
Small craft — Bilge-pumping systems

Petits navires — Systèmes de pompes de cale

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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 15083 was prepared by Technical Committee ISO/TC 188, *Small craft*.

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Introduction

Bilge-pumping systems as specified in this International Standard are limited to normal amounts of water in an intact boat due to spray, rain, seepage, spillage, and occasional small amounts of water shipped from boat movements in heavy weather.

This International Standard is not intended to enable flooding resulting from hull damage, to be dealt with.

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Small craft — Bilge-pumping systems

1 Scope

This International Standard specifies requirements for pumping or alternative means designed to remove normal accumulations of bilge water for small craft with a hull length, L_H , up to 24 m according to ISO 8666.

This International Standard does not set requirements for bilge pumps or bilge-pumping systems designed for damage control.

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 8666:2002, *Small craft — Principal data*

ISO 8849:—¹⁾, *Small craft — Electrically operated bilge-pumps*

ISO 9093 (all parts), *Small craft — Seacocks and through-hull fittings*

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

ISO 12216:2002, *Small craft — Windows, portlights, hatches, deadlights and doors — Strength and watertightness requirements*

IEC 60529: 2001, *Degrees of protection provided by enclosures (IP Code)*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply. The meanings of symbols used in the definitions are given in Clause 4.

3.1

design category

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

3.1.1

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)

1) To be published. (Revision of ISO 8849:1990)

3.1.2

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

3.1.3

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

3.1.4

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

3.2

sailing boat

boat for which the primary means of propulsion is by wind power, having a total profile area of all sails that may be set at one time when sailing close hauled (A_S) of greater than $0,07(m_{LDC})^{2/3}$

NOTE The total profile area of all sails is expressed in square metres.

3.3

fully decked boat

boat in which the horizontal projection of the sheerline comprises any combination of

- watertight deck and superstructure, and/or
- cockpits and quick-draining recesses which comply with ISO 11812, and/or
- watertight recesses complying with ISO 11812 with a combined volume of less than $L_H B_H F_M / 40$,

all closing appliances being watertight in accordance with ISO 12216

NOTE Open and partially decked boats do not comply with this definition.

3.4

enclosed steering position

steering position intended to be used in severe weather, having rigid or flexible enclosures on top and at least three sides

3.5

exposed steering position

steering position intended to be used in severe weather, not having rigid or flexible enclosures on top and at least three sides

3.6

accumulation of bilge water

minor amounts of water collecting in the bilge from spray, rain, seepage, spillage, and water shipped from normal boat movements or breaking waves

3.7**critical bilge-water level**

level at which bilge water will contact metallic fuel tanks, couplings, engine pans, non-submersible machinery, or non-watertight electrical circuits and connections, with the craft in the static floating position or in normal operation

3.8**maximum heeled waterline**

(non-sailing boats) level of water on the hull when the hull is inclined to an angle of 7° heel

3.9**maximum heeled waterline**

(sailing boats) level of water on the hull when the hull is inclined to an angle of 30° heel or the level of the sheerline amidships, whichever is less

3.10**submersible bilge pump**

pump designed to be located below water level

3.11**water head**

maximum head of water in the bilge-pump discharge line, measured vertically from the pump inlet port to the centre of the discharge line's highest position

3.12**accessible**

capable of being reached for inspection, removal or maintenance without removal of any permanent element of the boat structure

3.13**readily accessible**

capable of being reached for operation, inspection or maintenance without the use of tools or removal of any element of the boat structure or any item of portable equipment

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4 Symbols

For the purposes of this International Standard, the symbols and associated units in Table 1 apply.

Table 1 — Symbols

Symbol	Unit	Meaning
A_S	m ²	Projected sail area, according to ISO 8666
B_H	m	Beam of the hull, according to ISO 8666
F_M	m	Freeboard, midship, to the loaded waterline according to ISO 8666
L_H	m	Length of the hull, according to ISO 8666
m_{LDC}	kg	Mass of the boat in light craft condition with the maximum total load added, according to ISO 8666
IP 56		Degree of tightness providing protection against splashing water according to IEC 60529
IP 67		Degree of tightness providing protection against the effects of temporary immersion in water according to IEC 60529