

# SBM-PTV Series 100SP™ 3PC Ball Valve

## SS316 CF8M/A216 WCB Body Material

Series 100SP™ Ball valve provide the 3-piece design with the highest flexibility in selection of end connections and seat materials. The 3-piece design features in-line and out-of-line maintenance as the center section can be easily accessed without disturbing the pipe connections. Integrally ISO 5211 cast mounting pads ensure alignment and convenience for ease automation with the bracket and adaptor. All of these valves are suitable for applications requiring high flow capacity and tight shutoff, where reliability, functionality and interchangeability are essential for the product quality at an economical price. Available ends: Female Threaded (NPT), Socket Welded (SW) and Butt Weld (BT).

### Features:

- A) **Blow-out** proof stem, Fire-safe design.
- B) Built in **ISO 5211** direct mounting pad for easy automation
- C) **Pressure balance** hole in ball slot
- D) **Various** ends available
- E) Handle with **locking device**
- F) **Full** bore construction
- G) **RPTFE Seat** as standard
- H) **Investment** casting body
- I) **Adjustable** packing
- J) **Disassembly** is very convenient
- K) **Standard body** material SS316 CF8M and A216 WCB, other materials upon request

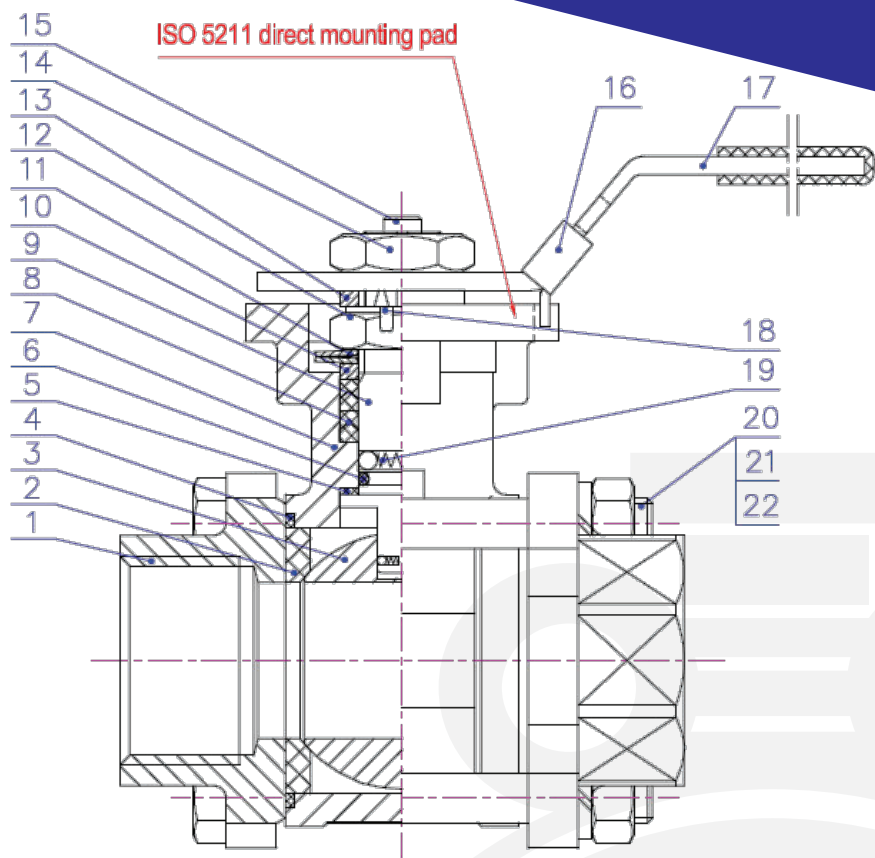


### Technical Data

1. Size range: NPS 1/4"~4"
2. Pressure ratings: 1000 PSI Non-Shock 150 PSI WSP
3. Working temperature: -29ℳ ~ +200ℳ
4. Suitable Medium: Water, Oil, Gas, Steam. etc
5. Body Material: A351 CF8M / A216 WCB
7. Ball Material: A276 SS316
7. Stem Material: A276 SS316
8. Seat: RPTFE / PTFE

### Performance Standard

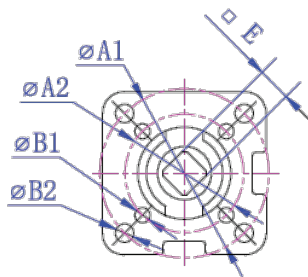
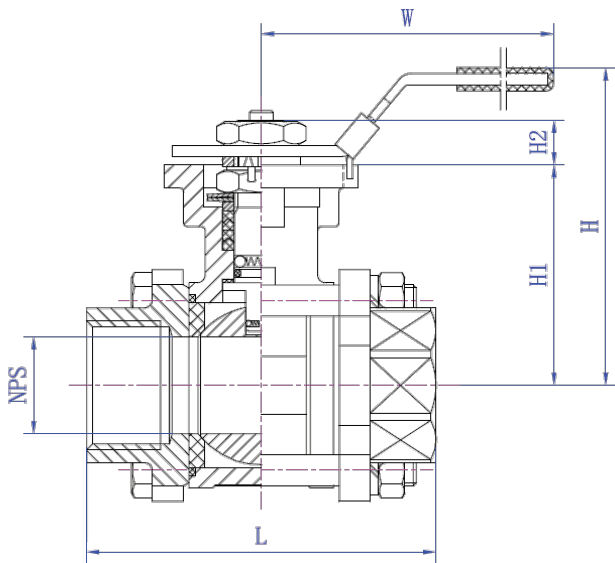
1. Design & Manufacture standard as to: ASME B16.34  
MSS SP-110
2. Face to Face dimension standard as to: MFR-STD
3. Threaded dimension conforms as to: NPT :ASME B1.20.1  
SW :ASME B16.11  
BW :ASME B16.25
4. Testing and Inspection as to: API 598 / MSS SP-110  
/ EN 12266
5. Pressure-temperature conforms as to: ASME B16.34
6. Anti- Corrosion as per NACE MR-0175(2002) requirement



## Part List:

### Series 100SP™ Ball Valve Part List (SS316 CF8M/A216 WCB)

| No. | Part Name          | Material        | Standard               |
|-----|--------------------|-----------------|------------------------|
| 1.  | Bonnet             | CF8M            | ASTM A351              |
| 2.  | Seat               | RPTFE           | 25% Carbon filled PTFE |
| 3.  | Ball               | F316            | ASTM A182              |
| 4.  | Gasket             | RPTFE           | 25% Carbon filled PTFE |
| 5.  | Stem Gasket        | RPTFE           | 25% Carbon filled PTFE |
| 6.  | O-Ring             | EPDM            | BNS-D00040             |
| 7.  | Body               | CF8M / A216 WCB | ASTM A351 /A216 WCB    |
| 8.  | Packing            | RPTFE           | 25% Carbon filled PTFE |
| 9.  | Stem               | F316            | ASTM A182              |
| 10. | Packing Bushing    | SS316           | ASTM A276              |
| 11. | Butterfly Spring   | SS316           | ASTM A276              |
| 12. | Stem Nut           | SS304           | ASTM A276              |
| 13. | Packing Gland      | CF8M            | ASTM A351              |
| 14. | Locking Nut        | SS304           | A193 B8                |
| 15. | Stop Pin           | SS304           | ASTM A276              |
| 16. | Locking Device     | SS201           | ASTM A276              |
| 17. | Hand Lever         | SS201+PVC       | ASTM A276              |
| 18. | Anti Loosing Cap   | SS304           | ASTM A276              |
| 19. | Anti-Static Device | SS304           | ASTM A276              |
| 20. | Bolt               | SS304           | A193 B8                |
| 21. | Gasket             | SS304           | ASTM A276              |
| 22. | Nut                | SS304           | A194 8                 |

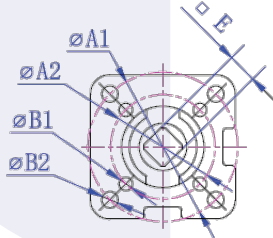
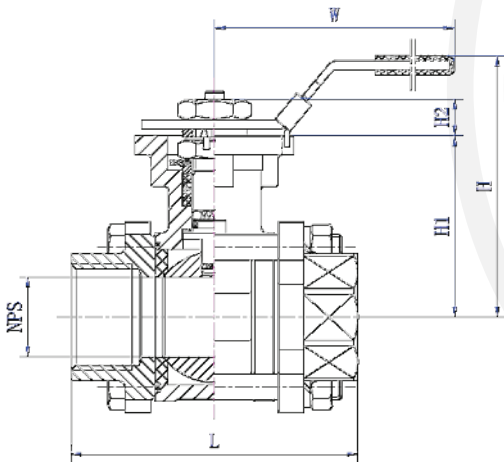


ISO 5211 Direct Mounting Pad

Series 100SP™ Ball Valve Thread NPT End Dimensions:

1. Threaded dimension conforms as to:  
NPT ASME B1.20.1

| NPS    | NPT    | d   | L   | H     | H1    | H2 | øE | W   | ΦA1 | ΦA2 | ΦB1 | ΦB2 | ISO5211 | Weight (Kg) | Torque (N*M) |
|--------|--------|-----|-----|-------|-------|----|----|-----|-----|-----|-----|-----|---------|-------------|--------------|
| 1/4"   | 1/4"   | 8   | 63  | 67    | 40    | 8  | 9  | 110 | 42  | 36  | 6   | 6   | F03/F04 | 0.35        | 4            |
| 3/8"   | 3/8"   | 10  | 63  | 67    | 40    | 8  | 9  | 110 | 42  | 36  | 6   | 6   | F03/F04 | 0.34        | 4            |
| 1/2"   | 1/2"   | 15  | 63  | 67    | 40    | 8  | 9  | 110 | 42  | 36  | 6   | 6   | F03/F04 | 0.42        | 5            |
| 3/4"   | 3/4"   | 20  | 70  | 71    | 44    | 8  | 9  | 110 | 42  | 36  | 6   | 6   | F03/F04 | 0.52        | 8            |
| 1"     | 1"     | 25  | 81  | 86    | 55    | 10 | 11 | 160 | 50  | 42  | 6   | 7   | F04/F05 | 0.72        | 12           |
| 1 1/4" | 1 1/4" | 32  | 95  | 91.5  | 60.5  | 10 | 11 | 160 | 50  | 42  | 6   | 7   | F04/F05 | 1.27        | 16           |
| 1 1/2" | 1 1/2" | 39  | 101 | 105.5 | 68.5  | 14 | 14 | 185 | 70  | 50  | 7   | 9   | F05/F07 | 1.49        | 39           |
| 2"     | 2"     | 48  | 125 | 112.5 | 75.5  | 14 | 14 | 185 | 70  | 50  | 7   | 9   | F05/F07 | 2.2         | 42           |
| 2 1/2" | 2 1/2" | 65  | 168 | 165   | 96    | 16 | 17 | 300 | 102 | 70  | 9   | 11  | F07/F10 | 4.86        | 59           |
| 3"     | 3"     | 79  | 187 | 175   | 106.5 | 16 | 17 | 305 | 102 | 70  | 9   | 11  | F07/F10 | 6.76        | 85           |
| 4"     | 4"     | 100 | 252 | 195   | 120   | 16 | 17 | 350 | 102 | 70  | 9   | 11  | F07/F10 | 13.76       | 130          |



ISO 5211 Direct Mounting Pad

Series 100SP™ Ball Valve Socket Weld End Dimensions:

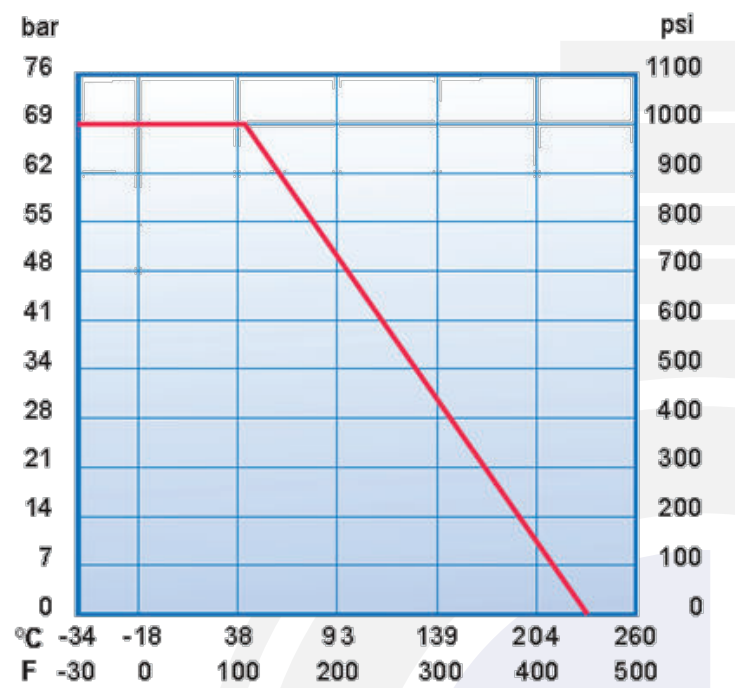
Socket Weld dimension conforms as to:  
ASME B16.11

| NPS    | S     | A    | d   | L   | H     | H1    | H2 | cE | W   | ΦA1 | ΦA2 | ΦB1 | ΦB2 | ISO5211  | Weight (Kg) | Torque (N*M) |
|--------|-------|------|-----|-----|-------|-------|----|----|-----|-----|-----|-----|-----|----------|-------------|--------------|
| 1/4"   | 14.1  | 9.6  | 8   | 63  | 67    | 40    | 8  | 9  | 110 | 42  | 36  | 6   | 6   | F03/F04  | 0.35        | 4            |
| 3/8"   | 17.6  | 9.6  | 10  | 63  | 67    | 40    | 8  | 9  | 110 | 42  | 36  | 6   | 6   | F03/F04  | 0.34        | 4            |
| 1/2"   | 21.8  | 9.6  | 15  | 63  | 67    | 40    | 8  | 9  | 110 | 42  | 36  | 6   | 6   | F03/F04  | 0.42        | 5            |
| 3/4"   | 27.1  | 12.7 | 20  | 70  | 71    | 44    | 8  | 9  | 110 | 42  | 36  | 6   | 6   | F03/F04  | 0.52        | 8            |
| 1"     | 33.8  | 12.7 | 25  | 81  | 86    | 55    | 10 | 11 | 160 | 50  | 42  | 6   | 7   | F04/F05  | 0.72        | 12           |
| 1 1/4" | 42.6  | 12.7 | 32  | 95  | 91.5  | 60.5  | 10 | 11 | 160 | 50  | 42  | 6   | 7   | F04/F05  | 1.27        | 16           |
| 1 1/2" | 48.7  | 12.7 | 39  | 101 | 105.5 | 68.5  | 14 | 14 | 185 | 70  | 50  | 7   | 9   | F05/F07  | 1.49        | 39           |
| 2"     | 61.1  | 15.9 | 48  | 125 | 112.5 | 75.5  | 14 | 14 | 185 | 70  | 50  | 7   | 9   | F05/F07  | 2.2         | 42           |
| 2 1/2" | 73.9  | 15.9 | 65  | 168 | 165   | 96    | 16 | 17 | 300 | 102 | 70  | 9   | 11  | F07/F010 | 4.86        | 59           |
| 3"     | 89.8  | 15.9 | 79  | 187 | 175   | 106.5 | 16 | 17 | 300 | 102 | 70  | 9   | 11  | F07/F010 | 6.76        | 85           |
| 4"     | 115.2 | 15.9 | 100 | 240 | 195   | 120   | 16 | 17 | 300 | 102 | 70  | 9   | 11  | F07/F010 | 13.76       | 130          |

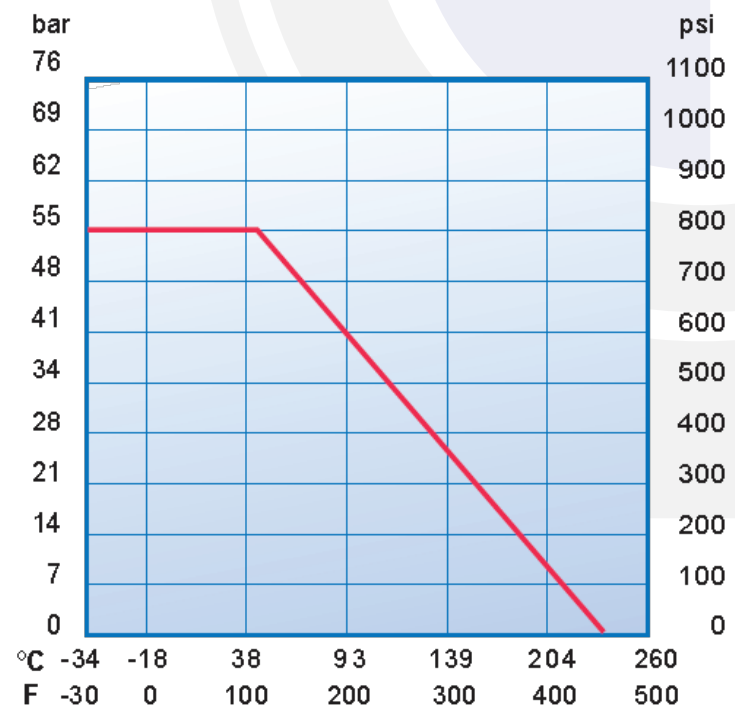
# SBM PTV Engineering Data

## Pressure and Temperature rating chart indicate bore size:

Size: 1/4" ~ 2" (DN8 ~ DN50)



Size: 2 1/2" ~ 4" (DN65 ~ DN100)



**ORDERING CODE:**

**Example: 100SP-422-2-100**

Ball Valve, 100SP Series, 3pc, A216 WCB Body, SS316 CF8M ball and stem, RPTFE Seat, Socket Weld End, Size 1”

**Available Body Material Code:**

- SS304 CF8 Stainless Steel: 1
- SS316 CF8M Stainless Steel: 2
- SS316L CF3M Stainless Steel: 3
- A216 WCB Cast Steel: 4

**Available Ball and Stem Material:**

- SS304 CF8 Stainless Steel: 1
- SS316 CF8M Stainless Steel: 2
- SS316L CF3M Stainless Steel: 3

**Available Seat Material Code:**

- PTFE: 1
- RPTFE: 2

**Available End Code:**

- Female NPT Thread: 1
- Socket Weld: 2
- Butt Weld: 3