



Flange Dimensions and End Details

All flanged Cla-Val valves are furnished faced and drilled unless otherwise specified. The dimensions and drilling of end flanges conform to standards of the American National Standards Institute.

The ANSI tables are provided here for your convenience. When ANSI standards call for 1/16" raised face, this face is included in the dimensions for the thickness of flange. All dimensions are shown in inches.

Ductile Iron Valves* Class 150 and 300 (ANSI B16.42 — 1987)

| Nominal Pipe Size | Diameter of Flange | | Thickness of Flange | | Diameter of Raised Face | | Diameter of Bolt Circle | | Number of Bolts | | Diameter of Bolts | | Diameter of Bolt Holes | |
|-------------------|--------------------|-------|---------------------|------|-------------------------|-------|-------------------------|-------|-----------------|-----|-------------------|------|------------------------|------|
| | 150 | 300 | 150 | 300 | 150 | 300 | 150 | 300 | 150 | 300 | 150 | 300 | 150 | 300 |
| Pressure Class | 150 | 300 | 150 | 300 | 150 | 300 | 150 | 300 | 150 | 300 | 150 | 300 | 150 | 300 |
| 1.5 | 5.00 | 6.12 | .56 | .81 | 2.88 | 2.88 | 3.88 | 4.50 | 4 | 4 | .50 | .75 | .62 | .88 |
| 2 | 6.00 | 6.50 | .62 | .88 | 3.62 | 3.62 | 4.75 | 5.00 | 4 | 8 | .63 | .63 | .75 | .75 |
| 2.5 | 7.00 | 7.50 | .69 | 1.00 | 4.12 | 4.12 | 5.50 | 5.88 | 4 | 8 | .63 | .75 | .75 | .88 |
| 3 | 7.50 | 8.25 | .75 | 1.12 | 5.00 | 5.00 | 6.00 | 6.62 | 4 | 8 | .63 | .75 | .75 | .88 |
| 4 | 9.00 | 10.00 | .94 | 1.25 | 6.19 | 6.19 | 7.50 | 7.88 | 8 | 8 | .63 | .75 | .75 | .88 |
| 6 | 11.00 | 12.50 | 1.00 | 1.44 | 8.50 | 8.50 | 9.50 | 10.62 | 8 | 12 | .75 | .75 | .88 | .88 |
| 8 | 13.50 | 15.00 | 1.12 | 1.62 | 10.62 | 10.62 | 11.75 | 13.00 | 8 | 12 | .75 | .88 | .88 | 1.00 |
| 10 | 16.00 | 17.50 | 1.19 | 1.88 | 12.75 | 12.75 | 14.25 | 15.25 | 12 | 16 | .88 | 1.00 | 1.00 | 1.12 |
| 12 | 19.00 | 20.50 | 1.25 | 2.00 | 15.00 | 15.00 | 17.00 | 17.75 | 12 | 16 | .88 | 1.12 | 1.00 | 1.25 |
| 14 | 21.00 | 23.00 | 1.38 | 2.12 | 16.25 | 16.25 | 18.75 | 20.25 | 12 | 20 | 1.00 | 1.12 | 1.12 | 1.25 |
| 16 | 23.50 | 25.50 | 1.44 | 2.25 | 18.50 | 18.50 | 21.25 | 22.50 | 16 | 20 | 1.00 | 1.25 | 1.12 | 1.38 |
| 18 | 25.00 | 28.00 | 1.56 | 2.38 | 21.00 | 23.00 | 22.75 | 24.75 | 16 | 24 | 1.12 | 1.25 | 1.25 | 1.38 |
| 20 | 27.50 | 30.50 | 1.69 | 2.50 | 23.00 | 23.00 | 25.00 | 27.00 | 20 | 24 | 1.13 | 1.25 | 1.25 | 1.38 |
| 24 | 32.00 | 36.00 | 1.88 | 2.75 | 27.25 | 27.25 | 29.50 | 32.00 | 20 | 24 | 1.25 | 1.50 | 1.38 | 1.62 |
| 30 | 38.75 | 43.00 | 2.12 | 3.00 | — | — | 37.19 | 36.00 | 28 | 28 | 1.25 | 1.75 | 1.38 | 2.00 |
| 36 | 46.00 | 50.00 | 2.38 | 3.38 | — | — | 42.69 | 42.75 | 32 | 32 | 1.50 | 2.00 | 1.62 | 2.25 |

Cast Iron Valves* Class 125 and 250 (ANSI B16.1 — 1989)

| Nominal Pipe Size | Diameter of Flange | | Thickness of Flange | | Diameter of Raised Face | | Diameter of Bolt Circle | | Number of Bolts | | Diameter of Bolts | | Diameter of Bolt Holes | |
|-------------------|--------------------|-------|---------------------|------|-------------------------|-------|-------------------------|-------|-----------------|-----|-------------------|------|------------------------|------|
| | 125 | 250 | 125 | 250 | 125 | 250 | 125 | 250 | 125 | 250 | 125 | 250 | 125 | 250 |
| Pressure Class | 125 | 250 | 125 | 250 | 125 | 250 | 125 | 250 | 125 | 250 | 125 | 250 | 125 | 250 |
| 1.5 | 5.00 | 6.12 | .56 | .81 | — | 2.88 | 3.88 | 4.50 | 4 | 4 | .50 | .75 | .62 | .88 |
| 2 | 6.00 | 6.50 | .62 | .88 | — | 3.62 | 4.75 | 5.00 | 4 | 8 | .63 | .63 | .75 | .75 |
| 2.5 | 7.00 | 7.50 | .69 | 1.00 | — | 4.12 | 5.50 | 5.88 | 4 | 8 | .63 | .75 | .75 | .88 |
| 3 | 7.50 | 8.25 | .75 | 1.12 | — | 5.00 | 6.00 | 6.62 | 4 | 8 | .63 | .75 | .75 | .88 |
| 4 | 9.00 | 10.00 | .94 | 1.25 | — | 6.19 | 7.50 | 7.88 | 8 | 8 | .63 | .75 | .75 | .88 |
| 6 | 11.00 | 12.50 | 1.00 | 1.44 | — | 8.50 | 9.50 | 10.62 | 8 | 12 | .75 | .75 | .88 | .88 |
| 8 | 13.50 | 15.00 | 1.12 | 1.62 | — | 10.62 | 11.75 | 13.00 | 8 | 12 | .75 | .88 | .88 | 1.00 |
| 10 | 16.00 | 17.50 | 1.19 | 1.88 | — | 12.75 | 14.25 | 15.25 | 12 | 16 | .88 | 1.00 | 1.00 | 1.12 |
| 12 | 19.00 | 20.50 | 1.25 | 2.00 | — | 15.00 | 17.00 | 17.75 | 12 | 16 | .88 | 1.12 | 1.00 | 1.25 |
| 14 | 21.00 | 23.00 | 1.38 | 2.12 | — | 16.25 | 18.75 | 20.25 | 12 | 20 | 1.00 | 1.12 | 1.12 | 1.25 |
| 16 | 23.50 | 25.50 | 1.44 | 2.25 | — | 18.50 | 21.25 | 22.50 | 16 | 20 | 1.00 | 1.25 | 1.12 | 1.38 |
| 18 | 25.00 | 28.00 | 1.56 | 2.38 | 21.00 | 23.00 | 22.75 | 24.75 | 16 | 24 | 1.12 | 1.25 | 1.25 | 1.38 |
| 20 | 27.50 | 30.50 | 1.69 | 2.50 | — | 23.00 | 25.00 | 27.00 | 20 | 24 | 1.13 | 1.25 | 1.25 | 1.38 |
| 24 | 32.00 | 36.00 | 1.88 | 2.75 | — | 27.25 | 29.50 | 32.00 | 20 | 24 | 1.25 | 1.50 | 1.38 | 1.62 |

Bronze Valves* Class 150 and 300 (ANSI 16.24 — 1979)

| Nominal Pipe Size | Diameter of Flange | | Thickness of Flange | | Diameter of Raised Face | | Diameter of Bolt Circle | | Number of Bolts | | Diameter of Bolts | | Diameter of Bolt Holes | |
|-------------------|--------------------|-------|---------------------|------|-------------------------|-----|-------------------------|-------|-----------------|-----|-------------------|-----|------------------------|------|
| | 150 | 300 | 150 | 300 | 150 | 300 | 150 | 300 | 150 | 300 | 150 | 300 | 150 | 300 |
| Pressure Class | 150 | 300 | 150 | 300 | 150 | 300 | 150 | 300 | 150 | 300 | 150 | 300 | 150 | 300 |
| 1.5 | 5.00 | 6.12 | .44 | .69 | — | — | 3.88 | 4.50 | 4 | 4 | .50 | .75 | .62 | .88 |
| 2 | 6.00 | 6.50 | .50 | .75 | — | — | 4.75 | 5.00 | 4 | 8 | .63 | .63 | .75 | .75 |
| 2.5 | 7.00 | 7.50 | .56 | .81 | — | — | 5.50 | 5.88 | 4 | 8 | .63 | .75 | .75 | .88 |
| 3 | 7.50 | 8.25 | .62 | .91 | — | — | 6.00 | 6.62 | 4 | 8 | .63 | .75 | .75 | .88 |
| 4 | 9.00 | 10.00 | .69 | 1.06 | — | — | 7.50 | 7.88 | 8 | 8 | .63 | .75 | .75 | .88 |
| 6 | 11.00 | 12.50 | .81 | 1.19 | — | — | 9.50 | 10.62 | 8 | 12 | .75 | .75 | .88 | .88 |
| 8 | 13.50 | 15.00 | .94 | 1.38 | — | — | 11.75 | 13.00 | 8 | 12 | .75 | .88 | .88 | 1.00 |
| 10 | 16.00 | — | 1.00 | — | — | — | 14.25 | — | 12 | — | .88 | — | 1.00 | — |
| 12 | 19.00 | — | 1.06 | — | — | — | 17.00 | — | 12 | — | .88 | — | 1.00 | — |

Cast Steel Valves* Class 150 and 300 (ANSI 16.5 — 1988)

| Nominal Pipe Size | Diameter of Flange | | Thickness of Flange | | Diameter of Raised Face | | Diameter of Bolt Circle | | Number of Bolts | | Diameter of Bolts | | Diameter of Bolt Holes | |
|-------------------|--------------------|-------|---------------------|------|-------------------------|-------|-------------------------|-------|-----------------|-----|-------------------|------|------------------------|------|
| | 150 | 300 | 150 | 300 | 150 | 300 | 150 | 300 | 150 | 300 | 150 | 300 | 150 | 300 |
| Pressure Class | 150 | 300 | 150 | 300 | 150 | 300 | 150 | 300 | 150 | 300 | 150 | 300 | 150 | 300 |
| 1.5 | 5.00 | 6.12 | .56 | .81 | 2.88 | 2.88 | 3.88 | 4.50 | 4 | 4 | .50 | .75 | .62 | .88 |
| 2 | 6.00 | 6.50 | .62 | .88 | 3.63 | 3.63 | 4.75 | 5.00 | 4 | 8 | .63 | .63 | .75 | .75 |
| 2.5 | 7.00 | 7.50 | .69 | 1.00 | 4.13 | 4.13 | 5.50 | 5.88 | 4 | 8 | .63 | .75 | .75 | .88 |
| 3 | 7.50 | 8.25 | .75 | 1.12 | 5.00 | 5.00 | 6.00 | 6.62 | 4 | 8 | .63 | .75 | .75 | .88 |
| 4 | 9.00 | 10.00 | .94 | 1.25 | 6.19 | 6.19 | 7.50 | 7.88 | 8 | 8 | .63 | .75 | .75 | .88 |
| 6 | 11.00 | 12.50 | 1.00 | 1.44 | 8.50 | 8.50 | 9.50 | 10.62 | 8 | 12 | .75 | .75 | .88 | .88 |
| 8 | 13.50 | 15.00 | 1.12 | 1.62 | 10.63 | 10.63 | 11.75 | 13.00 | 8 | 12 | .75 | .88 | .88 | 1.00 |
| 10 | 16.00 | 17.50 | 1.19 | 1.88 | 12.75 | 12.75 | 14.25 | 15.25 | 12 | 16 | .88 | 1.00 | 1.00 | 1.12 |
| 12 | 19.00 | 20.50 | 1.25 | 2.00 | 15.00 | 15.00 | 17.00 | 17.75 | 12 | 16 | .88 | 1.12 | 1.00 | 1.25 |
| 14 | 21.00 | 23.00 | 1.38 | 2.12 | 16.25 | 16.25 | 18.75 | 20.25 | 12 | 20 | 1.00 | 1.12 | 1.12 | 1.25 |
| 16 | 23.50 | 25.50 | 1.44 | 2.25 | 18.50 | 18.50 | 21.25 | 22.50 | 16 | 20 | 1.00 | 1.25 | 1.12 | 1.38 |
| 18 | 25.00 | 28.00 | 1.56 | 2.38 | 21.00 | 23.00 | 22.75 | 24.75 | 16 | 24 | 1.12 | 1.25 | 1.25 | 1.38 |
| 20 | 27.50 | 30.50 | 1.69 | 2.50 | 23.00 | 23.00 | 25.00 | 27.00 | 20 | 24 | 1.13 | 1.25 | 1.25 | 1.38 |
| 24 | 32.00 | 36.00 | 1.88 | 2.75 | 27.25 | 27.25 | 29.50 | 32.00 | 20 | 24 | 1.25 | 1.50 | 1.38 | 1.62 |