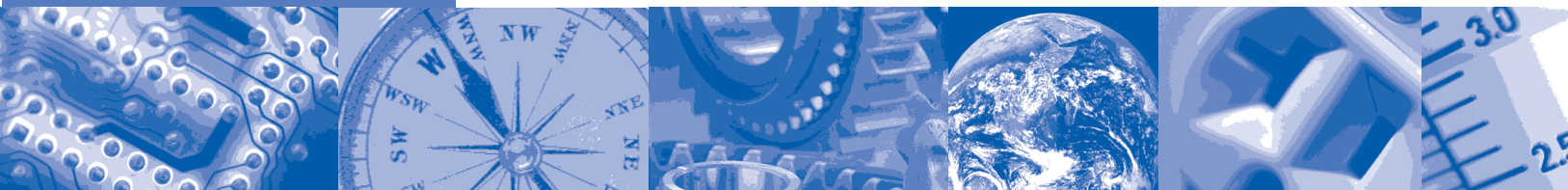


ANSI/ISA-75.04-1995

Formerly ANSI/ISA-S75.04-1995



Face-to-Face Dimensions for Flangeless Control Valves (ANSI Classes 150, 300, and 600)



ISA—The Instrumentation,
Systems, and
Automation Society

Approved 6 October 1995

ANSI/ISA-75.04-1995, Face-to-Face Dimensions for Flangeless Control Valves
(ANSI Classes 150, 300, and 600)

ISBN: 1-55617-569-8

Copyright © 1995 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, as well as all footnotes and annexes, is included for informational purposes only and is not part of ANSI/ISA-75.04-1995.

This standard has been prepared as part of the service of ISA, the international society for measurement and control, 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) 990-9227; Fax (919) 549-8288; 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, recommended practices, and technical reports. 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 Electronics 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 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 ISA, or of any of the standards that ISA develops.

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

NAME	COMPANY
W. Weidman, Chairman/Managing Director	Consultant/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
B. Hart	M. W. Kellogg Company
B. Hatton	Honeywell, Inc.
C. Koloboff	Chevron Research & Technical Company
J. Leist	Dow Chemical USA
J. Reed	Norriseal Controls
H. Sonderegger	Grinnell Corporation
R. Tubbs	Industrial Valve & Gauge Company

The following people served as members of ISA Committee SP75:

NAME	COMPANY
D. Buchanan, Chairman	Union Carbide Corporation
W. Weidman, Chairman/Managing Director	Consultant/Gilbert Commonwealth, Inc.
T. Abromaitis	Red Valve, Inc.
J. Arant	J.B.A. Consulting Company
H. Backinger	J. F. Kraus & Company
G. Baenteli	Bechtel
G. Barb	Consultant
H. Baumann	H. D. Baumann & Associates, Ltd.
K. Black	Cashco, Inc.
H. Boger	Masoneilan/Dresser
G. Borden, Jr.	Consultant
S. Boyle	Neles-Jamesbury, Inc.
R. Brodin	Fisher Controls International, Inc.
F. Cain	Valtek, Inc.
C. Corson	Fluor Daniel, Inc.
C. Crawford	Union Carbide Corporation
L. Driskell	Consultant
J. Duhamel	Red Valve, Inc.
H. Fuller	Consultant
*J. George	Richards Industries, Inc.
L. Griffith	Consultant
B. Hart	M. W. Kellogg Company
F. Harthun	Consultant
B. Hatton	Honeywell, Inc.
*J. Herold	DeZurik Valve Company
R. Jeanes	T.U. Electric
C. Koloboff	Chevron Research & Technical Company
G. Kovecses	Yarway Corporation
C. Langford	Consultant
J. Leist	Dow Chemical USA
*A. Libke	DeZurik Valve Company
R. Louviere	Creole Engineering Sales Company
O. Lovett, Jr.	Consultant
A. McCauley, Jr.	Chagrin Valley Controls, Inc.
H. Miller	Control Components, Inc.
T. Molloy	CMES
L. Ormanoski	Frick Company
J. Ozol	Commonwealth Edison
W. Rahmeyer	Utah State University
J. Reed	Norriseal Controls
*G. Richards	Richards Industries, Inc.
T. Rutter	Fluid Controls Institute, Inc.
A. Shea	Copes-Vulcan, Inc.
K. Schoonover	Con-Tek
E. Skovgaard	Leslie Controls
H. Sonderegger	Grinnell Corporation

*One vote per company

NAME**COMPANY**

R. Terhune
R. Tubbs
L. Zinck

Cranmoor
Industrial Valve & Gauge Company
Consultant

This published standard was approved for publication by the ISA Standards and Practices Board on May 5, 1995.

NAME**COMPANY**

M. Widmeyer, Vice President
H. Baumann
D. Bishop
P. Brett
W. Calder III
H. Dammeyer
R. Dieck
H. Hopkins
A. Iverson
K. Lindner
T. McAviney
A. McCauley, Jr.
G. McFarland

J. Mock
E. Montgomery
D. Rapley
R. Reimer
R. Webb
W. Weidman, Chairman/Managing Director
J. Weiss
J. Whetstone
C. Williams
G. Wood
M. Zielinski

The Supply System
H. D. Baumann & Associates, Ltd.
Chevron USA Production Company
Honeywell, Inc.
Foxboro Company
Phoenix Industries, Inc.
Pratt & Whitney
Utility Products of Arizona
Lyondell Petrochemical Company
Endress + Hauser GmbH + Company
Metro Wastewater Reclamation District
Chagrin Valley Controls, Inc.
Consultant/Honeywell Industrial Automation and Controls
Consultant
Fluor Daniel, Inc.
Rapley Engineering Services
Allen-Bradley Company
Pacific Gas & Electric Company
Consultant/Gilbert Commonwealth, Inc.
Electric Power Research Institute
National Institute of Standards & Technology
Eastman Kodak Company
Graeme Wood Consulting
Fisher-Rosemount

Contents

1	Scope	9
2	Purpose	9
3	Definitions	9
4	Bibliography	9
5	Dimensional Data	10
	Annex A	11
	Table 1 — Face-to-face dimensions for flangeless control valves	10

1 Scope

1.1 This standard applies to flangeless control valves using a full ball or a segment of a ball and other rotary-stem or sliding-stem flangeless control valves, sizes 3/4 inch (20 mm) through 24 inches (600 mm) for ANSI Classes 150 through 600.

1.2 The face-to-face dimensions listed apply only to control valves that will be bolted between flanges.

1.3 This standard is not intended to include butterfly valves.

2 Purpose

2.1 The purpose of this standard is to aid users in their piping designs for flangeless control valves by providing valve face-to-face dimensions without giving special consideration to the equipment manufacturer to be used.

3 Definitions

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

4 Bibliography

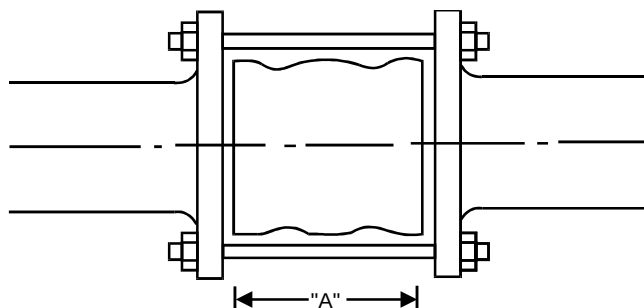
4.1 International Electrotechnical Commission (IEC) Publication 534, Industrial-Process Control Valves, Part 3, Section Two-1983, "Face-to-Face Dimensions of Flangeless Control Valves Except Wafer Butterfly Valves."

5 Dimensional Data

5.1 Face-to-Face Dimensions for Flangeless Control Valves. See [Table 1](#).

Table 1 — Face-to-face dimensions for flangeless control valves

Nominal Valve Size		PN 20, 50 & 100 ANSI Classes 150, 300 & 600		Tolerance	
mm	inches	Dimension "A"		mm	inches
		mm	inches		
20	3/4	76	3.00	±1.6	±0.062
25	1	102	4.00	±1.6	±0.062
40	1-1/2	114	4.50	±1.6	±0.062
50	2	124	4.88	±1.6	±0.062
80	3	165	6.50	±1.6	±0.062
100	4	194	7.62	±1.6	±0.062
150	6	229	9.00	±1.6	±0.062
200	8	243	9.56	±1.6	±0.062
250	10	297	11.69	±1.6	±0.062
300	12	338	13.31	±3.2	±0.125
350	14	400	15.75	±3.2	±0.125
400	16	400	15.75	±3.2	±0.125
450	18	457	18.00	±3.2	±0.125
500	20	508	20.00	±3.2	±0.125
600	24	610	24.00	±3.2	±0.125



NOTE: Dimension "A" does not include line gaskets; it is a dimension for only the valve itself.

Annex A

This annex is not part of ISA-S75.04, but it is included to facilitate its use.

Face-to-face dimensions to start this standard were obtained from Scientific Apparatus Makers Association (SAMA), Proposed Standard PMC 23.3e-1975, "Face-to-Face Dimensions of Flangeless Control Valves." Dimensions for metrically sized valves are nominal conversions that are conventionally used in the Manufacturers Standardization Society (MSS) of the Valve and Fitting Industry (MSS-SP86-1981), International Standards Organization (ISO), and International Electrotechnical Commission (IEC).

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: 1-55617-569-8