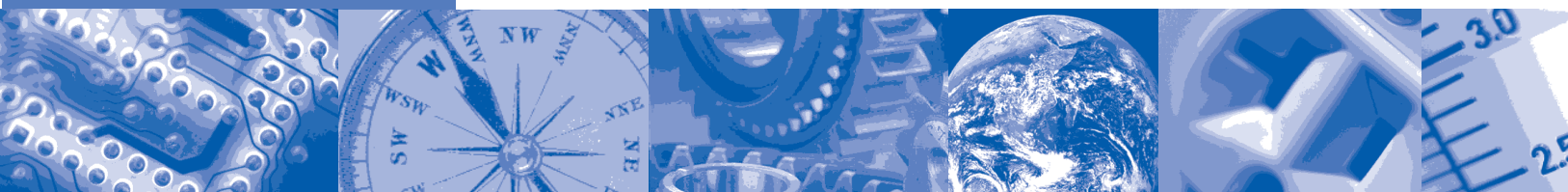


## **ANSI/ISA-75.15-1994**

Formerly ANSI/ISA-S75.15-1994



# **Face-to-Face Dimensions for Buttweld-End Globe-Style Control Valves (ANSI Classes 150, 300, 600, 900, 1500, and 2500)**



**ISA—The Instrumentation,  
Systems, and  
Automation Society**

**Approved 24 February 1994**

ANSI/ISA-75.15-1994, Face-to-Face Dimensions for Butt-weld-End Globe-Style Control Valves  
(ANSI Classes 150, 300, 600, 900, 1500, and 2500)

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## 1 Scope

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**1.1** This standard applies to butt-weld-end globe-style control valves, sizes 15 mm (1/2 inch) through 450 mm (18 inches) for ANSI Classes 150 through 2500, having top, top and bottom, port, or cage guiding.

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## 2 Purpose

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**2.1** The purpose of this standard is to aid users in their piping designs by providing butt-weld-end control valve dimensions, without giving special consideration to the equipment manufacturer to be used.

**2.2** The short-long dimensions provided in [Table 1](#) clarify [Section 2.1](#) by consolidating the diversity of existing manufacturers' lengths into two sets of dimensions for each valve size. 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.

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## 3 Definitions

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

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## 4 Bibliography

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The following standards were developed by the American Society of Mechanical Engineers (ASME).

**4.1** American National Standard Institute, Inc., Standard ANSI/ASME B16.34-1988, "Valves—Flanged, Threaded, and Welding End."

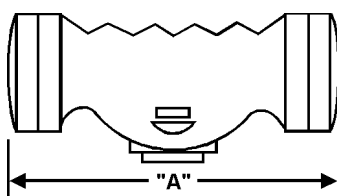
**4.2** American National Standard Institute, Inc., Standard ANSI/ASME B16.25-1986, Butt-welding Ends.

## 5 Dimensional data

5.1 For face-to-face dimensions for butt-weld-end globe-style control valves, see [Table 1](#).

**Table 1: Face-to-face dimensions for butt-weld-end globe-style control valves**

| Nominal<br>Valve Size |        | PN 20, 50, & 100<br>(ANSI Classes 150, 300, & 600) |      |        |       | PN 150 & 250<br>(ANSI Classes 900 & 1500) |      |        |       | PN 420<br>(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    | 187                                                | 203  | 7.38   | 8.00  | 194                                       | 279  | 7.62   | 11.00 | 216                         | 318  | 8.50   | 12.50 | ±1.6      | ±0.062 |
| 20                    | 3/4    | 187                                                | 206  | 7.38   | 8.25  | 194                                       | 279  | 7.62   | 11.00 | 216                         | 318  | 8.50   | 12.50 | ±1.6      | ±0.062 |
| 25                    | 1      | 187                                                | 210  | 7.38   | 8.25  | 197                                       | 279  | 7.75   | 11.00 | 216                         | 318  | 8.50   | 12.50 | ±1.6      | ±0.062 |
| 40                    | 1-1/2  | 222                                                | 251  | 8.75   | 9.88  | 235                                       | 330  | 9.25   | 13.00 | 260                         | 359  | 10.25  | 14.12 | ±1.6      | ±0.062 |
| 50                    | 2      | 254                                                | 286  | 10.00  | 11.25 | 292                                       | 375  | 11.50  | 14.75 | 318                         | 400  | 12.50  | 15.75 | ±1.6      | ±0.062 |
| 65                    | 2-1/2  | 292                                                | 311  | 11.50  | 12.25 | 292                                       | 375  | 11.50  | 14.75 | 318                         | 400  | 12.50  | 15.75 | ±1.6      | ±0.062 |
| 80                    | 3      | 318                                                | 337  | 12.50  | 13.25 | 318                                       | 460  | 12.50  | 18.12 | 381                         | 498  | 15.00  | 19.62 | ±1.6      | ±0.062 |
| 100                   | 4      | 368                                                | 394  | 14.50  | 15.50 | 368                                       | 530  | 14.50  | 20.88 | 406                         | 575  | 16.00  | 22.62 | ±1.6      | ±0.062 |
| 150                   | 6      | 451                                                | 508  | 17.75  | 20.00 | 508                                       | 768  | 24.00  | 30.25 | 610                         | 819  | 24.00  | 32.25 | ±1.6      | ±0.062 |
| 200                   | 8      | 543                                                | 610  | 21.38  | 24.00 | 610                                       | 832  | 24.00  | 32.75 | 762                         | 1029 | 30.00  | 40.25 | ±1.6      | ±0.062 |
| 250                   | 10     | 673                                                | 752  | 26.50  | 29.62 | 762                                       | 991  | 30.00  | 39.00 | 1016                        | 1270 | 40.00  | 50.00 | ±1.6      | ±0.062 |
| 300                   | 12     | 737                                                | 819  | 29.00  | 32.35 | 914                                       | 1130 | 36.00  | 44.50 | 1118                        | 1422 | 44.00  | 56.00 | ±3.2      | ±0.125 |
| 350                   | 14     | 851                                                | 1029 | 33.50  | 40.50 | —                                         | 1257 | —      | 49.50 | —                           | 1803 | —      | 71.00 | ±3.2      | ±0.125 |
| 400                   | 16     | 1016                                               | 1108 | 40.00  | 43.62 | —                                         | 1422 | —      | 56.00 | —                           | —    | —      | —     | ±3.2      | ±0.125 |
| 450                   | 18     | 1143                                               | —    | 45.00  | —     | —                                         | 1727 | —      | 68.00 | —                           | —    | —      | —     | ±3.2      | ±0.125 |



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## Appendix

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This appendix is not part of ISA-S75.15, but 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 the Manufacturers Standardization Society (MSS) of the Valve and Fitting Industry's Publication MSS-SP86-1981, and in International Standards Organization (ISO) and International Electrotechnical Commission (IEC) documents.





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