

Butterfly Valve BF-756

Introduction of the valve

The two pieces of body wafer type butterfly valve and a concentric disc and seat with PTFE. The painting thickness can reach up to 3~4mm. Heavy duty top plate is drilled and slotted to ISO 5211 and other existing valve drillings, thus allowing ease of automation and interchangeability. Discs have a streamlined design, providing higher Cv and lower pressure drop. The Flow Line shaft seal is achieved through a continuous pressure exerted from the flatted area of the seat to the machined flatted area of the disc. The raised flatted area of the seat corresponds precisely with the machined flatted hub area of the disc. These matching flatted surfaces provide a wide sealing area for the elastomer backed PTFE seat to exert pressure against, forming the primary seal. Secondary sealing is provided by a 360° machined radius on the flatted hub.

Features

- -The valve body and disc are accurately machined which results in low operating torque and long service life and reliability
- -PTFE liner seated prevents corrosion and guarantees long service life
- Splitted body design
- Can be installed in any desired position
- Maintenance-free
- Can be disassembled, material-specific recycling possible

General Applications



- · Chemical and petrochemical industries
- Water & Wastewater Treatment
- · Pneumatic materials handling technology
- Shipbuilding
- Food Processing
- · Petroleum Refining & Oilfield
- Power generation industry
- Mining
- Irrigation
- Textile
- Desalination
- Steel Production
- Sugar/Ethanol
- HVAC



Parts of name and purpose (DN50-DN300)

NECK: An extended neck design in all valve sizes allows for 2" of piping insulation and provides easy access

for mounting actuators.

FLANGE LOCATING HOLES:

Locating holes in the wafer version provide quick and precise alignment during valve installation eliminating disc interference with adjacent pipe I.D.

DISC: The PTFE
disc has 1/8"
(3 mm) minimum
thickness of pure,
virgin PTFE encapsulated over Stainless
Steel.

design reduces seating
unseating torque and, at the same
time, reduces wear on the
contacting parts. Curvatures
machined into the inner seat area
minimize contact forces between
the disc and seat as the disc approaches,
or opens from, the closed position. This unique

seat geometry permits lower torques and reduces seat wear.

TOP STEM BUSHING: A top stem bushing, retained by a stainless steel ring, is provided to absorb actuator side thrusts and is acetal as standard or PTFE as an option

BODY: Bodies are two piece wafer style and are epoxy coated.

All bodies meet full ASME Class 150 and DIN 3840 pressure ratings

for hydrostatic requirements.

Seat Energizer: A resilient seat energizer extends completely around the seat, including the disc hub. This provides uniform force sufficient for bubble-tight shut off.



Parts of name and purpose (DN50-DN200)

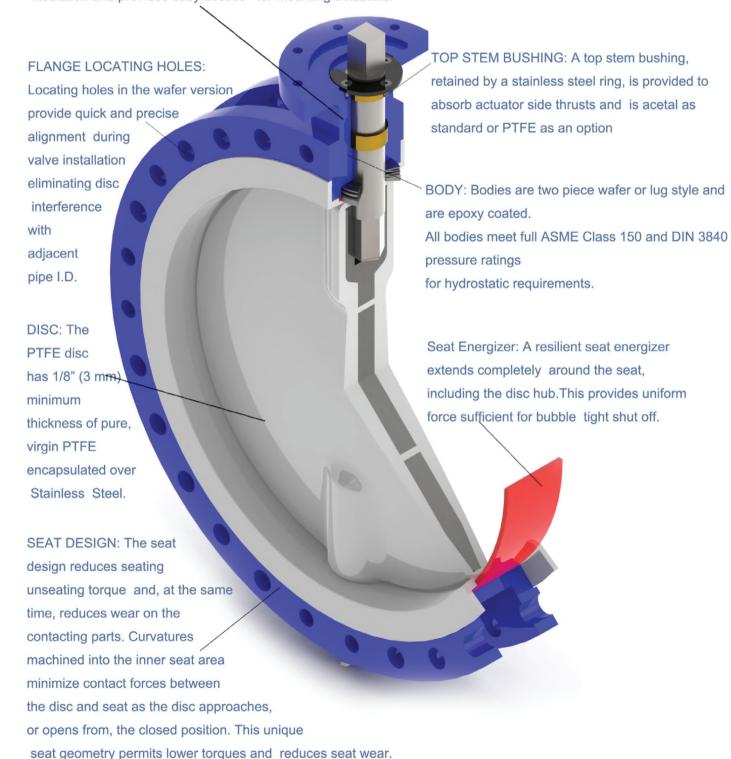
seat geometry permits lower torques and reduces seat wear.

TOP STEM BUSHING: A top stem bushing, retained by a stainless steel ring, is provided to absorb actuator side thrusts and is acetal as standard or PTFE as an option NECK: An extended neck design BODY: Bodies are two piece lug style and are epoxy in all valve sizes allows for 2" of coated. piping insulation and provides easy All bodies meet full ASME Class 150 and DIN 3840 access for mounting actuators. pressure ratings for hydrostatic requirements. DISC: The PTFE disc has 1/8" (3 mm) minimum thickness of pure, virgin PTFE encapsulated over Stainless Steel. Seat Energizer: A resilient seat energizer extends completely around the seat, including the disc hub. This provides uniform force sufficient for bubble-tight shut off. SEAT DESIGN: The seat design reduces seating unseating torque and, at the same time, reduces wear on the contacting parts. Curvatures machined into the inner seat area minimize contact forces between the disc and seat as the disc approaches, or opens from, the closed position. This unique



Parts of name and purpose (DN350-DN1200)

NECK: An extended neck design in all valve sizes allows for 2" of piping insulation and provides easy access for mounting actuators.

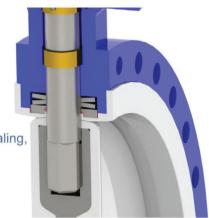




Key Design

Disc spring,two sets for a group,is a state of compressive deformation in the body. It will impose elastic force on the press sleeve,compact the O ring and seat,improve axial sealing,then provided the bearing stress for the seat and disc,to cover the shortage of elasticity about PTFE seat.

The seat is designed as shown in the figure, the advantage of this design is better sealing, effectively preventing the media leakage from the valve cavity.





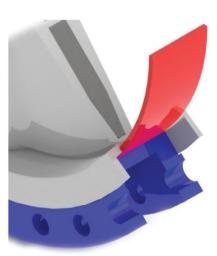
TOP STEM BUSHING:

The bushing can assure the correct interaction between the upper shaft and the lower shaft, at the same time, it can make sure the smooth running of the shaft.

SEAT DESIGN: The seat design reduces seating unseating torque and, at the same time, reduces wear on the contacting parts. Curvaturesmachined into the inner seat area minimize contact forces between the disc and seat as the disc approaches, or opens from, the closed position. This unique seat geometry permits lower torques and reduces seat wear.

Seat Energizer:

A resilient seat energizer extends completely around the seat, including the disc hub. This provides uniform force sufficient for bubble-tight shut off.





Extensive field research and engineering have developed this state of the art design which provides excellent shut off protection (bubbletight shut off) and high \ Cv values. The Series CBF05E-TA01 is crafted in a variety of materials such as PTFE, tainless Steel, UHMWPE and special alloys to fit a wide range of customer requirements. As with all WORLDS's products, precision manufacturing and exceptional quality remain the keys to a proven record of long service life.

Technical Date(DN50-DN1200)

Design Standard

EN593 API 609 BS5155 MSS SP-67

Face to Face

DIN558-1 API609 DIN3202 K1 ISO5752 BS5155

Testing Inspection

EN 12266-1 ISO5208 API598

Flange Accommodation

ASME B 16.1 125LB

ASME B 16.5 150LB

BS4504 PN10/16

DIN2501 PN10/16

ISO7005 PN10/16

EN1092 PN10/16

Top Flange

ISO 5211(accroding to the custumer need)

Temperature Range

- 35 to +200(depending on pressure, medium and material)

Suitable Medium

flesh water, waste water, sewage, seawater, air, vapor, food, oils, medicine

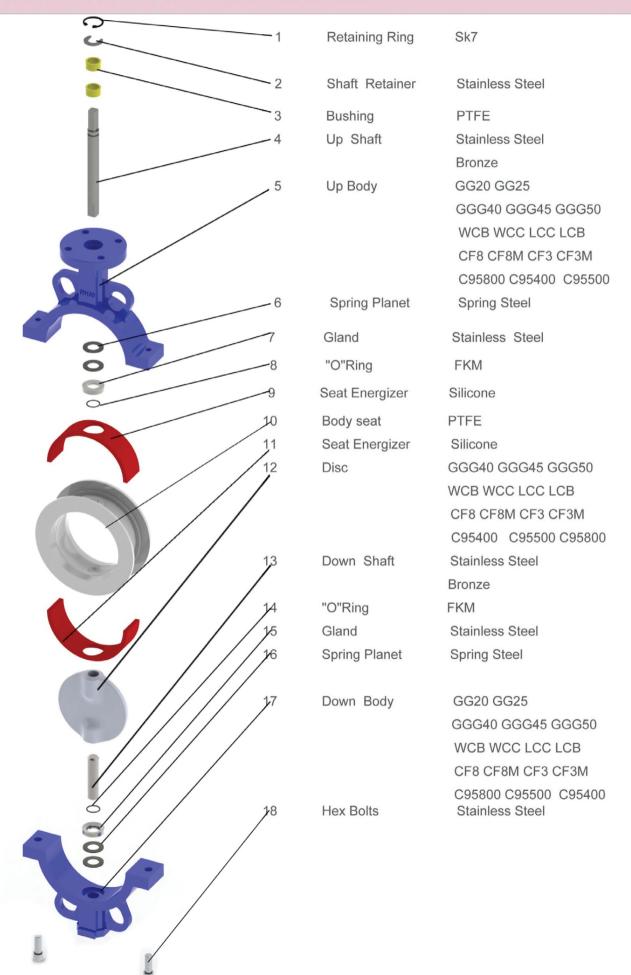
alkailis, salt, ect

Max Working Pressure

DN50-DN250 16Bar DN300-DN1200 10Bar

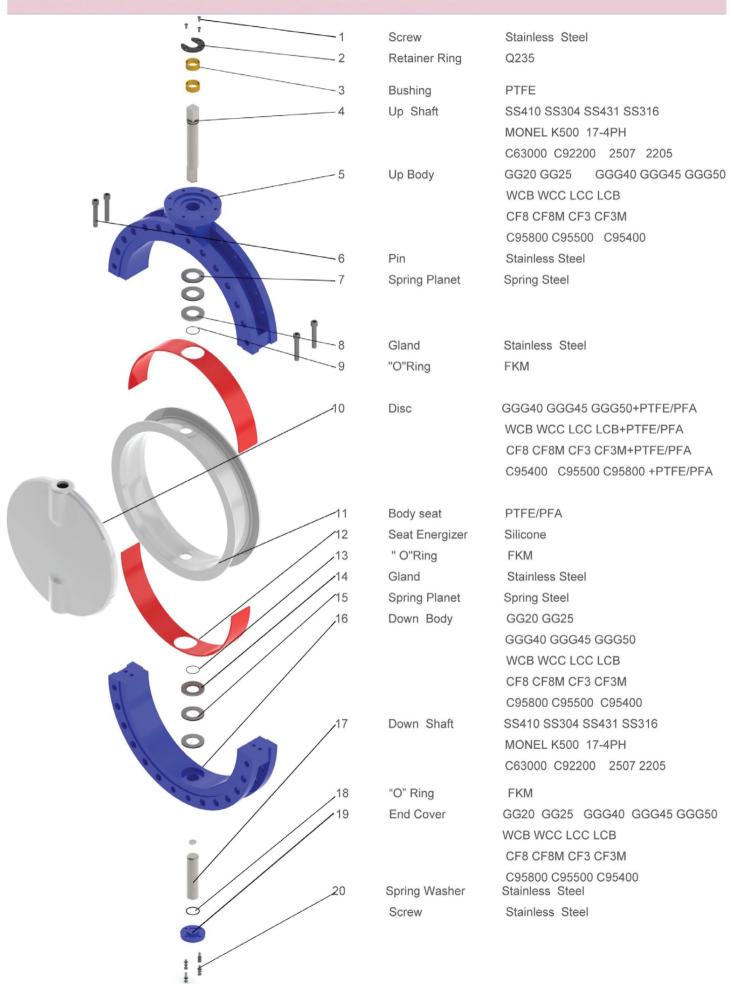


Main Spare Part Material Quality (DN50-DN300)



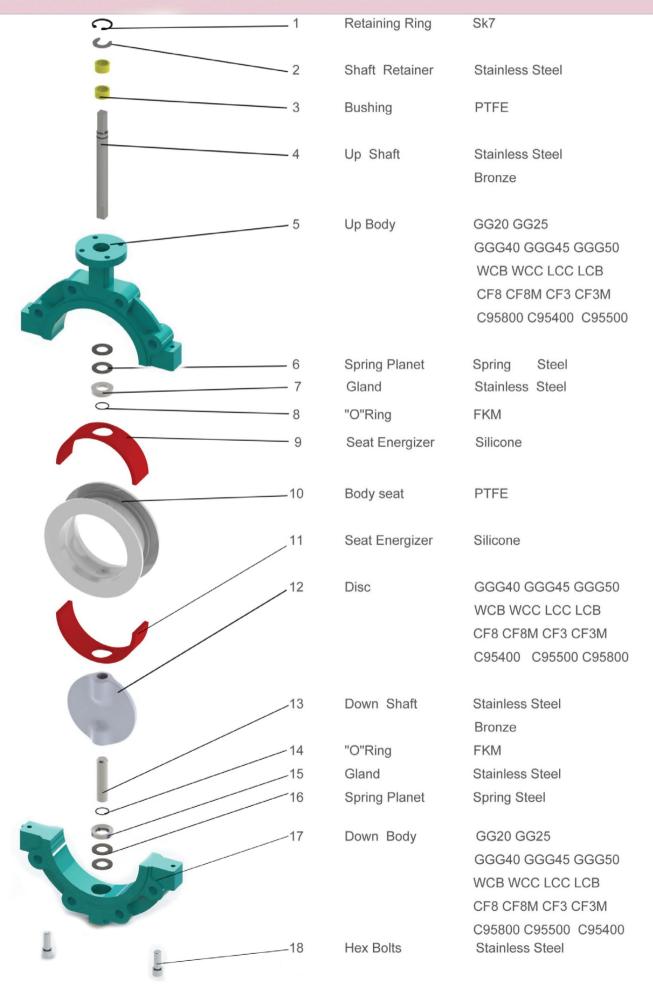


Main Spare Part Material Quality (DN350-DN1200)



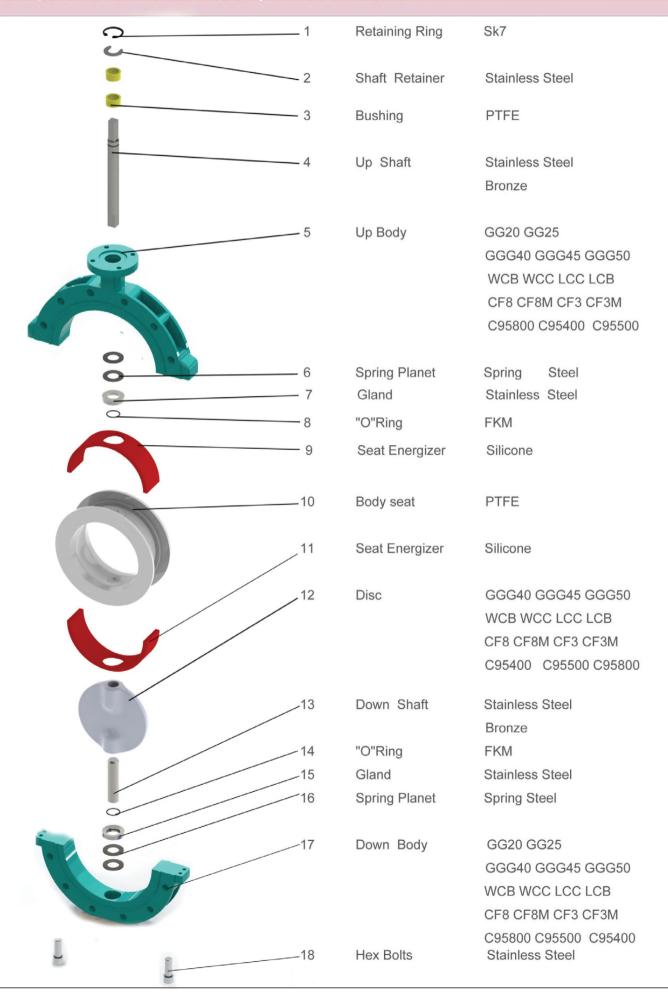


Main Spare Part Material Quality (DN50-DN200)



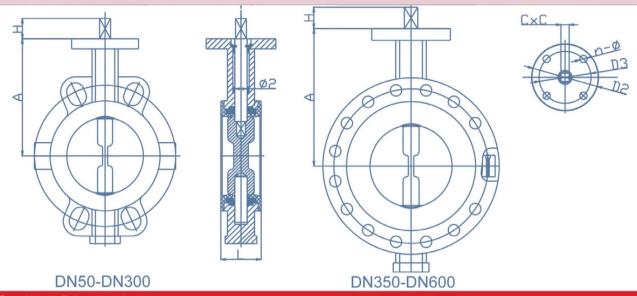


Main Spare Part Material Quality (DN250-DN600)





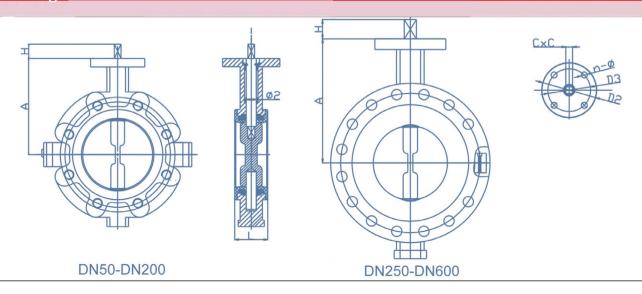
Drawing



Outline Dimensions

| SIZE | L | A | Н | CxC | IS05211 | D2 | D3 | n - Ø | Ø2 |
|-------|-----|-----|----|--------------|---------|-------|-------|--------------|--------|
| DN50 | 43 | 140 | 14 | 9 x 9 | F07/F05 | 90/65 | 70/50 | 4-10/7 | 12.6 |
| DN65 | 46 | 150 | 14 | 9 x 9 | F07/F05 | 90/65 | 70/50 | 4-10/7 | 12.6 |
| DN80 | 46 | 160 | 14 | 9 x 9 | F07/F05 | 90/65 | 70/50 | 4-10/7 | 12.6 |
| DN100 | 52 | 178 | 14 | 11x11 | F07 | 90 | 70 | 4-10 | 15.77 |
| DN125 | 56 | 190 | 17 | 14x14 | F07 | 90 | 70 | 4-10 | 18. 92 |
| DN150 | 56 | 200 | 17 | 14x14 | F07 | 90 | 70 | 4-10 | 18. 92 |
| DN200 | 60 | 240 | 22 | 17x17 | F10 | 125 | 102 | 4-12 | 22. 10 |
| DN250 | 68 | 273 | 22 | 22x22 | F10 | 125 | 102 | 4-12 | 28. 45 |
| DN300 | 78 | 310 | 22 | 22x22 | F10 | 125 | 102 | 4-12 | 31.60 |
| DN350 | 78 | 346 | 22 | 22x22 | F10 | 125 | 102 | 4-12 | 31.60 |
| DN400 | 102 | 375 | 36 | 27x27 | F14 | 175 | 140 | 4-18 | 33, 15 |
| DN450 | 114 | 406 | 36 | 27x27 | F14 | 175 | 140 | 4-18 | 37.95 |
| DN500 | 127 | 438 | 36 | 36x36 | F14 | 175 | 140 | 4-18 | 45. 72 |
| DN600 | 154 | 495 | 46 | 36x36 | F16 | 210 | 165 | 4-22 | 50.62 |

Drawing

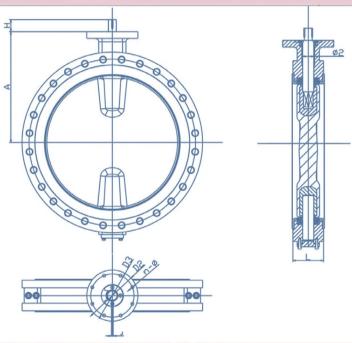




Outline Dimensions

| SIZE | L | A | Н | CxC | IS05211 | D2 | D3 | n- ø | Ø2 |
|-------|-----|-----|----|--------------|---------|-------|-------|--------|--------|
| DN50 | 43 | 140 | 14 | 9 x 9 | F07/F05 | 90/65 | 70/50 | 4-10/7 | 12.6 |
| DN65 | 46 | 150 | 14 | 9x9 | F07/F05 | 90/65 | 70/50 | 4-10/7 | 12.6 |
| DN80 | 46 | 160 | 14 | 9x9 | F07/F05 | 90/65 | 70/50 | 4-10/7 | 12. 6 |
| DN100 | 52 | 178 | 14 | 11x11 | F07 | 90 | 70 | 4-10 | 15.77 |
| DN125 | 56 | 190 | 17 | 14x14 | F07 | 90 | 70 | 4-10 | 18. 92 |
| DN150 | 56 | 200 | 17 | 14x14 | F07 | 90 | 70 | 4-10 | 18. 92 |
| DN200 | 60 | 240 | 22 | 17x17 | F10 | 125 | 102 | 4-12 | 22. 10 |
| DN250 | 68 | 273 | 22 | 22x22 | F10 | 125 | 102 | 4-12 | 28. 45 |
| DN300 | 78 | 310 | 22 | 22x22 | F10 | 125 | 102 | 4-12 | 31.60 |
| DN350 | 78 | 346 | 22 | 22x22 | F10 | 125 | 102 | 4-12 | 31.60 |
| DN400 | 102 | 375 | 36 | 27x27 | F14 | 175 | 140 | 4-18 | 33, 15 |
| DN450 | 114 | 406 | 36 | 27x27 | F14 | 175 | 140 | 4-18 | 37. 95 |
| DN500 | 127 | 438 | 36 | 36x36 | F14 | 175 | 140 | 4-18 | 45. 72 |
| DN600 | 154 | 495 | 46 | 36x36 | F16 | 210 | 165 | 4-22 | 50.62 |

Drawing



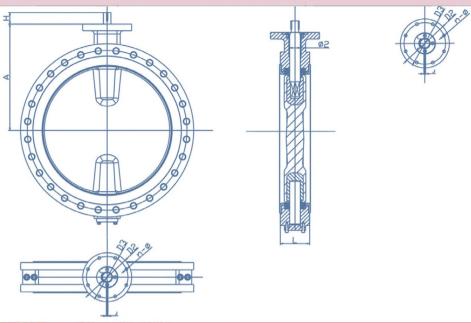


Outline Dimensions (Wafer)

| SIZE | L | A | Н | J | IS05211 | D2 | D3 | n−ø | ø2 |
|--------|-----|-----|-----|----|---------|-----|-----|------|--------|
| DN700 | 165 | 600 | 110 | 18 | F25 | 300 | 200 | 8-18 | 63.35 |
| DN750 | 165 | 610 | 110 | 18 | F25 | 300 | 200 | 8-18 | 63.35 |
| DN800 | 190 | 672 | 110 | 18 | F25 | 300 | 200 | 8-18 | 63. 35 |
| DN900 | 203 | 720 | 110 | 20 | F25 | 300 | 200 | 8-18 | 75 |
| DN1000 | 216 | 800 | 110 | 22 | F35 | 415 | 356 | 8-33 | 85 |
| DN1200 | 254 | 920 | 130 | 28 | F35 | 415 | 356 | 8-33 | 105 |



Drawing



Outline Dimensions (Lug)

| SIZE | L | A | Н | J | IS05211 | D2 | D3 | n−ø | ø2 |
|--------|-----|-----|-----|----|---------|-----|-----|------|--------|
| DN700 | 165 | 600 | 110 | 18 | F25 | 300 | 200 | 8-18 | 63.35 |
| DN750 | 165 | 610 | 110 | 18 | F25 | 300 | 200 | 8-18 | 63. 35 |
| DN800 | 190 | 672 | 110 | 18 | F25 | 300 | 200 | 8-18 | 63.35 |
| DN900 | 203 | 720 | 110 | 20 | F25 | 300 | 200 | 8-18 | 75 |
| DN1000 | 216 | 800 | 110 | 22 | F35 | 415 | 356 | 8-33 | 85 |
| DN1200 | 254 | 920 | 130 | 28 | F35 | 415 | 356 | 8-33 | 105 |

Torque values-Nm

| R | RFBF | 05-TA01 | | R | FBF0 | 5-TL01 | | |
|-------|------|------------|------------|--------------|------|------------|------------|----|
| SIZ | E | 10 Bar | 16 Bar | SIZ | E | 10 Bar | 16 Bar | |
| mm | inch | wet (N .m) | wet (N .m) | mm | inch | wet (N .m) | wet (N .m) | |
| DN40 | 1.5" | 18 | 20 | DN40 | 1.5" | 18 | 20 | |
| DN50 | 2" | 20 | 25 | DN50 | 2" | 20 | 25 | |
| DN65 | 2.5" | 30 | 35 | DN65 | 2.5" | 30 | 35 | |
| DN80 | 3" | 40 | 45 | DN80 | 3" | 40 | 45 | |
| DN100 | 4" | 65 | 75 | DN100 | 4" | 65 | 75 | ١. |
| DN125 | 5" | 100 | 120 | DN125 | 5" | 100 | 120 | |
| DN150 | 6" | 150 | 160 | DN150 | 6" | 150 | 160 | - |
| DN200 | 8" | 290 | 320 | DN200 | 8" | 290 | 320 | ١, |
| DN250 | 10" | 430 | 460 | DN250 | 10" | 430 | 460 | |
| DN300 | 12" | 560 | 650 | DN300 | 12" | 560 | 650 | 1 |
| DN350 | 14" | 732 | 850 | DN350 | 14" | 732 | 850 | |
| DN400 | 16" | 1300 | | DN400 | 16" | 1300 | | |
| DN450 | 18" | 1700 | | DN450 | 18" | 1700 | | |
| DN500 | 20" | 2700 | | DN500 | 20" | 2700 | | |
| DN600 | 24" | 4200 | | DN600 | 24" | 4200 | | |

NOTICE:



Connection Dimensisns

| | Outer I | Diamet | ter Of | Flange | Diamete | er Of C | Center | Circle | | r And D Holes | iamete | r Of |
|------|---------|--------|--------|--------|---------|---------|--------|--------|-------|------------------|--------|--------|
| DN | 150LB | PN10 | PN16 | JIS10K | 150LB | PN10 | PN16 | JIS10K | 150LB | PN10 | PN16 | JIS10K |
| 40 | 125 | 150 | 150 | 140 | 98.4 | 110 | 110 | 105 | 4-16 | 4-19 | 4-19 | 4-19 |
| 50 | 150 | 165 | 165 | 155 | 120.7 | 125 | 125 | 120 | 4-19 | 4-19 | 4-19 | 4-19 |
| 65 | 180 | 185 | 185 | 175 | 139.7 | 145 | 145 | 140 | 4-19 | 4-19 | 4-19 | 4-19 |
| 80 | 190 | 200 | 200 | 185 | 152.4 | 160 | 160 | 150 | 4-19 | 8-19 | 8-19 | 8-19 |
| 100 | 230 | 220 | 220 | 210 | 190.5 | 180 | 180 | 175 | 8-19 | 8-19 | 8-19 | 8-19 |
| 125 | 255 | 250 | 250 | 250 | 215.9 | 210 | 210 | 210 | 8-22 | 8-19 | 8-19 | 8-23 |
| 150 | 280 | 285 | 285 | 280 | 241.3 | 240 | 240 | 240 | 8-22 | 8-23 | 8-23 | 8-23 |
| 200 | 345 | 340 | 340 | 330 | 298.5 | 295 | 295 | 290 | 8-22 | 8-23 | 12-23 | 12-23 |
| 250 | 405 | 395 | 405 | 400 | 362 | 350 | 355 | 355 | 12-26 | 12-23 | 12-28 | 12-25 |
| 300 | 485 | 445 | 460 | 445 | 431.8 | 400 | 410 | 400 | 12-26 | 12-23 | 12-28 | 16-25 |
| 350 | 535 | 505 | 520 | 490 | 476.3 | 460 | 470 | 445 | 12-29 | 16-23 | 16-28 | 16-25 |
| 400 | 595 | 565 | 580 | 560 | 539.8 | 515 | 525 | 510 | 16-29 | 16-28 | 16-31 | 16-27 |
| 450 | 635 | 615 | 640 | 620 | 577.9 | 565 | 585 | 565 | 16-32 | 20-28 | 20-31 | 20-27 |
| 500 | 700 | 670 | 715 | 675 | 635 | 620 | 650 | 620 | 20-32 | 20-28 | 20-34 | 20-27 |
| 600 | 815 | 780 | 840 | 795 | 749.3 | 725 | 770 | 730 | 20-35 | 20-31 | 20-37 | 24-33 |
| 700 | 927 | 895 | 910 | 905 | 863.6 | 840 | 840 | 840 | 28-35 | 24-31 | 24-37 | 24-33 |
| 800 | 1060 | 1015 | 1025 | 1020 | 977.9 | 950 | 950 | 950 | 28-42 | 24-34 | 24-41 | 28-33 |
| 900 | 1168 | 1115 | 1125 | 1120 | 1085.85 | 1050 | 1050 | 1050 | 32-42 | 28-34 | 28-41 | 28-33 |
| 1000 | 1289 | 1230 | 1255 | 1235 | 1200.15 | 1160 | 1170 | 1160 | 36-42 | 28-37 | 28-44 | 28-39 |
| 1200 | 1511 | 1455 | 1485 | 1465 | 1422.4 | 1380 | 1390 | 1380 | 44-42 | 32-41 | 32-50 | 32-39 |



Connection Dimensisns

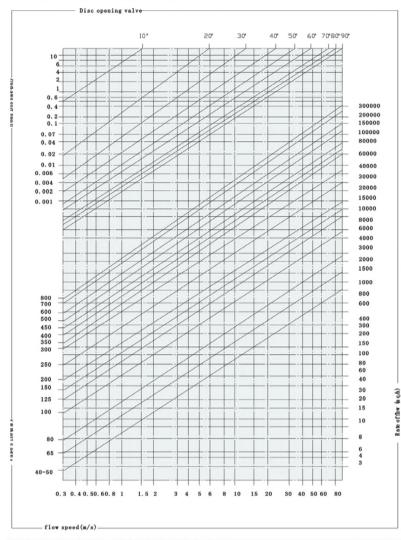
| | Outer I | Diamet | ter Of F | lange | Diamete | er Of C | Center | Circle | Number An | d Diame | eter Of B | olt |
|------|---------|--------|----------|--------|---------|---------|--------|--------|--|---------|-----------|--------|
| DN | 150LB | PN10 | PN16 | JIS10K | 150LB | PN10 | PN16 | JIS10K | 150LB | PN10 | PN16 | JIS10K |
| 40 | 125 | 150 | 150 | 140 | 98.4 | 110 | 110 | 105 | 4-1/2"-13UNC | 4-M16 | 4-M16 | 4-M16 |
| 50 | 150 | 165 | 165 | 155 | 120.7 | 125 | 125 | 120 | 4-5"-11UNC | 4-M16 | 4-M16 | 4-M16 |
| 65 | 180 | 185 | 185 | 175 | 139.7 | 145 | 145 | 140 | 4-5"-11UNC | 4-M16 | 4-M16 | 4-M16 |
| 80 | 190 | 200 | 200 | 185 | 152.4 | 160 | 160 | 150 | 4-5"-11UNC | 8-M16 | 8-M16 | 8-M16 |
| 100 | 230 | 220 | 220 | 210 | 190.5 | 180 | 180 | 175 | 8-5/8"-11UNC | 8-M16 | 8-M16 | 8-M16 |
| 125 | 255 | 250 | 250 | 250 | 215.9 | 210 | 210 | 210 | 8- ³ "-10UNC | 8-M16 | 8-M16 | 8-M20 |
| 150 | 280 | 285 | 285 | 280 | 241.3 | 240 | 240 | 240 | 8- ³ / ₄ "-10UNC | 8-M20 | 8-M20 | 8-M20 |
| 200 | 345 | 340 | 340 | 330 | 298.5 | 295 | 295 | 290 | 8- ³ ₄ "-10UNC | 8-M20 | 12-M20 | 12-M20 |
| 250 | 405 | 395 | 405 | 400 | 362 | 350 | 355 | 355 | 12-7/8"-9UNC | 12-M20 | 12-M24 | 12-M22 |
| 300 | 485 | 445 | 460 | 445 | 431.8 | 400 | 410 | 400 | 12-7/8"-9UNC | 12-M20 | 12-M24 | 16-M22 |
| 350 | 535 | 505 | 520 | 490 | 476.3 | 460 | 470 | 445 | 12-1"-8UNC | 16-M20 | 16-M24 | 16-M22 |
| 400 | 595 | 565 | 580 | 560 | 539.8 | 515 | 525 | 510 | 16-1"-8UNC | 16-M24 | 16-M27 | 16-M24 |
| 450 | 635 | 615 | 640 | 620 | 577.9 | 565 | 585 | 565 | 16-1 ¹ / ₈ "-8UN | 20-M24 | 20-M27 | 20-M24 |
| 500 | 700 | 670 | 715 | 675 | 635 | 620 | 650 | 620 | 20-1 ¹ / ₈ "-8UN | 20-M24 | 20-M30 | 20-M24 |
| 600 | 815 | 780 | 840 | 795 | 749.3 | 725 | 770 | 730 | 20-1 ¹ / ₄ "-8UN | 20-M27 | 20-M33 | 24-M30 |
| 700 | 927 | 895 | 910 | 905 | 863.6 | 840 | 840 | 840 | 28-1 ¹ / ₄ "-8UN | 24-M27 | 24-M33 | 24-M30 |
| 800 | 1060 | 1015 | 1025 | 1020 | 977.9 | 950 | 950 | 950 | 28-1 ¹ / ₂ "-8UN | 24-M30 | 24-M36 | 28-M30 |
| 900 | 1168 | 1115 | 1125 | 1120 | 1085.85 | 1050 | 1050 | 1050 | 32-1 ¹ / ₂ "-8UN | 28-M30 | 28-M36 | 28-M30 |
| 1000 | 1289 | 1230 | 1255 | 1235 | 1200.15 | 1160 | 1170 | 1160 | 36-1 ¹ / ₂ "-8UN | 28-M33 | 28-M39 | 28-M36 |
| 1200 | 1511 | 1455 | 1485 | 1465 | 1422.4 | 1380 | 1390 | 1380 | 44-1 ¹ / ₂ "-8UN | 32-M36 | 32-M45 | 32-M36 |



Head losses

Formulae for calculation of rate flow

Notes: Values indicated in this page is only for information



Liquids:
$$Q = \frac{KV}{\sqrt{\frac{PS}{\Delta P}}}$$

Q rate of flow (m3/h)

PS specific gravity (water=1)

ΔP pressure drop (bar)

Gas:
$$Q = 28.5 \frac{KV}{\sqrt{\frac{PS}{P_2 \cdot \Delta P}}}$$

Q rate of flow (m3/h)

PS specific gravity (air=1)

ΔP pressure drop (bar)

(less than 1/2 inlet pressure)

2 outlet pressure

Steam: Q = 22.5 · KV ·
$$\sqrt{P_2 \cdot \Delta P}$$

Q rate of flow (Kg/h)

ΔP pressure drop (bar)

(less than 1/2 inlet pressure)

P2 outlet pressure

Calculation of the rate of flow equivalent to H2O:

For different liquid, gas or steam head losses are determined by equivalent water of flow, as follosw:

Qe equivalent water flow

(mc/l o l/s)

Q fluid flow

(mc/l o l/s)

d fluid specific gravity

(Kg/mc)

Values CV (CV=1. 16KV)

| | | Flow in | n Gpm@1 PS | SI P@ Var: | ious Disc | Angles | | | Full 90° |
|------|-------|---------|------------|------------|-----------|--------|-------|-------|----------|
| (mm) | 10° | 20° | 30° | 40° | 50° | 60° | 70° | 80° | 0pen |
| 40 | 0.04 | 3 | 6 | 12 | 23 | 32 | 46 | 60 | 69 |
| 50 | 0.08 | 4 | 10 | 20 | 38 | 54 | 77 | 106 | 115 |
| 65 | 0.17 | 7 | 17 | 31 | 55 | 83 | 122 | 173 | 187 |
| 80 | 0. 26 | 10 | 19 | 33 | 60 | 99 | 156 | 234 | 257 |
| 100 | 0.43 | 14 | 31 | 66 | 118 | 196 | 309 | 464 | 510 |
| 125 | 0.68 | 25 | 52 | 113 | 201 | 333 | 527 | 791 | 869 |
| 150 | 1.7 | 38 | 81 | 174 | 311 | 514 | 814 | 1221 | 1342 |
| 200 | 2. 55 | 76 | 160 | 347 | 618 | 1022 | 1618 | 2426 | 2666 |
| 250 | 3.4 | 128 | 272 | 590 | 1051 | 1740 | 2754 | 4130 | 4539 |
| 300 | 4.3 | 199 | 421 | 911 | 1624 | 2688 | 4254 | 6381 | 7013 |
| 350 | 5 | 287 | 608 | 1317 | 2347 | 3883 | 6146 | 9217 | 10129 |
| 400 | 7 | 394 | 836 | 1811 | 3227 | 5340 | 8451 | 12676 | 13930 |
| 450 | 9 | 523 | 1107 | 2399 | 4274 | 7072 | 11193 | 16789 | 18449 |
| 500 | 12 | 825 | 1423 | 3084 | 5495 | 9093 | 14391 | 21587 | 23722 |
| 600 | 19 | 1039 | 2199 | 4764 | 8491 | 14049 | 22233 | 33351 | 36649 |



Installation Instructions





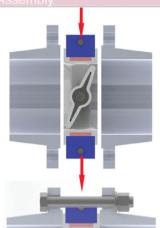


The butterfly valve can be installed on the pipeline, which is at any angle.

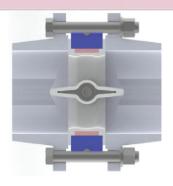
- 1.The valve should be installed in the location being sure to provide convenient operation, maintenance and replacement.
- 2.As mounting the butterfly valve, fail to consider flow direction of mediums in pipeline, that is to say, the valve can be used in double way.
- 3.Before installation, the butterfly valve should be stored in ware house and prevent it from moisture and in so doing, the disc should be kept to open at an angle of 15 degree.
- 4. Before installation, the following processes should be completed:
- (1)Check carefully and confirm the operation condition of the valve is in line with the technical specification and requirements.
- (2)Clean the disc sealing area and body sealing completely. It is not permitted to open the disc before cleaning.
- (3)Check and confirm the handle is strongly collected to the flange and stem.
- 5.As mounting the butterfly valve in pipeline, the load for tightening connection bolts should be uniformed.
- 6.After installation, the disc must be opened in the case of the strength pressure test on pipeline being carried out.
- 7.After being installed, the valve should be examined regularly. The main item to be checked are as follows:
- (1) Whether the valve seat and 'O' sealing ring have been damaged.
- (2) Check the sealing effects of the disc sealing area.
- (3)After the valve was examined and assembled, no scuffing happens at the time of on-off rotation.
- (4)After the valve was examined and assembled, the sealing test should be carried out as the introduction.
- (5)After each examination, detailed records should be filed for reference.



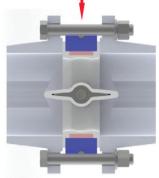
INSTALLATION



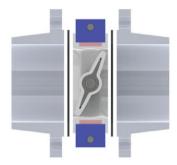
1 Leave a space between flanges so that valve can be easily inserted and removed .and move the valve in accordance with the arrow



2 Open completely the valve before tightening flanges



3 Tighten bolts till flanges are in contact with valve body

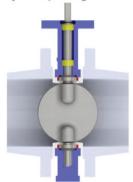


4 NOTE: do not insert other packing between flange and valve

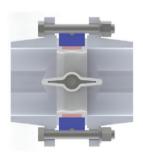
NOTE:Weld the pipe only in spots with the valve between flanges. Remove the valve before finishing welding to avoid that heat damage the seat. Clean carefully the welding to avoid that slags damage the seat

Installation for powders and muddy fluids

In case of use with powders or muddy fluids,install the valve with horizontal rotation axis,to allow sediments to flow easily on opening



Wrong
Vertical rotation axis



Right
Horizontal rotation axis

End piping installation

When valves are installed end of piping, a counterflange as per dwg type B is needed to secure tightness at max peressure. Please notice in order when the valves are installed as per drawing type A.



Type A installation without end piping



Type B installation with end piping

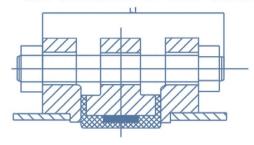
Pressure (max): Type A installation is 6 Bar

Type B installation is 16 Bar

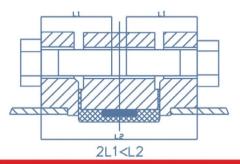


Length & Quantity of Bolts for Valve Installation

Bolt Connection of Wafer Butterfly Valve



Bolt Connection of Lug Butterfly Valve



EN1092-1 PN10/16 ISO7005 PN10/16 DIN2501 PN10/16

| | | | 1 | .0Мра | | | | 1.6 | Мра | | |
|------|---------|-------------------------|--------|-----------|-----------------------------------|-----------------------------------|---------|--------|--|---------|--|
| size | Stud Bo | lt for Type of valve | wafer | Hexagon H | eed Bolt for Type of Lug valve | Stud Bolt for Type of wafer valve | | | Hexagon Heed Bolt for Type of Lug valve | | |
| inch | Qty | Dia×L1 | Length | Qty | Dia×L1 | Qty | Dia×L1 | Length | Qty | Dia×L1 | |
| 50 | 4 | M16×110 | 130 | 4×2 | M16×40 | 4 | M16×110 | 130 | 4×2 | M16×40 | |
| 65 | 4 | M16×120 | 140 | 4×2 | M16×45 | 4 | M16×120 | 140 | 4×2 | M16×45 | |
| 80 | 8 | M16×120 | 140 | 8×2 | M16×45 | 8 | M16×120 | 140 | 8×2 | M16×45 | |
| 100 | 8 | M16×130 | 150 | 8×2 | M16×50 | 8 | M16×130 | 150 | 8×2 | M16×50 | |
| 125 | 8 | M16×130 | 150 | 8×2 | M16×50 | 8 | M16×130 | 150 | 8×2 | M16×50 | |
| 150 | 8 | M20×140 | 165 | 8×2 | M20×50 | 8 | M20×140 | 165 | 8×2 | M20×50 | |
| 200 | 8 | M20×150 | 175 | 8×2 | M20×55 | 12 | M20×150 | 175 | 12×2 | M20×55 | |
| 250 | 12 | M20×160 | 185 | 12×2 | M20×60 | 12 | M24×160 | 185 | 12×2 | M24×60 | |
| 300 | 12 | M20×170 | 195 | 12×2 | M20×65 | 12 | M24×170 | 195 | 12×2 | M24×65 | |
| 350 | 16 | M20×170 | 195 | 16×2 | M20×65 | 16 | M24×170 | 195 | 16×2 | M24×65 | |
| 400 | 16 | M24×190 | 220 | 16×2 | M24×75 | 16 | M27×190 | 220 | 16×2 | M27×75 | |
| 450 | 20 | M24×220 | 250 | 20×2 | M24×80 | 20 | M27×220 | 250 | 20×2 | M27×80 | |
| 500 | 20 | M24×260 | 290 | 20×2 | M24×90 | 20 | M30×260 | 290 | 20×2 | M30×90 | |
| 600 | 20 | M27×290 | 324 | 20×2 | M27×100 | 20 | M33×290 | 324 | 20×2 | M33×100 | |
| 700 | 24 | M27×290 | 324 | 24×2 | M27×100 | 24 | M33×290 | 324 | 24×2 | M33×100 | |
| 800 | 24 | M30×320 | 356 | 24×2 | M30×110 | 24 | M36×320 | 356 | 24×2 | M36×110 | |
| 900 | 28 | M30×340 | 376 | 28×2 | M30×130 | 28 | M36×340 | 376 | 28×2 | M36×130 | |
| 1000 | 28 | M33×360 | 400 | 28×2 | M33×140 | 28 | M39×360 | 400 | 28×2 | M39×140 | |
| 1200 | 32 | M36×430 | 470 | 32×2 | M36×165 | 32 | M45×430 | 470 | 32×2 | M45×165 | |

ASME B 16.5 150LB

| aima | | | 1501 | _B | |
|------|---------|----------------------|--------|--------------|------------------------------|
| size | Stud Bo | It for Type of wafer | valve | Hexagon Heed | d Bolt for Type of Lug valve |
| inch | Qty | Dia×L1 | Length | Qty | Dia×L1 |
| 50 | 4 | 5/8"×110 | 130 | 4×2 | 5/8"×40 |
| 65 | 4 | 5/8"×120 | 140 | 4×2 | 5/8"×45 |
| 80 | 4 | 5/8"×120 | 140 | 4×2 | 5/8"×45 |
| 100 | 8 | 3/4"×130 | 150 | 8×2 | 3/4"×50 |
| 125 | 8 | 3/4"×130 | 150 | 8×2 | 3/4"×50 |
| 150 | 8 | 3/4"×140 | 165 | 8×2 | 3/4"×50 |
| 200 | 8 | 3/4"×150 | 175 | 8×2 | 3/4"×55 |
| 250 | 12 | 7/8"×160 | 185 | 12×2 | 7/8"×60 |
| 300 | 12 | 7/8"×170 | 195 | 12×2 | 7/8"×65 |
| 350 | 12 | 1"×170 | 195 | 12×2 | 1"×65 |
| 400 | 16 | 1"×190 | 220 | 16×2 | 1"×75 |
| 450 | 16 | 9/8"×220 | 250 | 16×2 | 9/8"×80 |
| 500 | 20 | 9/8"×260 | 290 | 20×2 | 9/8"×90 |
| 600 | 20 | 5/4"×290 | 324 | 20×2 | 5/4"×100 |
| 700 | 28 | 5/4"×290 | 324 | 28×2 | 5/4"×100 |
| 800 | 28 | 3/2"×320 | 356 | 28×2 | 3/2"×110 |
| 900 | 32 | 3/2"×340 | 376 | 32×2 | 3/2"×130 |
| 1000 | 36 | 3/2"×360 | 400 | 36×2 | 3/2"×140 |
| 1200 | 44 | 3/2"×430 | 470 | 44×2 | 3/2"×165 |

Butterfly Valve BF-756



Work principle

This product mainly consists of body, stem, disc, seat bushings etc. The rotation of actuating device makes stem and disc revolved, which ensures on-off operations and flow control.

The rotation of the actuating device ensures dependability and position disc control and position disc control and water flow control. Rotate handle wheel clockwise, the valve is close.

Advantage

- 1.Small in size and light in weight. Easy installation and maintenance. It can be mounted wherever needed.
- 2. Simple and compact construction, quick 90 degrees on-off operation.
- 3. Minimized operating torque, energy saving.
- 4. Bubbles-tight sealing with no leakage under the pressure testing
- 5. Wide selection of materials, applicable for various medium.
- 6.Long service life. Standing the test of tens of thousands opening/closing operations.
- 7. Flow curve tending to straight line. Excellent regulation performance.

Trouble & remedy

| Trouble | cause | remedy |
|---|---|---|
| Leakage in sealing area | Disc sealing area or body sealing seat scratched, disc is not closed completely. Hexagonal socket head bolts on clamping ring are not tightened completely. | Repair the disc sealing replace repair the body sealing seat, adjust actuator to close the disc completely, tighten loosed hexagonal socket head bolts. |
| Leakage in shaft end | The seat or The 'O' ring is not pressed completely. | Replace the body sealing seat |
| Leakage in joint area between valve face and relevant flange on pipeline | Connection bolts are not screwed up uniformly. | Tighten the connection bolts evenly. |

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