

ANSI/ISA-S75.14-1993

Approved July 24, 1995

American National Standard

**Face-to-Face Dimensions for
Buttweld-End Globe-Style
Control Valves
(ANSI Class 4500)**



ANSI/ISA-S75.14 — Face-to-Face Dimensions for Buttweld-End Globe-Style Control Valves
(ANSI Class 4500)

ISBN 1-55617-479-9

Copyright © 1993 by the Instrument Society of America. All rights reserved. Printed in the United States of America. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means (electronic, mechanical, photocopying, recording, or otherwise), without the prior written permission of the publisher.

ISA
67 Alexander Drive
P.O. Box 12277
Research Triangle Park, North Carolina 27709

Preface

This preface is included for information purposes and is not part of ISA-S75.14.

This standard has been prepared as part of the service of ISA toward a goal of uniformity in the field of instrumentation. To be of real value, this document should not be static, but should be subject to periodic review. Toward this end, the Society welcomes all comments and criticisms, and asks that they be addressed to the Secretary, Standards and Practices Board, ISA, 67 Alexander Drive, P. O. Box 12277, Research Triangle Park, NC 27709, Telephone (919) 549-8411, e-mail: standards@isa.org.

The ISA Standards and Practices Department is aware of the growing need for attention to the metric system of units in general, and the International System of Units (SI) in particular, in the preparation of instrumentation standards. The Department is further aware of the benefits to U.S.A. users of ISA Standards of incorporating suitable references to the SI (and the metric system) in their business and professional dealings with other countries. Toward this end, this Department will endeavor to introduce SI-acceptable metric units in all new and revised standards to the greatest extent possible. *The Metric Practice Guide*, which has been published by the Institute of Electrical and Electronic Engineers as ANSI/IEEE Std. 268-1992, and future revisions will be the reference guide for definitions, symbols, abbreviations, and conversion factors.

It is the policy of the ISA to encourage and welcome the participation of all concerned individuals and interests in the development of ISA standards. Participation in the ISA standards-making process by an individual in no way constitutes endorsement by the employer of that individual, of the ISA, or of any of the standards that ISA develops.

The information contained in the preface, footnotes, and appendices is included for information only and is not a part of the standard.

The following people served as members of ISA Subcommittee SP75.08:

NAME	COMPANY
W. Weidman, Chairman	Gilbert Commonwealth, Inc.
H. Baumann	H. D. Baumann & Associates, Ltd.
G. Borden, Jr.	Consultant
R. Brodin	Fisher Controls International, Inc.
F. Cain	Valtek, Inc.
R. Chown	OTEC
J. Emery	Honeywell, Inc.
B. Hart	M. W. Kellogg Company
H. Illing	DeZurik Valve Company
C. Koloboff	Chevron Research & Technology Company
J. Leist	Dow Chemical U.S.A.
J. Reed	Norriseal Controls
H. Schwartz	Flexible Valve Corporation
A. Scott	Huestis Machine Corporation
H. Sonderegger	Grinnell Corporation
R. Stanley	Retired
R. Tubbs	Consultant

The following people served as members of ISA Committee SP75.

NAME	COMPANY
D. Buchanan, Chairman	Union Carbide Corporation
W. Weidman, Managing Director	Gilbert Commonwealth, Inc.
T. Abromaitis	Red Valve, Inc.
J. Arant	JBA Consulting Company
H. Backinger	J.F. Kraus & Company
G. Barb	Anchor/Darling Valve Company
H. Baumann	H.D. Baumann & Associates, Ltd.
H. Boger	Masoneilan/Dresser
G. Borden, Jr.	Consultant
S. Boyle	Neles-Jamesbury, Inc.
R. Brodin*	Fisher Controls International, Inc.
E. Brown	Dravo McKee
F. Cain	Valtek, Inc.
C. Corson	Fluor Daniel, Inc.
L. Driskell	Consultant
J. Emery	Honeywell, Inc.
H. Fuller	Consultant
L. Griffith	Consultant
B. Hart	M.W. Kellogg Company
F. Harthun*	Fisher Controls International, Inc.
J. Herold*	DeZurik Valve Company
H. Illing*	DeZurik Valve Company
R. Jeanes	Texas Utilities Electric
C. Koloboff	Chevron Research & Technology Company
C. Langford	E.I. du Pont de Nemours & Company
J. Leist	Dow Chemical U.S.A.
R. Louviere	Creole Engineering Sales Company
O. Lovett, Jr.	Retired
J. McCaskill	Leslie Controls
A. McCauley, Jr.	Chagrin Valley Controls, Inc.
H. Miller	Control Components, Inc.
T. Molloy	Pacific Gas & Electric Company
L. Ormanoski	Frick Company
J. Ozol	Commonwealth Edison
W. Rahmeyer	Utah State University
G. Richards	Richards Industries, Inc.
T. Rutter	Fluid Controls Institute, Inc.
H. Schwartz	Flexible Valve Corporation
A. Scott	Huestis Machine Corporation
H. Sonderegger	Grinnell Corporation
R. Stanley	Retired
R. Terhune	Cranmoor
R. Tubbs	Consultant
R. Widdows	Cashco, Inc.

*One vote per company

This recommended practice was approved for publication by the ISA Standards and Practices Board in March 1993.

NAME	COMPANY
W. Weidman, Vice President	Gillbert Commonwealth, Inc.
M. Widmeyer, Vice President-Elect	The Supply System
H. Baumann	H. D. Baumann & Associates, Ltd.
C. Gross	Dow Chemical USA
H. Hopkins	Utility Products of Arizona
A. Iverson	Lyondell Petrochemical Company
K. Lindner	Endress & Hauser GmbH & Company
G. McFarland	ABB Power Automation, Inc.
E. Montgomery	Fluor Daniel, Inc.
E. Nesvig	Erdco Engineering Corporation
D. Rapley	Rapley Engineering Services
R. Reimer	Allen-Bradley Company
J. Rennie	Factory Mutual Research Corporation
J. Weiss	Electric Power Research Institute
R. Webb	Pacific Gas & Electric Company
J. Whetstone	National Institute of Standards & Technology
C. Williams	Eastman Kodak Company
M. Zielinski	Rosemount, Inc.
D. Bishop*	Chevron USA Production Company
P. Bliss*	Consultant
W. Calder, III*	Consultant
B. Christensen*	Consultant
L. Combs*	Retired/Consultant
N. Conger*	Consultant
T. Harrison*	FAMU/FSU College of Engineering
R. Jones*	Consultant
R. Keller*	Engineering Support Services
O. Lovett, Jr.*	Consultant
E. Magison*	Honeywell, Inc.
R. Marvin*	Roy G. Marvin Company
A. McCauley, Jr.*	Chagrin Valley Controls, Inc.
W. Miller*	Retired/Consultant
J. Mock*	The Supply System
G. Platt*	Retired/Consultant
R. Prescott*	Moore Products Company
C. Reimann*	National Institute of Standards & Technology
K. Whitman*	ABB Combustion Engineering
J. Williams*	Consultant

*Directors Emeriti

Contents

1 Scope	9
2 Purpose.....	9
3 Definition	9
4 Bibliography	9
5 Dimensional Data.....	10
Appendix.....	10

1 Scope

1.1 This standard applies to buttweld-end globe-style control valves, sizes 1/2 inch (15 mm) through 8 inches (200 mm), having top and cage guiding.

2 Purpose

The purpose of this standard is to aid users in their piping designs by providing ANSI Class 4500 buttweld-end control valve dimensions, without giving special consideration to specific equipment manufacturers.

3 Definition

3.1 For definitions of terms used in this standard, see ANSI/ISA-S75.05, "Control Valve Terminology."

4 Bibliography

The following references were published by ASME (The American Society of Mechanical Engineers).

4.1 American Society of Mechanical Engineers (ASME), ANSI/ASME B16.34-1988, "Valves--Flanged, Threaded and Welding Ends."

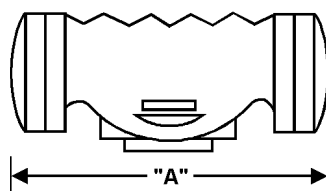
4.2 American Society of Mechanical Engineers (ASME), ANSI/ASME B16.25-1986, "Buttwelding Ends."

5 Dimensional Data

5.1 Face-to-face buttweld-end valve dimensions are listed in [Table 1](#).

Table 1 — Face-to-face dimensions for buttweld-end globe-style control valves

Nominal Valve Size		ANSI Class 4500		Tolerance	
mm	inches	Dimension "A"		mm	inches
		mm	inches		
15	1/2	298	11.75	±1.6	±0.062
20	3/4	298	11.75	±1.6	±0.062
25	1	298	11.75	±1.6	±0.062
40	1-1/2	298	11.75	±1.6	±0.062
50	2	378	14.88	±1.6	±0.062
80	3	479	18.88	±1.6	±0.062
100	4	584	23.00	±1.6	±0.062
150	6	883	34.75	±2.4	±0.093
200	8	1,118	44.00	±2.4	±0.093



Appendix

This Appendix is not part of ISA Standard S75.14, but it is included to facilitate its use.

The ANSI standards listed in the bibliography contain valve body design information in addition to face-to-face dimensions. Dimensions for metrically sized valves are nominal conversions that are conventionally used in documents in the Manufacturers Standardization Society (MSS) of the Valve and Fitting Industry's Publication MSS-SP86-1987, and also in International Organization for Standardization (ISO) and International Electrotechnical Commission (IEC) documents.

Developing and promulgating technically sound consensus standards, recommended practices, and technical reports is one of ISA's primary goals. To achieve this goal the Standards and Practices Department relies on the technical expertise and efforts of volunteer committee members, chairmen, and reviewers.

ISA is an American National Standards Institute (ANSI) accredited organization. ISA administers United States Technical Advisory Groups (USTAGs) and provides secretariat support for International Electrotechnical Commission (IEC) and International Organization for Standardization (ISO) committees that develop process measurement and control standards. To obtain additional information on the Society's standards program, please write:

ISA
Attn: Standards Department
67 Alexander Drive
P.O. Box 12277
Research Triangle Park, NC 27709

ISBN: 1-55617-479-9