

2024 Olympic Sailing Competition

Olympic Equipment

A submission from the Hungarian Yachting Association, the Israel Sailing Association, the Romanian Yachting Federation, the Trinidad and Tobago Yachting Association, the International 470 Class Association, the International Finn Association, the International Formula Kite Class Association, the International KiteFoil Class Association, the International TwinTip:Racing Class Association, the International TwinTip:Freestyle Class Association and the International IKA Open Class Association

Purpose or Objective

To finalize the equipment for the 2024 Olympic Games.

Proposal

Current Event & Equipment	2024 Events – May 2018	2024 Equipment Proposal
Men's Windsurfer – RS:X *	Retained	Retain RS:X
Women's Windsurfer – RS:X *	Retained	Retain RS:X
Heavyweight Men's One Person Dinghy – Finn	New Event - Mixed One-Person Dinghy	Select New Equipment
Men's Two Person Dinghy – 470	New Event - Mixed Two Person Dinghy	Select New Equipment
Women's Two Person Dinghy – 470	New Event Mixed Kite	Select New Equipment

** Note the equipment for this event is under Olympic Equipment Re-evaluation if retained.*

Equipment Criteria for Mixed One-Person Dinghy:

Boat concept: Displacement (Non-Foiling) and hiking

Same hull for Men and Women with different rig concept: No

Single mast and sail: Yes

Sail size for Men: 10.6m²

Sail size for Women: Criteria to be approved by Council through other submissions

Suitable wind range for competition: 4 to 30 knots and different sea state (flat, choppy, swell, ...)

Athlete weight range for Men: 87-100+kg.

Athlete weight range for Women: Criteria to be approved by Council through other submissions. Preferably a weight range different from the one provided by the women one person dinghy event.

Builder / Class structure: Measurement controlled Monotype, and:

- Possibility for identical supplied hulls at Olympic Games.

- Possibility for multiple licensed builders.
- Equipment available worldwide without restrictions.
- The selected class should be run by a well-established worldwide class authority with well-developed class rules following the ERS and SCR format.

Format proposal: Various options, including:

- Duomix (results are based on a mixed format of relay and team cumulated time), evolving qualification system with selection, repechage and elimination. Winner takes all final. Lower pumping limit or free pumping, variable courses to adapt and make the most of sailing conditions and course area.
- Or format detailed in a separate submission but not binding to the present submission
- Or "Format criteria to be approved by Council through other submissions

Other Equipment considerations:

- GRP hull
- No trapeze
- The equipment shall enable free kinetics.
- The equipment shall be seaworthy and capable of handling extreme wind and sea conditions.
- The equipment should have a long lifespan and high resale value for a high sustainability level.

Equipment Criteria for Mixed Two Person Dinghy:

Boat concept: Displacement (Non-Foiling)

Skipper weight range: 55-70 kg.

Crew weight range: 65-80 kg.

Sail size: Mainsail 9-10 m², Jib 3-4 m², Spinnaker 13-14 m².

Sail types: Mainsail, headsail and spinnaker. Yes

Suitable wind range for competition: 5-35 knots and any respective sea state suitable for racing

Builder / Class structure: Measurement controlled

Format proposal: Various options, including:

- Fleet race – trapezoid, windward leeward, triangle courses, with downwind slalom and /or middle gates.
- Or format detailed in a separate submission but not binding to the present submission
- Or "Format criteria to be approved by Council through other submissions

Other Equipment considerations:

Glass fibre reinforced with polyester construction; Symmetrical spinnaker; Single trapeze rig; Class rules to permit adjustable and optionally arranged rig and sail control systems; Option in class rules to amend RR42 and permit kinetics and physical action by the athletes; The selected class should be run by a well-established worldwide class authority with well-developed class rules following the ERS and SCR format.

Equipment Criteria for Mixed Kite:

Board concept: Foiling

Weight range men: 65-85kg

Weight range women: 50-70kg

Kite size for Men: 7-21 m².

Kite size for Women: 7-21 m².

Kite system: RAM-Air (foil-kite)

Number of permitted kites per event: 4 high performance, high aspect ratio kites

Number of permitted hydrofoil systems per event: 1 high performance, high aspect ratio hydrofoil system

Same hydrofoil system, board and kites scheme for men and women.

Equipment to be licensed once per Olympic cycle to ensure level playing field. The proposed timeline is that the licenced equipment will be confirmed 3 years before the next Olympic Games. This is not selecting new equipment but licencing improved models of the same equipment. The selection criteria should include manufacturing tolerances, quality management, worldwide distribution network and time, and other criteria as outlined in the current Olympic Classes contract.

Suitable wind range for competition: 5-40 knots

Builder / Class structure: Registered Series Production Scheme with multiple licensed builders. All equipment within a model/series must be identical, and must be available worldwide without restrictions. World Sailing, in close cooperation with the class, manages the control of builders and licenses equipment.

Format proposal: Various options, including:

- Short Track Relay on a short windward/leeward course, with team members (male and female) covering laps alternating, with a changeover zone. Competition may consist of an opening series in heats and a knockout stage including winner takes all final or other form of final (i.e. best of x race wins). Proposed target time 10 minutes for 4 laps, each team member covers 2 laps with a total of 3 changeovers.
- Or format detailed in a separate submission but not binding to the present submission
- Or "Format criteria to be approved by Council through other submissions

Other Equipment considerations: The proposed registered series production equipment scheme is fully supported by sailors, the industry and the wider kiteboarding community over a one-design solution and reflects the IOC "urban sports" vision with variety of equipment similar to what is common in snowboarding, skateboarding and surfing. Equipment will be "frozen" per Olympic cycle to ensure confidence and reliability in equipment investment while ensuring controlled evolution from one Olympic cycle to the next. The selected class should be run by a well-established worldwide class authority with well-developed class rules following the ERS and SCR format.

Current Position

As above.

Reasons

1. Mixed One Person Dinghy

1.1 Suitability for athletes ranging from 87 to 100+ kg.

The chosen Men's equipment shall be suitable for athletes ranging from 87 to 100+ kg.

[HUN only:

The women's equipment shall be suitable for women whose physique is not suited to the Women's One Person Dinghy event (currently the Laser Radial). This would allow a wide group of women sailors with a weight of below 70 kg to participate in the Olympics in a

single-handed dinghy event and foster hereby women sailing around the world (especially Asia, South-America, Southern-Europe, Middle-East).]

At the 2017 November Conference Council set some key criteria to define the 2024 Events and Equipment. One of the five criteria was to “Ensure that men and women of different physiques have an opportunity to compete “

With the increase in the size of people in recent years, a 87 to 100+ kg body range is becoming the norm for many young people in many parts of the world. At the same time, it is a range that allows sailors who may have completed an initial Olympic cycle in another class to move into a class that is more suited to their adult body evolution. Sailors can therefore maintain that body type for a number of years so are not forced to leave sailing when they outgrow a class.

Sailors can train physically and develop muscles that protects their bodies against injury and improves performance without worrying about becoming too heavy to be competitive.

The equipment shall allow the sailors to use free kinetics and showcase physicality and athletic skills to complete the range of skills across all the athletes in the Sailing Olympic competition.

The equipment shall be one design and meets strict class rules refined over the years to ensure the evenness of competition. However, slight changes in masts and sails within the allowed tolerances should allow sailors from a relatively wide weight range (wider than other current Olympic classes) to be able to find equipment that allows them to be competitive without needing “the optimal body type” that exists in many classes. The result should be an equipment/class where the sailors make the difference not the equipment.

1.2 Availability and reliance on builders and market

The builders shall be independent to the chosen class. They should have proven their technical and professional capacity by staying in the market over the years. They should be able to adjust to the market demand. Equipment builders should demonstrated expertise and experience by supplying quality products to the fleet.

Multiple builders across the world are important to respond to high volume distribution and production demands in various part of the world and avoiding high import taxes.

1.3 Reliable and sustainable equipment

The chosen equipment should demonstrate reliability with quality control, performance and longevity in order to reduce costs. Hull and mast should last at least a four years campaign while remaining performant with a proven longevity. Hull and masts should keep a high resale value to encourage a strong second hand market and class growth.

The chosen equipment should prove seaworthiness with high buoyancy level and capability to handle various wind and sea conditions in order to maximise safety while allowing spectacular racing in great sailing conditions.

[HUN only:

Based on the above criteria, a boat like the Finn would best fit the male equipment.

1.4 The women's equipment shall be suitable for women whose physique is not suited to the Women's One Person Dinghy event (currently the Laser Radial). This would allow a wide group of women sailors with a weight of below 70 kg to participate in the Olympics in a single-handed dinghy event and foster hereby women sailing around the world (especially Asia, South-America, Southern-Europe, Middle-East).]

2. Mixed Two Person Dinghy

The equipment for the Mixed Two Person Dinghy event must be:

- 2.1 Affordable - the selected equipment must be the most affordable two-person boat at the Olympic Games, and particularly affordable for emerging nations which is critical for the ongoing development of sailing and aspiration to the Olympic Games. For example the price of a ready to sail campaign-level 470 Class dinghy starts from €13,000. The average ready-to-race 470 dinghy price is 25% to 30% lower than the price of the other two-person Olympic classes, and about 2½ times the price of the current one-person dinghy men and women class. GRP construction prohibiting expensive materials is a must.
- 2.2 Mainstream – a 3-sail 2-person dinghy represents universal and mainstream sailing. A boat like the 470 would continue as the proven flag-bearer for two-person dinghy sailing at the Olympics. A technical and fully adjustable non-foiling dinghy with symmetric spinnaker challenges sailors to be fully accomplished in all aspects of sailing: tuning, tactics, strategy, technique, boat handling, agility and teamwork.
- 2.3 Universal – a boat like the 470 has worldwide popularity and offers a consistent and proven pathway from youth to Olympic.
- 2.4 Accessible - whether newcomer or elite, the selected boat should offer widespread participation and racing opportunities, and be flexible to different racing environments and formats, whilst offering a level field of tactical racing and high performance from 5-35 knots.
- 2.5 A Level Field Provider – a boat like the 470 is a well-controlled one-design class, with excellent rules and building specification, delivering a level playing field, with equipment provided by manufactures around the world. The 470 has been refined and upgraded through the years to become a modern, mature and proven racing machine.
- 2.6 Media Appeal – a boat such as the 470 lends itself to multiple race format options, which can better present the style of sailing than the limitations of the current Olympic format. Better use of on board cameras, headcams and audio will better convey the intensity of racing, precision of team work and the range of skills needed to sail such a boat.
- 2.7 The boat must be suitable for light to medium weight athletes hence the limitation to a single trapeze rig with the proposed sail area.
- 2.8 The boat should be suitable and responsive to kinetics action by the athletes, with class rules that permit these actions by amending RR42.

3. Mixed Kite

- 3.1 A detailed description of the format and equipment proposal including slideshow and explanatory video will be made available online.
 - 3.2 Format:
 - (a) A mixed kiteboarding relay event is a competition format that does not otherwise exist in Olympic Sailing and provides a unique signature for the event as encouraged by the IOC.
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- (b) A consistent format (men and women racing the same course and do not compete in different disciplines or on separate courses) reduces coaching costs compared to a multi-discipline event.
- (c) The relay format does not require the male and the female team members to sail on the same boat, making the format friendlier to cultures that do not encourage cross gender interaction.
- (d) As a new discipline of sailing, MNA acceptance for a first-past-the-post racing format based on windward/leeward courses increases wider acceptance.
- (e) Rules and officiating are mostly identical with dinghy sailing.

3.3 Equipment:

- (a) The registered series production equipment scheme has been successfully used in Sailing World Cups from 2014 to 2016, in the 2018 Sailing World Championships and is the chosen equipment option for the Central American & Caribbean Games, the PanAmerican Games, the World Beach Games and the African Beach Games. Sailors and MNAs have already invested in compliant equipment and are familiar with the equipment and procedures.
 - (b) The principle of registered series production equipment represents universal and mainstream kiteboard racing with world-wide accessibility and popularity. There is no need and no demand for one-design monotypes as this does not reflect the reality of kiteboard racing and would stand against the demands of the sailors.
 - (c) Registered series production equipment ensures state-of-the art equipment for each Olympic Games while avoiding an arms race. New builders and equipment can get licensed once every Olympic cycle, allowing the market to expand and ensuring strong competition between builders, resulting in better quality at lower prices without the risks associated with monopolies.
 - (d) All licensed registered series production equipment follows In-House Certification principles, minimizing measurement and equipment inspection costs at events. In case of selection the process will be included into the World Sailing in-House Certification program.
 - (e) Using the same hydrofoil system, board and kite scheme for men and women reduces equipment investment and coaching costs.
 - (f) The model of equipment "supply", together with "bring your own" is successfully implemented by other equipment sports like snowboarding, skiing, surfing, skateboarding and other "urban" sports and adds with its "look and feel" to the appeal to a young audience, as encouraged by the IOC.
 - (g) The principle of the proposed registered series production equipment scheme (including "bring your own") has been already successfully proven for the Youth Olympic Games with a large variety of different brands and models winning races and competitions. The sailor is winning the race, not the equipment.
 - (h) A Registered Series Production Equipment scheme with multiple brands / builders enables sponsorship from manufacturers for sailors and national teams. It is expected that good sailors will not have to buy their equipment as it will be provided for free by competing manufacturers for publicity reasons.
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- (i) It is expected that the majority of the higher ranked competitors (and their MNA's) will not have to purchase equipment and will be able to enter sponsorship agreements with manufacturers.
 - (j) The vast majority of contenders for the YOG places (including many from emerging and developing nations) have competed on fully sponsored equipment.
 - (k) A Registered Series Production scheme allows sailors to choose equipment suitable for their body physics, resulting in a wide range of sailor types competing on a level playing field with equipment provided by manufacturers around the world. This is only possible through the availability of different models of equipment, with the same overall performance around the race course:
 - (i) In the current Men's Formula Kite Top 10, the size of the sailors ranges from 168 to 198 cm, and the weight ranges from 69 to 85 kg.
 - (ii) In the current Women's Formula Kite Top 10, the size of the sailors ranges from 158 to 180 cm, and the weight ranges from 49 to 69 kg
 - (l) Multiple kites do not only ensure racing in the widest possible wind range but are also a safety consideration. Kiteboards are able to sail in very high winds, ensuring that World Sailing can provide content to TV and media no matter what the conditions are.
 - (m) Multiple kites do not increase equipment costs as each kite is used proportionately less. Furthermore, sailors automatically have spares with them. A strong second hand market with high resale value exists for this type of equipment.
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