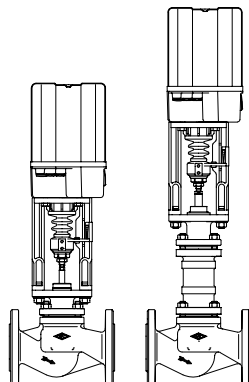


## Straight through control valve

DN 15 - 100 (STEVI® 440 up to DN 150)

### STEVI® 440 / 441 Electric actuator ARI-PREMIO

- Enclosure IP 65
- 2 torque switches
- 1 travel switch
- Handwheel
- Additional devices available, e.g. potentiometer



Page 2

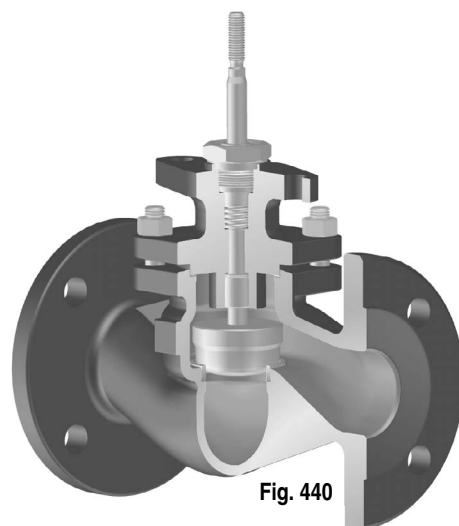
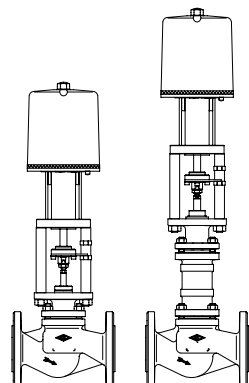


Fig. 440

### STEVI® 440 / 441 Electric actuator FR with safety reset

- Type approval acc. to DIN 32730 for Fig. 440 with FR 2.1
- CE-marking from DN15
- Optional direction for safety reset, OPEN or CLOSE, as required
- Enclosure IP 54
- 1 travel switch for OPEN and CLOSE
- Additional devices available, e.g. potentiometer



Page 4

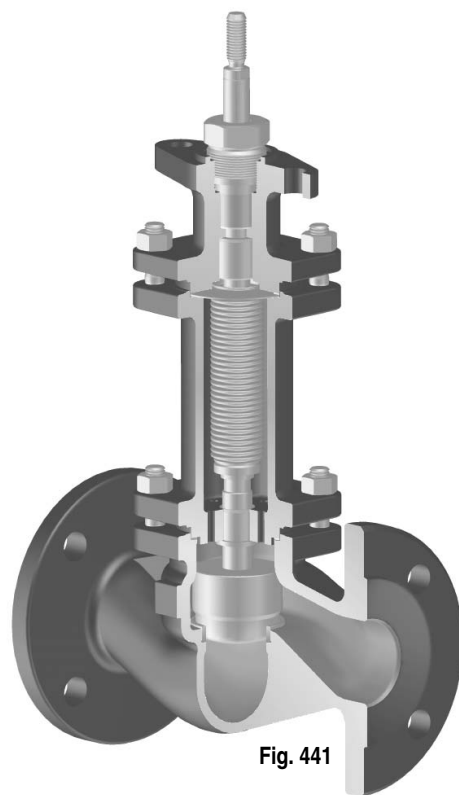
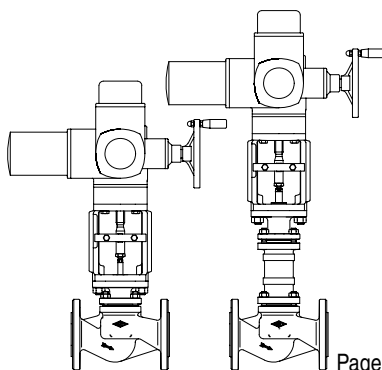


Fig. 441

### STEVI® 440 / 441 Electric actuator AUMA SAR

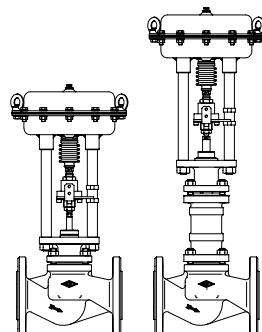
- Electric multiturn actuator capable of high closing pressures
- Enclosure IP 67
- 2 torque switches
- 2 limit switches
- Handwheel
- Overheating protection for motor as standard
- Additional devices available, e.g. potentiometer
- Explosion proof version available



Page 6

### STEVI® 440 / 441 Pneumatic actuator DP

- Reversible pneumatic actuator
- Actuator with rolling diaphragm
- Air supply pressure max. 6 bar
- Stem protection by bellow
- Maintenance-free O-ring sealing
- Assembly of additional devices acc. to DIN IEC 60534-6

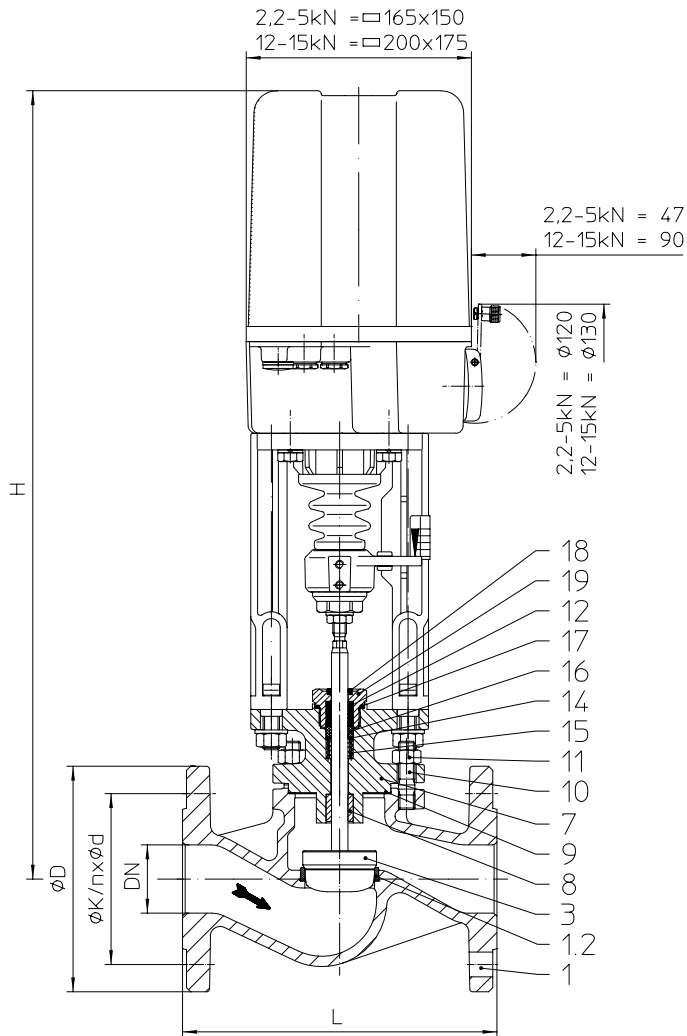


Page 8

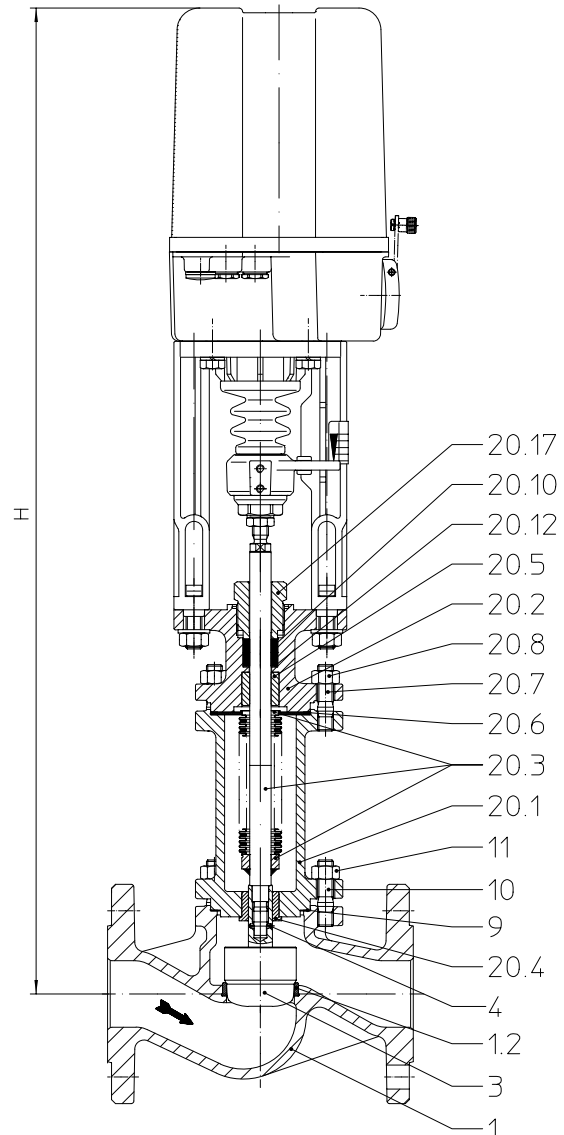
### Features:

- Compact design
- Precision guided stem
- Burnished stem
- Tapered seat joint
- Rangeability 50:1
- Spring-loaded PTFE-V-ring packing unit
- Two-ply bellows seal
- Travel indicator

(Material and Figure-No.  
refer to technical data  
or part list.)



**Fig. 440**



**Fig. 441**

**Heights and weights**

| DN     |        |               | 15        | 20        | 25        | 32        | 40        | 50        | 65        | 80        | 100   | 125   | 150    |
|--------|--------|---------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-------|-------|--------|
| ...440 | H      | (mm)          | 556       | 556       | 564       | 564       | 571       | 577       | 590       | 605       | 624   | 685   | 745    |
|        | 2,2 kN | PN16 /PN25-40 | 9/9,8     | 9,7/10,6  | 10,6/11,9 | 12,2/13,7 | 14,1/16,2 | 17/18,9   | 22,1/26,1 | 27,8/32,3 | 38/45 |       |        |
|        | 5 kN   | (kg)          | 10,1/10,9 | 10,8/11,7 | 11,7/13   | 13,3/14,8 | 15,2/17,3 | 18,1/20   | 23,2/27,2 | 28,9/33,4 | 39/46 | 55/86 | 73/127 |
|        | H      | (mm)          |           |           |           |           | 721       | 727       | 740       | 755       | 774   | 833   | 893    |
|        | 12 kN  | PN16 /PN25-40 |           |           |           |           | 19,2/21,3 | 22,1/24   | 27,2/31,2 | 32,9/37,4 | 43/50 | 59/90 | 77/131 |
| ...441 | H      | (mm)          | 741       | 741       | 749       | 749       | 740       | 742       | 826       | 838       | 854   |       |        |
|        | 2,2 kN | PN16 /PN25-40 | 13,4/15,4 | 13,4/16,9 | 14,4/19,4 | 16,9/22,4 | 19,4/28,4 | 21,9/30,9 | 24,9/37,9 | 35,9/47,9 | 51/64 |       |        |
|        | 5 kN   | (kg)          | 14,5/16,5 | 14,5/18   | 15,5/20,5 | 18/23,5   | 20,5/29,5 | 23/32     | 26/39     | 37/49     | 53/66 |       |        |
|        | H      | (mm)          |           |           |           |           | 890       | 892       | 976       | 988       | 1004  |       |        |
|        | 12 kN  | PN16 /PN25-40 |           |           |           |           | 24,5/33,5 | 27/36     | 30/43     | 41/53     | 57/70 |       |        |

Other dimensions refer to page 13.

**max. permissible closing pressures** on flow-to-open  $P_2 = 0$ 

(Observe pressure-temperature-limits on page 13. Plug design acc. to „Selection STEVI®“, refer to techn. annex.)

| DN   |   | 15   | 20     | 25   | 32   | 40   | 50   | 65   | 80   | 100  | 125  | 150 |     |
|--|---|------|--------|------|------|------|------|------|------|------|------|-----|-----|
| Seat-Ø (mm)  |   | 21   | 21     | 27   | 31   | 41   | 51   | 66   | 81   | 101  | 126  | 151 |     |
| Standard Kvs-values  |   | 4    | 6,3    | 10   | 16   | 25   | 40   | 63   | 100  | 160  | 250  | 400 |     |
| Reduced Kvs-values <sup>3)</sup>   |   | 2,5  | 4; 2,5 | 6,3  | 10   | 16   | 25   | 40   | 63   | 100  | 160  | 250 |     |
| Travel (mm)  |   | 20   |        |      |      |      |      | 30   |      |      | 50   |     |     |
| Actuator <sup>1)</sup><br>ARI-PREMIO<br>2,2 kN   | Closing pressure (bar)                                      | I.   | 40     | 40   | 30,8 | 23,1 | 12,8 | 8    | 4,3  | 2,7  | 1,5  |     |     |
|  |   | II.  | 40     | 40   | 28,8 | 21,6 | 11,9 | 7,4  | 3,9  | 2,3  | 1,3  |     |     |
|  |   | III. | 30,7   | 30,7 | 27,1 | 20,4 | 10,6 | 6,5  | 3,6  | 2,2  | 1,2  |     |     |
|  | Operating time <sup>2)</sup><br>(Operating speed 0,38 mm/s) | (s)  | 53     |      |      |      |      |      | 79   |      |      |     |     |
| Actuator <sup>1)</sup><br>ARI-PREMIO<br>5 kN   | Closing pressure (bar)                                      | I.   |        |      | 40   | 40   | 33,2 | 21,3 | 12,3 | 8    | 4,9  | 3   | 2   |
|  |   | II.  |        |      | 40   | 40   | 32,3 | 20,7 | 11,9 | 7,6  | 4,7  | 2,9 | 1,9 |
|  |   | III. | 40     | 40   | 40   | 40   | 31   | 19,8 | 11,6 | 7,5  | 4,6  |     |     |
|  | Operating time <sup>2)</sup><br>(Operating speed 0,38 mm/s) | (s)  | 53     |      |      |      |      |      | 79   |      |      | 132 |     |
| Actuator <sup>1)</sup><br>ARI-PREMIO<br>12 kN  | Closing pressure (bar)                                      | I.   |        |      |      |      | 40   | 40   | 32,3 | 21,2 | 13,5 | 8,5 | 5,9 |
|  |   | II.  |        |      |      |      | 40   | 40   | 31,8 | 20,9 | 13,3 | 8,4 | 5,8 |
|  |   | III. |        |      |      |      | 40   | 40   | 31,6 | 20,7 | 13,2 |     |     |
|  | Operating time <sup>2)</sup><br>(Operating speed 0,79 mm/s) | (s)  |        |      |      |      | 25   |      | 38   |      |      | 63  |     |
| Actuator <sup>1)</sup><br>ARI-PREMIO<br>15 kN  | Closing pressure (bar)                                      | I.   |        |      |      |      |      | 40   | 26,9 | 17,2 | 10,9 | 7,5 |     |
|  |   | II.  |        |      |      |      |      | 40   | 26,6 | 17   | 10,8 | 7,4 |     |
|  |   | III. |        |      |      |      |      | 40   | 26,4 | 16,9 |      |     |     |
|  | Operating time <sup>2)</sup><br>(Operating speed 0,38 mm/s) | (s)  |        |      |      |      |      |      | 79   |      |      | 132 |     |
| <b>I. Fig. 440: PTFE-V-ring unit;      II. Fig. 440: PTFE- / pure graphite-packing;      III. Fig. 441: Bellows seal</b> |   |      |        |      |      |      |      |      |      |      |      |     |     |

1) Motor voltage: 230V 50Hz  
Other voltages: 24V 50/60Hz; 115V 50/60Hz; 230V 60Hz

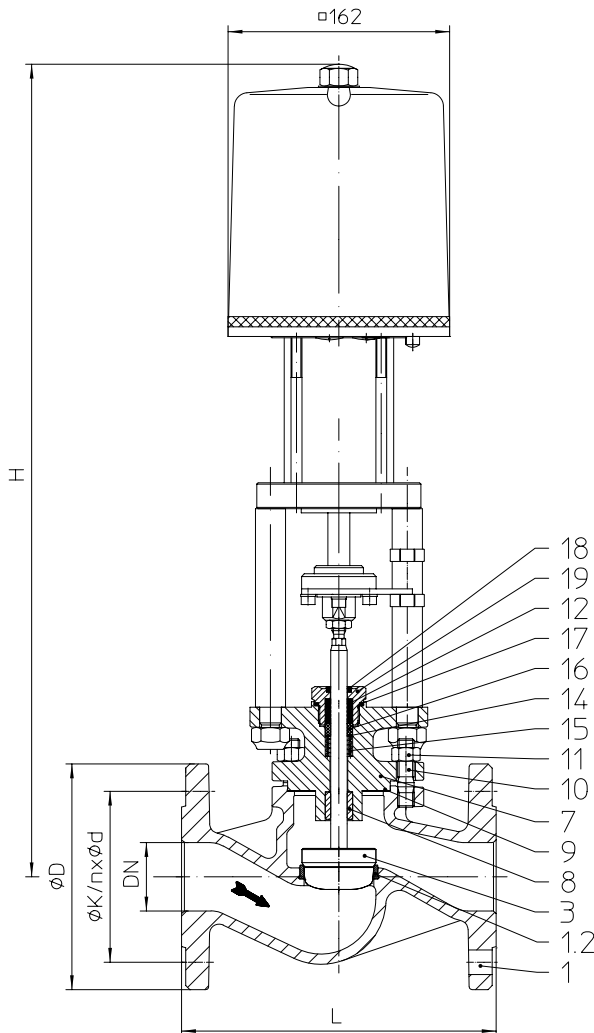
Technical data for actuator refer to data sheet ARI-PREMIO.

2) Indicated operating times with 50 Hz.

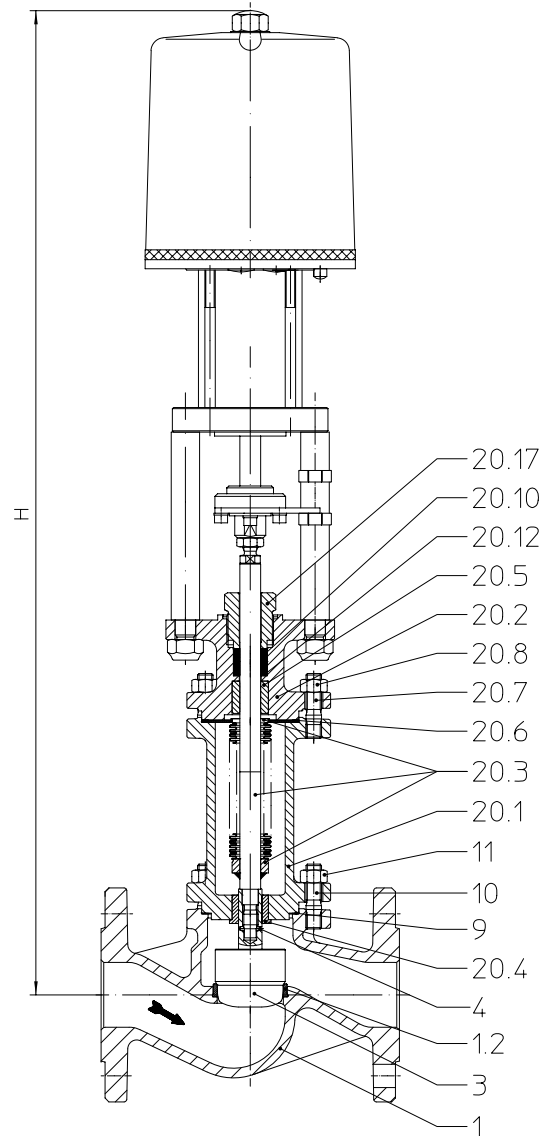
3) Other Kvs-value-reductions are possible with Fig. 445 / 446 (Stainless steel body with screwed seat ring).

4) Max. permissible closing pressures refer to separate data sheet.

(Material and Figure-No.  
refer to technical data  
or part list.)



**Fig. 440**



**Fig. 441**

**Heights and weights**

| DN                   |              |               | 15   | 20   | 25   | 32   | 40   | 50   | 65   | 80   | 100 |
|----------------------|--------------|---------------|------|------|------|------|------|------|------|------|-----|
| ...440 /<br>...440-D | H            | FR 2.1 (mm)   | 573  | 573  | 581  | 581  | 588  | 594  | 607  | 622  | 641 |
|                      |              | FR 2.2 (mm)   | 591  | 591  | 599  | 599  | 606  | 612  | 625  | 640  | 659 |
| ...440               | FR 2.1 / 2.2 | PN 6-16 (kg)  | 12,3 | 13   | 13,9 | 15,5 | 17,4 | 20,3 | 25,4 | 31,1 | 41  |
|                      |              | PN 25-40 (kg) | 13,1 | 13,9 | 15,2 | 17   | 19,5 | 22,2 | 29,4 | 35,6 | 48  |
| ...440-D             | FR 2.1 / 2.2 | PN 6-16 (kg)  |      |      |      |      | 18,4 | 22,3 | 28,4 | 35,1 | 46  |
|                      |              | PN 25-40 (kg) |      |      |      |      | 20,5 | 24,2 | 32,4 | 39,6 | 53  |
| ...441 /<br>...441-D | H            | FR 2.1 (mm)   | 758  | 758  | 766  | 766  | 757  | 759  | 843  | 855  | 871 |
|                      |              | FR 2.2 (mm)   | 776  | 776  | 784  | 784  | 775  | 777  | 861  | 873  | 889 |
| ...441               | FR 2.1 / 2.2 | PN 6-16 (kg)  | 16,7 | 16,7 | 17,7 | 20,2 | 22,7 | 25,2 | 28,2 | 39,2 | 55  |
|                      |              | PN 25-40 (kg) | 18,7 | 20,2 | 22,7 | 25,7 | 31,7 | 34,2 | 41,2 | 51,2 | 68  |
| ...441-D             | FR 2.1 / 2.2 | PN 6-16 (kg)  |      |      |      |      | 23,7 | 27,2 | 31,2 | 43,2 | 60  |
|                      |              | PN 25-40 (kg) |      |      |      |      | 32,7 | 36,2 | 44,2 | 55,2 | 73  |

Other dimensions refer to page 13.

**max. permissible closing pressures** on flow-to-open  $P_2 = 0$ 

(Observe pressure-temperature-limits on page 13. Plug design acc. to „Selection STEVI®“, refer to techn. annex.)

| <b>Fig. 440 / 441 with parabolic plug</b>  |                                       |        |  |      |      |      |                             |     |     |     |     |
|--|---------------------------------------|--------|--|------|------|------|-----------------------------|-----|-----|-----|-----|
| DN   | 15                                    | 20     | 25   | 32   | 40   | 50   | 65                          | 80  | 100 |     |     |
| Seat- $\varnothing$ (mm)                   | 21                                    | 21     | 27   | 31   | 41   | 51   | 66                          | 81  | 101 |     |     |
| Standard Kvs-values                        | 4                                     | 6,3    | 10   | 16   | 25   | 40   | 63                          | 100 | 160 |     |     |
| Reduced Kvs-values <sup>3)</sup>           | 2,5                                   | 4; 2,5 | 6,3  | 10   | 16   | 25   | 40                          | 63  | 100 |     |     |
| Travel (mm)                                | 20                                    |        |  |      |      |      | 30                          |     |     |     |     |
| Actuator <sup>1)</sup><br>FR 2.1<br>1 kN   | Closing pressure (bar)                | I.     | 18   | 18   | 10,3 | 7,4  | 3,6                         | 2   |     |     |     |
|  |                                       | II.    | 16   | 16   | 9,0  | 6,5  | 3,2                         | 1,7 |     |     |     |
|  |                                       | III.   | 9  | 9    | 7,4  | 5,2  | 1,9                         | 0,9 |     |     |     |
|  | Operating time <sup>2)</sup> (s)      | 69     |  |      |      |      |                             |     |     |     |     |
|  | Operating time on voltage failure (s) | 5,5    |  |      |      |      |                             |     |     |     |     |
| Actuator <sup>1)</sup><br>FR 2.2<br>2,2 kN | Closing pressure (bar)                | I.     | 40   | 40   | 30,8 | 23,1 | 12,8                        | 8   | 4,3 | 2,7 | 1,5 |
|  |                                       | II.    | 40   | 40   | 28,8 | 21,6 | 11,9                        | 7,4 | 3,9 | 2,3 | 1,3 |
|  |                                       | III.   | 30,7   | 30,7 | 27,1 | 20,4 | 10,6                        | 6,5 | 3,6 | 2,2 | 1,2 |
|  | Operating time <sup>2)</sup> (s)      | 69     |  |      |      |      |                             | 103 |     |     |     |
|  | Operating time on voltage failure (s) | 5,5    |  |      |      |      |                             | 8,5 |     |     |     |
| I. Fig. 440: PTFE-V-ring unit;             |                                       |        | II. Fig. 440: PTFE- / pure graphite-packing; |      |      |      | III. Fig. 441: Bellows seal |     |     |     |     |

**max. permissible closing pressures** on flow-to-open  $P_2 = 0$ 

(Observe pressure-temperature-limits on page 13. Plug design acc. to „Selection STEVI®“, refer to techn. annex.)

| <b>Fig. 440 / 441 with pressure balanced plug</b> (design refer to page 14) |                                       |      |  |    |    |    |                             |     |     |    |    |
|---|---------------------------------------|------|--|----|----|----|-----------------------------|-----|-----|----|----|
| DN  |                                       |      | 25   | 32 | 40 | 50 | 65                          | 80  | 100 |    |    |
| Seat- $\varnothing$ (mm)  |                                       |      | 27   | 31 | 41 | 51 | 66                          | 81  | 101 |    |    |
| Standard Kvs-values   |                                       |      | 10   | 16 | 25 | 40 | 63                          | 100 | 160 |    |    |
| Reduced Kvs-values  |                                       |      | 6,3  | 10 | 16 | 25 | 40                          | 63  | 100 |    |    |
| Travel (mm)   |                                       |      | 20   |    | 20 |    | 30                          |     |     |    |    |
| Actuator <sup>1)</sup><br>FR 2.1<br>1 kN                                    | Closing pressure (bar)                | I.   |  |    | 20 | 20 | 20                          | 16  | 16  | 16 | 12 |
|   |                                       | II.  |  |    |    |    | 20                          | 16  | 16  |    |    |
|   |                                       | III. |  |    |    |    | 16                          | 15  | 2   |    |    |
|   | Operating time <sup>2)</sup> (s)      | 69   |  |    |    |    |                             | 103 |     |    |    |
|   | Operating time on voltage failure (s) | 5,5  |  |    |    |    |                             | 8,5 |     |    |    |
| Actuator <sup>1)</sup><br>FR 2.2<br>2,2 kN                                  | Closing pressure (bar)                | I.   |  |    |    | 40 | 40                          | 40  | 40  |    |    |
|   |                                       | II.  |  |    |    | 40 | 40                          | 40  | 40  |    |    |
|   |                                       | III. |  |    |    | 40 | 40                          | 40  | 40  | 40 |    |
|   | Operating time <sup>2)</sup> (s)      | 69   |  |    |    |    |                             | 103 |     |    |    |
|   | Operating time on voltage failure (s) | 5,5  |  |    |    |    |                             | 8,5 |     |    |    |
| I. Fig. 440: PTFE-V-ring unit;  |                                       |      | II. Fig. 440: PTFE- / pure graphite-packing; |    |    |    | III. Fig. 441: Bellows seal |     |     |    |    |

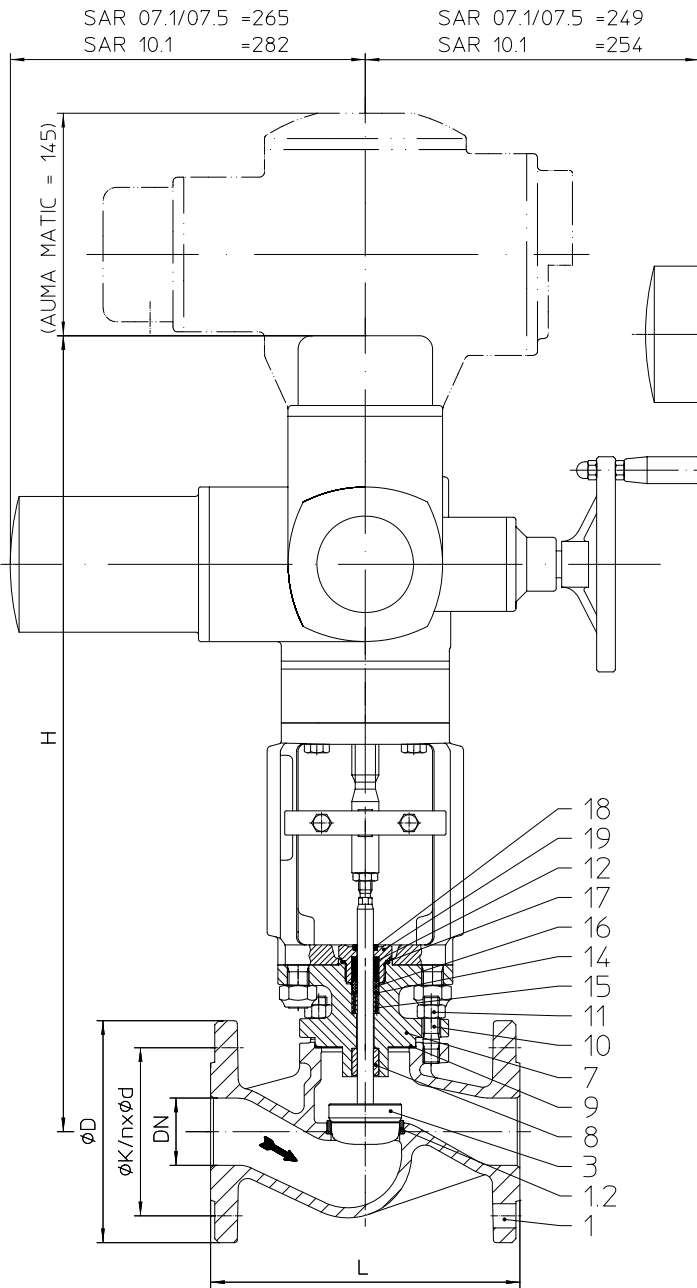
**Control valve „Typ 440 - FR 2.1“ acc. to DIN 32730 for cast iron, nodular iron and cast steel.**

1) Motor voltage: 230V 50Hz  
 Other voltages: 24V 50/60Hz; 230V 60Hz  
 Technical data for actuator refer to data sheet FR 2.1.

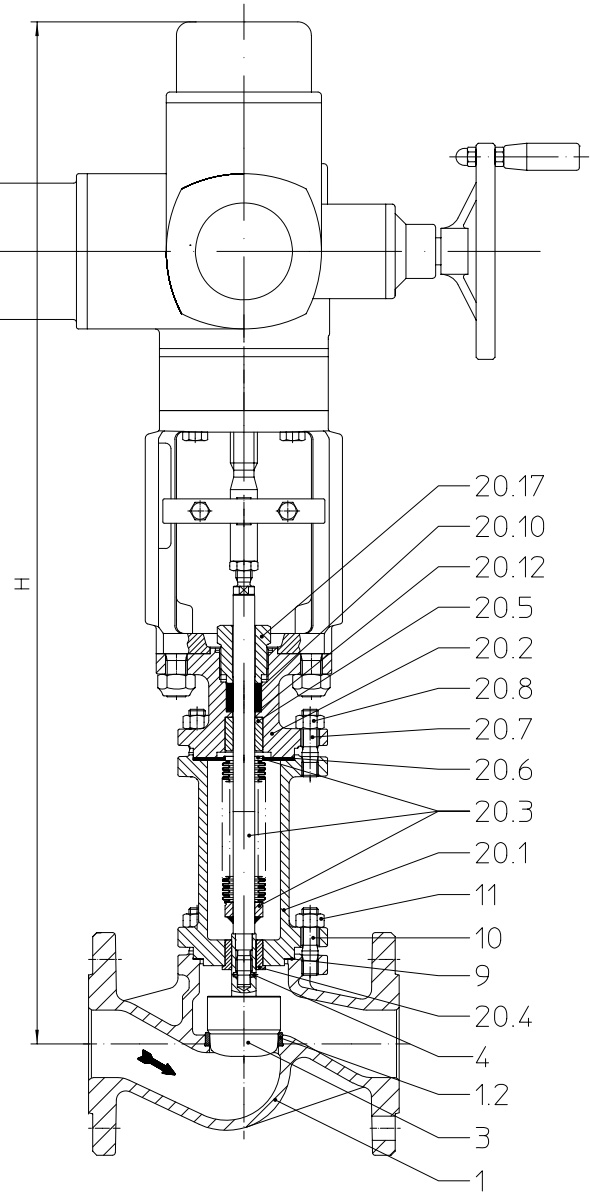
2) Indicated operating times with 50 Hz.

3) Other Kvs-value-reductions are possible with Fig. 445 / 446 (stainless steel body with screwed seat ring).  
 Max. permissible closing pressures refer to separate data sheet.

(Material and Figure-No.  
refer to technical data  
or part list.)



**Fig. 440**



**Fig. 441**

**Heights and weights**

| DN       |                   |                   | 40          | 50          | 65          | 80          | 100      | 125      | 150      |
|----------|-------------------|-------------------|-------------|-------------|-------------|-------------|----------|----------|----------|
| ...440   | H                 | (mm)              | 611         | 617         | 630         | 645         | 664      | 703      | 763      |
|          | SAR 07.1          | PN16/PN25-40 (kg) | 35 / 37,1   | 37,9 / 39,8 | 44,5 / 48,5 | 50,2 / 54,7 | 60 / 80  | 76 / 107 | 94 / 148 |
|          | SAR 07.5          |                   |             |             |             |             |          |          |          |
|          | H                 | (mm)              |             |             | 642         | 657         | 676      | 715      | 775      |
| SAR 10.1 | PN16/PN25-40 (kg) |                   |             | 49 / 53     | 54,7 / 59,2 | 65 / 72     | 80 / 111 | 98 / 152 |          |
| ...441   | H                 | (mm)              | 780         | 782         | 866         | 878         | 894      |          |          |
|          | SAR 07.1          | PN16/PN25-40 (kg) | 40,3 / 49,3 | 44,3 / 53,3 | 47,3 / 60,3 | 58,3 / 70,3 | 74 / 87  |          |          |
|          | SAR 07.5          |                   |             |             |             |             |          |          |          |

Other dimensions refer to page 13.

(For version with AUMA SAR Ex other heights.)

**max. permissible closing pressures** for parabolic plug on flow-to-open  $P_2 = 0$ 

(Observe pressure-temperature-limits on page 13. Plug design acc. to „Selection STEVI®“, refer to techn. annex.)

| <b>Fig. 440</b>   |                                  |        |             | <b>40</b>  | <b>50</b> | <b>65</b> | <b>80</b> | <b>100</b> | <b>125</b> | <b>150</b> |
|---|----------------------------------|--------|-------------|--|-----------|-----------|-----------|------------|------------|------------|
| <b>DN</b>   |                                  |        |             |  |           |           |           |            |            |            |
| Seat-Ø (mm)   |                                  |        |             | 41   | 51        | 66        | 81        | 101        | 126        | 151        |
| Standard Kvs-values   |                                  |        |             | 25   | 40        | 63        | 100       | 160        | 250        | 400        |
| Reduced Kvs-values <sup>3)</sup>  |                                  |        |             | 16   | 25        | 40        | 63        | 100        | 160        | 250        |
| Travel (mm)   |                                  |        |             | 20   |           |           | 30        |            | 50         | 50         |
| Actuator <sup>1)</sup><br><b>AUMA</b><br><b>SAR 07.1</b><br>Output drive<br>Form A<br>TR 20 x 4 | Closing pressure (bar)           | I./II. | shut off    | 40   | 40        | 40        | 29,7      | 19         | 12,1       | 8,3        |
|   |                                  |        | controlling | 40   | 36,5      | 21,4      | 14        | 8,8        | 5,5        | 3,7        |
|   | Torque (Nm)                      |        |             | 15   | 20        | 30        | 30        | 30         | 30         | 30         |
|   | Operating time <sup>2)</sup> (s) |        |             | 54   |           |           | 56        |            | 94         | 94         |
|   | Output drive (rpm)               |        |             | 5,6  |           |           | 8         |            | 8          |            |
| Actuator <sup>1)</sup><br><b>AUMA</b><br><b>SAR 07.5</b><br>Output drive<br>Form A<br>TR 26 x 5 | Closing pressure (bar)           | I./II. | shut off    |  | 40        | 40        | 40        | 26,9       | 17,2       | 11,9       |
|   |                                  |        | controlling |  | 40        | 30,5      | 20        | 12,8       | 8          | 5,5        |
|   | Torque (Nm)                      |        |             |  | 30        | 40        | 60        | 60         | 60         | 60         |
|   | Operating time <sup>2)</sup> (s) |        |             |  | 43        | 64        |           | 55         |            | 55         |
|   | Output drive (rpm)               |        |             |  | 5,6       | 5,6       |           | 11         |            |            |
| Actuator <sup>1)</sup><br><b>AUMA</b><br><b>SAR 10.1</b><br>Output drive<br>Form A<br>TR 26 x 5 | Closing pressure (bar)           | I./II. | shut off    |  |           | 40        | 40        | 31,6       | 29,3       | 20,3       |
|   |                                  |        | controlling |  |           | 40        | 40        | 26,9       | 17,2       | 11,9       |
|   | Torque (Nm)                      |        |             |  |           | 60        | 70        | 70         | 100        | 100        |
|   | Operating time <sup>2)</sup> (s) |        |             |  |           | 64        |           | 55         |            |            |
|   | Output drive (rpm)               |        |             |  |           | 5,6       |           | 11         |            |            |
| <b>I. Fig. 440: PTFE-V-ring unit;</b>   |                                  |        |             | <b>II. Fig. 440: PTFE- / pure graphite-packing</b> |           |           |           |            |            |            |

**max. permissible closing pressures** for parabolic plug on flow-to-open  $P_2 = 0$ 

(Observe pressure-temperature-limits on page 13. Plug design acc. to „Selection STEVI®“, refer to techn. annex.“)

| <b>Fig. 441</b>   |                                  |        |             | <b>40</b> | <b>50</b> | <b>65</b> | <b>80</b> | <b>100</b> |
|---|----------------------------------|--------|-------------|-----------|-----------|-----------|-----------|------------|
| <b>DN</b>   |                                  |        |             |           |           |           |           |            |
| Seat-Ø (mm)   |                                  |        |             | 41        | 51        | 66        | 81        | 101        |
| Standard Kvs-values   |                                  |        |             | 25        | 40        | 63        | 100       | 160        |
| Reduced Kvs-values <sup>3)</sup>  |                                  |        |             | 16        | 25        | 40        | 63        | 100        |
| Travel (mm)   |                                  |        |             | 20        |           |           | 30        |            |
| Actuator <sup>1)</sup><br><b>AUMA</b><br><b>SAR 07.1</b><br>Output drive<br>Form A<br>TR 20 x 4 | Closing pressure (bar)           | III.   | shut off    | 40        | 40        | 40        | 29,5      | 18,9       |
|   |                                  |        | controlling | 40        | 35,7      | 21,1      | 13,8      | 8,7        |
|   | Torque (Nm)                      |        |             | 15        | 20        | 30        | 30        | 30         |
|   | Operating time <sup>2)</sup> (s) |        |             | 54        |           |           | 56        |            |
|   | Output drive (rpm)               |        |             | 5,6       |           |           | 8         |            |
| Actuator <sup>1)</sup><br><b>AUMA</b><br><b>SAR 07.5</b><br>Output drive<br>Form A<br>TR 26 x 5 | Closing pressure (bar)           | I./II. | shut off    |           | 40        | 40        | 30,8      | 19,7       |
|   |                                  |        | controlling |           | 40        | 30,2      | 19,8      | 12,6       |
|   | Torque (Nm)                      |        |             |           | 30        | 45        | 45        | 45         |
|   | Operating time <sup>2)</sup> (s) |        |             |           | 43        | 64        |           |            |
|   | Output drive (rpm)               |        |             |           | 5,6       | 5,6       |           |            |
| <b>III. Fig. 441: Bellows seal</b>  |                                  |        |             |           |           |           |           |            |

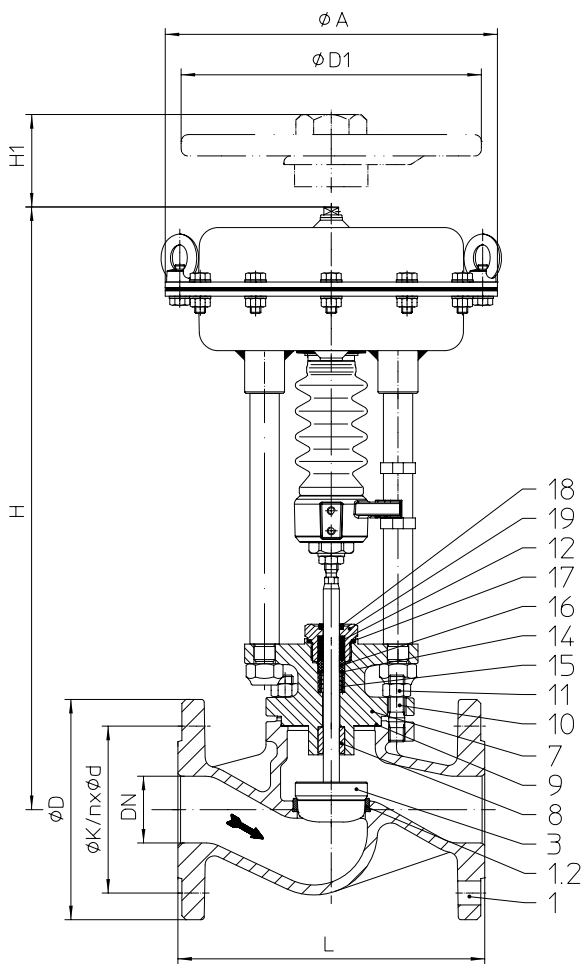
1) Motor voltage: 400V 50Hz 3~  
(Other voltages on request)

Technical data for actuator refer to price list.

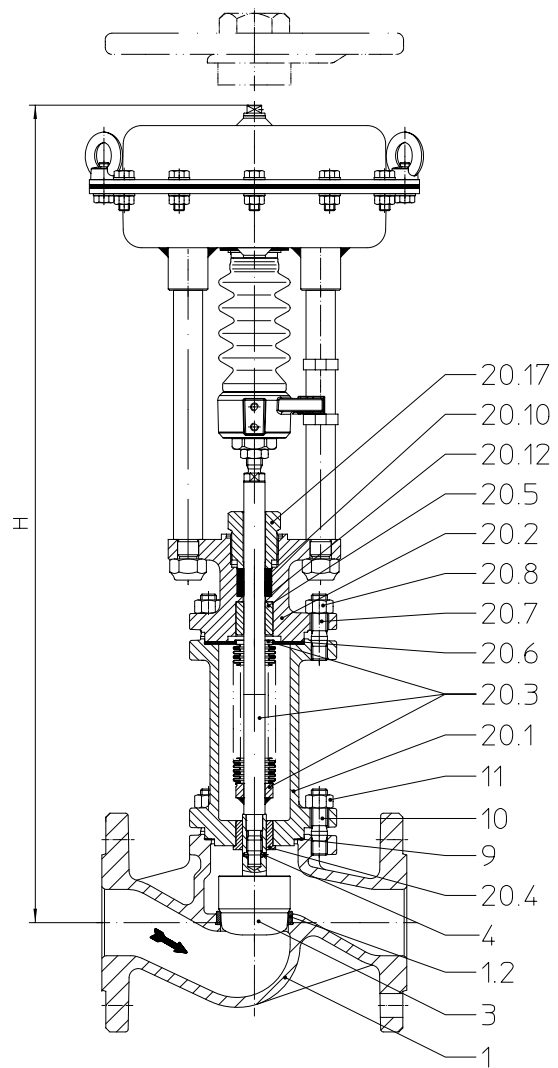
2) Indicated operating times with 50 Hz.

3) Other Kvs-value-reductions are possible with Fig. 445 / 446 (Stainless steel body with screwed seat ring).

(Material and Figure-No.  
refer to technical data  
or part list.)



**Fig. 440**



**Fig. 441**



**Heights and weights**

| DN    |                     | 15        | 20        | 25        | 32        | 40        | 50        | 65        | 80        | 100    | 125    | 150     |  |
|-------|---------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|--------|--------|---------|--|
| DP 32 | ∅ A (mm)            | 250       |           |           |           |           |           |           |           |        |        |         |  |
|       | ...440 H (mm)       | 442       | 442       | 450       | 450       | 457       | 463       | 476       | 491       | 510    |        |         |  |
|       | PN16 / PN25-40 (kg) | 12,6/13,4 | 13,3/14,2 | 14,2/15,5 | 15,8/17,3 | 17,7/19,8 | 20,6/22,5 | 25,7/29,7 | 31,4/35,9 | 42/49  |        |         |  |
|       | ...441 H (mm)       | 627       | 627       | 635       | 635       | 626       | 628       | 712       | 724       | 740    |        |         |  |
|       | PN16 / PN25-40 (kg) | 17/19     | 17/20,5   | 18/23     | 20,5/26   | 23/32     | 25,5/34,5 | 28,5/41,5 | 39,5/51,5 | 55/68  |        |         |  |
| DP 33 | ∅ A (mm)            | 300       |           |           |           |           |           |           |           |        |        |         |  |
|       | ...440 H (mm)       | 497       | 497       | 505       | 505       | 512       | 518       | 531       | 546       | 565    |        |         |  |
|       | PN16 / PN25-40 (kg) | 18,6/19,4 | 19,3/20,2 | 20,2/21,5 | 21,8/23,3 | 23,7/25,8 | 26,6/28,5 | 31,7/35,7 | 37,4/41,9 | 48/55  |        |         |  |
|       | ...441 H (mm)       | 682       | 682       | 690       | 690       | 681       | 683       | 767       | 779       | 795    |        |         |  |
|       | PN16 / PN25-40 (kg) | 23/25     | 23/26,5   | 24/29     | 26,5/32   | 29/38     | 31,5/40,5 | 34,5/47,5 | 45,5/57,5 | 61/74  |        |         |  |
| DP 34 | ∅ A (mm)            | 405       |           |           |           |           |           |           |           |        |        |         |  |
|       | ...440 H (mm)       |           |           |           |           |           |           | 666       | 681       | 680    | 739    | 799     |  |
|       | PN16 / PN25-40 (kg) |           |           |           |           |           |           | 61,7/65,7 | 67,4/71,9 | 78/85  | 93/124 | 111/165 |  |
|       | ...441 H (mm)       |           |           |           |           |           |           | 902       | 914       | 930    |        |         |  |
|       | PN16 / PN25-40 (kg) |           |           |           |           |           |           | 64,5/77,5 | 75,5/87,5 | 91/104 |        |         |  |

Other dimensions refer to page 13.

**Top mounted handwheel**

| Actuator-type |  | DP 32 | DP 33 | DP 34 |
|---------------|--|-------|-------|-------|
| ∅ D1 (mm)     |  | 225   | 300   | 400   |
| H1 (mm)       |  | 270   | 284   | 442   |
| Weight (kg)   |  | 5     | 8     | 17    |

Technical data for actuator refer to data sheet DP32-34T.

max. permissible closing pressures on flow-to-open  $P_2 = 0$ 

| Spring closes on air failure     |                      | (Observe pressure-temperature-limits on page 13. Plug design acc. to „Selection STEVI®“, refer to techn. annex.) |                                |         |      |                    |                    |                    |                    |                    |                    |                   |                   |      |     |
|----------------------------------|----------------------|--|--------------------------------|---------|------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|-------------------|-------------------|------|-----|
| DN                               |                      | 15   | 20                             | 25      | 32   | 40                 | 50                 | 65                 | 80                 | 100                | 125                | 150               |                   |      |     |
| Seat-Ø(mm)                       |                      | 21   | 21                             | 27      | 31   | 41                 | 51                 | 66                 | 81                 | 101                | 126                | 151               |                   |      |     |
| Standard Kvs-values              |                      | 4  | 6,3                            | 10      | 16   | 25                 | 40                 | 63                 | 100                | 160                | 250                | 400               |                   |      |     |
| Reduced Kvs-values <sup>1)</sup> |                      | 2,5  | 4; 2,5                         | 6,3     | 10   | 16                 | 25                 | 40                 | 63                 | 100                | 160                | 250               |                   |      |     |
| Travel(mm)                       |                      | 20   |                                |         |      |                    | 30                 |                    |                    | 50                 |                    |                   |                   |      |     |
| Actuator DP 32                   | Control signal (bar) | Air supply pressure min. (bar)   | 0,2-1,0                        | 1,2     | I.   | 5,5                | 5,5                | 2,6                | 1,6                |                    |                    |                   |                   |      |     |
|                                  |                      |  |                                |         | II.  | 2,3                | 2,3                |                    |                    |                    |                    |                   |                   |      |     |
|                                  |                      |  |                                | 0,4-1,2 | 1,4  | I.                 | 18,6               | 18,6               | 10,7               | 7,8                | 3,9                | 2,2               |                   |      |     |
|                                  |                      |  | II.                            |         |      | 15,4               | 15,4               | 8,7                | 6,2                | 3                  | 1,6                |                   |                   |      |     |
|                                  |                      |  | 0,8-2,4                        | 2,7     | I.   | 40                 | 40                 | 26,8               | 20,1               | 11                 | 6,8                | 3,7               | 2,2               | 1,2  |     |
|                                  |                      |  |                                |         | II.  | 40                 | 40                 | 24,8               | 18,6               | 10,2               | 6,3                | 3,2               | 1,9               | 1    |     |
|                                  | 1,5-2,5              | 2,8  | III.                           | 26,4    | 26,4 | 23,2               | 17,3               | 8,9                | 5,4                | 2,9                | 1,7                |                   |                   |      |     |
|                                  |                      |  | I.                             |         |      | 40                 | 40                 | 23,5               | 15                 |                    |                    |                   |                   |      |     |
|                                  |                      |  | II.                            |         |      | 40                 | 40                 | 22,7               | 14,4               |                    |                    |                   |                   |      |     |
|                                  | 2,0-3,3              | 3,6  | III.                           | 40      | 40   | 40                 | 38,9               | 21,4               | 13,6               |                    |                    |                   |                   |      |     |
|                                  |                      |  | I.                             |         |      |                    |                    | 32,5               | 20,8               |                    |                    |                   |                   |      |     |
|                                  |                      |  | II.                            |         |      |                    |                    | 31,6               | 20,2               |                    |                    |                   |                   |      |     |
|                                  | Actuator DP 33       | Control signal (bar)   | Air supply pressure min. (bar) | 0,2-1,0 | 1,2  | I.                 | 13,3 <sup>c)</sup> | 13,3 <sup>c)</sup> | 7,4 <sup>c)</sup>  | 5,2 <sup>c)</sup>  | 2,4 <sup>c)</sup>  | 1,2 <sup>c)</sup> |                   |      |     |
|                                  |                      |  |                                |         |      | II.                | 10,1 <sup>c)</sup> | 10,1 <sup>c)</sup> | 5,4 <sup>c)</sup>  | 3,7 <sup>c)</sup>  | 1,5 <sup>c)</sup>  |                   |                   |      |     |
|                                  |                      |  |                                |         |      | III.               | 5 <sup>a)</sup>    | 5 <sup>a)</sup>    | 3,8 <sup>a)</sup>  | 2,5 <sup>a)</sup>  |                    |                   |                   |      |     |
| 0,4-1,2                          |                      |  |                                | 1,4     | I.   | 34,2 <sup>c)</sup> | 34,2 <sup>c)</sup> | 20,2 <sup>c)</sup> | 15,1 <sup>c)</sup> | 8,1 <sup>c)</sup>  | 4,9 <sup>c)</sup>  | 2,5               | 1,4               |      |     |
|                                  |                      |  |                                |         | II.  | 31 <sup>c)</sup>   | 31 <sup>c)</sup>   | 18,3 <sup>c)</sup> | 13,6 <sup>c)</sup> | 7,3 <sup>c)</sup>  | 4,4 <sup>c)</sup>  | 2,1               | 1,1               |      |     |
|                                  |                      |  |                                |         | III. | 19,1 <sup>a)</sup> | 19,1 <sup>a)</sup> | 16,6 <sup>a)</sup> | 12,3 <sup>a)</sup> | 5,9 <sup>a)</sup>  | 3,5 <sup>a)</sup>  | 1,8 <sup>a)</sup> |                   |      |     |
| 0,8-2,4                          |                      |  |                                | 2,7     | I.   | 40 <sup>a)</sup>   | 40 <sup>a)</sup>   | 40 <sup>a)</sup>   | 34,7 <sup>a)</sup> | 19,5 <sup>a)</sup> | 12,3 <sup>a)</sup> | 7                 | 4,4               | 2,6  |     |
|                                  |                      |  |                                |         | II.  | 40 <sup>a)</sup>   | 40 <sup>a)</sup>   | 40 <sup>a)</sup>   | 33,2 <sup>a)</sup> | 18,6 <sup>a)</sup> | 11,8 <sup>a)</sup> | 6,5               | 4,1               | 2,4  |     |
|                                  |                      |  |                                |         | III. | 40                 | 40                 | 40                 | 31,9               | 17,3               | 10,9               | 6,2               | 3,9               | 2,3  |     |
| 1,5-3,0                          |                      |  |                                | 3,3     | I.   |                    |                    |                    |                    |                    |                    | 14,8              | 9,6               | 6    |     |
|                                  |                      |  |                                |         | II.  |                    |                    |                    |                    |                    |                    | 14,3              | 9,3               | 5,8  |     |
|                                  |                      |  |                                |         | III. |                    |                    |                    |                    |                    |                    | 14                | 9,1               | 5,7  |     |
| 1,7-2,7                          |                      | 3,1  | I.                             |         |      | 40 <sup>a)</sup>   | 40 <sup>a)</sup>   | 29 <sup>a)</sup>   |                    |                    |                    |                   |                   |      |     |
|                                  |                      |  | II.                            |         |      | 40 <sup>a)</sup>   | 40 <sup>a)</sup>   | 28,4 <sup>a)</sup> |                    |                    |                    |                   |                   |      |     |
|                                  |                      |  | III.                           |         |      | 40                 | 40                 | 27,6               |                    |                    |                    |                   |                   |      |     |
| 2,0-4,0                          | 4,5                  | I.   |                                |         |      |                    |                    | 20,3               | 13,3               | 8,4                |                    |                   |                   |      |     |
|                                  |                      | II.  |                                |         |      |                    |                    | 19,9               | 12,9               | 8,2                |                    |                   |                   |      |     |
|                                  |                      | III.   |                                |         |      |                    |                    | 19,6               | 12,8               | 8,1                |                    |                   |                   |      |     |
| 2,3-3,7                          | 4,5                  | I.   |                                |         |      |                    | 40                 |                    |                    |                    |                    |                   |                   |      |     |
|                                  |                      | II.  |                                |         |      |                    | 39,5               |                    |                    |                    |                    |                   |                   |      |     |
|                                  |                      | III.   |                                |         |      |                    | 38,6               |                    |                    |                    |                    |                   |                   |      |     |
| Actuator DP 34                   | Control signal (bar) | Air supply pressure min. (bar)   | 0,2-1,0                        | 1,2     | I.   |                    |                    |                    |                    | 2,5 <sup>b)</sup>  | 1,5 <sup>b)</sup>  |                   |                   |      |     |
|                                  |                      |  |                                |         | II.  |                    |                    |                    |                    | 2,1 <sup>b)</sup>  | 1,2 <sup>b)</sup>  |                   |                   |      |     |
|                                  |                      |  |                                |         | III. |                    |                    |                    |                    | 1,8 <sup>e)</sup>  | 1 <sup>e)</sup>    |                   |                   |      |     |
|                                  |                      |  | 0,4-1,2                        | 1,4     | I.   |                    |                    |                    |                    |                    | 7 <sup>b)</sup>    | 4,4 <sup>b)</sup> | 2,7 <sup>b)</sup> | 1,6  | 1   |
|                                  |                      |  |                                |         | II.  |                    |                    |                    |                    |                    | 6,6 <sup>b)</sup>  | 4,1 <sup>b)</sup> | 2,5 <sup>b)</sup> | 1,4  |     |
|                                  |                      |  |                                |         | III. |                    |                    |                    |                    |                    | 6,3 <sup>d)</sup>  | 3,9 <sup>d)</sup> | 2,3 <sup>d)</sup> |      |     |
|                                  |                      |  | 0,8-2,4                        | 2,7     | I.   |                    |                    |                    |                    |                    | 16                 | 10,4              | 6,5               | 4    | 2,7 |
|                                  |                      |  |                                |         | II.  |                    |                    |                    |                    |                    | 15,5               | 10,1              | 6,3               | 3,9  | 2,6 |
|                                  |                      |  |                                |         | III. |                    |                    |                    |                    |                    | 15,2 <sup>b)</sup> | 9,9 <sup>b)</sup> | 6,2 <sup>b)</sup> |      |     |
|                                  |                      |  | 1,5-3,0                        | 3,3     |      |                    |                    |                    |                    |                    |                    |                   |                   | 8,4  | 5,7 |
|                                  |                      |  |                                |         |      |                    |                    |                    |                    |                    |                    |                   |                   | 8,2  | 5,6 |
|                                  |                      |  |                                |         |      |                    |                    |                    |                    |                    |                    |                   |                   | 11,5 | 7,9 |
|                                  | 2,0-4,0              | 4,5  |                                |         |      |                    |                    |                    |                    |                    |                    | 11,3              | 7,8               |      |     |
|                                  |                      |  | I.                             |         |      |                    |                    |                    | 40                 | 29,7               | 19                 |                   |                   |      |     |
|                                  |                      |  | II.                            |         |      |                    |                    |                    | 40                 | 29,4               | 18,8               |                   |                   |      |     |
| 2,1-3,0                          | 3,3                  | III.   |                                |         |      |                    |                    | 40 <sup>a)</sup>   | 29,2 <sup>a)</sup> | 18,7 <sup>a)</sup> |                    |                   |                   |      |     |
|                                  |                      | I.   |                                |         |      |                    |                    |                    |                    | 34,2               | 21,9               |                   |                   |      |     |
|                                  |                      | II.  |                                |         |      |                    |                    |                    |                    | 33,9               | 21,7               |                   |                   |      |     |
| 2,4-3,6                          | 4,5                  | III.   |                                |         |      |                    |                    |                    |                    |                    |                    |                   |                   |      |     |

III. Fig. 441: Bellows seal

II. Fig. 440: PTFE- / pure graphite-packing;

I. Fig. 440: PTFE-V-ring unit;

 Air supply pressure max. of pneumatic actuators DP: 6 bar  
 Air supply pressure max. limit of control valve: a) 5 bar b) 4,5 bar c) 4 bar d) 3,5 bar e) 3 bar

<sup>1)</sup> Other Kvs-value-reductions are possible with series 445 / 446 (Stainless steel body with screwed seat ring).  
 Max. permissible operating pressures refer to separate data sheet.

max. permissible closing pressures on flow-to-open  $P_2 = 0$ 

| Spring opens on air failure      |                                |                   | (Observe pressure-temperature-limits on page 13. Plug design acc. to „Selection STEVI®“, refer to techn. annex.) |                  |                  |                    |                    |                    |                    |                    |                    |                    |                   |      |   |
|----------------------------------|--------------------------------|-------------------|--|------------------|------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|-------------------|------|---|
| DN                               |                                |                   | 15   | 20               | 25               | 32                 | 40                 | 50                 | 65                 | 80                 | 100                | 125                | 150               |      |   |
| Seat-Ø                           | (mm)                           |                   | 21   | 21               | 27               | 31                 | 41                 | 51                 | 66                 | 81                 | 101                | 126                | 151               |      |   |
| Standard Kvs-values              |                                |                   | 4  | 6,3              | 10               | 16                 | 25                 | 40                 | 63                 | 100                | 160                | 250                | 400               |      |   |
| Reduced Kvs-values <sup>1)</sup> |                                |                   | 2,5  | 4; 2,5           | 6,3              | 10                 | 16                 | 25                 | 40                 | 63                 | 100                | 160                | 250               |      |   |
| Travel                           | (mm)                           |                   | 20   |                  |                  |                    |                    |                    | 30                 |                    |                    | 50                 |                   |      |   |
| Actuator<br>DP 32                | Air supply pressure min. (bar) | 1,4               | I.   | 18,6             | 18,6             | 10,7               | 7,8                | 3,9                | 2,2                |                    |                    |                    |                   |      |   |
|                                  |                                |                   | II.  | 15,4             | 15,4             | 8,7                | 6,2                | 3                  | 1,6                |                    |                    |                    |                   |      |   |
|                                  |                                |                   | III.   | 8,6              | 8,6              | 7,1                | 5                  | 1,7                |                    |                    |                    |                    |                   |      |   |
|                                  |                                | 2                 | I.   | 40               | 40               | 34,9               | 26,3               | 14,6               | 9,2                | 5                  | 3,1                | 1,8                |                   |      |   |
|                                  |                                |                   | II.  | 40               | 40               | 32,9               | 24,8               | 13,7               | 8,6                | 4,6                | 2,8                | 1,6                |                   |      |   |
|                                  |                                |                   | III.   | 35,2             | 35,2             | 31,3               | 23,5               | 12,4               | 7,7                | 4,3                | 2,6                | 1,5                |                   |      |   |
|                                  |                                | 3                 | I.   |                  |                  | 40                 | 40                 | 32,5               | 20,8               | 12                 | 7,8                | 4,8                |                   |      |   |
|                                  |                                |                   | II.  |                  |                  | 40                 | 40                 | 31,6               | 20,2               | 11,6               | 7,5                | 4,6                |                   |      |   |
|                                  |                                |                   | III.   | 40               | 40               | 40                 | 40                 | 30,3               | 19,4               | 11,3               | 7,3                | 4,5                |                   |      |   |
|                                  |                                | 4                 | I.   |                  |                  |                    |                    | 40                 | 32,4               | 19                 | 12,4               | 7,8                |                   |      |   |
|                                  |                                |                   | II.  |                  |                  |                    |                    | 40                 | 31,8               | 18,6               | 12,1               | 7,6                |                   |      |   |
|                                  |                                |                   | III.   |                  |                  |                    |                    | 40                 | 31                 | 18,3               | 11,9               | 7,5                |                   |      |   |
|                                  |                                | 5                 | I.   |                  |                  |                    |                    |                    | 40                 | 26                 | 17                 | 10,8               |                   |      |   |
|                                  |                                |                   | II.  |                  |                  |                    |                    |                    | 40                 | 25,6               | 16,7               | 10,6               |                   |      |   |
|                                  |                                |                   | III.   |                  |                  |                    |                    |                    | 40                 | 25,3               | 16,5               | 10,5               |                   |      |   |
|                                  |                                | 6                 | I.   |                  |                  |                    |                    |                    |                    | 33                 | 21,7               | 13,8               |                   |      |   |
|                                  |                                |                   | II.  |                  |                  |                    |                    |                    |                    | 32,6               | 21,4               | 13,6               |                   |      |   |
|                                  |                                |                   | III.   |                  |                  |                    |                    |                    |                    | 32,3               | 21,2               | 13,5               |                   |      |   |
|                                  |                                | Actuator<br>DP 33 | Air supply pressure min. (bar)   | 1,4              | I.               | 34,2 <sup>d)</sup> | 34,2 <sup>d)</sup> | 20,2 <sup>d)</sup> | 15,1 <sup>d)</sup> | 8,1 <sup>d)</sup>  | 4,9 <sup>d)</sup>  | 2,5 <sup>d)</sup>  | 1,4 <sup>d)</sup> |      |   |
|                                  |                                |                   |  |                  | II.              | 31 <sup>d)</sup>   | 31 <sup>d)</sup>   | 18,3 <sup>d)</sup> | 13,6 <sup>d)</sup> | 7,3 <sup>d)</sup>  | 4,4 <sup>d)</sup>  | 2,1 <sup>d)</sup>  | 1,1 <sup>d)</sup> |      |   |
|                                  |                                |                   |  |                  | III.             | 19,1 <sup>d)</sup> | 19,1 <sup>d)</sup> | 16,6 <sup>d)</sup> | 12,3 <sup>d)</sup> | 5,9 <sup>d)</sup>  | 3,5 <sup>d)</sup>  | 1,8 <sup>d)</sup>  |                   |      |   |
| 2                                | I.                             |                   |  | 40 <sup>d)</sup> | 40 <sup>d)</sup> | 40 <sup>d)</sup>   | 40 <sup>d)</sup>   | 25,2 <sup>d)</sup> | 16 <sup>d)</sup>   | 9,2 <sup>d)</sup>  | 5,9 <sup>d)</sup>  | 3,6 <sup>d)</sup>  |                   |      |   |
|                                  | II.                            |                   |  | 40 <sup>d)</sup> | 40 <sup>d)</sup> | 40 <sup>d)</sup>   | 40 <sup>d)</sup>   | 24,3 <sup>d)</sup> | 15,5 <sup>d)</sup> | 8,7 <sup>d)</sup>  | 5,6 <sup>d)</sup>  | 3,4 <sup>d)</sup>  |                   |      |   |
|                                  | III.                           |                   |  | 40 <sup>d)</sup> | 40 <sup>d)</sup> | 40 <sup>d)</sup>   | 40 <sup>d)</sup>   | 23 <sup>d)</sup>   | 14,6 <sup>d)</sup> | 8,4 <sup>d)</sup>  | 5,4 <sup>d)</sup>  | 3,3 <sup>d)</sup>  |                   |      |   |
| 3                                | I.                             |                   |  |                  |                  |                    |                    | 40 <sup>d)</sup>   | 34,6 <sup>d)</sup> | 20,3 <sup>d)</sup> | 13,3 <sup>d)</sup> | 8,4 <sup>d)</sup>  |                   |      |   |
|                                  | II.                            |                   |  |                  |                  |                    |                    | 40 <sup>d)</sup>   | 34 <sup>d)</sup>   | 19,9 <sup>d)</sup> | 12,9 <sup>d)</sup> | 8,2 <sup>d)</sup>  |                   |      |   |
|                                  | III.                           |                   |  |                  |                  |                    |                    | 40 <sup>d)</sup>   | 33,1 <sup>d)</sup> | 19,6 <sup>d)</sup> | 12,8 <sup>d)</sup> | 8,1 <sup>d)</sup>  |                   |      |   |
| 4                                | I.                             |                   |  |                  |                  |                    |                    |                    | 40 <sup>c)</sup>   | 31,4               | 20,6               | 13,1               |                   |      |   |
|                                  | II.                            |                   |  |                  |                  |                    |                    |                    | 40 <sup>c)</sup>   | 31                 | 20,3               | 12,9               |                   |      |   |
|                                  | III.                           |                   |  |                  |                  |                    |                    |                    | 40 <sup>a)</sup>   | 30,7 <sup>a)</sup> | 20,1 <sup>a)</sup> | 12,8 <sup>a)</sup> |                   |      |   |
| 5                                | I.                             |                   |  |                  |                  |                    |                    |                    |                    | 40                 | 28                 | 17,9               |                   |      |   |
|                                  | II.                            |                   |  |                  |                  |                    |                    |                    |                    | 40                 | 27,7               | 17,7               |                   |      |   |
|                                  | III.                           |                   |  |                  |                  |                    |                    |                    |                    | 40 <sup>a)</sup>   | 27,5 <sup>a)</sup> | 17,6 <sup>a)</sup> |                   |      |   |
| 6                                | I.                             |                   |  |                  |                  |                    |                    |                    |                    |                    | 35,4               | 22,7               |                   |      |   |
|                                  | II.                            |                   |  |                  |                  |                    |                    |                    |                    |                    | 35,1               | 22,5               |                   |      |   |
| Actuator<br>DP 34                | Air supply pressure min. (bar) |                   |  | 1,4              | I.               |                    |                    |                    |                    |                    | 7 <sup>b)</sup>    | 4,4 <sup>b)</sup>  | 2,7 <sup>b)</sup> | 1,6  | 1 |
|                                  |                                | II.               |  |                  |                  |                    |                    |                    | 6,6 <sup>b)</sup>  | 4,1 <sup>b)</sup>  | 2,5 <sup>b)</sup>  | 1,4                |                   |      |   |
|                                  |                                | III.              |  |                  |                  |                    |                    |                    | 6,3 <sup>e)</sup>  | 3,9 <sup>e)</sup>  | 2,3 <sup>e)</sup>  |                    |                   |      |   |
|                                  |                                | 2                 | I.   |                  |                  |                    |                    |                    |                    | 20,5 <sup>b)</sup> | 13,3 <sup>b)</sup> | 8,4 <sup>b)</sup>  | 5,3               | 3,6  |   |
|                                  |                                |                   | II.  |                  |                  |                    |                    |                    |                    | 20 <sup>b)</sup>   | 13 <sup>b)</sup>   | 8,2 <sup>b)</sup>  | 5,1               | 3,5  |   |
|                                  |                                |                   | III.   |                  |                  |                    |                    |                    |                    | 19,7 <sup>e)</sup> | 12,9 <sup>e)</sup> | 8,1 <sup>e)</sup>  |                   |      |   |
|                                  |                                | 3                 | I.   |                  |                  |                    |                    |                    |                    | 40 <sup>b)</sup>   | 28,2 <sup>b)</sup> | 18 <sup>b)</sup>   | 11,5              | 7,9  |   |
|                                  |                                |                   | II.  |                  |                  |                    |                    |                    |                    | 40 <sup>b)</sup>   | 27,9 <sup>b)</sup> | 17,8 <sup>b)</sup> | 11,3              | 7,8  |   |
|                                  |                                |                   | III.   |                  |                  |                    |                    |                    |                    | 40 <sup>e)</sup>   | 27,7 <sup>e)</sup> | 17,7 <sup>e)</sup> |                   |      |   |
|                                  |                                | 4                 | I.   |                  |                  |                    |                    |                    |                    |                    | 40 <sup>b)</sup>   | 27,6 <sup>b)</sup> | 17,7              | 12,2 |   |
|                                  |                                |                   | II.  |                  |                  |                    |                    |                    |                    |                    | 40 <sup>b)</sup>   | 27,5 <sup>b)</sup> | 17,5              | 12,1 |   |
|                                  |                                | 5                 |  |                  |                  |                    |                    |                    |                    |                    |                    |                    | 23,9              | 16,6 |   |
|                                  |                                |                   |  |                  |                  |                    |                    |                    |                    |                    |                    |                    | 23,7              | 16,5 |   |
|                                  |                                | 6                 |  |                  |                  |                    |                    |                    |                    |                    |                    |                    | 30,9              | 20,9 |   |
|                                  |                                |                   |  |                  |                  |                    |                    |                    |                    |                    |                    |                    | 29,9              | 20,8 |   |

I. Fig. 440: PTFE-V-ring unit;      II. Fig. 440: PTFE- / pure graphite-packing;      III. Fig. 441: Bellows seal

Air supply pressure max. of pneumatic actuators DP: 6 bar

Air supply pressure max. limit of control valve: a) 5 bar      b) 4,5 bar      c) 4 bar      d) 3,5 bar      e) 3 bar

<sup>1)</sup> Other Kvs-value-reductions are possible with series 445 / 446 (Stainless steel body with screwed seat ring).  
 Max. permissible operating pressures refer to separate data sheet.

| Figure        | PN16 - 12.440 / 12.441 | PN16 - 22.440 / 22.441<br>PN25 - 23.440 / 23.441 | PN25 - 34.440 / 34.441<br>PN40 - 35.440 / 35.441 | PN40 - 55.440 / 55.441              |                                 |
|---------------|------------------------|--|--|-------------------------------------|---------------------------------|
| Pos.          | Description            | Material, Material.No.                           |  |                                     |                                 |
| 1             | Body                   | EN-JL1040,<br>EN-GJL-250                         | EN-JS1049,<br>EN-GJS-400-18U-LT                  | GP240GH+N,<br>1.0619+N              | GX5CrNiMo19-11-2,<br>1.4408     |
| 1.2           | Seat ring              | X20Cr13+QT, 1.4021+QT                            | X20Cr13+QT, 1.4021+QT                            | X20Cr13+QT, 1.4021+QT <sup>5)</sup> | --                              |
| 3             | Plug*                  | X20Cr13+QT, 1.4021+QT                            |  |                                     | X6CrNiMoTi17-12-2, 1.4571       |
| 4             | Straight pin*          | X10CrNi18-8, 1.4310                              |  |                                     | A4 - 70                         |
| 7             | Mounting bonnet        | EN-JL1040, EN-GJL-250                            | EN-JS1049,<br>EN-GJS-400-18U-LT                  | GP240GH+N,<br>1.0619+N              | GX5CrNiMo19-11-2, 1.4408        |
| 8             | Guiding bush           | X20Cr13+QT, 1.4021+QT (hardened)                 |  |                                     | X6CrNiMoTi17-12-2, 1.4571       |
| 9             | Gasket *               | CrNi laminated both sides with pure graphite     |  |                                     |                                 |
| 10            | Studs                  | 25CrMo4, 1.7218                                  |  |                                     | A4 - 70                         |
| 11            | Hexagon nuts           | C35E, 1.1181                                     |  |                                     | A4                              |
| 12            | V-ring unit*           | PTFE   |  |                                     |                                 |
| 14            | Washer *               | X5CrNi18-10, 1.4301                              |  |                                     |                                 |
| 15            | Spring *               | X10CrNi18-8, 1.4310                              |  |                                     |                                 |
| 16            | Bushing *              | Reinforced PTFE                                  |  |                                     |                                 |
| 17            | Gasket *               | Soft iron/ Copper                                |  |                                     |                                 |
| 18            | Scraper *              | Reinforced PTFE                                  |  |                                     |                                 |
| 19            | Screw joint *          | X8CrNiS18-9, 1.4305                              |  |                                     |                                 |
| 20.1          | Bellows housing        | EN-JS1049, EN-GJS-400-18U-LT                     |  | GP240GH+N, 1.0619+N                 | GX5CrNiMo19-11-2, 1.4408        |
| 20.2          | Mounting bonnet        | EN-JS1049, EN-GJS-400-18U-LT                     |  | GP240GH+N, 1.0619+N                 | GX5CrNiMo19-11-2, 1.4408        |
| 20.3          | Stem-/ Bellows unit *  | X20Cr13+QT, 1.4021+QT / X6CrNiTi18-10, 1.4541    |  |                                     | X6CrNiMoTi17-12-2, 1.4571       |
| 20.4          | Guide bushing          | X20Cr13+QT, 1.4021+QT (hardened)                 |  |                                     | X6CrNiMoTi17-12-2, 1.4571       |
| 20.5          | Guide bushing          | X20Cr13+QT, 1.4021+QT (hardened)                 |  |                                     | X6CrNiMoTi17-12-2, 1.4571       |
| 20.6          | Gasket *               | CrNi laminated both sides with pure graphite     |  |                                     |                                 |
| 20.7          | Studs                  | 25CrMo4, 1.7218                                  |  |                                     | A4 - 70                         |
| 20.8          | Hexagon nuts           | C35E, 1.1181                                     |  |                                     | A4                              |
| 20.10         | Packing ring *         | Pure graphite                                    |  |                                     |                                 |
| 20.12         | Washer *               | X5CrNi18-10, 1.4301                              |  |                                     |                                 |
| 20.17         | Screw joint *          | X8CrNiS18-9, 1.4305                              |  |                                     |                                 |
| 23            | Packing ring *         | PTFE or pure graphite                            |  |                                     |                                 |
| 25            | Screw joint *          | X8CrNiS18-9, 1.4305                              |  |                                     |                                 |
| * Spare parts |                        |  |  |                                     | <sup>5)</sup> from DN 65 1.4551 |

**Please indicate when ordering:**

- |                     |                                  |
|---------------------|----------------------------------|
| 1. Figure-No.       | 6. Kvs-value                     |
| 2. Nominal diameter | 7. Flow characteristic           |
| 3. Nominal pressure | 8. Stem sealing                  |
| 4. Body material    | 9. Actuator                      |
| 5. Plug design      | 10. Special design / accessories |

**Example:**

Figure 35.440; nominal diameter DN 100; nominal pressure PN 40; body material 1.0619+N; parabolic plug; kvs 160; equal percentage; stem sealing PTFE-V-ring unit; actuator ARI-PREMIO 5 kN.

Dimensions in mm  
 Weight in kg  
 Pressures in barg (gauge)  
 1 bar  $\hat{=}$  10<sup>5</sup> Pa  $\hat{=}$  0,1 MPa  
 Kvs in m<sup>3</sup>/h  
 1Kvs  $\hat{=}$  0,85 Cv

**Technical data of the valve**

|  |   |      |                      |  |  |
|--|---|------|----------------------|--|--|
| <b>Type:</b>                               | Control valve Fig. 440-441  |      |                      | <b>Guiding:</b>                            | Parabolic plug: Stem guiding<br>V-port plug: Stem and port guiding   |
| <b>Nominal diameter:</b>                   | DN 15-150 (Fig. 441 up to DN100)  |      |                      | <b>Flow characteristic:</b>                | Equal percentage or linear   |
| <b>Nominal pressure:</b>                   | PN 16, PN 25, PN 40   |      |                      | <b>Rangeability:</b>                       | • 50 : 1 on parabolic plug<br>• 30 : 1 on V-port plug  |
| <b>Stem sealing:</b><br>(refer to page 14) | Fig. 440<br>• PTFE-V-ring unit -10°C up to +220°C<br>• PTFE-packing -10°C up to +250°C<br>• Pure graphite-packing -10°C up to +450°C  |      |                      | <b>Shut off class:</b>                     | • Metal seat - Leakage class IV<br>acc. to DIN EN 1349 or IEC 60534-4<br>• Soft seat - Leakage class VI<br>acc. to DIN EN 1349 or IEC 60534-4  |
|  | Fig. 441<br>• Stainless steel bellows seal<br>with safety stuffing box -60°C up to +450°C   |      |                      |  |  |
| <b>Body material:</b>                      | EN-JL1040   | PN16 | Fig. 12.440 / 12.441 | <b>Selection of possible applications:</b> | <b>Fig. 440</b><br>• Cooling water<br>• Cooling brine<br>• Warm water<br>• Hot water<br>• Steam<br>• Gas<br><br><b>Fig. 441</b><br>• Refrigerant<br>• Cooling water<br>• Warm water<br>• Hot water<br>• Thermal oil<br>• Steam<br>• Gas<br><br>- other applications on request - |
|  | EN-JS1049   | PN16 | Fig. 22.440 / 22.441 |  |  |
|  | EN-JS1049   | PN25 | Fig. 23.440 / 23.441 |  |  |
|  | 1.0619+N  | PN25 | Fig. 34.440 / 34.441 |  |  |
|  | 1.0619+N  | PN40 | Fig. 35.440 / 35.441 |  |  |
|  | 1.4408  | PN40 | Fig. 55.440 / 55.441 |  |  |
|  | Other materials and versions on request   |      |                      |  |  |
| <b>Plug design:</b><br>(refer to page 14)  | Standard:<br>• parabolic plug, metal seat   |      |                      |  |  |
|  | Special design:<br>• Parabolic plug with PTFE soft seat (max. 200°C)<br>• V-port plug, metal seat<br>• Parabolic pressure balanced plug, metal seat,<br>Material of piston seal:<br>PTFE with stainless steel spring (max. 200°C) |      |                      |  |  |

Technical data for actuator refer to corresponding actuator data sheets.

**Pressure-temperature-ratings**

Observe regulations.

| acc. to DIN EN 1092-2 |    | Temperature         |                   |          |          |          |          |          |       |       |
|-----------------------|----|---------------------|-------------------|----------|----------|----------|----------|----------|-------|-------|
| Material              | PN | -60°C up to <-10°C* | -10°C up to 120°C | 150°C    | 200°C    | 250°C    | 300°C    | 350°C    | 400°C | 450°C |
| EN-JL1040             | 16 | ---                 | 16 bar            | 14,4 bar | 12,8 bar | 11,2 bar | 9,6 bar  | ---      | ---   | ---   |
| EN-JS1049             | 16 | on request          | 16 bar            | 15,5 bar | 14,7 bar | 13,9 bar | 12,8 bar | 11,2 bar | ---   | ---   |
|                       | 25 | on request          | 25 bar            | 24,3 bar | 23 bar   | 21,8 bar | 20 bar   | 17,5 bar | ---   | ---   |

| acc. to DIN EN 1092-1 |    | Temperature         |                  |          |          |          |          |          |          |          |          |
|-----------------------|----|---------------------|------------------|----------|----------|----------|----------|----------|----------|----------|----------|
| Material              | PN | -60°C up to <-10°C* | -10°C up to 50°C | 100°C    | 150°C    | 200°C    | 250°C    | 300°C    | 350°C    | 400°C    | 450°C    |
| 1.0619+N              | 25 | 18,7 bar            | 25 bar           | 23,3 bar | 21,7 bar | 19,4 bar | 17,8 bar | 16,1 bar | 15 bar   | 14,4 bar | 13,9 bar |
|                       | 40 | 30 bar              | 40 bar           | 37,3 bar | 34,7 bar | 30,2 bar | 28,4 bar | 25,8 bar | 24 bar   | 23,1 bar | 22,2 bar |
| 1.4408                | 40 | 40 bar              | 40 bar           | 37,3 bar | 33,8 bar | 31,1 bar | 29,3 bar | 27,6 bar | 26,7 bar | 25,6 bar | ---      |

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

\* Valve with extended bonnet, studs and nuts made of A4-70 (at temperatures below -10°C)

ARI-Valves of EN-JL1040 are not allowed in systems acc. to TRD 110.

A production allowance acc. to TRB 801 No. 45 exists. (acc. to TRB 801 No. 45 EN-JL1040 is not allowed.)

**Valve dimensions**

Face to face dimension FTF series 1 according to DIN EN 558-1 (DIN 3202-1 series F1)

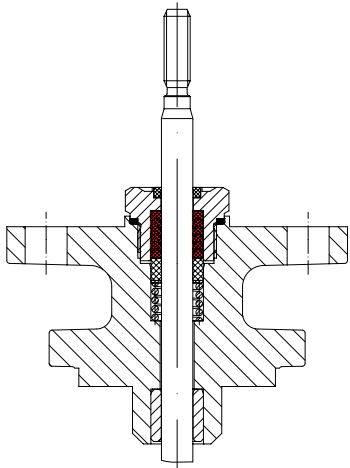
| DN |      | 15  | 20  | 25  | 32  | 40  | 50  | 65  | 80  | 100 | 125 | 150 |
|----|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| L  | (mm) | 130 | 150 | 160 | 180 | 200 | 230 | 290 | 310 | 350 | 400 | 480 |

**Flange dimensions**

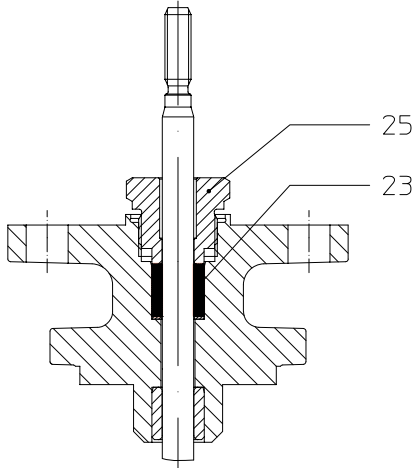
Flanges acc. to DIN EN 1092-1/-2 (Flangeholes/-thickness tolerances acc. to DIN 2533/2544/2545)

| DN    |               | 15     | 20     | 25     | 32     | 40     | 50     | 65     | 80     | 100    | 125    | 150    |
|-------|---------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| PN 16 | ∅ D (mm)      | 95     | 105    | 115    | 140    | 150    | 165    | 185    | 200    | 220    | 250    | 285    |
|       | ∅ K (mm)      | 65     | 75     | 85     | 100    | 110    | 125    | 145    | 160    | 180    | 210    | 240    |
|       | n x ∅ d1 (mm) | 4 x 14 | 4 x 14 | 4 x 14 | 4 x 18 | 4 x 18 | 4 x 18 | 4 x 18 | 8 x 18 | 8 x 18 | 8 x 18 | 8 x 22 |
| PN 25 | ∅ D (mm)      | 95     | 105    | 115    | 140    | 150    | 165    | 185    | 200    | 235    | 270    | 300    |
|       | ∅ K (mm)      | 65     | 75     | 85     | 100    | 110    | 125    | 145    | 160    | 190    | 220    | 250    |
|       | n x ∅ d1 (mm) | 4 x 14 | 4 x 14 | 4 x 14 | 4 x 18 | 4 x 18 | 4 x 18 | 8 x 18 | 8 x 18 | 8 x 22 | 8 x 26 | 8 x 26 |
| PN 40 | ∅ D (mm)      | 95     | 105    | 115    | 140    | 150    | 165    | 185    | 200    | 235    | 270    | 300    |
|       | ∅ K (mm)      | 65     | 75     | 85     | 100    | 110    | 125    | 145    | 160    | 190    | 220    | 250    |
|       | n x ∅ d1 (mm) | 4 x 14 | 4 x 14 | 4 x 14 | 4 x 18 | 4 x 18 | 4 x 18 | 8 x 18 | 8 x 18 | 8 x 22 | 8 x 26 | 8 x 26 |

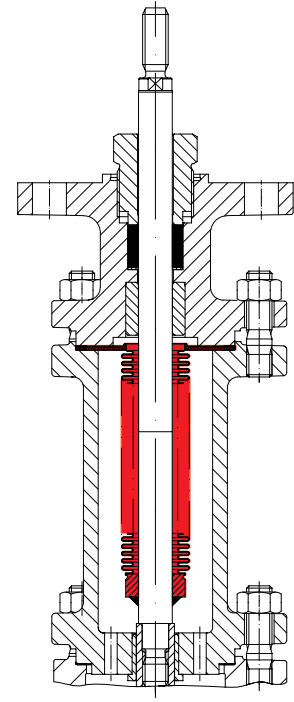
**Stem sealings**



Spring-loaded PTFE-V-ring unit

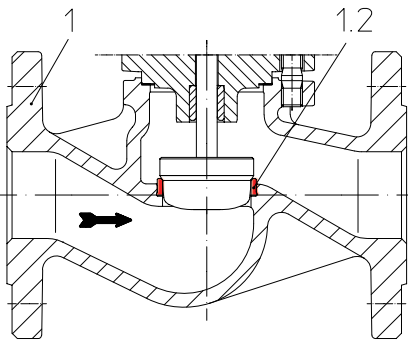


PTFE-/ Pure graphite-packing

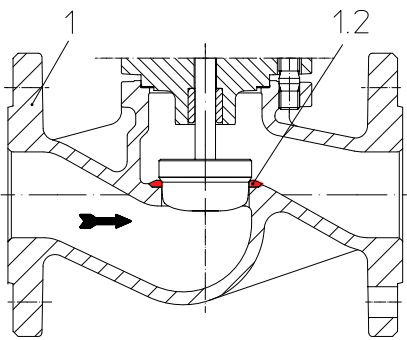


Bellows seal with safety stuffing box

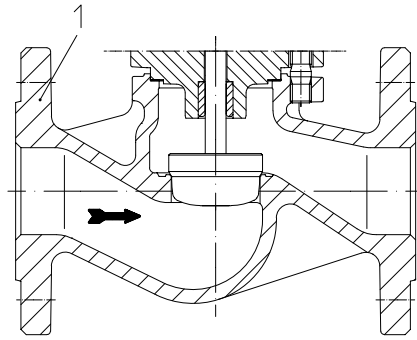
**Body designs**



Body with pressed seat ring  
 (EN-JL1040, EN-JS1049)

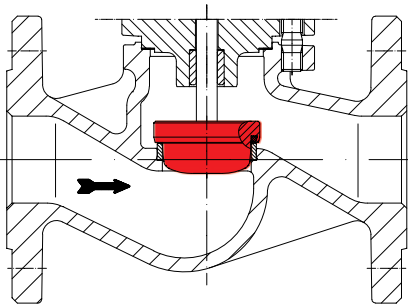


Body with welded seat  
 (1.0619+N)

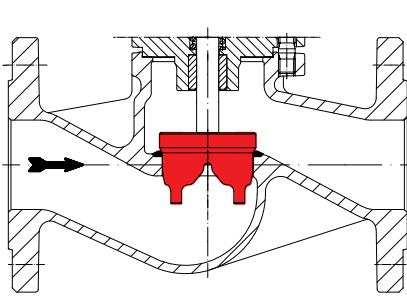


Body with machined seat  
 (1.4408)

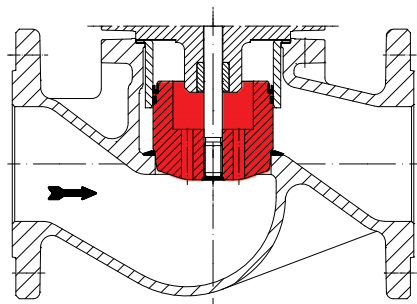
**Plug designs**



Parabolic plug with PTFE soft seat and  
 stem guiding



V-port plug with stem and  
 port guiding



Parabolic pressure balanced plug



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