

AC45 Class Rule Version 1.0

Pursuant to **AC45 Class Rule A.4.1**, this **AC45 Class Rule** version 1.0 was approved on 4 May 2011

Measurement Committee

Regatta Director

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INTRODUCTION

The AC45 Class Rule is owned by America’s Cup Race Management (ACRM) Ltd.

The AC45 Class has been created as a one-design catamaran where teams can develop their skills related to the AC72 Class.

AC45 hulls, crossbeams, spines, bowsprits, hull appendages, standing rigging and wings are manufacturing controlled. AC45 sails are measurement controlled.

PART I - ADMINISTRATION

SECTION A – GENERAL

A.1. RULES

ISAF Equipment Rules of Sailing sections G and H5 shall apply unless specifically stated otherwise.

A.2. LANGUAGE

- A.2.1. The official language of the AC45 class rule is English. Except for words defined herein, the meaning of any word shall be determined by reference to the Oxford English Dictionary, Second Revised Edition (2009) – CD Rom Version 4.0 (Oxford University Press 21 May 2009) or any later published version. When there is more than one definition in the Dictionary, the **Measurement Committee** shall determine the appropriate definition.
- A.2.2. When a term is used in AC45 class rule or **building specification** defined sense, it is printed in **bold** type.
- A.2.3. When a term is used in the Equipment Rules of Sailing (ERS) defined sense, it is printed in underlined type.
- A.2.4. The words "shall" and "must" are mandatory. The words "can" and "may" are permissive. The word "should" is advisory.
- A.2.5. This class rule is a closed rule. Anything not specifically permitted by the class rules is prohibited.
- A.2.6. Other than as defined in A.3, components, and their use, are defined by their description or as illustrated in the attached Appendices.

A.3. DEFINITIONS

- A.3.1. **Building specification** means the yacht as described in the sale and purchase contract and associated documentation that defines the design, construction and assembly as approved by ACRM.
- A.3.2. **Measurement Committee** means the same committee appointed under Article 4.3(h)(ii) of the Protocol for the 34th America's Cup or those appointed by ACRM.
- A.3.3. **Measurement condition** means the condition as specified in rule C.2
- A.3.4. **Measurer** means a person appointed by the **Measurement Committee** to perform measurement services or compliance checks; a **measurer** may or may not be a member of the **Measurement Committee**.
- A.3.5. **Soft sail** means a sail that is not a **wing**.
- A.3.6. **Trampoline** means the mesh installed between the **hulls** and extending the full length of the **spine** to provide a working area for the crew.
- A.3.7. **Wing** means a rigid or semi-rigid structure (encompassing a traditional yacht's mast and mainsail structures), similar to an aircraft wing fixed approximately vertically to provide propulsion from the wind.
- A.3.8. **Wing measurement condition** means the condition of the **wing** as specified in rule D.1.2.
- A.3.9. **Wing membrane** means the material stretched over the **wing flaps** and **wing spars** to create the surface over which the air flows.
- A.3.10. **Wing spar** means the fully assembled **upper wing spar** and **lower wing spar**.

A.4. RULE AUTHORITY

- A.4.1. The authority of the class is the **Measurement Committee**, which shall consult with ACRM in all matters concerning the AC45 class rule.
- A.4.2. Only the **Measurement Committee** may issue or invalidate a certificate.

A.5. UNITS OF MEASUREMENT AND MEASUREMENT PROTOCOL

- A.5.1. The Metric System shall be used for all measurements.
- (a) Unless otherwise stated, linear measurements shall be taken and recorded in millimetres.
- (b) **Soft sail** linear measurements shall be taken and recorded in centimetres.
- (c) Weights of the **wing** and the yacht in **measurement condition** shall be taken and recorded to the nearest kilogram.
- (d) Any other weights, if used, shall be taken and recorded to the nearest 0.1kg.
- A.5.2. The **Measurement Committee** shall determine and record measurements of any other components to a degree of precision and using methodology they determine to be practical and appropriate.
- A.5.3. Competitors shall permit and assist all inspections and measurements by a **measurer**.
- A.5.4. The measuring equipment used by the **measurer** shall be the reference device for determining compliance with the AC45 class rule.

A.6. INTERPRETATIONS

- A.6.1. A competitor may seek an interpretation by submitting a request in writing to the **Measurement Committee**, or the **Measurement Committee** may initiate an interpretation. The **Measurement Committee** shall issue interpretations publically in writing within 30 days of the request or may request a longer period subject to agreement of the competitor seeking the interpretation.
- A.6.2. A competitor shall not rely on any advice or opinion from a member of the **Measurement Committee** other than through a written interpretation published by the **Measurement Committee**.

A.7. AMENDMENTS

- A.7.1. The AC45 class rule may be amended at any time by the **Measurement Committee**, with the approval of the ACRM Regatta Director.

A.8. YACHT / SAIL NUMBERS & CLASS INSIGNIA

- A.8.1. Yacht identification numbers shall be issued sequentially by ACRM on delivery of the yacht components. An AC45 yacht shall retain the same identification number irrespective of validity of class certificate, change of ownership or any replacement of components.
- A.8.2. If applicable, the class insignia shall be positioned as defined in Appendix B.

A.9. CERTIFICATES

- A.9.1. When the **Measurement Committee** concludes that the yacht complies with the AC45 class rule, having successfully completed all the measurement checks and compliance inspections requested by the **Measurement Committee**, it shall issue a measurement certificate as in Appendix A.
- A.9.2. A copy of the measurement certificate will be supplied to the yacht and ACRM.

- A.9.3. When the **Measurement Committee** determines that a yacht does not comply with the AC45 class rule, that yacht's certificate shall be made invalid.
- A.9.4. When a new certificate is issued the old certificate is made invalid.
- A.9.5. When there is a change of ownership a yacht's certificate shall be made invalid.
- A.9.6. The **Measurement Committee** shall retain the original documentation upon which the current certificate is based.

PART II – REQUIREMENTS AND LIMITATIONS

The crew and the yacht shall comply with the rules in Part II when racing.

SECTION B – CONDITIONS FOR RACING

B.1. GENERAL

- B.1.1. A yacht shall have a valid AC45 measurement certificate unless otherwise permitted by the ACRM Regatta Director.
- B.1.2. A yacht shall only be raced with original or replacement equipment supplied or specified by ACRM, except where otherwise authorized by the AC45 class rule.

B.2. YACHT

- B.2.1. The weight of the yacht without:

- (a) crew, guests(including their corrector weights) and media personnel;
- (b) personal equipment;
- (c) soft sails, including bags, battens, luff cables and associate fittings;
- (d) drinks and/or food.

shall not be less than its weight in measurement condition nor more than 20kg greater than its weight in measurement condition.

B.3. CREW

- B.3.1. The crew shall consist of 5 persons.
- B.3.2. The total weight of crew dressed in underwear shall not exceed 437.5 kg. Crewmembers shall be weighed prior to competing in a race. The **Measurement Committee** shall use that recorded weight at any post-race verification of compliance. In the event that a crewmember is re-weighed at any time, a new weight will be recorded and shall be used for any subsequent post-race verification.

B.4. PERSONAL EQUIPMENT

- B.4.1. The yacht shall be equipped with one personal floatation device for each crewmember to the minimum standard ISO 12402-5 (CE 50 Newtons), USCG Type III, or equivalent.
- B.4.2. The yacht shall be equipped with one helmet for each crewmember.
- B.4.3. The total weight of worn or carried personal equipment shall not exceed 30 kg (average of 6 kg per crewmember).
- B.4.4. The crewmembers shall not wear or carry clothing and equipment for the purpose of increasing their weight.
- B.4.5. In addition to the items listed in B.4.1 through B.4.4, no more than 10 kg of drink and food may be on board.

B.5. APPENDAGES

- B.5.1. DAGGERBOARDS

- (a) Both **daggerboards** shall be retained in their **daggerboard** housings;
- (b) **Daggerboards** shall not be retracted or extended beyond the specified mechanical stops;
- (c) **Daggerboards** shall only be extended and retracted; and

(d) **Daggerboards** shall not be adjusted by using a winch.

B.5.2. RUDDERS

(a) Both **rudders** shall be in their designed sailing position.

(b) Both **rudders** shall be connected to their **tillers** and the **tillers** connected to the **tiller linkage arm**. **Rudders** shall not be moved independently.

B.6. WING

B.6.1. The **forestay** shall not be adjusted.

B.6.2. **Upper shrouds** and **lower shrouds** shall not be adjusted.

B.6.3. The **running backstays** shall remain fully lead.

B.7. RUNNING RIGGING AND ASSOCIATED FITTINGS

B.7.1. All running rigging shall remain fully lead, except if being replaced and/or during manoeuvres.

B.7.2. All turning blocks, winches and associated running rigging fittings and equipment shall remain on board.

B.7.3. All running rigging listed in Appendix E shall remain on board unless otherwise permitted by the **Measurement Committee**.

B.8. SOFT SAILS

B.8.1. Each **soft sail** shall carry an AC45 sail sticker assigned to it by the **Measurement Committee**.

B.8.2. **Soft sails** shall only be hoisted and used as defined in section E.

B.8.3. One jib and one other **soft sail** shall be on board.

B.8.4. The total weight of **soft sails** aboard (including any sail bags, luff cables and hanks) shall be no less than 45kg and no greater than 70kg.

B.8.5. The jib shall be attached to the **forestay** along its luff.

B.8.6. The code zero shall be sheeted through the **forward cross beam** jib tracks.

B.8.7. The gennaker shall be sheeted with the forward most bearing point aft of the **forward cross beam**.

B.8.8. No device shall control a **soft sail** except:

(a) sheets attached at the clew to sheeting points on the yacht;

(b) leech and foot lines;

(c) a furling system;

(d) a halyard; and,

(e) sail ties or similar devices for securing a soft sail when not in use.

B.9. ELECTRONICS

B.9.1. Yachts may have "Velociteck Pro Start" instruments or similar devices approved by the **Measurement Committee**.

SECTION C – YACHT

C.1. YACHT

C.1.1. A yacht shall carry an AC45 yacht identification number affixed to the **aft cross beam** by the measurer.

C.1.2. The following components shall comply with the **building specification** in force at the time of manufacture. As required, components shall have identification stickers attached by the builder at the time of manufacture or by the measurer:

	Component	Identification Sticker
(a)	Hulls	Required
(b)	Transoms	Required
(c)	Cross beams	Required
(d)	Spine	Required
(e)	Bowsprit	Required
(f)	King post	
(g)	Forward king post	
(h)	Forward whisker cable	
(i)	Aft whisker cable	
(j)	Forward spine cable	
(k)	Aft spine cable	
(l)	Trampoline	
(m)	King post whisker stay	
(n)	Supplied Electronics	
(o)	Board lifting posts	
(p)	Daggerboards	Required
(q)	Rudders (including stocks)	Required
(r)	Rudder hull cassette	
(s)	Tiller	
(t)	Tiller link assembly	
(u)	Lower wing spar	Required
(v)	Upper wing spar	Required
(w)	Lower wing flap	Required
(x)	Mid wing flap	Required
(y)	Upper wing flap	Required
(z)	Forestay	
(aa)	Upper shrouds	
(bb)	Lower shrouds	
(cc)	Running backstays	
(dd)	Wing membrane	
(ee)	Control arms	
(ff)	Hardware, fittings and fixings supplied with the components	

C.1.3. All items listed in C.1.2 shall be built by a manufacturer licensed or otherwise specified by ACRM to produce that item. The stickers required in C.1.2 confirm that the item has complied with the AC45 **building specification** at the time of manufacture.

C.1.4. All production moulds, jigs and construction methods used for manufacture of the items listed in C.1.2 shall be approved by ACRM.

- C.1.5. In regards to the components listed in C.1.2:
- (a) they shall not be modified unless specifically permitted by the **Measurement Committee**. Application of branding and team graphics is not considered to be modification for this purpose.
 - (b) maintenance may be carried out provided that the essential shape, characteristics and function of the original component are not affected.
 - (c) repair work may be carried out, provided:
 - (i) any repair work shall be reported the **Measurement Committee** before the yacht next races, or on days of multiple races, before the next scheduled race day.
 - (ii) any repair shall be such that the **Measurement Committee** is satisfied that there is no advantage gained as a result of the repair.
- C.1.6. The yacht, in **measurement condition**, shall not weigh less than 1290 kg plus the weight of organiser specified media equipment or more than 1320 kg plus the weight of organiser specified media equipment. Any shortfall in this weight shall be made up by corrector weights securely fixed to the hulls within 0.420m of the shroud chainplate bulkhead, as specified by the **Measurement Committee**.

C.2. MEASUREMENT CONDITION

C.2.1. **Measurement condition** shall include:

- (a) components of C.1.2 (a) to (o) and associated hardware, fittings and fixings fully assembled;
- (b) the **wing** in **wing measurement condition**;
- (c) two **daggerboards** and two **rudders**, including **tillers** and associated hardware, fittings and fixings;
- (d) all running rigging that may be on board while racing, excluding any spares;
- (e) all advertising branding applied to the yacht;
- (f) corrector weights required by the **Measurement Committee**;
- (g) all media equipment listed in Appendix F when specified for an event;
- (h) four winch handles;
- (i) all other equipment and modifications approved by the **Measurement Committee** as posted on the noticeboard; and
- (j) weight adjustment by the **Measurement Committee** and agreed by the Regatta Director for event-specific issues.

C.2.2. **Measurement condition** shall NOT include:

- (a) crew, guests (including their corrector weights) and media personnel;
- (b) personal equipment;
- (c) soft sails, including bags, battens, luff cables and associate fittings;
- (d) spares and tools;
- (e) safety equipment; and
- (f) drinks and/or food.

C.3. SURFACE FINISHES AND BOUNDARY LAYER INTERFERENCE

- C.3.1. Only paint systems generically specified as two-component linear polyester saturated aliphatic polyurethane, two-component epoxy urethane, or two-component acrylic urethane, and manufactured by International, Awlgrip, Akzo Nobel or Resene, may be used as the outermost surface finish of the **hulls** and hull appendages. No materials other than specified manufacturer-supplied retardants, accelerants, thinners and pigments shall be added. Similarly, the specific gravity of the paint shall not be altered with any material other than those specified above. The **Measurement Committee** may authorize the use of comparable paint products from other manufacturers provided those products meet comparable requirements for product standardization, compliance, and testing.
- C.3.2. The application of vinyl, mylar or other plastic film over the surface of the **hull** for advertising or branding is allowed, provided that the film shall not be specially textured or otherwise manufactured in a way that could improve the character of the flow of water inside the boundary layer.
- C.3.3. Small quantities of friction-reducing compounds (for example, McLube) may be applied only to the surface of **daggerboards** prior to racing, and solely for the purpose of reducing bearing friction while raising and lowering the **daggerboards**. A competitor shall seek the approval of the **Measurement Committee** for the type and quantity of friction-reducing compounds to be used for this purpose.
- C.3.4. The outermost surfaces of the **hulls** or hull appendages may be sanded and cleaned with normal concentrations and quantities of detergents or similar materials. However, while afloat on a scheduled race day, no substances other than those allowed in C.3.1, C.3.2 and C.3.3 shall be present on the outermost surfaces of the **hulls** or hull appendages.

C.4. TRAMPOLINE

- C.4.1. All **trampoline** lashings shall be of the specification approved by ACRM and listed in Appendix E.

C.5. EQUIPMENT

- C.5.1. All sail handling equipment, including winches, turning blocks (floating and fixed) tracks, padeyes etc., supplied or specified by ACRM shall be installed using appropriate fixings, lashings and fastenings. All running rigging shall comply with Appendix E.

C.6. ASSEMBLY

- C.6.1. The yacht and all associated hardware, fittings and fixings shall be assembled as per the ACRM **building specification**, except when altered, added or replaced as permitted by Section C of these class rules.

SECTION D – WING

D.1. GENERAL

- D.1.1. The **wing** in **wing measurement condition** shall not weigh less than 385 kg plus the weight of organiser specified media equipment. Any shortfall in this weight shall be compensated for by the necessary corrector weight being affixed at the connection between the **lower wing spar** section and the **upper wing spar** section, as shown in Appendix D.
- D.1.2. **Wing measurement condition** shall include:
- (a) The fully assembled **wing spar**, including all fittings and fixings.
 - (b) The lower, mid and upper **wing flaps**.
 - (c) The **forestay**.
 - (d) One pair of **upper shrouds**.
 - (e) One pair of **lower shrouds**.
 - (f) One pair of **running backstays**, including flying blocks and **running backstay** tails.
 - (g) Four **control arms**, each fully assembled, including all running rigging including all associated fittings and fixings.
 - (h) **Wing membrane**.
 - (i) All applied advertising and branding applied to the components that are part of **wing measurement condition**.
 - (j) All media equipment listed to be attached to the **wing** in Appendix F, when specified for an event.
 - (k) All halyards and any other **wing**-specific running rigging not described above.
 - (l) Weight adjustment by the **Measurement Committee** and agreed by the Regatta Director for event specific issues.

D.2. WING MEMBRANE

- D.2.1. The **wing spar** and each **wing** flap shall be covered completely on both sides between the aft edge of the leading edge spar and the trailing edge, from the foot to the head of the **wing** with a membrane material which shall comply with the **building specification** in force at the time of manufacture.
- D.2.2. Adhesives and edging tape may be used, and advertising branding may be applied as a covering over the **wing membrane**.

D.3. STANDING RIGGING

- D.3.1. Standing rigging shall be of equal length port and starboard within 10mm, and shall be of specification approved by ACRM and shown in Appendices D & E.

D.4. RUNNING RIGGING

- D.4.1. All running rigging shall comply with the specification given in Appendix E.

SECTION E – SOFT SAILS

E.1. GENERAL

- E.1.1. Other than as required for **soft sail** hardware, intentional openings in **soft sails** are prohibited.
- E.1.2. Artificially thickened **soft sails** are prohibited.
- E.1.3. The dimension of any **soft sail** hardware, in any direction, shall not exceed 0.375 m for a clew point, or 0.250 m for any other hardware.
- E.1.4. Batten and batten pockets are not permitted unless specifically permitted below.
- E.1.5. Leech and foot lines shall not be greater than 5 mm in diameter.
- E.1.6. No sail bag shall weigh more than 4.0 kg and shall not be designed to retain water.
- E.1.7. **Forestay** and luff support cable attachments are permitted and shall measure no more than 0.120 m perpendicular to the luff. No luff support device may be used to increase effective sail area.
- E.1.8. No more than 4 **soft sails** may be declared for use during one event. The declared **soft sails** shall be identified by the AC45 sail sticker and may consist of:
 - (a) No more than 2 Jibs;
 - (b) No more than 1 Code Zero;
 - (c) No more than 1 Gennaker.
- E.1.9. If more than 25% of the original fabric surface is replaced after a **soft sail** is declared for use whilst racing, it shall be considered to be a new **soft sail**.

E.2. JIB

- E.2.1. The Jib shall have a luff perpendicular no greater than 4.370 m.
- E.2.2. The Jib shall have a three-quarter width (measured as a headsail) no greater than 41% of luff perpendicular.
- E.2.3. The Jib shall be fitted with no more than six battens.
 - (a) Battens shall be no closer than 0.250 m to each other at any point.
 - (b) Battens shall pass through a 0.055 m diameter circle.
 - (c) Battens may consist of multiple elements that need not necessarily be attached to one another, provided the batten is fitted within a single, continuous batten pocket, and provided the multi-element array complies with (b) above.
 - (d) Battens shall not have a permanent bend or set, within a tolerance of 0.050 m over their entire length.
 - (e) Battens shall not be adjusted while the Jib is set.
 - (f) Battens shall not be inflatable.
 - (g) Batten pockets shall not exceed 0.120 m in width measured normal to the longitudinal axis of the batten.
 - (h) Battens shall be oriented not less than 30 degrees to the local luff, with the centreline of the batten projected to the luff if necessary
- E.2.4. The Jib shall have a maximum head width no greater than 20% of luff perpendicular.
- E.2.5. The Jib shall have no battens below a line joining points 1.000 m above the clew point and 1.000 m above the tack point.

E.3. CODE ZERO

- E.3.1. The Code Zero shall have a luff perpendicular no less than 6.650 m and no greater than 6.850 m.

E.4. GENNAKER

- E.4.1. The Gennaker shall have a luff perpendicular no less than 9.500 m and no greater than 10.500 m.

PART III – APPENDICES

APPENDIX A – CLASS CERTIFICATE

Page 1 of 2



Office Use Only
Original to Owner ()
Copy to MC File ()
Copy to ACRM ()

AC45 Yacht

Measurement Certificate

Name of Yacht: _____

Owner(s): _____

Yacht Identification Number: _____

Measurement Certificate Number: _____

VALIDATION

We confirm that this yacht has been measured in accordance with the AC45 class rule, and has been found to be in compliance with the rule.

Signatures of issuing measurers: _____

Date of certification: _____

Supersedes Certificate No. & Date: _____

Yacht Name: _____

Yacht ID: _____

YACHT

Yacht weight (kg): _____

Yacht correction (kg): _____

Hull ID: _____

Spine ID: _____

Bowsprit ID: _____

Port Transom ID: _____

Stbd Transom ID: _____

Fwd Cross Beam ID: _____

Aft Cross Beam ID: _____

WING

Wing weight (kg): _____

Wing correction (kg): _____

Upper Spar ID: _____

Lower Spar ID: _____

Upper Flap ID: _____

Middle Flap ID: _____

Lower Flap ID: _____

APPENDAGES

Port Daggerboard ID: _____

Stbd Daggerboard ID: _____

Port Rudder ID: _____

Stbd Rudder ID: _____

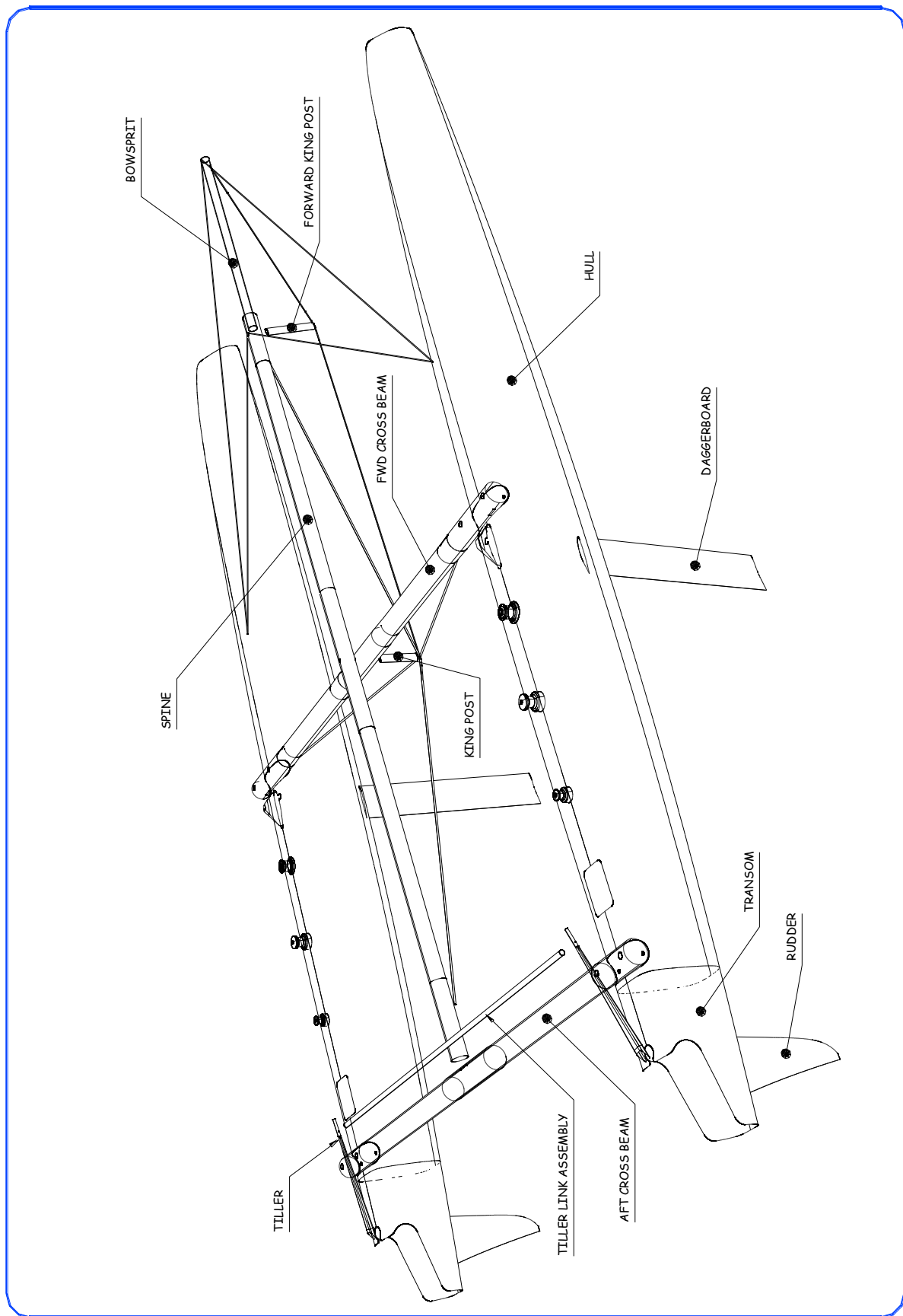
Measurer Name and Signature: _____

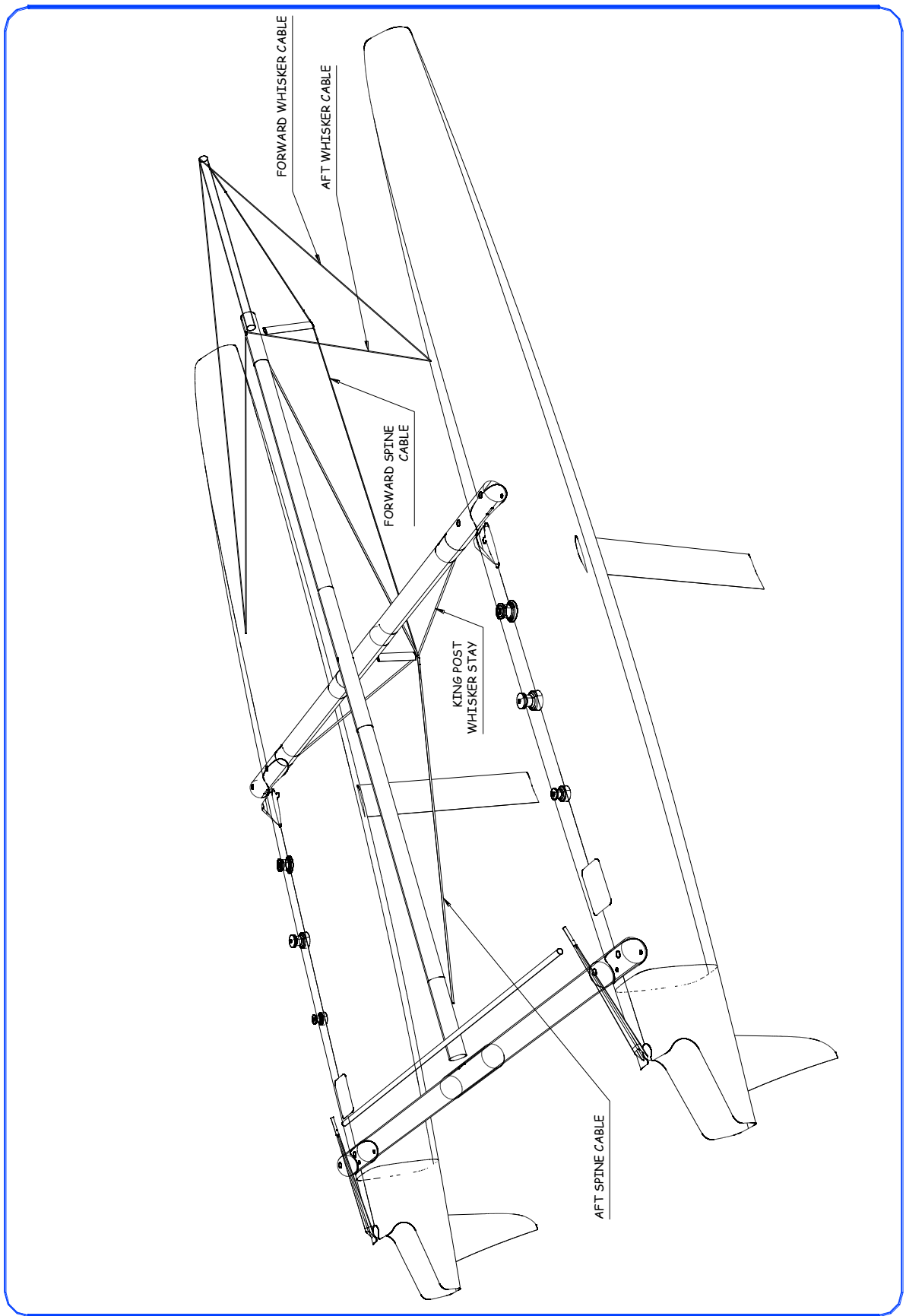
Measurer Name and Signature: _____

Date: _____

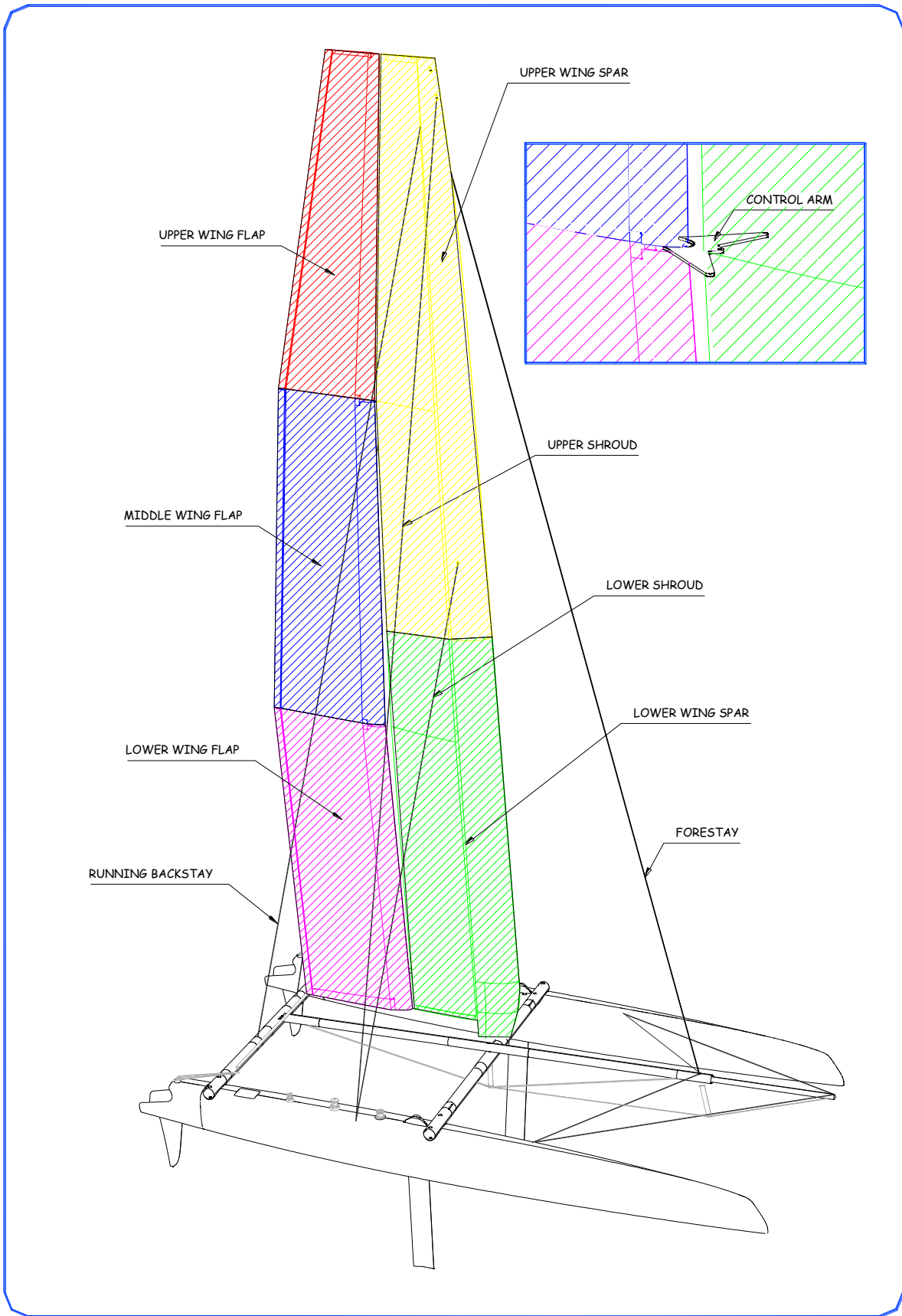
APPENDIX B – CLASS INSIGNIA

APPENDIX C – HULL DRAWINGS





APPENDIX D – WING DRAWING



APPENDIX E – RIGGING LIST

<i>Description</i>	<i>Quantity</i>	<i>Length (m)</i>	<i>Diameter (mm)</i>	<i>Core</i>	<i>Cover</i>	<i>Associated Hardware</i>
<u>Running Rigging</u>						
Jib Halyard 1:1	1	18	11	Sk90	Dyneema	Harken Block
Jib Halyard 2:1	1	45	10	Sk90	Tech / Poly 50/50	ZS 1214 (aluminium)
Jib Halyard Final Purchase 16:1	1	20	6	Sk78	Tech / Poly 50/50	Cam Cleat for final purchase
Gennaker Halyard 1:1	1	1.5	7	Sk78	Tech / Poly 50/50	ZS 1214 (aluminium)
Gennaker Halyard Tail	1	50	10	Sk78	Tech / Poly 50/50	
Gennaker Jammer Trip Line	1	25	3	Sk90	None	ZS 1214 (aluminium)
Runner Tails	2	15	12	Sk78	PBO / Poly 50/50	Harken Block
Runner Light Tail	2	15	8	Polyester	Polyester	None
Jib Sheets	2	20	10	Sk78	PBO 70/30	Spinlock XX0812
Gennaker Sheets	2	33	10	Sk78	Tech / Poly 50/50	Spinlock XX0812
Wing Sheets 2:1	2	20	10	Sk78	PBO / Poly 50/50	None
Board Up/Down Lines	4	10	8	Sk75	Tech / Poly 50/50	
Furling Line	1	33	10	Sk78	Vectran / Poly 50/50	Harken Furling Unit 3101
Control Lines	3	50	6	Sk75	Mottled Polyester	Cam Cleat
Net Lashing	1	300	3	Sk75	None	None
General Lashing	1	100	4	Sk78	None	None
General Lashing	1	100	5	Sk78	None	None
General Lashing	1	100	6	Sk78M	None	None
General Lashing	1	100	7	Sk78M	None	None
Dyneema Cover	1	50	6	None	Dyneema	None
<u>Wing Control Cables</u>						
Flap Control Cable 2 - upper	2	8.2	7	PBO / Sk90	Dyneema	CA2
Flap Control Cable 2 - lower	2	2	7	PBO / Sk90	Dyneema	
Flap Control Cable 3 - upper	2	14.31	6	PBO / Sk90	Dyneema	CA3
Flap Control Cable 3 - lower	2	2.5	6	PBO / Sk90	Dyneema	
Flap Control Cable 4 - upper	2	20.5	6	PBO / Sk90	Dyneema	CA4
Flap Control Cable 4 - lower	2	3	6	PBO / Sk90	Dyneema	
Twist Control Purchase - Final to Hull	1	15	8	Sk78	Mottled Polyester	
Twist Control Purchase 5:1	1	6	6	Sk78	None	
Twist Control Purchase 1:1	1	2	6	PBO / Sk90	Dyneema	
Camber Control Purchase 1:1 to arm	1		7	PBO / Sk90	Dyneema	
Camber Control Purchase 2:1 vertical	1		7	Sk78	None	
Camber Control Cascade 2:1 vertical	1		6	Sk78	None	
Camber Control Purchase 4:1 Final	1		8	Sk78	Mottled Polyester	
<u>Standing Rigging</u>						
		<i>Length (m)</i>	<i>EA(MN)</i>	<i>MWL (kg)</i>	<i>Construction</i>	<i>Terminal A / Terminal B</i>
Lower Shrouds	2	11	4.9	1400	Carbon	Lashing Eye / Lashing Eye
Upper Shrouds	2	20	3.5	1000	Carbon	Lashing Eye / Lashing Eye
Running Backstays	2	20.5	5.7	1600	Carbon	Lashing Eye / Straight Pin
Forestay	1	19.9	7.2	2100	Carbon	Lashing Eye / Lashing Eye
Gennaker Cable	1	21.4	4.4	1300	PBO	Straight Pin / Straight Pin
Spine Cable Aft	1	9.688	13	5500	Carbon	Lashing Eye / Lashing Eye
Spine Cable Fwd	1	7.560	18	6000	Carbon	Straight Pin / Lashing Eye

APPENDIX F – MEDIA EQUIPMENT