

# Serie F.200



## WAFER BUTTERFLY VALVE

F.200



The shut-off wafer butterfly valves in Series 200 are equipped with a centred disc and wafer type body, manufactured in accordance with severe product norms and in conformity to EN ISO 9001. These valves are suitable for heating and conditioning (HVAC), water treatment and water distribution, industrial applications, agricultural purposes for compressed air, gas, oils and hydrocarbons

**YES:** for in line and end of line installation with frequent actuation; the integrated support, in accordance with ISO 5211, allows easy mounting of a wide range of actuators and drives. They are suitable for choking and regulating the flow.

**NO:** for steam.

### Application fields



WATER



CONDITIONING



INDUSTRY



DRINKING WATER



GAS



HEATING



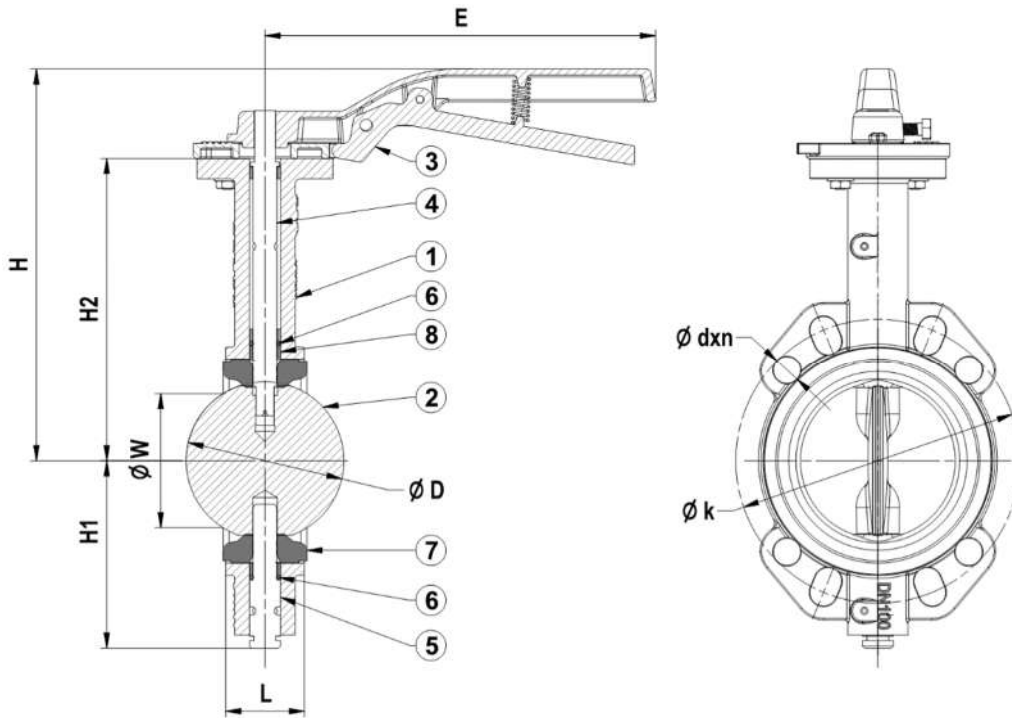
MARINE



FIRE FIGHTING



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**Materials**

|   | Component    | Material  |
|---|--------------|---|
| 1 | Body         | GGG 50 - EN GJS 500 - Ductile Iron                    |
| 2 | Disc         | GGG 40 - EN GJS 400-15 - Ductile Iron + Nickel Plated |
| 3 | Lever        | GGG 40 - EN GJS 400-15 - Ductile Iron                 |
| 4 | Top Stem     | X20Cr13 - AISI420 - Stainless steel                   |
| 5 | Bottom Stem  | X20Cr13 - AISI420 - Stainless steel                   |
| 6 | O-Ring       | EPDM  |
| 7 | Seat         | EPDM - NBR  |
| 8 | Stem Bearing | Lubricated Bronze                                     |

**Dimensions (mm)**

| DN             | 40   | 50   | 65   | 80   | 100   | 125   | 150   | 200   | 250           | 300   | 350   | 400   | 450   | 500   | 600   |
|----------------|------|------|------|------|-------|-------|-------|-------|---------------|-------|-------|-------|-------|-------|-------|
| L              | 33   | 43   | 46   | 46   | 52    | 56    | 56    | 60    | 68            | 78    | 78    | 102   | 114   | 127   | 154   |
| E              | 210  | 210  | 210  | 210  | 265   | 265   | 265   | 355   | With Gear Box |       |       |       |       |       |       |
| H1             | 77   | 81   | 87   | 99   | 111   | 132   | 144   | 185   | 208           | 251   | 277   | 308   | 342   | 374   | 459   |
| H2             | 144  | 162  | 175  | 193  | 200   | 218   | 226   | 280   | 315           | 354   | 388   | 416   | 455   | 490   | 562   |
| H              | 205  | 222  | 235  | 253  | 260   | 288   | 296   | 340   | With Gear Box |       |       |       |       |       |       |
| W              | 26.8 | 31   | 45.9 | 62.2 | 90.6  | 110   | 145.6 | 193.9 | 241.6         | 292.3 | 341.8 | 388.8 | 445.6 | 480.5 | 566.4 |
| D              | 42.5 | 53   | 65   | 79   | 104.5 | 123.5 | 156   | 203   | 251           | 302.5 | 354   | 402   | 455   | 492.5 | 582   |
| k              | 110  | 125  | 145  | 160  | 180   | 210   | 240   | 295   | 355           | 410   | 470   | 525   | 585   | 650   | 770   |
| dxn            | 19x4 | 19x4 | 19x4 | 19x8 | 19x8  | 19x8  | 23x8  | 23x12 | 28x12         | 28x12 | 28x16 | 31x16 | 31x20 | 34x20 | 37x20 |
| Upper Flange   | F05  | F05  | F05  | F05  | F07   | F07   | F07   | F10   | F10           | F10   | F10   | F16   | F16   | F16   | F16   |
| Stem Dimension | □11  | □11  | □11  | □11  | □14   | □17   | □17   | □17   | □22           | □22   | Ø31.8 | Ø33.3 | Ø38.1 | Ø41.3 | Ø50.8 |

**Weight (kg)**

|  |     |   |     |   |   |   |   |    |    |    |    |    |     |     |     |
|--|-----|---|-----|---|---|---|---|----|----|----|----|----|-----|-----|-----|
|  | 2.5 | 3 | 3.5 | 4 | 6 | 7 | 9 | 14 | 20 | 33 | 49 | 90 | 110 | 150 | 242 |
|--|-----|---|-----|---|---|---|---|----|----|----|----|----|-----|-----|-----|

**Certificates**



**Standards**

Design : TS EN 593  
 Connection Dimensions : TS EN1092-2 (PN 16)  
 Tests : TS EN 12266-1  
 Nominal Pressure: PN16 (Option: PN25)  
 Temperature: -10 ~ 110°C

## Versions

### Ductile Iron Disc



#### F.200

Body: EN GJS 500 - Ductile Iron  
Disc: EN GJS 500 - Ductile Iron  
PN16

#### F.200.1

Body: EN GJL 250 - Cast Iron  
Disc: EN GJS 500 - Ductile Iron  
PN16

### Stainless Steel Disc



#### F.200.2

Body: EN GJS 500 - Ductile Iron  
Disc: AISI304 - Stainless Steel  
PN16

#### F.200.3

Body: EN GJS 500 - Ductile Iron  
Disc: AISI316 - Stainless Steel  
PN16

#### F.200.4

Body: EN GJS 500 - Ductile Iron  
Disc: AISI304L - Stainless Steel  
PN16

#### F.200.5

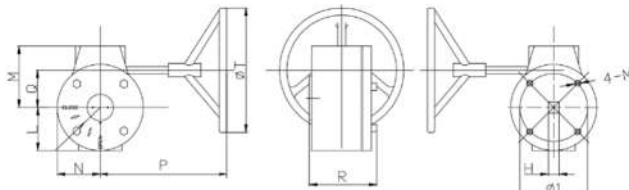
Body: EN GJS 500 - Ductile Iron  
Disc: AISI316L - Stainless Steel  
PN16

## Accessories

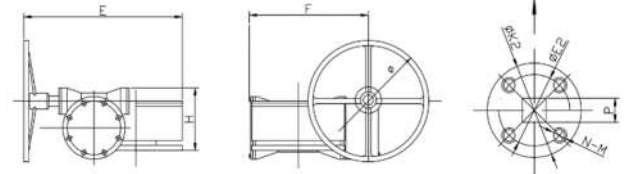
- Actuator
- Stem extension
- Gear box

### Gear Box

DN50~DN350



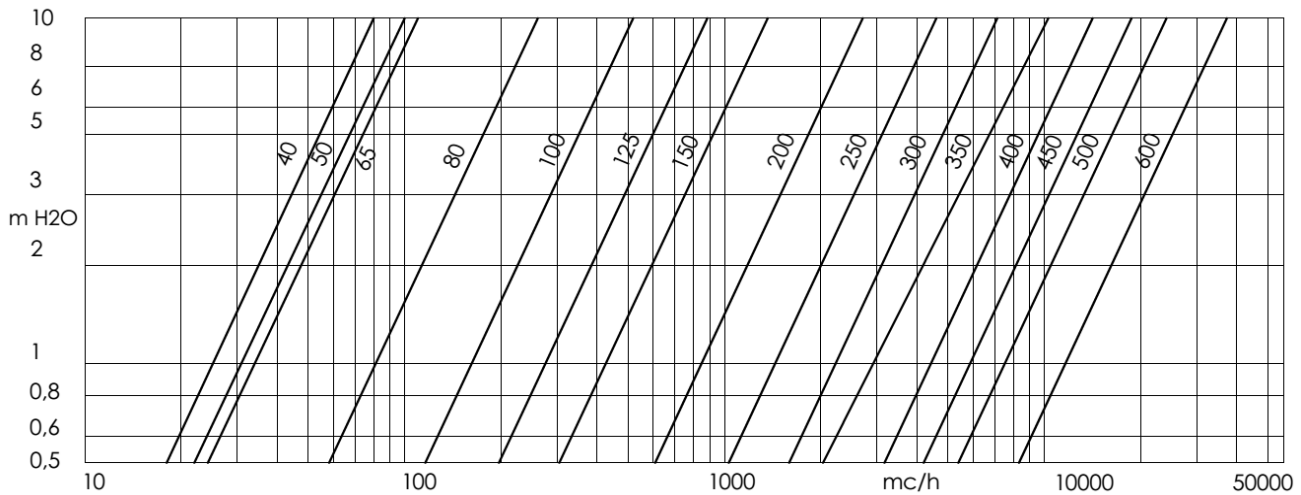
DN400~DN600



| DN               | 50   | 65   | 80   | 100  | 125  | 150  | 200   | 250   | 300   | 350   |
|------------------|------|------|------|------|------|------|-------|-------|-------|-------|
| <b>Torque Nm</b> | 170  | 170  | 170  | 170  | 170  | 170  | 750   | 750   | 1200  | 1200  |
| <b>P</b>         | 150  | 150  | 150  | 150  | 150  | 150  | 207   | 207   | 195   | 195   |
| <b>N</b>         | 50   | 50   | 50   | 50   | 50   | 50   | 66    | 66    | 72    | 72    |
| <b>T</b>         | 137  | 137  | 137  | 137  | 137  | 137  | 269   | 269   | 269   | 269   |
| <b>M</b>         | 72   | 72   | 72   | 72   | 72   | 72   | 86    | 86    | 101   | 101   |
| <b>Q</b>         | 45   | 45   | 45   | 45   | 45   | 45   | 51    | 51    | 73    | 73    |
| <b>R</b>         | 62   | 62   | 62   | 62   | 62   | 62   | 74    | 74    | 78    | 78    |
| <b>L</b>         | 50   | 50   | 50   | 50   | 50   | 50   | 65    | 65    | 72    | 72    |
| <b>Ø1</b>        | 50   | 50   | 50   | 70   | 70   | 70   | 102   | 102   | 102   | 102   |
| <b>M</b>         | 4-M6 | 4-M6 | 4-M6 | 4-M8 | 4-M8 | 4-M8 | 4-M10 | 4-M10 | 4-M10 | 4-M10 |
| <b>H</b>         | 9    | 9    | 9    | 11   | 14   | 14   | 17    | 22    | 22    | 22    |

| DN               | 400   | 450   | 500   | 600   |
|------------------|-------|-------|-------|-------|
| <b>Torque Nm</b> | 2500  | 2500  | 3000  | 4000  |
| <b>E</b>         | 340   | 340   | 340   | 425   |
| <b>F</b>         | 285   | 285   | 285   | 330   |
| <b>H</b>         | 165   | 165   | 165   | 185   |
| <b>Ø</b>         | 290   | 290   | 290   | 360   |
| <b>K2</b>        | 175   | 175   | 175   | 210   |
| <b>E2</b>        | 140   | 140   | 140   | 165   |
| <b>N-M</b>       | 4-M16 | 4-M16 | 4-M16 | 4-M20 |
| <b>P</b>         | 24    | 27    | 32    | 36    |

**Head loss Fluid: water** (1m H<sub>2</sub>O = 0.098bar) - Head loss with shutter fully open



**Instruction and Recommendations**

**STORING AND TRANSPORT**

- Keep in dry and closed place.
- While stored, the disc must be partially open.
- Avoid knocks, take special care to protect lever, hand wheel, gear boxes/actuators.
- Do not use lever or hand wheel to lift the valve.

**RECOMMENDATIONS**

Before carrying out maintenance or dismantling the valve: be sure that the pipes, valves and fluids have cooled down, that the pressure has decreased, and that the lines and pipes have been drained in case of toxic, corrosive, inflammable or caustic liquids.

Temperatures above 50°C and below 0°C might cause damage to people.

**INSTALLATION**

- Handle with care
- Do not weld the flanges to the piping after installing the valve
- Water hammers might cause damage and ruptures. Inclination, twisting and misalignments of the piping may subject the valve to stress, once it has been installed. It is recommended that elastic joints be used, in order to reduce these effects as much as possible. The disc must be partially open
- The stem has a machined notch N (Fig. 2), which indicates the position of the disc; consider this indication, in order to mount the levers and actuators correctly.

FIG. 1

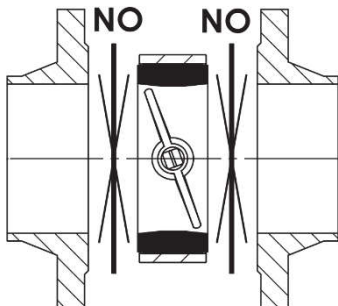


FIG. 2

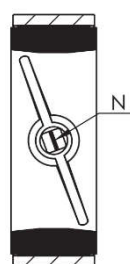
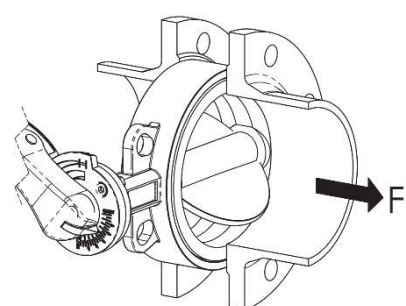
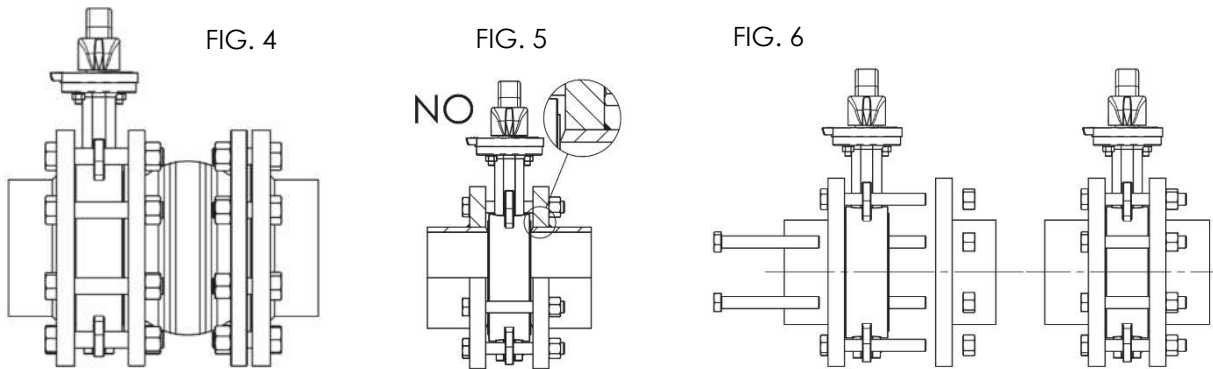


FIG. 3



- The mounting can be made with the stem axis in a horizontal or vertical position. In case the fluid contains suspended solid particles (for example, sand, impurities, etc.) or solid particles that may leave deposits, it is recommended that the valve be installed with its axis horizontal, and in such a way that the bottom end of the disc opens in the direction of flow, F. (Fig.3)

- Place the valve between two flanges. While placing the valve, ensure there is sufficient space in order not to damage the rubber. Do not mount seals between valve and flanges (Fig. 1). Carefully clean the contact surface. Do not install the butterfly valve in direct contact with a rubber surface (for example, expansion joints); the best installation is when the rubber is in contact with metal (Fig. 4)



- As far as possible, avoid flat flanges for welding (EN 1092 01 type); if these flanges are used, ensure perfect centring between the flange and valve, and be sure to weld exactly edgewise to the flange. Do not let protrusions or sharp edges on the piping cause damage to the rubber surface of the valve (Fig. 5)
- Centre the valve on holes while using wafer type valves. Tighten the bolts crosswise and progressively, in order to distribute the pressure equally before the body and flanges come into contact with each other (Fig. 6)
- With regard to the Lug version, check that the screws are the correct length, in order to allow complete compression of the lining rubber
- Turbulences of the fluid might increase erosion and reduce the life-cycle of the valve. Install the valve at a distance of at least 1 x DN upstream, and at a distance of 2-3 x DN downstream, away from fittings or bends.
- In the open position, the valve is larger than the nominal Face to Face value. Check that no other components of the piping interfere or create damage or malfunction (Fig. 7A). If they do, a spacer should be inserted for the valve to operate correctly (Fig. 7B).

