

1) Background

Submission 164-18 modified RR43.1(b) {*new RR50.1(b) in 2021-2024 RRS*} by: (a) increasing the standard trapeze harness maximum weight limit from 2kg to 6kg, and (b) deleting the option for classes to change the harness weight from 2kg up to 4kg in their class rules.

The reasons for the increased weight, as stated in 164-18 were: **(a) the addition of a quick release mechanism is likely to increase the weight of the overall trapeze harness** and **(b) Trapeze harnesses are also now carrying lumbar support to protect the crew and therefore an increase in the maximum weight is required to support design changes**.

In addition, to justify the deletion of the option to adjust the trapeze harness weight in class rules, it was stated that: ***This will require less active class rule management, which is currently not happening.***

No other reason was given for the proposed changes, and during the Int. Classes Committee (ICC) meeting at the 2018 Annual Conference the submitter only spoke about the need to increase the harness weight because of additional support being introduced in newer designs, without ever mentioning the fundamental changes of enforcing this new limit to all cases and deleting the class rule modification option.

2) Submission 046-20 explanation

Submission 046-20 proposes to bring back the definitions as they were in RR43.1(b), on the belief that the changes brought into the rules by 164-18 (a) are not justified by the data from existing products and current practice in both WC and National Classes around the world, (b) are introducing health and safety hazards to the athletes, and (c) are creating conflicts between the trapeze harness and clothing weight rules, by suggesting (as the submitter explicitly said during the 2018 ICC meeting) that additional functions may be introduced into the harnesses (such as buoyancy and body protection, which clearly belong to other items of equipment and whose weight is regulated by the clothing weight limitation).

3) 2kg weight limit vs 6kg weight limit

- The current standard limit of 2kg is adequately covering most of the trapeze harnesses on the market today. Lumbar support accounts for a very small weight increase (as confirmed by extensive measurements during the 2019 Olympic Test Event) but in a small number of cases it may be necessary to change the standard weight of 2kg by a few hundred grams to make those harnesses rule-compliant.
- Quick release systems (a) are not going to increase the weight substantially, (b) they are not meant to be mandatory, and (c) they will be introduced as optional equipment -but not before 2023.
- Any other additional function, such as impact protection or extra buoyancy, should be left to special pieces of equipment, which are also governed by the clothing weight rules (and which may also be modified by class rules, if a class desires to add extra items such as impact vests).
- Analysis of the current situation in the trapeze-carrying World Sailing Classes and also in a number of National Classes from GBR, GER, NED and AUS reveals that the majority of Classes is working with the current standard limit of 2kg. This has been in place since the 1997 edition of the RRS, and through these 23 years all Classes had the option to modify it –and a number of classes have done so.
- The currently optional maximum permitted (through class rule changes) limit of 4kg is more than adequate to cover the introduction of quick release mechanisms, lumbar or other support and

differences in sizing (from small body types to large ones). As an example, two of the Classes for large-bodied crews, the 505 and the FD, are having 2kg harnesses in their rules –but they change the clothing weight limits to 10kg. The Tempest, on the other hand, is using a 3.5kg harness with standard 8kg clothing weight limit. A recent inquiry to one of the major harness manufacturers revealed that the difference in weight between the small and large sizes of the same model is well below half a kilo.

4) Practical considerations

- The RRS and Class Rules apply to all sailors, whether they are racing on the Olympic level or the Club weekend races. A small minority of club sailors which may not be very careful with selecting their equipment is not an excuse for a rules change that will disrupt the classes management and bring unintended consequences to the vast majority of the sailors.
- Even non-class or rating system boats have to respect the RRS. To use a trapeze they have to deactivate RR49.1 in some sort of “class” rule or the NoR. If they can do that, then they can certainly go with 2kg or specify something else as permitted by the new RR50.1(b) if they wish so.
- Moving from 2kg to a higher value as the standard rule weight and then allowing a class to modify it to a lower value in the class rules means that as many as 2/3 of the WS trapeze Classes (and 3/4 of the WS and National Classes reviewed) must consider urgently if they want to have these heavier harnesses or move to lower limits. This is not easy since class rule changes have to follow certain procedures (i.e. annual meetings) and usually require strong majorities of 2/3 or 3/4 of their members.
- Keeping the lower value as the standard will allow those classes which wish to review the status of their harness weights (adding quick release mechanisms at some point etc.) to do so at their own pace, during their next general meetings. At the same time those classes who are satisfied with their current status do not need to take any action.
- Health risks are serious: a weight increase from 2kg to 6kg probably means that such a harness is having enough water absorbing materials built-in to act at the same time as a 3-4kg ‘water jacket’. This piece of equipment has been banned by the RRS since the 1997-2000 edition because of the known health issues it was causing to sailors. Allowing this universally unwanted side-effect to re-enter the sailing scene is totally unacceptable.
- Safety issues are also obvious: while a 6kg floating harness will not be felt like a 6kg item by a swimming sailor of a capsized boat, it will definitely feel like a 6kg item when he tries to climb back in after righting his boat. It will be also harder for a rescue team to pick an injured sailor from the water.
- Rules should be changed when we need to solve a known and existing problem. In this case there doesn’t seem to be any real issue with trapeze harnesses, to justify such a disruption as the one caused by 164-18.
- Classes are capable of managing their own rules, according to the best interests and preferences of their sailors. There is no reason for enforcing a ‘one-size-fits-all’ standard rule for such technical details; they should be left to be customized on a case by case basis.

5) WS & National Classes harness weight analysis

An analysis of trapeze harness weights as stated in their Class rules has been performed for all the WS trapeze classes and all the trapeze National classes from GBR, GER, NED, AUS and USA. When a

class rule did not define a trapeze harness weight, the default 2kg RRS limit is to be considered instead.

- 65% of the WS Classes are keeping the 2kg limit, and only 15% have opted for the 4kg maximum permissible weight limit.
- Exactly 2/3 of the WS Classes which have rules in the Standard Class Rules (SCR) format are keeping the 2kg limit. All of the SCR classes have reviewed their class rules and have rewritten them in this format at some point within the last 17-18 years. The template they have used provides the appropriate wording for changes in the harness and clothing weights, so they had considered the options when re-writing their rules: only 1/3 still opted to change the 2kg limit.
- Almost the same percentage (64%) of Non-SCR classes is keeping the 2kg limit. The remaining 36% had obviously reviewed their rules at least once after 1997, opting for higher weight limits.
- Out of 13 national classes with trapeze, 12 are keeping the 2kg limit. 5 of them have SCR rules which means they have reviewed their rules and considered the harness weight limits at least once in recent years.
- Out of those 13 National Classes, only 3 are from GBR: all 3 are SCR Classes and only one of them has an increased harness weight: This is the Hornet Class with 3.5kg (not even the 4kg maximum possible). Submission 164-18 came from the RYA, supposedly after discovering a serious problem with trapeze harnesses in their fleets.
- The percentage of classes which have modified their harness weight rules shows that indeed there has been active rules management by classes, against the statement given in the reasons of 164-18.
- Almost all Board classes are including their harness weight in the clothing weight (which is in most cases 9kg). This is something that should be covered in the rules in a better way.

GBR has 11 national classes but only 3 use a trapeze

<https://www.rya.org.uk/racing/national-classes/Pages/hub.aspx>

GER has about 45 national classes and only 7 use a trapeze

<https://www.dsv.org/segeln/wettsegeln/klassenvereinigungen/>

There are about 20 classes in AUS but only 2 use a trapeze

<https://www.sailingresources.org.au/class-assoc/class-list/>

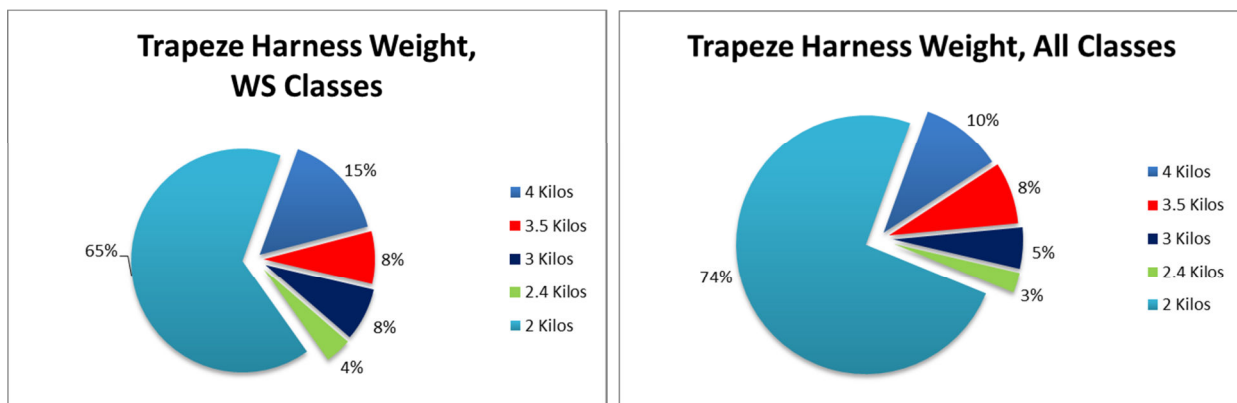
There are 25+ national classes in USA, but none is using a trapeze

[https://www.ussailing.org/competition/one-design-central/?utm_source=One-](https://www.ussailing.org/competition/one-design-central/?utm_source=One-Design%20Home%20Page%20Square&utm_medium=hp-banner&utm_campaign=one-design-home-page#class-finder)

[Design%20Home%20Page%20Square&utm_medium=hp-banner&utm_campaign=one-design-home-page#class-finder](https://www.ussailing.org/competition/one-design-central/?utm_source=One-Design%20Home%20Page%20Square&utm_medium=hp-banner&utm_campaign=one-design-home-page#class-finder)

There are at least two trapeze classes in NED (one of them in common with GER)

<https://www.watersportverbond.nl/kenniscentrum/wedstrijdsport/klassen>



WS Classes			
Class	Harness Weight	Clothing Weight	Notes
420	4	9	SCR
470	3	10	SCR
505	2	10	
29er	2	8	SCR
49er/FX	2	8	SCR
B14	2	8 - 10	SCR, 10kg from SIs
Contender	4	8	
FD	2	7 - 10	7 kg Helm, 10kg Crew
Fireball	3.5	8	
FJ	2	8	SCR
Int.14	4	10	
Laser II	4	8	
MPS	3	10	SCR
RS500	2	8	SCR
A-Cat	2	8	
Dart 18	2	8	
Formula 16	2	8	SCR
Formula 18	2	8	SCR
Hobie	2	8	
Nacra 17	2.4	8	SCR
Nacra F18	2	8	
Nacra Infusion	2	8	SCR
TopCat	2	8	
Tornado	2	8	SCR
Tempest	3.5	8	SCR
Boards		9	Harness included in clothing weight

National Classes			
Class	Harness Weight	Clothing Weight	Notes
GBR			
Hornet	3.5	10	SCR
National 18	2	8	SCR
Redwing	2	8	SCR
GER			
Ixylon	2	8	
Javelin	2	8	
Jeton	2	8	
Korsar	2	8	
Sailhorse	2	8	SCR, NED too
Streamline	2	8	
Teeny	2	8	
NED			
Valk	2	8	SCR
AUS			
125	2	8	
Mosquito	2	8	

