

IRC Owner Measurement Preparation Guide

Please read this checklist thoroughly. Also, review the IRC Rule and on-line information and go over the IRC Application spreadsheet form. Being informed and prepared is the best way to make the process as straight forward as possible.

The earlier the process is started the better. Contact a measurer well before your boat might be ready to be measured to begin the necessary coordination and work out a preliminary schedule.

Several measurement steps are involved. The order in which these are performed is not important. Two steps require the boat to be in a empty measurement condition (IRC Rule 17.1 and 17.2) and are most conveniently performed on the same day. All measurements can be easily accomplished within a few hours with proper preparation, coordination with boat yard facilities, and calm weather conditions. Flexibility is a must, particularly with respect to those items out of the control of the measurer and owner - namely the weather and boat yard scheduling. The presence of the owner or owner's representative is required. Someone needs to hoist the measurer up the mast for the pertinent rig measurements. US Sailing membership is required. Join now if not already a member.

A. IRC Empty Measurement Condition:

This is the boat load-out condition required for **Weighing** and **Afloat measurements**. The simplest description is just plain empty - exceptions are described below.

Required items:

1. Yacht fully rigged with all spars and standing rigging installed. Spinnaker pole or bowsprit on board.
2. Running rigging installed: halyards, vang, mainsheet, runners, traveler control lines, i.e., permanently installed running rigging in place.
3. Engine installed or outboard engine on board if applicable.
4. Batteries on board if onboard when racing. Any removed must be listed on the application form for description on the IRC certificate.
5. All furniture, tables and doors installed. Compliance with class rules is permitted. All pieces removed must be listed on the application form for description on the IRC certificate.
6. Settee/bunk cushions on board if onboard when racing. Any removed must be listed on the application form for description on the IRC certificate.
7. Companionway hatch boards on board.
8. Permanently installed equipment on board.
9. Internal ballast/corrector weights installed. Provide documentation for weight.

Removed items:

1. Tanks EMPTY. Tanks are to be empty if at all practicable. Otherwise, tanks must be FULL. Provide documentation for tank capacity and access to confirm contents so the weight of the contents can be deducted from the scale reading.
(Note: Afloat measurement with contents in the tanks will impact the Overhang measurements. These will be shorter than if the tanks are empty, resulting in a longer rated LWP which will, in turn, have a small upward (faster) influence on the TCC. Overhangs cannot be adjusted via calculations from the ORR float data.)
2. NO sails, headsail or spinnaker sheets, guys, spare running/standing rigging.
3. NO propane or CNG tanks.
4. NO food, cooking/catering utensils.
5. NO anchors, chains, rodes, dock lines or fenders.
6. NO clothing or personal effects.
7. NO life rafts, dinghies, life jackets or any other safety equipment. Portable fire extinguishers should be kept on board except for the actual weighing and afloat measurement when they should be immediately available for use if needed.
8. NO bedding or loose cushions.
9. NO tools or spare parts or other loose gear. All lockers, drawers, storage bins EMPTY.
10. NO crew or personnel.
11. NO water in the bilge.
12. Decks/sides DRY.

B. Measurement Steps:

1. Afloat Hull Measurements
2. Ashore Hull Measurements
3. Rig Measurements
4. Weighing
5. Sail Measurements

C. Description of Measurement Steps:

1. Afloat Hull Measurements:

Requirements:

Boat in IRC Empty Weight Condition.

Weather:

Calm wind and waves.

No precipitation.

Minimal nearby boating activity.

Measured parameters:

BO, h, x

SO, y

Afloat waterline to a hull reference point (for use in determining the draft)

2. Ashore Hull Measurements:

Requirements:

Boat level fore/aft and athwartships.

Weather:

Not applicable.

Measured parameters:

Length of Hull (LH)

Beam

Draft - from hull reference point to bottom of keel

3. Rig Measurements:

Requirements:

Mast stepped, boom and bowsprit (if applicable) installed; spinnaker pole onboard (if applicable).

Means to hoist measurer up mast.

Weather:

Calm wind.

Measured parameters:

P (and PY if mizzen)

E (and EY if mizzen)

J

FL

STL

4. Weighing:

Requirements:

Boat in IRC Empty Condition.

Single point lift crane with load cell or US Sailing-approved pad scales configuration.

Weather:

Calm wind.

No precipitation.

Measured parameters:

Net boat weight in empty condition

6. Sail Measurements:

Requirements: Make arrangements with your sailmaker to measure your sails.

Measured parameters:

Headsail:

LL	Headsail luff length of <u>largest area</u> headsail
LL max	Longest headsail luff length of <u>any</u> headsail
LP	Headsail perpendicular of <u>largest area</u> headsail
HHW	Headsail half width of <u>largest area</u> headsail
HTW	Headsail 3/4 width of <u>largest area</u> headsail
HHB	Largest headsail top width of <u>any</u> headsail

Main sail:

MUW	Mainsail upper (seven eighth) width
MTW	Mainsail three quarter width
MHW	Mainsail half width

Spinnaker: For the largest area spinnaker, whether symmetric or asymmetric.

SLU	Spinnaker luff
SLE	Spinnaker leach
SF	Spinnaker foot
SHW	Spinnaker half width