



## **BUTTERFLY VALVE**

SPHERICALLY PROFILED DISC

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Proudly Manufactured in South Africa

**LVSA BUTTERFLY VALVES :**

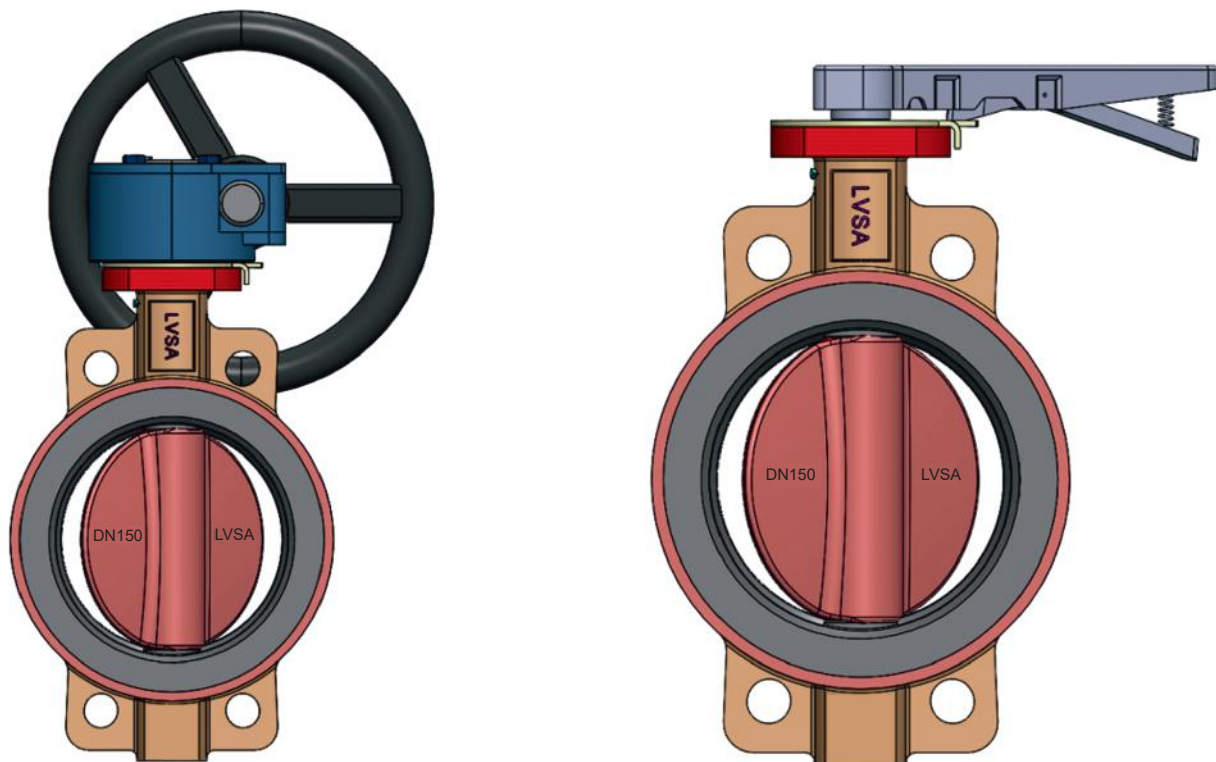
LVSA manufactures a comprehensive range of butterfly valves. The range addresses water treatment and distribution systems, power plants, utility lines, fire water lines and HVAC. The versatile range is available in various body styles, materials and actuation options to suit customer requirements.

**Butterfly Valve :**

| Body Style | Pressure Rating | 2  | 3  | 4   | 6   | 8   | 10  | 12  | 16  | 18  | 20  | 24  |
|------------|-----------------|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|            |                 | 50 | 80 | 100 | 150 | 200 | 250 | 300 | 400 | 450 | 500 | 600 |
| Wafer      | PN 16           | •  | •  | •   | •   | •   | •   | •   | •   | •   | •   | •   |
| Lugged     |                 | •  | •  | •   | •   | •   | •   | •   | •   | •   | •   | •   |
| Flanged*   |                 | •  | •  | •   | •   | •   | •   | •   | •   | •   | •   | •   |

\*Size upto DN1200

LVSA butterfly valves sets a new bench mark in performance. The versatile valve is offered in a variety of elastomer-disc combinations to address various process requirements.



Available from 50mm (2”) to 600mm (24”). The valve is available in Cast iron, SG iron, Carbon steel, & Stainless steel, in a variety of body styles and actuation options.



## Testing

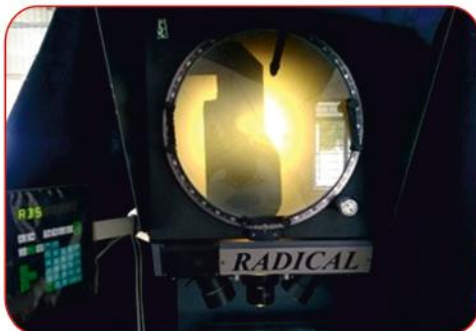
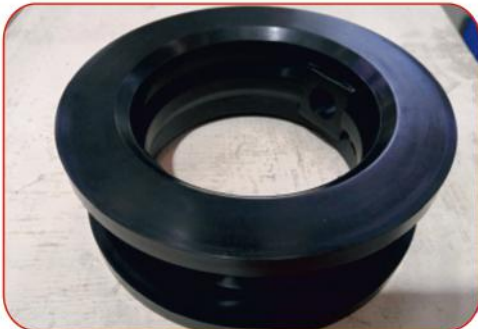
All our valves are tested according to EN 12266-1 Standard tests performed are body strength, body tightness, seat tightness and functional test.

## Dimensions of liner thickness

The liner thickness is checked in accordance with specific measuring methods. The test ensures that the required thicknesses are adhered to. For use in practical applications at elevated temperatures and simultaneously high vacuums.



To ensure constant high quality valves all components are subjected to stringent testing running in parallel with all stages of production.



**LOOSE LINERS:**

Rubber lined butterfly valves provide an optimum solution to the corrosion problems encountered by industries. The rubber seat liner covers the entire wetted surface of the body and extends on to the flange contact faces, thus eliminating the possibility of any media contact with the body base metal.

The circularly moulded full back up elastomer and live loaded disc shoulder sealing ensures bubble tight closing of the valve with zero shaft leakage. Spherically machined disc prevents scuffing of the liner. The valve is adaptable for ON / OFF as well as control applications which can be fitted with actuators (ISO 5211 mounting) and accessories as required to meet the specific duty conditions.

Disc to shaft connection is positively secured through splines which eliminates transmission losses. Drive connection is devoid of pins and keys which improves the valve performance and its maintenance.

| <b>Rubber Lining Temperature details PN16</b> |                          |
|---|--------------------------|
| <b>Seat / Body Liner</b>                      | <b>Temperature Range</b> |
| Nitrile Rubber                                | -10°C to 90°C            |
| EPDM  | -10°C to 120°C           |
| Viton   | -10°C to 150°C           |



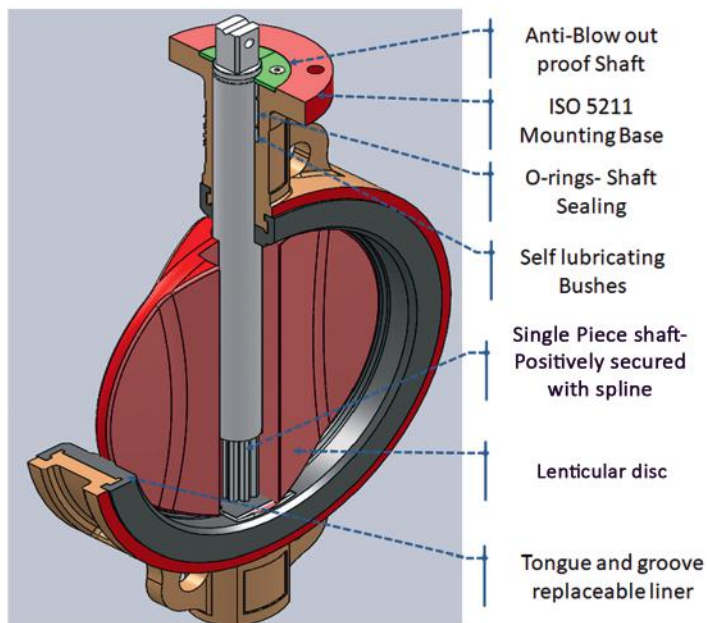
### Material of Construction

| Components   | Material   |
|--------------|--|
| Body         | <ul style="list-style-type: none"> <li>• Cast iron (EN 1561)</li> <li>• Ductile iron (EN 1563)</li> <li>• Cast steel (A216 Gr. WCB)</li> </ul>   |
| Seat / Liner | <ul style="list-style-type: none"> <li>• Nitrile</li> <li>• EPDM</li> <li>• Viton</li> </ul>   |
| Disc         | <ul style="list-style-type: none"> <li>• Ductile iron (EN 1563)</li> <li>• Cast steel (A216 Gr. WCB) with nylon / epoxy coat</li> <li>• Stainless steel (A351 Gr. CF8/CF8M)</li> </ul> |
| Shaft        | <ul style="list-style-type: none"> <li>• A479 type 431</li> <li>• A479 type 410</li> </ul>   |
| Bush         | <ul style="list-style-type: none"> <li>• Phosphor bronze</li> <li>• PTFE</li> </ul>  |

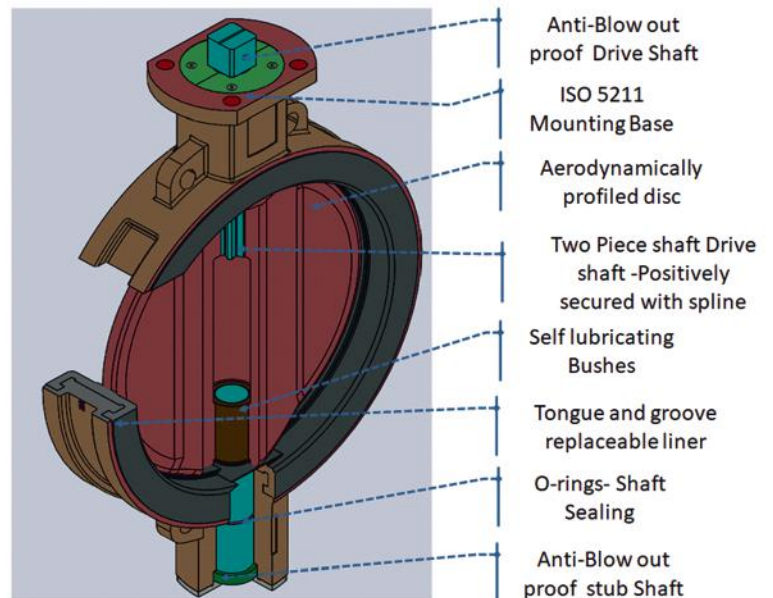
### Compliance Standards

| Parameters           | Standard                                  |
|----------------------|---|
| Design specification | EN 593 / SANS 1849 / API 609 / MSS SP 67  |
| Pressure testing     | EN 12266 / SANS 1849 / API 528 / ISO 5208 |
| Face to face         | EN 558 / SANS 1849 / API 609 / MSS SP 67  |
| End connection       | Wafer flangeless to suit SANS 1123        |
|                      | Flanged EN 1092 / ASME B16.5              |

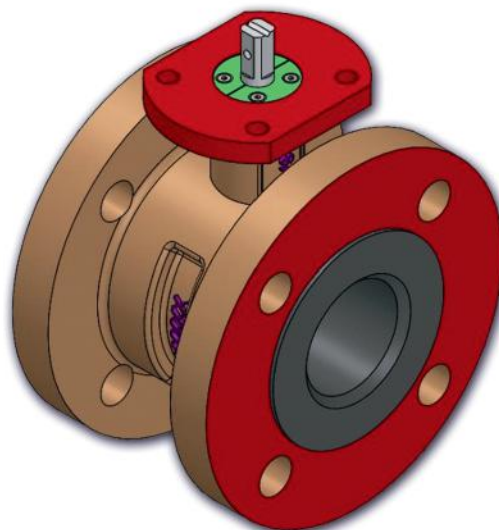
| Pressure rating              |      |
|------------------------------|------|
| Rated working pressure (bar) | 16   |
| Shell test pressure (bar)    | 24   |
| Seat test pressure (bar)     | 17.6 |

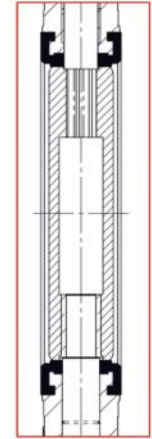
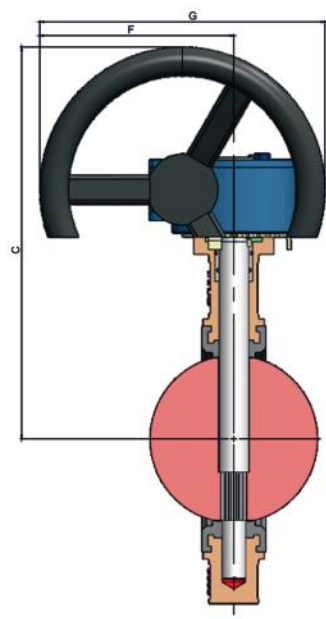
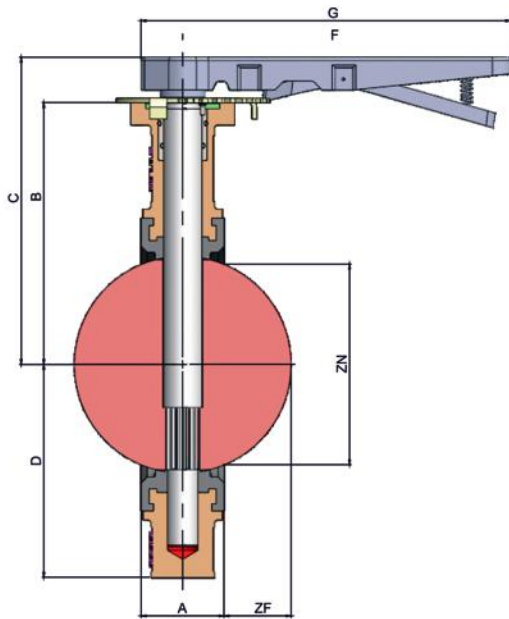


DN 50 to dn 400

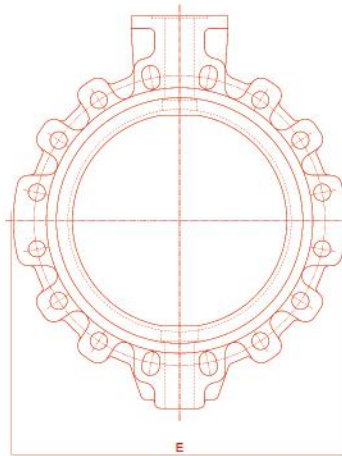
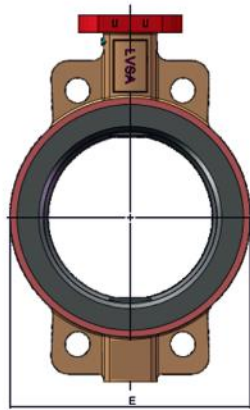


DN 450 to DN 600





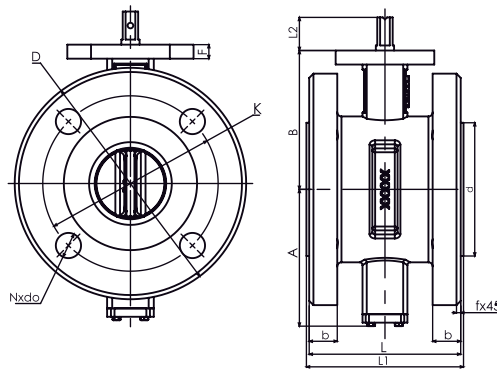
DN 450 - 600



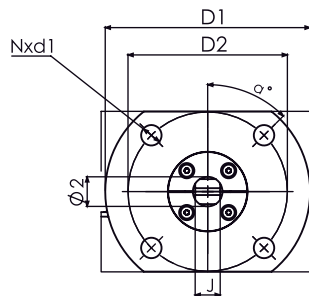
| Valve size |     | A     | B      | C                  |           | D     | E      |        | F                  |           | G                  |           | ZN  | ZF  | Weight (Kgs)       |           | Torque (Nm) |          |      |
|------------|-----|-------|--------|--------------------|-----------|-------|--------|--------|--------------------|-----------|--------------------|-----------|-----|-----|--------------------|-----------|-------------|----------|------|
| NPS        | DN  |       |        | Flow control lever | Gear unit |       | Wafer  | Lugged | Flow control lever | Gear unit | Flow control lever | Gear unit |     |     | Flow control lever | Gear unit |             | FC Lever |      |
|            |     | Wafer | Lugged | Wafer              | Lugged    | Wafer | Lugged | Wafer  | Lugged             |           |                    |           |     |     |                    |           |             |          |      |
| 2          | 50  | 43    | 75     | 129                | 268       | 130   | 96     | 158    | 176                | 181       | 216                | 242       | 24  | 4   | 3                  | 4         | 11          | 12.5     | 8    |
| 3          | 80  | 46    | 95     | 160                | 284       | 155   | 123    | 190    | 176                | 181       | 216                | 242       | 62  | 16  | 4                  | 8         | 12          | 16       | 20   |
| 4          | 100 | 52    | 110    | 188                | 302       | 170   | 157    | 216    | 268                | 181       | 308                | 242       | 82  | 23  | 6                  | 10.5      | 14          | 18.5     | 40   |
| 6          | 150 | 56    | 139    | 207                | 344       | 210   | 212    | 280    | 268                | 181       | 308                | 242       | 135 | 45  | 9.5                | 14.5      | 17.5        | 22.5     | 95   |
| 8          | 200 | 60    | 172    | 253                | 414       | 243   | 262    | 345    | 405                | 217       | 470                | 290       | 184 | 67  | 18                 | 29.5      | 25          | 36       | 170  |
| 10         | 250 | 68    | 238    | 308                | 437       | 278   | 322    | 405    | 513                | 217       | 610                | 290       | 234 | 88  | 30                 | 44        | 35          | 48.5     | 300  |
| 12         | 300 | 78    | 250    | 328                | 462       | 298   | 373    | 485    | 516                | 217       | 612                | 290       | 279 | 106 | 41                 | 61        | 45          | 66       | 390  |
| 16         | 400 | 102   | 341    | 443                | 568       | 419   | 481    | 600    | -                  | 255       | -                  | 375       | 374 | 144 | -                  | -         | 113         | 156      | 925  |
| 18         | 450 | 114   | 422    | 438                | 766       | 409   | 524    | 650    | -                  | 437       | -                  | 552       | 423 | 163 | -                  | -         | 162         | 206      | 1230 |
| 20         | 500 | 127   | 444    | 470                | 802       | 441   | 583    | 710    | -                  | 437       | -                  | 552       | 475 | 183 | -                  | -         | 189         | 264      | 1420 |
| 24         | 600 | 154   | 533    | 530                | 861       | 481   | 685    | 820    | -                  | 437       | -                  | 552       | 573 | 220 | -                  | -         | 270         | 362      | 2500 |

Note: Torque figures are the maximum torque under static condition and do not include any safety factor. Consider selecting a suitable actuator taking into account any safety measures that should occur during operation. Torque figures are at the top shaft of the valve.





| DN   | A   | B   | L   | L1  | b    | f | D    | K    | N-do  | d    |
|------|-----|-----|-----|-----|------|---|------|------|-------|------|
| 50   | 80  | 120 | 108 | 111 | 19   | 3 | 165  | 125  | 4-19  | 89   |
| 65   | 89  | 130 | 112 | 115 | 19   | 3 | 185  | 145  | 4-19  | 106  |
| 80   | 95  | 145 | 114 | 117 | 19   | 3 | 200  | 160  | 8-19  | 120  |
| 100  | 114 | 155 | 127 | 130 | 19   | 3 | 220  | 180  | 8-19  | 144  |
| 125  | 125 | 170 | 140 | 143 | 19   | 3 | 250  | 210  | 8-19  | 170  |
| 150  | 139 | 190 | 140 | 143 | 19   | 3 | 285  | 240  | 8-23  | 197  |
| 200  | 170 | 205 | 152 | 155 | 20   | 3 | 340  | 295  | 12-23 | 252  |
| 250  | 198 | 235 | 165 | 168 | 22   | 3 | 405  | 355  | 12-28 | 305  |
| 300  | 223 | 280 | 178 | 182 | 24.5 | 4 | 460  | 410  | 12-28 | 350  |
| 350  | 254 | 310 | 190 | 194 | 26.5 | 4 | 520  | 470  | 16-28 | 415  |
| 400  | 306 | 340 | 216 | 221 | 28   | 4 | 580  | 525  | 16-31 | 460  |
| 450  | 345 | 375 | 222 | 227 | 30   | 4 | 640  | 585  | 20-31 | 510  |
| 500  | 378 | 430 | 229 | 234 | 31.5 | 4 | 715  | 650  | 20-34 | 560  |
| 600  | 440 | 500 | 267 | 272 | 36   | 5 | 840  | 770  | 20-37 | 660  |
| 700  | 510 | 560 | 292 | 299 | 39.5 | 5 | 910  | 840  | 24-37 | 770  |
| 800  | 560 | 620 | 318 | 325 | 43   | 5 | 1025 | 950  | 24-41 | 871  |
| 900  | 638 | 685 | 330 | 337 | 46.5 | 5 | 1125 | 1050 | 28-41 | 972  |
| 1000 | 705 | 735 | 410 | 417 | 50   | 5 | 1255 | 1170 | 28-44 | 1080 |
| 1200 | 815 | 917 | 470 | 478 | 57   | 5 | 1485 | 1390 | 32-50 | 1270 |



| F  | D1  | D2  | N-d1 | a°   | J     | X  | L2  | Ø2    | Weight |
|----|-----|-----|------|------|-------|----|-----|-------|--------|
| 13 | 65  | 50  | 4-7  | 45   | 13.8  | 3  | 28  | 12.6  | 6      |
| 13 | 65  | 50  | 4-7  | 45   | 13.8  | 3  | 28  | 12.6  | 7.7    |
| 13 | 65  | 50  | 4-7  | 45   | 13.8  | 3  | 28  | 12.6  | 8      |
| 13 | 90  | 70  | 4-10 | 45   | 17.77 | 5  | 28  | 15.77 | 11     |
| 13 | 90  | 70  | 4-10 | 45   | 20.92 | 5  | 28  | 18.92 | 14     |
| 13 | 90  | 70  | 4-10 | 45   | 20.92 | 5  | 28  | 18.92 | 18     |
| 15 | 125 | 102 | 4-12 | 45   | 24.1  | 5  | 38  | 22.1  | 27     |
| 15 | 125 | 102 | 4-12 | 45   | 31.45 | 8  | 38  | 28.45 | 4      |
| 20 | 125 | 102 | 4-12 | 45   | 34.6  | 8  | 38  | 31.6  | 59     |
| 20 | 150 | 125 | 4-14 | 45   | 34.6  | 8  | 45  | 31.6  | 83     |
| 20 | 175 | 140 | 4-18 | 45   | 4.95  | 10 | 60  | 37.95 | 104    |
| 20 | 175 | 140 | 4-18 | 45   | 45.8  | 12 | 60  | 42.86 | 132    |
| 22 | 175 | 140 | 4-18 | 45   | 49.22 | 14 | 75  | 45.72 | 171    |
| 22 | 210 | 165 | 4-22 | 45   | 57.98 | 16 | 75  | 53.98 | 294    |
| 30 | 300 | 254 | 8-18 | 22.5 | 71.4  | 18 | 70  | 63.35 | 323    |
| 30 | 300 | 254 | 8-18 | 22.5 | 79    | 20 | 75  | 70    | 468    |
| 34 | 300 | 254 | 8-18 | 22.5 | 90    | 22 | 110 | 80    | 572    |
| 34 | 300 | 254 | 8-18 | 22.5 | 100   | 25 | 135 | 90    | 792    |
| 34 | 350 | 298 | 8-22 | 22.5 | 117   | 28 | 150 | 105   | 1292   |



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