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(reaffirmed 2021) •
CSA 1.8-2016
(reaffirmed 2021)
American National Standard

Gas food service equipment



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Preface

This is the fourth edition of ANSI Z83.11 • CSA 1.8, *Gas food service equipment*. It supersedes the previous editions published in 2006, 2002, and 1996.

This Standard was prepared by the Z21/CSA Joint Technical Subcommittee on Standards for Gas Food Service Equipment, 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 Technical Committee(s), American National Standards Institute, and the Interprovincial Gas Advisory Council.

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. (Standard for use of the International System of Units (SI): The Modern Metric System, IEEE/ASTM SI 10 or Metric Practice Guide, CSA/CSA Z234.1 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.*
- 4) *This publication 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 publication.*
- 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) *rational justification 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*
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 the standard for Gas food service equipment

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 equipment.

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 preliminary step toward harmonization with international standards, which was to become a necessity, as Europe moved toward its goal to form the Economic Community (EC) by the early 1990's.

At its June 13-14, 1990 meeting, the Z83 Subcommittee on Standards for Gas Food Service Equipment appointed working groups to begin comparisons of all five Z83 food service equipment standards, with their Canadian equivalents. In 1991, a U.S./Canadian joint working group on harmonizing Z83 and CGA food service equipment standards was established.

A Z83/CGA Joint Subcommittee on Standards for Gas Food Service Equipment was then established, based on memberships of the Z83 Subcommittee on Standards for Gas Food Service Equipment and the CGA 1.8-1.12 & 1.15 Commercial Cooking Appliance Committee.

Membership encompasses representatives from the U.S. and Canadian manufacturing industry, gas suppliers (natural and LP), regulatory authorities and general interest with the intent that each country is equally represented.

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 Committees Z21 and Z83.

The first meeting of the Z83/CGA joint gas food service equipment subcommittee was held on January 28-29, 1992. At its March 1993 meeting, an ad hoc working group was appointed to compare and investigate consolidation of the five Z83/CGA draft harmonized food service equipment standards for: ranges and unit broilers, baking and roasting ovens, deep fat fryers, counter appliances and kettles, steam cookers and steam generators into one standard.

At its September 1993 meeting, the joint food service equipment subcommittee reviewed a draft of Part I for the harmonized consolidated gas food service equipment standard as presented by the ad hoc working group and provided guidance to the working group on nine issues related to coverage which was unique to the product types covered in the five draft harmonized Z83/CGA food service equipment standards.

At its March 1994 meeting, the joint food service equipment subcommittee was provided with a First Draft of the harmonized consolidated gas food service equipment standard. Following consideration, the joint food service equipment subcommittee agreed to refer the draft standard back to the ad hoc working group for further editorial modifications.

At its August 1994 meeting, the joint food service equipment subcommittee was provided with a Second Draft of the draft harmonized gas food service equipment standard. Following review and subsequent modification, the joint food service equipment subcommittee adopted a proposed Third Draft of the harmonized consolidated gas food service equipment standard for distribution for review

and comment. The review and comment text for the proposed Third Draft was distributed for industry review during September 1994.

By letter ballot dated November 30, 1994, the joint food service equipment subcommittee recommended the proposed Third Draft of the harmonized consolidated gas food service equipment standard to the Z83 Committee and the CGA Standards Steering Committee for approval. The Third Draft of the proposed harmonized standard for gas food service equipment, Z83.11 • CGA 1.8, was approved by the Z83 Committee and CGA Standards Steering Committee by letter ballots dated January 20, 1995 and March 14, 1995, respectively.

Further editorial modifications to Z83.11 • CGA 1.8, based on comments considered by the joint food service equipment subcommittee at its July 1995 meeting were also recommended to and approved by the Z83 Committee and CGA Standards Steering Committee by letter ballots dated October 19, 1995 and December 4, 1995, respectively.

The first edition of the harmonized Z83/CGA Standard for Gas Food Service Equipment was approved by the the American National Standards Institute, Inc. on November 15, 1995 and by the Interprovincial Gas Advisory Council and the CGA Standards Advisory Committee in May 31, 1996.

Following the procedures outlined above, further revisions to this standard, Z83.11 • CGA 1.8, were made in line with industry developments. The second edition of the American National Standard/CSA Standard for Gas Food Service Equipment was approved by the Canadian Interprovincial Gas Advisory Council on July 12, 2002, and by the American National Standards Institute, Inc., on January 7, 2002.

The third edition of the harmonized standard for gas food service equipment was approved by the Interprovincial Gas Advisory Council on December 1, 2006 and by the American National Standards Institute on July 27, 2006.

This, the fourth edition of the harmonized standard for gas food service equipment was approved by the Interprovincial Gas Advisory Council on January 11, 2016 and by the American National Standards Institute on February 2, 2016.

ANSI Z83.11-2016 • CSA 1.8-2016

Gas food service equipment

1 Scope

1.1

This Standard applies to newly produced gas food service equipment providing coverage for ranges and unit broilers, baking and roasting ovens, counter appliances, deep fat fryers, kettles, steam cookers, steam generators, tableside cooking appliances (see Clause 3, Definitions), hereinafter referred to as either (1) “appliances” constructed entirely of new, unused parts and materials for use in food service centers of commercial, industrial, institutional and public assembly buildings, or (2) “outdoor appliances” constructed entirely of new, unused parts and materials for outdoor use and/or for installation in either carts or trailers:

- 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 liquefied petroleum gases (see Clause 5.2-e);
- f) for a tableside cooking appliance only, for use with butane gas;
- g) for use with LP gas-air mixtures; and
- h) for use with either natural, manufactured, or mixed gas and convertible (see Clause 3, Definitions) for use with either propane gas or liquefied petroleum gases.

The construction of gas food service equipment for use with the above-mentioned gases is covered under Clause 4.

The performance of gas food service equipment for use with the above-mentioned gases is covered under Clause 5.

The construction of floor-supported and built-in food service appliances for use with the above-mentioned gases is covered under Clause 4.

The performance of floor-supported and built-in food service appliances for use with the above-mentioned gases is covered under Clause 5.

1.2

Where specific type of equipment is involved, that product type (e.g., fryer) will be identified and underlined in the provision and will only apply to that product type.

1.3

This Standard also covers all electrical equipment, wiring, and accessories built in or supplied for use with an appliance. It covers only such appliances with electrical equipment, wiring, and accessories that are installed in accordance with the *National Electrical Code, NFPA 70* or the *Canadian Electrical Code, CSA C22.1*, as applicable.

1.4

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

1.5

All references to psi through this Standard are to be considered gauge pressure unless otherwise specified.

1.6

Outdoor appliances, carts, and trailers

- a) Appliances complying with sections of this Standard which specify outdoor appliances shall be marked per Clause [4.48](#), Marking.
- b) Appliances that are for use with a self-contained LP-gas system shall comply with Clause [4.40](#), Self-contained LP-gas supply systems and Clause [4.41](#), Enclosures for self-contained LP-gas supply systems.
- c) Outdoor appliances also include appliances that are intended to be towed behind a vehicle. This Standard does not address the issues of road performance or Department of Transportation (Federal, State, Canadian, or Provincial) rules and regulations concerning trailers.
- d) A manufacturer shall supply adequate documentation to a testing agency that the trailer equipped with appliances meets applicable regulations and is eligible for titling and licensing. Listing by an approval agency to this Standard does not imply that the trailer complies with the necessary codes applicable to vehicles for use on highways, roads, or streets.
- e) This Standard also covers the permanent gas distribution system used in any cart or trailer that is being submitted for evaluation under this Standard.
- f) This Standard is not intended for appliances that are:
 - i) for use in mobile structures with walls on all four sides and a permanent roof;
 - ii) listed separately for mounting on a trailer or cart;
 - iii) carts or trailers that are listed without appliances.
- g) Carts and trailers shall only be investigated for gas supply system construction.

1.7

These requirements cover a portable tableside cooking appliance equipped with a self-contained butane gas fuel supply with inputs not greater than 15,000 Btu/Hr. The fuel cylinder is of the non-refillable type and has a maximum capacity of more than 4 fluid ounces (118 ml) but no more than 10 fluid oz (296 ml) of butane. The maximum capacity in pounds of water is 1.08 (0.49 kg). A tableside cooking appliance may employ no more than two fuel cylinders. The fuel cylinder is removable and replaceable in normal use. The butane fuel cylinder shall comply with DOT 2P or 2Q requirements and be listed to the *Standard For Non-refillable (Disposable) Type Metal Container Assemblies For Butane, UL 147B*. These portable tableside cooking appliances are for use by commercial restaurants and may be used indoors, outdoors, or both. They are not for household use.

1.8

A tableside cooking appliance may employ a low pressure gas delivery system or may incorporate a delivery system operating directly from the self-contained tank supply.

1.9

Annex [A](#) contains items that are unique to the United States.