

**SLOVENSKI STANDARD**  
**oSIST prEN ISO 12215-8:2018**  
**01-marec-2018**

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**Mala plovila - Konstrukcija trupa in zahtevane lastnosti - 8. del: Krmila (ISO 12215-8:2009)**

Small craft - Hull construction and scantlings - Part 8: Rudders (ISO 12215-8:2009)

Kleine Wasserfahrzeuge - Rumpfbauweise und Dimensionierung - Teil 8: Ruder (ISO 12215-8:2009)

Petits navires - Construction de coques et échantillonnage - Partie 8: Gouvernails (ISO 12215-8:2009)

**Ta slovenski standard je istoveten z: prEN ISO 12215-8**

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**ICS:**

47.020.10	Ladijski trupi in njihovi konstrukcijski elementi	Hulls and their structure elements
47.080	Čolni	Small craft

**oSIST prEN ISO 12215-8:2018**

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EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

**DRAFT**  
**prEN ISO 12215-8**

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English Version

**Small craft - Hull construction and scantlings - Part 8:  
Rudders (ISO 12215-8:2009)**

Petits navires - Construction de coques et  
échantillonnage - Partie 8: Gouvernails (ISO 12215-  
8:2009)

Kleine Wasserfahrzeuge - Rumpfbauweise und  
Dimensionierung - Teil 8: Ruder (ISO 12215-8:2009)

This draft European Standard is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee CEN/SS T01.

If this draft becomes a European Standard, CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

This draft European Standard was established by CEN in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

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Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

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EUROPÄISCHES KOMITEE FÜR NORMUNG

**CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels**

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## European foreword

The text of ISO 12215-8:2009 has been prepared by Technical Committee ISO/TC 188 “Small craft” of the International Organization for Standardization (ISO) and has been taken over as prEN ISO 12215-8:2017.

This document is currently submitted to the CEN Enquiry.

This document will supersede EN ISO 12215-8:2009.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive 2013/53/EU.

For relationship with EU Directive 2013/53/EU, see informative Annex ZA, which is an integral part of this document.

## Endorsement notice

The text of ISO 12215-8:2009 has been approved by CEN as prEN ISO 12215-8:2017 without any modification.

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## Annex ZA (informative)

### Relationship between this European Standard and the Essential Requirements of Directive 2013/53/EU aimed to be covered

This European standard has been prepared under a Commission's standardization request M/542 C(2015) 8736 final to provide one voluntary means of conforming to Essential Requirements of Directive 2013/53/EU.

Once this standard is cited in the Official Journal of the European Union under that Directive, compliance with the normative clauses of this standard given in Table ZA.1 confers, within the limits of the scope of this standard, a presumption of conformity with the corresponding Essential Requirements of that Directive and associated EFTA regulations.

**Table ZA.1: Correspondence between this European Standard and Annex I of Directive 2013/53/EU**

Essential Requirements of Directive 2013/53/EU	Clause(s)/sub-clause(s) of this EN	Remarks/Notes
Annex I, Part A, 2.5 – Owner's manual	7.2, 7.3, 12.1	These clauses specify warnings and information to be included in the owner's manual, if relevant.
Annex I, Part A, 3.1 - Structure	All clauses	<p>This part of this standard provides scantling requirements applicable to five types of rudder configuration: Type I to Type V, as shown in Figures 2 and 3 of clause 6.2. It applies only to monohulls.</p> <p>The application of this part of this standard does not ensure proper steering capabilities.</p> <p>Single bearing spade rudders and single hull bearing skeg rudders are not addressed by this standard.</p>
Annex I, Part A, 5.4.2 - Steering system – Emergency arrangements	6.1.6	In respect of the ability of emergency tiller components to transmit rudder torque.

**WARNING 1** — Presumption of conformity stays valid only as long as a reference to this European Standard is maintained in the list published in the Official Journal of the European Union. Users of this standard should consult frequently the latest list published in the Official Journal of the European Union.

**WARNING 2** — Other Union legislation may be applicable to the product(s) falling within the scope of this standard.

# INTERNATIONAL STANDARD

**ISO**  
**12215-8**

First edition  
2009-05-15

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## **Small craft — Hull construction and scantlings —**

### **Part 8: Rudders**

*Petits navires — Construction de coques et échantillonnage —  
Partie 8: Gouvernails*

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## 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 12215-8 was prepared by Technical Committee ISO/TC 188, *Small craft*.

ISO 12215 consists of the following parts, under the general title *Small craft — Hull construction and scantlings*:

- *Part 1: Materials: Thermosetting resins, glass-fibre reinforcement, reference laminate*
- *Part 2: Materials: Core materials for sandwich construction, embedded materials*
- *Part 3: Materials: Steel, aluminium alloys, wood, other materials*
- *Part 4: Workshop and manufacturing*
- *Part 5: Design pressures for monohulls, design stresses, scantlings determination*
- *Part 6: Structural arrangements and details*
- *Part 8: Rudders*

## Introduction

The reason underlying the preparation of this part of ISO 12215 is that standards and recommended practices for loads on the hull and the dimensioning of small craft differ considerably, thus limiting the general worldwide acceptability of craft. This part of ISO 12215 has been set towards the lower boundary range of common practice.

The objective of this part of ISO 12215 is to achieve an overall structural strength that ensures the watertight and weathertight integrity of the craft.

The working group considers this part of ISO 12215 to have been developed applying present practice and sound engineering principles. The design loads and criteria of this part of ISO 12215 may be used with the scantling determination equations of this part of ISO 12215 or using equivalent engineering methods such as continuous beam theory, matrix-displacement method and classical lamination theory, as indicated within.

Considering future development in technology and craft types, and small craft presently outside the scope of this part of ISO 12215, provided that methods supported by appropriate technology exist, consideration may be given to their use as long as equivalent strength to this part of ISO 12215 is achieved.

The dimensioning according to this part of ISO 12215 is regarded as reflecting current practice, provided the craft is correctly handled in the sense of good seamanship and equipped and operated at a speed appropriate to the prevailing sea state.

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# Small craft — Hull construction and scantlings —

## Part 8: Rudders

### 1 Scope

This part of ISO 12215 gives requirements on the scantlings of rudders fitted to small craft with a length of hull,  $L_H$ , of up to 24 m, measured according to ISO 8666. It applies only to monohulls.

This part of ISO 12215 does not give requirements on rudder characteristics required for proper steering capabilities.

This part of ISO 12215 only considers pressure loads on the rudder due to craft manoeuvring. Loads on the rudder or its skeg, where fitted, induced by grounding or docking, where relevant, are out of scope and need to be considered separately.

NOTE Scantlings derived from this part of ISO 12215 are primarily intended to apply to recreational craft including charter craft.

### 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 12215-8:2018  
<https://standards.iteh.ai/catalog/standards/sist/3f773204-6c84-45aa-b764-387e9b4a95e5/sist-en-iso-12215-8-2018>  
ISO 8666, *Small craft — Principal data*

ISO 12215-5:2008, *Small craft — Hull construction and scantlings — Part 5: Design pressures for monohulls, design stresses, scantlings determination*

### 3 Terms and definitions

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

#### 3.1

##### design categories

sea and wind conditions for which a craft is assessed by this part of ISO 12215 to be suitable, provided the craft is correctly handled in the sense of good seamanship and operated at a speed appropriate to the prevailing sea state

##### 3.1.1

##### design category A (“ocean”)

category of craft considered suitable to operate in seas with significant wave heights above 4 m and wind speeds in excess of Beaufort Force 8, but excluding abnormal conditions such as hurricanes

**ISO 12215-8:2009(E)****3.1.2****design category B (“offshore”)**

category of craft considered suitable to operate in seas with significant wave heights up to 4 m and winds of Beaufort Force 8 or less

**3.1.3****design category C (“inshore”)**

category of craft considered suitable to operate in seas with significant wave heights up to 2 m and a typical steady wind force of Beaufort Force 6 or less

**3.1.4****design category D (“sheltered waters”)**

category of craft considered suitable to operate in waters with significant wave heights up to and including 0,3 m with occasional waves of 0,5 m height, for example from passing vessels, and a typical steady wind force of Beaufort Force 4 or less

**3.2****loaded displacement mass**

$m_{LDC}$

mass of the craft, including all appendages, when in the fully loaded ready-for-use condition as defined in ISO 8666

**3.3****sailing craft**

craft for which the primary means of propulsion is wind power, having  $A_S > 0,07(m_{LDC})^{2/3}$  where  $A_S$  is the total profile area of all sails that may be set at one time when sailing closed hauled, as defined in ISO 8666 and expressed in square metres

NOTE 1 For the headsails,  $A_S$  is the area of the fore triangle.

NOTE 2 In the rest of this part of ISO 12215, non-sailing craft are called motor craft.

**4 Symbols**

For the purposes of this document, unless specifically otherwise defined, the symbols given in Table 1 apply.

NOTE The symbols used in the annexes are not listed in Table 1.