



**CSA  
Group**

**ANSI Z21.69-2009  
CSA 6.16-2009**  
*(reaffirmed 2014)*

# Connectors For Moveable Gas Appliances

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**ANSI Z21.69-2009**  
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American National Standard/  
CSA Standard for  
**Connectors For Moveable  
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AMERICAN NATIONAL STANDARD  
ANSI Z21.69-2009

CSA STANDARD  
CSA 6.16-2009

Third Edition - 2009  
This Standard is based on the Standard for  
Connectors For Moveable Gas Appliances  
ANSI Z21.69-2002 • CSA 6.16-2002  
and Z21.69a-2003 • CSA 6.16a-2003,  
Z21.69b-2006 • CSA 6.16b-2006

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# ***Preface***

This publication represents a basic standard for safe operation, substantial and durable construction, and acceptable performance of connectors for movable gas appliances. It is the result of years of experience in the manufacture, testing, installation, maintenance, inspection and research on connectors for movable gas 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 connectors for movable gas 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 Chairman Z21/83 Committee, CSA America, 8501 East Pleasant Valley Road, Cleveland, Ohio 44131, or the Chairman of CSA Technical Committee on Gas Appliances and Related Accessories, CSA, 5060 Spectrum Way, Suite 100, Mississauga, Ontario, Canada L4W 5N6.

Safe and satisfactory operation of connectors for movable gas 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 level. 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 WHAT 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 The Standard For Connectors For Moveable Gas 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.

A draft harmonized standard for connectors for moveable gas appliances was prepared for review by the Z21/CGA Joint Connector Subcommittee. The draft harmonized standard for connectors for moveable gas appliances is based on the American National Standard for Connectors for Movable Appliances (Z21.69-1992 and Z21.69a-1993) and the National Standard of Canada for Movable Appliance Connectors (CAN/CGA-6.16-M87).

At its September 20, 1994 meeting, the Z21/CGA Joint Connector Subcommittee considered and modified the proposed harmonized draft standard and agreed to distribute it for industry review during April 1995.

With the formation of joint subcommittees, a Canadian Gas Association Standards Steering Committee on Gas Burning Appliances and Related Accessories was established. 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.

Following reconsideration and modification of the proposed draft standard for connectors for moveable gas appliances, in light of comments received, the joint connector subcommittee, at its November 16, 1995 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 Connectors for Moveable Gas Appliances, as modified by the joint subcommittee, was approved by the Z21 Committee at its April 11, 1996 meeting and by the CGA Standards Steering Committee on August 22, 1997.

The first edition of the harmonized Z21/CGA Standard for Connectors for Moveable Gas Appliances was approved by the CGA Standards Advisory Committee and the Canadian Interprovincial Gas Advisory Council on October 2, 1997 and by the American National Standards Institute, Inc., on June 6, 1997.

The second edition of the harmonized Z21/CSA Standard for Connectors for Moveable Gas Appliances was approved by the Canadian Interprovincial Gas Advisory Council on March 18, 2002 and by the American National Standards Institute, Inc., on April 11, 2002.

The third edition of the harmonized Z21/CSA Standard for Connectors for Moveable Gas Appliances was approved by the Canadian Interprovincial Gas Advisory Council on February 11, 2009 and by the American National Standards Institute, Inc., on October 16, 2008.

The previous editions of the Standard for Connectors for Moveable Gas Appliances, and addenda thereto, approved by the Interprovincial Gas Advisory Council and American National Standards Institute, Inc. are as follows:

ANSI Z21.69-1997 • CGA 6.16-M97  
ANSI Z21.69a-2001 • CGA 6.16a-2001  
ANSI Z21.69b-2001 • CGA 6.16b-2001

ANSI Z21.69-2002 • CSA 6.16-2002  
ANSI Z21.69a-2003 • CSA 6.16a-2003  
ANSI Z21.69b-2006 • CSA 6.16b-2006

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

ANSI Z21.69-2009 • CSA 6.16-2009

*Note* This edition of Z21.69 • CSA 6.16 incorporates changes to the 2002 edition and addenda thereto. Changes are denoted by a vertical line in the margin.

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# ***American National Standard/CSA Standard For Connectors For Moveable Gas Appliances***

## ***Part I: Construction***

### **1.1 Scope**

#### **1.1.1**

This standard applies to newly produced gas appliance connectors constructed entirely of new, unused parts and materials that:

Are intended for use with gas utilization equipment that may be mounted on casters or otherwise be subject to movement.

#### **1.1.2**

Connectors complying with this standard are considered suitable for use with natural, manufactured, mixed and liquefied petroleum gases and LP gasair mixtures.

#### **1.1.3**

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.

#### **1.1.4**

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

#### **1.1.5**

Exhibit A contains provisions that are unique to Canada.

#### **1.1.6**

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

### **1.2 Test Samples**

#### **1.2.1**

Connectors submitted for examination under this standard shall be representative production samples.

#### **1.2.2**

The manufacturer shall supply the number of samples of each nominal diameter, type and material specified by the testing agency. For test purposes, the testing agency may specify samples fabricated in lengths not to exceed 6 ft (1.83 m).