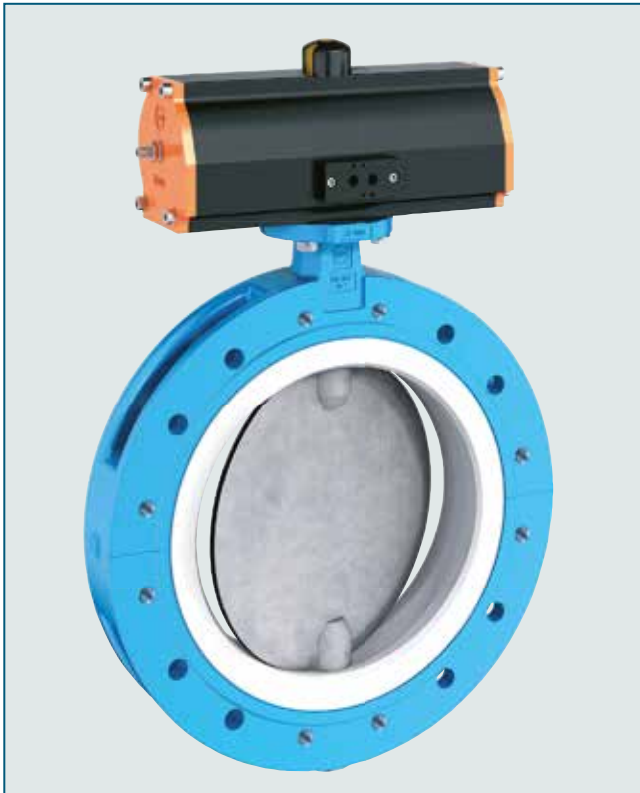


# PTFE-LINED BUTTERFLY VALVE T 212-A



Double flanged PTFE-lined butterfly valve for shut-off and control services in the chemical industry.

## TECHNICAL DATA

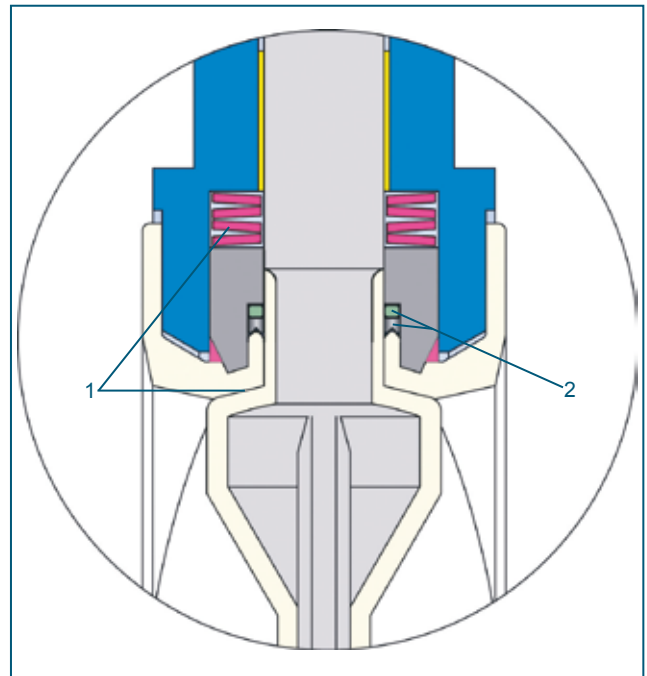
|                        |  |
|------------------------|--|
| Nominal diameter:      | DN 350 - DN 900  |
| Face-to-face:          | EN 558 Series 20<br>ISO 5752 Series 20<br>API 609 Table 1  |
| Flange accommodation:  | EN 1092 PN 10/16<br>ASME Class 150<br>ASME B16.47, Series A, Series B<br>AS 4087                           |
| 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)  |
| Temperature range:     | -40°C to +200°C<br>(depending on nominal diameter and operation pressure)                                  |
| Operating pressure:    | max. 6 bar (10 bar for special version)  |
| Vacuum:                | DN 350 - 600 max. 200mbar absolut<br>DN 700 - 900 max. 500mbar absolut<br>(with silicon elastomer inserts) |

## FEATURES

- PTFE-lined butterfly valve for chemically toxic and highly corrosive media
- Environmental protection via EBRO-Safety seal
- Splitted body design
- Isolation height according to plant prescription
- Can be installed in any desired position
- Maintenance-free
- Can be disassembled, material-specific recycling possible
- Material conform to FDA to EG 1935/2004
- Optional: Special design RWTÜV certified to TA-Air/ VDI 2440

## GENERAL APPLICATIONS

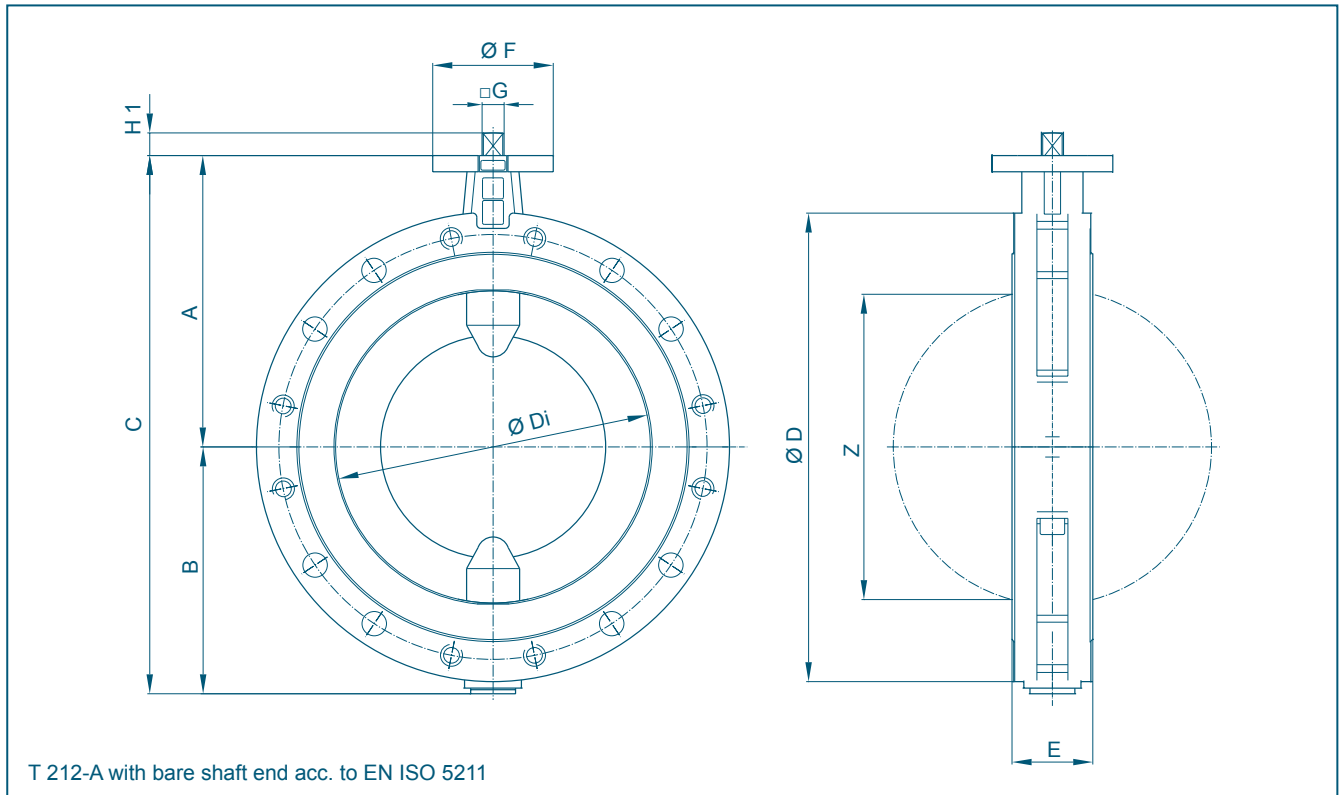
- Chemically highly corrosive and toxic media
- Purification plants
- Pharmaceutical industry
- Adhesives, paper industry, dissolver
- Paint manufacture and processing
- Food industry
- Chlorine production
- Processing of ore



Safety seal at both shaft ends:

1. Primary sealing by means of a Belleville spring washer, transmitting prestress on the spherical segment area.
2. Secondary sealing of the shaft by means of PTFE-Chevron and o-ring.

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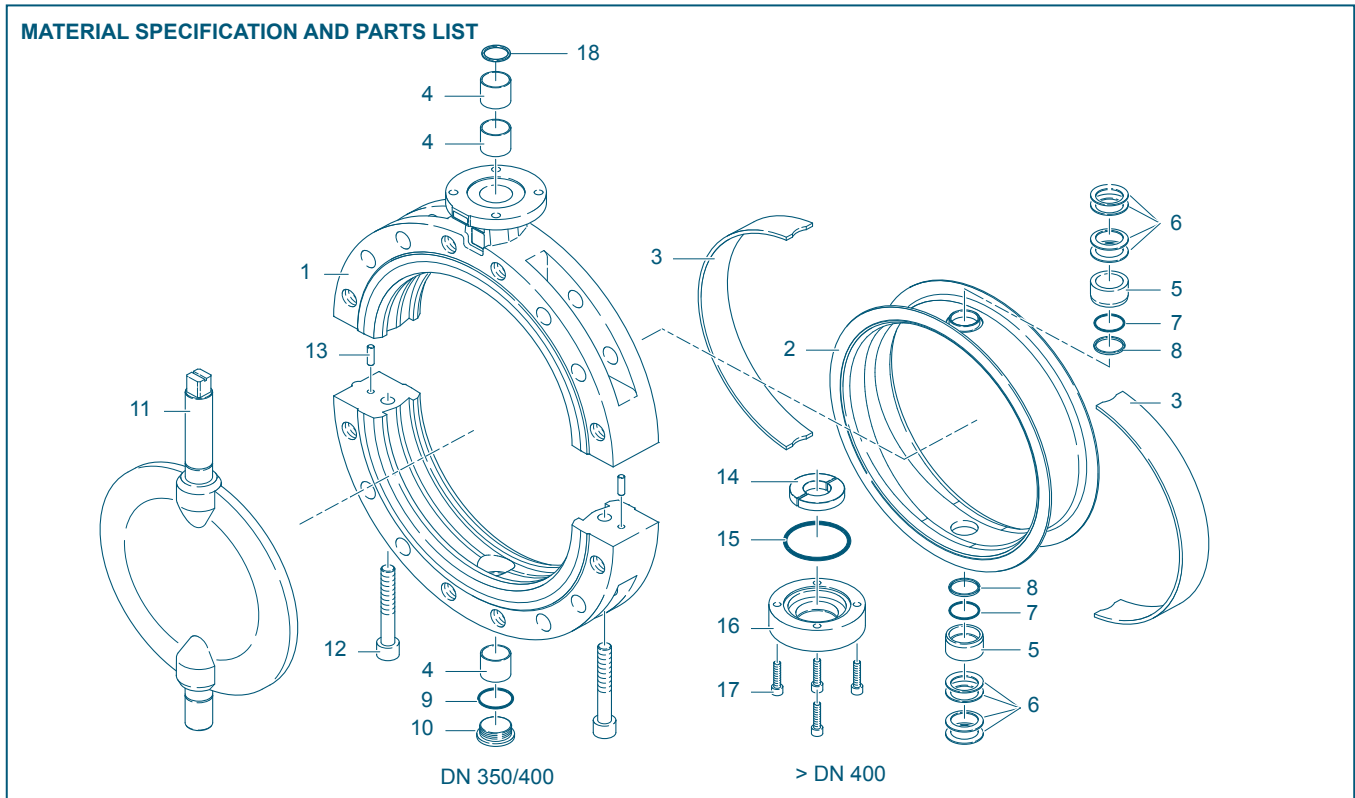


| DN<br>[mm] | Size<br>[in] | Dimensions [mm] |     |      |      |     |         |     |        |    |    |     | Weight<br>[kg] |
|------------|--------------|-----------------|-----|------|------|-----|---------|-----|--------|----|----|-----|----------------|
|            |              | A               | B   | C    | D    | Di  | E       | F   | Flange | G  | H1 | Z   |                |
| 350        | 14           | 330             | 277 | 607  | 535  | 338 | 78(92)* | 150 | F12    | 27 | 29 | 327 | 68             |
| 400        | 16           | 360             | 305 | 665  | 580  | 389 | 102     | 150 | F12    | 27 | 29 | 377 | 95             |
| 450        | 18           | 397             | 363 | 760  | 639  | 437 | 114     | 175 | F14    | 36 | 38 | 423 | 130            |
| 500        | 20           | 437             | 390 | 827  | 715  | 490 | 127     | 175 | F14    | 36 | 38 | 475 | 170            |
| 600        | 24           | 498             | 462 | 960  | 830  | 579 | 154     | 210 | F16    | 46 | 48 | 560 | 270            |
| 700        | 28           | 580             | 496 | 1076 | 927  | 676 | 165     | 210 | F16    | 46 | 47 | 662 | 410            |
| 750        | 30           | 610             | 538 | 1148 | 985  | 724 | 165     | 298 | F25    | 55 | 56 | 712 | 465            |
| 800        | 32           | 630             | 563 | 1193 | 1060 | 770 | 190     | 298 | F25    | 55 | 56 | 759 | 570            |
| 900        | 36           | 696             | 640 | 1336 | 1170 | 881 | 203     | 298 | F25    | 55 | 56 | 859 | 750            |

\* Face to face dim. acc. to EN 558 Tab. 20, 78mm  
Face to face dim. acc. to EN 558 Tab. 25, 92mm

Subject to change without notice

# PTFE-LINED BUTTERFLY VALVE T 212-A



| Pt.        | Description                     | Material               | Material-No. | ASTM  | Pt.          | Description                        | Material   | Material-No. | ASTM       |
|------------|---------------------------------|------------------------|--------------|-------|--------------|------------------------------------|--|--------------|------------|
| <b>1</b>   | <b>Body</b>                     |                        |              |       | <b>11***</b> | <b>Disc/Shaft (one-piece type)</b> |  |              |            |
|            | Nodular Cast Iron               | EN-JS 1025             | EN 1563      | A 395 |              | St. Steel/St. Steel                | X2CrNiMo22-5-3/  | 1.4462/      | Duplex     |
| <b>2**</b> | <b>Seat</b>                     |                        |              |       |              |                                    | X2CrNiMo 22-5-3  | 1.4462       |            |
|            | PTFE                            | Polytetrafluorethylene | PTFE         |       |              | St.Steel/PFA coated                | X2CrNiMo22-5-3/  | 1.4462/      | Duplex/    |
|            | M.-PTFE                         | Polytetrafluorethylene | modified     |       |              |                                    | St52.3-Perfluorakoxy   | 1.0570-PFA   | St./PFA    |
|            | Cond.-PTFE                      | Polytetrafluorethylene | conductive   |       |              | St. Steel/PFA conductive           | X2CrNiMo22-5-3/  | 1.4462/      | Duplex/    |
| <b>3**</b> | <b>Elastomer insert</b>         |                        |              |       |              |                                    | St52.3-Perfluorakoxy   | 1.0570-PFA   | conductive |
|            | Silicon                         | Silicon rubber         | MVQ          | VMQ   | <b>12</b>    | <b>Screw</b>                       |  |              |            |
| <b>4</b>   | <b>DU-bearing</b>               |                        |              |       |              | Stainless Steel                    | A4-70  |              |            |
|            | Steel / PTFE coated             |                        |              |       | <b>13</b>    | <b>Set screw</b>                   |  |              |            |
| <b>5**</b> | <b>Thrust collar</b>            |                        |              |       |              | Steel                              | 9SMnPb28K  | 1.0718       | SAE12L14   |
|            | Stainless Steel                 | X5CrNiMo17-12-2        | 1.4401       | 316   | <b>14</b>    | <b>Shaft retainer</b>              |  |              |            |
| <b>6</b>   | <b>Belleville spring washer</b> |                        |              |       |              | Steel                              | St37-2   |              |            |
|            | Stainless Steel                 | X12CrNi177             | 1.4568       | 631   | <b>15**</b>  | <b>O-ring</b>                      |  |              |            |
| <b>7**</b> | <b>O-ring</b>                   |                        |              |       |              | FPM                                | Fluorocarbon rubber  | FPM          | FKM        |
|            | FPM                             | Fluorocarbon rubber    | FPM          | FKM   | <b>16</b>    | <b>Cover plate</b>                 |  |              |            |
| <b>8**</b> | <b>Chevron seal</b>             |                        |              |       |              | Steel                              | St37-2   |              |            |
|            | PTFE                            | Polytetrafluorethylene | PTFE         | PTFE  | <b>17</b>    | <b>Screw</b>                       |  |              |            |
| <b>9</b>   | <b>Seal</b>                     |                        |              |       |              | Stainless Steel                    | A4-70  |              |            |
|            | Stainless Steel                 | X5CrNi18-10            | 1.4301       | 304   | <b>18</b>    | <b>Wiper ring</b>                  |  |              |            |
| <b>10</b>  | <b>Plug screw DIN 908</b>       |                        |              |       |              | PTFE                               | Polytetrafluorethylene   | PTFE         | PTFE       |
|            | Stainless Steel                 | G-X5CrNiMo19-11-2      | 1.4408       | CF8M  |              |                                    | Above-mentioned materials of the basic version, other materials upon request |              |            |

\*\* recommended spare parts

\*\*\* recommended for coated discs

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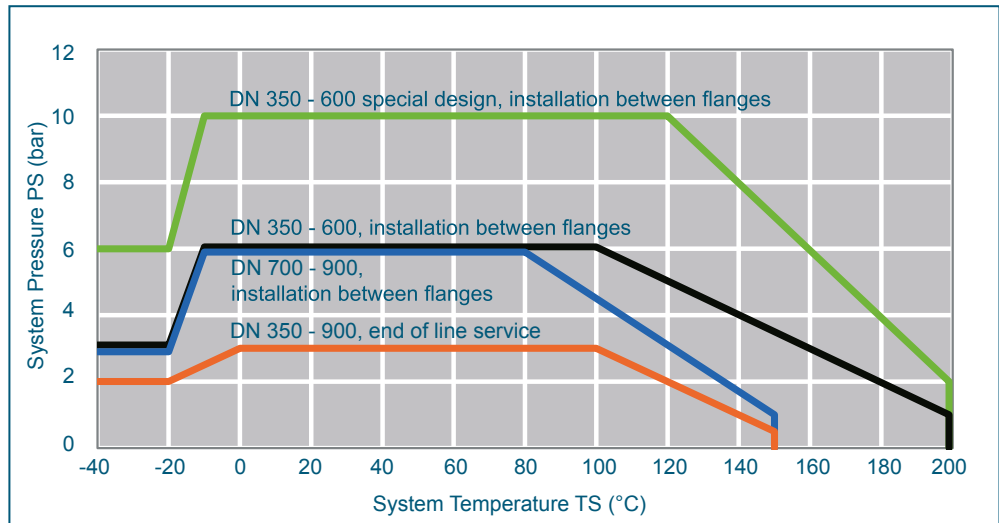
## TORQUE

- The torque values specified (Md) are based on dry media and are measured with air at a temperature of 20 °C
- The values specified are based on the initial breakaway torque (disc disengages from seat, torque then drops)
- Dynamic torque specification available upon request

Regarding the dimensioning of actuators, please contact our engineers.

|                  |     |     |      |      |      |      |      |      |      |
|------------------|-----|-----|------|------|------|------|------|------|------|
| <b>DN [mm]</b>   | 350 | 400 | 450  | 500  | 600  | 700  | 750  | 800  | 900  |
| <b>Size [in]</b> | 14  | 16  | 18   | 20   | 24   | 28   | 30   | 32   | 36   |
| <b>MD [Nm]</b>   | 720 | 980 | 1200 | 1500 | 2500 | 3000 | 3500 | 4500 | 6000 |

## PRESSURE/TEMPERATURE DIAGRAM



Pressure-Temperature-Diagram for valves with Silicone elastomer inserts.

Other elastomer inlays on request

Vacuumservice for Sizes DN 350 - 600 to 200mbar absolut, depending on medium and temperature. Valve installation between flanges

Vacuumservice for Sizes DN 700 - 900 to 500mbar absolut, depending on medium and temperature. Valve installation between flanges

## 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°

| DN [mm]                     | Size [in] | Opening angle α° |      |      |       |       |       |       |       |
|-----------------------------|-----------|------------------|------|------|-------|-------|-------|-------|-------|
|                             |           | 20°              | 30°  | 40°  | 50°   | 60°   | 70°   | 80°   | 90°   |
| <b>K<sub>v</sub>-values</b> |           |                  |      |      |       |       |       |       |       |
| 350                         | 14        | 482              | 464  | 1042 | 2126  | 3625  | 5449  | 7507  | 9708  |
| 400                         | 16        | 627              | 603  | 1355 | 2765  | 4715  | 7088  | 9764  | 12627 |
| 450                         | 18        | 790              | 761  | 1709 | 3488  | 5947  | 8939  | 12314 | 15925 |
| 500                         | 20        | 973              | 936  | 2104 | 4293  | 7320  | 11003 | 15158 | 19602 |
| 600                         | 24        | 1394             | 1342 | 3016 | 6153  | 10492 | 15769 | 21724 | 28094 |
| 700                         | 28        | 1891             | 1820 | 4090 | 8345  | 14229 | 21388 | 29464 | 38104 |
| 750                         | 30        | 2167             | 2084 | 4685 | 9560  | 16303 | 24507 | 33763 | 43664 |
| 800                         | 32        | 2463             | 2369 | 5323 | 10863 | 18525 | 27847 | 38365 | 49615 |
| 900                         | 36        | 3110             | 2991 | 6722 | 13718 | 23394 | 35166 | 48448 | 62655 |

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For further values, please contact our engineers.



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