

ANSI Z21.41-2011
CSA 6.9-2011

American National Standard/
CSA Standard for
Quick Disconnect Devices
For Use With Gas Fuel
Appliances

AMERICAN NATIONAL STANDARD
ANSI Z21.41-2011

CSA STANDARD
CSA 6.9-2011

Second Edition - 2011
This Standard is based on the Standard for
Quick Disconnect Devices For Use With Gas Fuel Appliances

ANSI Z21.41-2003 • CSA 6.9-2003
Addenda ANSI Z21.41a-2005 • CSA 6.9a-2005, and
ANSI Z21.41b-2010 • CSA 6.9b-2010

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Standard Developer:

CSA AMERICA INC.
8501 East Pleasant Valley Road
Cleveland, Ohio 44131

CANADIAN STANDARDS ASSOCIATION
5060 Spectrum Way, Suite 100
Mississauga, Ontario, Canada L4W 5N6

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***American National Standards Institute, Inc.
25 West 43rd Street, Fourth Floor
New York, NY
10036***

Preface

This publication represents a basic standard for safe operation, substantial and durable construction, and acceptable performance of quick disconnect devices for use with gas fuel appliances. It is the result of years of experience in the manufacture, testing, installation, maintenance, inspection and research on quick disconnect devices for use with gas fuel appliances designed for utilization of gas. There are risks of injury to persons inherent in appliances that, if completely eliminated, would defeat the utility of the appliance. The provisions in this standard are intended to help reduce such risks while retaining the normal operation of the appliance.

Nothing in this standard is to be considered in any way as indicating a measure of quality beyond compliance with the provisions it contains. It is designed to allow compliance of quick disconnect devices for use with gas fuel appliances, the safety construction and performance of which may exceed the various provisions specified herein. In its preparation, recognition has been given to possibilities of improvement through ingenuity of design. As progress takes place, revisions may become necessary. When they are believed desirable, recommendations or suggestions should be forwarded to the CSA America, 8501 East Pleasant Valley Road, Cleveland, Ohio 44131, or the Canadian Standards Association, 5000 Spectrum Way, Suite 100, Mississauga, Ontario, Canada L4W 5N6.

Safe and satisfactory operation of quick disconnect devices for use with gas fuel appliances depends to a great extent upon its proper installation, use and maintenance. It should be installed, as applicable, in accordance with the *National Fuel Gas Code, ANSI Z223.1/NFPA 54*; the *Natural Gas and Propane Installation Code, CSA-B149.1*.

Users of this American National Standard/CSA Standard are advised that the devices, products and activities within its scope may be subject to regulation at the Federal, Territorial, Provincial, state or local levels. Users are strongly urged to investigate this possibility through appropriate channels. In the event of a conflict with this standard, the Federal, Territorial, Provincial, state or local regulation should be followed.

THIS STANDARD IS INTENDED TO BE USED BY THE MANUFACTURING SECTOR AND BY THOSE APPLYING THE EQUIPMENT AND BY THOSE RESPONSIBLE FOR ITS PROPER INSTALLATION. IT IS THE RESPONSIBILITY OF THESE USERS TO DETERMINE THAT IN EACH CASE THIS STANDARD IS SUITABLE FOR AND APPLICABLE TO THE SPECIFIC USE THEY INTEND.

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EFFECTIVE DATE: An organization using this standard for product evaluation as a part of its certification program will normally establish the date by which all products certified by that organization should comply with this standard.

History Of The Development Of Standard For Quick Disconnect Devices For Use With Gas Fuel Appliances

(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.

At its meeting of May 12-13, 1993 the Z21/CGA Joint Subcommittee on Standards for Manually-Operated Valves and Quick-Disconnect Devices passed a motion requesting staff to prepare a draft international standard for Quick Disconnect Devices For Use With Gas Fuel Appliances for public review and comment.

The first draft harmonized standard was based on the current coverage from American National Standard for Quick-Disconnect Devices For Use With Gas Fuel, ANSI Z21.41-1988, Addenda Z21.41a-1990, and Z21.41b-1992, and the National Standard of Canada for Quick Disconnect Devices For Use With Gas Fuel, CAN1-6.9-M79. The first draft was subsequently issued for public review during September and October of 1995.

Following reconsideration and modification of the proposed draft standard, in light of comments received, the joint manual valves subcommittee, at its March 12-13, 1996 meeting, recommended the proposed draft to the Z21 Committee and the CGA Standards Steering Committee for approval.

The proposed draft of the harmonized Standard for Quick-Disconnect Devices For Use With Gas Fuel Appliances, as modified by the joint subcommittee at its meeting of March 12-13, 1996, was approved by the Z21/83 Committee by letter ballot dated July 30, 1997 and by the CGA Standards Steering Committee on September 16, 1996.

The first edition of the harmonized Z21/CSA Standard for Quick-Disconnect Devices For Use With Gas Fuel Appliances, was approved by the Canadian Interprovincial Gas Advisory Council (IGAC) in December 1996 and by the American National Standards Institute Inc. (ANSI) on January 6, 1998.

Following the procedures outlined above, further revisions to this standard, Z21.41 • CSA 6.9, were made in line with industry developments. The second edition of the American National Standard/CSA Standard for Quick Disconnect Devices For Use With Gas Fuel Appliances was approved by the IGAC on November 15, 2003, and by ANSI, on December 23, 2003.

This third edition of the standard was approved by the IGAC on July 8, 2011 and by ANSI on February 25, 2011.

The previous editions of the quick disconnect devices standard, and addenda thereto, approved by the Interprovincial Gas Advisory Council and American National Standards Institute, Inc. are as follows:

ANSI Z21.41-1998 • CSA 6.9-M98
ANSI Z21.41a-2001 • CSA 6.9a-2001
ANSI Z21.41b-2002 • CSA 6.9b-2002

ANSI Z21.41-2003 • CSA 6.9-2003
ANSI Z21.41a-2005 • CSA 6.9a-2005
ANSI Z21.41b-2010 • CSA 6.9b-2010

The following identifies the designation and year of this standard:

ANSI Z21.41-2011 • CSA 6.9-2011

Note: This edition of Z21.41 • CSA 6.9 incorporates changes to the 2003 edition of Z21.41 • CSA 6.9 and addenda thereto. Changes are denoted by a vertical line in the margin.

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Note:

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. (*Standard for use of the International System of Units (SI): The Modern Metric System, IEEE/ASTM SI 10 or Metric Practice Guide, CAN/CSA Z234.1* are 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.

American National Standard/CSA Standard for Quick Disconnect Devices For Use With Gas Fuel Appliances

Part I: Construction

1.1 Scope

1.1.1

This standard applies to newly-produced, hand-operated quick-disconnect devices, hereinafter also referred to as devices, constructed entirely of new, unused parts and materials which provide a means for connecting and disconnecting appliances or appliance connectors to gas supplies and which are for indoor and outdoor applications. These devices shall be equipped with automatic means to shut off the gas when the devices are disconnected. The mating parts shall be held together securely either by a positive locking means or by means requiring a straight pull to disconnect.

1.1.2

This standard applies to devices for use with natural, manufactured and mixed gases, liquefied petroleum gases and LP gas-air mixtures, at pressures not in excess of $1/2$ psi (3.5 kPa).

1.1.3

All references to psi (kPa) throughout this standard are to be considered as gauge pressure unless otherwise specified.

1.1.4

Exhibit A, Items Unique to Canada, contains provisions that are unique to Canada.

1.1.5

Exhibit B, List of Reference Standards, contains a list of standards specifically referenced in this standard, and sources from which these reference standards may be obtained.

1.2 General

1.2.1

Twelve production samples of each device submitted for examination under this standard shall be supplied by the manufacturer.

1.2.2

Detailed drawings of all basic models of devices submitted for examination under this standard shall be supplied in triplicate by the manufacturer.

1.2.3

When the device incorporates a valve of the tapered plug or rotating disc type, the valve shall comply with the applicable construction provisions of the *Standard for Manually Operated Gas Valves, ANSI Z21.15 • CSA 9.1*.