CSA Group

CSA/ANSI Z21.1-2018 • CSA 1.1-2018
National Standard of Canada

Household cooking gas appliances

Standards Council of Canada
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Revision History

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Errata — January 2019	Revision symbol (in margin)
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Preface

This is the second edition of CSA/ANSI Z21.1 • CSA 1.1, *Household cooking gas appliances*. It supersedes the previous edition published in 2016.

This Standard was prepared by the Z21/CSA Joint Technical Subcommittee on Standards for Domestic Gas Ranges, 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 Z21/83 and CSA Technical Committees, American National Standards Institute, 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.

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."

Notes:

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. (IEEE/ASTM SI 10,* American National Standard for Metric Practice*, or ISO 80000-1:2009,* Quantities and units — Part 1: General*, 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.*
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History of the development of the Standard for Household cooking gas appliances

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

The first definite step toward the preparation of gas range specifications appears to have been taken by The Philadelphia Gas Works Company in 1903, after several years' observation had indicated the desirability of preparing general specifications, which would enable manufacturers to build their ranges to meet certain specific requirements.

In Volume 4 of the 1909 Proceedings of the American Gas Institute there is a report of the Committee on Utilization of Gas Appliances, which includes the specifications in use by two large purchasers of gas ranges. In the 1912 proceedings: (1) specifications for gas ranges were submitted for approval which had been prepared jointly by the Committee of the American Gas Institute and a similar Committee of the National Commercial Gas Association, and (2) recommendation was made that a standing committee be appointed to continue the standardization and simplification of gas appliance specifications.

These specifications were revised several times between 1914 and 1918. In June 1918, the American Gas Institute and the National Commercial Gas Association amalgamated to form the American Gas Association. During 1919, a Committee on Standardization of Gas Appliances was formed by the American Gas Association to carry out revisions of existing gas appliance specifications.

In 1925, the Subcommittee on Approval Requirements for Domestic Gas Ranges was formed for the purpose of revising existing standards of the American Gas Association and placing them in a form adaptable to industry's needs and readily capable of enforcement by the newly created Testing Laboratories of the American Gas Association. The first American Gas Association Approval Requirements for Gas Ranges were released to the gas industry in 1926. Revised editions were published in 1928 and 1930.

In September 1930, the American Gas Association Approval Requirements Committee became Sectional Committee Z21 of the American Standards Association. Consequently, the Subcommittee on Approval Requirements for Domestic Gas Ranges became a subcommittee of the Z21 Committee.

During 1930 and 1931, general revision and enlargement of the standards were undertaken by the subcommittee and the Z21 Committee. The resulting standard, the most comprehensive ever issued for gas ranges, was submitted to the American Standards Association for adoption and accepted in 1932.

Revisions to this standard reflecting the latest developments and improvements were approved by the subcommittee during 1932. This draft standard was adopted by the Z21 Committee at its May 1933 meeting and approved as American Standard by the American Standards Association in 1933. Following this procedure, seven subsequent editions of this standard were approved by the American Standards Association from 1935 to 1955.

Up to this point, the domestic gas range standard (Z21.1) covered both free-standing and built-in cooking units; however, in view of the rapid development of built-in units (formerly classified as recessed range sections) as well as other considerations as to the testing of these types of units, it was deemed advisable to have a separate standard devoted to each type of appliance. Consequently, the standard was divided into two volumes: the fourteenth edition, Volume I, Free-Standing Units (Z21.1.1), and the first edition, Volume II, Built-In Domestic Cooking Units (Z21.1.2), which were approved as American Standard by the American Standards Association in 1956. New editions of Z21.1.1 and Z21.1.2 were approved in 1959.

As a result of the use of domestic gas ranges by the trailer coach and mobile home industry, the standards were modified to cover the special construction and performance features deemed necessary for ranges for installation in such vehicles. These revisions were included in first addenda to the standards approved as American Standards in 1960. Subsequent editions of both standards were approved in 1961 and 1964.

Continued progress in the development of domestic gas ranges prompted further revision of the standards. In the first addenda (Z21.1.1a-1965 and Z21.1.2a-1965) issued to the seventeenth edition of Z21.1.1 and the fourth edition of Z21.1.2, provisions covering outdoor gas broilers were incorporated.

In August 1966, the American Standards Association was reconstituted as the United States of America Standards Institute. As a result, the eighteenth edition of Z21.1.1 and the fifth edition of Z21.1.2 were approved as USA Standards by the United States of America Standards Institute in 1967.

In October 1969, the United States of America Standards Institute was renamed the American National Standards Institute, Inc.

As a result of continued progress and development of domestic cooking equipment designs plus the increasing similarity of some designs of free-standing and built-in ranges, the subcommittee concluded that reorganization and expansion of the domestic gas range standards was needed to adequately cover various types of cooking equipment. Accordingly, three draft standards were distributed for review and comment during September 1970: coverage for outdoor broilers contained in the existing standards, plus added coverage for outdoor top cooking units, was combined into a draft standard for outdoor cooking gas appliances; coverage for appliances for use with liquefied petroleum gases and for installation in travel trailers, as contained in the existing standards, was combined into a separate draft standard for recreational vehicle cooking appliances; and the remainder of Z21.1.1 and Z21.1.2 was combined into a draft standard for household cooking gas appliances.

The nineteenth edition of the former domestic gas range standards, Z21.1.1 and Z21.1.2, retitled and redesignated the American National Standard for *Household Cooking Gas Appliances*, Z21.1, was approved as American National Standard in 1972.

Further revisions in line with developments in gas utilization, including transfer of the remaining coverage for appliances for recreational vehicle installation to American National Standard for *Recreational Vehicle Cooking Gas Appliances*, Z21.57, were incorporated in the twentieth edition of the household cooking gas appliance standard, which was approved as American National Standard by the American National Standards Institute, Inc., in 1974.

The twenty-first, twenty-second, twenty-third, twenty-fourth, twenty-fifth, twenty-sixth, twenty-seventh, twenty-eighth, and twenty-ninth editions of the household cooking gas appliance standards were approved as American National Standards by the American National Standards Institute, Inc., in 1978, 1982, 1987, 1990, 1993, 1996, 2000, 2005, and 2010 respectively.

Harmonization efforts to harmonize the American national Standard for *Household Cooking Gas Appliances*, ANSI Z21.1 with the *Standard for Domestic Gas Ranges*, CAN1.1 began in 2005. A working group was formed in 2006 to combine both documents.

While harmonization efforts were ongoing, further revisions to Z21.1, were developed in line with industry developments. The twenty-ninth edition of the household cooking gas appliance standard, was approved as an American National Standard by the American National Standards Institute, Inc. on November 17, 2010.

The harmonized Standard for *Household Cooking Gas Appliances* ANSI Z21.1 • CSA 1.1 was approved as an American national Standard by the American National Standards Institute, Inc. on January 6, 2016 and by the Interprovincial Gas Advisory Council on January 18, 2016.

This, the second edition of the harmonized Standard for *Household Cooking Gas Appliances*, CSA/ANSI Z21.1 • CSA 1.1, was approved as an American National Standard by the American National Standards Institute, Inc. on November 29, 2018 and by the Interprovincial Gas Advisory Council on October 30, 2018.

The following identifies the designation and year of the second edition of the harmonized Standard:

ANSI Z21.1-2016 • CSA 1.1-2016

CSA/ANSI Z21.1-2018 • CSA 1.1-2018

CSA/ANSI Z21.1-2018 • CSA 1.1-2018
Household cooking gas appliances

1 Scope

1.1

This Standard applies to newly produced household cooking gas appliances (see Clause 3, Definitions), hereinafter referred to as units or appliances, constructed entirely of new, unused parts and materials. These appliances may be floor supported or built-in.

1.2

This Standard applies to household cooking gas appliances:

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;
f) for use with either natural, manufactured, or mixed gas and convertible for use with propane gas (see Clause 3, Definitions);
g) for manufactured (mobile) home installation for use with propane gas only (see Clause 4.1.29);
h) for manufactured (mobile) home installation for use with either natural, manufactured, or mixed gas and convertible for use with propane gas (see Clause 4.1.29 and Clause 3, Definitions);
i) for recreational park trailer installation for use with natural, manufactured, or mixed gases and convertible for use with propane gas (see Clause 4.1.29 and Clause 3, Definitions); and
j) provided with pyrolytic self-cleaning oven features or self-cleaning broiler features, or both (see Clause 4.1.30).

The construction of floor-supported units and built-in units for use with the above-mentioned gases is covered under Clause 4, Construction.

The performance of floor-supported units and built-in units for use with the above-mentioned gases is covered under Clause 5, Performance.

1.3

The electrical sections of this Standard are unique to the United States and cover all electrical equipment, wiring, and accessories built-in or supplied for use with an appliance. This Standard covers only appliances having current limitations of 20 amperes and whose electrical equipment, wiring, and accessories are installed in accordance with the *National Electrical Code,* NFPA 70.

For Canada, the electrical portions of the electrical equipment, wiring, and accessories built-in or supplied for use with an appliance are covered under the Standard for *Electrical Components of Fuel Burning Equipment,* CAN C22.2 No. 3.

This Standard covers:

a) appliances that use only gas for cooking and that are designed for connection to nominal 120-volt electrical supplies; or

