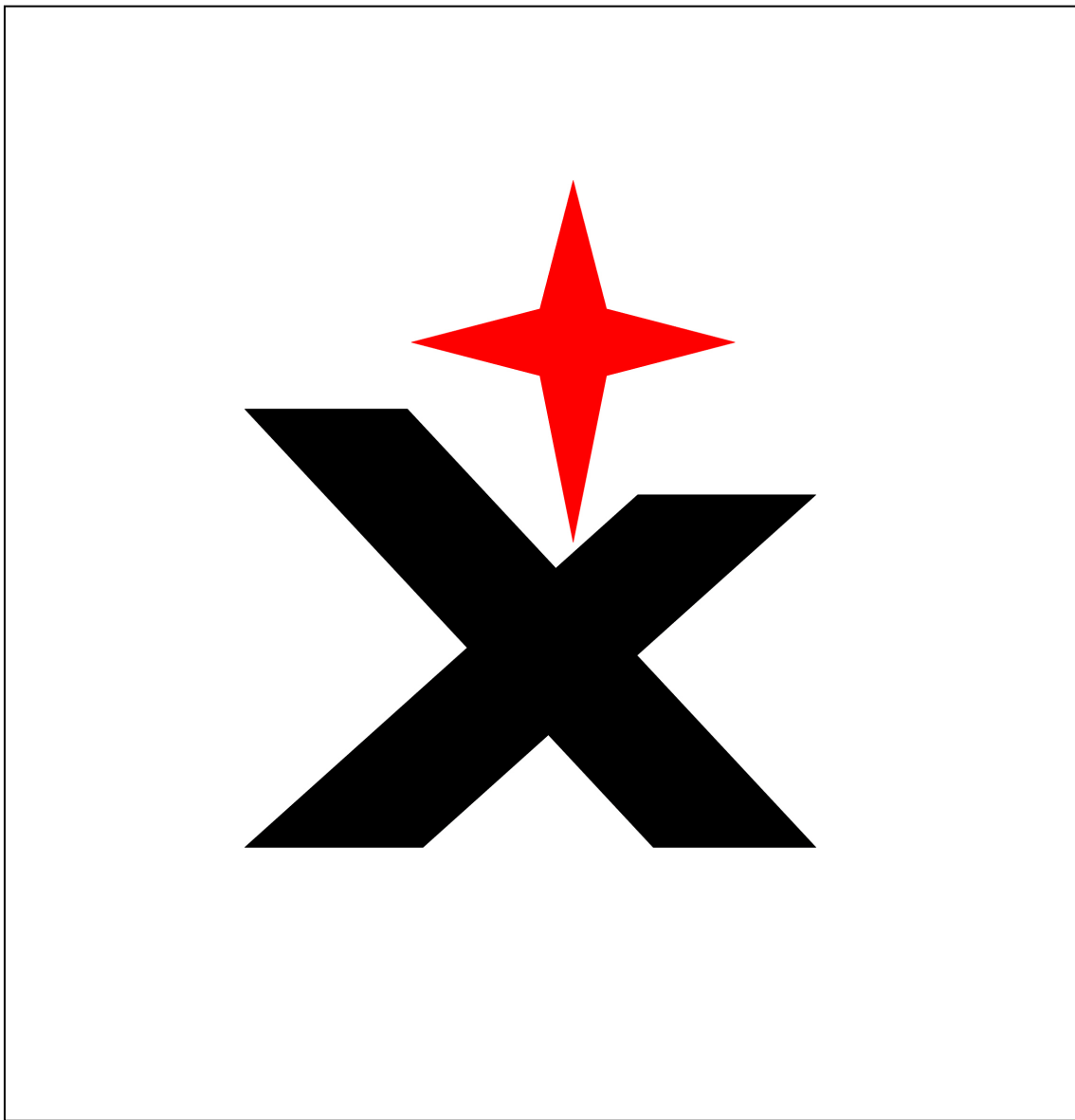


# **EXPRESS**

## **CLASS RULES**

### **2019**



The Express was designed in 1979 by Peter Norlin and was adopted as a National Class by the Swedish Sailing Federation in 1979

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# INTRODUCTION

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*Albin Express was designed by Peter Norlin, inspired by the popular J 24 produced by J-boats in the USA. The original prototype was shorter than the boats finally produced, and had a smaller, self-tacking jib. After comparing with the J 24, the prototype was faster in stronger winds, but needed modifications to perform better in lighter. The Express has been sailed and raced extensively starting in Sweden and later Norway, Finland, Denmark, Germany and the UK.*

*Albin Marin AB produced around 1000 boats in the years 1979-1981, starting in Gustavik on Gotland. Around 100 boats were delivered in 1979, 600 in 1980 and 300 boats in 1981. Production on Gotland continued until 1984. Between 1989-1990 a few boats were produced by Express Production AB. Between 2000-2003 boats with sail numbers 2000-2011 were produced by different manufacturers using the same moulds.*

*The Albin Express Class has been governed by Swedish Class Rules until 2017, these were last updated in 2014. These International Class Rules are the first official version in English, and were approved by World Sailing in 2018.*

*This introduction only provides an informal background and the Express Class Rules proper begin on the next page.*

*Express rigs and sails are measurement controlled by owners. Express hulls and hull appendages are measurement controlled by owners, unless built with class-owned or class-approved moulds.*

*Express hulls and hull appendages shall only be manufactured by class-approved builders. Hulls are required to comply with the Express Building Specification and are subject to an WS approved manufacturing control system.*

*Express 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. Sails may be produced under the World Sailing IHC.*

PLEASE REMEMBER:

THESE RULES ARE **CLOSED CLASS RULES** WHERE IF IT DOES NOT SPECIFICALLY SAY THAT YOU MAY – THEN YOU SHALL NOT.

COMPONENTS, AND THEIR USE, ARE DEFINED BY THEIR DESCRIPTION.

# 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.1.3 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.2 ABBREVIATIONS

- A.2.1 WS World Sailing
- SSF Swedish Sailing Federation
- MNA WS Member National Authority
- NCA National Class Association, here Sveriges Expresssegelare
- ERS Equipment Rules of Sailing
- RRS Racing Rules of Sailing

### A.3 AUTHORITIES

- A.3.1.a The **class authority** of the class is Sveriges Expresssegelare
- A.3.1.b The **class rules authority** of the class is the SSF which shall co-operate with the NCA in all matters concerning these **class rules**.
- A.3.1.c The **certification authority** is the MNA.
- 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 SSF.
- A.3.3 Neither SSF, a recognised **measurer** or the NCA has any legal responsibility regarding these **class rules**.

### A.4 ADMINISTRATION OF THE CLASS

- A.4.1 The SSF may delegate part or all of its functions, as stated in these **class rules**, to the NCA.

### A.5 CLASS RULES CHANGES

- A.5.1 These **class rules** may be changed by *sailing instructions* if the NCA so permits

### A.6 CLASS RULES AMENDMENTS

- A.6.1 Amendments to these **class rules** shall be suggested by the NCA (Sveriges Expresssegelare) and approved by SSF.
- A.6.2 Suggestions for amendments to these **class rules** shall be approved by a majority of the Executive Committee of the NCA, appointed according to the bylaws of the NCA

A.6.3 Any approved amendment shall not take effect until the beginning of the following calendar year.

## **A.7 CLASS RULES INTERPRETATION**

A.7.1.a Interpretation of **class rules** shall be made by the NCA in accordance with WS Regulations. SSF shall be informed about the interpretation as soon as possible.

A.7.1.b An interpretation can only be requested by SSF, an NCA member, a builder, a measurer or a Jury.

A.7.2 At a regatta, RSR 64.3.b is valid.

## **A.8 APPROVED BUILDERS**

A.8.1 Builders of **hulls** shall be licensed by the Copyright Holder and approved by the NCA.

A.8.2 Application for a Building license shall be made to the Copyright Holder.

Approved commercial builders are the following:

1979-1984	Albin Marin AB
1989-1990	Express Production AB
2000-2002	Rent-A-Boat Trinity Marin RS-plast
2003-2005	Nya Expressbyggarna
2005-	Finessabåtar AB

## **A.9 REGISTRATION AND SAIL NUMBERS**

A.9.1 Sail numbers shall be issued by the owners NCA. In Sweden the sail number is normally the hull number for new boats.

## **A.10 CERTIFICATION CONTROL**

A.10.1 **Certification control** for Boats built after 2019-01-01 shall only be performed by an **official measurer** who shall complete the measurement form.

A.10.2 For boats built before 2019-01-01, the owner of a boat may perform **certification control** on his own boat and complete the measurement form. If the owner prefers he may employ an **official measurer** to perform certification control.

A.10.3 The measurement form and **certification** fee, if required, shall be sent to the **certification authority** (in Sweden SSF).

A.10.4 Upon receipt of a satisfactorily completed measurement form and **certification** fee, if required, the **certification authority** may issue a **measurement certificate**. If an owner is unable to complete the measurement form in a satisfactory manner the **certification authority** may require that an **official measurer** performs the **certification control**.

A.10.5 Measurements shall be taken in accordance with the "World Sailing Guide to certification control" (available at [http://sailing.org/tools/documents/Guidetocertificationcontrol2017-\[21967\].pdf](http://sailing.org/tools/documents/Guidetocertificationcontrol2017-[21967].pdf)) unless otherwise specified in these class rules. Class specific measurement instructions are defined in (but not limited to) section H of these class rules.

A.10.6 The measurer shall use templates approved by the NCA when **certifying** keel and rudder. Tolerances shall be equal or smaller than stated in the drawings.

## **A.11 RE-CERTIFICATION**

A.11.1 Change of ownership invalidates the **measurement certificate**. For boats where the **certification control** has been performed by an **official measurer**, the new owner shall within 10 weeks register the change of ownership and apply for a new **measurement certificate** without a new **certification control** on SSF's online certificate system <http://matbrev.svensksegling.se>. For boats where the **certification control** is performed by the owner, the old **certification control** is invalid and a new **certification control** must be performed.

A.11.2 If an item that requires **certification** on the measurement form has changed, an **official measurer** or the owner shall **certify** the item and issue a new measurement form. The measurement form shall be sent to SSF within 10 weeks of the **certification**. Upon receiving the measurement form **the certification authority** can issue a new **measurement certificate**.

A.11.3 If any correction weights are changed or moved, an official measurer shall reweigh the boat and note the new correction weights on the **measurement certificate**. The owner shall send a photocopy of the amended **measurement certificate** to the **certification authority**. Upon receiving the amended **measurement certificate**, the certification authority can issue a new **measurement certificate**.

## Section B – Boat Eligibility

For a **boat** to be eligible for *racing*, 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.

### **B.2 CLASS ASSOCIATION MARKINGS**

B.2.1 A valid Class Association Sticker, if required by the NCA, shall be affixed to the hull in a conspicuous position.

### **B.3 COMPARATIVE EQUIPMENT INSPECTION**

At a regatta comparative equipment inspection may be used to settle a dispute of an item not directly covered by these **class rules**. The procedure for this shall be:

- (a) At least 10 reference boats shall be selected by lot.
- (b) The item in question shall be measured both on the disputed boat and the reference boats.
- (c) If any dimension on the disputed boat is outside of the interval formed by the reference boats the matter shall be deferred to the NCA for decision.
- (d) The case shall be reported to SSF.

# 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 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 GENERAL

#### C.1.1 RULES

- (a) The ERS Part I – Use of Equipment shall apply.

### C.2 CREW

#### C.2.1 LIMITATIONS

- (a) The **crew** shall consist of 3-5 persons.
- (b) A boat starting in an event with several individual races shall complete the event with the same crew.

However a crew member may be substituted during an event if the race management committee is notified before the start of the first race, in writing if so required by the race management team.

The race management committee may allow further substitutions for special reasons, e.g. sickness or injury, at its own discretion.

Substituting a crew member without notification and/or permission is ground for disqualification in all races of the event.

- (c) RRS 49.2 is valid, unless specified otherwise in the Sailing Instructions or Notice of Race.

#### C.2.2 CREW WEIGHT

- (a)

	minimum	maximum
Total weight of the crew	-	385 kg
- (b) The crew shall be wearing underwear, both below and above the waist, at the time of measurement.
- (c) The measurement shall be done, at the latest, before the start of the first race in the event.
- (d) No further crew weight measurements shall be performed over the duration of an event, unless a member of the crew has been substituted according to C.2.1(b).



### **C.3 PERSONAL EQUIPMENT**

#### **C.3.1 MANDATORY**

- (a) The boat shall be equipped with a **personal floatation device** for each crew member to the minimum standard ISO 12402-5 (CE 50 Newtons), or USCG Type III, or AUS PFD 1.

### **C.4 ADVERTISING**

#### **C.4.1 LIMITATIONS**

Advertising shall only be displayed in accordance the WS Advertising Code. (See WS Regulation 20)

### **C.5 PORTABLE AND BUILT IN EQUIPMENT**

#### **C.5.1 MANDATORY**

##### **(a) FOR USE**

- (1) One anchor (with optional chain) of a combined weight no less than 8 kg, including either  
no less than 30 m of line of no less than 8 mm in diameter  
or  
no less than 30 m of polyester webbing with a breaking strength no less than 1000 kg.

The anchor shall be functional and of a commercially available type.

- (2) One 12 V battery of minimum 65 Ah capacity and minimum 17 kg weight. The battery shall be fitted in the designated position below the port berth.
- (3) One bucket of minimum 10 liter capacity.
- (4) One cabin table weighing no less than 3 kg.
- (5) One fire extinguisher stowed in the designated position in the quarter berth.

##### **(b) NOT FOR USE**

- (1) Towing rope minimum 15 m long of not less than 14 mm in diameter.
- (2) One paddle minimum 1500 mm long and with a blade area of minimum 0.05 m<sup>2</sup>.

#### **C.5.2 OPTIONAL**

##### **(a) FOR USE**

- (1) Electronic or mechanical timing devices
- (2) Magnetic compasses
- (3) One electronic digital compass that may incorporate a timing device
- (4) A speedometer that may be incorporated with the electronic compass
- (5) A depth meter
- (6) Personal equipment
- (7) Mechanical Wind Indicators

- (8) Tools and spares
- (9) Mobile Telephones, Radio receivers and VHF-radios
- (10) GPS based navigation and tactical instruments. Such instruments may not be networked with other instruments.
- (11) Berth cushions consisting of up to 4 forepeak cushions covering the whole forepeak berth area, 2 saloon berth cushions and one quarter berth cushion each of no less than 50 mm thickness and 4 saloon backrests of no less than 120 mm thickness.
- (12) Additional equipment as per C.5.1

(b) NOT FOR USE

- (1) Electronic navigation devices and wind instruments. If installed such equipment shall be disabled e.g. by disconnecting the power and/or signal cables.
- (2) One outboard engine with fuel.
- (3) Mooring lines and fenders.

C.5.2 PLACING OF EQUIPMENT

Unless otherwise specified the placing of equipment is optional but equipment not in use shall not be moved when racing.

**C.6 BOAT**

C.6.1 MODIFICATIONS, MAINTENANCE AND REPAIR

- (a) Normal maintenance such as painting and polishing is allowed but it is the owner's responsibility that a changed or repaired boat fulfils these rules. The gelcoat may not be removed except by light sanding in preparation for painting. Irregularities from the manufacture may be faired using filler. Large repairs of the hull surface invalidate the **measurement certificate**. In order to renew the **measurement certificate** a documentation of the repair shall be submitted to the **certification authority**. For boats built before 2019-01-01 this may be done by the owner but for boats built after 2019-01-01 the repair shall be supervised and documented by an **official measurer**.

C.6.2 WEIGHT

- (a) The weight of the **boat** in dry condition
 

	minimum	maximum
For boats built on or before 2000-12-31	1780 kg	
For boats built after 2000-12-31	1820 kg	
- (b) The weight of the **boat** shall be measured excluding **sails**, including all mandatory **equipment** as listed in C.5.1(a) with the optional addition listed in C.6.2(c) below.
- (c) In addition to the mandatory equipment listed in C.5.1, the weight of the boat may be measured including maximum 30 kg of optional equipment as per C.5.2. or ballast. Berth cushions, if included in this way, can be placed

in an optional position. Any other equipment or ballast included in this way may be placed in optional position, and it shall be secured immediately above or below the floorboard, in a way that makes it difficult to move during racing. Berth cushions, equipment or ballast shall not be moved during racing.

- (d) Equipment and ballast included in the weight as per C.6.2 (c) shall be onboard when racing.
- (e) The total weight of the optional equipment and included in the weight as per C.6.2 (c) shall be noted in the boat's measurement certificate

### C.6.3 CORRECTOR WEIGHTS

- (a) When, after having added the optional 30 kg of weight as per C.6.2 (c), the **boat** weight is less than the minimum requirement, **corrector weights** of lead shall be permanently fixed to the underside of the deck with half the weight forward of the main bulkhead and half the weight aft of the cockpit
- (b) The weight and position of each corrector weight shall be noted in the boat's measurement certificate.

## C.7 HULL

### C.7.1 MODIFICATIONS, MAINTENANCE AND REPAIR

- (a) Normal maintenance such as painting, antifouling and polishing is allowed
- (b) On boats built before 1982 the reinforcement under the chain plates may be replaced by an aluminum U-section of maximum 450 mm length, max section 30x50 mm and max thickness 5 mm
- (c) The plywood core under the mast step may be replaced by an optional material. Any modification may not extend more than 15mm beyond the original plywood core.
- (d) Extra holes through hull e.g. for a sink drain, speedometer, depth sounder and/or for a marine toilet is allowed
- (e) The gelcoat may not be removed except by light sanding in preparation for painting. Irregularities from the manufacture may be faired using putty.
- (f) The keel attachment may be reinforced by adding layers of GRP and/or floors. The floors may be made of GRP of optional thickness with an optional core of plastic foam, wood, aluminum or steel plate of a maximum thickness of 10 mm. The reinforcement may not extend beyond the front end of the keel, the aft end of the rounding of the keel attachment area nor beyond the berth fronts. The height of any floors is limited by the underside of the original inner liner above the keel area.
- (g) The attachment of the berth fronts to the hull may be reinforced by adding layers of GRP under the berths not extending more than 200 mm measured perpendicular to the berth fronts.
- (h) The longitudinal and transverse plywood bulkheads under the cockpit area may be attached to the cockpit well, the inner liner and hull by either screws or GRP. If GRP is used it may not extend more than 50 mm measured perpendicular to the bulkhead. The transverse bulkhead under the aft part of the cockpit may be extended to the deck by either plywood or GRP but it

may not be solidly attached to the deck. The gap between the bulkhead and the deck may however be sealed using a soft sealant.

- (i) The original GRP foredeck hatch may be replaced by a commercially available aluminum framed hatch. The cut out in the deck may not exceed 650 × 650 mm

#### C.7.2 FITTINGS

##### (a) USE

- (1) Hatch covers and drainage plugs shall be kept in place at all times. The companionway hatch may be stowed at an optional position on board when racing.
- (2) The navigation lights may be detachable and stowed at an optional place on board during daylight and good visibility conditions.
- (3) If a 75 kg weight is suspended on the life lines between the stanchions, the distance between the life lines and the deck shall not be less than 150 mm.

### C.8 HULL APPENDAGES

#### C.8.1 MODIFICATIONS, MAINTENANCE AND REPAIR

- (a) Normal maintenance such as painting, antifouling and polishing is allowed

#### C.8.2 LIMITATIONS

- (a) Only one **rudder** blade shall be used during an event of less than 5 consecutive days, except when a **rudder** has been lost or damaged beyond repair.

#### C.8.3 RUDDER

##### (b) USE

- (1) The rudder measurement band shall not be below the hull contour, see drawing H.2.1

### C.9 RIG

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

- (a) Normal maintenance is allowed
- (b) The main boom topping lift may be removed

#### C.9.2 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, and the race committee has approved the substitution.

### C.9.3 MAST

- |  |         |         |
|--|---------|---------|
| (a) DIMENSIONS   | minimum | maximum |
| Intersection of the fore side of the <b>spar</b> and upper surface of the deck to the <b>lower point</b> .   | 800 mm  | 850 mm  |
| Distance between the + in the deck moulding (see <i>Drawing H.8.2</i> ), to the intersection of the extended fore side of the <b>spar</b> and upper surface of the deck. | 60 mm   | 70 mm   |
- (b) USE
- (1) The **spar** shall be stepped in the mast step in such a way that the heel shall not be capable of moving more than 1 mm.

### C.9.4 BOOM

- |                             |         |         |
|-----------------------------|---------|---------|
| (a) DIMENSIONS              | minimum | maximum |
| <b>Limit mark width</b>     | 20 mm   | -       |
| <b>Outer point distance</b> |         | 3350 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**.

### C.9.5 SPINNAKER POLE

- (a) USE
- (1) When in use one end of the spinnaker pole shall be attached to the mast fitting

### C.9.6 STANDING RIGGING

- |                                       |         |         |
|---------------------------------------|---------|---------|
| (a) DIMENSIONS                        | minimum | maximum |
| <b>Foretriangle base</b>              | 3040 mm | 3050 mm |
| <b>Foretriangle / Forestay height</b> | - mm    | 8600 mm |
- (b) USE
- (1) The length of the cap and lower **shrouds** shall not be adjusted when racing. Only rigging links and rigging screws placed above the deck may be used to adjust the length of the cap and lower shrouds
- (2) Use of a **headstay** is mandatory. A jib luff wire is not considered a **head stay**. Head foils are forbidden. The length of the **headstay** shall not be adjusted when racing.
- (3) The length of the **backstay** may be adjusted when racing.

### C.9.7 RUNNING RIGGING

#### (a) USE

All equipment for sheeting of sails, trimming of the **backstay** and trimming of sails is optional with the following limitations.

- (1) All equipment except blocks, fittings and lines for adjusting the **backstay** shall be above the deck. The blocks, fittings and lines for adjusting the **backstay** may be above or below deck.
- (2) All use of hydraulics is forbidden.

## C.10 SAILS

### C.10.1 MODIFICATIONS, MAINTENANCE AND REPAIR

- (a) **Sails** shall not be altered in any way except as permitted by these **class rules**.
- (b) Routine maintenance is permitted without **re-certification** but substantially re-cut sails shall be **re-certified**.

### C.10.2 LIMITATIONS

- (a) Not more than 1 **mainsail**, 1 jib, 1 heavy weather jib and 2 **spinnakers** shall be carried aboard.
- (b) Not more than 1 **mainsail**, 1 jib, 1 heavy weather jib and 2 **spinnakers** shall be used during an event of less than 5 consecutive days, except when a **sail** has been lost or damaged beyond repair.
- (c) One of the **spinnakers** shall be sealed. The seal may be broken if the first **spinnaker** is severely damaged. The damaged **spinnaker** shall be shown to the race committee.
- (d) Sail numbers may, at the discretion of the race committee, be different from the numbers on the boats **measurement certificate** provided that no other boat in the event has identical sail numbers.

### C.10.3 MAINSAIL

#### (a) IDENTIFICATION

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

#### (b) USE

- (1) The **sail** shall be hoisted on a **halyard**. The arrangement shall permit hoisting and lowering of the **sail** whilst afloat.
- (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) The **luff** shall be attached to the **mast spar** groove by bolt rope or sliders.
- (4) The **foot** may be attached to the **boom spar** groove by bolt rope or sliders.

#### C.10.4 JIB AND HEAVY WEATHER JIB

##### (a) USE

- (1) The **sail** shall be hoisted on a **halyard**. The arrangement shall permit hoisting and lowering of the sail whilst afloat.
- (2) The **jib** shall be set hanked to the **head stay**

#### C.10.5 SPINNAKER

##### (a) IDENTIFICATION

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

##### (b) USE

- (1) The **sail** shall be hoisted on a **halyard**. The arrangement shall permit hoisting and lowering of the **sail** whilst afloat.

## Section D – Hull

### D.1 PARTS

#### D.1.1 MANDATORY

- (a) Hull shell
- (b) Deck
- (c) Inner liner
- (d) Bulkheads
- (e) Mast support beam
- (f) Interior fitout

#### D.1.2 OPTIONAL

- (a) Extra interior fitout such as cabinets

### 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.10.

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

- (a) The hull shell, deck, innerliner, bulkheads, and interior fitout shall not be altered in any way except as permitted by these **class rules**.
- (b) Holes not bigger than necessary for the installation fittings and passage of lines may be made in the deck
- (c) Routine maintenance such as painting 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 **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 **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 the lower corner between the transom and hull shell.

#### D.2.5 IDENTIFICATION

(a) The hull shall carry the builder's plaque showing the hull number permanently placed on the aft cockpit bulkhead

(b) The hull number shall be permanently engraved on the inner liner on top of the port berth near the main bulkhead.

#### D.2.6 BUILDERS

(a) The hull shall be built by a builder licensed by Copyright Owner and approved by the NCA according to rule A.8.

(b) All moulds shall be approved by the NCA.

### D.3 HULL SHELL

#### D.3.1 MATERIALS

(a) The hull shell shall be built from chopped strand GRP according to the building specification.

#### D.3.2 CONSTRUCTION

(a) According to the building specification.

### D.4 DECK

#### D.4.1 MATERIALS

(a) The deck shall be built from chopped strand GRP with divinycell sandwich core according to the building specification.

#### D.4.2 CONSTRUCTION

(a) According to the building specification.

(b) There shall be a well-defined + mark in the deck as a reference for the mast position, positioned as defined by the **foretriangle base** in C.9.6(a).

### D.5 INNER LINER

#### D.5.1 MATERIALS

(a) The inner liner shall be built from chopped strand GRP according to the building specification

#### D.5.2 CONSTRUCTION

(a) According to the building specification



## **D.6 BULKHEADS**

### **D.6.1 MATERIALS**

- (a) The bulkheads shall be of plywood according to the building specification and H.7

### **D.6.2 CONSTRUCTION**

- (a) There shall be a main bulkhead, a forward cockpit bulkhead, two longitudinal bulkheads under the cockpit well and a transverse bulkhead at the aft end of the cockpit well.

## **D.7 MAST SUPPORT BEAM**

### **D.7.1 MATERIALS**

- (a) The mast support beam shall be in solid mahogany according to the building specification and H.7.

### **D.7.2 CONSTRUCTION**

- (a) The mast support beam may be laminated of two pieces of mahogany

## **D.8 INTERIOR FIT OUT**

### **D.8.1 MATERIALS**

- (a) The interior fit out shall be of plywood and solid wood according to the building specification and H.7

### **D.8.2 CONSTRUCTION**

- (a) According to the building specification

## **D.9 ASSEMBLED HULL**

### **D.9.1 FITTINGS**

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

The following fittings shall be positioned in accordance with drawing H.3:

- (1) Bow pulpit with integrated stemhead and forestay fitting
- (2) Port and starboard pushpits. The opening between the pushpits shall be closed with a chain.
- (3) 4 stanchions supporting lifelines of minimum 4 mm wire with a minimum height of 450 mm above the deck. The wire may be wholly or partly replaced by synthetic rope and/or webbing with a breaking strength of minimum 900 kg
- (4) 4 Mooring horn cleats
- (5) 2 ventilators
- (6) 2 windows
- (7) Toe rails in wood or aluminum
- (8) Mast step
- (9) One permanently installed bilge pump
- (10) One stainless steel folding swimming ladder permanently fitted to the transom

- (11) Bow and stern navigation light of a type approved according to the European norm EN 14744, 2005 and EN 60945, 2002 for the open sea for sailing boats less than 12m in length
  - (12) One foredeck hatch
  - (13) Port and starboard double chainplates
- (b) OPTIONAL
- (1) Equipment for sheeting of sails, trimming of the backstay and trimming of sails

## Section E – Hull Appendages

### E.1 PARTS

#### E.1.1 MANDATORY

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

### E.2 GENERAL

#### E.2.2 MODIFICATIONS, MAINTENANCE AND REPAIR

- (a) **Hull appendages** shall not be altered in any way except as permitted by these class rules.
- (b) Normal maintenance such as painting, antifouling and polishing is permitted without re-measurement and re-**certification**.

#### E.2.3 CERTIFICATION

- (a) The **official measurer** shall **certify hull appendages** and shall sign and date the **measurement form**.

#### E.2.4 MANUFACTURERS

- (a) The **hull appendages** shall be made by manufacturers licensed by the copyright holder.

### 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** or the **class rules** in force at the time of **certification**.

#### E.3.2 MATERIALS

- (a) The **keel** shall be of solid cast iron.

#### E.3.3 CONSTRUCTION

- (a) The **keel** shall be manufactured from a pattern approved by the NCA and made according to keel drawing H.1.
- (b) The **keel** may be faired and covered with an optional protective material of a density not greater than 2000 kg/m<sup>3</sup> while fulfilling rules E.3.4 and E.3.5
- (c) The **keel** shall be attached to the **hull** with 8 stainless steel bolts not less than 16 mm in diameter

#### E.3.4 DIMENSIONS

- (a) The **keel** shall be fitted to the hull and have dimensions as described in H.1.

#### E.3.5 WEIGHTS

	minimum	maximum
Keel weight	800 kg	815 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**.

### E.4.2 MATERIALS

- (a) The **rudder** blade shall be of GRP with core of polyurethane foam.
- (c) The tiller may be of wood, GRP, aluminum or stainless steel or a combination of these materials.
- (d) The pintles shall be of stainless steel

### E.4.3 CONSTRUCTION

- (a) The **rudder** blade shall be manufactured in a mould approved by the NCA or according to appendix H.2.
- (b) The laminate layup shall be according to the building specification
- (c) A rudder which does not comply with the class rules may be altered to comply with appendix H.2.

### E.4.4 FITTINGS

- (a) MANDATORY
  - (1) Two pintles
- (b) OPTIONAL
  - (1) One tiller extension of optional type

### E.4.5 DIMENSIONS

- (a) The **rudder** shall be fitted to the hull and have dimensions as described in appendix H.2.

### E.4.6 WEIGHTS

- (a)

	minimum	maximum
Rudder weight including pintles but without tiller and tiller extension	18 kg	-
- (b) The rudder weight may be corrected using corrector weights. They shall be placed above the upper pintle. The design of the weight(s) is optional but they shall be securely fastened to the rudder by screws and/or glue or by being laminated into the rudder.

## Section F – Rig

### F.1 PARTS

#### F.1.1 MANDATORY

- (a) **Mast**
- (b) **Boom**
- (c) Standing **rigging**
- (d) Running **rigging**
- (e) **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 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.
- (c) An MNA may appoint one or more **In-House Official Measurers** to measure and **certify rigs** produced by that manufacturer.

#### F.2.4 DEFINITIONS

- (a) MAST DATUM POINT  
The **mast datum point** is the **heel point**.

#### F.2.5 MANUFACTURER

- (a) No licence is required.

### F.3 MAST

#### F.3.1 MATERIALS

- (a) The **spars** shall be of an aluminum extrusion.
- (b) Spars shall be anodized and may be painted.
- (c) Alloys SIS4107-06, 6063/T6 and 6005A/T6 have been used in the past and are allowed. All spars built after 2018 shall be built from 6000 / T6-series aluminum alloy according to EN 755-2. Examples of such alloys are 6005 / T6, 6005A/T6, 6063A/T6.

F.3.2 CONSTRUCTION

- (a) The **spar** extrusion shall be according to drawing H.4. The extrusion shall not be tapered.

F.3.3 FITTINGS

(a) MANDATORY

- (1) Mast head fitting
- (2) Shroud tangs
- (3) A set of fixed spreaders
- (4) Mainsail halyard sheave box
- (5) Headsail halyard sheave box
- (6) Spinnaker halyard block or sheave box
- (7) Spinnaker pole fitting
- (8) Spinnaker pole lift sheave box
- (9) Gooseneck
- (10) Heel fitting with or without sheaves for halyards

(b) OPTIONAL

- (1) One mechanical wind indicator
- (2) Instrument bracket(s)
- (3) Spinnaker pole downhaul block with attachment
- (4) Kicking strap attachment

F.3.5 DIMENSIONS

	minimum	maximum
<b>Mast extrusion length</b>	10400 mm	mm
<b>Mast spar curvature</b>	-	30 mm
<b>Mast spar cross section</b>		
<b>fore-and-aft</b>	128 mm	130 mm
<b>transverse</b>	88 mm	90 mm
<b>Mast limit mark width</b>	20 mm	-
<b>Lower point height</b>	790 mm	850 mm
<b>Lower point to upper point</b>	-	9500 mm
<b>Forestay height</b>	8500 mm	8600 mm
<b>Shroud height</b>	8300 mm	8400 mm
<b>Spinnaker pole fitting:</b>		
<b>height</b>	1100 mm	1150 mm
<b>projection</b>	-	60 mm
<b>Spinnaker hoist height</b>	-	8660 mm
<b>Spreader;</b>		
<b>length</b>	1025 mm	1085 mm
<b>height</b>	4100 mm	4150 mm

F.3.16 WEIGHTS

	minimum	maximum
<b>Top weight</b>	15.8 kg	-

**F.4 BOOM**

F.4.1 MATERIALS

(a) The spar shall be of an aluminium extrusion. It shall be anodised and may be painted.

F.4.2 CONSTRUCTION

(a) The spar extrusion shall be one of the three allowed extrusions according to drawing H.5. The extrusion shall not be tapered.

F.4.3 FITTINGS

(a) MANDATORY

- (1) Two single sheave mainsheet blocks with attachments
- (2) Clew outhaul blocks and attachments
- (3) Kicking strap fitting
- (4) Gooseneck attachment

(b) OPTIONAL

- (1) Not more than two wire strops for mainsheet blocks
- (2) Spinnaker pole stowage fittings

F.4.5 DIMENSIONS

	minimum	maximum
<b>Boom spar curvature</b>	-	20 mm
<b>Boom spar cross section</b>		
<b>vertical</b>	90 mm	110 mm
<b>transverse</b>	53 mm	60 mm

**F.5 SPINNAKER POLE**

F.5.1 MATERIALS

(a) The **spar** shall be of an aluminium extrusion. It shall be anodised and may be painted.

F.5.2 CONSTRUCTION

(a) The extrusion may be tapered

F.5.3 FITTINGS

(a) Fittings are optional.

F.5.5 DIMENSIONS

	Minimum	maximum
<b>Spinnaker pole length</b>	-	3090 mm

## **F.6 STANDING RIGGING**

### **F.6.1 MATERIALS**

(a) The standing **rigging** shall be of stainless steel.

### **F.6.2 CONSTRUCTION**

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

(1) A **forestay** of wire with not less than 19 strands

(2) Lower and upper **shrouds** of wire with not less than 19 strands

(3) A **backstay** of wire with not less than 19 strands

Compact strand wire (e.g. dyform) is allowed

### **F.6.3 FITTINGS**

#### **(a) OPTIONAL**

(1) Rigging screws, links and connector plates, fittings for adjusting the **backstay**

### **F.6.4 DIMENSIONS**

	Minimum	maximum
<b>Forestay</b> diameter	5 mm	-
<b>Shroud</b> diameter	5 mm	-
<b>Backstay</b> diameter	4 mm	-

## **F.7 RUNNING RIGGING**

### **F.7.1 MATERIALS**

(a) Materials are optional.

### **F.7.2 DIMENSIONS**

(a) Dimensions are optional.



## Section G – Sails

### G.1 PARTS

#### G.1.1 MANDATORY

- (a) **Mainsail**
- (b) Jib

#### G.1.2 OPTIONAL

- (a) Spinnaker
- (b) Heavy weather 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) WS or an MNA may appoint one or more **In-House Official Measurers** to measure and **certify sails** produced by that manufacturer.

#### G.2.3 SAILMAKER

- (a) No license is required.
- (b) The weight in  $\text{g/m}^2$  of the **body of the sail** shall be indelibly marked near the **head point** by the sailmaker together with the date and his signature or stamp.

### G.3 MAINSAIL

#### G.3.1 IDENTIFICATION

- (a) The class insignia shall be a black X with a red star and conform to the dimensions, requirements and placed as detailed in drawing H.6.

#### G.3.2 MATERIALS

- (a) The **ply** fibres shall consist of polyester
- (b) **Stiffening**
  - (1) Headboards may be plastic or aluminium
  - (2) Battens shall be manufactured in GRP.
- (c) **Sail reinforcement** shall consist of woven **ply**. The **ply** fibres shall consist of polyester.

#### G.3.3 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 **sail** shall have 4 batten **pockets** in the **leech**.
- (d) The **sail** may be constructed so that it can be reefed by means of slab reefing

- (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, one **window**, 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.3.4 DIMENSIONS

	Minimum	maximum
<b>Leech length</b>	-	10080 mm
<b>Half width</b>	-	2090 mm
<b>Three-quarter width</b>	-	1290 mm
Mass of <b>ply</b> of the <b>body of the sail</b>	267 g/m <sup>2</sup>	
<b>Primary reinforcement</b>	-	440 mm
<b>Secondary reinforcement:</b>		
from <b>sail corner measurement points</b>	-	1300 mm
for <b>flutter patches</b>		optional
for <b>chafing patches</b>		optional
for <b>batten pocket patches</b>		optional
at a reefing point adjacent to <b>luff</b> or <b>leech</b>	-	1300 mm
<b>Tabling width</b>		optional
<b>Seam width</b>		optional
<b>Window area</b>	-	0.6 m <sup>2</sup>
<b>Window to sail edge</b>		150 mm
Max dimension of the headboard		180 mm
<b>Batten pocket length:</b>		
uppermost pocket:		
<b>inside</b>		optional
lowermost pocket:		
<b>inside</b>	-	970 mm
intermediate pockets:		
<b>inside</b>	-	1170 mm
<b>Batten pocket width:</b>		optional
<b>Head point</b> to intersection of <b>leech</b> and centreline of uppermost <b>batten pocket</b>	-	1950 mm

	Minimum	maximum
<b>Clew point</b> to intersection of <b>leech</b> and centreline of lowermost <b>batten pocket</b>	-	1950 mm

## G.4 JIB

### G.4.1 MATERIALS

- (a) The **ply** fibres shall consist of polyester
- (b) **Stiffening**
  - (1) Headboards may be plastic or aluminium
  - (2) Battens shall be manufactured in GRP.
- (c) **Sail reinforcement** shall consist of woven **ply**. The **ply** fibres shall consist of polyester.

### G.4.2 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 headsail shall have 3 **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
<b>Luff length</b>	-	8900 mm
<b>Leech length</b>	-	8150mm
<b>Foot length</b>	3500 mm	3560 mm
<b>Half width</b>	-	1630 mm
<b>Three-quarter width</b>	-	870 mm
<b>Upper width at upper leech point</b> 100 mm from the <b>head point</b>	-	100 mm
<b>Top width</b>	-	65 mm
Mass of <b>ply</b> of the <b>body of the sail</b>	245g/m <sup>2</sup>	-
<b>Primary reinforcement</b>		420mm
<b>Secondary reinforcement:</b>		
from <b>sail corner measurement points</b>	-	1250mm
for <b>flutter patches</b>		optional
for <b>chafing patches</b>		optional
for <b>batten pocket patches</b>		optional
<b>Tabling width</b>		optional
<b>Seam width</b>		optional
<b>Window area</b>		0.4 m <sup>2</sup>
<b>Window to sail edge</b>	150 mm	-

	minimum	maximum
<b>Batten pocket length:</b>		
<b>inside</b>	270 mm	620 mm
<b>Head point</b> to intersection of <b>leech</b> and centreline of uppermost <b>batten pocket</b>	1950 mm	-

## G.5 HEAVY WEATHER JIB

### G.5.1 MATERIALS

- (a) The **ply** fibres shall consist of polyester
- (b) **Stiffening**
  - (1) Battens shall be manufactured in GRP.
- (c) **Sail reinforcement** shall consist of woven **ply**. The **ply** fibres shall consist of polyester.

### G.5.2 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 sail shall have 2 **batten pockets** in the **leech**.
- (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
<b>Luff length</b>	-	7800 mm
<b>Leech length</b>	6200 mm	6300mm
<b>Foot length</b>	3050 mm	3150 mm
<b>Half width</b>	-	1250 mm
<b>Upper width at upper leech point</b> 140 mm from the <b>head point</b>	-	100 mm
<b>Top width</b>	-	50 mm
Mass of <b>ply</b> of the <b>body of the sail</b>	277g/m <sup>2</sup>	-
<b>Primary reinforcement</b>		380 mm
<b>Secondary reinforcement:</b>		
from <b>sail corner measurement points</b>	-	1150mm
for <b>flutter patches</b>		optional
for <b>chafing patches</b>		optional
for <b>batten pocket patches</b>		optional
<b>Tabling width</b>		optional
<b>Seam width</b>		optional
<b>Window area</b>	-	0.4 m <sup>2</sup>
<b>Window to sail edge</b>	150 mm	-

	minimum	maximum
<b>Batten pocket length:</b>		
<b>inside</b>	-	420 mm
<b>Head point</b> to intersection of <b>leech</b> and centreline of uppermost <b>batten pocket</b>	2000 mm	-

## G.6 SPINNAKER

### G.6.1 MATERIALS

- (a) The **ply** fibres shall consist of polyester or polyamide (nylon)
- (b) **Sail reinforcement** shall consist of woven **ply**. The **ply** fibres shall consist of polyester or polyamide.

### 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, recovery line eyes, tell tales and items as permitted or prescribed by other applicable *rules*.

### G.6.3 DIMENSIONS

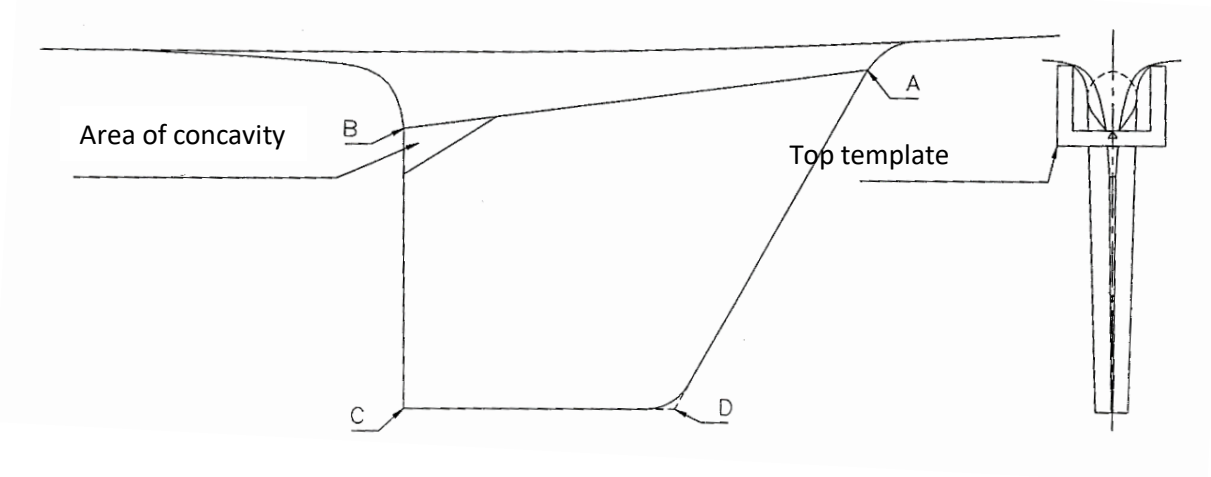
	minimum	maximum
<b>Leech length and luff length</b>	-	9000 mm
<b>Foot length</b>	5550 mm	5700 mm
<b>Quarter width</b>	-	5700 mm
<b>Half width</b>	-	5700 mm
Mass of <b>ply</b> of the <b>body of the sail</b>	32 g/m <sup>2</sup>	-
<b>Primary reinforcement</b>	-	420 mm
<b>Secondary reinforcement:</b>		
from <b>sail corner measurement points</b>	-	1260 mm
for recovery line point		optional
<b>Tabling width</b>		optional
<b>Seam width</b>		optional

## 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. Drawings and measurement instructions

#### H.1 KEEL DRAWING AND MEASUREMENT INSTRUCTION



*Drawing H.1.1 Keel overview*

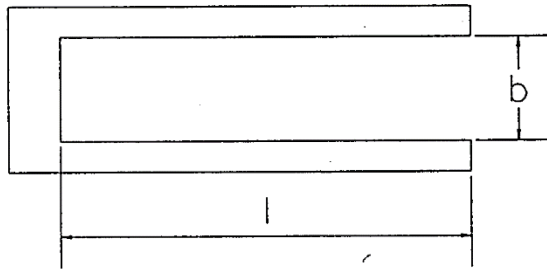
##### H.1.1 TEMPLATES

Templates defined in drawing H.1.2

- (a) Top template
- (b) Width templates no. 1-6
- (c) Leading edge radii templates no. 1 and 2

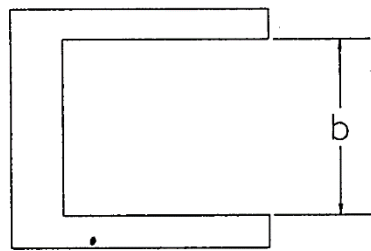
##### H.1.2 DEFINITIONS

- a) The point AA is marked by positioning the top template on the keel leading edge according to drawing H.1.3. The template shall be positioned so that the point AA is as low down as possible while holding the template against the hull
- b) The point A is marked 177 mm upwards along the keel leading edge, according to drawing H.1.3
- c) The point B is marked by positioning the top template on the keel trailing edge according to drawing H.1.3. The template shall be positioned so that the point B is as low down as possible while holding the template against the hull
- d) The point C is the intersection between a straightedge positioned in the bottom of the keel and a straightedge positioned along the leading edge of the keel
- e) The point D is the intersection between a straightedge positioned in the bottom of the keel and a straightedge positioned along the trailing edge of the keel



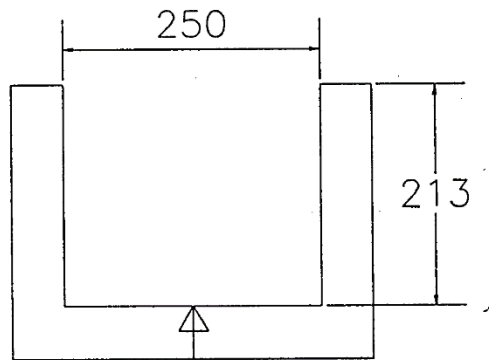
Trailing edge templates

Template no.	l (mm)	b (mm)
1	200	74
2	400	110
3	200	54
4	400	100

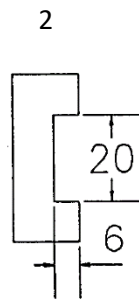
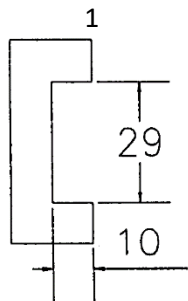


Leading edge templates

Template no.	l (mm)	b (mm)
5	100	84
6	100	77

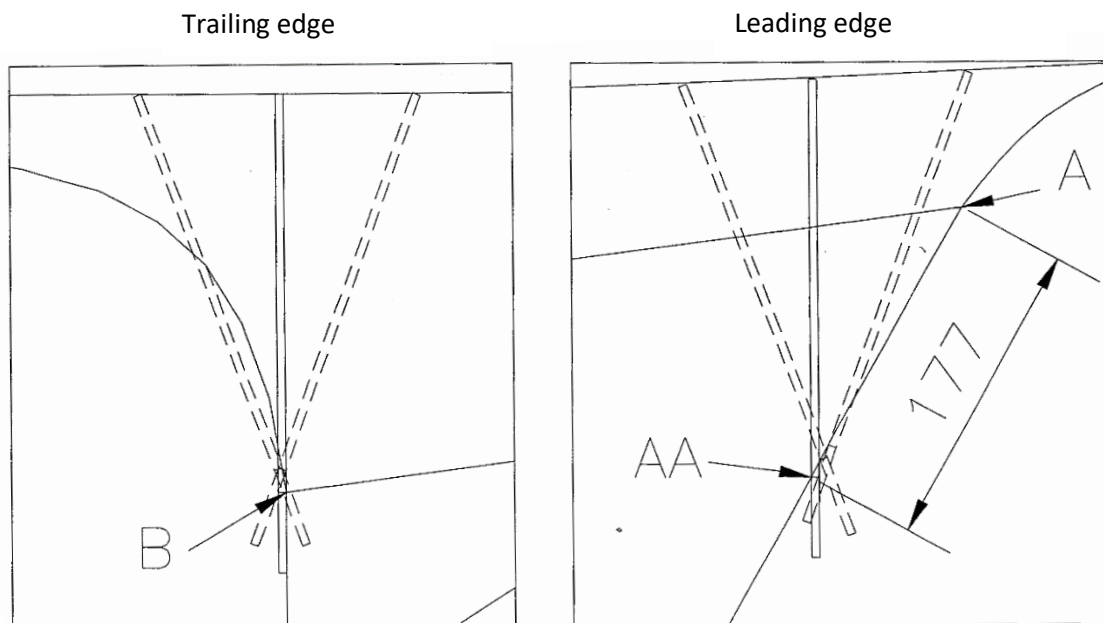


Top template



Leading edge radii templates

*Drawing H.1.2 Keel templates*



*Drawing H.1.3 Positioning of top template*

### H.1.3 LINEAR DIMENSIONS

	Minimum	Maximum
Point A-Point B:	1480 mm	1510 mm
Point C-Point D:	840 mm	870 mm
Point A-Point D:	1240 mm	1275 mm
Point B-Point C:	890 mm	915 mm
Maximum keel width along A-B	160 mm	-
Position of keel max width along A-B measured from B	790 mm	990 mm
Maximum keel width 10 mm above C-D	104 mm	-
Position of keel max width along C-D measured from C	470 mm	620 mm
Trailing edge width at B	22 mm	-
Trailing edge width 150 mm along the trailing edge below B	19 mm	-
Trailing edge width 10 mm above C	4 mm	-
Distance from the <b>hull datum point</b> (see D.2.4) to B	3210 mm	3240 mm
Angle between bottom (C-D) and trailing edge (B-D)		90°



#### H.1.4 USE OF KEEL TEMPLATES

The purpose of the keel templates is to define minimum keel widths. They shall be applied over the keel leading and trailing edges as listed below and if a template is able to touch the leading or trailing edge there shall be no gap between the template and the keel at the inner edge of the template.

Template	Application
1	Along A-B from the trailing edge
2	Along A-B from the trailing edge
3	Parallel to and 10 mm above C-D from the trailing edge
4	Parallel to and 10 mm above C-D from the trailing edge
5	Along A-B from the leading edge
6	Perpendicular to the leading edge at a point 1100 mm below A measured along the leading edge
LE radii 1	Perpendicular to the leading edge at a point 10 mm below A measured along the leading edge
LE radii 2	Perpendicular to the leading edge at a point 1100 mm below A measured along the leading edge

#### H.1.5 KEEL SURFACE

The keel surface shall be convex except;

- (a) for a triangular area limited by the point B, a point 300 mm forward of B along A-B and a point 150 mm below B along B-C.
- (b) and from surface irregularities smaller than 2 mm caused by manufacturing defects and/or unskilled finish work

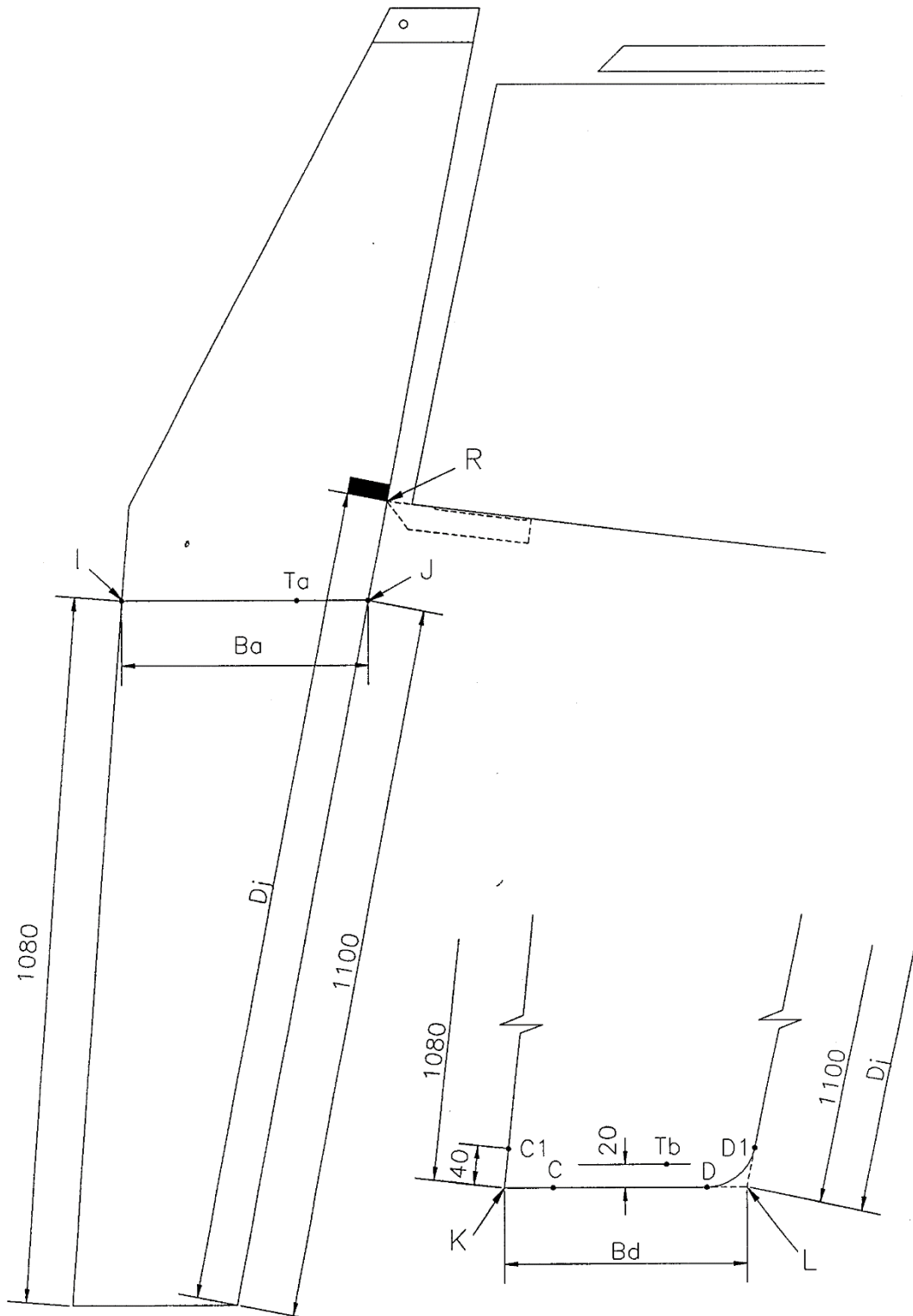
#### H.1.6 KEEL EDGES

The keel edges shall be straight with a tolerance of  $\pm 2$  mm between:

- (a) A and a point 1100 mm below A measured along the leading edge
- (b) B and C

The bottom of the keel between C and a point 780 mm forward of C shall be straight with a tolerance of  $\pm 5$  mm.

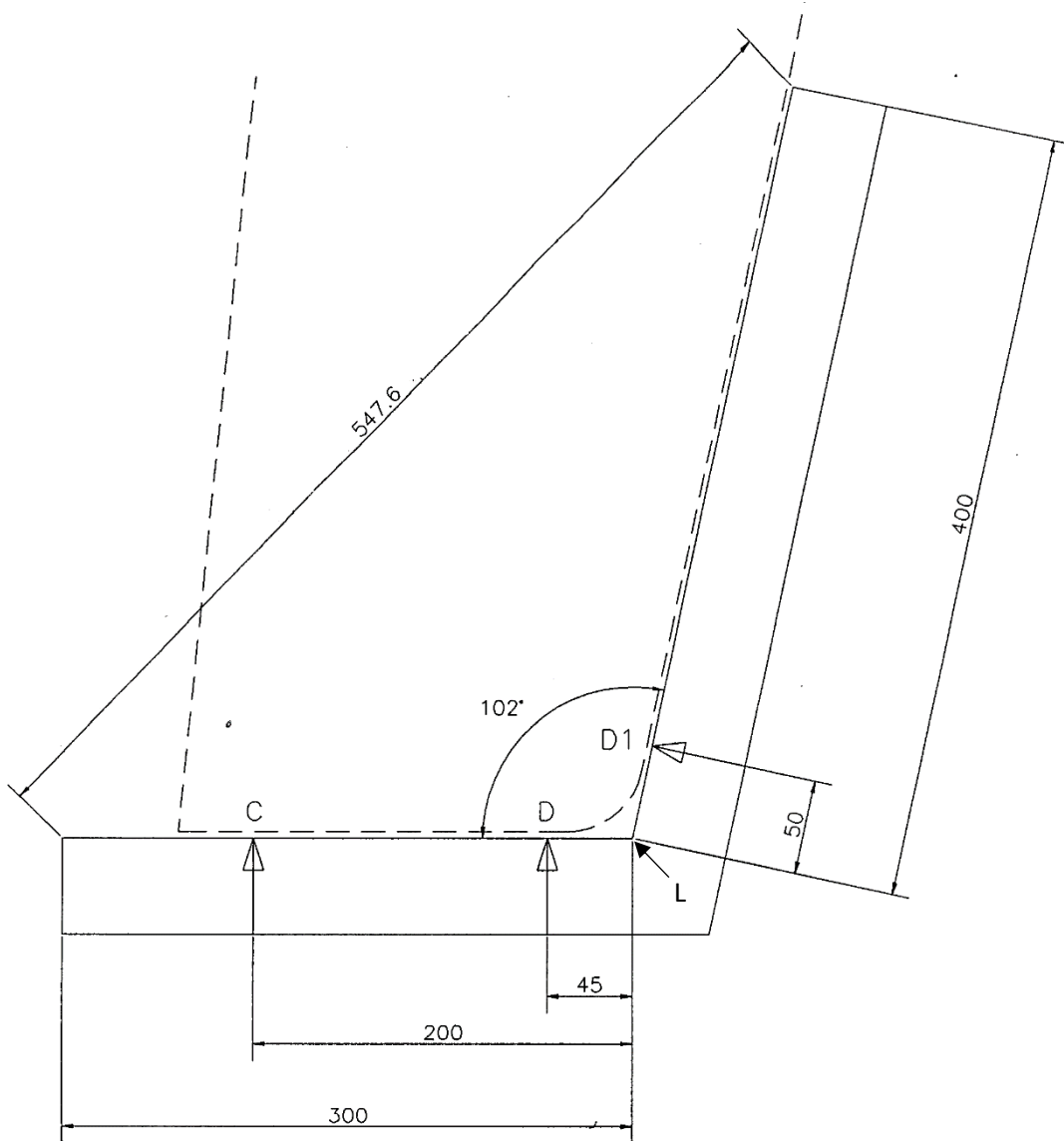
## H.2 RUDDER DRAWING AND MEASUREMENT INSTRUCTION



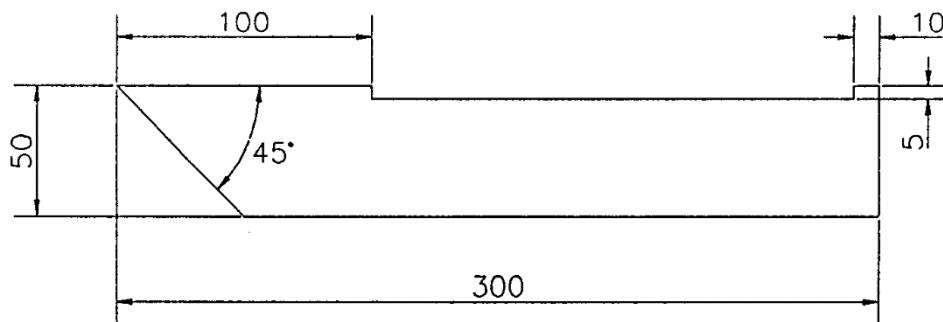
*Drawing H.2.1 Rudder plan*

### H.2.1 TEMPLATES

- (a) Angle template according to drawing H.2.2
- (b) Point template according to drawing H.2.3



*Drawing H.2.2 Angle template*



*Drawing H.2.3 Point template*

## H.2.2 USE OF THE ANGLE TEMPLATE

The angle template is used as follows:

- (a) Hold the longer leg against the rudder leading edge.
- (b) Slide the template upwards until the shorter leg touches the rudder bottom.

## H.2.3 DEFINITIONS

- (a) The points C, D, D1 and L are determined by the angle template when it is placed according to H.2.2
- (b) The point K is determined by the intersection between the short leg of the angle template and a 1000 mm straightedge resting against the rudder trailing edge and the short leg of the angle template when the template is placed according to H.2.2
- (c) The point C1 is positioned above point K 40 mm along the rudder trailing edge.
- (d) The point I is positioned above point K 1080 mm along the rudder trailing edge.
- (e) The point J is positioned above point L 1100 mm along the rudder leading edge.
- (f) The point R is defined by the point on the point template when the template is positioned on the bottom of the hull shell with the point touching the rudder.

## H.2.4 DIMENSIONS

	Minimum	Maximum
Point R-Point L:	1140 mm	1150 mm
Point K-Point L:	240 mm	250 mm
Point I-Point J:	380 mm	390 mm
Maximum rudder width along I-J	55 mm	60mm
Maximum rudder width 20 mm above K-L	42 mm	46 mm

## H.2.5 RUDDER SURFACE

The rudder surface shall be convex except for surface irregularities smaller than 2 mm caused by manufacturing defects and/or unskilled finish work

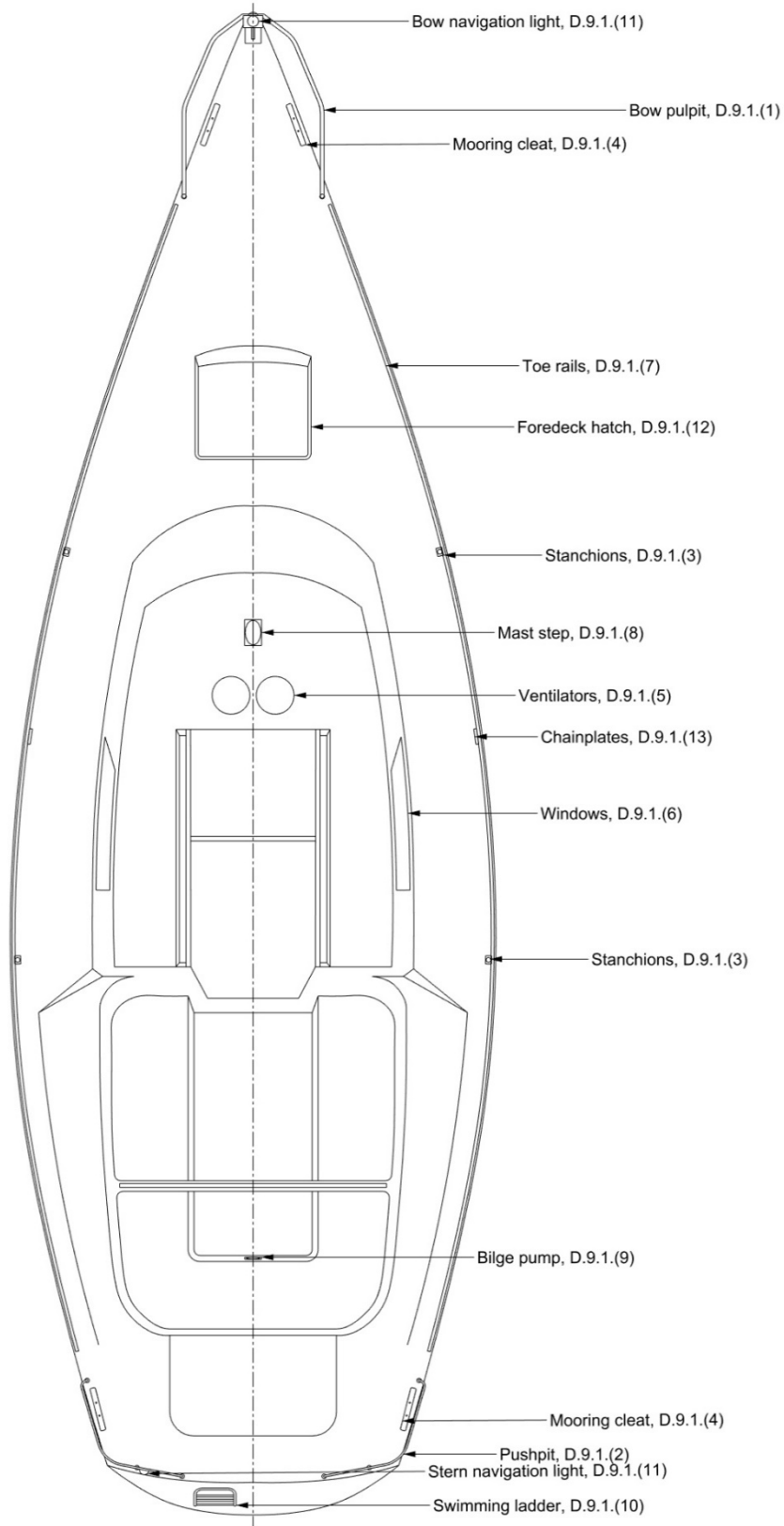
## H.2.6 RUDDER EDGES

The rudder leading and trailing edges shall be straight with a tolerance of  $\pm 2$  mm between:

- (a) D1-J
- (b) C1-I

The deviation between the lower leg of the angle template and bottom of the rudder between C and D shall be less than 4 mm. Between C-C1 and D-D1 the shape is free.

### H.3 DECK PLAN WITH MANDATORY FITTINGS

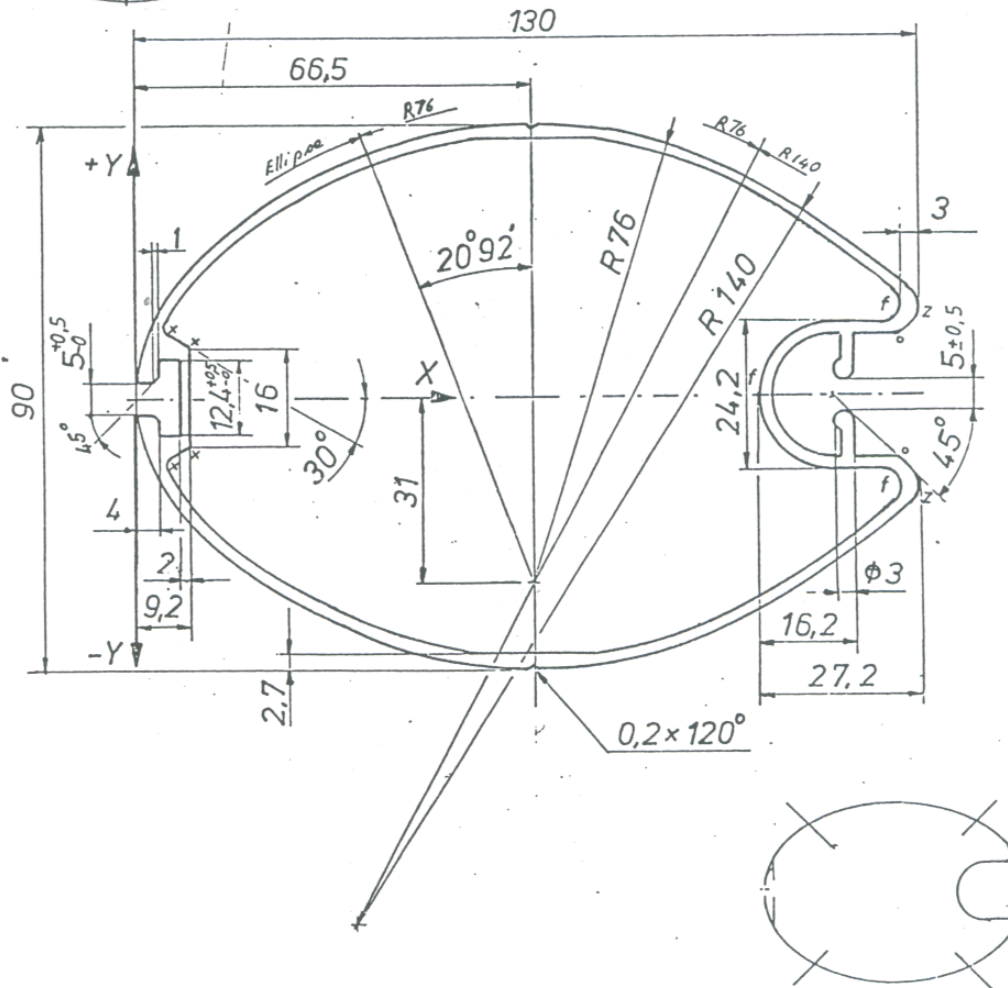
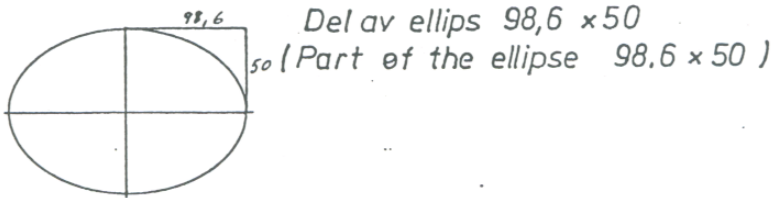


# H.4 MAST SPAR EXTRUSION DRAWING

"EXPRESS"

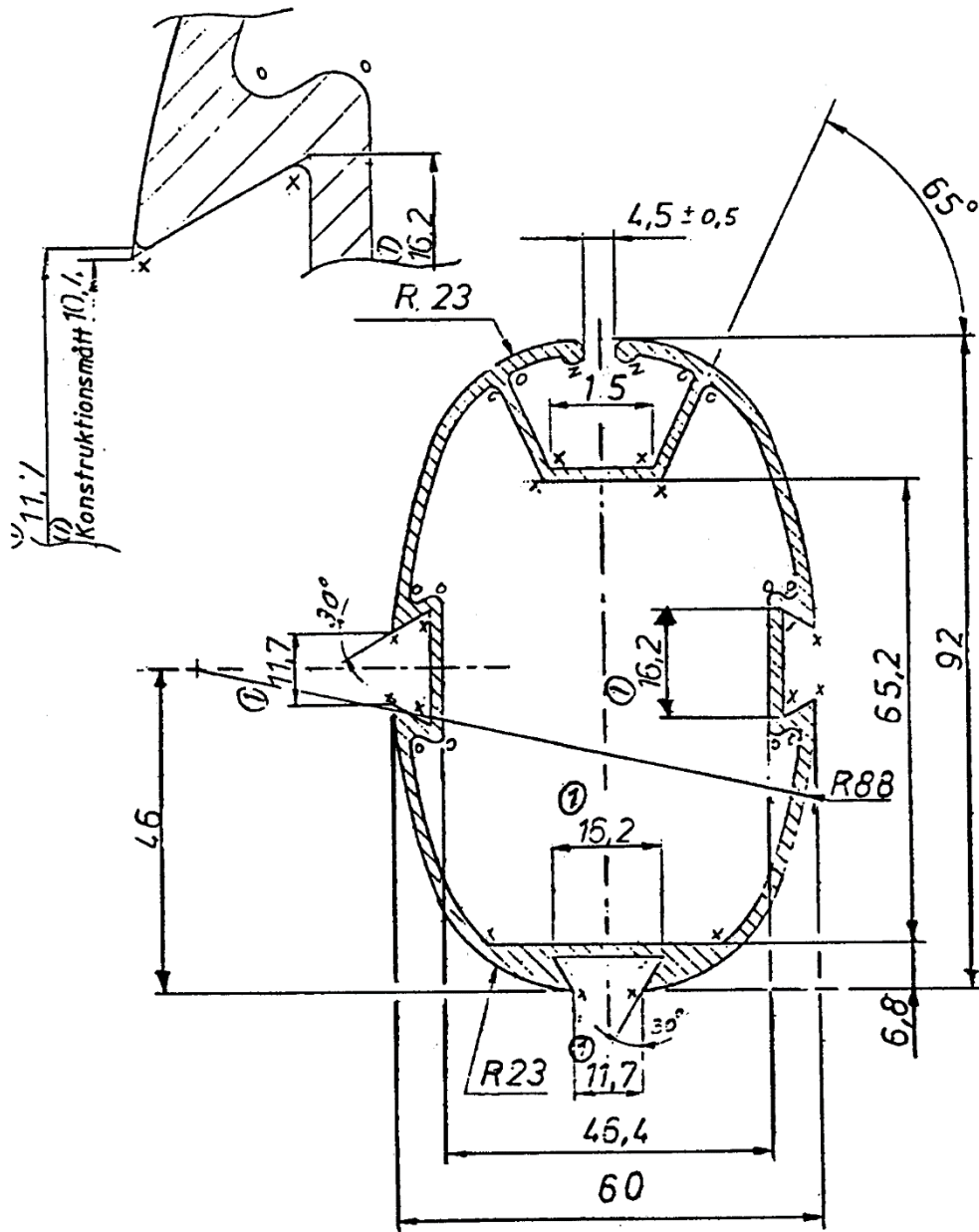
ELLIPSE CO. ORD.

X	±Y
0,32	4
1,27	8
2,87	12
5,17	16
8,20	20
12,07	24
16,86	28
22,77	32
30,07	36
39,30	40

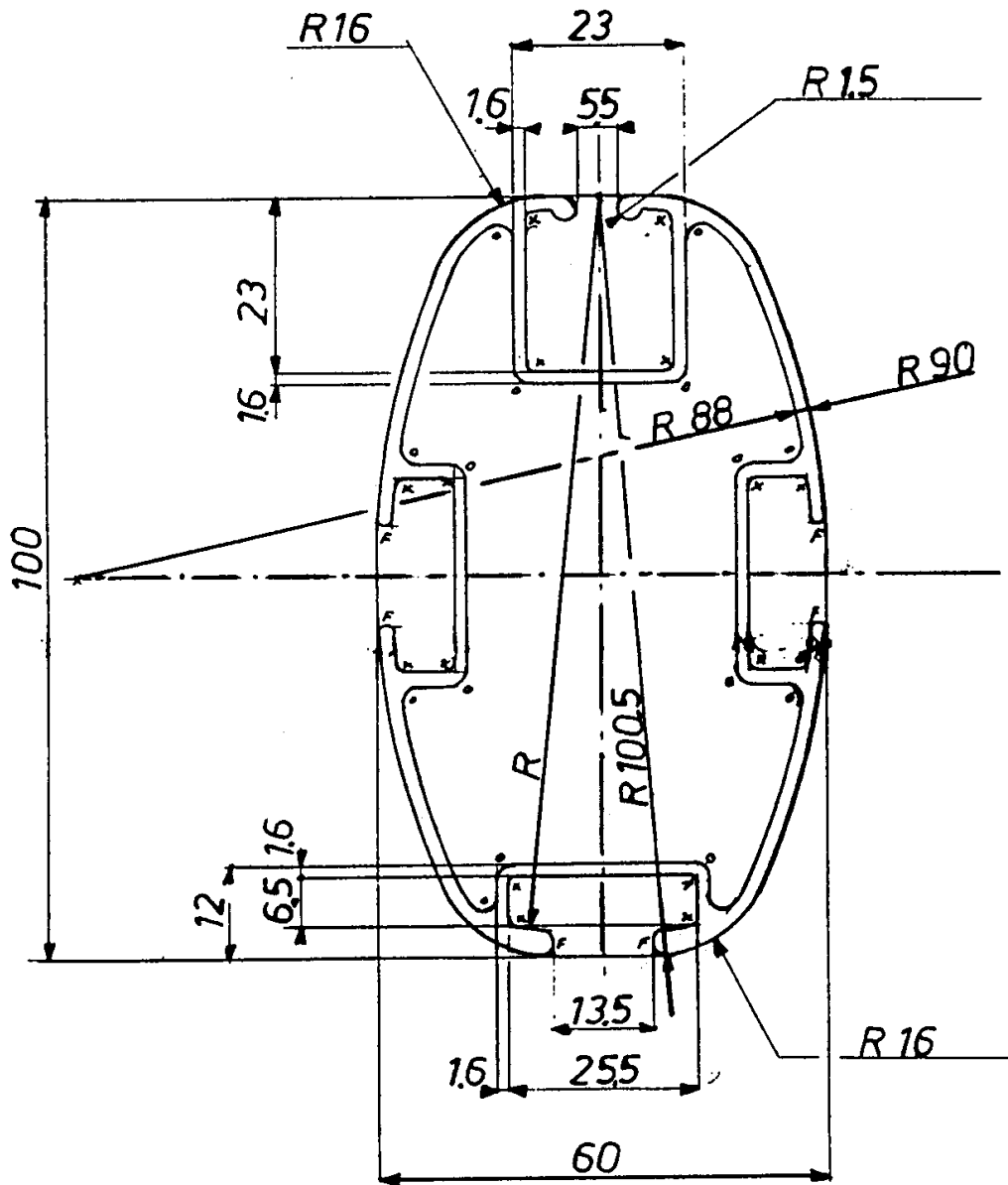


Drawing H.4.1 Mast spar extrusion

## H.5 BOOM SPAR EXTRUSION DRAWINGS

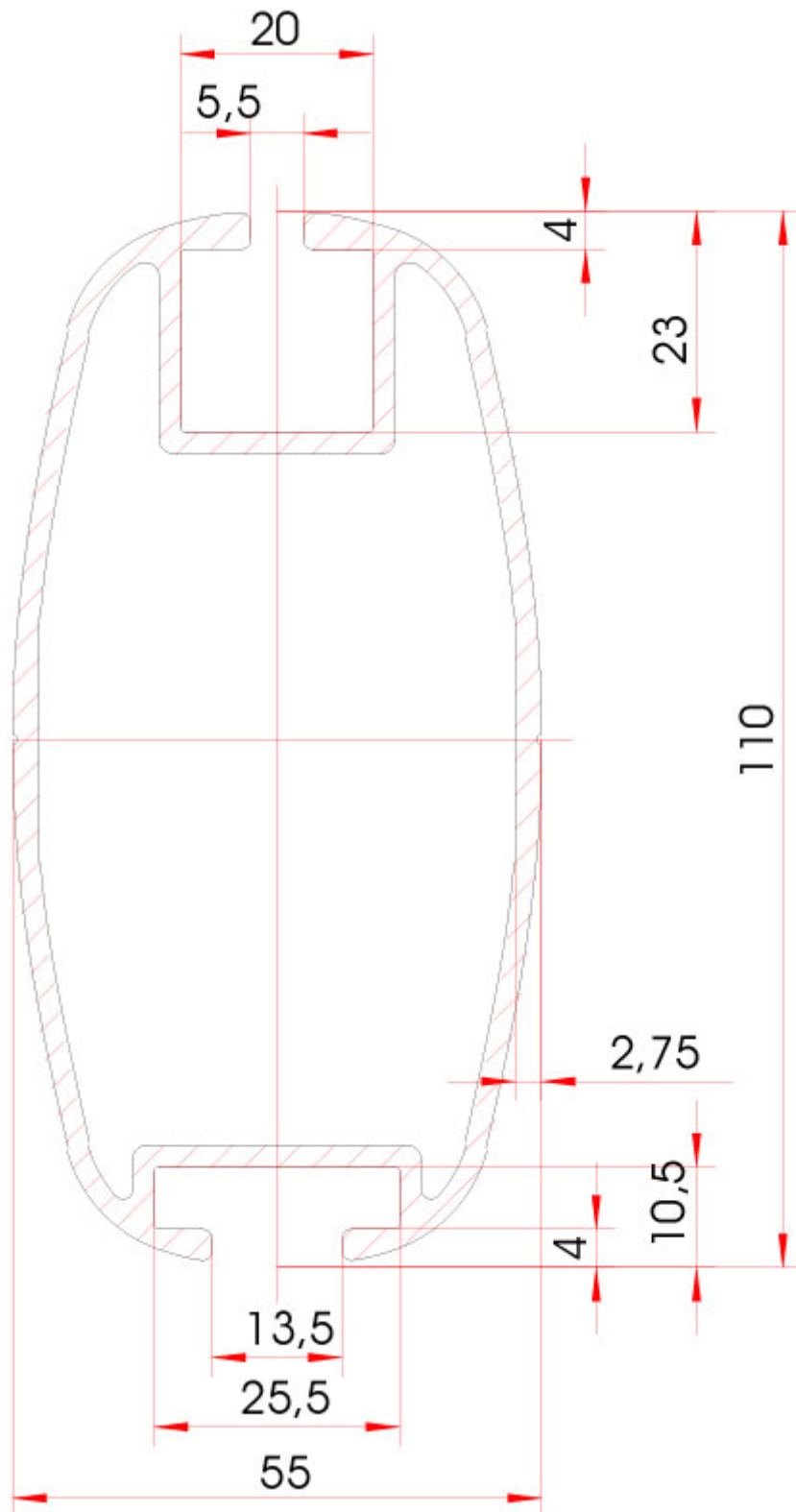


Drawing H.5.1 Boom spar extrusion type 1



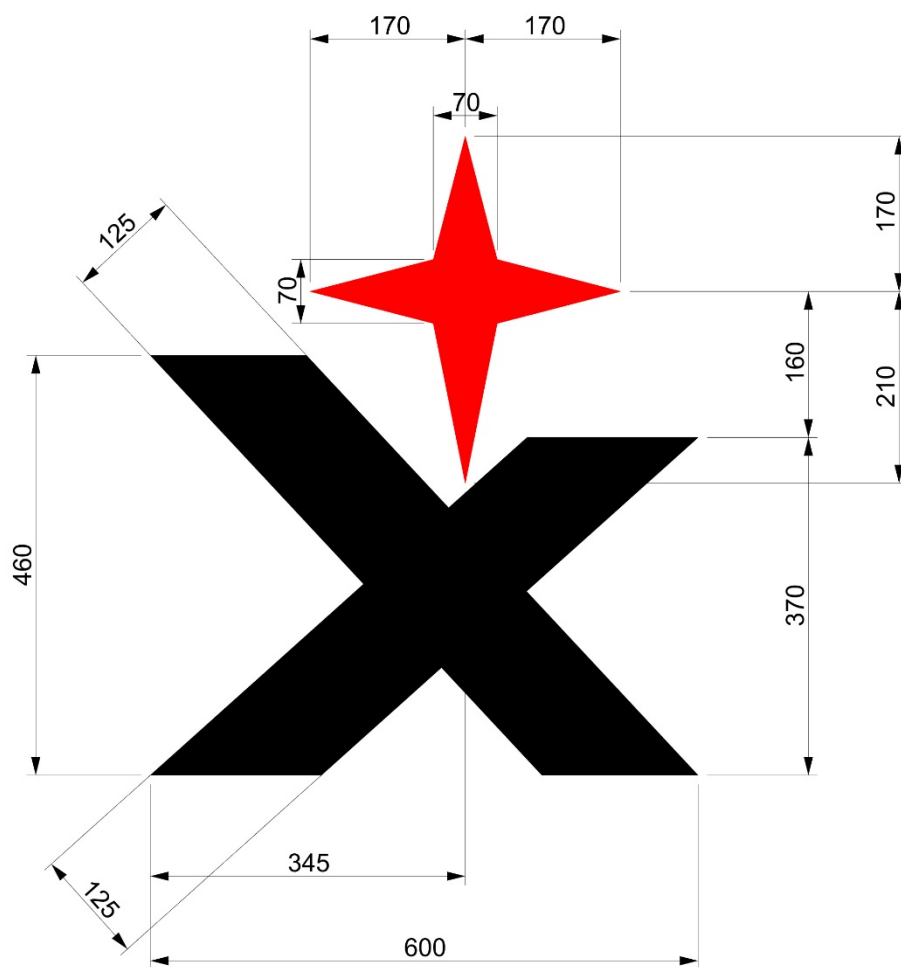
*Drawing H.5.2 Boom spar extrusion type 2*





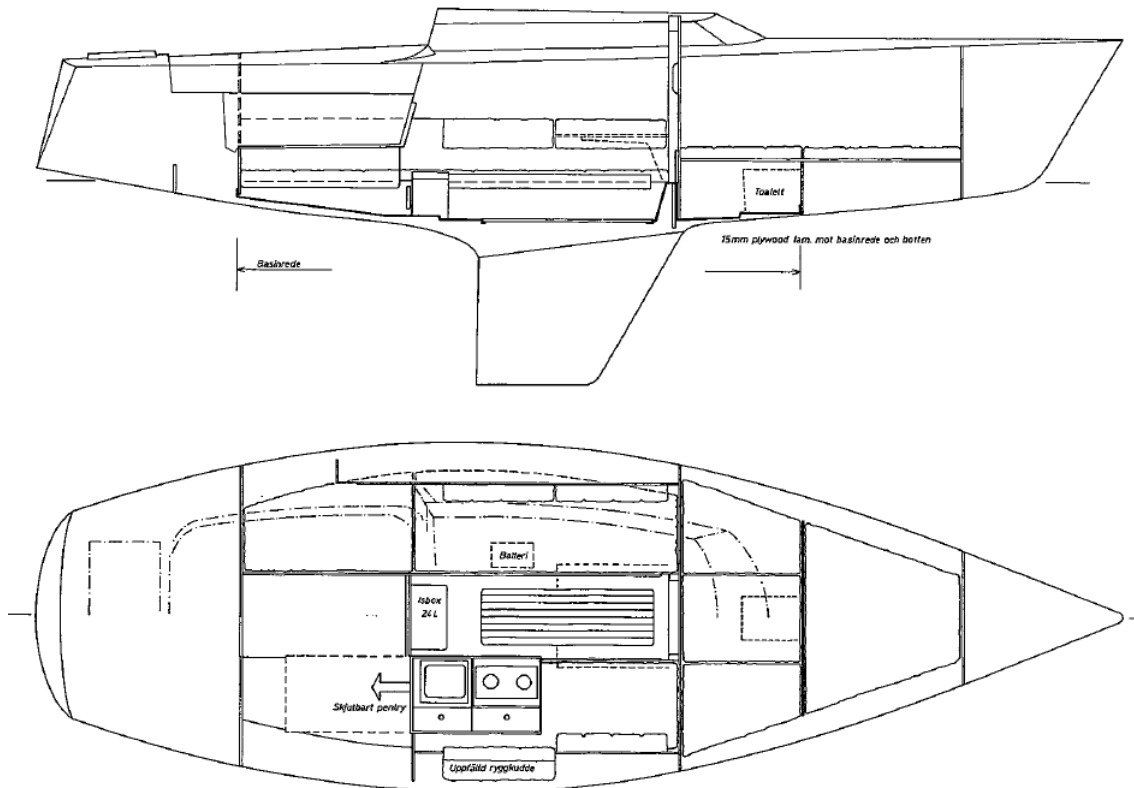
*Drawing H.5.3 Boom spar extrusion type 3*

## H.6 CLASS EMBLEM



*Drawing H.6.1 Class emblem*

## H.7 Interior fit out



Drawing H.7.1 Interior fitout

### H.7.1 INTERIOR FITOUT

The interior fitout shall be according to drawing H.7.1 and with the following materials and dimensions. The tolerance on plywood thickness is  $\pm 1$  mm

#### Forepeak

- A double berth with a longitudinal bulkhead and hatches in 8 mm plywood.
- The hull-deck joint shall be covered with longitudinal strips of 6 mm plywood

#### Cabin

- A mast support beam in solid mahogany of 45 mm thickness. It may be laminated from 2 pieces
- A main bulkhead in 14 mm plywood. The bulkhead shall be bolted to the hull flange and may not be glued or laminated to the hull or deck.
- Transverse bulkhead towards the cockpit in 8 mm plywood
- Longitudinal bulkheads under the cockpit in 10 mm plywood
- Transverse aft bulkhead under the cockpit in 8 mm plywood
- Longitudinal wooden battens on the berth fronts
- Plywood hatches for the openings in the berths
- Inner roof in 3 mm plywood with foam insulation mat
- The underside of the deck shall be top coated or covered with foam insulation mat.
- 2 storage pockets in awning cloth with a minimum size of 1800x500 mm behind the settee/berths. The pockets shall be attached using a wood, plastic or

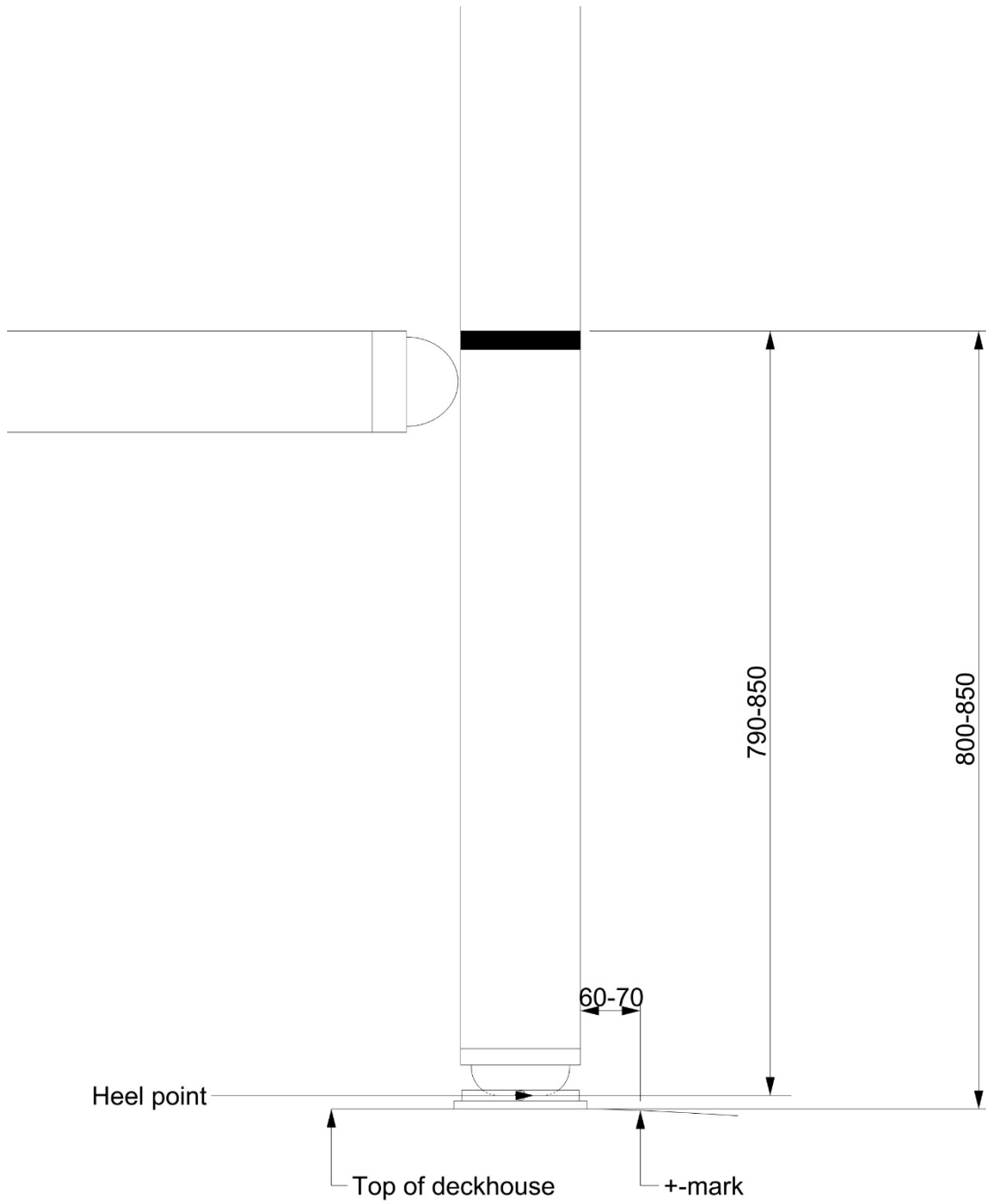
aluminum batten running their entire length. The storage pockets may be substituted for wooden cabinets or shelves.

- (k) A floorboard in 12 mm plywood.
- (l) Four functioning interior light fitted 2 on each side of the main bulkhead.
- (m) An electrical panel with a min switch connected to the battery, running and interior lights.
- (n) A plywood pantry module placed over the starboard berth including hatches, a wooden mug holder sliding fittings and rails. The minimum weight of the module is 23 kg.

## H.8 RIG DRAWING



*Drawing H.8.1 Rig main dimensions*



*Drawing H.8.2 Detail of placing the rig in the boat*

## H.9 MEASUREMENT FORM

### H.9.1 GENERAL

Authority: see Section A of these Class Rules.

This measurement form is a basis for obtaining a **Measurement Certificate**, once completed and the conditions described in section A of these Class Rules are met.

### H.9.1 BOAT DETAILS

National Letters	
Sail/Manufacturing Number	
Name of Boat	
Year of manufacture (if known)	
Owner's Name	
Owner's Club	
Owner's Telephone Number	
Owner's Email Address	
Owner's Address	

### H.9.2 OWNER'S DECLARATION

I undertake:

- To race this Albin Express only so long as I maintain it in conformity to the class rules
- That corrector weights (if any) will not be altered or removed except when carried out in conjunction with an official re-weighing by an approved measurer
- That only spars, sails etc., which have been measured and found in accordance with the rules, will be used.

Signature ..... Date .....

### H.9.3 MEASURER'S DECLARATION

I certify that I have taken the measurements on this form and that to the best of my knowledge the boat conforms to all of the rules and specifications at present in force of the class rules, except as I have stated below.

Comments .....

.....

.....

.....

Name ..... Email address: .....

Address .....

Signature ..... Date .....

Circle your role: Owner of measured boat / independent appointed measurer

## H.9.1 MEASUREMENT FORM

Measurement	Rule	Min	Actual measured	Max
Boat built before 2000-12-31 Boat weight including additional optional equipment (if any) and compensation weights (if any) and	C.6.2	1780 kg		-
Boat built after 2000-12-31 Boat weight including additional optional equipment (if any) and compensation weights (if any)	C.6.2	1820 kg		-
Total weight of additional optional equipment	C.6.2(c)	-		30 kg
Weight and position of aft corrector weights (if any)	C.6.3	-		-
Weight and position of forward corrector weights (if any)	C.6.3	-		-
Deck fittings correct	H.3		Yes / No	
Rudder weight	E.4.6	18 kg		
Rudder depth between R-L	H.2.4	1140 mm		1150 mm
Rudder measurement band placed above hull contour	C.8.3, H.2.1	-	Yes / No	-
Keel trailing edge length B-C	H.1.3	890 mm		915 mm
Maximum keel width A-B	H.1.3	160 mm		-
Maximum keel width 10 mm above C-D	H.1.3	104 mm		-
Keel trailing edge width at B	H.1.3	22 mm		-
Keel trailing edge width 10 mm above C	H.1.3	4 mm		-
Keel placement: distance from hull datum point to B	H.1.3, D.2.4	3210 mm		3240 mm
Lifeline height above deck	D.9.1	450 mm		-
Lifeline tension at 75 kg load	C.7.2	-		150 mm
Fore triangle base	C.9.6	3040 mm		3050 mm
Mast upper point measurement band to lower point	F.3.5, H.8.1	-		9500 mm
Mast upper point measurement band placed correctly	F.3.5, H.8.1		Yes / no	



Mast lower point height	F.3.5, H.8.1, H.8.2	790 mm		850 mm
Mast lower point measurement band placed correctly	F.3.5, H.8.1		Yes / no	
Boom outer point distance	C.9.4, H.8.1	-		3350 mm
Spinnaker pole fitting height	F.3.5	1100 mm		1150 mm
Spinnaker pole fitting projection	F.3.5	-		60 mm
Spinnaker pole length	F.5.5	-		3090 mm
Pentry module weight	H.7.1(n)	23 kg		-

Notes on repairs (use additional sheets if necessary):

Effective Date:

Published Date:

Previous issues:

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