

# **SLOVENSKI STANDARD**

## **oSIST prEN ISO 23411:2019**

**01-september-2019**

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### **Mala plovila - Krmila (ISO/DIS 23411:2019)**

Small craft - Steering wheels (ISO/DIS 23411:2019)

Kleine Wasserfahrzeuge - Steuerräder (ISO/DIS 23411:2019)

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#### **ICS:**

47.020.70	Navigacijska in krmilna oprema	Navigation and control equipment
47.080	Čolni	Small craft

**oSIST prEN ISO 23411:2019**

**en,fr,de**



# DRAFT INTERNATIONAL STANDARD

## ISO/DIS 23411

ISO/TC 188/SC 2

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## Small craft — Steering wheels

ICS: 47.080

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## ISO/DIS 23411:2019(E)

## 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.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see [www.iso.org/directives](http://www.iso.org/directives)).

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. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see [www.iso.org/patents](http://www.iso.org/patents)).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see [www.iso.org/iso/foreword.html](http://www.iso.org/iso/foreword.html).

This document was prepared by Technical Committee ISO/TC 188, *Small Craft, SC 2, Engines and propulsion systems*.

The main changes compared to the previous edition are as follows:

- consolidation of steering wheel requirements from ISO 8848, ISO 9775, and ISO 15652 into this document;
- requirements to meet current industry practices are updated.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at [www.iso.org/members.html](http://www.iso.org/members.html).

## Introduction

This International Standard specifies design, construction, and testing requirements for steering wheels on small craft.

Previously steering wheels were addressed in each of the ISO steering gear standards. A review of the steering standards for a merge project found that updates were needed for consistency and to meet current industry practices. Steering wheel requirements have been removed from each steering gear standard. This standard provides a consistent approach for the design and testing of steering wheels for small craft including steering wheels for sailing craft.

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# Small craft — Steering wheels

## 1 Scope

This document specifies design, construction, and testing requirements for steering wheels for small craft.

## 2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 25197, *Small craft — Electrical/electronic control system for steering, shift and throttle*

## 3 Terms and definitions

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

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <https://www.iso.org/obp>

### 3.1

#### **steering helm**

operator input device for the control of steering

### 3.2

#### **minimum retained system performance**

system capability after test(s) such that at least 90 % of the engine steering arm travel normally available to each side of the mid-position may be obtained by exertion of no more than 27 Nm of torque at the steering helm through the wheel or other normal control

Note 1 to entry: This criteria does not define steering system performance while a craft is underway, but is intended to provide qualitative limits for design and test purposes.

### 3.3

#### **steering wheel diameter**

the diameter of the circle formed by the outermost sections of the wheel ([Figure 1](#))

### 3.4

#### **steering wheel dish**

the distance between the two parallel planes formed by the aft rim surface and the forward hub surface of a wheel ([Figure 1](#))

### 3.5

#### **pinch point**

location at which a moving part comes into contact with or close proximity to another part such that another object at that location would be cut or crushed

### 3.6

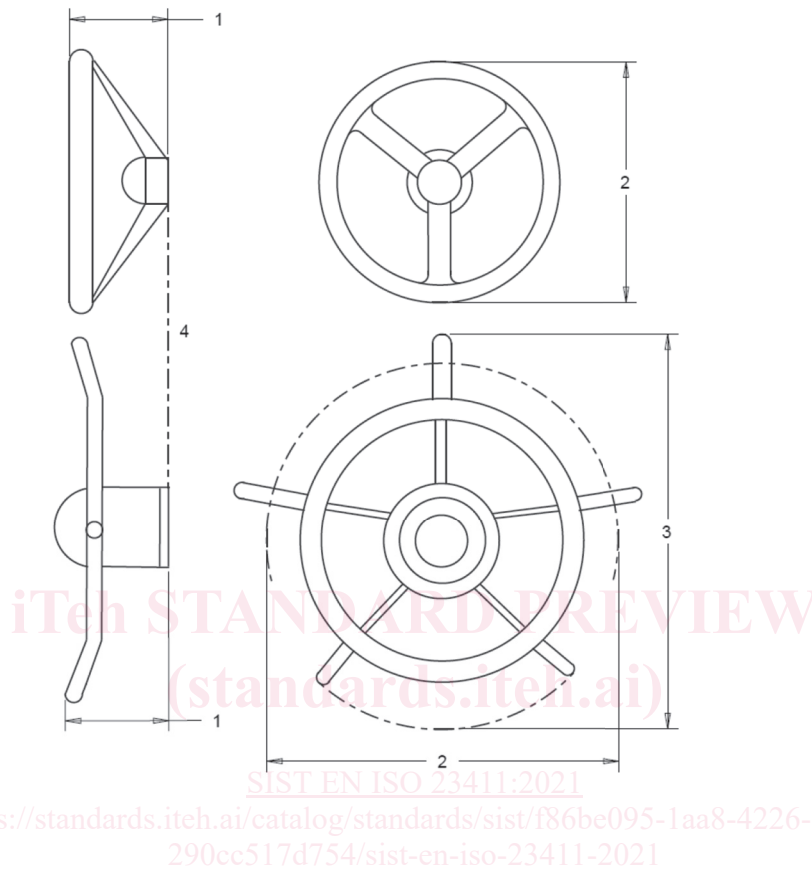
#### **craft**

#### **small craft**

recreational boat, and other watercraft using similar equipment, of up to 24 m length of hull (LH)

## 4 General requirements

**4.1** Steering wheels shall be permanently marked by their manufacturer with wheel diameter and wheel dish measurements ([Figure 1](#)).



### Key

- 1 dish
- 2 diameter
- 3 actual diameter
- 4 wheel level line

**Figure 1 — Steering wheel terms**