



IF RACING ASSOCIATION
CLASS-RULES

IF-BOAT CLASS
1974



1. OBJECT OF THE CLASS RULES

This is a one-design class. The rules and the official plans are intended to ensure that the boats of this class are as nearly alike as possible with respect to shape and weight of hull and decking, weight of ballast keel, shape of rudder, shape and area of sail plan and some other details which effect the performance of the boat. All boats shall be made in accordance with the plans from Tord Sundén with the exception of mast, boom, spinnaker pole, standing and running rigging, tiller extension, lifting eyes, cleats and jibroller, etc. These items and their fittings must not comply with the official plans but shall, in some cases, be controlled in another way by the following rules:

2. PROTECTION OF ONE-DESIGN

- a) The administrative authority for the class is the IF RACING ASSOCIATION (IFRA).
- b) Construction of the boat shall be of glass fibre reinforced plastics (GRP) and must be in accordance with the valid plans and their direction.
- c) Production moulds for hull, ballast keel, deck and rudder shall be made from GRP plugs obtained from an official GRP master mould. The shape and form of the patterns, plugs and moulds shall in no case be altered. The primary control exists by means of a single uniform source of plugs and moulds.
- d) Construction shall be checked by measurement in accordance with the official plans. Tolerances are given to allow minor building faults and distortion through age, but intentional variations within these tolerances shall be prohibited. The measurer, however, may take additional measurements on hull, keel and rudder in accordance with measurements provided by the IFRA.
- e) If it is considered that there has been any attempt to depart from the design or these rules in any particulars, it shall be reported to the national authority, which shall withhold the certificate, pending an examination of the case.
- f) Builders shall be licensed by Marieholms Bruk, Sweden, and shall only procure GRP plugs and/or production moulds through this source. The GRP construction and lining shall be in accordance with drawing No. 1460.

3. HULL AND DECKING.

- a) The hull and the deck shall be in accordance with the official construction plans and specifications.
- b) Hull tolerances.

LOA	± 10 mm
CWL	± 10 mm
Beam sections 1 - 16	1 %
Freeboard	1 %
Draught	1 %
Radius more than 25 mm	± 2 mm
Radius less than 25 mm	± 1 mm

4. KEEL.

The ballast keel shall be of cast iron and embed in the hull. The weight shall be 1250 kg ± 10 kg.

5. RUDDER.

The rudder shall be made, in accordance with the official design, of GRP with fillin-piece. The radius of the aft-edge shall nowhere be less than 5 mm. Tiller extension is optional.

6 MAST.

- a) The mast shall be stepped on deck and on the centerline. Distance from forward-side of mast to stembar is to be 2945 mm ± 10 mm and 285 mm before No. 10, measured from the peak of the standard head fitting. The extension of the luff shall meet the deck 2525 mm in front of the forward-side of the mast. See drwg. No. 1324.
- b) The mast shall be of aluminium with a permanent groove for the main sail's luff-rope. The groove shall be integral with the spar section. Sectional dimensions shall be min. 75 mm and max. 92 mm atwarthships and min. 120 and max. 127 mm fore-and-aft. The sectional weight shall not be less than 2.2 kg/m. The weight of the mast including all normally fixed fittings, but excluding all standing and running rigging shall not be less than 23 kg, and its centre of gravity shall not be less than 3500 mm above the upper edge of the lower black

band. Permanently bent masts and rotating masts are prohibited. A set, due to distortion, of up to 25 mm between upper and lower black bands shall be allowed. Titanium masts are prohibited. The cross-section of the mast shall be the same over the whole length of the mast.

Other mast profiles than round, oval or pear-shaped are prohibited.

Black bands shall be on the mast as follows:

(i) with upper edge $700 \text{ mm} \pm 5 \text{ mm}$ above the deck.

(ii) with its lower edge not more than 7160 mm above the upper edge of (i).

(iii) with its lower edge not more than 8750 mm above the upper edge of (i).

The black bands shall be 20 mm wide and clearly visible.

c) The standing rigging shall be steel wire construction and consist of the following: Two main shrouds of not less than 5 mm dia. attached (or its extension shall meet the mast) at $7175 \text{ mm} \pm 50 \text{ mm}$ above the lower black band. Two lower shrouds of not less than 4 mm dia. attached (or its extension shall meet the mast) $3088 \text{ mm} \pm 50 \text{ mm}$ above the lower black band. One permanent forestay of not less than 4 mm dia. The forestay or its extension shall meet the mast below the black bands lower edge, as prescribed in the rules 6 b (ii). The spreaders shall be of swing type with a length of $760 \text{ mm} \pm 5 \text{ mm}$ from the mast. The location of the spreaders on the mast shall be $3150 \text{ mm} \pm 25 \text{ mm}$ over the lower black band (i).

d) One adjustable standing backstay of not less than 3 mm dia. attached to the mast head.

e) The bearing point of the eye or sheave which supports the spinnaker halyard shall not be more than 450 mm from the lower edge of the black band as prescribed in rule 6 b (ii), and the fitting itself may not extend more than 50 mm on the forward-side of the mast.

f) Lead-through of standing and running rigging through deck and hull may only be done for jibroller, genoa cunningham and for the backstay.

7. MAIN BOOM.

a) The main boom shall be of aluminium with a fixed groove for the mainsail's foot rope. Sectional dimensions shall be $60 \text{ mm} \pm 5 \text{ mm}$ in width and $80 \text{ mm} \pm 5 \text{ mm}$ in height. The sectional weight shall not be less than 1.3 kg/m. Tapered or permanently bent booms are prohibited. A set, due to distortion, of up to 15 mm between the black band and the mast shall be allowed. Titanium booms are prohibited.

b) A black band shall be on the boom with its inner edge not more than 3400 mm from the aft side of the mast, excluding any local curvature.

8. SPINNAKER POLE

The maximum length shall be 2525 mm measured in the position of the greatest extension from the mast to the inner edge of the eye of the tack eye.

9. SAILS

The sails shall be constructed in accordance with the official construction plans and be measured and stamped by authorized measurer.

a) Only one main sail, two fore sails, one spinnaker shall be carried on board when racing. A maximum of two sets of sails may be presented for measurement at an International event and no other sails shall be used in the event, except by express permission of the Race Committee.

b) Sails shall be of a woven material, except that two areas (windows) unwoven transparent are permitted in each sail. These shall not exceed 0.65 m^2 each, and shall not be less than 150 mm from any edge of the sail. The weight of the material shall be 250 g/m^2 minimum for the main sail, 240 g/m^2 minimum for the jib, 190 g/m^2 minimum for the genoa-jib and 35 g/m^2 minimum for the spinnaker.

c) Sizes of numbers and letters:

Min. height of letters and figures: 380 mm.

Min. width occupied by each figure except the figure 1, shall be 225 mm.

Min. width of any part of each figure or letter: 55 mm.

Min. space between adjoining figures: 80 mm.

The class insignia with dimensions, as shown on sailplan No. 1328-3, shall appear on both sides of the main sail. The registration No. shall appear below the insignia together with the national letter. The position of the insignias with one another according to drwg. 1328-3.

d) Main sail.

The main sail shall not extend beyond the inner edges of the black bands as prescribed in rule 6 b (i) and (iii) and rule 7 b. Reefing eyelets are optional. Only four battens are allowed, the lower and the top battens 750 mm max. in length, the intermediate battens 1000 mm max. in length. The width of the battens max. 50 mm. The battens shall divide the leach into five approximately equal parts. The headboard shall not exceed 120 mm excluding luff rope, measured at right angles to the luff. The total width of the main sail, excluding luff rope, at half height of luff and at three-quarter height shall not exceed 2000 mm and 1100 mm respectively. Measurements according to drwg. No. 1328-3 January 9, 1974.

e) Genoa-jib.

The maximum measurement of the genoa-jib shall be as shown on sail plan No. 1328-3 dated January 9, 1974.

Max. length of luff: 7800 mm

Min. length of luff: 7700 mm

Max. length of foot: 3900 mm

Min. length of foot: 3800 mm

Length of leach is optimal.

Skirt on the foot is allowed.

Convex leach curvature is prohibited.

f) Jib.

The jib shall be in accordance with drwg. No. 1328-3 dated January 9, 1974.

Max. length of luff: 7800 mm.

Max. length of foot: 2820 mm.

Max. length of leach: 7150 mm.

Skirt on the foot is allowed.

The measure at half height of luff and leach shall be maximum 1550 mm. Smaller jibs than the standard jib are allowed.

g) Jibs with luffs made of rope shall have a steel wire of not less than 2 mm dia. in this luff, confining its length to max. 7800 mm.

h) Spinnaker.

The spinnaker shall be symmetrical about its vertical centre line and shall not embody any device capable of altering its shape. The length of the luff and leach shall be max. 8270 mm, when pulled out straight under a tension of approximately 3 kg. (29.5 N). The width of half the foot, when folded tack to clew, with sufficient tension to remove all adjacent creases shall be 2273 mm. The half width measures between points on the luff, leach and centre fold at a distance equal to 50 % of the actual luff length from the clew shall be 2270 mm. Measurements shall be done in accordance with drwg. No. 1328-3 dated January 9, 1974 and No. 1653 dated April 4, 1973. Spinnaker shall carry sail number.

10. WEIGHT

The weight of the boat in racing condition including accommodation, fixed fittings, excluding sails, cordage and non-fixed fittings shall be minimum 2150 kg. Correction weights, if any, shall be permanently fastened to the underside of the deck with, as far as possible, approximately 2/3 of the total weight forward and 1/3 aft of the cabin bulkhead. The boat shall be afloat on a line parallel with the construction water line. The engine well is optional. If the motor engine well is missing a compensator weight representing the engine well and its reinforcements, 3,5 kg, shall be screwed to the floor board at the place where the center of the engine well should be. The center of the engine well is 200 mm from the center line on the port side and 700 mm ahead of the center line of the stern on top of the deck

Minimum standard accommodation as follows:

4 fixed berths. Length each at least 1800 mm. Max. width min. 600 mm.

1 pantry, not less than 575 mm in length.

1 wardrobe, not less than 350 mm in length.

1 stove, with one or two flames, of normal size.

1 box for reckoning, about 250 x 300 mm.

4 mattresses to suit the berths of optimal material.

4 lockers, at least 500 mm in length and, at least, 200 mm in height.

material of the accommodation: Waterproof marine plywood or fibreboard.

Thickness of material minimum 6 mm.

11. MISCELLANEOUS.

- a) Standard equipment or accommodation may not be removed. It is allowed to change the accommodation. Standard accommodation means that all wardrobes, bulkheads, floors, benches, lids, doors, mattresses etc. are included.
- b) The position of the mast on the deck-house shall not be removed fore-and-aft.
- c) In addition to the permanent equipment and accommodation the following has to be on board when racing:
- 1 anchor, suitable for a boat of 2.3 t displacement. Min. weight 7.5 kg.
 - 1 paddle, length abt. 1200 mm.
 - 2 mooring ropes each not less than 10 m in length.
 - 1 anchor rope at least 30 m in length and of sufficient strength for a boat of 2.2 t displacement.
 - 3 buoyancy vests or life jackets.
 - 1 hand pump, hand bailer or bucket.
- d) Extra inside ballast, or ballast carried by the crew, is prohibited.
- e) When racing the crew shall consist of max. 3 persons.
- f) Running backstays are prohibited.
- g) 2 magnetic compasses, radio receiver, spy-glass, clock, non-electronic wind direction indicator are allowed.
- h) All instruments, electronic as well as non-electronic, except the ones mentioned in 11 g, are prohibited when racing. If there are such instruments on board they must be put out of function.
- k) No trapez or similar contrivance to support the crew outboard shall be permitted, except for hiking straps which may be arranged inside the cockpit only and may not extend outside the cockpit. Handrails on deck are allowed.
- l) Roller reefing gear is prohibited.

12. REGISTRATION NUMBERS

The registration numbers shall be obtained from the builder in consultation with the IFRA.

13. CERTIFICATE

The owner shall be obliged to make himself sure that the one design principle has not been violated and to do nothing during the course of his ownership that might cause a violation of these principles. No boat shall be entitled to race as a bona fide (IF-Boat) unless the owner holds a valid certificate with statement showing all the directed control-measurements have been carried out by an approved official measurer. This certificate can be obtained in the following way:

- a) In the case of a new boat and in the case of a substantial repairing or reconstruction that will necessitate a re-measurement, this must be done by an official measurer appointed by national authority, who shall certify that it is in accordance with the official drawings.
- b) All boats with certificate shall be liable to re-measurement at any time at the discretion of the national authority or race committee. If a builder is found to have signed a measurement certificate for a boat that does not measure correctly, he will be liable to rectify the error. In the event of a re-measurement this shall be in accordance with the rules in force at the time of issue of the original certificate, except regarding sails, these having to be re-measured in accordance with the current rule.

14. TRANSLATION OF RULES.

In case of dispute arising from the translation of these rules into other languages, the Swedish text shall prevail.

15. For participation in racing with the (IF-Boat) Class these rules will be valid. Divergence within these rules may be allowed by national authorities for national races.

Part of current official drawings:

Drwg. No.	Description	Dated
1223 A	Lay-out plan	June 15 1966
1231	Rudder	Sept. 3 1966
1324	Fore triangle, base measurem.	Aug. 20 1968
1423	Rigging plan	Dec. 5 1969
1460	GRP lining reinforcements	Nov. 1 1970
1653	Measure instr. sails	April 1973
1328-3	Sail plan	Jan. 9 1974

Rules accepted: 1st of January 1970

Rules revised: 9th of November 1970

Rules revised: 15th of March 1974

Rules accepted by:

DANISH IF-BOAT CLUB

FINNISH IF-RACING ASSOCIATION

NORWEGEN IF-BOAT CLUB

SWEDISH IF RACING ASSOCIATION

Manufacturer:

MARIEHOLMS BRUK AB

330 33 HILLERSTORP

SWEDEN

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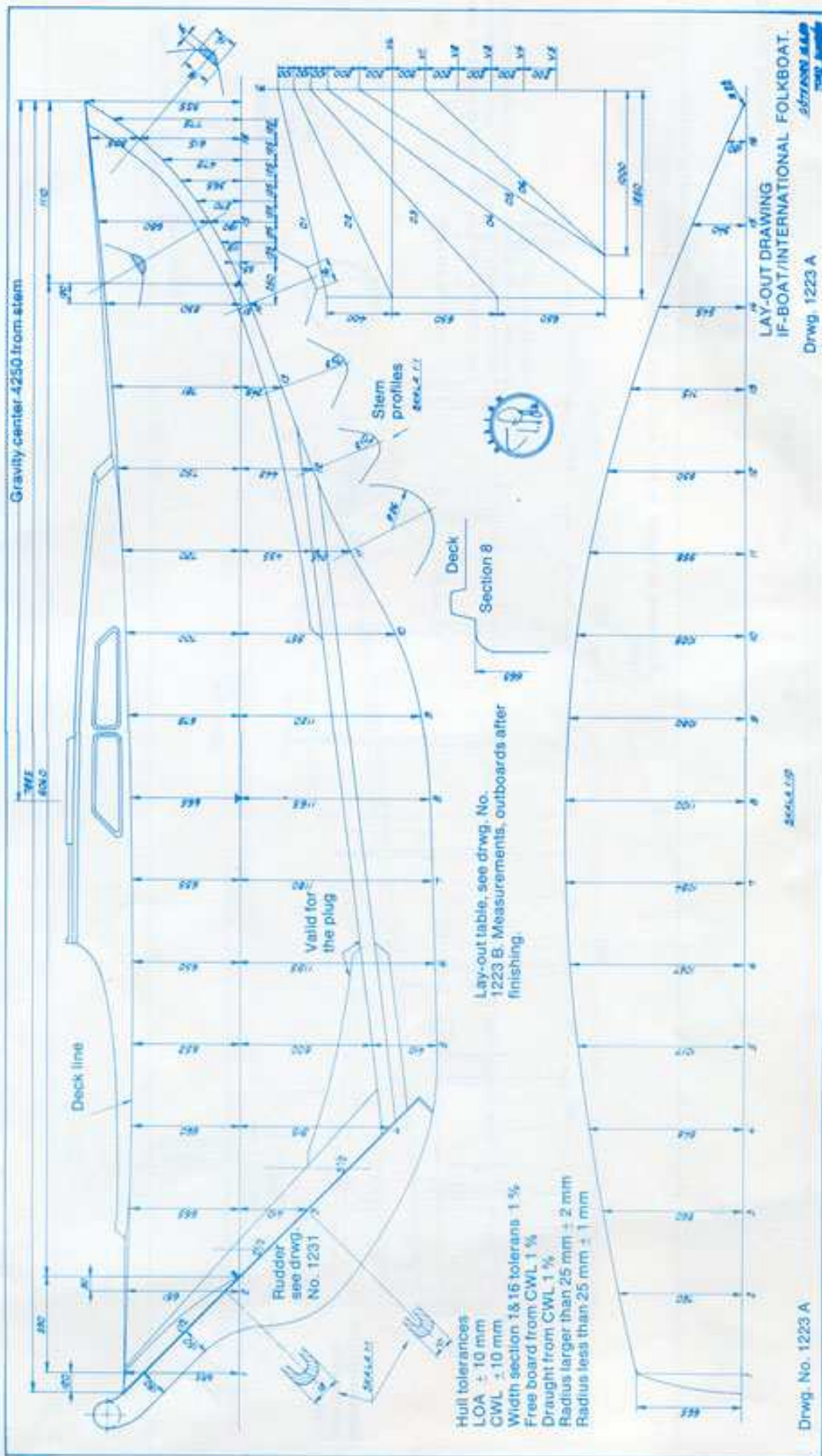
Over all length	7.865	m
Water line length	6.04	m
Max. width	2.20	m
Draught	1.21	m
Lowest free board	0.65	m
Displacement	2.15	t
Ballast keel	58	%

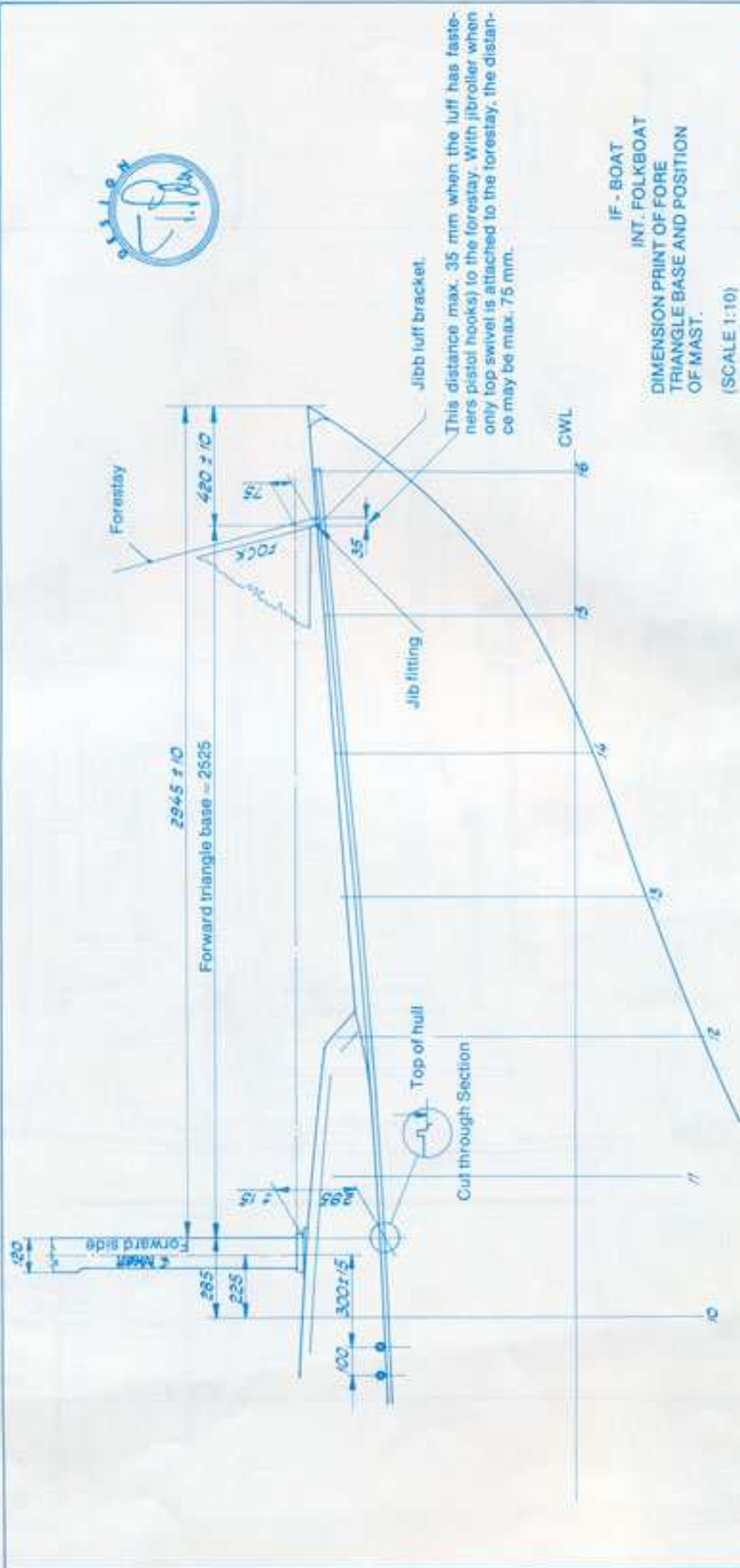
Sails		
Main sail	16	m ²
Genoa	15	m ²
Jib	10	m ²
Spinnaker	40	m ²



IF-BOAT/INI FOLK BOAT

Fred Pearson





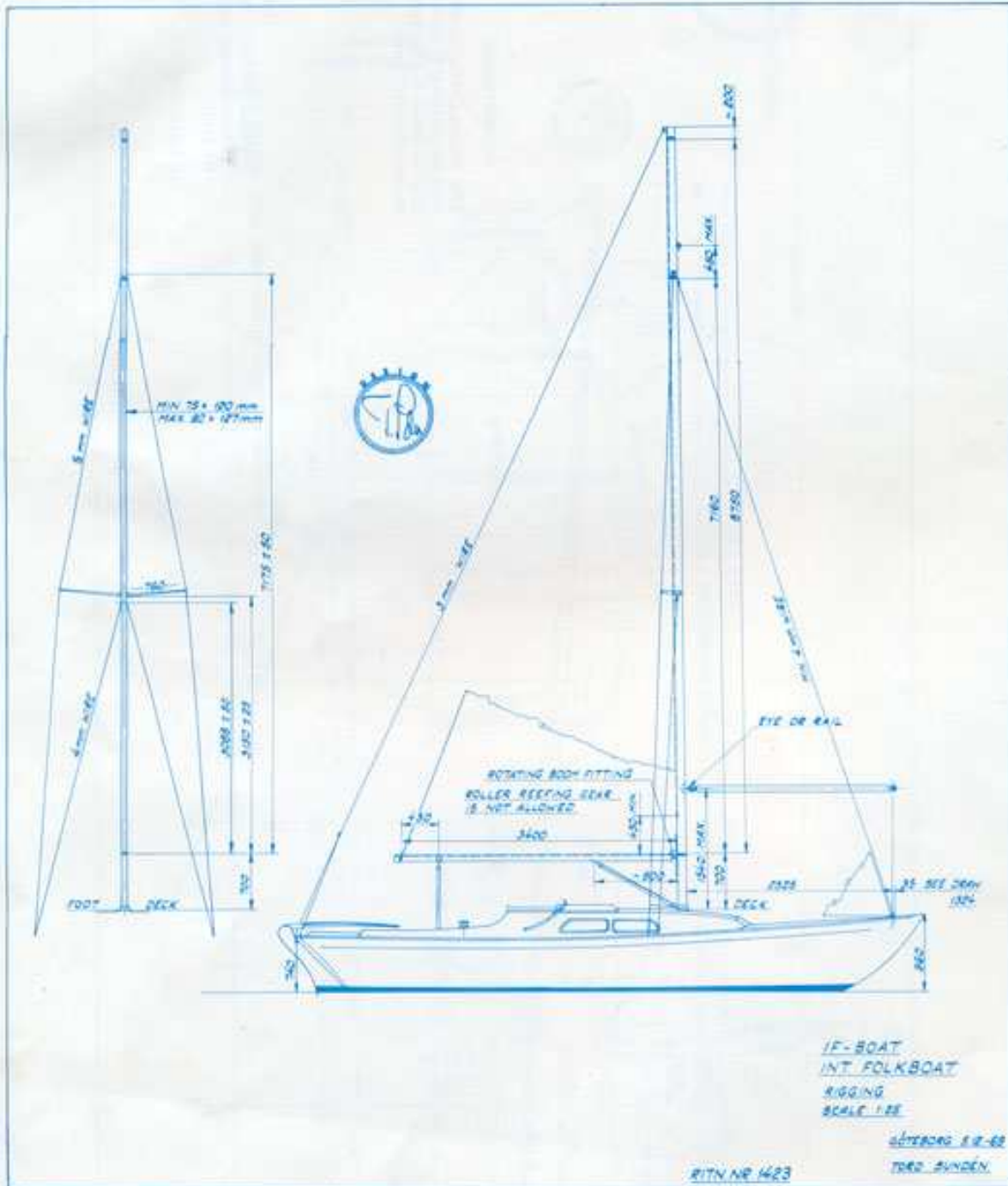
This distance max. 35 mm when the luff has fasteners pistol hooks) to the forestay. With jibroller when only top swivel is attached to the forestay, the distance may be max. 75 mm.

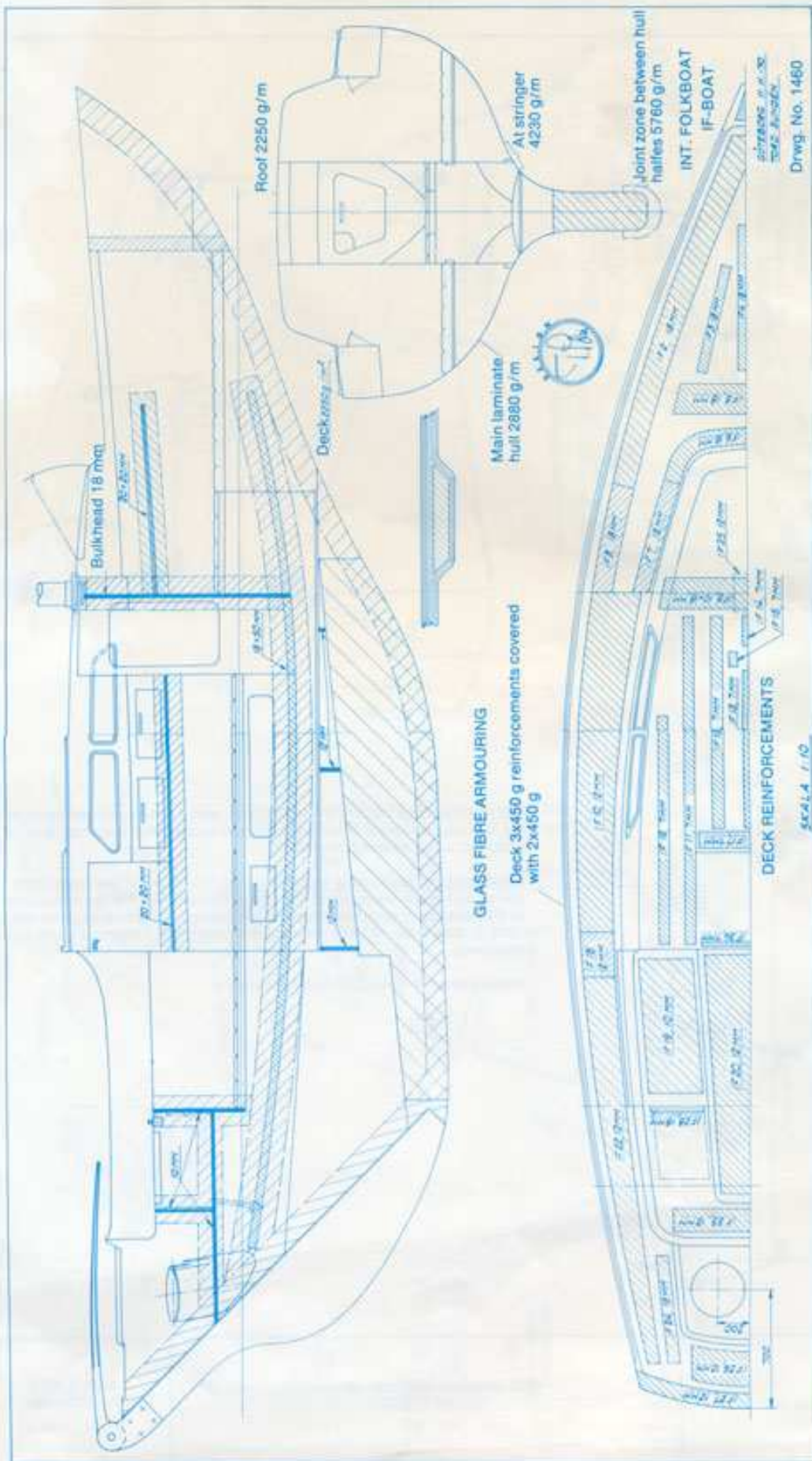
IF - BOAT
INT. FOLKBOAT
DIMENSION PRINT OF FORE
TRIANGLE BASE AND POSITION
OF MAST.

(SCALE 1:10)

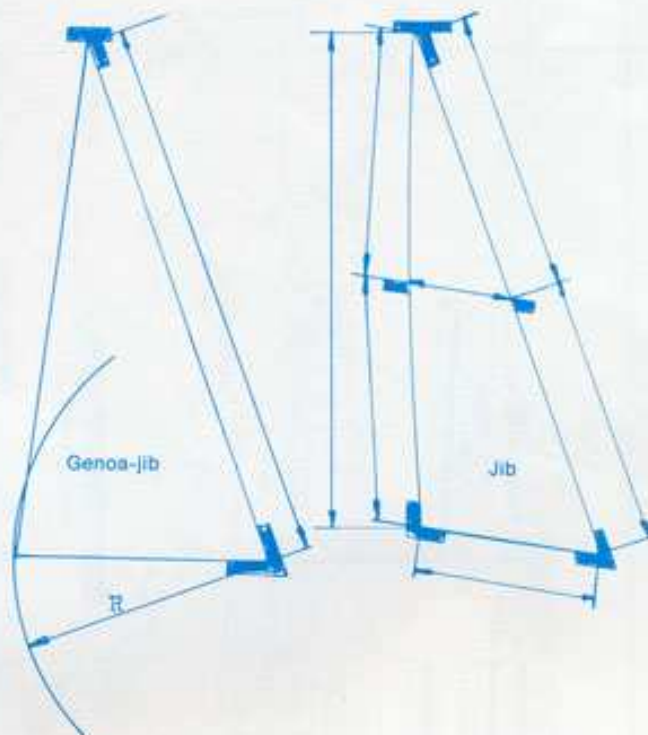
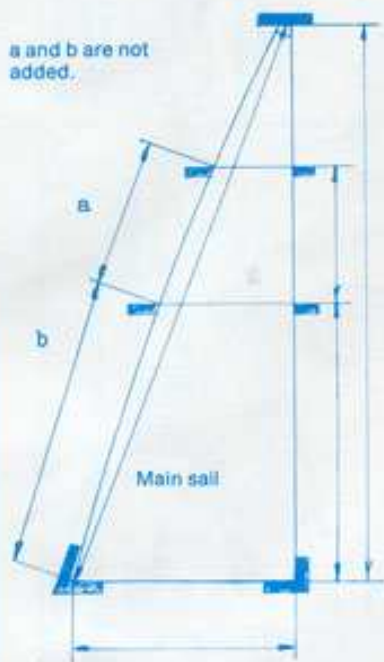
GÖTTSBOG 20.8.68
TORO SUNDEV

Drwg. No. 1324





a and b are not added.



The main shall be located in the foot end, and it shall be stretched from the tack and upwards. Stretch the luff just so hard that a smooth area is obtained within 50 mm from the luff.

When control measuring sails, tape (on the floor) at the measuring-points and mark the tapes at the correct measures. Are the measures of the sails equal to or less than the measurements stated on drwg. No. 1328-3, dated Jan. 9 1974 the sails are approved. Larger sails are not approved.

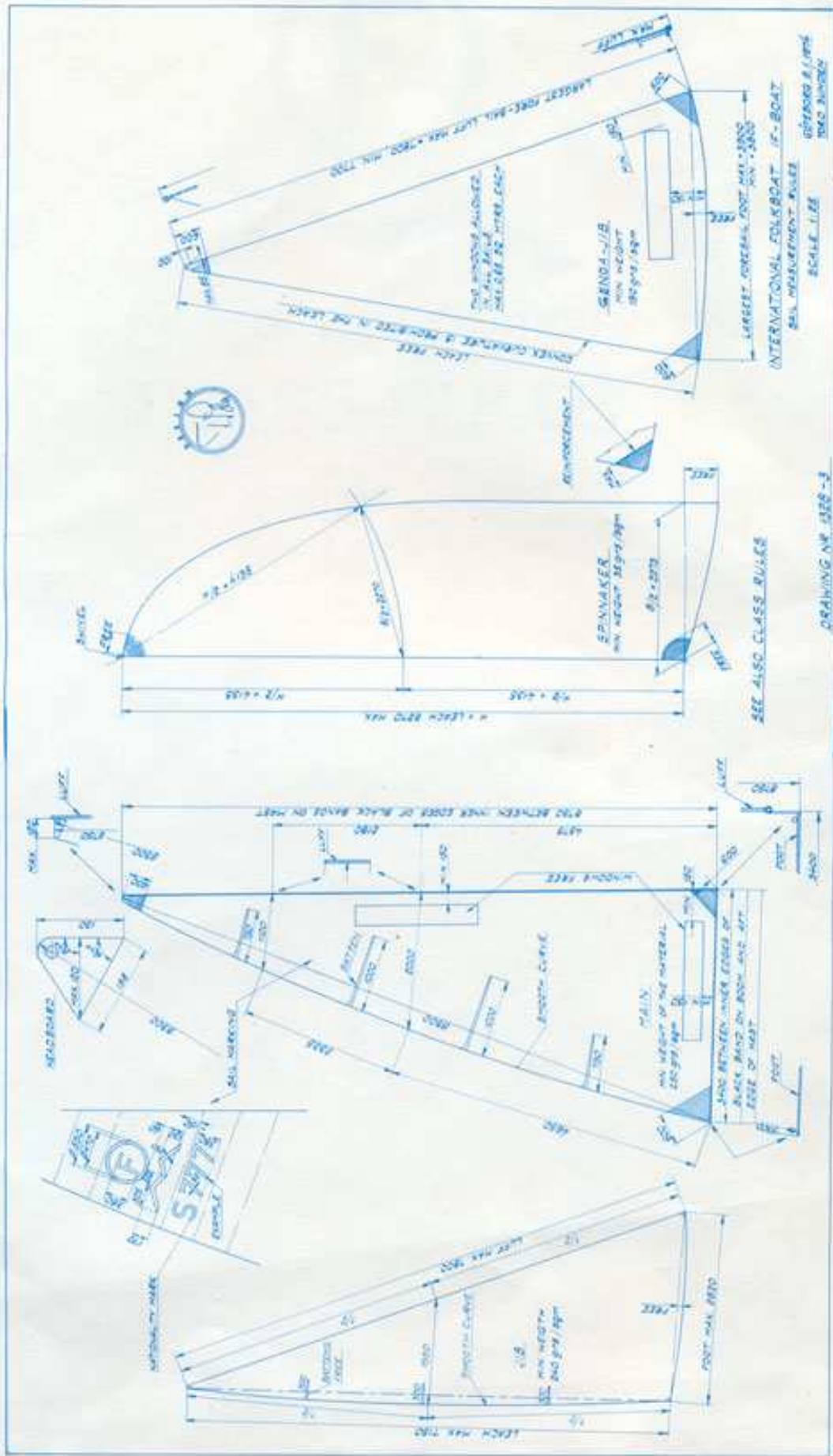
Measurements: See Class Rules, section 9.



Drwg. No. 1653

Sail measurement instructions
for the IF-BOAT

April 4 1973
Tord Sundén



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IF RACING ASSOCIATION IF - BOAT

PM FOR MEASUREMENTS AT RACES

SAIL MEASUREMENT

This is a control measurement, why only sails with stamps from the National Authority and signature of its authorized measurer shall be measured.

The measuring is carried out in order to control measures as to sail plan No. 1328-3, dated January 1, 1974 and to be carried out as outlined below. Messure marks shall be fixed to the floor.

The main sail is held at the lower part of the triangle against its base and with the tack at the mark and then stretched until all wrinkles along the leach and luff disappear. (See drwg. No. 1653)

The jib shall be measured with all fixed fittings in place, that is with wire thimbles etc. included.

The spinnaker shall be stretched with a force of 3 kp (30 N).

The battens shall be measured and stamped in a suitable way.

Reinforcements in the sails shall be checked.

Check the class designation.

Totally 2 main sails, 2 jibs and 2 spinnakers are allowed for measuring except by express permission of the Race Committee.

CONTROL OF THE EQUIPMENT BEFORE THE RACE

At the day of the measuring of the sails, control measurement of certain rigging details shall be done and control of the equipment shall be carried out on 1/5 of the number of racing boats. These boats are selected by the Race Committee by lot.

At this, the following shall be controlled:

1. The distance from the fore side of the mast to the peak of the head shall be $2.945 \text{ mm} \pm 10 \text{ mm}$ as on drwg. No. 1324.
2. The jib luff bracket shall meet the deck 2.525 mm in front of the forward side of the mast. See drwg. No. 1324.
3. The distance between the jib luff bracket and the forestay shall be in accordance with drwg. No. 1324.
4. All four (4) black bands shall appear on the rigging as shown on drwg. No. 1423. They may be of black tape or painted.
5. The distance between the deck and the lower black band on the mast shall be $700 \text{ mm} \pm 5 \text{ mm}$.
6. The distance between the aft side of the mast and the black band on the main boom shall be $\text{mac. } 3.400 \text{ mm}$.
7. Spinnaker pole. The distance from the fore side of the mast to the inner edge of the eye of the tack eye shall be 2.525 mm when the pole is fixed to its fitting.
8. Check the engine well. It shall be in accordance with drwg. No. 1460. If the engine well is missing, a detachable compensating weight of 3.75 kg shall be fixed below deck as outlined in the Class-Rules.
9. Check the standard accomodation. This consists of
4 mixed berths min. $1800 \times 600 \text{ mm}$

- 1 pantry
- 1 wardrobe
- 1 stove
- 1 box for reckoning
- 4 mattresses
- 4 lockers

Material and dimensions as outlined in the Class-Rules.

10. Extra equipment, including:

- 1 anchor, min. weight 7.5 kg including chain if present
- 1 paddle abt. 1.200 mm long
- 2 mooring ropes each not less than 10 m in length
- 1 anchor rope at least 30 m in length
- 3 buoyancy vests or life jackets
- 1 hand pump, hand bailer or bucket

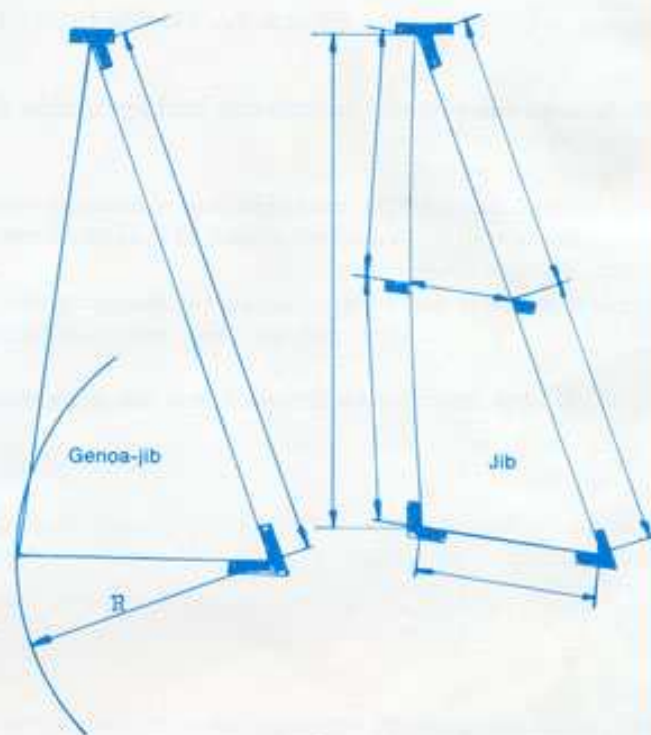
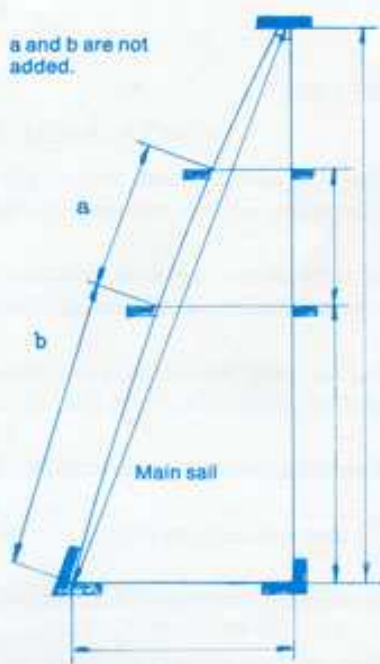
CONTROL OF 3 BOATS AFTER EACH DAYS RACE

At this control, which ought not to be necessary more than 2 arbitrary days, the following shall be checked:

1. The length of the spinnaker pole. The distance from the fore side of the mast to the inner edge of the eye of the tack eye shall be 2.525 mm when the pole is fixed to its fitting.
2. Check the engine well. It shall be in accordance with drwg. No. 1460. If the engine well is missing, a detachable compensating weight of 3.75 kg shall be fixed below deck as outlined in the Class-Rules.
3. Anchor, min. weight 7.5 kg incl. chain if present, and an anchor rope at least 30 m in length.

SAILS

When racing, only one main sail, 2 fore sails and one spinnaker are allowed on board. This is valid unless otherwise is desired by the Race Committee.



The main shall be located in the foot end, and it shall be stretched from the tack and upwards. Stretch the luff just so hard that a smooth area is obtained within 50 mm from the luff.

When control measuring sails, tape (on the floor) at the measuring-points and mark the tapes at the correct measures. Are the measures of the sails equal to or less than the measurements stated on drwg. No. 1328-3, dated Jan. 9 1974 the sails are approved. Larger sails are not approved.

Measurements: See Class Rules, section 9.

Drwg. No. 1653

Sail measurement instruksjons
for the IF-BOAT

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