

A  
Bray  
High  
Performance  
Company

# Flow-Tek

A Subsidiary of BRAY INTERNATIONAL, Inc.

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## 2 Piece Threaded Standard Port Ball Valves: 1/4" - 3"



Series S70 &  
Series S90

Flow-Tek's Series S70 and Series S90 ball valves offer an economical solution for high pressure applications in the process industries. Standard 2-piece valve bodies are available in Stainless Steel or Carbon Steel. Stainless Steel bodies are investment cast and solution annealed for the highest quality and added strength. Cast Carbon Steel bodies are normalized and black phosphate coated for added corrosion resistance. All body castings are marked

with a foundry heat number for full traceability. These quarter turn valves feature an adjustable packing gland for secure sealing.

Other features include low operating torque, internal bottom entry blowout proof stems, and stainless steel safety latch handles.

#### Body Materials

S70: 316 Stainless Steel  
S90: WCB Carbon Steel

#### Pressure Ratings

1/4" - 1": 2000 psi WOG  
1-1/4" - 2": 1500 psi WOG  
2-1/4" - 3": 1000 psi WOG  
Steam Rating: 150 psi WSP

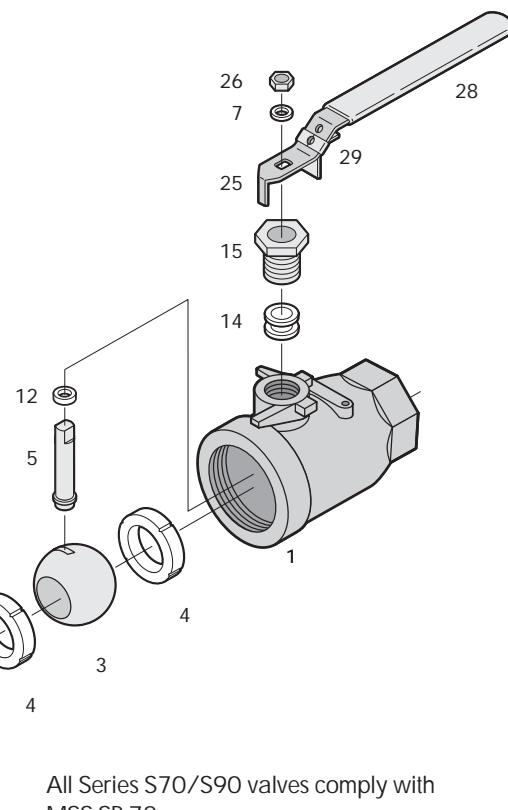
#### Temperature Range

S70: -50°F to +450°F  
-46°C to +232°C  
S90: -20°F to +450°F  
-29°C to +232°C

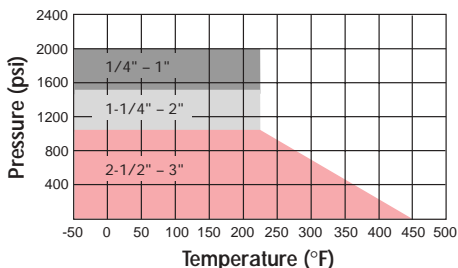
End Connections Threaded - NPT

## COMPONENTS AND MATERIALS

| Item | Name           | S70 Stainless Steel | S90 Carbon Steel   | Qty. |
|------|----------------|---------------------|--------------------|------|
| 1    | Body           | ASTM A351 Gr CF8M   | ASTM A216 Gr WCB   | 1    |
| 2    | End Cap        | ASTM A351 Gr CF8M   | ASTM A216 Gr WCB   | 1    |
| 3    | Ball           | ASTM A351 Gr CF8M   | ASTM A351 Gr CF8M  | 1    |
| 4    | Seat           | RTFE                | RTFE               | 2    |
| 5    | Stem           | ASTM A479 Type 316  | ASTM A351 Type 316 | 1    |
| 6    | Body Seal      | RTFE                | RTFE               | 1    |
| 7    | Spring Washer  | SS304               | SS304              | 1    |
| 12   | Thrust Washer  | RTFE                | RTFE               | 1    |
| 14   | Stem Packing   | RTFE                | RTFE               | 2    |
| 15   | Packing Gland  | SS304               | SS304              | 1    |
| 25   | Handle         | SS304               | SS304              | 1    |
| 26   | Nut            | SS304               | SS304              | 1    |
| 28   | Handle Sleeve  | Vinyl               | Vinyl              | 1    |
| 29   | Locking Device | SS304               | SS304              | 1    |



## PRESSURE/TEMPERATURE

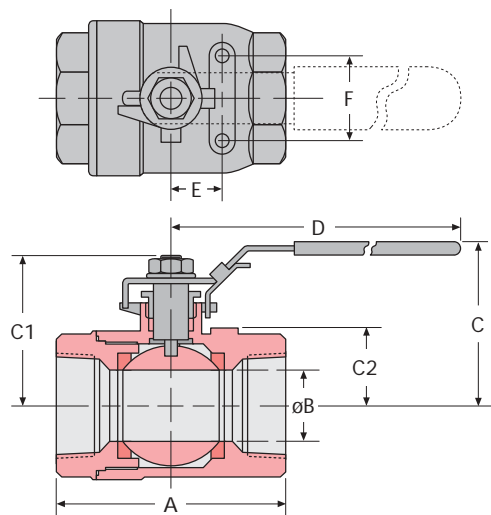


**NOTE:** S90 Carbon Steel Temperature Range limited to -20°F to +450°F.

**STEAM RATING:** 150 psi WSP.

## DIMENSIONS AND WEIGHTS

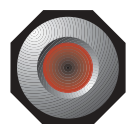
| Size<br>ins<br>mm | A             | ØB<br>PORT   | C             | C1           | C2           | D             | E             | F            | C <sub>V</sub> | Torque Weight |              |
|-------------------|---------------|--------------|---------------|--------------|--------------|---------------|---------------|--------------|----------------|---------------|--------------|
|                   |               |              |               |              |              |               |               |              |                | lbs-in<br>Nm  | lbs<br>kg    |
| 1/4<br>7.5        | 2.17<br>55.1  | 0.45<br>11.4 | 2.21<br>56.1  | 1.87<br>47.5 | .925<br>23.5 | 4.33<br>110   | 0.49<br>12.5  | 1.12<br>28.5 | 15             | 60<br>6.8     | 0.55<br>0.25 |
| 3/8<br>10         | 2.17<br>55.1  | 0.49<br>12.4 | 2.21<br>56.1  | 1.87<br>47.5 | .925<br>23.5 | 4.33<br>110   | 0.49<br>12.5  | 1.12<br>28.5 | 15             | 60<br>6.8     | 0.55<br>0.25 |
| 1/2<br>15         | 2.56<br>65    | 0.59<br>15   | 2.28<br>57.9  | 1.95<br>49.5 | 1.01<br>25.5 | 4.33<br>110   | 0.49<br>12.5  | 1.12<br>28.5 | 15             | 65<br>7.3     | 0.65<br>0.3  |
| 3/4<br>20         | 2.80<br>71.1  | 0.59<br>15   | 2.28<br>57.9  | 1.69<br>43   | 1.10<br>28   | 4.33<br>110   | 0.827<br>21   | 1.37<br>34.8 | 40             | 65<br>7.3     | 1.10<br>0.5  |
| 1<br>25           | 3.23<br>82    | 0.79<br>20.1 | 2.64<br>67.1  | 2.07<br>52.5 | 1.38<br>35   | 5.51<br>140   | 0.89<br>22.6  | 1.37<br>34.8 | 70             | 130<br>14.7   | 2.00<br>0.9  |
| 1 1/4<br>32.5     | 3.62<br>91.9  | 0.98<br>24.9 | 2.91<br>73.9  | 2.72<br>69   | 1.54<br>39   | 5.51<br>140   | 0.925<br>23.5 | 1.50<br>38.1 | 120            | 210<br>23.7   | 3.00<br>1.4  |
| 1 1/2<br>40       | 4.06<br>103.1 | 1.26<br>32   | 3.35<br>85.1  | 2.85<br>72.5 | 1.87<br>47.5 | 6.89<br>175   | 0.925<br>23.5 | 1.50<br>38.1 | 200            | 260<br>29.4   | 4.25<br>1.9  |
| 2<br>50           | 4.65<br>118.1 | 1.50<br>38.1 | 3.64<br>92.5  | 3.15<br>80   | 2.17<br>55   | 7.68<br>195.1 | 1.34<br>34.0  | 1.50<br>38.1 | 340            | 315<br>35.6   | 6.75<br>3.1  |
| 2 1/2<br>65       | 5.39<br>136.9 | 2.00<br>50.8 | 3.98<br>101.1 | 3.80<br>96.5 | 2.46<br>62.5 | 7.68<br>195.1 | 1.38<br>35.1  | 2.205<br>56  | 400            | 425<br>48     | 9.50<br>4.3  |
| 3<br>80           | 6.20<br>157.5 | 2.56<br>65   | 5.12<br>130.1 | 5.04<br>128  | 3.07<br>78   | 10.04<br>255  | 1.38<br>35.1  | 2.205<br>56  | 675            | 530<br>59.9   | 16.5<br>7.5  |



All Series S70/S90 valves comply with MSS-SP 72.

All valves are tested in accordance with MSS-SP 72.

Vacuum Service to 29 inches Hg.



# Flow-Tek

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