



ANSI Z21.66-2015 • CSA 6.14-2015
(reaffirmed 2020)

Automatic damper devices for use with gas-fired appliances



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ANSI Z21.66-2015 • CSA 6.14-2015, Automatic damper devices for use with gas-fired appliances

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American National Standard

ANSI Z21.66-2015 • CSA 6.14-2015 Automatic damper devices for use with gas-fired appliances



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IGAC

International Gas Advisory Council



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Preface

This is the second edition of ANSI Z21.66 • CSA 6.14, Automatic damper devices for use with gas-fired appliances. It supersedes the previous editions published in 1996.

This Standard was prepared by the Z21/CSA Joint Technical Sub-Committee on Standards for Automatic Damper Devices for Gas Appliances under the jurisdiction of the Technical Committee on Gas Appliances and Related Accessories, the Z21/83 Technical Committee on Performance and Installation of Gas Burning Appliances and Related Accessories, and the Strategic Steering Committee on Standards for Fuel Burning Appliances, 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 Fuel Burning 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 committee interpretation has not already been published, CSA’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) units 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 is 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, are to 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 periodic review, and 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:*
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 - b) *relevant clause, table, and/or figure number;*
 - c) *wording of the proposed change; and*
 - d) *rational justification 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*
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 Z21.66 • CSA 6.14

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.

With the formation of joint subcommittees, a Canadian Gas Association (CGA) 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.

At its December 16, 1992 meeting, the Joint Damper Device Subcommittee established a working group to develop a comparison document incorporating coverage from ANSI Z21.66, *Automatic Vent Damper Devices for Use With Gas-Fired Appliances*, CAN1-2.28-M81, *Gas-Fired Appliances Equipped with Electrically Operated Automatic Vent Damper Devices Provided as Integral Components*, and CAN1-6.14-M86, *Thermally Actuated Automatic Vent Damper Devices*. The comparison document was distributed to the members of the joint damper device subcommittee for review and comment. At its May 10, 1994 meeting, the joint damper device subcommittee adopted the proposed damper device standard for distribution for industry review and comment as a harmonized standard. The first draft harmonized damper device standard was distributed for review and comment during June 1994.

Following reconsideration and revision of the proposed harmonized damper device standard, in light of comments received, the joint damper device subcommittee, at its November 2, 1994 meeting, recommended the proposed standard to the Z21 Committee and the CGA Standards Steering Committee, for approval.

The proposed harmonized standard for damper devices was approved by the Z21 Committee at its April 6, 1995 meeting. The CGA Standards Steering Committee approved the proposed harmonized standard for damper devices by letter ballot dated May 19, 1995.

The first edition of the Z21, CGA Standard for Automatic Damper Devices for Use With Gas-Fired Appliances was approved by the CGA Standards Advisory Committee and the Canadian Interprovincial Gas Advisory Council (IGAC) on October 20, 1995 and by the American National Standards Institute, Inc. (ANSI), on July 1, 1996.

Subsequent revisions to the proposed harmonized damper device standard were adopted for distribution for review and comment by the joint damper device subcommittee at its November 2, 1994 meeting. The proposed revisions to the proposed harmonized damper device standard were distributed for review and comment during February 1995. At its April 19, 1995 meeting, in light of comments received, the joint damper device subcommittee recommended the proposed revisions to the proposed harmonized damper device standard to the Z21 Committee and the CGA Standards Steering Committee, for approval.

The proposed revisions to the proposed harmonized damper device standard were approved by the Z21 Committee by letter ballot dated July 17, 1995. The CGA Standards Steering Committee approved the proposed revisions to the proposed harmonized damper device standard by letter ballot dated November 17, 1995. The IGAC approved the proposed revisions to the harmonized damper device standard by letter ballot dated February 9, 1996.

The first edition of the harmonized Z21/CGA Standard for Automatic Vent Damper Devices for Use With Gas-Fired Appliances replaced previous editions of Z21.66, CAN1-2.28, and CAN1-6.14.

This, the second edition of the harmonized Z21/CSA Standard for Automatic Vent Damper Devices for Use with Gas-Fired Appliances, was approved by the Canadian Interprovincial Gas Advisory Council on March 16, 2015, and by the American National Standards Institute, Inc. on July 1, 2015.

The previous edition of the Standard for Automatic Vent Damper Devices for Use with Gas-Fired Appliances, approved by the Interprovincial Gas Advisory Council and American National Standards Institute, Inc. are as follows:

ANSI Z21.66-1996 • CGA 6.14-M96

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

ANSI Z21.66-2015 • CSA 6.14-2015

Note: *This edition of ANSI Z21.66 • CSA 6.14 incorporates changes to the 1996 edition. Changes, other than editorial, are denoted by a delta in the margin.*

ANSI Z21.66-2015 • CSA 6.14-2015

Automatic damper devices for use with gas-fired appliances

1 Scope

Δ 1.1

This Standard applies to the construction, performance, and installation procedures for a newly produced automatic damper device (hereinafter referred to as device) constructed entirely of new, unused parts and materials and designed to control the flow or products of combustion from an individually, automatically operated, gas-fired appliance listed by a nationally recognized testing agency. This device is not for installation on any appliance converted from solid or liquid fuels.

This Standard also applies to automatic outdoor vent dampers intended to be mounted outdoors on the top of fireplace chimneys and do not apply to service chimneys or common vents used for venting central heater or water heating appliances. Automatic outdoor vent dampers are intended to be mounted outdoors only on the top of fireplace chimneys and used with decorative fireplace appliances, certified to the Standard for Decorative gas appliances for installation in solid fuel burning fireplaces, ANSI Z21.60 • CSA 2.26, or to the Standard for Manually lighted, natural gas decorative gas appliances for installation in solid-fuel burning appliances, ANSI Z21.84.

1.2

This Standard does not apply to a flue damper, which is a device installed before (upstream of) the draft hood relief opening(s).

Δ 1.3

A device covered by this Standard has an inlet and outlet venting area each no greater than that of a vent connector having a nominal 12 inch (305 mm) diameter [113 square inches (729 cm²)].

Outdoor automatic vent dampers intended to be mounted outdoors on the top of the fireplace chimney has an inlet and outlet venting area each no greater than that of a vent connector having a nominal 24 inch (610 mm) diameter.

1.4

Additional provisions specific to electrically operated automatic vent damper devices are outlined under Clause [6](#).

1.5

Additional provisions specific to thermally actuated automatic vent damper devices are outlined under Clause [8](#).

1.6

Additional provisions specific to retrofit automatic vent damper devices are outlined under Clause [10](#) (see Exclusion – Clause [10](#)).