JCH®
JAUGE CLASSIQUE
CLASSIC HANDICAP

JCH 2014 Rules

2014 EDITION – MARK XVIII

2013 edition changes are in red.

ARTICLE 1 - PREAMBLE

The **Jauge Classique Handicap - JCH –** is a handicap system designed to allow classic boats with very different characteristics to race together with each having an equal chance of winning.

The seven core principles are :
• **Equality** : to give each boat an equal chance
• **Adaptability** : to the requirements of classics
•**Self certification** and straightforward measurements
• **Free** certificate
• **Universality** : designed for regattas with a single result, either time on time or time on distance, for all sizes and types of classic boats.
• **Transparency** : the formula is in the public domain and is evolutional
• **Objectivity** : based on strictly measurable criteria

ARTICLE 2 - ELIGIBLE BOATS

2.1. These rules apply to boats holding a Jauge Classique Handicap certificate**.**

2.2. Certificate validity

The validity of certificates is limited to April 1st of the year following the year of issue.

ARTICLE 3 - RESULTS

3.1. Results will be based on the formula :

TCorrected = TReal x Ftc

ARTICLE 4 - (NOT USED)

ARTICLE 5 - AUTHORIZED SAILS

5.1. Mainsails

A boat may have as a maximum a mainsail, a "Swedish" mainsail without battens and a trysail

5.1.1.Bermudan sails

The leech round of bermudan sails is limited to:

- MGM (half width) ≤ 65% E,
- MGU (three-quarter width) ≤ 38% E,
- MGT (seven-eight width) ≤ 22% E
- HB (top width) ≤ 4% E ou 0.152 m.

Bermudan sails area: Mainsail, mizzen sail and foresail:

$$S = 0.575*P*E$$

5.1.2.Gaff sails

Gaff sails area: Mainsail, mizzen sail and foresail :

$$S = \sqrt{V*(V-A)*(V-B)*(V-D)}+\sqrt{W*(W-C)*(W-D)*(W-E)}$$

Where V=0,5*(A+B+D) et W=0,5*(C+D+E)

5.1.3.Topsail

Topsail area :

$$S = \sqrt{Q*(Q-F)*(Q-G)*(Q-H)}$$ where Q=0,5*(F+G+H).

5.2. Foresails (jib, high cut jib, staysail, flying jib, genoa)

5.2.1.Definition

A foresail is a sail that has its luff attached to a stay and with a half width less than 55% of its luff perpendicular (SF or ASF).

Battens are not allowed for foresails.

Area of foresails

$$S=JL*LPG*0,5$$

5.3. Downwind sails (symmetric or asymmetric spinnaker, Cruising shute, Fisherman, Mizzen Staysail).

5.3.1.Definition

A downwind sail has a half width length greater than 55 % of its luff perpendicular (SF or ASF).

For downwind sails, only sewn panels of polyamide are admitted.

5.3.2.Authorized sails

The number of downwind sails carried on board must be equal or lower than three.

5.3.3.Symmetric spinnaker

Symmetric spinnaker area:

$$S = SL*(SF+4SMG)/6$$

Their measurements are displayed on the handicap certificate: leech length (SL), foot length (SF), half width (SMG).

5.3.4.Asymmetric spinnaker

Asymmetric spinnaker area:

$$S = 0,5 * (ALU+ALE)*(ASF+4AMG)/6$$

Their measurements are displayed on the handicap certificate: luff length (ALU), leech length (ALE), foot length (ASF), half width (AMG).

5.3.5.Cruising chute

Cruising chute area:

$$S = 0,5 * (ALU+ALE)*(ASF+4AMG)/6$$

Their measurements are displayed on the handicap certificate: luff length (ALU), leech length (ALE), foot length (ASF), half width (AMG).

5.3.6.Fisherman

Fisherman area:

$$S = \sqrt{(V*(V-A)*(V-B)*(V-D))}+\sqrt{(W*(W-C)*(W-D)*(W-E))}$$

where $V=0,5*(A+B+D)$ and $W=0,5*(C+D+E)$

5.3.7.Mizzen staysail

Mizzen staysail area :

$$S = 0,5 * (ALU+ALE)*(ASF+4AMG)/6$$

5.4. The same suit of sails shall be used throughout the duration of an event. In case of accident, the race committee may authorize the use of a new sail on the advice of the measurer. The sailing instructions will specify whether this limitation applies to a series of regattas over a short period.

5.5. Big-boys, tall-boys, spinnaker staysails and other special sails are allowed if their area is smaller than 25% of largest downwind sail.

5.6. Sail furling system.- Sails on furling systems are authorized

5.7. Use of sails :

Two jibs or genoas can be set simultaneously when sailing downwind. Only one may be poled out, and no spinnaker may be set at the same time.
Only one jib or genoa can be used with a spinnaker provided it is attached to a stay.

5.8. Tack of asymmetrical spinnakers.

Tacks of asymmetric spinnakers can be attached to:

- A spinnaker pole approximately on the center line of the boat whose other end is attached to the mast,
- A bowsprit if provided in the original plan,
- The stem of the boat (but not the pulpit)

ARTICLE 6 - (NOT USED)

ARTICLE 7 - (NOT USED)

ARTICLE 8 - BOATS IDENTIFICATION

8.1. All racing boats must display on the mainsail as a minimum their identification number provided by their national authority.

8.2. The place and dimension of the letters and numbers will comply with the specification of appendix E of ISAF rules. However for smaller boats, the height of numbers and letters should not be less than 25 cm.

ARTICLE 9 - BOATS CHARACTERISTICS

9.1. Compliancy

Boats must comply with the characteristics displayed on their certificate.

9.2. Characteristic changes

A change of boat characteristics requiring changes of its JCH certificate is limited to two per calendar year.

ARTICLE 10 - USE OF STORED ENERGY

Equipments using stored energy :

- Electronics : all electronic appliances are authorized.
- Autopilot : Authorized unless the SI's state otherwise.
- Windlass : Authorized unless the SI's state otherwise.

ARTICLE 11 - (NOT USED)

ARTICLE 12 - MEASUREMENTS : LIMITS, CORRECTING FACTORS, CHECKING

12.1. LIMITS.

12.1.1. Fittings

Removal of any fittings to lighten boat, even if not needed for security or comfort, is forbidden. When boats are checked by a measurer, the compliance of fittings will be assessed according to the boat's size.

12.1.2. Displacement.

The displacement to be declared is the loaded displacement, the boat being ready to sail but with no crew onboard.

12.1.3. Miscellaneous

Bowsprit

Fixed bowsprit is authorized provided it is part of the original design.

Spars colour

Black is forbidden for spinnaker poles, top sail mast and other moveable spars.

12.2. Correction factors

C= C1+C2+C3+C4+C5+C6+C7

12.2.1. C1 - Rigging type

Bermudan sloop or cutter	1,000
gaff or gunter cutter or sloop	0,980
Bermudan yawl	0,980
gunter yawl	0,965
gaff yawl	0,940
bermudan wishbone ketch	0,960
bermudan wishbone schooner	0,940
bermudan catboat:	0,900
Topsail schooner or gaffer ketch	0,850

12.2.2. C2 - Hull type

Centreboard	- 0,050
Classic long keel (with garboard strake)	- 0,050
Classic short keel (with garboard strake)	0,000
Fin keel (with no garboard strake)	0,050
Previous correction values must be added to :	
separate rudder (not attached to the keel)	0,100

12.2.3. C3 - Sails and spars

Cotton sails	- 0,150
Mainsails and foresails not made of sewn assemblies of panels visibly squared woven (see note) :	0.053xL-0.15
(see L definition in ARTICLE 9.).	
no winches (providing the original design is with no winches)	- 0,050
Mainsail luff equipped with batten cars with ball bearings (see note)	0,050
Mast or boom material different from original	0,050

Other spar material different from original	0,050
Mast and/or boom made of material other than wood, aluminium or steel (see note)	0,250

Note : * These equipments are clearly discouraged by JCH from being aboard classic yachts. However, to let organizers willing to "extend" their eligibility rules to allow these, the appropriate penalties have been developed.

12.2.4. C4 - Hull material

Traditional wood	-0,030
Moulded wood	0,020
Plywood	0,010
Aluminium	0,030
Iron / steel	0,030
Other	0,050

12.2.5. C5 - Inboard engine with propeller of appropriate size

- 3 fixed blades - 0,110
- 2 fixed blades - 0,090
- folding/feathering - 0,030
- others 0,030

Appropriate propeller size means that the engine and propeller are able to move the boat forward during five minutes at a minimum speed of:

$$1{,}811 \times LOA^{0{,}5}$$

Outboard engines installed permanently in a recess will be considered as equivalent to inboard engines if the shaft is from the original design and the permanent position of the engine certified by a measurer.

12.2.6. C6 - Vintage bonus

C6 = C6.1+C6.2

Where : C6.1 = Build year : for boats whose hull has been reconstructed, the date of the reconstruction is taken. A hull is considered as “reconstructed” if at least two thirds of the frame and/or the planking has been changed.

C6.2 = Design year

Same formula is used for C6.1 and C6.2 :

Until 1955 : C6.x = year / 1000-1,95

From 1956 on : $C6.x = (0{,}00168 \times year^4 - 3{,}27015 \times year^3)10^{-10}$

12.2.7. C7 – Regatta classes

If the yacht is part of a regatta class or is a day boat or an open boat or designed according to a handicap rule (metric, sqm, skerry, jauge universelle, jauge Godinet, linear rater….) then, C7 = 0.050

ARTICLE 13 - RATING CALCULATION

$$R = \frac{L * \sqrt{S}}{6 * \sqrt[3]{FD}}$$

Where L = LWL +0,3x(LOA-LWL) in metres.

With LOA Length Over Deck in metres
LWL Length Water Line in metres

S = (Mainsail Area + Foresail area or Mizzen area or Wishbone area or mizzen sail area + Gaff topsail area) + Ax(Sforesails) + (1-A)x(Sdown wind sails) in square metres,

With A = 0,65 (the principle is that during a season 65% of the race time will be on the wind courses)
Sforesails = maxi (Genoa area or High cut jib area + Staysail area or flying jib area + Jib area + Staysail area)
Sdownwindsails = maxi (Spinnaker area or Cruising shute area or Sforesails or Sforesails + (0,6xFisherman area) or Sforesails + Mizzen Staysail area)

FD = Displacement Factor, calculated using one of the following formulas in order of applicability :

1. Long keel boats: $FD = (L^{1,55} x B^{1,12} x T_{max}^{0,43})/22$
2. Boats with LOA less than 7 metres $FD = (L^{1,32} x B^{1,18} x T_{max}^{0,45})/22$
3. Centreboard boats : $FD = (L^{1,50} x B^{1,17} x T_{max}^{0,40})/22$
4. Set in keel boats $FD = (L^{1,50} x B^{1,12} x T_{max}^{0,45})/22$
5. Regatta series (see C7) $FD = (L^{1,28} x B^{1,55} x T_{max}^{0,60})/22$
6. Other boats $FD = (L^{1,50} x B^{1,15} x T_{max}^{0,70})/22$

In these formulas, B is the max Beam and Tmax is the maximum draught (with centreboard down for centreboard boats).
The maximum draft shall be the draft reported in the design unless it has been mesured.

Hull characteristics of in-series production boats are those declared to the F.F.Voile by the designer or the builder, a list is available on the JCH website.
In case a series does not appears on this list, a declaration to JCH must be done.

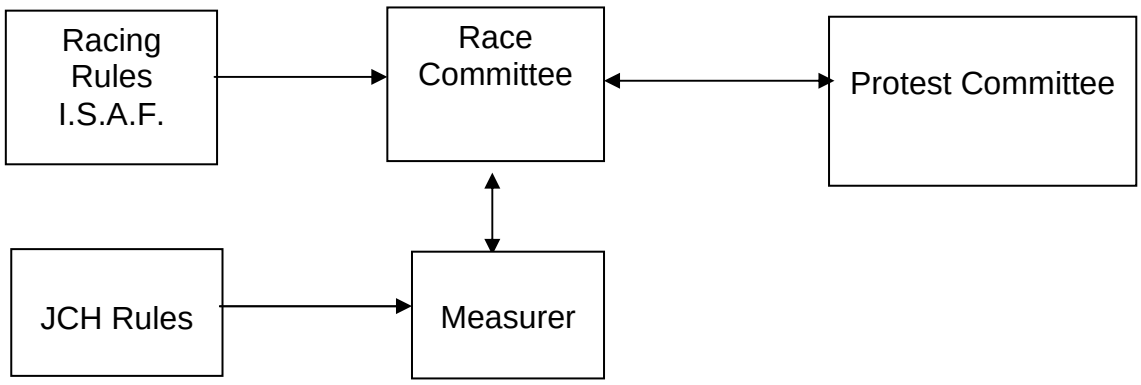
Corrected rating: Rc = R x C

Time corrected Factor: Ftc = 0,4650 + 0,1602 x √Rc

APPENDIX 1 JCH MEASURERS ROLE

JCH measurers check that the boat's certificate complies to the present rule, as regards sails, the rig, the hull and fittings. If they find any non-compliance they will require that a new certificate is issued. In all cases, whether compliant or not, a list of checked characteristics or measurements is stored in the JCH database.

When a check is performed during a regatta, a report is made for the Race Committee on any matters of non-compliance. This report may be considered if needed as a protest according to ISAF rules (RRS rule 78.3)

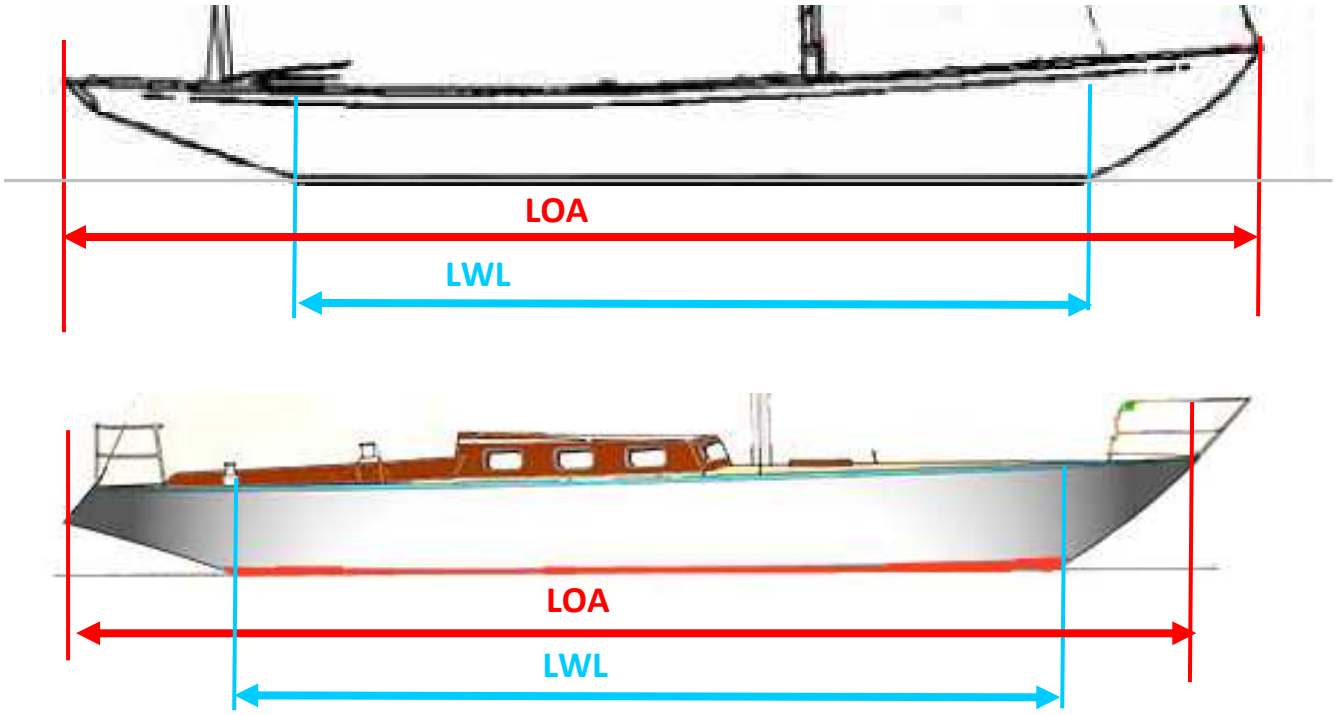


APPENDIX 2 HULL CHARACTERISTICS

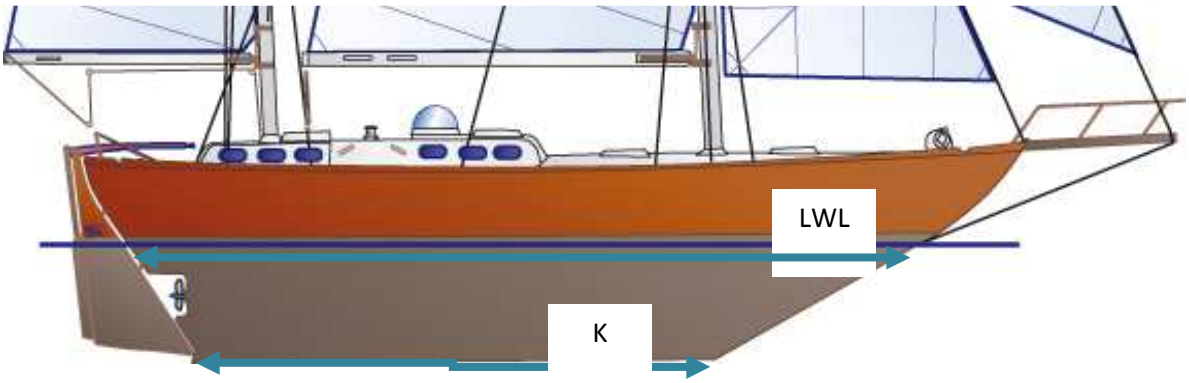
LOA, Length over all of the hull in metres : it is the maximum length of the hull, excluding pulpits and spars such as the bowsprit, bumpkin or a boom extending beyond the stern, measured between two perpendiculars.

LWL, Length on the waterline

Depending on the design of stern, measurements are illustrated below.



Long keel Definition: the ratio K/LWL is higher than 60%. See figure below. The owner must bring proof –photo or plan – than confirms this.



Example of rudder separated from the keel (here with a classic short keel, ie with garboard strake)

Photo © G Valognes pour le YCC

Draught measurement

While the boat is dried out and sitting level on the keel and properly settled in a horizontal position (verify this with a level), measure on each side of the hull the distance (A) between a horizontal ruler flush with the lowest point of the keel and the top of the bulwarks. Then, the boat being back afloat, measure on each side of the hull , at the same point as before, the distance (B) between the bulwarks and the water. Then calculate (A-B) for each side of the hull and Tmax is the average of the two results.