



Institut luxembourgeois de la normalisation
de l'accréditation, de la sécurité et qualité
des produits et services

ILNAS-EN 17032:2018

**Blast chillers and freezers cabinets for
professional use - Classification,
requirements and test conditions**

Cellules de refroidissement et
congélateurs pour usage professionnel -
Classification, exigences et conditions
d'essai

Schnellkühl- und Schockfrostkabinen für
den gewerblichen Gebrauch -
Klassifizierung, Anforderungen und
Prüfbedingungen

01/2018



National Foreword

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EUROPEAN STANDARD ^{ILNAS-EN 17032:2018} **EN 17032**
NORME EUROPÉENNE
EUROPÄISCHE NORM

January 2018

ICS 97.130.20

English Version

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This European Standard was approved by CEN on 22 October 2017.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

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European foreword

This document (EN 17032:2018) has been prepared by Technical Committee CEN/TC 44 “Commercial and Professional Refrigerating Appliances and Systems, Performance and Energy Consumption”, the secretariat of which is held by UNI.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by July 2018, and conflicting national standards shall be withdrawn at the latest by July 2018.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements the ecodesign requirements of Commission Regulation (EU) No 2015/1095.

For relationship with EU Directive(s), see informative Annex ZA, which is an integral part of this document.

According to the CEN-CENELEC Internal Regulations, the national standards organisations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

1 Scope

This European Standard specifies the requirements for the construction, characteristics, performance including energy consumption of blast cabinet for professional used in commercial kitchens, hospitals, canteens, institutional catering and similar professional areas.

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

This European Standard 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;

NOTE Specific requirements for roll-in cabinets, pass-through cabinets and cabinets with remote condensing unit are under discussion.

- 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

Not applicable.

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

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 may be claimed depending on the mode of operation for chilling or freezing considered.

3.2**built-in condensing unit**

appliance in which the refrigeration unit is an integral part of the cabinet

3.3**remote condensing unit**

appliance in which the compressors, condensers and liquid receivers (when required) are not supplied with the cabinet

3.4**reach-in blast cabinet**

appliance which can accommodate shelves, trays or pans

3.5**roll-in blast cabinet**

appliance intended to be loaded with trolleys with shelves, trays or pans designed to be introduced as such in the compartment

3.6**pass-through blast cabinet**

equipment in which the cabinet can be loaded and unloaded from both sides

3.7**test food**

reference food used for the tests

3.8**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

3.9**reference temperature cycle**

cycle from which temperature in $^{\circ}\text{C}$, down to which temperature in $^{\circ}\text{C}$, the test food is intended to be cooled and in how many minutes

Note 1 to entry: In Regulation 2015/1095/EU the term reference temperature cycle is reported as standard temperature cycle.

3.10**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

3.11**test pan**

container made by stainless steel according to EN 631-1

3.12**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

4 Requirements**4.1 Reference temperature and time of test food**

Blast chillers shall bring the test food from an initial reference temperature of +65 °C to a final temperature of +10 °C within a test time of 120 min.

Blast freezers shall bring the test food from an initial reference temperature of +65 °C to a final temperature of -18 °C within a test time of 270 min.

For blast chillers, the temperature of the coldest M-pan, measured at the end of the test, shall be higher than -1 °C.

NOTE In some European countries specific hygiene requirements apply, in addition.

4.2 Test time

The test time is the time between:

- T_0 , time when the average temperature of the test food in the M-pans is equal to the initial reference temperature; and
- T_f , time when the temperature of the test food in all M-pans reaches the final reference temperature.

The measured time is rounded to the full minute.

5 Test conditions**5.1 Test room**

Tests shall be carried out in a test room capable of maintaining a temperature of $30\text{ °C} \begin{smallmatrix} -1 \\ +5 \end{smallmatrix} \text{ °C}$ to one decimal place.

The measuring point shall be located opposite to the hinges of the door of the blast cabinet, 500 mm upstream of the blast cabinet, in line with the front of the cabinet at a vertical height that is half the blast cabinet height (including cabinet feet and fixings).

No specific requirement on relative humidity is applicable.

5.2 Blast cabinet selection, installation and positioning within the test room

Each blast cabinet intended to be tested, unless a prototype, shall be selected from stock or routine production and shall be representative as to construction and adjustment. The blast cabinet, including all components required for normal operation, shall be assembled, set up and sited as it would be installed in service as far as practicable and in accordance with the manufacturer's instructions. All permanently located accessories required for normal use shall be in their respective places. Blast