

BUTTERFLY VALVES

VF-235T / VF-255T

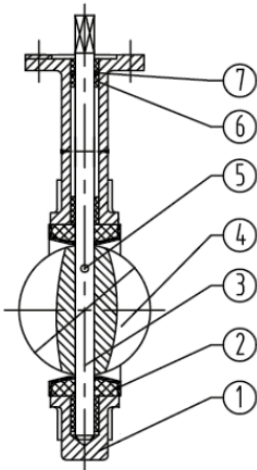


Centric butterfly valves, with vulcanized EPDM liner. The liner permits the tight between the valve body and the flanges (no gaskets are needed) and insulates the valve body from the medium.

AT.EX. Certified for zone 1 and 21

Available types

- art. VF-235T wafer
- art. VF-255T lug



Materials

| N° | PARTS | MATERIALS | SPECIFICATIONS | NOTE |
|----|---------|-----------------|----------------------|---------------|
| 1 | BODY | CAST IRON | GG25 | - |
| 2 | SEAT | EPDM | - | -20°C/+120°C* |
| 3 | SHAFT | STAINLESS STEEL | AISI 410 AISI 316 | - |
| 4 | DISCO | DUCTILE IRON | GGG50 + Ni | - |
| | | STAINLESS STEEL | ASTM A351 CF8M | - |
| 5 | PIN | STAINLESS STEEL | - | - |
| 6 | BUSHING | PTFE | - | - |
| 7 | O-RING | NBR | - | - |

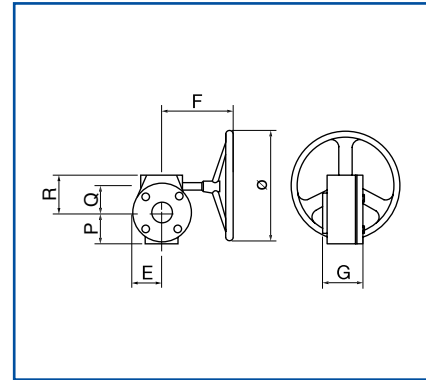
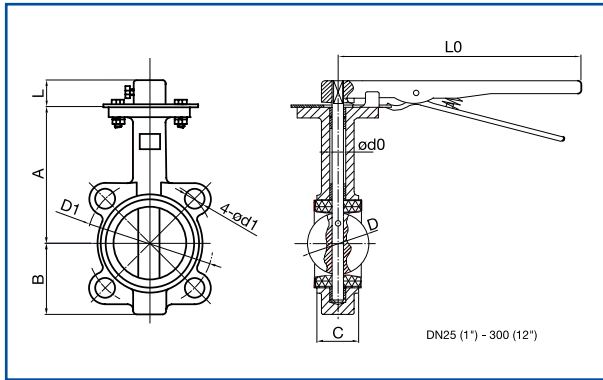
(*) Working temperature must always be related to working pressure and chemical composition of fluid

Technical details

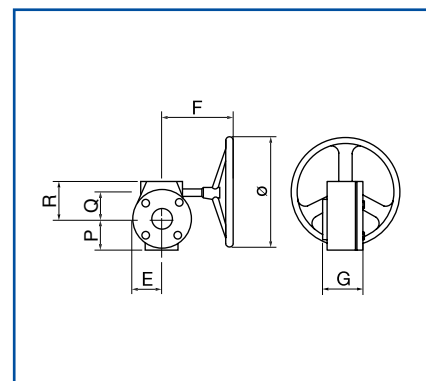
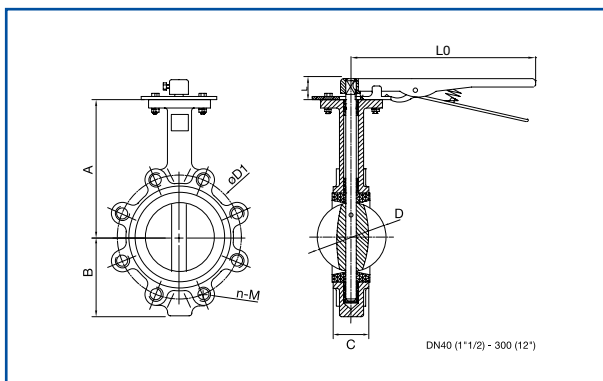
- Face to face according to DIN 3203/3-K1
- ISO 5211 upper flange for mounting of electrical or pneumatic actuator
- Valve are suitable for UNI PN 10/16 welding neck or slip-on flanges
- lever operated or gear operated
- epoxy coated painting
- working pressure: 16 bar
- Hydraulic tests according to API 598:
Seat: 18 bar
Body: 24 bar
- Pneumatic test of seat at 6 bar
- Working temperature: -20°C / +120°C
- Wafer type (VF-235T) can be installed between flanges with bolts; in case of maintenance work, the plants shall be completely empty before.
- Lugged type (VF-255T) can be installed between flanges with screw, permitting the maintenance work by disassembling one part of plant only (the valve remains installed onto one of the flanges) so, the plant shall not be empty before.

BUTTERFLY VALVES

VF-235T / VF-255T

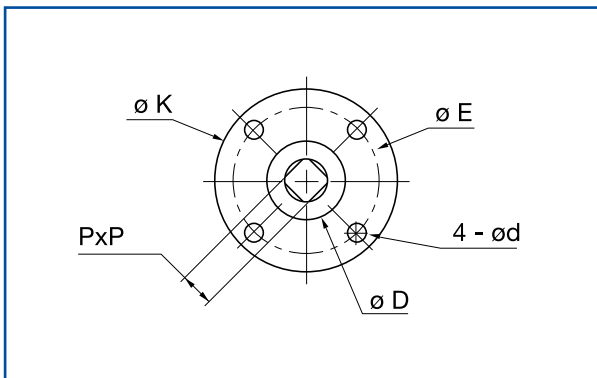
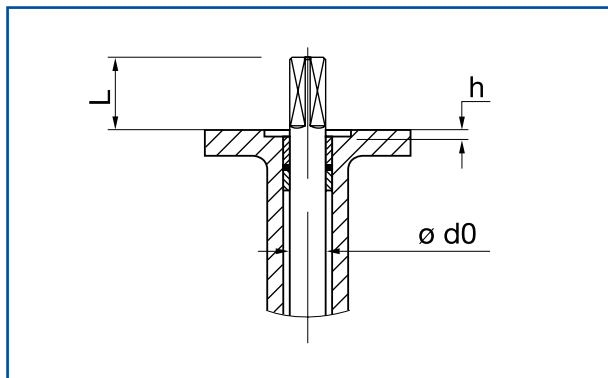


| SIZE | | A | B | C | D | L | L0 | D1 | WEIGHT kgs. | | | GEAR | | | | | | |
|------|--------|-----|-----|------|-------|----|-----|------------|-------------|---------|--------|------|-------|-----|----|-------|----|-----|
| mm. | inch. | | | | | | | | bare shaft | w/lever | w/gear | P | Q | R | E | F | G | ø |
| 25 | 1" | 116 | 59 | 33 | 29,9 | 30 | 232 | 85 | 1,7 | 2,2 | 6,9 | - | - | - | - | - | - | - |
| 32 | 1" 1/4 | 135 | 66 | 33 | 34,6 | 30 | 232 | 100 | 1,9 | 2,5 | 7,1 | - | - | - | - | - | - | - |
| 40 | 1" 1/2 | 145 | 75 | 33 | 42,4 | 32 | 232 | 110 | 2,2 | 3,0 | 7,4 | 52 | 45 | 74 | 52 | 152,5 | 75 | 150 |
| 50 | 2" | 161 | 80 | 43 | 52,6 | 32 | 232 | 125 | 2,5 | 3,3 | 7,7 | 52 | 45 | 74 | 52 | 152,5 | 75 | 150 |
| 65 | 2" 1/2 | 175 | 89 | 46 | 64,5 | 32 | 232 | 145 | 3,5 | 4,3 | 8,7 | 52 | 45 | 74 | 52 | 152,5 | 75 | 150 |
| 80 | 3" | 181 | 95 | 46 | 78,8 | 32 | 232 | 160 | 3,6 | 4,4 | 8,8 | 52 | 45 | 74 | 52 | 152,5 | 75 | 150 |
| 100 | 4" | 200 | 114 | 52,1 | 104 | 32 | 270 | 180 | 4,8 | 5,7 | 10,0 | 52 | 45 | 74 | 52 | 152,5 | 75 | 150 |
| 125 | 5" | 213 | 127 | 56 | 123,3 | 32 | 270 | 210 | 6,6 | 7,5 | 11,8 | 52 | 45 | 74 | 52 | 152,5 | 75 | 150 |
| 150 | 6" | 226 | 139 | 56 | 155,6 | 32 | 270 | 240 | 8,1 | 9,0 | 13,3 | 52 | 45 | 74 | 52 | 152,5 | 75 | 150 |
| 200 | 8" | 260 | 175 | 60,6 | 202,5 | 45 | 360 | 295 | 13,5 | 15,5 | 25,1 | 75 | 62,75 | 101 | 75 | 250 | 86 | 300 |
| 250 | 10" | 292 | 203 | 65,6 | 250,5 | 45 | 360 | 350 355 | 19,7 | 21,7 | 31,3 | 75 | 62,75 | 101 | 75 | 250 | 86 | 300 |
| 300 | 12" | 337 | 242 | 76,9 | 301,6 | 45 | 500 | 400 410 | 30,0 | 32,7 | 43,9 | 81 | 80 | 118 | 81 | 227 | 83 | 300 |



| SIZE | | A | B | C | D | L | L0 | D1 | n-ø | WEIGHT kgs. | | | GEAR | | | | | | |
|------|--------|-----|-----|------|-------|----|-----|------------|------------------|-------------|---------|--------|------|-------|-----|----|-------|----|-----|
| mm. | inch. | | | | | | | | | bare shaft | w/lever | w/gear | P | Q | R | E | F | G | ø |
| 40 | 1" 1/2 | 145 | 75 | 33 | 42,4 | 32 | 232 | 110 | 4-M16 | 3,5 | 4,3 | 8,7 | 52 | 45 | 74 | 52 | 152,5 | 75 | 150 |
| 50 | 2" | 161 | 80 | 43 | 52,6 | 32 | 232 | 125 | 4-M16 | 3,8 | 4,6 | 9,0 | 52 | 45 | 74 | 52 | 152,5 | 75 | 150 |
| 65 | 2" 1/2 | 175 | 89 | 46 | 64,5 | 32 | 232 | 145 | 4-M16 | 4,7 | 5,5 | 9,9 | 52 | 45 | 74 | 52 | 152,5 | 75 | 150 |
| 80 | 3" | 181 | 95 | 46 | 78,8 | 32 | 232 | 160 | 8-M16 | 4,9 | 5,7 | 10,1 | 52 | 45 | 74 | 52 | 152,5 | 75 | 150 |
| 100 | 4" | 200 | 114 | 52,1 | 104 | 32 | 270 | 180 | 8-M16 | 8,0 | 8,9 | 13,2 | 52 | 45 | 74 | 52 | 152,5 | 75 | 150 |
| 125 | 5" | 213 | 127 | 56 | 123,3 | 32 | 270 | 210 | 8-M16 | 9,7 | 10,6 | 14,9 | 52 | 45 | 74 | 52 | 152,5 | 75 | 150 |
| 150 | 6" | 226 | 139 | 56 | 155,6 | 32 | 270 | 240 | 8-M20 | 11,6 | 12,5 | 16,8 | 52 | 45 | 74 | 52 | 152,5 | 75 | 150 |
| 200 | 8" | 260 | 175 | 60,6 | 202,5 | 45 | 360 | 295 | 8-M20 12-M20 | 18,9 | 20,9 | 30,5 | 75 | 62,75 | 101 | 75 | 250 | 86 | 300 |
| 250 | 10" | 292 | 203 | 65,6 | 250,5 | 45 | 360 | 350 355 | 12-M20 12-M24 | 28,4 | 30,4 | 40,0 | 75 | 62,75 | 101 | 75 | 250 | 86 | 300 |
| 300 | 12" | 337 | 242 | 76,9 | 301,6 | 45 | 360 | 400 410 | 12-M20 12-M24 | 44,2 | 46,4 | 58,1 | 81 | 80 | 118 | 81 | 227 | 83 | 300 |

ISO 5211 UPPER FLANGE AND OPERATING TORQUE



| SIZE | TORQUE Nm | | | Upper flange dimensions | | | | | | | | ISO 5211 |
|-------|-----------|------|------|-------------------------|-----|------|-------|----|---|----|-------|----------|
| | PN6 | PN10 | PN16 | K | E | 4-d | d0 | D | h | L | PxP | |
| DN25 | 8,5 | 9,3 | 9,8 | 70 | 50 | 4-7 | 12,6 | 35 | 3 | 30 | 7x7 | F05 |
| DN32 | 8,5 | 9,3 | 9,8 | 70 | 50 | 4-7 | 12,6 | 35 | 3 | 30 | 7x7 | F05 |
| DN40 | 8,7 | 9,5 | 10 | 70 | 50 | 4-7 | 12,6 | 35 | 3 | 32 | 9x9 | F05 |
| DN50 | 9,6 | 12 | 12 | 70 | 50 | 4-7 | 12,6 | 35 | 3 | 32 | 9x9 | F05 |
| DN65 | 14,5 | 15 | 15 | 70 | 50 | 4-7 | 12,6 | 35 | 3 | 32 | 9x9 | F05 |
| DN80 | 21 | 22 | 28 | 70 | 50 | 4-7 | 12,6 | 35 | 3 | 32 | 9x9 | F05 |
| DN100 | 35,3 | 37 | 43 | 90 | 70 | 4-9 | 15,77 | 55 | 3 | 32 | 11x11 | F07 |
| DN125 | 47,5 | 58 | 68 | 90 | 70 | 4-9 | 18,92 | 55 | 3 | 32 | 14x14 | F07 |
| DN150 | 84,1 | 94 | 103 | 90 | 70 | 4-9 | 18,92 | 55 | 3 | 32 | 14x14 | F07 |
| DN200 | 127 | 132 | 173 | 125 | 102 | 4-14 | 22,1 | 70 | 3 | 45 | 17x17 | F10 |
| DN250 | 210 | 228 | 286 | 125 | 102 | 4-14 | 28,45 | 70 | 3 | 45 | 22x22 | F10 |
| DN300 | 245 | 287 | 429 | 140 | 102 | 4-14 | 31,6 | 70 | 3 | 45 | 22x22 | F10 |

Kv VALUE

| DN | Kv | | | | | | | | |
|-----|------|--------|--------|--------|---------|---------|---------|---------|---------------|
| | 10° | 20° | 30° | 40° | 50° | 60° | 70° | 80° | Full 90° open |
| 25 | 0,01 | 0,01 | 0,86 | 1,71 | 3,42 | 5,13 | 6,84 | 8,55 | 9,41 |
| 32 | 0,01 | 0,86 | 1,71 | 3,42 | 5,13 | 7,70 | 11,12 | 14,54 | 15,39 |
| 40 | 0,01 | 0,86 | 1,71 | 4,28 | 6,84 | 10,26 | 14,54 | 19,67 | 20,52 |
| 50 | 0,09 | 4,28 | 10,26 | 20,52 | 38,48 | 54,72 | 76,95 | 106,88 | 115,43 |
| 65 | 0,17 | 6,84 | 17,10 | 31,64 | 55,58 | 83,79 | 123,12 | 174,42 | 188,10 |
| 80 | 0,26 | 10,26 | 18,81 | 33,35 | 59,85 | 99,18 | 156,47 | 235,13 | 258,21 |
| 100 | 0,43 | 14,54 | 30,78 | 66,69 | 117,14 | 196,65 | 311,22 | 466,83 | 513,00 |
| 125 | 0,68 | 24,80 | 52,16 | 113,72 | 202,64 | 335,16 | 530,10 | 795,15 | 873,81 |
| 150 | 1,71 | 38,48 | 81,23 | 175,28 | 312,93 | 517,28 | 819,09 | 1228,64 | 1350,05 |
| 200 | 2,57 | 76,10 | 160,74 | 348,84 | 621,59 | 1027,71 | 1627,07 | 2440,17 | 2683,85 |
| 250 | 3,42 | 129,11 | 273,60 | 593,37 | 1057,64 | 1750,19 | 2770,20 | 4154,45 | 4565,70 |
| 300 | 4,28 | 200,07 | 423,23 | 916,56 | 1633,91 | 2703,51 | 4279,28 | 6416,78 | 7053,75 |

Kv values denotes flow rate in m³/hr for water at 20°C flowing under a differential pressure 1kg/cm². When require Cv = 1.17 Kv.

SUGGESTED BOLTS TO WEAR UNI PN 10/16 FLANGES

| SIZE | Art. VF235T Wafer | | | Art. VF255T Lug | |
|------------|-------------------|-------------------------------------|-------------------|-----------------|-----------------|
| | no. | BOLTS DIMENSION (SCREW+STUD NUT) | TIE ROD DIMENSION | no. | SCREW DIMENSION |
| DN25 | 4 | M12 x 90 | 12 x 120 | = | = |
| DN32 | 4 | M16 x 100 | 16 x 140 | = | = |
| DN40 | 4 | M16 x 100 | 16 x 130 | 8 | M16 x 30 |
| DN50 | 4 | M16 x 110 | 16 x 140 | 8 | M16 x 35 |
| DN65 | 4 | M16 x 110 | 16 x 140 | 8 | M16 x 35 |
| DN80 | 8 | M16 x 120 | 16 x 150 | 16 | M16 x 35 |
| DN100 | 8 | M16 x 120 | 16 x 150 | 16 | M16 x 40 |
| DN125 | 8 | M16 x 130 | 16 x 160 | 16 | M16 x 45 |
| DN150 | 8 | M20 x 130 | 20 x 170 | 16 | M20 x 50 |
| DN200 PN10 | 8 | M20 x 140 | 20 x 180 | 16 | M20 x 55 |
| DN200 PN16 | 12 | M20 x 140 | 20 x 180 | 24 | M20 x 50 |
| DN250 PN10 | 12 | M20 x 160 | 20 x 190 | 24 | M20 x 60 |
| DN250 PN16 | 12 | M22 x 160 | 22 x 190 | 24 | M20 x 60 |
| DN300 PN10 | 12 | M20 x 170 | 20 x 200 | 24 | M20 x 65 |
| DN300 PN16 | 12 | M22 x 170 | 22 x 210 | 24 | M24 x 65 |



Electrical or pneumatic actuators, positioners, limit switches, solenoid valves and other equipments. Assembled on VALSAR butterfly valves.