

World Sailing Manufacturer Certification System (MCS)

1. Background

- 1.1 Manufacturer-controlled Olympic classes rely on the requirement that all critical equipment items (hulls, appendages, rigs, and sails) be produced by licensed manufacturers operating under a “World Sailing approved Manufacturer Control System”. Once the equipment leaves the manufacturer, competitors may only alter or use it as defined in the class rules, which specify the permissible modifications and the conditions for use during racing.
- 1.2 The manufacturer-controlled framework is intended to reduce the need for detailed measurements at events by ensuring equipment is controlled at production. This approach supports efforts to maintain a level playing field, minimize performance discrepancies caused by equipment variation, and advance the sport’s broader sustainability and cost-efficiency goals.
- 1.3 Within this framework, the Manufacturer Certification System (MCS) serves as World Sailing’s mechanism to permit licensed manufacturers to self-certify their equipment, while enabling World Sailing to monitor and verify production quality through oversight and audits.
- 1.4 In 2022, World Sailing relaunched the In-House Certification (IHC) Scheme, a program that permits sail-lofts that comply with specific standards to self-certify sails. The IHC Scheme relies on the requirements of the ISO 9001, an international standard for quality management systems that emphasizes a process-oriented approach, continual improvement, evidence-based decision making, and risk-based thinking.
- 1.5 In 2023, World Sailing started working on the MCS. Taking in account the similarities between the IHC and MCS, the framework and documentation of the IHC Scheme was used as a validated starting point to create the system to monitor the quality of Olympic Equipment.

2. Challenges

- 2.1 The MCS presents several challenges, both in terms of number of manufacturers to be audited (nearly 40 manufacturers) and in variety of equipment item types (hulls, boards, rudders, centreboards, hydrofoils, masts, booms, bowsprits, sails, kites).
- 2.2 In addition, the scope of the MCS includes all Olympic Classes that are defined as Manufacturer Controlled. The Manufacturer Controlled Classes have their equipment items only manufactured by licensed manufacturers and the equipment is required to comply with confidential Building Specifications subject to World Sailing approval.
- 2.3 The main difference between the Manufacturer Controlled and the Measurement Controlled Classes, such as the International 470 Class Association, is that the Building Specifications are strictly confidential and only a small group of people can access this information. Sailors, coaches and even World Sailing International Measurers currently do not have access to the Building Specifications.

3. Certification System Manual

- 3.1 The Certification System (CS) Manual is issued under the authority of World Sailing, in pursuit of licencing under the MCS. The MCS for Olympic Equipment includes a Certification System aiming to allow manufacturers to certify their own registered equipment if it is produced in compliance with the requirements and controls set out in the CS Manual once approved by World Sailing.

- 3.2 World Sailing audits the manufacturer and inspect equipment to assess compliance with the requirements and controls defined in the CS Manual. The CS Manual is a document developed jointly by World Sailing and the manufacturer. The manufacturer must include information regarding the following:
- (a) Information concerning the manufacturer responsible for the production of the equipment item,
 - (b) Information defining the equipment item (registered design):
 - (i) Bills of Materials
 - (ii) Dimensions & Weights (Including Production Tolerances)
 - (iii) CAD Files
 - (iv) Material Lay-Up
 - (v) Building Process
 - (vi) Quality Assurance and Quality Controls
 - (c) Information concerning the traceability of the equipment and its information,
 - (d) Information concerning the building process and tooling used,
 - (e) Information concerning the management of non-conformities,
 - (f) Information concerning auditing.
- 3.3 The Manufacturer and its appointed Certification Manager, made responsible through the CS Manual for the production of Olympic Equipment, are required to provide the above information and agree to the MCS.

4. Auditing Process

- 4.1 As detailed in the audit plan which is included in the CS Manual, the Olympic Manufacturer will be audited by World Sailing during the first three years of the Olympic Quad. The auditing process consists of three main phases: Preparation, In-Person Audit and Follow-Up:
- (a) **Preparation:** in-depth analysis of the documentation shared with World Sailing via on-line meetings to validate the information. During the meetings the MCS is presented and the requirements to comply with the certification system. The dates of the In-Person Audit are formally agreed.
 - (b) **In-Person Audit:** The typical structure of a MCS in-person audit has a timeframe of two days, although the length of the audit may be longer due to multiple equipment models produced by the manufacturer or when the manufacturer is a certified In-House Sailmaker. The main activities are listed below:
 - (i) Day 1: Factory Inspection, Documental Review and Action Point Definition to comply with the MCS.
 - (ii) Day 2: Testing of Quality Controls for the Certification Process of the Equipment, Audit Report and Action Points Finalisation
 - (c) **Follow-Up:** email exchange and if necessary online meetings to close all the Action Points listed during the In-Person Audit as well as approval of the Certification System Manual.

5. Event Inspections

- 5.1 While the Manufacturer Certification System (MCS) provides a foundation for quality control at the point of production, the framework must be complemented by inspections at events.
- 5.2 This is especially relevant in manufacturer-controlled classes, where building specifications are strictly confidential, and access is limited to a small group. Event inspections supported by World Sailing technical specialists serve to verify that equipment has not been modified beyond what is permitted, to document changes resulting from normal use, and to assess the effectiveness of class rules in achieving fair competition.
- 5.3 These inspections also support continuous improvement by assisting IMs in refining event inspection protocols, allowing to replicate procedures used at production, defining and validating the necessary tools and resources for the Olympic Games inspections.

6. Recent Activities

- 6.1 **Data Gathering & Benchmarking:** the first phase of the project is focused on establishing a strong communication between World Sailing, Olympic Classes and Manufacturers and documenting quality controls. To achieve this the main activities can be summarised below:
 - (a) Definition of the baseline in terms of Manufacturers and Equipment Items to include the most relevant stakeholders. In the Appendix A of this document the full list is available.
 - (b) A standard approach to collect and classify the Building Specification was defined to monitor the level of compliance within the certification system and to easily access the information.
 - (c) The Audit Plan for the 2025 was developed and the Manufacturers contacted to organise the audits.
 - (d) Definition of the regulatory framework:
 - (i) Olympic Class Agreement between World Sailing and Olympic Classes
 - (ii) Commercial Undertakings between World Sailing and Manufacturers
 - (iii) Certification System Manual between World Sailing and Manufacturers
- 6.2 **2025 Performed Audits:** In February 2025 two Kite manufacturers were successfully audited by World Sailing:

Manufacturer/Brand	Class	Equipment
Flysurfer	IKA Formula Kite	Kite
Ozone Kites	IKA Formula Kite	Kite

7. Next Steps

- 7.1 **2025 Planned Audits:** The focus of the current year is on the IKA Formula Kite as World Sailing must license the manufacturers that were registered by the Class and are currently under review before they are eligible to produce the equipment for the Olympic Quad 2025-2028.
- 7.2 Below is the full list of MCS audits scheduled:

Manufacturer/Brand	Class	Equipment
Chubanga	IKA Formula Kite	Hydrofoil
North Kiteboarding	IKA Formula Kite	Kite
Flying Sardine	IKA Formula Kite	Hydrofoil
Levitaz	IKA Formula Kite	Hydrofoil
Element	IKA Formula Kite	Kite
Weihai JSP	iQFOiL	Rig
North Sails	ILCA, 49er & FX	Sail

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Appendix A | Manufacturers & Olympic Classes

International 49er & 49erFX Class Association

Equipment Item (Model)	Equipment Cluster	Brand Name	Manufacturer Name
Hull MacKay	Hull	MacKay Boats	-
Hull Ovington	Hull	Ovington Boats	-
Rudder MacKay	Hull Appendage	MacKay Boats	-
Rudder Ovington	Hull Appendage	Ovington Boats	-
Daggerboard MacKay	Hull Appendage	MacKay Boats	-
Daggerboard Ovington	Hull Appendage	Ovington Boats	-
Rudder Cassette	Hull Appendage	Allen/Hi-Rig	-
Mast Bottom Section 49er	Rig	CST Marine	-
Mast Middle Section 49er	Rig	CST Marine	-
Mast Top Section 49er	Rig	CST Marine	-
Mast Bottom Section FX	Rig	CST Marine	-
Mast Middle Section FX	Rig	CST Marine	-
Mast Top Section FX	Rig	CST Marine	-
Boom MacKay	Rig	MacKay Boats	-
Boom Ovington	Rig	Ovington Boats	-
Boom Vang Arms MacKay	Rig	MacKay Boats	-
Boom Vang Arms Ovington	Rig	Ovington Boats	-
Boom Vang Lever MacKay	Rig	MacKay Boats	-
Boom Vang Lever Ovington	Rig	Ovington Boats	-
Bowsprit MacKay	Rig	MacKay Boats	-
Bowsprit Ovington	Rig	Ovington Boats	-
Mainsail 49er	Sail	North Sails	-
Jib 49er	Sail	North Sails	-
Gennaker 49er	Sail	JIELI Sports Goods	-
Mainsail FX	Sail	North Sails	-
Jib FX	Sail	North Sails	-
Gennaker FX	Sail	North Sails	-
Battens Mainsail 49er	Sail	North Sails	-
Battens Jib 49er	Sail	North Sails	-
Battens Mainsail FX	Sail	North Sails	-
Battens Jib FX	Sail	North Sails	-

International Kiteboarding Association – Formula Kite

Equipment Item (Model)	Equipment Cluster	Brand Name	Manufacturer Name
Glider V3	Hull Appendage	Chubanga	-
Glider V4	Hull Appendage	Chubanga	-
Glider V4w	Hull Appendage	Chubanga	-
Foil Mast V3	Hull Appendage	Chubanga	-
Foil Mast V5	Hull Appendage	Chubanga	-
Glider Flow V2	Hull Appendage	Flying Sardine	NELO M.A.R. Kayaks
Race Foil Mast 106	Hull Appendage	Flying Sardine	NELO M.A.R. Kayaks
Race Foil Mast 110	Hull Appendage	Flying Sardine	NELO M.A.R. Kayaks
Frontwing R5	Hull Appendage	LEVITAZ	Geislinger
Frontwing R5-S	Hull Appendage	LEVITAZ	Geislinger
Frontwing R6 V1	Hull Appendage	LEVITAZ	Geislinger
Frontwing R6 V2	Hull Appendage	LEVITAZ	Geislinger
Foil Mast R5 V1	Hull Appendage	LEVITAZ	Geislinger
Foil Mast R5 V2	Hull Appendage	LEVITAZ	Geislinger
Foil Mast R6 V1	Hull Appendage	LEVITAZ	Geislinger
Foil Mast R6 V2	Hull Appendage	LEVITAZ	Geislinger
Rearwing R5	Hull Appendage	LEVITAZ	Geislinger
Rearwing R5 V2	Hull Appendage	LEVITAZ	Geislinger
Rearwing R6 V1	Hull Appendage	LEVITAZ	Geislinger
Flash (21, 19, 15, 11)	Sail	Element	Qingdao DingMingJin Gliders
VMG 3 (21, 19, 15, 11, 9)	Sail	Flysurfer	RAM
Formula (19, 17, 15, 13, 11, 10, 9, 8)	Sail	North Kiteboarding	Aqua Dynamics
R1 V5 (21, 19, 15, 14, 11, 10, 9, 8)	Sail	Ozone	PARAPEX

International ILCA 6 & ILCA 7 Class Association

Equipment Item (Model)	Equipment Cluster	Brand Name	Manufacturer Name
ILCA Hull Devoti	Hull	Devoti Sailing	-
ILCA Hull Element 6	Hull	Element 6 Evolution	-
ILCA Hull Far East	Hull	Far East Boats	-
ILCA Hull Nautivela	Hull	Nautivela	-
ILCA Hull Ovington	Hull	Ovington Boats	-
ILCA Hull PSA	Hull	Performance Sailcraft Australia	-
ILCA Hull PSJ	Hull	Performance Sailcraft Japan	-
ILCA Hull Rio Tecna	Hull	Rio Tecna	-
ILCA Hull ZIM	Hull	ZIM Sailing	-
ILCA Hull Zou Marine	Hull	Zou Marine	-
Rudder Devoti	Hull Appendage	Devoti Foil	-
Rudder Element 6	Hull Appendage	Element 6 Evolution	-
Rudder Rio Tecna	Hull Appendage	Rio Tecna	-
Rudder XSP	Hull Appendage	Xtreme Sailing Products	-
Rudder Head Allen	Hull Appendage	Allen	-
Rudder Head Element 6	Hull Appendage	Element 6 Evolution	-
Rudder Head Harken	Hull Appendage	Harken	-
Rudder Head Nautos	Hull Appendage	Nautos	-
Rudder Head RWO	Hull Appendage	RWO	-
Daggerboard Devoti	Hull Appendage	Devoti Foil	-
Daggerboard Element 6	Hull Appendage	Element 6 Evolution	-
Daggerboard Rio Tecna	Hull Appendage	Rio Tecna	-
Daggerboard XSP	Hull Appendage	Xtreme Sailing Products	-
Mast Bottom Section Aluminium (ILCA 7) Element 6	Rig	Element 6 Evolution	-
Mast Bottom Section Aluminium (ILCA 7) Selden UK	Rig	Selden Masts UK	-
Mast Bottom Section Aluminium (ILCA 7) Selden USA	Rig	Selden Masts USA	-
Mast Bottom Section Aluminium (ILCA 7) Technocar	Rig	Technocar	-
Mast Bottom Section Composite (ILCA 6) CST	Rig	CST Marine	-
Mast Top Section Composite CST	Rig	CST Marine	-
Mast Top Section Composite Selden UK	Rig	Selden Masts UK	-
Boom Element 6	Rig	Element 6 Evolution	-
Boom Selden USA	Rig	Selden Masts USA	-
Boom Technocar	Rig	Technocar	-
Boom Selden UK	Rig	Selden Masts UK	-
6S Sail Hyde	Sail	Hyde Sails	-
6S Sail JIELI	Sail	JIELI Sports Goods	-
6S Sail North	Sail	North Sails	-
7S Sail MKII Hyde	Sail	Hyde Sails	-
7S Sail MKII JIELI	Sail	JIELI Sports Goods	-
7S Sail MKII North	Sail	North Sails	-
6S Battens JIELI	Sail	JIELI Sports Goods	-
6S Battens North	Sail	North Sails	-
7S Battens JIELI	Sail	JIELI Sports Goods	-
7S Battens North	Sail	North Sails	-

International iQFOiL Class Association

Equipment Item (Model)	Equipment Cluster	Brand Name	Manufacturer Name
95 Carbon Reflex Board	Hull	Starboard, Patrik	Cobra International
900 Frontwing	Hull Appendage	Starboard, Patrik	Sonic Composite
115 Plus Fuselage	Hull Appendage	Starboard, Patrik	Sonic Composite
255 Rearwing	Hull Appendage	Starboard, Patrik	Sonic Composite
95cm Foil Mast	Hull Appendage	Starboard, Patrik	Sonic Composite
490 SDM Mast	Rig	Italica	Weihai Julia Sport Product
210-250 Carbon Boom	Rig	Italica	Weihai Julia Sport Product
Mast Base	Rig	Italica	Weihai Julia Sport Product
Mast Race Extension HD	Rig	Italica	Weihai Julia Sport Product
HyperGlide Olympic - 7.3	Sail	Severne, Patrik	IK Pacific
HyperGlide Olympic - 8.0	Sail	Severne, Patrik	IK Pacific
Battens	Sail	Severne, Patrik	IK Pacific

International Nacra 17 Class Association

Equipment Item (Model)	Equipment Cluster	Brand Name	Manufacturer Name
Hull	Hull	Element 6 Evolution	-
Bearing System	Hull	Nacra Sailing	-
Crossbar (Front, Rear)	Hull	Nacra Sailing	-
Rudder Rake System	Hull	Nacra Sailing	-
Tiller Crossbar	Hull	Nacra Sailing	-
Trampoline	Hull	Nacra Sailing	-
Daggerboard	Hull Appendage	Element 6 Evolution	-
Elevator	Hull Appendage	Element 6 Evolution	-
Rudder Blade	Hull Appendage	Element 6 Evolution	-
Mast	Rig	Hall Spars and Rigging	-
Boom	Rig	Nacra Sailing	-
Bowsprit	Rig	Nacra Sailing	-
Bowsprit Mid Bridles	Rig	Nacra Sailing	-
Spreader	Rig	Nacra Sailing	-
Gennaker	Sail	Performance Sails	-
Jib	Sail	Performance Sails	-
Mainsail	Sail	Performance Sails	-
Mainsail Batten Set (Hard, Standard, Soft)	Sail	Performance Sails	-