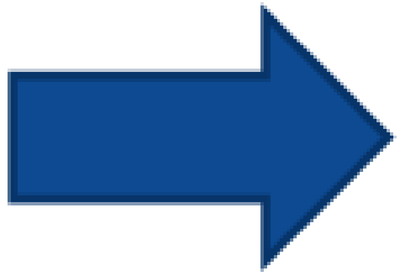
ORC Club

Measurement based rating system supported by Australian Sailing

Why ORC Club

PHS



ORC club

ORCi

International Rating Certificate

IRC 2020

How to get a rating

MEASUREMENTS + HULL 3D FILE

↓ VPP

BOAT POLARS

↓

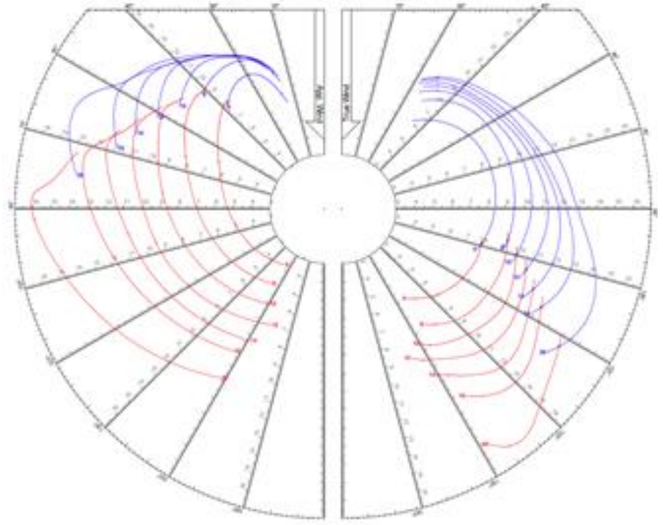
BOAT RATING

Self measured system

Based on boat measurement but no weighting needed

Online application via AS Resources website

Hull files : For the Velocity prediction (VPP) software to complete the calculations it needs an accurate hull file the ORC database contains thousands of hull files including most production boats. If a file is not in the database it can be created using 3D CAD files or a laser hull scan (expensive unfortunately).



Boat Polar outputs from VPP

Velocity Prediction in Knots for True Wind Speeds

Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat Angles	42.3°	40.7°	38.5°	37.2°	36.6°	35.8°	36.4°
Beat VMG	4.27	5.18	5.61	5.80	5.91	6.05	6.07
52°	6.50	7.57	7.91	8.06	8.15	8.28	8.43
60°	6.88	7.79	8.14	8.34	8.47	8.57	8.84
75°	7.18	7.94	8.43	8.82	9.04	9.19	9.51
90°	7.15	7.94	8.47	9.05	9.53	9.86	10.22
110°	6.90	7.99	8.59	9.03	9.48	9.93	11.28
120°	6.71	7.92	8.64	9.33	9.84	10.32	11.55
135°	6.07	7.49	8.22	8.97	9.85	10.89	12.67
150°	5.11	6.43	7.48	8.17	8.83	9.59	11.71
Run VMG	4.43	5.57	6.48	7.19	7.76	8.34	10.14
Gybe Angles	143.4°	143.9°	150.7°	157.3°	171.6°	157.3°	143.5°

WHAT'S IN IT FOR OWNERS ?

Price and simplicity: Self measured and no weighting.
Costs are $45 for the initial certificate $90 per year there after

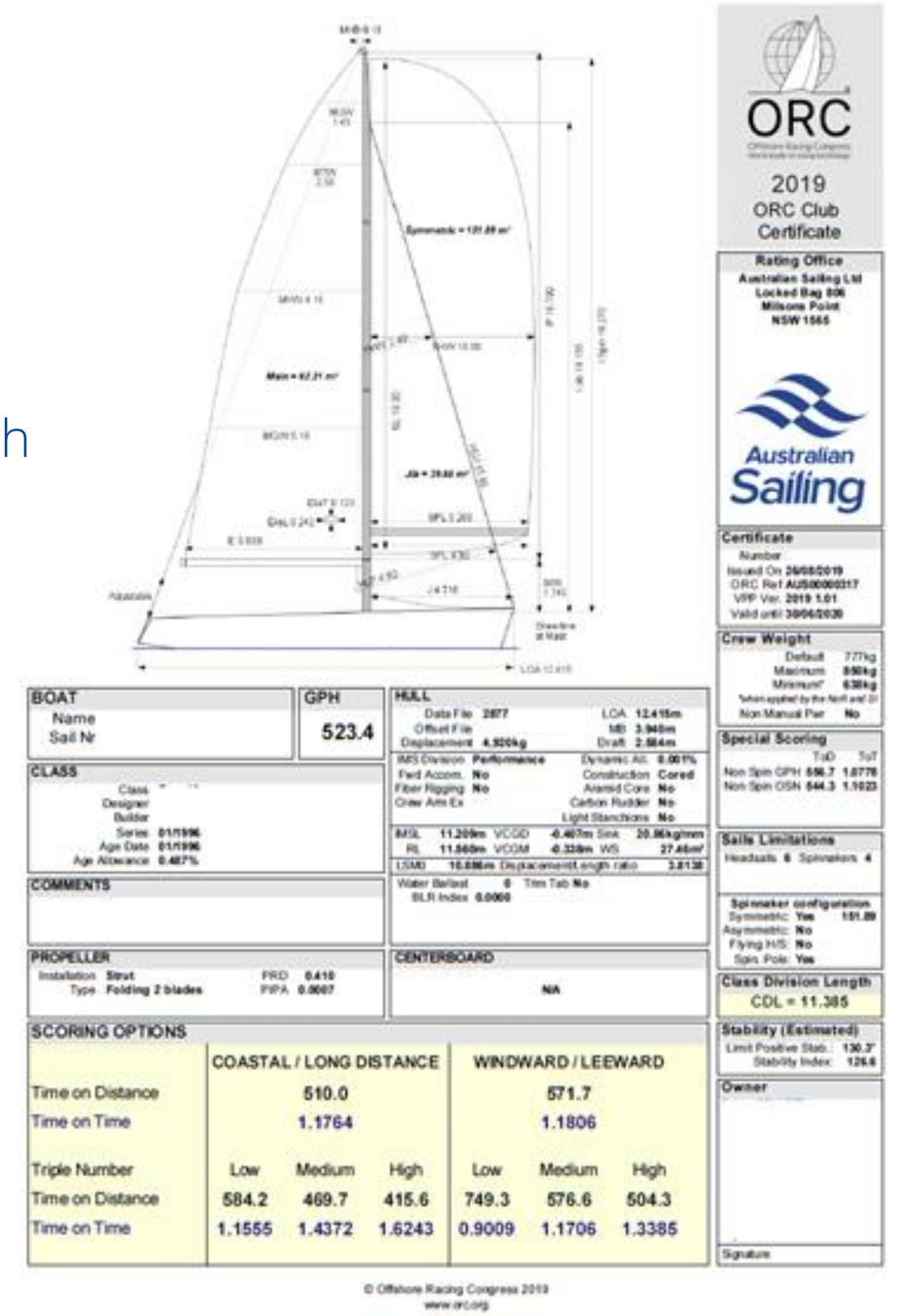
Accuracy: From the polar ORC calculate multiple ratings for each kind of course or wind strength.

Transparency: Every owner can access a copy of any certificate issued since 2009

International: Worldwide database and the rating is valid anywhere in the world

Multihulls: The ORC Ratings Office will be providing velocity predictions for multihull craft allowing ratings compatible rating to be created for this fleet.

Note: Self-measured certificates are non-endorsed



ORC

2019
ORC Club
Certificate

Rating Office
Australian Sailing Ltd
Locked Bag 806
Milsons Point
NSW 1565

Australian Sailing

Certificate
Number
Issued On 26/08/2019
ORC Ref AUS00000317
VPP Ver. 2019 1.01
Valid until 30/06/2020

Crew Weight
Default 777kg
Maximum 850kg
Minimum* 638kg
*when applied by the North and 31
Non Manual Pwr No

Special Scoring
ToD SpT
Non Spin GPH 598.7 1.0778
Non Spin OSN 544.3 1.1023

Sails Limitations
Headsails 6 Spinnakers 4

Spinnaker configuration
Symmetric Yes 151.89
Asymmetric No
Flying H/S No
Spin. Pole Yes

Class Division Length
CDL = 11.385

Stability (Estimated)
Limit Positive Stab.: 130.3°
Stability Index: 126.6

Owner

Signature

BOAT
Name
Sail Nr

GPH
523.4

HULL
Data File 2877 LOA 12.415m
Offset File MB 3.940m
Displacement 4.920kg Draft 2.564m
IMS Division Performance Dynamic Alt. 0.001%
Fwd Accom. No Construction Cored
Fiber Rigging No Aramid Core No
Crew Arm Ex Carbon Rudder No
Light Stanchions No
BAL 11.209m VCGD -0.407m Sink 20.86kg/mm
RL 11.560m VCGM -0.328m WS 27.46m²
LSAD 10.686m Displacement/Length ratio 3.8138
Water Ballast 0 Trim Tab No
BLR Index 0.0000

CLASS
Class
Designer
Builder
Series 01/1996
Age Date 01/1996
Age Allowance 0.487%

COMMENTS

PROPELLER
Installation Strut PRD 0.410
Type Folding 2 blades PIPA 0.0007

CENTERBOARD
NA

SCORING OPTIONS

	COASTAL / LONG DISTANCE			WINDWARD / LEEWARD		
Time on Distance	510.0			571.7		
Time on Time	1.1764			1.1806		
Triple Number	Low	Medium	High	Low	Medium	High
Time on Distance	584.2	469.7	415.6	749.3	576.6	504.3
Time on Time	1.1555	1.4372	1.6243	0.9009	1.1706	1.3385

WHAT'S IN IT FOR CLUBS ?

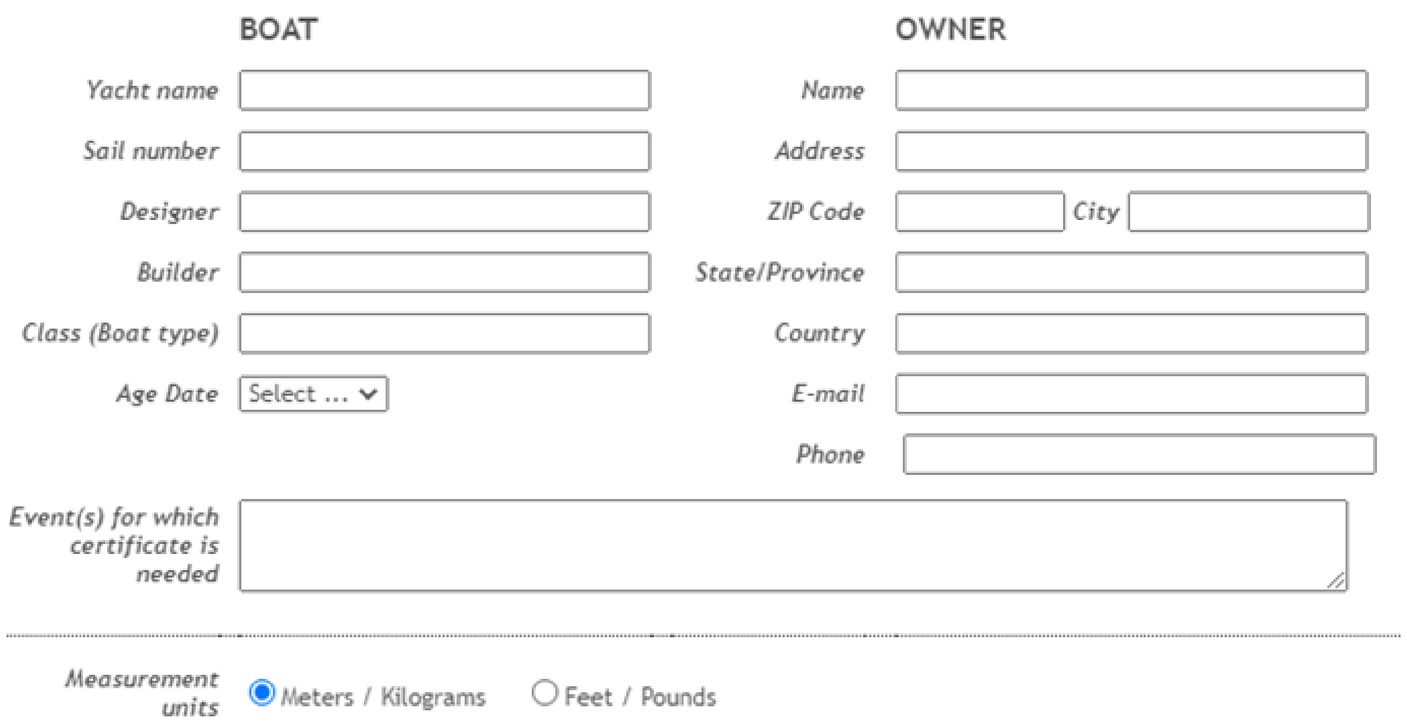
Easy to handle: Free software available online to chose the best type of rating and do all the calculations

Accurate: Rating adapted to the type of racing and the weather conditions

Managed by AS - We can help club to develop the rating and design solutions for them.

Latest Ratings are always available online and Race management systems such as **TopYacht** and **SailSys** automatically upload the current ratings for every yacht daily.

How to get an ORC club Rating



BOAT

Yacht name
Sail number
Designer
Builder
Class (Boat type)
Age Date Select ...

OWNER

Name
Address
ZIP Code
City
State/Province
Country
E-mail
Phone

Event(s) for which certificate is needed

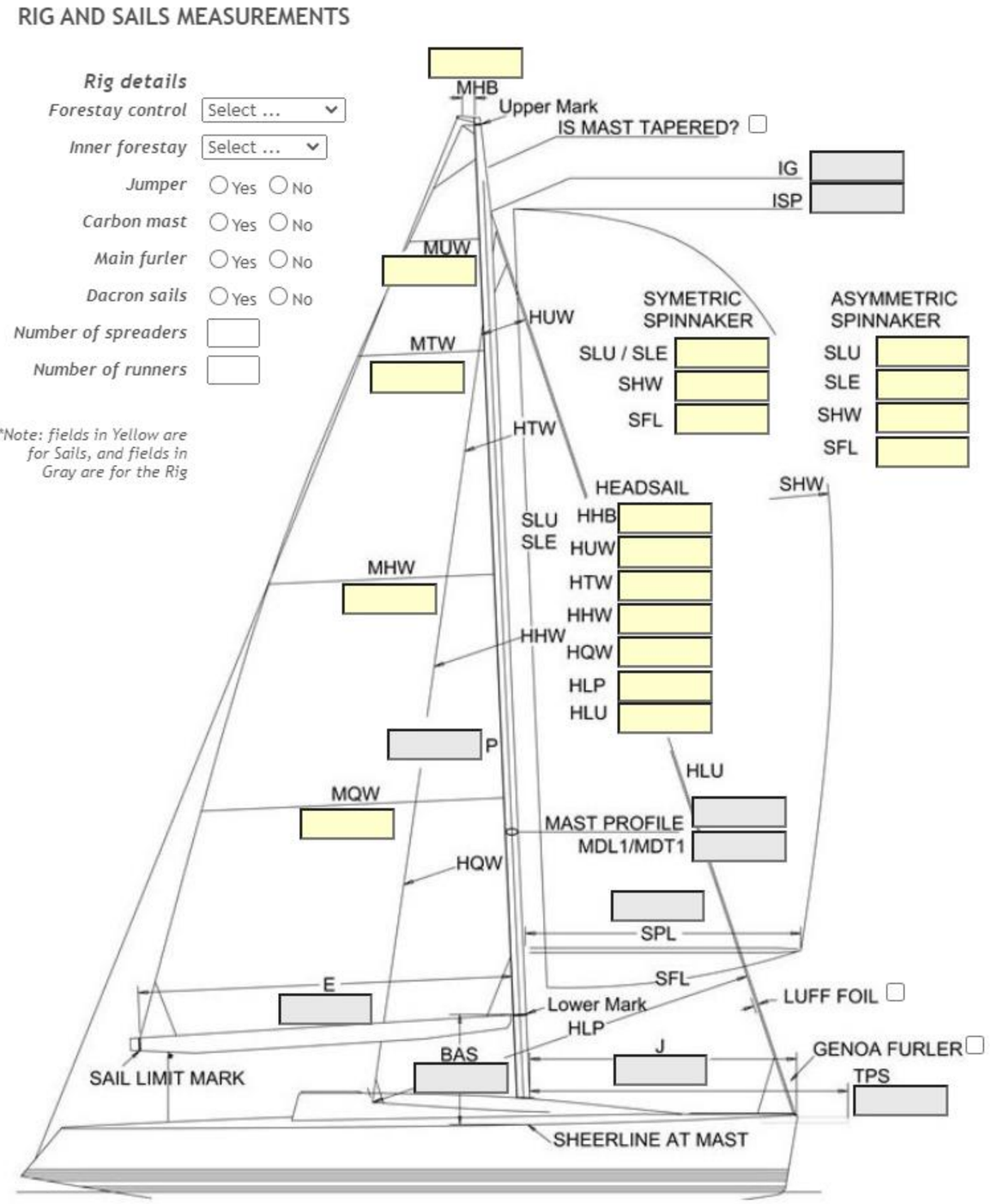
Measurement units Meters / Kilograms Feet / Pounds

An owner can go to the AS resources page **ORCc Application page**

Fill out the online form the information needed is shown here and in the following slides.

Or

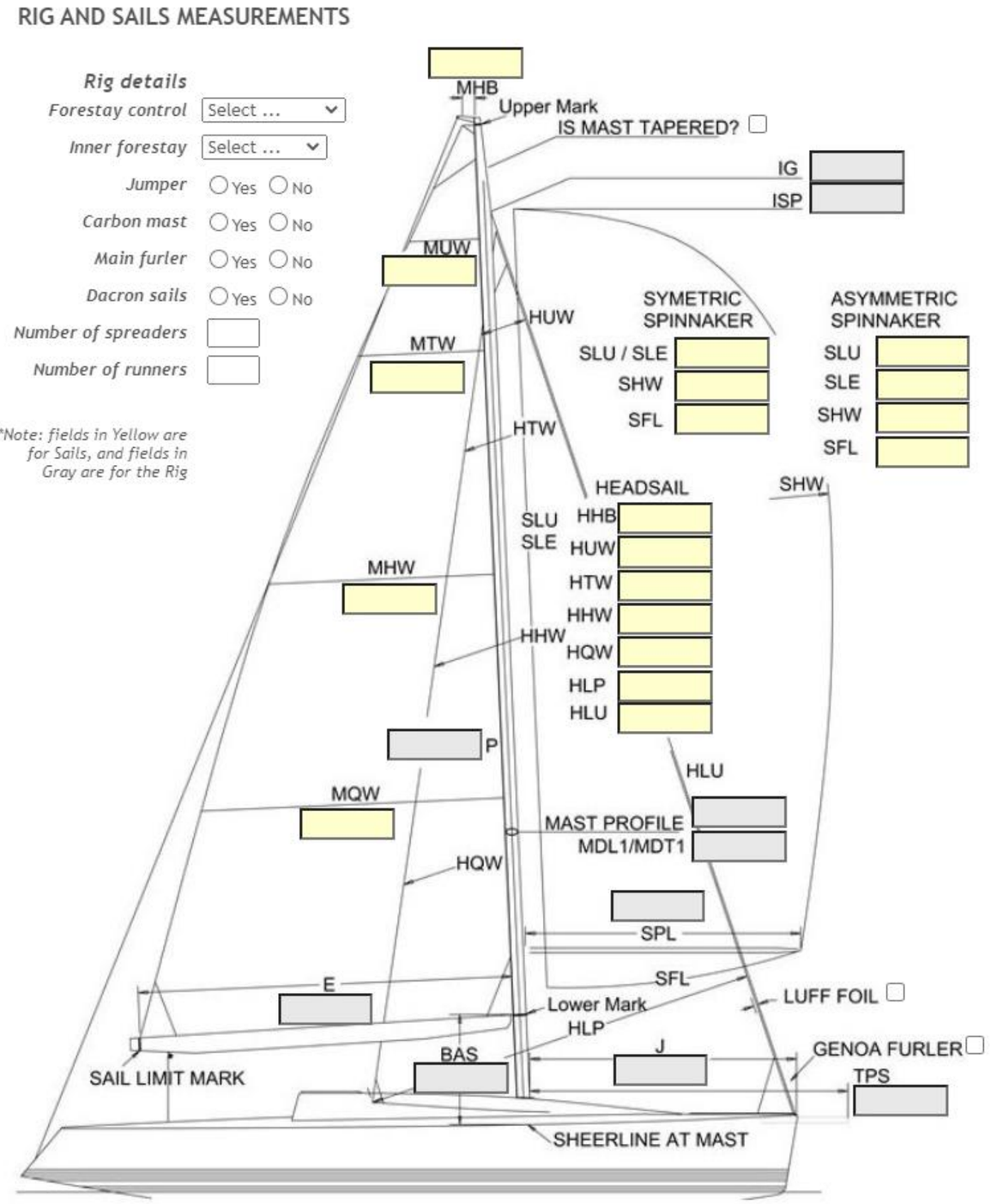
this can be done with the assistance of a local measurer who can submit it directly to Australian Sailing Ratings Office



Measurement Entry

All the measurements and be entered into the online form provided by the ORC

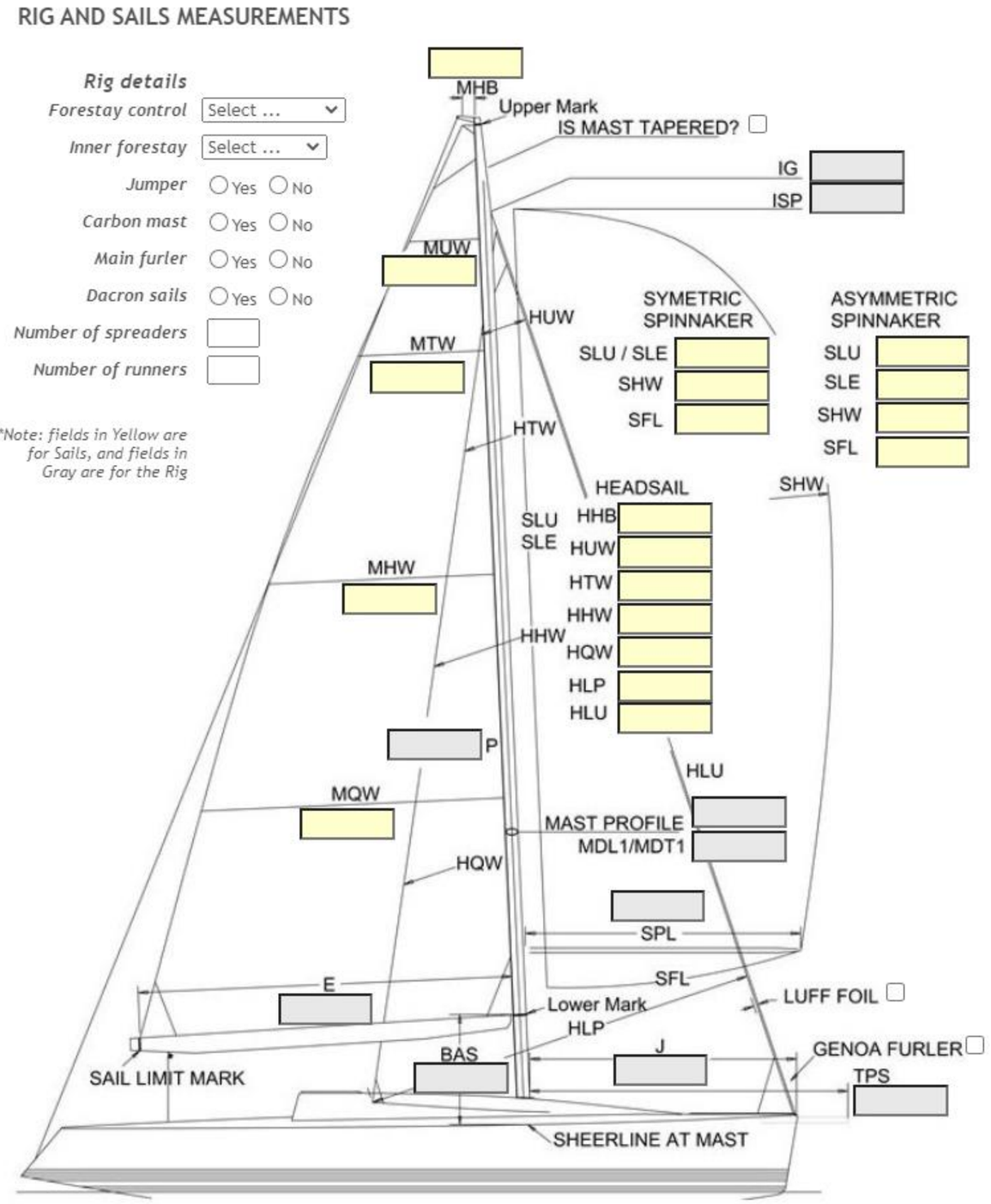
- Rig Measurements are
  - "P" - Mainsail Hoist
  - "E" - Mainsail foot
  - "BAS" - Boom above sheerline
  - "J" - Foretriangle base
  - "TPS" - Tacking point of the Spinnaker
  - "SPL" - Spinnaker Pole Length
  - "MDT1" - Max Mast width
  - "MDL1" - Max Fore and Aft Mast
  - "IG" - Forestay Height
  - "ISP" - Height of Spinnaker hoist



Measurement Entry

All the measurements and be entered into the online form provided by the ORC

- Mainsail Measurements are
  - "MHB" - Mainsail Top Width (optional)
  - "MUW" - Mainsail Mainsail Upper Width
  - "MTW" - Mainsail Mainsail 3/4 Width
  - "MHW" - Mainsail Mainsail 1/2 Width
  - "MQW" - Mainsail Mainsail 1/4 Width (optional)
- Headsail Measurements are
  - "HHB" - Headsail Top Width (optional)
  - "HUW" - Headsail Upper Width
  - "HTW" - Headsail 3/4 Width
  - "HHW" - Headsail 1/2 Width
  - "HQW" - Headsail 1/4 Width (optional)
  - "HLU" - Headsail Luff
  - "HLP" - Headsail Perpendicular



Measurement Entry

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- Spinnaker Measurements
  - "SHW" - Symmetrical/Asymmetrical Spinnaker Mid Width
  - "SFL" - Symmetrical/Asymmetrical Spinnaker Foot Length
  - "SLU" - Symmetrical/Asymmetrical Spinnaker Luff Length
  - "SLE" - Symmetrical/Asymmetrical Spinnaker Leach Length

Measurement Entry

All the measurements and be entered into the online form provided by the ORC

- Drive Measurements
  - Type of drive
  - Propeller diameter

Questions

Frequently Asked Questions

What about measurements: if I choose to measure my boat will I get a better rating? And what's the difference between an ORC Club and an ORC International certificate?

A boat that is fully measured by a certified measurer qualifies to receive an ORC International (or ORCi) certificate, which has the most accurate rating for the boat. ORC Club certificates can be issued without having measurements, but the data on whatever is not measured will rely on the expertise of the rating office to supply default figures corresponding to what will produce the fastest rating for that boat type.
For example,
If your mast is not weighed, a default figure is used that corresponds to the lightest possible spar that could be used in your boat. The principle is that there will be no advantage for not having your boat measured.

For rating and scoring purposes, ORCi and ORC Club certificates are compatible and can be used in the same event except for ORC championships where ORCi certificates are generally required. Alternatively, you may have a measurer check a few important items that can help your ORC Club rating, such as freeboard measurements of the hull: with the boat in measurement trim (ie, empty), a qualified measurer may measure your freeboards to be used to get an accurate calculation of the displacement of your boat, not just the lightest of the measured sister ships. For some boat types this can be 100's of kg's difference in weight, which in turn may be many sec/mi difference in ratings.

Frequently Asked Questions

This application requests a lot of information I’m not familiar with nor know how to access. How do I get the information needed to complete the application?

If your boat has been measured for any rating rule system and it has not changed at all since it was measured, input the information on that certificate. Leave blank anything you do not know and the Rating Manager at Australian Sailing will help complete this for you based on their database of measurements from similar boats.
Get your sailmaker to provide you the measurements of your Main, Headsails and Spinnaker that you will plan to race with. And provide an estimate of the weight of your crew you plan to race with: more crew means you’ll be rated faster in heavy air upwind but also maybe slower downwind in light air, this is part of the calculation.
The principle is this:
The more information you provide that is credible and accurate, the more accurate your rating will be.
Alternatively, you may contact a measurer to assist you with this process.

Can the scoring be in Time on Time or Time on Distance?

ORC ratings can be either Time on Time (ToT) or Time on Distance (ToD) – the Sailing Instructions will specify which will be used for scoring at any given event. Generally ToT is preferred where there is current, a large diversity in boat types, and for distance races.
Once the ratings are received for all boats, tables can be provided online to estimate corrected time allowances among competitors for each course type and wind speed. Its important to note, however, that these tables are guides only and that only the Race Committee can produce official results.