



IRC Congress 2020

Proposed IRC Rule Changes for 2021 from the IRC Technical Committee

After IRC Congress 2020 version with Proposal 10 – Flying Headsails updated – changes are highlighted in **yellow**

A word used as defined by ERS is printed in **bold**.

A word used as defined by IRC Definitions is printed underlined.

Proposed additions are printed in **blue**.

Proposed deletions are printed in ~~struckthrough-red~~.

Effective Date: IRC Rule changes apply from 1st January 2021, except in countries with June-May validity, where changes apply from 1st June 2021. See Rule 8.12

Original Version: 201026

This Version: 3



1. IRC RULES AND DEFINITIONS - WHISKER POLE

Reason for change: The 2021-2024 ERS definition of Whisker Pole is now compatible with the IRC Definition and therefore there is no need for the IRC definition.

2021-2024 ERS Definition of **Whisker Pole**:

F.1.4(d)(ii) WHISKER POLE A **spar** attached to the mast **spar** and **connected** to a **headsail clew**.

2021-2024 ERS Definition of **Connect**:

C.6.3(g) CONNECT To bring together or into contact so that a real link is established by which one item affects the function of the other; therefore includes "attached to" and "sheeted to" the corner of the **sail**.

Amend IRC Rules as follows:

- 21.3.5 **Boats** will be rated according to whether they use a **spinnaker pole**, ~~whisker pole~~ **whisker pole** and/or a **bowsprit** according to the following configurations:
- (a) No **spinnaker pole** (~~spinnaker~~ tacked on deck) or a centre line **bowsprit** only.
 - (b) An articulating **bowsprit** only.
 - (c) **Spinnaker pole(s)** and/or ~~whisker pole(s)~~ **whisker pole(s)** either with or without a **bowsprit**.

Amend IRC Definitions as follows:

- STL The greatest horizontal distance from the forward face of the **mast spar**, ignoring any fittings and tracks, measured on or near the centreline of the **boat**, to any of the following:
- the extremity of the **spinnaker pole**, ~~whisker pole~~ **whisker pole** or **bowsprit**, ignoring any **outer limit marks**;
 - the ~~spinnaker~~ tack point on deck projected vertically as necessary;
 - if a headsail may be tacked forward of the forestay, the headsail tack point on deck projected vertically as necessary or to the extremity of the **bowsprit**.

Delete IRC Whisker Pole definition

~~Whisker Pole — A **spar** attached to the mast **spar** to set a headsail. ERS F.1.4(d)(ii) does not apply.~~

Effect: Include the ERS definition of **Whisker Pole** in IRC Rules



2. IRC DEFINITIONS A5 - HEADSAIL AND SPINNAKER

Reason for change: ERS now includes a definition for headsail and spinnaker. These amendments clarify that ERS definitions of headsail (G.1.3(d)) and spinnaker (G.1.3(f)) do not apply to IRC definitions.

Amend IRC Definitions Spinnaker and Headsail as follows:

- Spinnaker **ERS G.1.3(f)** shall not apply. A spinnaker is defined as a **sail** set forward of the foremost **mast** with **half width** (measured as a spinnaker) equal to or greater than 75% of **foot length** and without battens. A spinnaker may be set reefed by any means while *racing* under IRC provided that when measured in any reefed condition it continues to satisfy the IRC definition of a spinnaker.
- Headsail **ERS G.1.3(d)** shall not apply. Any **sail** tacked down forward of the foremost **mast** which does not meet the definition of a spinnaker. A headsail may be hoisted from above the forestay rigging point.

Effect: To be clear that ERS definitions of headsail and spinnaker do not apply to IRC.



3. IRC RULE 22.6 - CREW POSITION

Reason for change: After an IRC submission to World Sailing The 2021-2024 RRS has removed the term “sitting on the deck” from RRS 49.2. Therefore IRC Rule 22.6 is no longer required.

Delete IRC Rule 22.6 as follows:

~~22.6—Crew Position~~

~~——22.6.1—RRS 49.2 is modified by deleting “sitting on the deck” in the second sentence.~~

Effect: To rely on RRS for IRC Crew Position rules.



4. IRC DEFINITION A4 - AFT RIGGING

Reason for change: The 2021-2024 ERS now has a definition for connect that is useful for the IRC Rules and Definitions.

2021-2024 ERS Definition of **Connect**:

C.6.3(g) CONNECT To bring together or into contact so that a real link is established by which one item affects the function of the other; therefore includes “attached to” and “sheeted to” the corner of the **sail**.

Amend IRC Definition of Aft Rigging as follows:

Aft rigging: The total number of **stays** and/or sets of **stays connected connected** to the mast **spar** above the top of the boom set horizontal providing aft support and/or control.

Effect: Include a reference to the ERS Definition of **connect** in IRC Rules.



5. IRC DEFINITION A1 – SERIES AND AGE DATE

Reason for change: The 2021-2024 ERS now has a definition for modification that is useful for IRC Rules and Definitions.

2021-2024 ERS Definition of **Modification**:

C.7.2 **Modification** Work resulting in a change to the original condition

Amend IRC Definition of Series Date and Age Date as follows:

Series date The date on which the first **boat** of the design or the production series was first launched, whichever is earlier. Series Date does not change if the **boat** is ~~modified~~ **modified**.

Age date The date on which the **boat** was first launched, or the date on which the **boat** was re-launched following any hull shell ~~modification~~ **modification**, excluding the transom, whichever is the later.

Effect: Include a reference to the ERS Definition of **modification** in IRC Rules.



6. IRC RULE 19.5 – HULL APPENDAGES

Reason for change: The 2021-2024 ERS now has a definition for maintenance that is useful for IRC Rules and Definitions.

2021-2024 ERS Definition of **Maintenance**:

C.7.3 **Maintenance** Work required to retain the original condition, compensating for normal wear and tear in order to achieve its maximum useful life. This includes preventive maintenance and may include **coating, sanding, lubricating** and **cleaning**, but shall exclude **fairing** and **bonding**.

Amend IRC Rules as follows:

- 19.5 **Boats** including material in their **hull appendages** with specific gravity greater than 11.3, and with **age date** of 2005 or earlier, and holding a valid IRC certificate on 31st December 2005 are exempt from Rule 19.4. Apart from ~~routine maintenance~~ **maintenance**, any such **boat** changing the quantity of material of specific gravity greater than 11.3 shall comply with Rule 19.4 and will not subsequently be eligible for exemption from compliance with Rule 19.4.

Effect: Include a reference to the ERS Definition of **maintenance** in IRC Rules.



7. IRC RULES AND DEFINITIONS - FITTINGS

Reason for change: The 2021-2024 ERS now has a definition of fitting that is useful for IRC Rules and Definitions.

ERS 2021-2024 definition of **Fitting**:

C.7.1(b) FITTING An item, including any associated **fitting**, that is not part of the **boat** structure but is bonded or fastened to the **hull, hull appendages** or **rig**.

Amend IRC Rules and Definitions as follows:

Amend the following IRC Rules and Definitions by changing **fitting** to **fitting** (ERS bold) as appropriate. See rules document for reference to fitting.

IRC Rule 17.1 Boat Weight

IRC Definition Hull Shell

IRC Definition E

IRC Definition STL

Effect: Include a reference to the ERS Definition of **fitting** in IRC Rules.



8. WHISKER POLES

Reason for change: In 2020 IRC introduced whisker poles into the rating scope for spinnaker poles. This has resulted in some boats having a substantial increase in rating where they were rated with a bowsprit but have now changed to bowsprit AND pole(s), for example to add a whisker pole to simply pole the headsail downwind. This big increase in rating is due to the rating formulation uses the bowsprit STL for the spinnaker pole/whisker pole part of the IRC formula. Now there is an Equipment Rules of Sailing (ERS) definition of whisker pole in the 2021-2024 ERS it is therefore proposed to revert to the 2019 declaration of a spinnaker pole and add the declaration of a whisker pole as a separate question with a corresponding rating formulation change.

Please note that this changes 2021 IRC Rule Proposal 1 above, but maintains the proposal of including **whisker pole** as an ERS definition.

Amend IRC Rules as follows:

- 21.3.5 **Boats** will be rated according to whether they use a **spinnaker pole**, ~~whisker pole~~ **whisker pole** and/or a **bowsprit** according to the following configurations:
- (a) No **spinnaker pole** (spinnaker tacked on deck) or a centre line **bowsprit** only.
 - (b) An articulating **bowsprit** only.
 - (c) **Spinnaker pole(s)** ~~and/or whisker pole(s)~~ either with or without a **bowsprit**.
- 21.4 ~~deleted for 2020~~ A **boat** shall declare using any **spar** as a ~~whisker pole~~ **whisker pole** to set a headsail or a flying headsail.

Amend IRC Definitions as follows:

STL definition:

STL The greatest horizontal distance from the forward face of the **mast spar**, ignoring any fittings and tracks, measured on or near the centreline of the **boat**, to any of the following:

- the extremity of the ~~spinnaker pole, whisker pole or~~ **bowsprit**, ignoring any **outer limit marks**;
- the spinnaker tack point on deck projected vertically as necessary;
- if a headsail or a flying headsail may be tacked forward of the forestay, the headsail or flying headsail tack point on deck projected vertically as necessary or to the extremity of the **bowsprit** **ignoring any outer limit marks**

Effect: To include whisker poles as a separate declaration and rate accordingly.



9. SPINNAKER POLES

Reason for change: It is proposed to add the definition of Spinnaker Pole Length (SSL) to the IRC measurements as this can be used to better rate boats with bowsprit AND spinnaker poles where at present the maximum is taken for rating purposes.

The IRC Technical Committee are looking at formulation options for rating on the above basis, but if a solution is not found for 2021 then the Technical Committee would request to continue to declare this value in 2021 for our research.

Amend IRC Rules as follows:

8.10 Rated Dimensions

8.10.1 Values stated on certificates for **LH, Hull Beam, Bulb Weight, Draft**, x, P, E, J, FL, MUW, MTW, MHW, HLU_{max}, HSA, PY, EY, LLY, LPY, Cutter Rig HLU_{max}, SPA, STL, **SSL** are maximum values.

9.8 In either case where the TCC is reviewed, the certificate becomes invalid if any re-measurement which increases the **boat's** rating differs from the measurement shown on the certificate by more than 1% of: LH, LWP, **Hull Beam, Draft**, P, E, J, FL, STL, **SSL**, HLU_{max}, MUW, MTW, MHW (see Appendix 1); by more than 2% of SPA or HSA by more than 5% of y, x or h; or by 5% in respect of weights; or if specific detail is clearly in error.

Amend IRC Definitions as follows:

New **SSL** definition:

SSL The greatest horizontal distance from the forward face of the **mast spar**, ignoring any fittings and tracks, measured on or near the centreline of the **boat**, to the extremity of the **spinnaker pole**.

Effect: Include the definition of Spinnaker Pole Length (SSL) in the IRC measurements, rating and rule.



10. FLYING HEADSAILS

Reason for change:

There have been many discussions in IRC regarding the use of Code 0s **sails that do not measure as spinnakers**. These sails are what is described as flying headsails as they do not satisfy the Racing Rules of Sailing, Equipment Rules of Sailing or IRC definition of a spinnaker where the half width (SHW) shall be greater than or equal to 75% of the foot length (SFL): $SHW/SFL \geq 75\%$. **Code 0s that measure as a spinnaker are not impacted by this proposal.**

IRC has placed a large rating effect on large headsails as they have been assumed to be used in an upwind configuration. **The evolution of sail types leads IRC to reconsider this position. The IRC Technical Committee propose to introduce a new IRC definition of "Flying Headsail"**. In respect of the introduction of this new sail definition IRC places several rules in regards to the half width ratio to the foot length ($>62.5\%$), a maximum tack point position (see STLFHmax below) and battens or stiffening of the sail are not permitted.

This proposal will allow an owner to declare a flying headsail within the proposed definition and will include a rating calculation for the flying headsail.

Amend IRC Rules as follows:

8.2.1 A **boat** may additionally hold a separate short-handed certificate. This short-handed certificate shall be valid only for racing in classes, or divisions of classes, for no more than 2 **crew**, included in a Notice of Race. When specified in a Notice of Race, **boats** holding short handed certificates, and *racing* in a short handed class or division, may also be scored in the overall results of the race. The short-handed certificate will be clearly identified and shall only vary from the primary certificate in respect of, **mainsail widths**, **headsail and flying headsail** dimensions, single furling headsail allowance, the use of stored power, SPA, STL, **spinnaker pole/bowsprit**, number of **spinnakers and flying headsails**, **moveable ballast** and **variable ballast**. A **boat** holding a shorthanded certificate shall use that certificate for races for no more than 2 **crew**.

8.10 Rated Dimensions

8.10.1 Values stated on certificates for **LH, Hull Beam, Bulb Weight, Draft**, x, P, E, J, FL, MUW, MTW, MHW, HLUmax, HSA, **FSA**, PY, EY, LLY, LPY, **Cutter Rig HLUmax**, SPA, STL, **STLFHmax** are maximum values.

9.8 In either case where the TCC is reviewed, the certificate becomes invalid if any re-measurement which increases the **boat's** rating differs from the measurement shown on the certificate by more than 1% of: LH, LWP, **Hull Beam, Draft**, P, E, J, FL, STL, HLUmax, MUW, MTW, MHW (see Appendix 1); by more than 2% of SPA ~~or~~, **HSA or FSA**; by more than 5% of y, x or h; or by 5% in respect of weights; or if specific detail is clearly in error.

21.3.1 No **headsail, flying headsail** or **spinnaker** may be sheeted from more than one point on the **sail**.

21.7 Headsails

21.7.1 Headsail area (HSA & FSA) shall be calculated from:

$$HSA = 0.0625 * HLU * (4 * HLP + 6 * HHW + 3 * HTW + 2 * HUW + 0.09)$$

$$FSA = 0.0625 * FLU * (4 * FLP + 6 * FHW + 3 * FTW + 2 * FUW + 0.09)$$



- If foot offset of any headsail is greater than 7.5% of HLP, then foot offset shall be declared and foot offset shall be added to HLU or FLU in the calculation of HSA or FSA.
- 21.7.2 The following shall apply to a headsail, which may be used while racing:
- 21.7.2.1 ~~HSA~~, HLU, HLP, HHW, HTW and HUW of the largest area headsail and HLU_{max} of any headsail shall be declared and will be shown on the **boat's** certificate, together with HSA. HSA and HLU_{max} are the maximum permitted values.
- 21.7.3 The following shall apply to a flying headsail, which may be used while racing:
- 21.7.3.1 FLU, FLP, FHW, FTW, FUW, FSFL, and FSHW of the largest area flying headsail shall be declared and will be shown on the **boat's** certificate, together with FSA which is the maximum permitted value.
- 21.7.4.1 Boats shall not carry on board more than the number of flying headsails on their IRC certificate while racing.
- 21.7.4 Any number of headsails may be set simultaneously when racing under IRC provided that headsail data is measured and declared as defined in Appendix A.

Amend IRC Definitions as follows:

A4 – RIG

- STLFH_{max} The greatest horizontal distance from the forward face of the **mast spar**, ignoring any **fittings** and tracks, measured on or near the centreline of the **boat**, to the flying headsail tack point, calculated as follows:
- $STLFH_{max} = FSFL - (0.25 \times J)$
 - if the calculated STLFH_{max} is greater than STL, the flying headsail shall be tacked no greater than STL.
 - if the calculated STLFH_{max} is less than J, the flying headsail shall be considered a headsail.

A5 – SAILS – GENERAL

[COMMENT: Spinnaker definition remains the same]

- Flying Headsail RRS 50.4 shall not apply. Any **sail set flying** tacked down forward of the forestay that does not meet the definition of spinnaker and without battens. A flying headsail shall have a **half width** (measured as a spinnaker) equal to or greater than 62.5% of **foot length**. A flying headsail shall be tacked down no greater than STLFH_{max} and approximately on the **boat's** centreline, except when it is tacked on a declared articulating **bowsprit**. A flying headsail may be entirely furled but shall not be **set reefed** while racing.

- Headsail RRS 50.4 shall not apply. Any **sail** tacked down forward of the foremost **mast** which does not meet the definition of a spinnaker or flying headsail. A headsail may be hoisted from above the forestay rigging point.

A6 - SAILS – HEADSAILS

A6.1 - HEADSAIL

- HSA The maximum permitted headsail area.
- HLU The **luff length** of the largest area headsail ~~on board and which may be used while racing.~~
- HLU_{max} The longest **luff length** of any headsail ~~on board and which may be used while racing.~~



LLY	The longest luff length of any mizzen staysail.
HLP	The luff perpendicular of the largest area <u>headsail</u> on board and which may be used while racing.
LPY	The longest luff perpendicular of any mizzen staysail.
HHW	The half width of the largest area <u>headsail</u>
HTW	The three-quarter width of the largest area <u>headsail</u> .
HUW	The seven-eighths width of the largest area <u>headsail</u> .
Foot Offset	The maximum offset between the edge of a <u>headsail</u> foot and a straight line between tack point and clew point .

A6.2 – FLYING HEADSAIL

FSA	The maximum permitted <u>flying headsail</u> area.
FLU	The luff length of the largest area <u>flying headsail</u> .
FLP	The luff perpendicular of the largest area <u>flying headsail</u> .
FHW	The half width of the largest area <u>flying headsail</u> .
FTW	The three-quarter width of the largest area <u>flying headsail</u> .
FUW	The seven-eighths width of the largest area <u>flying headsail</u> .
FSFL	The foot length of the largest area <u>flying headsail</u> (measured as a <u>spinnaker</u>).
FSHW	The half width of the largest area <u>flying headsail</u> (measured as a <u>spinnaker</u>).

Effect: Introduce the “Flying Headsail” sail type to IRC measurements, rating and rule..



11. FOILS – SUPPLEMENTARY IRC RULE APPENDIX F

Reason for change: In September 2020 the IRC Technical Committee issued an IRC notice – IRC 2020-01 “Prescriptions Relating to the Use of Foils on IRC boats”. This notice contains several constraints that will be better developed as rules. Boats with lifting appendages represent a very small part of the IRC fleet but can take a lot of text up in the rule document as we develop the rules and therefore it is recommended to publish a supplementary appendix F on the IRC website and link to that from the IRC Rule document.

It is noted that the new ERS definitions relating to foils are not suited to the systems used on yachts. The IRC Technical Committee therefore requests from IRC Congress permission to publish further draft IRC definitions in the Lifting Appendage Appendix F relating to elements of the foils and lifting appendages such as Winglet, Lifting Surface, Horizontal Plane Regulator, Trailing Edge Flap etc.

The vocabulary and expressions that IRC has the intention to use for the description of the lifting appendages are derived from the aeronautic world. Those definitions are universal. However, they are not characteristic of the eligibility of IRC lifting appendages. They only provide the possibility to identify the various lifting appendages external to the hull.

Amend IRC Rules as follows:

1. Move IRC definition of Foil into Appendix F.
2. Reference Appendix F in the IRC Rule document.
3. Develop IRC notice into IRC Rule Appendix F.
4. Develop further draft definitions regarding foils and publish as draft during late 2020 early 2021.
5. Publish IRC Foil Appendix on the IRC Website: <https://ircrating.org/irc-rule/>