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Standard

**Face-to-Face Dimensions for
Integral Flanged Globe-Style
Control Valve Bodies
(ANSI Classes 125, 150,
250, 300, and 600)**



ISA-S75.03 — Face-to-Face Dimensions for Integral Flanged Globe-Style Control Valve Bodies
(ANSI Classes 125, 150, 250, 300, and 600)

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1 Scope

1.1 This standard applies to flanged globe-style control valves, sizes 1/2 inch (15 mm) through 16 inches (400 mm), having top, top and bottom, port, or cage guiding.

2 Purpose

The purpose of this standard is to aid users in their piping design by providing ANSI Class 125 flat face, and ANSI Classes 150, 250, 300, and 600 raised face, flanged control valve dimensions, without giving special consideration of the equipment manufacturer to be used.

3 Definitions

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

4 Bibliography

The following bibliography is included for the definition of pressure classes and flange dimensions, material identification, and cross reference information. Items 4.1 through 4.4 were published by ASME (American Society of Mechanical Engineers).

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

4.2 American Society of Mechanical Engineers (ASME), ANSI/ASME B16.1-1989, "Cast Iron Pipe Flanges and Flanged Fittings."

4.3 American Society of Mechanical Engineers (ASME), ANSI/ASME B16.5-1988, "Pipe Flanges and Flanged Fittings."

4.4 American Society of Mechanical Engineers (ASME), ANSI/ASME B16.10-1986, "Face-to-Face and End-to-End Dimensions of Valves."

4.5 American National Standards Institute, Inc. (ANSI), ANSI B16.24-1979, "Bronze Pipe Flanges and Flanged Fittings, Class 150 and 300."

4.6 International Electrotechnical Commission (IEC) Publication 534, Industrial-Process Control Valves, 534-3 (1976) Part 3: Dimensions, Section One: "Face-to-Face Dimensions for Flanged, Two-Way, Globe-Type Control Valves."

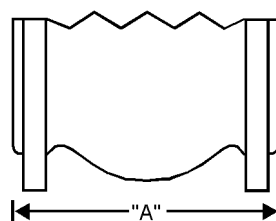
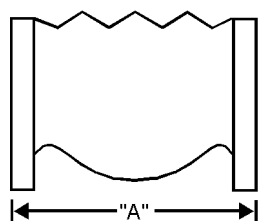
5 Dimensional data

5.1 Face-to-face dimensions for integral flanged globe-style control valves. [See Table 1.](#)

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

Nominal valve size		PN 20* (ANSI Classes 125 and 150)		PN 50 (ANSI Classes 250 and 300)		PN 100 (ANSI Classes 600)		Tolerance	
		Dimension “A”		Dimension “A”		Dimension “A”			
mm	inches	mm	inches	mm	inches	mm	inches	mm	inches
15	1/2	184	7.25	190	7.50	203	8.00	±1.6	±0.062
20	3/4	184	7.25	194	7.62	206	8.12	±1.6	±0.062
25	1	184	7.25	197	7.75	210	8.25	±1.6	±0.062
40	1-1/2	222	8.75	235	9.25	251	9.88	±1.6	±0.062
50	2	254	10.00	267	10.50	286	11.25	±1.6	±0.062
65	2-1/2	276	10.88	292	11.50	311	12.25	±1.6	±0.062
80	3	298	11.75	318	12.50	337	13.25	±1.6	±0.062
100	4	352	13.88	368	14.50	394	15.50	±1.6	±0.062
150	6	451	17.75	473	18.62	508	20.00	±1.6	±0.062
200	8	543	21.38	568	22.38	610	24.00	±1.6	±0.062
250	10	673	26.50	708	27.88	752	29.62	±1.6	±0.062
300	12	737	29.00	775	30.50	819	32.25	±3.2	±0.125
350	14	889	35.00	927	36.50	972	38.25	±3.2	±0.125
400	16	1016	40.00	1057	41.62	1108	43.62	±3.2	±0.125

*International standards groups have not finalized PN 20 and PN 50 as being designated for Class 125 and Class 250, respectively. However, dimensionally, the flanges are compatible.



Appendix

This Appendix is not part of ISA-S75-03, but it is included to facilitate its use.

The ASME 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 by the Manufacturers Standardization Society (MSS) of the Valve and Fitting Industry (MSS-SP86-1987), by the International Organization for Standardization (ISO), and by the International Electrotechnical Commission (IEC).

Control valve initial dimensions, 10 inches - 16 inches, were listed in the Fluid Control Institute (FCI) Standard, FCI-65-2-1975, which has been withdrawn from publication.

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