World Leader in Rating Technology

OFFSHORE RACING CONGRESS

ORC Grand Prix 42
Class Rules 2015

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by courtesy Max Ranchi

Part 1 - ADMINISTRATION

100 Rule Philosophy

It is the intention that the rules and specifications for the ORC Grand Prix Classes provide close racing without time allowance in grand prix competition and that the yachts designed to this rule be fast, sound and seaworthy, retaining thereby, with a minimum of modification, good value beyond their competitive life as grand prix racers.

These are Closed Class Rules. Anything that is not expressly permitted by the GP42 Rule is prohibited.

101 Authorities

The sole authority for the GP 42 Class is the Offshore Racing Congress and it shall be maintained and administered at the ORC's discretion.

102 Administrative

102.1 The official language of the ORC GP Class Rules is English and in case of dispute over translations the English text shall prevail.

102.2 The word "shall" is mandatory and the words "may" and “can” are permissive.

102.3 Except where used in headings, when a term is printed in “**bold**” the definition in the ERS applies and when a term is printed in “*italics”* the definition in the RRS applies.

102.4 When printed in "***bold italics***" the term is used as measurement taken or recorded by the measurer.

103 Abbreviations and Definitions

ERS	Equipment Rules of Sailing
GP	Grand Prix
IMS	International Measurement System
ISAF	International Sailing Federation
ORC	Offshore Racing Congress
OSR	Offshore Special Regulations
RRS	Racing Rules of Sailing

104 ISAF and ORC Rules

104.1 RRS, IMS and ERS shall apply except when changed by these **class rules**.

104.2 ISAF Advertising Code shall apply.

104.3 ISAF OSR Category 3 with liferaft shall apply.

104.4 In alteration to RRS 42

a) The race committee may signal that pumping is permitted when after the starting signal a boat is sailing a course where asymmetric spinnaker could be hoisted and filled (change of RRS 42.2.a). The signals will be made according to RRS P5.

b) The race committee shall state in the sailing instructions the minimum wind speed limit to implement Rule 104.7.a. The GP42 Class recommends either no limit or a limit between 10 and 13 knots .

c) Add RRS 42.3(i): A boat’s crew may pump the mainsail repeatedly to release one or more inverted battens (change of RRS 42.3).

105 Rules Amendments

Amendments to the GP 42 Class Rules are subject to the submission by the ORC Nominating bodies or GP 42 Class Association and approval of the ORC in accordance with the Articles of Association of ORC Ltd. GP 42 Class Association shall give its opinion about any submission concerning GP 42 Class Rules and ORC will be bounded by that opinion before making final decision.

106 Rules Interpretations

The Class Technical Committee with approval of the ORC Chief Measurer may at any time issue interpretations or correction of the GP class rules. Any such interpretation or correction shall be published and then deemed final unless and until overruled by the ORC Management Committee and Congress.

Part 2 - ELIGIBILTY

201 Hull

201.1 **Permitted materials**. In the construction of the hull and deck structures and in interior panels, except for hardware, fastenings and keel support structures, only the following materials are permitted: E-glass, Carbon, Kevlar, Epoxy, Vinylester and Polyester resin, Foam Core with minimum density of 75 kg/m3, Balsa Core, Plywood.

a) Stainless steel and aluminium are permitted for keel support structures inside the hull shell.
b) Titanium is not permitted in any purpose. Carbon is not permitted in winches or winch systems except if standard, unmodified production winches usually supplied are used.
c) The modulus of the carbon used in the rudder is limited to 250 GPa.

201.2 **Construction Scantlings**. The boats shall have been designed and built either in accordance with the ABS Guide for Building and Classing Offshore Yachts or, when ultimately published, in accordance with ISO Standard 12215. The designer and the builder, respectively, shall confirm by signed written declarations that the design and build comply. The Owner shall sign the declaration printed on the **measurement certificate**.

201.3 **Hollows in Hull**. Aft of 30% LOA the hull there shall be no hollows in the hull surface below the sheerline. The sheerline shall be a fair, concave curve in profile view and a fair, convex curve in plan view with no double inflections in either view. Hollows generated by any protrusion outside the outer skin of the hull are not allowed. A recess, of a maximum of 20 litres of volume, is permitted in the hull, only in the area of the keel attachment and for this purpose only. The keel (when in position) shall totally fill this recess. Any part of the keel contained in this recess, as well as outside the hull outer skin, is considered keel and will be weighed as keel.

201.4 **Working Deck**. The working deck shall have a positive camber (i.e., convex) and be continuously fair. Except for the coach roof an the cockpit, at any transverse section the deck camber, as measured from a horizontal datum passing through the sheer points, shall be not less than 2%. Trunks and troughs are not permitted. Fittings may be recessed, provided the recess dimensions are not larger than 120% of the fitting dimension.

202 Appendages

202.1 Except for a single rudder located aft of the keel, no other moveable appendages are permitted.

202.2 Except for fairing (no more than 10 mm thick), no material other than lead, antimony, steel or iron are permitted in the structure of the keel blade, fin and in any bulb.

202.3 Hollows between the sections at ***KTHU*** and ***KTHL*** are not permitted.

203 Propulsion Engine and Strut Drive

203.1 A securely covered inboard propulsion engine as water cooled diesel of minimum 29 HP shall be provided together with permanently installed exhaust and fuel supply systems and fuel tank(s). The engine and drive train shall be orientated for and aft, located on the centerline of the boat.

203.2 Retractable propellers as well as retractable or custom strut drives are not allowed. Only standard, unmodified production strut drives usually supplied with the following engines are allowed: Volvo Penta, Yanmar, Lombardini Marine.

204 Rig

204.1 Throughout its length, the mast shall be fair with no hollows and be of continuous section from the butt to the upper measurement point of ***IG***.

204.2 Where carbon fiber is incorporated in the construction of any spars on the yacht, this shall be limited to 250 GPa and the walls of the spar shall not be of cored construction.

204.3 There shall be two spreader sets. The sweep-back angle of spreaders shall be not less than 15 degrees. Curved spreaders are not permitted.

204.4 Jumper struts and stays, outriggers, sprits and halyard locks are not permitted.

204.5 **Standing Rigging**. Except for the permanent backstay, all standing rigging shall be of stainless steel rod or twisted stainless steel wire and subject to the limitations set forth below. Titanium is not permitted in any purpose.

a) **Backstay**. Twin backstays may be of stainless steel or composite fiber construction. The backstays may be adjustable. From the upper attachment point of each backstay there shall be a single part only, of length not less than "***P***". Below the lower end of this single part, the backstay configuration is unrestricted except that the fixed anchor points of each backstay configuration shall be not higher than 200mm above the working deck.

A "fixed anchor point" is any point where a block or the end of any rope used to tune the backstay is attached. When in tension, the backstay shall form a straight line between the top and bottom fixed anchor attachment points. The centre of any bottom fixed anchor point shall not be above a horizontal plane which is established 0.8 m from the waterline in measurement trim.

Pre bent backstays and/or any system to artificially increase the distance between the straight backstay line and the mainsail roach is not allowed, except for soft battens "flippers".

b) Boats with a non-square top main sail are limited to a single, permanent backstay, with the same characteristics of the twin backstays previously described. When in tension, the backstay shall form a straight line between the top mast crane and bottom fixed anchor attachment points.

c) **Forestay**. Except for backstay adjustment, means for adjusting forestay tension while racing is not permitted. Any luff-groove device shall not incorporate carbon fibers in construction.

205 Bowsprit

205.1 The bowsprit shall be removable from the hull without damaging the structural or watertight integrity of the hull.

205.2 The bowsprit shall be fastened to the hull by mechanical means only. This shall not preclude small quantities of non-structural sealing compound at the points of attachment to the hull.

205.3 The bowsprit shall not be retractable; nor shall it pivot; nor shall it be removed when racing.

205.4 The bowsprit shall not extend below a plane 0.200m below the freeboard at FFS. However a bobstay is permitted to go below that plane.

205.5 The bobstay shall attach to the bowsprit in the forward 20% of the bowsprit (20% of the distance most forward point hull - outer end bowsprit) and attach to the hull not further than 0.3 m from the waterline in measurement trim.

206 Sails

206.1 Maximum of seven battens are permitted in the mainsail. No more than 3 of these battens may be "full length", so span leech to luff. In addition so-called "flutter battens" may be used

206.2 Maximum of five battens are permitted in the non-square top mainsail, and no battens are permitted above the **MGT** point.

206.3 Asymmetric spinnaker luff shall be calculated as: ASL = 0.5 * ***SLU*** + 0.5 * ***SLE***

206.4 Exclusive of storm sails required by the Offshore Special Regulations, sails allowed on board while *racing* are limited to:

1 Mainsail
3 Headsails
1 Inner Headsail
2 Asymmetric spinnakers
1 Free sail (any of above types)

206.5 In addition to the standard ORC stamp, all sails shall be stamped with an official GP class measurement stamp where sail number, date of measurement, name of measurer and type of sail with appropriate identification per year will be recorded. Damaged sails can be repaired, but then shall be re-measured and re-stamped with both ORC and GP measurement stamp where same sail identification will be used.

206.6 The mainsail shall carry a GP42 Class logo each side (port and starboard, back to back only), The dimensions shall be 1.77 x 1.14m, and it shall be placed above the 3/4 girth, preferably the top of the logo to line up with the I point.

207 Crew weight

The weight of all crew members on board while racing in light street clothes shall not be greater than 720 kg.

208 Outside assistance

208.1 A boat shall not receive outside assistance from the time it leaves the port each day until the last race is over except that the Race Committee declares an emergency. The use of tender boats in the racing area during a championship is forbidden.

208.2 There shall be no changes to the boat's inventory of sails, running rig or equipment after the boat has left the port for the day, except in the case of emergency.

208.3 In the event of a breakdown, a boat may return to the port for repairs. The boat shall receive permission at the earliest convenient opportunity from the General Umpire or Class Measurer to implement the repair. All repairs shall conform to the Class Rules. Repairs and replacement of parts damaged during a Championship, which would normally require a boat to be re-measured, shall not cause a boat to be re-measured until the Championship is completed.Repaired or replaced sails shall comply with the Class Rules and shall be subject to measurement.

Part 3 - MEASUREMENT

301 Measurement

301.1 All measurement shall be under the metric system.

301.2 All measurements shall be within the limits defined in these **class rules** without any rounding of measured or calculated values (e.g. where a limit is given as maximum 12.5, a measured value of 12.501 would not comply.)

301.3 Measurement shall be carried out by an **official measurer** who shall complete the **measurement form** and send it to the ORC.

302 Hull and appendages

Freeboard stations shall be defined as follows:

SFFP shall be taken as 0.200 m.
SAFP shall be normally taken as defined in IMS B2.2(c), but not forward of 12% ***LOA*** of the aftermost point of the hull

Following measurements shall be taken following appropriate IMS rules:

LOA	Length overall	B6.2
MB	Maximum Beam	B6.3
DSPW	Displacement as Weighed	B6.11
FFM	Freeboard Forward Measured	B5.3
FDM	Freeboard at Maximum Draft	B6.7
FAM	Freeboard Aft Meausred	B5.4
SDM	Station of Maximum Draft	B6.5
DMT	Deepest Point of Keel to Sheerline	B6.6
EDL	Strut Drive Length	D4.8
KW	Keel Weight	C1.1(h)
KTHU	Keel Thickness – Upper	C1.1(a)
KTHM	Keel Thickness – Mid	C1.1(b)
KTHL	Keel Thickness – Lower	C1.1(c)
KBW	Keel Bulb Transverse Witdh	C1.1(d)
KBWT	Keel Bulb Weight	C1.1(g)

303 Rig

Following measurements shall be taken following appropriate IMS rules:

P	Mainsail Hoist	F2.1
IG	Height of Headsail Hoist	F3.1
ISP	Height of Spinnaker Hoist	F3.2
BAS	Boom Above Sheerline	F3.4
MWT	Mast Weight	F8.1
MCG	Mast Vertical Center of Gravity	F8.2
MDT1	Max. Transverse Mast	F4.1
MDL1	Max. Fore-and-Aft Mast	F4.2
MDT2	Min. Transverse Mast	F4.3
MDL2	Min. Fore-and-Aft Mast	F4.4
TL	Taper Length	F4.5
GOA	Backstay Gantry Overhang	F4.8
CPW	Chainplate Width	F6.3
E	Mainsail Foot	F5.1
BD	Boom Diameter	F5.2
J	Foretriangle Base	F6.1
TPS	Tacking Point of Spinnaker	F7.2
FSP	Forestay Perpendicular	F6.5

304 Sails

Following measurements shall be taken following appropriate IMS rules:

HB	Mainsail Top Width	G2.1
MGT	Mainsail 7/8 Width	G2.1
MGU	Mainsail 3/4 Width	G2.1
MGM	Mainsail 1/2 Width	G2.1
MGL	Mainsail 1/4 Width	G2.1
JGU	Headsail 3/4 Width	G4.1
JGM	Headsail 1/2 Width	G4.1
LPG	Headsail Perpendicular	G4.1

AMG	Asymmetric Spinnaker Mid Width	G6.5
SLU	Asymmetric Spinnaker Luff	G6.5
SLE	Asymmetric Spinnaker Leech	G6.5

305 Internal ballast and batteries

Internal ballast, if any, shall not weight more than 9% of Max ***DSPW***. Batteries shall not weight more than 2% of Max ***DSPW***. The weight and location of internal ballast and batteries shall be recorded on the Measurement Inventory.

306 Maximum draft

The Maximum Draft of the yacht shall be calculated as DHKM = ***DMT*** – ***FMD***.

307 Measurement Inspection

Following tolerances will be acceptable on the measurement inspection during an event:

DSPW	+/- 30 kg
KW	+/- 10 kg
FFM, FMD, FAM	+/- 4 mm

308 Certificate

308.1 Upon receipt of a satisfactory completed **measurement form** and **certification** fee, the ORC will issue a **measurement certificate**.

308.2 A boat shall have only one valid **certificate** at any one time. The valid **certificate** shall be only the last issued. The **certificate** shall be valid until 31st December of the current year.

308.3 A **certificate** shall be changed upon the change of any measurement recorded in the **certificate** or change of ownership.

308.4 A boat shall have no more than two valid **certificates** issued as a result of a change of recorded measurement values in period from January 1st to December 31st each year.

308.5 ORC in agreement with the Class Technical Committee can withdraw any **certificate** in any time when it finds that boat may not comply with intention of these **class rules**. In such a case it will inform the owner about further actions and if needed, appoint the measurer to re-measure the boat.

308.6 Owner of boats build to the GP42 Rule before 31 December 2010 and have had a GP42 Certificate, and are still within the limits of a pre-2011 GP42 Rule, may request the GP42 Class Technical Committee to be grandfathered on aspects that are or might be seen to be different from the GP42 Rule in effect when boat was built and the current GP42 Rule. The decision on this rests solely with the GP42 Class Technical Committee, with the option to ask a review on this decision from the GP42 Class Association.

Part 4 - TABLE OF LIMITS

401 Limits

All measurements shall be within the limits defined in the following table:

	Min.	*Max.*	*Rule*	*Descirption*
Hull				
LOA	---	12.800	IMS B6.2	Length Overall
MB	3.500	3.900	IMS B6.3	Maximum Beam
DSPW	4200	4400	IMS B6.11	Displacement as Weighed
DHKM	---	2.600	GP 306	Maximum Draft
EDL	0.530	---	IMD D4.8	Strut Drive Length
FFM	1.340	1.460	IMS B5.3	Freeboard Forward
FDM	1.160	1.280	IMS B6.7	Freeboard at Maximum Draft
FAM	1.020	1.140	IMS B5.4	Freeboard Aft
Keel				
KW	2400	2600	IMS C1.1(h)	Keel Weight
KTHU	0.090	---	IMS C1.1(a)	Keel Thickness – Upper
KTHM	0.080	---	IMS C1.1(b)	Keel Thickness – Mid
KTHL	0.070	---	IMS C1.1(c)	Keel Thickness – Lower
KBW	---	0.640	IMS C1.1(d)	Keel Bulb Transverse Width
Rig				
P	---	16.800	IMS F2.1	Mainsail Hoist
IG	---	16.200	IMS F3.1	Height of Headsail Hoist
ISP	---	18.600	IMS F3.2	Height of Spinnaker Hoist
BAS	1.700	1.800	IMS F3.4	Boom Above Sheerline
MWT	200.0	---	IMS F8.1	Mast Weight
MCG	5.560	---	IMS F8.2	Mast Centre of Gravity
MDT1	0130	---	IMS F4.1	Max. Transverse Mast
MDL1	0.250	0.300	IMS F4.2	Max. For-and-Aft Mast
MDT2	0.090	---	IMS F4.3	Min. Transverse Mast
MDL2	0.150	---	IMS F4.4	Min. For-and-Aft Mast
TL	---	2.400	IMS F4.5	Taper Length
GOA*	---	0.500	IMS F4.8	Backstay Gantry Overhang
CPW	2.850	---	IMS F6.3	Chainplate Width
E	---	5.900	IMS F5.1	Mainsail Foot
BD	---	0.295	IMS F5.2	Boom Diameter
J	---	5.000	IMS F6.1	Foretriangle Base
TPS	---	6.700	IMS F7.2	Tackin Point of Spinnaker
FSP	---	0.068	IMS F6.5	Forestay Perpendicular
Sails				
HB*	---	0.25	IMS G2.1	Mainsail Top Width
MGT*	---	1.52	IMS G2.1	Mainsail 7/8 Width
MGU*	---	2.60	IMS G2.1	Mainsail 3/4 Width
MGM*	---	4.06	IMS G2.1	Mainsail 1/2 Width
MGL*	---	5.15	IMS G2.1	Mainsail 1/4 Width
HB	---	1.30	IMS G2.1	Mainsail Top Width
MGT	---	2.10	IMS G2.1	Mainsail 7/8 Width
MGU	---	2.80	IMS G2.1	Mainsail 3/4 Width
MGM	---	4.10	IMS G2.1	Mainsail 1/2 Width
MGL	---	5.10	IMS G2.1	Mainsail 1/4 Width
LPG	---	5.35	IMS G4.1	Headsail Perpendicular
JGU	---	1.45	IMS G4.1	Headsail 3/4 Width
JGM	---	2.80	IMS G4.1	Headsail 1/2 Width
AMG	---	12.00	IMS G6.5	Asymmetric Spinnaker Mid Girth
ASL	---	20.40	GP 205.2	Asymmetric Spinnaker Luff/Leech
ASF	---	12.00	IMS G6.5	Asymmetric Spinnaker Mid Girth

* Limits for non-square top main sails.

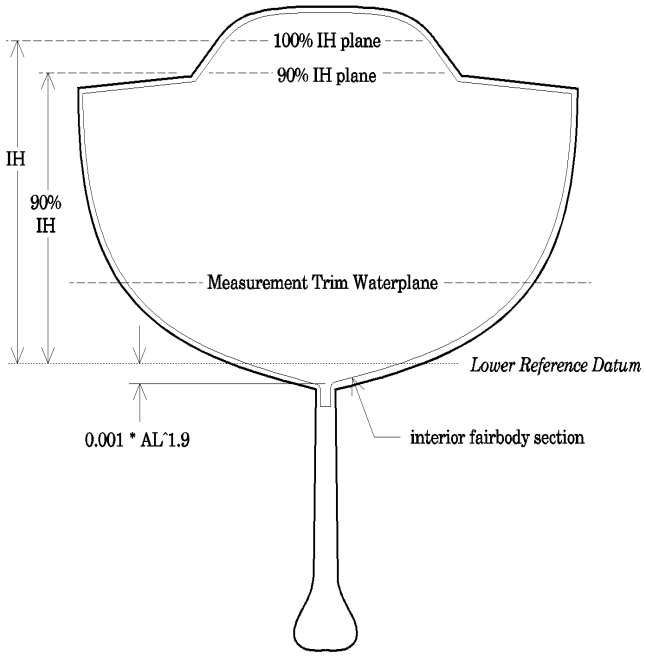
Appendix 1 - ACCOMMODATION REGULATIONS

A1 Introduction

The purpose of these regulations is to ensure that boats meet the minimum standards of accommodation in order to provide for comfort of crews and stowage of gear, maintain long term value and to prevent unrated performance advantage from stripping hulls for racing.

A2 **Interior Volume** shall comply with following requirements:

1. **Lower Reference Datum.** A level datum, parallel to the waterplane in measurement trim, shall be established at a height of 0.127 m above the inside of the hull surface, projected if necessary, at the deepest interior fairbody section which, for this purpose, shall not be found outside the 90% IH overhead area (see A2.3 below). This level is independent of the actual height of the cabin sole.
2. **Overhead Area at Full Interior Height:** At a height 1.78 m above the level established in A2.1 there shall exist under the overhead a plane of length not less than 1.792 m and area not less than 0.983 m^2, ignoring deck beams and deck stringers. The aft extent of this area at the centerline shall lie not forward of a point located 7.04 m aft of the stem.
3. **Overhead Area at 90% Interior Height:** At a height 1.60 m above the level established in A2.1 there shall exist under the overhead a plane of length not less than 2.432 m and minimum area 3.113 m^2. At this defined plane there shall exist a rectangular area for length of 1.92 m and width not less than 1.28 m. Deck beams and deck stringers may be ignored.



All types of cut-outs and fitting recesses penetrating into the volume defined by 2 and 3 are forbidden. Only control lines may pass into the coach-roof volume.

A3 **A Cabin Sole** shall extend fore and aft over a length which provides convenient access to lockers, berths, galley, head, navigation area and other components making up the yacht's interior.

A4 **Berths**. Minimum number of berths is 4. Each single berth of should be at least 1.9m in length and at some point at least 0.6m in width. A double berth shall be at least twice the width of a single berth. The ends of berths may taper as required by the hull shape. Mattresses are to be fitted to all such berths.

A5 **Personal Gear Stowage** shall be provided in the form of built-in lockers of minimum volume of 0.22 m^3.

A6 Galley Area:

1. **Stoves:** A gimbaled stove fitted with high retaining rails to permit safe operation underway.
2. **Sinks:** Permanently installed and fitted with pump/tap and drainage system.

3. **Galley Gear Stowage:** Should be provided in rigid lockers, bins or compartments.
4. **Food Stowage:** Stowage for food should be provided in rigid lockers, bins or compartments of minimum volume of 0.32 m^3.

A7

1. **Toilet** Marine type permanently installed and operable in compliance with local regulations.
2. **Wash Basin:** Near the toilet, fitted with pump/tap and drainage system which permits use underway.

A8 **Navigation Area** shall include flat area suitable for chart work. The area should be built with storage for charts, navigational instruments, books, etc.

A9 **Hanging Locker(s)** shall be of sufficient dimension to permit hanging garments vertically.

A10 **Fresh Water Capacity:** Fresh water pumps shall be installed at the sink and wash basin and fresh water shall be contained in permanently installed tankage either of rigid construction or of the bladder type. Minimum fresh water capacity is 131 litres.

A11 **Fuel Capacity:** Inboard engines shall be directly supplied from permanently installed fuel tankage. Minimum diesel fuel capacity is 65 litres (81 litres for gasoline).