

| Figure                                   | Nominal pressure | Material   | Nominal diameter |
|--|------------------|------------|------------------|
| 12.448                                   | PN16             | EN-JL 1040 | DN15-100         |
| 22.448 / 22.449                          | PN16             | EN-JS1049  | DN15-100         |
| 23.448 / 23.449                          | PN25             | EN-JS1049  | DN15-100         |
| 25.448                                   | PN40             | EN-JS1049  | DN15-50          |
| 32.448 / 32.449                          | PN16             | 1.0619+N   | DN15-100         |
| 34.448 / 34.449                          | PN25             | 1.0619+N   | DN15-100         |
| 35.448 / 35.449                          | PN40             | 1.0619+N   | DN15-100         |
| 52.448 / 52.449                          | PN16             | 1.4408     | DN15-100         |
| 54.448 / 54.449                          | PN25             | 1.4408     | DN15-100         |
| 55.448 / 55.449                          | PN40             | 1.4408     | DN15-100         |
| Other materials and versions on request. |                  |            |                  |

Information / restriction of technical rules need to be observed!  
A production permission acc. to TRB 801 No. 45 is available.  
(acc. to TRB 801 No. 45 EN-JL1040 is not allowed.)  
The engineer, designing a system or a plant, is responsible for the selection of the correct valve.  
Resistance and fitness must be verified, contact manufacturer for information (refer to Product overview and Resistance list).

| Stem sealing                          |  |
|---------------------------------------|--|
| Fig. 448                              |  |
|                                       |  |
| I. PTFE-V-ring unit<br>-10°C to 220°C | I. EPDM-sealing<br>-10°C to 150°C<br>(allowed for water and steam up to 180°C) |

| Fig. 449   |  |
|--|--|
| standard   | optional   |
|  |  |
| III. Stainless steel-bellow with pure graphite-packing<br>-60°C to 400°C | III. Stainless steel-bellow with V-ring unit<br>-60°C to 220°C |

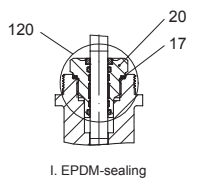
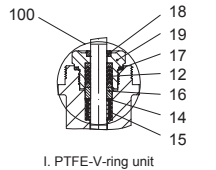
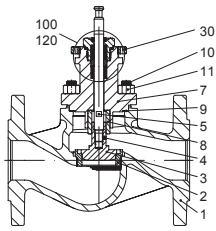
**Pressure-temperature-ratings** Intermediate values for max. permissible operational pressures can be determined by linear interpolation of the given temperature / pressure chart.

| acc. to DIN EN 1092-2 |      |       | -60°C to <-10°C <sup>1)</sup> | -10°C to 120°C | 150°C | 200°C | 250°C | 300°C | 350°C | 400°C |
|-----------------------|------|-------|-------------------------------|----------------|-------|-------|-------|-------|-------|-------|
| EN-JL1040             | PN16 | (bar) | --                            | 16             | 14,4  | 12,8  | 11,2  | 9,6   | --    | --    |
| EN-JS1049             | PN16 | (bar) | --                            | 16             | 15,5  | 14,7  | 13,9  | 12,8  | 11,2  | --    |
| EN-JS1049             | PN25 | (bar) | --                            | 25             | 24,3  | 23    | 21,8  | 20    | 17,5  | --    |
| EN-JS1049             | PN40 | (bar) | --                            | 40             | 38,5  | 36,8  | 34,8  | 32    | 28    | --    |

| acc. to manufacturers standard |      |       | -60°C to <-10°C <sup>1)</sup> | -10°C to 120°C | 150°C | 200°C | 250°C | 300°C | 350°C | 400°C |
|--------------------------------|------|-------|-------------------------------|----------------|-------|-------|-------|-------|-------|-------|
| 1.0619+N                       | PN25 | (bar) | 18,7                          | 25             | 23,9  | 22    | 20    | 17,2  | 16    | 14,8  |
| 1.0619+N                       | PN40 | (bar) | 30                            | 40             | 38,1  | 35    | 32    | 28    | 25,7  | 23,8  |

| acc. to DIN EN 1092-1 |      |       | -60°C to <-10°C <sup>1)</sup> | -10°C to 100°C | 150°C | 200°C | 250°C | 300°C | 350°C | 400°C |
|-----------------------|------|-------|-------------------------------|----------------|-------|-------|-------|-------|-------|-------|
| 1.4408                | PN40 | (bar) | 40                            | 40             | 36,3  | 33,7  | 31,8  | 29,7  | 28,5  | 27,4  |

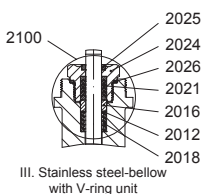
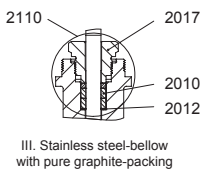
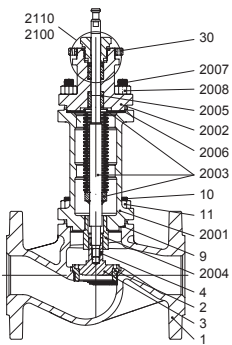
<sup>1)</sup> Valve with extended bonnet, screws and nuts made of A4-70 (at temperatures below -10°C)



| Pos. | Sp.p.                     | Description        | Fig. 12.448                                  | Fig. 22./23./25.448          | Fig. 34./35.448     | Fig. 55.448                          |
|------|---------------------------|--------------------|--|------------------------------|---------------------|--------------------------------------|
| 1    |                           | Body               | EN-GJL-250, EN-JL1040                        | EN-GJS-400-18U-LT, EN-JS1049 | GP240GH+N, 1.0619+N | GX5CrNiMo19-11-2, 1.4408             |
| 2    | x                         | Seat ring          | X20Cr13+QT, 1.4021+QT                        |                              |                     | X6CrNiMoTi17-12-2, 1.4571            |
| 3    | x                         | Plug               | X20Cr13+QT, 1.4021+QT                        |                              |                     | X6CrNiMoTi17-12-2, 1.4571            |
| 4    | x                         | Thread pin         | A4   |                              |                     |                                      |
| 5    | x                         | Stem               | X20Cr13+QT, 1.4021+QT                        |                              |                     | X6CrNiMoTi17-12-2, 1.4571            |
| 7    |                           | Bonnet             | GP240GH+N, 1.0619+N                          |                              |                     | GX5CrNiMo19-11-2, 1.4408             |
| 8    |                           | Guide bushing      | X20Cr13+QT, 1.4021+QT (hardened)             |                              |                     | X6CrNiMoTi17-12-2, 1.4571 (hardened) |
| 9    | x                         | Gasket             | pure graphite (CrNi laminated with graphite) |                              |                     |                                      |
| 10   |                           | Stud               | 25CrMo4, 1.7218                              |                              |                     | A4 - 70                              |
| 11   |                           | Hexagon nuts       | C35E, 1.1181                                 |                              |                     | A4                                   |
| 12   | Set:<br>refer to Pos. 100 | V-ring unit        | PTFE / Graphite                              |                              |                     |                                      |
| 14   |                           | Washer             | X5CrNi18-10, 1.4301                          |                              |                     |                                      |
| 15   |                           | Compression spring | X10CrNi18-8, 1.4310                          |                              |                     |                                      |
| 16   |                           | Bush               | PTFE (strengthened)                          |                              |                     |                                      |
| 17   |                           | Gasket             | X6CrNiMoTi17-12-2, 1.4571                    |                              |                     |                                      |
| 18   |                           | Scraper            | PTFE (strengthened)                          |                              |                     |                                      |
| 19   |                           | Coupling           | X8CrNiS18-9, 1.4305                          |                              |                     |                                      |
| 20   |                           | Coupling           | X8CrNiS18-9, 1.4305 / EPDM                   |                              |                     |                                      |
| 30   |                           | x                  | Central nut                                  | X8CrNiS18-9, 1.4305          |                     |                                      |

**Stem sealing Fig. 448**

|     |   |                  |  |
|-----|---|------------------|--|
| 100 | x | V-ring unit set  | Set aus: Pos. 12, 14, 15, 16, 17, 18, 19 |
| 120 | x | EPDM-sealing set | Set aus: Pos. 17, 20                     |
|     |   | L Spare parts    |  |

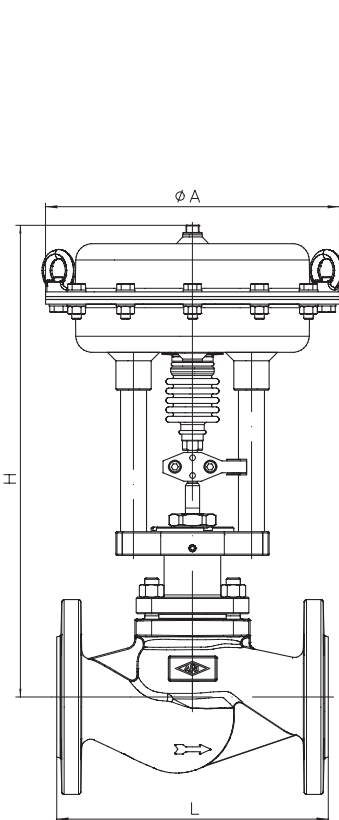


| Pos. | Sp.p.                   | Description          | Fig. 22./23.449                               | Fig. 34./35.449     | Fig. 55.449              |                                      |
|------|-------------------------|----------------------|---|---------------------|--------------------------|--------------------------------------|
| 1    |                         | Body                 | EN-GJS-400-18U-LT, EN-JS1049                  | GP240GH+N, 1.0619+N | GX5CrNiMo19-11-2, 1.4408 |                                      |
| 2    | x                       | Seat ring            | X20Cr13+QT, 1.4021+QT                         |                     |                          |                                      |
| 3    | x                       | Plug                 | X20Cr13+QT, 1.4021+QT                         |                     |                          |                                      |
| 4    | x                       | Thread pin           | A4  |                     |                          |                                      |
| 9    | x                       | Gasket               | Pure graphite (CrNi laminated with graphite)  |                     |                          |                                      |
| 10   |                         | Stud                 | 25CrMo4, 1.7218                               |                     |                          | A4 - 70                              |
| 11   |                         | Hexagon nuts         | C35E, 1.1181                                  |                     |                          | A4                                   |
| 30   | x                       | Central nut          | X8CrNiS18-9, 1.4305                           |                     |                          |                                      |
| 2001 |                         | Bellows housing      | EN-GJS-400-18U-LT, EN-JS1049                  | GP240GH+N, 1.0619+N | GX5CrNiMo19-11-2, 1.4408 |                                      |
| 2002 |                         | Bonnet               | GP240GH+N, 1.0619+N                           |                     |                          | GX5CrNiMo19-11-2, 1.4408             |
| 2003 | x                       | Stem- / Bellows unit | X20Cr13+QT, 1.4021+QT / X6CrNiTi18-10, 1.4541 |                     |                          | X6CrNiMoTi17-12-2, 1.4571            |
| 2004 |                         | Guide bushing        | X20Cr13+QT, 1.4021+QT (hardened)              |                     |                          | X6CrNiMoTi17-12-2, 1.4571 (hardened) |
| 2005 |                         | Guide bushing        | X20Cr13+QT, 1.4021+QT (hardened)              |                     |                          | X6CrNiMoTi17-12-2, 1.4571 (hardened) |
| 2006 | x                       | Gasket               | Pure graphite (CrNi laminated with graphite)  |                     |                          |                                      |
| 2007 |                         | Stud                 | 25CrMo4, 1.7218                               |                     |                          | A4 - 70                              |
| 2008 |                         | Hexagon nuts         | C35E, 1.1181                                  |                     |                          | A4                                   |
| 2010 | Set: refer to Pos. 2110 | Packing ring         | Pure graphite                                 |                     |                          |                                      |
| 2012 |                         | Washer               | X5CrNi18-10, 1.4301                           |                     |                          |                                      |
| 2017 |                         | Coupling             | X8CrNiS18-9, 1.4305                           |                     |                          |                                      |
| 2016 | Set: refer to Pos. 2110 | Bush                 | PTFE (strengthened (only for DN15-50))        |                     |                          |                                      |
| 2018 |                         | Compression spring   | X10CrNi18-8, 1.4310                           |                     |                          |                                      |
| 2021 |                         | V-ring unit          | PTFE / Graphite                               |                     |                          |                                      |
| 2024 |                         | Coupling             | X8CrNiS18-9, 1.4305                           |                     |                          |                                      |
| 2025 |                         | Scraper              | PTFE  |                     |                          |                                      |
| 2026 |                         | Gasket               | X6CrNiMoTi17-12-2, 1.4571                     |                     |                          |                                      |

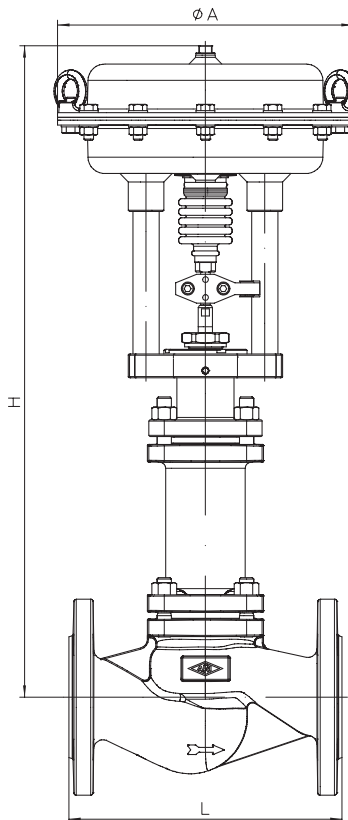
**Stem sealings Fig. 449**

|      |   |                   |   |
|------|---|-------------------|---|
| 2110 | x | Packing rings set | Set of: Pos. 2010, 2012, 2017                         |
| 2100 | x | V-ring unit set   | Set of: Pos. 2012, 2016, 2018, 2021, 2024, 2025, 2026 |
|      |   | L Spare parts     |   |

\*last updated 10/16



**Fig. 448**  
Packing ring



**Fig. 449**  
Bellows seal

**Features**

- Compact design
- Bonnet with rotatable traverse
- Optional: Perforated plug for noise reduction
- Replaceable seat
- Reduceable Kvs-values
- Shaft plug guide

**Applications**
**Fig.448**

- Cooling water
- Cooling brine
- Warm water
- Steam
- Gas

**Fig.449**

- Refrigerant
- Cooling water
- Warm water
- Hot water
- Thermal oil
- Steam

| Actuator data            |                    | DP30 | DP32 | DP33 | DP34 |
|--------------------------|--------------------|------|------|------|------|
| Ø A                      | (mm)               | 168  | 250  | 300  | 405  |
| Effective diaphragm area | (cm <sup>2</sup> ) | 80   | 250  | 400  | 800  |

Technical data for actuator refer to data sheet ARI-DP.

**Dimensions and weights**

| DN       |              | 15           | 20  | 25  | 32  | 40  | 50  | 65  | 80  | 100 |     |
|----------|--------------|--------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| L        | (mm)         | 130          | 150 | 160 | 180 | 200 | 230 | 290 | 310 | 350 |     |
| Fig. 448 | DP30         | H (mm)       | 354 | 354 | 369 | 369 | 384 | 391 |     |     |     |
|          |              | PN16-40 (kg) | 8   | 9   | 10  | 12  | 14  | 17  |     |     |     |
|          | DP32         | H (mm)       |     |     |     | 378 | 393 | 400 | 407 | 429 | 445 |
|          |              | PN16-40 (kg) |     |     |     | 17  | 19  | 22  | 28  | 35  | 47  |
|          | DP33         | H (mm)       |     |     |     |     |     |     | 458 | 480 | 496 |
|          |              | PN16-40 (kg) |     |     |     |     |     |     | 34  | 41  | 53  |
| DP34     | H (mm)       |              |     |     |     |     |     | 527 | 549 | 565 |     |
|          | PN16-40 (kg) |              |     |     |     |     |     | 64  | 71  | 83  |     |
| Fig. 449 | DP30         | H (mm)       | 539 | 539 | 547 | 547 | 538 | 540 |     |     |     |
|          |              | PN16-40 (kg) | 14  | 15  | 18  | 20  | 27  | 30  |     |     |     |
|          | DP32         | H (mm)       |     |     |     | 556 | 547 | 549 | 633 | 646 | 662 |
|          |              | PN16-40 (kg) |     |     |     | 25  | 32  | 35  | 41  | 52  | 68  |
|          | DP33         | H (mm)       |     |     |     |     |     |     | 684 | 697 | 713 |
|          |              | PN16-40 (kg) |     |     |     |     |     |     | 47  | 58  | 74  |
| DP34     | H (mm)       |              |     |     |     |     |     | 753 | 766 | 782 |     |
|          | PN16-40 (kg) |              |     |     |     |     |     | 77  | 88  | 104 |     |

\*last updated 10/16



**Spring closes on air failure**  
(stem extended by spring)

**max. permissible closing pressures** on flow-to-open P2 = 0.  
Observe pressure-temperature-limits, refer to page 2.

| DN  |                                   | 15     |                   |            | 20                |                   |            |                   | 25  |                   |            |                   |     |     |
|---|-----------------------------------|--------|-------------------|------------|-------------------|-------------------|------------|-------------------|-----|-------------------|------------|-------------------|-----|-----|
| Parabolic plug                                      | Kvs-value                         | (m³/h) | 0,25 / 0,16 / 0,1 | 0,63 / 0,4 | 4 / 2,5 / 1,6 / 1 | 0,25 / 0,16 / 0,1 | 0,63 / 0,4 | 4 / 2,5 / 1,6 / 1 | 6,3 | 0,25 / 0,16 / 0,1 | 0,63 / 0,4 | 4 / 2,5 / 1,6 / 1 | 6,3 | 10  |
|   | max. diff. pressure <sup>1)</sup> | (bar)  | 40                |            |                   | 40                |            |                   |     | 40                |            |                   |     |     |
| Perforated plug                                     | Kvs-value                         | (m³/h) | --                | --         | 2,5 / 1,6 / 1     | --                | --         | 2,5 / 1,6 / 1     | 4   | --                | --         | 2,5 / 1,6 / 1     | 4   | 6,3 |
|   | max. diff. pressure <sup>1)</sup> | (bar)  | --                | --         | 40                | --                | --         | 40                | --  | --                | 40         | --                | --  | 40  |
| Seat-Ø  |                                   | (mm)   | 3                 | 5          | 12                | 3                 | 5          | 12                | 16  | 3                 | 5          | 12                | 16  | 22  |
| Travel  |                                   | (mm)   | 10                |            |                   | 10                |            |                   |     | 10                |            |                   |     |     |
| DP30<br>80 cm²<br>(Air supply pressure max.: 6 bar) | Air supply pressure min. (bar)    | 4      | I.                | (bar)      | 40                | 40                | 40         | 40                | 40  | 40                | 40         | 40                | 40  | 40  |
|   |                                   |        | III.              | (bar)      | 32                | 32                | 31         | 32                | 32  | 31                | 30         | 32                | 32  | 31  |

| DN   |                                   | 32     |                   |       |     | 40 |     |     |    | 50 |     |    |    |    |
|--|-----------------------------------|--------|-------------------|-------|-----|----|-----|-----|----|----|-----|----|----|----|
| Parabolic plug                                       | Kvs-value                         | (m³/h) | 4 / 2,5 / 1,6 / 1 | 6,3   | 10  | 16 | 6,3 | 10  | 16 | 25 | 10  | 16 | 25 | 40 |
|  | max. diff. pressure <sup>1)</sup> | (bar)  | 40                |       |     |    | 40  |     |    |    | 30  | 30 |    |    |
| Perforated plug                                      | Kvs-Wert                          | (m³/h) | 2,5 / 1,6 / 1     | 4     | 6,3 | 10 | 4   | 6,3 | 10 | 16 | 6,3 | 10 | 16 | 25 |
|  | max. diff. pressure <sup>1)</sup> | (bar)  | 40                |       |     |    | 40  |     |    |    | 40  |    |    |    |
| Seat-Ø   |                                   | (mm)   | 12                | 16    | 22  | 28 | 16  | 22  | 28 | 35 | 22  | 28 | 35 | 43 |
| Travel   |                                   | (mm)   | 10                |       |     | 15 | 10  |     | 15 |    | 10  | 15 |    |    |
| DP30<br>80 cm²<br>(Air supply pressure max.: 6 bar)  | Air supply pressure min. (bar)    | 4      | I.                | (bar) | 40  | 40 | 40  |     | 40 | 40 |     | 40 |    |    |
|  |                                   |        | III.              | (bar) | 31  | 30 | 30  |     | 30 | 30 |     | 30 |    |    |
| DP32<br>250 cm²<br>(Air supply pressure max.: 6 bar) | Air supply pressure min. (bar)    | 4      | I.                | (bar) |     |    |     | 40  |    |    | 40  | 40 |    | 28 |
|  |                                   |        | III.              | (bar) |     |    |     | 40  |    |    | 40  | 39 |    | 40 |

| DN   |                                   | 65     |      |       |    | 80 |    |    |    | 100 |    |    |     |     |    |   |
|--|-----------------------------------|--------|------|-------|----|----|----|----|----|-----|----|----|-----|-----|----|---|
| Parabolic plug                                       | Kvs-value                         | (m³/h) | 16   | 25    | 40 | 63 | 25 | 40 | 63 | 100 | 40 | 63 | 100 | 160 |    |   |
|  | max. diff. pressure <sup>1)</sup> | (bar)  | 40   | 30    | 30 | 10 | 30 | 30 | 10 | 8   | 30 | 10 | 8   | 3   |    |   |
| Perforated plug                                      | Kvs-value                         | (m³/h) | 10   | 16    | 25 | 40 | 16 | 25 | 40 | 63  | 25 | 40 | 63  | 100 |    |   |
|  | max. diff. pressure <sup>1)</sup> | (bar)  | 40   |       |    |    | 40 |    |    |     | 40 |    |     |     |    |   |
| Seat-Ø   |                                   | (mm)   | 28   | 35    | 43 | 56 | 35 | 43 | 56 | 70  | 43 | 56 | 70  | 95  |    |   |
| Travel   |                                   | (mm)   | 15   |       |    | 20 | 15 |    | 20 | 25  | 15 | 20 | 25  | 30  |    |   |
| DP32<br>250 cm²<br>(Air supply pressure max.: 6 bar) | Air supply pressure min. (bar)    | 4      | I.   | (bar) | 40 | 40 | 28 |    | 40 | 28  |    | 28 |     |     |    |   |
|  |                                   |        | III. | (bar) | 40 | 39 | 26 |    | 39 | 26  |    | 26 |     |     |    |   |
| DP33<br>400 cm²<br>(Air supply pressure max.: 6 bar) | Air supply pressure min. (bar)    | 4      | I.   | (bar) |    |    | 40 | 25 |    | 40  | 25 | 16 | 40  | 25  | 16 | 8 |
|  |                                   |        | III. | (bar) |    |    | 40 | 24 |    | 40  | 24 | 15 | 40  | 24  | 15 | 8 |
| DP34<br>800 cm²<br>(Air supply pressure max.: 4 bar) | Air supply pressure min. (bar)    | 4      | I.   | (bar) |    |    | 40 |    |    | 40  | 32 |    | 40  | 32  | 17 |   |
|  |                                   |        | III. | (bar) |    |    | 40 |    |    | 40  | 31 |    | 40  | 31  | 16 |   |

I. Fig. 448: PTFE-V-ring unit / EPDM-sealing

III. Fig. 449: Bellows seal

<sup>1)</sup>max. differential pressure drop

**Closing pressure: pneumatic actuator ARI-DP**
**Fig. 448 / 449**

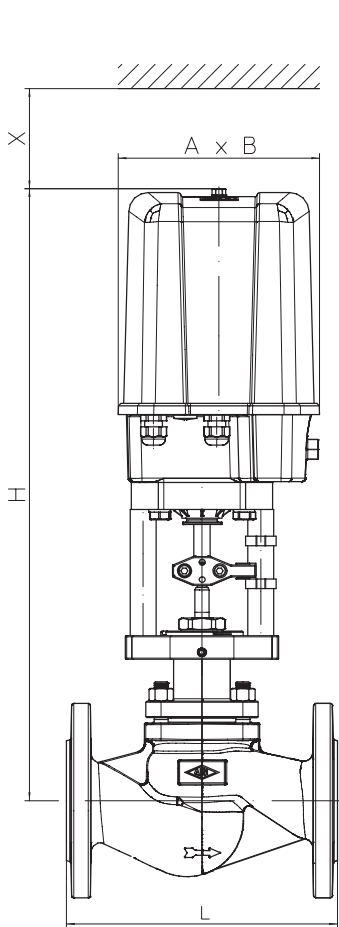
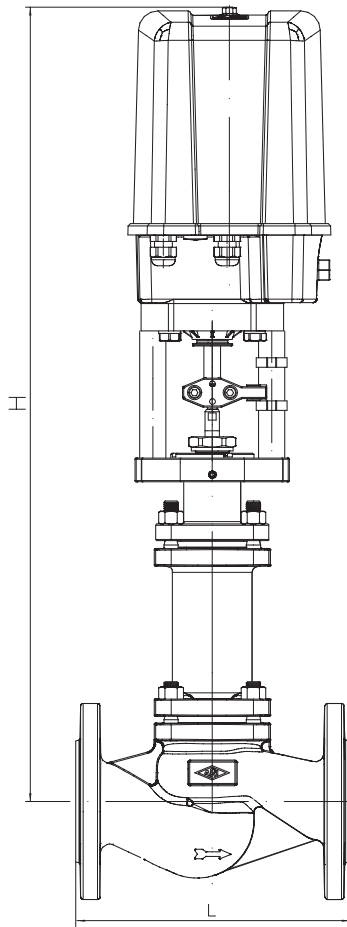
**Spring opens on air failure**  
(stem retracting by spring)

**max. permissible closing pressures** on flow-to-open P2 = 0.  
Observe pressure-temperature-limits, refer to page 2.

| DN   |                                   |        | 15                |            |                   |                   | 20         |                   |     |                   | 25         |                   |     |     |    |    |
|--|-----------------------------------|--------|-------------------|------------|-------------------|-------------------|------------|-------------------|-----|-------------------|------------|-------------------|-----|-----|----|----|
| Parabolic plug                                       | Kvs-value                         | (m³/h) | 0,25 / 0,16 / 0,1 | 0,63 / 0,4 | 4 / 2,5 / 1,6 / 1 | 0,25 / 0,16 / 0,1 | 0,63 / 0,4 | 4 / 2,5 / 1,6 / 1 | 6,3 | 0,25 / 0,16 / 0,1 | 0,63 / 0,4 | 4 / 2,5 / 1,6 / 1 | 6,3 | 10  |    |    |
|  | max. diff. pressure <sup>1)</sup> | (bar)  | 40                |            |                   |                   | 40         |                   |     |                   | 40         |                   |     |     |    |    |
| Perforated plug                                      | Kvs-value                         | (m³/h) | --                | --         | 2,5 / 1,6 / 1     | --                | --         | 2,5 / 1,6 / 1     | 4   | --                | --         | 2,5 / 1,6 / 1     | 4   | 6,3 |    |    |
|  | max. diff. pressure <sup>1)</sup> | (bar)  | --                | --         | 40                | --                | --         | 40                | --  | --                | 40         | --                | --  | 40  |    |    |
| Seat-Ø   |                                   | (mm)   | 3                 | 5          | 12                | 3                 | 5          | 12                | 16  | 3                 | 5          | 12                | 16  | 22  |    |    |
| Travel   |                                   | (mm)   | 10                |            |                   |                   | 10         |                   |     |                   | 10         |                   |     |     |    |    |
| DP30<br>80 cm²<br>(Air supply pressure max.: 6 bar)  | Air supply pressure min. (bar)    | 2      | I. (bar)          | 40         | 40                | 33                | 40         | 40                | 33  | 18                | 40         | 40                | 33  | 18  | 8  |    |
|  |                                   |        | III. (bar)        | 5          | 4                 | 3                 | 5          | 4                 | 3   | 3                 | 5          | 4                 | 3   | 3   | 2  |    |
|  |                                   | 3      | I. (bar)          |            |                   | 40                |            |                   | 40  | 40                |            |                   |     | 40  | 40 | 28 |
|  |                                   |        | III. (bar)        | 19         | 19                | 18                | 19         | 19                | 18  | 17                | 19         | 19                | 18  | 17  | 16 | 16 |
|  |                                   | 4      | I. (bar)          |            |                   |                   |            |                   |     |                   |            |                   |     |     |    | 40 |
|  |                                   |        | III. (bar)        | 33         | 33                | 32                | 33         | 33                | 32  | 31                | 33         | 33                | 32  | 31  | 31 | 31 |
| DN   |                                   |        | 32                |            |                   |                   | 40         |                   |     |                   | 50         |                   |     |     |    |    |
| Parabolic plug                                       | Kvs-value                         | (m³/h) | 4 / 2,5 / 1,6 / 1 | 6,3        | 10                | 16                | 6,3        | 10                | 16  | 25                | 10         | 16                | 25  | 40  |    |    |
|  | max. diff. pressure <sup>1)</sup> | (bar)  | 40                |            |                   |                   | 40         |                   |     |                   | 30         |                   |     |     |    |    |
| Perforated plug                                      | Kvs-value                         | (m³/h) | 2,5 / 1,6 / 1     | 4          | 6,3               | 10                | 4          | 6,3               | 10  | 16                | 6,3        | 10                | 16  | 25  |    |    |
|  | max. diff. pressure <sup>1)</sup> | (bar)  | 40                |            |                   |                   | 40         |                   |     |                   | 40         |                   |     |     |    |    |
| Seat-Ø   |                                   | (mm)   | 12                | 16         | 22                | 28                | 16         | 22                | 28  | 35                | 22         | 28                | 35  | 43  |    |    |
| Travel   |                                   | (mm)   | 10                |            |                   |                   | 15         |                   |     |                   | 10         |                   |     |     |    |    |
| DP30<br>80 cm²<br>(Air supply pressure max.: 6 bar)  | Air supply pressure min. (bar)    | 2      | I. (bar)          | 33         | 18                | 8                 |            | 18                | 8   |                   |            | 8                 |     |     |    |    |
|  |                                   |        | III. (bar)        | 3          | 3                 | 2                 |            | 3                 | 2   |                   |            | 2                 |     |     |    |    |
|  |                                   | 3      | I. (bar)          | 40         | 40                | 28                |            | 40                | 28  |                   |            | 28                |     |     |    |    |
|  |                                   |        | III. (bar)        | 18         | 17                | 16                |            | 17                | 16  |                   |            | 16                |     |     |    |    |
|  |                                   | 4      | I. (bar)          |            |                   | 40                |            |                   | 40  |                   |            | 40                |     |     |    |    |
|  |                                   |        | III. (bar)        | 32         | 31                | 31                |            | 31                | 31  |                   |            | 31                |     |     |    |    |
| DP32<br>250 cm²<br>(Air supply pressure max.: 4 bar) | Air supply pressure min. (bar)    | 2      | I. (bar)          | 40         | 40                | 38                | 23         | 40                | 38  | 23                | 14         | 38                | 23  | 14  | 9  |    |
|  |                                   |        | III. (bar)        | 25         | 25                | 24                | 19         | 25                | 24  | 19                | 11         | 24                | 19  | 11  | 7  |    |
|  |                                   | 3      | I. (bar)          |            |                   | 40                | 40         |                   | 40  | 40                | 36         | 40                | 40  | 36  | 23 |    |
|  |                                   |        | III. (bar)        |            |                   | 40                | 40         |                   | 40  | 40                | 33         | 40                | 40  | 33  | 21 |    |
|  |                                   | 4      | I. (bar)          |            |                   |                   |            |                   |     |                   | 40         |                   |     | 40  | 38 |    |
|  |                                   |        | III. (bar)        |            |                   |                   |            |                   |     |                   | 40         |                   |     | 40  | 36 |    |
| DN   |                                   |        | 65                |            |                   |                   | 80         |                   |     |                   | 100        |                   |     |     |    |    |
| Parabolic plug                                       | Kvs-value                         | (m³/h) | 16                | 25         | 40                | 63                | 25         | 40                | 63  | 100               | 40         | 63                | 100 | 160 |    |    |
|  | max. diff. pressure <sup>1)</sup> | (bar)  | 40                | 30         | 30                | 10                | 30         | 30                | 10  | 8                 | 30         | 10                | 8   | 3   |    |    |
| Perforated plug                                      | Kvs-value                         | (m³/h) | 10                | 16         | 25                | 40                | 16         | 25                | 40  | 63                | 25         | 40                | 63  | 100 |    |    |
|  | max. diff. pressure <sup>1)</sup> | (bar)  | 40                |            |                   |                   | 40         |                   |     |                   | 40         |                   |     |     |    |    |
| Seat-Ø   |                                   | (mm)   | 28                | 35         | 43                | 56                | 35         | 43                | 56  | 70                | 43         | 56                | 70  | 95  |    |    |
| Travel   |                                   | (mm)   | 15                |            |                   |                   | 20         |                   |     |                   | 15         |                   |     |     |    |    |
| DP32<br>250 cm²<br>(Air supply pressure max.: 6 bar) | Air supply pressure min. (bar)    | 2      | I. (bar)          | 22         | 14                | 8                 |            | 14                | 8   |                   |            | 8                 |     |     |    |    |
|  |                                   |        | III. (bar)        | 18         | 11                | 7                 |            | 11                | 7   |                   |            | 7                 |     |     |    |    |
|  |                                   | 3      | I. (bar)          | 40         | 36                | 23                |            | 36                | 23  |                   |            | 23                |     |     |    |    |
|  |                                   |        | III. (bar)        | 40         | 33                | 21                |            | 33                | 21  |                   |            | 21                |     |     |    |    |
|  |                                   | 4      | I. (bar)          |            | 40                | 38                |            | 40                | 38  |                   |            | 38                |     |     |    |    |
|  |                                   |        | III. (bar)        |            | 40                | 36                |            | 40                | 36  |                   |            | 36                |     |     |    |    |
| 5  | I. (bar)                          |        |                   | 40         |                   |                   | 40         |                   |     | 40                |            |                   |     |     |    |    |
|  | III. (bar)                        |        |                   | 40         |                   |                   | 40         |                   |     | 40                |            |                   |     |     |    |    |
| DP33<br>400 cm²<br>(Air supply pressure max.: 5 bar) | Air supply pressure min. (bar)    | 2      | I. (bar)          | 40         | 30                | 20                | 11         | 30                | 20  | 11                | 7          | 20                | 11  | 7   | 3  |    |
|  |                                   |        | III. (bar)        | 40         | 28                | 18                | 10         | 28                | 18  | 10                | 6          | 18                | 10  | 6   | 3  |    |
|  |                                   | 3      | I. (bar)          |            | 40                | 40                | 26         | 40                | 40  | 26                | 17         | 40                | 26  | 17  | 9  |    |
|  |                                   |        | III. (bar)        |            | 40                | 40                | 25         | 40                | 40  | 25                | 16         | 40                | 25  | 16  | 8  |    |
|  |                                   | 4      | I. (bar)          |            |                   |                   | 40         |                   |     | 40                | 26         |                   | 40  | 26  | 14 |    |
|  |                                   |        | III. (bar)        |            |                   |                   | 40         |                   |     | 40                | 26         |                   | 40  | 26  | 14 |    |
| 5  | I. (bar)                          |        |                   |            |                   |                   |            |                   | 36  |                   |            | 36                | 19  |     |    |    |
|  | III. (bar)                        |        |                   |            |                   |                   |            |                   | 36  |                   |            | 36                | 19  |     |    |    |

**I. Fig. 448: PTFE-V-ring unit / EPDM-sealing**
**III. Fig. 449: Bellows seal**
<sup>1)</sup>max. differential pressure drop

\*last updated 10/16


**Fig. 448**

**Fig. 449**
**Features**

- Compact design
- Bonnet with rotatable traverse
- Optional: Perforated plug for noise reduction
- Replaceable seat
- Reduceable Kvs-values
- Shaft plug guide

**Applications**
**Fig.448**

- Cooling water
- Cooling brine
- Warm water
- Steam
- Gas

**Fig.449**

- Refrigerant
- Cooling water
- Warm water
- Hot water
- Thermal oil
- Steam

| Actuator data |      | 2,2 - 5 kN | 15 kN |
|---------------|------|------------|-------|
| A             | (mm) | 171        | 210   |
| B             | (mm) | 156        | 184   |
| X             | (mm) | 150        | 200   |

**Supply voltage:** 90-264V AC 47-63Hz, 127-370V DC  
**Other voltages:** 24V AC/DC  
**Technical data for actuator refer to data sheet PREMIO-Plus 2G**

**Dimensions and weights**

| DN       |         | 15      | 20   | 25  | 32  | 40  | 50  | 65  | 80  | 100 |     |     |
|----------|---------|---------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| L        | (mm)    | 130     | 150  | 160 | 180 | 200 | 230 | 290 | 310 | 350 |     |     |
| Fig. 448 | 2,2 kN  | H       | (mm) | 496 | 496 | 511 | 511 | 526 | 533 |     |     |     |
|          |         | PN16-40 | (kg) | 10  | 11  | 12  | 14  | 16  | 19  |     |     |     |
|          | 5 kN    | H       | (mm) | 496 | 496 | 511 | 511 | 526 | 533 | 550 | 572 | 588 |
|          |         | PN16-40 | (kg) | 10  | 11  | 12  | 14  | 16  | 19  | 25  | 32  | 44  |
| 15 kN    | H       | (mm)    |      |     |     |     |     |     | 667 | 689 | 705 |     |
|          | PN16-40 | (kg)    |      |     |     |     |     |     | 29  | 36  | 48  |     |
| Fig. 449 | 2,2 kN  | H       | (mm) | 681 | 681 | 689 | 689 | 680 | 682 |     |     |     |
|          |         | PN16-40 | (kg) | 16  | 17  | 20  | 22  | 29  | 32  |     |     |     |
|          | 5 kN    | H       | (mm) | 681 | 681 | 689 | 689 | 680 | 682 | 776 | 789 | 805 |
|          |         | PN16-40 | (kg) | 16  | 17  | 20  | 22  | 29  | 32  | 38  | 49  | 65  |
| 15 kN    | H       | (mm)    |      |     |     |     |     |     | 893 | 906 | 922 |     |
|          | PN16-40 | (kg)    |      |     |     |     |     |     | 42  | 53  | 69  |     |

\*last updated 10/16

max. permissible closing pressures on flow-to-open P2 = 0.  
Observe pressure-temperature-limits, refer to page 2.

| DN              |                                   |            | 15                |            |                   |                   | 20         |                   |     |                   | 25         |                   |     |     |
|-----------------|-----------------------------------|------------|-------------------|------------|-------------------|-------------------|------------|-------------------|-----|-------------------|------------|-------------------|-----|-----|
| Parabolic plug  | Kvs-value                         | (m³/h)     | 0,25 / 0,16 / 0,1 | 0,63 / 0,4 | 4 / 2,5 / 1,6 / 1 | 0,25 / 0,16 / 0,1 | 0,63 / 0,4 | 4 / 2,5 / 1,6 / 1 | 6,3 | 0,25 / 0,16 / 0,1 | 0,63 / 0,4 | 4 / 2,5 / 1,6 / 1 | 6,3 | 10  |
|                 | max. diff. pressure <sup>1)</sup> | (bar)      | 40                |            |                   |                   | 40         |                   |     |                   | 40         |                   |     |     |
| Perforated plug | Kvs-value                         | (m³/h)     | --                | --         | 2,5 / 1,6 / 1     | --                | --         | 2,5 / 1,6 / 1     | 4   | --                | --         | 2,5 / 1,6 / 1     | 4   | 6,3 |
|                 | max. diff. pressure <sup>1)</sup> | (bar)      | --                | --         | 40                | --                | --         | 40                | --  | --                | 40         | --                | --  | 40  |
| Seat-Ø          |                                   | (mm)       | 3                 | 5          | 12                | 3                 | 5          | 12                | 16  | 3                 | 5          | 12                | 16  | 22  |
| Travel          |                                   | (mm)       | 10                |            |                   |                   | 10         |                   |     |                   | 10         |                   |     |     |
| 2,2 kN          | Closing pressure                  | I. (bar)   | 40                | 40         | 40                | 40                | 40         | 40                | 40  | 40                | 40         | 40                | 40  | 40  |
|                 |                                   | III. (bar) | 33                | 32         | 31                | 33                | 32         | 31                | 31  | 33                | 32         | 31                | 31  | 30  |
|                 | Operating time (50 Hz)            | (s)        | 40                |            |                   |                   | 40         |                   |     |                   | 40         |                   |     |     |
|                 | Operating speed                   | (mm/s)     | 0,25              |            |                   |                   | 0,25       |                   |     |                   | 0,25       |                   |     |     |

| DN              |                                   |            | 32                |     |     |      | 40   |     |    |      | 50   |    |      |    |
|-----------------|-----------------------------------|------------|-------------------|-----|-----|------|------|-----|----|------|------|----|------|----|
| Parabolic plug  | Kvs-value                         | (m³/h)     | 4 / 2,5 / 1,6 / 1 | 6,3 | 10  | 16   | 6,3  | 10  | 16 | 25   | 10   | 16 | 25   | 40 |
|                 | max. diff. pressure <sup>1)</sup> | (bar)      | 40                |     |     |      | 40   |     |    |      | 30   | 30 |      |    |
| Perforated plug | Kvs-value                         | (m³/h)     | 2,5 / 1,6 / 1     | 4   | 6,3 | 10   | 4    | 6,3 | 10 | 16   | 6,3  | 10 | 16   | 25 |
|                 | max. diff. pressure <sup>1)</sup> | (bar)      | 40                |     |     |      | 40   |     |    |      | 40   |    |      |    |
| Seat-Ø          |                                   | (mm)       | 12                | 16  | 22  | 28   | 16   | 22  | 28 | 35   | 22   | 28 | 35   | 43 |
| Travel          |                                   | (mm)       | 10                |     |     | 15   | 10   |     |    | 15   | 10   | 15 |      |    |
| 2,2 kN          | Closing pressure                  | I. (bar)   | 40                | 40  | 40  | 28   | 40   | 40  | 28 | 17   | 40   | 28 | 17   | 11 |
|                 |                                   | III. (bar) | 31                | 31  | 30  | 25   | 31   | 30  | 25 | 14   | 30   | 25 | 14   | 9  |
|                 | Operating time (50 Hz)            | (s)        | 40                |     |     | 60   | 40   |     |    | 60   | 40   | 60 |      |    |
|                 | Operating speed                   | (mm/s)     | 0,25              |     |     |      | 0,25 |     |    |      | 0,25 |    |      |    |
| 5 kN            | Closing pressure                  | I. (bar)   |                   |     |     | 40   |      |     |    | 40   | 40   |    | 40   | 40 |
|                 |                                   | III. (bar) |                   |     |     | 40   |      |     |    | 40   | 40   |    | 40   | 28 |
|                 | Operating time (50 Hz)            | (s)        |                   |     |     | 60   |      |     |    | 60   |      |    | 60   |    |
|                 | Operating speed                   | (mm/s)     |                   |     |     | 0,25 |      |     |    | 0,25 |      |    | 0,25 |    |

| DN              |                                   |            | 65   |    |      |    | 80   |      |    |     | 100  |    |     |     |    |
|-----------------|-----------------------------------|------------|------|----|------|----|------|------|----|-----|------|----|-----|-----|----|
| Parabolic plug  | Kvs-value                         | (m³/h)     | 16   | 25 | 40   | 63 | 25   | 40   | 63 | 100 | 40   | 63 | 100 | 160 |    |
|                 | max. diff. pressure <sup>1)</sup> | (bar)      | 40   | 30 | 30   | 10 | 30   | 30   | 10 | 8   | 30   | 10 | 8   | 3   |    |
| Perforated plug | Kvs-value                         | (m³/h)     | 10   | 16 | 25   | 40 | 16   | 25   | 40 | 63  | 25   | 40 | 63  | 100 |    |
|                 | max. diff. pressure <sup>1)</sup> | (bar)      | 40   |    |      |    | 40   |      |    |     | 40   |    |     |     |    |
| Seat-Ø          |                                   | (mm)       | 28   | 35 | 43   | 56 | 35   | 43   | 56 | 70  | 43   | 56 | 70  | 95  |    |
| Travel          |                                   | (mm)       | 15   |    |      | 20 | 15   |      |    | 20  | 25   | 15 | 20  | 25  | 30 |
| 5 kN            | Closing pressure                  | I. (bar)   | 40   | 40 | 29   | 17 | 40   | 29   | 17 | 10  | 29   | 17 | 10  | 5   |    |
|                 |                                   | III. (bar) | 40   | 40 | 28   | 16 | 40   | 28   | 16 | 10  | 28   | 16 | 10  | 5   |    |
|                 | Operating time (50 Hz)            | (s)        | 39   |    |      | 53 | 39   |      |    | 53  | 66   | 39 | 53  | 66  | 79 |
|                 | Operating speed                   | (mm/s)     | 0,38 |    |      |    | 0,38 |      |    |     | 0,38 |    |     |     |    |
| 15 kN           | Closing pressure                  | I. (bar)   |      |    | 40   | 40 |      | 40   | 40 | 36  | 40   | 40 | 36  | 19  |    |
|                 |                                   | III. (bar) |      |    | 40   | 40 |      | 40   | 40 | 35  | 40   | 40 | 35  | 19  |    |
|                 | Operating time (50 Hz)            | (s)        |      |    | 39   | 53 |      | 39   | 53 | 66  | 39   | 53 | 66  | 79  |    |
|                 | Operating speed                   | (mm/s)     |      |    | 0,38 |    |      | 0,38 |    |     | 0,38 |    |     |     |    |

I. Fig. 448: PTFE-V-ring unit / EPDM-sealing

III. Fig. 449: Bellows seal

<sup>1)</sup> max. differential pressure drop