

NSF/ANSI 7 – 2001

Commercial refrigerators and freezers

**NSF International Standard/
American National Standard**

Requirements for Food Store Refrigeration
were developed in collaboration with the
Commercial Refrigerator Manufacturers Association

NSF/ANSI 7 – 2001



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for Food Equipment —

Commercial refrigerators and freezers

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Foreword²

Requirements for mounting self-service display refrigerators were incorporated into the Standard in December 1999. The requirements will be effective after November 2004. Following November 2004, all equipment will be required to meet the mounting requirements of section 5.23.

In this revision, time frames for monitoring temperatures during performance tests in sections 6.5.2 and 6.6.2 for open display refrigerators and closed display refrigerators are modified from 3 minutes to 5 minutes and from 1 hour to 5 minutes, respectively. These changes were made to provide consistency in the testing of refrigeration equipment.

This Standard was developed by the NSF Joint Committee on Food Equipment using the consensus process described by the American National Standards Institute.

Suggestions for improvement of this Standard are welcome. Comments should be sent to Chair, Joint Committee on Food Equipment, c/o NSF International, Standards Department, PO Box 130140, Ann Arbor, Michigan, 48113-0140, USA.

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Collaborating organizations

NSF/ANSI Standard 7 – 2001, Commercial refrigerators and freezers, contains requirements for food store refrigeration. These requirements are, over time, intended to replace the Commercial Refrigerator Manufacturers Division/Air Conditioning Refrigeration Institute (CRMD/ARI) minimum standards for Retail Food Store Refrigeration.

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Commercial Refrigerator Manufacturers Division/Air Conditioning Refrigeration Institute

The Commercial Refrigerator Manufacturers Association (CRMA) was founded in 1933 as a national trade association dedicated to advancing the common interests of the commercial refrigeration industry. In April 2000, CRMA merged with the Air Conditioning Refrigeration Institute (ARI) to form the Commercial Refrigerator Manufacturers Division/Air Conditioning Refrigeration Institute. CRMD/ARI continues to target three primary objectives:

- to showcase technical and business information to help solve common problems and promote growth in industry.
- to represent the collective voice of the industry with any government organization addressing policies or issues affecting the industry.
- to support high voluntary standards for quality in equipment design and performance.

CRMD/ARI is a not-for-profit corporation of leading businesses meeting international demands for increasingly specialized and efficient refrigeration equipment. CRMD/ARI members serve a wide range of markets, including supermarkets, food stores, convenience stores, restaurants, hotels, motels, food processing establishments, and hospitals.

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NSF/ANSI Standard for Food Equipment —

Commercial refrigerators and freezers

1 General

1.1 Purpose

This Standard establishes minimum food protection and sanitation requirements for the materials, design, construction, and performance of commercial refrigerators and freezers and their related components.

1.2 Scope

This Standard contains requirements for the refrigerators and freezers used to store and/or display cold food. The types of refrigerators and freezers covered by this Standard include, but are not limited to: storage refrigerators (e.g., reach-in, under counter, walk-in, roll-in); storage freezers (e.g., reach-in, under counter, walk-in, roll-in); rapid pull-down refrigerators and freezers; refrigerated food transport cabinets; refrigerated buffet units; refrigerated food preparation units; display refrigerators; beverage coolers; and ice cream cabinets.

This Standard does not establish equipment installation requirements. While the requirements of this Standard are intended to ensure equipment may be installed in a sanitary manner, proper installation of equipment shall be governed by the applicable codes.

Refrigerator and freezer components and materials covered under other NSF or NSF/ANSI Standards or Criteria shall also comply with the requirements therein. This Standard is not intended to restrict new unit design, provided such design meets the minimum specifications described herein.

1.3 Alternate materials, design, and construction

While specific materials, design, and construction may be stipulated in this Standard, equipment that incorporates alternate materials, design, or construction may be acceptable when such equipment meets the applicable requirements herein.

2 Normative references

The following documents contain provisions that, through reference, constitute provisions of this Standard. At the time of publication, the editions listed below were valid. All standards are subject to revision, and parties are encouraged to investigate the possibility of applying the most recent editions of the documents indicated below.

ANSI/ASHRAE 72 – 1983, *Method of Testing Open Refrigerators for Food Stores*³

ANSI/ASHRAE 117 – 1992, *Method of Testing Closed Refrigerators*³

ASHRAE *Refrigeration Handbook*³

ANSI Z97.1 – 1984, *Safety Performance Specifications and Methods of Test for Safety Glazing Material Used in Buildings*⁴

ASTM A653/A653M, *Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-*

³ American Society of Heating, Refrigerating and Air Conditioning Engineers, Inc., 1791 Tullie, 11 NE, Atlanta, GA 30329

⁴ American National Standards Institute, 11 W. 42nd Street, New York, NY 10036