



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

Automatic damper devices for use with gas-fired appliances



Legal Notice for Standards

Canadian Standards Association and CSA America Standards Inc. (operating as "CSA Group") develop standards through a consensus standards development process approved by the Standards Council of Canada and the American National Standards Institute. This process brings together volunteers representing varied viewpoints and interests to achieve consensus and develop a standard. Although CSA Group administers the process and establishes rules to promote fairness in achieving consensus, it does not independently test, evaluate, or verify the content of standards.

Disclaimer and exclusion of liability

This document is provided without any representations, warranties, or conditions of any kind, express or implied, including, without limitation, implied warranties or conditions concerning this document's fitness for a particular purpose or use, its merchantability, or its non-infringement of any third party's intellectual property rights. CSA Group does not warrant the accuracy, completeness, or currency of any of the information published in this document. CSA Group makes no representations or warranties regarding this document's compliance with any applicable statute, rule, or regulation.

IN NO EVENT SHALL CSA GROUP, ITS VOLUNTEERS, MEMBERS, SUBSIDIARIES, OR AFFILIATED COMPANIES, OR THEIR EMPLOYEES, DIRECTORS, OR OFFICERS, BE LIABLE FOR ANY DIRECT, INDIRECT, OR INCIDENTAL DAMAGES, INJURY, LOSS, COSTS, OR EXPENSES, HOWSOEVER CAUSED, INCLUDING BUT NOT LIMITED TO SPECIAL OR CONSEQUENTIAL DAMAGES, LOST REVENUE, BUSINESS INTERRUPTION, LOST OR DAMAGED DATA, OR ANY OTHER COMMERCIAL OR ECONOMIC LOSS, WHETHER BASED IN CONTRACT, TORT (INCLUDING NEGLIGENCE), OR ANY OTHER THEORY OF LIABILITY, ARISING OUT OF OR RESULTING FROM ACCESS TO OR POSSESSION OR USE OF THIS DOCUMENT, EVEN IF CSA GROUP HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES, INJURY, LOSS, COSTS, OR EXPENSES.

In publishing and making this document available, CSA Group is not undertaking to render professional or other services for or on behalf of any person or entity or to perform any duty owed by any person or entity to another person or entity. The information in this document is directed to those who have the appropriate degree of experience to use and apply its contents, and CSA Group accepts no responsibility whatsoever arising in any way from any and all use of or reliance on the information contained in this document.

CSA Group is a private not-for-profit company that publishes voluntary standards and related documents. CSA Group has no power, nor does it undertake, to enforce compliance with the contents of the standards or other documents it publishes.

Intellectual property rights and ownership

As between CSA Group and the users of this document (whether it be in printed or electronic form), CSA Group is the owner, or the authorized licensee, of all works contained herein that are protected by copyright, all trade-marks (except as otherwise noted to the contrary), and all inventions and trade secrets that may be contained in this document, whether or not such inventions and trade secrets are protected by patents and applications for patents. Without limitation, the unauthorized use, modification, copying, or disclosure of this document may violate laws that protect CSA Group's and/or others' intellectual property and may give rise to a right in CSA Group and/or others to seek legal redress for such use, modification, copying, or disclosure. To the extent permitted by licence or by law, CSA Group reserves all intellectual property rights in this document.

Patent rights

Attention is drawn to the possibility that some of the elements of this standard may be the subject of patent rights. CSA Group shall not be held responsible for identifying any or all such patent rights. Users of this standard are expressly advised that determination of the validity of any such patent rights is entirely their own responsibility.

Authorized use of this document

This document is being provided by CSA Group for informational and non-commercial use only. The user of this document is authorized to do only the following:

If this document is in electronic form:

- load this document onto a computer for the sole purpose of reviewing it;
- search and browse this document; and
- print this document if it is in PDF format.

Limited copies of this document in print or paper form may be distributed only to persons who are authorized by CSA Group to have such copies, and only if this Legal Notice appears on each such copy.

In addition, users may not and may not permit others to

- alter this document in any way or remove this Legal Notice from the attached standard;
- sell this document without authorization from CSA Group; or
- make an electronic copy of this document.

If you do not agree with any of the terms and conditions contained in this Legal Notice, you may not load or use this document or make any copies of the contents hereof, and if you do make such copies, you are required to destroy them immediately. Use of this document constitutes your acceptance of the terms and conditions of this Legal Notice.



Revision History

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

Revision from previous edition	Revision symbol (in margin)
Clauses 1.1 , 1.3 , 1.12 , 4.2.2 , 4.2.4 , 5.2.4 , 5.4 , 6.6 , 7.7 , and 7.8	Δ

Standards Update Service

ANSI Z21.66-2015 • CSA 6.14-2015 July 2015

Title: *Automatic damper devices for use with gas-fired appliances*

To register for e-mail notification about any updates to this publication

- go to store.csagroup.org
- click on **Product Updates**

The **List ID** that you will need to register for updates to this publication is **2422771**.

If you require assistance, please e-mail techsupport@csagroup.org or call 416-747-2233.

Visit CSA Group's policy on privacy at www.csagroup.org/legal to find out how we protect your personal information.

CSA Group

The Canadian Standards Association (operating as "CSA Group"), under whose auspices this National Standard has been produced, was chartered in 1919 and accredited by the Standards Council of Canada to the National Standards system in 1973. It is a not-for-profit, nonstatutory, voluntary membership association engaged in standards development and certification activities.

CSA Group standards reflect a national consensus of producers and users including manufacturers, consumers, retailers, unions and professional organizations, and governmental agencies. The standards are used widely by industry and commerce and often adopted by municipal, provincial, and federal governments in their regulations, particularly in the fields of health, safety, building and construction, and the environment.

Individuals, companies, and associations across Canada indicate their support for CSA Group's standards development by volunteering their time and skills to Committee work and supporting CSA Groups objectives through sustaining memberships. The more than 7000 committee volunteers and the 2000 sustaining memberships together form CSA Group's total membership from which its Directors are chosen. Sustaining memberships represent a major source of income for CSA Groups standards development activities.

CSA Group offers certification and testing services in support of and as an extension to its standards development activities. To ensure the integrity of its certification process, CSA Group regularly and continually audits and inspects products that bear the CSA Group Mark.

In addition to its head office and laboratory complex in Toronto, CSA Group has regional branch offices in major centres across Canada and inspection and testing agencies in eight countries. Since 1919, CSA Group has developed the necessary expertise to meet its corporate mission: CSA Group is an independent service organization whose mission is to provide an open and effective forum for activities facilitating the exchange of goods and services through the use of standards, certification and related services to meet national and international needs.

For further information on CSA Group services, write to
CSA Group
178 Rexdale Boulevard, Toronto, Ontario,
Canada M9W 1R3

American National Standards Institute

The American National Standards Institute (ANSI), Inc. is the nationally recognized coordinator of voluntary standards development in the United States through which voluntary organizations, representing virtually every technical discipline and every facet of trade and commerce, organized labor and consumer interests, establish and improve the some 10,000 national consensus standards currently approved as American National Standards.

ANSI provides that the interests of the public may have appropriate participation and representation in standardization activity, and cooperates with departments and agencies of U.S. Federal, state and local governments in achieving compatibility between government codes and standards and the voluntary standards of industry and commerce.

ANSI represents the interests of the United States in international nontreaty organizations such as the International Organization for Standardization (ISO) and the International Electrotechnical Commission (IEC). The Institute maintains close ties with regional organizations such as the Pacific Area Standards Congress (PASC) and the Pan American Standards Commission (COPANT). As such, ANSI coordinates the activities involved in the U.S. participation in these groups.

ANSI approval of standards is intended to verify that the principles of openness and due process have been followed in the approval procedure and that a consensus of those directly and materially affected by the standards has been achieved. ANSI coordination is intended to assist the voluntary system to ensure that national standards needs are identified and met with a set of standards that are without conflict or unnecessary duplication in their requirements.

Responsibility of approving American standards rests with the
American National Standards Institute, Inc.
25 West 43rd Street, Fourth floor
New York, NY 10036

American National Standard

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



American National Standards Institute, Inc.

IGAC

Interprovincial Gas Advisory Council



*® A trademark of the Canadian Standards Association
and CSA America Standards Inc., operating as "CSA Group"*

*Approved on July 1, 2015 by ANSI
Approved on March 16, 2015 by IGAC
Effective in Canada October 1, 2016
Published in July 2015 by CSA Group
A not-for-profit private sector organization
178 Rexdale Boulevard, Toronto, Ontario, Canada M9W 1R3*

*To purchase standards and related publications, visit our Online Store at store.csagroup.org
or call toll-free 1-800-463-6727 or 416-747-4044.*

ISBN 978-1-77139-403-1

*© 2015 Canadian Standards Association
All rights reserved. No part of this publication may be reproduced in any form whatsoever
without the prior permission of the publisher.*

Contents

Interprovincial Gas Advisory Council	3
Z21/83 Technical Committee on Performance and Installation of Gas Burning Appliances and Related Accessories	5
CSA Technical Committee on Gas Appliances and Related Accessories	8
Joint Technical Sub-Committee on Standards for Automatic Damper Devices for Gas Appliances	10
Preface	11
1 Scope	14
2 Reference publications	15
3 Definitions	17
4 Construction	19
4.1 General construction	19
4.2 Materials	20
4.3 Vent connections	22
4.4 Internal free venting area	22
4.5 Instructions	22
4.6 Marking	23
5 General performance	25
5.1 General	25
5.2 Strength	26
5.3 Safety analysis	29
5.4 Marking material adhesion and legibility	29
6 Construction of electrically operated automatic vent damper devices	29
6.1 Damper operation	29
6.2 Internal free venting area	30
6.3 Electrical equipment and wiring	30
6.4 Instructions	30
6.5 Marking	31
6.6 Vent damper connections	31
7 Performance of electrically operated automatic vent damper devices	32
7.1 Strength	32
7.2 Voltage variation	32
7.3 Electrical continuity	32
7.4 Electrical equipment and wiring temperatures, leakage current, and dielectric strength	32
7.5 Exposure to temperature extremes	37
7.6 Continued operation	37
7.7 Continued operation for outdoor installation	38

7.8	Outdoor tests	38
7.8.1	General	38
7.8.2	Rain test	38
7.8.3	Wind load test	40
7.8.4	Salt spray corrosion	41
8	Construction of thermally actuated automatic vent damper devices	42
8.1	General construction	42
8.2	Instructions	42
8.3	Marking	42
9	Performance of thermally actuated automatic vent damper devices	42
9.1	Strength	42
9.2	Flow restriction evaluation	42
9.3	Damper force	44
9.4	Exposure to temperature extremes	45
9.5	Continued operation	45
10	Construction of automatic vent damper devices for retrofit installation	46
10.1	Free venting area	46
10.2	Instructions	46
10.3	Marking	47
11	Performance of automatic vent damper devices for retrofit installation	47
12	Manufacturing and production tests	48
12.1	General	48
12.2	Electronically operated automatic vent damper devices	48
12.3	Thermally actuated automatic vent damper devices	49
13	Items unique to the United States	49
13.1	General	49
13.2	Electrical equipment and wiring	50
14	Items unique to Canada	56
<hr/>		
Annex A (normative)	— Procedure for safety inspection of an existing appliance installation	57
Annex B (normative)	— Procedure for installing electrically operated automatic vent damper devices on existing appliances	59
Annex C (normative)	— Procedure for installing thermally actuated automatic vent damper devices on existing appliances	61
Annex D (informative)	— Pertinent references to ANSI Y14.15	63
Annex E (informative)	— Wire color designations	64
Annex F (informative)	— Preferred graphic symbols of commonly used items, extracted from standard ANSI/IEEE 315, Graphic symbols for electrical and electronics diagrams, and abbreviations for these items	65
Annex G	— Recommended wire color usage	67
Annex H	— Table of conversion factors	68

Interprovincial Gas Advisory Council

J.R. Marshall	Technical Standards & Safety Authority (TSSA), Toronto, Ontario, Canada	<i>Chair</i>
J. Renaud	Régie du bâtiment du Québec, Montréal, Québec, Canada	<i>First Vice-Chair</i>
M.E. Davidson	Province of New Brunswick Dept. of Public Safety, Fredericton, New Brunswick, Canada	<i>Second Vice-Chair</i>
A. Ali	Government of Nunavut Community & Government Services, Iqaluit, Nunavut, Canada	
R. Brousseau	Régie du bâtiment du Québec, Montréal, Québec	<i>Alternate</i>
P. Fowler	Nova Scotia Department of Labour Advanced Education, Halifax, Nova Scotia, Canada	
D.N. Hird	SaskPower, Regina, Saskatchewan, Canada	<i>Alternate</i>
C. Lashek	Manitoba, Office of the Fire Commissioner, Winnipeg, Manitoba, Canada	<i>Alternate</i>
W. Locke	British Columbia Safety Authority (BCSA), New Westminster, British Columbia, Canada	
S.C. Manning	Alberta Municipal Affairs Safety Services, Edmonton, Alberta, Canada	
R. McRae	Government of the NWT Public Works & Services, Yellowknife, Northwest Territories, Canada	
B.W. Reid	Department of Environment, Energy and Forestry, Charlottetown, Prince Edward Island, Canada	
G. Tremblett	Service NL, Newfoundland & Labrador, St. John's, Newfoundland and Labrador, Canada	

C. Valliere	Alberta Municipal Affairs Safety Services, Edmonton, Alberta, Canada	<i>Alternate</i>
M.A. Wani	Government of Nunavut, Iqaluit, Nunavut, Canada	<i>Alternate</i>
B. Zinn	British Columbia Safety Authority (BCSA), New Westminster, British Columbia, Canada	<i>Alternate</i>

Z21/83 Technical Committee on Performance and Installation of Gas Burning Appliances and Related Accessories

B.J. Swiecicki	National Propane Gas Association, Washington, District of Columbia, USA <i>Category: Gas Supplier</i>	<i>Chair</i>
M.W. Wilber	Crane Engineering, Plymouth, Minnesota, USA <i>Category: General Interest</i>	<i>Vice-Chair</i>
C.W. Adams	A.O. Smith Corporation, Milwaukee, Wisconsin, USA <i>Category: Manufacturer</i>	
S.R. Caudle	Southern California Gas Company, Los Angeles, California, USA <i>Category: Gas Supplier</i>	<i>Alternate</i>
M. Deegan	Clearwater Gas System, Clearwater, Florida, USA <i>Category: Government and/or Regulatory Authority</i>	
M. Diesch	Lennox International Inc, Carrollton, Texas, USA <i>Category: Manufacturer</i>	
R. Ehsan	Association of Home Appliance Manufacturers (AHAM), Washington, D.C., USA <i>Category: Manufacturer</i>	<i>Alternate</i>
J.M. Emmel	Virginia Tech, Blacksburg, Virginia, USA <i>Category: Consumer/User</i>	
R.R. Frazier	ATMOS Energy, Arlington, Texas, USA <i>Category: Gas Supplier</i>	

T.F. Hardin	Underwriters Laboratories Inc., Research Triangle Park, North Carolina, USA <i>Category: Research/Testing</i>	
D. Hubbard	Intertek Commercial and Electrical, Chagrin Falls, Ohio, USA <i>Category: Research/Testing</i>	
D.M. Jakobs	Rheem Manufacturing Company Air Conditioning Division, Fort Smith, Arkansas, USA <i>Category: Manufacturer</i>	
R.A. Jordan	Consumer Product Safety Commission, Rockville, Maryland, USA	<i>Non-voting</i>
S. Kristjansson	Southern California Gas Company, Los Angeles, California, USA <i>Category: Gas Supplier</i>	
F. Myers	PVI Industries LLC, Fort Worth, Texas, USA <i>Category: Manufacturer</i>	
D. Parker	Western Industries., Engineered Products Group, Watertown, Wisconsin, USA	<i>Non-voting</i>
A. Papageorge	AGL Resources, Atlanta, Georgia, USA <i>Category: Gas Supplier</i>	
G.J. Potter	Cambridge Engineering, Chesterfield, Missouri, USA <i>Category: Manufacturer</i>	
T.W. Poulin	A.O. Smith Enterprises Ltd., Fergus, Ontario, Canada	<i>Non-voting</i>
J.A. Ranfone	American Gas Association Inc., Washington, District of Columbia, USA <i>Category: Gas Supplier</i>	
N.W. Rolph	Lochinvar LLC, Lebanon, Tennessee, USA <i>Category: Manufacturer</i>	<i>Alternate</i>

G.A. Ruzicka	Lowes Companies, Inc, Mooresville, North Carolina, USA <i>Category: General Interest</i>	
I. Sargunam	Bloomington, Illinois, USA <i>Category: General Interest</i>	
A.B. Sherwin	St. Louis Community College, St. Louis, Missouri, USA <i>Category: Consumer/User</i>	
C. Souhrada	North American Association of Food Equipment Manufacturers, Chicago, Illinois, USA <i>Category: Manufacturer</i>	
F.A. Stanonik	Air-Conditioning, Heating, and Refrigeration Institute, Arlington, Virginia, USA	<i>Non-voting</i>
T. Stroud	Hearth, Patio & Barbecue Association, Seattle, Washington, USA <i>Category: General Interest</i>	
C. Suchovsky	Burner Technology Unlimited, Inc, Walton Hills, Ohio, USA <i>Category: General Interest</i>	
H. Virgil	Brownsburg, Indiana, USA <i>Category: Consumer/User</i>	
M.B. Williams	Association of Home Appliance Manufacturers (AHAM), Washington, D.C., USA <i>Category: Manufacturer</i>	
J. Novkovic	CSA Group, Cleveland, Ohio, USA	<i>Program Manager</i>
S.M. Corcoran	CSA Group, Cleveland, Ohio, USA	<i>Project Manager</i>

CSA Technical Committee on Gas Appliances and Related Accessories

T.W. Poulin	A.O. Smith Enterprises Ltd., Fergus, Ontario, Canada <i>Category: Producer Interest</i>	<i>Chair</i>
A. Gould	Reliance Comfort Ltd. Partnership dba Reliance Home Comfort, Cambridge, Ontario, Canada <i>Category: User Interest</i>	<i>First Vice-Chair</i>
D.N. Hird	SaskPower, Regina, Saskatchewan, Canada <i>Category: Government and/or Regulatory Authority</i>	<i>Second Vice-Chair</i>
A. Abdel-Rehim	A.O. Smith Enterprises Ltd., Fergus, Ontario, Canada	<i>Non-Voting</i>
P.A. Baker	Maxitrol Company, Hamilton, Ontario, Canada <i>Category: Producer Interest</i>	
D. Baxter	Enbridge Gas Distribution, Thorold, Ontario, Canada <i>Category: User Interest</i>	
J. Boros	Rheem Manufacturing Company, Montgomery, Alabama, USA <i>Category: Producer Interest</i>	
T. Brennan	Natural Resources Canada, Ottawa, Ontario, Canada	<i>Non-Voting</i>
C. Côté	Gaz Métro Inc., Montréal, Québec, Canada <i>Category: User Interest</i>	
Z.J. Fraczkowski	Technical Standards & Safety Authority (TSSA), Toronto, Ontario, Canada <i>Category: Government and/or Regulatory Authority</i>	
C. Gibbs	Guelph, Ontario, Canada <i>Category: General Interest</i>	

E. Grzesik	Mississauga, Ontario, Canada <i>Category: General Interest</i>	
D.R. Jameison	GHP Group Inc., Oakville, Ontario, Canada <i>Category: Producer Interest</i>	
J.M. Jones	J.M. Jones Consulting Services, Leamington, Ontario, Canada <i>Category: Producer Interest</i>	<i>Non-Voting</i>
C.E. Jorgenson	British Columbia Safety Authority (BCSA), New Westminster, British Columbia, Canada <i>Category: Government and/or Regulatory Authority</i>	
S. Katz	S. Katz and Associates Inc., North Vancouver, British Columbia, Canada	<i>Non-Voting</i>
J.R. Marshall	Technical Standards & Safety Authority (TSSA), Toronto, Ontario, Canada	<i>Non-Voting</i>
J. Melling	SaskPower, Saskatoon, Saskatchewan, Canada	<i>Non-Voting</i>
J. Overall	Union Gas Limited, Toronto, Ontario, Canada	<i>Non-Voting</i>
G.B. Prociw	Union Gas Limited, Chatham, Ontario, Canada <i>Category: User Interest</i>	
E. Scott	British Columbia Safety Authority (BCSA), New Westminster, British Columbia, Canada	<i>Non-Voting</i>
B.J. Swiecicki	National Propane Gas Association, Frankfort, Illinois, USA	<i>Non-Voting</i>
M. Thomas	Natural Resources Canada CANMET Energy, Ottawa, Ontario, Canada	<i>Non-Voting</i>
J. Novkovic	CSA Group, Cleveland, Ohio, USA	<i>Program Manager</i>
C. Rake	CSA Group, Cleveland, Ohio, USA	<i>Project Manager</i>

Joint Technical Sub-Committee on Standards for Automatic Damper Devices for Gas Appliances

C. Weiss	Field Controls LLC, Kinston, North Carolina, USA	<i>Chair</i>
D. Berning	A.O. Smith Corporation, McBee, South Carolina, USA	<i>Vice-Chair</i>
G. Doss	Bradford-White Corporation, Rochester, New Hampshire, USA	<i>Alternate</i>
T.F. Hardin	Underwriters Laboratories Inc., Research Triangle Park, North Carolina, USA	
M. Lamborn	Air-Conditioning, Heating, and Refrigeration Institute (AHRI), Arlington, Virginia, USA	<i>Associate</i>
J. Robertson	Bradford-White Corporation, Middleville, Michigan, USA	
F.A. Stanonik	Air-Conditioning, Heating, and Refrigeration Institute (AHRI), Arlington, Virginia, USA	<i>Alternate</i>
T.E. Trant	Rheem Manufacturing Company, Montgomery, Alabama, USA	
J.E. Wallace	A.O. Smith Corporation, McBee, South Carolina, USA	<i>Alternate</i>
J. Novkovic	CSA Group, Cleveland, Ohio, USA	<i>Program Manager</i>
S.M. Corcoran	CSA Group, Cleveland, Ohio, USA	<i>Project Manager</i>

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:*
 - a) *Standard designation (number);*
 - b) *relevant clause, table, and/or figure number;*
 - c) *wording of the proposed change; and*
 - d) *rationale 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*
 - 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 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 16, 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](#)).