



**CSA
Group**

Portable Type Gas Camp Heaters

Currently in preview, click buy full version

Legal Notice for Standards

Canadian Standards Association and CSA America, 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 printed 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 must 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 Z21.63-2014 • CSA 11.3-2014, Portable camp heaters

Revisions from previous edition	Revision symbol (in margin)
Clauses 1.1 , 4.1.9 , 4.3.6 , 4.4.5 , 4.4.6 , 4.4.7 , 4.4.8 , 4.6.2 , 4.8.8 , 4.11.2 , 4.12 , 4.13.7 , 5.2 , 5.5 , 5.8.1 , 5.12.2 , 6.1 , 6.2 , 6.3 , and 6.4 Table 1 Figure 1	Δ

Currently in preview, click buy full version

Standards Update Service

ANSI Z21.63-2014 • CSA 11.3-2014 December 2014

Title: *Portable Type Gas Camp Heaters*

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

- go to shop.csa.ca
- click on **CSA Update Service**

The **List ID** that you will need to register for updates to this publication is **24332.1**

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

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

ANSI Z21.63-2014 • CSA 11.3-2014 Portable Type Gas Camp Heaters



American National Standards Institute, Inc.

IGAC

Interprovincial Gas Advisory Council



CSA Group

™A trade-mark of the Canadian Standards Association and CSA America Inc., operating as "CSA Group"

*Approved on December 2, 2014 by ANSI
Approved on December 8, 2014 by IGAC
Effective in Canada June 1, 2016
Published in December 2014 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 shop.csa.ca
or call toll-free 1-800-463-6727 or 416-747-4044.*

ISBN 978-1-77139-653-0

© 2014 CSA Group

*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 (IGAC)	3
Gas Appliances and Related Accessories	5
Performance & Installation of Gas Burning Appliances & Related Accessories (Z21/83)	7
Joint TAG on Gas-Fired Refrigerators & Portable Camping Equipment	10
Preface	12
1 Scope	14
2 Reference publications	15
3 Definitions	17
4 Construction	19
4.1 General construction and assembly	19
4.2 Stability	20
4.3 Materials	20
4.4 Burners	22
4.5 Orifices and orifice fittings	22
4.6 Pilot burners and safety shut-off devices	23
4.7 Manually operated gas valves	23
4.8 Gas pressure regulators	25
4.9 Hose and hose fittings	26
4.10 Flow limiting devices	26
4.11 Guards, grilles, and screens	26
4.12 Instructions	28
4.13 Marking	30
5 Performance	33
5.1 General	33
5.2 Test gases	33
5.3 Test pressures and burner adjustments	33
5.4 Combustion	34
5.5 Hydrocarbon emission	35
5.6 Burner operating characteristics	36
5.7 Pilot operating characteristics	36
5.8 Pilot burners and safety shut-off devices	37
5.9 Stability	38
5.10 Resistance to wind	39
5.11 Gas valves and carrying handles	39
5.12 Wall, floor, and ceiling temperatures	39
5.13 Evaluation of clothing ignition potential	41
5.14 Marking material adhesion and legibility	42
5.15 Permanently attached marking tags	43

6 Manufacturing and production tests 44

Annex A (normative) — Items Unique To Canada 46

Annex B (informative) — Relationship Of Carbon Dioxide To Oxygen In The Closed Room Test Specified
In Clause 5.4, Combustion 48

Annex C (informative) — Table of conversion factors 50

Interprovincial Gas Advisory Council (IGAC)

R. Brousseau	Régie du Bâtiment du Québec, Montréal, Québec, Canada
M.E. Davidson	Province of New Brunswick Dept of Public Safety, Fredericton, New Brunswick, Canada <i>Category: Government and/or Regulatory Authority</i>
A. Durnie	Alberta Municipal Affairs, Edmonton, Alberta, Canada
D. Eastman	Service NL, Newfoundland & Labrador, St. John's, Newfoundland and Labrador, Canada <i>Category: Government and/or Regulatory Authority</i>
P. Fowler	Nova Scotia Department of Labour Advanced Education, Halifax, Nova Scotia, Canada <i>Category: Government and/or Regulatory Authority</i>
D.N. Hird	SaskPower, Regina, Saskatchewan, Canada <i>Category: Government and/or Regulatory Authority</i>
C. Lashek	Manitoba, Office of the Fire Commissioner, Winnipeg, Manitoba, Canada <i>Category: Government and/or Regulatory Authority</i>
W. Lock	British Columbia Safety Authority (BCSA), New Westminster, British Columbia, Canada <i>Category: Government and/or Regulatory Authority</i>
S.C. Manning	Alberta Municipal Affairs Safety Services, Edmonton, Alberta, Canada <i>Category: Government and/or Regulatory Authority</i>
J.R. Marshall	Technical Standards & Safety Authority (TSSA), Toronto, Ontario, Canada <i>Category: Government and/or Regulatory Authority</i>

- R. McRae** Government of the NWT Public Works & Services,
Yellowknife, Northwest Territories, Canada
Category: Government and/or Regulatory Authority
- J. Melling** SaskPower,
Saskatoon, Saskatchewan, Canada
- B.W. Reid** Department of Environment, Energy and Forestry,
Charlottetown, Prince Edward Island, Canada
Category: Government and/or Regulatory Authority
- J. Renaud** Régie du bâtiment du Québec,
Montréal, Québec, Canada
Category: Government and/or Regulatory Authority
- G. Tremblett** Service NL, Newfoundland & Labrador,
St. John's, Newfoundland and Labrador, Canada
Category: Government and/or Regulatory Authority
- C. Valliere** Alberta Municipal Affairs Safety Services,
Edmonton, Alberta, Canada
- M. Wani** Government of Nunavut Dept. of Community &
Government Svcs,
Nunavut, Northwest Territories, Canada
Category: Government and/or Regulatory Authority
- D. Young** Yukon Government,
Whitehorse, Yukon, Canada
Category: Government and/or Regulatory Authority
- B. Zinn** British Columbia Safety Authority (BCSA),
Coquitlam, British Columbia, Canada

Gas Appliances and Related Accessories

Z.J. Fraczkowski	Technical Standards & Safety Authority (TSSA), Toronto, Ontario, Canada <i>Category: Government and/or Regulatory Authority</i>	<i>Chair</i>
A. Gould	Reliance Comfort Ltd. Partnership dba Reliance Home Comfort, Cambridge, Ontario, Canada <i>Category: User Interest</i>	<i>Vice-Chair</i>
A. Abdel-Rehim	A.O. Smith Enterprises Ltd., Fergus, Ontario, Canada	<i>Associate</i>
J.K. Angus	J.M.A. Associates Representing EnerCare Solutions Midland, Ontario, Canada <i>Category: General Interest</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 Sales Co. Inc. AKA Rheem Manufacturing Co, Montgomery, Alabama, USA <i>Category: Producer Interest</i>	
T. Brennan	Natural Resources Canada, Ottawa, Ontario, Canada	<i>Associate</i>
C. Côté	Gaz Métro, Montréal, Québec, Canada <i>Category: User Interest</i>	
C. Gibb	Guelph, Ontario, Canada <i>Category: General Interest</i>	
D.N. Hird	SaskPower, Regina, Saskatchewan, Canada <i>Category: Government and/or Regulatory Authority</i>	

D.R. Jamieson	GHP Group Inc, Oakville, Ontario, Canada <i>Category: Producer Interest</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>Associate</i>
J.R. Marshall	Technical Standards & Safety Authority (TSSA), Toronto, Ontario, Canada	<i>Associate</i>
J. Melling	SaskPower, Saskatoon, Saskatchewan, Canada	<i>Associate</i>
J. Overall	Toronto, Ontario, Canada	<i>Associate</i>
T.W. Poulin	A.O. Smith Enterprises Ltd., Fergus, Ontario, Canada <i>Category: Producer Interest</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>Associate</i>
B.J. Swiecicki	National Propane Gas Association, Frankfort, Illinois, USA	<i>Associate</i>
M. Thomas	Natural Resources Canada CANMET Energy, Ottawa, Ontario, Canada	<i>Associate</i>
M. Travers	Reliance Comfort L.P., Cambridge, Ontario, Canada	<i>Associate</i>

Performance & Installation of Gas Burning Appliances & Related Accessories (Z21/83)

B.J. Swiecicki	National Propane Gas Association, Frankfort, Illinois, USA <i>Category: Producer Interest</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: Producer Interest</i>	
S.R. Caudle	Southern California Gas Company, Los Angeles, California, USA	
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: Producer Interest</i>	
R. Ehsan	Association of Home Appliance Manufacturers (AHAM), Washington, D.C., USA	
J.M. Emmel	Virginia Tech, Blacksburg, Virginia, USA <i>Category: User Interest</i>	
Z.J. Fraczkowski	Technical Standards & Safety Authority (TSSA), Toronto, Ontario, Canada	<i>Associate</i>
R.R. Frazier	ATMOS Energy, Arlington, Texas, USA <i>Category: Producer Interest</i>	
M. Garcia	Sempra Energy Utility, Los Angeles, California, USA <i>Category: Producer Interest</i>	

T.F. Hardin	Underwriters Laboratories Inc., Research Triangle Pk, North Carolina, USA	
D.M. Jakobs	Rheem Manufacturing Company Air Conditioning Division, Fort Smith, Arkansas, USA <i>Category: Producer Interest</i>	
R.A. Jordan	Consumer Product Safety Commission, Rockville, Maryland, USA	
A. Lanier Papageorge	AGL Resources Inc., Atlanta, Georgia, USA <i>Category: Producer Interest</i>	
F. Myers	PVI Industries LLC, Fort Worth, Texas, USA <i>Category: Producer Interest</i>	
D. Parker	Western Industries, Inc. Engineered Products Group, Watertown, Wisconsin, USA	<i>Associate</i>
G.J. Potter	Heater Technologies, LLC, Marthasville, Missouri, USA <i>Category: Producer Interest</i>	
J.A. Ranfone	American Gas Association Inc., Washington, D.C., USA <i>Category: Producer Interest</i>	
N.W. Rolph	Lochinvar LLC, Lebanon, Tennessee, USA	
G.A. Ruzicka	Lowe's Companies, Inc, Mooresville, North Carolina, USA <i>Category: User Interest</i>	
I. Sargunam	Bloomington, Indiana, USA <i>Category: General Interest</i>	
C. Souhrada	North American Association of Food Equipment Manufacturers, Chicago, Illinois, USA <i>Category: Producer Interest</i>	

- F.A. Stanonik** Air-Conditioning, Heating, and Refrigeration Institute, Associate
Arlington, Virginia, USA
- T. Stroud** Hearth Patio & Barbecue Association,
Seattle, Washington, USA
Category: General Interest
- C. Suchovsky** Burner Technology Unlimited, Inc,
Walton Hills, Ohio, USA
Category: General Interest
- D.W. Switzer** Consumer Product Safety Commission, Associate
Rockville, Maryland, USA
- H. Virgil** Brownsburg, Indiana, USA
Category: User Interest
- A.B. Wagner-Sherwin** St. Louis Community College,
St. Louis, Missouri, USA
Category: User Interest
- M.B. Williams** Association of Home Appliance Manufacturers
(AHAM),
Washington, D.C., USA
Category: Producer Interest
- R. Wozniak** Underwriters Laboratories Inc.,
Melville, New York, USA
Category: Research/Testing

Joint TAG on Gas-Fired Refrigerators & Portable Camping Equipment

B. Vandrak	Enerco/Mr. Heater Corporation, Cleveland, Ohio, USA	<i>Chair</i>
D. Brand	Thermablaster, Pittsburgh, Pennsylvania, USA	
T. Bukowski	Weber-Stephen Products Co., Palatine, Illinois, USA	
C.V. Childers	Weber-Stephen Products LLC, Palatine, Illinois, USA	
P. Dinsmore	The Coleman Company Inc, Wichita, Kansas, USA	
C. Falco	The Brinkmann Corporation, Dallas, Texas, USA	
Z.J. Fraczkowski	Technical Standards & Safety Authority (TSSA), Toronto, Ontario, Canada	<i>Associate</i>
A. Gafford	Char-Broil, LLC, Columbus, Georgia, USA	
C. Gibbs	Guelph, Ontario, Canada	
C. Hoskins	Norcold, Inc., Sidney, Ohio, USA	
J.P. Jollay	Char-Broil, LLC, Columbus, Georgia, USA	
R. May	The Brinkmann Corporation, Dallas, Texas, USA	
M. Pablo	Orkli, S. Coop, Ordizia-Gipuzkoa, Spain	<i>Associate</i>

D. Perkins	Norcold, Inc., Sidney, Ohio, USA
P. Petersen	Unique Gas Products Ltd, Oakville, Ontario, Canada
M. Scott	Unique Gas Products Ltd, Oakville, Ontario, Canada
C. Suchovsky	Burner Technology Unlimited, Inc, Walton Hills, Ohio, USA
R. Ten Bruin	Weber-Stephen Products LLC, Palatine, Illinois, USA
J.R. Willey	Superior Energy Systems, Derby, Kansas, USA
R. Wozniak	Underwriters Laboratories Inc., Melville, New York, USA
W.J. Young	Superior Energy Systems Ltd, Columbia Station, Ohio, USA

Preface

This is the third edition of ANSI Z21.63 • CSA 11.3, *Portable camp heaters*. It supersedes the previous editions published in 2011 and 2000.

This Standard was prepared by the Z21/CSA Joint Technical Advisory Group on Standards for Gas-Fired Refrigerators and Portable Camping 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 Z21/83 and CSA Technical Committees, 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) 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 review five years from the date of publication, 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 the standard for portable type gas camp heaters

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.

The draft harmonized standard was based on the current coverage from the American National Standard for Portable Camp Heaters of Other Than the Catalytic Type for Use with Liquefied Petroleum Gases, ANSI Z21.63-1978 and the Canadian Standard for Portable Type Gas Camp Heaters, CAN1-11.3-M79. On September 19, 1997, the Z21/(Interim CSA) Joint Gas Refrigerators and Portable Camping Equipment Subcommittee reviewed by letter ballot the first draft harmonized portable type gas camp heater standard. At its February 4-5, 1998 meeting, in light of comments received, the joint subcommittee agreed to adopt the revised draft standard for public review and comment. The revised draft camp heater standard was distributed for review during June 1998.

At its November 1998 meeting, the subcommittee recommended the proposed draft to the Z21/83 Committee and the (Interim CSA) Standards Steering Committee for approval.

The proposed draft harmonized standard for Portable Type Gas Camp Heaters was approved by the Z21/83 Committee at its April 15, 1999 meeting and by the (Interim CSA) Standards Steering committee on May 26, 1999. There were some issues raised during the Interprovincial Gas Advisory Council's (IGAC) approval process and the standard was not approved in 1999. Therefore, a U.S. only edition of the draft standard was published, ANSI Z21.63-1999. Based on additional information provided by the joint subcommittee, and an editorial revision to section 2.4, Combustion, the draft harmonized standard was reconsidered and approved by the IGAC a year later.

The first edition of American National Standard/CSA Standard for Portable Type Gas Camp Heaters was approved by the IGAC on May 30, 2000, and by ANSI, on November 2, 1999.

This, the second edition of American National Standard/CSA Standard for Portable Type Camp Heaters was approved by the IGAC on August 23, 2011 and by ANSI on March 17, 2011.

This, the third edition of the American National Standard/CSA Standard for Portable Type Camp Heaters was approved by the IGAC on December 8, 2014 and by ANSI on December 2, 2014.

The following identifies the designation and year of this Standard:

ANSI Z21.63-2014 • CSA 11.3-2014

ANSI Z21.63-2014 • CSA 11.3-2014 Portable Type Gas Camp Heaters

1 Scope

Δ 1.1

This Standard applies to unvented portable type gas camp heaters of the catalytic and infrared type only up to and including a maximum input of 12,000 Btu/hr (3 517 w) using propane, butane, and liquefied petroleum gas mixtures thereof, and intended for outdoor use.

1.2

This Standard applies to portable type gas camp heaters having a:

- a) regulated pressure; or
- b) non-regulated pressure.

1.3

Heaters and components employing materials or having forms of construction differing from those detailed in these provisions may be examined and tested according to the intent of the provisions, and if found to be satisfactorily equivalent, may be given recognition.

1.4

This Standard applies to heaters constructed entirely of new, unused parts and materials.

1.5

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

1.6

All accessories recommended by the manufacturer for use with appliances certified to this Standard are to be supplied with the appliance.

1.7

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, except as noted in Clause [A.2](#).

1.8

Annex [A](#), Items Unique to Canada, contains provisions that are unique to Canada.

1.9

Clause [2](#), Reference Publications, contains a list of standards specifically referenced in this Standard, and sources from which these standards may be obtained.

1.10

This Standard contains SI (Metric) equivalents to the yard/pound quantities, the purpose being to allow the standard to be used in SI (Metric) units. (IEEE/ASTM-SI-10 is used as a guide in making metric conversion from yard/pound quantities.) If a value for a measurement and an equivalent value in other units, the first stated is to be regarded as the requirement. The given equivalent value may be approximate. If a value for a measurement and an equivalent value in other units, are both specified as a quoted marking requirement, the first stated unit, or both shall be provided.

1.11

In this Standard, “shall” is used to express a requirement, i.e., a provision that the user shall satisfy in order to comply with the standard; “should” is used to express a recommendation or that which is advised but not required; and “may” is used to express an option or that which is permissible within the limits of the standard.

Notes accompanying clauses do not include requirements or alternative requirements; the purpose of a note accompanying a clause is to separate from the text explanatory or informative material.

Notes to tables and figures are considered part of the table or figure and may be written as requirements.

Annexes are designated normative (mandatory) or informative (non-mandatory) to define their application.

2 Reference publications

This Standard refers to the following publications, and where such reference is made, it shall be to the edition listed below including all amendments published thereto.

CSA Group (CSA)

ANSI Z21.15-2009 • CSA 9.1-2009

Manually Operated Gas Valves for Appliances, Appliance Connector Valves and Hose End Valves

ANSI Z21.18-2007 • CSA 6.3-2007

Gas Appliance Pressure Regulators

ANSI Z21.81-2005 • CSA 6.25-2005

Cylinder Connection Devices

ANSI Z21.92-2001/CSA 6.29-2001 (R2012)

Manually Operated Electric Gas Ignition Systems and Components

CAN1-6.4-M79 (R2006)

Automatic Gas Ignition Systems and Components

CAN/CSA 8.1-M86 (R2001)

Elastomeric Hose and Hose Couplings for Conducting Propane and Natural Gas

CAN1-8.3-77 (R2001)

Thermoplastic Hose and Hose Couplings for Conducting Propane and Natural Gas