



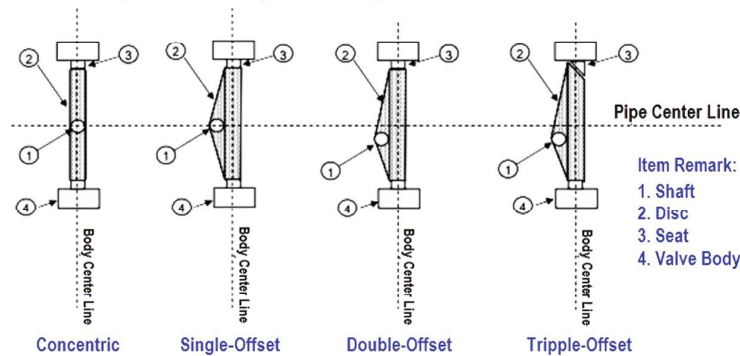
# BUTTERFLY VALVES - BUTTERFLY VALVES



FLOWTORQ make Butterfly valves are generally preferred because they cost less than other valve designs, and are lighter weight so they need less support. Operation is similar to that of a ball valve, which allows for quick shut off. The disc is positioned in the center of the pipe. A shaft or stem passes through the disc to an actuator on the outside of the valve. Rotating the actuator turns the disc either parallel or perpendicular to the flow. Unlike a ball valve, the disc is always present within the flow, so it induces a pressure drop, even when open.

It is from a family of valves called quarter-turn valves. In operation, the valve is fully open or closed when the disc is rotated a quarter turn. The "butterfly" is a metal disc mounted on a rod. When the valve is closed, the disc is turned so that it completely blocks off the passageway. When the valve is fully open, the disc is rotated a quarter turn so that it allows an almost unrestricted passage of the fluid. The valve may also be opened incrementally to throttle flow.

### Top View Butterfly Valve - Fully Closed Position



Single-Offset - The shaft is offset from its body center line.

Double-Offset - The shaft is offset from its body center line + shaft offset from pipe center line.

Tripple-Offset - The shaft is offset from its body center line + shaft offset from pipe center line + conical offset shape in its seal and discs connection.



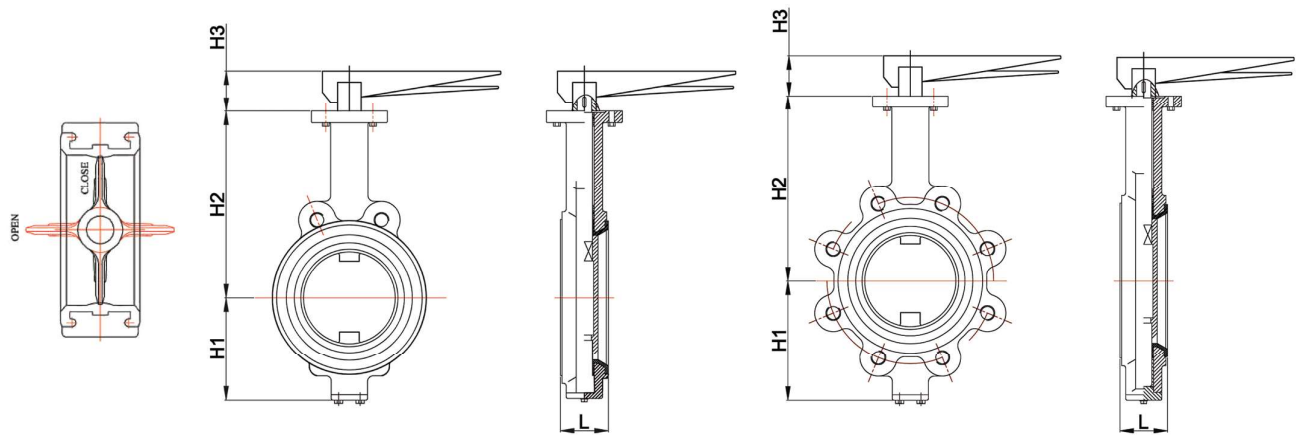
| DESIGN STANDARD                      |   |
|--------------------------------------|---|
| DESIGN STANDARD                      | ISO 5752, API 609, BS 5155, ASME B16.34           |
| Face to Face / End to End Dimensions | BS 5155, API 609, ISO 5752, MSS SP67              |
| Valve inspection & testing           | API598, BS 5146, ISO 5208 Rate A, FCI 70.2 Cl. VI |
| Pressure - Temperature rating        | ASME B16.34                                       |
| Flange Standards                     | ANSI B16.5, PN6, PN10, PN16, BS10 D & E           |



# BUTTERFLY VALVES - CENTERLINE TYPE



The concentric butterfly valve is a standard or a general use butterfly valve. The shaft is located in the center of the disc. During opening or closing, there are some parts of the disc that always in-contact or rubbing the seat. This arrangement will make the seat experience friction each time the valve is operating. In a typical application, this concentric butterfly valve is limited to class 150 due to its seat design.



| Upto 150#, PN10 - Wafer & Lug Type |      |     |      |      |     |                       |      |
|------------------------------------|------|-----|------|------|-----|-----------------------|------|
| SIZE                               |      | L   | H1   | H2   | H3  | WEIGHT (APPROX.) (kg) |      |
| inch                               | mm   |     |      |      |     | Wafer                 | Lug  |
| 1.5"                               | 40   | 40  | 54   | 120  | 33  | 2.5                   | 3.4  |
| 2"                                 | 50   | 43  | 68   | 130  | 33  | 3                     | 3.4  |
| 2.5"                               | 65   | 46  | 77   | 138  | 33  | 4                     | 4    |
| 3"                                 | 80   | 46  | 84   | 157  | 33  | 4.5                   | 4.8  |
| 4"                                 | 100  | 52  | 105  | 170  | 33  | 5                     | 6.9  |
| 5"                                 | 125  | 56  | 120  | 186  | 33  | 6.5                   | 10.6 |
| 6"                                 | 150  | 56  | 135  | 200  | 33  | 8                     | 11.4 |
| 8"                                 | 200  | 60  | 183  | 237  | 33  | 12.5                  | 15.9 |
| 10"                                | 250  | 68  | 223  | 286  | 50  | 19.5                  | 26   |
| 12"                                | 300  | 78  | 255  | 314  | 50  | 30.5                  | 38.2 |
| 14"                                | 350  | 78  | 280  | 340  | 50  | 55                    | 60   |
| 16"                                | 400  | 102 | 310  | 378  | 60  | 70                    | 92   |
| 18"                                | 450  | 114 | 350  | 400  | 60  | 95                    | 108  |
| 20"                                | 500  | 127 | 380  | 440  | 80  | 128                   | 151  |
| 22"                                | 550  | 142 | 396  | 485  | 80  | 180                   | 245  |
| 24"                                | 600  | 154 | 448  | 510  | 80  | 222                   | 266  |
| 26"                                | 650  | 165 | 463  | 530  | 80  | 265                   | 320  |
| 28"                                | 700  | 165 | 500  | 580  | 110 | 295                   | 350  |
| 30"                                | 750  | 190 | 520  | 590  | 110 | 350                   | 430  |
| 32"                                | 800  | 190 | 565  | 630  | 110 | 430                   | 600  |
| 36"                                | 900  | 203 | 670  | 700  | 150 | 600                   | 720  |
| 40"                                | 1000 | 216 | 725  | 750  | 150 | 720                   | 805  |
| 44"                                | 1100 | 216 | 780  | 840  | 150 | 805                   | 862  |
| 48"                                | 1200 | 254 | 860  | 900  | 150 | 860                   | 940  |
| 52"                                | 1300 | 280 | 920  | 970  | 180 | 940                   | 1121 |
| 56"                                | 1400 | 280 | 970  | 1010 | 180 | 1100                  | 1429 |
| 64"                                | 1600 | 360 | 1120 | 1160 | 180 | 1450                  | 1842 |
| 72"                                | 1800 | 360 | 1210 | 1270 | 200 | 1850                  | 2250 |



(Code -SVE)

