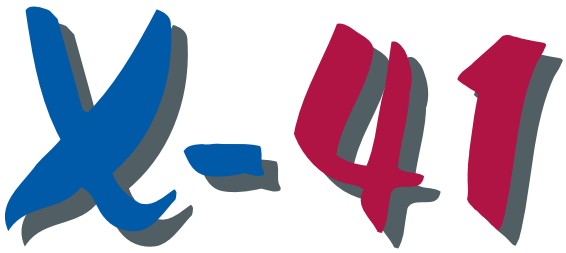
ISAF Secretariat Note: To keep the file size down the appendices can be viewed at x-yachts.com




# CLASS RULES 2008

# INDEX

X-41 One Design hulls, hull appendages and rigs are manufacturing controlled and the sails are measurement controlled.

X-41 One Design hulls, hull appendages and rigs shall only be manufactured by X-Yachts A/S or by manufacturers licensed by X-Yachts A/S. Equipment is required to comply with the International X-41 One Design Building Specification.

X-41 One Design hulls, hull appendages, rigs and sails, after having left the manufacturer, shall 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 fundamental certification.

Rules regulating the use of equipment during a race are contained in Section C of these class rules, in ERS Part I, ISAF Offshore Special Regulation and in the Racing Rules of Sailing.

This introduction only provides an informal background and the X-41 One Design Class Rules proper begin on the next page.

The X-41 One Design hull and deck, rig and hull appendages will be in-house certified.

# PART I – ADMINISTRATION

## 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 | X-41 International Class Association |
| RCA | Regional Class Association |
| ERS | Equipment Rules of Sailing |
| RRS | Racing Rules of Sailing |
| OSR | ISAF Offshore Special Regulations |

### A.3 AUTHORITIES

A.3.1 The international authority of the class is the ISAF which shall cooperate with ICA in all matters concerning these **class rules**.

A.3.2 Notwithstanding anything contained herein, the **certification authority** has the authority to withdraw a **certificate** and shall do so on the request of the ISAF.

### A.4 ADMINISTRATION OF THE CLASS

A.4.1 ISAF has delegated its administrative functions of the class to MNAs. The MNA may delegate part or all of its functions, as stated in these **class rules**, to an RCA.

A.4.2 In countries where there is no MNA, or the MNA does not wish to administrate the class, its administrative functions as stated in these **class rules** shall be carried out by the ICA which may delegate the administration to an RCA.

### A.5 ISAF RULES

A.5.1 These **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 88.1.d) – ISAF Regulation 26.5(f) applies. At all other events RRS 86 applies.

### A.7 CLASS RULES AMENDMENTS

A.7.1 Amendments to these **class rules** are subject to the approval of the international X-41 class board in accordance with the ISAF regulations.

## A.8 CLASS RULES INTERPRETATION

A.8.1 Interpretation of class rules shall be made in accordance with the ISAF regulations

## A.9 INTERNATIONAL CLASS FEE AND ISAF BUILDING PLAQUE

A.9.1 The licensed **hull** builder shall pay the International Class Fee.

A.9.2 ISAF shall, after having received the International Class Fee for the **hull**, send the ISAF Building Plaque.

A.9.3 Section A.9 will first come into effect after the class has been recognized by ISAF.

## A.10 SAIL NUMBERS

A.10.1 Sail numbers shall be issued by the MNA.

A.10.2 National letters and sail numbers shall conform to the current RRS Appendix on "Identification on **Sails**".

A.10.3 It is preferred to use the build number of the X-41 as sail number preceded by the national letters, e.g. build No 101 from Denmark "DEN 101", except where the MNA has its own sail number system.

## A.11 MEASUREMENT CERTIFICATION

A.11.1 A measurement **certificate** shall record the following information:

(a) Class
(b) X-Yachts A/S
(c) Sail number issued by the **certification authority**
(d) Owner
(e) **Hull** identification
(f) Builder/Manufacturers details
(g) Date of issue of **certificate**

## A.12 INITIAL DECLARATION OF CONORMITY CERTIFICATION

A.12.1 Declaration of conformity form will be issued to the **hull** and **spars** upon completion and measurement by the builders:

(a) **Certification control** shall be carried out by the **official measurer** who shall complete the appropriate documentation.

## A.13 VALIDITY OF CERTIFICATE

A.13.1 A declaration of conformity becomes invalid upon:

(a) significant repair or replacement to the **hull**, **keel**, **rudder** or **spar** and the change to any items recorded on the **hull certificate** as required under A.11.

(b) the date of expiry

(c) withdrawal by the **certification authority**

(d) the issue of a new **certificate**

(e) change of ownership

## 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), (b) or (e), 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 other cases, by application of the procedure in A.12.

## A.15 RETENTION OF CERTIFICATION DOCUMENTATION

A.15.1 The authority shall:

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

(b) upon request, transfer this documentation to the new **certification authority** if the **hull** is exported.

## A.16 OWNER'S OBLIGATION

A.16.1 A copy of the X-41 One Design Measurement **Certificate** and Measurement Form for Weight shall be kept on board the yacht while racing.

# Section B – Boat Eligibility

For a **boat** to be eligible for, 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 measurement **certificate**.

(c) have valid **certification marks** as required

(d) have Builders Plaque

## B.2 CLASS ASSOCIATION MARKINGS

(a) A valid Class Association Sticker, if required by the RCA or the ICA, shall be affixed to the measurement **certificate**.

(b) **Sails** other than the storm trysail and storm jib shall carry a Class Association Sail Sticker.

# PART II – REQUIREMENTS AND LIMITATIONS

The **crew** and the **boat** shall comply with the rules in Part II when *racing*. In case of conflict Section C shall prevail.

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 RULES

(a) RRS 50.4 shall not apply.

(b) The **boat** shall be equipped to the minimum standard ISAF Offshore Special Regulations category IV, or the category which is specified by race organizers, whichever is greater, shall be carried on the X-41 One Design while racing.

(c) The ERS Part 1 – Use of equipment shall apply except were deleted or amended as modified by these rules

### C.2 CREW

Section C2 shall only apply to official X-41 class events as published by the X-41 class association. Sections C.2.3 will only apply from 01.01.2008.

C.2.1 LIMITATIONS

(a) The ISAF Sailor classification, Reg 22, shall apply. The **crew** shall consist of no more than 4 persons either unclassified or classified Group 3. All other **crew** shall hold a valid Group 1 or Group 2 classification.

Competitors without a current classification, or whose employment circumstances have changed, may apply for a new **certificate** electronically from the ISAF website www.sailing.org/isafsailor.

(b) The **crew** shall consist of minimum 6 persons.

(c) No **crew** member shall be substituted during an event, unless substitution is authorized by the Race Committee.

C.2.2 WEIGHTS

In One Design Class events the maximum weight of the **crew** dressed in swimwear shall not exceed 850 kg at weigh-in prior to the start of a regatta.

C.2.3 STEERING

Owners and one more **crew** member may steer the yacht. The two helmsmen shall be appointed before the race series start. The **crew** member appointed as helmsman shall not be ISAF Cat 3. Except for emergencies involving safety of the yacht or **crew**, the appointed helmsmen shall not be substituted by any crew member while racing in sanctioned One Design Class events, or in any One Design Class racing.

## C.3 PERSONAL EQUIPMENT

C.3.1 MANDATORY

As per the Offshore Special Regulations

## C.4 ADVERTISING

C.4.1 LIMITATIONS

Advertising shall only be displayed in accordance with Category C of the ISAF Advertising Code.

C.4.2 In addition to advertising permitted in C 4.1 the Class may request the following:

(a) The **boat** type to be displayed on each side of the coaming as fitted by the builder

(b) The builders name and logo to be displayed on each side of the cabin roof as fitted by the builder

(c) The Class International board may request display of event advertising on the **hull** within ISAF Advertising Code 20.3 (d).

## C.5 PORTABLE & OPTIONAL EQUIPMENT

C.5.1 FOR USE

(a) MANDATORY

(1) One main anchor of not less than 13 kg in weight and one anchor warp of minimum length 30 m. Anchor and warp shall remain on board while racing and shall not to be moved during racing unless for the purpose of anchoring.

Minimum weight of anchor and warp 21,5 kg.

(2) Towing rope minimum 30 m long of not less than 10 mm in diameter.

(3) One mechanical compass

(4) One emergency tiller

(B) OPTIONAL

(1) Electronic or mechanical timing devices

(2) Mooring lines

(3) Electronic navigation devices, charts and other navigational equipment

(4) There are no restrictions on portable equipment carried except were defined elsewhere within these rules

(5) Winch handles

(6) Fixed magnetic compass

(7) Running rigging in accordance with F7

(8) Saloon table and loose seat cushions in saloon may be removed while racing.

(9) Cushions in forward cabin shall stay on board but may be placed elsewhere in the **boat**.

The optional items, as specified in section C.5.B, or the amount of fuel and water in the tanks shall not be used for re-trimming, ballasting or alternating fore and aft trim of the yacht for the sole purpose of improving the yachts performance for a specific wind range during a series.

## C.6 BOAT

C.6.1 WEIGHT

The weight of the **boat** in dry condition ……minimum 6840 kg

The weight shall be taken excluding **sails**

The weight shall be taken with equipment checked and listed by measurer during the official weight measuring. Equipment and installation that can be included in class weight is listed in appendix H7.

A measurement **certificate** (Appendix H8) shall be onboard, signed by measurer.

C.6.2 CORRECTOR WEIGHTS

(a) **Corrector weights** of lead shall permanently be fastened when the **boat** weight is less than the minimum requirement.

(b) The corrector weights shall be distributed with 1/3 of total corrector weight permanently mounted under centre shelf in saloon equally divided between port and starboard and 2/3 of total corrector weight permanently mounted under floorboard just behind main bulkhead. Position defined according to Appendix H6.

Permanently mounted is defined as bolted or glued and installation must be approved by measurer.

## C.7 HULL

C.7.1 FITTINGS

(a) Hand hole covers and drainage plugs shall be kept in place at all times.

(b) **Hull** skin fittings shall not be altered in any form or type.

C.7.2 FINISHING AND POLISHING

(a) **Hull** surface may be wet sanded and/or polished. **Hull** lines and curves shall not be altered.

(b) Primer and antifouling is optional

(c) Routine maintenance such as painting, polishing and minor repairs is permitted without new **certification control** and **re-certification.**

## C.8 DECK

C.8.1 FITTINGS

(a) Deck fittings as per appendix H1 and H2 shall only be replaced by equipment as specified in appendix H1 and H2 or by equipment that in weight is no lighter than equipment defined in appendix H1 and H2.

(b) Hiking padding on lower guard rail wire is optional.

(c) Routine maintenance such as painting, polishing and minor repairs is permitted without new **certification control** and **re-certification.**

(d) The bathing ladder may be stowed below deck, but shall be on board.

(e) While racing, the cabin roof portlights must be closed.

(f) The standard Genua winches Harken B48.3 may be replaced by Harken B48.2STA.

## C.9 HULL APPENDAGES

C.9.1 MODIFICATION, MAINTENANCE AND REPAIR

(a) The **keel** and **rudder** shall comply within the maximum templates as defined in the construction manual and with the following tolerances measured perpendicular to **keel** or **rudder** surface, respectively. The permitted distance between the maximum templates and the **keel** surface is between 0 and 4 mm.

The **keel** fin surfaces to be ruled between templates #??? through to #????.

The permitted distance between the maximum templates and the **rudder** blade surface is between 0 and 4 mm.

**Keel** and **rudder** fairing and painting is permitted provided that the dimensions detailed in appendix H4 are met.

(b) Transverse width on keel and rudder in the areas from trailing edge to 15 mm forward of trailing edge is free ie. Not limited by distance to maximum templates as described in C.9.1 a).

## C.10 RIG

C.10.1 BUILDER:

- All **spars** including spares and replacements shall be supplied by licenced **spar** supplier and shall comply with Construction manual, approved sparmakers construction details and X-41 One design **class rules**.

C.10.2 MODIFICATIONS AND REPAIR

**Spars** shall not be modified from the approved construction drawings in any way without written approval from the X-41 International Board and X-Yachts A/S.

C.10.3 FITTINGS

All mast fittings and there positioning shall comply with approved construction drawing from supplier and X-Yachts.

C.10.4 Limitations

(a) Only one set of **spars** and standing **rigging** shall be used during an event, except when an item has been lost or damaged beyond repair.

C.10.5 Mast

(a) DIMENSIONS

(1) The vertical position of the mast is defined as the distance from the forward bottom edge of the **spar** profile to the mast **lower point** forward edge.

The distance shall be xxxx mm ± 5 mm.

(b) STEPPING

(1) The **spar** shall be stepped in the mast step as fitted by the builder and the mast step shall not be adjusted.

(2) The mast shall not be adjusted during racing.

(3) The mast foot may only be moved within the standard slots in the mast foot.

C.10.6 BOOM

(a) DIMENSIONS

| | minimum | maximum |
|---|---|---|
| **Limit mark** width | 20 mm | |
| Boom **outer point distance** | | 5500 mm |

(b) POSITIONING

(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**.

C.10.7 SPINNAKER POLE

(a) DIMENSIONS

| | minimum | maximum |
|---|---|---|
| **Spinnaker pole length** | | 5105 mm |
| **Spinnaker pole cross section at half pole length** | 96 mm | |
| **Spinnaker pole weight** | | 7,5 kg |

C.10.8 STANDING RIGGING

(a) DIMENSIONS

(1) Rigging dimensions as specified by the construction manual.

(b) ADJUSTMENT

(1) Rigging links and rigging screws shall not be adjusted while racing.

(c) BACKSTAY

(1) Supplier is optional.

(2) Material shall be HMPE

(3) Dimension shall be minimum 10 mm in diameter

C.10.9 RUNNING RIGGING

(a) MANUFACTURER

(1) Manufacturer is optional.

(b) Materials

(2) Materials shall either be polyester or HMPE.

(c) Construction

(1) MANDATORY

| Description | QTY | Min Ø non-stripped [mm] | Max length of stripped part [m] |
|---|---|---|---|
| Mainsail halyard | 1 | 12 | 0 |
| Mainsail sheet | 1 | 10 | 0 |
| Mainsail traveller control line | 1 | 8 | 0 |
| Reefing 1 | 1 | 10 | 0 |
| Genoa Halyard | 1 | 12 | 11 |
| Genoa sheets | 2 | 10 | 0 |
| Genoa in-haulers 1 | 2 | 6 | 0 |
| Genoa in-haulers 2 | 2 | 6 | 2,5 |
| Genoa adjusters | 2 | 6 | 0 |
| Combi halyard | 2 | 12 | 14 |
| Spinnaker sheets | 2 | 10 | 5,7 |
| Spinnaker tweakers | 2 | 6 | 0 |
| Spinnaker pole downhaul 1 | 1 | 6 | 0 |
| Spinnaker pole downhaul 2 | 1 | 8 | 1 |
| Backstay control line 1 | 1 | 10 | 1,8 |
| Backstay control line 2 | 1 | 6 | 6,5 |
| Backstay control line 3 | 1 | 6 | 0 |
| Vang control lines 1 | 2 | 6 | 0 |
| Cunningham control lines 1 | 2 | 6 | 0 |
| Cunningham control lines 2 | 2 | 6 | 0 |
| Mainsail – outhaul lines | 2 | 6 | 0 |

(b) OPTIONAL

(1) Change or reaching sheet

(2) Reefing Line 2

(3) Spinnaker guys

(4) Headsail Barber haulers capable of modifying the sheeting angle in one direction only of maximum purchase 10:1

(5) Single line spinnaker Barber haulers capable of modifying the sheeting angle in one direction only of maximum purchase 2:1

(6) Light air spinnaker sheets

(7) Shockcord, tape or short ropes may be used to protect blocks, other deck gear and rigging from chafe

(8) Reeling netting and shockcord for securing **sails** on the foredeck

(9) A short strop with snapschackle at the forestay and/or a combination of two snapschackles to facilitate sail changing and handling

(10) Sail prefeeder(s) to facilitate sail handling

(11) Recommended robe length as per table below:

| Description | Min length<br>Total m] |
|---|---|
| Mainsail halyard | 41 |
| Mainsail sheet | 46 |
| Mainsail traveller control line | 18 |
| Reefing 1 | 19 |
| Genoa Halyard | 39 |
| Genoa sheets | 15 |
| Genoa in-haulers 1 | 10 |
| Genoa in-haulers 2 | 2,8 |
| Genoa adjusters | 12 |
| Combi halyard | 45 |
| Spinnaker sheets | 26 |
| Spinnaker tweakers | 10 |
| Spinnaker pole downhaul 1 | 27 |
| Spinnaker pole downhaul 2 | 0,65 |
| Backstay control line 1 | 1,8 |
| Backstay control line 2 | 6,5 |
| Backstay control line 3 | 26 |
| Vang control lines 1 | 15 |
| Cunningham control lines 1 | 10 |
| Cunningham control lines 2 | 1,5 |
| Mainsail – outhaul lines | 9 |

(d) Fittings

(1) MANDATORY

Headfoil or roller furling track with two headsail grooves

(2) MATERIALS

Headfoil shall either be of plastic or aluminium.

(e) OPERATION

(1) The mainsail sheet shall be led as standard delivered to cockpit aft winches as per deck drawing in Appendix H1. The two ends of the mainsheet may be spliced to form a continuous loop.

(2) The headsail sheet shall be led to cockpit coaming formost winches. A change or reaching sheet may be let to any winch.

(3) The spinnaker sheet and guy shall be led to either halyard winches on cabin roof or to cockpit coaming formost winches.

(4) The spinnaker pole topping lift may be one of the combi halyards or the genoa halyard or a 4 dedicated topping lift and be led to either side of cabin roof to jammer on coach roof as shown per deck drawing in Appendix H2. In addition, cam cleats for the combi and

genua halyards may be added to the mast below their exits. These cleats are not intended to carry the full working load of these halyards. Max 4 forward looking halyards shall be installed..

(5) The spinnaker pole downhaul shall be led either to swivels basis both sides on the cabin roof as per deck drawing in Appendix H1.

(6) The kicking strap shall be led to swivel basis on both side of cabin roof as per deck drawing in Appendix H1 and installed per standard equipment

(7) The mainsail clew outhaul shall be led to swivel basis on both sides of cabin roof as per deck drawing in Appendix H1 and installed per standard equipment

(8) The mainsail Cunningham control shall be led swivel basis on both side of cabin roof as per deck drawing in Appendix H1 and installed per standard equipment

## C.11 SAILS

C.11.1 MODIFICATIONS, MAINTENANCE AND REPAIR

(a) **Sails** shall not be altered in any way except as permitted by these **class rules.**

(b) Routine maintenance such as minor repairs to batten pockets are permitted without re-measurement and re-**certification**.

C.11.2 NOT FOR USE

(a) Carbon battens are not permitted

C.11.3 LIMITATIONS

(a) Not more than one mainsail, two Max jibs, one OSR heavy weather jib, two spinnakers and one storm trysail and one storm jib shall be carried aboard.

(b) Not more than one mainsails, two jibs, one OSR heavy weather jib, two spinnakers and one storm trysail and one storm jib shall be used during an event, except when a **sail** has been lost or damaged beyond repair. In that case a class measurer or race committee shall give his permission to replace damaged **sails**.

(c) **Sails** used in a class event shall have the class sail sticker attached and signed as per Appendix H5. Only **sails** with registered class sail stickers shall be used.

Storm try sail and storm jib do not require class sail sticker.

(d) In addition to the base inventory (1 mainsail, 2 headsails (number 1 jib), 2 spinnakers, 1 ISAF OSR Heavy weather jib, outlined in paragraph G.1. each yacht is permitted five (5) new class **sails** per calendar year (January 1 to December 31) to be used in that year.

In the first year of racing each yacht is permitted a total of maximum 11 (6+5) **sails** that require sail sticker according to the **class rules**.

Unless otherwise specified in the Sailing Instructions, each yacht shall only use registered **sails** for the duration of the regatta, complying with paragraph C11.3 a & b.

Charterers who do not own an X-41 may purchase one original inventory, plus five sail stickers per year, and transfer **sails** to different chartered boats.

Charterers and X-41 owners who charter are permitted to transfer their own **sails** to a chartered **boat**, or may use **sails** registered to the chartered **boat**, but may not combine inventories. X-41 owners cannot

charter a **boat** and purchase a set of charter **sails**. X-41 owners with multiple **boats** cannot transfer **sail** inventories from **boat** to **boat**. Transfer of **boat** ownership to either immediate family members or a non-sailing Owner to increase sail entitlements is not permitted. Swapping of **boat** ownership between X-41 owners to increase **sail** entitlement is not permitted. Should a **sail** be destroyed during a regatta, the owner of the **boat** or a representative from that **boat** may apply to the Race Committee for a replacement **sail** to be registered in place of the destroyed **sail**.

C.11.4 MAINSAIL

(a) IDENTIFICATION

(1) The national letters and **sail** numbers shall comply with the RRS except where prescribed otherwise in these **class rules**

(2) National letters and sail numbers are required on the sail (e.g. NED 41, DEN 41 etc.)

(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** ropes or **batten** cars shall be in the **spar** groove.

C.11.5 JIB

(a) USE

(1) The **sail** shall be hoisted on a halyard.

If a furling headstay is in use, the **sail** shall not be furled.

(b) IDENTIFICATION

No identification numbering is required.

C.11.6 SPINNAKER

(a) USE

(1) The **sail** shall be hoisted on a halyard.

(b) IDENTIFICATION

(1) The national letters and **sail** numbers shall comply with the RRS except where prescribed otherwise in these **class rules**

(2) National letters and sail numbers are required on the sail (e.g. NED 41, DEN 41 etc.)

# Section D – Hull

## D.1 PARTS

D.1.1 MANDATORY

(a) **Hull** shell

(b) Deck

(c) Bulkheads

## 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 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 **hull**, deck and bulkheads. Coring, cutting of holes and removal of material for the purpose of changing the inertia of the yacht is not permitted.

(c) Routine maintenance such as painting, filling of minor scratches 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) **HULL DATUM POINT**

The **hull datum point** is on centerline at the aft extremity of the **hull** underside.

D.2.5 IDENTIFICATION

(a) The **hull** shall carry the Builders Plaque permanently placed in the cockpit.

D.2.6 BUILDERS

(a) The **hull** shall be built by a builder licensed by X-Yachts A/S.

(b) All moulds shall be approved by X-Yachts A/S.

## D.3 HULL, SHELL, DECK AND BULKHEADS

D.3.1 MATERIALS

(a) As specified in the construction manual.

D.3.2 CONSTRUCTION

(a) Shall be built in accordance with the construction manual

(b) No part of the structure shall be altered in any way other than by an approved X-Yachts service agent.

(c) Any major repair after damage should be done in accordance with the original construction manual by an X-Yachts approved service agent.

## D.4 INTERIOR FITOUT

D.4.1 MATERIALS

(a) As specified in the construction manual.

D.4.2 CONSTRUCTION

(a) Shall be built in accordance with the construction manual

(b) No part of the standard interior fit out shall be altered in any way other than by an approved X-Yachts service agent.

(c) Any major repair after damage should be done in accordance with the original construction manual by an X-Yachts approved service agent.

D.4.3 EQUIPMENT

(a) All equipment shall be fitted and placed as originally installed by the builder and specified as per construction manual.

## D.5 MECHANICAL INSTALLATION

D.5.1 MATERIALS

(a) As specified in the construction manual.

D.5.2 CONSTRUCTION

(a) Shall be built in accordance with the construction manual

(b) No part of the mechanical fit out shall be altered in any way other than by an approved X-Yachts service agent.

(c) Any major repair after damage should be done in accordance with the original construction manual by an X-Yachts approved service agent.

D.5.3 FOR USE

(a) MANDATORY

(1) One inboard engine, Volvo D2-40, 40 HP (29 kW) with Volvo S-Drive and an X-Yachts A/S approved 2 bladed folding propeller 17”x13.

The engine may be used only to charge batteries.

## D.6 ELECTRICAL SYSTEM

D.6.1 MATERIALS

(a) As specified in the construction manual.

D.6.2 CONSTRUCTION

(a) Shall be built in accordance with the construction manual

(b) No part of the electrical system shall be altered in any way other than by an approved X-Yachts service agent.

(c) Any major repair after damage should be done in accordance with the original construction manual by an X-Yachts approved service agent.

## D.7 ASSEMBLED HULL & DECK

D.7.1 FITTINGS

(a) MANDATORY

(1) Factory fit standard fittings in accordance with the construction manual.

Fittings shall be positioned as delivered from the factory

(2) Race package equipment shall only contain fittings as per deck drawing and race package equipment list in Appendix H2 and be placed as defined in deck drawing in Appendix H2.

(3) Equipment differing from the race package per appendix H2 shall not be lighter in weight compared to components from appendix H2 and shall be placed as defined in deck drawing in Appendix H2.

(b) OPTIONAL

Options listed can be part of the Measurement **Certificate**

(see also Section C5. and appendix H7):

(1) Spray hood deck fittings

(2) 2 Cabinets in saloon

(3) Cooling compressor

(4) Heating system

(5) Hotwater container

(6) Holding tank installation

(7) Radio/CD with loudspeakers

(8) Cockpit loudspeakers

(9) Unrestricted Electronic Instruments

(10) Shower in cockpit

(11) Other permanently mounted equipment such as lee cloth, saltwater system etc.

# Section E – Hull Appendages

## E.1 PARTS

E.1.1 MANDATORY

(a) **Keel**

(b) **Rudder**

## E.2 NOT IN USE

## E.3 KEEL

E.3.1 RULES

(a) The **keel** shall comply with the **class rules** in force at the time of the initial **certification** of the **hull**.

E.3.2 CERTIFICATION

(a) The **certification authority** shall **certify keels**

E.3.4 MANUFACTURERS

(a) Manufacturers shall be licensed by X-Yachts A/S.

E.3.5 MATERIALS

(a) The **keel** bulb shall be made of lead.

(b) The **keel** fin shall be made of cast iron

(c) The **keel** shall be in capsulated in fibre glass and epoxy.

E.3.6 CONSTRUCTION

(a) The **keel** shall be manufactured from a pattern approved by X-Yachts A/S.

E.3.7 DIMENSIONS

In accordance with the construction manual.

E.3.8 WEIGHTS

In accordance with the construction manual.

## E.4 RUDDER BLADE, RUDDER STOCK

E.4.1 RULES

(a) The **rudder** blade shall comply with the **class rules** in force at the time of **certification**.

E.4.2 MANUFACTURERS

(a) Manufacturers shall be licensed by the X-Yachts A/S.

E.4.3 MATERIALS

(a) The **rudder** blade and **rudder** stock shall be made as per construction manual.

E.4.4 CONSTRUCTION

(a) The **rudder** blade shall be manufactured in a mould approved by X-Yachts A/S in accordance with the construction manual.

E.4.5. DIMENSIONS

(a) In accordance with the construction manual.

E.4.6. POSITION

(a) In accordance to construction manual.

E.4.7 FITTINGS

(a) OPTIONAL

(1) Autopilot

## E.5 WHEEL STEERING SYSTEM

E.5.1 RULES

(a) Wheel steering system and steering mechanism including the quadrant shall be supplied by and installed by licensed manufacturer in accordance with the construction manual.

(b) Emergency tiller can be mounted on top of **rudder** shaft.

# Section F – Rig

## F.1 PARTS

F.1.1 MANDATORY

(a) **Mast**

(b) **Boom**

(c) Standing **rigging**

(d) Running **rigging**

F.1.2 OPTIONAL

(a) **Spinnaker pole**

## 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 cleaning and polishing is permitted without re-measurement and re-**certification**.

F.2.3 CERTIFICATION

(a) The **official measurer** shall **certify spars** and shall sign and date the **certification mark.**

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

F.2.4 DEFINITIONS

(a) MAST DATUM POINT

As specified in the construction manual and licensed **spar** manufacturer's tolerances.

F.2.5 MANUFACTURER

(a) Licenced by X-Yachts A/S

(b) Replacement **spars** shall only be supplied by the builder or the Licensed **Spar** Manufacturer

## F.3 MAST

F.3.1 MATERIALS

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

F.3.2 CONSTRUCTION

(a) In accordance with the construction manual

F.3.3 FITTINGS

(a) MANDATORY

(1) In accordance with construction manual

(b) OPTIONAL

(1) Additional instrumentation, lights, wind indicators may be mounted on the mast

F.3.4 DIMENSIONS

(a) In accordance with construction manual.

## F.4 BOOM

F.4.1 MATERIALS

(a) The **spar** shall be of anodised carbon.

F.4.2 CONSTRUCTION

(a) In accordance with the construction manual

F.4.3 FITTINGS

(a) As per construction manual

(b) OPTIONAL

(1) Second reefing line

F.4.4 DIMENSIONS

(a) In accordance with construction manual.

## F.5 SPINNAKER POLE

F.5.1 MANUFACTURER

(a) Manufacturer is optional.

F.5.2 MATERIALS

(a) The **spar** shall be of either aluminium alloy or Carbon (area of aramid reinforcement are permitted).

F.5.3 CONSTRUCTION

(a) Construction is optional

F.5.4 FITTINGS

(a) Fittings are optional.

F.5.5 DIMENSIONS

| | minimum | maximum |
|---|---|---|
| **Spinnaker pole spar cross section** | 96 mm | |
| **Spinnaker pole length** | 5105 mm | |

## F.6 STANDING RIGGING

F.6.1 MATERIALS

(a) The standing **rigging** shall be of stainless steel, except of the backstay

F.6.2 CONSTRUCTION

(a) In accordance with the construction manual

F.6.3 FITTINGS

(a) MANDATORY

(1) In accordance with construction manual

(b) OPTIONAL

(1) Furling forestay

F.6.4 DIMENSIONS

(a) In accordance with construction manual.

# Section G – Sails

## G.1 PARTS

G.1.1 MANDATORY

(a) Mainsail

(b) Number 1 Jib

(c) ISAF OSR Heavy Weather Jib

(d) ISAF OSR Storm Trisail

G.1.2 OPTIONAL

(a) Additional Number 1 Jib

(b) Spinnaker 1

(c) Spinnaker 2

(d) Storm Jib

## G.2 GENERAL

G.2.1 RULES

(a) **Sails** shall comply with the **class rules** in force at the time of **certification**.

G.2.2 CERTIFICATION

(a) The **official measurer** shall **certify** mainsails and headsails in the **tack** and spinnakers in the **head** and shall sign and date the **certification mark**.

(b) An MNA may appoint one or more persons at a sailmaker to measure and **certify sails** produced by that manufacturer in accordance with the ISAF In-house Certification Guidelines.

G.2.3 DEFINITIONS

(a) Not in use

G.2.4 SAILMAKER

(a) No licence is required.

## G.3 MAINSAIL

G.3.1 PARTS

(a) One (1) mainsail is mandatory.

G.3.2 IDENTIFICATION

(a) The class insignia shall conform with the dimensions and requirements as detailed in the diagram contained in Appendix H3 (sail plan).

G.3.3 MATERIALS

(a) The **ply** fibres shall be of either Dacron, Polyester, Aramid, Carbon or combination of before mentioned materials.

G.3.4 CONSTRUCTION

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

(b) The **body of the sail** shall consist entirely of either **woven ply** or non woven ply.

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

(d) The **sail** shall be constructed with a usable slab reef at one point adjacent to the **luff**, one point adjacent to the **leech**.

(e) The following are permitted: Stitching, glues, tapes, bolt ropes, corner eyes, headboard with fixings, Cunningham eye or pulley, batten pocket patches, **batten pocket elastic**, batten pocket end caps, mast and boom slides, **leech** line with cleat, **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) More than one slap reef is permitted.

G.3.5 DIMENSIONS

| | minimum | maximum |
|---|---|---|
| **Leech length** | | 17150 mm |
| **Mainsail upper point minus Mainsail lower point** | | 16250 mm |
| **Boom outer point distance** | | 5500 mm |
| **Quarter width** | | 4620 mm |
| **Half width** | | 3570 mm |
| **Three-quarter width** | | 2100 mm |
| **Upper width** | | 1210 mm |
| **Top width** | | 210 mm |
| **Leech Reefing point** | 1700 mm | 3900 mm |

**Upper Leech Point is the point on the leech equidistant from the head point and the three-quarter leech point.**

G.3.6. BATTEN LENGTH

(a) The **leech** shall have 5 battens.

(b) The top batten may be full batten.

(c) The top batten shall be positioned with minimum 2150 mm from **head point** of the mainsail, to the centreline of the **batten pocket**, at **leech**.

Top **Inside Batten Pocket Length** ..... maximum 1300 mm

**Inside Batten Pocket Length** # 2 from head ..... maximum 1370 mm

**Inside Batten Pocket Length** # 3 from head ..... maximum 1820 mm

**Inside Batten Pocket Length** # 4 from head ..... maximum 2100 mm

**Inside Batten Pocket Length** # 5 from head ..... maximum 2420 mm

## G.4 HEADSAILS

G.4.1 MATERIALS

(a) The **ply** fibres shall be of either Dacron, Polyester, Aramid, Carbon or combination of before mentioned materials.

G.4.2 CONSTRUCTION

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

(b) The **body of the sail** shall consist entirely of either **woven or non-woven ply**.

(c) The headsail shall have 4 **batten pockets** in the **leech**.

(d) 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*.

G.4.3 DIMENSIONS

| | minimum | maximum |
|---|---|---|
| **Luff length** | 16750mm | 17180 mm |
| **Luff Perpendicular** | | 5250 mm |
| **Three-quarter width** | | 1450 mm |
| **Half width** | | 2750 mm |
| **Quarter width** | | 4020 mm |
| **Top width** | | 130 mm |

G.4.4 BATTEN LENGTH

Top **Inside Batten Pocket Length** ..... full batten

**Inside Batten Pocket** Length # 2 maximum ..... 1370 mm

**Inside Batten Pocket Length** # 3 maximum ..... 1520 mm

**Inside Batten Pocket Length** # 4 maximum ..... 1820 mm

## G.5 ISAF OSR HEAVY WEATHER JIB

PARTS

(a) One (1) ISAF OSR Heavy Weather Jib is mandatory.

G.5.1 MATERIALS

(a) The **ply** fibres shall be of either Dacron, Polyester, Aramid, Carbon or combination of before mentioned materials.

G.5.2 CONSTRUCTION

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

(b) The **body of the sail** shall consist entirely either of **woven** and/or **non-woven ply.**

(c) The headsail shall have 4 **batten pockets** in 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*.

G.5.3 DIMENSIONS

| | minimum | maximum |
|---|---|---|
| **Luff length** | 16200 mm | 16500mm |
| **Luff Perpendicular** | | 4700 mm |
| **Half width** | | 2250 mm |
| **Top width** | | 130 mm |

G.5.4 BATTEN LENGTH

| | |
|---|---|
| Top **Inside Batten Pocket Length** | full batten |
| **Inside Batten Pocket Length** # 2 maximum | 770 mm |
| **Inside Batten Pocket Length** # 3 maximum | 1070 mm |
| **Inside Batten Pocket Length** # 4 maximum | 1370 mm |

(a) Alternative attachment along the luff.

## G.6 SPINNAKERS

G.6.1 PARTS

(a) Two (2) spinnakers are allowed

G.6.2 MATERIALS

(a) The spinnakers shall be made of commercial available woven nylon

G.6.3 DIMENSIONS

The spinnakers shall be symmetric around the centreline

(a) Spinnaker 1 with a minimum actual cloth weight of 30 g/m2.

The sailmaker shall mark the weight and make of cloth permanently near the head of the spinnaker

| | maximum |
|---|---|
| **Leech length** | 17950 mm |
| **Luff length** | 17950 mm |
| Difference between two **luff length** | 100 mm |
| **Half width maximum** | 8770 mm |
| **Foot length maximum** | 8540 mm |

(b) Spinnaker 2 with a minimum actual cloth weight of 40 g/m2

The sailmaker shall mark the weight and make of cloth permanently near the head of the spinnaker

Dimensions as per Spinnaker 1

## G.7 ISAF OSR STORM JIB

G.7.1 PARTS

(a) One (1) ISAF OSR storm jib is allowed

G.7.2 MATERIALS

(a) The **ply** fibres shall in accordance with the OSR.

G.7.3 CONSTRUCTION

(a) The construction shall be in accordance with the OSR.

G.7.4 DIMENSIONS

| | minimum | maximum |
|---|---|---|
| **Luff length** | | xxxx mm |
| **Leech length** | | xxxx mm |
| **Foot length** | | xxxx mm |
| **Luff Perpendicular** | | xxxx mm |
| Weight of **ply** of the **body of the sail** | 375 g/m2 | |

## G.8 ISAF OSR TRISAIL

G.8.1 PARTS, MATERIALS AND CONSTRUCTION

(a) Shall be in accordance with the OSR. It is suggested that the minimum weight of **ply** used in the **body of the sail** is 375 g/m².

G.8.2 DIMENSIONS

Shall be in accordance with OSR. The suggested size is as follows:

| | maximum |
|---|---|
| **Luff length** | xxxx mm |
| **Leech length** | xxxx mm |
| **Foot length** | xxxx mm |

# PART III – APPENDICES

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

H1 Deckplan
H2 Guide to race package equipment list
H3 Sailplan – only use as guide.
H4 Keel check measurement drawing
H5 Instruction for class sail sticker attachment
H6 Position of corrector weights
H7 Equipment and installations qualifying for minimum class weight
H8 Measurement certificate



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