CSA/ANSI Z21.88:19 • CSA 2.33:19

National Standard of Canada
American National Standard

Vented gas fireplace heaters

REVISED FEBRUARY 2021

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Revision History

CSA/ANSI Z21.88:19 • CSA 2.33:19, Vented gas fireplace heaters

Errata — February 2021	**Revision symbol (in margin)**
Clause 4.10.1	ΔΔ

Revision from previous edition	**Revision symbol (in margin)**
Clauses 1.3, 3, 4.12.1, 4.33.1, 4.34.2, 4.34.3, 4.34.4, 4.34.5, 4.34.7, 4.34.16, 5.10.8, and 5.12.5 Annexes A, C, and D	Δ

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National Standard of Canada
American National Standard

CSA/ANSI Z21.88:19 • CSA 2.33:19
Vented gas fireplace heaters

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Contents

Preface

This is the ninth edition of CSA/ANSI Z21.88 • CSA 2.33, *Vented gas fireplace heaters*. It supersedes the previous editions published in 2017, 2016, 2014, 2009, 2005, 2002, 2000, and 1998.

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

This Standard was prepared by the Joint Technical Subcommittee on Vented Gas-Fired Warm Air Heaters under the jurisdiction of the Z21/83 Technical Committee on Performance and Installation of Gas Burning Appliances and Related Accessories and the Strategic Steering Committee on Fuels and Appliances. It has been formally approved by the Z21/83 Technical Committee, the Canadian Technical Committee on Gas Appliances and Related Accessories, and the Interprovincial Gas Advisory Council.

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.

This Standard has been approved by the American National Standards Institute (ANSI) as an American National Standard.

Interpretations: The Strategic Steering Committee on Fuels and Appliances 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.*

History of the development of the Standard for Vented gas fireplace 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 applications. 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. The harmonization of these standards was also seen as a step toward harmonization with international standards. Joint subcommittees were established to facilitate the standards harmonization process between the United States and Canada.

At its October 19-20, 1995 meeting, the Z21/CGA Joint Subcommittee on Standards for Vented Gas-Fired Warm Air Heaters formed a working group to prepare a draft bi-national standard for Vented Gas Fireplace Heaters. During its October 22-23, 1996 meeting the joint subcommittee approval to send the draft standard for public review and comment.

The first draft harmonized standard was based on current coverage from the *American National Standard/Canadian Gas Association Standard for Vented Gas Fireplace*, ANSI Z21.50-1996 • CGA 2.22-M96, and the *American National Standard/CSA Standard for Vented Gas-Fired Space Heating Equipment*, ANSI Z21.86-1998 • CSA 2.32-M98.

Following reconsideration and modification of the proposed draft standard, in light of comments received, the joint vented heater subcommittee at its March 10-11, 1997 meeting, recommended the proposed draft standard to Accredited Standards Committee Z21/83 and the (Interim CSA) Standards Steering Committee for approval.

The proposed draft of the harmonized standard for vented gas-fireplace heaters, as modified by the joint subcommittee, was approved by the Z21/83 Committee by letter ballot dated August 19, 1997, and by the CGA Standards Steering Committee by letter ballot dated January 5, 1998.

The first edition of the *American National Standard/CSA Standard for Vented Gas Fireplace Heaters* was approved by the Canadian Interprovincial Gas Advisory Council on February 26, 1998, and by the American National Standards Institute, Inc., on March 31, 1998.

The second edition of the *American National Standard/CSA Standard for Vented Gas Fireplace Heaters* was approved by the Canadian Interprovincial Gas Advisory Council on June 1, 2000, and by the American National Standards Institute, Inc., on October 20, 1999.

The third edition of the harmonized *American National Standard/CSA Standard for Vented Gas Fireplace Heaters* was approved by the Canadian Interprovincial Gas Advisory Council on March 18, 2002 and by the American National Standards Institute, Inc., on April 11, 2002.

The fourth edition of the harmonized *American National Standard/CSA Standard for Vented Gas Fireplace Heaters* was approved by the Canadian Interprovincial Gas Advisory Council on December 2, 2005 and by the American National Standards Institute, Inc., on October 19, 2005.

Following the procedures outlined above further revisions to this Standard were made in line with industry developments.

The fifth edition of the harmonized *American National Standard/CSA Standard for Vented Gas Fireplace Heaters* was approved by the Interprovincial Gas Advisory Council on December 29, 2009 and by the American National Standards Institute, Inc., on March 26, 2009.

The sixth edition of the *Standard for Vented gas fireplace heaters* was approved by the Z21/83 Technical Committee on Performance and Installation of Gas Burning Appliances and Related Accessories on December 20, 2013; the CSA Technical Committee on Gas Appliances and Related Accessories on October 30, 2013; the IGAC on February 18, 2014; and ANSI on February 20, 2014.

The seventh edition of the Standard for *Vented gas fireplace heaters* was distributed for industry review and comment dated July 2013, July 2014, and December 2014; and subsequently approved by the Z21/83 Technical Committee on Performance and Installation of Gas Burning Appliances and Related Accessories on August 29, 2016; the CSA Technical Committee on Gas Appliances and Related Accessories on October 25, 2016; the IGAC on September 15, 2016; and ANSI on November 2, 2016.

The eighth edition of the Standard for *Vented gas fireplace heaters* was distributed for industry review and comment dated March 2012, September 2012, July 2013, November 2013, July 2014, December 2014, September 2015, and March 2016; and subsequently approved by the Z21/83 Technical Committee on Performance and Installation of Gas Burning Appliances and Related Accessories on August 28, 2017; the CSA Technical Committee on Gas Appliances and Related Accessories on April 25, 2017; the IGAC on August 28, 2017; and ANSI on December 6, 2017.

This, the ninth edition of the Standard for *Vented gas fireplace heaters* was distributed for industry review and comment dated December 2016, September 2017, and January 2019; and subsequently approved by the Z21/83 Technical Committee on Performance and Installation of Gas Burning Appliances and Related Accessories on May 30, 2019; the CSA Technical Committee on Gas Appliances and Related Accessories on May 30, 2019; the IGAC on May 31, 2019; and ANSI on July 22, 2019.

The previous editions of the vented gas fireplace heaters standard, and addenda thereto, approved by the Interprovincial Gas Advisory Council and American National Standards Institute, Inc. are as follows:

ANSI Z21.88-1998 • CSA 2.33-M98	ANSI Z21.88a-1998 • CSA 2.33a-M98 ANSI Z21.88b-1999 • CSA 2.33b-M99
ANSI Z21.88-2000 • CSA 2.33-2000	ANSI Z21.88a-2000 • CSA 2.33a-2000 ANSI Z21.88b-2001 • CSA 2.33b-2001
ANSI Z21.88-2002 • CSA 2.33-2002	ANSI Z21.88a-2003 • CSA 2.33a-2003 ANSI Z21.88b-2003 • CSA 2.33b-2003
ANSI Z21.88-2005 • CSA 2.33-2005	ANSI Z21.88a-2007 • CSA 2.33a-2007 ANSI Z21.88b-2008 • CSA 2.33b-2008
ANSI Z21.88-2009 • CSA 2.33-2009	ANSI Z21.88a-2012 • CSA 2.33a-2012
ANSI Z21.88-2014 • CSA 2.33-2014	
ANSI Z21.88-2016 • CSA 2.33-2016	
ANSI Z21.88-2017 • CSA 2.33-2017	

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

CSA/ANSI Z21.88:19 • CSA 2.33:19

Note: *This edition of CSA/ANSI Z21.88 • CSA 2.33 incorporates changes to the 2017 edition and addenda thereto. Changes, other than editorial, are denoted by a delta symbol in the margin.*

CSA/ANSI Z21.88:19 • CSA 2.33:19
Vented gas fireplace heaters

1 Scope

1.1

This Standard applies to newly produced vented gas fireplace heaters (see Clause 3, Definitions), hereinafter referred to as appliance(s), constructed entirely of new, unused parts and materials, and having input ratings up to and including 400,000 Btu/hr (117 228 W):

a) for use with natural gas;
b) for use with propane;
c) direct vent appliances for manufactured home (USA only) or mobile home OEM installation convertible for use with natural gas and propane when provision is made for simple conversion from one gas to the other [see Clause 4.1.4a) and b)];
d) direct vent appliances for manufactured home (USA only) or mobile home aftermarket installation for use with natural gas only or propane gas only [see Clause 4.1.4b)];
e) direct vent appliances for recreational vehicle installation for use with propane gas only [see Clause 4.1.4c)];
f) direct vent appliances for recreational vehicle installation only convertible for use with natural gas and propane gas when provision is made for the simple conversion from one gas to the other [see Clause 4.1.4c)]; and
g) for direct vent appliances for manufactured home (USA only) or mobile home OEM installation for use with propane gas only [see Clause 4.1.4a)].

The construction of vented gas fireplace heaters and vented gas fireplace heaters with cooling units for use with the above-mentioned gases is covered under Clause 4, Construction.

The performance of vented gas fireplace heaters and vented gas fireplace heaters with cooling units for use with the above-mentioned gases is covered under Clause 5, Performance.

1.2

Clauses 4 and 5 cover all vented gas fireplace heaters. In addition, Clauses 6 and 7 address the requirements specific to vented condensing gas fireplace heaters.

Δ **1.3**

Annex A, Automatic intermittent pilot ignition systems or on-demand pilot ignition systems for field installation, includes provisions for newly produced (optional) automatic intermittent pilot ignition systems and on-demand pilot ignition systems (see Clause 3, Definitions), constructed entirely of new, unused parts and materials, to be adapted in the field to an appliance equipped with an existing continuous pilot burner and which has been examined and tested for compliance with this Standard when installed on the appliance.

1.4

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