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Gas-fired room heaters, volume III, propane-fired portable emergency use heater systems

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Revision History

Revisions from previous edition	Revision symbol (in margin)
Clauses 1.1, 1.4, 1.5, 1.6, 1.7, 3, 4.1.2, 4.1.19, 4.21.1, 4.21.2, 4.22.3, 4.22.12, 5.10.4, 5.11, 5.11.1, 5.11.2, 5.11.3, 5.11.4, 5.11.5, and 5.19.1 Figures 12 and 13	Δ

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ANSI Z21.11.3-2016
November 2016

Title: *Gas-fired room heaters, volume III, propane-fired portable emergency use heater systems*

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American National Standards Institute, Inc.

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Approved on October 31, 2016 by ANSI
Published in November 2016 by CSA Group
A not-for-profit private sector organization
178 Rexdale Boulevard, Toronto, Ontario, Canada M9W 1R3

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ISBN 978-1-4883-0084-4

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Preface

This is the second edition of ANSI Z21.11.3, *Gas-fired room heaters, volume III, propane-fired emergency use heater systems*. It supersedes the previous edition published in 2013.

This Standard was prepared by the Z21 Technical Subcommittee on Standards for Unvented Gas-Fired Heating Appliances, under the jurisdiction of the Z21/83 Technical Committee on Performance and Installation of Gas Burning Appliances and Related Accessories, and was formally approved by the Technical Committee and American National Standards Institute.

Interpretations: The Z21/83 Technical Committee on Standards for Performance and Installation of Gas Burning 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) *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.*

4) *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**.*

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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History of the development of ANSI Z21.11.3

Note: *This history is informative and is not part of the standard.*

At its June 6, 2006 meeting, the Z21 Technical Advisory Group on Standards for Unvented Gas-Fired Heating Appliances approved the first draft to be distributed for industry review during August 2006.

During its February 27-28, 2007 meeting, the Z21 Technical Advisory Group (TAG) on Standards for Unvented Gas-Fired Heating Appliances addressed comments received and distributed the second draft for industry review during March 2007.

At its June 19, 2007 meeting, the Z21 Technical Advisory Group on Standards for Unvented Gas-Fired Heating Appliances agreed to send the proposed draft standard to the Z21/83 Technical Committee on Standards for Performance and Installation of Gas Burning Appliances and Related Accessories for approval. The Technical Committee voted on the draft standard at its September 26, 2007 meeting and returned the draft to the TAG.

During the March 18, 2008 meeting, the TAG addressed the comments from the Z21/83 Technical Committee and held a teleconference meeting on August 12, 2008. The changes made to the draft standard at the meeting were distributed for industry review during September 2008.

During the March 23, 2010 meeting, the Z21 Technical Advisory Group on Standards for Unvented Gas-Fired Heating Appliances was asked to consider revising coverage in the draft standard to limit the use of the appliance to emergency use only. The TAG formed a Working Group to reconsider the proposed draft standard. The Working Group's proposed revisions were incorporated into the fourth draft distributed for industry review during August 2010.

The Z21 Technical Advisory Group on Standards for Unvented Gas-Fired Heating Appliances addressed comments from the August 2010 industry review at its September 29, 2010 meeting. During that meeting, the TAG agreed to send the proposed draft standard to the Z21/83 Technical Committee for approval.

The Z21/83 Technical Committee was balloted at its annual meeting on July 18, 2012. The Technical Committee approved the proposed draft standard.

The first edition of the Standard for Gas-fired room heaters, volume III, propane-fired portable emergency use heater systems, was approved by the American National Standards Institute on February 13, 2013.

This, the second edition of the Standard for Gas-Fired Room Heaters, Volume III, Propane-Fired Portable Emergency Use Heater Systems was distributed for industry review during April 2014 and July 2014. This edition was formally approved by the Z21/83 Technical Committee on August 29, 2016 and by the American National Standards Institute, Inc., on October 31, 2016.

Previous editions of the portable emergency use heater standard approved by the American National Standards Institute are as follows:

ANSI Z21.11.3–2013

Note: *This edition of ANSI Z21.11.3 incorporates changes to the 2013 edition. Changes, other than editorial, are denoted by a Δ in the margin.*

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ANSI Z21.11.3-2016
Gas-fired room heaters, volume III, propane-fired portable emergency use heater systems

1 Scope

Δ **1.1**

This Standard applies to newly produced unvented, propane-fired portable emergency use heater systems utilizing a self-contained propane supply in a listed composite cylinder. This appliance is not for use with line voltage. A portable emergency use heater system is to be identified as a “heater system” when the coverage refers to the heating appliance and the listed composite cylinder. The term “heater” is used when identifying the appliance only.

A propane-fired portable emergency use heater system is constructed entirely of new, unused parts and materials. Propane-fired portable emergency use heater systems have input ratings up to and including 15,000 Btu/hr (4 396 W).

a) Heater systems listed for use in bedrooms (during emergencies) have a maximum input setting of 10,000 Btu/hr (2 931 W); and
b) Heater systems listed for use in bathrooms (during emergencies) have a maximum input setting of 5,000 Btu/hr (1465 W).

1.2

The construction of the heater and heater system is covered under Clause 4.

1.3

The performance of the heater and heater system is covered under Clause 5.

Δ **1.4**

A listed composite cylinder meets the requirements of the U.S. Department of Transportation (DOT) special permit approval process* and is equipped with a listed overfilling prevention device (OPD) cylinder valve with a Compressed Gas Association CGA 793 male outlet connection.

* *Title 49 Code of Federal Regulations, Transportation, Part 178, Specifications for Packagings: Subpart H – Specifications for Portable Tanks; and Part 451, Testing and Approval of Containers.*

Δ **1.5**

A listed composite cylinder also meets the requirements of the Propane Education and Research Council (PERC) Fire Test* for indoor use during emergencies.

* *Code Approval of Composite Propane Cylinders for Indoor Use – PERC Docket 11643.*

Δ **1.6**

This standard covers heater systems shipped from the factory equipped specifically for one gas only. Field conversion of gas types is not permitted.

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Δ **1.7**

Propane-fired portable emergency use heating systems are designed for indoor heating in buildings during emergencies.

1.8

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.

1.9

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

1.10

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

1.11

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 ISO 80000-1:2009 Quantities and units– Part 1: General 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.

1.12

In this Standard, “shall” is used to express a requirement, i.e. a provision that the user is obliged to 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.