ANSI/ISA-S75.12-1993

Approved February 24, 1994

American National Standard

Face-to-Face Dimensions for Socket Weld-End and Screwed-End Globe-Style Control Valves (ANSI Classes 150, 300, 600, 900, 1500, and 2500)

ISA-S75.12 — Face-to-Face Dimensions for Socket Weld-End and Screwed-End Globe-Style Control Valves (ANSI Classes 150, 300, 600, 900, 1500, and 2500)

ISBN 1-55617-478-0

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Contents

1 Scope

1.1 This standard applies to socket weld-end globe-style control valves, sizes 1/2 in (15 mm) through 4 in (100 mm), and screwed-end globe-style control valves, sizes 1/2 in (15 mm) through 2 1/2 in (65 mm), having top, top and bottom, port, or cage guiding.

2 Purpose

2.1 The purpose of this standard is to aid users in their piping designs by providing ANSI Classes 150 through 2500 socket weld-end control valve dimensions and ANSI classes 150 through 600 screwed-end control dimensions without giving special consideration to the equipment manufacturer to be used.

2.2 The short-long dimensions provided in Tables 1 and 2 clarify Section 2.1 by consolidating the diversity of existing manufacturers' lengths into two sets of dimensions for each size valve. Before using either the short or long dimensions, the piping designer should confirm with the selected valve manufacturer which dimension is correct for the valve(s) being supplied.

3 Definitions

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

4 Bibliography

4.1 Manufacturers Standardization Society of the Valve & Fittings Industry (MSS) SP-84-1990, "Steel Valves — Socket Welding and Threaded Ends."

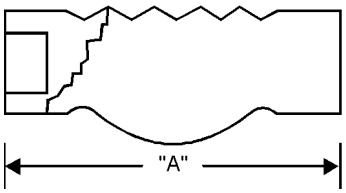
4.2 American Society of Mechanical Engineers (ASME), ANSI/ASME B16.11-1991, "Forged Steel Fittings, Socket Welding and Threaded."

5 Dimensional data

5.1 Face-to-face dimensions for socket weld-end globe-style control valves are listed in Table 1.

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

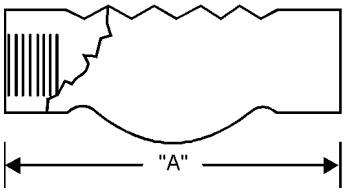
Nominal Valve Size		PN 20, 50, & 100 (ANSI Classes 150, 300, & 600)				PN 150 & 250 (ANSI Classes 900 & 1500)				PN 420 (ANSI Class 2500)				Tolerance	
		Dimension "A"				Dimension "A"				Dimension "A"					
		mm		inches		mm		inches		mm		inches			
mm	inches	Short	Long	Short	Long	Short	Long	Short	Long	Short	Long	Short	Long	mm	inches
15	1/2	170	206	6.69	8.12	178	279	7.00	11.00	216	318	8.50	12.50	±6.4	±0.25
20	3/4	170	210	6.69	8.25	178	279	7.00	11.00	216	318	8.50	12.50	±6.4	±0.25
25	1	197	210	7.75	8.25	178	279	7.00	11.00	216	318	8.50	12.50	±6.4	±0.25
40	1-1/2	235	251	9.25	9.88	235	330	9.25	13.00	260	381	10.25	15.00	±6.4	±0.25
50	2	267	286	10.50	11.25	292	375	11.50	14.75	324	400	12.75	15.75	±6.4	±0.25
65	2-1/2	292	311	11.50	12.25	292	—	11.50	—	324	—	12.75	—	±6.4	±0.25
80	3	318	337	12.50	13.25	318	533	12.50	21.00	381	660	15.00	26.00	±6.4	±0.25
100	4	368	394	14.50	15.50	368	530	14.50	20.88	406	737	16.00	29.00	±6.4	±0.25



5.2 Face-to-face dimensions for screwed-end globe-style control valves are listed in Table 2.

Table 2 — Face-to-face dimensions for screwed-end globe-style control valves

Nominal Valve Size		PN 20, 50, & 100 (ANSI Classes 150, 300, & 600)				Tolerance	
		Dimension “A”					
		mm		inches			
mm	inches	Short	Long	Short	Long	mm	inches
15	1/2	165	206	6.50	8.12	±1.6	±0.062
20	3/4	165	210	6.50	8.25	±1.6	±0.062
25	1	197	210	7.75	8.25	±1.6	±0.062
40	1-1/2	235	251	9.25	9.88	±1.6	±0.062
50	2	267	286	10.50	11.25	±1.6	±0.062
65	2-1/2	292	311	11.50	12.25	±1.6	±0.062



Annex

This annex is not part of ISA-S75.12, but is included to facilitate its use.

Dimensions for metrically sized valves are nominal conversions that are conventionally used in the Manufacturers Standardization Society (MSS) of the Valve and Fitting Industry's Publication MSS-SP86-1981, and in International Organization for Standardization (ISO) and International Electrotechnical Commission (IEC) documents.

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ISBN: 1-55617-478-0