

# INTERNATIONAL FLYING TIGER 10 M CLASS RULES

2009



The FLYING TIGER 10 METER was designed in 2005 by Robert Perry and is  
established as an  
international class in 2008

The Flying Tiger 10 M International Class Association is a state of WA non-profit  
corporation formed June 30<sup>th</sup>, 2006

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# INTRODUCTION

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*The mission of the class is to keep the Flying Tiger 10 Meter as an **affordable** strictly one-design sport boat with a focus on club level racing.*

*FLYING TIGER 10 METER hulls, hull appendages, rigs and sails are measurement/manufacturing controlled.*

*FLYING TIGER 10 METER hulls, hull appendages, and rigs shall only be supplied by HipTrader LLC (the “Manufacturer”). Equipment is required to comply with the International FLYING TIGER 10 METER Building Specification (the “Specification”) and is subject to a manufacturing control system.*

*FLYING TIGER 10 METER hulls, hull appendages, rigs and sails may, after having left the manufacturer, only be altered to the extent permitted in Section C of the Class Rules.*

*Owners and crews should be aware that compliance with rules in Section C is NOT checked as part of the certification process.*

*Rules regulating the use of equipment during a race are contained in Section C of these Class Rules, in ERS Part I and in the Racing Rules of Sailing.*

*This introduction only provides an informal background. The International FLYING TIGER 10 METER Class Rules (the “Class Rules”) proper begin on the next page.*

# PART I – ADMINISTRATION

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## Section A – General

### A.1 LANGUAGE

- A.1.1 The official language of the class is English and in case of dispute over translation the English text shall prevail.
- A.1.2 The word “shall” is mandatory and the word “may” is permissive.

### A.2 ABBREVIATIONS

- A.2.1 ISAF International Sailing Federation
- MNA ISAF Member National Authority
- ICA International Flying Tiger 10 meter Class Association
- NCA National Class Association
- RCA Regional Class Association (also defined as “Fleet”)
- ERS Equipment Rules of Sailing
- RRS Racing Rules of Sailing

### A.3 AUTHORITIES

- A.3.1 The international authority of the class is the ICA in all matters concerning the **Class Rules**.

### A.4 ADMINISTRATION OF THE CLASS

- A.4.1 The administrative functions as stated in the **Class Rules** shall be carried out by the ICA. The ICA may delegate these functions to an NCA or RCA.

### A.5 ISAF RULES

- A.5.1 The **Class Rules** shall be read in conjunction with the ERS.
- A.5.2 Except where used in headings, when a term is printed in “**bold**” the definition in the ERS applies and when a term is printed in “*italics*” the definition in the RRS applies.

### A.6 CLASS RULES VARIATIONS

- A.6.1 At Class Events – see RRS 87.1.d) – ISAF Regulation 26.5(f) applies. At all other events RRS 86 applies.

### A.7 CLASS RULES AMENDMENTS

- A.7.1 Amendments to the **Class Rules** are subject to the approval of the ICA by the procedures set forth in the Class Constitution.

### A.8 CLASS RULES INTERPRETATION

- A.8.1 Interpretation of **Class Rules** shall be made in accordance with the ISAF Regulations.

## **A.9 MEMBERSHIP DUES**

- A.9.1 Owner(s) electing to participate in class racing shall be holders of a valid Class Membership Card.
- A.9.2 ICA shall, after having received the Membership Dues from an applying member, issue a Class Membership Card to the owner.

## **A.10 SAIL NUMBERS**

- A.10.1 Sail numbers shall be the hull number as built.  
Example: the sail number for the 100th hull shall read “100” and optionally may have the Country Code position above the sail number. Exception is allowed in cases where national or regional requirements for sail numbers exist.

## **A.11 HULL CERTIFICATION**

- A.11.1 A **certificate** shall record the following information:
- (a) Class
  - (b) **Certification authority = ICA**
  - (c) Sail number issued by the **certification authority**
  - (d) Owner
  - (e) Hull identification (*See the Guide to Standard Class Rules*)
  - (f) Builder/Manufacturers details
  - (g) Date of issue of initial **certificate**
  - (h) Date of issue of **certificate**

## **A.12 INITIAL HULL CERTIFICATION**

- A.12.1 For a **certificate** to be issued to hull not previously **certified**:
- (a) **Certification control** shall be carried out by the **Manufacturer**, who shall complete the appropriate hull **certificate** for all manufactured hulls.
  - (b)

## **A.13 VALIDITY OF CERTIFICATE**

- A.13.1 A hull **certificate** becomes invalid upon:
- (a) the change to any items recorded on the hull **certificate** as required under A.11.
  - (b) withdrawal by the **certification authority**,
  - (c) the issue of a new **certificate**,

## **A.14 HULL RE-CERTIFICATION**

- A.14.1 The **certification authority** may issue a **certificate** to a previously certified **hull**:
- (a) when it is invalidated under A.13.1(a) or (b), after receipt of the old **certificate**, and **certification** fee if required.

- (b) when it is invalidated under A.13.1 (c), at its discretion.
- (c) in case of change of ownership.

## **A.15 RETENTION OF CERTIFICATION DOCUMENTATION**

A.15.1 The **certification authority** shall:

- (a) retain the original documentation upon which the current **certificate** is based.

## **Section B – Boat Eligibility**

For a **boat** to be eligible for *racing in a sanctioned class event*, it shall comply with the rules in this section.

### **B.1 CLASS RULES AND CERTIFICATION**

B.1.1 The boat shall:

- (a) be in compliance with the **Class Rules**.
- (b) have a valid hull **certificate**.

### **B.2 DISPLACEMENT CHECKS**

B.2.1 A race committee may require that a **boat** to be weighed using an ICA certified or approved load-cell. (refer to section H)

### **B.3 CLASS ASSOCIATION MARKINGS**

B.3.1 A valid Class Association Sticker shall be affixed to the hull in a conspicuous position.

# PART II – REQUIREMENTS AND LIMITATIONS

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The **crew** and the **boat** shall comply with the rules in Part II when *racing in a sanctioned class event*.

The rules in Part II are **closed Class Rules**. **Certification control** and **equipment inspection** shall be carried out in accordance with the ERS except where varied in this Part.

## Section C – Conditions for Racing

### C.1 GENERAL

#### C.1.1 RULES

- (a) RRS TBD shall not apply.
- (b) RRS TBD is/are changed as follows: ... .
- (c) The ERS Part I – Use of Equipment shall apply.
- (d) ERS TBD is/are changed as follows: ... .

### C.2 CREW

#### C.2.1 LIMITATIONS

- (a) Paid crew shall not be allowed.
- (b) A Crew may contain a maximum of one (1) ISAF Group 3 sailor.
- (c) While racing in One Design Class events, only Group 1 owners and their immediate family members may steer, except in cases approved by the Executive Committee. The above shall not apply to designated One Design Class distance races, except that an approved owner helmsman shall start the boat and steer for the first hour, and steer for approximately the last hour of the race and finish the boat.

#### C.2.2 WEIGHTS

The total weight of the **crew** dressed in swimwear ..... maximum  
.....525 kg.  
Skipper weight used is at 50% of actual – if boat has co-skippers then the lower weight of the two is used

### C.3 PERSONAL EQUIPMENT

#### C.3.1 MANDATORY

- (a) The boat shall be equipped with **personal buoyancy** for each crew member to the minimum standard EN 393: 1995 (CE 50 Newtons), or USCG Type III, or AUS PFD 1.

or

- (a) The boat shall be equipped to the minimum standard ISAF Offshore Committee Special Regulations category IV.

C.3.2 OPTIONAL

- (a)

**C.4 ADVERTISING**

C.4.1 LIMITATIONS

Mainsail area between lowest batten and boom is reserved for class sponsorship.

**C.5 PORTABLE EQUIPMENT**

C.5.1 FOR USE

(a) MANDATORY

- (1) Safety equipment ...
- (2) One hand bailer or bucket
- (3) One anchor rated for boat size and weight and with not less than 30 m of line of not less than 8 mm in diameter

(b) OPTIONAL

- (1) Electronic or mechanical timing devices
- (2) One magnetic compass
- (3) Electronic navigation devices

C.5.2 NOT FOR USE WHILE RACING

(a) MANDATORY

(b) OPTIONAL

- (1) Auxiliary propulsion unit when not racing.

**C.6 BOAT (\*MEASUREMENT TO BE VERIFIED AFTER 20 HULLS BUILT AND UPDATED)**

C.6.1 DIMENSIONS

	minimum	maximum
.....	9950* mm	9970* mm

C.6.2 WEIGHT

	minimum	maximum
The weight of the <b>boat</b> in dry condition .....	1985* kg	... 2005* kg

The weight shall be taken excluding **sails** and all portable equipment as listed in C.5.

### C.6.3 CORRECTOR WEIGHTS

- (a) **Corrector weights** (equal to 45kg) shall be permanently fastened to engine well at location on forward wall, located at a vertical dimension 1000mm or more from the bottom, for boats that do not have an auxiliary propulsion unit located in the engine well.
- (b) **Corrector weights** (equal to 45kg minus the weight of the propulsion unit including fuel & controls) shall be permanently fastened to engine well at location on forward wall, located at a vertical dimension 1000mm or more from the bottom, to compensate for an underweight auxiliary propulsion unit.
- (c) Any other corrector weight needed to compensate for manufacturing variations in order to meet displacement check shall be placed at front or rear bulkhead only.
- (d) The total weight of such all **corrector weights** shall not exceed 200 kg. See also rule B.1.1.

### C.6.4 FLOTATION

- (a) The **hull** shall be fully decked.
- (b) Fully decked **hulls** shall comply with ISO 11812 and ISO 12216.

## C.7 HULL

### C.7.1 MODIFICATIONS, MAINTENANCE AND REPAIR

- (a) The moulded gel coat below the waterline and for not more than 30mm above the waterline may be lightly abraded back to allow for the application and adhesion of anti-fouling products, for those boats to be left afloat. The abrasion of the gel coat shall be the minimum needed to ensure adhesion of the coating and shall not involve fairing of any sort. The application of paint and epoxy treatments to protect the hull, whilst allowed, shall not result performance improvement over hull as moulded.
- (b) Smoothing of anti-foul painted areas is permitted.
- (c) The moulded gel coat above the waterline may be lightly abraded back to allow for the application and adhesion of paint coatings, for cosmetics or protection. The abrasion of the gel coat shall be the minimum needed to ensure adhesion of the coating and shall not involve fairing of any sort. The application of paint, whilst allowed, shall not result performance improvement over hull as moulded.
- (d) Any repair to damaged hull areas shall be documented and may be subjected to inspection by the class association. Repair shall restore hull to original as moulded profile within tolerance of +/- 5 mm.

### C.7.2 FITTINGS

- (a) THROUGH-HULLS
  - (1) THROUGH-HULLS may be installed for transducers, kelp window and drains.

C.7.3 LIMITATIONS

(a)

**C.8 HULL APPENDAGES**

C.8.1 MODIFICATIONS, MAINTENANCE AND REPAIR

- (a) The keel strut & the keel bulb may be lightly abraded back to allow for the application and adhesion of anti-fouling products, for those boats to be left afloat. The abrasion of the gel coat shall be the minimum needed to ensure adhesion of the coating and shall not involve fairing of any sort. The application of paint and epoxy treatments to protect the keel strut & bulb, whilst allowed, shall not result performance improvement over keel assembly as manufactured.
- (b) Smoothing of anti-foul painted areas on keel & bulb is permitted.
- (c) No modification of the removable rudder blade is permitted except for (d).
- (d) Any repair to damaged keel or rudder shall be documented and may be subjected to inspection by the class association. Repair shall restore keel or rudder to original as manufactured profile within tolerance of +/- 2 mm.
- (e) Sharpening of kelp cutter blade or replacement using factory replacement blade is permitted.
- (f) Filling and smoothing of the gap between the engine well flap and the hull is prohibited.

C.8.2 FITTINGS

- (a) Kelp cutter is an optional fitting

C.8.3 LIMITATIONS

- (a) Only one rudder blade shall be used in a class race of any duration although a spare rudder blade may be carried aboard.
- (b) Exception for (a) & (b) applies when hull appendage is lost or damaged beyond repair.

C.8.4 KEEL

(a) DIMENSIONS

	minimum	maximum
.....	TBD* mm	TBD* mm

(b) USE

- (1) The **keel** shall be fixed down
- (2) The keel may be lifted temporarily only if boat is aground.

C.8.5 RUDDER

(a) DIMENSIONS

	minimum	maximum
.....	TBD* mm	TBD* mm

Profile per factory templates

(b) USE

(1) The rudder blade may be raised up while under way to clear kelp or reduce drag.

**C.9 RIG**

**C.9.1 MODIFICATIONS, MAINTENANCE AND REPAIR**

(a) No modifications to the mast, spreaders, boom or bowsprit will be permitted.

**C.9.2 FITTINGS**

(a) USE

(1) Standard factory rig hardware shall be used; a snap shackle or other securing device may be attached to a stanchion base or shroud to hold the spinnaker halyard while the spinnaker is not in use.

(2) Halyard locks are not permitted

**C.9.3 LIMITATIONS**

(a)

**C.9.4 MAST**

(a) DIMENSIONS

	minimum	maximum
Intersection of the fore side of the <b>spar</b> and upper surface of the deck to ...	TBD* mm	TBD* mm

(b) USE

(1) The **spar** shall be stepped in the mast step in such a way that the heel is not be capable of moving more than TBD mm.

(2)

**C.9.5 BOOM**

(a) DIMENSIONS

	minimum	maximum
<b>Limit mark width</b> .....	10 mm	
<b>Boom point distance</b> .....		4540 mm

(b) USE

(1) The intersection of the aft edge of the mast **spar** and the top of the boom **spar**, each extended as necessary, shall not be below the upper edge of the mast **lower limit mark** when the boom **spar** is at 90° to the mast **spar**.

(2)

**C.9.6 RETRACTING BOWSPRIT**

(a) USE

(1) When not in the process of setting, flying or taking down the spinnaker, the bowsprit shall be fully retracted. Approaching a

windward mark without the spinnaker set, the bowsprit shall not be extended until the bow of the boat has passed the mark. This is defined by extending to windward, the line formed by the windward and leeward marks. An offset mark is not considered as a windward mark in this case. The bowsprit shall be retracted at the first reasonable opportunity after taking the spinnaker down.

#### C.9.7 STANDING RIGGING

##### (a) DIMENSIONS

	minimum	maximum
<b>Foretriangle base</b> .....	3686 mm	3696 mm
<b>Foretriangle/Forestay height</b> .....	11964 mm	11974 mm

##### (b) USE

(1) While racing, the standing rigging (other than the back stay) and the location of the mast butt shall not be adjusted, provided that this rule shall not apply to any race with a scheduled length of 15 nautical miles or more.

(c) Standard factory sizing and type standing rigging hardware shall be used;

#### C.9.8 RUNNING RIGGING

##### (a) USE

- (1) The mainsail sheet shall be led through 6:1 gross /12:1 fine purchase block system.
- (2) The headsail sheet shall be led through adjustable jib lead and on deck cheek block to either primary winch.
- (3) The spinnaker sheet shall be led through stern sheet block and optionally through on deck deflator block to any winch.
- (4) The spinnaker tack line shall be led through tack block mounted on tip of the bowsprit and fairleads to line clutch .
- (5) The bowsprit extension line shall be led inside the cabin .
- (6) The vang control line location is not restricted.
- (7) The mainsail clew outhaul shall be led inside the boom to exit below gooseneck.
- (8) The mainsail Cunningham control shall be led below the gooseneck
- (9) Shackles (no limit on material) are permitted for attaching sheets, halyards, or tack line to sails.
- (10) Main halyard is led to cabin top line clutch and winch.

### C.10 SAILS

#### C.10.1 MODIFICATIONS, MAINTENANCE AND REPAIR

(a) **Sails** shall comply with these **Class Rules**.

(b) Routine maintenance such as cleaning, repairing of damaged or chafed areas is permitted without re-measurement and re-**certification**.

- (c) Repairs of damaged sail requiring replacement of material exceeding 10% of original sail area will require re-measurement and re-certification.
- (d) Re-certification shall only be granted for complete destruction of the most recently registered sail by type (jib, heavy jib, main or spinnaker) upon submission of sail tag and proof of destruction to class measurer.

#### C.10.2 LIMITATIONS

- (a) Not more than 1 class mainsail, 1 class jib, 1 heavy class jib, and 2 class spinnakers shall be carried aboard.
- (b) Additional acquisition of up to three (3) class sails are allowed during the first 12 months of new boat purchase or purchase of a previously owned boat. One heavy class jib shall be excluded from this sail purchase restriction when purchased during this 12 month initial period and shall be included thereafter as depicted in section C.10.2(c). This is additional to the class sails already included with the boat purchase. However, unused class sail quota is not transferable.
- (c) Sail acquisition shall be limited to no more than 2 sails in the subsequent 12 months and no more than 3 sails in the 12 months after that. Sail acquisition limit (2-3-2...) repeats thereafter on the anniversary date of boat purchase.
- (d) Storm sails (<75%LP) are excluded from sail count.
- (e) Storm spinnaker (<50% sail area of class spinnaker with minimum 40 g/m<sup>2</sup> Nylon) permitted for race of distance > 50 miles is excluded from sail count.

#### C.10.3 MAINSAIL

##### (a) IDENTIFICATION

The national letters and sail numbers shall comply with the RRS except where prescribed otherwise in these **Class Rules**.

*(Not to be included here if this is covered in Section G and thereby checked in connection with certification control)*

##### (b) USE

- (1) The **sail** shall be hoisted on a halyard. The arrangement shall permit hoisting and lowering of the **sail** at sea.
- (2) The highest visible point of the **sail**, projected at 90° to the mast **spar**, shall not be set above the lower edge of the mast **upper limit mark**. The intersection of the **leech** and the top of the boom **spar**, each extended as necessary, shall not be behind the fore side of the boom **outer limit mark**.
- (3) **Luff** bolt ropes or slides shall be in the **spar** grooves or tracks.
- (4)

#### C.10.4 JIB

##### (a) IDENTIFICATION

The sail number shall be optional.

## C.10.6

### C.10.6 SPINNAKER

#### (a) IDENTIFICATION

The sail numbers shall comply with the RRS except where prescribed otherwise in these **Class Rules**.

*(Not to be included here if this is covered in Section G and thereby checked at certification control.)*

#### (b) USE

## Section D – Hull

### D.1 PARTS

#### D.1.1 MANDATORY

- (a) Hull shell
- (b) Deck
- (c) Bulkheads
- (d) Thwarts

#### D.1.2 OPTIONAL

- (a) Cushions
- (b) Stove
- (c) Ice chest
- (d) Head

### D.2 GENERAL

#### D.2.1 RULES

- (a) The **hull** shall comply with the **Class Rules** in force at the time of initial **certification**.

#### D.2.2 CERTIFICATION

See Rule A.13.

#### D.2.3 MODIFICATIONS, MAINTENANCE AND REPAIR

- (a) The hull shell, deck, bulkheads, keel box, stringers, thwarts, cockpit sole, galley, cabin sole and engine well... shall not be altered in any way except as permitted by these **Class Rules**.
- (b) Holes not bigger than necessary for the installation of fittings and passage of lines may be made in the above named structures.
- (c) Routine maintenance such as painting, repairing of superficial damage and polishing is permitted without re-measurement and re-**certification**.

- (d) If any hull moulding is repaired in any other way than described in D.2.3(c), an **official measurer** shall verify on the **certificate** that the external shape is the same as before the repair and that no substantial stiffness, or other, advantage has been gained as a result of the repair. The **official measurer** shall also describe the details of the repair on the **certificate**.

#### D.2.4 DEFINITIONS

- (a)

#### D.2.5 IDENTIFICATION

- (a) The hull shall carry the Manufacturer Hull Identification plaque permanently placed on transom.

#### D.2.6 BUILDERS

- (a) The hull shall be built by a builder licensed by the Manufacturer.
- (b) All moulds shall be approved by the Manufacturer.
- (c)

### D.3 HULL SHELL

#### D.3.1 MATERIALS

- (a) The hull shell shall be built per specifications defined by the Manufacturer.

#### D.3.2 CONSTRUCTION

- (a) Vacuum bagged sandwich core construction.

### D.4 DECK

#### D.4.1 MATERIALS

- (a) The deck shall be built of materials per the Specifications defined by the Manufacturer.

#### D.4.2 CONSTRUCTION

- (a) Vacuum bagged sandwich core construction.

### D.7 BULKHEADS

#### D.7.1 MATERIALS

- (a) per the Specifications defined by the Manufacturer

#### D.7.2 CONSTRUCTION

- (a) per the Specification as defined by the Manufacturer

## **D.8 THWARTS**

### **D.8.1 MATERIALS**

(a) per specifications defined by the Manufacturer

### **D.8.2 CONSTRUCTION**

(a) per the Specification as defined by the Manufacturer

## **D.9 ASSEMBLED HULL**

### **D.9.1 FITTINGS**

#### **(a) MANDATORY**

The following standard factory fittings or equivalent shall be positioned in accordance with the measurement diagram:

- (1) Stemhead fitting
- (2) Forestay fitting
- (3) Shroud plates
- (4) Headsail tracks
- (5) Mainsheet track with one traveller
- (6) Mast step
- (7) 2 halyard winches
- (8) Mainsail sheet blocks, fairleads and cleats
- (9) Mainsail Cunningham blocks, fairleads and cleats
- (10) 2 headsail sheet winches
- (11) Headsail sheet blocks, fairleads
- (12) Headsail furler, fairleads and cleats – with parts (e.g. head swivel) in operational positions
- (13) Spinnaker sheet fairleads, blocks, pad eyes and cleats
- (14) Mid-ship padeyes
- (15) Backstay fitting

#### **(b) LIMITATION**

- (1) Standard factory deck hardware or equivalent per the Specifications shall be used;
- (2) Mainsheet, traveller, Cunningham and outhaul systems shall not be altered from factory configuration hardware and power ratio.
- (3) Addition of non-standard factory deck hardware is permitted, however, these shall not be used in sanctioned events unless defined in the following section (c).

#### **(c) OPTIONAL**

- (1) Additional cam cleats and/or blocks may be used for spinnaker twings and jib barber haulers.
- (2) Tiller lock
- (3) Stowage clips for, sail bags and other equipment
- (4) Magnetic compasses

- (5) Electronic instruments & displays
- (6) Deck clips for cockpit cover and/or tent
- (7) Cam cleats may be added for halyard winches
- (8) Upgrade cam cleat for sprit extension line and relocate to stiffer part of the cabin structure
- (9) Upgrade sprit extension line tackle to 3:1
- (10) Cleats for securing furling line and floating blocks for maintain tension of furling line
- (11) Blocks for mainsheet fine-tune to not exceed 4:1 purchase
- (12) Optional furler with luff foil (torque tube) – specific model allowed is Harken MkIV unit 0. Removable drum & upper swivel must be in place for class racing.

#### D.9.2 DIMENSIONS

- (a) Per the Specifications defined by the Manufacturer.

## Section E – Hull Appendages

### E.1 PARTS

#### E.1.1 MANDATORY

- (a) **Keel**
- (b) **Rudder**

#### E.1.2 OPTIONAL

- (a)
- (b)

### E.2 GENERAL

#### E.2.1 RULES

- (a) **Hull appendages** shall comply with the **Class Rules** in force at the time of **certification**.

*(In the case of a keel it is probably preferably to refer to the Class Rules in force at the time of initial certification of the hull – see E.3.1(a) )*

E.2.2 MODIFICATIONS, MAINTENANCE AND REPAIR

- (a) Hull appendages shall not be altered in any way except as expressly permitted by the Class Rules.
- (b) Routine maintenance is permitted without re-measurement and re-certification.

E.2.3 DEFINITIONS

- (a)

E.2.4 MANUFACTURERS

- (a) The **hull appendages** shall be made by the Manufacturer or its licensee.

**E.3 KEEL**

E.3.1 RULES

- (a) The **keel** shall comply with the **Class Rules** in force at the time of the **certification** of the **hull**.

E.3.7 FITTINGS

- (a) MANDATORY
  - (1)
- (b) OPTIONAL
  - (1)

E.3.8 DIMENSIONS

	minimum	maximum
.....	TBD* mm	TBD* mm

E.3.9 WEIGHTS

	minimum	maximum
.....	850 kg	870 kg

**E.4 RUDDER BLADE, RUDDER STOCK AND TILLER**

E.4.1 RULES

- (a) The **rudder** blade shall comply with the **Class Rules** in force at the time of **certification**.
- (b)

E.4.3 DEFINITIONS

- (a)

E.4.4 MANUFACTURERS

- (a)

E.4.5 MATERIALS

E.4.6 CONSTRUCTION

E.4.7 FITTINGS

(a) MANDATORY

(1) Rudder cassette as manufactured by builder

(b) OPTIONAL

(1) Tiller is open

(2) Tiller extension is open

E.4.8 DIMENSIONS

minimum maximum

..... TBD\* mm TBD\* mm

E.4.9 WEIGHTS

minimum maximum

..... TBD\* kg ... TBD\* kg

## Section F – Rig

**F.1 PARTS**

F.1.1 MANDATORY

(a) **Mast**

(b) **Boom**

(c) Standing **rigging**

(d) Running **rigging**

(e) Bowsprit

F.1.2 OPTIONAL

(a)

**F.2 GENERAL**

F.2.1 RULES

(a) The **spars** and their fittings shall comply with the **Class Rules** in force at the time of **certification** of the **spar**.

(b) The standing and running **rigging** shall comply with the **Class Rules**.

F.2.2 MODIFICATIONS, MAINTENANCE AND REPAIR

(a) **Spars** shall not be altered in any way except as permitted by these **Class Rules**.

(b) Routine maintenance such as recoating UV protective layer is permitted without re-measurement and re-**certification**.

F.2.3 RECERTIFICATION

(a) The **official measurer** shall **certify spars** and shall update, sign and date the hull **certificate** for the boat.

(b) No **certification** of standing and running **rigging** is required.

F.2.4 DEFINITIONS

(a)

F.2.5 MANUFACTURER

(a) Licensed by the Manufacturer

**F.3 MAST**

F.3.1 MATERIALS

(a) The **spar** shall be of carbon fiber composite

F.3.2 CONSTRUCTION

(a) The **spar** shall include an attached sail groove or track.

F.3.3 FITTINGS

(a) MANDATORY

1. Mast head fitting
2. Shroud tangs
3. Two set of fixed spreaders
4. Mainsail halyard sheave box
5. Headsail halyard sheave box
6. Spinnaker halyard sheave box
7. Backstay flicker
8. Gooseneck
9. Vang

(b) OPTIONAL

- (1) Mechanical wind indicator
- (2) Instrument bracket
- (3) Solid vang

F.3.5 DIMENSIONS

	minimum	maximum
<b>Mast length</b> .....	TBD* mm	TBD* mm
<b>Mast spar deflection</b> when loaded with ... kg at ... mm from the mast datum point as defined in F.2.3:		
<b>fore-and-aft</b> .....	TBD* mm	TBD* mm
<b>transverse</b> .....	TBD* mm	TBD* mm
<b>Mast spar cross section</b> between ... and ... ;		
<b>fore-and-aft</b> .....	TBD* mm	TBD* mm
<b>transverse</b> .....	TBD* mm	TBD* mm

<b>Mast limit mark width</b> .....	TBD* mm	
<b>Lower point height</b> .....	TBD* mm	
<i>(Not necessary if the lower point is the mast datum point.)</i>		
<b>Upper point height</b> .....		TBD* mm
<b>Lower point to upper point</b> .....		TBD* mm
<b>Forestay height</b> .....	TBD* mm	TBD* mm
<b>Shroud height</b> .....	TBD* mm	TBD* mm
<b>Spinnaker hoist height</b> .....	TBD* mm	TBD* mm
<b>Spreader;</b>		
<b>length</b> .....	TBD* mm	TBD* mm
<b>height</b> .....	TBD* mm	TBD* mm

#### F.3.16 WEIGHTS

	minimum	maximum
<b>Mast weight</b> .....	TBD* .....	TBD* kg

### F.4 BOOM

#### F.4.1 MATERIALS

(a) The **spar** shall be of carbon fiber composite

#### F.4.2 CONSTRUCTION

(a)

#### F.4.3 FITTINGS

(a) MANDATORY

- (1) One Triple mainsheet blocks with attachments
- (2) Clew outhaul blocks and attachments
- (3) Vang fitting
- (4) Gooseneck attachment
- (5) Reefing hardware

(b) OPTIONAL

(1)

#### F.4.5 DIMENSIONS

	minimum	maximum
<b>Boom spar curvature</b> .....		TBD* mm
<i>Or</i>		
<b>Boom spar curvature</b> at ... mm from the <b>outer limit mark</b> .....		TBD* mm
<b>Boom spar deflection</b> when loaded with ... kg at ... ;		
<b>vertical</b> .....	TBD* mm	
<b>transverse</b> .....	TBD* mm	
<b>Boom spar cross section</b> between ... and ... ;		

	<b>vertical</b> .....	TBD* mm	TBD* mm
	<b>transverse</b> .....	TBD* mm	TBD* mm
F.4.16	WEIGHTS		
		minimum	maximum
	<b>Boom weight</b> .....	TBD* kg	

## F.6 BOWSPRIT

### F.6.1 MANUFACTURER

(a)

### F.6.2 MATERIALS

(a) The **spar** shall be of carbon fiber composite

### F.6.3 CONSTRUCTION

(a)

### F.6.4 FITTINGS

(a) Fittings are defined per the Deck Specifications.

(b) A batten or similar device no longer than 150mm can be affixed to the tip of the bowsprit to prevent spinnaker sheets being over-run by the hull.

### F.6.6 DIMENSIONS

minimum      maximum

**Bowsprit spar cross section** between

... and ... .. TBD\* mm      TBD\* mm

**Bowsprit point distance** .....

TBD\* mm      TBD\* mm

### F.6.7 WEIGHTS

minimum      maximum

**Bowsprit weight** .....

TBD\* kg

## F.7 STANDING RIGGING

### F.7.1 MATERIALS

(a) The standing **rigging** shall be of stainless steel or equivalent per the Specifications.

(b) Backstay material is open.

### F.7.2 CONSTRUCTION

(a) MANDATORY

(1) A forestay of 6.35mm 1x19 wire (Dyform or rod not permitted)

(2) Shrouds of 6.35mm 1x19 wire (Dyform or rod not permitted)

(b) OPTIONAL

(1) 5.55mm or 6mm Dyform wire forestay is permitted only in conjunction with optional Harken furler installation

### F.7.3 FITTINGS

#### (a) MANDATORY

- (1) Forestay rigging link
- (2) Shroud rigging screw
- (3) Backstay ...
- (4)

#### (b) OPTIONAL

- (1)

### F.7.4 DIMENSIONS

	minimum	maximum
Forestay length from ... to ... .....	12500 mm	12650 mm

### F.7.5 WEIGHTS

	minimum	maximum
.....	TBD* kg	... TBD* kg

## F.8 RUNNING RIGGING

### F.8.1 MATERIALS

- (a) Materials are open.

### F.8.2 CONSTRUCTION

#### (a) MANDATORY

1. Mainsail halyard
2. Mainsail sheet
3. Kicking strap or Vang
4. Headsail halyard (one only)
5. Headsail sheets
6. Spinnaker halyard (one only)
7. Spinnaker sheet – can be spliced into “Y” splice configuration
8. Bowsprit setting lines
9. Mainsail Cunningham line
10. Mainsail outhaul

#### (b) OPTIONAL

- (1) Single line headsail Barber haulers capable of modifying the sheeting angle in outboard direction only
- (2) Single line spinnaker Barber haulers capable of modifying the sheeting angle in one direction only
- (3) Reefing lines
- (4) Sprit retraction line or elastic cord
- (5) Sprit retraction limit line

F.8.3 FITTINGS

(a) MANDATORY

(1)

(b) OPTIONAL

- (1) One block or eye in each headsail Barber hauler to run on headsail sheet
- (2) One block or eye in each spinnaker Barber hauler to run on spinnaker sheet or guy
- (3) 2:1 main halyard block and attachment

F.8.4 DIMENSIONS

	minimum	maximum
.....	TBD* mm	TBD* mm

F.8.5 WEIGHTS

	minimum	maximum
.....	TBD* kg	... TBD* kg

## Section G – Sails

### G.1 PARTS

#### G.1.1 MANDATORY

- (a) Mainsail
- (b) Headsail
- (c) Spinnaker

#### G.1.2 OPTIONAL

- (a) Spare spinnaker
- (b) Heavy jib
- (c) Storm Jib of size less than 75% of LP

### G.2 GENERAL

#### G.2.1 RULES

- (a) **Sails** shall comply with the **Class Rules** in force at the time of sail **certification**.

#### G.2.2 CERTIFICATION

- (a) The **sailmaker** shall **certify** mainsails and headsails in the **tack** and spinnakers in the **tack** and shall sign and date the **certification mark**.
- (b) ICA may appoint one or more agents of a sailmaker to measure and **certify sails** produced by that sailmaker in accordance with the ICA In-house Certification Guidelines.

### G.2.3 DEFINITIONS

(a)

### G.2.4 SAILMAKER (REFER TO SECTION J)

(a) No licence is required.

(b) The sail weight in grams of **the sail** without battens shall be indelibly marked near the **tack** by the sailmaker together with the date and his signature or stamp.

## G.3 MAINSAIL

### G.3.1 IDENTIFICATION

(a) The class insignia shall conform with the dimensions and requirements as detailed in the diagram contained in Section J and be placed in accordance with the diagram contained in Section J .

(b) Insignia on both sides – starboard side higher than port side

### G.3.2 MATERIALS (REFER TO SECTION J)

(a) The **ply** fibres shall consist of one or more of the following materials: polyester, pentex aramids . Aramid is marketed under trade names such as Kevlar and Twaron.

(b) **Stiffening** shall consist of Headboards & Battens

(1) Headboards – Headboard materials include aluminium, glass fiber and carbon fiber composites.

(2) Battens – maximum of 5, of which a minimum of 3 shall be full length. Battens shall be made of glass fiber composites.

(c) **Sail reinforcement** shall consist of **woven ply** and/or **laminated ply** made from one or more of the following materials: polyester, aramids, or carbon fiber. Aramid is marketed under trade names such as Kevlar and Twaron.

### G.3.3 CONSTRUCTION

(a) The construction shall be: **soft sail**.

(b) The **body of the sail** shall consist of **woven ply** and/or **laminated ply** made from one or more of the following materials: polyester, pentex or, aramids. Aramid is marketed under trade names such as Kevlar and Twaron.

(c) The **sail** shall have 5 batten **pockets** in the **leech**.

(d) The sail shall be constructed so that it can be reefed by means of slab reefing at least at one point adjacent to the **luff**, and at least at one point, adjacent to the **leech**.

(e) The following are permitted: Stitching, glues, tapes, sail slide/sail slugs, corner eyes, headboard with fixings, Cunningham eye or pulley, **batten pocket & spreader patches**, batten pocket elastic, batten pocket end caps, mast and boom slides, leech line with cleat, two **windows**, tell tales, sail shape indicator stripes and items as permitted or prescribed by other applicable *rules*.

(f) The **leech** shall not extend aft of straight lines between:

- (1) the **aft head point** and the intersection of the **leech** and the upper edge of the nearest **batten pocket**,
  - (2) the intersection of the **leech** and the lower edge of a **batten pocket** and the intersection of the **leech** and the upper edge of an adjacent **batten pocket** below,
  - (3) the **clew point** and the intersection of the **leech** and the lower edge of the nearest **batten pocket**.
- (g) The sail without battens shall meet minimum weight \_\_\_\_\_ grams

#### G.3.4 DIMENSIONS

	minimum	maximum
<b>Leech length</b> .....	13000 mm	13070mm
<b>Quarter width</b> .....	3945 mm	... 4020 mm
<b>Half width*</b> .....	3150 mm	... 3225 mm
<b>Three-quarter width</b> .....	1940 mm	.. 2015 mm
<b>Upper width at upper leech point 87.5% ht</b>		
<b>head point</b> .....	1093mm	1168 ... mm
<b>Top width</b> .....		150 mm
<b>View Window area</b> .....		1.0 m <sup>2</sup>
<b>Window to sail edge</b> .....	not less than 400 mm	
<b>Spreader Window area</b> .....	4 m <sup>2</sup>	
<b>Window to sail edge</b> .....	not less than 400 mm	
<b>Head point</b> to intersection of <b>leech</b> and centreline of uppermost <b>batten pocket</b> .....	1200 mm	
<b>Head point</b> to intersection of <b>luff</b> and centreline of uppermost <b>batten pocket</b> .....	1010 mm	
<b>Clew point</b> to intersection of <b>leech</b> and centreline of lowermost <b>batten pocket</b> .....	2667 mm	
<b>Reef point</b> to Tack .....	not less than 1200 mm	

#### G.4 UPWIND HEADSAIL 1

##### G.4.1 MATERIALS (REFER TO SECTION J)

- (a) The **ply** fibres shall consist of one or more of the following materials: polyester, pentex, aramids . Aramid is marketed under trade names such as Kevlar and Twaron.
- (b) **Stiffening** shall consist of Battens  
Battens – maximum of 3. Battens shall be made of glass fiber composites.
- (c) **Sail reinforcement** shall consist of **woven ply** and/or **laminated ply** made from one or more of the following materials: polyester, aramids, or carbon fiber. Aramid is marketed under trade names such as Kevlar and Twaron

G.4.2 CONSTRUCTION

- (a) The construction shall be: soft sail
- (b) The **body of the sail** shall consist of **woven ply** and/or **laminated ply** made from one or more of the following materials: polyester, pentex or, aramids. Aramid is marketed under trade names such as Kevlar and Twaron.
- (c) The headsail shall have a maximum of 3 **batten pockets** in the **leech** at equally divided positions along the leech.
- (d) The **leech** shall not extend beyond a straight line from the aft **head point** to the **clew point**.
- (e) The following are permitted: Stitching, glues, tapes, corner eyes, hanks, batten pocket elastic, **batten pocket patches**, batten pocket end caps, leech line with cleat, one **window**, tell tales, sail shape indicator stripes and items as permitted or prescribed by other applicable *rules*.
- (f) The sail without battens shall meet minimum weight \_\_\_\_\_ grams

G.4.3 DIMENSIONS

	minimum	maximum
<b>Luff length</b> .....	11550 mm	11850 mm
<b>Leech length</b> .....	... not spec'd	
<b>L.P. length</b> .....	3810 mm	.. 3885 mm
<b>Top width</b> .....		65 mm
<b>Mid-Girth</b> —Shall be measured between the midpoints of luff and leech and shall not be more than 50% of the foot length. Intermediated girths at 25% and 75% (and so on) may not exceed values similarly proportioned to their distance from the head.		
<b>Window area</b> .....		0.7 m <sup>2</sup>
<b>Window to sail edge</b> .....	not less than 900 mm	
<b>Tell Tale window(s) area each</b> .....		0.12 m <sup>2</sup>
<b>Batten length</b> :.....	not to exceed 1250 mm	

G.5 UPWIND HEADSAIL 2 (HEAVY JIB)

G.5.1 MATERIALS

- (a) The **ply** fibres shall consist of one or more of the following materials: polyester, pentex, aramids . Aramid is marketed under trade names such as Kevlar and Twaron.
- (b) **Stiffening** shall consist of Battens  
Battens – maximum of 3. Battens shall be made of glass fiber composites.
- (c) **Sail reinforcement** shall consist of **woven ply** and/or **laminated ply** made from one or more of the following materials: polyester, aramids, or carbon fiber. Aramid is marketed under trade names such as Kevlar and Twaron

G.5.2 CONSTRUCTION

- (a) The construction shall be: soft sail

- (b) The **body of the sail** shall consist of **woven ply** and/or **laminated ply** made from one or more of the following materials: polyester, pentex or, aramids. Aramid is marketed under trade names such as Kevlar and Twaron.
- (c) The headsail shall have a maximum of 3 **batten pockets** in the **leech** at equally divided positions along the leech.
- (d) The **leech** shall not extend beyond a straight line from the aft **head point** to the **clew point**.
- (e) The following are permitted: Stitching, glues, tapes, corner eyes, hanks, batten pocket elastic, **batten pocket patches**, batten pocket end caps, leech line with cleat, one **window**, tell tales, sail shape indicator stripes and items as permitted or prescribed by other applicable *rules*.
- (f) The sail without battens shall meet minimum weight \_\_\_\_\_ grams

### G.5.3 DIMENSIONS

	minimum	maximum
<b>Luff length</b> .....	10395 mm	10665 mm
<b>Leech length</b> .....	... not spec'd	
<b>L.P. length</b> .....	3390 mm	.. 3458 mm
<b>Top width</b> .....		... not spec'd

**Mid-Girth**—Shall be measured between the midpoints of luff and leech and shall not be more than 50% of the foot length. Intermediated girths at 25% and 75% (and so on) may not exceed values similarly proportioned to their distance from the head.

<b>Window area</b> .....	0.7 m <sup>2</sup>
<b>Window to sail edge</b> .....	not less than 900 mm
<b>Tell Tale window(s) area each</b> .....	0.12 m <sup>2</sup>
<b>Batten length:</b> .....	not to exceed 1250 mm

## G.6 SPINNAKER

### G.6.1 MATERIALS (REFER TO SECTION J)

- (a) The **ply** fibres shall consist of nylon
- (b) **Sail reinforcement** shall consist of woven or mylar materials

### G.6.2 CONSTRUCTION

- (a) The construction shall be: **soft sail, single ply sail**.
- (b) The **body of the sail** shall consist of the same **woven ply** throughout.
- (c) The following are permitted: Stitching, glues, tapes, corner eyes, dousing patch, tell tales and items as permitted or prescribed by other applicable *rules*.

G.6.3 DIMENSIONS

	minimum	maximum
<b>Luff length</b> .....	15100 mm	15700mm
<b>Centerline length</b> .....		16400 mm
<b>Foot length</b> .....	8100 mm	8400 mm
<b>Half width</b> .....	8160mm	8460 mm
Weight of <b>ply</b> of the <b>body of the sail</b> .....	40 g/m <sup>2</sup>	

## PART III – APPENDICES

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The rules in Part III are **closed Class Rules**. Measurement shall be carried out in accordance with the ERS except where varied in this Part.

### Section H

#### H.1

##### **Procedure for Equalizing Boat Weight For Class Racing**

A. Measurement with loadcell. Boat shall include only the equipment and other items specified in Paragraph B for its measurement.

B. Equipment and other Items Required for Measurement. All equipment and other items listed as mandatory are required to be on the boat. If any optional items are permanently installed on the boat, such items may be on the boat for measurement trim, and may not be removed from the locations where they are installed.

Optional:

1. Any optional items or standard factory installations not required to be on board by the Class Rules.
2. Optional sailing gear such as spare sheets, blocks, winch handles, a second anchor with attached chain and/or rode, foul weather gear or other sailing related gear that is part of the yacht's permanent inventory, but not including daily provisions such as food, drink and personal crew bags.
3. Second (spare) class spinnaker.
4. Up to 5 gallons of water in the optional factory tank (in standard location).
5. Lead corrector weight permanently installed (bolted, glassed or glued) per section C.6.3

To achieve proper balance, all items referenced in this paragraph B may be located anywhere on the boat on a temporary basis; for racing, those items may be relocated from their temporary locations to any other place on the boat.

C. Required Equipment & Locations:

1. All equipment, ballast (water, fuel and lead) and other items referenced in paragraphs B must be located on the boat at all times and, if locations are specified herein or must be located in their specified locations.

## **Section I**

### **I.1 Non-sanctioned events**

Following sections are waived for one design configuration raced in non-sanctioned events:

C2.1, C2.2, C9.6a, C10.2.