



# SERIES R701-1F

Two-Piece Ball Valve



## INTRODUCTION

The Series R701 is a two-piece full bore ball valve designed for applications requiring fire safety and reliability. It features a seal-welded construction without the use of body gasket for enhanced durability and structural integrity. Certified to meet API 607 7th Edition fire-safe standards, the valve includes a blowout-proof stem and anti-static design for added safety. Equipped with carbon-reinforced seats, the R701 is ideal for fire-critical environments such as oil and natural gas applications, ensuring dependable performance and robust functionality.

## TECHNICAL SUMMARY

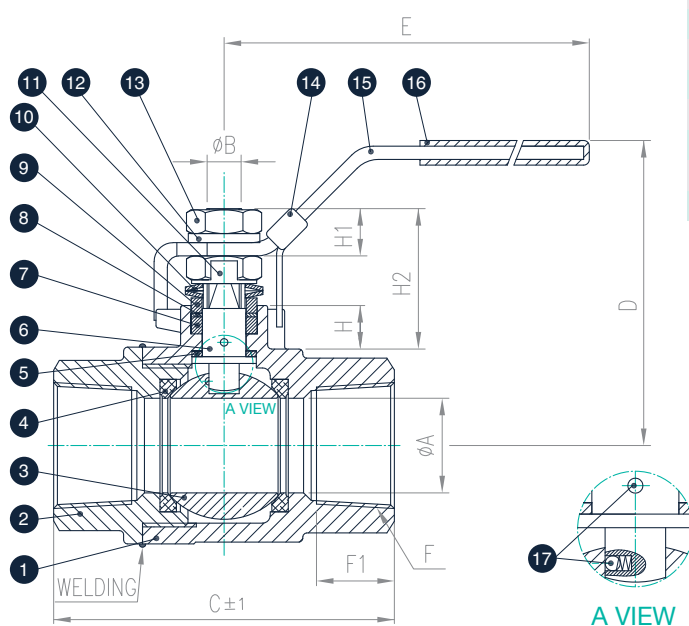
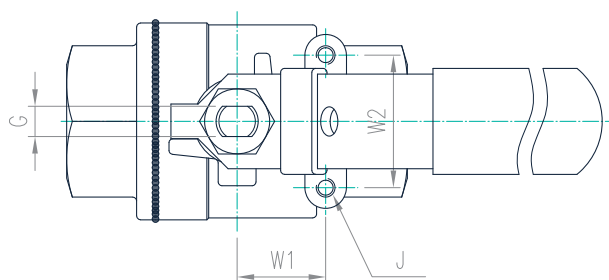
|                                  |                                                                 |                 |                               |
|----------------------------------|-----------------------------------------------------------------|-----------------|-------------------------------|
| SIZE RANGE                       | Full port                                                       | 1/4" ~ 4"       |                               |
|                                  | Reduced port                                                    | 1/2" ~ 4"       |                               |
| PRESSURE RATING                  | Full port                                                       | 1/4" ~ 1"       | : 2000psi / Class 800 / PN100 |
|                                  |                                                                 | 1-1/4" ~ 1-1/2" | : 1500psi / Class 600 / PN100 |
|                                  |                                                                 | 2" ~ 4"         | : 1000psi / Class 400 / PN63  |
|                                  | Reduced port                                                    | 1/2" ~ 2-1/2"   | : 1500psi / Class 600 / PN100 |
|                                  |                                                                 | 3" ~ 4"         | : 1000psi / Class 400 / PN63  |
| END CONNECTIONS                  | Threaded, Butt weld, Socket weld, Flanged, Tube (ISO) Butt weld |                 |                               |
| VALVE TYPE                       | Full Bore                                                       |                 |                               |
| BODY & END CAP MATERIAL ( ASTM ) | CF8M, CF3M, CF8, CF3, WCB                                       |                 |                               |
| BODY & END CAP MATERIAL ( EN )   | 1.4408, 1.4409, 1.4308, 1.4309, 1.0619                          |                 |                               |
| SEAT MATERIAL                    | PTFE, RTFE, CTFE, TFM1600, MG1241, STFE                         |                 |                               |
| HANDLE TYPE                      | Flat                                                            |                 |                               |
| V-PORT OPTION                    | N/A                                                             |                 |                               |
| OPERATION                        | Pneumatic or electric actuated                                  |                 |                               |

## STANDARD OF COMPLIANCE

|                             |                         |
|-----------------------------|-------------------------|
| MATERIAL CERTIFICATION      | EN 10204-3.1            |
| DESIGN                      | ASME B16.34             |
| THREADED END CONNECTIONS    | NPT ASME B1.20.1        |
|                             | BSPP ISO 228-1          |
|                             | BSPT ISO 7-1            |
|                             | DIN 2999                |
| SOCKET WELD END CONNECTIONS | ASME B16.11             |
| BUTT WELD END CONNECTIONS   | ASME B16.25             |
| FLANGED END CONNECTIONS     | EN 1092-1 PN16 / PN40   |
|                             | ASME B16.5 Class 150    |
| PRESSURE TESTING            | API 598                 |
| MOUNTING PAD                | ISO 5211                |
| FIRE SAFE                   | API 607 6 th Edition    |
| MARKING                     | ISO 5209                |
| CE APPROVAL                 | 2014 / 68 / EU Module H |
| QUALITY ASSURANCE           | ISO 9001:2015           |

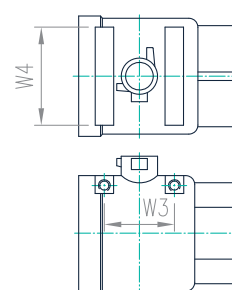
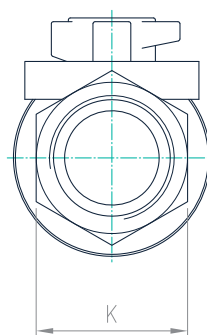
## CONSTRUCTION-BILL OF MATERIAL

### SERIES R701-1F 1/4" ~ 1-1/2", 2", 3" Full port



| NO. | Parts              | Material                                               | Qty |
|-----|--------------------|--------------------------------------------------------|-----|
| 1   | Body               | CF8M                                                   | 1   |
| 2   | End cap            | CF8M                                                   | 1   |
| 3   | Ball               | 1/2", 3/4", 1" : SS316<br>1/4", 3/8", 1-1/4"~3" : CF8M | 1   |
| 4   | Seat               | 25% CARBON+PTFE                                        | 2   |
| 5   | Thrust Washer      | 50% S.S.                                               | 1   |
| 6   | Stem               | SS316                                                  | 1   |
| 7   | Stem Packing       | GRAPHITE                                               | 1   |
| 8   | Stem Packing       | RTFE                                                   | 1   |
| 9   | Follower           | SS304                                                  | 1   |
| 10  | Belleville Washer  | SS301                                                  | 2   |
| 11  | Tab Washer         | SS304                                                  | 1   |
| 12  | Stem Washer        | SS304                                                  | *   |
| 13  | Stem Nut           | SS304                                                  | 2   |
| 14  | Locking Device     | SS304                                                  | 1   |
| 15  | Handle             | SS304                                                  | 1   |
| 16  | Handle Cover       | VINYL                                                  | 1   |
| 17  | Anti-Static Device | SS316                                                  | 2   |

1/4" ~ 1/2" (0pcs) , 3/4" ~ 3" (1pcs)



Top Mounting Location For 3"

## DIMENSIONS(mm)

| SIZE   | øA   | B   | C    | D     | E   | F1   | F                | J         | G   | H    | H1   | H2   | W1   | W2   | W3 | W4   | K   | WEIGHT<br>kg |
|--------|------|-----|------|-------|-----|------|------------------|-----------|-----|------|------|------|------|------|----|------|-----|--------------|
| 1/4"   | 11.5 | 9.5 | 65   | 69.5  | 130 | 16   | 1/4" PF-NPT-PT   | 10-24UNC  | 6.5 | 10   | 5.8  | 25.1 | 12.7 | 28.5 | -  | -    | 26  | 0.47         |
| 3/8"   | 12.5 | 9.5 | 65   | 69.5  | 130 | 16   | 3/8" PF-NPT-PT   | 10-24UNC  | 6.5 | 10   | 5.8  | 25.1 | 12.7 | 28.5 | -  | -    | 26  | 0.45         |
| 1/2"   | 15   | 9.5 | 65   | 69.5  | 130 | 16   | 1/2" PF-NPT-PT   | 10-24UNC  | 6.5 | 10   | 5.8  | 25.1 | 12.7 | 28.5 | -  | -    | 26  | 0.41         |
| 3/4"   | 20   | 9.5 | 74.6 | 72.5  | 130 | 17   | 3/4" PF-NPT-PT   | 10-24UNC  | 6.5 | 11   | 10.2 | 32.1 | 22.4 | 35   | -  | -    | 32  | 0.56         |
| 1"     | 25   | 11  | 88   | 78.8  | 165 | 20.4 | 1" PF-NPT-PT     | 10-24UNC  | 8   | 11.5 | 10.8 | 36.8 | 23.4 | 35   | -  | -    | 40  | 1            |
| 1-1/4" | 32   | 11  | 102  | 84.3  | 165 | 22   | 1-1/4" PF-NPT-PT | 1/4-20UNC | 8   | 11.5 | 10.8 | 33.9 | 25.4 | 38.1 | -  | -    | 49  | 1.4          |
| 1-1/2" | 38   | 14  | 110  | 100.8 | 190 | 22.5 | 1-1/2" PF-NPT-PT | 1/4-20UNC | 9.7 | 12   | 12.3 | 41.1 | 25.4 | 38.1 | -  | -    | 56  | 2.02         |
| 2"     | 50   | 14  | 125  | 108.6 | 190 | 26   | 2" PF-NPT-PT     | 1/4-20UNC | 9.7 | 9.5  | 12.3 | 38.6 | 25.4 | 38.1 | -  | -    | 70  | 3.13         |
| 3"     | 80   | 19  | 178  | 152   | 250 | 34   | 3" PF-NPT-PT     | 1/4-20UNC | 12  | 10.5 | 22.3 | 51.3 | -    | -    | 70 | 70.5 | 104 | 9.68         |

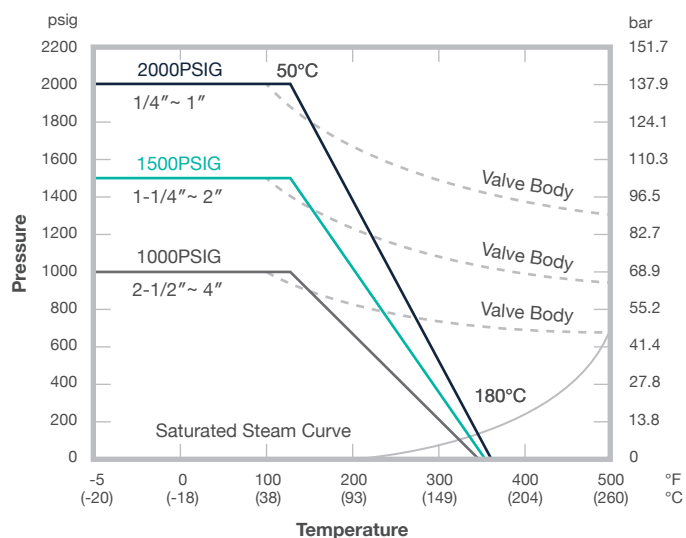
## TECHNICAL DATA | Breakaway torque / Cv and Kv values / Weight

| Size   | Torque (N.m) |    | Torque (lbs.in) |     | Cv values |     | Kv values (M <sup>3</sup> /h) | Weight (Kg)     |                |
|--------|--------------|----|-----------------|-----|-----------|-----|-------------------------------|-----------------|----------------|
|        | F            | R  | F               | R   | F         | R   | F                             | F               | R              |
| 1/4"   | 8            | -  | 69              | -   | 8         | -   | 7                             | 0.89            | -              |
| 3/8"   | 8            | 8  | 69              | 69  | 8         | 8   | 7                             | 0.89            | 0.89           |
| 1/2"   | 8            | 8  | 69              | 69  | 15        | 15  | 13                            | 0.84            | 0.84           |
| 3/4"   | 10           | 10 | 92              | 92  | 34        | 34  | 30                            | 1.35            | 0.85           |
| 1"     | 16           | 16 | 138             | 138 | 56        | 56  | 48                            | 2.13            | 1.41           |
| 1-1/4" | 23           | 23 | 207             | 207 | 85        | 85  | 73                            | 2.76            | 2.17           |
| 1-1/2" | 33           | 33 | 288             | 288 | 125       | 125 | 108                           | 4.42            | 2.87           |
| 2"     | 34           | 34 | 301             | 301 | 250       | 250 | 216                           | # 6.93 / * 6.25 | 4.49           |
| 2-1/2" | 62           | 62 | 553             | 553 | 320       | 320 | 277                           | # 12.12 / * 11  | # 6.94         |
| 3"     | 88           | 88 | 780             | 780 | 580       | 580 | 502                           | # 16 / * 14.78  | # 12.64 / * 11 |
| 4"     | 114          | -  | 1010            | -   | 1020      | -   | 882                           | # 25 / * 23.3   | # 16 / * 14.78 |

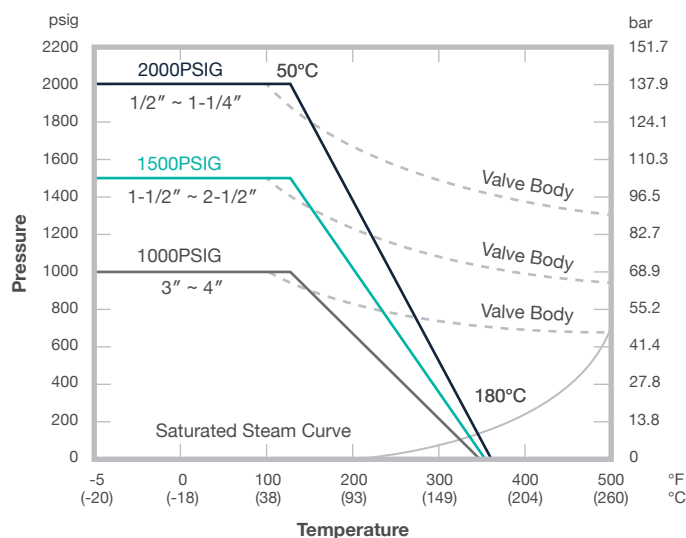
# Round shape    Flower shape    F : Full Port    R : Reduced Port

## TECHNICAL DATA | Pressure- Temperature diagram

**1/4" ~ 4" Full port**  
Seat material : PTFE / RTFE



**1/2" ~ 4" Reduced port**  
Seat material : PTFE / RTFE





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Established in 1992  
TAWD has dedicated over 30 years to  
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## OPTIONAL ACCESSORIES

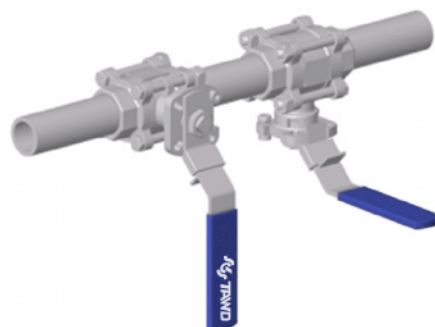
### | Handle options



Oval handle

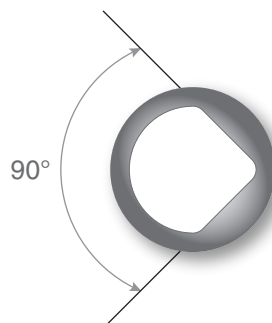
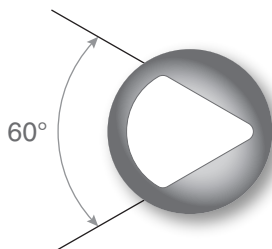
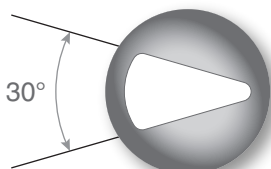


Economical stem extension



Spring return sliding lock

### | V Port ball



### | TSM

