYMPICS ABOUT NEWS EVENTS SAFESPORT

YOUTH

RACING

- Youth Racing Central
- Junior Olympics
- Youth Development
- US Sailing Championships
- Olympic Development Program
- Match Racing
- Team Racing
- One Design Central
- High School
- College

SIEBEL SAILORS PROGRAM

ADULT

RACING

- Adaptive Racing
- Small Boat Racing
- US Sailing Championships
- Match Racing
- Team Racing
- One Design Central

RESOURCES

- Regatta Safety
- Trophies
- SafeSport
- Regatta Management

OFFSHORE

MIXED OFFSHORE DOUBLES

RATING RULES

- IRC
- ORC**
- ORR
- PHRF
- Portsmouth Yardstick

SERVICES

- US SER's and World Sailing Special Regulations
- Sail Numbers

SAFETY

RULES/OFFICIATING

RACE OFFICIAL TRAINING/CERTIFICATION

- Race Officers
- Judges
- Umpires
- Classifiers
- Measurers and Equipment Inspectors

RESOURCES

- Find a Race Official
- Student Materials
- Publications
- Trophies
- SOARS
- Area Map
- SafeSport & Background Checks
- RC 101

APPEALS

RACING RULES

- Rulebook 2021-2024
- US Prescriptions

NEWS

ROLEX **GRAND PRIX** **YOUR TIME** 12:44 PM

NSPS 2022 Postponed Due to Covid-19

It is with great disappointment that US Sailing has made the difficult decision to postpone the 2022 National Sailing Programs.

MEMBERSHIP MY US SAILING CALENDAR SHOP DONATE CONTACT SIGN OUT

EDUCATION RECREATION **COMPETITION** OLYMPICS ABOUT NEWS EVENTS SAFESPORT

Copy Certificates

ORC provides free access to all measurements and any valid certificate issued by any rating office in the world since 2009 through the free ORC Sailor Services database. Measurements and copies of certificates in pdf format are available at no charge without limit. Copy certificates are NOT valid for racing.

ON THIS PAGE: ORC

- Offshore Racing Congress (ORC)
- Products
- Applications

QUICK LINKS

- Starboard Portal
- US Sailing Resource Library
- One Design Central
- Diversity, Equity & Inclusion
- Join US Sailing Today
- Donate
- SafeSport
- Insurance Solutions by Gowrie Group
- Calendar

Trial

To understand how a potential modification would impact a boat's rating, trials may be ordered through the Sailor Services system on the ORC website. There is no limit to the number of trial certificates issued in the ORC Sailor Services system. Trial certificates are NOT valid for racing.

Hydrostatics/Stability Data Sheet

Understanding the limitations of stability is important to every boat owner, but this information is also useful to offshore race organizers interested in defining relevant safety standards in their entry requirements.

For more: [ORC Stability Datasheet Explanation](#)

Speed Guide

The ORC Speed Guide uses the ORC PDP to develop polar diagrams for your yacht. These diagrams are an asset to understanding relationships between performance, sail selection, wind speed, and wind angle. Speed Guides are provided with every US Sailing issued ORC certificate. Additional speed guides may be obtained via the ORC sailor services.

For more: [ORC Speed Guide Explanation](#), [ORC Speed Guide Sample](#)

Applications

- US Sailing ORC Policy and Pricing
- New ORC Certificate/Transfer of Owner- Request for Rating
- New ORC Club Application
- ORR to ORC Transfer
- ORC Revalidations
- ORC Amendment Request
- ORC Trials and Speed Guides

Other Resources

- ORC Homepage
- Explanation of Scoring options for US and Canadian Events.



Application Steps

OFFSHORE REQUEST A RATING

Request for Rating / Measurement

Thank you for your interest in being measured and rated for IRC, ORC and/or ORR through US Sailing!

Please confirm the rating rule used and whether measurement is required for the race(s) in which you plan to participate by reviewing the Notice of Race (NOR) for each race.

Please review the [US Sailing ORR Policy](#) / [US Sailing ORC Policy](#), and complete the following to begin the rating process.

For the measurement and rating process to be finalized, [sail measurement certificate](#) submitted from your loft to [US Sailing Offshore](#).

US Sailing Member ID *

12345x

Owner Name *

Ratty

Rat

First Name

Last Name

Boat contact email *

info@usresnoff.org

Requested Certificate Type(s) / Measurement *

- IRC Non-endorsed
- IRC Endorsed (measurement required)
- ORC Club
- ORC Double handed
- ORC Club Non-Spinnaker
- ORCi Non-Spinnaker
- ORC International (measurement required)
- ORR Partially Measured
- ORR Fully Measured (measurement required)

4. Enter owner contact info into on-line form

5. Select desired certificate type(s)

9. Submit – US Sailing will contact you for additional information including payment and sail measurement data

- ORC Club Non-Spinnaker
- ORCi Non-Spinnaker
- ORC International (measurement required)
- ORR Partially Measured
- ORR Fully Measured (measurement required)

ORC Promo Code

Boat Name *

Messabout

Sail Number *

12345

Racing Rules of Sailing require an official sail number

Class/Make and Model *

BENETEAU OCEANIS 31

Please note special production options (e.g. shoal or wing keel, deep draft, tall rig, etc.)

Year Built *

1965

Designer

Finot - Conq

Builder

Beneteau

Maximum Draft *

6'

Minimum Draft

6'

Displacement/Boat Weight

10,692 lbs

Boat Weight Source

brochure

class certificate, brochure

Date and Race for which the Certificate is Needed *

5/7/22 Spring Oxford

Boat Location: Marina/YC, City, State *

Marina

Comments and Modification Notes *

Deep Keel version with Air Conditioning and forward cabin option

Please describe any modifications including sails, rigging, machinery, mast, appendages, heavy equipment, an influence on your vessel's performance.

Submit

6. Add best available technical data to help US Sailing identify correct model particulars

7. Note first event - leave time for processing

8. Include modification details and other helpful info



Application Steps

- US Sailing will respond with any questions or issues associated with issuing you a certificate
- Reach out to a sailmaker to have your sails measured and have these submitted to US Sailing
- Certificates can be issued in as little as one or two weeks, but apply early and try to avoid peak times before major events (Bermuda, Mackinac Race, etc.)

United States Sailing Association
Universal Measurement System (UMS)
Headsail Certificate
Version date: 2 Mar 2015

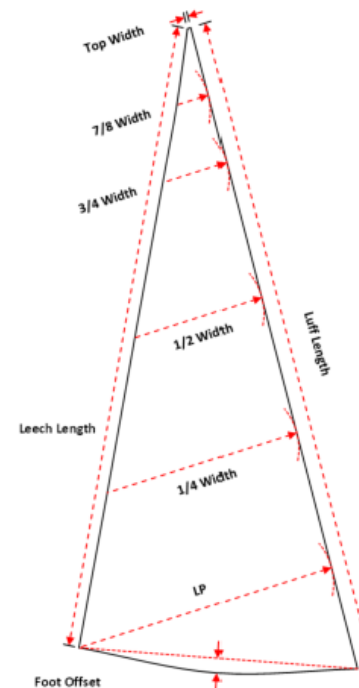
	Meters	Feet
Luff Length	15.80	51.84
Luff Perpendicular	6.88	22.57
Top Width	0.09	0.30
7/8 Width	0.86	2.82
3/4 Width	1.72	5.64
1/2 Width	3.44	11.29
1/4 Width	5.15	16.90
Leech Length	14.83	48.65
Foot Offset	0.35	1.15
Roach		
Area - IRC	54.44	585.37
Area - HPR & ORC	54.40	585.67

Boat Name: Shinnecock
Sail No.: 51334
Class/Model: J-120
Owner: James Praley
Sail Desc.: L/M Genoa
Sail ID No.: OUS105442-001

Measurement Units: Meters Feet

Loft: North Sails
Measurer Name: Mark Taylor
Date: 5/23/2016
Signature: _____

Sail plotted below from input data.



North Sails
Downwind Measurement Form

Owner/Yacht Name: Capuco, Ben/Zuul
Boat Type: AERODYNE 38
Sail Type: Code Zero
OEF: OUS139452-002

SAILMAKER: North Sails

ORC/IMS IRC ORR HPR PHRF
Luff Length SLU SLU/SL SLU/SL ALL/SL
17.80 Mts

Leech Length SLE SLE/SL SLE/SL ALE/SL
16.49 Mts

Max Girth (Symmetrical) N/A SMW SMG G
N/A Mts

Mid Girth SHW AMG AMG AMG
6.37 Mts

Foot Length SFL SF ASF/SF AF
8.44 Mts

Weight 19.00 kgs

Signature: Richard Williams Date: 8/18/2020
Print Name: Richard Williams CRC#: NS Loft Z1

World Sailing Sticker # (if required)



Application Steps

Already Have an ORR or ORRez Certificate?

ORR to ORC Transfer

In most cases the transfer of data from a previous ORR certificate to an ORC certificate is seamless, however there are a few key items that need to be updated to ensure the accuracy of the ratings. This is a complex form below to help us in the transfer of your rating information. Please note this is not for ORRez to ORC certificate Transfer. To transfer an ORRez certificate please complete the form at US Sailing Rating Request

I am trying to transfer the following type of certificate: *

ORRez

ORR standard

Name *

First Name Last Name

Email *

example@example.com

What is the Name of your Boat? *

Sail Number (including any country prefix) *

1. Enter Basic contact and boat info

2. Upload latest ORR or ORRez Certificate

3. Add additional details, note if sails are unchanged and submit

MEMBERSHIP MY US SAILING CALENDAR SHOP DONATE CONTACT SIGN OUT

EDUCATION RECREATION COMPETITION OLYMPICS ABOUT NEWS EVENTS SAFESPORT

Sail Number (including any country prefix) *

Please upload your last ORR certificate (copies can be downloaded by logging into <https://ucs.ussailing.org> *)

Browse Files
Drag and drop files here

(copies can be downloaded by logging into <https://ucs.ussailing.org>)

Do you fly asymmetric spinnakers? *

Yes

No

ORR and ORC calculate different default crew weights, please enter the weight of your crew you plan to race with (in Kilograms)

Leave blank if you wish to use the default

Do you fly any headsails ahead of the forestay (not in the luff groove or hanked to the stay)? *

Yes

No

Have you replaced, added or changed any of the largest sails not mentioned above since your last ORR certificate? *

No

Yes

Submit



Application Steps

- Join US Sailing (<https://www.ussailing.org/>)
- Complete online application for ORC rating or transfer of ORR Certificate (<https://www.ussailing.org/competition/offshore/orc/>)
- Have your mainsail, largest headsail and largest spinnaker measured
See sail measurement contact information on next slide
- Plan for completing online application and sail measurement 3-4 weeks in advance of need
- Pay fees and respond to any requests from US Sailing to complete measurement



Local Sail Lofts with registered US Sailing ORC measurers

You must have a certified measurer measure your main, largest genoa and largest downwind sail

North Sails	Ridgely Mackenzie	ridgely.mackenzie@northsails.com
Quantum	Mike Crump	MCrump@quantumsails.com
Elvstrom	Chuck O'Malley	chuck@chesapeake-sailmakers.com
Ullman	Scott Steele	scott@ullmansailsannapolis.com
Evolution	Jerry Latell	jerry@latellsails.com



QUESTIONS?

Use the **Q&A** function (not chat) in the menu to type any questions you might have