

## **INTERNATIONAL 14 CLASS MEASUREMENT RULES**

*These are the class rules which applied immediately after amalgamation of the International, Australian and New Zealand 14's*

The Name of the Class shall be The International I4 Class

The International Fourteen is a development class sailing dinghy.

Under the authority of the International Fourteen World Association, the Measurement Rules presented in this booklet constitute the sole reference, except where noted, for the measurement of boats in this class.

The IYRU Sail Measurement Instructions shall not apply.

A boat includes its hull, spars, sails and fittings.

The units of measurement shall be metric.

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## **HULL and CENTREBOARD**

Unless specifically required otherwise hereunder, all measurements shall be taken parallel to one of the three major axis of the hull - vertical, horizontal or transverse - related to the waterline and fore and aft centre line of the hull.

### **Rule 1 Length of hull and fittings**

The overall length of the hull shall not exceed 4267mm including stem band but excluding all the rudder fittings, transom flaps, drain plugs and stem fittings. Stem fittings shall not project more than 25 mm beyond the surface of the hull. No fittings or equipment which have the effect of elongating the skin of the boat beyond a length of 4267mm is permitted.

A bowsprit and a device to support such bowsprit are allowed. Neither shall extend more than 900mm forward of the hull. The bowsprit shall be able to pass through a ring of internal diameter 140mm. Any device to support the bowsprit shall not exceed cross sectional dimensions of 13mm transverse by 76mm horizontal. Neither shall extend more than 457mm below the sheerline or its extension. A line extended from the jib luff shall not cross a line extended from the sheerline more than 300mm in front of the stem.

### **Rule 2 Beam**

The width of the hull including fittings and gunwale assembly, at its widest points shall not be in excess of 1830mm. Foot loops, which are not capable of supporting the crew outboard the hull or gunwale assembly, are not part of the hull and shall not be included for the purpose of measuring the maximum beam measurement or for the purposes of Rule 5 (See also Rule 20)

### **Rule 3 Shape and Depth of section 2134mm aft of bow**

At this section:

- (a) The outside of the skin shall not be higher than 203mm above the outside of the keel at a beam of 1118mm.
- (b) The top edge of the hull or gunwale assembly shall not be less than 508mm above the lowest part of the hull.

For the purposes of this Rule, any hollow in the keel or keel band shall be bridged by a straight line from which the measurements shall be taken.

At these measurement points the hull shall pass the following test:

A pan-shaped instrument consisting of a flat disc of 305mm diameter with a vertical lip of 13mm depth internally shall, when placed on the hull, touch at two or more points on the lip and nowhere on the disc. This restriction shall not apply to boats first registered before 1 January 1991.

#### **Rule 4 Sheer**

The sheerline, defined as being the top outside edge of the hull including the deck and gunwale in profile from the side, shall be straight or a fair continuous concave curve.

#### **Rule 5 Flare and Tumblehome**

A taut tape on the outside of the hull containing the vertical transverse section of the hull below the rise of floor measurement point defined in Rule 3(b) shall nowhere exceed 19mm from the outside surface of the hull.

#### **Rule 6 Blank**

#### **Rule 7 Course Configuration**

All races specified in the Sailing Instructions of any National, Continental or World Championships shall be designed to include spinnaker reaching legs.

#### **Rule 8 Anchor**

An anchor and chain or rope need not be carried

#### **Rule 9 Weight**

The hull in dry condition and with no free water in any part shall weigh not less than 81.6kgs. From the 1st January 1999, the minimum weight shall be 74.25kg. The hull shall include essential fittings (as defined below), buoyancy apparatus (whether moveable or fixed), spinnaker boom and controls directly connected for the purposes of launching or retraction of the spinnaker boom, and correctors, but exclude the mast, boom, rudder, centreboard, lines, sails and all other gear.

Essential fittings are defined as:

- any fittings that are permanently bolted, glued or screwed to the hull.
- any fittings attached to the hull, that are included in another hull measurement rule. Such fittings include, but are not limited to, footloops, non-skid materials and materials covering the foredeck area attached to, and between the gunwales.

- all components of an assembly that is used to support the mast at a point no higher than the top of the lower band defined in Rule 15(c)(i)

If the hull is found to be underweight, lead correctors shall be added. No other inside ballast shall be carried. Neither any essential fixed fittings nor any correctors shall be removed or altered without the boat being re-weighed by an Official Measurer, and the revised weight being recorded on the Measurement Certificate. The weight of any correctors shall be stated on the Measurement Certificate.

### **Rule 10 Centreboard**

Only one centreboard shall be carried.

## **BUOYANCY**

### **Rule 11 Buoyancy Apparatus**

The buoyancy apparatus of the boat shall be constructed so that it meets:

- the requirements of Rule 12 and

- the following requirements:

(i) Boats constructed of buoyant materials shall have at least one independent watertight unit securely attached to or integral with the hull of minimum volume 0.085 m<sup>3</sup>.

(ii) Boats constructed of non-buoyant materials shall have three independent watertight units containing not less than 0.085 m<sup>3</sup> minimum of closed cell rigid foam plastic or air bags of robust construction. Either shall be capable of being removed for inspection.

(iii) Covers, valves etc., shall be enclosed in a manner that prevents accidental dislodgement whether the boat is afloat, capsized or swamped.

### **Rule 12 Buoyancy Test**

With sails, boom, rudder, tiller and all loose gear removed from the boat, but with the centreboard and mast in position, the boat shall pass the following buoyancy test:

(a) With the boat on its side and the mast horizontal, it shall support not less than 136kgs placed entirely out of the water and not within either 1524mm of the bow or 610mm of the stern. The boat shall float for 10 minutes on each side, followed by 10 minutes upright. At the end of this test and with the specified weight aboard, the boat

must float with the top edge of the hull (sheerline or gunwales) not less than 127mm above the water for its entire length.

(b) With the boat out of the water, the Measurer shall check that all the buoyancy units contain not more than 13.6kgs of water. No air bags shall be visibly deflated.

(c) Each buoyancy test is valid for twelve months. For the Measurement Certificate to remain in force, the boat must be re-tested in accordance with the procedure of Rule 12(a) and (b) and re-certified by an authorised person (i.e. Class or Club Official) within each twelve months.

(d) Any alteration of the buoyancy apparatus immediately invalidates the Measurement Certificate until the boat is re-tested and certified according to this Rule by an Official Measurer.

(e) The initial test and the first test after any alteration to the buoyancy apparatus must comply with Rule 12, paragraphs (a) to (d) inclusive. Subsequent re-tests may be carried out by a dry testing method approved by the National Authority. Boats sailing outside their National Authority's jurisdiction or taking part in International Team Racing Events, must be re-tested in accordance with Rule 12, paragraphs (a) to (d) inclusive.

## **SAILS, SAIL AREA, SPARS and RIGGING**

### **Rule 13 Sail Plan**

(a) (i) The sail plan shall not exceed 7626mm above the top edge of the hull and gunwale assembly in way of the mast. The mast shall be painted with a distinctively coloured band with its upper edge level with the top edge of the hull and gunwale assembly in way of the mast and no part of this band may protrude above this level. This band is the gunwale band.

(ii) Where the mast is stepped on or above the gunwale line the 7626mm measurement shall be taken from the gunwale line in way of the mast. If a mast jack is used in such cases, the measurement shall be taken with this fully extended.

The spinnaker boom need not be attached to or be fixed to the mast when in use.

(b) The extension of the top of the spinnaker halyard when held taut at right angles to the mast shall intersect the mast not more than 7626mm above the top edge of the gunwale band. If the spinnaker halyard is led through an eye or block, no part of such eye or block shall project more than 76mm from the mast.

(c) Spare.

(d) All sails shall be capable of being lowered or furled when the boat is underway.

(e) (i) The foremost end of the spinnaker boom, including end fitting(s), shall not extend more than 2743mm beyond the foremost vertical extension or transverse extension of the bow. The measurement of 2743mm shall be taken at right angles to the extension of the centreline of the hull. The spinnaker boom shall not be used as a bowsprit for headsails or when sailing close hauled.

Any spinnaker boom when in use and below a horizontal projection from the lower mainsail black band, shall have a minimum end diameter of 50 mm and shall be shaped or capped to avoid a sharp edge.

(ii) In its retracted position, the spinnaker pole shall not extend more than 900mm in front of the foremost vertical or transverse extension of the bow. The spinnaker pole shall be in its retracted position whenever the spinnaker is not in use.

The spinnaker boom need not be attached to or fixed to the mast when in use.

(f) A spinnaker once hoisted in a race shall be the only spinnaker to be used for the remainder of that race. (See also Rule 14(d)(ii))

#### **Rule 14 Sail Area**

(a) The area of the headsail shall be taken as  $0.5 \times L \times LP$  where L and LP are defined in Rule 15(b)(i) and 15(b)(ii). The area shall be rounded off to the nearest 0.01m<sup>2</sup> and inscribed near the clew on the port side of the sail in numbers not less than 76mm high and line width 6mm in a contrasting colour indelible ink.

(b) The mainsail area shall be taken as  $0.25A (G1 + G2 + G3 + 0.5B)$  where A and B are as defined in Rule 15(c)(i) and Rule 15(c)(ii) and G1, G2 and G3 are the mainsail girths defined in Rule 15(c)(v). This area shall be rounded off to the nearest 0.01m<sup>2</sup> and shall be stated on the Measurement Certificate and inscribed near the clew on the port side of the sail. Above this figure shall also be inscribed the maximum area of the headsail permitted with this mainsail (i.e. 18.58 less the measured mainsail area). Both these numbers to be not less than 76mm high and line width 6mm in a contrasting colour indelible ink.

(c) Different combinations of mainsail and headsail areas are permitted provided the total measured area in use at any one time does not exceed 18.58 m<sup>2</sup>.

(d) (i) Not more than two spinnakers shall be added to a boats Measurement Certificate in any 12 month period. All spinnakers shall be numbered chronologically, dated and signed by a Measurer on the port clew in a contrasting indelible ink, and entered on the Measurement Certificate.

(ii) Only one spinnaker shall be used for any series of races, as defined by the relevant Sailing Instructions. Spinnakers lost or damaged beyond repair during a series may be replaced by application to the Race Organising Committee, who have discretion to agree or refuse.

## **Rule 15 Sail Measurement**

### **(a) Method**

(i) Measurements are taken with the sail smoothed out on a flat surface and with just sufficient tension to remove wrinkles across the line of the dimension being taken. All measurements are to be taken over the full width including tabling and roping with the battens in position.

(ii) The head of the mainsail is defined as the point on the Luff, or its extension, level with the highest point of the sail projected perpendicular to the Luff or its extension.

(iii) The clew of the mainsail is defined as the aftermost part of the sail projected to the foot or its extension, including foot rope, if any.

(iv) Each sail is to be measured, and if satisfied, the Measurer shall date and sign the clew on the port side of the sail and mark the area of the sail in accordance with Rule 14(a) for the headsail, Rule 14(b) for the mainsail and Rule 14(d) for the spinnaker.

(v) All reinforcement shall be capable of being folded in any direction, measuring no more than 13mm across the fold inward from the folded edge. Any finishing material or coating applied to the sail material shall not prevent the reinforcement being folded. This rule shall not apply to headboards, clewboards, or any other fittings attached to the sail with a maximum dimension of less than 102mm .

### **(b) Headsail**

(i) The Luff length  $L$  shall be measured from the bottom edge of the sail at the tack to the top edge of the sail at the tack to the top edge of the sail at the head. The measurement  $L$  shall not be exceeded whilst racing.

Either the headsail shall have a check wire of minimum diameter 1.25mm attached to the head and tack of the sail whilst racing, to ensure that measurement  $L$  is not exceeded at any time, and the distance between the tack and head attachment points shall not exceed measurement  $L$ ; or if the headsail is presented for measurement without a check wire fixed at the head and tack, then  $L$  shall be measured with a tension of 5kg. applied to the Luff, and the measurement  $L$  shall be marked within 150mm of the tack on the port side in letters of minimum dimension 25mm high.

(ii) The length LP shall be measured from the outside edge of the clew to the nearest point of the Luff. The clew is defined as the intersection of the foot and the leech, extended as necessary.

(iii) Headboards are not permitted. Clewboards having a maximum dimension of 229mm are permitted. Clew boards are defined as being incapable of being folded by hand.

(iv) The Leech of the headsail must be a straight line or a concave curve.

(c) Mainsail

(i) The dimension A is to be measured between the upper edge of a lower band painted on the mast and the lower edge of an upper band painted on the mast. The upper edge of the lower band is to mark the lowest position where the line of the top of the boom when at right angles to the mast cuts the mast. No part of the headboard of the sail shall exceed in height the lower edge of the upper band.

(ii) The dimension B is to be measured from the inner edge of a band painted at the outer end of the boom, along the top of the boom, to the after side of the mast and track excluding any local curvature. No part of the sail shall extend beyond the inner edge of this band.

(iii) The measurements A and B are to be stated on the Measurement Certificate.

(iv) The headboard of the mainsail shall not exceed 102mm in width, measured at right angles to the mast.

(v) The girth measurements G1, G2 and G3, indexed from the head, shall be taken from their respective points on the Leech to the nearest point on the Luff of the sail including the bolt rope. The half height on the Leech shall be determined by folding the head to the clew and the quarter and three quarter height Leech points by folding the clew and the head respectively to the half height point on the Leech. If there are any hollows in the Leech of the sail, these shall be bridged by straight lines and the girth measurements taken from these straight lines.

**Rule 16      Boom**

The boom, excluding fittings, shall be capable of being passed through a circle of 102mm diameter. The total accumulated length along the boom of any part of all attachment surfaces which fall outside the 102mm diameter circle, shall not exceed 152mm.

**Rule 17      Distinguishing Marks**



(a) On each side of the mainsail shall be the insignia 14 and beneath this the national letter and the class number of the boat as stated on the Measurement Certificate, thus:

14

GBR 1355

The figures shall be not less than 300mm in height and shall be disposed in accordance with IYRR 25.

(b) Each boat shall bear a permanent distinguishing mark on the transom, hog piece or thwart in figures not less than 19mm high, which shall be either

(i) The complete class number, e.g. GBR 1355, or

(ii) The manufacturer's code, in which case this code shall appear on the boat's Measurement Certificate.

#### **Rule 18 Prohibitions.**

The following are prohibited:

- (a) Mast or boom designed or built with a permanent bend.
- (b) Rotating masts.
- (c) Bumpkin.
- (d) Double luffed sails.

#### **Rule 19 Crew**

Shall be two, including the helmsman. If a member of the crew during the course of a race leaves the boat voluntarily, he shall be deemed to have been lost overboard within the meaning of IYRR 57.

#### **Rule 20 Equipment for Crew**

- (a) Both members of the crew shall be in contact with the hull, fittings or gunwhale assembly. Either, or both, may use a trapeze, individually or simultaneously.
- (b) The trapeze belts when wet, must float and shall not weigh more than 5kg. each.
- (c) A competitor shall not wear or carry clothing or equipment for the purpose of increasing his / her weight. The total weight of clothing or equipment worn or carried by a competitor shall not exceed 15kg. when weighed as provided in Appendix 10 of the Racing Rules.

## **Rule 21      Certificate**

- (a) The Measurement Certificate and Form shall be approved by the World Association.
- (b) No boat shall be allowed to race in the Class unless it has a valid Measurement Certificate. Application for measurement and registration shall be the responsibility of the Owner who shall apply to his National Authority for a Sail Number and Measurement Form.
- (c) The Owner shall arrange for the attendance of an Official Measurer who shall complete the Measurement Form and Measurement Certificate, and, if satisfied, shall certify thereon that the boat complies with the Class Rules.
- (d) The Measurement Form and Measurement Certificate, when complete shall be returned by the Owner to his National Authority together with any registration fee required by the National Authority. The National Authority shall then endorse the Measurement Certificate.
- (e) Change of ownership invalidates the Measurement Certificate, but re-registration may be effected by the new owner in accordance with procedures laid down by the National Authority.
- (f) A Measurement Certificate issued or endorsed by the National Authority shall remain valid so long as the boat continues to comply with these Rules, and the details shown on the Measurement Certificate and providing that there is a current buoyancy endorsement. (See Rule 12(c)).
- (g) The Owner of the boat is responsible for ensuring that the Measurement Certificate is not rendered invalid from any cause.
- (h) If any details on the Measurement Form or Measurement Certificate are altered the owner shall arrange for an Official Measurer to re-measure the altered items. The Measurer shall, if satisfied, complete the relevant section of a Measurement Form or Measurement Certificate and the Owner shall process this as laid down by the National Authority.
- (i) These Rules are effective from the 1st January 1996 and shall apply to all boats first measured on or after that date. Boats whose rigs and sails were measured in accordance with the Rules effective from 1st March 1976 to 28th February 1982 may continue to use those rigs and sails, but must conform with the 1st January 1989 Rules if any alteration to their rig is made or any additional sails used.

A boat first measured before 1st March 1976 shall comply with the Rules in force at the time she was first measured. Any alterations, replacements or repairs shall at the Owner's option, comply with either the Rules in force at the time she was first

measured or with these Rules. However, if any alteration is made in accordance with these Rules to the sail plan or to the spars, all the sails and spars shall be measured in accordance with these Rules and a new Measurement Certificate shall be issued.