ANSI Z21.24-2015 • CSA 6.10-2015
(reaffirmed 2020)

Connectors for gas appliances

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Revision History

ANSI Z21.24-2015 • CSA 6.10-2015, Connectors for gas appliances

Errata — February 2017	**Revision symbol (in margin)**
Table 3	Δ

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American National Standard

ANSI Z21.24-2015 • CSA 6.10-2015
Connectors for gas appliances

American National Standards Institute, Inc.

Interprovincial Gas Advisory Council

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Contents

Preface

This is the fourth edition of ANSI Z21.24 • CSA 6.10, *Connectors for gas appliances*. It supersedes the previous editions published in 2006, 2001, and 1997.

This Standard was prepared by the Z21/CSA Joint Technical Advisory Group on Standards for Connectors for Gas Appliances, 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, CAN/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) *rationale for the change.*
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   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.

History of the development of the standard for connectors for gas appliances

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.

A draft harmonized standard for connectors for moveable gas appliances was prepared for review by the Z21/CGA Joint Connector Subcommittee. The draft harmonized standard for connectors for gas appliances is based on the American National Standard for Connectors for Gas Appliances (Z21.24-1993 and Z21.24a-1993), the standard American National Standard for Flexible Connectors of Other than All-Metal Construction for Gas Appliances (Z21.45-1992, Z21.45a-1993 and Z21.45b-1993), and the National Standard of Canada for Connectors for Gas-Appliances (CAN/CGA-6.10-M88). At its September 20, 1994 meeting, the Z21/CGA joint Connector Subcommittee considered and modified the proposed harmonized draft standard and agreed to distribute it for industry review during April 1995.

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, and to support the formation of joint subcommittees. Operating procedures, in accordance with American National Standards Institute procedures, for joint subcommittees were developed and subsequently approved by ANSI on April 1, 1993.

Following reconsideration and modification of the proposed draft standard for connectors for gas appliances, in light of comments received, the joint connector subcommittee, at its November 16, 1995 meeting, recommended the proposed draft to the Z21 Committee and the CGA Standards Steering Committee for approval.

The first edition of the harmonized standard for connectors for gas appliances, as modified by the joint subcommittee, was approved by the Z21 Committee at its April 11, 1996 meeting, by the CGA Standards Steering Committee on May 8, 1996, by the Interprovincial Gas Advisory Council (IGAC) in June 1996, by the CGA Standards Advisory Committee on September 6, 1996, and by the American National Standards Institute, Inc. (ANSI), on June 6, 1997.

The second edition of the harmonized standard for connectors for gas appliances was approved by the IGAC on June 12, 2001, and by ANSI on May 18, 2001.

The third edition of the harmonized standards for Connectors for Gas Appliances was approved by the IGAC December 1, 2006 and by ANSI on August 25, 2005.

The fourth edition of the harmonized standards for Connectors for Gas Appliances was approved by the IGAC on October 10, 2015 and by ANSI on September 16, 2015.

The following identifies the designation and year of the harmonized standard:

Z21.24-2015 • CSA 6.10-2015

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Connectors for gas appliances

1 Scope

1.1
This Standard applies to newly produced gas appliance connectors, constructed entirely of new unused parts and materials, having nominal internal diameters of $^1/_4$, $^3/_8$, $^1/_2$, $^5/_8$, $^3/_4$, and 1 in, and having fittings at both ends provided with taper pipe threads for connection to a gas appliance and to house piping. This Standard covers assembled appliance connectors not exceeding a nominal length of 6 ft (1.83 m).

Connectors listed under this Standard are intended for use with gas appliances that are not frequently moved after installation.

For the purpose of this Standard, an unused connector, including end fittings, is considered to be a connector that has not been installed.

1.2
Appliance connectors complying with this Standard are considered suitable for use with natural, manufactured, mixed and propane gases, and LP gas-air mixtures.

1.3
Appliance connectors complying with this Standard are for use with piping systems having fuel gas pressures not in excess of $^1/_2$ lb/in^2 (3.5 kPa).

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 throughout this Standard are to be considered gauge pressure unless otherwise specified.

1.6
Annex A contains provisions that are unique to the United States.

1.7
Annex B contains provisions that are unique to Canada.

1.8
Clause 2 contains a list of standards specifically referenced in this Standard, and sources from which these reference standards may be obtained.

