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ANSI Z83.7-2017 • CSA 2.14-2017

Gas-fired construction heaters

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Gas-fired construction heaters



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Preface

This is the third edition of ANSI Z83.7 • CSA 2.14, *Gas-fired construction heaters*. It supersedes the previous editions published in 2000 and 2011.

This Standard was prepared by the Z21/CSA Joint Technical Subcommittees on Standards for Gas-Fired Construction Heaters, under the jurisdiction of the Technical Committee on Performance and Installation of Gas Burning Appliances and Related Accessories and the Strategic Steering Committee on Standards for Gas Appliances and Related Accessories, and had been formally approved by the Technical Committee(s), American National Standards Institute, and the Interprovincial Gas Advisory Council.

Interpretations: The Strategic Steering Committee on Standards for Gas Appliances and Related Accessories 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 Group’s procedures for interpretation shall be followed to determine the intended safety principle.”

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- 1) *Use of the singular does not exclude the plural (and vice versa) when the sense allows.*
- 2) *This Standard contains SI (Metric) corresponding to the yard/pound quantities, the purpose being to allow the standard to be used in SI (Metric) units. (Standard for use of the International System of Units (SI): The Modern Metric System, IEEE/ASTM SI 10 or Metric Practice Guide, CAN/CSA Z234.1 are used as a guide in making metric conversion from yard/pound quantities.) If a value for a measurement and a corresponding value in other units are stated, the first stated value is to be regarded as the requirement. The given corresponding value may be approximate. If a value for a measurement and a corresponding value in other units are both specified as a quoted marking requirement, the first stated unit, or both shall be provided.*
- 3) *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.*
- 4) *This publication 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 publication.*
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History of development of the Standard for Gas-fired construction heaters

Note: *This History is informative and is not part of the standard.*

With the onset of the Free Trade Agreement between the United States and Canada on January 2, 1988, significant attention was given to the harmonization of the United States and Canadian safety standards addressing gas-fired equipment for residential, commercial and industrial equipment.

It was believed that the elimination of the differences between the standards would remove potential trade barriers and provide an atmosphere in which North American manufacturers could market more freely in the United States and Canada.

A Z83/CGA joint Subcommittee on Standards for Gas-Fired Construction Heaters was established, based on memberships of the Z83 Subcommittee on Standards for Gas-Fired Construction Heaters and the CGA Committee on Gas-Fired Construction Heaters.

To facilitate the reporting structure of joint subcommittees, a CSA Technical Committee on Gas Burning Appliances and Related Accessories was established to parallel the Z21/Z83 Technical Committee on Performance and Installation of Gas Burning Appliances and Related Accessories.

The first edition of the harmonized Z83/CSA Standard for Construction Heaters was approved by the Interprovincial Gas Advisory Council on May 23, 2000, and by the American National Standards Institute, Inc. on October 24, 2000.

The second edition of the harmonized Z83/CSA Standard for Construction Heaters was approved by the Interprovincial Gas Advisory Council on August 31, 2011, and by the American National Standards Institute, Inc. on February 25, 2011.

The third edition of the harmonized Z83/CSA Standard for Construction Heaters was approved by the Interprovincial Gas Advisory Council on November 4, 2017, and by the American National Standards Institute, Inc. on Month DD, 20YY.

The following identifies the designation and year of this edition of the standard:

ANSI Z83.7-2017 • CSA 2.14-2017

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Gas-fired construction heaters

1 Scope

1.1

This Standard applies to newly produced, direct-fired construction heaters, hereinafter referred to as heaters or appliances, constructed entirely of new, unused parts and materials and primarily intended for temporary use in heating buildings or structures under construction, alteration, or repair. All the products of combustion generated by the heater are released into the area being heated. The requirements of this Standard cover heaters with rated inputs up to and including 10,000,000 BTU/h (2930 kW).

Δ 1.2

This Standard applies to self-contained heaters with or without integral means for air circulation and may be intended for connection to ducts.

If a heater is designed to be utilized with ductwork, the heater is to be tested with the ductwork recommended by the manufacturer or at the maximum static pressure specified by the manufacturer.

Δ 1.3

This Standard applies to direct ground thawing appliances for outdoor use where heat is directed into the ground.

1.4

This Standard applies to universal construction heaters (see Clause 3, Definitions) intended for use with either natural or propane gases.

1.5

This Standard applies to heaters using the following fuels:

- a) natural gas; and
- b) propane gas.

1.6

This Standard does not apply to heaters employing a flameless catalytic combustion process or heaters for use with liquid phase fuel gases.

1.7

If a value for measurement as given in this Standard is followed by an equivalent value in other units, the first state value is to be regarded as the specification.

1.8

All accessories intended for use with appliances certified to this Standard are to be tested on the appliance in which they may be used.

1.9

Annex A, Items unique to Canada, contains items unique to the Canada.

1.10

Annex B, Items unique to the United States, contains items unique to the U.S.

Δ 1.11

Special construction provisions applicable to an appliance designed for use with an optional listed conversion kit are outlined under Annex D, (Optional) Provisions for Listed Gas Appliances Conversion Kits.

1.12

Clause 2 contains a list of standards specifically referenced in this Standard, and sources from which these reference standards may be obtained.

1.13

All references to psi throughout this Standard are to be considered gauge pressure unless otherwise specified.

1.14

This Standard contains SI (Metric) equivalents to the yard/pound quantities, the purpose being to allow the Standard to be used in SI (Metric) units. (IEEE/ASTM SI 10, *American National Standard for Metric Practice*, or ISO 80000-1:2009, *Quantities and units – Part 1: General* is used as a guide in making metric conversion from yard/pound quantities.) If a value for a measurement and a corresponding value in other units are stated, the first stated value is to be regarded as the requirement. The given corresponding value may be approximate. If a value for a measurement and a corresponding value in other units are both specified as a quoted marking requirement, the first stated unit, or both are to be provided.

1.15

In this Standard, “shall” is used to express a requirement, i.e., a provision that the user shall 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 (non-mandatory) to define their application.

2 Reference publications

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