

JCH 2015 Rules

2015 EDITION – MARK XIX

2014 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, each having an equal chance of winning.

The seven core principles are :

- **Adaptation** to the requirements of classics : designed for a time defined fleet emphasizing fidelity to the original construction
- **Equality** : to give each boat an equal chance
- **Self certification** using straightforward measurements
- **Free** certificate
- **Universality** : designed for regattas utilising a individual race 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 evolutionary
- **Objectivity** : based on strictly measurable criteria

ARTICLE 2 - ELIGIBLE BOATS These rules apply to boats applying or 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 :

$$T_{Corrected} = T_{Real} \times F_{tc}$$

ARTICLE 4 - (NOT USED)

ARTICLE 5 - AUTHORIZED SAILS

5.1. Mainsails

A boat may carry a maximum of a regular mainsail, a "Swedish" mainsail without battens and a trysail

5.1.1. Bermudan sails

The leech round of bermudan sails is limited to:

JCH®
JAUGE CLASSIQUE
CLASSIC HANDICAP

- MGM (half width) ≤ 65% E,
- MGU (three-quarter width) ≤ 38% E,
- MGT (seven-eighth width) ≤ 22% E
- HB (top width) ≤ 4% E or 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 :

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

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

5.2.1. Definition

A headsail 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 headsails.

Area of headsails

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

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 Nylon or other similar polyamide are admitted.

5.3.2. Authorized sails

The number of downwind sails carried on board may be no more 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:

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

The 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:

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

The 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 damage to a sail which cannot be repaired during an event, the race committee may authorize the use of a new sail on the advice of the race 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 or Class Authority.
- 8.2.** The place and dimension of the letters and numbers will comply with the specification of appendix G of ISAF rules. However for smaller boats, the height of numbers and letters should not be less than 25 cm.

ARTICLE 9 - BOATS SPECIFICATION

9.1. Compliancy

Boats must comply with the specification displayed on their certificate.

9.2. Characteristic changes

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

ARTICLE 10 - USE OF ELECTRICAL EQUIPEMENT

Equipment using stored energy :

- Electronics : all electronic aids to navigation are permitted.
- Autopilot : Permitted unless the SI's state otherwise.
- Windlass : Permitted 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 racing, is forbidden. When boats are checked by a measurer, the suitability 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

Only a fixed bowsprit is permitted, 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

$$C = C1 + C2 + C2a + C3 + C4 + C5 + C6 + C7$$

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 and C2a - Hull type

A new coefficient K is used to take into account the draught : $K = (T_{max}/L)$

Kref is K reference value for each type hull type defined hereafter.

Boats receive a bonus or a penalty depending of the K value :

$$C2a = 3(K - Kref)$$

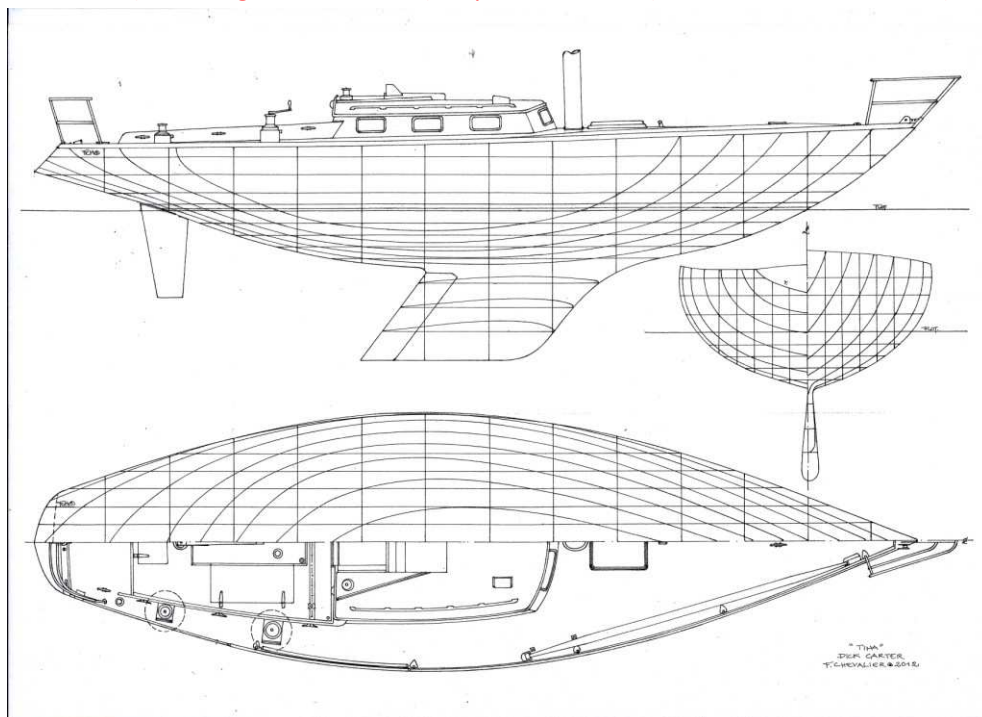
JCH®
JAUGE CLASSIQUE
CLASSIC HANDICAP

Modern hull

$C2 = 0.15$

$K_{ref} = 0.210$

Shaped hull, fin keel (with no garboard strake), separate rudder (not attached to the keel)

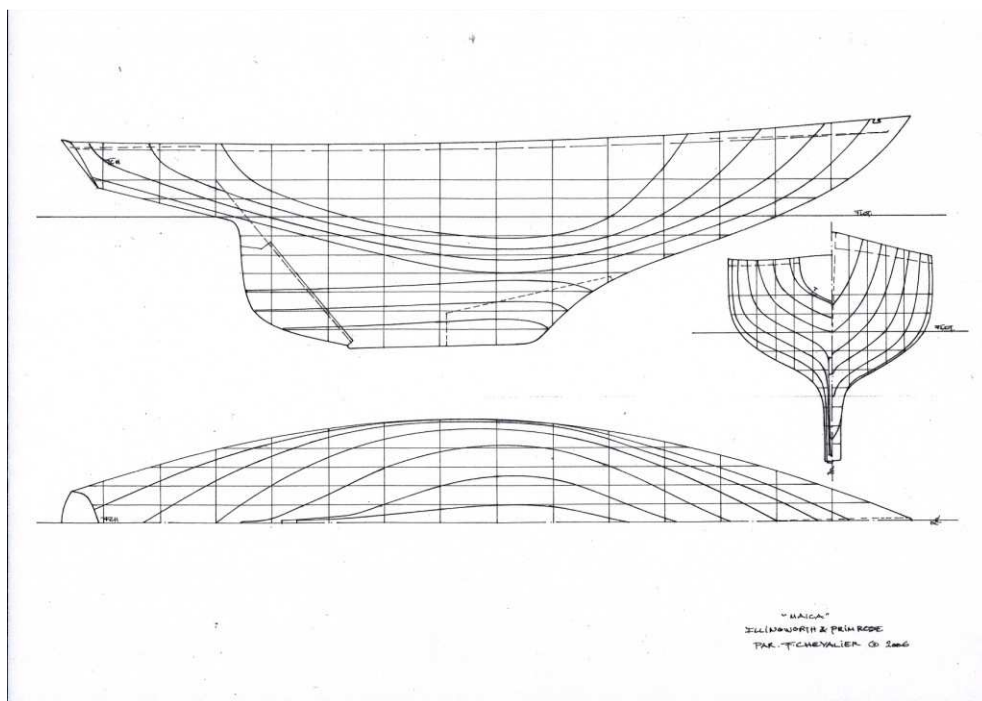


Classic hull 2

$C2 = 0.11$

$K_{ref} = 0.187$

Shaped hull, keel with garboard strake and longitudinal shape partially concave, rudder attached to the keel.



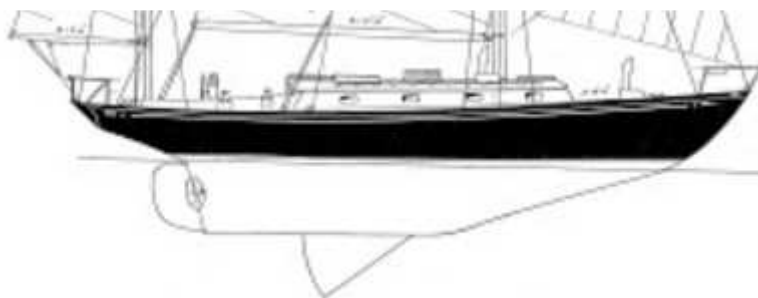
Classic hull 2 - with centerboard

$C2 = 0.07$

$K_{ref} = 0.215$

Shaped hull, shallow keel with garboard strake and centreboard, longitudinal keel shape partially concave, rudder attached to the keel.

JCH®
JAUGE CLASSIQUE
CLASSIC HANDICAP

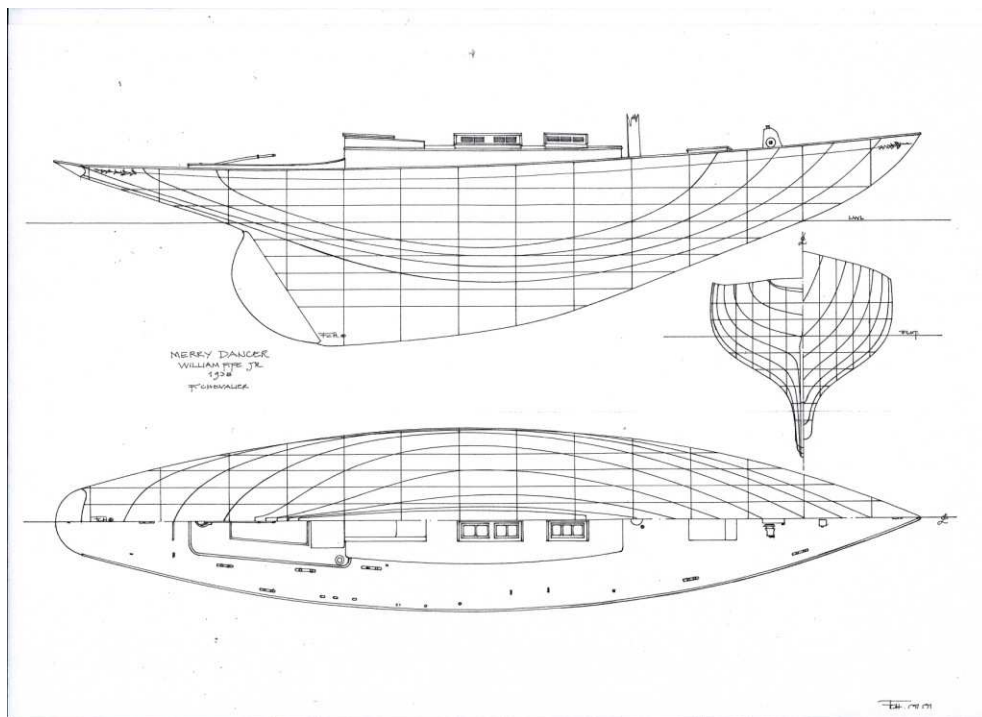


Classic hull 2 - with separate rudder $C2 = 0.13$ $Kref = 0.200$

Shaped hull, keel with garboard strake and longitudinal shape partially concave, separate rudder not attached to the keel.

Classic hull 1 $C2 = 0.05$ $Kref = 0.185$

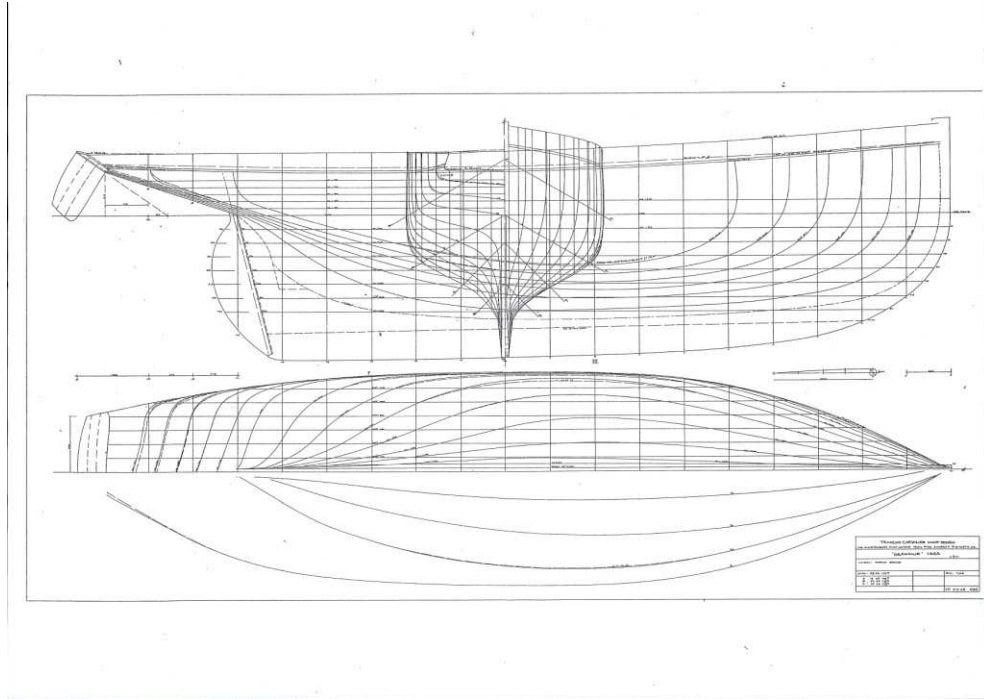
Shaped hull, keel with garboard strake and longitudinal shape continuously convex, rudder attached to the keel.



Traditional hull $C2 = -0.05$ $Kref = 0.170$

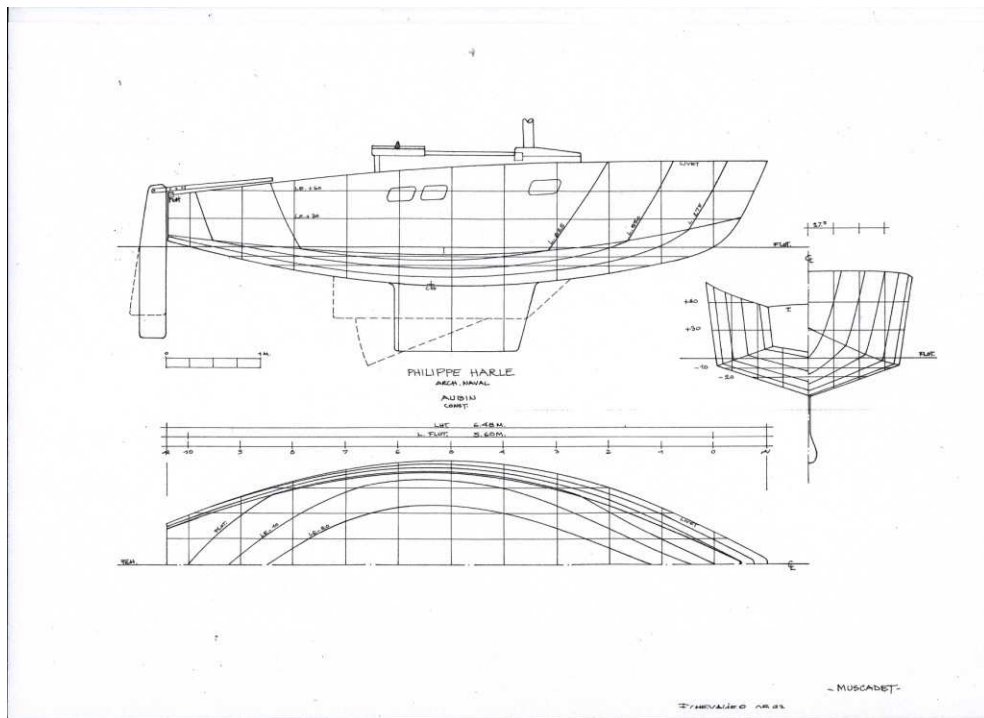
Shaped hull, keel with garboard strake and longitudinal shape continuously convex with long horizontal part, rudder attached to the keel.

JCH®
JAUGE CLASSIQUE
CLASSIC HANDICAP



Hard Chined Hull - fixed ballast - $C2 = 0.10$ $Kref = 0.225$

Hard Chined Hull - shallow keel with centerboard - $C2 = -0.05$ $Kref = 0.250$



Full centreboard - $C2 = 0.12$ $Kref = 0.185$

12.2.3. C3 - Sails and spars

Cotton sails

- 0,150

JCH®
JAUGE CLASSIQUE
CLASSIC HANDICAP

Mainsails and foresails not made of sewn assemblies of panels visibly squared woven (see note) :
0.053xL-0.15

(see definition of L in ARTICLE 13.).

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)	0,050

Note : * This equipment is clearly discouraged by JCH from being on classic yachts. However, in order to allow regata organizers flexibility on their eligibility rules, the appropriate penalties have been developed.

12.2.4. C4 - Hull material

Traditional wood	-0,030
Laminated / Moulded wood	0,020
Plywood	0,000
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:

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

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

$$\mathbf{C6 = C6.1 + C6.2}$$

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 : $C6.x = \text{year} / 1000 - 1,95$

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

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(Sheadsails) + (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)

Sheadsails = 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 Sheadsails or Sheadsails + (0,6xFisherman area) or Sheadsails + Mizzen Staysail area)

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

- | | |
|--------------------------------------|--|
| 1. Traditional hull boats: | $FD = (L^{1,55} \times B^{1,12} \times T_{max}^{0,43}) / 22$ |
| 2. Boats with LOA less than 7 metres | $FD = (L^{1,32} \times B^{1,18} \times T_{max}^{0,45}) / 22$ |
| 3. Full centreboard boats : | $FD = (L^{1,50} \times B^{1,17} \times T_{max}^{0,40}) / 22$ |
| 4. Modern hull boats | $FD = (L^{1,50} \times B^{1,12} \times T_{max}^{0,45}) / 22$ |
| 5. Regatta series (see C7) | $FD = (L^{1,28} \times B^{1,55} \times T_{max}^{0,60}) / 22$ |
| 6. Other boats | $FD = (L^{1,50} \times B^{1,15} \times T_{max}^{0,70}) / 22$ |

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 measured.

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 = 0,4536 + 0,1563 x vRc