



Industrial heating equipment



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Industrial heating equipment



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Contents

Technical Committee on Industrial Products	3
Subcommittee on Industrial Heating Products	5
Preface	6
1 Scope	8
2 Reference publications	9
3 General requirements	10
4 Construction	11
4.1 General	11
4.2 Enclosures for live parts	11
4.2.1 General	11
4.2.2 Material	11
4.2.3 Openings in enclosures	11
4.2.4 Safety doors	12
4.3 Protection against rusting and corrosion	12
4.4 Mechanical assembly	12
4.5 Supply connections	13
4.5.1 Permanently connected equipment	13
4.5.2 Terminal parts and leads	14
4.5.3 Cord-connected equipment	14
4.6 Electrical insulation	15
4.7 Thermal insulation	15
4.8 Current-carrying parts	15
4.9 Wiring	16
4.10 Heater and heating elements	17
4.11 Overcurrent protection	17
4.12 Protection against overheating	17
4.13 Lampholders	17
4.14 Switches and controls	18
4.15 Transformers	19
4.16 Motors	19
4.17 Spacings	19
4.18 Bonding means	20
4.19 Current leakage for stationary liquid-heating equipment	21
5 Marking	21
6 Tests	22
6.1 Samples	22
6.2 Rating	22
6.3 Temperature	23
6.3.1 Normal	23

6.3.2	Abnormal	24
6.4	Dielectric strength	24
6.5	Continuity of bonding	25
6.6	Performance of fusible links	25

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Preface

This is the second edition of CSA C22.2 No. 88, *Industrial heating equipment*, issued by the Canadian Standards Association under *Canadian Electrical Code, Part II*. It supersedes the first edition published in 1958.

This edition has been substantially rewritten with the following major changes:

- a) Clause 2, Reference publications, updated to latest editions;
- b) Clause 4.3, Protection against rusting and corrosion, has been rewritten;
- c) Clause 4.5, Supply connections, has been clarified and updated;
- d) Clause 4.17, Spacings, requirements updated and now aligned with other similar product standards;
- e) Clause 4.18, Bonding means, updated to align with other similar product standards;
- f) Clause 5, Marking, requirements aligned with other similar product standards;
- g) Clause 6.3, Temperature, requirements updated and aligned with similar product standards; and
- h) Clause 6.4, Dielectric strength, requirements updated and aligned with similar product standards.

This Standard has been prepared by the Subcommittee on Industrial Heating Products, under the jurisdiction of the Technical Committee on Industrial Products and the Strategic Steering Committee on Requirements for Electrical Safety, and has been formally approved by the Technical Committee.

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

This Standard has been developed in compliance with Standards Council of Canada requirements for National Standards of Canada. It has been published as a National Standard of Canada by CSA Group.

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 CSA committee interpretation has not already been published, CSA Group’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 review within five years from the date of publication. 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.*

CSA C22.2 No. 88:19

Industrial heating equipment

1 Scope

1.1

This Standard specifies the requirements for cord-connected and permanently connected industrial type heating equipment that is intended to be used in ordinary locations in accordance with CSA C22.1, *Canadian Electrical Code, Part I (CE Code, Part I)* and rated 600 volts or less.

1.2

This Standard applies to

- a) heat treating and other special-use furnaces;
- b) infrared mobile and stationary drying ovens;
- c) steam boilers and distilling equipment of the electrode or resistance-element type;
- d) liquid-heaters;
- e) electrically-heated presses; and
- f) similar equipment.

1.3

This Standard does not apply to

- a) equipment utilizing high-frequency alternating currents;
- b) soldering irons, tube vulcanizers, and similar small devices which, although often used in industrial premises, normally have enclosures, spacings, and other constructional features similar to appliances; or
- c) air-heaters for industrial establishments, which are covered in CSA C22.2 No. 46, *Electric air-heaters*.

1.4

In this Standard, “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; and “may” is used to express an option or that which is permissible within the limits of the Standard.

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 (nonmandatory) to define their application.