



# MV-500

## DOUBLE ECCENTRIC BUTTERFLY VALVE

### Production Standards

|                       |                                                                            |
|-----------------------|----------------------------------------------------------------------------|
| <b>Size Range</b>     | DN100 - DN2400                                                             |
| <b>Pressure Range</b> | PN10 - PN16 - PN25                                                         |
| <b>Design</b>         | EN 593                                                                     |
| <b>Connection</b>     | EN 1092-2 ISO 7005 Flanged                                                 |
| <b>Face to Face</b>   | EN 558 Series 14                                                           |
| <b>Marking</b>        | EN 19                                                                      |
| <b>Tests</b>          | EN 12266-1                                                                 |
| <b>Coating</b>        | Electrostatic/ThermoPlastic Powder Epoxy                                   |
| <b>Temperature</b>    | EPDM : -10°C to +80 °C<br>NBR: - 10°C to +60 °C<br>VITON: -10°C to +110 °C |



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### Product Description

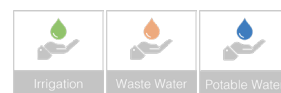
Double Eccentric Butterfly valves are most often used in underground water distribution applications as an alternative to gate valves. The double eccentric disc design allows the butterfly plate to be released from the valve seat immediately after the valve is opened, which eliminates unnecessary excessive squeezing and erosion of the butterfly plate and the valve seat. This feature reduces the opening high torque, improves the service life of the valve seat.

### Application Areas

- Pipelines
- Water treatment plants
- Pumping stations
- Industry

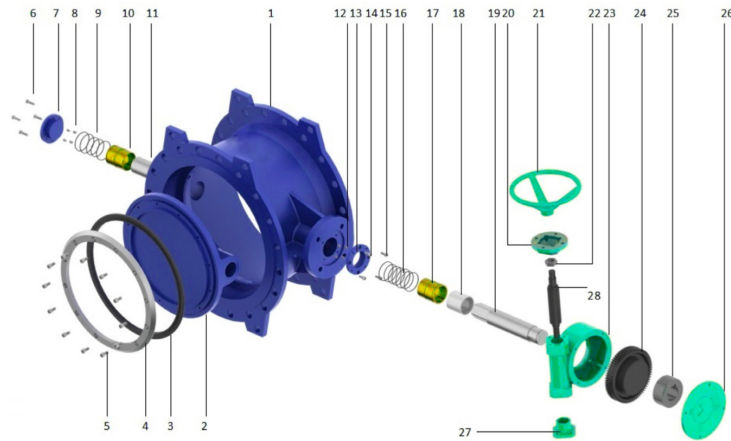
### Accessories

- Handwheel
- Electric act
- Extension spindle
- Surface box
- Flange adaptor
- Dismantling joint



## Product Features

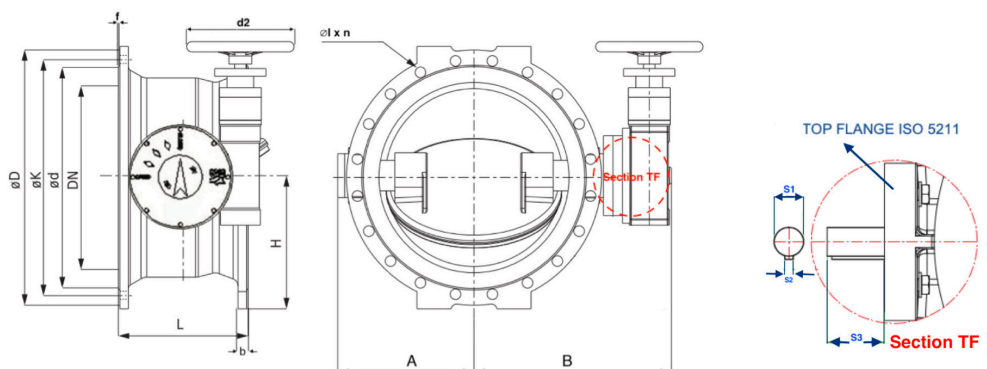
- The tilted disc releases the pressure from the disc sealing after a few degrees of opening, which extends the durability and allows low operating torques
- Ductile iron body and disc can bear extreme stretching stresses
- The disc is fixated to prevent wear and fluttering
- Shafts are equipped with bronze bushings having high corrosion resistance
- The threaded bolt holes in the disc are corrosion protected with O-rings
- Stainless steel retainer ring for seal
- Low moments are obtained by decreasing the friction through self-lubricating bushings.
- Slim Body and Light weight
- Full coating on the body and disc internally & externally with an average of 250 microns.
- WRAS approved coating available upon request which meets hygienic requirements for potable water applications



| No | Part                 | Material                                       |
|----|----------------------|------------------------------------------------|
| 1  | Body                 | GGG40/50 Ductile Iron                          |
| 2  | Disc                 | GGG40/50 Ductile Iron                          |
| 3  | Disc Sealing         | EPDM                                           |
| 4  | Retaining Ring       | ST37 / SS304 / SS316                           |
| 5  | Retaining Ring Bolts | A2 / A4                                        |
| 6  | Bolts                | 8.8 / A2 / A4                                  |
| 7  | Lower Shaft Cover    | GGG40/50 Ductile Iron                          |
| 8  | Bolts                | 8.8 / A2 / A4                                  |
| 9  | Spring               | AISI 304 Stainless Steel                       |
| 10 | Bushing              | Bronze                                         |
| 11 | Lower Shaft          | AISI 420 / 304 / 316 Stainless Steel           |
| 12 | Bolts                | 8.8 / A2 / A4                                  |
| 13 | Main Shaft Cover     | ST37 Steel / AISI304 / AISI316 Stainless Steel |
| 14 | Bolts                | 8.8 / A2 / A4                                  |

| No | Part                        | Material                                                      |
|----|-----------------------------|---------------------------------------------------------------|
| 15 | Gear Box Shaft              | GGG40/50 Ductile Iron / ST37 Steel / AISI 304 Stainless Steel |
| 16 | Spring                      | AISI 304 Stainless Steel                                      |
| 17 | Bushing                     | Bronze                                                        |
| 18 | Main Shaft Bearing          | Delrin                                                        |
| 19 | Main Shaft                  | AISI 420 / 304 / 316 Stainless Steel                          |
| 20 | GearBox ISO Top Flange      | GGG40 / 50 Ductile Iron ST37 Steel                            |
| 21 | Hand Wheel                  | GGG40/50 Ductile Iron                                         |
| 22 | Hexagon Nut                 | ST37 Steel                                                    |
| 23 | Gearbox Body                | GGG40/50 Ductile Iron                                         |
| 24 | Gear                        | GGG0/50 Ductile Iron                                          |
| 25 | Inner Gear Shaft Connection | GGG40/50 Ductile Iron                                         |
| 26 | Gearbox Cover               | GGG40/50 Ductile Iron                                         |
| 27 | Gearbox Shaft Cover         | GGG40/50 Ductile Iron / ST37 Steel                            |
| 28 | Gearbox Shaft               | C40 Steel                                                     |

## Technical Data



| Nominal Diameter |      | PN 10 |      |      |      |      |        |      |      |      |     |     |    |       |                 |                    |                         |             |
|------------------|------|-------|------|------|------|------|--------|------|------|------|-----|-----|----|-------|-----------------|--------------------|-------------------------|-------------|
| DN               | L    | f     | ØD   | ØK   | Ød   | b    | Øl x n | B    | A    | H    | d2  | S1  | S2 | S3    | Body Top Flange | Gearbox Top Flange | Auma Actuator Selection | Weight (kg) |
| 100              | 190  | 3     | 220  | 180  | 156  | 19   | 19x8   | 185  | 125  | 110  | 250 | 20  | 7  | 53.5  | F10             | F10                | SA07.6-60Nm             | 35          |
| 125              | 200  | 3     | 250  | 210  | 184  | 19   | 19x8   | 230  | 130  | 130  | 250 | 20  | 7  | 53.5  | F10             | F10                | SA07.6-60Nm             | 40          |
| 150              | 210  | 3     | 285  | 240  | 211  | 19   | 23x8   | 275  | 135  | 150  | 250 | 20  | 7  | 53.5  | F10             | F10                | SA07.6-60Nm             | 45          |
| 200              | 230  | 3     | 340  | 295  | 266  | 20   | 23x8   | 320  | 170  | 175  | 250 | 30  | 8  | 51    | F10             | F10                | SA07.6-60Nm             | 57          |
| 250              | 250  | 3     | 400  | 350  | 319  | 22   | 23x12  | 350  | 200  | 210  | 250 | 30  | 8  | 58    | F16             | F10                | SA07.6-60Nm             | 70          |
| 300              | 270  | 4     | 455  | 400  | 370  | 24.5 | 23x12  | 400  | 235  | 235  | 250 | 30  | 8  | 45    | F16             | F10                | SA07.6-60Nm             | 130         |
| 350              | 290  | 4     | 505  | 460  | 429  | 24.5 | 23x16  | 430  | 265  | 265  | 250 | 40  | 12 | 52    | F16             | F10                | SA07.6-60Nm             | 165         |
| 400              | 310  | 4     | 565  | 515  | 480  | 24.5 | 28x16  | 465  | 295  | 295  | 250 | 250 | 12 | 48    | F16             | F10                | SA07.6-60Nm             | 200         |
| 450              | 330  | 4     | 615  | 565  | 530  | 26.5 | 28x20  | 515  | 340  | 325  | 250 | 40  | 12 | 45.5  | F16             | F10                | SA07.6-60Nm             | 225         |
| 500              | 350  | 4     | 670  | 620  | 582  | 26.5 | 28x20  | 550  | 360  | 365  | 250 | 60  | 18 | 68    | F16             | F10                | SA07.6-60Nm             | 270         |
| 600              | 390  | 5     | 780  | 725  | 682  | 30   | 31x20  | 610  | 430  | 425  | 250 | 60  | 18 | 107   | F25             | F10                | SA07.6-60Nm             | 430         |
| 700              | 430  | 5     | 895  | 840  | 794  | 32.5 | 31x24  | 640  | 475  | 455  | 250 | 65  | 18 | 104   | F25             | F10                | SA10.2-120Nm            | 490         |
| 800              | 470  | 5     | 1015 | 950  | 901  | 35   | 34x24  | 865  | 550  | 515  | 250 | 80  | 22 | 101   | F25             | F10                | SA10.2-120Nm            | 705         |
| 900              | 510  | 5     | 1115 | 1050 | 1001 | 37.5 | 34x28  | 910  | 615  | 565  | 250 | 90  | 26 | 98    | F25             | F10                | SA10.2-120Nm            | 957         |
| 1000             | 550  | 5     | 1230 | 1160 | 1112 | 40   | 37x28  | 970  | 675  | 620  | 250 | 100 | 28 | 98    | F25             | F10                | SA10.2-120Nm            | 1200        |
| 1100             | 590  | 5     | 1340 | 1270 | 1218 | 43   | 37x32  | 1049 | 760  | 720  | 250 | 110 | 30 | 123   | F25             | F10                | SA10.2-120Nm            | 1410        |
| 1200             | 630  | 5     | 1455 | 1380 | 1328 | 45   | 41x32  | 1170 | 805  | 735  | 250 | 120 | 32 | 148   | F30             | F10                | SA10.2-120Nm            | 1725        |
| 1300             | 670  | 5     | 1585 | 1490 | 1432 | 45   | 42x32  | 1235 | 850  | 800  | 250 | 140 | 36 | 166   | F30             | F14                | SA14.2-250Nm            | 2200        |
| 1400             | 710  | 5     | 1675 | 1590 | 1530 | 46   | 44x36  | 1235 | 920  | 845  | 250 | 160 | 42 | 184.5 | F30             | F14                | SA14.2-250Nm            | 2600        |
| 1500             | 750  | 5     | 1785 | 1700 | 1640 | 49   | 44x36  | 1307 | 975  | 915  | 320 | 170 | 44 | 205   | F30             | F14                | SA14.2-250Nm            | 3813        |
| 1600             | 790  | 5     | 1915 | 1820 | 1750 | 49   | 50x40  | 1420 | 1075 | 975  | 320 | 180 | 48 | 228   | F40             | F14                | SA14.2-250Nm            | 4750        |
| 1800             | 870  | 5     | 2115 | 2020 | 1950 | 52   | 50x44  | 1535 | 1195 | 1065 | 320 | 200 | 54 | 253   | F40             | F14                | SA16.2-500Nm            | 6100        |
| 2000             | 950  | 5     | 2325 | 2230 | 2150 | 55   | 50x48  | 1725 | 1290 | 1170 | 340 | 200 | 54 | 280   | F40             | F14                | SA16.2-500Nm            | 7300        |
| 2200             | 1030 | 6     | 2555 | 2440 | 2370 | 58   | 56x52  | 1920 | 1560 | 1310 | 340 | 220 | 60 | 309   | F40             | F14                | SA16.2-500Nm            | 8200        |
| 2400             | 1110 | 6     | 2760 | 2650 | 2555 | 65   | 56x52  | 1920 | 1481 | 1379 | 340 | 220 | 60 | 341   | F40             | F14                | SA16.2-500Nm            | 9200        |



| Nominal Diameter |      | PN 16 |      |      |      |      |       |      |      |      |     |     |    |       |                 |                    |                         |             |
|------------------|------|-------|------|------|------|------|-------|------|------|------|-----|-----|----|-------|-----------------|--------------------|-------------------------|-------------|
| DN               | L    | f     | ØD   | ØK   | Ød   | b    | ØIxn  | B    | A    | H    | d2  | S1  | S2 | S3    | Body Top Flange | Gearbox Top Flange | Auma Actuator Selection | Weight (kg) |
| 100              | 190  | 3     | 220  | 180  | 156  | 19   | 19x8  | 185  | 125  | 110  | 250 | 20  | 7  | 53.5  | F10             | F10                | SA07.6-60Nm             | 35          |
| 125              | 200  | 3     | 250  | 210  | 184  | 19   | 19x8  | 230  | 130  | 130  | 250 | 20  | 7  | 53.5  | F10             | F10                | SA07.6-60Nm             | 40          |
| 150              | 210  | 3     | 285  | 240  | 211  | 19   | 23x8  | 275  | 135  | 150  | 250 | 20  | 7  | 53.5  | F10             | F10                | SA07.6-60Nm             | 45          |
| 200              | 230  | 3     | 340  | 295  | 266  | 20   | 23x12 | 320  | 170  | 175  | 250 | 30  | 8  | 51    | F10             | F10                | SA07.6-60Nm             | 57          |
| 250              | 250  | 3     | 400  | 350  | 319  | 22   | 28x12 | 350  | 200  | 210  | 250 | 30  | 8  | 58    | F16             | F10                | SA07.6-60Nm             | 70          |
| 300              | 270  | 4     | 455  | 400  | 370  | 24.5 | 28x12 | 400  | 235  | 235  | 250 | 30  | 8  | 45    | F16             | F10                | SA07.6-60Nm             | 130         |
| 350              | 290  | 4     | 505  | 460  | 429  | 26.5 | 28x16 | 430  | 265  | 265  | 250 | 40  | 12 | 52    | F16             | F10                | SA07.6-60Nm             | 165         |
| 400              | 310  | 4     | 565  | 515  | 480  | 28   | 31x16 | 465  | 295  | 295  | 250 | 250 | 12 | 48    | F16             | F10                | SA07.6-60Nm             | 200         |
| 450              | 330  | 4     | 615  | 565  | 530  | 30   | 31x20 | 515  | 340  | 325  | 250 | 40  | 12 | 45.5  | F16             | F10                | SA07.6-60Nm             | 225         |
| 500              | 350  | 4     | 670  | 620  | 582  | 31.5 | 34x20 | 550  | 360  | 365  | 250 | 60  | 18 | 68    | F16             | F10                | SA07.6-60Nm             | 270         |
| 600              | 390  | 5     | 780  | 725  | 682  | 36   | 37x20 | 610  | 430  | 425  | 250 | 60  | 18 | 107   | F25             | F10                | SA07.6-60Nm             | 430         |
| 700              | 430  | 5     | 895  | 840  | 794  | 39.5 | 37x24 | 640  | 475  | 460  | 250 | 65  | 18 | 104   | F25             | F10                | SA10.2-120Nm            | 490         |
| 800              | 470  | 5     | 1015 | 950  | 901  | 43   | 41x24 | 865  | 550  | 520  | 250 | 80  | 22 | 101   | F25             | F10                | SA10.2-120Nm            | 705         |
| 900              | 510  | 5     | 1115 | 1050 | 1001 | 46.5 | 41x28 | 945  | 625  | 575  | 250 | 90  | 26 | 98    | F25             | F10                | SA10.2-120Nm            | 957         |
| 1000             | 550  | 5     | 1230 | 1160 | 1112 | 50   | 44x28 | 1070 | 705  | 635  | 250 | 100 | 28 | 98    | F25             | F10                | SA10.2-120Nm            | 1200        |
| 1100             | 590  | 5     | 1340 | 1270 | 1218 | 53.5 | 44x32 | 1122 | 765  | 720  | 250 | 110 | 30 | 123   | F25             | F10                | SA10.2-120Nm            | 1410        |
| 1200             | 630  | 5     | 1455 | 1380 | 1328 | 57   | 50x32 | 1177 | 835  | 750  | 250 | 120 | 32 | 148   | F30             | F10                | SA10.2-120Nm            | 1725        |
| 1300             | 670  | 5     | 1585 | 1490 | 1432 | 59   | 50x32 | 1232 | 885  | 800  | 250 | 140 | 36 | 166   | F30             | F14                | SA14.2-250Nm            | 2200        |
| 1400             | 710  | 5     | 1675 | 1590 | 1530 | 60   | 50x36 | 1320 | 970  | 850  | 250 | 160 | 42 | 184.5 | F30             | F14                | SA14.2-250Nm            | 2600        |
| 1500             | 750  | 5     | 1785 | 1700 | 1640 | 62.5 | 57x36 | 1370 | 1025 | 920  | 320 | 170 | 44 | 205   | F30             | F14                | SA14.2-250Nm            | 3813        |
| 1600             | 790  | 5     | 1915 | 1820 | 1750 | 65   | 57x40 | 1530 | 1100 | 970  | 320 | 180 | 48 | 228   | F40             | F14                | SA14.2-250Nm            | 4750        |
| 1800             | 870  | 5     | 2115 | 2020 | 1950 | 70   | 57x44 | 1680 | 1250 | 1075 | 320 | 200 | 54 | 253   | F40             | F14                | SA16.2-500Nm            | 6100        |
| 2000             | 950  | 5     | 2325 | 2230 | 2150 | 75   | 62x48 | 1812 | 1385 | 1180 | 340 | 200 | 54 | 280   | F40             | F14                | SA16.2-500Nm            | 7300        |
| 2200             | 1030 | 6     | 2555 | 2440 | 2370 | 80   | 62x52 | 1920 | 1560 | 1310 | 340 | 220 | 60 | 309   | F40             | F14                | SA16.2-500Nm            | 8200        |
| 2400             | 1110 | 6     | 2760 | 2650 | 2555 | 80   | 62x56 | 2750 | 1875 | 1400 | 340 | 220 | 60 | 341   | F40             | F14                | SA16.2-500Nm            | 9200        |