INTERNATIONAL STANDARD

ISO 12216

Second edition
2020-07

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

Reference number
ISO 12216:2020(E)

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Published in Switzerland

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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.

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).

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).

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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.

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

This second edition cancels and replaces the first edition (ISO 12216:2002), which has been technically revised.

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

— new definitions (Clause 3);

— change in watertightness requirements (4.3.1);

— change of size allowance for glazing in the hull in area I (6.3.1.1);

— change in the requirements for the use of glass in area IIa appliances (6.3.2);

— new requirements for flush deck hatches (6.3.3);

— new requirements for multihull break out panels (6.3.8);

— new definition and requirements for prefabricated appliances (6.3.9);

— new requirements for simply supported plates (7.2.9 and 7.2.10);

— new direct calculation method for laminated glass plates (7.3);

— new advanced calculation method for strength requirements on certain types of non glazed plates (7.4);

— new requirements for pressure test (D.2.1);

— new requirements for watertightness test (D.2.2);

— new requirement for mechanical links test (Clause D.3);

— change to method of separation test (D.4.3);

— new precalculated plate thickness tables (Annex F).

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.

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

1 Scope

This document specifies technical requirements and test methods for windows, portlights, hatches, deadlights and doors on small craft with a length of hull, L_H, as defined in ISO 8666:2016, of up to 24 m. It takes into account the type of craft, its design category, and the location of the appliance.

The appliances considered in this document are only those that are critical for the craft's watertightness.

Openings and non-opening devices fitted below area I (see 3.5.2) are excluded from the scope of this document.

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

ISO 11336-1:2012, *Large yachts — Strength, weathertightness and watertightness of glazed openings — Part 1: Design criteria, materials, framing and testing of independent glazed openings*

ISO 11812:2020, *Small craft — Watertight cockpits and quick-draining cockpits*

ISO 12217-1:2015, *Small craft — Stability and buoyancy assessment and categorization — Part 1: Non-sailing boats of hull length greater than or equal to 6 m*

ISO 12217-2:2015, *Small craft — Stability and buoyancy assessment and categorization — Part 2: Sailing boats of hull length greater than or equal to 6 m*

ISO 12217-3:2015, *Small craft — Stability and buoyancy assessment and categorization — Part 3: Boats of hull length less than 6 m*

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*

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:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at http://www.electropedia.org/