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CSA/ANSI Z21.56:19 • CSA 4.7:19

National Standard of Canada
American National Standard

Gas-fired pool heaters

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CSA/ANSI Z21.56:19 • CSA 4.7:19, Gas-fired pool heaters

Revision from previous edition	Revision symbol (in margin)
Clauses 3, 4.12, 5.4, and 8.3	Δ

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Gas-fired pool heaters

American National Standards Institute, Inc.

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Preface

This is the seventh edition of CSA/ANSI Z21.56 • CSA 4.7, *Gas-fired pool heaters*. It supersedes the previous editions published in 2017, 2014, 2013, 2006, 2001, and 1998.

This Standard is considered suitable for use for conformity assessment within the stated scope of the Standard.

This Standard was prepared by the Joint Technical Subcommittee on Gas-Fired Water Heaters under the jurisdiction of the Z21/83 Technical Committee on Performance and Installation of Gas Burning Appliances and Related Accessories and the Strategic Steering Committee on Fuels and Appliances. It has been formally approved by the Z21/83 Technical Committee, the Canadian Technical Committee on Gas Appliances and Related Accessories, 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.

This Standard has been approved by the American National Standards Institute (ANSI) as an American National Standard.

Interpretations: The Strategic Steering Committee on Fuels and Appliances 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 CSA 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) *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.*
3) *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) *wording of the proposed change; and*
   d) *rationale for the change.*

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History of the development of CSA/ANSI Z21.56 • CSA 4.7

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. Joint subcommittees were established to facilitate the standards harmonization process between the United States and Canada.

The draft harmonized standard was based on current coverage from the *American National Standard for Gas-Fired Pool Heaters*, ANSI Z21.56-1993 and Addenda Z21.56a-1994, Z21.56b-1994 and the Canadian Standard for *Gas-Fired Pool Heaters*, CAN1-4.7-M85. The draft was subsequently issued for public review and comment during April 1996.

Following reconsideration and modification of the proposed draft standard, in light of comments received, the joint water heater subcommittee, at its July 24-25, 1996 meeting, recommended the proposed draft to the Z21 Committee and the CGA Standards Steering Committee for approval.

The proposed draft of the harmonized standard for gas-fired pool heaters, as modified by the joint subcommittee at its meeting of July 24-25, 1996, was approved by the Z21/83 Committee at its April 17, 1997 meeting and by the CGA Standards Steering Committee on May 6, 1997.

The first edition of the harmonized Z21/CSA Standard for *Gas-Fired Pool Heaters* was approved by the Canadian Interprovincial Gas Advisory Council on September 10, 1997 and by the American National Standards Institute Inc. on March 19, 1998.

The second edition of the harmonized Z21/83/Canadian Standards Association Standard for *Gas-Fired Pool Heaters* was approved by the Canadian Interprovincial Gas Advisory Council on August 1, 2001 and by the American National Standards Institute Inc. on December 20, 2001.

The third edition of the harmonized Z21/CSA Standard for *Gas-Fired Pool Heaters* was approved by the Canadian Interprovincial Gas Advisory Council on January 4, 2006 and by the American National Standards Institute, Inc. on December 13, 2005.

The fourth edition of the harmonized Z21/CSA Standard for *Gas-Fired Pool Heaters* was approved by the Canadian Interprovincial Gas Advisory Council on February 25, 2013, and by the American National Standards Institute, Inc. on January 9, 2013.

The fifth edition of the harmonized Z21/CSA Standard for *Gas-Fired Pool Heaters* was approved by the Canadian Interprovincial Gas Advisory Council on May 28, 2014 and by the American National Standards Institute, Inc. on April 21, 2014.

The sixth edition of the harmonized Z21/CSA Standard for *Gas-Fired Pool Heaters* was approved by the Canadian Interprovincial Gas Advisory Council on August 18, 2017 and by the American National Standards Institute, Inc. on November 6, 2017.

This, the seventh edition of the harmonized Z21/CSA Standard for *Gas-Fired Pool Heaters*, was approved by the Canadian Interprovincial Gas Advisory Council on October 9, 2019 and by the American National Standards Institute, Inc. on September 23, 2019.

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The previous editions of the Standard for *Gas-Fired Pool Heaters*, and addenda thereto, approved by the Interprovincial Gas Advisory Council and American National Standards Institute, Inc. are as follows:

Z21.56-1998 • CSA 4.7-M98 Z21.56a-2000 • CSA 4.7a-M00 Z21.56b-2000 • CSA 4.7b-2000	Z21.56-2013 • CSA 4.7-2013
Z21.56-2001 • CSA 4.7-2001 Z21.56a-2004 • CSA 4.7a-2004 Z21.56b-2004 • CSA 4.7b-2004	Z21.56-2014 • CSA 4.7-2014
ANSI Z21.56-2008 • CSA 4.7-2006 ANSI Z21.56a-2011 • CSA 4.7a-2008 ANSI Z21.56b-2011 • CSA 4.7b-2011	Z21.56-2017 • CSA 4.7-2017

The following identifies the designation and year of the seventh edition of the Standard:

CSA/ANSI Z21.56:19 • CSA 4.7:19

Note: *This edition of CSA/ANSI Z21.56 • CSA 4.7 incorporates changes to the 2017 edition. Changes, other than editorial, are denoted by a delta in the margin.*

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CSA/ANSI Z21.56:19 • CSA 4.7:19
Gas-fired pool heaters

1 Scope

1.1
This Standard applies to newly produced pool heaters (see Clause 3, Definitions), hereinafter referred to as pool heaters or appliances, constructed entirely of new, unused parts and materials, for heating non-potable water stored at atmospheric pressure, such as water in swimming pools, spas, hot tubs and similar applications:

a) for use with natural gas;
b) for use with manufactured gas;
c) for use with mixed gas;
d) for use with liquefied petroleum gases;
e) for use with LP gas-air mixtures;
f) for installation in applications intended to temper the entire flow of the primary circulating pool loop water prior to re-entering the pool; and
g) for installation in applications for pool heaters intended to temper a portion of the primary circulating loop water diverted through the pool heater by mechanical means, and then re-enter and mix with the primary circulating loop water prior to entering the pool.

1.2
This Standard applies to pool heaters intended for installation at a distance less than 5 ft (1.52 m) from the inside surface of a pool or spa, hereinafter referred to as close proximity heaters (see Clause 3).

1.3
This Standard applies to pool heaters for indoor installation with draft hoods which are factory equipped with automatic vent damper devices (see Clause 3, Definitions), hereinafter referred to as vent damper devices.

1.4
This Standard applies to pool heaters of other than the direct vent type which are factory equipped with electrically operated or mechanically actuated automatic flue damper devices (see Clause 3, Definitions), hereinafter referred to as flue damper devices.

1.5
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.

1.6
All references to psi throughout this Standard are to be considered gauge pressure unless otherwise specified.

1.7
Clause 7 contains clauses that are unique to the United States.

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