ANSI Z21.103-2017

CSA Group

# Unvented portable type gas camp heaters for indoor and outdoor use

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# *ANSI Z21.103-2017*

# *Unvented portable type gas camp heaters for indoor and outdoor use*


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# Preface

This is the first edition of ANSI Z21.103, *Unvented portable type gas camp heaters for indoor and outdoor use*.

This Standard was prepared by the Z21/CSA Joint Technical Subcommittee 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 Technical Committee and the American National Standards Institute.

Interpretations: The Strategic Steering Committee on Standards for 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 unvented portable type gas camp heaters for indoor and outdoor use

**Note:** *This History is informative and is not part of the Standard.*

This standard was based on coverage from the Standard for Portable Type Gas Camp Heaters, ANSI Z21.63/CSA 11.3, the CSA International requirement 4.98 for Gas-Fired Portable Heaters for Recreational and Commercial Use and the Standard for Unvented Room Heaters, ANSI Z21.11.2-2013. The creation of the Standard for Unvented Portable Type Gas Camp Heaters for Indoor and Outdoor Use, Z21.103, was needed to provide coverage for camp heaters which were specifically designed for indoor use in small recreational enclosures, having means for providing combustion air and ventilation such as fishing huts, trailers, and tents.

The Z21/83 Technical Committee approved the development of the standard on September 20, 2011. The Joint Technical Subcommittee on Standards for Gas-Fired Refrigerators and Portable Camping Equipment agreed to adopt the draft standard and distribute it for public review and comment dated September 2012.

At its September 25, 2013 meeting, the technical subcommittee recommended the proposed draft standard to the Z21/83 Technical Committee for approval.

This, the first edition of the Standard for Unvented Portable Type Gas Camp Heater for Indoor and Outdoor Use was approved by the Z21/83 Technical Committee on August 14, 2017 and by the American National Standards Institute, Inc. (ANSI) on DATE.

The following identifies the designation and year of this edition of the standard:

ANSI Z21.103-2017

# *ANSI Z21.103-2017*
# *Unvented portable type gas camp heaters for indoor and outdoor use*

## 1 Scope

### 1.1

This Standard applies to newly produced gas-fired unvented portable type gas camp heaters including the catalytic type, hereinafter referred to as either “heaters” or “portable heaters” having an input up to and including 18 000 Btuh (5.27 kW) using one or more fuel sources such as propane, buatne, or identified propane and butane blended gases.

### 1.2

Portable heaters are intended for the following uses:

a) indoor heating in small recreational enclosures, such as fishing huts, tents, and hunting blinds when such enclosures have adequate means for combustion air and ventilation and when:
   i) used with disposable cylinder(s) of nominal water capacity of 2.7 lb (1.1 kg) [nominal 1 lb (0.45 kg)] LP-gas or less; or
   ii) connected to a remote self-contained outdoor LP-gas supply system having a maximum size of 20 lb (9.1 kg) of fuel, that provides a regulated outlet pressure not exceeding 11 inches water column (2.74 kPa);

b) emergency indoor home heating, when the space to be heated has adequate means for combustion air and ventilation and when used with disposable cylinder(s) of nominal water capacity of 2.7 lb (1.1 kg) [nominal 1 lb (0.45 kg)] LP-gas or less and such emergency indoor heaters identified for use in;
   i) bedrooms when the heaters have an input setting of 10,000 Btu/hr or less (2 931 W); and
   ii) bathrooms when the heaters have an input setting of 5,000 Btu/hr or less (1 465 W)

c) outdoor heating, when provided with a self-contained LP-gas propane or butane supply system having a maximum size of 20 lb (9.1 kg) of fuel, that provides a regulated outlet pressure not exceeding 11 inches water column (2.74 kPa).

The construction of a heater for use with the above-mentioned gases is covered under Clause 4.

The performance of a heater for use with the above-mentioned gases is covered under Clause 5.

### 1.3

This Standard applies to heaters having a regulated outlet pressure not exceeding 5 psi.

### 1.4

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.

## 1.5
This Standard applies to heaters constructed entirely of new, unused parts.

## 1.6
All references to “psi” throughout this Standard are to be considered gauge pressures unless otherwise specified.

## 1.7
All accessories supplied with the appliance are to be evaluated with the appliance.

## 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
Clause 2 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) 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.

## 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.