



**WORLD VALVE CO.,LTD**

---

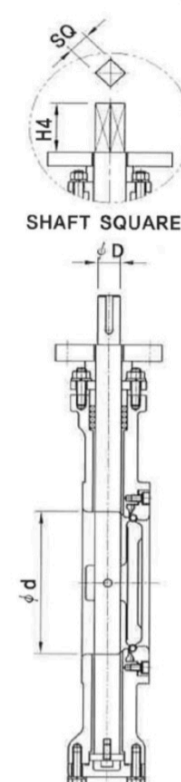
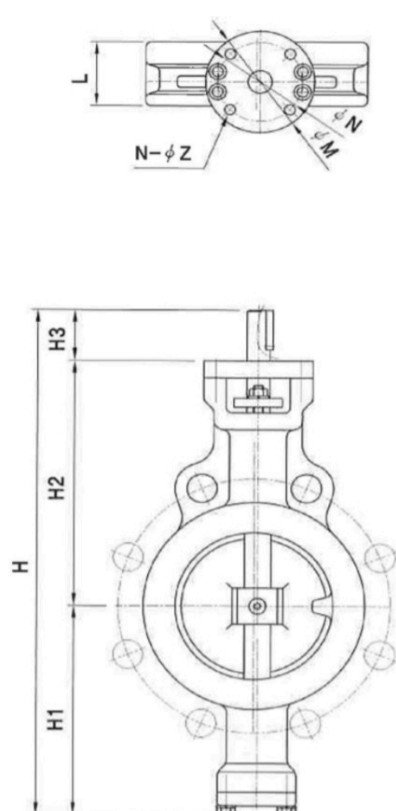
## **High Performance Butterfly Valves**



**Product Information**



## High Performance Butterfly Valve (Wafer Type)

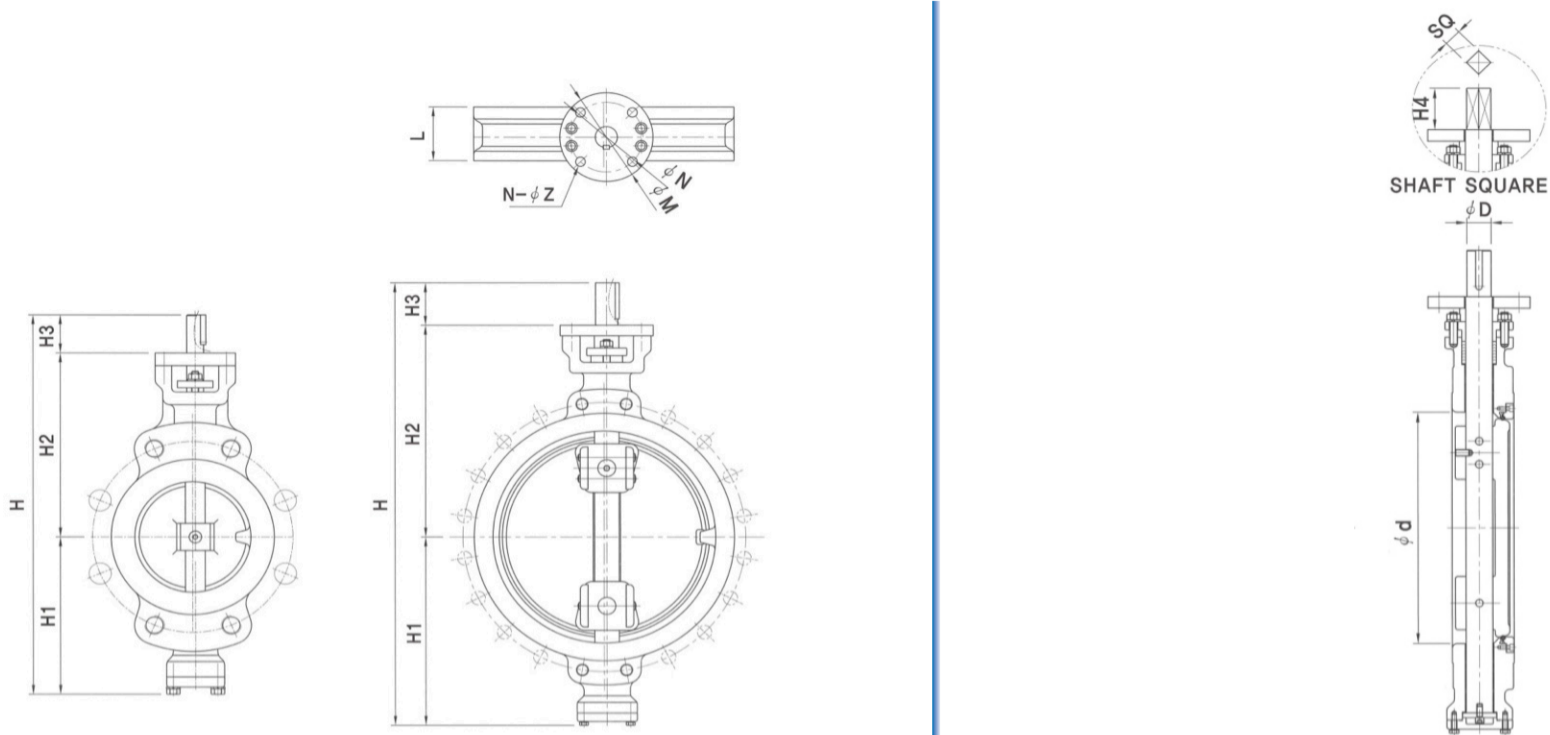


| Materials (applies to all valves) |                |   |
|-----------------------------------|----------------|---|
| No.                               | Part Name      | Material  |
| 1.                                | Body           | Cast iron, Ductile iron, Cast steel, Stainless steel, AL-Bronze |
| 2.                                | Disc           | Cast steel, Stainless steel, AL-Bronze                          |
| 3.                                | Seat           | SS.Steel, Teflon rubber   |
| 4.                                | Stem           | SS.Steel (304, 316, 316L, 630, 17-4PH, Monel)                   |
| 5.                                | Disc Pin       | Stainless steel   |
| 6.                                | Retainer       | Stainless steel, AL-Bronze                                      |
| 7.                                | Retainer Bolt  | Stainless steel   |
| 8.                                | Thrust Plate   | Bronze, Stainless steel   |
| 9.                                | Bottom Cover   | Mild steel, Stainless steel, AL-Bronze                          |
| 10.                               | Bottom Bolt    | Stainless steel, Mild steel                                     |
| 11.                               | Bottom Gasket  | Teflon, Graphite, Rubber  |
| 12.                               | Packing Gland  | SS.steel, Mild steel, Bronze                                    |
| 13.                               | Packing        | Teflon, Graphite, Rubber  |
| 14.                               | Actuator Stand | Mild steel  |
| 15.                               | Stem Bearing   | Teflon, Stainless, Bronze                                       |
| 16.                               | Stem Bearing   | Teflon, Stainless, Bronze                                       |
| 17.                               | Bolt & Nut     | Stainless steel, Mild Steel                                     |
| 18.                               | Set Bolt       | Stainless steel   |
| 19.                               | Thrust Bolt    | Stainless steel   |

| Dimensions |     |    |     |     |     |    |      |          |        |    |            |     |     |                    |      |
|------------|-----|----|-----|-----|-----|----|------|----------|--------|----|------------|-----|-----|--------------------|------|
| Size (mm)  | ød  | L  | H   | H1  | H2  | H3 | Stem |          |        |    | Top Flange |     |     | Weight (approx kg) |      |
|            |     |    |     |     |     |    | øD   | Key Size | Square |    | Type       | øN  | øM  |                    | N-øZ |
|            |     |    |     |     |     |    |      |          | SQ     | H4 |            |     |     |                    |      |
| 50A        | 50  | 43 | 331 | 118 | 168 | 45 | 16   | 5x5      | 12     | 33 | F07        | 70  | 90  | 4-9                | 4.5  |
| 65A        | 65  | 46 | 355 | 133 | 177 | 45 | 16   | 5x5      | 12     | 33 | F07        | 70  | 90  | 4-9                | 5.5  |
| 80A        | 80  | 48 | 374 | 144 | 185 | 45 | 19   | 6x6      | 12     | 33 | F07        | 70  | 90  | 4-9                | 9.0  |
| 100A       | 100 | 54 | 409 | 164 | 200 | 45 | 19   | 6x6      | 12     | 33 | F07        | 70  | 90  | 4-9                | 10.0 |
| 125A       | 125 | 57 | 450 | 188 | 217 | 45 | 19   | 6x6      | 12     | 33 | F07        | 70  | 90  | 4-9                | 13.0 |
| 150A       | 150 | 57 | 490 | 205 | 240 | 45 | 19   | 6x6      | 12     | 33 | F07        | 70  | 90  | 4-9                | 17.0 |
| 200A       | 200 | 64 | 553 | 223 | 270 | 60 | 25   | 8x7      | 17     | 55 | F10        | 102 | 125 | 4-12               | 26.0 |
| 250A       | 250 | 71 | 655 | 275 | 320 | 60 | 25   | 8x7      | 22     | 55 | F10        | 102 | 125 | 4-12               | 40.0 |



## High Performance Butterfly Valve (Semi-Lug Type)

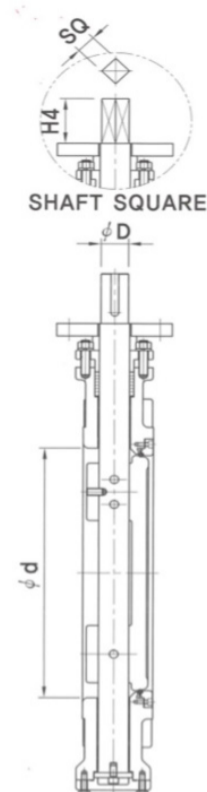
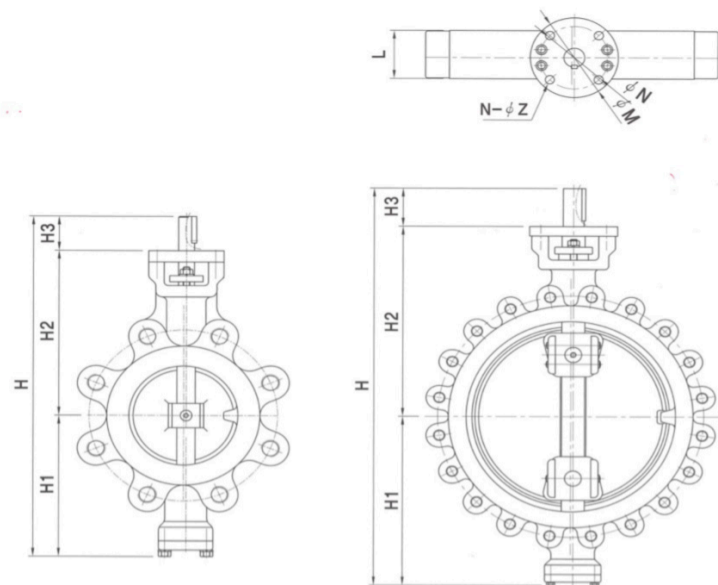


| Materials (applies to all valves) |                |   |
|-----------------------------------|----------------|---|
| No.                               | Part Name      | Material  |
| 1.                                | Body           | Cast iron, Ductile iron, Cast steel, Stainless steel, AL-Bronze |
| 2.                                | Disc           | Cast steel, Stainless steel, AL-Bronze                          |
| 3.                                | Seat           | SS.Steel, Teflon rubber   |
| 4.                                | Stem           | SS.Steel (304, 316, 316L, 630, 17-4PH, Monel)                   |
| 5.                                | Disc Pin       | Stainless steel   |
| 6.                                | Retainer       | Stainless steel, AL-Bronze                                      |
| 7.                                | Retainer Bolt  | Stainless steel   |
| 8.                                | Thrust Plate   | Bronze, Stainless steel   |
| 9.                                | Bottom Cover   | Mild steel, Stainless steel, AL-Bronze                          |
| 10.                               | Bottom Bolt    | Stainless steel, Mild steel                                     |
| 11.                               | Bottom Gasket  | Teflon, Graphite, Rubber  |
| 12.                               | Packing Gland  | SS.steel, Mild steel, Bronze                                    |
| 13.                               | Packing        | Teflon, Graphite, Rubber  |
| 14.                               | Actuator Stand | Mild steel  |
| 15.                               | Stem Bearing   | Teflon, Stainless, Bronze                                       |
| 16.                               | Stem Bearing   | Teflon, Stainless, Bronze                                       |
| 17.                               | Bolt & Nut     | Stainless steel, Mild Steel                                     |
| 18.                               | Set Bolt       | Stainless steel   |
| 19.                               | Thrust Bolt    | Stainless steel   |

| Dimensions |      |     |      |     |     |     |      |          |        |     |            |     |     |                    |        |  |
|------------|------|-----|------|-----|-----|-----|------|----------|--------|-----|------------|-----|-----|--------------------|--------|--|
| Size (mm)  | ød   | L   | H    | H1  | H2  | H3  | Stem |          |        |     | Top Flange |     |     | Weight (approx kg) |        |  |
|            |      |     |      |     |     |     | øD   | Key Size | Square |     | Type       | øN  | øM  |                    | N-øZ   |  |
|            |      |     |      |     |     |     |      |          | SQ     | H4  |            |     |     |                    |        |  |
| 50A        | 50   | 43  | 331  | 118 | 168 | 45  | 16   | 5x5      | 12     | 33  | F07        | 70  | 90  | 4-9                | 5.0    |  |
| 65A        | 65   | 46  | 355  | 133 | 177 | 45  | 16   | 5x5      | 12     | 33  | F07        | 70  | 90  | 4-9                | 6.5    |  |
| 80A        | 80   | 48  | 374  | 144 | 185 | 45  | 19   | 6x6      | 12     | 33  | F07        | 70  | 90  | 4-9                | 10.5   |  |
| 100A       | 100  | 54  | 409  | 164 | 200 | 45  | 19   | 6x6      | 12     | 33  | F07        | 70  | 90  | 4-9                | 15.0   |  |
| 125A       | 125  | 57  | 450  | 188 | 217 | 45  | 19   | 6x6      | 12     | 33  | F07        | 70  | 90  | 4-9                | 18.0   |  |
| 150A       | 150  | 57  | 490  | 205 | 240 | 45  | 19   | 6x6      | 12     | 33  | F07        | 70  | 90  | 4-9                | 25.0   |  |
| 200A       | 200  | 64  | 553  | 223 | 270 | 60  | 25   | 8x7      | 17     | 55  | F10        | 102 | 125 | 4-12               | 36.0   |  |
| 250A       | 250  | 71  | 655  | 275 | 320 | 60  | 25   | 8x7      | 22     | 55  | F10        | 102 | 125 | 4-12               | 56.0   |  |
| 300A       | 300  | 81  | 718  | 308 | 350 | 60  | 32   | 10x8     | 27     | 55  | F10        | 102 | 125 | 4-12               | 68.0   |  |
| 350A       | 350  | 92  | 816  | 346 | 395 | 75  | 38   | 12x8     | 27     | 65  | F14        | 140 | 175 | 4-18               | 93.0   |  |
| 400A       | 400  | 102 | 905  | 385 | 445 | 75  | 38   | 12x8     | 27     | 65  | F14        | 140 | 175 | 4-18               | 121.0  |  |
| 450A       | 450  | 114 | 1000 | 410 | 490 | 100 | 50   | 14x9     | 36     | 90  | F16        | 165 | 210 | 4-22               | 144.0  |  |
| 500A       | 500  | 127 | 1048 | 448 | 500 | 100 | 50   | 14x9     | 36     | 90  | F16        | 165 | 210 | 4-22               | 160.0  |  |
| 550A       | 550  | 154 | 1123 | 488 | 535 | 100 | 65   | 20x12    | 50     | 90  | F16        | 165 | 210 | 4-22               | 228.0  |  |
| 600A       | 600  | 154 | 1180 | 515 | 565 | 100 | 65   | 20x12    | 50     | 90  | F16        | 165 | 210 | 4-22               | 284.0  |  |
| 650A       | 650  | 165 | 1271 | 551 | 620 | 100 | 65   | 20x12    | 50     | 90  | F16        | 165 | 210 | 4-22               | 327.0  |  |
| 700A       | 700  | 165 | 1346 | 596 | 650 | 100 | 65   | 20x12    | 50     | 90  | F16        | 165 | 210 | 4-22               | 388.0  |  |
| 750A       | 750  | 190 | 1465 | 620 | 695 | 150 | 80   | 22x14    | 50     | 90  | F16        | 165 | 210 | 4-22               | 462.0  |  |
| 800A       | 800  | 190 | 1535 | 645 | 740 | 150 | 80   | 22x14    | 61     | 100 | F25        | 254 | 300 | 8-18               | 607.0  |  |
| 900A       | 900  | 203 | 1665 | 710 | 805 | 150 | 90   | 22x14    | 68     | 100 | F25        | 254 | 300 | 8-18               | 860.0  |  |
| 1000A      | 1000 | 216 | 1790 | 770 | 870 | 150 | 90   | 22x14    | 68     | 100 | F25        | 254 | 300 | 8-18               | 1180.0 |  |



## High Performance Butterfly Valve (Full Lug Type)

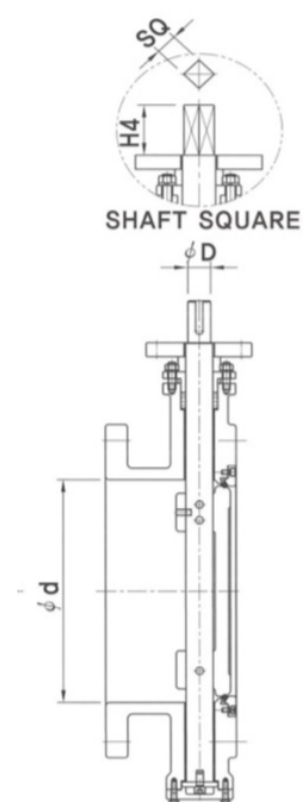
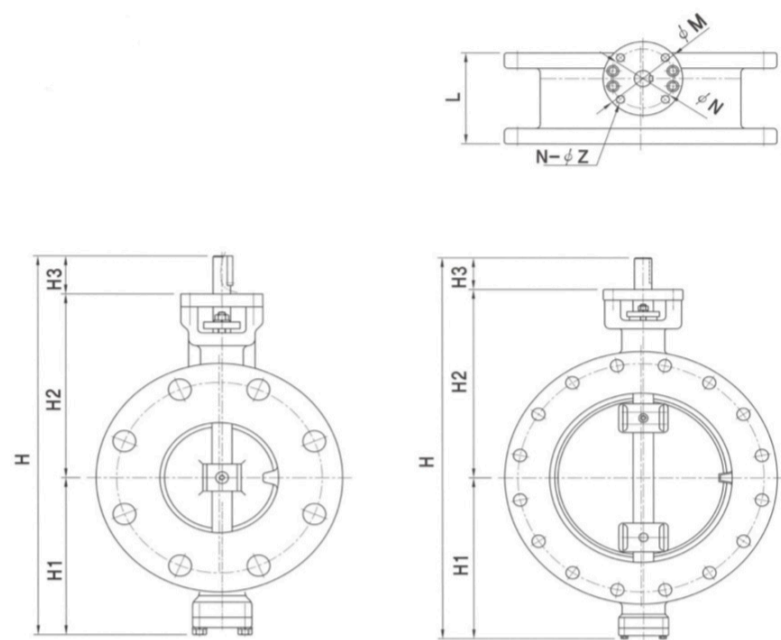


| Materials (applies to all valves) |                |   |
|-----------------------------------|----------------|---|
| No.                               | Part Name      | Material  |
| 1.                                | Body           | Cast iron, Ductile iron, Cast steel, Stainless steel, AL-Bronze |
| 2.                                | Disc           | Cast steel, Stainless steel, AL-Bronze                          |
| 3.                                | Seat           | SS.Steel, Teflon rubber   |
| 4.                                | Stem           | SS.Steel (304, 316, 316L, 630, 17-4PH, Monel)                   |
| 5.                                | Disc Pin       | Stainless steel   |
| 6.                                | Retainer       | Stainless steel, AL-Bronze                                      |
| 7.                                | Retainer Bolt  | Stainless steel   |
| 8.                                | Thrust Plate   | Bronze, Stainless steel   |
| 9.                                | Bottom Cover   | Mild steel, Stainless steel, AL-Bronze                          |
| 10.                               | Bottom Bolt    | Stainless steel, Mild steel                                     |
| 11.                               | Bottom Gasket  | Teflon, Graphite, Rubber  |
| 12.                               | Packing Gland  | SS.steel, Mild steel, Bronze                                    |
| 13.                               | Packing        | Teflon, Graphite, Rubber  |
| 14.                               | Actuator Stand | Mild steel  |
| 15.                               | Stem Bearing   | Teflon, Stainless, Bronze                                       |
| 16.                               | Stem Bearing   | Teflon, Stainless, Bronze                                       |
| 17.                               | Bolt & Nut     | Stainless steel, Mild Steel                                     |
| 18.                               | Set Bolt       | Stainless steel   |
| 19.                               | Thrust Bolt    | Stainless steel   |

| Dimensions |      |     |      |     |     |     |      |          |        |     |            |     |     |      |                    |  |
|------------|------|-----|------|-----|-----|-----|------|----------|--------|-----|------------|-----|-----|------|--------------------|--|
| Size (mm)  | ød   | L   | H    | H1  | H2  | H3  | Stem |          |        |     | Top Flange |     |     |      | Weight (approx kg) |  |
|            |      |     |      |     |     |     | øD   | Key Size | Square |     | Type       | øN  | øM  | N-øZ |                    |  |
|            |      |     |      |     |     |     |      |          | SQ     | H4  |            |     |     |      |                    |  |
| 50A        | 50   | 43  | 331  | 118 | 168 | 45  | 16   | 5x5      | 12     | 33  | F07        | 70  | 90  | 4-9  | 8.0                |  |
| 65A        | 65   | 46  | 355  | 133 | 177 | 45  | 16   | 5x5      | 12     | 33  | F07        | 70  | 90  | 4-9  | 9.0                |  |
| 80A        | 80   | 48  | 374  | 144 | 185 | 45  | 19   | 6x6      | 12     | 33  | F07        | 70  | 90  | 4-9  | 12.0               |  |
| 100A       | 100  | 54  | 409  | 164 | 200 | 45  | 19   | 6x6      | 12     | 33  | F07        | 70  | 90  | 4-9  | 15.0               |  |
| 125A       | 125  | 57  | 450  | 188 | 217 | 45  | 19   | 6x6      | 12     | 33  | F07        | 70  | 90  | 4-9  | 20.0               |  |
| 150A       | 150  | 57  | 490  | 205 | 240 | 45  | 19   | 6x6      | 12     | 33  | F07        | 70  | 90  | 4-9  | 29.0               |  |
| 200A       | 200  | 64  | 553  | 223 | 270 | 60  | 25   | 8x7      | 17     | 55  | F10        | 102 | 125 | 4-12 | 44.0               |  |
| 250A       | 250  | 71  | 655  | 275 | 320 | 60  | 25   | 8x7      | 22     | 55  | F10        | 102 | 125 | 4-12 | 65.0               |  |
| 300A       | 300  | 81  | 718  | 308 | 350 | 60  | 32   | 10x8     | 27     | 55  | F10        | 102 | 125 | 4-12 | 80.0               |  |
| 350A       | 350  | 92  | 816  | 346 | 395 | 75  | 38   | 12x8     | 27     | 65  | F14        | 140 | 175 | 4-18 | 130.0              |  |
| 400A       | 400  | 102 | 905  | 385 | 445 | 75  | 38   | 12x8     | 27     | 65  | F14        | 140 | 175 | 4-18 | 144.0              |  |
| 450A       | 450  | 114 | 1000 | 410 | 490 | 100 | 50   | 14x9     | 36     | 90  | F16        | 165 | 210 | 4-22 | 191.0              |  |
| 500A       | 500  | 127 | 1048 | 448 | 500 | 100 | 50   | 14x9     | 36     | 90  | F16        | 165 | 210 | 4-22 | 226.0              |  |
| 550A       | 550  | 154 | 1123 | 488 | 535 | 100 | 65   | 20x12    | 50     | 90  | F16        | 165 | 210 | 4-22 | 278.0              |  |
| 600A       | 600  | 154 | 1180 | 515 | 565 | 100 | 65   | 20x12    | 50     | 90  | F16        | 165 | 210 | 4-22 | 339.0              |  |
| 650A       | 650  | 165 | 1271 | 551 | 620 | 100 | 65   | 20x12    | 50     | 90  | F16        | 165 | 210 | 4-22 | 418.0              |  |
| 700A       | 700  | 165 | 1346 | 596 | 650 | 100 | 65   | 20x12    | 50     | 90  | F16        | 165 | 210 | 4-22 | 519.0              |  |
| 750A       | 750  | 190 | 1465 | 620 | 695 | 150 | 80   | 22x14    | 50     | 90  | F16        | 165 | 210 | 4-22 | 620.0              |  |
| 800A       | 800  | 190 | 1535 | 645 | 740 | 150 | 80   | 22x14    | 61     | 100 | F25        | 254 | 300 | 8-18 | 783.0              |  |
| 900A       | 900  | 203 | 1665 | 710 | 805 | 150 | 90   | 22x14    | 68     | 100 | F25        | 254 | 300 | 8-18 | 1102.0             |  |
| 1000A      | 1000 | 216 | 1790 | 770 | 870 | 150 | 90   | 22x14    | 68     | 100 | F25        | 254 | 300 | 8-18 | 1450.0             |  |



## High Performance Butterfly Valve (Flange Type)

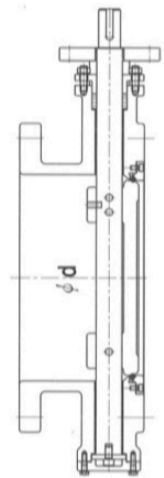
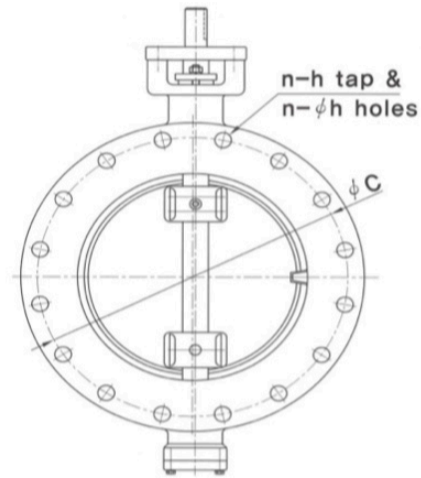
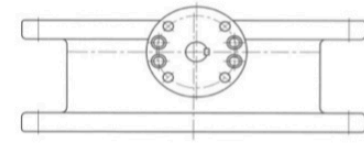
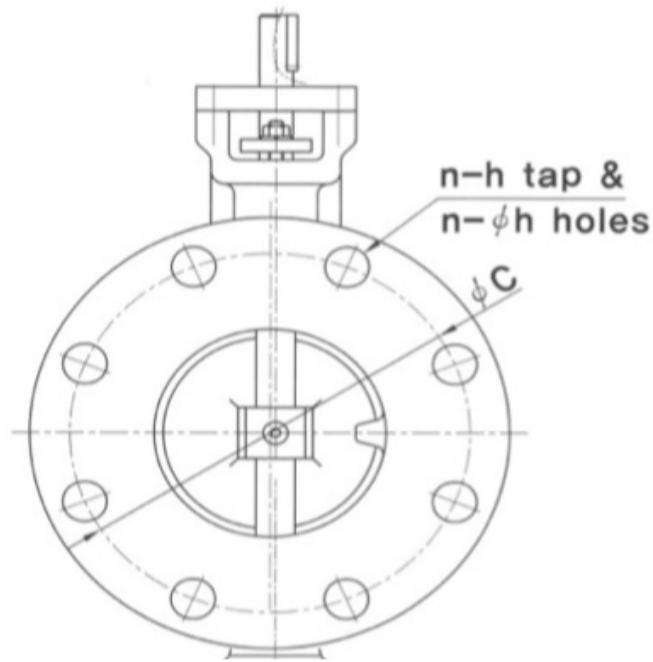


| Materials (applies to all valves) |                |   |
|-----------------------------------|----------------|---|
| No.                               | Part Name      | Material  |
| 1.                                | Body           | Cast iron, Ductile iron, Cast steel, Stainless steel, AL-Bronze |
| 2.                                | Disc           | Cast steel, Stainless steel, AL-Bronze                          |
| 3.                                | Seat           | SS.Steel, Teflon rubber   |
| 4.                                | Stem           | SS.Steel (304, 316, 316L, 630, 17-4PH, Monel)                   |
| 5.                                | Disc Pin       | Stainless steel   |
| 6.                                | Retainer       | Stainless steel, AL-Bronze                                      |
| 7.                                | Retainer Bolt  | Stainless steel   |
| 8.                                | Thrust Plate   | Bronze, Stainless steel   |
| 9.                                | Bottom Cover   | Mild steel, Stainless steel, AL-Bronze                          |
| 10.                               | Bottom Bolt    | Stainless steel, Mild steel                                     |
| 11.                               | Bottom Gasket  | Teflon, Graphite, Rubber  |
| 12.                               | Packing Gland  | SS.steel, Mild steel, Bronze                                    |
| 13.                               | Packing        | Teflon, Graphite, Rubber  |
| 14.                               | Actuator Stand | Mild steel  |
| 15.                               | Stem Bearing   | Teflon, Stainless, Bronze                                       |
| 16.                               | Stem Bearing   | Teflon, Stainless, Bronze                                       |
| 17.                               | Bolt & Nut     | Stainless steel, Mild Steel                                     |
| 18.                               | Set Bolt       | Stainless steel   |
| 19.                               | Thrust Bolt    | Stainless steel   |

| Valve Dimensions |      |     |      |     |     |     |      |          |        |     |            |     |     |                    |        |  |
|------------------|------|-----|------|-----|-----|-----|------|----------|--------|-----|------------|-----|-----|--------------------|--------|--|
| Size (mm)        | ød   | L   | H    | H1  | H2  | H3  | Stem |          |        |     | Top Flange |     |     | Weight (approx kg) |        |  |
|                  |      |     |      |     |     |     | øD   | Key Size | Square |     | Type       | øN  | øM  |                    | N-øZ   |  |
|                  |      |     |      |     |     |     |      |          |        | SQ  | H4         |     |     |                    |        |  |
| 50A              | 50   | 43  | 331  | 118 | 168 | 45  | 16   | 5x5      | 12     | 33  | F07        | 70  | 90  | 4-9                | 14.0   |  |
| 65A              | 65   | 46  | 355  | 133 | 177 | 45  | 16   | 5x5      | 12     | 33  | F07        | 70  | 90  | 4-9                | 18.0   |  |
| 80A              | 80   | 48  | 374  | 144 | 185 | 45  | 19   | 6x6      | 12     | 33  | F07        | 70  | 90  | 4-9                | 22.0   |  |
| 100A             | 100  | 54  | 409  | 164 | 200 | 45  | 19   | 6x6      | 12     | 33  | F07        | 70  | 90  | 4-9                | 28.0   |  |
| 125A             | 125  | 57  | 450  | 188 | 217 | 45  | 19   | 6x6      | 12     | 33  | F07        | 70  | 90  | 4-9                | 37.0   |  |
| 150A             | 150  | 57  | 490  | 205 | 240 | 45  | 19   | 6x6      | 12     | 33  | F07        | 70  | 90  | 4-9                | 44.0   |  |
| 200A             | 200  | 64  | 553  | 223 | 270 | 60  | 25   | 8x7      | 17     | 55  | F10        | 102 | 125 | 4-12               | 64.0   |  |
| 250A             | 250  | 71  | 655  | 275 | 320 | 60  | 25   | 8x7      | 22     | 55  | F10        | 102 | 125 | 4-12               | 87.0   |  |
| 300A             | 300  | 81  | 718  | 308 | 350 | 60  | 32   | 10x8     | 27     | 55  | F10        | 102 | 125 | 4-12               | 123.0  |  |
| 350A             | 350  | 92  | 816  | 346 | 395 | 75  | 38   | 12x8     | 27     | 65  | F14        | 140 | 175 | 4-18               | 155.0  |  |
| 400A             | 400  | 102 | 905  | 385 | 445 | 75  | 38   | 12x8     | 27     | 65  | F14        | 140 | 175 | 4-18               | 224.0  |  |
| 450A             | 450  | 114 | 1000 | 410 | 490 | 100 | 50   | 14x9     | 36     | 90  | F16        | 165 | 210 | 4-22               | 255.0  |  |
| 500A             | 500  | 127 | 1048 | 448 | 500 | 100 | 50   | 14x9     | 36     | 90  | F16        | 165 | 210 | 4-22               | 321.0  |  |
| 550A             | 550  | 154 | 1123 | 488 | 535 | 100 | 65   | 20x12    | 50     | 90  | F16        | 165 | 210 | 4-22               | 410.0  |  |
| 600A             | 600  | 154 | 1180 | 515 | 565 | 100 | 65   | 20x12    | 50     | 90  | F16        | 165 | 210 | 4-22               | 475.0  |  |
| 650A             | 650  | 165 | 1271 | 551 | 620 | 100 | 65   | 20x12    | 50     | 90  | F16        | 165 | 210 | 4-22               | 565.0  |  |
| 700A             | 700  | 165 | 1346 | 596 | 650 | 100 | 65   | 20x12    | 50     | 90  | F16        | 165 | 210 | 4-22               | 685.0  |  |
| 750A             | 750  | 190 | 1465 | 620 | 695 | 150 | 80   | 22x14    | 50     | 90  | F16        | 165 | 210 | 4-22               | 818.0  |  |
| 800A             | 800  | 190 | 1535 | 645 | 740 | 150 | 80   | 22x14    | 61     | 100 | F25        | 254 | 300 | 8-18               | 1050.0 |  |
| 900A             | 900  | 203 | 1665 | 710 | 805 | 150 | 90   | 22x14    | 68     | 100 | F25        | 254 | 300 | 8-18               | 1350.0 |  |
| 1000A            | 1000 | 216 | 1790 | 770 | 870 | 150 | 90   | 22x14    | 68     | 100 | F25        | 254 | 300 | 8-18               | 1720.0 |  |
| 1100A            | 1100 | 410 | 1945 | 835 | 930 | 180 | 120  | 32x18    | 90     | 120 | F30        | 350 | 350 | 8-23               | 2010.0 |  |
| 1200A            | 1200 | 470 | 2070 | 895 | 995 | 180 | 120  | 32x18    | 90     | 120 | F30        | 350 | 350 | 8-23               | 2450.0 |  |



## High Performance Butterfly Valve (Flange Type)



Flange Dimensions

| Size (mm) | JIS 10K |    |     | JIS 16K |    |     | JIS 20K |    |     | ANSI 150LB |    |       | ANSI 300LB |    |       | BS 4504 PN 10 |    |     | BS 4504 PN 16 |    |     |
|-----------|---------|----|-----|---------|----|-----|---------|----|-----|------------|----|-------|------------|----|-------|---------------|----|-----|---------------|----|-----|
|           | øC      | n  | h   | øC      | n  | h   | øC      | n  | h   | øC         | n  | h     | øC         | n  | h     | øC            | n  | h   | øC            | n  | h   |
| 50A       | 120     | 4  | M16 | 120     | 8  | M16 | 120     | 8  | M16 | 120.5      | 4  | 5/8   | 127        | 8  | 5/8   | 125           | 4  | M16 | 125           | 4  | M16 |
| 65A       | 140     | 4  | M16 | 140     | 8  | M16 | 140     | 8  | M16 | 139.5      | 4  | 5/8   | 149        | 8  | 3/4   | 145           | 4  | M16 | 145           | 4  | M16 |
| 80A       | 150     | 8  | M16 | 160     | 8  | M20 | 160     | 8  | M20 | 152.5      | 4  | 5/8   | 168        | 8  | 3/4   | 160           | 8  | M16 | 160           | 8  | M16 |
| 100A      | 175     | 8  | M16 | 185     | 8  | M20 | 185     | 8  | M20 | 190.5      | 8  | 5/8   | 200        | 8  | 3/4   | 180           | 8  | M16 | 180           | 8  | M16 |
| 125A      | 210     | 8  | M20 | 225     | 8  | M22 | 225     | 8  | M22 | 216.5      | 8  | 3/4   | 235        | 8  | 3/4   | 210           | 8  | M16 | 210           | 8  | M16 |
| 150A      | 240     | 8  | M20 | 260     | 12 | M22 | 260     | 12 | M22 | 241.5      | 8  | 3/4   | 270        | 12 | 3/4   | 240           | 8  | M20 | 240           | 8  | M20 |
| 200A      | 290     | 12 | M20 | 305     | 12 | M22 | 305     | 12 | M22 | 298.5      | 8  | 3/4   | 330        | 12 | 7/8   | 295           | 8  | M20 | 295           | 12 | M20 |
| 250A      | 355     | 12 | M22 | 380     | 12 | M24 | 380     | 12 | M24 | 362.0      | 12 | 7/8   | 387.5      | 16 | 1     | 350           | 12 | M20 | 355           | 12 | M24 |
| 300A      | 400     | 16 | M22 | 430     | 16 | M24 | 430     | 16 | M24 | 432.0      | 12 | 7/8   | 451        | 16 | 1 1/8 | 400           | 12 | M20 | 410           | 12 | M24 |
| 350A      | 445     | 16 | M22 | 480     | 16 | M30 | 480     | 16 | M30 | 476.0      | 12 | 1     | 514.5      | 20 | 1 1/8 | 460           | 16 | M20 | 470           | 16 | M24 |
| 400A      | 510     | 16 | M24 | 540     | 16 | M30 | 540     | 16 | M30 | 539.5      | 16 | 1     | 571.5      | 20 | 1 1/4 | 515           | 16 | M24 | 525           | 16 | M27 |
| 450A      | 565     | 20 | M24 | 605     | 20 | M30 | 605     | 20 | M30 | 578.0      | 16 | 1 1/8 | 628.5      | 24 | 1 1/4 | 565           | 20 | M24 | 585           | 20 | M27 |
| 500A      | 620     | 20 | M24 | 660     | 20 | M30 | 660     | 20 | M30 | 635.0      | 20 | 1 1/8 | 686        | 24 | 1 1/4 | 620           | 20 | M24 | 650           | 20 | M30 |
| 550A      | 680     | 20 | M30 | 720     | 20 | M36 | 720     | 20 | M36 | 392.2      | 20 | 1 1/4 | 692.15     | 20 | 1 1/4 | -             | -- | -   | -             | -  | -   |
| 600A      | 730     | 24 | M30 | 770     | 24 | M36 | 770     | 24 | M36 | 749.5      | 20 | 1 1/4 | 813        | 24 | 1 1/2 | 725           | 20 | M27 | 770           | 20 | M33 |
| 650A      | 780     | 24 | M30 | 820     | 24 | M36 | 820     | 24 | M36 | 806.5      | 24 | 1 1/4 | 806.45     | 24 | 1 1/2 | -             | -  | -   | -             | -  | -   |
| 700A      | 840     | 24 | M30 | 875     | 24 | M39 | 875     | 24 | M39 | 863.5      | 28 | 1 1/4 | 863.6      | 28 | 1 1/2 | 840           | 24 | M27 | 840           | 24 | M33 |
| 750A      | 900     | 24 | M30 | 935     | 24 | M39 | 935     | 24 | M39 | 914.5      | 28 | 1 1/4 | 914.4      | 28 | 1 1/2 | -             | -  | -   | -             | -  | -   |
| 800A      | 950     | 28 | M30 | 990     | 24 | M45 | 990     | 24 | M45 | 978.0      | 28 | 1 1/2 | 977.9      | 28 | 1 1/2 | 950           | 24 | M30 | 950           | 24 | M36 |
| 850A      | 1000    | 28 | M30 | 1040    | 24 | M45 | 1040    | 24 | M45 | 1029.0     | 32 | 1 1/2 | 1028.7     | 32 | 1 1/2 | -             | -  | -   | -             | -  | -   |
| 900A      | 1050    | 28 | M30 | 1090    | 28 | M45 | 1090    | 28 | M45 | 1086.0     | 32 | 1 1/2 | 1085.85    | 32 | 1 1/2 | 1050          | 28 | M30 | 1050          | 28 | M36 |
| 1000A     | 1160    | 28 | M36 | 1210    | 28 | M52 | 1210    | 28 | M52 | 1200.0     | 36 | 1 1/2 | 1200.15    | 36 | 1 1/2 | 1160          | 28 | M33 | 1170          | 28 | M39 |
| 1100A     | 1270    | 28 | M36 | 1310    | 32 | M52 | 1310    | 32 | M52 | 1314.5     | 40 | 1 1/2 | 1314.45    | 40 | 1 1/2 | -             | -  | -   | -             | -  | -   |
| 1200A     | 1380    | 32 | M36 | 1420    | 32 | M52 | 1420    | 32 | M52 | 1422.4     | 44 | 1 1/2 | 1422.4     | 44 | 1 1/2 | 1380          | 32 | M36 | 1390          | 32 | M45 |