

Amendment to the Removal of Reference Weight from Handicap List (Year 2)

The removal of the former reference weight system is suspended until the following proposals are adopted for SC3 and SC3a :

SC3

6.5.6 Club Class

The purpose of the Club Class is to preserve the value of older high performance gliders, to provide inexpensive but high quality international championships, and to enable pilots who do not have access to gliders of the highest standard of performance to take part in contests at the highest levels.

- a. ENTRY The only limitation on entry of a glider into a Club Class competition is that it is within the agreed range of handicap factors for the competition.
- b. BALLAST Water ballast is ~~not~~ permitted up to a MTOW of 36kg/m².
- c. SCORING Championship scoring formulas shall include handicap factors.

SC3a

4.2 MAXIMUM TAKE OFF MASS

d. Club Class –

If any form of ballast in the wings is used, Take Off Mass (TOM) limited to the lowest of:

1. wing area (m²) * 36 (kg/m²)
2. Maximum certified Take Off Mass with water according to Type Certificate Data Sheet (TCDS).

If not, ~~No ballast permitted and~~ TOM limited to :

1. Maximum certified weight of non-lifting parts plus weight of lifting parts (wings without any form of ballast); or
2. Maximum certified Take Off Mass without water according to Type Certificate Data Sheet (TCDS).

Appendix 3 : IGC Handicap Lists

General rules for the IGC Club Class:

Only Single Seat Gliders with a handicap index of 1.09 or lower are eligible.

~~Retrofitting a glider with retractable landing gear increases the Handicap by 0.02.~~

~~Retrofitting a glider with winglets increases the Handicap by 0.01. (deplaced)~~

The pilot is responsible for providing documentation to prove that his glider will be operated within the legal weight limits.

The handicap is based on the performance at a stated glider reference weight, which is ~~based on~~ corresponding to 36kg/m² a typical empty weight plus 110 kg.

Where a glider is flown at a higher weight by necessity (without any form of ballast in the wings), the handicap will be increased by 0.005/15kg, rounded to the closest step of 15kg. ~~for each 10 kg or part thereof that the glider exceeds the base handicap weight.~~

Where a glider is flown at a lower weight by necessity (glider not equipped with water ballast that may be discharged in flight or that cannot be used anymore), the handicap will be decreased by 0.01 for each complete 30kg below the weight corresponding to 36kg/m².

Technical check process that determines the handicap :

- Glider is using ballast

The TOM is corresponding to a maximum of 36kg/m² (or the MTOM of the TCDS if more

restrictive).

Handicap is applied without any change.

➤ Glider is not using ballast

The TOM must be below or equal to the MTOM w/out water of the TCDS if published.

If $[\text{Mass}(36\text{kg}/\text{m}^2) - 30\text{kg} < \text{TOM} \leq \text{Mass}(36\text{kg}/\text{m}^2) + 7,5\text{kg}]$, Handicap is applied without any change

If $[\text{Mass}(36\text{kg}/\text{m}^2) - 60\text{kg} < \text{TOM} \leq \text{Mass}(36\text{kg}/\text{m}^2) - 30\text{kg}]$, Handicap is decreased by 0.01

If $[\text{Mass}(36\text{kg}/\text{m}^2) - 90\text{kg} < \text{TOM} \leq \text{Mass}(36\text{kg}/\text{m}^2) - 60\text{kg}]$, Handicap is decreased by 0.02...

If $[\text{Mass}(36\text{kg}/\text{m}^2) + 7,5\text{kg} < \text{TOM} \leq \text{Mass}(36\text{kg}/\text{m}^2) + 22,5\text{kg}]$, Handicap is increased by 0.005

If $[\text{Mass}(36\text{kg}/\text{m}^2) + 22,5\text{kg} < \text{TOM} \leq \text{Mass}(36\text{kg}/\text{m}^2) + 37,5\text{kg}]$, Handicap is increased by 0.01...

➤ In any case :

Retrofitting a glider with retractable landing gear increases the Handicap by 0.02.

Retrofitting a glider with winglets increases the Handicap by 0.01.

Argumentation

Why the removal of the reference weight is not possible without any new system to replace it?

By removing the reference weight in club class, there would exist 2 masses to control that pilots fly in the legal weights limits.

- Maximum mass of non lifting parts
- MTOM without water (not all the gliders have one)

It is not easy to perform. It is a big work to make before a competition (that will take a lot of time during the technical checks by rigging and de-rigging the gliders near the scales) and also before choosing a glider for pilots.

→ These kinds of control are not realistic... because there are not simple.

Brian Spreckley told us in last meeting, "Weight is like gold for pilots".

→ It is not realistic to let the club class without weight controls. The club class would be the only class in this case!

By removing weight reference, new problems would appear for the definition of handicaps (in addition of the cheating problem):

- Some gliders have different versions with different maximum mass of non lifting parts. Discus is limited to 240kg, DiscusBT is limited to 290kg and DiscusBM is limited to 320kg. If there is no mass restriction, the same handicap will apply for up to 80kg of weight difference. The ASW24 and the ASW24E are in the same case with 55kg of difference between the 2 maximum mass of non lifting parts.
- Some gliders don't have a MTOM without water. It is really easy to perform heavy reparation of the wings that legally lets pilots fly much heavier gliders than today for the same handicaps.

→So we need a control of the masses in club class that is simple!

Why authorising the ballast in club class until a TOW of 36kg/m²?

For gliders or pilots that are light, it is a value that can be reached by most of the gliders with only few liters of ballast instead of lead that was necessary to reach the “old” reference weight. The spirit of the club class will not change. This rule will not allow Discus or ASW24 to fly with a typical 190L of ballast for a TOW of more than 500kg!

This rule will make the life easier for the organisers and for the pilots. (some light pilots in club class have to put up to 25/30kg to reach the former reference weight). This rule will be safer for them because the lead in the fuselage will be replaced by few liters of water in the wings.

The 36kg/m² will not be too far from the old value of reference weight so the handicaps will not change for most of them.

For gliders above the 36kg/m² without ballast (there will not be a lot of gliders in this case), the increase of its handicap will be limited compared to the one of the old system.

For gliders well below the 36kg/m² - not equipped with a system of ballast or that have system of ballast not usable - (there will not be a lot of gliders in this case: LS1c, Cirrus STD, ASW15, pegase club...), the handicap will be decreased.

**So all the club class gliders in the old system will be competitive in the new system!
Moreover club class gliders that were not competitive in the old system could become competitive in the new one (ASW15, LS1c, Cirrus STD...)!**