

Australian Standard™

Refrigerated display cabinets

Part 11: Installation, maintenance and user guide

This Australian Standard was prepared by Committee ME/8, Refrigerated Display Cabinets. It was approved on behalf of the Council of Standards Australia on 28 April 2000 and published on 10 August 2000.

The following interests are represented on Committee ME/8:

Australian Food and Grocery Council
Australian Retailers Association
Commercial Refrigeration Manufacturers Association of Australia
Food Science Australia
New South Wales Health Department

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Refrigerated display cabinets

Part 11: Installation, maintenance and user guide

Originated as AS B220—1966.
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PREFACE

This Standard was prepared by Standards Australia Committee ME/8, Refrigerated Display Cabinets, to supersede (in part) AS 1731—1983, *Frozen food retail cabinets*.

The Scope of the original Standard has been extended to include requirements for retail chiller cabinets as well as retail freezer cabinets.

This Standard is based on British Standard BS EN 441:1994, *Refrigerated display cabinets* (Part 11).

This Standard is Part 7 of a series of Standards for refrigerated display cabinets, as follows:

AS

1731	Refrigerated display cabinets
1731.1	Part 1: Terms and definitions
1731.2	Part 2: General mechanical and physical requirements
1731.3	Part 3: Linear dimensions, areas and volumes
1731.4	Part 4: General test conditions
1731.5	Part 5: Temperature test
1731.6	Part 6: Classification according to temperatures
1731.7	Part 7: Defrosting test
1731.8	Part 8: Water vapour condensation test
1731.9	Part 9: Electrical energy consumption test
1731.10	Part 10: Test for absence of odour and taste
1731.11	Part 11: Installation, maintenance and user guide
1731.12	Part 12: Measurement of the heat extraction rate of the cabinets when the condensing unit is remote from the cabinet

The objective of this series of Standards is to provide standardized construction requirements and performance assessment procedures for refrigerated display cabinets, for use by manufacturers, suppliers, purchasers, operators and regulators of these systems.

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STANDARDS AUSTRALIA

Australian Standard **Refrigerated display cabinets**

Part 11: Installation, maintenance and user guide

1 SCOPE

1.1 Scope of Standard

This Standard specifies terminology, general mechanical and physical requirements, test conditions as well as installation and maintenance, including a user's guide, for refrigerated display cabinets for the sale or display, or both, of food products.

This Standard does not cover refrigerated vending machines, cabinets intended for use in catering and similar non-retail applications, or food service cabinets.

1.2 Scope of Part 11

This Part of AS 1731 gives information concerning the installation and maintenance of refrigerated display cabinets and includes a guide for users.

2 IMPORTANT SITING CONDITIONS

2.1 Climate

In order to keep the ambient climate at the place of installation within agreed limits, it may be necessary to install airconditioning. Such an installation should include control of the relative humidity, as excessive humidity is detrimental to cabinet performance. It can be more economical to dehumidify the air by airconditioning than through cabinet evaporators operating at lower temperatures, as the latter is not energy efficient.

The grouping of cabinets in a defined area will be advantageous in terms of performance and operating costs; however, it may also, cause customer discomfort.

2.2 Air draughts

The location of the cabinets should be such that air draughts are minimized or avoided. Cabinets should not be installed adjacent to doors or in areas where exposure to considerable air movement will be experienced, e.g., from airconditioning, ventilation and heating outlets.

The design of ventilating equipment should consider the air speed across the cabinets. Special attention should be afforded to air heating outlets.

2.3 Heat radiation and lighting

To reduce to a minimum the ill effects of radiant heat, care should be exercised to ensure cabinets are not exposed to the sun, air diffusers and ducts, sun-heated non-insulated roof or walls, or other heat sources. Radiated heat entering the cabinet will increase operating costs and reduce performance. Spotlights or other concentrated lighting units should not be aimed into the cabinets.

External fluorescent lighting is preferred to incandescent lighting, and it is strongly recommended that only the former type be used.