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Commercial refrigerated cabinets — Methods of test — Part II : General test conditions

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FOREWORD

ISO (the International Organization for Standardization) is a worldwide federation of national standards institutes (ISO Member Bodies). The work of developing International Standards is carried out through ISO Technical Committees. Every Member Body interested in a subject for which a Technical Committee has been set up 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.

Draft International Standards adopted by the Technical Committees are circulated to the Member Bodies for approval before their acceptance as International Standards by the ISO Council.

International Standard ISO 1992/II (originally ISO/DIS 1993) was drawn up by Technical Committee ISO/TC 86, *Refrigeration*, and circulated to the Member Bodies in September 1971.

It has been approved by the Member Bodies of the following countries :

Australia	Germany	Spain
Austria	Hungary	Sweden
Belgium	Ireland	Switzerland
Canada	Israel	Turkey
Czechoslovakia	Japan	United Kingdom
Denmark	Netherlands	U.S.S.R.
Egypt, Arab Rep. of	Romania	
France	South Africa, Rep. of	

The Member Body of the following country expressed disapproval of the document on technical grounds :

New Zealand

Other parts in this series under the general title, *Commercial refrigerated cabinets – Methods of test*, are as follows :

- Part I : *Calculation of linear dimensions, areas and volumes.*
- Part III : *Temperature test.*
- Part IV : *Defrosting test.*
- Part V : *Water vapour condensation test.*
- Part VI : *Electrical energy consumption test.*
- Part VII : *Test for odour of material.*

(Parts IV to VII are at present at the stage of draft.)

Commercial refrigerated cabinets – Methods of test – Part II : General test conditions

1 SCOPE AND FIELD OF APPLICATION

This International Standard specifies general conditions for type testing of commercial refrigerated cabinets intended for the sale and/or display of food products.

2 REFERENCES

ISO/R 817, *Number designation of organic refrigerants.*

ISO/R 916, *Testing of refrigerating systems.*

3 SELECTION AND INSTALLATION OF TEST SPECIMEN

3.1 Each specimen commercial refrigerated cabinet intended to be tested shall, if not a prototype, be selected from stock or routine production and shall be representative as to construction and adjustment.

3.2 The test report shall clearly state whether the cabinet tested is a prototype or a cabinet taken from stock or factory production.

3.3 The cabinet, including all components required for normal operation, shall be assembled, set up and sited as it would be installed in service as nearly as practicable in accordance with the intentions of the manufacturer so far as these are stated or known. All permanently located accessories required for normal use shall be in their respective places.

3.4 Cabinets intended to be placed against a wall shall be positioned with the back at a distance from the wall as recommended or, if no such distance is recommended, at a distance of 100 mm.

3.5 When the condensing unit is remote from the cabinet, the cabinet manufacturer shall state for the specified test conditions of this International Standard :

- a) the international number of the refrigerant (see ISO/R 817);
- b) the actual operating suction pressure taken at the cabinet outlet;

c) the actual operating liquid temperature taken at the cabinet inlet;

d) the heat extraction rate necessary (some measuring methods are described in ISO/R 916).

3.6 During the test, the temperature defined in 3.5 c) above shall not be more than 10 °C above the specified test room temperature. No "flash gas" condition shall occur at the inlet to the cabinet during the type test.

4 TESTING EQUIPMENT

4.1 Test room

If more than one cabinet is being tested in the same room, appropriate arrangements (such as the use of partitions) shall be used in order to ensure that the conditions surrounding each cabinet are in accordance with the test requirements specified in 4.1.1 to 4.1.7 below.

4.1.1 Power supply

The tolerance on power supply shall be $\pm 2\%$ for voltage and $\pm 1\%$ for frequency in relation to the nominal values which are given on the marking plate or otherwise stated.

4.1.2 Air movement

Local air movement shall be provided to some extent. The air movement shall be, however, as far as practicable, parallel to the plane of the display opening and to the longitudinal axis. With the display cabinet(s) switched off, the air velocity at any point along the line shown in figure 1 shall be $0,2 \pm 0,1$ m/s.

For closed cabinets the direction of air flow shall be such that the air enters the cabinet when the door(s) is (are) open.

4.1.3 Radiant heat

The walls and ceiling and any partitions of rooms intended for the testing of display cabinets shall be painted in light-coloured, semi-gloss paint.

The surface temperatures of walls and ceiling and partitions shall be maintained within ± 2 °C of the air temperature measured at the same level.