

# **M5.0 Class Racing Rules**

**(Part of the Class Racing Rules of the Maricat Association)**

## **2.1 POLICY**

The design philosophy of the M 5.0 is aimed at a one design catamaran where the test of sailing skill is the dominant factor in racing success.

The aim of these rules is to provide guidelines to those who race the M 5,0 catamaran. These rules restrict modifications and choice of equipment as far as possible to promulgate the one design philosophy. The rules also reduce the factor of financial advantage whilst allowing some limited freedom of personal choice in rig set up and controls, to suit variations in crew weight and sailing style.

## **2.2 RULES – ORDER OF PRECEDENCE**

Where any conflict exists between racing rules and or sailing instructions, the order of precedence shall be:

- Local Club Rules
- Maricat Association Class Racing Rules
- Relevant State Yachting Authority
- AYF Rules
- IYRU Rules

## **2.3 PERSONAL BOUYANCE**

Every person racing a M 5.0 shall wear a personal flotation device, (of a type approved by the Standards Association of Australia for the purpose) secured and correctly fastened to their person.

## **2.4 SPECIFICATIONS**

(a) "The Specifications" referred to herein shall be The Specifications of the M 5.0 catamaran as given in Appendix 2.A, Appendix 2.B.1 and Appendix 2.B.2 (Sail Plan).

(b) At the time of its initial purchase either fully assembled or in part form from the manufacturer, a M 5.0 shall be fully equipped to "The Specifications".

(c) Replacement components shall be as per "The Specifications" including dimensions, materials and source of equipment where indicated.

(d) "The Specifications" at Appendix 2.A and Appendix 2.B shall serve as direction to the manufacturer to provide the basis for measurement by the Class Measurer. Any variation by either the Manufacturer or an individual must conform to "The Specifications" and fall within the limits as applicable.

(e) Non-compliance of a M 5.0 with "The Specifications" will render that catamaran ineligible to compete in championship events.

## **2.5 EXTRA EQUIPMENT**

(a) Extra equipment such as anchors, paddles, lights, safety equipment, etc, shall be as per the regulations of local maritime, safety or yachting authority and sailing instructions relevant to the event entered.

(b) Wind indicators and compasses may be fitted to assist the helmsperson of that catamaran.

(c) No other equipment shall be fitted to the catamaran except that allowed for in these rules.

## **2.6 RIGHTING LINE**

A righting system that shall facilitate the prompt righting of the M 5.0 under normal sailing conditions shall be attached to the boat.

## **2.7 RACING REGULATIONS**

The M 5.0 may be raced in either open competition on yardstick, or in the case of a Championship event, in the following classes:

- Class C M 5.0 Cat rigged (Main sail only) (Helmsperson only one person)
- Class D M 5.0 Sloop rigged (Main sail and jib) (Helmsperson and forward hand two persons)
- Class E M 5.0 super sloop Mainsail and jib) (Helmsperson only one person)

## **2.8 CREW REGULATIONS**

(a) Either helmsperson and / or forward hand must be financial members of the relevant State Maricat Association.

(b) The crew of a Class C (cat rigged) M 5.0 shall be helmsperson only. Crew weight as measured in shorts and T/shirt shall not be less than 70 KG.

(c) The crew of a Class D (sloop rigged) M 5.0 shall be helmsperson and forward hand whose duties may interchange at any time. Crew weights as measured in shorts and T/shirts shall not be less than 125KG.

(d) the crew of the Class E (super sloop) M 5.0 shall be helmsperson only, crew weight as measured in shorts and a t/shirt shall not be less than 85 kg

(e) Weight belts or aids designed to alter crew weight shall not be used.

(f) Crew members must be nominated before a race or series and shall not be changed during that race or series without the prior permission of the race committee Crew changes are only permissible in the advent of misadventure. illness. or other extreme circumstances deemed as sufficient by the race committee. Substitute crew to be within 10KG or nominated person.

(g) In the event of "Championship" status, Class C, D and E M 5.0's shall compete separately only if 3 or more of each class is present, otherwise will compete together and have a yardstick or handicap applied to each class or individual boats. The yardsticks or handicaps are to be determined by the regatta governing body.

## **2.9 INCLEMENT WEATHER**

Where sailing conditions are extreme and unlikely to improve, and /or the wind velocity exceeds 22 knots for a period of ten minutes as measured on the committee vessel before or during a race, that race shall be postponed and resailed if possible when conditions permit or abandoned.

## **2.10 LIMITS OF ACCEPTABLE CHANGE**

### **(a) Mainsheet System**

Ropes, pulleys and cleats may be exchanged or altered. Maximum purchase of 8:1 shall apply.

**(b) Mainsail Downhaul**

Ropes, pulleys and cleats may be exchanged or altered. Maximum purchase of 8:1 shall apply.

**(c) Mainsail Outhaul**

Ropes, pulleys and cleats may be exchanged or altered. Maximum purchase of 4:1 shall apply.

**(d) Traveller Control System**

System may be replaced or altered provided that all fittings are attached to the rear beam. Maximum purchase of 3:1 shall apply.

**(e) Mast Rotation**

Control system may be altered to a maximum purchase of 2:1. Control system optional, provided that cleats and pulleys are attached to the mast, boom and/or spanner.

**(f) Jib Sheeting**

System may be altered or replaced to a maximum purchase of 2:1 and barber haulers may be added.

**(g) Jib Luff Tensioning**

System may be added to a maximum of (4:1)

**(h) Centreboard and Rudder Blade Uphaul and Downhaul System**

Optional.

**(i) Tiller Extension**

May be either one piece or telescopic.

**(j) Mast Rake**

May be varied such that the tolerances of the standard rigging are not exceeded as mentioned in "The Specifications". Rake shall not be adjusted whilst racing.

**(k) Trapeze System**

Optional.

**(l) Running Rigging**

Sheet lengths are optional.

**(m) Rig Tension**

Adjustments for tensioning rigging may be added but must be of simple mechanical means. Tension shall not be adjusted whilst racing.

**(n) Sail Cloth Colour**

Optional.

**(o) Toe Straps**

May only be added, moved or modified.

**(p) Boom Fittings**

Boom fittings positions are optional.

**(q) Jib Clew Plates**

Optional.

**(r) Sails**

May be worked for the following purposes repair of damaged areas removal of excess material to compensate for cloth stretch. Windows tell tales and leech ribbons may be added.

**(s) Battens**

May be replaced with non-foam battens, reshaped or altered.

**(t) MODIFICATIONS**

Modification to the M5.0 required for strengthening shall be allowed, subject to written approval from the State Association.

**(u) Diamonds**

Diamond tension shall not be adjusted whilst racing.

**(V) Halyard Lock**

The standard halyard and halyard lock arrangement shall be used. The sail shall not be shackled or tied to the mast head.

**2.11 MEASUREMENT**

Measurement shall be carried out as detailed in Appendix 2.A, Appendix 2.B.1 and Appendix 2.B.2

**APPENDIX 2.A  
M 5.0 SPECIFICATIONS**

THE SPECIFICATIONS

**2.A.1 GENERAL**

1) The M5.0 catamaran is a one design catamaran (with a minimum allowance of development) and of the following dimensions.

|            |  |
|------------|--|
| LOA:       | 5.09m maximum                          |
| Beam:      | 2.335M maximum                         |
| Sail area: |  |
|            | • Old main 14.0 M <sup>2</sup> maximum |
|            | • New main 14.8 M <sup>2</sup> maximum |
|            | • jib 4.6 M <sup>2</sup> maximum       |

2) All fittings, components, equipment and materials should be of a strength and quality commensurate with the loads and stresses imposed by a high performance two trapeze 5.0m catamaran with the above dimensions.

**2.A.2 HULLS**

1) The M 5.0 shall comprise of two hulls, each symmetrical in design except for the deck insert between the front and rear beams.

2) Hulls shall be manufactured from moulds as per designer's specifications,

3) All fittings may be replaced; however, their position shall not be altered.

4) Each hull shall have two inspection ports. Fitting or storage compartments is optional.

5) Attachments for jib bridle and shrouds shall be optional. the centre lines of which shall be 1000mm +/- 10mm, and 3088mm +/- 10mm from the bow respectively.

6) Toe straps shall be fitted and restraining lines may be fitted but no additions to the hull are allowed to aid in any increase in crew leverage.

### **2.A.3 CENTREBOARDS, RUDDER BLADES and ETC's**

- 1) centreboards and rudder optional (non-lifting or fouling boards and rudder's allowed).
  - Trim tabs or other control devices attached to rudders or centreboards are not permitted.
  - The intent of this class is for a non foiling.
  - Either swing or drop boards are permitted.
  - No minimum or maximum boards sizes.
- 2) rudder stocks optional.
- 3) Centreboard uphaul and downhaul system is optional.
- 4) rudder Uphaul and downhaul system are optional but no more the 2:1.
- 5) Tiller extension may be one piece or telescopic and shall be fitted at the centre of the cross bar.

### **2.A.4 FRONT BEAM**

- 2) A dolphin striker shall be fitted and comprise a post fixed at the centre line of the beam and standing a maximum of 240mm between the underside of the beam and outside of the aluminium strap, the strap being of minimum dimensions 40 x 5m +/- 2% manufactured from high grade aluminium alloy, grade 6 or equivalent.

### **2.A.5 TRAMPOLINE**

- 1) Trampoline shall be black mesh type or other coloured equivalent.
- 2) Toe straps may only be added, moved, or modified.
- 3) Eye let centres for jib blocks shall be 635mm +/-150mm from the front beam and 190mm +/- 20mm from inside of trampoline track.
- 4) Trampoline shall be affixed by bolt rope to track on from beam and sides and laced to the rear beam.

### **2.A.6 MAST**

- 1) The mast shall be a constant section aluminium alloy extrusion (Goodall Superwing T5) or equivalent +/- 2mm, 8500mm +/- 5mm in length, excluding masthead and base castings.
- 2) Masthead and base castings to suit the extrusion manufactured from aluminium allow shall be attached.

### **2.A.7 BOOM**

- 1) The boom shall be a constant section aluminium alloy extrusion (Comalco section E17490 or equivalent +/- 4mm, 2560 +/- 10mm in length.
- 2) Position of fittings is optional but must include:
  - a) a cleat and / or pulley for rotation control.

- b) an outhaul system (4:1 maximum purchase)
- c) block hanger (location optional).

3) Vang system is optional.

## 2.A.8 RIGGING

1) Mast measurements: All measurements are taken from bottom of mast, not including mast base.

- |                                   |             |
|-----------------------------------|-------------|
| a) spanner (pivot point centre)   | 210 +/-5mm  |
| b) centre of gooseneck            | 300 +/-5mm  |
| c) lower diamond tang             | 250 +/-5mm  |
| d) spreader (diamond strut)       | 3100 +/-5mm |
| e) upper diamond tang (upper end) | 5730 +/-5mm |
| f) hound (hole centre)            | 6075 +/-5mm |

2) Fitting dimensions/characteristic:

- |   |                               |
|---|-------------------------------|
| a) with of diamond spreaders                | 640 +/-10mm to centre of wire |
| b) length of spanner                        | 450 +/-10mm                   |
| c) halyard lock shall be hook and ring type |                               |

3) Standard rigging:

The M 5.0 shall have:

| <b><u>Components</u></b>  | <b><u>length (between bearing point)</u></b>                        |
|---|---|
| Two shrouds<br>(3mm minimum S/S wire plastic coated)            | 6220mm +/-100mm   |
| One forestay<br>(3mm minimum S/S wire)                          | 5600mm +/-200mm   |
| Two diamond wires<br>(3mm minimum S/S wire)                     | 5240mm +/- 50mm   |
| Two bridle wire<br>(3mm minimum S/S wire plastic coated)        | Total length including shackles and all fittings<br>2280mm +/- 20mm |
| Up to four trapeze wires  | wire & rope length opt.   |
| Two jib hawses, as appropriate with tensioning system optional. |   |
| One jib halyard<br>(any suitable material)                      | variable length   |

4) Equipment:

- a) trapeze system optional
- b) jib luff adjustment via halyard id optional
- c) main halyard shall be fitted
- d) barber haulers optional
- e) running rig length optional
- f) adjusters for tensioning rigging may be fitted

## 2.A.9 sails

- 1) One set of sails only shall be used in a series. except in the event of damage where the race committee may approve of a replacement. the manufacturer or their agents The Mariglass M5.0 insignia and issued sail number must remain an integral part of the mainsail. The mainsail and Jib shall carry sail maker's label.
- 2) The M 5.0 shall carry either mainsail. or mainsail and jib.
- 3) Original and new square top sails shall be obtainable from any sail maker.
- 4) Original pin head sails shall comply with the Maricat Association specifications and drawings.
- 5) Colour of cloth for mainsail and jib is optional.
- 6) Sails may be worked for the following purposes:
  - Repair of damaged areas
  - Removal of excess material to compensate for cloth stretch.
  - Windows, tell tales and leech ribbons may be added.

### **Original mainsails shall have:** (pin head)

- Nine battens.
- Standard 130mm headboard.
- Issued individual sail number to IYRU specifications (National prefix letters may be added).
- Manufacturer's and/or sailmaker's label.
- The M 5.0 insignia.
- Minimum cloth weight of 5.5oz and to be made of woven material (unreinforced Dacron).
- Dimensions not exceeding those in Appendix 2.B.1 .

### **New mainsail shall have:**

- Issued individual sail number to IYRU specifications (National prefix letters may be added).
- Manufacturer's and/or sailmaker's label. (Optional)
- The M 5.0 insignia.
- Maximum of 7 battens.
- Maximum 50mm step down in top of sail.
- Any suitable sail cloth may be used.
- Dimensions not exceeding those in Appendix 2.B.2.

### **jib shall have:**

- Maximum 2 battens – maximum length 250mm & 330mm.
- Manufacturer's and/or sailmaker's label. (optional)
- Any suitable sail cloth no less than 4,5oz may be used.
- Dimensions not exceeding those in Appendix 2.B.3.

### **APPENDIX 2.B.1 (Pin Head)**

Mainsail. Method of measurement

1. Remove battens
2. Measure leech length 7890mm maximum
3. Fold leech  $\frac{1}{4}$   $\frac{1}{2}$   $\frac{3}{4}$
4. Measure girths from leech to luff shortest distance incl. boltrope
5. Head board 130mm
6. Head width 400mm maximum
7.  $\frac{1}{4}$  girth width 1418mm maximum
8.  $\frac{1}{2}$  girth width 2090mm maximum
9.  $\frac{3}{4}$  girth width 2390mm maximum
10. Foot length. Measure up luff 300mm then the shortest distance to the clew 2400mm maximum
11. Foot 2420mm maximum

### **APPENDIX 2.B.2 (square Head)**

Mainsail. Method of measurement

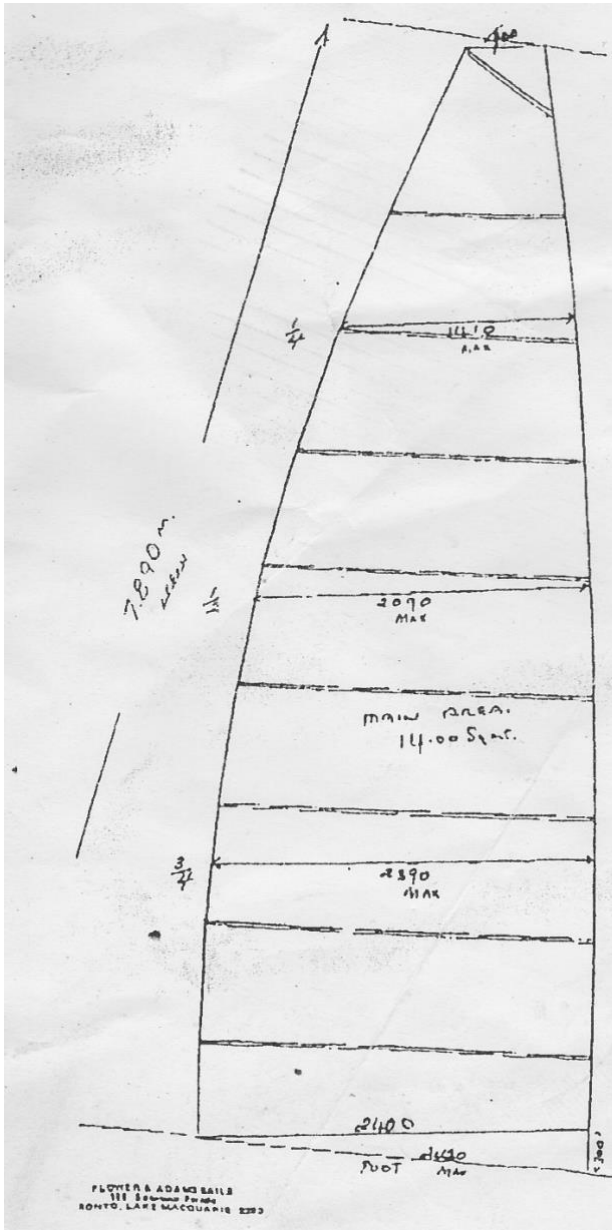
1. Luff Geodesic: 7910.0mm
2. Leech Geodesic: 7730.0mm
3. Foot Geodesic: 2300.0mm
4. Head width: 950mm
5. Mainsail Girth Top (MGT) (87.5): 1146.5mm
6. Mainsail Girth Upper (MGU) (75): 1535.6mm
7. Mainsail Girth Medium (MGM) (50): 1948.7mm
8. Mainsail Girth Lower (MGL) (25): 2203.3mm

### **APPENDIX 2.B.3 (JIB)**

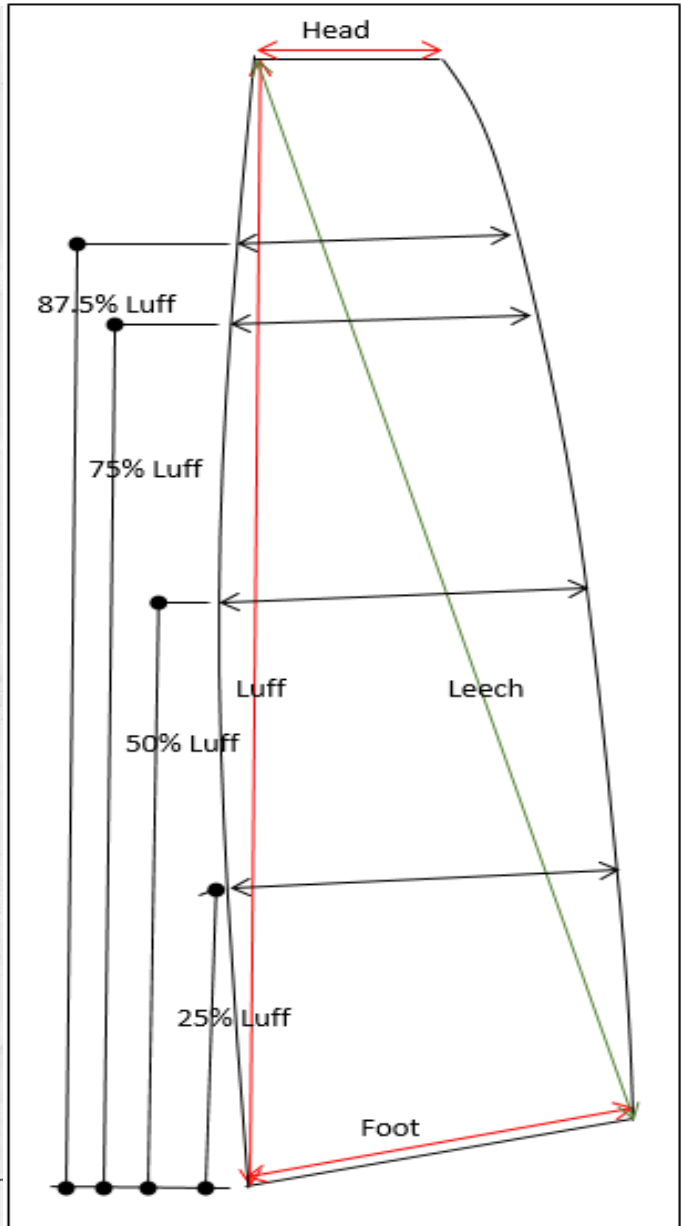
Jib. Method of measurement: (Maximum dimensions)

1. Luff length: 5100.0mm
2. Leech length: 5000.0mm
3. Foot length: 1800.0mm
4. Headboard width: 50.0mm
5. Half width (HHW): 874.9mm
6. Foot median: 5021.4mm





Old Mainsail



New Mainsail