

"Hunter 19 ft keelboat National Association"

Structure of Class Rules

The *Class Rules* consist of the following parts:

- A. - The Constitution
- B. - The Measurement Rules

A) The Constitution

1) NAME

The name of the association shall be the "Hunter 19 ft. keelboat National Association" and the short title which may be used shall be the "Hunter Association" abbreviated as "HA" and here after referred to as the "Association".

2) OBJECTS

The objects of the association will be to:-

- a) Encourage the use of the Hunter keelboat designed by Oliver J Lee, hereinafter called "the boats", as a one design class for racing and cruising, and to advance these boats as a class.
- b) From time to time determine the specifications of the hull, keel weight, sail plan, spars rigging and fittings of the boats.
- c) Establish and maintain a register of the boats complying with the specifications.
- d) Sponsor National, Provincial and other meetings as thought fit.
- e) Encourage and authorise the formation of branches of the Association and delegate to such branches such rights as the national committee from time to time may think fit.

3) OFFICERS

The officers of the association shall consist of the Chairman, Vice-Chairman and Hon. Secretary as well as a treasurer who will form an executive committee of the association for the purpose of day to day matters concerning the Association.

4) COMMITTEE

The committee of the Association shall consist of the officers and four other persons, all of whom shall be elected by the annual general meeting and shall hold office until the elections at the next AGM. Past Chairman shall be ex-officio members of the committee.

5) **POWERS OF THE COMMITTEE**

The conduct of the Association shall be in the hands of the committee which may inter alia,

- a) Appoint officers to sign all legal documents on behalf of the association.
- b) Co-opt additional members who, if not already members of the association are enumerated in article 7, shall become associate members.
- c) Appoint sub-committees and delegate to them such powers as it thinks fit. Officers shall be ex-officio members of all sub committees.
- d) Acquire property, or other assets, levy fee's, authorise payments, invest moneys or to do all lawful acts which it considers will be in the interests of the advancement of the Association subject to the consent of S.A.S. (South African Sailing). When such consent may be required.

6) **MEMBERSHIP**

Membership shall consist of:

- a) Ordinary membership which shall be open to any persons being the owner or part owner of a boat. When two or more persons are owners of a boat they shall be entitled to only one vote. A member who owns more than one boat may cast the number of votes equal to the number of boats he owns to a maximum of three votes. In addition to this the owner must have paid the association membership fees equal to the number of boats for the votes to become valid. A member ceasing to be an owner or part owner of a boat may continue membership as an associate member without election as such.
- b) Associate membership which shall be open to any person wishing to support the objectives of the Association, or who is the crew on a boat at a provincial, national or association run event or who is elected to such membership by the committee.
An associate member will not have a vote at a general meeting but will have a vote on the committee if co-opted onto the committee.
- c) Honorary memberships which may be confirmed by the committee on such persons and for such time as the committee see fit.

All members shall be entitled to attend a general meeting and to participate there but only ordinary members shall be entitled to vote at the meeting.

7) **SUBSCRIPTOINS**

- 1) On the purchase of a boat there shall be paid immediately to S.A.S. the current fee for the registration of the sail no and name of the boat.
- 2) When a boat is transferred, the new owner shall pay to S.A.S. the current fee for the registration of change of ownership.
- 3) Ordinary members shall pay an annual subscription pre-determined at an AGM or SGM. Payment of the subscription shall be payable by 1st of January each year.
- 4) All boats wishing to race must have been issued with measurement certificates. The current issuing fee shall be paid to S.A.S.
- 5) Associate members shall pay an annual subscription pre-determined at an AGM or SGM.

8) **ANNUAL GENERAL MEETINGS**

- 1) An annual general meeting shall be held every year at the Venue and at the time of the National Championships. A minimum of 21 days' notice shall be given to each paid up Ordinary or Associate member by way of email letter at the members last known email address.

The business transacted there at shall be:-

- a) Minutes of the previous meeting.
- b) Chairman's report.
- c) Annual accounts as presented by the Association treasurer.
- d) Election of the Chairman who then takes the chair.
- e) Election of Vice-Chairman.
- f) Election of members of the committee.
- g) Any item of which notice has been given on the agenda of the AGM.
- h) General business competent to the meeting.

2) **EXTRA-ORDINARY GENERAL MEETING.**

The Hon secretary shall call an extra- ordinary meeting at the discretion of the committee or on receipt of a written request signed by the owners of not less than 6 boats stating the purpose for which such meeting is to be called. The venue shall be decided by the committee and 21 days' notice shall be given. Only that business may be transacted for which the meeting has been called.

3) **COMMITTEE MEETINGS.**

Committee meetings shall be called at a time and venue convenient by the secretary whenever called on to do so by the Chairman, or by three or more committee members or if six months has elapsed since the last committee meeting. Not less than seven days' notice shall be given.

Questions raised at the committee meetings shall be decided by simple majority each member having one vote. In the case of an equality of votes the Chairman of the meeting shall have a second or casting vote.

The Chairman shall preside at committee meetings. In his absence the Vice-Chairman shall preside. In the absence of both, the members present shall elect a Chairman of the meeting.

9) **ALTERATION OF THE CONSTITUTION AND/OR CLASS RULES**

Any intension to alter these articles shall be passed at a general meeting by majority of not less than two thirds of those members present and voting. Alternatively, notice shall be sent to all members and a postal vote taken.

DISSOLUTION

In the event of dissolution of the association the assets of the association shall be paid or transferred to S.A.S.

10) **NOTICES**

Notices shall be deemed to have been dually served if posted by electronic mail to the last known address of a member and such notice shall be deemed to have been served seventy two hours after posting. In the case of joint owners of boats, notice need only be sent to the person named first in the records of the Association.

11) **QUORUM**

- 1) At any annual or extra-ordinary general meeting 10 of voting members shall constitute a quorum.
- 2) At any committee meeting 50%+1 of the committee members with voting powers with a minimum of four persons shall constitute a quorum.

12) **FINANCIAL YEAR**

The financial year of the Association shall commence on the 1st January.

13) **DISCIPLINE**

- 1) A member shall not be more than one year in arrears with fee's or subscriptions, at which time he will automatically be excluded.
- 2) Members who's conduct is contrary or detrimental to the objectives of the Association, will be liable to disciplinary action and expulsion from the Association.

Hunter Association Class Rules Part “B”

The measurement rules

RULE 1 – GENERAL

1. This is a one-design class. The rules, plans and specifications are intended to ensure that the boats of this class are as nearly as possible the same as regards shape and mass of the hull and decks, keel as well as the shape of the rudder, sail plan and other items which effect on the performance of these boats.
2. These rules supersede all previous Hunter Class Rules.
3. The rules are complementary to the plans, measurement form and measurement diagram. Any interpretation shall be made by SAS, which will consult with the Association committee.
4. In the event of a discrepancy between the rules, measurement form, measurement diagram, and/or the plans, the rules shall take precedence.
5. Neither SAS, nor the Association shall accept any legal liability of claims in respect of these rules and/or claims arising there from.

RULE 2 – BUILDERS

1. Only a builder, approved by the Association, may build new boats in the Republic of South Africa. All boats however must conform to the rules of the Association.
2. Prior to 01 January 1985, all boats must have been produced by builders licensed by Hunter Boats Limited of the United Kingdom.

RULE 3 – REGISTRATION AND MEASUREMENT CERTIFICATES

1. On the purchase of a new boat there shall be paid to **SAS** the current registration fee for the registration of the sail number and name of boat.
2. All boats wishing to compete in races must have been issued with a Measurement Certificate. In order for the certificate to remain current, owners must be paid up members of SAS and the Association.
3. No two boats in the class shall have the same name, sail number, or measurement certificate number.
4. The Measurement Certificate is obtained as follows:
 - a) After payment of the current registration fee, the owner shall have the boat measured by a SAS approved, measurer, who has been nominated by the Association.
 - b) The completed measurement form shall be signed by the measurer, stamped as checked by the Association and sent to SAS.

- c) *If all the measurements comply with the class rules, SAS will issue a measurement certificate to the owner.*
- 2. Change of Ownership invalidates the measurement certificate but shall not necessitate re-measurement. The new owner shall forward the measurement certificate together with the required change of ownership form to SAS for endorsement in the new owner's name.
- 3. It is the responsibility of the owner to ensure that the boat complies with the class rules at all times, and that no modifications, repairs or replacements conflict with the rules, thus invalidating the measurement certificate.
- 4. Notwithstanding anything in the rules, SAS shall have the right to refuse, or withdraw a measurement certificate from any boat.

RULE 4 – MEASUREMENT

- 1. Only a measurer duly appointed by the association and approved by SAS shall measure a boat, its spars or sails, and sign the declaration form certifying that it complies with the class rules.
- 2. Measurement tolerances are intended to allow for genuine building errors and shall not be used for deliberate alteration to the design. The measurer shall report on the measurement form anything which he considers to be a departure from the intended nature and design of the boat, or to be against the general interest of the class, and a measurement certificate may be refused even if the specific requirements of the rules are satisfied.
- 3. A measurer shall not measure a boat, spars or sails owned or built by himself, or in which he is an interested party or has a vested interest.
- 4. All boats, spars and equipment shall comply with these rules or with the corresponding rules applying to them at the time the original certificate was issued. Any alterations or replacements shall comply with these rules.
- 5. New or substantially altered sails shall comply with these rules. Sails measure and stamped prior to 1 September 1997 shall comply with the corresponding rules applying to them at the time of measurement. Any alterations shall comply with these rules.
- 6. New or substantially altered sails shall be measured by an official measurer, who shall stamp, sign and date the sails near to the tack.
- 7. All boats, spars, sails and other equipment shall be liable to re-measurement at the discretion of S A Sailing, the race committee, or the Association.

RULE 5 – IDENTIFICATION MARKS

1. The Hull shall carry the sail number either cut, drilled or engraved into the top of the keel casing.
2. The mainsail and spinnaker shall carry identification marks as stated in RULE 17 (4).
3. All identification marks on the sails shall be of durable material and securely attached.

RULE 6 – CONSTRUCTION

1. The hull and deck shall be constructed from G.R.P. in accordance with the plans and specifications, in moulds approved by the Association. Boats built before the 21st of March 2013, having been incorrectly built with a balsa core by Fast Yachts, shall, from now onward, be protected by a "Grandfather" clause and shall be deemed to be class legal. No Other hulls may benefit from this clause, and no more may be constructed.
2. The outer shape of the hull and deck may not be modified in any manner, apart from drilling of holes for the attachment of fittings and equipment, except that the cockpit floor of the Hunter 19 may be modified to facilitate self-draining.
3. A gunwale rubbing strake, of any resilient material, 35mm +/-10mm by 15mm +/-5mm, extending unbroken from a point not more than 50mm from the bow to a point not more than 50mm from the transom, shall be fitted.
4. The use of exotic materials (such as, but not limited to Carbon and Kevlar fiber) in the hull and the deck construction is prohibited.

RULE 7 – HULL MEASUREMENT

1. The hull and deck mouldings shall only be accepted if manufactured from G.R.P. in moulds approved by the Association.
2. All measurements shall be taken from the aft perpendicular. (This is a line perpendicular to the waterline that passes through the aft most point of the hull.) The length overall measured from the aft perpendicular to the stem *shall be 5760mm +/-25mm.*

RULE 8 – KEEL (refer to diagram 1 & 4 attached)

1. The keel shall be manufactured from fine grain cast iron, cast from a pattern approved by the Association. The dimensions of the keel may not vary from the pattern by more than +0.0% or -2.0%, or from the dimensions in diagram 1 by more than +/- 1%.

2. The sectional shape is defined in diagram 1.
3. The mass may not be less than 350 kg.
4. The keel may be treated with any non-reinforcing coating, with a maximum general thickness of 2mm, measured within any circle of 100mm diameter.
5. The maximum projection of the keel from the underside of the GRP hull shall be 710mm measured perpendicular to the waterline at 2610mm from the stern perpendicular.
6. The fore and aft position is controlled by the hull moulding. The intersection of the aft edge of the keel and the underside of the GRP hull shall be 2215mm $\pm$ 15mm, measured parallel to the stern perpendicular.
7. The sectional shape in any plane, may not be altered except to smooth out any manufacturing flaws. The dimensions must then still be consistent with RULE 8 (2).

RULE 9 – RUDDER AND TILLER (refer to diagram 2 attached)

1. The rudder shall be manufactured from wood and/or G.R.P.
2. The profile of the rudder below the waterline shall conform to the dimensions as stated in diagram 2.
3. The sectional profile of the rudder shall be optional, with a maximum thickness of 36mm below the waterline.
4. The design of the rudder bearings shall be optional but the centerline of the bearings shall not be more than 16mm forward or aft of the leading edge of the rudder blade, and may not project more than 25mm aft of the transom.
5. The design of the tiller and tiller extension shall be optional.

RULE 10 – FITTINGS (refer diagram 4 attached)

1. The forestay fitting shall be placed so that the distance from the aft perpendicular to both the forestay and headsail tack attachment points is between 5550mm and 5750mm.
2. The main shroud tangs shall be placed so that the distance from the aft perpendicular to centerline of the shroud attachment point is 3360mm $\pm$ 50mm.
3. The lower shroud tangs shall be placed behind the main shroud tangs so that the distance between the centerlines of the shroud attachment points is 450mm maximum.
4. The inner forestay, if fitted, shall be attached along the centerline of the deck.

5. The backstay tangs shall be placed so that the distance from the aft perpendicular to centerline of the backstay attachment point is 200mm maximum.
6. Headsail fairleads may be adjustable fore and aft using a pin stop system only, but the centerline of the fittings and their tracks must be within the outer 50mm of the confines of the deck.(excluding rubbing strake)
7. One mainsheet traveler track, maximum 1200mm may be fitted.
8. Toe straps may be fitted, provided that only the upper torso of the crew will be permitted outboard of the gunwales. They shall not be adjustable whilst racing.
9. In addition to the fittings listed above, only the following may be fitted for racing:
 - a. **Spinnaker Chute**
Only the spinnaker chute supplied by the class association may be fitted. This includes the chute, tube and inboard end coupling. The chute must run from the bow into the cockpit with no way for water to get into the cabin. The cockpit must also have suitable drainage.
 - b. Additional cleats, fairleads, jammers and blocks.
 - c. Brackets for outboard motors.
 - d. Stowage chocks and/or brackets.
 - e. Deck clips for covers and/or tents.
 - f. Tiller lock.
 - g. One compass.
 - h. Cunningham eye equipment for headsail and mainsail.
 - i. Adjustable mainsail clew outhaul equipment.
 - j. Two sheet winches and one halyard winch.
 - k. Pulpit, push-pit, stanchions and lifelines.
 - l. Additional hatches and vents.
 - m. Echo sounder.
 - n. Boom support line or crutch.
 - o. Bilge pumps (s).
 - p. Navigation lights.
 - q. Barometer.
 - r. Speedometer and/or log.
 - s. Slab reefing equipment for mainsail.
 - t. Barber hauler equipment for spinnakers.
 - u. Self-bailing equipment.
 - v. Handholds and toe rails on coach roof and foredeck.
 - w. Boom vang.
 - x. Spinnaker pole support equipment.
 - y. Roller furling equipment for headsails.
10. If additional vents and hatches are fitted, they must be closed whilst racing.

RULE 11 – MAST STEP POSITION (refer to diagram 4 attached)

1. The distance from the front of the mast to the aft perpendicular shall not exceed 3435mm, or be less than 3305mm at the step.
2. The mast foot position shall be permanently fixed and may not be adjustable in any direction

RULE 12 – MAST (refer diagram 4 attached)

1. The mast shall be of aluminum alloy extrusion with a fixed groove or track, which may or may not be integral with the mast section, but shall be of the same material. The mast may be anodized.
2. Sectional dimensions shall be 70mm +/-10mm athwart ships and 95mm $\square$ +/-15mm fore and aft, including the groove or track. The section shall be constant for the entire length of the mast.
3. Rotating and permanently bent masts are prohibited.
4. Distinctively colored bands, not less than 15mm wide, shall be marked on the mast as follows:
 1. No. 1 – The upper edge of which shall not be less than 550mm above the G.R.P. mast step in the deck.
 2. No. 2 – The lower edge of which shall not be more than 6190mm above the G.R.P. mast step in the deck.
 3. No. 3 – The upper edge of which shall be 3050mm +/-50mm above the G.R.P. mast step in the deck.
5. No part of the spinnaker boom attachment fittings shall project more than 100mm from the mast.
6. The mast shall have one set of fixed spreaders (made only of aluminum or stainless steel) for the upper shrouds. The spreaders shall be attached to the mast above the lower shrouds within 100mm of band No. 3. They may be of optional design.

RULE 13 – STANDING AND RUNNING RIGGING (refer diagram 4 attached)

1. The standing rigging shall be of stainless steel or galvanized wire (Excluding the backstay), of not less than 2.5mm diameter, and shall consist of a forestay, two main shrouds and two lower shrouds and backstay. A lower forestay is optional.
2. The shrouds may be fitted with rollers or plastic tubes.
3. The backstay shall be attached to the mast crane. The backstay span may be of optional design, material, and may be adjusted whilst racing.
4. The lower forestay may be adjusted and/or removed whilst racing.
5. The extension of the line of the spinnaker halyard, when held taut at right angles to the mast, shall intersect the front of the mast not more than 6500mm above the G.R.P. mast step in the deck.
6. The design of all running rigging is optional.
7. The line of the forestay, both main shrouds and backstay shall intersect the mast above the lower edge of Band No. 2.
8. The inner forestay and lower shrouds shall intersect the mast within 100mm of Band No. 3.

RULE 14 – MAIN BOOM (refer diagram 4 attached)

1. The boom shall be of aluminum alloy extrusion, and may be anodized.
2. A distinctively coloured band, not less than 15mm wide, shall be marked on the boom with its forward edge not more than 2260mm from the aft side of the mast, including the groove or track (or extension thereof), including any local curvature, when the boom is at right angles to the mast.
3. The boom section must pass through a circle of 100mm diameter.

RULE 15 – SPINNAKER BOOM

1. The spinnaker boom can be made of any material.
2. The overall length, including fittings, shall not be more than 2300mm.
3. The spinnaker boom, including fittings, must pass through a circle of 75mm diameter.

RULE 16 – MASS

1. The minimum mass of the boat shall be 680 kg. This will be measured with only the following equipment on board:-

- a) Standing rigging.
- b) Mast and main boom and spinnaker pole.
- c) Hatches and washboards, external only.
- d) Permanently mounted fittings and equipment.
- e) Adjustable standing rigging – backstay span and lower forestay (if fitted).
- f) Permanently mounted correction masses. (if any)
- g) Push pit and pulpit. (if any)
- h) Rudder, tiller and extension.

2. Correction masses of metal or wood must be split into two equal parts and positioned equal distances fore and aft of the keel, in positions not less than 750mm forward of the Keel's leading edge, and 750mm aft of the Keel's trailing edge, measured from the point of the Keel's exit from the hull. These masses shall be recorded on the measurement certificate.

RULE 17 – SAILS (refer to diagram 3 attached)

1. Sails shall be made and measured in accordance with the SAS sail measurement instructions, except where varied herein.
2. They shall be of polyester sailcloth, available commercially to all sail lofts in roll form. No membrane or string laminates are allowed.
3. The use of exotic materials (such as, but not limited to Carbon and Kevlar fiber) in the sail construction is prohibited.
4. The Class Emblem and sail number shall be displayed on both sides of the mainsail and the sail number shall be displayed on both sides of the spinnaker in accordance with SAS prescriptions. The Class Emblem and sail number shall be optional on the headsails.
 - i) The Class Emblem shall consist of a black capital letter 'H' with a red equilateral triangle whose base is adjacent to the upright of the 'H' and placed between the 'H' and luff of the sail. The 'H' shall not be less than 440mm high and 370mm wide.
 - j) Sail numbers and letters shall be of the following dimensions:-
 - i. - minimum height 300mm;
 - ii. - minimum width 200mm (except number 1);
 - iii. - thickness 40mm to 50mm
 - k) Minimum spacing between adjoining numbers and letters or emblems shall be 60mm.

Mainsail

- a) The mainsail shall have a maximum of 4 battens of any material, which shall divide the leech of the sail into equal parts $\pm 150\text{mm}$. The distance from the head point down the leech to the centerline of the top batten pocket shall not be less than 1240mm or greater than 1290mm. At 1240mm from the head point at the leech, the Upper Width (MUW) shall not exceed 830mm.
- b) The length of the top batten may not exceed 830mm, the length of the bottom batten shall not exceed 530mm, and that of the center battens shall not exceed 575mm.
- c) The width of the headboard shall not exceed 150mm measured at right angles to the luff, or have a height greater than 150mm along the luff. The Headboard shall be approximately triangular in shape within the above mentioned dimensions.
- d) The leech length shall not exceed 6045mm.
- e) The half width shall not exceed 1500mm.
- f) The foot median shall not exceed 5950mm.
- g) No part of the mainsail luff or headboard shall extend beyond the lower edge of band No. 2, and the upper edge of band No. 1 on the mast, and no part of the mainsail foot shall extend beyond the inner edge of the main boom band.
- h) The total area of the window/s, if fitted, shall not be greater than 1m².
- i) Not more than one mainsail may be on board whilst racing.

5. Headsails

- a) The size of each of the headsails shall be as follows, with a maximum tolerance of 75mm
- b) luff leech foot
 - i. Genoa 6600 6350 3300
 - ii. Blade 6600 (LP 2100) refer to Measurement Form.
 - iii. jib 5800 5150 2450
 - iv. storm jib 4050 3000 1950
 - v. All sizes in millimeters.
- c) Battens and Headboards are prohibited in all foresails excepting the blade.
- d) Headsails shall be attached to the forestay by means of hanks only, unless roller furling equipment is installed.
- l) Not more than one each of the above headsails shall be on board whilst racing.
- m) A minimum of one window shall be placed on the genoa in the lower third of the sail. The total area of the window/s shall not be less than 0.25m². Or greater than 1.0m²...

2. Spinnakers

- a) The spinnaker shall be symmetrical, three cornered sail. No headboard battens or other stiffening device, other than the normal woven cloth reinforcing is permitted.
- b) The spinnaker shall be measured folded along its centerline with the leeches together.
- c) The length of the leeches shall not exceed 6500mm measured along the edge of the sail from the highest point of the sail at the head, to the lowest point of the sail directly below the centerline of the tack and clew cringle.
- d) The half width of the foot shall not exceed 2000mm measured around the edge of the sail.
- e) The half-height width from leech to centerline shall not exceed 2000mm when measured by folding the sail in half with the leeches together and measuring at right angles to the leech.
- f) Not more than one spinnaker shall be on board whilst racing.

RULE 18 – COMPULSORY EQUIPMENT

1. The following equipment shall be on board whilst racing, unless specifically stated otherwise in the sailing instructions:-
 - a) An outboard motor, with a minimum of 2ℓ of petrol or two paddles of at least 1000mm length or two paddles with a minimum area of 0.005m. each.
 - b) One bucket of minimum 9 liter capacity fitted with a strong lanyard of a minimum length of 2000mm.
 - c) One personal flotation device for every person on board.
 - d) All washboards and external hatches, the rear hatch must be permanently fitted while sailing and fastened down.

RULE 19 – CREW

1. In all National, Provincial and Association run events, all persons on board shall be either an ordinary member or an associate member of the Hunter Association.

RULE 20 – PROHIBITIONS

1. The adjustment of standing rigging, except for the lower forestay and/or backstay whilst racing.
2. Internal ballast or ballast carried by the crew, other than those correction masses as designated on the yachts measurement certificate.
3. Any equipment to support the crew outboard of the gunwales.
4. Hydraulic or pneumatic rigging tensioners.
5. Mast Rams

HUNTER CLASS ASSOCIATION - KEEL SHAPE DIAGRAM

Drawing not to scale

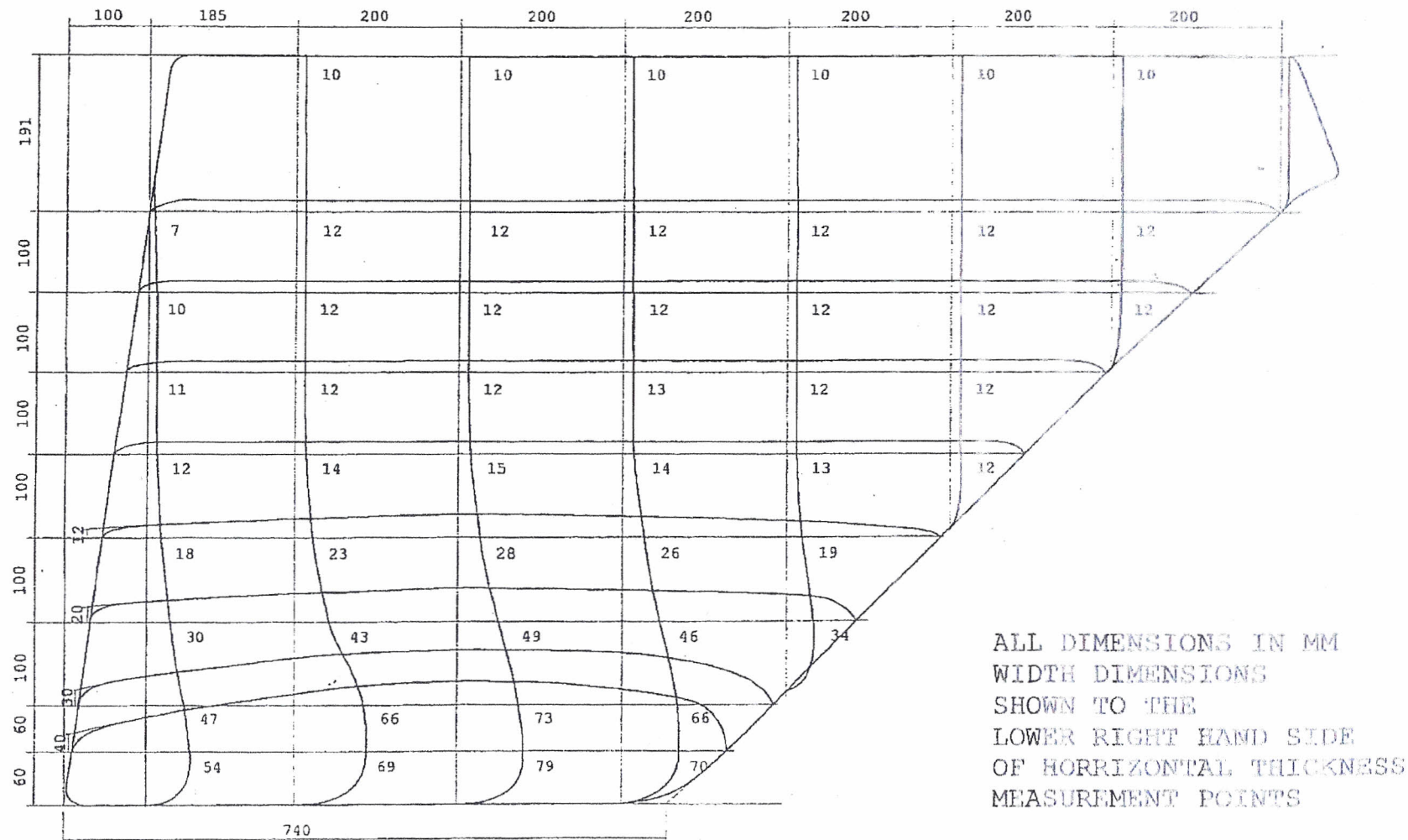


DIAGRAM 1

HUNTER CLASS ASSOCIATION RUDDER DIAGRAM

Drawing not to scale

All tolerances $\pm 15\text{mm}$ unless otherwise stated.

Maximum thickness below waerline: 36mm

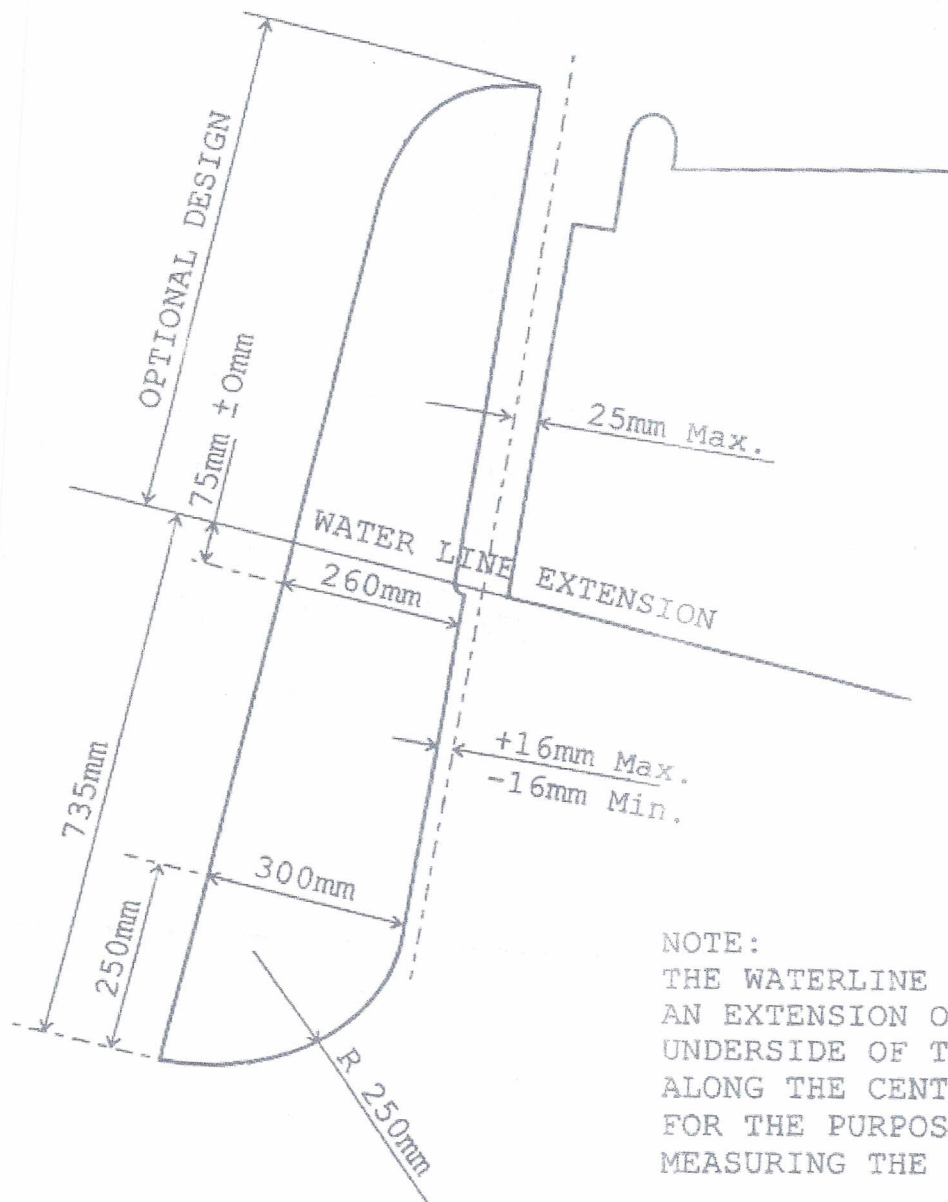


DIAGRAM 2

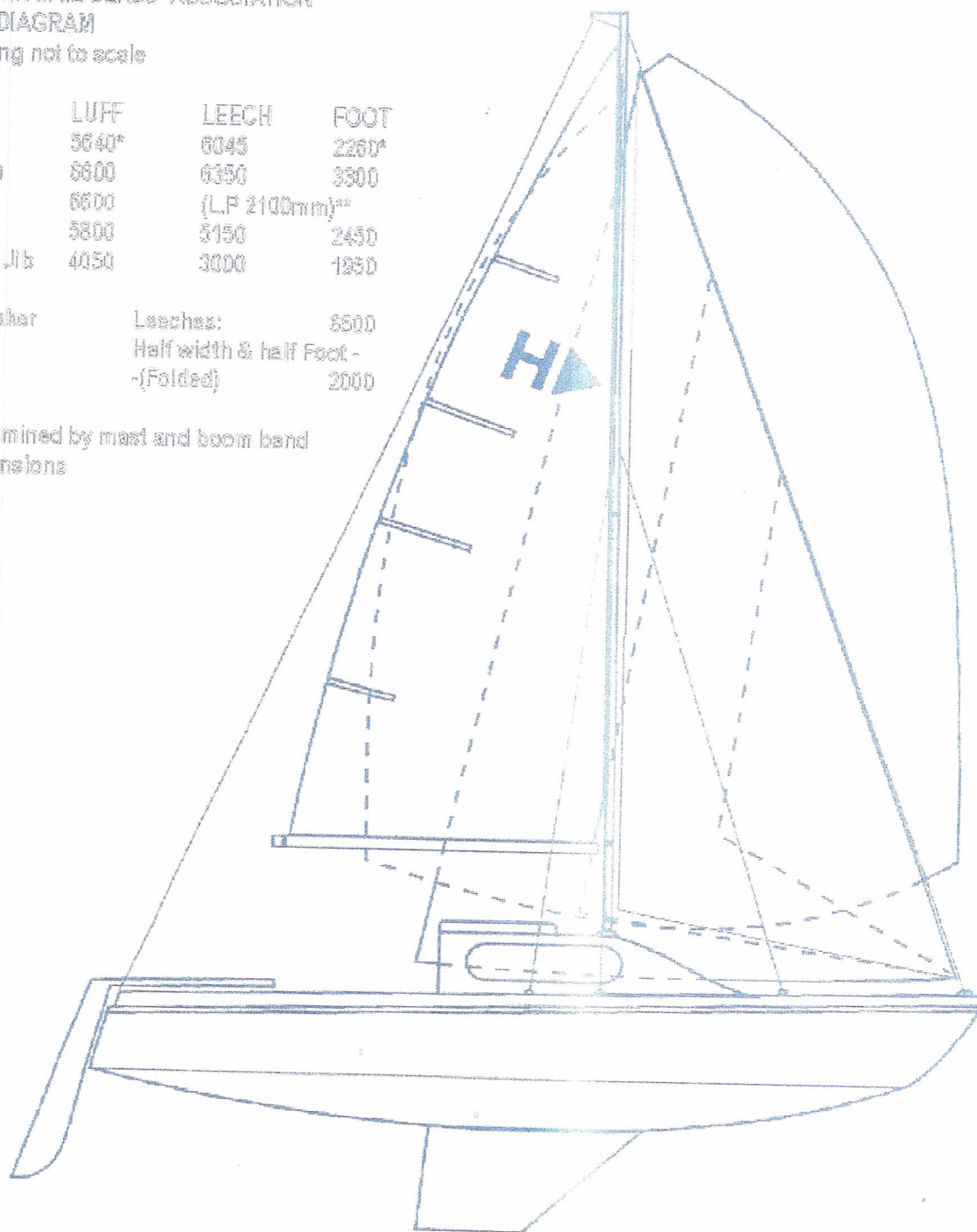
HUNTER SAIL CLASS ASSOCIATION SAIL DIAGRAM

Drawing not to scale

	LUFF	LEECH	FOOT
Main	5640*	6045	2260*
Genoa	6600	6350	3300
Blade	6600	(L.P 2100mm)**	
Jib	5800	5150	2450
Storm Jib	4050	3000	1950

Spinnaker	Leeches:	6500
	Half width & half Foot -	
	-(Folded)	2000

* Determined by mast and boom band dimensions



** BLADE : "L.P" = LUFF PERPENDICULAR (Clew to Luff maximum measurement)
OPTIONAL: Use of three Bafons, of 400mm length, each, positioned evenly spaced up the luff
Cloth: 240gm p.m2
Max/Min 50mm Tolerance

Diagram 3

HUNTER CLASS ASSOCIATION MEASUREMENT DIAGRAM

Drawing not to scale

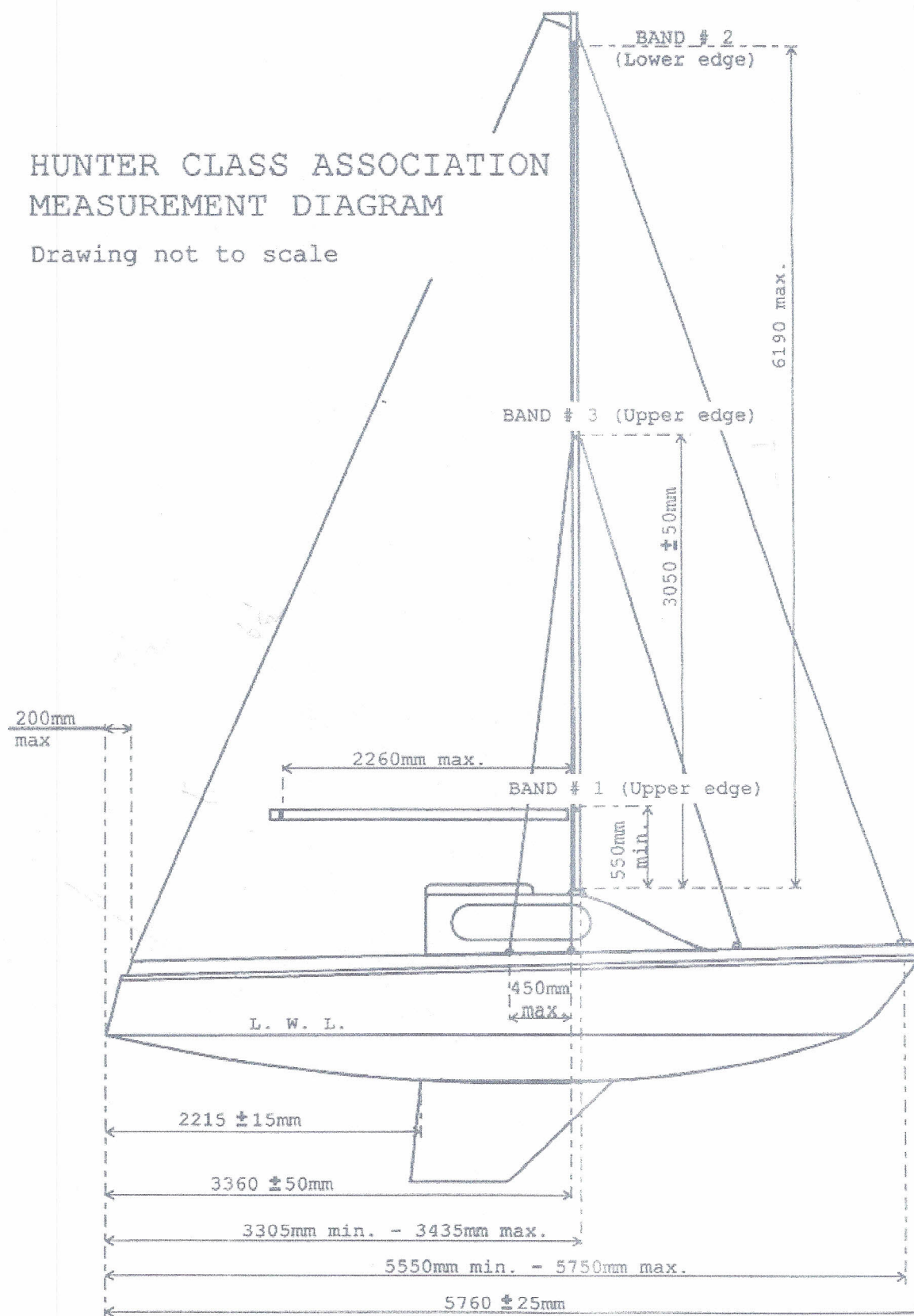


DIAGRAM 4