

NATIONAL SOLO CLASS RULES

2014



The Solo was designed in 1956 by Jack Holt and was adopted as an
National class in 1963

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INTRODUCTION

The National Solo is a single-handed one design racing dinghy.

National Solo hulls, hull appendages, rigs and sails are measurement controlled.

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

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

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

Note: The class permits In-house Certification – as detailed in Section G sails – in accordance with the ISAF Guidelines.

**PLEASE REMEMBER: IF THESE RULES DO
NOT SAY THAT YOU CAN – THEN YOU CAN
NOT.**

Please see ERS C.2.2 – Closed Class Rules

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
- RYA Royal Yachting Association
- NSCA National Solo Class Association
- ERS Equipment Rules of Sailing
- RRS Racing Rules of Sailing
- IHC ISAF In House Certification

A.3 AUTHORITIES

- A.3.1 The **Class Rules Authority** of the class is the RYA which shall co-operate with the NSCA 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/or sail or flotation/buoyancy endorsement from any boat at any time.
- A.3.3 The **Certification Authority**, **Class Rule Authority**, the NSCA and any **Official Measurer** is under no legal responsibility in respect of these Rules, Plans or accuracy of measurement and no claims arising therefrom can be entertained.
- A.3.4 These **class rules** are complimentary to the plans, in the case of conflict these **class rules** will take precedence.

A.4 ADMINISTRATION OF THE CLASS

- A.4.1 The class shall be administered by the RYA in conjunction with the NSCA.

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 **Class Rules** shall only be varied in accordance with RRS 87.

A.7 CLASS RULES AMENDMENTS

A.7.1 Amendments to these **class rules** are subject to the approval of the **Class Rules Authority** who shall consult the NSCA.

A.7.2 **Class Rule** amendments are highlighted with an underline.

A.8 CLASS RULES INTERPRETATION

A.8.1 Interpretation of these **class rules** shall be made by the **Class Rules Authority** who shall consult with the NSCA.

A.9 NATIONAL CLASS FEE

A.9.1 The hull builder shall pay the National Class Fee (Building Fee) at the commencement of building whether or not it is subsequently measured or certificated.

A.9.2 The RYA shall, after having received the National Class Fee, paid in pounds sterling, issue a Building Fee Receipt, sail number & for boats built after 01/01/2013 a building fee plaque to the hull builder.

A.9.3 Replacement building fee plaques may be issued at the discretion of the RYA.

A.10 SAIL NUMBERS

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

A.11 HULL CERTIFICATION

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

- (a) Class
- (b) **Certification authority**
- (c) Owner name and address
- (d) Sail number issued by the RYA
- (e) Boat Name, if one has been chosen
- (f) Shell material and deck material.
- (g) Builders details, including date built,
- (h) Date of issue of initial **certificate**
- (i) Date of issue of current **certificate**
- (j) Date measurement completed
- (k) The names of the relevant **official measurers**
- (l) Hull weight as per D.9.3
- (m) Total number of **Correctors** and Total **Corrector Weight**

A.12 INITIAL HULL CERTIFICATION

A.12.1 For a **certificate** to be issued to a hull not previously **certified**:

- (a) **Certification measurement** shall be carried out by the **official measurer** who shall complete the appropriate documentation.
- (b) The documentation and **certification** fee, if required, shall be sent to the **certification authority**.

- (c) Upon receipt of a satisfactorily completed documentation and **certification** fee, if required, the **certification authority** may issue a **certificate**.

A.13 VALIDITY OF CERTIFICATE

A.13.1 A hull **certificate** becomes invalid upon:

- (a) The change to any items recorded on the hull **certificate** as required under A.11, including change of ownership.
- (b) The date of expiry,
- (c) Withdrawal by the **certification authority**,
- (d) The issue of a new **certificate**,
- (e) Any alteration, replacement or repair that is made to the hull, that might change the dimensions of any item measured by these rules to achieve a hull **certificate**,

A.14 HULL RE-CERTIFICATION

A.14.1 The **certification authority** may issue a **certificate** to a previously certified hull:

- (a) When it is invalidated under A.13.1(a) or (b), after receipt of the **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 **certification 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.

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 Certification Documentation specified in A.11.1 shall be held by the current owner and shall be available upon demand.
- B.1.2 For *racing*, it is the owner's responsibility to ensure that the **boat** and any equipment; including any alterations, replacements or repairs, shall be compliant with the current **class rules** at the time of *racing*.
- B.1.3 **Sails** shall carry **certification marks** as required.
- B.1.4 **Spars** shall carry **certification marks** as required

B.2 FLOTATION CHECKS

- B.2.1 The hull **certificate** shall carry a satisfactorily flotation/buoyancy check confirmation in accordance with section H of these **class rules**.

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 measurement** 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.
- (b) RRS 43.1(b) is modified such that the total weight of worn equipment above the knee shall not exceed 10kg.

C.2 CREW

C.2.1 LIMITATIONS

- (a) The **crew** shall consist of one person.

C.3 PERSONAL EQUIPMENT

C.3.1 PERSONAL EQUIPMENT

- (a) **Personal equipment** is unrestricted.

C.4 ADVERTISING

C.4.1 LIMITATIONS

Advertising on the **boat** chosen by the person in charge is permitted.

C.5 PORTABLE EQUIPMENT

C.5.1 FOR USE

(a) OPTIONAL

- (1) Electronic or mechanical timing devices that do not indicate, transmit or collate data related to wind speed or boat location.
- (2) Compass(s)
- (3) Drinking bottle(s)
- (4) Mast chock(s)
- (5) Hand bailer or bucket.
- (6) Sponge(s)
- (7) Manual recorders, writing equipment and spares

- (8) A Mast head float which may be rigged to either the **head** of the **mainsail** or the top of the **mast**. Any mast head float shall have the primary purpose of preventing the boat from inverting in the event of a capsize. The attachment of such a mast head float is optional. The Sailing Instructions and Notice of Race for an event may amend this rule.

C.5.2 NOT FOR USE

(b) OPTIONAL

- (1) Paddle
- (2) Mooring line
- (3) Tow rope – the Sailing Instructions or Notice of Race for an event may amend this rule.
- (4) Anchor – the Sailing Instructions or Notice of Race for an event may amend this rule.

C.6 HULL

C.6.1 MODIFICATIONS, MAINTENANCE AND REPAIR

- (a) The **hull** shall not be altered in any way except as permitted by these **class rules**.
- (b) Routine maintenance such as painting, polishing and filling scratches is permitted without re-measurement and re-**certification**.

C.6.2 FITTINGS

(a) USE

- (1) Inspection hatch covers and drainage plugs shall be kept in place at all times while *racing*.
- (2) Fittings and associated parts for storing of equipment as permitted by C.5 is optional.

C.7 HULL APPENDAGES

C.7.1 MODIFICATION, MAINTENANCE AND REPAIR

- (a) **Hull appendages** shall not be altered in any way except as permitted by these **class rules**.
- (b) Routine maintenance such as sanding or polishing is permitted.

C.7.2 CENTREBOARD

USE

- (1) When fully extended, the **centreboard** profile below the keel band shall comply with the dimensions shown in Diagram 9 in Section H.
- (2) The thickness profile of any part of the **centreboard** that extends below the keel band is optional.

C.7.3 DIMENSIONS

	Minimum	Maximum
(1) Width of centreboard at keel	349 mm	.... 375 mm
(2) Extension of centreboard below keel .....	.914 mm	.. 1030 mm

C.7.4 RUDDER

USE

MANDATORY

- (1) The tiller shall operate through the tiller port in the transom.

C.8 RIG

C.8.1 MODIFICATION, MAINTENANCE AND REPAIR

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

C.8.1 LIMITATIONS

- (a) The **mast spar** shall not be capable of moving more than 26mm in the longitudinal plane at deck level.
- (b) The **mast spar** shall be stepped such that it shall not permit rotation of the **mast spar** whilst *racing*.

C.8.2 MAST

USE

- (1) The **spar** shall be stepped in the mast step in such a way that the **heel point** shall not be capable of moving more than 5mm in any plane.
- (2) The horizontal surface of the mast heel at the **mast datum point** (F2.4(a)) shall bear on the mast step.

C.8.3 BOOM

(a) USE

- (1) See ERS B.1.2

C.8.4 STANDING RIGGING

(a) USE

- (1) **Standing Rigging** shall not be adjusted

C.8.5 RUNNING RIGGING

(a) USE

- (1) The type and materials of all **running rigging** is optional.

C.9 SAILS

C.9.1 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 repairing minor tears is permitted without re-measurement and re-**certification**.

C.9.2 LIMITATIONS

- (a) The Notice of Race may limit the number of **sails** to be used during an event.

C.9.3 MAINSAIL

(a) IDENTIFICATION

The national letters and sail numbers shall comply with the RRS appendix G 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** 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**.
- (3) See ERS B.1.3
- (4) **Luff** and **foot** bolt ropes shall be in the **spar** grooves or tracks.

Section D – Hull

D.1 PARTS

D.1.1 MANDATORY

- (a) Hull shell
- (b) Deck
- (c) Buoyancy Tanks
- (d) Gunwale Rubbing Strakes
- (e) Bulkheads
- (f) Thwart
- (g) Keel bands

D.1.2 OPTIONAL

- (a) Floor battens

D.2 GENERAL

D.2.1 RULES

- (a) The **hull** shall comply with the **class rules** in force at the time of initial **certification**.
- (b) See A.3.4

D.2.2 CERTIFICATION

See Rule A.13.

D.2.3 MATERIALS

- (a) **Hulls** shall be constructed of either wood, GRP, FRP or plywood/foam/plywood or a combination thereof.
- (b) The outer ply face of a “ply foam ply” hull shell may be replaced by a single thickness non-reinforcing decorative wooden veneer.
- (c) A non-reinforcing protective coating of paint, enamel, varnish or plastic is permitted.

D.2.4 DEFINITIONS

(a) **Hull Datum Point**

The **hull datum point** is the intersection, on the centreplane of the **hull**, of the bottom of the keel band and the aft edge of the transom.

Beam measurements shall be taken at the **sheerline**, unless otherwise specified.

(b) **Bow Profile Measurement Point**

The point from which the bow profile is measured is 170mm above the base line, measured along the extension of the foreside face of the stem including the stem band.

(c) **Stem Apron Beam Measurement**

The points from which the stem apron beam is measured is 435mm above the base line, measured along the extension of the foreside face of the stem including the stem band, and 15mm aft of the face of the stem band, perpendicular to that face.

(d) **Hull datum plane**

A plane passing through the **hull datum point** which is set perpendicular to the base line.

D.2.5 BUILDERS

(a) The **hull** may be built by any professional or amateur builder.

(b) GRP and FRP **hulls** and composite hull shells shall be produced only by builders licensed by the RYA.

D.2.6 IDENTIFICATION

(a) Wooden **hulls** shall carry the sail number cut into the hog aft of the centreboard case in figures not less than 25 mm high.

(b) GRP and FRP hulls shall have a plate permanently fixed inside the transom with the sail number, mould number and builders serial number stamped thereon.

(c) In addition to D.2.6 (a) and (b) boats built after 01/01/2013 shall display an RYA building fee plaque on the inside of the transom.

D.3 HULL SHELL

D.3.1 CONSTRUCTION

(a) Composite **hulls** shall consist of the following;

A GRP/FRP hull shell with integral centreboard case and transom.

All other items are optional in materials as listed in D.2.3(a)

(b) GRP/FRP **hulls** shall consist of the following;

A GRP/FRP hull shell with integral centreboard case and transom

GRP/FRP bulkhead side tanks and decks

All other items are optional in materials as listed in D.2.3(a)

(c) (i) Wooden **hulls** shall consist of the following:

A hull shell of either wood, plywood, foam or a combination thereof.

A centreboard case of wood or plywood or a combination thereof.

Bulkhead, transom and side decks of either wood, plywood, foam or a combination thereof.

- (ii) The inner ply face of “ply foam ply” may be replaced by a single thickness resin impregnated biaxial or plain glass fibre.

All other items are optional in materials as listed in D.2.3(a)

- (d) Washboards are optional.
- (e) Chine stringers may be replaced with structural epoxy fillets in accordance with Diagrams 12 and 13 in Section H.
- (f) A separate wooden bead to cover the exposed edge of the deck panel may be fitted on each side, but if fitted shall be over the full length of the inside of the buoyancy tanks at their junction with the side deck.

D.3.3 OPTIONAL

- (a) Not more than two floor battens may be fitted each side of minimum length 1300mm
- (b) Two transom ports. These ports shall have covers, may be hinged and may have a device to hold them closed.
- (c) Not more than two reinforcement pads may be fitted to the floor each side of the hog.
- (d) If required, an additional two reinforcement pads may be fitted on the centreline to facilitate a centre toe strap.

D.4 CENTREBOARD CASE

D.4.1 CONSTRUCTION

- (a) Centreboard case capping may be extended forward from the front end of the centreboard slot (See D.9.2).
- (b) Optional reinforcement pads, one each side of the centreboard case, may be fitted around the centreboard pivot hole.
- (c) The Centreboard case capping shall have two toe holes each side of the hull centreline.
- (d) Bedlogs may be replaced with structural epoxy fillets in accordance with Diagrams 12 and 13 in Section H.
- (e) The centreboard case capping shall be supported by:-
 - (i) Not more than four knees, two each side of the centreboard case.
AND/OR
 - (ii) Two wooden or structural epoxy fillets (required measurements see D.9.2), one on each side of the centreboard case.

D.5 BUOYANCY TANKS

D.5.1 CONSTRUCTION

- (a) Buoyancy tanks shall have a minimum of one drain hole and one inspection hatch per tank.
- (b) Internal buoyancy tank stiffening and reinforcement is optional

- (c) **Hulls** shall have a minimum of three internal buoyancy tanks.
- (d) Fillets of any permitted material may be fitted to the edges of the buoyancy tanks (measurements see D.9.2).

D.6 GUNWALE AND RUBBING STRAKES

D.6.1 CONSTRUCTION

- (a) The rubbing bead shall not project above the line continuing the top of the deck.

D.7 BULKHEADS

D.7.1 CONSTRUCTION

- (a) The bulkhead construction is optional.

D.8 CENTRE THWART

D.8.1 CONSTRUCTION

- (a) The thwart construction is optional except that the leading edge when viewed in plan shall be inherently straight.
- (b) A mainsheet pulley mounting block may be fitted to the centre thwart.

D.9 ASSEMBLED HULL

D.9.1 FITTINGS

(a) MANDATORY

The following fittings shall be positioned in accordance with the measurements in D.9.2:

- (1) Forestay fitting
- (2) Shroud plates
- (3) Mast step
- (4) **Keel** bands

(b) USE

Fittings shall not be recessed into the deck or buoyancy tanks

(c) OPTIONAL

- (1) Blocks, fairleads and cleats for **running rigging**.
- (2) Fixed or adjustable toe straps.
- (3) Mainsheet traveller tracks or horse fitted directly to the top of the thwart or transom.
- (4) A maximum of three bailers fitted through the **hull** shell are permitted.
- (5) Not more than two compasses are permitted. If fitted, they shall either be permanently fixed to the hull or using a mounting bracket.
- (6) Wind indicators (non electrical).
- (7) Carrying handles fixed on deck
- (8) Mooring rings or cleats.

- (9) Sockets for rowlocks.
- (10) Twin keel bands.
- (11) A Centreboard Case Gasket of any flexible material may be fitted to the underside of the hull shell to cover the centreboard case slot.

D.9.2 DIMENSIONS

The keel line shall be taken as the intersection line from transom to stem of the hull shell and the hull centre plane.

The baseline shall be on the centre plane of the **hull** at the following vertical distances:

- at **hull datum point** 137mm from the keel band
- at Section 1 76mm from the keel band

The sections shall be taken as vertical, transverse planes at the following positions along the baseline:

- Section 1: at 3050 mm from **hull datum point** as defined in D.2.5
- Section 2: at 2440 mm from **hull datum point** as defined in D.2.5
- Section 3: at 1830 mm from **hull datum point** as defined in D.2.5
- Section 4: at 1220 mm from **hull datum point** as defined in D.2.5
- Section 5: at 610 mm from **hull datum point** as defined in D.2.5

	minimum	maximum
Hull length	3758 mm	.. 3798 mm
Floor thickness		15mm
Panel thickness for Wooden Hulls ;		
Thickness of plywood skin bottom panel,		
.....	5.3 mm	..... 15 mm
Thickness of plywood skin chine panel, topsides		
.....	4.35 mm	.....
Vertical distance from baseline to underside of keel band;		
at section 2	22 mm	..... 42 mm
at section 3	15 mm	..... 29 mm
at section 4	31 mm	..... 51 mm
at section 5	76 mm	..... 96 mm

Distance between sheerlines ;		
at section 1	925 mm	.... 951 mm
at section 3	1486 mm	.. 1512 mm
at section 4	1475 mm	.. 1501 mm
at transom	997 mm	.. 1023 mm

MAST SLOT

Hull datum plane to mast **spar** slot at deck2921mm . 3010 mm

CENTRE THWART

Hull datum plane to fore side of centre thwart1650 mm .. 1728 mm

Width of centre thwart 71 mm 81 mm

If a mainsheet pulley mounting block is fitted as an integral part or added to the rear of the centre thwart per 8.1 (b):

mounting block transverse maximum width	150 mm
mounting block maximum longitudinal length	100 mm
maximum fairing radius of mounting block to centre thwart	30 mm

Hull datum plane to aft edge of foredeck	2883 mm ..	2909 mm
Hull datum plane to centre of shroud plate holes	2590 mm ..	2616 mm

CENTREBOARD CASE

Underside of keel band to top of **centreboard** case at

Section 3	292 mm	318 mm
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Hull datum plane to fore end of centreboard slot	2121 mm ..	2147 mm
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Hull datum plane to aft end of centreboard slot	901 mm	927 mm
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Centreboard pivot hole from fore end of centreboard slot ..	89 mm ..	115 mm
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Width of centreboard slot	25 mm	32 mm
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Width of centreboard case capping	196 mm	222 mm
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Extension of centreboard case capping forward from fore end of centreboard slot	300 mm
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Width of centreboard case capping on any extension forward from front end of centreboard slot	222 mm
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Thickness of centreboard case capping	16 mm	24 mm
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Optional centreboard case slot covering, measured from the outside rear plate case	0 mm	457mm
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Centreboard case capping Knees:

Knee thickness	12 mm	18 mm
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Knee depth	95 mm
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Knee width	75 mm
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Centreboard case capping Wooden or structural Fillets:

Fillet depth	15 mm	20 mm
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Fillet width	15 mm	20 mm
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RUBBING STRAKES

Depth	40 mm
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Between 610mm and 3148mm from hull datum plane the width from sheerline	30 mm	51 mm
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At all other points it may be less than the 30mm minimum.

SIDE DECKS

Shall be measured as the transverse plan width of the side deck, excluding the inboard bead if fitted, from the **sheerline** to the vertical projection of the intersection of the buoyancy tank side and deck.

Width of side deck at transom	174 mm	210 mm
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Width of side deck at Section 3	279 mm	305 mm
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Width of side deck at aft edge of foredeck	253 mm	293 mm
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Depth of inboard edge of side deck below sheerline at section 3	50 mm	76 mm
Wooden bead per D.3.1 (e) maximum vertical depth	22 mm	
Wooden bead per D.3.1 (e) maximum horizontal width	11 mm	
Top of mast step to sheer at aft edge of foredeck	412 mm	452 mm
Camber of deck above the sheer at aft edge of foredeck	38 mm	64 mm
MAINSHEET TRACK or HORSE		
Maximum length	914 mm	
Projection of track or horse above of thwart or transom	64 mm	
TILLER PORT		
Underside of keel band to top of tiller port in transom	257 mm	283 mm
Width of tiller port in transom	260 mm	
BOW MEASUREMENTS		
Longitudinal length along the baseline from hull datum plane to its intersection with the projection of the foreside of the stem including keel band	3582 mm	3624 mm
Distance from the <i>bow profile measurement point</i> per D.2.5 (b) to the nearest point on the keel band	30 mm	50 mm
Width of stem apron	88 mm	102 mm
HULL PROFILE AT SECTION 1		
Baseline to lower chine	165 mm	185 mm
Baseline to upper chine	283 mm	309 mm
Baseline to sheerline	548 mm	574 mm
Beam width at lower chine	470 mm	496 mm
Beam width at upper chine	713 mm	739 mm
HULL PROFILE AT SECTION 2		
Baseline to lower chine	100 mm	126 mm
Baseline to upper chine	221 mm	247 mm
Beam width at lower chine	777 mm	817 mm
Beam width at upper chine	1092 mm	1132 mm
HULL PROFILE AT SECTION 3		
Baseline to lower chine	79 mm	105 mm
Baseline to upper chine	203 mm	223 mm
Baseline to sheerline	462 mm	502 mm
Beam width at lower chine	952 mm	978 mm
Beam width at upper chine	1269 mm	1295 mm
HULL PROFILE AT SECTION 4		
Baseline to lower chine	99 mm	125 mm
Beam width at lower chine	993 mm	1019 mm

HULL PROFILE AT SECTION 5

Baseline to lower chine	137 mm	.....	163 mm
Beam width at lower chine	896 mm	.....	936 mm

HULL PROFILE AT TRANSOM

Baseline to lower chine	180 mm	.....	194 mm
Baseline to upper chine	263 mm	.....	283 mm
Baseline to sheerline	404 mm	.....	430 mm
Beam width at lower chine	647 mm	.....	673 mm
Beam width at upper chine	883 mm	.....	909 mm

Round on all chines aft of section 1, measured from the point where the outer faces of the **hull** panels would meet if extended, shall not exceed 15 mm

Corners in GRP and FRP mouldings other than the chines may be moulded up to a radius of 13 mm

Projection of keel below **hull shell** including keel band12 mm 20 mm

Stem, keel and chine rubber band width12 mm

Stem, keel and chine rubber projection3 mm

The length of the chine rubber band is optional except that for a minimum of 1194mm it shall be a minimum width of 12mm.

minimum.... maximum

FLOOR BATTENS

Length of floor batten	1300 mm	.....
Thickness of floor batten	8 mm	..... 20 mm
If one batten is fitted each side:		
it may be shaped,		
width		75 mm
If two battens are fitted each side:		
More than 200mm from ends – width at base and top	25 mm	..... 52 mm
Less than 200mm from ends – width		52 mm

TRANSOM PORTS

Width of transom port		203 mm
Height of transom port		76 mm
Transom port inboard edge to vertical plane of hull centreline	89 mm	.....
Transom port lower edge to outside of hull skin	35 mm	.....

TOESTRAP BLOCKS

If spanning two adjacent floor battens:

Maximum width		50 mm
Maximum height		20 mm
Maximum length		250 mm

If single block fitted directly to the floor:

Maximum width in plan 100 mm

Maximum length in plan 100 mm

Depth of any fillets added to edges of buoyancy tanks 15 mm

Width of any fillets added to edges of buoyancy tanks..... 15 mm

COMPASS MOUNTING BRACKET (Option 1)

Transverse 300 mm

Vertical 300 mm

Deep 300 mm

COMPASS MOUNTING BRACKET L SHAPE (Option 2)

Maximum height above upper surface **centreboard**

case capping 320 mm

Maximum projection from front of the **centreboard**

case capping 300 mm

Maximum Width 200 mm

D.9.3 WEIGHT

minimum maximum

(a) **Hull weight**.....70 kg

(b) **Hull weight** in D.9.3 (a) shall be the **hull weight** include the following items where present; mainsheet, hatch covers, rudder pin if fitted or used, centreboard pivot pin and any permanently attached **running rigging**.

D.9.4 HULL CORRECTOR WEIGHTS

(a) **Corrector weights** of any material shall be permanently fastened to the aftermost end of the centreboard case when the **hull weight** is less than the minimum requirement.

(b) Total weight of **corrector weights**

..... 3kg

D.9.5 TRANSOM

The Transom shall be perpendicular to the base line +/- 2mm at a point 300mm up from the **Hull Datum Point** (**hull deck uppermost**).

Section E – Hull Appendages

E.1 PARTS

E.1.1 MANDATORY

(a) **Centreboard**

(b) **Rudder**

E.1.2 OPTIONAL

- (a) Tiller
- (b) Tiller Extension

E.2 GENERAL

E.2.1 RULES

- (a) **Hull appendages** shall comply with these **class rules**.

E.2.3 CERTIFICATION

- (a) No **certification** is required for **Hull Appendages**.

E.2.4 MANUFACTURERS

- (a) The **hull appendages** may be made by manufacturers without license.

E.3 CENTREBOARD

E.3.1 MATERIALS

- (a) The **centreboard** construction is optional except that the following are prohibited: carbon fibre and metals other than those permitted by E.3.2(d).

E.3.2 CONSTRUCTION

- (a) The **centreboard** shall conform to the plans.
- (b) The bottom of the **centreboard** shall have a semi-circular profile.
- (c) The **centreboard** may be built up to equal the width of the centreboard case.
- (d) The edges may be protected by an outer metal strip which shall not extend more than 25mm from the edge.

E.3.3 FITTINGS

- (a) MANDATORY
 - (1) Pivot Bolt
- (b) OPTIONAL
 - (1) Handle
 - (2) Friction pad/s

E.3.4 DIMENSIONS

minimum maximum

Semi circular radius of **centreboard** lower end 90 mm 140 mm

E.4 RUDDER BLADE, RUDDER STOCK AND TILLER

E.4.1 MATERIALS

- (a) The rudder blade construction is optional except that the following are prohibited:
carbon fibre and metals other than those permitted by E4.2(h)
- (b) The rudder stock construction is optional except that the following are prohibited:
carbon fibre and metals other than aluminium.
- (c) The tiller and tiller extension materials are optional

E.4.2 CONSTRUCTION

- (a) The rudder blade and stock shall conform to these rules. The profile of the rudder blade and rudder stock shall not differ from the profile shown in diagrams in part III of these rules by more than 13mm at any point except that above the 202mm line at the head of the rudder, the profile is unrestricted.
- (b) The rudder blade may be fixed or pivot in the rudder stock.
- (c) The position of the pivot pin, if used, is optional
- (d) The method of controlling the blade angle to the stock is optional.
- (e) The fairing and streamlining of the rudder blade is optional
- (f) Shaping of the rudder stock is permitted within 10mm from the outer edges.
- (g) The cheeks of the rudder stock either side of the rudder blade shall not be less than 9.5mm, or 2.5mm when the stock is constructed of aluminium.
- (h) The rudder blade edges may be protected by an outer metal strip which shall not extend more than 25mm from the edge.

E.4.3 OPTIONAL

- (1) All Fittings are optional.

E.4.4 DIMENSIONS

	minimum	maximum
Length of rudder blade including part in stock.....	698 mm	750 mm
Width of rudder blade at widest point	297 mm	349 mm

Section F – Rig

F.1 PARTS

F.1.1 MANDATORY

- (a) **Mast**
- (b) **Boom**

F.1.2 OPTIONAL

- (a) **Standing rigging**
- (b) **Running rigging**

F.2 GENERAL

F.2.1 RULES

- (a) The **spars** and fittings shall comply with the class rules in force at the time of certification.
- (b) The standing and running **rigging** shall comply with these **class rules**.

(C) **Spar limit marks** of contrasting colour shall be permanent.

F.2.3 CERTIFICATION

- (a) The **official measurer** shall certify **spars** and sign and date the **certification mark**.
- (b) No **certification** or measurement of standing and running **rigging** is required.

F.2.4 DEFINITIONS

(a) MAST DATUM POINT

The **mast datum point** is the **heel point**.

F.2.5 MANUFACTURER

- (a) **Rigs** may be made by manufacturers without license.

F.3 MAST

F.3.1 MATERIALS

- (a) The **spar** shall be of aluminium alloy or wood.
- (b) Anodising and protective coatings are permitted.
- (c) Materials of fittings and fastenings are optional.

F.3.2 CONSTRUCTION

- (a) The **spar** extrusion shall include a fixed sail groove or track that may or may not be integral with the **spar**.

F.3.3 FITTINGS

(a) MANDATORY

- (1) Mast head fitting
- (2) Shroud and forestay
- (3) Gooseneck
- (4) Heel fitting. It may accommodate (1) and/or (4) below.

(b) OPTIONAL

- (1) Mainsail halyard sheave box
- (2) Mechanical wind indicator(s)
- (3) Compass bracket
- (4) Kicking strap attachment
- (5) Mast Chocks, if fitted they may be made from any material and be either wedge or T-shaped flat plates.

F.3.4 DIMENSIONS

minimum maximum

Mast spar deflection, with sail track uppermost, with the lower support 70mm above the **mast datum point** and upper support at the **upper point**. When loaded with 25 kg at 2915 mm from the **mast datum point** deflection fore-and-aft shall not exceed

..... 152 mm

Metal mast spar cross section;

fore-and-aft between 457mm above **lower point**

height and hounds 50 mm 76 mm

fore-and-aft at deck level..... 50 mm

transverse chord between **lower point height**

and hounds..... 50 mm 68 mm

and may be tapered above the hounds:

fore-and-aft 48 mm

transverse 44 mm

Mast limit mark width 10 mm

Lower point height 972 mm

Upper point height..... .. 6002 mm

Forestay height 4197 mm .. 4275 mm

Shroud height 4274 mm .. 4352 mm

Wooden mast spar cross section;

fore-and-aft between 457mm above **lower point**

height and hounds 70 mm 76 mm

fore-and-aft at deck level..... 60 mm

transverse chord between **lower point height**

and hounds..... 60 mm 68 mm

F.3.5 WEIGHTS

(a) The **mast** weight in F.3.5(b) shall be the weight of the **mast spar** excluding all **rigging** but shall include the mainsail halyard.
minimum

(b) **Mast** weight 6.7 kg

F.3.6 CORRECTOR WEIGHTS

(a) Corrector weights of any material shall be permanently fastened to the mast **spar** in the case that the **mast** weight is less than the minimum requirement.

F.4 BOOM

F.4.1 MATERIALS

- (a) The **spar** shall be of aluminium alloy or wood.
- (b) Anodising and protective coatings are permitted.
- (c) Materials of fittings and fastenings, including gooseneck and boom end, are optional.
- (d) A wooden boom constructed as plan is optional.

F.4.2 CONSTRUCTION

(a) The **spar** extrusion shall include a fixed sail groove or track that may or may not be integral with the **spar**.

F.4.3 FITTINGS

(a) MANDATORY

- (1) Clew outhaul blocks and attachments
- (2) Kicking strap fitting
- (3) Gooseneck attachment

(b) OPTIONAL

- (1) Mainsheet blocks with attachments
- (2) Strops for mainsheet blocks
- (3) Out board end fitting

F.4.4 DIMENSIONS

	minimum	maximum
Metal Boom spar cross section between 20mm and 2700 mm		
vertical	50 mm	72 mm
transverse	50 mm	66 mm
Wooden boom spar cross Section between 610 and 2700 mm		
vertical	50 mm	58 mm
transverse	50 mm	58 mm
Boom limit mark width	10 mm	
Outer point distance		2693 mm

F.5 STANDING RIGGING

F.5.1 MATERIALS

- (a) Materials of **standing rigging** are optional.

F.5.2 CONSTRUCTION

(a) MANDATORY

- (1) The mast shall be supported by a **forestay** and two **shrouds**.
- (2) The **standing rigging** shall be detachable from the **mast spar**.

F.5.3 FITTINGS

(a) OPTIONAL

- (1) T terminals
Rigging links
Tangs.
Shroud and forestay adjusters

F.6 RUNNING RIGGING

F.6.1 MATERIALS

- (a) Materials of the **running rigging** is optional.

F.6.2 FITTINGS

(a) MANDATORY

- (1) Main halyard
- (2) Main sheet
- (3) Kicking strap

(b) OPTIONAL

- (1) Other types of running rigging are optional

Section G – Sails

G.1 PARTS

G.1.1 MANDATORY

- (a) **Mainsail**

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** in the **tack** and shall sign and date the Official RYA **certification mark**.
- (b) The RYA 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 SAILMAKER

- (a) No licence is required.

G.3 MAINSAIL

G.3.1 IDENTIFICATION

- (a) The class insignia and sail numbers shall be placed in accordance with RRS 77 Appendix G.
- (b) The emblem shall comply with the measurements of the Class emblem diagram contained in Diagram 2 of Section H.
- (c) The emblem shall be placed approximately perpendicular to the upper middle batten pocket.

G.3.2 MATERIALS

- (a) The **ply** fibres of the **body of the sail** are optional.
- (b) **Stiffening** shall consist of:
 - (1) A Headboard of optional material.
 - (2) Battens of optional material
- (c) **Sail reinforcement** material is optional

G.3.3 CONSTRUCTION

- (a) The construction shall be: **single ply, soft sail**.
- (b) Sail plan A shall have 5 **batten pockets**.
- (c) Sail plan B shall have 4 **batten pockets**.
- (d) The method of tensioning battens at the outboard end of the **batten pocket** is optional.
- (e) The following are permitted: **Seams**, stitching, glues, tapes, bolt ropes, **tabling**, corner eyes, headboard with fixings, Cunningham eye or block, **batten pocket patches**, batten pocket end caps, batten ties, threaded batten

tension adjusters, Velcro fastening batten tension adjusters, 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) Sail Plan A and B shall have a bolt rope on the **luff**.
- (g) Sail Plan A shall have a bolt rope on the **foot**, Sail Plan B **foot** bolt ropes are optional

G.3.4 DIMENSIONS – SAIL PLAN A

maximum

Leech length 5558 mm

Top width 150 mm

Distance between the **luff** and **leech**, as measured along the centreline of the batten pocket, extended as necessary:

	minimum	maximum
Top batten.....	700 mm	778 mm
Second batten	1309 mm	1387 mm
Third batten	1767 mm	1845 mm
Fourth batten.....	2122 mm	2200 mm
Bottom batten	2427 mm	2505 mm

Batten pocket width: inside 60 mm

Luff to batten pocket end cap 20 mm

Head point to intersection of **leech** and centreline of:

Top batten pocket	801 mm	921 mm
Second batten pocket.....	1724 mm	1844 mm
Third batten pocket.....	2564 mm	2684 mm
Fourth batten pocket.....	3410 mm	3530 mm
Bottom batten pocket	4238 mm	4358 mm

Head point to intersection of **luff** and centreline of:

Top batten pocket	763 mm	863 mm
Second batten pocket.....	1626 mm	1726 mm
Third batten pocket.....	2490 mm	2590 mm
Fourth batten pocket.....	3354 mm	3454 mm
Bottom batten pocket	4217 mm	4317 mm

Foot Bolt rope :

Tack point to forward edge of bolt rope 400mm

Clew Point to aft edge of bolt rope..... 100mm

Luff Bolt rope:

Tack point to lower edge of bolt rope 280mm

Upper edge of bolt rope shall meet the **head point**.

DIMENSIONS – SAIL PLAN B

		maximum
Leech length	4668 mm	
Foot length	2505 mm	
Top width	150 mm	
Distance between the luff and leech , as measured along the centreline of the batten pocket, extended as necessary;		
	minimum	maximum
Top batten.....	700 mm	778 mm
Second batten	1309 mm	1387 mm
Third batten	1767 mm	1845 mm
Bottom batten	2122 mm	2200 mm
Batten pocket width: inside		60 mm
Luff to batten pocket end cap		20 mm
Head point to intersection of leech and centreline of:		
Top batten pocket	801 mm	921 mm
Second batten pocket.....	1724 mm	1844 mm
Third batten pocket.....	2564 mm	2684 mm
Bottom batten pocket	3410 mm	3530 mm
Head point to intersection of luff and centreline of:		
Top batten pocket	763 mm	863 mm
Second batten pocket.....	1626 mm	1726 mm
Third batten pocket.....	2490 mm	2590 mm
Bottom batten pocket	3354 mm	3454 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

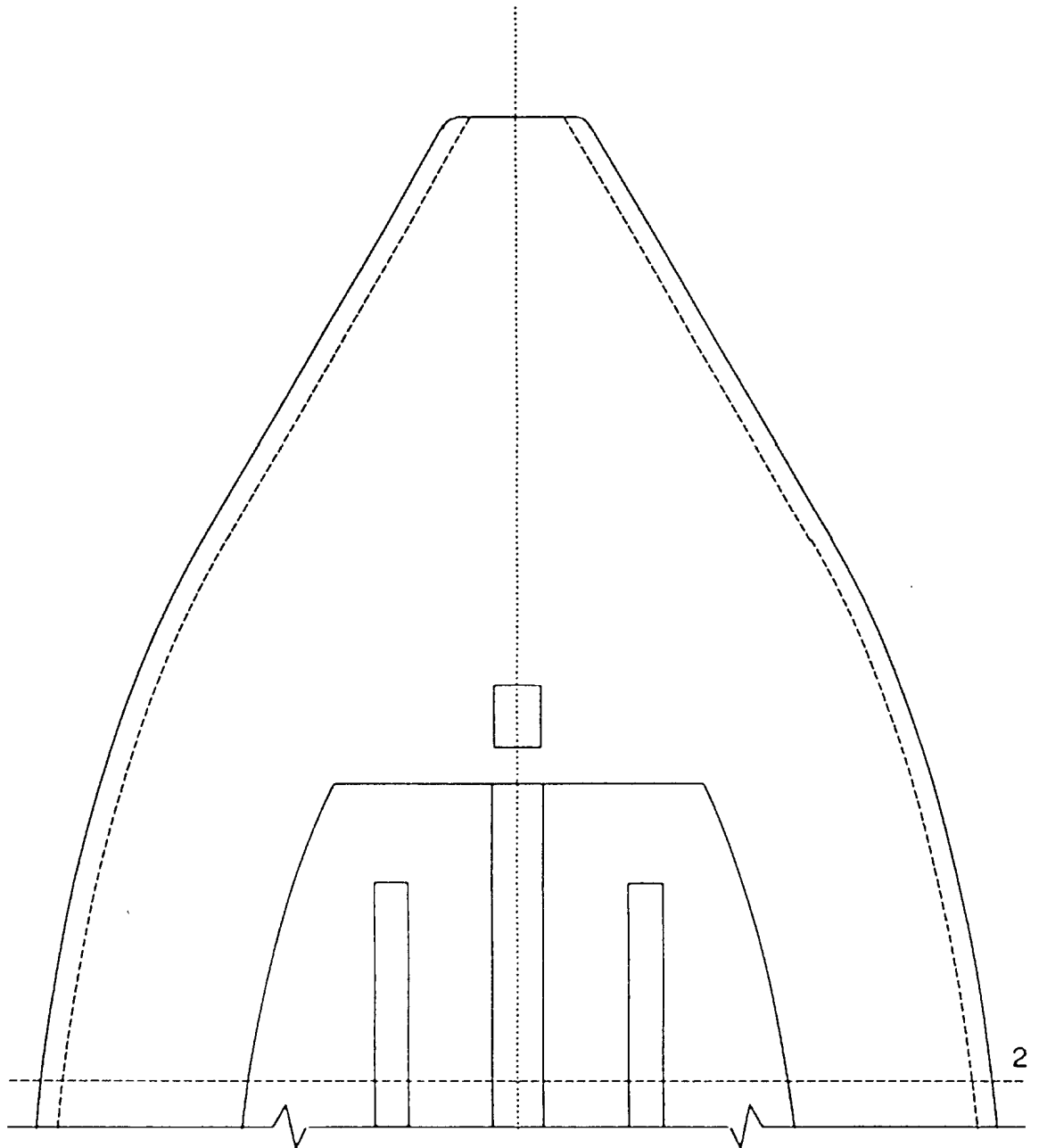
H.1 FLOTATION TEST

- (a) The owner shall examine each tank and be satisfied that it is adequately constructed and maintained. *If there is any doubt one of the tests in H.1(b) or H.1(c) shall be used.*
- (b) *If H.1(a) examination is unsatisfactory, the **boat** will be swamped on its beam ends with the stepped **mast** approximately horizontal, supporting a weight of not less than 68 kg above the waterline for 10 minutes each side, both port and starboard OR*
- (c) *If H.1(a) examination is unsatisfactory have each tank tested as follows:- Hatches shall be closed normally using only the **boats** hatch covers and fastenings. Draining holes shall be closed with their normal stoppers except where tubes to a pressure source and gauge are connected. Equipment for producing a pressure differential between the tank and the atmosphere and a water gauge for measuring the differential shall be connected to the tank. Air pressure shall be applied to the tank to produce a differential reading of at least 125mm on the water gauge. After isolating the buoyancy tank from the pressure source, the pressure differential shall not reduce from 125mm to 50mm in less than 30 seconds.*

H.2 FLOATATION ENDORSEMENTS

- H.2.1 Owners shall carry out a flotation/buoyancy test/inspection in accordance with H.1 of these Rules.
- H.2.2 The owner shall sign and date the flotation/buoyancy endorsement on the measurement **certificate** and arrange for such signature to be witnessed and endorsed by a club or NSCA official.
- H.2.3 Flotation/buoyancy endorsements shall remain in force for a period not exceeding twelve months from the date of the last endorsement.

DIAGRAM 3
PLAN - STEM to SECTION 2



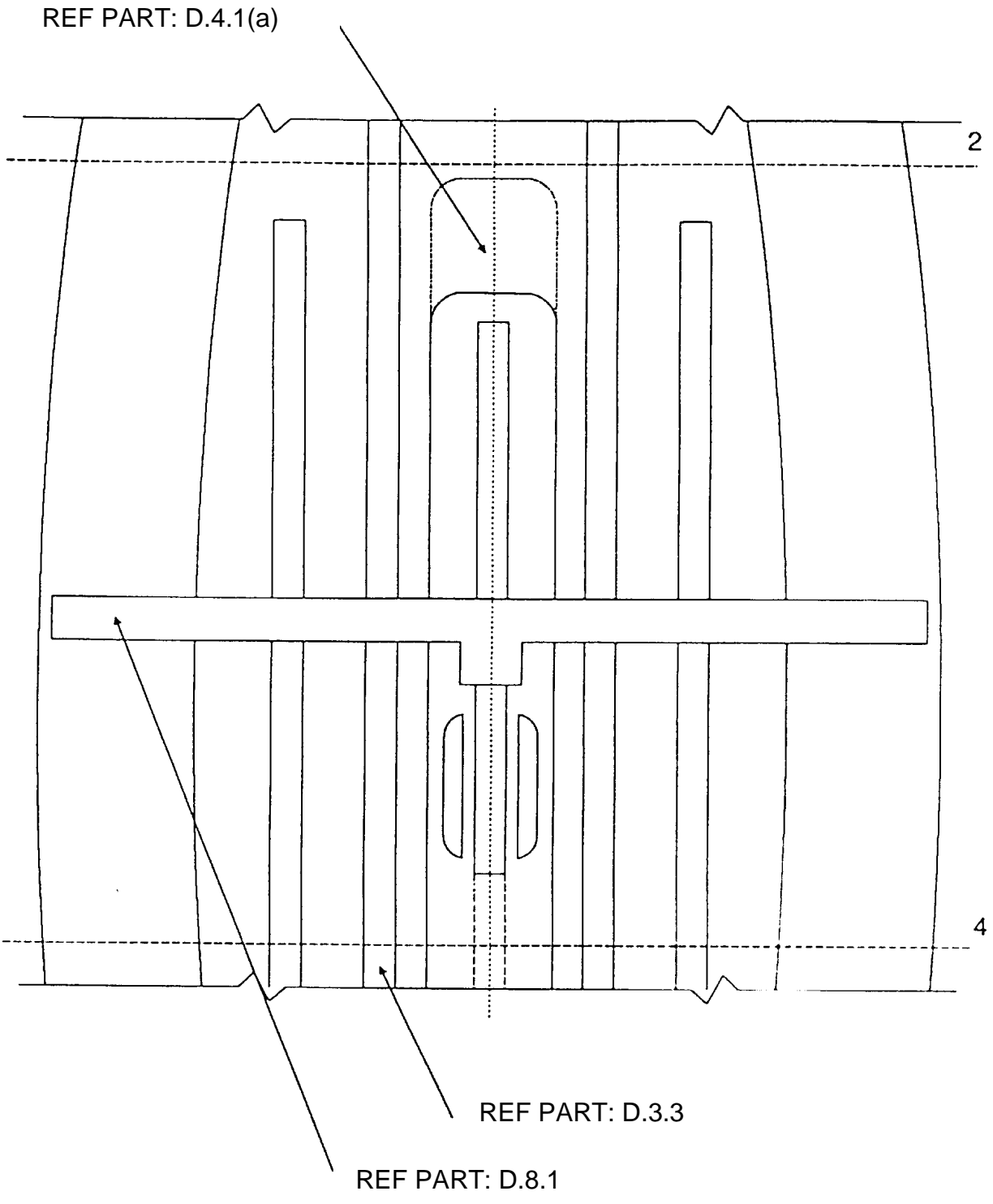


DIAGRAM 4
PLAN - SECTION 2 to SECTION 4

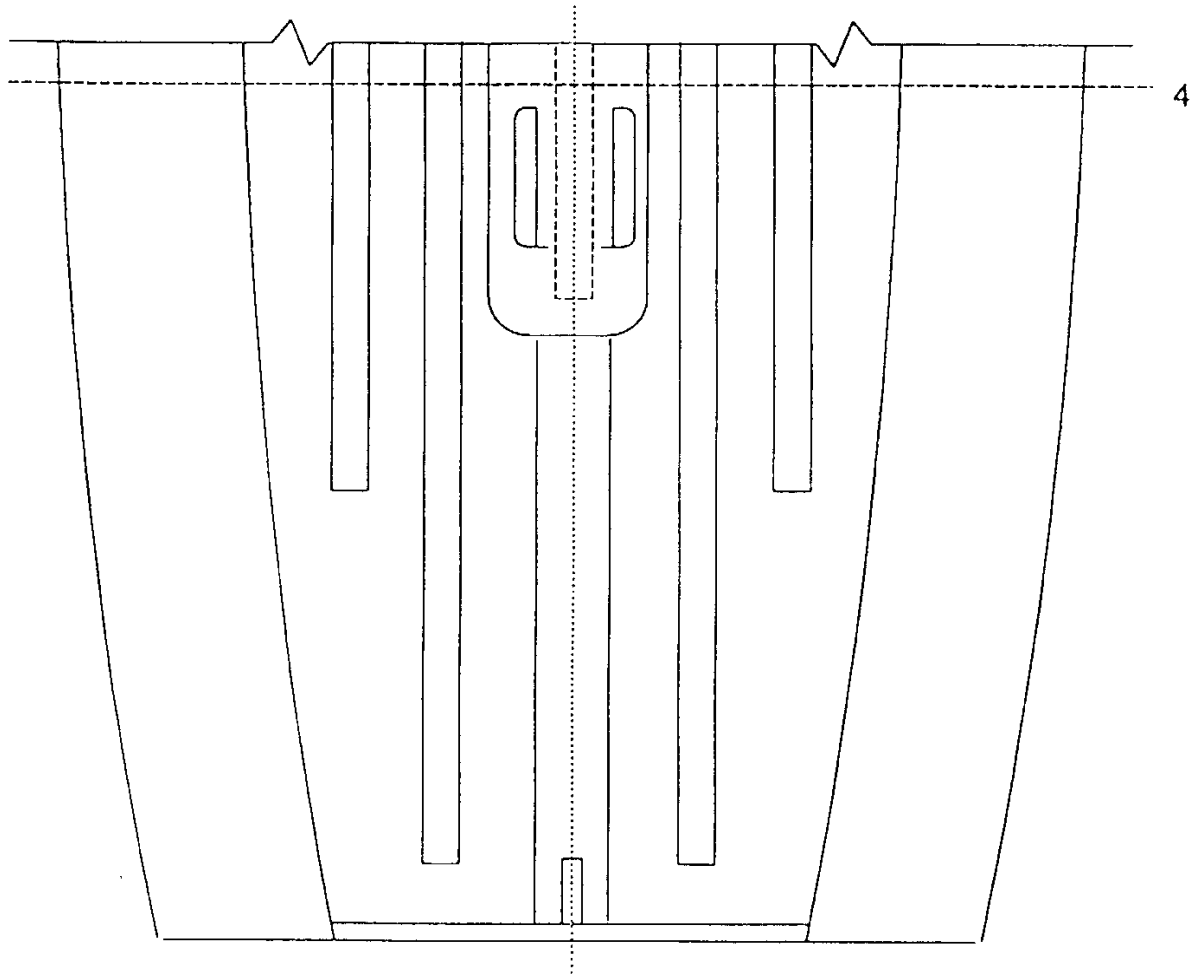
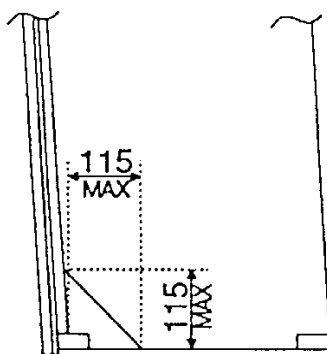
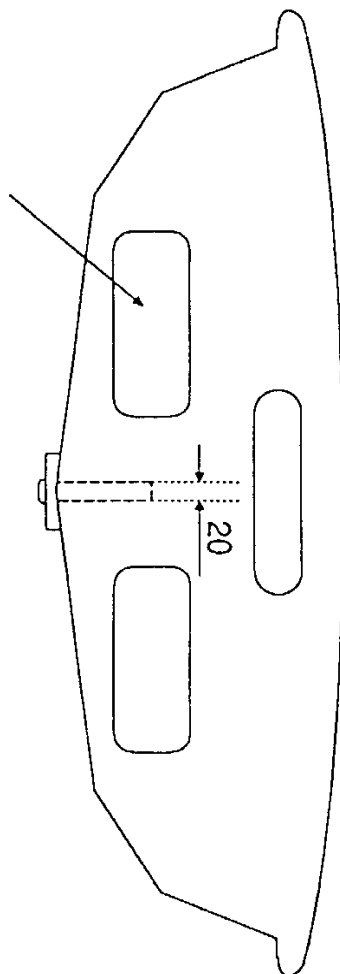


DIAGRAM 5
PLAN - SECTION 4 to TRANSOM

REF PART: D3.3(b)



KNEE IS OPTIONAL

DIAGRAM 6
TRANSOM

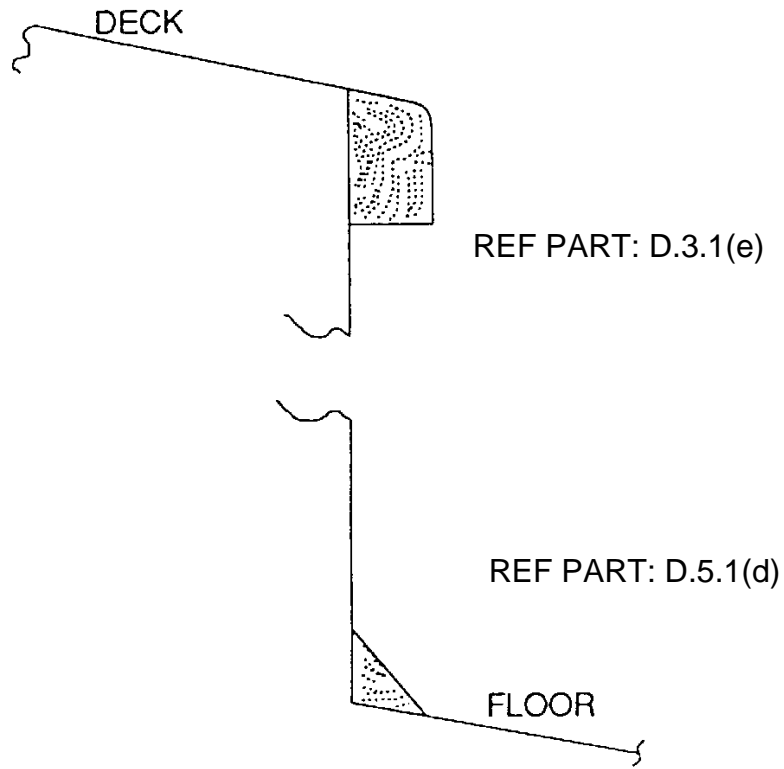


DIAGRAM 7
BUOYANCY TANK SIDE BEAD

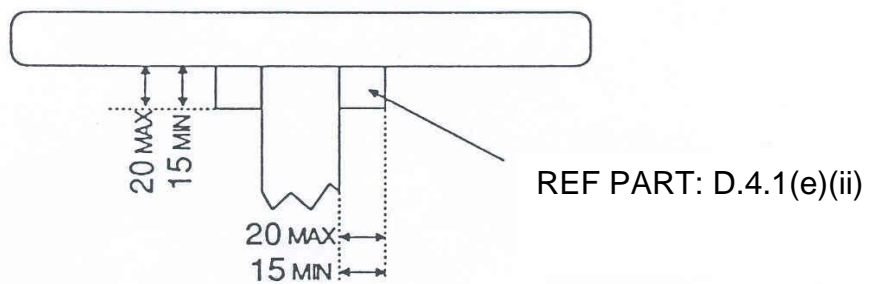
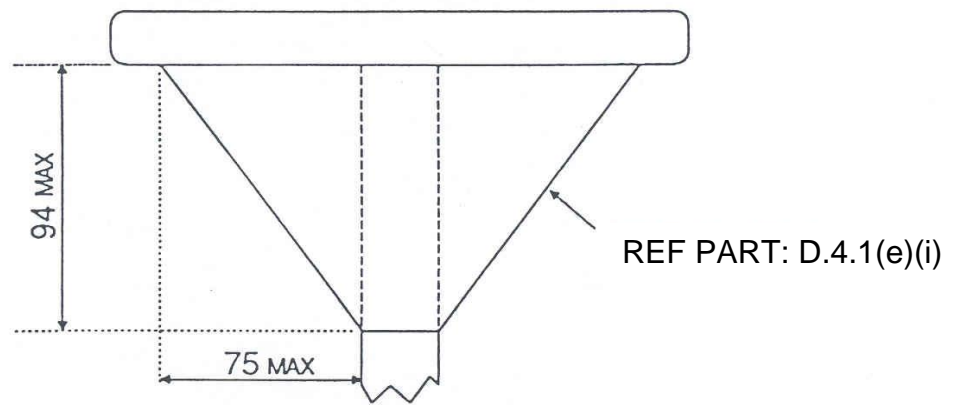
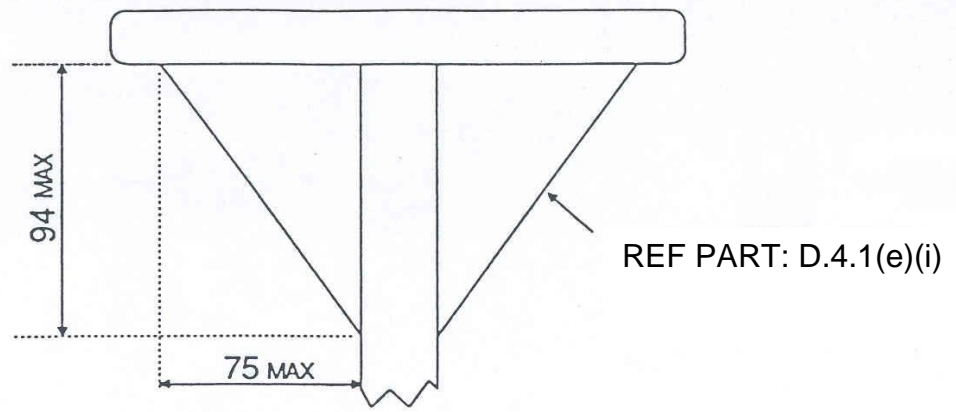
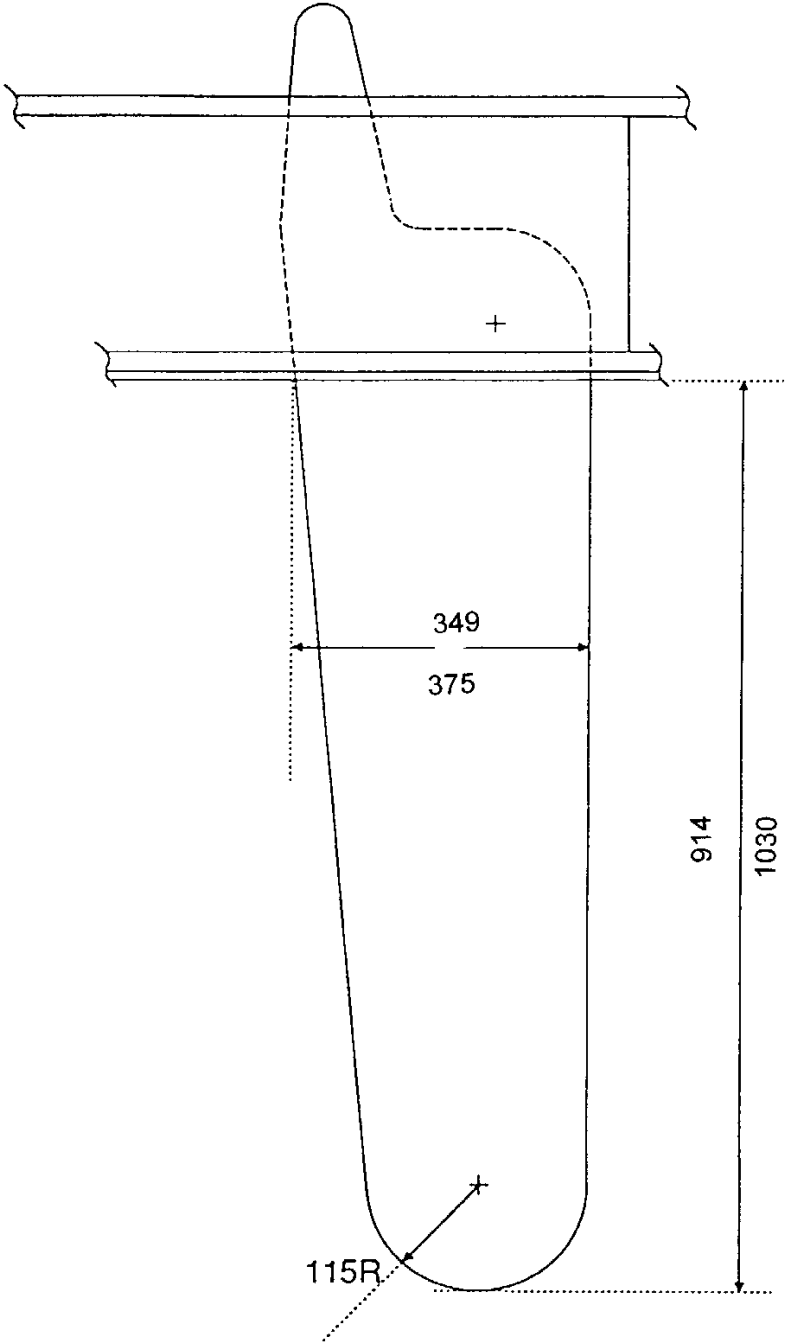


DIAGRAM 8
TOE RAIL SUPPORT

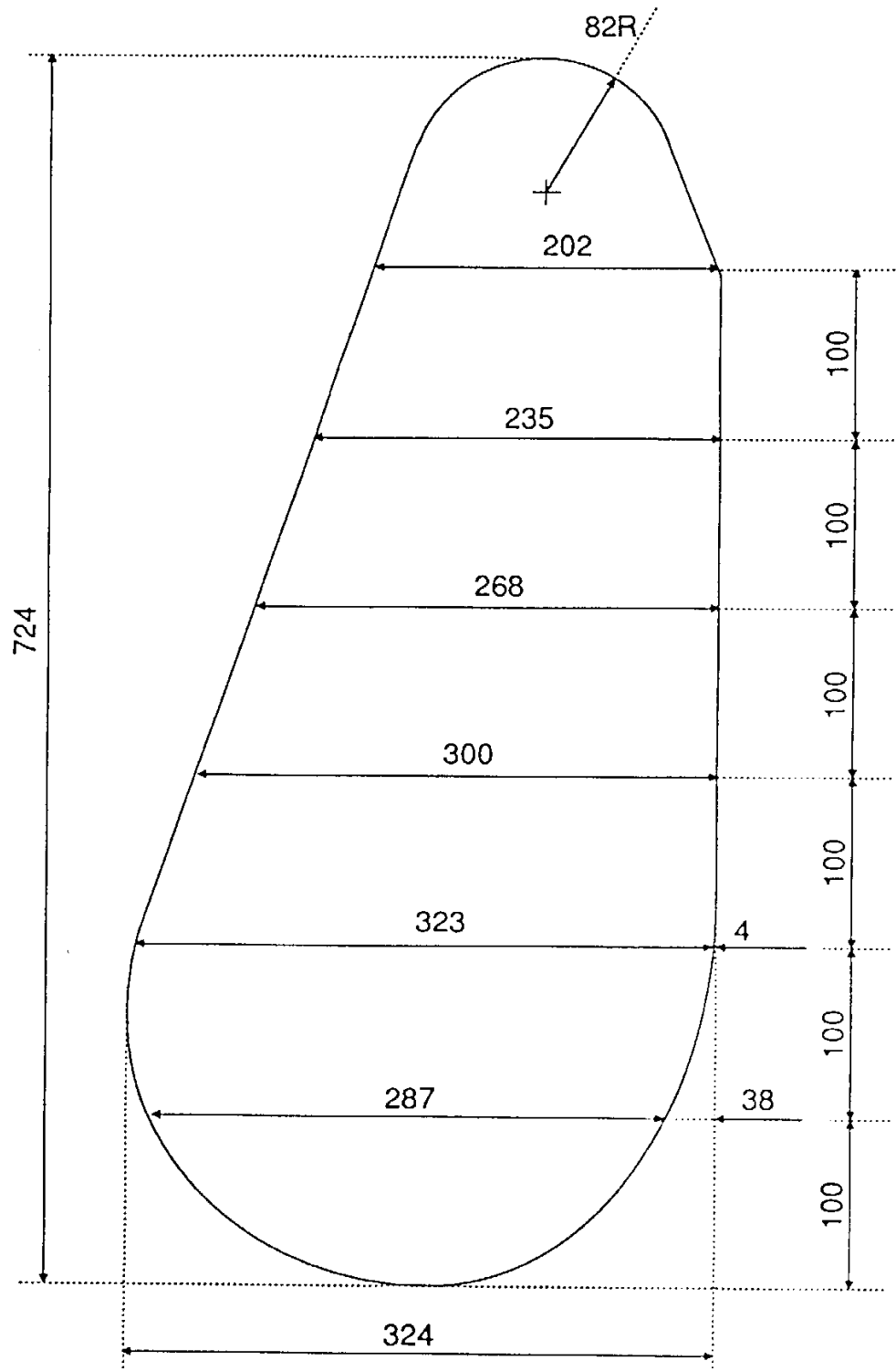
**DIAGRAM 9
CENTREBOARD**



REF PART: E.3

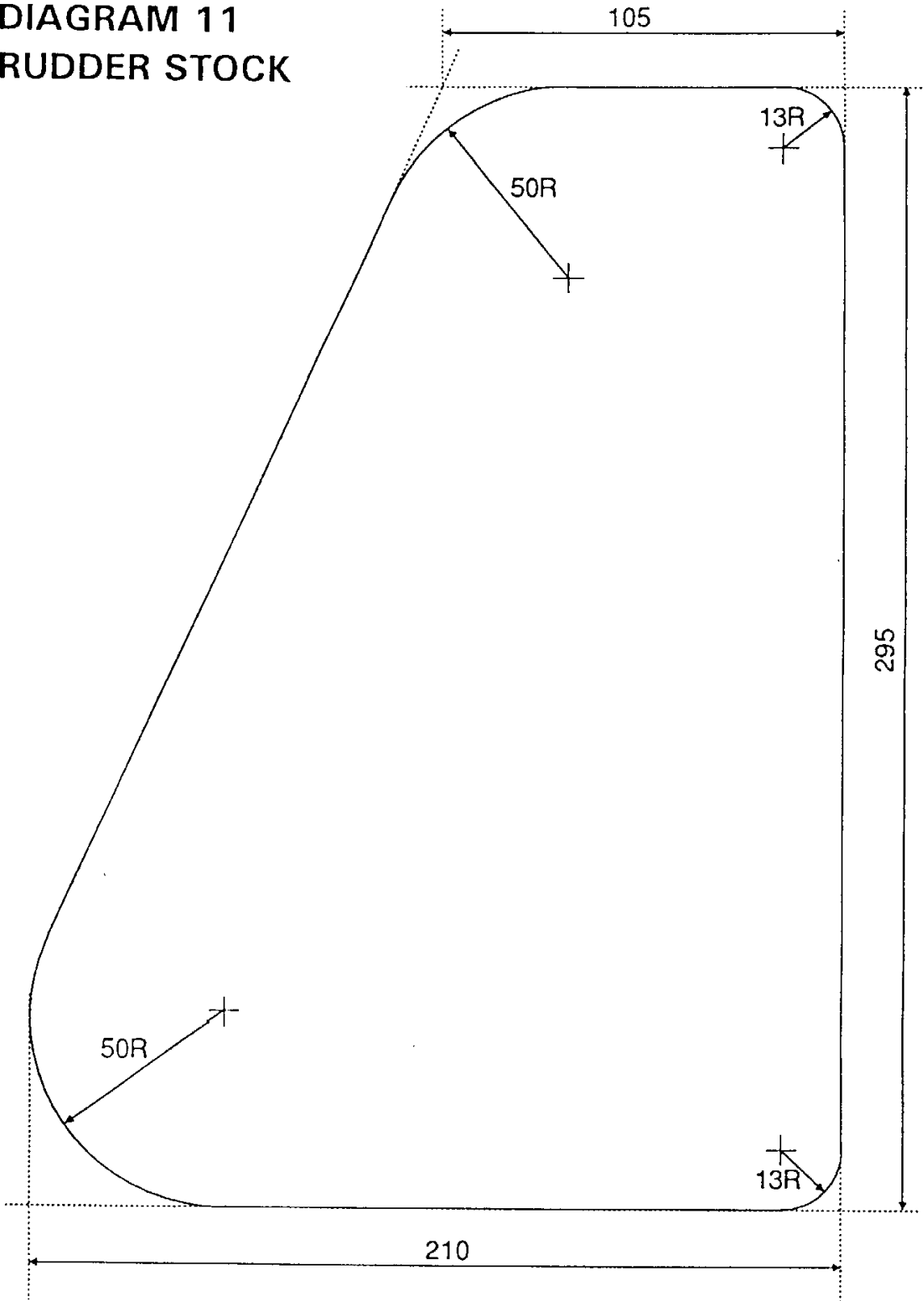
DIAGRAM 10 RUDDER

A FAIR SHAPE MUST BE PRODUCED



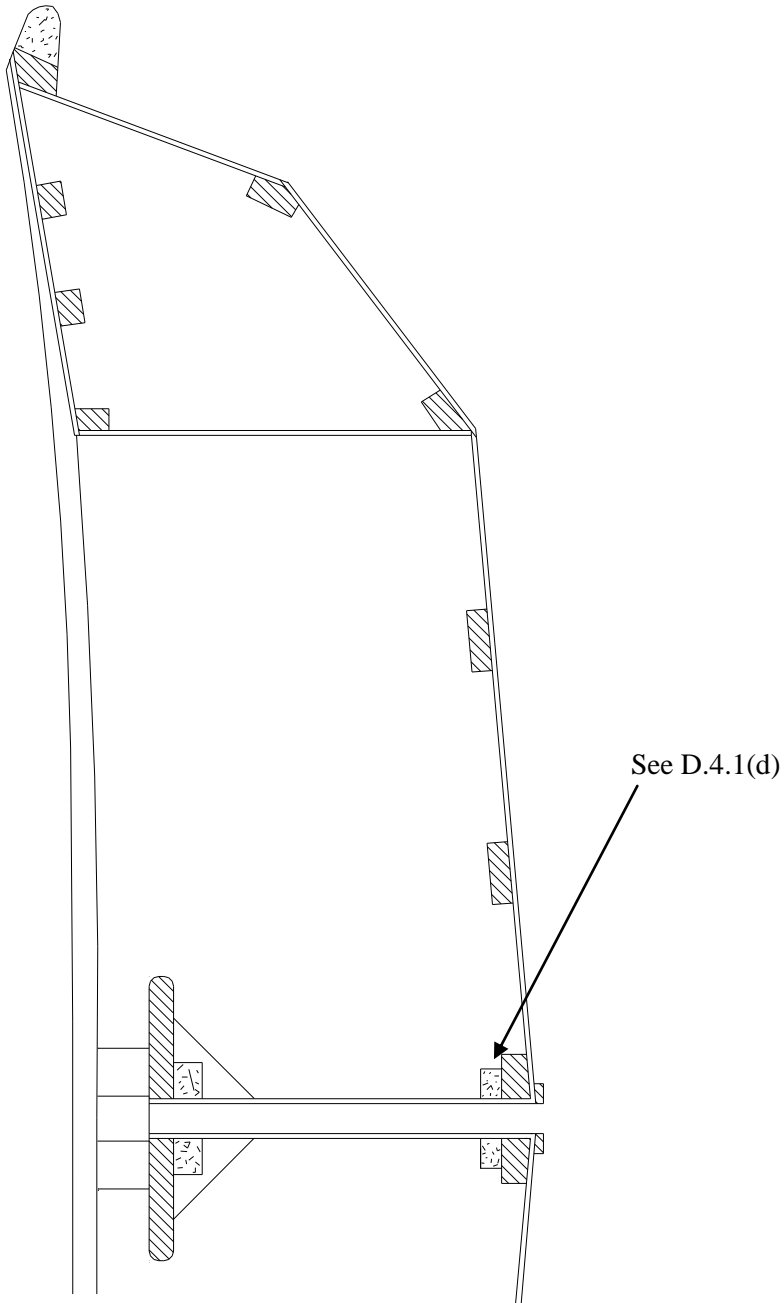
REF PART: E.4

**DIAGRAM 11
RUDDER STOCK**



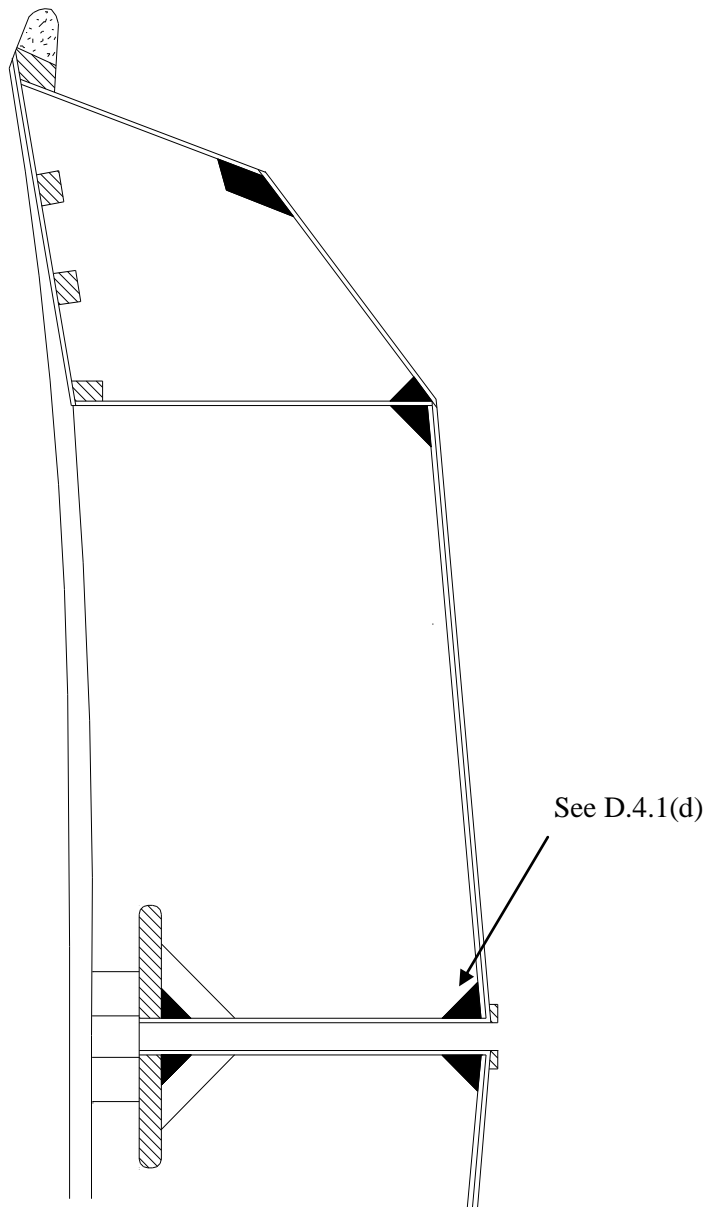
REF PART: E.4

Diagram 12



Section Through Centreboard Case

Diagram 13



Section Through Centreboard Case - Alternative Construction

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	1 April 2001 Edition B
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	1 July 2000
	1 March 1999 Edition B
	1 March 1996
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	1 March 1970
	1 March 1969
	1 March 1967
	1 April 1966

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