ASME A112.4.14-2022/ CSA B125.14:22

National Standard of Canada
American National Standard

Manually or automatically operated valves for use in plumbing systems

Legal Notice for Harmonized Standard Jointly Developed by ASME and CSA Group

Intellectual property rights and ownership

As between American Society of Mechanical Engineers ("ASME") and Canadian Standards Association (Operating as "CSA Group") (collectively "ASME and CSA Group") and the users of this document (whether it be in printed or electronic form), ASME and CSA Group are the joint owners 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. The unauthorized use, modification, copying, or disclosure of this document may violate laws that protect the intellectual property of ASME and CSA Group and may give rise to a right in ASME and CSA Group to seek legal redress for such use, modification, copying, or disclosure. ASME and CSA Group reserve all intellectual property rights in this document.

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. ASME and CSA Group do not warrant the accuracy, completeness, or currency of any of the information published in this document. ASME and CSA Group make no representations or warranties regarding this document's compliance with any applicable statute, rule, or regulation.

IN NO EVENT SHALL ASME AND CSA GROUP, THEIR RESPECTIVE 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 ASME OR CSA GROUP HAVE BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES, INJURY, LOSS, COSTS, OR EXPENSES.

In publishing and making this document available, ASME and CSA Group are 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 ASME and CSA Group accept no responsibility whatsoever arising in any way from any and all use of or reliance on the information contained in this document.

ASME and CSA Group have no power, nor do they undertake, to enforce compliance with the contents of the standards or other documents they jointly publish.

Authorized use of this document

This document is being provided by ASME and 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 print or paper form may be distributed only to persons who are authorized by ASME and CSA Group to have such copies, and only if this Legal Notice appears on each such copy.

In addition, users may not and may 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 ASME and 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.

ASME SETTING THE STANDARD

CSA GROUP™

Standards Update Service

ASME A112.4.14-2022/CSA B125.14:22
August 2022

Title: *Manually or automatically operated valves for use in plumbing systems*

To register for e-mail notification about any updates to this publication
- go to **www.csagroup.org/store/**
- click on **Product Updates**

The **List ID** that you will need to register for updates to this publication is **2429521**.

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

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

Canadian Standards Association (operating as "CSA Group"), under whose auspices this National Standard has been produced, was chartered in 1919 and accredited by the Standards Council of Canada to the National Standards system in 1973. It is a not-for-profit, nonstatutory, voluntary membership association engaged in standards development and certification activities.

CSA Group standards reflect a national consensus of producers and users — including manufacturers, consumers, retailers, unions and professional organizations, and governmental agencies. The standards are used widely by industry and commerce and often adopted by municipal, provincial, and federal governments in their regulations, particularly in the fields of health, safety, building and construction, and the environment.

More than 10 000 members indicate their support for CSA Group's standards development by volunteering their time and skills to Committee work.

CSA Group offers certification and testing services in support of and as an extension to its standards development activities. To ensure the integrity of its certification process, CSA Group regularly and continually audits and inspects products that bear the CSA Group Mark.

In addition to its head office and laboratory complex in Toronto, CSA Group has regional branch offices in major centres across Canada and inspection and testing agencies in fourteen countries. Since 1919, CSA Group has developed the necessary expertise to meet its corporate mission: CSA Group is an independent service organization whose mission is to provide an open and effective forum for activities facilitating the exchange of goods and services through the use of standards, certification and related services to meet national and international needs.

For further information on CSA Group services, write to
CSA Group
178 Rexdale Boulevard
Toronto, Ontario, M9W 1R3
Canada

A National Standard of Canada is a standard developed by a Standards Council of Canada (SCC) accredited Standards Development Organization, in compliance with requirements and guidance set out by SCC. More information on National Standards of Canada can be found at www.scc.ca.

SCC is a Crown corporation within the portfolio of Innovation, Science and Economic Development (ISED) Canada. With the goal of enhancing Canada's economic competitiveness and social well-being, SCC leads and facilitates the development and use of national and international standards. SCC also coordinates Canadian participation in standards development, and identifies strategies to advance Canadian standardization efforts.

Accreditation services are provided by SCC to various customers, including product certifiers, testing laboratories, and standards development organizations. A list of SCC programs and accredited bodies is publicly available at www.scc.ca.

Standards Council of Canada
600-55 Metcalfe Street
Ottawa, Ontario, K1P 6L5
Canada

Cette Norme Nationale du Canada n'est disponible qu'en anglais.

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 to judge its suitability for their particular purpose.

CSA Group

The Canadian Standards Association (operating as "CSA Group"), under whose auspices this National Standard has been produced, was chartered in 1919 and accredited by the Standards Council of Canada to the National Standards system in 1973. It is a not-for-profit, nonstatutory, voluntary membership association engaged in standards development and certification activities.

CSA Group standards reflect a national consensus of producers and users including manufacturers, consumers, retailers, unions and professional organizations, and governmental agencies. The standards are used widely by industry and commerce and often adopted by municipal, provincial, and federal governments in their regulations, particularly in the fields of health, safety, building and construction, and the environment.

More than 10 000 members indicate their support for CSA Group's standards development by volunteering their time and skills to Committee work.

CSA Group offers certification and testing services in support of and as an extension to its standards development activities. To ensure the integrity of its certification process, CSA Group regularly and continually audits and inspects products that bear the CSA Group Mark.

In addition to its head office and laboratory complex in Toronto, CSA Group has regional branch offices in major centres across Canada and inspection and testing agencies in fourteen countries. Since 1919, CSA Group has developed the necessary expertise to meet its corporate mission: CSA Group is an independent service organization whose mission is to provide an open and effective forum for activities facilitating the exchange of goods and services through the use of standards, certification and related services to meet national and international needs.

For further information on CSA Group services, write to
CSA Group
178 Rexdale Boulevard, Toronto, Ontario,
Canada M9W 1R3

American National Standards Institute

The American National Standards Institute (ANSI), Inc. is the nationally recognized coordinator of voluntary standards development in the United States through which voluntary organizations, representing virtually every technical discipline and every facet of trade and commerce, organized labor and consumer interests, establish and improve the some 10 000 national consensus standards currently approved as American National Standards.

ANSI provides that the interests of the public may have appropriate participation and representation in standardization activity, and cooperates with departments and agencies of U.S. Federal, state and local governments in achieving compatibility between government codes and standards and the voluntary standards of industry and commerce.

ANSI represents the interests of the United States in international nontreaty organizations such as the International Organization for Standardization (ISO) and the International Electrotechnical Commission (IEC). The Institute maintains close ties with regional organizations such as the Pacific Area Standards Congress (PASC) and the Pan American Standards Commission (COPANT). As such, ANSI coordinates the activities involved in the U.S. participation in these groups.

ANSI approval of standards is intended to verify that the principles of openness and due process have been followed in the approval procedure and that a consensus of those directly and materially affected by the standards has been achieved. ANSI coordination is intended to assist the voluntary system to ensure that national standards needs are identified and met with a set of standards that are without conflict or unnecessary duplication in their requirements.

Responsibility of approving American standards rests with the
American National Standards Institute, Inc.
25 West 43rd Street, Fourth floor
New York, NY 10036

ASME/CSA Standard

ASME A112.4.14-2022/CSA B125.14:22
Manually or automatically operated valves for use in plumbing systems

Published in August 2022 by CSA Group
A not-for-profit private sector organization
178 Rexdale Boulevard, Toronto, Ontario, Canada M9W 1R3
1-800-463-6727 • 416-747-4044

Visit the CSA Group Online Store at www.csagroup.org/store/

The American Society of Mechanical Engineers (ASME)
Two Park Avenue
New York, NY 10016-5990, USA
1-800-843-2763

Visit the ASME Online Store at www.asme.org

Commitment for Amendments

This Standard is issued jointly by the American Society of Mechanical Engineers (ASME) and the Canadian Standards Association (Operating as "CSA Group"). Amendments to this Standard will be made only after processing according to the Standards writing procedures of both ASME and CSA Group.

The American Society of Mechanical Engineers (ASME)
Two Park Avenue
New York, NY 10016-5990
USA
1-800-843-2763
Visit the ASME Online Store at
www.asme.org

ISBN 978-0-7918-7523-0

This Standard is available for public review on a continuous basis. This provides an opportunity for additional public input from industry, academia, regulatory agencies, and the public at large.

Published in August 2022 by
CSA Group
A not-for-profit private sector organization
178 Rexdale Boulevard
Toronto, Ontario, Canada
M9W 1R3
1-800-463-6727 or 416-747-4044
Visit the CSA Group Online Store at
www.csagroup.org/store/

ISBN 978-1-4883-3843-4
ICS 91.140.70

Contents

ASME A112 Standards Committee on Plumbing Materials and Equipment

W. M. Smith	American Society of Plumbing Engineers (ASPE), Montgomery, Alabama, USA	*Chair*
S. M. Rawalpindiwala	Kohler Co. Plumbing Division, Kohler, Wisconsin, USA	*Vice-Chair*
A. L. Guzman Rodriguez	American Society of Mechanical Engineers, New York, New York, USA	*Secretary*
M. R. Gibeault	Kohler Co. Plumbing Division, Kohler, Wisconsin, USA	*Alternate*
J. A. Ballanco	JB Engineering and Code Consulting PC, Munster, Indiana, USA	
J. E. Bertrand	Watts Water Technologies, Inc., Avon, Ohio, USA	
C. Haldiman	Watts Water Technologies, North Andover, Massachusetts, USA	*Alternate*
T. Burger	ASSE International, Mokena, Illinois, USA	
R. Burnham	Zurn Industries LLC, Erie, Pennsylvania, USA	
M. Campos	ICC Evaluation Service, LLC, Brea, California, USA	
S. L. Cavanaugh	Cavanaugh Consulting, Santa Fe, New Mexico, USA	*Contributing Member*
W. E. Chapin	Professional Code Consulting, LLC, Cullman, Alabama, USA	
P. V. DeMarco	IAPMO Group, Dayton, New Jersey, USA	

N. E. Dickey	Hansgrohe, Inc., Alpharetta, Georgia, USA	
G. S. Duren	Code Compliance, Inc., South Pasadena, Florida, USA	
A. R. Emmerson	Consultant, Arlington Heights, Illinois, USA	
K. Ernst	Oakville Stamping & Bending Limited, Oakville, Ontario, Canada	
R. L. George	Plumb-Tech Design and Consulting Services LLC, Newport, Michigan, USA	
D. Gleiberman	Sloan Valve Co., Los Angeles, California, USA	
J. W. Lauer	Sloan Valve Co., Anaheim, California, USA	*Alternate*
M. Guard	Regulosity, LLC, Wauwatosa, Wisconsin, USA	
G. W. Harrison	Consultant/Plumbing Instructor, Edmond, Oklahoma, USA	
L. Himmelblau	The Chicago Faucet Company, Des Plaines, Illinois, USA	
J. Kendzel	American Supply Association, Itasca, Illinois, USA	*Contributing Member*
J. M. Koeller	Koeller and Co., Yorba Linda, California, USA	
C. J. Lagan	American Standard/LIXIL, Piscataway, New Jersey, USA	
W. LeVan	Cast Iron Soil Pipe Institute, Auburn, Alabama, USA	

D. Parney	Cast Iron Soil Pipe Institute, Mundelein, Illinois	*Alternate*
D. Liang	CSA Group, Toronto, Ontario, Canada	*Contributing Member*
D. Marbry	Fluidmaster Inc., San Juan Capistrano, California, USA	
R. Mata	American Society of Plumbing Engineers, Mentor, Ohio, USA	
L. A. Mercer	IAPMO Group, Valley City, Ohio, USA	
K. Thompson	Plumbing Manufacturers International, McLean, Virginia, USA	*Alternate*
A. I. Murra	Abraham Murra Consulting, Santa Margarita, California, USA	
D. Orton	NSF International, Ann Arbor, Michigan, USA	
A. Ciechanowski	NSF International, Ann Arbor, Michigan, USA	*Alternate*
R. Pickering	Eastern Research Group, Inc. (ERG), Morrisville, North Carolina, USA	*Contributing Member*
A. Poon	Delta Faucet Company, Indianapolis, Indiana, USA	
B. Ramkarran	Infinity Drain, Ltd., Amityville, New York, USA	*Contributing Member*
S. A. Remedios	Remedios Consulting, London, Ontario, Canada	
M. Sigler	Plumbing Manufacturers International (PMI), Orlando, Florida, USA	

G. L. Simmons	Charlotte Pipe & Foundry, Charlotte, North Carolina, USA	
W. B. Morris	Charlotte Pipe & Foundry, Charlotte, North Carolina, USA	*Alternate*
S. Tanner	U.S. Environmental Protection Agency, Washington, District of Columbia, USA	*Contributing Member*
J. Watson	Elkay Manufacturing, Downers Grove, Illinois, USA	
M. Weiss	Plumbing & Drainage Institute (PDI), Polson, Montana, USA	
W. C. Whitehead	Whitehead Consulting Services, Red Oak, Texas, USA	
S. J. McDanal	Jay R. Smith Manufacturing Co., Montgomery, Alabama	*Alternate*

ASME A112.4.14 Project Team on Quarter Turn Valves

M. Campos	ICC Evaluation Service, LLC, Brea, California, USA	*Chair*
J. E. Bertrand	Watts Water Technologies, Inc., Avon, Ohio, USA	
W. E. Chapin	Professional Code Consulting, LLC, Cullman, Alabama, USA	
N. E. Dickey	Hansgrohe, Inc., Alpharetta, Georgia, USA	
R. L. George	Plumb-Tech Design and Consulting Services LLC, Newport, Michigan, USA	
J. F. Higdon	Apollo Valves/Conbraco Industries, Pageland, South Carolina, USA	
D. Marbry	Fluidmaster Inc., San Juan Capistrano, California, USA	
C. W. McDonald	Fortune Brands - Global Plumbing Group, North Olmsted, Ohio, USA	
D. Orton	NSF International, Ann Arbor, Michigan, USA	
S. A. Remedios	Remedios Consulting, London, Ontario, Canada	
M. Sigler	Plumbing Manufacturers International (PMI), Orlando, Florida, USA	
K. Thompson	Plumbing Manufacturers International, McLean, Virginia, USA	
C. Osteen	Reliance Worldwide Corp, Cullman, Alabama, USA	*Contributing Member*

CSA Technical Committee on Plumbing Fittings

K. Ernst	Oakville Stamping & Bending Limited, Oakville, Ontario, Canada *Category: Producer Interest*	*Chair*
J. E. Bertrand	Watts Water Technologies Inc, Avon, Ohio, USA *Category: Producer Interest*	*Vice-Chair*
J. Adili	UL LLC, Northbrook, Illinois, USA	*Non-voting*
A. Ahuja	Masco Canada Limited, St. Thomas, Ontario, Canada	*Non-voting*
W. T. Ball	WCM Industries Inc, Colorado Springs, Colorado, USA	*Non-voting*
S. Breda	Omni Brass Inc, Vaughan, Ontario, Canada *Category: User Interest*	
A. Brhelle	Masco Canada, St Thomas, Ontario, Canada	*Non-voting*
J. Briggs	NSF International, Ann Arbor, Michigan, USA	*Non-voting*
T. Burke	Victoria + Albert Baths Ltd., Telford, Shropshire, United Kingdom	*Non-voting*
R. Burnham	Zurn Industries LLC, Erie, Pennsylvania, USA *Category: Producer Interest*	
M. Campos	ICC Evaluation Service, LLC, Brea, California, USA	*Non-voting*
W. E. Chapin	Professional Code Consulting, LLC, Cullman, Alabama, USA	*Non-voting*

E. Cometa	CSA Group, Toronto, Ontario, Canada	*Non-voting*
A. De Francesca	City of Toronto, Toronto, Ontario, Canada *Category: Regulatory Authority*	
P. Despatis	Régie du bâtiment du Québec, Montréal, Québec, Canada *Category: Regulatory Authority*	
N. Dickey	Hansgrohe, Inc, Alpharetta, Georgia, USA	*Non-voting*
Y. Duchesne	Régie du bâtiment du Québec, Québec, Québec, Canada	*Non-voting*
F. Fernández	Toto U.S.A. Inc, Ontario, California, USA *Category: Producer Interest*	
M. E. Fish	Zurn Industries, LLC, Cary, North Carolina, USA	*Non-voting*
M. R. Gibeault	Kohler Co. Plumbing Division, Kohler, Wisconsin, USA	*Non-voting*
D. Gleiberman	Sloan, Los Angeles, California, USA	*Non-voting*
D. Grenier	BainUltra inc., Lévis, Québec, Canada	*Non-voting*
M. A. Guard	Regulosity LLC, Wauwatosa, Wisconsin, USA	*Non-voting*
L. Himmelblau	Chicago Faucets Geberit Manufacturing Division, Des Plaines, Illinois, USA *Category: Producer Interest*	
E. Ho	IAPMO Group, Markham, Ontario, Canada	*Non-voting*

E. Hood	H. H. Angus & Associates Limited Consulting Engineers, Toronto, Ontario, Canada *Category: User Interest*	
K. S. Hui	Ontario Ministry of Municipal Affairs, Toronto, Ontario, Canada *Category: Regulatory Authority*	
M. Johnson	Delta Faucet Company, Indianapolis, Indiana, USA	*Non-voting*
J. Knapton	Southern Alberta Institute of Technology, Calgary, Alberta, Canada *Category: General Interest*	
T. Knull	Alberta Municipal Affairs, Lethbridge, Alberta, Canada *Category: Regulatory Authority*	
J. M. Koeller	Koeller and Company, Yorba Linda, California, USA *Category: General Interest*	
F. Lemieux	Health Canada, Ottawa, Ontario, Canada	*Non-voting*
D. Liang	CSA Group, Toronto, Ontario, Canada	*Non-voting*
R. Liao	Xiamen Lota International Co.Ltd, Xiamen, Fujian, China	*Non-voting*
J. Loera	Fluidmaster Inc., San Juan Capistrano, California, USA	*Non-voting*
D. Lundy	Watts Water Technologies (Canada) Inc, Burlington, Ontario, Canada	*Non-voting*
J. MacDonald	BLANCO Canada Inc, Brampton, Ontario, Canada	*Non-voting*
M. Malatesta	American Standard Brands/LWTA, Piscataway, New Jersey, USA *Category: Producer Interest*	

D. Marbry	Fluidmaster Inc., San Juan Capistrano, California, USA	*Non-voting*
R. Mata	American Society of Plumbing Engineers, Mentor, Ohio, USA	*Non-voting*
C. McDonald	Fortune Brands - Global Plumbing Group, North Olmsted, Ohio, USA	*Non-voting*
M. Mohammed	Reliance Worldwide Corp (Canada) Inc, Vaughan, Ontario, Canada	*Non-voting*
K. Moriel	City of Brampton, Brampton, Ontario, Canada	*Non-voting*
A. I. Murra	Abraham Murra Consulting, Santa Margarita, California, USA *Category: General Interest*	
R. Neff	Delta Faucet Company, Indianapolis, Indiana, USA	*Non-voting*
S. R. O'Neill	Mohawk College of Applied Arts and Technology, Stoney Creek, Ontario, Canada	*Non-voting*
D. Orton	NSF International, Ann Arbor, Michigan, USA	*Non-voting*
P. P. Paré	Consumer Representative, Lemoyne, Québec, Canada *Category: User Interest*	
R. Pickering	Eastern Research Group, Inc (ERG), Morrisville, North Carolina, USA	*Non-voting*
A. Poon	Delta Faucet Company, Indianapolis, Indiana, USA	*Non-voting*
S. M. Rawalpindiwala	Kohler Co. Plumbing Division, Kohler, Wisconsin, USA *Category: Producer Interest*	

S. A. Remedios	Remedios Consulting, London, Ontario, Canada *Category: User Interest*	
S. Rouleau	Intertek, Ste-Marie, Québec, Canada	*Non-voting*
P. Saeed	Powers, A Watts Brand, Mt. Prospect, Illinois, USA *Category: User Interest*	
S. Shang	China Building Material Test & Cert. Group (Shaanxi) Co. Ltd, Xi'an, Shaanxi, China	*Non-voting*
M. Sigler	International Code Council, Orlando, Florida, USA	*Non-voting*
W. Smith	American Society of Plumbing Engineers (ASPE), Montgomery, Alabama, USA *Category: General Interest*	
R. Sparling	-30- Forensic Engineering, Toronto, Ontario, Canada *Category: General Interest*	
S. Tanner	U.S. Environmental Protection Agency, Washington, District of Columbia, USA *Category: General Interest*	
K. Thompson	Plumbing Manufacturers International, McLean, Virginia, USA	*Non-voting*
J. C. Watson	IAPMO, Westchester, Illinois, USA	*Non-voting*
C. White	ASSE International, Mokena, Illinois, USA	*Non-voting*
S. P. Williams	Sioux Chief Manufacturing Company Inc, Brantford, Ontario, Canada	*Non-voting*
C. Wisniewski	Franke Kindred Canada Ltd, Midland, Ontario, Canada	*Non-voting*

K. Wong	Uponor, Mississauga, Ontario, Canada	*Non-voting*
C. Wright	Ontario Pipe Trades, Dundalk, Ontario, Canada *Category: User Interest*	
F. Zhang	China Building Material Test & Cert. Group (Shaanxi) Co. Ltd, Xi'an, Shaanxi, China	*Non-voting*
M. Khalil	CSA Group, Toronto, Ontario, Canada	*Project Manager*
J. Menard	CSA Group, Toronto, Ontario, Canada	*Project Manager*

Preface

This is the second edition of ASME A112.4.14/CSA B125.14, *Manually or automatically operated shutoff valves for use in plumbing systems*. It supersedes the previous edition published in 2017 under the title *Manually operated shutoff valves for use in plumbing systems*.

This Standard is considered suitable for use with conformity assessment within its stated scope.

This Standard was prepared by the ASME A112.4.14 Project team on Quarter Turn Valves, under the jurisdiction of the ASME A112 Standards Committee on Plumbing Materials and Equipment and the CSA Technical Committee on Plumbing Fixtures. The ASME A112 Standards Committee operates under the jurisdiction of the ASME Board on Standardization and Testing and the CSA Technical Committee operates under the jurisdiction of the CSA Strategic Steering Committee on Construction and Civil Infrastructure. This Standard has been formally approved by the ASME Standards Committee and the CSA Technical Committee.

This Standard was approved as an American National Standard by the American National Standards Institute on June 22, 2022.

This Standard has been developed in compliance with the Standards Council of Canada requirements for National Standards of Canada. It has been published as a National Standard of Canada by CSA Group.

ASME Notes:

1) *The next edition of this standard is scheduled for publication in 2025.*
2) *This standard was developed under procedures accredited as meeting the criteria for American National Standards and it is an American National Standard. The standards committee that approved the code or standard was balanced to ensure that individuals from competent and concerned interests had an opportunity to participate. The proposed standard was made available for public review and comment, which provided an opportunity for additional public input from industry, academia, regulatory agencies, and the public-at-large.*
3) *ASME does not "approve," "rate," or "endorse" any item, construction, proprietary device, or activity. ASME does not take any position with respect to the validity of any patent rights asserted in connection with any items mentioned in this document, and does not undertake to insure anyone utilizing a standard against liability for infringement of any applicable letters patent, nor does ASME assume any such liability. Users of a standard are expressly advised that determination of the validity of any such patent rights, and the risk of infringement of such rights, is entirely their own responsibility.*
4) *Participation by federal agency representatives or persons affiliated with industry is not to be interpreted as government or industry endorsement of this standard.*
5) *ASME accepts responsibility for only those interpretations of this document issued in accordance with the established ASME procedures and policies, which precludes the issuance of interpretations by individuals.*
6) *Upon request, ASME will issue an interpretation of any requirement of this standard. An interpretation can be issued only in response to a request submitted through the online Interpretation Submittal Form. The form is accessible at http://go.asme.org/InterpretationRequest. ASME procedures provide for reconsideration of any interpretation when or if additional information that might affect an interpretation is available. Further, persons aggrieved by an interpretation may appeal to the cognizant ASME committee.*

Interpretations are published on the ASME website under the Committee Pages at http://cstools.asme.org/ as they are issued.

CSA 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 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.*
4) *This Standard is subject to review within five years from the date of publication. Suggestions for its improvement will be referred to the appropriate committee.*
5) *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.*
6) *Attention is drawn to the possibility that some of the elements of this Standard may be the subject of patent rights. CSA Group is not to 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.*

ASME A112.4.14-2022/CSA B125.14:22
Manually or automatically operated valves for use in plumbing systems

1 Scope

1.1 Inclusions

This Standard specifies requirements for manually or automatically operated valves, in sizes NPS 4 and smaller. Valves covered by this Standard are intended for installation as water shutoff valves between the meter and the supply stop.

Note: *Manually or automatically operated valves covered by this Standard are also known as supply line stops.*

1.2

This Standard does not apply to hose end valves or endpoint devices defined in Section 9 of NSF/ANSI 61.

1.3

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.

1.4

SI units are the units of record in Canada. In this Standard, the yard/pound units are shown in parentheses.

The values stated in each measurement system are equivalent in application; however, each system is to be used independently. Combining values from the two measurement systems can result in non-conformance with this Standard.

All references to gallons are to U.S. gallons.

For information on the conversion criteria used in this Standard, see Annex A.

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.

ASME (The American Society of Mechanical Engineers)/CSA Group

ASME A112.18.1-2018/CSA B125.1-18
Plumbing supply fittings

ASME (The American Society of Mechanical Engineers)

B1.1-2019
Unified Inch Screw Threads, (UN and UNR Thread Form)

B1.20.1-2013(R2018)
Pipe Threads, General Purpose, Inch

B16.18-2018
Cast Copper Alloy Solder Joint Pressure Fittings

B16.22-2018
Wrought Copper and Copper Alloy Solder Joint Pressure Fittings

B16.26-2018
Cast Copper Alloy Fittings for Flared Copper Tubes

B16.51-2018
Copper and Copper Alloy Press-Connect Pressure Fittings

CSA Group

B242:05 (R2021)
Groove-and shoulder-type mechanical pipe couplings

CSA B137.5:20
Crosslinked polyethylene (PEX) tubing systems for pressure applications

CSA B137.6:20
Chlorinated polyvinylchloride (CPVC) pipe, tubing, and fittings for hot- and cold-water distribution systems

ASSE (American Society of Sanitary Engineering)

1061-2020
Performance Requirements for Push-Fit Fittings

ASTM International (American Society for Testing and Materials)

D1599-18
Standard Test Method for Resistance to Short-Time Hydraulic Pressure of Plastic Pipe, Tubing, and Fittings

D1784-20
Standard Classification System and Basis for Specification for Rigid Poly(Vinyl Chloride) (PVC) Compounds and Chlorinated Poly(Vinyl Chlorinated) (CPVC) Compounds

D2466-17
Standard Specification for Poly(Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 40

D2467-20
Standard Specification for Poly(Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 80

D2846/D2846M-19a
Standard Specification for Chlorinated Poly(Vinyl Chloride) (CPVC) Plastic Hot- and Cold- Water Distribution Systems

E29-13(2019)
Standard Practice for Using Significant Digits in Test Data to Determine Conformance with Specifications

F439-19
Standard Specification for Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe Fittings, Schedule 80

F1498-08(2020)
Standard Specification for Taper Pipe Threads 60° for Thermoplastic Pipe and Fittings

F1970-19
Standard Specification for Special Engineered Fittings, Appurtenances or Valves for use in Poly (Vinyl Chloride) (PVC) and Chlorinated Poly (Vinyl Chlorinated) (CPVC) Systems

AWWA (American Water Works Association)
C606-2015
Grooved and Shouldered Joints

ISA (The International Society of Automation)
ANSI/ISA 75.01.01-2012 (60534-2-1 MOD)
Industrial-Process Control Valves — Part 2-1: Flow capacity — Sizing equations for fluid flow under installed conditions

NSF International
NSF/ANSI/CAN 61-2020
Drinking Water System Components — Health Effects

NSF/ANSI 359-2016
Valves for Crosslinked Polyethylene (PEX) Water Distribution Tubing Systems

NSF/ANSI 372-2020
Drinking Water System Components — Lead content

3 Definitions and abbreviations

3.1 Definitions

The following definitions shall apply in this Standard:

Fine control valve — a valve designed to accurately and precisely adjust the flow of water (e.g., needle valve).

Flow coefficient (C_v) — a relative measure of a valve's efficiency at allowing fluid flow. Numerically, C_v is equal to the number of gallons per minute of water at 60 °F that will flow through the valve when the pressure differential across the valve is 1 psi.

Note: *See definition of* ***Flow factor****.*

Flow factor (K_v) — a relative measure of a valve's efficiency at allowing fluid flow. Numerically, K_v, is equal to the cubic metres per hour, of water at 16 °C that will flow through the valve when the pressure differential across the valve is 100 kPa.

Note: *The flow factor is the metric equivalent to the flow coefficient (C_v), and it is used in Europe and Asia*

Supply line stop — a valve used to control the flow of water in a distribution system, except a supply stop.

Supply stop — a valve that is placed immediately upstream of a terminal fitting used to shut off the water supply to the terminal fitting .

Valve — a fitting with a movable part that regulates the flow of water through one or more passages.

3.2 Abbreviations

The following abbreviations shall apply in this Standard:

CPVC = chlorinated polyvinylchloride
C_v = flow coefficient
K_v = flow factor
NPS = nominal pipe size
PEX = crosslinked polyethylene
PVC = polyvinylchloride

4 Design requirements

4.1 Rated pressure and temperatures

Valves shall be designed at a minimum for service temperatures between 5 °C and 71 °C (40 °F and 160 °F), with an allowable rated working pressure not less than 862 kPa (125 psi). Valves rated in excess of 71 °C (160 °F) and 862 kPa (125 psi) shall be tested in accordance with Clause 5.1.3 in addition to the other applicable requirements of this Standard.

4.2 End connections

4.2.1 Taper pipe threads

Metallic taper pipe threads shall comply with ASME B1.20.1. Plastic taper pipe threads shall be in accordance with ASTM F1498.

4.2.2 Solder joints

The dimensions of solder joint ends for connection to copper tubes or fittings (other than factory-assembled parts) shall comply with ASME B16.18 or ASME B16.22, as applicable.

4.2.3 Solvent cement connections

Socket ends for making solvent-cement connections shall comply with

a) ASTM D2466 or ASTM D2467 for connections to PVC pipe; and
b) ASTM D2846, ASTM F439, or CSA B137.6 for connections to CPVC pipe.

4.2.4 PEX connections

Valves intended for connecting to PEX tubing for water distribution systems shall comply with the applicable requirements of Clause 5 of CSA B137.5 or Clause 5 of NSF/ANSI 359.

4.2.5 Flared connections

Flared connections to copper tube shall be in accordance with ASME B16.26. The screw thread dimensions of flared and ball sleeve (compression) tube fittings shall comply with ASME B1.1.

4.2.6 Grooved-end connections

Grooved-end connections shall comply with AWWA C606 or CSA B242.

4.2.7 Push-fit fittings

Connections achieved by push-fit fittings shall comply with ASSE 1061.

4.2.8 Press-connect fittings

Ends of press-connect fittings shall comply with ASME B16.51.

4.2.9 Other connections

Connection methods not specified in Clauses 4.2.1 to 4.2.8 shall be made in accordance with a nationally or internationally recognized standard.

4.3 Materials

4.3.1 General

The requirements specified in Clauses 4.3.2 to 4.3.5 shall apply only to the materials used in valve bodies, bonnets, end pieces, pressure-containing parts, and wetted operating parts.

4.3.2 Copper alloys

Copper alloys shall have a copper content of at least 58% by weight.

4.3.3 Ferrous alloys

Ferrous alloys shall be stainless steel of the 300 or 400 series.