

# WAFER TYPE BUTTERFLY VALVE Z 011-AS



A low weight wafer type valve (body aluminium) which is optimally suited for applications in public swimming pools.

## TECHNICAL DATA

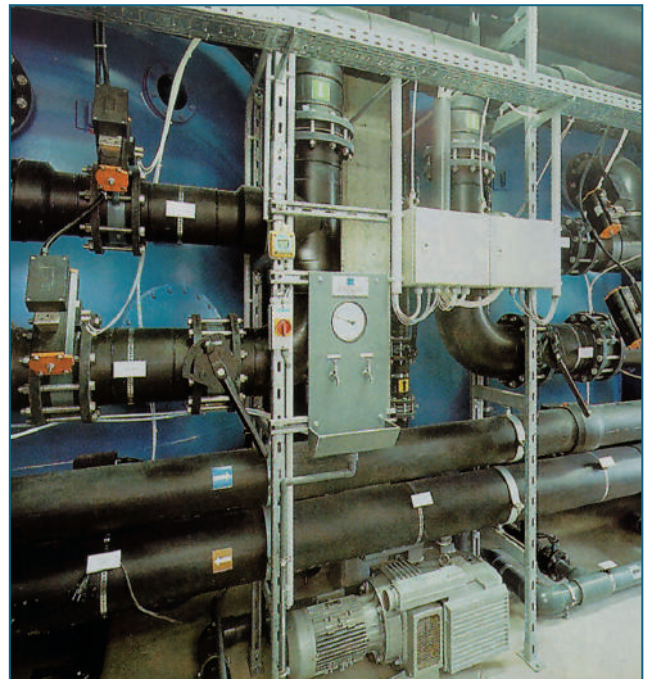
|                        |                                                                        |
|------------------------|------------------------------------------------------------------------|
| Nominal diameter:      | DN 50 - DN 300<br>Larger diameters:<br>See Z 011-A with aluminium body |
| Face-to-face:          | EN 558 Series 20<br>ISO 5752 Series 20<br>API 609 Table 1              |
| Flange accommodation:  | EN 1092 PN 6/10/16<br>ASME Class 150<br>AS 4087 PN 16                  |
| Flange Surface Design: | EN 1092 Form A/B<br>ASME RF, FF                                        |
| Top flange:            | EN ISO 5211                                                            |
| Marking:               | EN 19                                                                  |
| Tightness check:       | EN 12266 (Leakage rate A)<br>ISO 5208, Category 3                      |
| Temperature range:     | -10°C to +100°C (depending on<br>pressure, medium and material)        |
| Operating pressure:    | max. 3 bar                                                             |

## FEATURES

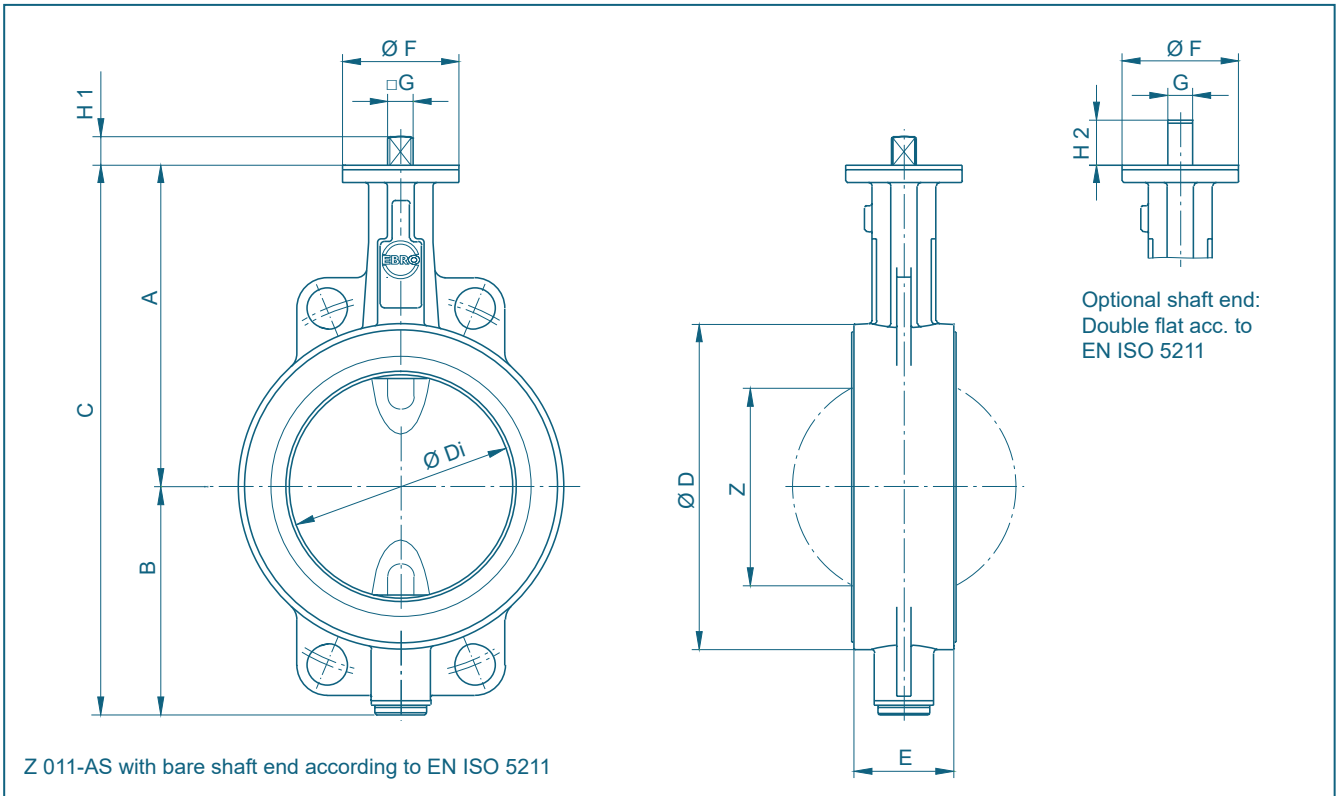
- Low weight aluminium body
- Can be used as control valve or shut-off valve
- Triple shaft bearing
- Interchangeable seat
- Can be installed in any desired position
- Maintenance-free
- Can be disassembled, material specific recycling possible

## GENERAL APPLICATIONS

- Public swimming pools



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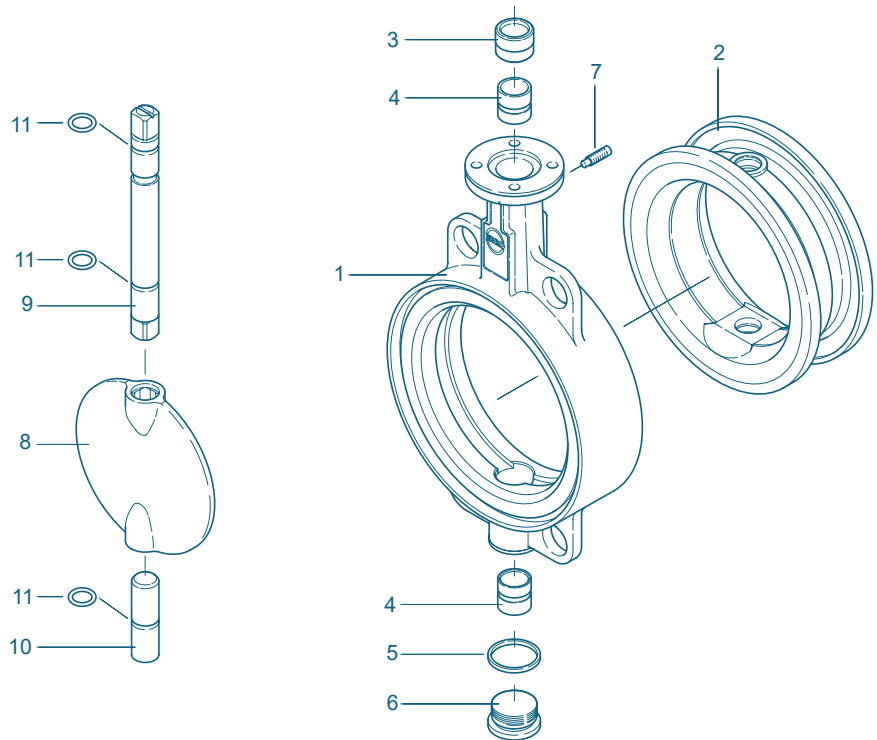
| DN<br>[mm] | Size<br>[in] | Dimensions [mm] |     |     |     |       |    |     |        |    |    |    |     | Weight<br>[kg] |
|------------|--------------|-----------------|-----|-----|-----|-------|----|-----|--------|----|----|----|-----|----------------|
|            |              | A               | B   | C   | D   | Di    | E  | F   | Flange | G  | H1 | H2 | Z   |                |
| 50         | 2            | 126             | 84  | 210 | 95  | 48,5  | 43 | 54  | F04    | 11 | 12 | 19 | 25  | 1,1            |
| 65         | 2½           | 134             | 93  | 227 | 115 | 63,5  | 46 | 54  | F04    | 11 | 12 | 19 | 45  | 1,4            |
| 80         | 3            | 157             | 104 | 261 | 131 | 78,5  | 46 | 65  | F05    | 14 | 16 | 25 | 65  | 1,9            |
| 100        | 4            | 167             | 115 | 282 | 151 | 98,5  | 52 | 65  | F05    | 14 | 16 | 25 | 85  | 2,4            |
| 125        | 5            | 180             | 127 | 307 | 182 | 123,5 | 56 | 65  | F05    | 14 | 16 | 25 | 111 | 3,2            |
| 150        | 6            | 203             | 150 | 353 | 200 | 141,6 | 56 | 90  | F07    | 17 | 19 | 30 | 130 | 4,6            |
| 200        | 8            | 228             | 176 | 404 | 260 | 199   | 60 | 90  | F07    | 17 | 19 | 30 | 190 | 6,8            |
| 250        | 10           | 266             | 212 | 478 | 316 | 248   | 68 | 125 | F10    | 22 | 24 | 39 | 240 | 12,6           |
| 300        | 12           | 291             | 237 | 528 | 360 | 281,1 | 78 | 125 | F10    | 22 | 24 | 39 | 270 | 17,5           |

For larger diameters:, see Z 011-A (Aluminium version)

Subject to change without notice

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## MATERIAL SPECIFICATION AND PARTS LIST



| Pt. | Description        | Material                             | Material-No. | ASTM    | Pt.  | Description                  | Material                 | Material-No.  | ASTM |
|-----|--------------------|--------------------------------------|--------------|---------|------|------------------------------|--------------------------|---------------|------|
| 1   | Body               |                                      |              |         | 8    | Disc                         |                          |               |      |
|     | Aluminium alloy    | GD-AISI9Cu3                          | 3.2163.05    | B 380.1 |      | Stainless Steel              | X6CrNiMo18-10            | 1.4408        | CF8M |
| 2   | Seat               |                                      |              |         |      |                              | G-X2CrNiMoN26-7-4        | 1.4469        | F 51 |
|     | CSM                | Chlorosulfonated polyethylene rubber |              |         | 9/10 | Shaft                        |                          |               |      |
|     | FPM                | Fluorocarbon rubber                  |              |         |      | Stainless Steel              | X14CrMoS17               | 1.4104        | 430  |
| 3/4 | Bearing bush       |                                      |              |         |      |                              | X5/(X2)CrNiMo17-12-2     | 1.4401/1.4404 | 316  |
|     | Brass              | MS 58                                | 2.0401       | B 45    | 11   | O-ring                       |                          |               |      |
| 5   | Seal DIN 7603      |                                      |              |         |      | NBR                          | Nitrile butadiene rubber |               |      |
|     | Copper             | Cu                                   |              | Copper  |      | FPM                          | Fluorocarbon rubber      |               |      |
| 6   | Plug screw DIN 908 |                                      |              |         |      |                              |                          |               |      |
|     | Stainless Steel    | G-X5CrNiMo18-10                      | 1.4408       | CF8M    |      |                              |                          |               |      |
| 7   | Set screw DIN 915  |                                      |              |         |      |                              |                          |               |      |
|     | Steel              | 45 H galvanized                      |              |         |      |                              |                          |               |      |
|     | Stainless Steel    | X5CrNiMo17-12-2                      | 1.4401       | B8M     |      | Other materials upon request |                          |               |      |

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## K<sub>v</sub>-VALUES

- The K<sub>v</sub>-value [m<sup>3</sup> per hour] is the flow of water at a temperature of 5°C to 30°C (41°F to 86°F) at Δp of 1 bar
- The K<sub>v</sub>-values specified are based on tests carried out by the Delfter Hydraulics Laboratories, the Netherlands
- Permissible velocity of flow  
V<sub>max</sub> 4,5 m/s for liquids,  
V<sub>max</sub> 70 m/s for gases
- The throttle function is linear at an angle 30° to 70°
- Avoid cavitation

| DN<br>[mm] | Size<br>[in] | Opening angle α° |     |      |      |      |      |      |      |
|------------|--------------|------------------|-----|------|------|------|------|------|------|
|            |              | 20°              | 30° | 40°  | 50°  | 60°  | 70°  | 80°  | 90°  |
| 50         | 2            | 1,4              | 9   | 15   | 26   | 44   | 58   | 76   | 99   |
| 65         | 2 ½          | 2                | 10  | 26   | 49   | 90   | 134  | 198  | 250  |
| 80         | 3            | 9                | 28  | 58   | 110  | 174  | 279  | 384  | 488  |
| 100        | 4            | 15               | 33  | 76   | 151  | 209  | 395  | 640  | 930  |
| 125        | 5            | 30               | 76  | 151  | 267  | 407  | 616  | 1012 | 1174 |
| 150        | 6            | 35               | 105 | 221  | 372  | 593  | 756  | 1128 | 1395 |
| 200        | 8            | 50               | 209 | 407  | 674  | 1163 | 1860 | 3488 | 4651 |
| 250        | 10           | 145              | 419 | 767  | 1279 | 2093 | 3605 | 6163 | 7442 |
| 300        | 12           | 233              | 640 | 1163 | 1860 | 3023 | 5814 | 8721 | 9884 |

For further values, please contact our engineers.