INTERNATIONAL STANDARD

**ISO 23953-1**

Third edition
2023-11

# Refrigerated display cabinets —

## Part 1: Vocabulary

*Meubles frigorifiques de vente —*

*Partie 1: Vocabulaire*



Reference number
ISO 23953-1:2023(E)

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ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Email: copyright@iso.org
Website: www.iso.org

Published in Switzerland

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# Foreword

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This document was prepared by Technical Committee ISO/TC 86, *Refrigeration and air-conditioning*, Subcommittee SC 7, *Testing and rating of commercial refrigerated display cabinets*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 44, *Commercial and Professional Refrigerating Appliances and Systems, Performance and Energy Consumption*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This third edition cancels and replaces the second edition (ISO 23953-1:2015), which has been technically revised.

The main changes are as follows:

— the following terms have been significantly revised: “semi-vertical refrigerated display cabinet”, “horizontal refrigerated display cabinet”, “combined refrigerated display cabinet with glass-door top”, “combined refrigerated display cabinet with open top”, “multi-temperature refrigerated display cabinet”, “front panel”, “display opening area”, “product temperature”, “product family”, “total revised daily electrical energy consumption”, “published standard rating and standard configuration”;

— the following terms have been added: “multi-use refrigerated display cabinet”, “assisted-service door”, “assisted-service lid”, “self-service door”, “self-service lid”, “door for loading food”, “sneeze guard”, “compartment”, “cabinet with incorporated liquid-cooled condensing unit”, “cabinet with incorporated air-cooled condensing unit”, “full loading”, “half loading”, “sensitive foodstuff loading”, “coefficient of performance for liquid-cooled condensing unit”, “cooling system energy consumption”, “heat extracted condenser”, “revised heat removal energy consumption”, “heat load extracted daily”, “heat removal energy consumption”, “additional heat removal energy consumption”, “refrigeration electrical energy consumption compression-type”, “refrigeration electrical energy consumption indirect”, “additional refrigeration daily electrical energy consumption”, “configuration”, “standard configuration”;

— the following term has been deleted: “visibility of products by arc method”;

— relevant symbols have been added.

A list of all parts in the ISO 23953 series can be found on the ISO website.

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.

# Refrigerated display cabinets —

# Part 1:
# Vocabulary

## 1 Scope

This document defines terms related to refrigerated display cabinets used for the sale and display of foodstuffs.

It does not apply to refrigerated vending machines or cabinets intended for use in catering or similar non-retail applications.

## 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 23953-2:2023, *Refrigerated display cabinets — Part 2: Classifications, requirements and test conditions*



## 3 Terms and definitions

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 Cabinet families and types

**3.1.1**
**refrigerated display cabinet**
cabinet cooled by a refrigerating system which enables chilled and frozen *foodstuffs* (3.7.4) placed therein for a *display* (3.4.4) to be maintained within prescribed temperature limits

**3.1.2**
**vertical refrigerated display cabinet**
*refrigerated display cabinet* (3.1.1) that is semi-vertical multi-deck, roll-in or glass door

**3.1.3**
**semi-vertical refrigerated display cabinet**
*vertical refrigerated display cabinet* (3.1.2) whose overall height does not exceed 1,5 m, with a vertical or inclined display opening, where the total vertical display height ($V_g$ + $V_o$) is greater than 45 % of the total horizontal display depth ($H_g$ + $H_o$)

Note 1 to entry: The meaning of $V_g$, $V_o$, $H_g$ and $H_o$ shall be in accordance with ISO 23953-2:2023, Annex A.

**3.1.4**
**horizontal refrigerated display cabinet**
counter
*refrigerated display cabinet* (3.1.1) with a horizontal or slightly inclined display opening on its top and accessible from above, where the total vertical display height ($V_g$ + $V_o$) is equal to or less than 45 % of the total horizontal display depth ($H_g$ + $H_o$)

Note 1 to entry: The meaning of $V_g$, $V_o$, $H_g$ and $H_o$ shall be in accordance with ISO 23953-2:2023, Annex A.

**3.1.5**
**closed refrigerated display cabinet**
*refrigerated display cabinet* (3.1.1) where access to *foodstuffs* (3.7.4) is gained by opening a door or lid

**3.1.6**
**assisted service refrigerated display cabinet**
*refrigerated display cabinet* (3.1.1) which requires that a person serve the *consumer* (3.7.1) with food

**3.1.7**
**self-service refrigerated display cabinet**
*refrigerated display cabinet* (3.1.1) from which a *consumer* (3.7.1) selects food

**3.1.8**
**serve-over counter with integrated storage**
*refrigerated display cabinet* (3.1.1) for assisted service, including refrigerated storage which is normally placed in its base



**3.1.9**
**combined refrigerated display cabinet with glass-door top**
*refrigerated display cabinet* (3.1.1) consisting of a horizontal refrigerated bottom (open or with a glass lid) and a vertical, glass-door, refrigerated top with an overall height higher than 1,55 m

**3.1.10**
**combined refrigerated display cabinet with open top**
*refrigerated display cabinet* (3.1.1) consisting of a horizontal refrigerated bottom (open or with a glass lid) and a vertical, open, refrigerated top with an overall height higher than 1,55 m



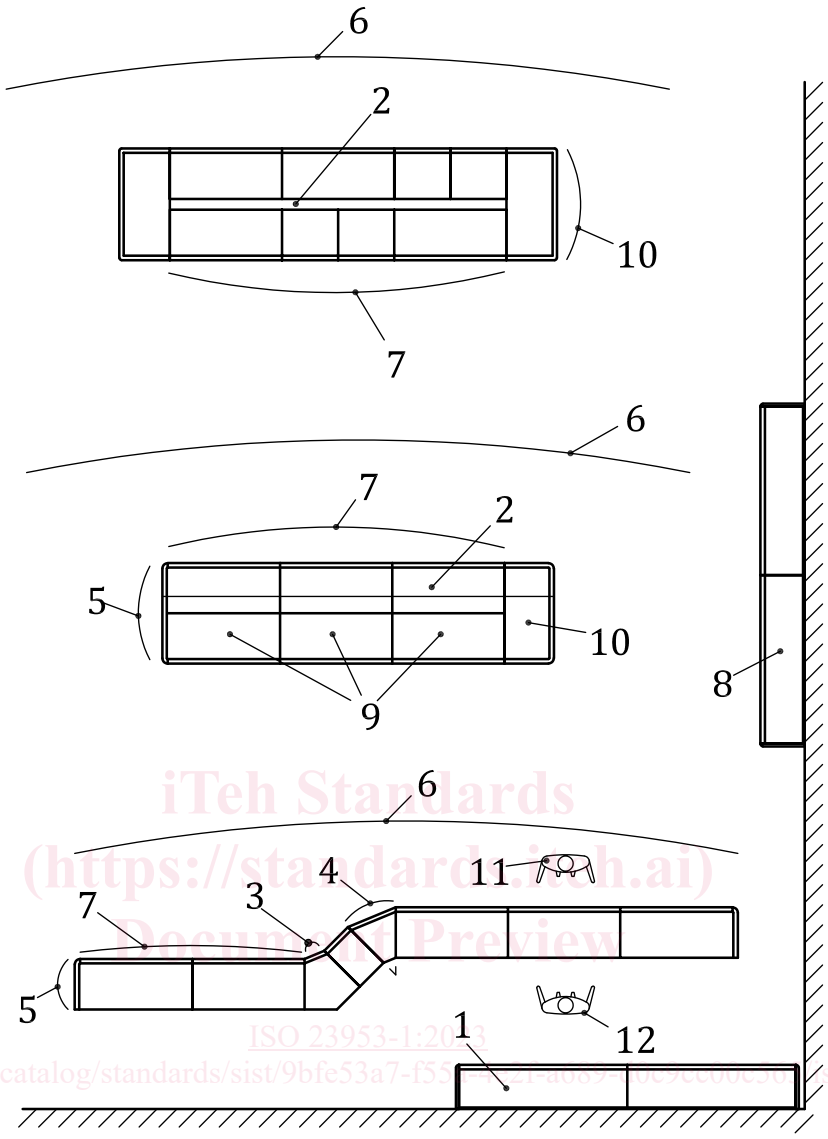
**3.1.11**
**multi-temperature refrigerated display cabinet**
*refrigerated display cabinet* (3.1.1) with *compartments* (3.4.11) working simultaneously at different temperature classes

**3.1.12**
**multi-use refrigerated display cabinet**
*refrigerated display cabinet* (3.1.1) or separate *compartment(s)* (3.4.11) of the same cabinet that can be set at different temperature classes at different times

**3.1.13**
**roll-in cabinet**
cabinet that enables *goods* (3.7.3) to be displayed directly on their pallets or rolls, which can be placed inside by lifting, swinging or removing the lower front part, where fitted

**3.1.14**
**back-wall service cabinet**
refrigerated cabinet in assisted service, placed behind *serving personnel* (3.7.2), with or without an added back storage

Note 1 to entry: See Figure 1.






**Key**

| | | | |
|---|---|---|---|
| 1 | back-wall service cabinet | 7 | *technical line-up* (3.2.6) |
| 2 | *island run* (3.2.1) | 8 | *wall cabinet* (3.2.7) |
| 3 | *internal angle cabinet* (3.2.2) | 9 | *island cabinet* (3.2.8) |
| 4 | *external angle cabinet* (3.2.3) | 10 | *end cabinet* (3.2.10) |
| 5 | *end wall* (3.2.4) | 11 | *consumer* (3.7.1) |
| 6 | *line-up* (3.2.5) | 12 | *serving personnel* (3.7.2) |

**Figure 1 — Shapes of refrigerated display cabinets**

**3.1.15**
**assisted-service door**
door opened by *serving personnel* (3.7.2) to serve a *consumer* (3.7.1) with food

**3.1.16**
**assisted-service lid**
lid opened by *serving personnel* (3.7.2) to serve a *consumer* (3.7.1) with food

**3.1.17**
**self-service door**
door directly opened by a *consumer* (3.7.1) to access food

**3.1.18**
**self-service lid**
lid directly opened by a *consumer* (3.7.1) to access food

**3.1.19**
**door for loading food**
door to access a cabinet used exclusively to load food into the cabinet or an integrated food-storage compartment

**3.1.20**
**product family**
group of cabinets having similar design and functional characteristics

Note 1 to entry: The designation of product families shall be in accordance with Annex A.

## 3.2 Shapes of refrigerated display cabinets

**3.2.1**
**island run**
shop-around line of multiplexed cabinets (horizontal, vertical or combined), possibly provided with an *end cabinet* (3.2.10) so that a *consumer* (3.7.1) has access to all sides

Note 1 to entry: See Figure 1.

**3.2.2**
**internal angle cabinet**
cabinet that ensures the geometrical continuity between two cabinets whose extremities form an internal angle of between 0° and 90°

Note 1 to entry: See Figure 1.

**3.2.3**
**external angle cabinet**
cabinet that ensures the geometrical continuity between two cabinets whose extremities form an external angle of between 0° and 90°

Note 1 to entry: See Figure 1.

**3.2.4**
**end wall**
panel closing a cabinet or a *line-up* (3.2.5) or the side of a line-up

Note 1 to entry: See Figure 1.

**3.2.5**
**line-up**
run
line consisting of multiplexed, modular, refrigerated cabinets even if not in a straight segment

Note 1 to entry: See Figure 1.

**3.2.6**
**technical line-up**
zone
line made up of multiplexed, modular, refrigerated cabinets even if not in a straight segment but with shared safety and temperature control devices

Note 1 to entry: See Figure 1.