

# VIBRATION / DOSING VALVE VIDOS



Resilient seated wafer type butterfly valve for semi-corrosive media with vibration function.

## TECHNICAL DATA

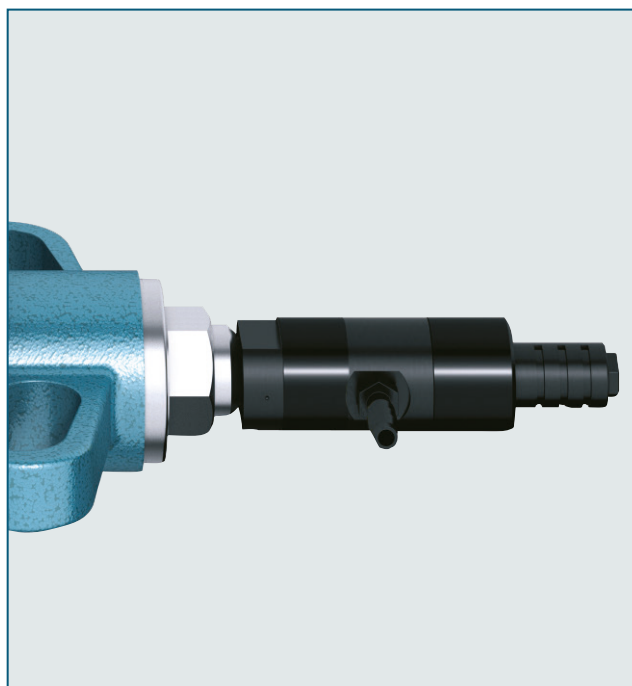
|                        |                                                              |
|------------------------|--------------------------------------------------------------|
| Nominal diameter:      | DN 150 - DN 400                                              |
| Face-to-face:          | EN 558 Series 20<br>ISO 5752 Series 20<br>API 609 Table 1    |
| Flange accommodation:  | EN 1092 PN 10/16<br>ASME Class 150                           |
| 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 +200°C (depending on pressure, medium and material) |
| Operating pressure:    | max. 10 bar                                                  |

## FEATURES

- One piece disc/shaft
- Split body with stainless steel screws
- Insulation height as per plant regulations
- Optional: Special design RWTÜV certified to TA-Air/ VDI 2440
- Triple shaft bearing
- Disc's sealing surface mirror polished
- Seal materials optional according to FDA or EC 1935/200
- Can be disassembled, material-specific recycling possible
- Also available as stainless steel version Z611-K
- Optional according to ATEX

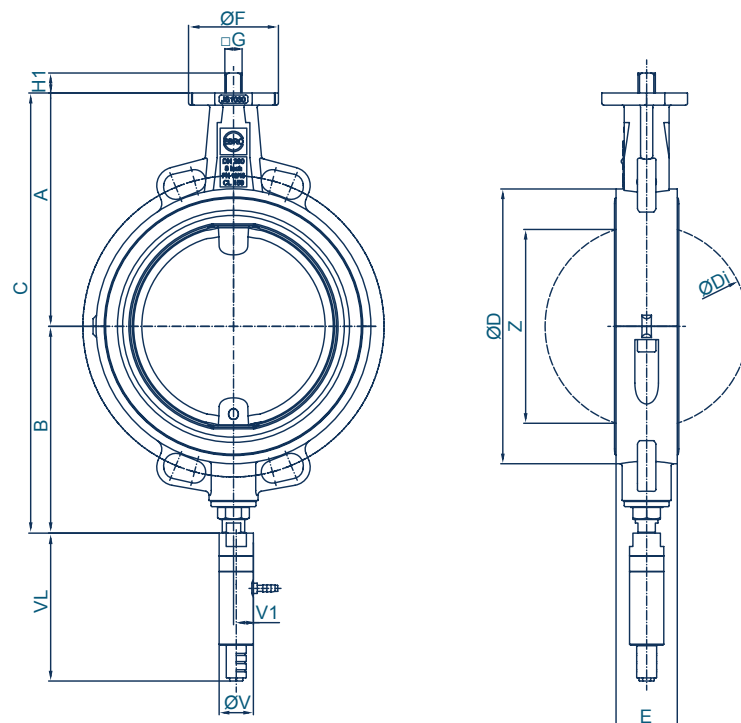
## GENERAL APPLICATIONS

- Dosing and discharging of solid materials
- Food and beverage industry
- Pneumatic materials handling technology
- Power plant technology



The vibrator causes a linear vibration, which swings the disc horizontally. The frequency of the vibration is controlled via air pressure.

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Vidos with bare shafts end acc. to EN ISO 5211

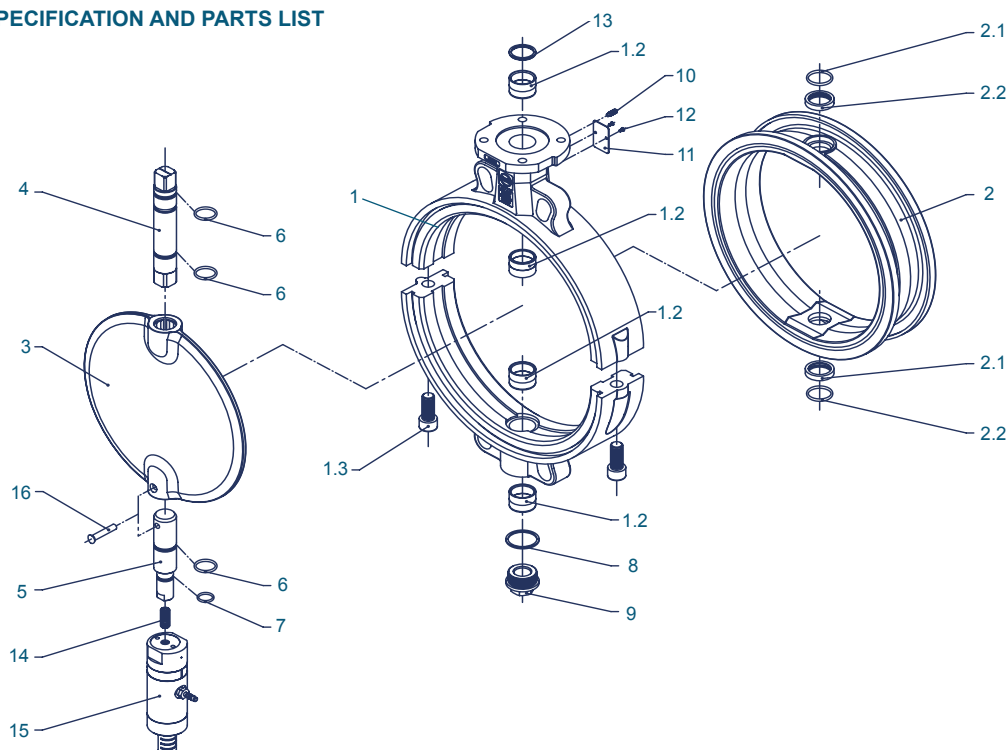
| DN<br>[mm] | Size<br>[in] | Dimensions [mm] |     |     |     |     |     |     |        |    |      |     |            |      |      | Vibrator | ØV   | V1 | VL | Weight<br>[kg] |
|------------|--------------|-----------------|-----|-----|-----|-----|-----|-----|--------|----|------|-----|------------|------|------|----------|------|----|----|----------------|
|            |              | A               | B   | C   | ØD  | Di  | E   | F   | Flange | G  | H1   | Z   |            |      |      |          |      |    |    |                |
| 150        | 6            | 203             | 177 | 380 | 215 | 149 | 56  | 88  | F07    | 17 | 20   | 138 | NTS 120 HF | 27,5 | 16,5 | 97,5     | 9,7  |    |    |                |
|            |              |                 |     |     |     |     |     |     |        |    |      |     | NTS 120 NF | 27,5 | 16,5 | 125      | 9,8  |    |    |                |
|            |              |                 |     |     |     |     |     |     |        |    |      |     | NTS 180 HF | 33,5 | 19,5 | 125      | 9,8  |    |    |                |
|            |              |                 |     |     |     |     |     |     |        |    |      |     | NTS 180 NF | 33,5 | 19,5 | 146      | 9,9  |    |    |                |
| 200        | 8            | 228             | 203 | 431 | 269 | 199 | 60  | 88  | F07    | 17 | 20   | 189 | NTS 120 HF | 27,5 | 16,5 | 97,5     | 13,4 |    |    |                |
|            |              |                 |     |     |     |     |     |     |        |    |      |     | NTS 120 NF | 27,5 | 16,5 | 125      | 13,5 |    |    |                |
|            |              |                 |     |     |     |     |     |     |        |    |      |     | NTS 180 HF | 33,5 | 19,5 | 125      | 13,5 |    |    |                |
|            |              |                 |     |     |     |     |     |     |        |    |      |     | NTS 180 NF | 33,5 | 19,5 | 146      | 13,6 |    |    |                |
| 250        | 10           | 266             | 239 | 505 | 324 | 249 | 68  | 125 | F10    | 22 | 23,5 | 239 | NTS 250 HF | 41,5 | 24   | 146      | 23   |    |    |                |
|            |              |                 |     |     |     |     |     |     |        |    |      |     | NTS 250 NF | 41,5 | 24   | 189      | 23,2 |    |    |                |
|            |              |                 |     |     |     |     |     |     |        |    |      |     | NTS 350 HF | 53   | 30,5 | 147      | 23,3 |    |    |                |
|            |              |                 |     |     |     |     |     |     |        |    |      |     | NTS 350 NF | 53   | 30,5 | 193      | 23,7 |    |    |                |
| 300        | 12           | 291             | 263 | 554 | 374 | 297 | 78  | 125 | F10    | 22 | 23,5 | 286 | NTS 250 HF | 41,5 | 24   | 146      | 32   |    |    |                |
|            |              |                 |     |     |     |     |     |     |        |    |      |     | NTS 250 NF | 41,5 | 24   | 189      | 32,2 |    |    |                |
|            |              |                 |     |     |     |     |     |     |        |    |      |     | NTS 350 HF | 53   | 30,5 | 147      | 32,3 |    |    |                |
|            |              |                 |     |     |     |     |     |     |        |    |      |     | NTS 250 NF | 53   | 30,5 | 193      | 32,7 |    |    |                |
| 350*       | 14           | 330             | 302 | 632 | 535 | 338 | 78  | 148 | F12    | 27 | 29   | 329 | NTS 250 HF | 41,5 | 24   | 149      | 68,5 |    |    |                |
|            |              |                 |     |     |     |     |     |     |        |    |      |     | NTS 250 NF | 41,5 | 24   | 189      | 68,7 |    |    |                |
|            |              |                 |     |     |     |     |     |     |        |    |      |     | NTS 350 HF | 53   | 30,5 | 147      | 68,8 |    |    |                |
|            |              |                 |     |     |     |     |     |     |        |    |      |     | NTS 350 NF | 53   | 30,5 | 193      | 69,2 |    |    |                |
| 400*       | 16           | 360             | 329 | 689 | 580 | 391 | 102 | 148 | F12    | 27 | 29   | 3   | NTS 250 HF | 41,5 | 24   | 149      | 95,5 |    |    |                |
|            |              |                 |     |     |     |     |     |     |        |    |      |     | NTS 250 NF | 41,5 | 24   | 189      | 95,7 |    |    |                |
|            |              |                 |     |     |     |     |     |     |        |    |      |     | NTS 350 HF | 53   | 30,5 | 147      | 95,8 |    |    |                |
|            |              |                 |     |     |     |     |     |     |        |    |      |     | NTS 350 NF | 53   | 30,5 | 193      | 96,2 |    |    |                |

\* Lug type version on dimensions of the T212-A

Subject to change without notice

## VIBRATION / DOSING VALVE VIDEOS

## MATERIAL SPECIFICATION AND PARTS LIST



| Pt. | Description                         | Material                                | Material No. | ASTM  | Pt. | Description                  | Material               | Material No. | ASTM   |
|-----|-------------------------------------|-----------------------------------------|--------------|-------|-----|------------------------------|------------------------|--------------|--------|
| 1   | Body                                |                                         |              |       | 8   | Seal                         |                        |              |        |
|     | Stainless Steel                     | G-X6CrNiMo18-10                         | 1.4408       | CF8M  |     | Copper                       | Cu                     |              | Copper |
| 1.2 | Bearing Bush                        |                                         |              |       | 9   | Plug Screw                   |                        |              |        |
|     | Brass                               | MS 58                                   | 2.0401       | B 45  |     | Stainless Steel              | A4-70                  |              | B8M    |
| 1.3 | Screw                               |                                         |              |       | 10  | Threaded Pin                 |                        |              |        |
|     | Stainless Steel                     | A4-70                                   |              | B8M   |     | Stainless Steel              | A4-70                  |              | B8M    |
| 2   | Seal                                |                                         |              |       | 11  | Type Plate                   |                        |              |        |
|     | NBR                                 | Nitrile butadiene rubber                |              |       |     | Stainless Steel              | G-X5CrNiMo19-11-2      | 1.4301       | 304    |
|     | EPDM                                | Ethylene propylene diene monomer rubber |              |       | 12  | Round Head Grooved Pin       |                        |              |        |
| 2.1 | Ring of Stainless Steel ( ≥ DN 250) |                                         |              |       |     | Stainless Steel              | A2-70                  |              | B 8    |
|     | Stainless Steel                     | G-X5CrNiMo19-11-2                       | 1.4301       | 304   | 13  | Wiper ring (DN 150 - DN 200) |                        |              |        |
| 2.2 | O-Ring ( ≥ DN 250)                  |                                         |              |       |     | PTFE                         | Polytetrafluorethylene |              |        |
|     | NBR                                 | Nitrile butadiene rubber                |              |       | 14  | Threaded pin                 |                        |              |        |
| 4   | Upper Shaft                         |                                         |              |       |     | Stainless Steel              | A2-70                  |              | B 8    |
|     | Stainless Steel                     | X14CrMoS17                              | 1.4104       | 430 F | 15  | Vibrator                     |                        |              |        |
|     |                                     | X5CrNiMo17-12-2                         | 1.4401       | 316   |     | Standard Version             |                        |              |        |
| 5   | Lower Shaft                         |                                         |              |       |     | Stainless Steel Version      |                        |              |        |
|     | Stainless Steel                     | X14CrMoS17                              | 1.4104       | 430 F |     | ATEX Version                 |                        |              |        |
|     |                                     | X5CrNiMo17-12-2                         | 1.4401       | 316   | 16  | Pin (DN 100 - DN 125)        |                        |              |        |
| 6   | O-Ring                              |                                         |              |       |     | Stainless Steel              | X4CrNiMo16-5-1         | 1.4418       |        |
|     | NBR                                 | Nitrile butadiene rubber                |              |       |     |                              |                        |              |        |
| 7   | O-Ring                              |                                         |              |       |     |                              |                        |              |        |
|     | NBR                                 | Nitrile butadiene rubber                |              |       |     |                              |                        |              |        |
|     |                                     |                                         |              |       |     | other materials upon request |                        |              |        |

### Exemplary parts list for nominal diameters DN 150 - DN 300

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## TORQUE

- The torque values specified (Md) are based on liquid and lubricant media
- Powdery (non-lubricant) media Md x 1,3
- Dry gases/high viscous media Md x 1,2
- The values specified are based on the initial breakaway torque
- Dynamic torque specification available upon request

Regarding the dimensioning of actuators, please contact our engineers.

| DN [mm]   | 150 | 200 | 250 | 300 | 350 | 400 |
|-----------|-----|-----|-----|-----|-----|-----|
| Size [in] | 6   | 8   | 10  | 12  | 14  | 16  |
| MD [Nm]   | 110 | 140 | 200 | 280 | 720 | 980 |

## 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

For further values, please contact our engineers.

| DN [mm] | Size [in] | Opening angle α° |      |      |      |      |      |       |       |
|---------|-----------|------------------|------|------|------|------|------|-------|-------|
|         |           | 20°              | 30°  | 40°  | 50°  | 60°  | 70°  | 80°   | 90°   |
| 150     | 6         | 76,5             | 97,3 | 197  | 375  | 629  | 957  | 1360  | 1830  |
| 200     | 8         | 137              | 187  | 373  | 697  | 1160 | 1760 | 2510  | 3400  |
| 250     | 10        | 227              | 271  | 563  | 1090 | 1850 | 2830 | 4010  | 5390  |
| 300     | 12        | 287              | 409  | 820  | 1550 | 2610 | 4050 | 5880  | 8120  |
| 350     | 14        | 399              | 488  | 1070 | 2110 | 3590 | 5480 | 7760  | 10400 |
| 400     | 16        | 557              | 703  | 1360 | 2600 | 4470 | 7060 | 10400 | 14600 |

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