

Centerboard

25. Vents dimensions with drawing. No other shape permitted. Glass centerboard trunk: maximum 21-1/2" (546.1mm) long and no more than 2" (12.7mm) in width if in fiberglass nor 9/16" (14.3mm) if in wood or plywood. The aft edge of centerboard trunk shall be perpendicular to base line. Forward edge of centerboard trunk shall either be perpendicular or slope forward 1/4" (6.4mm) maximum at the top of trunk.

Boards must be uniform thickness except within 1" (25.4mm) of edges which may be tapered off. Centerboard may be cut out for lightness. (See drawing.) The top of the front leg of a centerboard may be sloped back at an angle not greater than 45 degrees, starting at a point 12" (304.8mm) above the centerpunch mark 35-1/2" (850.9mm) from the bottom of the board. The handle of the centerboard shall be installed in such a manner that the aft edge of the centerboard is perpendicular to the base line when the centerboard is completely down.

26. **FOR ALL BOATS:** The centerboard must be restricted while racing, in such a manner that no point on the bottom edge extends less than 2 inches (50.8mm) below the keel. To permit checking the position of the centerboard while racing, a band 1" wide shall be painted on each side of the board, the top of the band being even with the surface of the deck at the centerline of the boat when the board is raised to its maximum height. A safety line must be used on the centerboard while racing. Any type of retaining system may be used, provided such system allows the crew to extend the board completely when capsized without a swimming guard on the boat.

27. The dimensions for centerboards as given on the drawing on the back of this sheet must be adhered to. There shall be no inserts or other means of changing the distribution of the weight. Centerboards shall be made of any hard aluminum alloy. 6061 T6 or its equivalent is recommended. The thickness of the centerboard shall be 3/8" (10mm). If seals are used on the centerboard trunk, they shall be used at the top of the trunk only. Any type of seals may be used.

Rudder

28. See that rudder is substantially made of wood, fiberglass or fiberglass and foam. See that tiller is strong and attached firmly to rudder head in such a manner that it cannot be slid fore and aft. There shall be a suitable means of preventing rudder from falling off with boat inverted.

29. The basic rudder thickness above and below the waterline shall be 3/4" (19.1mm) minimum and 1-1/2" (38.1mm) maximum.

30. The width of blade below waterline shall be 10-1/4" (264.4mm) maximum and 10" (254mm) minimum. This measurement is taken across rudder at approximately right angles to its leading edge.

31. Metal rudder blades are prohibited. Where pivoting rudders are desirable because of purely local conditions, they may be used for local point score races only. They may not be used in any regatta or championships.

Tillers must be direct connected and all above the aft deck. Rudder must at all times be mounted essentially parallel to the transom. Vertical adjustments or changes in angle are not permitted. Rudder must be attached to the transom and as close to the transom as conveniently possible with 1-1/2" (38.1mm) maximum clearance. The minimum weight of the rudder including pintles shall be 6 pounds (2.72 kg) for all boats.

Mast, Boom and Rigging

32. Only one mast may be used during a regatta unless irreparable damage has occurred. It shall be stepped on the keel, or no higher than 2" (50.8mm) above the top of flotation tank in bottom. The butt of the mast shall be positively retained in the step by means of a collar, cable or other suitable means.

33. The minimum allowable length from sheer molding shall be 20-1/2" (612.14mm).

34. The center line of the mast shall be located 60" (1524mm) or 7 inches (162.56mm) aft of the stem. This measurement shall be taken to the mast step. The hole in the deck where the mast goes through the deck shall have a maximum size of 3" (76.2mm) athwartship x 1-1/2" (38.1mm) fore and aft. A 60" (1524mm) mark showing on either side of the mast step shall be molded in the hull.

35. Rotating masts are prohibited.

36. The mast must be minimum 1-1/4" (31.8mm) athwartships at the top band or at any point below. On all boats. Any taper in the mast above the stay intersection shall be essentially a uniform taper.

37. If mast is made of wood, it must be minimum 2" (50.8mm) athwartships and minimum 3" (76.2mm) fore and aft at deck. If mast is round (not streamlined), the dimension at deck shall be minimum 2-1/2" (63.5mm) in diameter.

38. Spreader length and rake limit shall not be adjustable while racing on any boat.

39. Measure distance from sheer to the intersection of the jib stay with surface of the mast. See sketch on measurement drawing for method of determining the intersection. The shroud, jib stay, and jib halyard intersections with the surface of the mast shall be between 15" (381mm) and 15" 0" (457.2mm) above the sheer. This shall apply to all boats built after January 1, 1992 and to replacement masts on older boats if such are used.

40. Halyards must be used, and they must lead down the mast to the

boat, down side or inside the mast. The length of the luff of the mainsail shall be limited to the racing by the following means:

Bands 1" (25.4mm) wide shall be painted around the mast in color to contrast with the color of the mast, the bands being located as follows:

1. The lower edge of the top band to be not more than 20-1/2" (519.1mm) above the sheer.

2. An additional band, the upper edge of which shall be a maximum of 20-1/4" (514.3mm) below the lower edge of the corresponding top band.

3. Two additional bands, the lower edge of each band being 6" (152.4mm) below the lower edge of the previously specified bands, may be installed. These additional bands are optional.

In regatta the sail must be set so that the edge of the sail is limited at the top to the lower edge of one of the bands, and at the bottom by the top edge of a corresponding band. Tape which is not readily removable and which soon becomes permanently attached as paint (such as one mil vinyl) may be used on bands. Easily removable tape such as electricians or plastic on the tape is not acceptable.

41. Length of boom shall be 8-8" (264.16mm) maximum, 8' 0" (2590.8mm) minimum, measured from the aft side of the mast (the aft side of the mast includes the sail slot and material enclosing the bolt rope). A screw or other stopper shall limit the stretch of the mainsail foot so that the aftermost edge of the sail at the clew shall not be stretched beyond the following limit while racing: the aftermost edge of the sail at the clew shall not be farther aft than the forward edge of a band 1" (25.4mm) wide, and forward side of which is 8' 4-7/8" (2562.2mm) aft of the aft edge of sail slot in the mast.

42. The maximum depth of boom, no matter what type or material shall be 4-1/2" (111.8mm) at its widest point, minimum 3-1/2" (88.9mm) for a wood boom. Maximum width at any point 3" (76.2mm). Minimum thickness of plank boom 3/4" (19.1mm). If slotted boom is used, the maximum depth of 4-1/2" (111.8mm) includes the material forming the slot. Booms shall be essentially straight and shall not be tapered nor have lightning holes.

43. Aluminum extrusions may be used for masts and booms and masts may be tapered subject to Para. 37. Masts must be made of alloy 6061 T6 or equivalent. Booms may be made of alloy 6063 T6 or equivalent. Weight of such must be with winches, halyards, stays, gooseneck, spreaders and butt end must be at least 20 lbs (9.1kg), and nothing may be added to the basic mast except necessary fittings or reinforcements. Center of gravity in the condition when weighed, with the stays and halyards extended full length and temporarily taped to the mast, shall be at least 60 inches (1524mm) above the upper band of the lower set of bands. Masts having an athwartship dimension of 2-1/8" (54mm) or less must use spreaders. Any section which may be used for a mast may be used for a boom. For booms only, a basic section 2-1/2" (63.5mm) deep and at least 7/8" (22.2mm) wide at its widest point may be used. The height of the boom at either end may be reduced for access to the hull top.

44. Boom and mast may be slotted to take sail butt rope provided dimensions are met.

45. Deliberately left blank.

46. All boats must have a jib stay and two side shrouds. The jib stay must be of metal 3/8" (12.7mm) minimum diameter, either wire or rod and must be fastened to a ring or other deck fitting. The length of the jib stay shall be such that it does not allow the mast to touch the back of the partner when the mast is restrained only by the jib stay and shrouds and the mast push/puller is off. **THIS APPLIES TO ALL BOATS.** No backstay may be used. Shroud anchorages or through-the-deck fairleads must be not more than 4" (101.6mm) in from the sheer, and between 70" (1778mm) and 78" (1981.2mm) aft of stem. Anchorages of jib stay and shrouds may be under deck, but location and length of jib stay and shrouds must be incapable of change during a race. The use of elastic light line between the shrouds and the mast is permitted.

47. All other rigging optional. So-called streamlined rigging not permitted. Running rigging optional. If, in the opinion of the Measurer, the rig shall be considered unsound, weak or unseaworthy, the Measurer must not recommend a Measurement Certificate. Changes must not be made after the Certificate is issued, unless the owner has Measurer recheck the rig.

Weight Limit

48. The boat complete must be weighed. This weight does not include paddle, life preservers, bailing equipment (unless permanently attached), sails or any other loose gear. It does include mast, boom, rigging, mainsheet, whisker pole or whisker pole launching system, centerboard, rudder and tiller. Boats that do not meet the weight limit must have weight permanently added before they can be given Measurement Certificates.

49. The weight of this boat as outlined above is 1732 lbs (kg) (circle one)

Amount of ballast 10 lbs (kg) (circle one)

Ballast Location Must Be Marked on Diagram on Page Four

53. All boats must be weighed before issuing a measurement certificate and must be re-weighed at the start of each season.

54. The Measurer shall either witness the weighing of the boat or require the owner to furnish a weight certificate signed by at least two witnesses and the owner as well as the owner of the scales, that the minimum weight of the boat complete complies with this paragraph. The minimum weight shall be 381 lbs (172.8 Kg). The bare hull including deck, centerboard trunk, floorboards, flotation, hull fittings, and sailaway equipment shall weigh 276 lbs (125.2 Kg) minimum. In addition ballast up to 33 lbs (15 Kg) may be permanently added in any location, subject to the requirements for Moment of Inertia. All ballast must be installed where it may be seen and it shall be attached with pegged over bolts or glass cloth. The bare hull including ballast as defined above shall be subjected to the moment of inertia test as contained in the Supplement to the Measurement Data Sheet for Moment of Inertia Test.

54 | Effective January 1, 1996, measurement certificates given to owners shall include a hull diagram showing ballast weight and location and moment of inertia value.

55. Weight certificates from builders will not be accepted.

56. All boats shall comply with the following flotation requirement: When the boat has been capsized and has remained in any position long enough to take in as much water as possible in high wave conditions, it shall, upon being righted, float so that the lowest point around the cockpit edge where water might enter the boat is at least 6" (152.4 mm) above the water when the boat is supporting 300 lbs (136.1 kg). This may be accomplished by means of tanks, flotation bags, self-bailing cockpits, increased low density flotation material, or other suitable means. Holes with maximum total area 100 square inches (645.2 sq. cm) may be made in the transom to facilitate drainage. Where transom drains are used to comply with this rule they should have a minimum of 45 square inches (290.3 sq. cm) total. In boats meeting the requirements of this rule, the centerboard trunk may have a minimum height of 9" (228.6 mm) above the outside of the keel if the boat, after capsizing and being righted, floats high enough so that water will flow out of the trunk; otherwise, the trunk shall be 2" (50.8 mm) above the water level in the boat after capsizing and being righted.

Miscellaneous

58. Measurer must notify the owner of the following essential requirements: Boat must carry wearable life preservers for all occupants at all times, and race committees may require wearing them when racing when they consider it necessary. Suitable paddle or oar must be carried. A towline of 33' (10 meters) minimum length, and 1/4" (6mm) minimum diameter must be carried. SCIRA makes no prescription on anchors but some local authorities may require them. This applies to all boats.

59. There shall be no advertising matter whatever on the outside or inside of any boat or on its sails, except as allowed by the SCIRA Event Sponsorship Policy. Any boat infringing this ruling shall be subject to loss of measurement certificate. Measurers shall not issue a certificate to any such boat.

60. Name, complete mailing address and telephone or fax number of Builder

PERSON MACHINE
STRANDVEJEN 352 C
DK 3000 ESPERGÅRDE
49170210 FAX: 49170620

61. Sliding seats, hiking boards, trapeze rigs, and other artificial methods of supporting the skipper's or crew's weight to balance the boat are prohibited. This does not prevent the use of hiking straps or any kind of line or cord attached to the boat within 8" (203.2 mm) of the top of the deck. It is permissible for the crew to hold on to the side stays.

Construction of Fiberglass Hulls

76. Only professional boat builders can make fiberglass Spinnaker hulls. Effective January 1, 1965, the construction of fiberglass hulls has been allowed under the same tolerances as approved by IYRU and now in effect for wood hulls. The loft lines do not show any sheer molding. Part or all of a sheer molding may be molded with the hull.

MATERIALS: Fiberglass cloth, woven roving or mat may be used, with either polyester or epoxy resins. Glass content must be at least 30% by weight.

FLOTATION: 6-1/2 cubic feet (.184 cu. m) of Styrofoam, Urethane foam, or equivalent, having a density of 2-1/2 kg per cubic foot (.070 cu. m) maximum must be built into the hull. Balsa wood enclosed in resin-impregnated fiberglass cloth is considered equivalent. Supposedly airtight compartments are not considered adequate.

TOLERANCE: All fiberglass boats are to be measured to standard tolerances. The thickness of the hull must be uniform except where

reinforced locally such as at the keel, the chine, the stem, the mast step, and where the stay anchorages and rudder gudgeons are attached. Increased thickness due to incorporation of flotation material in either the sides or bottom of the hull is not a violation of this requirement. If desired, floorboards may be bonded directly to the bottom of the hull, omitting supports. A fiberglass and foam sandwich floor structure may be used. Wood and plywood are acceptable local reinforcements.

DECKS: The deck may be plywood as specified in the measurement data sheet, or it may be fiberglass. In general, a fiberglass deck will require some type of double surface and core construction to secure adequate stiffness. Each builder's method of construction must be approved by the Rules Committee.

Construction of Plywood Hulls

77 BOTTOM AND SIDES: The weight of the plywood used must be at least one pound, two and one-half ounces per square foot (3.65 kg. Per square meter). If 3/8 inch (9.5 mm) material is used throughout, fiberglass or other covering material may be used to bring the hull up to a minimum weight.

FLOTATION: Three cubic feet (.085 cu. m) of foam must be installed in the hull.

Moment of Inertia Test

78. All bare hulls, as defined in paragraph 54 must be subjected to the moment of inertia test. (For a full description of the method, see SUPPLEMENT TO THE MEASUREMENT DATA SHEET FOR MOMENT OF INERTIA TEST.)

The moment of inertia of the hull is calculated from the following formula.

$$I = \frac{CD^2T}{4\pi^2}$$

Where: I = Moment of Inertia

C = Styrofoam content in per ft. (kg. per m³)

D = Distance across in feet

T = Time of one complete oscillation, seconds

$\pi = 3.1416$

English - $I = \frac{86067 H^2 CT^2}{4 \times 31416^2} = 0.63261 = 8.6767 H^2 (2.623) m^2$

Metric - $I = \frac{2.6233 m^3 CT^2}{4 \times 31416^2} = 1743 CT^2$

Slugs - $I = \frac{86067 H^2 CT^2}{4 \times 31416^2} = 1.8763 (CT^2) slug ft.^2$

$$English: I = \frac{86067 H^2 CT^2}{4 \times 31416^2} = 1.8763 (CT^2) slug ft.^2$$

$$Metric: I = \frac{2.6233 m^3 CT^2}{4 \times 31416^2} = 1743 CT^2$$

The minimum moment of inertia of the hull as determined from the formula above shall be:

English - 280 (slug foot squared)

Metric - 27.6 (metric slug meters squared)

If the hull moment of inertia does not meet this minimum, weight shall be moved to or added to the ends to bring it up to the minimum.

The Moment of Inertia for this boat is: 210

Amount of weight and detailed description of location of weight added to conform to MOI requirements: (Location must be marked on diagram on page 4.)

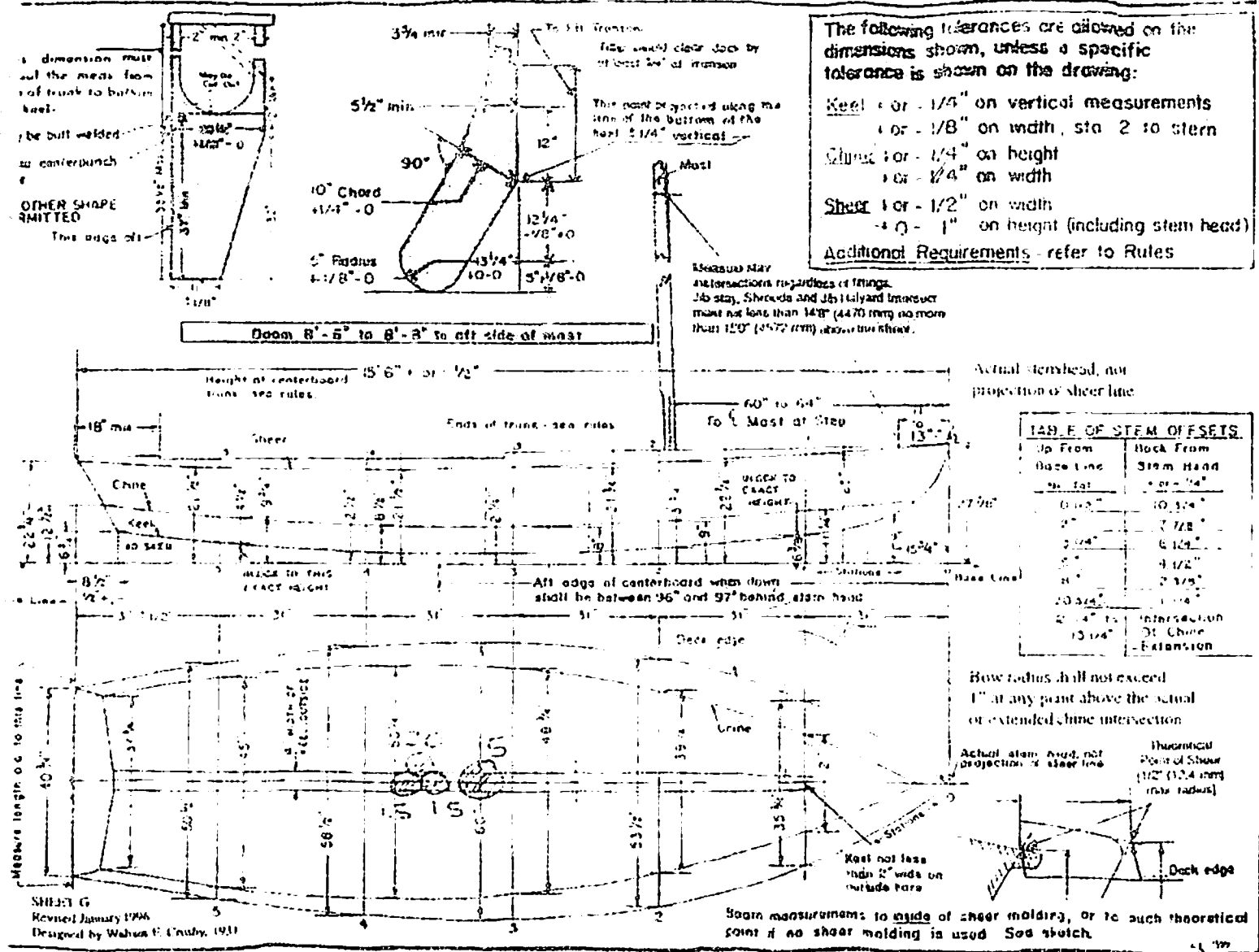
- 5 KG 40 CM AFT OF TRUNK
- 1.5 KG 45 CM "
- 1.5 KG 55 CM "
- 2.0 KG 50 CM "

Exception to Applicability of Prior Rules

The new centerboard shape and thickness must be used after January 1, 1976 on all boats in the World Championship, Western Hemisphere Championship and European Championship. Those existing boats which cannot use a 3/8" (10mm) thick board because of trunk slot width shall use a 5/16" (8mm) thick board of the new shape. The length of the trunk slot shall be 21-1/2 inches (546 mm) maximum.

MEASUREMENTS ARE CAUTIONED TO FILL OUT THIS DATA SHEET IN FULL AND AS ACCURATELY AS POSSIBLE
 Those measurements found correct should be "circled" carefully on the drawing below, preferably with colored pencil.
 If certain measurements are *not* within the limits shown, cover same on the drawing with an "X" and use a reference letter
 or line across to your marginal note, giving the actual measurement.

Approved by the Secretary of the
 United States Coast Guard
 for the purpose of certifying the
 accuracy of the measurements.



I hereby certify that I am the official measurer of the DANISH Divisional Fleet, Charter No. 302
 I certify and affirm that I have carefully measured this boat No. 29438 to the best of my ability and that all the measurements written herein or checked by me were found to be exactly as indicated, I am ready and willing to swear to this before any accredited notary public.
 (Date) 000811 (Measurer's Signature) M. [Signature]
 Recommended for Certificate [Initials] (Initial) Not Recommended _____

Note: The Fleet Measurer must under no circumstances give the Certificate of Measurement to the owner until it is positive that the boat fully complies with the regulations. If positive, the Measurer gives the Certificate to the owner and sends the Data Sheet to the Secretary.