

Series BUV-1107 butterfly valves designed to comply with MSS SP-67, BS5155 and API 609. Compatible with GB, ANSI, DIN, BS, JIS flanges. Available in size 1½" to 48". Available in wafer type, lug type and U-section wafer type body. Available with handles (1½" to 12"), manual gear operators (1½" to 48"), and electric or pneumatic actuators (1½" to 48"). With many body/trim combinations, there is a series BUV-1107 butterfly valve to meet your application.

8. Key

Optional flat stem or square stem

7. Bushing:

✦ Minimizes torque.

Isolate the stem from the valve body, preventing seizure of the stem due to corrosion in the stem journal.

6. O-Ring:

✦ Provides further prevention of stem leakage

5. Disc

✦ Provides bubble-tight shut-off
 ✦ Assures minimum torque
 ✦ Longer seat life

1. Body

✦ Top flange comply with ISO5211;
 ✦ Compatible with GB, DIN, BS, JIS, ANSI flanges

2. Stem

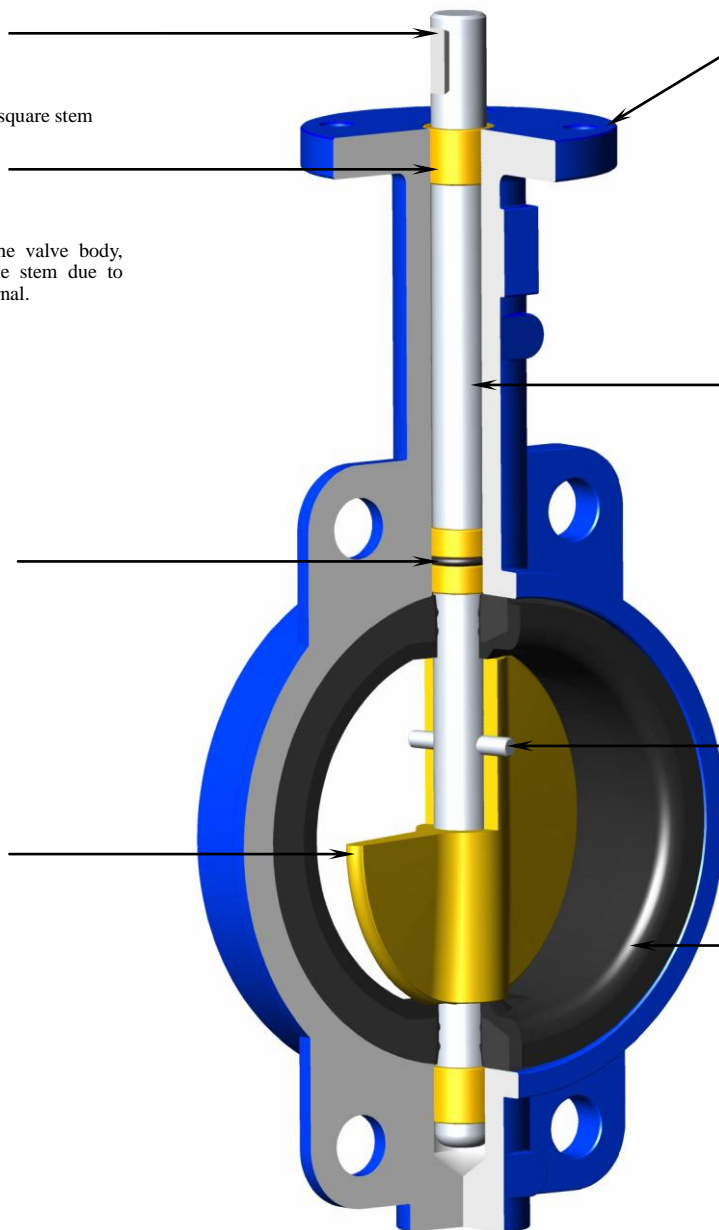
✦ One-piece thru stem
 ✦ Ensure dependability

3. Taper Pin

✦ Stem to disc connection
 ✦ field replaceable

4. Seat

✦ Cartridge seat
 ✦ Field replaceable
 ✦ Negates need for flange gaskets



Materials List

| Item | Part Name | Materials |
|------|-----------|--|
| 1 | Body | Cast Iron: ASTM A126CL. B , DIN1691 GG25, EN 1561 EN-GJL-200; GB12226 HT200; Ductile Cast Iron: ASTM A536 65-45-12, DIN 1693 GGG40, EN1563 EN-GJS-400-15, GB12227 QT450-10; Stainless Steel: ASTM A351 CF8, CF8M; CF3, CF3M; Carbon Steel: ASTM A216 WCB |
| 2 | Stem | Zinc Plated Steel; Stainless Steel: ASTM A276 Type 316, Type 410, Type 420; ASTM A582 Type 416; |
| 3 | Taper Pin | Stainless Steel: ASTM A276 Type 304, Type 316; EN 1.4501; |
| 4 | Seat | NBR, EPDM, Neoprene, PTFE, Viton; |
| 5 | Disc | Ductile Cast Iron (Nickel plated): ASTM A536 65-45-12, DIN 1693 GGG40, EN1563 EN-GJS-400-15, GB12227 QT450-10; Stainless Steel: ASTM A351 CF8, CF8M; CF3, CF3M; EN 1.4408, 1.4469; 1.4501; AL-Bronze: ASTM B148 C95400; |
| 6 | O-Ring | NBR, EPDM, Neoprene, Viton; |
| 7 | Bushing | PTFE, Nylon, Lubricated Bronze; |
| 8 | Key | Carbon Steel |

This buyer can select material as per materials list. The customer may mark the material and temperature used, Our company may select instead. When the medium and temperature is special, please consult with our company.

Seat Temperature Ratings

| Material | | NBR | Neoprene | EPDM | Hypalon | Viton | PTFE |
|---------------------|----|---------|----------|---------|-----------|----------|---------|
| Temperature Ratings | °C | -20~100 | -40~100 | -40~120 | -32~135 | -12~230 | -50~200 |
| | °F | -4~212 | -40~212 | -40~248 | -25.6~275 | 10.4~446 | -58~392 |

Seat materials are capable of withstanding lower temperatures without damage. However, the elastomer becomes hard and torques increase. Some flow media may further restrict the published temperature limits or significantly reduce seat life.

Valve Torques (N·M)

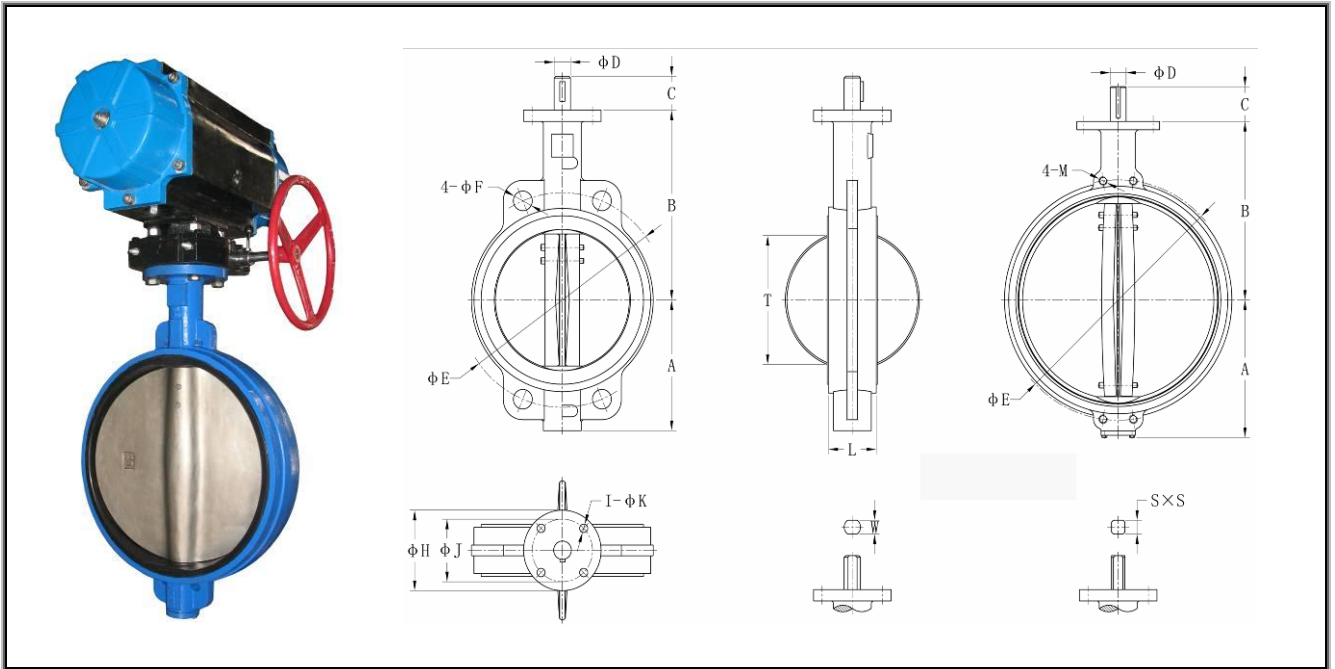
| Valve Size | | (N·M) Torques for differential pressure | | | | |
|------------|------|---|---------|---------|---------|---------|
| inch | mm | 0.4MPa | 0.6MPa | 1.0MPa | 1.4MPa | 1.6MPa |
| 1½" | 40 | 7.3 | 7.7 | 8.2 | 8.9 | 9.2 |
| 2" | 50 | 11.2 | 11.9 | 12.5 | 13.2 | 13.7 |
| 2½" | 65 | 16.9 | 18.4 | 19.8 | 21.3 | 22.1 |
| 3" | 80 | 23.3 | 24.8 | 26.2 | 27.5 | 28.3 |
| 4" | 100 | 32.7 | 36.4 | 40.3 | 44.0 | 46.3 |
| 5" | 125 | 47.7 | 54.3 | 61.0 | 67.5 | 72.7 |
| 6" | 150 | 67.6 | 78.0 | 88.4 | 98.8 | 105.6 |
| 8" | 200 | 119.7 | 133.6 | 147.6 | 161.5 | 171.4 |
| 10" | 250 | 188.7 | 211.5 | 234.3 | 257.0 | 271.5 |
| 12" | 300 | 290.1 | 315.7 | 341.5 | 367.0 | 384.3 |
| 14" | 350 | 298.2 | 346.8 | 395.4 | 447.9 | 482.1 |
| 16" | 400 | 481.3 | 551.3 | 621.4 | 676.4 | 709.6 |
| 18" | 450 | 710.3 | 818.3 | 926.4 | 1037.5 | 1109.2 |
| 20" | 500 | 944.5 | 1037.2 | 1129.8 | 1226.9 | 1289 |
| 24" | 600 | 1743 | 1899.6 | 2056.3 | 2116 | 2164.2 |
| 28" | 700 | 2147.8 | 2489.0 | 2841.5 | 3198.6 | 3427.1 |
| 30" | 750 | 3085.9 | 3322.5 | 3559.0 | 3788.4 | 3936.8 |
| 32" | 800 | 4067.9 | 4357.8 | 4712.6 | 5073.1 | 5304.3 |
| 36" | 900 | 6176.5 | 6444.0 | 6711.2 | 6981.7 | 7157.7 |
| 40" | 1000 | 7810.0 | 8270.4 | 8869.3 | 9365.2 | 9682.6 |
| 42" | 1050 | 9316.7 | 9720.5 | 10123.4 | — | — |
| 48" | 1200 | 12204 | 12733.8 | 13261.7 | 13795.6 | 14143.1 |

◇ All torque values shown on chart are for "wet" (water and other non-lubricating media) on-off service. Under certain conditions, hydrodynamic torque can meet or exceed seating and unseating torques. When designing valve systems, hydrodynamic torque must be considered to help ensure correct selection of application.

Cv Values-Valve Sizing Coefficients (US-GPM@1ΔP)

| Valve Size | | DEG. OPEN | | | | | | | | |
|------------|------|-----------|------|-------|-------|-------|-------|-------|--------|--------|
| inch | mm | 10° | 20° | 30° | 40° | 50° | 60° | 70° | 80° | 90° |
| 1½" | 40 | 0.04 | 1.92 | 4.1 | 8.7 | 15 | 26 | 41 | 65 | 72 |
| 2" | 50 | 0.06 | 3 | 7 | 15 | 27 | 44 | 70 | 105 | 115 |
| 2½" | 65 | 0.1 | 6 | 12 | 25 | 45 | 75 | 119 | 178 | 196 |
| 3" | 80 | 0.2 | 9 | 18 | 39 | 70 | 116 | 183 | 275 | 302 |
| 4" | 100 | 0.3 | 17 | 36 | 78 | 139 | 230 | 364 | 546 | 600 |
| 5" | 125 | 0.5 | 29 | 61 | 133 | 237 | 392 | 620 | 930 | 1022 |
| 6" | 150 | 0.8 | 45 | 95 | 205 | 366 | 605 | 958 | 1437 | 1579 |
| 8" | 200 | 2 | 89 | 188 | 408 | 727 | 1202 | 1903 | 2854 | 3136 |
| 10" | 250 | 3 | 151 | 320 | 694 | 1237 | 2049 | 3240 | 4859 | 5340 |
| 12" | 300 | 4 | 234 | 495 | 1072 | 1911 | 3162 | 5005 | 7507 | 8250 |
| 14" | 350 | 6 | 338 | 715 | 1549 | 2761 | 4568 | 7230 | 10844 | 11917 |
| 16" | 400 | 8 | 464 | 983 | 2130 | 3797 | 6282 | 9942 | 14913 | 16388 |
| 18" | 450 | 11 | 615 | 1302 | 2822 | 5028 | 8320 | 13168 | 19752 | 21705 |
| 20" | 500 | 14 | 791 | 1647 | 3628 | 6465 | 10698 | 16931 | 25396 | 27908 |
| 24" | 600 | 22 | 1222 | 2587 | 5605 | 9989 | 16528 | 26157 | 39236 | 43116 |
| 28" | 700 | 31 | 1703 | 3605 | 7813 | 13961 | 23037 | 36459 | 54689 | 60102 |
| 30" | 750 | 37 | 2080 | 4406 | 9546 | 17010 | 28147 | 44545 | 66818 | 73246 |
| 32" | 800 | 100 | 2436 | 5272 | 10636 | 18025 | 29440 | 47622 | 70876 | 77897 |
| 36" | 900 | 260 | 3050 | 6730 | 12740 | 20220 | 32500 | 52500 | 79600 | 87500 |
| 40" | 1000 | 313 | 3665 | 8089 | 15942 | 24299 | 39056 | 63093 | 95660 | 105154 |
| 42" | 1050 | 350 | 4095 | 9040 | 17108 | 27150 | 43640 | 70500 | 106890 | 117500 |
| 48" | 1200 | 455 | 5365 | 11840 | 22400 | 30600 | 51200 | 92300 | 140000 | 154000 |

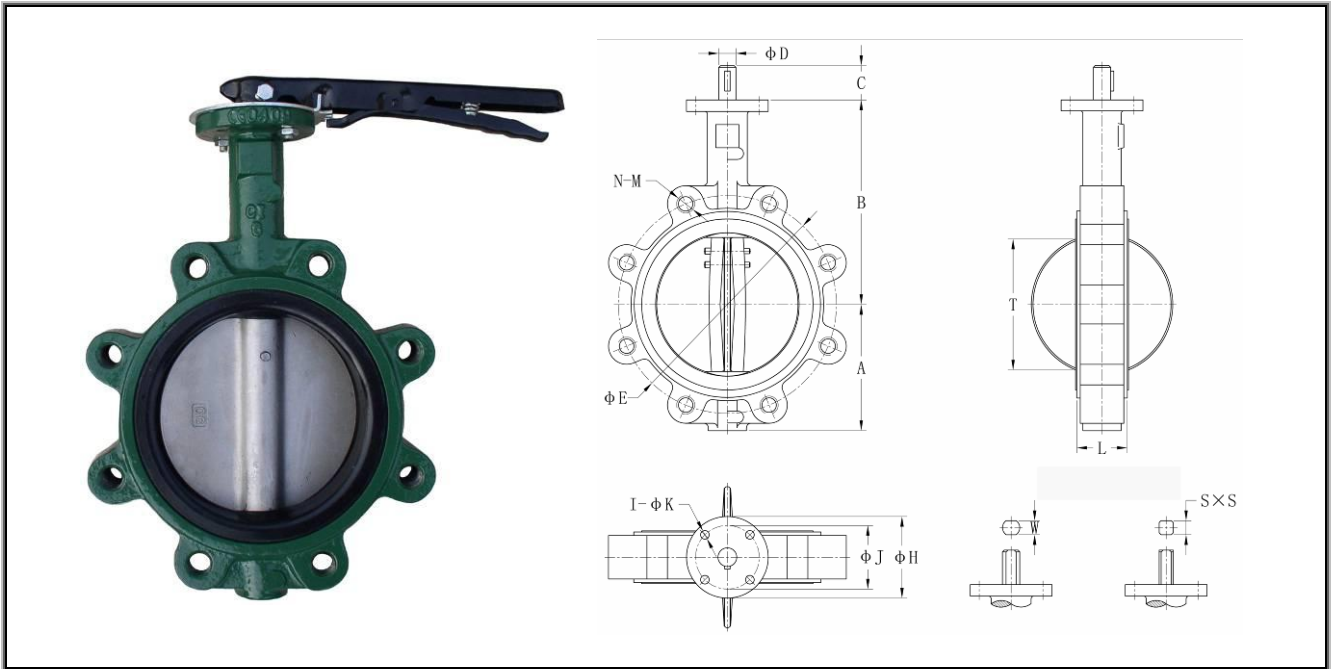
Wafer Type Butterfly Valve



Dimension List (mm)

| Size | | A | B | C | D | E | | | | F/M | | | | H | J | I-K | L | T | S | W |
|------|------|-----|-----|-----|------|--------------|------|------|------|--------------|------|------|-----|-----|-----|--------|-----|------|----|----|
| mm | inch | | | | | ANSI 125/150 | PN10 | PN16 | 10K | ANSI 125/150 | PN10 | PN16 | 10K | | | | | | | |
| 40 | 1½ | 70 | 145 | 32 | 12.7 | 98.4 | 110 | 110 | 105 | 16 | 18 | 18 | 19 | 65 | 50 | 4-7 | 33 | 27 | 10 | 10 |
| 50 | 2 | 76 | 162 | 32 | 12.7 | 120.7 | 125 | 125 | 120 | 19 | 18 | 18 | 19 | 65 | 50 | 4-7 | 42 | 32 | 10 | 10 |
| 65 | 2½ | 89 | 174 | 32 | 12.7 | 139.7 | 145 | 145 | 140 | 19 | 18 | 18 | 19 | 65 | 50 | 4-7 | 45 | 47 | 10 | 10 |
| 80 | 3 | 95 | 181 | 32 | 12.7 | 152.4 | 160 | 160 | 150 | 19 | 18 | 18 | 19 | 65 | 50 | 4-7 | 45 | 65 | 10 | 10 |
| 100 | 4 | 114 | 200 | 32 | 15.9 | 190.5 | 180 | 180 | 175 | 19 | 18 | 18 | 19 | 90 | 70 | 4-9.5 | 52 | 90 | 14 | 12 |
| 125 | 5 | 127 | 213 | 32 | 19.1 | 215.9 | 210 | 210 | 210 | 22 | 18 | 18 | 23 | 90 | 70 | 4-9.5 | 54 | 111 | 17 | 14 |
| 150 | 6 | 139 | 225 | 32 | 19.1 | 241.3 | 240 | 240 | 240 | 22 | 22 | 22 | 23 | 90 | 70 | 4-9.5 | 56 | 145 | 17 | 14 |
| 200 | 8 | 177 | 260 | 38 | 22.2 | 298.5 | 295 | 295 | 290 | 22 | 22 | 22 | 23 | 125 | 102 | 4-11.5 | 60 | 193 | 17 | 17 |
| 250 | 10 | 203 | 292 | 38 | 28.6 | 362 | 350 | 355 | 355 | 25 | 22 | 26 | 25 | 125 | 102 | 4-11.5 | 66 | 241 | 22 | 22 |
| 300 | 12 | 242 | 337 | 38 | 31.8 | 431.8 | 400 | 410 | 400 | 25 | 22 | 26 | 25 | 125 | 102 | 4-11.5 | 77 | 292 | 22 | 24 |
| 350 | 14 | 277 | 368 | 45 | 31.8 | 476.3 | 460 | 470 | 445 | 29 | 22 | 26 | 25 | 125 | 102 | 4-11.5 | 77 | 325 | 22 | 24 |
| 400 | 16 | 308 | 400 | 51 | 33.3 | 539.8 | 515 | 525 | 510 | 29 | 26 | 30 | 27 | 210 | 165 | 4-22 | 86 | 380 | 27 | 27 |
| 450 | 18 | 342 | 422 | 51 | 38.1 | 577.9 | 565 | 585 | 565 | 32 | 26 | 30 | 27 | 210 | 165 | 4-22 | 105 | 428 | 27 | 27 |
| 500 | 20 | 374 | 479 | 64 | 41.3 | 635 | 620 | 650 | 620 | 32 | 26 | 33 | 27 | 210 | 165 | 4-22 | 130 | 474 | 36 | 32 |
| 600 | 24 | 459 | 562 | 70 | 50.8 | 749.3 | 725 | 770 | 730 | 35 | 30 | 36 | 33 | 210 | 165 | 4-22 | 152 | 575 | 36 | 36 |
| 700 | 28 | 520 | 624 | 72 | 55 | — | 840 | 840 | 840 | — | 30 | 36 | 33 | 300 | 254 | 8-18 | 165 | 674 | — | — |
| 750 | 30 | 565 | 650 | 72 | 55 | 914.4 | 900 | 900 | 900 | 1¼"-7 | 33 | 36 | 33 | 300 | 254 | 8-18 | 167 | 726 | — | — |
| 800 | 32 | 591 | 672 | 72 | 55 | — | 950 | 950 | 950 | — | 33 | 39 | M30 | 300 | 254 | 8-18 | 190 | 771 | — | — |
| 900 | 36 | 610 | 768 | 77 | 75 | 1085.9 | 1050 | 1050 | 1050 | 1½"-6 | M30 | M36 | M30 | 300 | 254 | 8-18 | 207 | 839 | — | — |
| 1000 | 40 | 685 | 823 | 85 | 85 | — | 1160 | 1170 | 1160 | — | M33 | M39 | M36 | 300 | 254 | 8-18 | 216 | 939 | — | — |
| 1050 | 42 | 785 | 858 | 85 | 85 | 1257.3 | — | — | — | 1½"-6 | — | — | — | 300 | 254 | 8-18 | 256 | 997 | — | — |
| 1200 | 48 | 839 | 940 | 150 | 92 | 1422.4 | 1380 | 1390 | 1380 | 1½"-6 | M36 | M45 | M36 | 350 | 298 | 8-22 | 276 | 1125 | — | — |

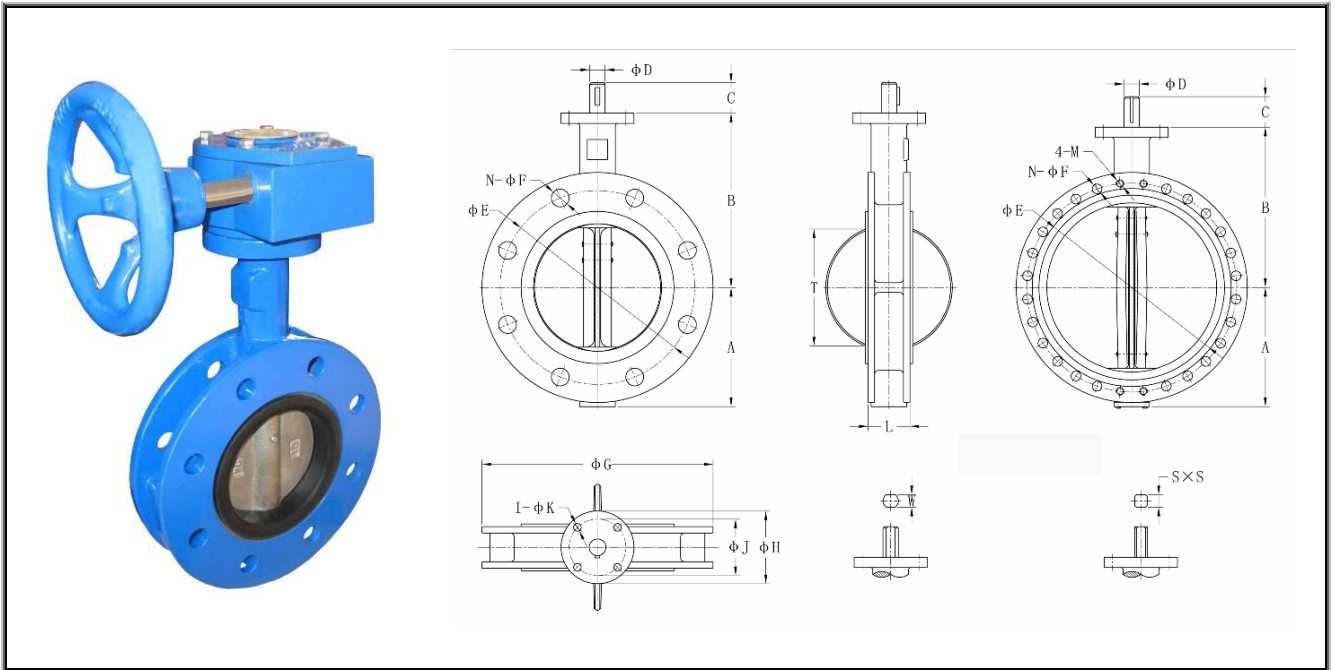
Lug Type Butterfly Valve



Dimension List (mm)

| Size | | A | B | C | D | E | | | | N-M | | | | H | J | I-K | L | T | S | W |
|------|------|-----|-----|-----|------|--------------|------|------|------|--------------|--------|--------|--------|-----|-----|--------|-----|------|----|----|
| mm | inch | | | | | ANSI 125/150 | PN10 | PN16 | 10K | ANSI 125/150 | PN10 | PN16 | 10K | | | | | | | |
| 40 | 1½ | 70 | 145 | 32 | 12.7 | 98.4 | 110 | 110 | 105 | 4-½"-12 | 4-M16 | 4-M16 | 4-M16 | 65 | 50 | 4-7 | 33 | 27 | 10 | 10 |
| 50 | 2 | 76 | 162 | 32 | 12.7 | 120.7 | 125 | 125 | 120 | 4-¾"-11 | 4-M16 | 4-M16 | 4-M16 | 65 | 50 | 4-7 | 42 | 32 | 10 | 10 |
| 65 | 2½ | 89 | 174 | 32 | 12.7 | 139.7 | 145 | 145 | 140 | 4-¾"-11 | 4-M16 | 4-M16 | 4-M16 | 65 | 50 | 4-7 | 45 | 47 | 10 | 10 |
| 80 | 3 | 95 | 181 | 32 | 12.7 | 152.4 | 160 | 160 | 150 | 4-¾"-11 | 4-M16 | 8-M16 | 8-M16 | 65 | 50 | 4-7 | 45 | 65 | 10 | 10 |
| 100 | 4 | 114 | 200 | 32 | 15.9 | 190.5 | 180 | 180 | 175 | 8-¾"-11 | 8-M16 | 8-M16 | 8-M16 | 90 | 70 | 4-9.5 | 52 | 90 | 14 | 12 |
| 125 | 5 | 127 | 213 | 32 | 19.1 | 215.9 | 210 | 210 | 210 | 8-¾"-10 | 8-M16 | 8-M16 | 8-M20 | 90 | 70 | 4-9.5 | 54 | 111 | 17 | 14 |
| 150 | 6 | 139 | 225 | 32 | 19.1 | 241.3 | 240 | 240 | 240 | 8-¾"-10 | 8-M20 | 8-M20 | 8-M20 | 90 | 70 | 4-9.5 | 56 | 145 | 17 | 14 |
| 200 | 8 | 177 | 260 | 38 | 22.2 | 298.5 | 295 | 295 | 290 | 8-¾"-10 | 8-M20 | 12-M20 | 12-M20 | 125 | 102 | 4-11.5 | 60 | 193 | 17 | 17 |
| 250 | 10 | 203 | 292 | 38 | 28.6 | 362 | 350 | 355 | 355 | 12-½"-9 | 12-M20 | 12-M24 | 12-M22 | 125 | 102 | 4-11.5 | 66 | 241 | 22 | 22 |
| 300 | 12 | 242 | 337 | 38 | 31.8 | 431.8 | 400 | 410 | 400 | 12-¾"-9 | 12-M20 | 12-M24 | 16-M22 | 125 | 102 | 4-11.5 | 77 | 292 | 22 | 24 |
| 350 | 14 | 277 | 368 | 45 | 31.8 | 476.3 | 460 | 470 | 445 | 12-1"-8 | 16-M20 | 16-M24 | 16-M22 | 125 | 102 | 4-11.5 | 77 | 325 | 22 | 24 |
| 400 | 16 | 308 | 400 | 51 | 33.3 | 539.8 | 515 | 525 | 510 | 16-1"-8 | 16-M24 | 16-M27 | 16-M24 | 210 | 165 | 4-22 | 86 | 380 | 27 | 27 |
| 450 | 18 | 342 | 422 | 51 | 38.1 | 577.9 | 565 | 585 | 565 | 16-1½"-7 | 20-M24 | 20-M27 | 20-M24 | 210 | 165 | 4-22 | 105 | 428 | 27 | 27 |
| 500 | 20 | 374 | 479 | 64 | 41.3 | 635 | 620 | 650 | 620 | 20-1½"-7 | 20-M24 | 20-M30 | 20-M24 | 210 | 165 | 4-22 | 130 | 474 | 36 | 32 |
| 600 | 24 | 459 | 562 | 70 | 50.8 | 749.3 | 725 | 770 | 730 | 20-1¼"-7 | 20-M27 | 20-M33 | 24-M30 | 210 | 165 | 4-22 | 152 | 575 | 36 | 36 |
| 700 | 28 | 520 | 624 | 72 | 55 | — | 840 | 840 | 840 | — | 24-M27 | 24-M33 | 24-M30 | 300 | 254 | 8-18 | 165 | 674 | — | — |
| 750 | 30 | 565 | 650 | 72 | 55 | 914.4 | 900 | 900 | 900 | 28-1½"-7 | 24-M30 | 24-M33 | 24-M30 | 300 | 254 | 8-18 | 167 | 726 | — | — |
| 800 | 32 | 591 | 672 | 72 | 55 | — | 950 | 950 | 950 | — | 24-M30 | 24-M36 | 28-M30 | 300 | 254 | 8-18 | 190 | 771 | — | — |
| 900 | 36 | 610 | 768 | 77 | 75 | 1085.9 | 1050 | 1050 | 1050 | 32-1½"-6 | 28-M30 | 28-M36 | 28-M30 | 300 | 254 | 8-18 | 207 | 839 | — | — |
| 1000 | 40 | 685 | 823 | 85 | 85 | — | 1160 | 1170 | 1160 | — | 28-M33 | 28-M39 | 28-M36 | 300 | 254 | 8-18 | 216 | 939 | — | — |
| 1050 | 42 | 785 | 858 | 85 | 85 | 1257.3 | — | — | — | 36-1½"-6 | — | — | — | 300 | 254 | 8-18 | 256 | 997 | — | — |
| 1200 | 48 | 839 | 940 | 150 | 92 | 1422.4 | 1380 | 1390 | 1380 | 44-1½"-6 | 32-M36 | 32-M45 | 32-M36 | 350 | 298 | 8-22 | 276 | 1125 | — | — |

U-Section Wafer Type Butterfly Valve



Dimension List (mm)

| 规格 Size | | A | B | C | D | E | | | N-F/(4-M) | | | G | | | H | J | I-K | L | T | S | W |
|---------|------|-----|-----|-----|------|--------------|------|------|----------------|----------------|----------------|--------------|------|------|-----|-----|--------|-----|------|----|----|
| mm | inch | | | | | ANSI 125/150 | PN10 | PN16 | ANSI 125/150 | PN10 | PN16 | ANSI 125/150 | PN10 | PN16 | | | | | | | |
| 40 | 1½ | 70 | 145 | 32 | 12.7 | 98.4 | 110 | 110 | 4-16 | 4-18 | 4-18 | 127 | 150 | 150 | 65 | 50 | 4-7 | 33 | 27 | 10 | 10 |
| 50 | 2 | 76 | 162 | 32 | 12.7 | 120.7 | 125 | 125 | 4-19 | 4-18 | 4-18 | 152 | 165 | 165 | 65 | 50 | 4-7 | 42 | 32 | 10 | 10 |
| 65 | 2½ | 80 | 174 | 32 | 12.7 | 139.7 | 145 | 145 | 4-19 | 4-18 | 4-18 | 178 | 185 | 185 | 65 | 50 | 4-7 | 45 | 47 | 10 | 10 |
| 80 | 3 | 90 | 181 | 32 | 12.7 | 152.4 | 160 | 160 | 4-19 | 4-18 | 8-18 | 191 | 200 | 200 | 65 | 50 | 4-7 | 45 | 65 | 10 | 10 |
| 100 | 4 | 110 | 200 | 32 | 15.9 | 190.5 | 180 | 180 | 8-19 | 8-18 | 8-18 | 229 | 220 | 220 | 90 | 70 | 4-9.5 | 52 | 90 | 14 | 12 |
| 125 | 5 | 125 | 213 | 32 | 19.1 | 215.9 | 210 | 210 | 8-22 | 8-18 | 8-18 | 254 | 250 | 250 | 90 | 70 | 4-9.5 | 54 | 111 | 17 | 14 |
| 150 | 6 | 143 | 225 | 32 | 19.1 | 241.3 | 240 | 240 | 8-22 | 8-22 | 8-22 | 279 | 285 | 285 | 90 | 70 | 4-9.5 | 56 | 145 | 17 | 14 |
| 200 | 8 | 175 | 260 | 38 | 22.2 | 298.5 | 295 | 295 | 8-22 | 8-22 | 12-22 | 343 | 340 | 340 | 125 | 102 | 4-11.5 | 60 | 193 | 17 | 17 |
| 250 | 10 | 203 | 292 | 38 | 28.6 | 362 | 350 | 355 | 12-25 | 12-22 | 12-26 | 406 | 395 | 405 | 125 | 102 | 4-11.5 | 66 | 241 | 22 | 22 |
| 300 | 12 | 245 | 337 | 38 | 31.8 | 431.8 | 400 | 410 | 12-25 | 12-22 | 12-26 | 483 | 445 | 460 | 125 | 102 | 4-11.5 | 77 | 292 | 22 | 24 |
| 350 | 14 | 277 | 368 | 45 | 31.8 | 476.3 | 460 | 470 | 12-29 | 16-22 | 16-26 | 533 | 505 | 520 | 125 | 102 | 4-11.5 | 77 | 325 | 22 | 24 |
| 400 | 16 | 308 | 400 | 51 | 33.3 | 539.8 | 515 | 525 | 16-29 | 16-26 | 16-30 | 597 | 565 | 580 | 210 | 165 | 4-22 | 86 | 380 | 27 | 27 |
| 450 | 18 | 342 | 422 | 51 | 38.1 | 577.9 | 565 | 585 | 16-32 | 20-26 | 20-30 | 635 | 615 | 640 | 210 | 165 | 4-22 | 105 | 428 | 27 | 27 |
| 500 | 20 | 374 | 479 | 64 | 41.3 | 635 | 620 | 650 | 20-32 | 20-26 | 20-33 | 699 | 670 | 715 | 210 | 165 | 4-22 | 130 | 474 | 36 | 32 |
| 600 | 24 | 459 | 562 | 70 | 50.8 | 749.3 | 725 | 770 | 20-35 | 20-30 | 20-36 | 813 | 780 | 840 | 210 | 165 | 4-22 | 152 | 575 | 36 | 36 |
| 700 | 28 | 520 | 624 | 72 | 55 | — | 840 | 840 | — | 24-30 | 24-36 | — | 895 | 910 | 300 | 254 | 8-18 | 165 | 674 | — | — |
| 750 | 30 | 565 | 650 | 72 | 55 | 914.4 | 900 | 900 | 24-35 4-1½" | 24-33 | 24-36 | 984 | 965 | 970 | 300 | 254 | 8-18 | 167 | 726 | — | — |
| 800 | 32 | 591 | 672 | 72 | 55 | — | 950 | 950 | — | 24-33 | 24-39 | — | 1025 | 1025 | 300 | 254 | 8-18 | 190 | 771 | — | — |
| 900 | 36 | 610 | 768 | 77 | 75 | 1085.9 | 1050 | 1050 | 28-41 4-1½" | 24-33 4-M30 | 24-39 4-M36 | 1168 | 1115 | 1125 | 300 | 254 | 8-18 | 207 | 839 | — | — |
| 1000 | 40 | 685 | 823 | 85 | 85 | — | 1160 | 1170 | — | 24-36 4-M33 | 24-42 4-M39 | — | 1230 | 1255 | 300 | 254 | 8-18 | 216 | 939 | — | — |
| 1050 | 42 | 785 | 858 | 85 | 85 | 1257.3 | — | — | 32-41 4-1½" | — | — | 1346 | — | — | 300 | 254 | 8-18 | 256 | 997 | — | — |
| 1200 | 48 | 839 | 940 | 150 | 92 | 1422.4 | 1380 | 1390 | 40-41 4-1½" | 28-39 4-M36 | 28-48 4-M45 | 1511 | 1455 | 1485 | 350 | 298 | 8-22 | 276 | 1125 | — | — |