

Double-eccentric kinematics, and all stainless steel bodies and trims guarantee high performance corrosion resistant service for application of KITZ Type UB butterfly valves to chemical industries.

Specification

| Maximum service pressure | | | |
|---------------------------|-----------------|------------------------|---------|
| 10UB | 1.4 MPa | 16UB (size 14" to 24") | 1.4 MPa |
| 16UB (size 2" to 12") | 2.0 MPa | 150UB | 1.9 MPa |
| Service temperature range | | | |
| PTFE seat | -29°C to +160°C | | |
| Carbon filled PTFE seat | -29°C to +200°C | | |
| Wall thickness | | | |
| ASME B 16.34 Class 150 | | | |
| Face to face dimensions | | | |
| 6" and smaller | ISO 5752 Short | | |
| 8" and larger | ISO 5752 Medium | | |
| Coupling flanges | | | |
| 10UB | JIS 10K | | |
| 16UB | JIS 16K | | |
| 150UB | ASME Class 150 | | |

Standard Materials

| Parts | ASTM Materials | JIS Materials |
|---------------|----------------|---------------|
| Body | A351 Gr.CF8*1 | SCS13A*1 |
| Stem | SUS304 N2 | SUS304 N2 |
| Disc | A351 Gr.CF8*1 | SCS13A*1 |
| Gland | A351 Gr.CF8*1 | SCS13A*1 |
| Seat ring | PTFE*2 | PTFE*2 |
| Seat retainer | A276 TYPE304 | SUS304 |
| Gland packing | PTFE | PTFE |
| Gasket | PTFE | PTFE |

Feature

Double-eccentric Kinematics

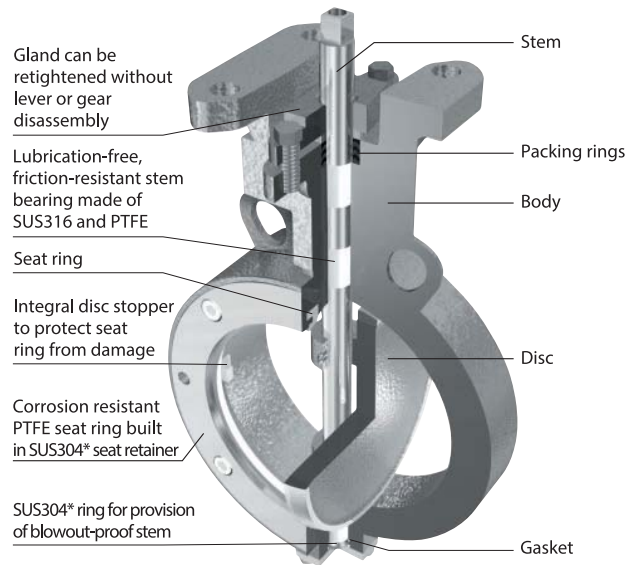
The valves stem is designed eccentric to both the center of the seat ring (by X) and the center of the valve body (by Y), which makes the clearance C between the seat ring and the disc seat surface on its fully open position (Fig. 1). Disc seating surface is spherically machined and contacts PTFE seat tightly thorough 360°C for leak-free service. All these help minimize frictional wear of seat rings and reduce the valve operating torque considerably.

Durable Seat Rings

Seat rings are made of PTFE with stainless steel supporter. Furthermore, double-eccentric kinematics relieve seat ring from damage or wear which is a rather usual problem of conventional butterfly valves, This makes the service life twice as long as rubber seated butterfly valves.

Retightening of Gland Packing

There is a room between the gland and the lever or gear to allow retightening of gland boltings without trouble of disassembly of the lever or gear during plant operation. Another feature of KITZ Type UB butterfly valves (Fig. 2).



*SCS14A or SUS316 is available as an option

| Parts | ASTM Materials | JIS Materials |
|-----------------|-------------------|-------------------|
| Set bolt | A193 Gr.B8 | SUS304 |
| Taper pin | A276 TYPE316 | SUS316 |
| Stem bearing | METAL BACKED PTFE | METAL BACKED PTFE |
| Gland bolts | A193 Gr.B8 | SUS304 |
| Thrust washer | PTFE | PTFE |
| End plate | A351 Gr.CF8 | SCS13A |
| End plate bolts | A193 Gr.B8 | SUS304 |

*1. CF8M(316)/SCS14A(SUS316) is available as an option.
*2. Carbon filled PTFE seat rings are optionally available.

Fig. 1

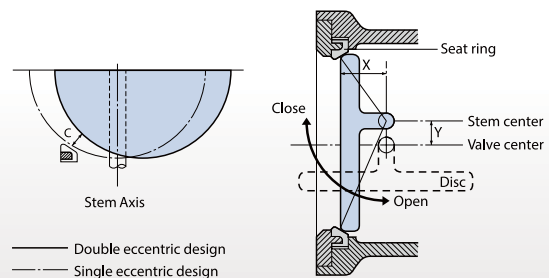
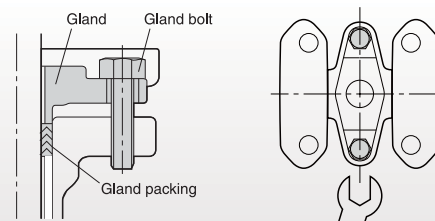


Fig. 2



Flow Coefficient (Cv)

| Size | | Valve opening | | | |
|------|-------|---------------|------|-------|-------|
| DN | NPS | 30° | 45° | 60° | 90° |
| 50 | 2 | 17 | 33 | 54 | 83 |
| 65 | 2 1/2 | 36 | 69 | 112 | 175 |
| 80 | 3 | 52 | 101 | 164 | 255 |
| 100 | 4 | 94 | 182 | 295 | 460 |
| 125 | 5 | 147 | 285 | 462 | 722 |
| 150 | 6 | 240 | 465 | 756 | 1180 |
| 200 | 8 | 455 | 883 | 1440 | 2240 |
| 250 | 10 | 743 | 1450 | 2350 | 3660 |
| 300 | 12 | 1150 | 2230 | 3610 | 5640 |
| 350 | 14 | 1440 | 2790 | 4520 | 7060 |
| 400 | 16 | 1910 | 3700 | 6010 | 9390 |
| 450 | 18 | 2500 | 4850 | 7880 | 12300 |
| 500 | 20 | 3110 | 6030 | 9800 | 15300 |
| 600 | 24 | 4650 | 9030 | 14700 | 22900 |

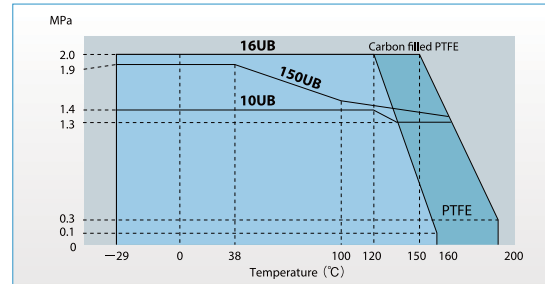
CAUTION

For mounting Valves onto pipes, be sure to use gaskets* specified below:

*Asbestos joint sheet or PTFE sheet

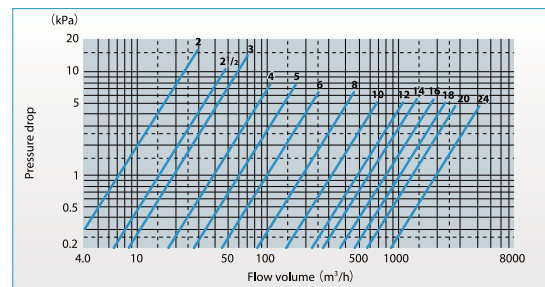
| Size | I/D | | O/D | | Thickness |
|-------|-----|------|------|------|-----------|
| | NPS | Min. | Max. | Min. | |
| 2 | | 60 | 61 | 90 | 3 |
| 2 1/2 | | 73 | 77 | 115 | 3 |
| 3 | | 88 | 90 | 126 | 3 |
| 4 | | 108 | 116 | 146 | 3 |
| 5 | | 136 | 143 | 181 | 3 |
| 6 | | 162 | 170 | 211 | 3 |
| 8 | | 213 | 220 | 257 | 3 |
| 10 | | 266 | 275 | 322 | 3 |
| 12 | | 312 | 326 | 367 | 3 |
| 14 | | 342 | 359 | 410 | 3 |
| 16 | | 389 | 410 | 470 | 3 |
| 18 | | 444 | 460 | 530 | 3 |
| 20 | | 493 | 513 | 580 | 3 |
| 24 | | 594 | 615 | 688 | 3 |

P-T Rating of Seats

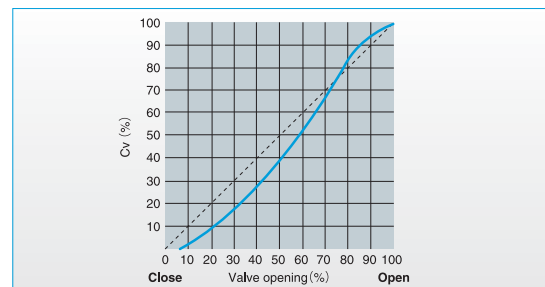


Contact KITZ for technical advice when service conditions may exceed the P-T rating range limited here.

Pressure Loss (for handling static clean water)



Flow Characteristics

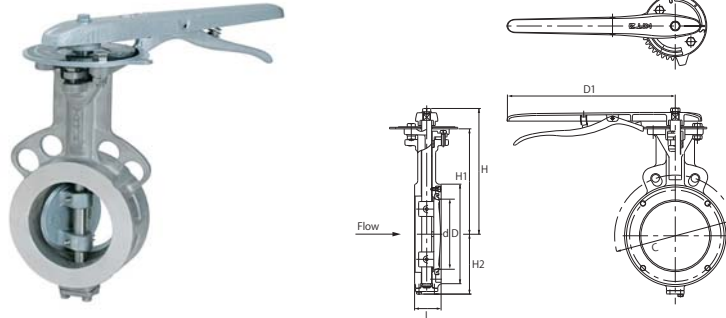


CAUTION

- The following gaskets should be used for installation of the UB series butterfly valves to pipelines.
 - [Type of Gasket]
 - Non-asbestos joint sheet gasket
 - Reinforced PTFE gasket (Jacketed gasket, Spiral Wound gasket, or Metal gasket cannot be installed.)
 - [Shape of Gasket]
 - Full-face gasket
 - Ring gasket (for full-face flanges and flat-face flanges)
 - [Dimension of Gasket]
 - The dimension of the gasket should comply with JIS B 2404 and ASME B 16.21 (minimum gasket thickness is 3 mm).
- UB series butterfly valves cannot be used with lapped loose flanges (lap joints + stub ends, stainless steel pipe joints with flanged pipe end).
- UB series butterfly valves may not be used with some large flat face flanges.
 - JIS 5K RF Flange: Not applicable
 - JIS 10K RF Flange: Applicable, but be sure to align the centers of the flange and the valve.
 - JIS 16K RF Flange: Applicable
 - Class 150 RF Flange: Applicable, but be sure to align the centers of the flange and the valve.
- UB series butterfly valves cannot be used with rubber lining pipes
- UB is a unidirectional valve. The valve must be installed according to an arrow, provided on the side of the operator mounting flange. The arrow must point from the higher pressure side to the lower pressure side in the valve closed position.

Lever Operated

10UB
150UB



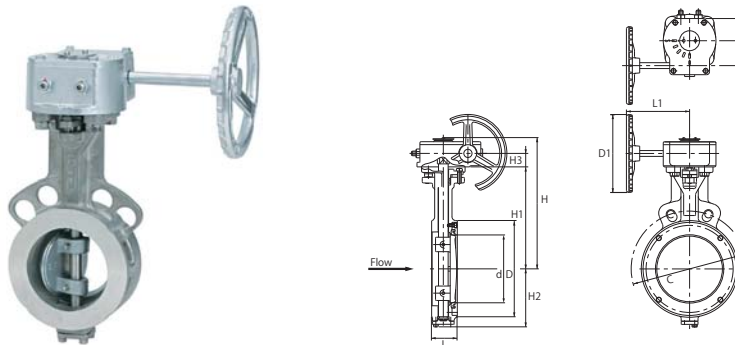
Dimensions

unit: mm

| Size | | d | H | H1 | H2 | L | D | C | | D1 |
|------|------|-----|-----|-----|-----|----|-----|------|-------|-----|
| mm | inch | | | | | | | 10UB | 150UB | |
| 50 | 2 | 50 | 176 | 138 | 64 | 43 | 92 | 120 | 120.5 | 230 |
| 65 | 2½ | 65 | 186 | 148 | 74 | 46 | 117 | 140 | 139.5 | 230 |
| 80 | 3 | 78 | 207 | 167 | 82 | 46 | 128 | 150 | 152.5 | 280 |
| 100 | 4 | 98 | 221 | 181 | 92 | 52 | 148 | 175 | 190.5 | 280 |
| 125 | 5 | 123 | 241 | 202 | 115 | 56 | 183 | 210 | 216 | 350 |
| 150 | 6 | 148 | 263 | 225 | 126 | 56 | 213 | 240 | 241.5 | 350 |

Gear Operated

GL-10UB
GL-16UB
GL-150UB



Dimensions

unit: mm

| Size | | d | H | H1 | H2 | H3 | L | D | C | | | D1 | L1 | E | F | Gear type |
|------|------|-----|-----|-----|-----|-----|-----|-----|------|------|-------|-----|-----|-----|-----|-----------|
| mm | inch | | | | | | | | 10UB | 16UB | 150UB | | | | | |
| 50 | 2 | 50 | 192 | 138 | 64 | 25 | 43 | 92 | 120 | 120 | 120.5 | 140 | 150 | 35 | 42 | No. 1 |
| 65 | 2½ | 65 | 202 | 148 | 74 | 25 | 46 | 117 | 140 | 140 | 139.5 | 140 | 150 | 35 | 42 | No. 1 |
| 80 | 3 | 78 | 226 | 167 | 82 | 28 | 46 | 128 | 150 | 160 | 152.5 | 170 | 195 | 42 | 60 | No. 2 |
| 100 | 4 | 98 | 240 | 181 | 92 | 28 | 52 | 148 | 175 | 185 | 190.5 | 170 | 195 | 42 | 60 | No. 2 |
| 125 | 5 | 123 | 261 | 202 | 115 | 28 | 56 | 183 | 210 | 225 | 216 | 200 | 204 | 42 | 60 | No. 2 |
| 150 | 6 | 148 | 283 | 225 | 126 | 28 | 56 | 213 | 240 | 260 | 241.5 | 200 | 204 | 42 | 60 | No. 2 |
| 200 | 8 | 197 | 348 | 263 | 163 | 47 | 71 | 259 | 290 | 305 | 298.5 | 310 | 280 | 54 | 66 | No. 3 |
| 250 | 10 | 243 | 416 | 315 | 234 | 60 | 76 | 322 | 355 | 380 | — | 360 | 310 | 68 | 89 | No. 4 |
| 300 | 12 | 295 | 443 | 342 | 257 | 60 | 83 | 367 | 400 | 430 | — | 360 | 310 | 68 | 89 | No. 4 |
| 350 | 14 | 325 | 476 | 375 | 293 | 57 | 92 | 410 | 445 | 480 | — | 500 | 358 | 70 | 94 | No. 5 |
| 400 | 16 | 371 | 572 | 409 | 314 | 94 | 102 | 470 | 510 | 540 | — | 500 | 360 | 90 | 134 | No. 6 |
| 450 | 18 | 421 | 607 | 443 | 369 | 94 | 114 | 530 | 565 | 605 | — | 500 | 360 | 90 | 134 | No. 6 |
| 500 | 20 | 470 | 623 | 459 | 394 | 94 | 127 | 580 | 620 | 660 | — | 500 | 360 | 90 | 134 | No. 6 |
| 600 | 24 | 569 | 757 | 558 | 475 | 117 | 154 | 688 | 730 | 770 | — | 500 | 371 | 105 | 213 | No. 7 |