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ANSI Z21.50-2014 • CSA 2.22-2014

Vented gas fireplaces



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Vented gas fireplaces



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Preface

This is the seventh edition of ANSI Z21.50 • CSA 2.22, *Vented gas fireplaces*. It supersedes the previous editions published in 2012, 2007, 2003, 2000, 1998, and 1996.

This Standard was prepared by the Z21/CSA Joint Technical Subcommittee on Standards for 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, the Canadian Technical Committee on Gas Appliances and Related Accessories, and the Strategic Steering Committee on Standards for Fuel Burning Equipment, and had been formally approved by the Technical Committees, American National Standards Institute, 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.”

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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) 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.*
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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.

History of the development of the Standard for Vented gas fireplaces

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.

A Z21/CGA joint working group on harmonizing decorative gas appliance standards was established. On October 27-28, 1992 the Z21/CGA Joint Decorative Appliance Subcommittee reviewed the second draft harmonized Standard for Vented Gas Fireplaces based on current coverage from the American National Standard for Vented Decorative Gas Appliances, ANSI Z21.50-1989, Addenda ANSI Z21.50a-1990 and Addenda ANSI Z21.50b-1990; and the National Standard of Canada for Vented Decorative Gas Appliances, CAN/CGA-2.22-M86. Following its review, the joint subcommittee modified the draft document and agreed to distribute a second draft for industry review during March 1993. The first draft was not distributed for industry review.

With the formation of joint subcommittees, a Canadian Gas Association Standards Steering Committee on Gas Burning Appliances and Related Accessories was established to parallel Accredited Standards Committee Z21 and Z83, and to support the formation of joint subcommittees. Operating procedures for joint subcommittees were developed in accordance with American National Standards Institute procedures and subsequently approved by ANSI on April 1, 1993.

During its October 6–7, 1993 meeting, the joint decorative gas appliance subcommittee reconsidered the proposed second draft of the harmonized Standard for Vented Gas Fireplaces dated March 1993, in light of comments received. Changes to the delayed ignition and integrity test, addition of a water shock test and revisions to wind test coverage were redistributed for review and comment. At this time, a third draft of the harmonized standard was developed. The third draft including the revisions was recommended to the Z21 Committee and the CGA Standards Steering Committee for approval.

The proposed third draft of the harmonized Standard for Vented Gas Fireplaces was considered by the Z21 Committee at its April 7, 1994 meeting and by the CGA Standards Steering Committee on April 14, 1994. Comments were received from the Z21 Committee and returned to the joint subcommittee for consideration.

At its May 26-27, 1994 meeting, the joint decorative appliance subcommittee reconsidered draft three and proposed revisions, in light of comments received from the Z21 Committee. As a result, the third draft comprised of the second draft and the proposed revisions were revised to include references to American National Standard for Combination Gas Controls for Gas Appliances, ANSI Z21.78 and revisions to the maximum temperature rise for glass and references to combustion chamber pressure relief device. The third draft, plus all revisions, were recommended again to the Z21 Committee by letter ballot dated August 5, 1994, and the CGA Standards Steering Committee for approval.

Comments were again received from the Z21 Committee revising the conversion kit boxed warning and coverage addressing the moisture test. The joint decorative appliance subcommittee agreed with the revisions recommended by the Z21 Committee.

The proposed third draft of the harmonized Standard for Vented Gas Fireplaces and all revisions were approved by the Z21 Committee by letter ballot dated June 26, 1995 and by the CGA Standards Steering Committee on April 15, 1996.

The first edition of the harmonized Z21/CGA Standard for Vented Gas Fireplaces was approved by the Canadian Interprovincial Gas Advisory Council in May 1996, and by the American National Standards Institute Inc., on September 27, 1996.

The second edition of the Standard for Vented Gas Fireplaces was approved by the Canadian Interprovincial Gas Advisory Council on August 7, 1998, and by the American National Standards Institute, Inc. on November 3, 1998.

The third edition of the Standard for Vented Gas Fireplaces was approved by the Canadian Interprovincial Gas Advisory Council on August 22, 2000, and by the American National Standards Institute, Inc. on November 11, 2000.

The fourth edition of the Standard for Vented Gas Fireplaces was approved by the Canadian Interprovincial Gas Advisory Council on August 28, 2003, and by the American National Standards Institute, Inc. on July 11, 2003.

The fifth edition of the Standard for Vented Gas Fireplaces was approved by the Canadian Interprovincial Gas Advisory Council on March 15, 2007, and by the American National Standards Institute on February 22, 2007.

The sixth edition of the Standard for Vented Gas Fireplaces was approved by the Canadian Interprovincial Gas Advisory Council on September 28, 2012, and by the American National Standards Institute, Inc. on December 18, 2012.

This, the seventh edition of the Standard for Vented gas fireplaces was distributed for industry review during May 2012, September 2012, and January 2013; and approved by the Z21/83 Technical Committee on Performance and Installation of Gas Burning Appliances and Related Accessories on December 20, 2013; by the Canadian Technical Committee on Gas Appliances and Related Accessories on October 30, 2013; by the American National Standards Institute, Inc on February 20, 2014; and by the Interprovincial Gas Advisory Council on February 18, 2014.

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

ANSI Z21.50-1996 • CGA 2.22-M96

ANSI Z21.50-1998 • CGA 2.22-M98

ANSI Z21.50-2000 • CSA 2.22-2000

ANSI Z21.50-2003 • CSA 2.22-2003

ANSI Z21.50-2007 • CSA 2.22-2007

ANSI Z21.50-2012 • CSA 2.22-2012

ANSI Z21.50a-1998 • CGA 2.22a-M98

ANSI Z21.50b-1998 • CGA 2.22b-M98

ANSI Z21.50a-1999 • CGA 2.22a-M99

ANSI Z21.50b-2000 • CGA 2.22b-M00

ANSI Z21.50a-2001 • CSA 2.22a-2001

ANSI Z21.50b-2002 • CSA 2.22b-2002

ANSI Z21.50a-2003 • CSA 2.22a-2003

ANSI Z21.50b-2005 • CSA 2.22b-2005

ANSI Z21.50a-2008 • CSA 2.22a-2008

ANSI Z21.50b-2009 • CSA 2.22b-2009

Note: This edition of ANSI Z21.50 • CSA 2.22 incorporates changes to the 2012 edition.

ANSI Z21.50-2014 • CSA 2.22-2014

Vented gas fireplaces

1 Scope

1.1

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

These appliances are for:

- a) use with natural gas;
- b) use with propane;
- c) direct vent gas appliances for manufactured home (USA only) or mobile home OEM installation or aftermarket installation convertible for use with natural gas and liquefied petroleum (propane) gases when provision is made for the simple conversion from one gas to the other (see Clauses 4.1.21 and 4.1.22);
- d) direct vent gas appliances for manufactured home (USA only) or mobile home aftermarket installation for use with natural gas only or liquefied petroleum (propane) gases only (see Clause 4.1.22); and
- e) direct vent gas appliances for manufactured home (USA only) or mobile home OEM installation for use with liquefied petroleum (propane) gases only (see Clause 4.1.21).

The construction of vented gas fireplaces for use with the above mentioned gases is covered under Clause 4, Construction.

The performance of vented gas fireplaces for use with the above mentioned gases is covered under Clause 5, Performance.

1.2

Annex H, Automatic intermittent pilot ignition systems for field installation, includes provisions for newly produced (optional) automatic intermittent 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.

1.3

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.

1.4

Clause 2, Reference publications, contains a list of standards specifically referenced in this Standard and sources from which they may be obtained. It is the responsibility of the user of this Standard to determine which referenced standard applies based on the requirements of the Authority Having Jurisdiction (AHJ) for the location of installation.