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Blast chiller and freezer cabinets for professional use — Classification, requirements and test conditions

Cellules de refroidissement et de surgélation rapide pour usage professionnel — Classification, exigences et conditions d'essai

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Contents

Page

Foreword

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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).

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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).

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.

Blast chiller and freezer cabinets for professional use — Classification, requirements and test conditions

1 Scope

This document specifies the requirements for the verification of performance and energy consumption of blast cabinets for professional use in commercial kitchens, hospitals, canteens, institutional catering and similar professional areas.

The appliances covered by this document are intended to rapidly cool down hot foodstuffs up to a load capacity of 300 kg.

This document applies to:

— blast chillers;

— blast freezers;

— multi-use blast chillers/freezers.

The following appliances are not covered:

— roll-in cabinet;

— pass-through cabinet;

— cabinets with remote condensing unit;

— cabinets with water cooled condenser;

— blast chilling and freezing tunnels;

— continuous blast-chilling and blast-freezing equipment;

— bakery combined freezing and storage units.

2 Normative references

There are no normative references in this document.

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:

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

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

3.1
blast cabinet
insulated refrigerating appliance primarily intended to rapidly cool down hot foodstuff

3.1.1
blast chiller
blast cabinet intended to rapidly cool down hot foodstuff to below +10 °C

3.1.2
blast freezer
blast cabinet intended to rapidly cool down hot foodstuff to below −18 °C

Note 1 to entry: Blast freezers are also able to operate as blast chillers.

Note 2 to entry: Different full load capacity is claimed depending on the mode of operation for chilling or freezing considered.

3.2
test food
reference food used for the tests

3.3
full load capacity
weight of the test food, in kg, as declared by the manufacturer, that can be processed in the appliance for testing its performance

3.4
reference temperature cycle
cycle from which temperature in °C down to which temperature in °C test food is intended to be cooled and in how many minutes

3.5
energy consumption
ratio of total energy measured in kWh per kg of test food per reference temperature cycle, rounded to four digits after the comma

3.6
test pan
container made by solid stainless steel

3.7
M-pan
test pans equipped for temperature measurement, fitted with a temperature probe placed at the geometrical centre of the test food volume

3.8
operating conditions
conditions which exist when the cabinet, including all permanently located accessories, has been set up to the program specified by the manufacturer in order to achieve final reference temperature cycle

3.9
operational ambient temperature
ambient temperature at which the appliance has been designed to be operated

Note 1 to entry: The operational ambient temperatures are 25 °C $^{-1}_{+5}$ or 30 °C $^{-1}_{+5}$ or 40 °C $^{-1}_{+5}$.