

IRC Endorsement

Process, Measurement, and Data Standards

Issue: February 2024. Main update: 5. Retention of Endorsed Status

1. Preamble

An 'Endorsed' IRC certificate is defined by IRC Rule 8.5 as:

An ENDORSED IRC certificate is one for which the data on the certificate has been audited and if necessary verified by measurement or other methods in accordance with current published standards.

This document provides a set of common standards for the IRC Rating Authority and Rule Authorities to apply when Endorsing a boat's IRC certificate.

Generally, IRC is a self-measurement system. There is therefore no general requirement for an owner to have their boat officially measured or weighed unless either they choose to do so, or their Rule Authority (i.e. local IRC body) and/or an Organising Authority for a race requires official measurement, generally resulting in an Endorsed IRC certificate.

An Endorsed IRC certificate will carry the notation ENDORSED under the TCC and certificate year, for example:



Within the guidelines below Rule Authorities are given some options for sources of data. This recognises that circumstances vary from country to country, that some owners are prepared to expend more time and effort than others, and that for instance weighing a large boat may be impractical. The options offered cater for these while at the same time not generally compromising the validity of a boat's data and hence its Endorsed certificate.

It is a fundamental prerequisite of this that responsibility for appointment and training of measurers and quality of measurement data generally lies with each Rule Authority. Attention is drawn to the IRC Measurement Manual available from the IRC website, ircrating.org. Additional material to aid Rule Authorities and measurers is also available direct from the Rating Authority.

2. Process

An owner wishing to have their certificate endorsed first contacts their local Rule Authority. **The Rule Authority carries responsibility for auditing the boat's data file and for defining what, if any, data is to be verified.** In doing this, the data and measurement standards below shall be applied. If these standards are not applied, then the Rating Authority must be advised and an Endorsed certificate will not be issued.

On return of the data from the measurer, or other defined source, the Rule Authority will review the data and confirm that it is satisfied that an Endorsed certificate can be issued. The data is then forwarded to the Rating Authority accompanied by a request to issue an Endorsed certificate. Only then will the Rating Authority issue an Endorsed certificate.

The Rating Authority reserves the right at its absolute discretion to refuse to issue an Endorsed certificate if it is not satisfied in any respect with the data submitted by a boat through its Rule Authority.

It is not permitted to over-stamp a Standard IRC certificate as Endorsed. IRC Endorsed certificates shall be issued by the IRC Rating Authority only.

3. Measuring Equipment

While measurement methods are generally beyond the scope of this document, the following shall apply. For detailed information on weighing and measurement equipment and methods see the IRC Measurement Manual published on ircrating.org.

3.1 Load Cells

Load cells for single point lift weighing shall have a quoted accuracy of $\pm 0.2\%$ of maximum capacity or equivalent and discrimination of not less than 10 kg. i.e. a 10 tonne load cell should have a quoted accuracy of ± 20 kg, and a 20 tonne cell, ± 40 kg. Load cells shall be calibrated at least once per year.

A load cell should not normally be used to weigh a boat weighing less than 15% of the maximum capacity of the load cell, i.e. 1500 kg for a 10 tonne cell. Rule Authorities may waive this requirement on an individual case basis if the load cell is appropriately calibrated for a lower weight.

Compression load cells should generally follow the above standards. It is however recognised and noted that the ultimate accuracy of weighing on compression load cells is a function of the combined accuracy of all the cells rather than the accuracy of each individual cell and also of the methodology adopted. Rule Authorities are therefore advised to exercise care in approving compression load cells.

3.2 Linear Measurements

Tape measures and measuring rules built to CE category 2 or equivalent standards are acceptable.

Tape measures shall be steel, as required by CE category 2.

4. Sources of Data

4.1 General

Generally Acceptable	Weight	Hull and Appendages	Variable/moveable ballast	Rig	Sails
Measurement carried out by an authorised measurer using equipment complying with defined standards.	n/a	✓	✓	✓	✓
Single point weighing carried out by an authorised measurer using a load cell complying with defined standards.	✓	n/a	n/a	n/a	n/a
If available, standard design data and light weight defined by the Rating Authority.	✓	✓	n/a	X	X
Unless prescribed otherwise by an IRC Rule Authority, sail measurement by a World Sailing In-House Certified (IHC) sail measurer.	n/a	n/a	n/a	n/a	✓
Data supplied by an approved sail measurer.	n/a	n/a	n/a	n/a	✓

Acceptable at the discretion of a Rule Authority	Weight	Hull and Appendages	Variable/moveable ballast	Rig	Sails
Weighing in a cradle on compression load cells carried out by an authorised measurer using load cells complying with defined standards.	✓	n/a	n/a	n/a	n/a
Measurement carried out by a specially appointed measurer or sail measurer.	n/a	✓	✓	✓	✓
Single point weighing or weighing in a cradle on compression load cells carried out by a specially appointed measurer using load cells complying with defined standards.	✓	n/a	n/a	n/a	n/a
Weight derived from freeboards measured by an acceptable method, calculation and declaration by the naval architect or other person authorised by the Rating Authority. Generally only acceptable for very large boats.	✓	n/a	n/a	n/a	n/a
ORCi DSPM; ORC Club DSPM (only if boat fully measured)	✓	n/a	n/a	n/a	n/a
Data derived from a current valid or recently expired ORCi or other measurement certificate.	n/a	✓	n/a	✓	✓
Variable ballast: standard production volume (where available); IRC calculated list angle.	n/a	n/a	✓	n/a	n/a

NOT acceptable	Weight	Hull and Appendages	Variable/ moveable ballast	Rig	Sails
Owner, designer or manufacturer declaration.	X	X	X	X	X
Registered Tonnage.	X	n/a	n/a	n/a	n/a
Weighing on crane built in Loadcell.	X	n/a	n/a	n/a	n/a
Weighing in a travel hoist by any means, including on compression load cells, without the prior approval of the Rating Authority.	X	n/a	n/a	n/a	n/a
ORC Club (un-measured) data.	X	X	n/a	X	X

4.2 One Designs Previously Approved by the Rating Authority

One designs previously approved as such by the Rating Authority may have their certificates endorsed without further measurement on declaration by the owner that the boat holds, and is in compliance with, its one design class certificate.

5. Retention of Endorsed Status

When a boat changes any data, or has new equipment used for racing (including, but not limited to, new sails), to retain the Endorsed status of its certificate the relevant rated data shall be verified by a method approved by the Rule Authority and included in paragraph 4.1 above.

The Rating Authority reserves the right to remove the Endorsed status if any of the following apply:

Boat weight / overhangs	10 years since last weighed/measured significant modification compound weight adjustments since weighed
Rig data	5 years since last measured
Sail data	3 years since last measured
Ownership change	
Or any other specific reason decided by the Rating Authority or the boat's Rule Authority.	