

**Gas-fired room heaters, volume II,
unvented room heaters**



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unvented room heaters***



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Preface

This is the twenty-ninth edition of ANSI Z21.11.2, *Gas-fired room heaters, volume II, unvented room heaters*. It supersedes the previous editions published in 2016, 2013, 2011, 2007, 2000, 1996, 1992, 1989, 1983, 1978, 1974, 1971, 1967, and 1962.

This Standard was prepared by the Z21 Technical Subcommittee on Standards for Unvented Gas-Fired Heating Appliances, under the jurisdiction of the Z21/83 Technical Committee on Performance and Installation of Gas Burning Appliances and Related Accessories, and had been formally approved by the Technical Committee, and American National Standards Institute.

Interpretations: The Z21/83 Technical Committee on Performance and Installation of Gas Burning 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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- 4) *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.*
- 5) *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.*
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 - 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.

History of the development of ANSI Z21.11.2

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

Available records indicate that the “Gas Appliance Testing Code,” published in 1924 by the Pacific Coast Gas Association, contained what appeared to be the first printed specifications covering construction and performance of gas fired space heaters.

In April 1925, the American Gas Association (A.G.A.) Approval Requirements Committee appointed the Subcommittee on Approval Requirements for Gas Space Heaters to formulate nationally acceptable standards that could be used by the newly created A.G.A. Testing Laboratories. Following a comprehensive investigation of contemporary types of gas space heaters, a draft standard was developed and distributed for criticism in April 1926. The subcommittee revised the draft standard in the light of comments received, and the resultant standard was approved by the Approval Requirements Committee and published in July 1926. Following the same procedure, revised editions were published in June 1927 and August 1929.

On September 11, 1930, the American Gas Association Approval Requirements Committee became Sectional Committee Z21 of the American Standards Association; consequently, the Sub-committee on Approval Requirements for Gas Space Heaters became a subcommittee of the Z21 Committee, and subsequent editions were developed in accordance with American Standards Association procedures. Due to progress made in the utilization of gas for space heating during this period, further modifications and expansion of these standards were deemed necessary. Based on a continuous program of study and research conducted on this type of equipment and following American Standards Association procedures, eleven subsequent editions were approved as American Standards between December 1930 and August 1962.

With the tenth edition of the standard, approved as American Standard by the American Standards Association on August 12, 1949, the title of the standard was changed from “Requirements for Gas Space Heaters” to “Requirements for Gas Fired Room Heaters” to be more indicative of its scope.

In 1959, the gas heating appliance subcommittees were reorganized with the result that the gas fired room heater standard was divided into Volume I, Vented Room Heaters, and Volume II, Unvented Room Heaters. The vented room heater standard was assigned to the new vented warm air heater subcommittee, and the unvented room heater standard was assigned to the new unvented heating appliance subcommittee. With the fourteenth edition, approved by the American Standards Association in 1962, this division of the room heater standard into Volumes I and II was accomplished.

On August 24, 1966, the American Standards Association was reconstituted as the United States of America Standards Institute, and the fifteenth edition of the unvented room heater standard was approved as USA Standard in November 1967. On October 6, 1969, the United States of America Standards Institute was renamed the American National Standards Institute, Inc. As a result, the sixteenth through the twenty-third edition of this Standard were approved as American National Standards between 1971 and 2000.

Further revisions to the standard were developed in line with industry development. The twenty-fourth edition of the unvented room heater standard, which includes revisions deemed necessary in line with industry developments, was approved as an American National Standard by the American National Standards Institute, Inc., on October 17, 2002.

The twenty-fifth edition of the unvented room heater standard was approved by the American National Standards Institute, Inc., on February 28, 2007.

The twenty-sixth edition of the unvented room heater standard was approved by the American National Standards Institute, Inc., on September 30, 2011.

The twenty-seventh edition of the unvented room heater standard was approved by the Z21/83 Technical Committee on May 13, 2013 and by the American National Standards Institute, Inc., on August 7, 2013.

The twenty-eighth edition of the unvented room heater standard was distributed for industry review during August 2012, April 2013, November 2013, and July 2014. This edition was approved by the Z21/83 Technical Committee on August 29, 2016 and by the American National Standards Institute, Inc. on November 7, 2016.

This, the twenty-ninth edition of the unvented room heater standard was distributed for industry review during November 2016 and February 2017. This edition was approved by the Z21/83 Technical Committee on DATE and by the American National Standards Institute, Inc. on DATE.

Previous editions of the unvented room heater standard, and addenda thereto, approved by the American National Standards Institute or its predecessor organizations are as follows:

ANSI Z21.11-1933		
ANSI Z21.11-1936		
ANSI Z21.11-1940		
ANSI Z21.11-1942	ANSI Z21.11a-1945	
ANSI Z21.11-1948		
ANSI Z21.11-1949	ANSI Z21.11a-1950	ANSI Z21.11b-1953
ANSI Z21.11-1954	ANSI Z21.11a-1955	
ANSI Z21.11-1956	ANSI Z21.11a-1957	ANSI Z21.11b-1958
ANSI Z21.11-1959	ANSI Z21.11a-1960	
ANSI Z21.11.2-1962	ANSI Z21.11.2a-1964	ANSI Z21.11.2b-1965
ANSI Z21.11.2-1967	ANSI Z21.11.2a-1968	ANSI Z21.11.2b-1969
ANSI Z21.11.2-1971	ANSI Z21.11.2a-1972	ANSI Z21.11.2b-1973
ANSI Z21.11.2-1974	ANSI Z21.11.2a-1976	ANSI Z21.11.2b-1977
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ANSI Z21.11.2-2007	ANSI Z21.11.2a-2007	ANSI Z21.11.2b-2010
ANSI Z21.11.2-2011		

ANSI Z21.11.2-2013

ANSI Z21.11.2-2016

Note: *This edition of ANSI Z21.11.2 incorporates changes to the 2016 edition. Changes, other than editorial, are denoted by a delta in the margin.*

CSA/ANSI Z21.11.2:19

Gas-fired room heaters, volume II, unvented room heaters

1 Scope

Δ 1.1

This Standard applies to newly produced gas-fired unvented room heaters for connection to the house fuel supply system (see Clause 3), hereinafter referred to as room heaters or appliances, constructed entirely of new, unused parts and materials, having input ratings up to and including 40,000 Btu/hr (11,723 W) except:

- a) unvented room heaters suitable for installation in bedrooms have input ratings of 10,000 Btu/hr (2,931 W) or less; and
- b) unvented room heaters suitable for installation in bathrooms have input ratings of 6000 Btu/hr (1,758 W) or less.

Δ 1.2

This Standard covers unvented room heaters that comply with either of the following types:

- a) shipped from the factory equipped specifically for use with one gas only. Field conversion of gas types by any means including the use of a kit are not permitted; or
- b) a universal unvented room heater shipped from the factory equipped with a switching means for selecting the type of gas to which it is being connected.

1.3

Unvented room heaters are:

- a) for use with natural gas;
- b) for use with manufactured gas;
- c) for use with mixed gas;
- d) for use with propane gas;
- e) for use with LP gas-air mixtures; and
- f) for manufactured (mobile) home aftermarket installation for use with natural gas only or for use with propane gas only.

1.4

Universal unvented room heaters are:

- a) for use with propane and for use with natural gas when provision is made for a switching means from one gas to the other; and
- b) for manufactured (mobile) home or mobile home aftermarket installation for use with propane and for use with natural gas when provision is made for a switching means from one gas to the other (see Clause 4.1.5).

1.5

Unvented room heaters for installation in bathrooms are to be wall-mounted. Unvented room heaters for installation in bedrooms are to be wall-mounted or for installation in solid-fuel burning fireplaces.