
**Ships and marine technology —
Air-conditioning and ventilation of
accommodation spaces and other
enclosed compartments on board
ships — Design conditions and basis
of calculations**

*Navires et technologie maritime — Conditionnement d'air et
ventilation des emménagements et autres compartiments fermés à
bord des navires — Conditions de conception et bases de calcul*



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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).

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.

This document was prepared by Technical Committee ISO/TC 8, *Ships and marine technology*, Subcommittee SC 3, *Piping and machinery*.

This third edition cancels and replaces the second edition (ISO 7547: 2002), as well as ISO 8862:1987, ISO 8863:1987, ISO 8864:1987 and ISO 9099:1987, which have been technically revised. It also incorporates the Technical Corrigendum ISO 7547:2002/Cor.1:2008.

The main changes are as follows:

- incorporation of smaller ship ventilation standards (ISO 8862, ISO 8863, ISO 8864, ISO 9099) into this document;
- minor editorial changes made in conformity with the ISO/IEC Directives, Part 2, 2021.

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.

Ships and marine technology — Air-conditioning and ventilation of accommodation spaces and other enclosed compartments on board ships — Design conditions and basis of calculations

1 Scope

This document specifies design conditions and methods of calculation for air-conditioning and ventilation of accommodation spaces on board seagoing merchant ships for all conditions, except those encountered in extremely cold or hot climates (i.e. with lower or higher conditions than those stated in 4.2 and 4.3). This document also provides special considerations for machinery control-rooms, wheelhouse, and dry provision store rooms in Annexes C, D and E.

NOTE Statutory requirements, rules and regulations can be applicable to the individual ships concerned.

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 80000-5, *Quantities and units — Part 5: Thermodynamics*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 80000-5 and the following apply.

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

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

3.1

accommodation

space used as public rooms, cabins, offices, hospitals, cinemas, games and hobby rooms, hairdressing salons and pantries without cooking appliances

3.2

machinery control-room

space containing the system of the main alarm displays and the controls for the propulsion machinery

3.3

wheelhouse

enclosed area of the bridge, excluding radio cabin

3.4

air-conditioning

form of air treatment whereby temperature, humidity, ventilation (3.5) and air cleanliness are all controlled within limits prescribed for the enclosure to be air-conditioned