

## **International MICRO MAGIC Class Rules 2020**

### **General**

These regulations have been provided to ensure that all countries can compete in a fair and equal environment.

The regulations are based on one-design principles, but with some freedom of construction and layout.

We will strive to keep the rules as simple as possible while ensuring that the cost of maintaining a competitive boat is tightly controlled.

We would ask all sailors to adhere to the spirit of these rules and not seek to gain advantage by manipulation of the wording through translation or other means.

These regulations are designed primarily for International competition; however, any nation is welcome to adopt these rules for their own national competition.

They refer to all Micro-Magic versions supplied by Graupner, Graupner/SJ, or Hacker Model Production. And they refer to such a Micro Magic built from the standard instructions supplied by Graupner, Graupner/SJ, or Hacker Model Production as a base line.

- The parts which are mandatory for a construction using kits or sets of parts are listed in rule 7.0 and 7.1.
- The parts to be used when using a prefabricated boat are listed in rule 7.0 and 7.1.

### **Production Overview**

1998 – 2011 Order No. 2114 Kit Classic Micro Magic (cMM)  
2006 – 2011 Order No. 2014 Kit Racing MM (rMM)  
2011 – 2013 Order No. 2014 Kit Racing MM (rMM)  
2011 – 2013 Order No. 2014.c Kit Micro Magic Carbon (ce-rMM)  
2011 – 2013 Order No. 2014.200 Prefabricated Boat Racing MM Ready-to-Race (RTR)  
2014 – 2019 Order No. 2014.V2 Kit Racing MM (rMM)  
2014 – 2019 Order No. 2014.CV2 Kit Racing MM Carbon (ce-rMM)  
2014 – 2019 Order No. 2014.HoTT Prefabricated Boat Racing MM RFH (Ready for Hott)  
2014 – 2019 Order No. 2014.1 Set of parts Racing MM (Hull, Deck, Canopy, Keel Box)  
Since mid-2020 Order No. HCB2550K New Micro Magic Kit (nMM)  
Since mid-2020 Order No. HCB2550A, HCB2550A+, HCB2550A++ New Micro Magic Prefabricated Boat (nMM ARTR)

## **Regulations**

### **1. Hull & Deck**

- 1.1 The hull, deck, keel box and canopy must be the original Graupner, Graupner/SJ, or Hacker Model Production parts.  
These components may not be modified in any way except for the following:
  - paint or other decorative finish may be applied.
  - a maximum of 6 additional holes, not greater than 20mm diameter, may be made in the deck and / or the canopy.
- 1.2 The layout and construction of internal components is free.
- 1.3 The canopy shall be fitted when sailing.
- 1.4 Per regatta, each boat must only make use of one hull. Exceptions are only allowed in the event of demonstrable damage.
- 1.5 The hull length may not be enlarged, other than the addition of a screw eye or eye bolt for the backstay and for a drainage bung.

### **2. Weight of sail ready boat**

- 2.1 The minimum weight of a sail ready boat is 860 grams.

### **3. Keel and Rudder**

- 3.1 A Graupner, Graupner/SJ, or Hacker Model Production keel must be used.
- 3.2 The location of the keel and rudder is restricted to the standard Graupner, Graupner/SJ, or Hacker Model Production positions as identified on the construction drawing and the markings in the hull.
  - In some 2014.V2 hulls there is either no marking or hole or an incorrect marking for the position of the rudder. The axis of the rudder should be 210 mm from the inner back-side of the keel box, measured alongside the bottom of the boat. See figure 1.
- 3.3 A Graupner, Graupner/SJ, or Hacker Model Production ballast weight must be used.
- 3.4 The keel, inclusive of the lead ballast, is not allowed to extend more than 135 mm from the hull.
- 3.5 The keel must be removable.
- 3.6 The filling, fairing and painting of the keel, ballast and rudder is permitted.
- 3.7 The ballast must maintain a circular cross-section along the entire length, must be torpedo shaped, and must be mounted with the thick end forward, the pointed end aft.
- 3.8 The ballast rMM (Order No. 2014.4) and the ballast nMM (Order No. HCB2550x6) must be maximally 131mm in length.
  - The ballast cMM (Order No. 2114.4) must have its original dimensions.
- 3.9 The minimum-distance between the leading edge of the keel and the front of the ballast is 15mm for ballast cMM (Order No. 2114.4) and 25mm for ballast rMM (Order No. 2014.4) and ballast nMM (Order No. HCB2550x6). See figure 2.
- 3.10 The weight of the keel assembly including spacers, if used, shall not be less than 380 grams and not more than 420 grams.
- 3.11 A Graupner, Graupner/SJ, or Hacker Model Production rudder must be used.
- 3.12 Wings or other extensions are not allowed for the keel, ballast and rudder.

3.13 There are no restrictions on what rudder, keel, ballast combinations are used.

#### **4. Mast & Booms**

- 4.1 Mast and booms must be straight over their total length.
- 4.2 The profile of all spars must be circular over their total length.
- 4.3 Tapered profiles are not allowed.
- 4.4 The maximum diameter of the mast and booms is 7mm.
- 4.5 The minimum diameter of the mast is 5 mm
- 4.6 The minimum diameter of the booms is 4 mm
- 4.7 Above the gooseneck fitting the mast may consist of two pieces of different diameters, which must conform to 4.4 and 4.5.
  - one piece between the gooseneck fitting and the point of attachment of the jib
  - one piece between the point of attachment of the jib and the top of the mast.
- 4.8 Swivel masts are not allowed.
- 4.9 The mast shall be stepped in the standard position (as identified on the construction drawing), into the mast-opening on the deck.
- 4.10 The maximum distance from the deck to the top of the mast is 780mm.
- 4.11 The jib boom may not have a fixed connection with either the mast or boom.
- 4.12 The jib boom must be connected to the deck with the use of a flexible connector in the standard position as indicated in the Graupner, Graupner/SJ, or Hacker Model Production construction drawing.
  - On some decks of the 2014.V2 there is no or a wrong marking for the position of the jib attachment. It should be 176 mm from the middle of the mast-position, measured in the length-direction of the boat. See figure 3.
- 4.13 There are no restrictions on mast or boom materials.
- 4.14 There are no further restrictions on standing or running rigging.

#### **5. Sails**

- 5.1 Sails will be measured to the sail plan with a maximum tolerance of 2 mm.
- 5.2 Smaller sails are allowed, as long as they fit within the maximum limits as shown in figure 4.
- 5.3 Sails must be made from flexible materials that can be rolled into a maximum diameter of 50 mm.
- 5.4 The mainsail must display a class provided sail number and country designation. The minimum number height is 60 mm and width of 8 mm. The minimum letter height is 40 mm and width of 6 mm. Letters & numbers should be of a good contrasting color and completely filled in.
- 5.5 The sail plan consists of only one jib and one mainsail.

## 6. Electric components

- 6.1 Only two servos are allowed. One servo controls the rudder. One servo controls the jib sheet and the mainsheet. Other controls for the adjustment of the sail or fixing it are not permitted. Other functions may not be used by these servos.
- 6.2 Any brand or type of radio equipment is permitted. Transmitters and receivers may have more than two channels, provided no more than two channels are used, one channel for sail sheet control only, and one channel for rudder control only. Use of radio transmissions from the boat except for the establishment and maintenance of a radio control link, control unit positioning information, signal strength, and battery status information while racing is prohibited.

## 7. Parts list

Mandatory parts to be used (part numbers under 7.1):

- when building an MM from kits / parts:
- Hull, Deck, Keel box
- Canopy
- Graupner, Graupner/SJ, or Hacker Model Production Keel
- Graupner, Graupner/SJ, or Hacker Model Production Ballast weight
- Graupner, Graupner/SJ, or Hacker Model Production Rudder

### 7.1 Overview of part numbers

#### Kits:

HCB2550K New Micro Magic Kit Racing MM (nMM)  
2014.V2 Kit Racing MM (Keel box: Modified version)  
2014.CV2 Kit Racing MM Carbon (Keel box: Modified version)

#### Prefabricated boats:

HCB2550A, HCB2550A+, HCB2550A++ nMM Prefabricated Boat Racing MM (nMM ARTR)  
2014.HoTT Prefabricated Boat Racing MM RFH (Ready for Hott) (Keel box: Modified version)  
(Precursor:) 2014.200 MM prefabricated Boat Racing MM "Ready to Race" (RTR)

#### Sets of parts:

HCB2550x10 Set of parts: New Micro Magic, CNC processed (nMM)  
2014.1 Set of parts, CNC processed (Hull, Deck, Canopy, Keel box) (Keel box: Modified version)

#### Single components:

HCB2550x11 Prefabricated Hull - Ready to Run (nMM ARTR)  
HCB2550x1 Hull New Micro Magic (nMM)  
HCB2550x2 Deck New Micro Magic (nMM)  
HCB2550x3 Keel Box New Micro Magic (nMM)

HCB2550x5 Keel New Micro Magic (nMM)  
2114.2 Keel Classic MM (Modified Version for modified Keel box)  
2014.2 Keel Racing MM (not modified for modified Keel box)  
HCB2550x4 Canopy, white New Micro Magic (nMM)  
2014.7 Canopy, white  
2014.71 Canopy, transparent  
2014.7C Canopy, carbon  
HCB2550x7 Rudder New Micro Magic (nMM)  
2114.3 Rudder Classic MM  
2014.3 Rudder Racing MM  
HCB2550x6 Ballast New Micro Magic (nMM)  
2014.4 Ballast Racing MM  
2114.4 Ballast Classic MM...

Note: Despite the same part number, MM parts were sometimes produced in various dimensions during the production history mentioned at the outset.

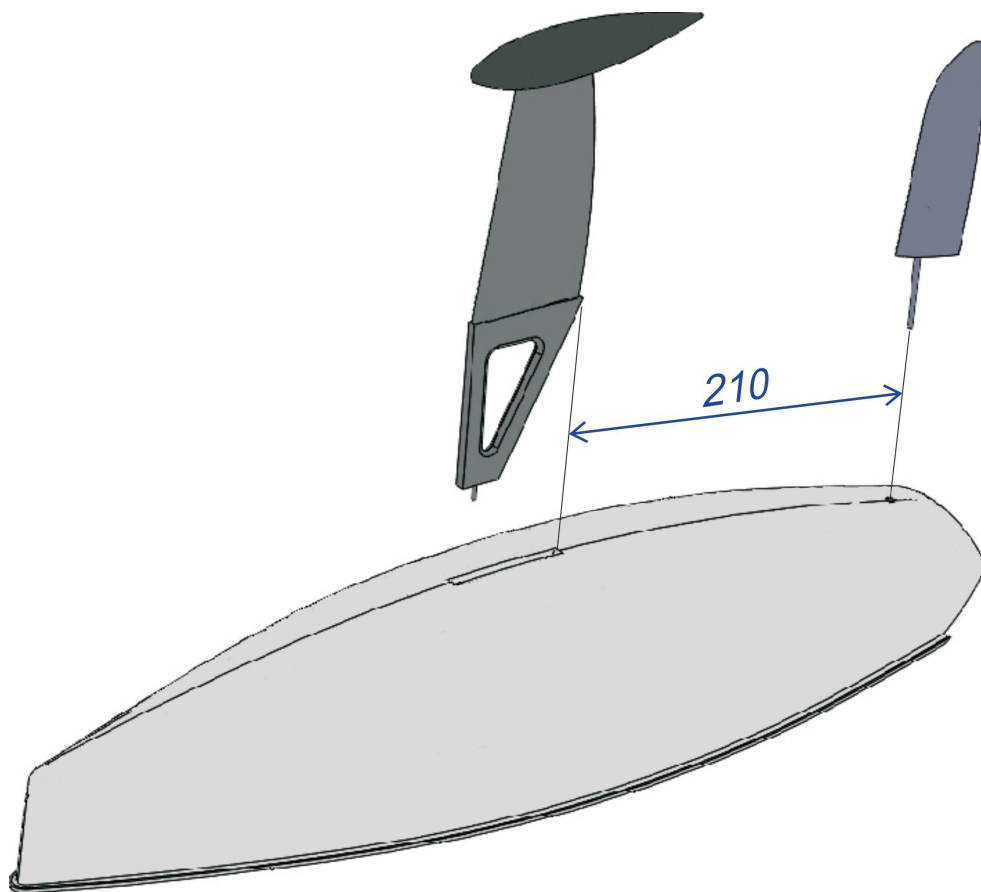


Figure 1: Position of Rudder Post on 2014.v2 Hulls

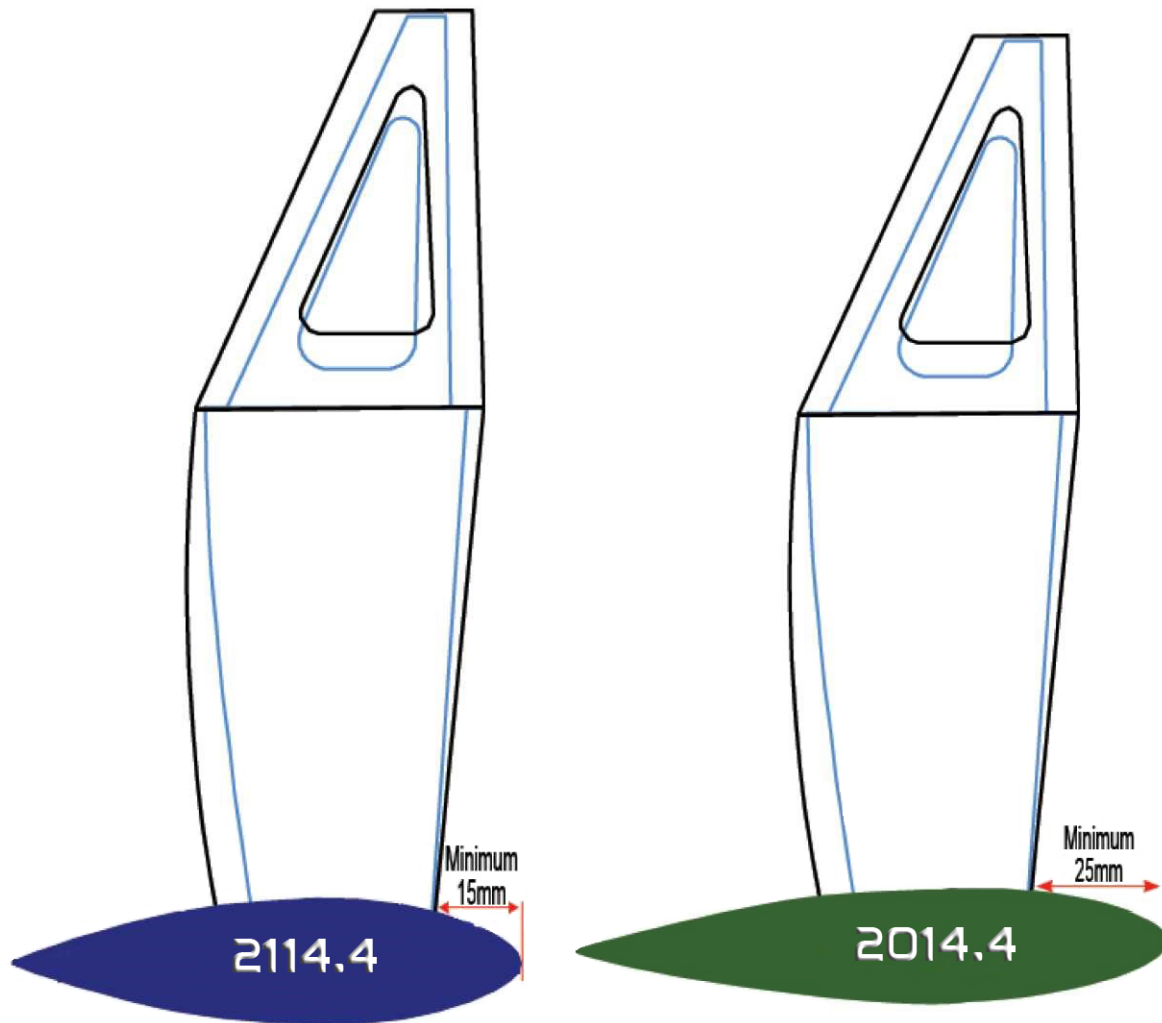


Figure 2: Positioning of Ballasts

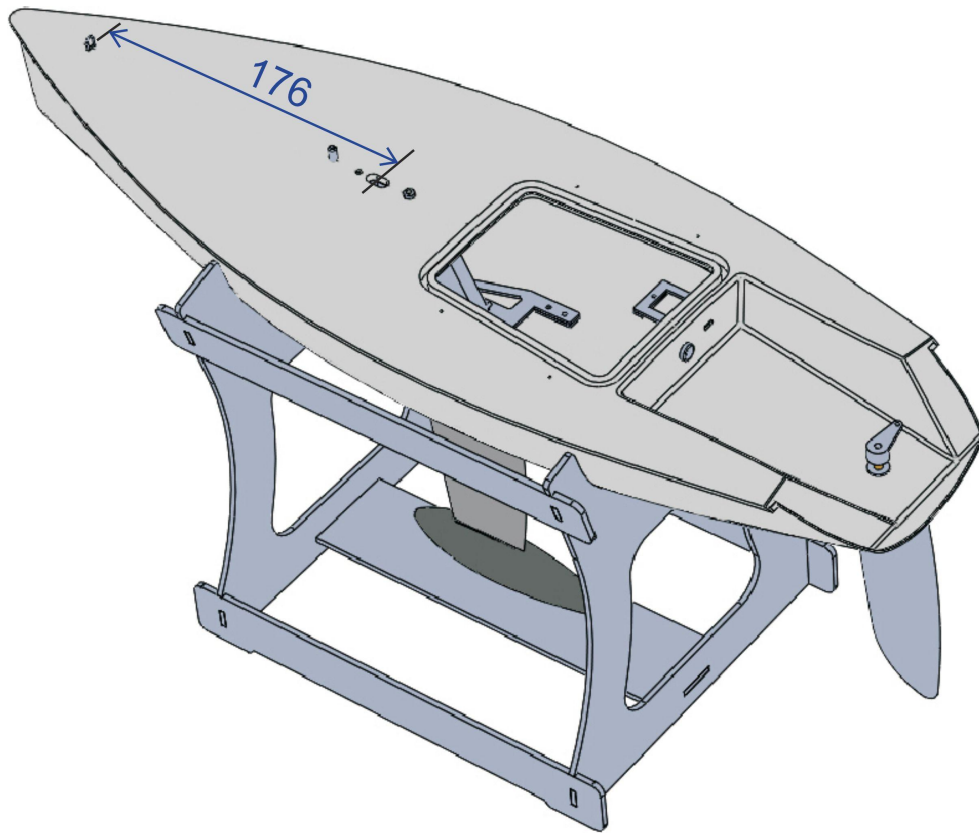


Figure 3: Attachment of Jib Boom Fastener on 2014.v2 Hulls

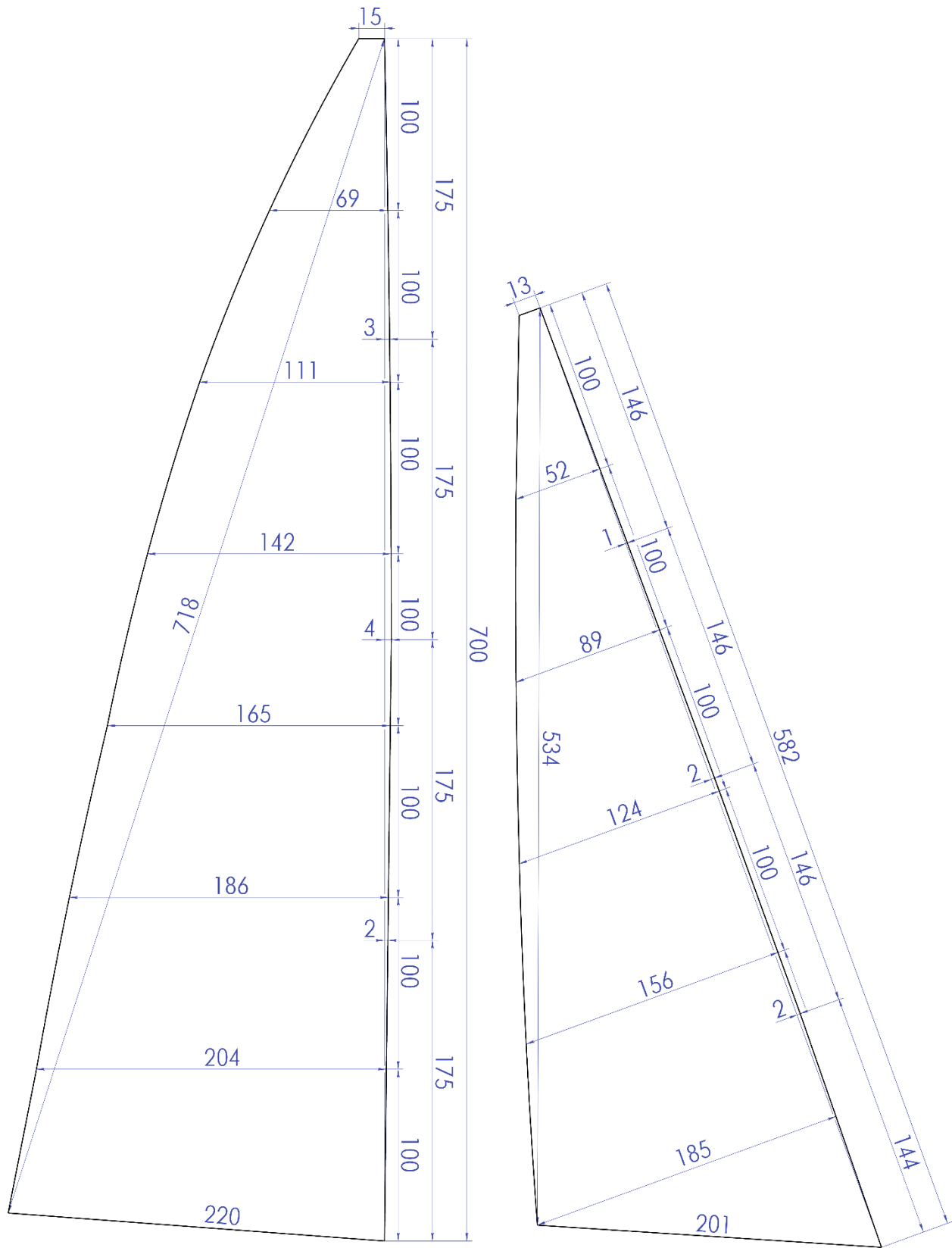


Figure 4: Sail Plan