76-100 Series
Stainless Steel Ball Valve
1/4” - 1”

Threaded, 2000 psig WOG. (See referenced P/T chart)
Cold Non-Shock. 150 psig Saturated Steam, Vacuum Service to 29 inches Hg.
MSS SP-110; Ball Valves Threaded, Socket-Welding, Solder Joint, Grooved and Flared Ends.

FEATURES
- Investment cast components
- Reinforced seats
- Mounting pad for easy actuator mounting
- Blow-out-proof stem design

- Adjustable packing gland
- Meets NACE MR-01-75
- SS lever and nut
- (-24) 1/4” to 2” Certified to API 607, 4th Edition, Class 600 burn

STANDARD MATERIAL LIST
1. Lever and grip
   304 SS w/vinyl
2. Stem packing
   MPTFE
3. Stem bearing
   RPTFE
4. Ball
   A276-316
5. Seat (2)
   RPTFE
6. Retainer
   A351-CF8M
7. Gland nut
   A276-316
8. Stem
   A276-316
9. Lever nut
   18-8 SS
10. Body seal
    PTFE
11. Body
    A351-CF8M

OPTIONS AVAILABLE:

STAINLESS STEEL BALL VALVE

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<thead>
<tr>
<th>SUFFIX</th>
<th>OPTION</th>
<th>SIZES</th>
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<td></td>
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<td>-04</td>
<td>2-1/4” CS Stem Extension</td>
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<td>Steel Tee Handle</td>
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<td>-08</td>
<td>90° Reversed Stem</td>
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<tr>
<td>-14</td>
<td>Side Vented Ball (Uni-Directional)</td>
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<td>-15</td>
<td>Wheel Handle, Steel</td>
<td>1/4” to 2”</td>
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<tr>
<td>-16</td>
<td>Chain Lever - Vertical</td>
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<tr>
<td>-19</td>
<td>Lock Plate</td>
<td>1/4” to 2”</td>
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<tr>
<td>-21</td>
<td>UHMWPE Trim (Non-PTFE)</td>
<td>1/4” to 2”</td>
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<td>-24</td>
<td>Graphite Packing</td>
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<tr>
<td>-27</td>
<td>SS Latch-Lock Lever &amp; Nut</td>
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<td>-30</td>
<td>Cam-Lock and Grounded</td>
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<td>VTFE Trim</td>
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<td>SS Hi-Rise Locking Wheel Handle, SS Nut</td>
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<td>-45</td>
<td>Less Lever &amp; Nut</td>
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<td>-46</td>
<td>Latch Lever - Lock in Closed Position Only</td>
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<td>SS Latch Lock Ovaled Handle</td>
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<td>SS Oval Handle (No Latch) &amp; Nut</td>
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<td>Oxygen Cleared</td>
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<td>-58</td>
<td>Chain Lever - Horizontal</td>
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<td>-59</td>
<td>Static Grounded Ball &amp; Stem</td>
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<td>-64</td>
<td>25# Steam Trim</td>
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<td>-PO1</td>
<td>BSPP (Parallel) Thread Connection</td>
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<tr>
<td>-T01</td>
<td>BSPT (Tapered) Thread Connection</td>
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ST30NLwSSeSTwwLe23LLeV3LVw

For Pressure/Temperature Ratings,
Refer to Page M-12, Graph No. 14
76-100 Series
Stainless Steel Ball Valve
1-1/4” - 2”

Threaded, 1500 psig WOG. (See referenced P/T chart)
Cold Non-Shock, 150 psig Saturated Steam, Vacuum. Service to 29 inches Hg.
MSS SP-110; Ball Valves Threaded, Socket-Welding, Solder Joint, Grooved and Flared Ends.

FEATURES
- Investment cast components
- Reinforced seats
- Mounting pad for easy actuator mounting
- Blow-out-proof stem design
- Adjustable packing gland
- Meets NACE MR-01-75
- SS lever and nut
- (.24) 1/4” to 2” Certified to API 607,
  4th Edition, Class 600 burn

STANDARD MATERIAL LIST

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<th>NUMBER</th>
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<th>C</th>
<th>D</th>
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<th>G</th>
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<th>J</th>
<th>K</th>
<th>L</th>
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OPTIONS AVAILABLE:

SUFFIX (OPTION) SIZES
-02- Stem Grounded 1/4” to 3”
-04- 2-1/4” C/S Stem Extension 1/4” to 3”
-07- Steel Tee Handle 1/4” to 2”
-08- 90° Reversed Stem 1/4” to 2”
-14- Side Vented Ball (Uni-Directional) 1/4” to 2”
-15- Wheel Handle, Steel 1/4” to 2”
-16- Chain Lever - Vertical 3/4” to 2”
-19- Lock Plate 1/4” to 2”
-21- UHMWPE Trim (Non-PTFE) 1/4” to 3”
-24- Graphite Packing 1/4” to 3”
-27- SS Lock Lock Lever & Nut 1/4” to 3/4”
-30- Corn-Lock and Grounded 1/4” to 3/4”
-32- SS Tee Handle & Nut 1/4” to 2”
-35- PTFE Trim 1/4” to 3”
-39- SS Hi-Rise Locking Wheel Handle, SS Nut 1/4” to 3/4”
-40- Cyl-Loc and Grounded 1/4” to 3/4”
-44- Seal Welded 1/4” to 2”
-45- Less Lever & Nut 1/4” to 2”
-46- Lock Lever - Lock in Closed Position Only 1/4” to 2”
-47- SS Lock Lock Oval Handle 1/4” to 3/4”
-48- SS Oval Handle (No Lock) & Nut 1/4” to 2”
-49- Assembled Dry 1/4” to 3”
-50- 2-1/4” C/S Locking Stem Extension 1/4” to 3”
-57- Oxygen Cleaned 1/4” to 3”
-58- Chain Lever - Horizontal 3/4” to 2”
-59- Static Grounded Ball & Stem 1/4” to 3/4”
-64- 250# Steam Trim 1/4” to 3”
-P01- BSFP (Parallel) Thread Connection 1/4” to 3”
-T01- BSPT (Tapered) Thread Connection 1/4” to 3”

For Pressure/Temperature Ratings,
Refer to Page M-11, Graph No. 12

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A-13
76-100 Series
Stainless Steel Ball Valve
2-1/2” - 3”

Threaded, 1000 psig WOG. (See referenced P/T chart)
Cold Non-Shock. 150 psig Saturated Steam, Vacuum Service to 29 inches Hg.
MSS SP-110; Ball Valves Threaded, Socket-Welding, Solder Joint, Grooved and Flared Ends.

FEATURES
• Investment cast components
• Reinforced seats
• Mounting pad for easy actuator mounting
• Blow-out-proof stem design

• Adjustable packing gland
• Meets NACE MR-01-75
• SS lever and nut
• (.24) 1/4” to 2”; Certified to API 607, 4th Edition, Class 600 burn

STANDARD MATERIAL LIST

<table>
<thead>
<tr>
<th>NUMBER</th>
<th>SIZE</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
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OPTIONS AVAILABLE:

For Pressure/Temperature Ratings, Refer to Page M-10, Graph No. 8
FLOW DATA

For Apollo® Ball Valves

The listed Cv “factors” are derived from actual flow testing, in the Apollo® Ball Valve Division, Conbraco Industries, Inc., Pageland, South Carolina. These tests were completed using standard “off the shelf” valves with no special preparation and utilizing standard schedule 40 pipe. It should be understood that these factors are for the valve only and also include the connection configuration. The flow testing is done utilizing water as a fluid media and is a direct statement of the gallons of water flowed per minute with a 1 psig pressure differential across the valve/connection unit. Line pressure is not a factor. Because the Cv is a factor, the formula can be used to estimate flow of most media for valve sizing.

Flow of Liquid

\[ Q = \frac{Cv \sqrt{\Delta P}}{SpGr} \]

or \( \Delta P = \frac{(Q)^2 (SpGr)}{(Cv)^2} \)

Where:
- \( Q \) = flow in US gpm
- \( \Delta P \) = pressure drop (psig)
- \( SpGr \) = specific gravity at flowing temperature
- \( Cv \) = valve constant

Flow of Gas

\[ Q = 1360 Cv \sqrt{\frac{(\Delta P) (P_1)}{(SpGr) (T)}} \]

or \( \Delta P = 5.4 \times 10^{-7} \frac{(SpGr) (T)}{(Q)^2} \frac{(P_2)}{(Cv)^2} \)

Where:
- \( Q \) = flow in SCFH
- \( \Delta P \) = pressure drop (psig)
- \( SpGr \) = specific gravity (based on air = 1.0)
- \( P_1 \) = outlet pressure–psia (psig + 14.7)
- \( T \) = (temp. °F + 460)
- \( Cv \) = valve constant

Cv FACTORS
SERIES:
70-100, 71-100, 71AR, 73A-100,
74-100, 76-100, 76AR, 80-100
81-100, 89-100

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<th>1/2”</th>
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Cv FACTORS
76F, 77, 77AR, 77C, 77D SERIES

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<th>3/4”</th>
<th>1”</th>
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Cv FACTORS
82-100/200, 83R-100/200/700,85R-100/200,86R-100/200/700,83-500/600,86-500/600/900 SERIES

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Cv FACTORS
83A/83B, 86A/86B, 86C SERIES

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