



**SLOVENSKI STANDARD**  
**SIST EN ISO 12216:2003**  
**01-marec-2003**

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**Mala plovila - Okna, lopute, pokrovi in vrata - Zahteve trdnosti in odpornosti proti vodi (ISO 12216:2002)**

Small craft - Windows, portlights, hatches, deadlights and doors - Strength and watertightness requirements (ISO 12216:2002)

Kleine Wasserfahrzeuge - Fenster, Bullaugen, Luken, Seeschlagblenden und Türen - Anforderungen an die Festigkeit und Wasserdichtheit (ISO 12216:2002)

Petits navires - Fenêtres, hublots, panneaux, tapes et portes - Exigences de résistance et d'étanchéité (ISO 12216:2002)

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**Ta slovenski standard je istoveten z: EN ISO 12216:2002**

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**ICS:**

47.080

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ICS 47.020.10; 47.080

English version

Small craft - Windows, portlights, hatches, deadlights and doors  
- Strength and watertightness requirements (ISO 12216:2002)

Petits navires - Fenêtres, hublots, panneaux, tapes et  
portes - Exigences de résistance et d'étanchéité (ISO  
12216:2002)

Kleine Wasserfahrzeuge - Fenster, Bullaugen, Luken,  
Seeschlagblenden und Türen - Anforderungen an die  
Festigkeit und Wasserdichtheit (ISO 12216:2002)

This European Standard was approved by CEN on 26 May 2002.

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. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Management Centre or to any CEN member.

This European Standard exists 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 Management Centre has the same status as the official versions.

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EUROPEAN COMMITTEE FOR STANDARDIZATION  
COMITÉ EUROPÉEN DE NORMALISATION  
EUROPÄISCHES KOMITEE FÜR NORMUNG

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## Foreword

This document (EN ISO 12216:2002) has been prepared by Technical Committee ISO/TC 188 "Small craft", in collaboration with CMC.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by December 2002, and conflicting national standards shall be withdrawn at the latest by December 2002.

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(s).

For relationship with EU Directive(s), see informative annex ZB, which is an integral part of this document.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

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The text of the International Standard ISO 12216:2002 has been approved by CEN as a European Standard without any modifications.

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NOTE Normative references to International Standards are listed in annex ZA (normative).

## Annex ZA (normative)

### Normative references to international publications with their relevant European publications

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

NOTE Where an International Publication has been modified by common modifications, indicated by (mod.), the relevant EN/HD applies.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN</u>	<u>Year</u>
ISO 6603-1	2000	Plastics - Determination of puncture impact behaviour of rigid plastics - Part 1: Non-instrumented impact testing	EN ISO 6603-1	2000
ISO 11812	2001	Small craft - Watertight cockpits and quick-draining cockpits	EN ISO 11812	2001

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## Annex ZB (informative)

### Clauses of this European Standard addressing essential requirements or other provisions of EU Directives

This European Standard 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 94/25/EC.

**WARNING:** Other requirements and other EU Directives may be applicable to the product(s) falling within the scope of this standard.

The following clauses of this standard, as detailed in table ZA.1, are likely to support requirements of Directive 94/25/EC.

Compliance with the clauses of this standard provides one means of conforming with the specific essential requirements of the Directive concerned and associated EFTA regulations.

**Table ZA.1: Correspondence between this European Standard and EU Directives**

Clauses/sub-clauses of this European Standard	Corresponding annexes/ paragraphs of Directive 94/25/EC	Comments
3, 4.1, 5, 6, 7, Annex A, B, C, D, E and F	Annex I, clause 3.1, Structure, and 3.4, Openings in hull, deck and superstructure - structural integrity	
3, 4.2, 4.3, Annex A and D.1	Annex I, clause 3.4, Openings in hull, deck and superstructure – weathertight integrity	
3.8, 6.3.7	Annex I, clause 3.8, Escape - multihull escape	
3, 4, 5, 6 (6.3.8), Annex A, B, C, D, E and F	Annex II, 5, Components - Prefabricated hatches and portlights	

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**Small craft — Windows, portlights, hatches,  
deadlights and doors — Strength and  
watertightness requirements**

*Petits navires — Fenêtres, hublots, panneaux, tapes et portes —  
Exigences de résistance et d'étanchéité*

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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 3.

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 International Standard may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 12216 was prepared by Technical Committee ISO/TC 188, *Small craft*.

Annexes A, B, C, D and E form integral parts of this International Standard. Annexes F and G are for information only.

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# Small craft — Windows, portlights, hatches, deadlights and doors — Strength and watertightness requirements

## 1 Scope

This International Standard specifies technical requirements for windows, portlights, hatches, deadlights and doors on small craft of hull length up to 24 m, taking into account the type of craft, its design category, and the location of the appliance.

The appliances considered in this International Standard are only those that are critical for the craft's watertightness, i.e. those that could lead to flooding in case of rupture of the plate.

This International Standard is mostly intended to be used for recreational craft, but it may be used for non-recreational small craft of hull length up to 24 m, excluding lifeboats. However, it is not applicable to commercial or work boats used in severe conditions.

## 2 Normative references

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The following normative documents contain provisions which, through reference in this text, constitute provisions of this International Standard. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies. Members of ISO and IEC maintain registers of currently valid International Standards.

ISO 6603-1:2000, *Plastics — Determination of multiaxial impact behaviour of rigid plastics — Part 1: Non-instrumented impact testing*

ISO 7823-1:—<sup>1)</sup>, *Poly(methyl methacrylate) sheets — Types, dimensions and characteristics — Part 1: Cast sheets*

ISO 8666:—<sup>2)</sup>, *Small craft — Principal data*

ISO 9094-1:—<sup>2)</sup>, *Small craft — Fire protection — Part 1: Craft with a hull length of up to and including 15 m*

ISO 9094-2:—<sup>2)</sup>, *Small craft — Fire protection — Part 2: Craft with a hull length of over 15 m*

ISO 11812:2001, *Small craft — Watertight cockpits and quick-draining cockpits*

ISO 12217 (all parts):2002, *Small craft — Stability and buoyancy assessment and categorization*

EN 356:1999, *Glass in building — Security glazing — Testing and classification of resistance against manual attack*

EN 1063:1999, *Glass in building — Security glazing — Testing and classification of resistance against bullet attack*

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1) To be published. (Revision of ISO 7823-1:1998)

2) To be published.

### 3 Terms and definitions

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

#### 3.1

##### **appliance**

device made of a plate and possibly a framing system, used to cover an opening in the hull or superstructure of a boat

EXAMPLE Windows, portlights, hatches, deadlights, doors, sliding appliances, escape hatches.

#### 3.2

##### **plate**

sheet of material, which may be transparent, that is fixed on the boat structure either directly or via a framing system

##### 3.2.1

##### **stiffened plate**

plate equipped with stiffeners

##### 3.2.2

##### **non-stiffened plate**

plate directly fixed on its supports

##### 3.2.3

##### **glazing**

transparent or translucent plate

##### 3.2.4

##### **unsupported dimensions of a plate**

clear dimensions between the supports bearing the plate

NOTE See annexes B and C.

#### 3.3

##### **passage**

clear opening through which people or material may pass

NOTE This definition can be used in defining passage dimensions and passage area.

#### 3.4

##### **window**

portlight

glazed appliance

NOTE The term "portlight" is generally used for a small window.

#### 3.5

##### **deck hatch**

appliance fitted on decks and superstructures

#### 3.6

##### **companionway door**

door or closing appliance intended to close a companionway opening

#### 3.7

##### **escape hatch**

appliance intended to provide an exit and designated means of escape

**3.8****multihull escape hatch**

appliance allowing a viable means of escape in the event of inversion

NOTE As this hatch is not normally totally immersed in the upright and inverted position, it is usually fitted below deck level on the hull side, nacelle or crossarm bottom, or transom.

**3.9****deadlight**

shutter

secondary watertight closure, fitted to a window, a hatch or a door, and which may be fitted inside or outside the plate

**3.10****closing appliance**

device used to cover an opening in the cockpit, hull or superstructure

**3.11****sliding appliance**

appliance that can slide in a rabbet or a frame

**3.11.1****framed plate sliding appliance**

plate mechanically connected to a frame that slides in a rabbet or a frame

**3.11.2****frameless plate sliding appliance**

plate without frame that slides in a rabbet or a frame

**3.12****design category**

description of the sea and wind conditions for which a boat is assessed to be suitable

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**3.12.1****design category A****category for "ocean" sailing**

boat designed for extended voyages where conditions experienced may exceed wind force 8 (Beaufort Scale) and significant wave heights of 4 m and above, but excluding abnormal conditions (e.g. hurricanes)

**3.12.2****design category B****category for "offshore" sailing**

boat designed for offshore voyages where conditions up to and including wind force 8 (Beaufort Scale) and significant wave heights up to and including 4 m may be experienced

**3.12.3****design category C****category for "inshore" sailing**

boat designed for voyages in coastal waters, large bays, estuaries, lakes and rivers, where conditions up to and including wind force 6 (Beaufort Scale) and significant wave heights up to and including 2 m may be experienced

**3.12.4****design category D****category for sailing in "sheltered waters"**

boat designed for voyages in sheltered waters, small bays, estuaries, lakes, rivers and canals, where conditions up to and including wind force 4 (Beaufort Scale) and maximum occasional wave heights up to and including 0,5 m may be experienced