



SLOVENSKI STANDARD
oSIST prEN ISO 11591:2014
01-december-2014

Mala motorna plovila - Vidno polje izza krmila (ISO/DIS 11591:2014)

Small craft - Field of vision from helm position (ISO/DIS 11591:2014)

Kleine Wasserfahrzeuge - Sichtfeld vom Steuerstand (ISO/DIS 11591:2014)

Petits navires - Champ de vision depuis le poste de pilotage (ISO/DIS 11591:2014)

Ta slovenski standard je istoveten z: prEN ISO 11591 rev

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47.080

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Small craft

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en

DRAFT INTERNATIONAL STANDARD

ISO/DIS 11591

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Small craft — Field of vision from helm position

Petits navires — Champ de vision depuis le poste de pilotage

ICS: 47.080

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ISO/CEN PARALLEL PROCESSING

This draft has been developed within the International Organization for Standardization (ISO), and processed under the **ISO lead** mode of collaboration as defined in the Vienna Agreement.

This draft is hereby submitted to the ISO member bodies and to the CEN member bodies for a parallel five month enquiry.

Should this draft be accepted, a final draft, established on the basis of comments received, will be submitted to a parallel two-month approval vote in ISO and formal vote in CEN.

To expedite distribution, this document is circulated as received from the committee secretariat. ISO Central Secretariat work of editing and text composition will be undertaken at publication stage.

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Contents

Page

Foreword	iv
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Engine power driven craft	3
4.1 General requirements	3
4.2 Field of vision — Forward.....	5
4.3 Field of vision — Astern	7
5 Sailing craft	7
5.1 General requirements	7
5.2 Field of vision	7
6 Owner's manual	7
6.1 Powered craft	7
6.2 Sailing craft	8

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ISO/DIS 11591

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 11591 was prepared by Technical Committee ISO/TC 188, *Small craft* together with CEN/BT/WG 69, *Small craft*.

This third edition cancels and replaces the second edition (ISO 11591:2011), which has been technically revised.

Main changes to ISO 11591:2011 are that:

- this standard has been adapted to sailing craft;
- the part for engine-powered craft has been simplified for easier application.

Small craft — Field of vision from helm position

1 Scope

This International Standard specifies requirements for the field of vision from the helm position, forward and astern, small craft of up to 24 m length of hull. It considers different risk assessments for both engine driven and sailing craft due to their different ranges of speed and their related collision hazards.

It is not applicable to:

- engine driven tiller-steered craft with maximum speed less than 10 knots;
- rowing boats.

NOTE Small engine driven craft can be operated in a manner and at certain speeds causing trim angles such that vision forward is temporarily obscured. This International Standard cannot assure that a craft can be operated without some temporary loss of vision from the helm position while operating at high trim angles during the transition from displacement to planing mode.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 3538:1997, *Road vehicles — Safety glazing materials — Test methods for optical properties*

ISO 7010:2011, *Graphical symbols — Safety colours and safety signs — Registered safety signs*

ISO 8666, *Small craft — Principal data*

ISO 10240, *Small craft — Owner's manual*

ISO 11192:2005, *Small craft — Graphical symbols*

E/ECE/324, E/ECE/TRANS/505, *Uniform provisions concerning the approval of safety glazing materials and their installation on vehicles, United Nations*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1 steering position

(sailing craft) area of craft in which the operator manually steers the craft

3.2 steering position

(engine powered craft) position in craft in which the operator manually steers the craft and controls the propulsion system.

ISO/DIS 11591

3.3**high eye position**

⟨helmsman in standing position⟩ position 1 730 mm above the surface on which the helmsman stands, 400 mm from the centre of the steering-wheel rim

Note 1 to entry: See Figure 1.

3.4**high eye position**

⟨helmsman in seated position⟩ position 840 mm above the intersection of the compressed seat and the seat back, 400 mm from the centre of the steering-wheel rim

Note 1 to entry: See Figure 2.

3.5**low eye position**

⟨helmsman in standing position⟩ position 1 480 mm above the surface on which the helmsman stands, 400 mm from the centre of the steering-wheel rim

Note 1 to entry: See Figure 1.

3.6**low eye position**

⟨helmsman in seated position⟩ position 690 mm above the intersection of the compressed seat and the seat-back, 400 mm from the centre of the steering-wheel rim

Note 1 to entry: See Figure 2.

3.7**compressed seat bottom**

surface of the centre of the helm seat at the intersection of the seat-back and seat-bottom when compressed by a 25 mm diameter spherical object under a vertical load of 100 N

Note 1 to entry: See Figure 2.

3.8**level reference line**

real or designated waterline of the craft determined for the operating conditions

3.9**vertical range of vision**

range between the lowest unobstructed line of vision from the low eye position and the highest unobstructed line of vision from the high eye position

Note 1 to entry: See Figures 1 and 2.

3.10**horizontal range of vision**

range of vision through the horizontal arc formed from 112,5° on the starboard side to 90° on the port side of the craft

Note 1 to entry: See Figure 3.

3.11**tiller-steered craft**

craft steered from the stern position by outboard engine tiller or rudder with tiller arm directly attached

3.12**sailing craft**

craft for which the primary means of propulsion is wind power as defined in ISO 8666

3.13**power driven craft**

craft for which the primary means of propulsion is an engine.

3.14**planing mode**

mode of running of a craft in the sea such that its mass is significantly supported by forces coming from dynamic lift due to speed in the water

3.15**planing craft**

craft whose maximum speed in flat water and m_{LDC} conditions, declared by its manufacturer, is such that

$$\frac{V}{\sqrt{L_{WL}}} \geq 5$$

Note 1 to entry: L_{WL} is the length of the waterline, craft at rest in m_{LDC} conditions, in metres, and V is the maximum speed in calm water declared by the manufacturer, with the craft in m_{LDC} conditions, in km/h.

3.16**displacement mode**

mode of running of a craft in the sea such that its mass is mainly supported by buoyancy forces

3.17**displacement craft**

craft whose maximum speed in flat water and m_{LDC} conditions, declared by its manufacturer, is such that

$$\frac{V}{\sqrt{L_{WL}}} < 5$$

Note 1 to entry: L_{WL} and V are defined as in 3.15.

4 Engine power driven craft**4.1 General requirements**

4.1.1 The helmsman's position shall permit the operator to have a field of vision as defined in Figures 1 and 2, when in the fully loaded ready-for-use condition (m_{LDC}) as specified in ISO 8666, during cruising, manoeuvring, docking or other extended operational modes.

4.1.2 All glazing in the forward horizontal range of vision shall conform to the requirements of this International Standard and shall have at least 70 % light transmission as measured in accordance with E/ECE/324.

4.1.3 For craft having more than one steering position, at least one steering position shall meet the vision requirements of this International Standard. Other steering positions that do not meet the requirements of this International Standard shall display a sign at these steering positions, in clear view of the operator, with the ISO symbol for warning in accordance with 19.1 of ISO 11192:2005 or symbol W001 of ISO 7010:2011 together with at least the following information in a language appropriate to the country of operation:

WARNING — Vision from this steering position is limited. Maintain a lookout as required.

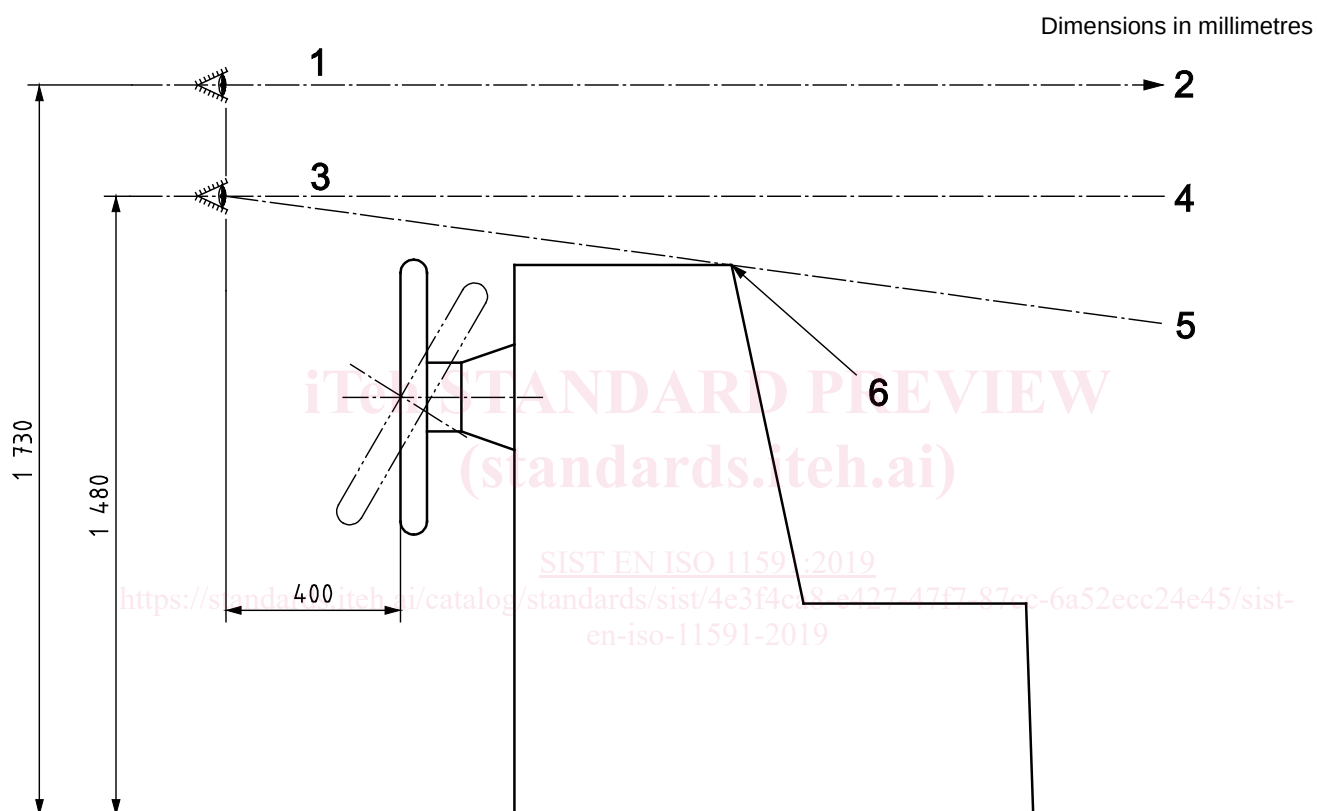
ISO/DIS 11591

4.1.4 Helm locations designed to be used from either standing or sitting positions shall meet the requirements of this International Standard from at least one of the positions.

4.1.5 Throttle and shift controls, as intended for use by the helmsman, shall be positioned within 0,7 m of the high eye position and shall enable the maintenance of at least the low eye position by the helmsman at all throttle settings. For craft designed to be operated from both the seated and standing position, the controls shall be located to meet these requirements from at least the seated position.

4.1.6 The requirements for low eye position can be met by a helmsman's seat with vertical height adjustment.

4.1.7 Permanent and removable tops and/or other structural parts and mounted instruments in the vicinity of the helmsman shall not obstruct forward vision as required by this International Standard.

**Key**

- 1 high eye position
- 2 to horizon
- 3 low eye position
- 4 required vertical range of vision
- 5 lowest unobstructed line of vision
- 6 point of visual obstruction

Figure 1 — Eye positions and vertical range of vision — Helmsman in standing position