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CSA 2.17-2017

Gas-fired appliances for use at high altitudes

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IGAC

Interprovincial Gas Advisory Council



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Preface

This is the fourth edition of CSA 2.17, *Gas-fired appliances for use at high altitudes*. It supersedes the previous edition published in 1991.

This Standard was prepared by the Canadian Technical Committee on Gas Appliances and Related Accessories, under the jurisdiction of the Strategic Steering Committee on Standards for Fuel Burning Equipment, and had been formally approved by the Technical Committee, and the Interprovincial Gas Advisory Council.

Interpretations: The Strategic Steering Committee on Standards for Fuel Burning Equipment 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.”

Notes:

- 1) *Use of the singular does not exclude the plural (and vice versa) when the sense allows.*
- 2) *This Standard contains SI (Metric) units corresponding 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.*
- 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 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.*
- 5) *This Standard is subject to review at least every five years; 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.*
- 6) *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.

CSA 2.17-2017

Gas-fired appliances for use at high altitudes

1 Scope

1.1

This Standard covers the construction and performance* (see Clause 3, Definitions) of gas-fired appliances with inputs up to and including 400 000 Btu/h (117.23 kW)† to determine their suitability for use at high altitude. The appliances include furnaces, boilers, room heaters, unit heaters, water heaters, and such other appliances where field conditions indicate the necessity of testing for high altitude use (see Clause 3, Definitions). The test rate means the appliance's input at a datum of 600 ft (152 m) or 29.38 in Hg (99.2 kPa) pressure.

** At the option of the manufacturer, tests specified in Clause 5, Performance, may be conducted at a high-altitude location.*

† This input limitation reflects what is currently required by inspection authorities in high-altitude areas (i.e., appliances under 400 000 Btu/h (117.23 kW) must meet the requirements of this Standard). Appliances with inputs in excess of 400 000 Btu/h (117.23 kW) may still be reviewed for compliance with this Standard.

1.2

This Standard applies to appliances specified in Clause 1.1 when for use over an altitude range of 2000 to 4500 ft (610 to 1370 m), or 0 to 4500 ft (0 to 1370 m).

1.3

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.

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.