

International Cadet Class

Cadet Mark IV Specification / Measurement Form 1st December 2009

INTRODUCTION

This contains the specification and measurement form for the GRP Cadet Mark IV hull.

This document consists of the following:

- Instructions to Measurers (this page)
- Layout drawing (page 2)
- Full Measurement form for licensing measurement (pages 3 - 7)
- Production measurement form (pages 8 - 11)
- Registration form (page 12)

Pages 8 - 12 should be photocopied for use as measurement and registration forms for production boats.

MEASUREMENT INSTRUCTIONS

The International Cadet Mark IV may only be built by licensed builders using moulds licensed by the ICC. Therefore, the purpose of production measurement is to ensure that there has been no accidental or deliberate distortion of the hull and that fittings have been correctly placed. The measurer must also endeavour to ascertain that the hulls have been built in accordance with the lay-up specification that is in the license agreement. This will normally be deemed to be by inspection, and by sight of a signed builders certificate relating to the hulls.

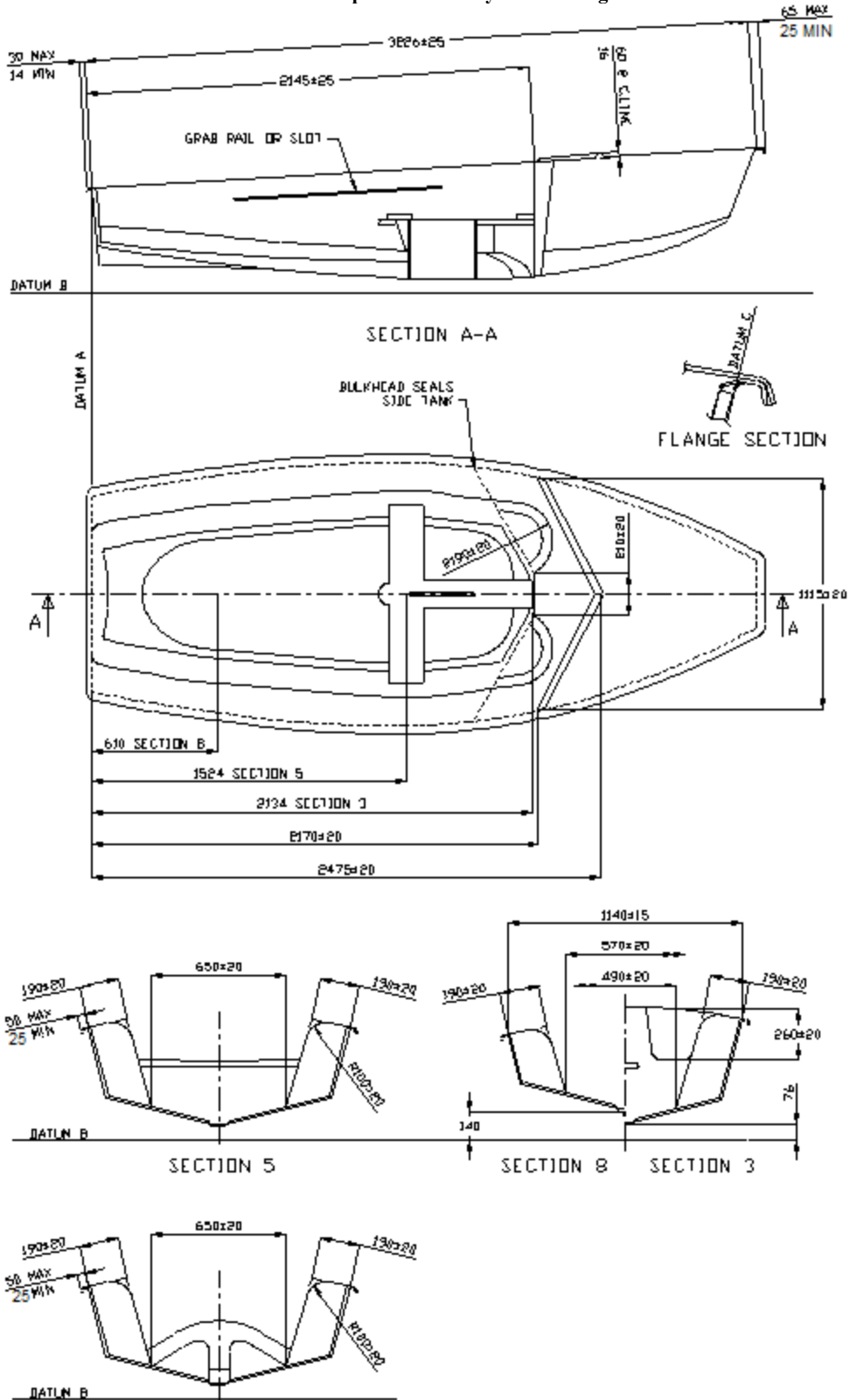
The first hull from any new mould is measured by the ICA using the "Initial Mould Measurement" form (pages 3 - 7) any problems that are uncovered must be resolved before production of further hulls begins.

Subsequent hulls taken from this mould are measured using the "Production Measurement Form" (pages 8 - 11).

The original Production Specification / Measurement Form when completed should be forwarded by the Measurer to the MNA / National Association as appropriate. The Measurer must retain a copy for his own records and provide a copy to the builder or owner. The builder or owner may then apply to the MNA / National Association as appropriate with the current fee for the issue of a hull measurement certificate using the form on page 12 below.

International Cadet Class

Cadet Mark IV Specification Layout Drawing 2009



International Cadet Class

CADET MARK IV INITIAL MOULD MEASUREMENT FORM 1st Dec 2009

Measurements	Min. mm	Port	Actual	Starbd	Max. mm
Datum line B to Keel at Section 3, 2134mm from Datum Plane A.	-	-	76	-	-
Datum line B to Keel at Section 8, 610mm from Datum Plane A	-	-	140	-	-
Notes: (i) Measure Datum line B to Hull Datum Point and to Datum line C at centreline at fore transom so that a line parallel to Datum line B can be established above the decks. (ii) Leave marks at sections for beam at Chine and beam at deck level.					
Datum Plane A to the point of intersection on the centreline of the extension of the outer surface of the fore transom with the extension of the lower surface of the keel (ignoring any permitted rounding).	3067	-		-	3117
Datum line B to Keel at fore transom	331	-		-	361
Datum Plane B to chine at fore transom	359				383
Datum Plane B to Datum line C at fore transom	680				707
Datum line B to Keel at Section 1, 2743mm from Datum Plane A	184	-		-	208
Datum Plane B to Chine at Section 1	255				281
Datum Plane B to Datum line C at Section 1	623				661
Datum line B to Keel at Section 2, 2438mm from Datum Plane A	109	-		-	133
Datum Plane B to Chine at Section 2	207				231
Datum Plane B to Datum line C at Section 2	599				633
Datum Plane B to Chine at Section 3, 2134mm from Datum Plane A	189				205
Datum Plane B to Datum line C at Section 3	575				599
Datum line B to Keel at Section 4, 1829mm from Datum Plane A	48	-		-	72
Datum Plane B to Chine at Section 4	184				204
Datum Plane B to Datum line C at Section 4	547				577
Datum line B to Keel at Section 5, 1524mm from Datum Plane A	58	-		-	75
Datum Plane B to Chine at Section 5	195				211
Datum Plane B to Datum line C at Section 5	528				558
Datum line B to Keel at Section 6, 1219mm from Datum Plane A	71	-		-	95
Datum Plane B to Chine at Section 6	210				234
Datum Plane B to Datum line C at Section 6	512				542
Datum line B to Keel at Section 7, 914mm from Datum Plane A	96	-		-	120
Datum Plane B to Chine at Section 7	229				253
Datum Plane B to Datum line C at Section 7	503				533
Datum Plane B to Chine at Section 8, 610mm from Datum Plane A	263				279
Datum Plane B to Datum line C at Section 8	502				526
Datum line B to Keel at Section 9, 305mm from Datum Plane A	166	-		-	190
Datum Plane B to Chine at Section 9	284				310
Datum Plane B to Datum line C at Section 9	493				523

Datum Plane B to Chine at aft transom	306				328
Datum Plane B to Datum line C at aft transom	490				520
Beam of fore transom at Chine	152	-		-	168
Beam at Chine at Section 1	520	-		-	574
Beam at Chine at Section 2	765	-		-	796
Beam at Chine at Section 3	928	-		-	952
Beam at Chine at Section 4	1020	-		-	1050
Beam at Chine at Section 5	1080	-		-	1104
Beam at Chine at Section 6	1084	-		-	1114
Beam at Chine at Section 7	1058	-		-	1088
Beam at Chine at Section 8	1004	-		-	1028
Beam at Chine at Section 9	931	-		-	961
Beam at Chine at aft transom	839	-		-	863
Datum Plane A to the aft edge of the keel where it joins the aft transom	46	-		-	56
Datum Plane A to forward end of the daggerboard slot	1835	-		-	1885
Datum Plane A to aft end of daggerboard slot	1518	-		-	1568
Datum Plane A to forward end of skeg	965	-		-	1005
Depth of skeg near aft end (including keelband to the lowest point on the keelband)	76	-		-	-
Width of skeg, upper surface in contact with keel at aft end	38	-		-	-
Width of skeg, upper surface in contact with keel at forward end	20	-		-	-
Width of the flat part of the lower surface of the skeg (measured as if it was not rounded where there is permitted rounding)	19	-		-	-
Radius at aft end of skeg	20	-		-	30
Save for permitted rounding within 4mm of where the planes meet, are the side and bottom surfaces of skeg flat (surfaces 2mm or less from 300mm straight edge)?	✓ or ✗				
Is the radius where the skeg meets the keel \leq 6mm?	✓ or ✗				
Height of daggerboard case measured midway between fore and aft ends	290	-		-	-
Does the width of the daggerboard slot vary by more than 2mm save for permitted additional strips and rounding within 9mm of each end?	✓ or ✗				
If fitted, are any additional strips of non-metallic material fitted in the slot within 30mm of the top and bottom of the slot and not so as to cause the width of the opening to vary by more than 2mm?	✓ or ✗ or "not fitted"				
If fitted are additional strips of non-metallic material fitted within 30mm of each end of the slot?	✓ or ✗ or "not fitted"				
Internal width of daggerboard case (excluding permitted additional material)	15	-		-	20
Is the keel continuous from fore transom to aft transom?	✓ or ✗				
Save for permitted rounding, is the lower surface of the keel flat athwartships (surface less than 2mm from 300mm straight edge)?	✓ or ✗				
Save for permitted rounding, are the sides of the keel flat (surface less than 2mm from 300mm straight edge)?	✓ or ✗				
Are the flat sides of the keel at $90^\circ \pm 5^\circ$ to the flat part of the lower surface of the keel?	✓ or ✗				
Save for permitted rounding and radiussing, does the keel vary in thickness throughout its length by more than 5mm? (✓ = "no")	✓ or ✗				
Save for permitted rounding, are the aft ends of the keel and skeg so	✓ or ✗				

edge placed anywhere on such surfaces within 200mm of the point where the keel joins the transom is nowhere (save at the permitted rounded parts) more than 2mm from such surfaces?					
Save for permitted rounding, is the fore end of the keel so flat and so in line with the outer face the fore transom that a straight edge placed anywhere on such surfaces within 200mm of the point where the keel joins the transom is nowhere (save at the permitted rounded parts) more than 2mm from such surfaces?	✓ or ✗				
Width of keel throughout length (measured between its flat surfaces)	76	-		-	-
Thickness of keel throughout length	11	-		-	-
Radius at fore end of keel	20	-		-	30
Radius at edges of keel throughout its length	-	-		-	10
Radius where bottom panels meet keel					6
Radius where skeg meets keel	-	-		-	6
Is a straight edge 300mm long placed athwartships anywhere on the outer surfaces of the side or bottom panels (save (i) within 4mm of the edges of such panels and (ii) within 40mm of Datum Line "C") anywhere more than 3mm from the hull surface? (✓ = "no")	✓ or ✗				
Is a straight edge 300mm long placed anywhere on the outer surfaces of the bow or aft transoms (save (i) within 4mm of their edges and (ii) within 40mm of Datum line "C") anywhere more than 3mm from such surfaces? (✓ = "no")	✓ or ✗				
Except where otherwise specifically permitted, does any rounding on the chines or intersection of planes on the outside of the hull beyond 4mm from the point of intersection of the two adjacent planes? (✓ = "no")	✓ or ✗				
Chine angle at Section 3	114°		-		122°
Chine angle at Section 8	114°		-		122°
Are rubbing bands of brass, light alloy or plastic fitted?	✓ or ✗				
Are rubbing bands of convex or flat section strip?	✓ or ✗				
Minimum cross-section dimension 10mm by 2mm?	✓ or ✗				
Maximum cross-section dimension 30mm by 8mm?	✓ or ✗				
Do bands run the full length of the keel and skeg (except in the way of any self-bailer in the keel where they may begin and end not more than 40mm fore and aft of the self-bailer)?	✓ or ✗				
Are they double for the full length of the daggerboard slot? (they may be double elsewhere or triple within 100mm of the fore and aft ends of the daggerboard slot)	✓ or ✗				
Are the Chine bands a minimum length of 1219mm each, positioned a minimum of 600mm from the aft transom?	✓ or ✗				
Are the outboard edges of the chine bands (except where they may be tapered) within 4mm of the intersections of the panels?	✓ or ✗				
Panel thickness (including any g.r.p., epoxy, filler paint and varnish finishing)	✓ or ✗				20
Does the hull conform to the building specification as approved by the ICA for the licensed builder?	✓ or ✗				
Does the g.r.p. used consist only of polyester resin and E-Glass (in chopped strand or woven form)?	✓ or ✗				

Measurements	Min. mm	Actual mm	Max. mm
Hull Datum Point to Datum line C at fore transom on centreline (measured in a straight line between the two points and not necessarily parallel to Datum line B)	3201		3251
Hull Datum Point above the straight line joining Datum line C at the aft transom on one side of the boat with Datum line C at the aft transom on the opposite side of the boat	0		50
Datum line C on the centreline at the fore transom above the straight line joining Datum line "C" at the fore transom on one side of the boat with Datum line "C" at the fore transom on the opposite side of the boat	0		30
Beam at Datum line C at fore transom	320		340
Beam at Datum line C at Section 1	743		783
Beam at Datum line C at Section 2	966		1006
Beam at Datum line C at Section 3	1125		1155
Beam at Datum line C at Section 4	1207		1247
Beam at Datum line C at Section 5	1245		1285
Beam at Datum line C at Section 6	1232		1272
Beam at Datum line C at Section 7	1194		1234
Beam at Datum line C at Section 8	1125		1155
Beam at Datum line C at Section 9	1029		1069
Beam at Datum line C at Aft Transom	934		958
Is a thwart made of wood or g.r.p. fitted which extends fully between the side tanks?	✓ or ✗		
Width of thwart	102		-
Distance of aft edge of thwart forward of Datum Plane A	1416		1470
Optional aft extension of thwart maximum dimensions 250mm (athwartships) by 75mm (fore and aft) on the centreline	✓ or ✗	/	
Is thwart attached to or part of daggerboard case or capping?	✓ or ✗		
Inspection hole in each buoyancy compartment 90 – 160mm internal diameter?	✓ or ✗		
Drainage holes in buoyancy compartments (if fitted) 15 – 25mm internal diameter?	✓ or ✗		
Hull Datum Point to aft side of forward bulkhead at deck level	2120		2170
Inside of sidedeck at Sections 3, 5, and 8	170		210
Radius of sidedeck	80		120
Do the distances across the cockpit at Sections 5 and 8 where the side buoyancy tanks meet the floor conform to the page 2 drawing?	✓ or ✗		
Do the recesses for the spinnaker bags conform to the page 2 drawing in profile and depth?	✓ or ✗		
Do the spray guards conform to the page 2 drawing?	✓ or ✗		
Are there finger grips or grab slots on each side tank at least 19mm deep and at least 850mm long extending along the length of the sidedeck with a minimum of 850mm of their lengths between 610mm and 1524mm from Datum Plane "A"?	✓ or ✗		
Datum line C to outside of gunwale moulding flange	25		50
Datum line C to outside of bow moulding flange	25		65
Datum line C to outside of stern moulding flange (cutaway permitted 100mm either side of centreline)	14		30
Do deck overhangs or flanges project above Datum line C? (✓ = "no")	✓ or ✗		
Has a satisfactory air pressure (buoyancy) test been completed on all three compartments?	✓ or ✗		
Weight of hull including correctors	54kg		-
Weight of correctors			3kg

Does vertical centre of gravity conform to class rule D.10.3(b)?	✓ or ✗
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Mould Number	
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Builder's hull number	
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MEASURERS' REMARKS (if necessary continue on a separate sheet):

The Measurer has carried out and recorded the above measurements to the best of his ability, but makes no representations and gives no warranties as to their accuracy and is not to be held responsible for any inaccuracies. Responsibility for ensuring that the boat complies with the Class Rules lies wholly and exclusively on the builder and the owner.

I certify that I have made the above outside hull and deck level measurements to the best of my ability on

Hull numberManufactured from Mould No.....

Measurer's Name.....Signature:.....Date:.....

Status:.....

Address:.....

BUILDER'S DECLARATION

On behalf of my Company, I hereby certify that this International Cadet, Hull No..... has been built in accordance with the agreed specification, using the mould No.....and therefore request it to be licensed by the ICC.

Name.....Signature.....Date.....

Builder's Name.....

Builder's Address.....

Date of Completion.....

PLEASE USE BLOCK CAPITALS

International Cadet Class

CADET MARK IV PRODUCTION MEASUREMENT FORM 1st December 2009

Sail and ISAF Plaque Number	
Builders' Mould number	
Builder's hull number	

OUTSIDE HULL AND DECK LEVEL

Measurements	Min. mm	Port	Actual	Starbd	Max. mm
Datum line B to Keel at Section 3, 2134mm from Datum Plane A.	-	-	76	-	-
Datum line B to Keel at Section 8, 610mm from Datum Plane A	-	-	140	-	-
Notes: (i) Measure Datum line B to Hull Datum Point and to Datum line C at centreline at fore transom so that a line parallel to Datum line B can be established above the decks. (ii) Leave marks at sections for beam at Chine and beam at deck level.					
Datum Plane A to the point of intersection on the centreline of the extension of the outer surface of the fore transom with the extension of the lower surface of the keel (ignoring any permitted rounding).	3067	-		-	3117
Datum line B to Keel at fore transom	331	-		-	361
Datum line B to Keel at Section 5, 1524mm from Datum Plane A	58	-		-	75
Datum Plane B to Chine at Section 5	195				211
Datum Plane B to Datum line C at Section 5	528				558
Beam at Chine at Section 5	1080				1104
Datum Plane B to Keel at aft transom	202				224
Datum Plane B to Chine at aft transom	306				328
Datum Plane B to Datum line C at aft transom	490				520
Beam at Chine at aft transom	839	-		-	863
Datum Plane A to the aft edge of the keel where it joins the aft transom	46	-		-	56
Datum Plane A to forward end of the daggerboard slot	1835	-		-	1885
Datum Plane A to aft end of daggerboard slot	1518	-		-	1568
Datum Plane A to forward end of skeg	965	-		-	1005
Depth of skeg near aft end (including keelband to the lowest point on the keelband)	76	-		-	-
Width of skeg, upper surface in contact with keel at aft end	38	-		-	-
Minimum cross-section dimension of rubbing bands 10mm by 2mm?	✓ or ✗				
Maximum cross-section dimension 30mm by 8mm?	✓ or ✗				
Do bands run the full length of the keel and skeg (except in the way of any self-bailer in the keel where they may begin and end not more than 40mm fore and aft of the self-bailer)?	✓ or ✗				
Are they double for the full length of the daggerboard slot? (they may be double elsewhere or triple within 100mm of the fore and aft ends of the daggerboard slot)	✓ or ✗				
Are the Chine bands a minimum length of 1219mm each, positioned a minimum of 600mm from the aft transom?	✓ or ✗				
Are the outboard edges of the chine bands (except where they may be tapered) within 4mm of the intersections of the panels?	✓ or ✗				
Hull Datum Point to Datum line C at fore transom on centreline (measured in a straight line between the two points and not necessarily parallel to Datum line B)			3201		3251

Beam at Datum line C at Section 5	1245		1285
Beam at Datum line C at Section 8	1125		1155
Inspection hole in each buoyancy compartment 90 – 160mm internal diameter?	✓ or ✗		
Hull Datum Point to aft side of forward bulkhead at deck level	2120		2170
Are there finger grips or grab slots on each side tank at least 20mm deep extending along the length of the sidedeck at least between 750mm and 2100mm from Datum Plane A?	✓ or ✗		
Datum line C to outside of gunwale moulding flange	25		50
Has a satisfactory air pressure (buoyancy) test been completed on all three compartments?	✓ or ✗		
Weight of hull including correctors	54kg		-
Weight of correctors			3kg
Does vertical centre of gravity conform to class rule D.10.3(b)?	✓ or ✗		
Is an ISAF plaque permanently placed on the inside of the aft transom?	✓ or ✗		
Is the sail number of the boat permanently marked in contrasting colour (carved or engraved) on the port side of the outside of the aft transom in figures a minimum of 25mm in height?	✓ or ✗		

FITTINGS

Items	✓ or ✗
Mast step block containing a 29 ± 1 mm x 29 ± 1 mm square socket	
Upper face of mast step block (including protective plate, if fitted) not more than 46mm above the straight lines joining Datum line “C” on the port and starboard sides of the hull at the sections containing the block which are parallel with Datum Plane “A”	
Mast tenon socket, of a minimum depth of 13mm	
Max. height of the mast step block including the optional protective plate, 20mm	
Towing fitting made of stainless or galvanised steel strongly attached to the fore transom at least 230 mm below Datum Line “C” at the top of the fore transom	
Bow plate to attach the forestay and headsail fitted on the centreline at the bow	
Two hull shroud plates or U bolts fitted 1835 mm ±25 mm from Datum Plane A (1838mm ±25 mm if measured along deck)	
Two headsail fairleads fitted so that the bearing surface of each fairlead is a maximum of 50 mm from Datum line “C”	
Headsail sheet cam cleats (if fitted) inboard of the headsail sheet fairleads and placed a minimum of 1735 mm from "Datum Plane A" measured along the deck	
Separate halyard cleats for the mainsail and headsail halyards fixed on the forward bulkhead	
Eye(s) for the mainsheet fixed 254 mm ±10 mm either side of the boat centreline on the deck at the aft transom	
If fitted, single block (“A”) for centre sheeting fixed centrally a minimum of 1368mm and a maximum of 1493mm forward of Datum Plane “A”	
Gudgeons and/or pintles for the rudder fitted on the aft transom	
Retaining clip or device attached to the aft transom or to a fixed or loose pintle so as to prevent the rudder from becoming accidentally detached while in use.	
Toe straps fixed in the hull for the crew and helmsperson. They may be fixed or adjustable, positioned to suit. The toe strap webbing may be of optional length and width. The ends of the toe straps shall be attached to the hull or bulkheads in an appropriate manner. For this purpose and for the purpose of adjustment only ropes, fairleads, deckeyes, cleats, and appropriate pads, plates and fastenings may be used.	
Inspection hole fittings consisting of a part fixed to the hull and a detachable cover	
Shock cord fitted and fixed for retaining the daggerboard in the daggerboard case	
Kicking strap eye plate fitted on the centreline (may be combined with the mast plate)	
<i>Optional Fittings</i>	
Fairleads for the spinnaker sheets (when fitted) must be fitted between 690mm and 1120mm from Datum Plane "A" measured along the deck	
One open cleat for the spinnaker sheet may be fitted on each side of the boat between 690mm and 1120mm from Datum Plane "A" measured along the deck	

incorporated with the open fairlead referred to in D.9.3(xi) or the shroud plates or U bolts or the shroud adjusting plates. The cleats shall not extend beyond the outside of the rubbing strake or bead or deck flange or overhang	
A maximum of two lacing hooks are permitted to hold the spinnaker halyard	
If a spinnaker halyard is fitted its tail after passing through the fairlead on the mast shall be led through no more than the following: (i) one cleat (which may incorporate a fairlead, which fairlead shall not count towards the number of fairleads next-mentioned); (ii) a maximum of two fairleads or single blocks. The cleat may be fitted in any position. No gearing of the spinnaker halyard is permitted.	
One open fairlead may be fitted one each side of the boat to fairlead the spinnaker guys. It shall not project beyond the gunwale.	
Lifting handles are optional, but if fitted, four handles made of suitable material shall conform to the dimensions shown on Measurement Plan No.3 and shall be strongly fitted so that the centres of the aft pair of handles are 640mm ±50 mm from Datum Plane "A" and the centres of the forward pair of handles are 2370mm ±50 mm from Datum Plane "A"	
Maximum of two self-bailers	
It is permissible to have one or two open compartments or bags (for spinnaker or other loose gear), provided that they extend aft no more than 400mm from the forward bulkhead. The compartments or bags may be partly covered by flexible material which may be supported by shockcord. The bags may contain pockets and be supported by shockcord.	
Stowage clips, nets, ropes, bags and shockcord (and their fastenings) for paddle(s), spinnaker pole, sail bags and other loose equipment are permitted	
Drain hole fittings of internal dimensions 20 mm (± 5 mm) may be provided in each buoyancy compartment.	
One compass and mounting bracket only may be fitted (alternatively on mast)	
Mainsail Cunningham block, fairlead and cleat may be fitted (alternatively on mast)	
Such blocks cleats and fairleads as necessary for the operation of a spinnaker pole uphaul / downhaul system (alternatively on mast)	
A block, fairlead and cleat for the jib Cunningham may be fitted on the foredeck (alternatively on headsail)	
Blocks, fairleads and cleat for kicking strap system (alternatively as part of purchase system)	
Mechanical advantage of kicking strap system ≤ 6:1	
Shock cord may be fitted at or near the transom so as to prevent the mainsheet from catching on the corners of the transom	
Shock cord may be fitted to support the toe straps	
Such fastenings and ropes as may be appropriate in order to attach permitted fittings or equipment	
Are there any additional fittings?	

MEASURERS' REMARKS (if necessary continue on a separate sheet):

The Measurer has carried out and recorded the above measurements to the best of his ability, but makes no representations and gives no warranties as to their accuracy and is not to be held responsible for any inaccuracies. Responsibility for ensuring that the boat complies with the Class Rules lies wholly and

amongst other things, it has been issued following an error, omission or mistake in the measurement process.

I certify that I have made the above outside hull, deck level and fittings measurements to the best of my ability and that they are within tolerances allowed, but I make no representations and give no warranties as to their accuracy and I am not to be held responsible for any inaccuracies.

Measurer's Name.....Signature:.....Date:.....

Status:.....

Address:.....

PLEASE USE BLOCK CAPITALS

BUILDER'S DECLARATION

On behalf of my Company, I hereby certify that this International Cadet, Hull Number..... has been built in accordance with the agreed specification, using the Mould No.....licensed by the ICCA.

Name.....Signature.....Date.....

Builder's Name.....

Builder's Address.....

Date of Completion.....

The original Production Specification / Measurement Form when completed should be forwarded by the Measurer to the MNA / National Association as appropriate. The Measurer must retain a copy for his own records and provide a copy to the builder or owner. The builder or owner may then apply to the MNA / National Association as appropriate with the current fee for the issue of a hull measurement certificate using the form on the next page.

International Cadet Class

REGISTRATION FORM

PLEASE USE BLOCK CAPITALS

1. Sail/ISAF Plaque Number.....
2. Boat name (if known).....
3. Builder.....
4. Measurer.....
5. Applicant's Name.....
6. Applicant's Address.....
.....
7. Club or Squadron (if known).....

I apply for a hull measurement certificate for the above boat and enclose the appropriate fee.

Signed.....

Dated.....

RESERVATION

The International Cadet Class reserves the right to refuse a Certificate of Measurement and to withdraw or cancel a Certificate already granted even in the case of a boat or boats which, although complying with the letter of the rules, if it has by reason of the exploitation of an error, omission or mistake in the rules, measurement plans or forms, in the opinion of the National or International Committee obtained a material superiority in competitive performance.