CSA Group

C22.2 No. 120-13
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Refrigeration equipment

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Preface

This is the fourth edition of CSA C22.2 No. 120, *Refrigeration equipment*, one of a series of Standards issued by CSA Group under Part II of the *Canadian Electrical Code*. It supersedes the previous edition published in 1991.

For general information on the Standards of the *Canadian Electrical Code, Part II*, see the Preface of the latest edition of CAN/CSA-C22.2 No. 0, *General Requirements — Canadian Electrical Code, Part II*.

This Standard is considered suitable for use for conformity assessment within the stated scope of the Standard.

This Standard was prepared by the Subcommittee on Household Appliances for Refrigeration, under the jurisdiction of the Technical Committee on Consumer and Commercial Products and the Strategic Steering Committee on Requirements for Electrical Safety, and has been formally approved by the Technical Committee.

Interpretations: The Strategic Steering Committee on Requirements for Electrical Safety has provided the following direction for the interpretation of standards under its jurisdiction: "The literal text shall be used in judging compliance of products with the safety requirements of this Standard. When the literal text cannot be applied to the product, such as for new materials or construction, and when a relevant committee interpretation has not already been published, CSA's procedures for interpretation shall be followed to determine the intended safety principle."

Notes:

1) *Use of the singular does not exclude the plural (and vice versa) when the sense allows.*

2) *Although the intended primary application of this Standard is stated in its Scope, it is important to note that it remains the responsibility of the users of the Standard to judge its suitability for their particular purpose.*

3) *This Standard was developed by consensus, which is defined by CSA Policy governing standardization — Code of good practice for standardization as "substantial agreement. Consensus implies much more than a simple majority, but not necessarily unanimity". It is consistent with this definition that a member may be included in the Technical Committee list and yet not be in full agreement with all clauses of this Standard.*

4) *To submit a request for interpretation of this Standard, please send the following information to **inquiries@csagroup.org** and include "Request for interpretation" in the subject line:*

- a) *define the problem, making reference to the specific clause, and, where appropriate, include an illustrative sketch;*
- b) *provide an explanation of circumstances surrounding the actual field condition; and*
- c) *where possible, phrase the request in such a way that a specific "yes" or "no" answer will address the issue.*

*Committee interpretations are processed in accordance with the CSA Directives and guidelines governing standardization and are available on the Current Standards Activities page at **standardsactivities.csa.ca**.*

5) *This Standard is subject to periodic review, and suggestions for its improvement will be referred to the appropriate committee. To submit a proposal for change, please send the following information to **inquiries@csagroup.org** and include "Proposal for change" in the subject line:*

- a) *Standard designation (number);*
- b) *relevant clause, table, and/or figure number;*
- c) *wording of the proposed change; and*
- d) *rationale for the change.*

C22.2 No. 120-13
Refrigeration equipment

1 Scope

1.1
This Standard applies to self-contained and remote refrigeration equipment, designed to be installed and used in accordance with the *Canadian Electrical Code, Part I*, for use in non-hazardous locations indoors or outdoors in commercial and business establishments.

1.2
This Standard also applies to self-contained, cord-connected equipment rated at not more than 250V with branch circuit protection rated at not more than 60A, and equipment intended for permanent connection rated at 600V and less, single-phase or three-phase.

1.3
This Standard applies to refrigerated equipment used in commercial and business establishments that include refrigeration systems other than those that employ refrigerant motor-compressors and air- and water-cooled condensers, such as thermo-electric or absorption systems.

1.4
This Standard applies to

a) refrigerated equipment such as display cases, meat, dairy, or frozen food cases, reach-in cabinets, and bottle type beverage coolers;
b) self-service or illuminated refrigerators, freezers, and ice cream cabinets;
c) walk-in coolers;
d) equipment designed to be field-installed as part of a refrigeration system, such as remote display cases and unit coolers;
e) equipment designed to produce some degree of freezing of food or beverage mixtures and to dispense them at will from the equipment at the time of sale, such as ice cream makers;
f) water coolers, pressure, bottle, or point-of-use type, free-standing or wall-mounted, having added features such as a means for heating water, or a refrigerated space;
g) refrigerated beverage dispensers for use in commercial establishments, designed for free-standing use or for building into fixtures;
h) coolers for raw milk intended for farm use, permanently-connected, of the bulk direct expansion ice bank type, having either a self-contained or remote condensing unit;
i) ice makers that manufacture and harvest ice in cube, flake, or other readily usable form and that may or may not incorporate ice storage means;

   Note: *This Standard does not apply to automatic ice-makers that are accessory components in household refrigerators and freezers.*
j) refrigeration units;
k) refrigerant recovery and recycling equipment intended for use with refrigeration systems;
l) refrigerant liquid pumps;
m) door and frame assemblies used as part of a refrigerated room or cabinet; and

n) other equipment used in conjunction with refrigerated equipment, such as carbonators (for use with beverage dispensers), ice dispensers (for use with ice making machines), and non-refrigerated display cases.

1.5

This Standard includes requirements for the electrical features of equipment, with consideration given to the effects of sanitation procedures that may be required by authorities having jurisdiction, as well as the functional operation of the equipment, and requirements for the mechanical safety of refrigerating systems, water heating means, carbonating equipment, dispensing equipment, and door frame assemblies.

1.6

This Standard does not apply to compressor units, condensing units, and other equipment that is within the scope of CSA C22.2 No. 236 or CAN/CSA-C22.2 No. 60335-2-40.

1.7

General requirements applicable to this Standard are specified in CAN/CSA-C22.2 No. 0, *General requirements—Canadian Electrical Code, Part II*.

1.8

In CSA Group Standards, "shall" is used to express a requirement, i.e., a provision that the user is obliged to satisfy in order to comply with the standard; "should" is used to express a recommendation or that which is advised but not required; "may" is used to express an option or that which is permissible within the limits of the standard; and "can" is used to express possibility or capability. Notes accompanying clauses do not include requirements or alternative requirements; the purpose of a note accompanying a clause is to separate from the text explanatory or informative material. Notes to tables and figures are considered part of the table or figure and may be written as requirements. Annexes are designated normative (mandatory) or informative (non-mandatory) to define their application.

1.9

The values given throughout this publication in SI (metric) units are the standard. The values given in parentheses are for information only.

2 Reference publications

This Standard refers to the following publications, and where such reference is made, it shall be to the edition listed below.

CSA Group

CAN/CSA-B45 Series-02 (R2008)
Plumbing fixtures

B51-09
Boiler, pressure vessel, and pressure piping code

B52-05
Mechanical Refrigeration Code

