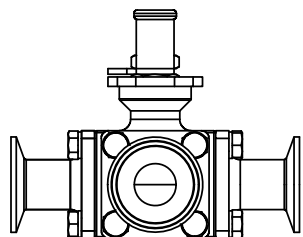
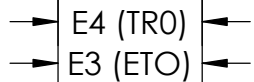
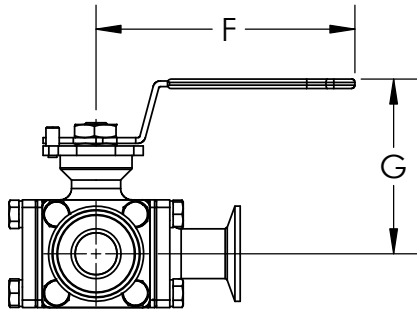
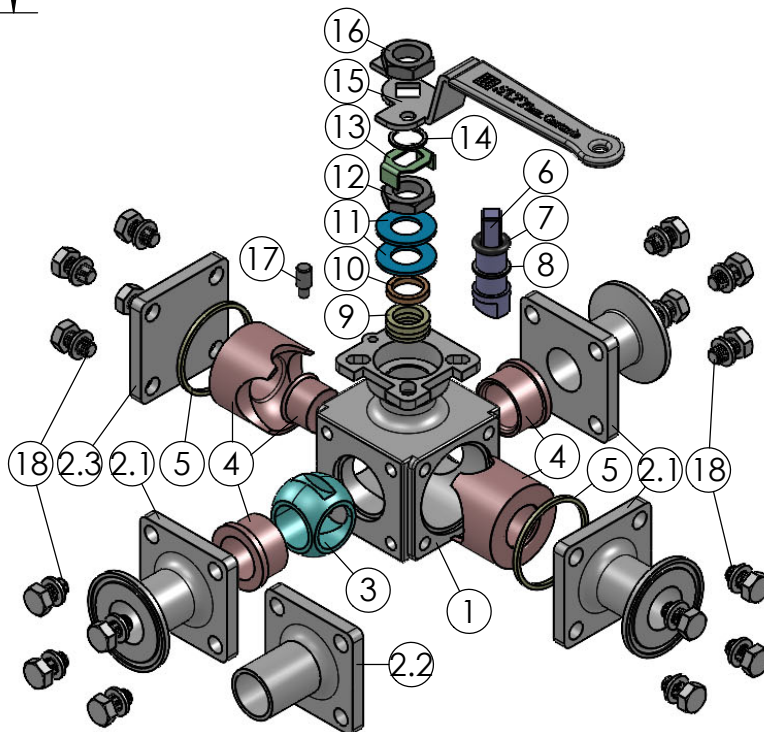
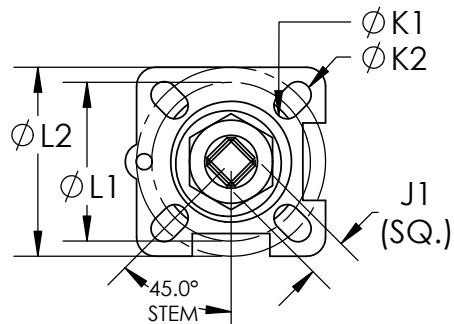
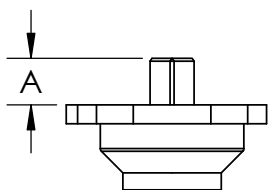


\*AT FULL DIFFERENTIAL PRESSURE FOR CLEAN FLUIDS WITH TFM1600 SEATS

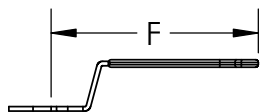
| SIZE   | A         | øD        | E1          | E2          | E3         | E4         | F           | G          | J1 (SQ.)  | øK1       | øK2       | øL1        | øL2        | W           | ISO 5211 | WEIGHT (lbs) | Cv   | TORQUE* (in-lbf) |
|--------|-----------|-----------|-------------|-------------|------------|------------|-------------|------------|-----------|-----------|-----------|------------|------------|-------------|----------|--------------|------|------------------|
| 1/2"   | 0.35 (9)  | 0.37 (10) | 4.65 (118)  | 4.65 (118)  | 2.32 (59)  | 2.32 (59)  | 4.76 (121)  | 2.93 (75)  | 0.35 (9)  | 0.26 (6)  | 0.26 (6)  | 1.42 (36)  | 1.65 (42)  | 0.065 (1.7) | F03-F04  | 2            | 9    | 79               |
| 3/4"   | 0.35 (9)  | 0.62 (16) | 5.00 (127)  | 5.00 (127)  | 2.52 (64)  | 2.52 (64)  | 4.76 (121)  | 3.21 (82)  | 0.35 (9)  | 0.26 (6)  | 0.26 (6)  | 1.42 (36)  | 1.65 (42)  | 0.065 (1.7) | F03-F04  | 3            | 26   | 85               |
| 1"     | 0.43 (11) | 0.87 (22) | 6.01 (153)  | 6.01 (153)  | 3.01 (77)  | 3.01 (77)  | 5.39 (137)  | 3.46 (88)  | 0.43 (11) | 0.28 (7)  | 0.28 (7)  | 1.65 (42)  | 1.97 (50)  | 0.065 (1.7) | F04-F05  | 6            | 61   | 110              |
| 1-1/2" | 0.55 (14) | 1.38 (35) | 6.89 (175)  | 6.89 (175)  | 3.46 (88)  | 3.46 (88)  | 7.17 (182)  | 4.07 (104) | 0.55 (14) | 0.30 (8)  | 0.37 (10) | 1.97 (50)  | 2.76 (70)  | 0.065 (1.7) | F05-F07  | 11           | 193  | 290              |
| 2"     | 0.55 (14) | 1.87 (48) | 7.48 (190)  | 7.48 (190)  | 3.74 (95)  | 3.74 (95)  | 7.17 (182)  | 4.42 (112) | 0.55 (14) | 0.30 (8)  | 0.37 (10) | 1.97 (50)  | 2.76 (70)  | 0.065 (1.7) | F05-F07  | 16           | 432  | 425              |
| 2-1/2" | 0.67 (17) | 2.37 (60) | 8.98 (228)  | 8.98 (228)  | 4.49 (114) | 4.49 (114) | 14.57 (370) | 4.15 (106) | 0.67 (17) | 0.37 (10) | 0.43 (11) | 2.76 (70)  | 4.02 (102) | 0.065 (1.7) | F07-F10  | 21           | 728  | 1085             |
| 3"     | 0.91 (23) | 2.87 (73) | 10.26 (261) | 10.26 (261) | 5.13 (131) | 5.13 (131) | 15.75 (400) | 5.08 (129) | 0.87 (22) | 0.43 (11) | 0.55 (14) | 4.02 (102) | 4.92 (125) | 0.065 (1.7) | F10-F12  | 40           | 1125 | 1597             |
| 4"     | 0.91 (23) | 3.83 (97) | 11.42 (290) | 11.42 (290) | 5.71 (145) | 5.71 (145) | 15.75 (400) | 5.28 (134) | 0.87 (22) | 0.43 (11) | 0.55 (14) | 4.02 (102) | 4.92 (125) | 0.065 (1.7) | F10-F12  | 45           | 1986 | 1780             |



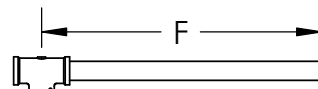
**TOPWORKS**



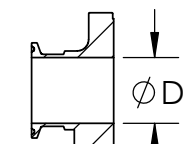
**SIZES 1/2" - 2" WITH LEVER HANDLE:**



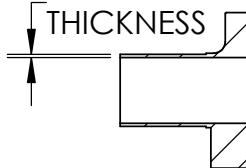
**SIZES 2-1/2" - 4" WITH PIPE HANDLE:**



W = WALL THICKNESS



TRI-CLAMP END



EXTENDED TUBE-OD END

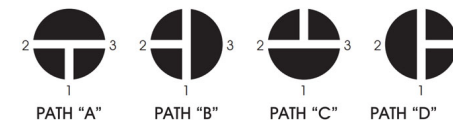
**PRODUCT INFORMATION:**

1. POSITIVE SHUT-OFF ON ANY OF THE THREE PORTS
2. BLOW OUT PROOF STEM
3. LOCKING DEVICE
4. FULL CAVITY FILLED SEATS
5. INTERNAL SURFACE FINISH OF 20 Ra OR BETTER
4. COMPLETE VALVE AUTOMATION

**APPLICABLE STANDARDS:**

1. ASME B16.34: DESIGN REQUIREMENTS
2. API 598: INSPECTION AND TESTING
3. ISO 5211: MOUNTING
4. USP CLASS VI: CONFIRMATION OF COMPLIANCE (TFM1600/PTFE MATERIAL)

**FLOW PATTERN:**



| ITEM NO. | DESCRIPTION        | MATERIALS           | QTY. |
|----------|--------------------|---------------------|------|
| 1        | BODY               | A351-CF8M           | 1    |
| 2.1      | END (TRI-CLAMP)    | A351-CF8M           | 3    |
| 2.2      | END (ETO)          | A351-CF3M           | 3    |
| 2.3      | BLIND END          | A351-CF8M           | 1    |
| 3        | BALL               | A351-CF3M           | 1    |
| 4        | SEAT               | TFM1600             | 5    |
| 5        | BODY SEAL          | PTFE                | 2    |
| 6        | STEM               | AISI 316L           | 1    |
| 7        | O-RING             | VITON               | 1    |
| 8        | STEM THRUST WASHER | PTFE                | 1    |
| 9        | STEM SEAL          | PTFE                | 3    |
| 10       | GLAND FOLLOWER     | 304 STAINLESS STEEL | 1    |
| 11       | BELLEVILLE WASHER  | 301 STAINLESS STEEL | 2    |
| 12       | STEM NUT           | 304 STAINLESS STEEL | 1    |
| 13       | LOCK TAB           | 304 STAINLESS STEEL | 1    |
| 14       | SPACER             | 304 STAINLESS STEEL | 1    |
| 15       | HANDLE             | 304 STAINLESS STEEL | 1    |
| 16       | HANDLE NUT         | 304 STAINLESS STEEL | 1    |
| 17       | STOP PIN           | AISI 316            | 1    |
| 18       | BODY BOLTS         | 304 STAINLESS STEEL | 16   |

DRAWN BY C.L.  
 CHECKED BY K.C.  
 APPROVED BY J.S.  
(FOR REF ONLY IF NOT APPROVED)

DATE 08/20/2018  
 DATE 04/23/2026  
 DATE 04/23/2026

PROJECTION THIRD ANGLE

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**OSVF FLOW CONTROLS**

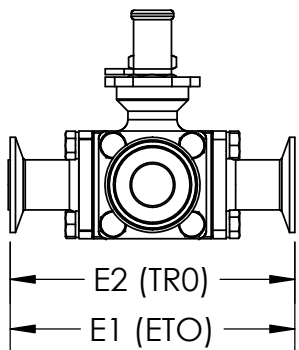
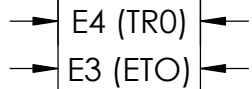
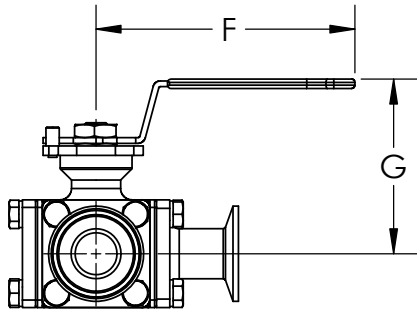
5595 Fresca Drive • La Palma, CA 90623 • 1.800.783.7836  
 www.SVF.net • Sales@SVF.net

DESCRIPTION:  
 1/2" - 4" SMC9 THREE-WAY MULTI-PORTED BALL VALVE, EXTENDED TUBE O.D. ENDS/ TRI-CLAMP ENDS, T PORT, S/S

UNITS: INCH (MILLIMETERS)    DATE: 04/23/2026    REV: B

\*AT FULL DIFFERENTIAL PRESSURE FOR CLEAN FLUIDS WITH TFM1600 SEATS

| SIZE   | A         | øD        | E1          | E2          | E3         | E4         | F           | G          | J1 (SQ.)  | øK1       | øK2       | øL1        | øL2        | W           | ISO 5211 | WEIGHT (lbs) | Cv   | TORQUE* (in-lbf) |
|--------|-----------|-----------|-------------|-------------|------------|------------|-------------|------------|-----------|-----------|-----------|------------|------------|-------------|----------|--------------|------|------------------|
| 1/2"   | 0.35 (9)  | 0.37 (10) | 4.65 (118)  | 4.65 (118)  | 2.32 (59)  | 2.32 (59)  | 4.76 (121)  | 2.93 (75)  | 0.35 (9)  | 0.26 (6)  | 0.26 (6)  | 1.42 (36)  | 1.65 (42)  | 0.065 (1.7) | F03-F04  | 2            | 9    | 79               |
| 3/4"   | 0.35 (9)  | 0.62 (16) | 5.00 (127)  | 5.00 (127)  | 2.52 (64)  | 2.52 (64)  | 4.76 (121)  | 3.21 (82)  | 0.35 (9)  | 0.26 (6)  | 0.26 (6)  | 1.42 (36)  | 1.65 (42)  | 0.065 (1.7) | F03-F04  | 3            | 26   | 85               |
| 1"     | 0.43 (11) | 0.87 (22) | 6.01 (153)  | 6.01 (153)  | 3.01 (77)  | 3.01 (77)  | 5.39 (137)  | 3.46 (88)  | 0.43 (11) | 0.28 (7)  | 0.28 (7)  | 1.65 (42)  | 1.97 (50)  | 0.065 (1.7) | F04-F05  | 6            | 61   | 110              |
| 1-1/2" | 0.55 (14) | 1.38 (35) | 6.89 (175)  | 6.89 (175)  | 3.46 (88)  | 3.46 (88)  | 7.17 (182)  | 4.07 (104) | 0.55 (14) | 0.30 (8)  | 0.37 (10) | 1.97 (50)  | 2.76 (70)  | 0.065 (1.7) | F05-F07  | 11           | 193  | 290              |
| 2"     | 0.55 (14) | 1.87 (48) | 7.48 (190)  | 7.48 (190)  | 3.74 (95)  | 3.74 (95)  | 7.17 (182)  | 4.42 (112) | 0.55 (14) | 0.30 (8)  | 0.37 (10) | 1.97 (50)  | 2.76 (70)  | 0.065 (1.7) | F05-F07  | 16           | 432  | 425              |
| 2-1/2" | 0.67 (17) | 2.37 (60) | 8.98 (228)  | 8.98 (228)  | 4.49 (114) | 4.49 (114) | 14.57 (370) | 4.15 (106) | 0.67 (17) | 0.37 (10) | 0.43 (11) | 2.76 (70)  | 4.02 (102) | 0.065 (1.7) | F07-F10  | 21           | 728  | 1085             |
| 3"     | 0.91 (23) | 2.87 (73) | 10.26 (261) | 10.26 (261) | 5.13 (131) | 5.13 (131) | 15.75 (400) | 5.08 (129) | 0.87 (22) | 0.43 (11) | 0.55 (14) | 4.02 (102) | 4.92 (125) | 0.065 (1.7) | F10-F12  | 40           | 1125 | 1597             |
| 4"     | 0.91 (23) | 3.83 (97) | 11.42 (290) | 11.42 (290) | 5.71 (145) | 5.71 (145) | 15.75 (400) | 5.28 (134) | 0.87 (22) | 0.43 (11) | 0.55 (14) | 4.02 (102) | 4.92 (125) | 0.065 (1.7) | F10-F12  | 45           | 1986 | 1780             |



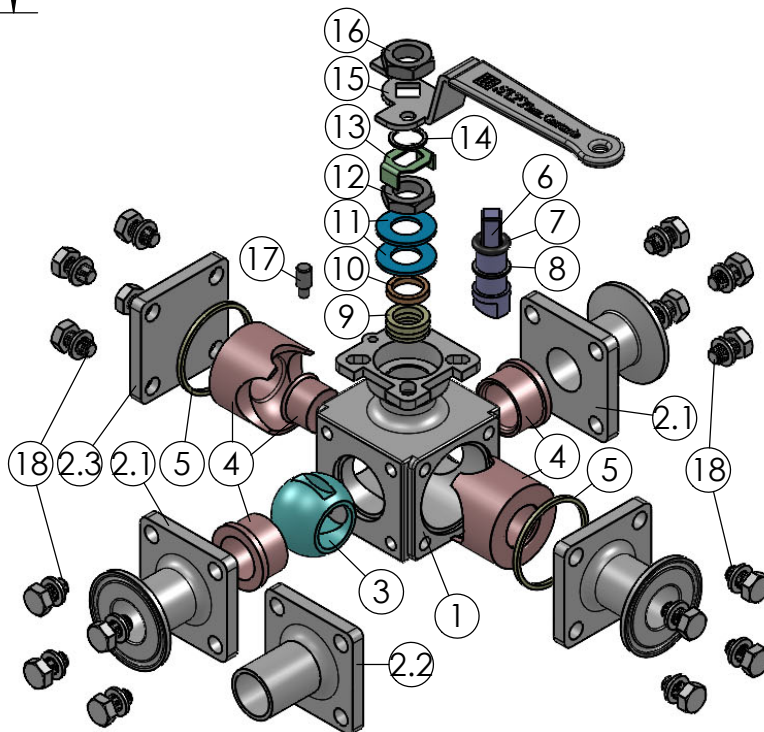
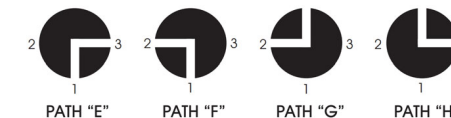
**PRODUCT INFORMATION:**

1. POSITIVE SHUT-OFF ON ANY OF THE THREE PORTS
2. BLOW OUT PROOF STEM
3. LOCKING DEVICE
4. FULL CAVITY FILLED SEATS
5. INTERNAL SURFACE FINISH OF 20 Ra OR BETTER
4. COMPLETE VALVE AUTOMATION

**APPLICABLE STANDARDS:**

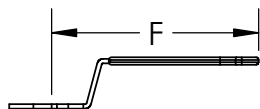
1. ASME B16.34: DESIGN REQUIREMENTS
2. API 598: INSPECTION AND TESTING
3. ISO 5211: MOUNTING
4. USP CLASS VI: CONFIRMATION OF COMPLIANCE (TFM1600/PTFE MATERIAL)

**FLOW PATTERN:**

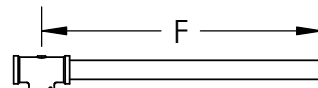


| ITEM NO. | DESCRIPTION        | MATERIALS           | QTY. |
|----------|--------------------|---------------------|------|
| 1        | BODY               | A351-CF8M           | 1    |
| 2.1      | END (TRI-CLAMP)    | A351-CF8M           | 3    |
| 2.2      | END (ETO)          | A351-CF3M           | 3    |
| 2.3      | BLIND END          | A351-CF8M           | 1    |
| 3        | BALL               | A351-CF3M           | 1    |
| 4        | SEAT               | TFM1600             | 5    |
| 5        | BODY SEAL          | PTFE                | 2    |
| 6        | STEM               | AISI 316L           | 1    |
| 7        | O-RING             | VITON               | 1    |
| 8        | STEM THRUST WASHER | PTFE                | 1    |
| 9        | STEM SEAL          | PTFE                | 3    |
| 10       | GLAND FOLLOWER     | 304 STAINLESS STEEL | 1    |
| 11       | BELLEVILLE WASHER  | 301 STAINLESS STEEL | 2    |
| 12       | STEM NUT           | 304 STAINLESS STEEL | 1    |
| 13       | LOCK TAB           | 304 STAINLESS STEEL | 1    |
| 14       | SPACER             | 304 STAINLESS STEEL | 1    |
| 15       | HANDLE             | 304 STAINLESS STEEL | 1    |
| 16       | HANDLE NUT         | 304 STAINLESS STEEL | 1    |
| 17       | STOP PIN           | AISI 316            | 1    |
| 18       | BODY BOLTS         | 304 STAINLESS STEEL | 16   |

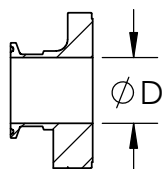
SIZES 1/2" - 2" WITH LEVER HANDLE:



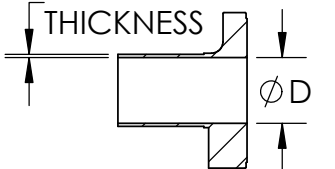
SIZES 2-1/2" - 4" WITH PIPE HANDLE:



W = WALL THICKNESS

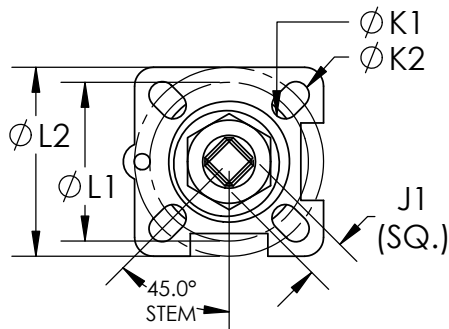
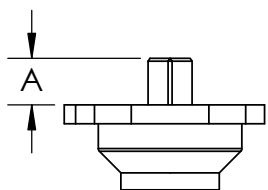


TRI-CLAMP END



EXTENDED TUBE-OD END

**TOPWORKS**



DRAWN BY C.L.  
 CHECKED BY K.C.  
 APPROVED BY J.S.  
(FOR REF. ONLY IF NOT APPROVED)

DATE 08/20/2018  
 DATE 04/23/2026  
 DATE 04/23/2026

**OSVF FLOW CONTROLS**

5595 Fresca Drive • La Palma, CA 90623 • 1.800.783.7836  
 www.OSVF.net • Sales@OSVF.net

DESCRIPTION:  
 1/2" - 4" SMC9 THREE-WAY MULTI-PORTED BALL VALVE,  
 EXTENDED TUBE O.D. ENDS/ TRI-CLAMP ENDS, L PORT, S/S

UNITS: INCH (MILLIMETERS) DATE: 04/23/2026 REV: B