

# BUTTERFLY VALVE WITH GEAR BOX

## TECHNICAL PASSPORT

### BUTTERFLY VALVE - DUCTILE IRON BODY WITH GEAR BOX - BETWEEN FLANGES PN10/16 - ASA 150

VPG4442-08

#### APPLICATION

VPG butterfly valves are intended for ON/OFF or control use in fluid transfer circuits.

##### Area of use

Seawater desalination, reverse osmosis, etc.



##### Fluids

Water, sea water, air, industrial fluids.

##### Contraindications

Use on steam is strongly discouraged.



#### GENERAL CHARACTERISTICS

**Range:** from DN32/40 to DN300.

- Design according to standard NF EN 593.
- Removable wafer type with smooth centering lugs
- Sealing in both directions of piping circulation.
- Body coated with epoxy paint protection against corrosion
- Raised neck compatible with pipe insulation
- Soft sleeve insures a perfect seal.
- Disc profiled and reduced in thickness
- Low operating torque.
- Stem in two parts couples to the disc using a square.
- Reduced head losses.
- Standardized ISO 5211 upper flange for easy assembly of actuators.

#### STANDARDS

|                     |  |
|---------------------|--|
| <b>Design</b>       | Manufacture according to the requirements of the European directive 2014/68/UE<br>«Equipment under pressure»: modulate H.                              |
| <b>Face to face</b> | Face to face according to standards NF EN 558-1 serie 20, ISO 5752 serie 20, DIN 3202.   |
| <b>Connection*</b>  | Mounting between flanges ISO PN10/16 according to EN1092-1 and GOST PN10/16.<br>Adjustable between flanges ASME B16.5 Class 150 (ISO PN20) / EN 1092-2 |
| <b>Tests</b>        | Pressure test according to standards EN12266-1, DIN 3230 and ISO 5208:<br>-Body: 24 bar<br>-Seat: 17.6 bar   |

\* Possible assembly with stamped flanges and stainless steel collars

#### PRODUCT APPROVALS



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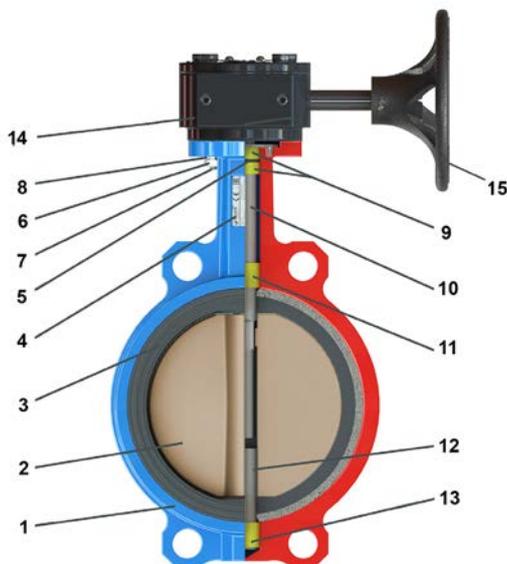


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### CONSTRUCTION



| Pos. | Q-ty | Description   | Material                   | Equivalences |                |                | Epoxy coating       |
|------|------|---------------|----------------------------|--------------|----------------|----------------|---------------------|
|      |      |               |                            | DIN          | ASTM           | BS             |                     |
| 1    | 1    | Body          | Ductile iron EN-GJS-400-15 | GGG40        | A536 65-45-12  | EN-JS1030      | RAL 5015, 150 µm    |
| 2    | 1    | Disc          | Cu Al10 Ni5 Fe4            |              |                |                |                     |
| 3    | 1    | Sleeve        | Heat EPDM                  |              |                |                |                     |
| 4    | 1    | Nameplate     | Stainless steel 304        | X5CrNi 18 10 | A 182 AISI 304 | 1449-2 304 S15 |                     |
| 5    | 1    | O ring        | EPDM                       |              |                |                |                     |
| 6    | 2    | Screw         | Stainless steel 304/A2     | X5CrNi 18 10 | A 182 AISI 304 | 1449-2 304 S15 |                     |
| 7    | 2    | Nut           | Stainless steel 304/A2     | X5CrNi 18 10 | A 182 AISI 304 | 1449-2 304 S15 |                     |
| 8    | 2    | Washer        | Stainless steel 304/A2     | X5CrNi 18 10 | A 182 AISI 304 | 1449-2 304 S15 |                     |
| 9    | 2    | Upper bushing | PTFE                       |              |                |                |                     |
| 10   | 1    | Upper stem    | Stainless steel 420        | X20Cr13      | A276 AISI 420  | 970-1 420S37   |                     |
| 11   | 1    | Bushing       | PTFE                       |              |                |                |                     |
| 12   | 1    | Lower stem    | Stainless steel 420        | X20Cr13      | A276 AISI 420  | 970-1 420S37   |                     |
| 13   | 1    | Lower bushing | PTFE                       |              |                |                |                     |
| 14   | 1    | Gear box      |                            |              |                |                | Dark black RAL 9005 |
| 15   | 1    | Handwheel     | Cast iron                  |              |                |                | Dark black RAL 9005 |

The photographs and technical art works are not contractual. The specifications of the presented products are open to modifications without previous advice.

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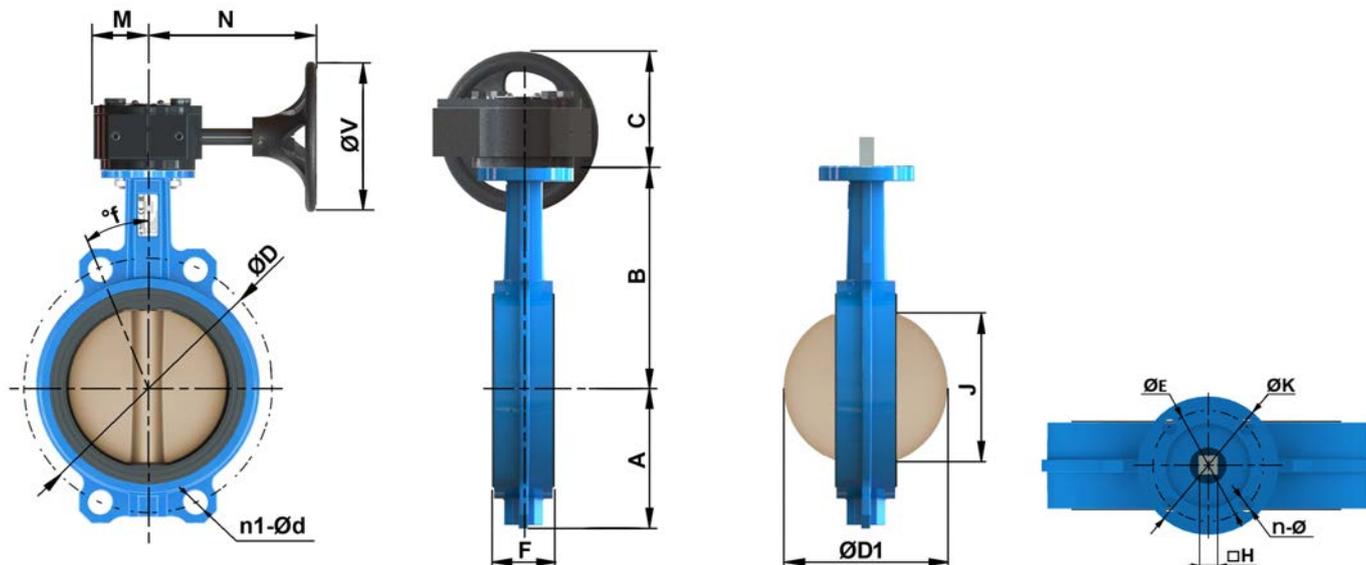


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#### DIMENSIONS



| DN    |                | A    | B   | C   | ØD      | ØD1 | n1-Ød | f°        | ØE  | F  | ØK  | J   | n-Ø   | M  | N   | ØV  | □H | Torque* Nm | Weight (kg) |
|-------|----------------|------|-----|-----|---------|-----|-------|-----------|-----|----|-----|-----|-------|----|-----|-----|----|------------|-------------|
| mm    | inch           |      |     |     |         |     |       |           |     |    |     |     |       |    |     |     |    |            |             |
| 32/40 | 1"1/4<br>1"1/2 | 60   | 120 | 112 | 110     | 43  | 4-Ø19 | 45°       | 50  | 33 | 65  | 29  | 4-Ø7  | 50 | 160 | 150 | 9  | 12         | 5,48        |
| 50    | 2"             | 60   | 128 | 116 | 125     | 53  | 4-Ø19 | 45°       | 50  | 43 | 65  | 31  | 4-Ø7  | 50 | 160 | 150 | 9  | 16         | 6,03        |
| 65    | 2"1/2          | 72.5 | 140 | 115 | 145     | 65  | 4-Ø19 | 45°       | 50  | 45 | 65  | 46  | 4-Ø7  | 50 | 160 | 150 | 9  | 18         | 6,24        |
| 80    | 3"             | 91   | 148 | 116 | 160     | 79  | 4-Ø19 | 45°       | 50  | 45 | 65  | 64  | 4-Ø7  | 50 | 160 | 150 | 9  | 25         | 6,84        |
| 100   | 4"             | 108  | 165 | 115 | 180     | 105 | 4-Ø19 | 22.5°     | 50  | 52 | 65  | 91  | 4-Ø7  | 50 | 160 | 150 | 11 | 42         | 7,88        |
| 125   | 5"             | 121  | 175 | 116 | 210     | 124 | 4-Ø20 | 22.5°     | 70  | 56 | 90  | 111 | 4-Ø10 | 50 | 160 | 150 | 14 | 65         | 9,8         |
| 150   | 6"             | 131  | 199 | 116 | 240     | 155 | 4-Ø23 | 22.5°     | 70  | 56 | 90  | 144 | 4-Ø10 | 50 | 160 | 150 | 14 | 110        | 10,91       |
| 200   | 8"             | 163  | 220 | 208 | 295     | 203 | 4-Ø23 | 15°/22.5° | 102 | 60 | 125 | 194 | 4-Ø12 | 75 | 232 | 305 | 17 | 200        | 22,14       |
| 250   | 10"            | 198  | 251 | 209 | 350/355 | 251 | 4-Ø28 | 15°       | 102 | 68 | 125 | 242 | 4-Ø12 | 75 | 232 | 305 | 22 | 330        | 29,13       |
| 300   | 12"            | 231  | 288 | 210 | 400/410 | 302 | 4-Ø28 | 15°       | 102 | 78 | 125 | 292 | 4-Ø12 | 75 | 232 | 305 | 22 | 500        | 37,78       |

The smooth holes are oblong on the DN32/40, DN200 et DN300  
 \* Torque value without safety factor

#### WORKING CONDITIONS

Maximum working pressure: 16 bar  
 (6 bar for compressed air)

Maximum vacuum pressure: -0.8 bar for 10 minutes  
 (vacuum tests performed in laboratory, valve tested open at -0.8 bar for 10 minutes)

Maximum working temperature: -20°C / +130°C

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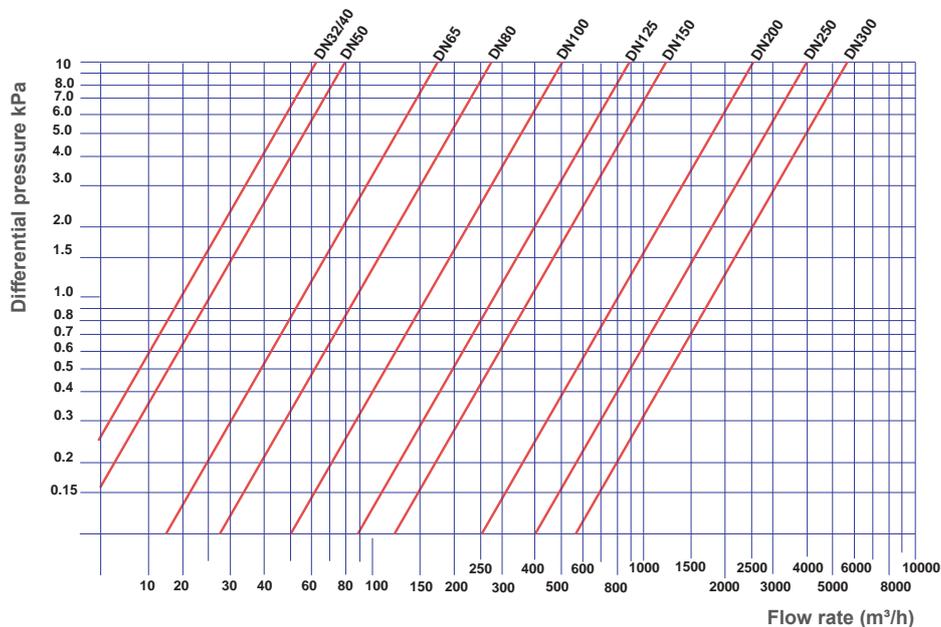


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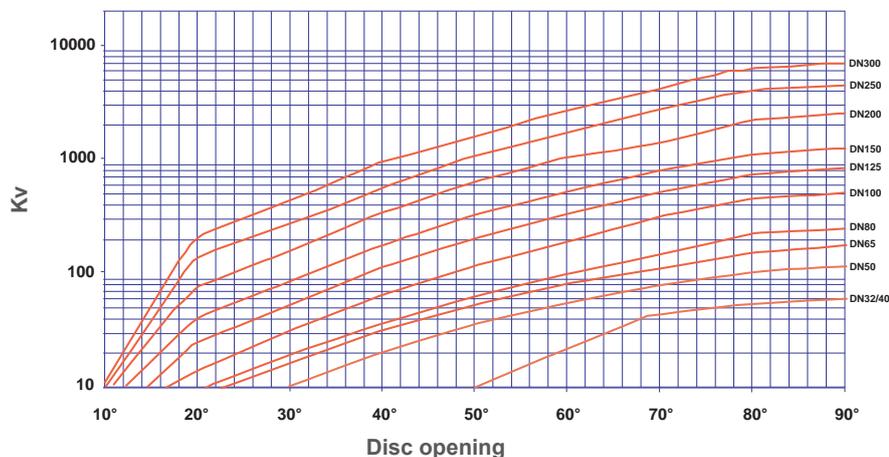
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#### HEAD LOSSES DIAGRAMM



#### FLOW FACTOR

| DN    |               | Kv  |      |      |      |      |      |      |       |       |
|-------|---------------|-----|------|------|------|------|------|------|-------|-------|
| mm    | inch          | 10° | 20°  | 30°  | 40°  | 50°  | 60°  | 70°  | 80°   | 90°   |
| 32/40 | 1"1/4 - 1"1/2 | 0.0 | 0.0  | 0.1  | 1.0  | 10.0 | 20.0 | 45.0 | 55.0  | 60.0  |
| 50    | 2"            | 0.0 | 2.6  | 10.3 | 20.5 | 38.5 | 54.7 | 77.0 | 106.9 | 115.4 |
| 65    | 1"1/2         | 0.1 | 5.1  | 17.1 | 31.6 | 55.6 | 83.8 | 123  | 174   | 188   |
| 80    | 3"            | 0.2 | 7.7  | 19.4 | 33.3 | 59.9 | 99.2 | 156  | 235   | 258   |
| 100   | 4"            | 0.4 | 14.5 | 30.8 | 66.7 | 119  | 197  | 311  | 467   | 513   |
| 125   | 5"            | 0.7 | 24.8 | 52.2 | 114  | 203  | 335  | 530  | 795   | 874   |
| 150   | 6"            | 1.7 | 38.5 | 81.2 | 175  | 313  | 517  | 819  | 1229  | 1350  |
| 200   | 8"            | 2.6 | 76.1 | 161  | 349  | 622  | 1028 | 1627 | 2440  | 2681  |
| 250   | 10"           | 3.4 | 129  | 274  | 593  | 1058 | 1750 | 2770 | 4154  | 4566  |
| 300   | 12"           | 4.3 | 200  | 423  | 917  | 1634 | 2704 | 4279 | 6418  | 7054  |



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