

## Technical note N°2/2012

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### RC 44 Sailboat measurement - Boat weight policy

#### Minimum weight for boat "in racing condition":

Based on the recorded weight of 14 boats checked in November 2011 at Puerto Calero and in February 2012 in Puerto Calero, with the official load cell from the RC44 class, it was decided that the minimum in racing condition weight to reach to be compliant is 3710 kg.

This weight was obtained by subtracting 1% of the average weight from the fleet, from the heaviest boat. Compared to the construction weight of 3650 kg, the weight in racing condition take into account: water absorption from the hull, additional fitting added by teams and painting.

The weight in racing condition is the weight of the boat as described hereafter plus the weight of the rig (mast, boom and vang) as per measurement form.

#### Boat weight policy "in racing condition":

- All boats shall have an "in racing condition" weight to be able to join a race. If the weight is below 3710kg, the team will have to compensate the difference according to CR C.7.3 and B.2
- The in racing condition weight is written in the Measurement Form
- Any boat performing a major maintenance/repairation job in a boatyard shall be weighted
- The Class Office will try to organize a boat weight session once per season
- A team can ask to be weighted at his costs anytime during the season
- A new boat shall be weighted after 4 events and shall then reach the minimum in racing condition weight

For the Technical Committee,

Bertrand Favre

## **Boat weight measurement preparation**

### **Official measurement**

The *fundamental measurement* shall be carried by the official measurer (appointed by the Class) in cooperation with the production manager. It is the builder's responsibility to have the boat weighed when completed, inside the factory and before delivery.

When the measurement is carried during a regatta or a practice session, a Class representative or a Coutts Justin Design representative can run the measurement and record the data in cooperation with a Builder's representative.

### **Load cells**

The Class instrument is the reference weight machine for RC 44 measurements. Any other instrument used to perform the measurement shall show recent calibration certification. The results obtained shall be verified with the Class instrument (random check. Example: weight one bulb with the two different load cells). Always calibrate the cell after installation of the belts and lifting accessories ("Tare"). Measurement is not valid in case of wind (exceeding 10m/s) or rain.

The weighing procedure consist two measures:

1. Weigh the lifting accessories (slings, chains, etc...)
2. Lift the boat till no part touches the cradle anymore
3. Wait 1 minute for the reading to be stable (record the weight)
4. Put the boat back on the cradle in order to read maximum 1 ton
5. Lift the boat again till no part touches the cradle anymore
6. Wait 1 minute for the reading to be stable (record the weight)
7. Record the average of the two readings as the weight of the boat (hull and appendices).
8. Add the weight of the rig

All the boats shall be weighed in the conditions described below:
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### **Complete boat including**

- Stern scoop and bow + bowsprit and bowsprit system
- Bulb and keel fin + trim tab and trim tab system
- Rudder and rudder system + steering wheels
- Hydraulic system
- Bags and retriever bag
- Underdeck running rigging
- Hull electronics set
- Hatches

### **Items to remove from the boat**

- Mast, mast foot and shims, boom and vang
- Sails and battens
- Safety equipment
- Maintenance equipment
- Sheets and handles
- Any other moveable item

### **Water and fuel**

- Dry boat, including stern scoop, bilge and structural liner
- Full fuel tank
- Full hydraulic system