



Wafer Butterfly Valves
Hard sealing face
Soft sealing face

STANDARDS

Flange Butterfly Valves: MSS SP-67
 Wafer Butterfly Valves: MSS SP-68 or API 609
 Face to face dimensions: ANSI B16.10 MSS SP-67 and MSS SP-68 or API 609
 Test: API 598

End flange dimensions

NPS 1 1/2-24: ANSI B16.5,
 NPS 30-72: MSS SP-44. or API 605

Type of construction

Flange Butterfly Valves (Hard face and soft face)
 Wafer Butterfly Valves (Hard face and soft face)

Type of connection

RF and RTJ flange ends to ANSI B16.5 or API 605
 and MSS SP-44 standard.

Type of operation

Lever
 Worm Gear actuator, Electric actuator, Pneumatic actuator.
 Actuator dimensions to ISO 5211 standard.

| CLASS 150 | | | | | | | | | | | | |
|----------------|-------|------|-------|------|------|------|------|------|-------|-------|-------|-------|
| DN | 40 | 50 | 65 | 80 | 100 | 125 | 150 | 200 | 250 | 300 | 350 | 400 |
| NPS | 1 1/2 | 2 | 2 1/2 | 3 | 4 | 5 | 6 | 8 | 10 | 12 | 14 | 16 |
| L | - | - | - | 127 | 127 | 127 | 127 | 152 | 203.2 | 203.2 | 203.2 | 203.2 |
| | - | - | - | 5 | 5 | 5 | 5 | 6 | 8 | 8 | 8 | 8 |
| L ₁ | 38.1 | 46 | 50.8 | 48 | 54 | 63.5 | 57 | 63.5 | 71.5 | 81.0 | 92.0 | 101.5 |
| | 1.5 | 1.81 | 2 | 1.88 | 2.13 | 2.5 | 2.25 | 2.50 | 2.81 | 3.19 | 3.62 | 4.00 |
| H | 185 | 190 | 220 | 229 | 239 | 252 | 284 | 307 | 337 | 392 | 435 | 481 |
| | 7.28 | 7.48 | 8.7 | 9 | 9.4 | 9.9 | 11.2 | 12 | 13.3 | 15.4 | 17.1 | 19 |
| D _o | 160 | 160 | 160 | 160 | 160 | 160 | 160 | 200 | 200 | 250 | 250 | 300 |
| | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 | 6.3 | 7.9 | 7.9 | 9.8 | 9.8 | 11.8 |
| F(kg) W(kg) | - | - | - | 12.5 | 13.5 | 17 | 38 | 72 | 105 | 148 | 182 | 230 |
| | 8 | 9 | 10 | 10 | 11 | 14.5 | 34.2 | 66 | 98 | 134 | 168 | 200 |

| CLASS 150 | | | | | | | | | | | | |
|----------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|---|
| DN | 450 | 500 | 600 | 750 | 900 | 1050 | 1200 | 1350 | 1500 | 1650 | 1800 | - |
| NPS | 18 | 20 | 24 | 30 | 36 | 42 | 48 | 54 | 60 | 66 | 72 | - |
| L | 203.2 | 203.2 | 203.2 | 304.8 | 304.8 | 304.8 | 381.0 | 381.0 | 381.0 | 457.2 | 457.2 | - |
| | 8 | 8 | 8 | 12 | 12 | 12 | 15 | 15 | 15 | 18 | 18 | - |
| L ₁ | 114.5 | 127 | 154 | 165.1 | 200.2 | 251 | 276.4 | - | - | - | - | - |
| | 4.50 | 5.00 | 6.06 | 6.50 | 7.88 | 9.88 | 10.88 | - | - | - | - | - |
| H | 521 | 568 | 698 | 903 | 1031 | 1122 | 1180 | 1425 | 1545 | 1624 | 1750 | - |
| | 20.5 | 22.4 | 27.5 | 35.6 | 40.6 | 44.2 | 46.5 | 56 | 60.8 | 24 | 69 | - |
| D _o | 400 | 450 | 500 | *350 | *350 | *350 | *350 | *350 | *350 | *350 | *350 | - |
| | 15.8 | 17.7 | 19.7 | 13.8 | 13.8 | 13.8 | 13.8 | 13.8 | 13.8 | 13.8 | 13.8 | - |
| F(kg) W(kg) | 274 | 375 | 595 | 1030 | 1985 | 2100 | 3420 | 3875 | 3980 | 4210 | 4335 | - |
| | 248 | 334 | 510 | 880 | 1580 | 1680 | 2736 | - | - | - | - | - |

MATERIAL LIST

| NO. | Part Name | Carbon Steel | | Alloy Steel | | | Stainless Steel | | | |
|-----|----------------------|--|----------|-------------|-----------|-----------|-----------------|-----------|------------|------------|
| | | WCB | LCB | WC6 | WC9 | C5 | CF8 | CF8M | CF3 | CF3M |
| 1 | Body | A216 WCB | A352 LCB | A217 WC6 | A217 WC9 | A217 C5 | A351 CF8 | A351 CF8M | A351 CF3 | A351 CF3M |
| 2 | Butterfly plate | A216 WCB | A352 LCB | A217 WC6 | A217 WC9 | A217 C5 | A351 CF8 | A351 CF8M | A351 CF3 | A351 CF3M |
| 3 | Seat Ring | PTFE or Stainless steel and graphite spiral wound | | | | | | | | |
| 4 | Axle | A182 F6 | A182 F6 | A182 F304 | A182 F304 | A182 F304 | A182 F304 | A182 F316 | A182 F304L | A182 F316L |
| 5 | Below Axle bush | A439 D2 or A436 Austenite iron | | | | | | | | |
| 6 | Top Axle bush | A439 D2 or A436 Austenite iron | | | | | | | | |
| 7 | Lock Ring | A105 | A182 F6 | A182 F22 | A182 F22 | A182 F22 | A182 F304 | A182 F304 | A182 F304L | A182 F316L |
| 8 | Axle packing | PTFE or Graphite | | | | | | | | |
| 9 | Gland | A182 F6 | A182 F6 | A182 F304 | A182 F304 | A182 F304 | A182 F304 | A182 F316 | A182 F304L | A182 F316L |
| 10 | Gland flange | A216 WCB | A352 LCB | A217 WC6 | A217 WC9 | A217 C5 | A351 CF8 | A351 CF8M | A351 CF3 | A351 CF3M |
| 11 | York | A216 WCB | A352 LCB | A217 WC6 | A217 WC9 | A217 C5 | A351 CF8 | A351 CF8M | A351 CF3 | A351 CF3M |
| 12 | Bolt | A193 B7 | | A302 L7 | A193 B16 | A320 B8 | A193 B8M | | | |
| 13 | Below Cap | A216 WCB | A352 LCB | A217 WC6 | A217 WC9 | A217 C5 | A351 CF8 | A351 CF8M | A351 CF3 | A351 CF3M |
| 14 | Bolt | A193 B7 | | A302 L7 | A193 B16 | A320 B8 | A193 B8M | | | |
| 15 | Pin | Carbon steel or Alloy steel | | | | | | | | |
| 16 | Sealing-face overlay | Soft face(PTFE)Hard face(13Cr and 18Cr-8Ni or Co-Cr-A) | | | | | | | | |

The material is according to ASTM standard.