

BUTTERFLY VALVE

INDEX



01 CENTRIC WAFER BODY BUTTERFLY VALVES

| | |
|--|-------|
| 1.1 Centric Wafer Body Butterfly Valves Features | ... 3 |
| 1.2 Material of Construction | ... 4 |
| 1.3 Dimension Specification | ... 5 |

02 CENTRIC LUG BODY BUTTERFLY VALVES

| | |
|---|-------|
| 2.1 Centric Lug Body Butterfly Valve Features | ... 6 |
| 2.2 Material of Construction. | ... 7 |
| 2.3 Dimension Specification. | ... 8 |

03 OPERATORS AVAILABILITY LEVER, GEAR, ACTUATOR ... 9

OUR PRODUCT RANGE

| VALVE | TYPE | 1.5" | 2" | 2.5" | 3" | 4" | 5" | 6" | 8" | 10" | 12" | 14" | 16" | 18" | 20" | 22" | 24" |
|-----------------|-------|------|----|------|----|----|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|
| Butterfly Valve | Wafer | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Butterfly Valve | Lug | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |

CENTRIC WAFER BODY BUTTERFLY VALVE FEATURES

1. STEM Precision double “D” disc to stem connection drives the disc without the need for screws or pins. The close tolerance, double “D” connection that drives the valve disc is an exclusive feature of the KFEL valve. Disassembly of the KFEL stem is just a matter of pulling the stem out of the disc.
2. STEM RETAINING : The stem is retained in the body by means of a unique stainless steel Spirolox retaining ring, manufactured from stainless steel as standard,
3. Top plate drilled to fit iso 5211 dimensions. All handles, gear operators and pneumatic actuators are designed to mount directly.
4. STEM BUSHING : An upper stem bushing, retained by a stainless steel ring, is provided to absorb actuator side thrusts and is PTFE as standard.
5. STEM SEAL: Double “U” cup seal design is self-adjusting and gives positive sealing in both directions. Keeps environmental contaminants from entering the stem bore.
6. BODY: One piece wafer or lug style allows for ease of assembly and maintenance.
7. SEAT: KFEL’s Replaceable tongue and groove seat design provides complete isolation of flowing media from the body. The seat also features a moulded o-ring which eliminates the need of flange gaskets.
8. DISC/STEM: One piece design. The disc edge is spherically machined and hand polished to produce a bubble tight shut off, minimum torque, and longer seat life. For erosion and abrasion resistance.



CENTRIC WAFER BODY BUTTERFLY VALVE



TECHNICAL SPECIFICATION

Design & Manufacturing Standards

API 609 / BS EN-593 / IS13095 / ASME B16.5 / ISO 7005

Testing Standard

API 598 / API6D / BSEN 12266-1

Valve face to face Dimension

Category A API 609 / IS13095 / EN593 / ISO5752Tab5

TOP Flange Drilling

ISO 5211

Flang Standard

DIN EN 1092-PN6, PN10, Class 150, BS10 Tab D&E, IS6392, Tab 11/17, JIS 5K/10K

MATERIAL OF CONSTRUCTION

BODY

Cast Iron ASTM A126 Class B IS 210 FG 260,
Ductile Iron ASTM A 395 (60-40-18), WCB (CS)
ASTM A 216, Stainless Steel (CF8M/CF8) ASTM A 351M/351

DISC

Cast Iron ASTM A126 Class B IS 210 FG 260, Ductile Iron
ASTM A 395 (60-40-18), WCB (CS) ASTM A 216,
Stainless Steel (CF8M/CF8) ASTM A 351M/351
Alluminium Bronze, Duplex, Super Duplex

***DISC also available with Rubber Lining in EBBONITE/
EPDM/NBR/NYLON/HYPLON (with Gurranted Spark
Test Pass)**

SEAT

EPDM / White EPDM (FOOD GRADE)
BUNA-N / White - BUNA N (Food Garde)
(NITRILE - NBR) VITON, HYPLON, BUTYLE, SILICON,
NEOPRENE, NATURAL RUBBER

STEM

Stainless Steel ASTM A 479 TYPE 410
Stainless Steel ASTM A 276 TYPE 316
Stainless Steel ASTM A 276 TYPE 304
Duplex, Super Duplex, Monel, Bronze

STEM BUSHING : PTFE, ACETAL

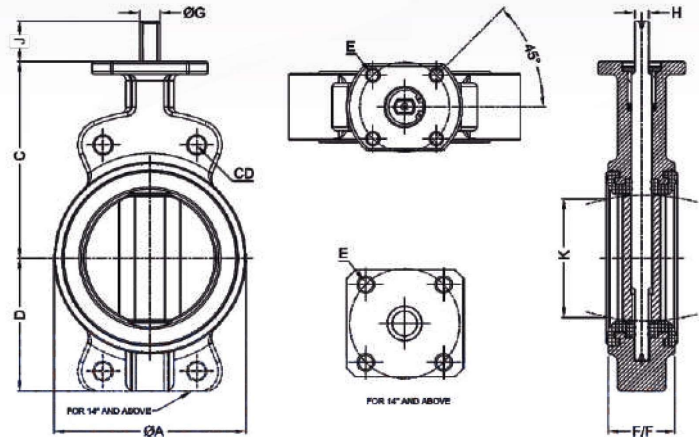
OIL SEAL (Stem Seal) : EPDM

WASHER : SS304

RETAINING CIRCLIP : SPRING STEEL

Note : Note : All Body and Disc are **IC** Cast from 1.5" (**DN40**) To 24" (**DN600**) Available. any other Special Material are also work on request for Body / Disc / Stem / Seat.

DIMENSION SPECIFICATION



| Valve Size | | ØA | F/F | C | D | Top Mounting Flange | | | ØG | H | J | K | Bolting Dia | |
|------------|-----|--------|--------|--------|--------|---------------------|--------------|------------|-------|-------|-------|--------|---------------|-------------|
| Inch | DIN | | | | | E | No. of Holes | Hole Dia | | | | | ASME B16.5 CD | ISD 7005 CD |
| 1.5 | 40 | 71.80 | 43.00 | 87.00 | 47.00 | F05 | 4 | 8.00 | 12.00 | 8.00 | 30.00 | - | 98.40 | 110.00 |
| 2 | 50 | 91.00 | 43.00 | 113.00 | 59.00 | F05 | 4 | 8.00 | 14.00 | 10.00 | 29.40 | 30.98 | 120.70 | 125.00 |
| 2.5 | 65 | 96.80 | 46.00 | 110.00 | 61.00 | F05 | 4 | 8.00 | 14.00 | 10.00 | 30.00 | 48.741 | 139.70 | 145.00 |
| 3 | 80 | 116.80 | 46.00 | 128.00 | 73.00 | F05 | 4 | 8.00 | 14.00 | 10.00 | 30.00 | 66.42 | 152.40 | 160.00 |
| 4 | 100 | 149.00 | 52.00 | 154.00 | 91.00 | F07 | 4 | 9.00 | 16.00 | 11.00 | 31.40 | 90.64 | 190.50 | 180.00 |
| 5 | 125 | 168.90 | 56.00 | 169.00 | 105.00 | F07 | 4 | 9.00 | 19.00 | 13.00 | 32.00 | 115.10 | 215.90 | 210.00 |
| 6 | 150 | 202.00 | 56.00 | 189.00 | 122.00 | F07 | 4 | 9.00 | 19.00 | 13.00 | 30.00 | 140.23 | 241.30 | 240.00 |
| 8 | 200 | 250.00 | 60.00 | 214.00 | 146.00 | F07/F10 | 4/4 | 9.00/11.00 | 22.00 | 16.00 | 30.00 | 189.53 | 298.50 | 295.00 |
| 10 | 250 | 308.00 | 68.00 | 251.00 | 185.00 | F10 | 4 | 11.00 | 28.00 | 20.00 | 32.00 | 240.99 | 362.00 | 350.00 |
| 12 | 300 | 361.40 | 78.00 | 289.00 | 214.00 | F10 | 4 | 11.00 | 30.00 | 22.00 | 32.00 | 289.68 | 431.80 | 400.00 |
| 14 | 350 | 413.00 | 78.00 | 340.00 | 262.00 | F12 | 4 | 14.50 | 35.00 | 27.00 | 52.00 | 325.65 | 476.30 | 460.00 |
| 16 | 400 | 474.00 | 102.00 | 373.00 | 294.00 | F12 | 4 | 14.50 | 35.00 | 27.00 | 52.00 | 374.88 | 539.80 | 515.00 |
| 18 | 450 | 528.00 | 114.00 | 407.00 | 319.00 | F16 | 4 | 21.00 | 47.00 | 36.00 | 59.00 | 424.97 | 577.90 | 565.00 |
| 20 | 500 | 582.00 | 127.00 | 436.00 | 354.00 | F16 | 4 | 21.00 | 49.00 | 36.00 | 59.00 | 473.25 | 635.00 | 620.00 |
| 22 | 550 | 634.00 | 127.00 | 464.00 | 381.00 | F16 | 4 | 21.00 | 49.00 | 36.00 | 59.00 | 525.88 | 692.10 | - |
| 24 | 600 | 690.00 | 154.00 | 494.00 | 422.00 | F16 | 4 | 21.00 | 59.00 | 46.00 | 80.00 | 571.61 | 749.30 | 725.00 |

Torque Rating(NM) for Rubber Line Wafer Butterfly Valve

| VALVE | 1.5" | 2" | 2.5" | 3" | 4" | 5" | 6" | 8" | 10" | 12" | 14" | 16" | 18" | 20" | 22" | 24" | |
|---------------------|------|----|------|----|----|----|----|-----|-----|-----|-----|-----|------|------|------|------|------|
| Full Rated Pressure | 3.5 | 7 | 7 | 13 | 14 | 29 | 44 | 58 | 102 | 164 | 269 | 351 | 418 | 659 | 768 | 996 | 1091 |
| Valve ΔP Bar (PSI) | 7 | 8 | 8 | 14 | 18 | 30 | 47 | 65 | 118 | 183 | 317 | 401 | 504 | 825 | 957 | 1295 | 1412 |
| | 10 | 8 | 8 | 14 | 18 | 30 | 48 | 66 | 122 | 198 | 337 | 450 | 585 | 989 | 1144 | 1684 | 1760 |
| | 12 | 12 | 12 | 18 | 23 | 34 | 53 | 73 | 131 | 218 | 369 | 540 | 702 | 1186 | 1373 | 2189 | 2288 |
| | 16 | 17 | 17 | 22 | 32 | 45 | 65 | 110 | 210 | 319 | 468 | 800 | 1025 | 1730 | 2002 | 2845 | 3080 |

CENTRIC LUG BODY BUTTERFLY VALVE FEATURES

1. STEM Precision double “D” disc to stem connection drives the disc without the need for screws or pins. The close tolerance, double “D” connection that drives the valve disc is an exclusive feature of the KFEL valve. Disassembly of the KFEL stem is just a matter of pulling the stem out of the disc.

2. STEM RETAINING : The stem is retained in the body by means of a unique stainless steel Spirolox retaining ring, manufactured from stainless steel as standard,

3. Top plate drilled to fit iso 5211 dimensions. All handles, gear operators and pneumatic actuators are designed to mount directly.

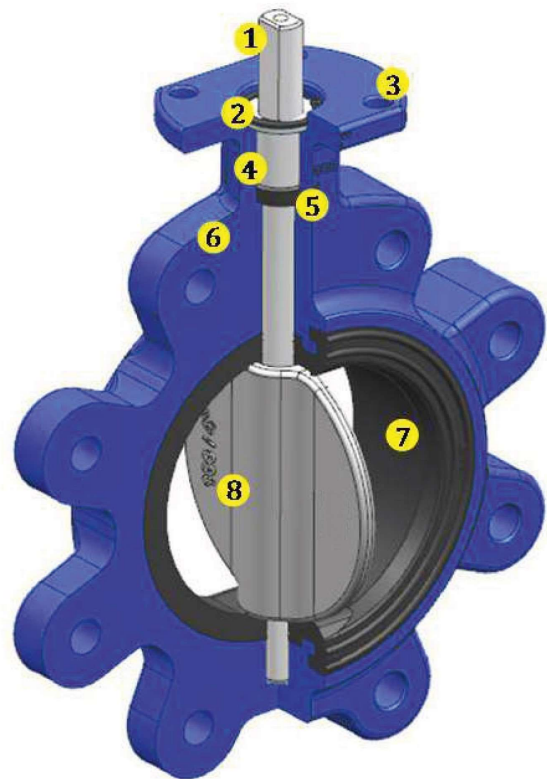
4. STEM BUSHING : An upper stem bushing, retained by a stainless steel ring, is provided to absorb actuator side thrusts and is PTFE as standard.

5. STEM SEAL: Double “U” cup seal design is self-adjusting and gives positive sealing in both directions. Keeps environmental contaminants from entering the stem bore.

6. BODY: One piece wafer or lug style allows for ease of assembly and maintenance.

7. SEAT: KFEL’s Replaceable tongue and groove seat design provides complete isolation of flowing media from the body. The seat also features a moulded o-ring which eliminates the need of flange gaskets.

8. DISC/STEM: One piece design. The disc edge is spherically machined and hand polished to produce a bubble tight shut off, minimum torque, and longer seat life. For erosion and abrasion resistance.



CENTRIC LUG BODY BUTTERFLY VALVE



TECHNICAL SPECIFICATION

Design & Manufacturing Standards

API 609 / BS EN-593 / IS13095 / ASME B16.5 / ISO 7005

Testing Standard

API 598 / API6D / BSEN 12266-1

Valve face to face Dimension

Category A API 609 / IS13095 / EN593 / ISO5752Tab5

TOP Flange Drilling

ISO 5211

Flang Standard

DIN EN 1092-PN6, PN10, Class 150, BS10 Tab D&E, IS6392, Tab 11/17, JIS 5K/10K

MATERIAL OF CONSTRUCTION

BODY

Cast Iron ASTM A126 Class B IS 210 FG 260,
Ductile Iron ASTM A 395 (60-40-18), WCB (CS)
ASTM A 216, Stainless Steel (CF8M/CF8) ASTM A 351M/351

DISC

Cast Iron ASTM A126 Class B IS 210 FG 260, Ductile Iron
ASTM A 395 (60-40-18), WCB (CS) ASTM A 216,
Stainless Steel (CF8M/CF8) ASTM A 351M/351
Alluminium Bronze, Duplex, Super Duplex

***DISC also available with Rubber Lining in EBBONITE/
EPDM/NBR/NYLON/HYPLON (with Gurranted Spark
Test Pass)**

SEAT

EPDM / White EPDM (FOOD GRADE)
BUNA-N / White - BUNA N (Food Garde)
(NITRILE - NBR) VITON, HYPLON, BUTYLE, SILICON,
NEOPRENE, NATURAL RUBBER

STEM

Stainless Steel ASTM A 479 TYPE 410
Stainless Steel ASTM A 276 TYPE 316
Stainless Steel ASTM A 276 TYPE 304
Duplex, Super Duplex, Monel, Bronze

STEM BUSHING : PTFE, ACETAL

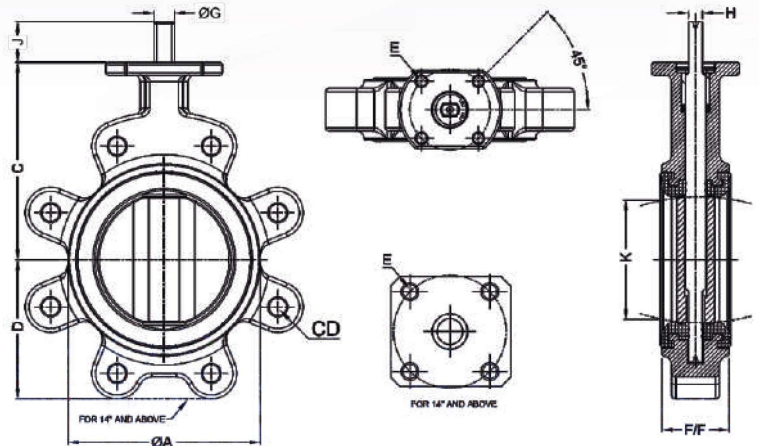
OIL SEAL (Stem Seal) : EPDM

WASHER : SS304

RETAINING CIRCLIP : SPRING STEEL

Note : Note : All Body and Disc are **IC** Cast from 1.5" (**DN40**) To 24" (**DN600**) Available. any other Special Material are also work on request for Body / Disc / Stem / Seat.

DIMENSION SPECIFICATION



| Valve Size | | ØA | F/F | C | D | Top Mounting Flange | | | ØG | H | J | K | Bolting Dia | | |
|------------|-----|--------|--------|--------|--------|---------------------|--------------|------------|-------|-------|-------|--------|---------------|--------------|----------------|
| Inch | DIN | | | | | E | No. of Holes | Hole Dia | | | | | ASME B16.5 CD | No. of Holes | Threads UNC-2B |
| 1.5 | 40 | 71.80 | 43.00 | 87.00 | 47.00 | F05 | 4 | 8.00 | 12.00 | 8.00 | 30.00 | - | 98.40 | 4 | 1/2-13 |
| 2 | 50 | 91.00 | 43.00 | 113.00 | 59.00 | F05 | 4 | 8.00 | 14.00 | 10.00 | 29.40 | 30.98 | 120.70 | 4 | 5/8-11 |
| 2.5 | 65 | 96.80 | 46.00 | 110.00 | 61.00 | F05 | 4 | 8.00 | 14.00 | 10.00 | 30.00 | 48.741 | 139.70 | 4 | 5/8-11 |
| 3 | 80 | 116.80 | 46.00 | 128.00 | 73.00 | F05 | 4 | 8.00 | 14.00 | 10.00 | 30.00 | 66.42 | 152.40 | 4 | 5/8-11 |
| 4 | 100 | 149.00 | 52.00 | 154.00 | 91.00 | F07 | 4 | 9.00 | 16.00 | 11.00 | 31.40 | 90.64 | 190.50 | 8 | 5/8-11 |
| 5 | 125 | 168.90 | 56.00 | 169.00 | 105.00 | F07 | 4 | 9.00 | 19.00 | 13.00 | 32.00 | 115.10 | 215.90 | 8 | 3/4-10 |
| 6 | 150 | 202.00 | 56.00 | 189.00 | 122.00 | F07 | 4 | 9.00 | 19.00 | 13.00 | 30.00 | 140.23 | 241.30 | 8 | 3/4-10 |
| 8 | 200 | 250.00 | 60.00 | 214.00 | 146.00 | F07/F10 | 4/4 | 9.00/11.00 | 22.00 | 16.00 | 30.00 | 189.53 | 398.50 | 8 | 3/4-10 |
| 10 | 250 | 308.00 | 68.00 | 251.00 | 185.00 | F10 | 4 | 11.00 | 28.00 | 20.00 | 32.00 | 240.99 | 362.00 | 12 | 7/8-9 |
| 12 | 300 | 361.40 | 78.00 | 289.00 | 214.00 | F10 | 4 | 11.00 | 30.00 | 22.00 | 32.00 | 289.68 | 431.80 | 12 | 7/8-9 |
| 14 | 350 | 413.00 | 78.00 | 340.00 | 262.00 | F12 | 4 | 14.50 | 35.00 | 27.00 | 52.00 | 325.65 | 476.30 | 12 | 1-8 |
| 16 | 400 | 474.00 | 102.00 | 373.00 | 294.00 | F12 | 4 | 14.50 | 35.00 | 27.00 | 52.00 | 374.88 | 539.80 | 16 | 1-8 |
| 18 | 450 | 528.00 | 114.00 | 407.00 | 319.00 | F16 | 4 | 21.00 | 47.00 | 36.00 | 59.00 | 424.97 | 577.90 | 16 | 11/8-7 |
| 20 | 500 | 582.00 | 127.00 | 436.00 | 354.00 | F16 | 4 | 21.00 | 49.00 | 36.00 | 59.00 | 473.25 | 635.00 | 20 | 11/8-7 |
| 22 | 550 | 634.00 | 127.00 | 464.00 | 381.00 | F16 | 4 | 21.00 | 49.00 | 36.00 | 59.00 | 525.88 | 692.10 | 20 | 11/4-7 |
| 24 | 600 | 690.00 | 154.00 | 494.00 | 422.00 | F16 | 4 | 21.00 | 59.00 | 46.00 | 80.00 | 571.61 | 749.30 | 20 | 11/4-7 |

Torque Rating(NM) for Rubber Line Lug Butterfly Valve

| VALVE | 1.5" | 2" | 2.5" | 3" | 4" | 5" | 6" | 8" | 10" | 12" | 14" | 16" | 18" | 20" | 22" | 24" | |
|---------------------|------|----|------|----|----|----|----|-----|-----|-----|-----|-----|------|------|------|------|------|
| Full Rated Pressure | 3.5 | 7 | 7 | 13 | 14 | 29 | 44 | 58 | 102 | 164 | 269 | 351 | 418 | 659 | 768 | 996 | 1091 |
| Valve ΔP Bar (PSI) | 7 | 8 | 8 | 14 | 18 | 30 | 47 | 65 | 118 | 183 | 317 | 401 | 504 | 825 | 957 | 1295 | 1412 |
| | 10 | 8 | 8 | 14 | 18 | 30 | 48 | 66 | 122 | 198 | 337 | 450 | 585 | 989 | 1144 | 1684 | 1760 |
| | 12 | 12 | 12 | 18 | 23 | 34 | 53 | 73 | 131 | 218 | 369 | 540 | 702 | 1186 | 1373 | 2189 | 2288 |
| | 16 | 17 | 17 | 22 | 32 | 45 | 65 | 110 | 210 | 319 | 468 | 800 | 1025 | 1730 | 2002 | 2845 | 3080 |

OPERATORS



BARE SHAFT

Valve up to Size 24" for customizes Operating System available in Different Shape & Size Stem Direct Mounting



LEVER

Valve up to 12" Size Depending on pressure rating can be supplied with lever handles for manual operation. Pad locking can also be provided for preventing unauthorized operation.



GEAR

Valve up to 24" Size can be direct mounted with gear operators for manual operation gear operates can be attached with chain wheel operators for opening or closing valves located on pipe lines at high elevators.



ACTUATOR

Valve can be direct mounted with pneumatic Actuator or Electric Actuators and access for complete automation options controlled valves can be mounted with manual override.

SEAT SELECTION GUIDE

| Seat Type | Temperature Range | | Media |
|---------------------------------|-------------------|---------------|---|
| | Max | Max | |
| EPDM / White EPDM | -20° F (-29°C) | 302°F (150°C) | Water+Steam+Chemical Oils All Oils Hot Air Application & All Food Ind. Goods Whether Resistance Moderate Oil Resistant All Oils |
| Buna-N / White Buna-N (Nitrite) | 0°F (-18°C) | 212°F (100°C) | |
| Viton (FKM) | 0°F (-18°C) | 392°F (200°C) | |
| Silicon | 0°F (-18°C) | 392°F (200°C) | |
| Neoprene | 0°F (-18°C) | 240°F (120°C) | Moderate Oil Resistant All Oils |
| Viton Extreme | 0°F (-18°C) | 536°F (280°C) | |