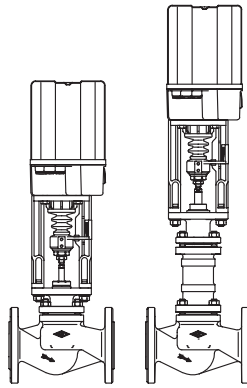


Control valve - straight through with flanges
DN 15 - 150

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

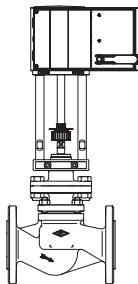
- Enclosure IP 65
- 2 torque switches
- Handwheel
- Additional devices available, e.g. potentiometer



Page 2


ARI-STEVI® 440
Electric actuator FR1
with safety reset

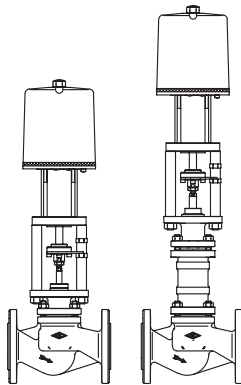
- Operating mode for safety reset CLOSE
- Enclosure IP 66
- Operating time einstellbar
- Additional devices available, e.g. potentiometer



Page 6

ARI-STEVI® 440 / 441
Electric actuator FR2
with safety reset

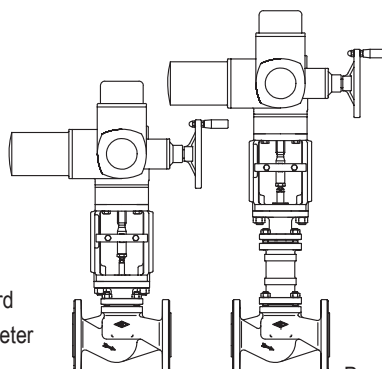
- Type approval acc. to DIN 32730  for Fig. 440 with FR 2.1
- CE-marking from DN15
- Optional direction for safety reset, OPEN or CLOSE, as required
- Enclosure IP 54
- 1 travel switch for OPEN and CLOSE
- Additional devices available, e.g. potentiometer



Page 10

ARI-STEVI® 440 / 441
Electric actuator AUMA SAR

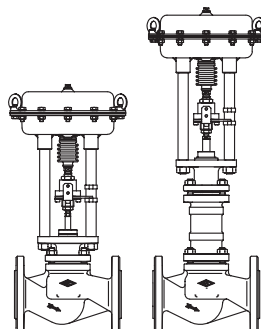
- Electric multiturn actuator, capable of high closing pressures
- Enclosure IP 67
- 2 torque switches
- 2 travel switches
- Handwheel
- Overheating protection for motor as standard
- Additional devices available, e.g. potentiometer
- Explosion proof version available



Page 14

ARI-STEVI® 440 / 441
Pneumatic actuator ARI-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 18

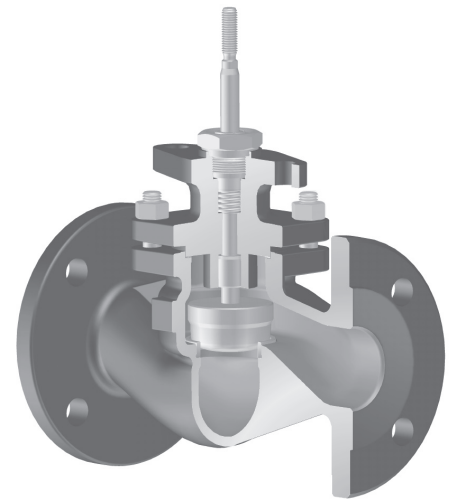


Fig. 440

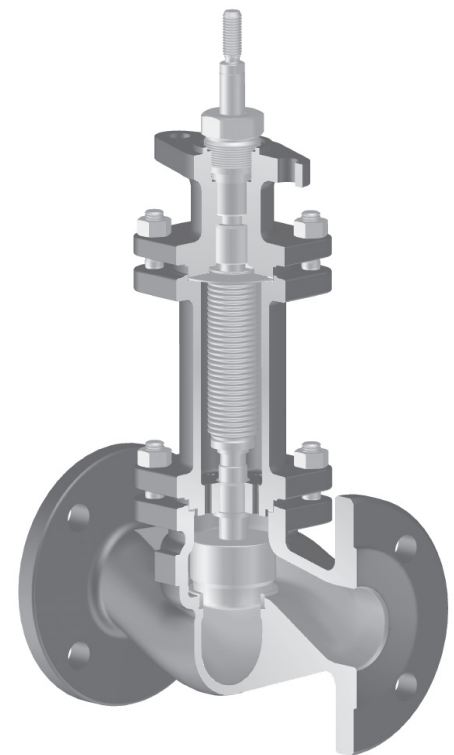


Fig. 441

Features:

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

Control valve in straightway form with electric actuator ARI-PREMIO

| Figure | Nominal pressure | Material | Nominal diameter |
|-----------------|------------------|-----------|------------------|
| 12.440 / 12.441 | PN16 | EN-JL1040 | DN15-150 |
| 22.440 / 22.441 | PN16 | EN-JS1049 | DN15-150 |
| 23.440 / 23.441 | PN25 | EN-JS1049 | DN15-150 |
| 34.440 / 34.441 | PN25 | 1.0619+N | DN15-150 |
| 35.440 / 35.441 | PN40 | 1.0619+N | DN15-150 |
| 55.440 / 55.441 | PN40 | 1.4408 | DN15-150 |

Other materials and versions on request.

Stem sealing
 Fig. 440: • PTFE-V-ring unit -10°C up to +220°C
 • PTFE-packing -10°C up to +250°C
 • Pure graphite-packing -10°C up to +450°C
 Fig. 441: • Stainless steel bellows seal with safety stuffing box -60°C up to +450°C

Plug design
 standard: • Parabolic plug, metal seat
 optional:
 • Parabolic plug with PTFE soft seat (max. 200°C)
 • V-port plug, metal seat
 • Parabolic pressure balanced plug, metal seat,
 Material of piston seal:
 PTFE with stainless steel spring (max. 200°C)

Guiding
 • Parabolic plug: Stem guiding
 • V-port plug: Stem and port guiding

Flow characteristic
 • Equal percentage or linear

Rangeability
 • 50 : 1 on parabolic plug
 • 30 : 1 on V-port plug

Shut off class (seat / plug leakage classes)
 • Metal seat - Leakage class IV acc. to DIN EN 1349 or IEC 60534-4
 • Soft seat Leakage - class VI acc. to DIN EN 1349 or IEC 60534-4

Closing pressures refer to page 4.
 Technical data for actuator refer to data sheet.

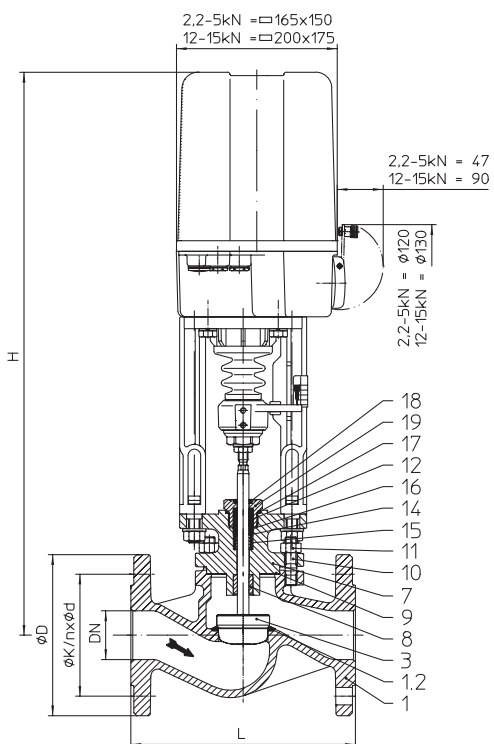


Fig. 440

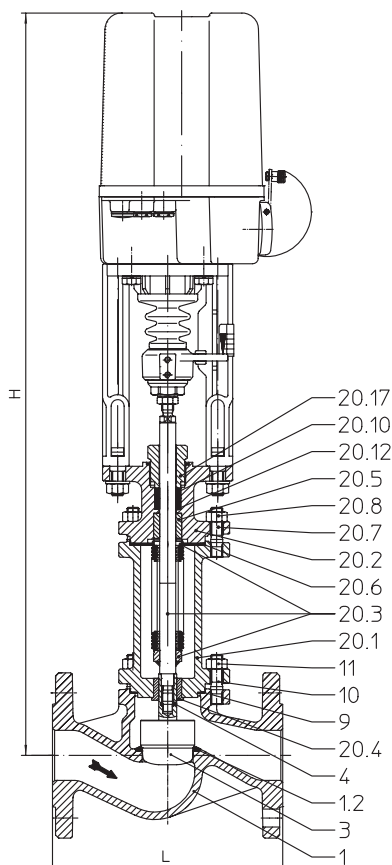


Fig. 441

Selection of possible applications

Industrial installations, processing technology, plant manufacturing, etc.
 (other applications on request)

Selection of possible flow media

Fig. 440: Cooling water, cooling brine, warm water, hot water, steam, gas, etc.

Fig. 441: Refrigerant, Cooling water, warm water, hot water, thermal oil, steam, gas, etc.
 (other flow media on request)

Dimensions and weights

| DN | | 15 | 20 | 25 | 32 | 40 | 50 | 65 | 80 | 100 | 125 | 150 | | |
|----------|-------------------|---------|------|------|------|------|------|------|------|------|------|------|------|-----|
| L | | (mm) | 130 | 150 | 160 | 180 | 200 | 230 | 290 | 310 | 350 | 480 | | |
| Fig. 440 | H | (mm) | 556 | 556 | 564 | 564 | 571 | 577 | 590 | 605 | 624 | 685 | 745 | |
| | ARI-PREMIO 2,2 kN | PN16 | (kg) | 9 | 9,7 | 10,6 | 12,2 | 14,1 | 17 | 22,1 | 27,8 | 38 | -- | -- |
| | | PN25/40 | (kg) | 9,8 | 10,6 | 11,9 | 13,7 | 16,2 | 18,9 | 26,1 | 32,3 | 45 | -- | -- |
| | ARI-PREMIO 5 kN | PN16 | (kg) | 10,1 | 10,8 | 11,7 | 13,3 | 15,2 | 18,1 | 23,2 | 28,9 | 39 | 66 | 88 |
| | | PN25/40 | (kg) | 10,9 | 11,7 | 13 | 14,8 | 17,3 | 20 | 27,2 | 33,4 | 46 | 78 | 110 |
| | H | (mm) | -- | -- | --- | -- | 721 | 727 | 740 | 755 | 774 | 833 | 893 | |
| | ARI-PREMIO 12 kN | PN16 | (kg) | -- | -- | -- | -- | 19,2 | 22,1 | 27,2 | 32,9 | 43 | 70 | 92 |
| | | PN25/40 | (kg) | -- | -- | -- | -- | 21,3 | 24 | 31,2 | 37,4 | 50 | 82 | 114 |
| Fig. 441 | H | (mm) | 741 | 741 | 749 | 749 | 740 | 742 | 826 | 838 | 854 | 1040 | 1071 | |
| | ARI-PREMIO 2,2 kN | PN16 | (kg) | 13,4 | 13,4 | 14,4 | 16,9 | 19,4 | 21,9 | 24,9 | 35,9 | 51 | -- | -- |
| | | PN25/40 | (kg) | 15,4 | 16,9 | 19,4 | 22,4 | 28,4 | 30,9 | 37,9 | 47,9 | 64 | -- | -- |
| | ARI-PREMIO 5 kN | PN16 | (kg) | 14,5 | 14,5 | 15,5 | 18 | 20,5 | 23 | 26 | 37 | 53 | 73 | 105 |
| | | PN25/40 | (kg) | 16,5 | 18 | 20,5 | 23,5 | 29,5 | 32 | 39 | 49 | 66 | 85 | 130 |
| | H | (mm) | -- | -- | -- | -- | 890 | 892 | 976 | 988 | 1004 | 1188 | 1219 | |
| | ARI-PREMIO 12 kN | PN16 | (kg) | -- | -- | -- | -- | 24,5 | 27 | 30 | 41 | 57 | 77 | 109 |
| | | PN25/40 | (kg) | -- | -- | -- | -- | 33,5 | 36 | 43 | 53 | 70 | 89 | 134 |

Standard-flange dimensions refer to page 23.

Face-to-face dimension FTF series 1 according to DIN EN 558-1

Parts

| Pos. | Description | Fig. 12.440 Fig. 12.441 | Fig. 22.440 / Fig. 23.440 Fig. 22.441 / Fig. 23.441 | Fig. 34.440 / Fig. 35.440 Fig. 34.441 / Fig. 35.441 | Fig. 55.440 Fig. 55.441 |
|-------|------------------------|---|--|--|----------------------------|
| 1 | Body | EN-GJL-250 , EN-JL 1040 | EN-GJS-400-18U-LT, EN-JS1049 | GP240GH+N, 1.0619+N | GX5CrNiMo19-11-2, 1.4408 |
| 1.2 | Seat ring | X20Cr13+QT, 1.4021+QT | | X20Cr13+QT, 1.4021+QT >DN50: G19 9 Nb Si, 1.4551 | -- |
| 3 | Plug * | X20Cr13+QT, 1.4021+QT | | | X6CrNiMoTi17-12-2, 1.4571 |
| 4 | Straight spin * | X10CrNi18-8, 1.4310 | | | A4 - 70 |
| 5 | Stem | X20Cr13+QT, 1.4021+QT (DN125-150) | | | X6CrNiMoTi17-12-2, 1.4571 |
| 7 | Mounting bonnet | EN-GJS-400-18U-LT, EN-JS1049 | | GP240GH+N, 1.0619+N | GX5CrNiMo19-11-2, 1.4408 |
| 8 | Guide bushing | X20Cr13+QT, 1.4021+QT (hardened) | | | X6CrNiMoTi17-12-2, 1.4571 |
| 9 | Gasket * | Pure graphite (CrNi laminated with 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 * | PTFE (reinforced) | | | |
| 17 | Sealing ring * | Cu / Soft iron | | | |
| 18 | Scraper * | PTFE (reinforced) | | | |
| 19 | Screw joint * | X8CrNiS18-9, 1.4305 | | | |
| 20.1 | Bellows housing | EN-GJS-400-18U-LT, EN-JS1049 | | GP240GH+N, 1.0619+N | GX5CrNiMo19-11-2, 1.4408 |
| 20.2 | Mounting bonnet | EN-GJS-400-18U-LT, EN-JS1049 | | 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 * | Pure graphite (CrNi laminated with 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 | | | |

* Spare parts

Information / restriction of technical rules need to be observed!

ARI-Valves of EN-JL1040 are not allowed to be operated 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.)

The engineer, designing a system or a plant, is responsible for the selection of the correct valve.

max. permissible closing pressures on flow-to-open P2 = 0

(Observe regulations, refer to page 23. Plug design acc. to „Selection STEVI“, refer to techn. annex.)

| DN | 15 | 20 | 25 | 32 | 40 | 50 | 65 | 80 | 100 | 125 | 150 | | |
|--|---|--------|------|------|------|------|------|------|------|------|------|-----|-----|
| Seat- σ (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 ³⁾ | 2,5 | 4; 2,5 | 6,3 | 10 | 16 | 25 | 40 | 63 | 100 | 160 | 250 | | |
| Travel (mm) | 20 | | | | | | 30 | | | 50 | | | |
| Actuator ¹⁾ ARI-PREMIO 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 ²⁾ (s) (Op. speed 0,38 mm/s) | 53 | | | | | | 79 | | | | | |
| Actuator ¹⁾ ARI-PREMIO 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 | 2,7 | 1,8 |
| | Operating time ²⁾ (s) (Op. speed 0,38 mm/s) | 53 | | | | | | 79 | | | 132 | | |
| Actuator ¹⁾ ARI-PREMIO 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 | 8,3 | 5,7 | |
| | Operating time ²⁾ (s) (Op. speed 0,79 mm/s) | | | | | 25 | | 38 | | | 63 | | |
| Actuator ¹⁾ ARI-PREMIO 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 | 10,6 | 7,3 | |
| | Operating time ²⁾ (s) (Op. speed 0,38 mm/s) | | | | | | | 79 | | | 132 | | |

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

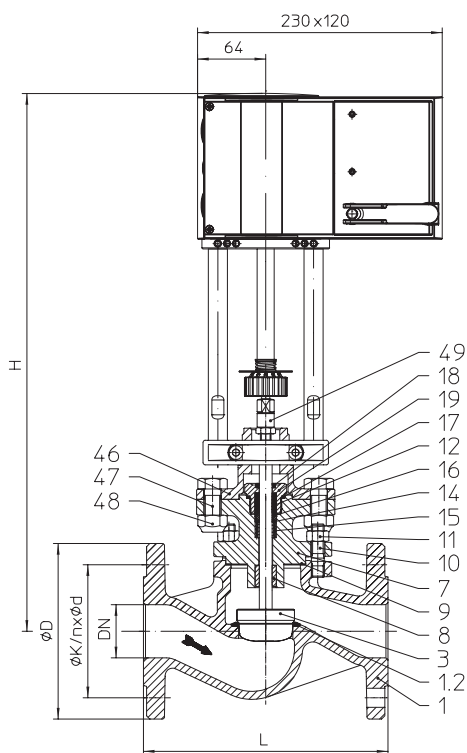
II. Fig. 440: PTFE- / pure graphite-packing;

III. Fig. 441: Bellows seal

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 50Hz.

³⁾ Other Kvs-value-reductions are possible with screwed seat ring (Fig. 445/446 or Fig. 470/471).
For max. permissible closing pressures refer to corresponding data sheet.

Control valve in straightway form with electric actuator FR 1.2 with safety reset

Fig. 440

| Figure | Nominal pressure | Material | Nominal diameter |
|--------|------------------|-----------|------------------|
| 12.440 | PN16 | EN-JL1040 | DN15-100 |
| 22.440 | PN16 | EN-JS1049 | DN15-100 |
| 23.440 | PN25 | EN-JS1049 | DN15-100 |
| 34.440 | PN25 | 1.0619+N | DN15-100 |
| 35.440 | PN40 | 1.0619+N | DN15-100 |
| 55.440 | PN40 | 1.4408 | DN15-100 |

Other materials and versions on request.

Stem sealing
 Fig. 440: • PTFE-V-ring unit -10°C to 200°C

Plug design
 standard: • Parabolic plug, metal seat
 optional:
 • Parabolic plug with PTFE soft seat (max. 200°C)
 • V-port plug, metal seat
 • Parabolic pressure balanced plug, metal seat,
 Material of piston seal:
 PTFE with stainless steel spring (max. 200°C)

Guiding
 • Parabolic plug: Stem guiding
 • V-port plug: Stem and port guiding

Flow characteristic
 • Equal percentage or linear

Rangeability
 • 50 : 1 on parabolic plug
 • 30 : 1 on V-port plug

Shut off class (seat / plug leakage classes)
 • Metal seat - Leakage class IV acc. to DIN EN 1349 or IEC 60534-4
 • Soft seat Leakage - class VI acc. to DIN EN 1349 or IEC 60534-4

Closing pressures refer to page 8.

Technical data for actuator refer to data sheet.

Selection of possible applications

Industrial installations, processing technology, plant manufacturing, etc.
 (other applications on request)

Selection of possible flow media

Fig. 440: Cooling water, cooling brine, warm water, hot water, steam, gas, etc.
 (other flow media on request)

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. 440 | H | FR 1.2 | (mm) | 502 | 502 | 510 | 510 | 515 | 523 | 536 | 551 | 570 |
| | | FR 1.2 | PN16 | (kg) | 9,3 | 10 | 10,9 | 12,5 | 14,4 | 17,3 | 22,4 | 28,1 |
| | PN25-40 | | (kg) | 10,1 | 10,9 | 12,2 | 14 | 16,5 | 19,2 | 26,4 | 32,6 | 45 |
| | with pressure balanced plug FR 1.2 | PN16 | (kg) | -- | -- | -- | -- | 15,4 | 19,3 | 25,4 | 32,1 | 43 |
| | | PN25-40 | (kg) | -- | -- | -- | -- | 17,5 | 21,2 | 29,4 | 36,6 | 50 |

Standard-flange dimensions refer to page 23.

Face-to-face dimension FTF series 1 according to DIN EN 558-1

Parts

| Pos. | Description | Fig. 12.440 Fig. 12.441 | Fig. 22.440 / Fig. 23.440 Fig. 22.441 / Fig. 23.441 | Fig. 34.440 / Fig. 35.440 Fig. 34.441 / Fig. 35.441 | Fig. 55.440 Fig. 55.441 |
|------|-----------------|--|--|--|------------------------------|
| 1 | Body | EN-GJL-250 , EN-JL1040 | EN-GJS-400-18U-LT, EN-JS1049 | GP240GH+N, 1.0619+N | GX5CrNiMo19-11-2, 1.4408 |
| 1.2 | Seat ring | X20Cr13+QT, 1.4021+QT | | X20Cr13+QT, 1.4021+QT >DN50: G19 9 Nb Si, 1.4551 | -- |
| 3 | Plug * | X20Cr13+QT, 1.4021+QT | | | X6CrNiMoTi17-12-2, 1.4571 |
| 7 | Mounting bonnet | EN-GJS-400-18U-LT, EN-JS1049 | | GP240GH+N, 1.0619+N | GX5CrNiMo19-11-2, 1.4408 |
| 8 | Guide bushing | X20Cr13+QT, 1.4021+QT (hardened) | | | X6CrNiMoTi17-12-2, 1.4571 |
| 9 | Gasket * | Pure graphite (CrNi laminated with 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 * | PTFE (reinforced) | | | |
| 17 | Sealing ring * | Cu / Soft iron | | | |
| 18 | Scraper * | PTFE (reinforced) | | | |
| 19 | Screw joint * | X8CrNiS18-9, 1.4305 | | | |
| 46 | Mounting bonnet | EN-GJS-400-18U-LT, EN-JS1049 | | | |
| 47 | Hexagon screws | 5.6 | | | |
| 48 | Hexagon nuts | 8-A2B | | | |
| 49 | Stem adapter | X20Cr13+QT, 1.4021+QT | | | |

* Spare parts

Information / restriction of technical rules need to be observed!

ARI-Valves of EN-JL1040 are not allowed to be operated 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.)

The engineer, designing a system or a plant, is responsible for the selection of the correct valve.

max. permissible closing pressures on flow-to-open P2 = 0

(Observe regulations, refer to page 23. Plug design acc. to „Selection STEVI“, refer to techn. annex.)

| Fig. 440 with parabolic plug | | | | | | | | | | | |
|--|---------------------------------------|--------|-----|------|------|------|----|-----|-----|-----|--|
| DN | 15 | 20 | 25 | 32 | 40 | 50 | 65 | 80 | 100 | | |
| Seat- ϕ (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 | 2,5 | 4; 2,5 | 6,3 | 10 | 16 | 25 | 40 | 63 | 100 | | |
| Travel (mm) | 20 | | | | | | 30 | | | | |
| Actuator ¹⁾ FR 1.2 2 kN | Closing pressure (bar) I. | 40 | 40 | 27,5 | 20,6 | 11,3 | 7 | 3,8 | 2,3 | 1,3 | |
| | Operating time ²⁾ (s) | 118 | | | | | | 176 | | | |
| | Operating time on voltage failure (s) | 28 | | | | | | 35 | | | |

| Fig. 440 with pressure balanced plug (Design refer to page 16) | | | | | | | | | | |
|---|---------------------------------------|----|----|----|-----|----|----|-----|-----|--|
| DN | 15 | 20 | 25 | 32 | 40 | 50 | 65 | 80 | 100 | |
| Seat- ϕ (mm) | | | | | 41 | 51 | 66 | 81 | 101 | |
| Standard Kvs-values | | | | | 25 | 40 | 63 | 100 | 160 | |
| Reduced Kvs-values | | | | | 16 | 25 | 40 | 63 | 100 | |
| Travel (mm) | | | | | 20 | | | 30 | | |
| Actuator ¹⁾ FR 1.2 2 kN | Closing pressure (bar) I. | | | | 40 | 40 | 40 | 40 | 25 | |
| | Operating time ²⁾ (s) | | | | 118 | | | 176 | | |
| | Operating time on voltage failure (s) | | | | 28 | | | 35 | | |

I. Fig. 440: PTFE-V-ring unit (Medium temperature restricted to 200°C)

1) Motor voltage: 24V 50/60Hz 1~, 24VDC, 230V 50/60Hz 1~
Technical data for actuator refer to data sheet FR1.2

2) Indicated operating times with factory setting.

Control valve in straightway form with electric actuator FR 2.1 / FR 2.2

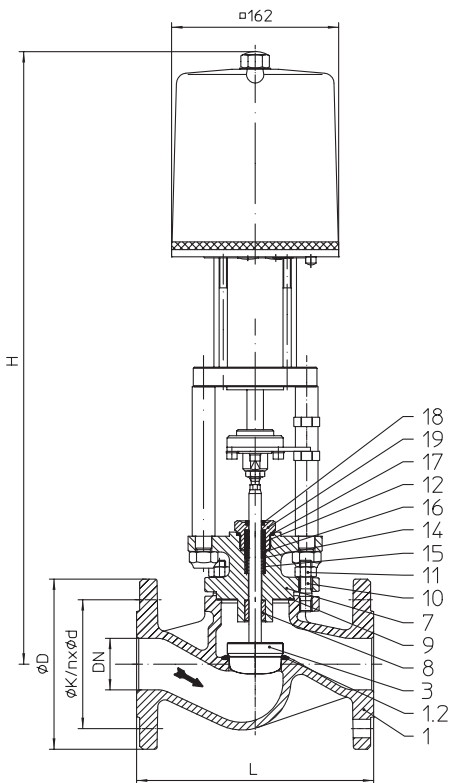


Fig. 440

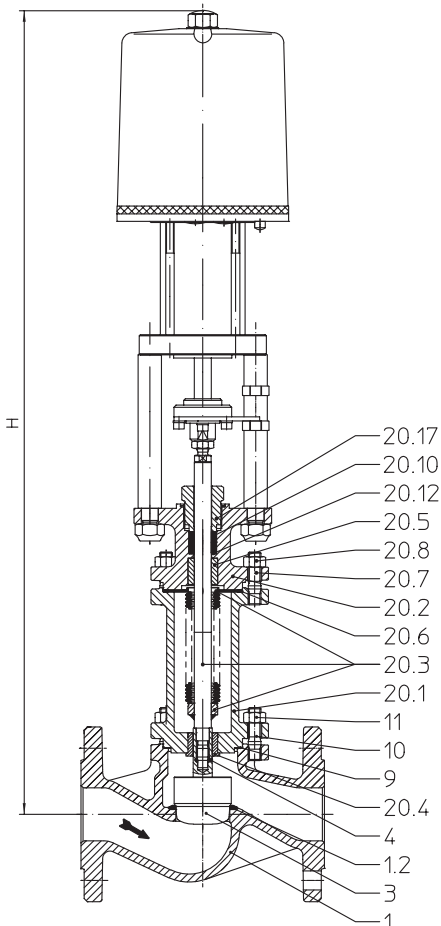


Fig. 441

| Figure | Nominal pressure | Material | Nominal diameter |
|-----------------|------------------|-----------|------------------|
| 12.440 / 12.441 | PN16 | EN-JL1040 | DN15-100 |
| 22.440 / 22.441 | PN16 | EN-JS1049 | DN15-100 |
| 23.440 / 23.441 | PN25 | EN-JS1049 | DN15-100 |
| 34.440 / 34.441 | PN25 | 1.0619+N | DN15-100 |
| 35.440 / 35.441 | PN40 | 1.0619+N | DN15-100 |
| 55.440 / 55.441 | PN40 | 1.4408 | DN15-100 |

Other materials and versions on request.

Ü Control valve Type 440 - FR 2.1 acc. to DIN 32730 (EN-JL1040, EN-JS1049, 1.0619+N)

Stem sealing

- Fig. 440:
- PTFE-V-ring unit -10°C up to +220°C
 - PTFE-packing -10°C up to +250°C
 - Pure graphite-packing -10°C up to +450°C

- Fig. 441:
- Stainless steel bellows seal with safety stuffing box -60°C up to +450°C

Plug design

- standard:
- Parabolic plug, metal seat
- optional:
- Parabolic plug with PTFE soft seat (max. 200°C)
 - V-port plug, metal seat
 - Parabolic pressure balanced plug, metal seat,
Material of piston seal:
PTFE with stainless steel spring (max. 200°C)

Guiding

- Parabolic plug: Stem guiding
- V-port plug: Stem and port guiding

Flow characteristic

- Equal percentage or linear

Rangeability

- 50 : 1 on parabolic plug
- 30 : 1 on V-port plug

Shut off class (seat / plug leakage classes)

- Metal seat - Leakage class IV acc. to DIN EN 1349 or IEC 60534-4
- Soft seat Leakage - class VI acc. to DIN EN 1349 or IEC 60534-4

Closing pressures refer to page 12.

Technical data for actuator refer to data sheet.

Selection of possible applications

Industrial installations, processing technology, plant manufacturing, etc.
(other applications on request)

Selection of possible flow media

Fig. 440: Cooling water, cooling brine, warm water, hot water, steam, gas, etc.

Fig. 441: Refrigerant, Cooling water, warm water, hot water, thermal oil, steam, gas, etc.
(other flow media on request)

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. 440 | 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 |
| | FR 2.1 / 2.2 | PN16 | (kg) | 12,3 | 13 | 13,9 | 15,5 | 17,4 | 20,3 | 25,4 | 31,1 | 41 |
| | | PN25-40 | (kg) | 13,1 | 13,9 | 15,2 | 17 | 19,5 | 22,2 | 29,4 | 35,6 | 48 |
| | with pressure balanced plug FR 2.1 / 2.2 | PN16 | (kg) | -- | -- | -- | -- | 18,4 | 22,3 | 28,4 | 35,1 | 46 |
| | | PN25-40 | (kg) | -- | -- | -- | -- | 20,5 | 24,2 | 32,4 | 39,6 | 53 |
| Fig. 441 | 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 |
| | FR 2.1 / 2.2 | PN16 | (kg) | 16,7 | 16,7 | 17,7 | 20,2 | 22,7 | 25,2 | 28,2 | 39,2 | 55 |
| | | PN25-40 | (kg) | 18,7 | 20,2 | 22,7 | 25,7 | 31,7 | 34,2 | 41,2 | 51,2 | 68 |
| | with pressure balanced plug FR 2.1 / 2.2 | PN16 | (kg) | -- | -- | -- | -- | 23,7 | 27,2 | 31,2 | 43,2 | 60 |
| | | PN25-40 | (kg) | -- | -- | -- | -- | 32,7 | 36,2 | 44,2 | 55,2 | 73 |

Standard-flange dimensions refer to page 23.

Face-to-face dimension FTF series 1 according to DIN EN 558-1

Parts

| Pos. | Description | Fig. 12.440 Fig. 12.441 | Fig. 22.440 / Fig. 23.440 Fig. 22.441 / Fig. 23.441 | Fig. 34.440 / Fig. 35.440 Fig. 34.441 / Fig. 35.441 | Fig. 55.440 Fig. 55.441 |
|-------|------------------------|---|--|--|----------------------------|
| 1 | Body | EN-GJL-250 , EN-JL1040 | EN-GJS-400-18U-LT, EN-JS1049 | GP240GH+N, 1.0619+N | GX5CrNiMo19-11-2, 1.4408 |
| 1.2 | Seat ring | X20Cr13+QT, 1.4021+QT | | | -- |
| 3 | Plug * | X20Cr13+QT, 1.4021+QT | | | X6CrNiMoTi17-12-2, 1.4571 |
| 4 | Straight spin * | X10CrNi18-8, 1.4310 | | | A4 - 70 |
| 7 | Mounting bonnet | EN-GJS-400-18U-LT, EN-JS1049 | | GP240GH+N, 1.0619+N | GX5CrNiMo19-11-2, 1.4408 |
| 8 | Guide bushing | X20Cr13+QT, 1.4021+QT (hardened) | | | X6CrNiMoTi17-12-2, 1.4571 |
| 9 | Gasket * | Pure graphite (CrNi laminated with 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 * | PTFE (reinforced) | | | |
| 17 | Sealing ring * | Cu / Soft iron | | | |
| 18 | Scraper * | PTFE (reinforced) | | | |
| 19 | Screw joint * | X8CrNiS18-9, 1.4305 | | | |
| 20.1 | Bellows housing | EN-GJS-400-18U-LT, EN-JS1049 | | GP240GH+N, 1.0619+N | GX5CrNiMo19-11-2, 1.4408 |
| 20.2 | Mounting bonnet | EN-GJS-400-18U-LT, EN-JS1049 | | 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 * | Pure graphite (CrNi laminated with 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 | | | |

* Spare parts

Information / restriction of technical rules need to be observed!

ARI-Valves of EN-JL1040 are not allowed to be operated 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.)

The engineer, designing a system or a plant, is responsible for the selection of the correct valve.

max. permissible closing pressures on flow-to-open P2 = 0

(Observe regulations, refer to page 23. Plug design acc. to „Selection STEVI“, refer to techn. annex.)

| Fig. 440 / 441 with parabolic plug | | | | | | | | | | | | |
|--|---|------|--|--------|------|------|------|-----|-----------------------------|-----|-----|--|
| DN | | | 15 | 20 | 25 | 32 | 40 | 50 | 65 | 80 | 100 | |
| Seat-ø (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 ³⁾ | | | 2,5 | 4; 2,5 | 6,3 | 10 | 16 | 25 | 40 | 63 | 100 | |
| Travel (mm) | | | 20 | | | | | | 30 | | | |
| Actuator ¹⁾ FR 2.1 1 kN | Closing pressure (bar) | I. | 18 | 18 | 10,3 | 7,4 | 3,6 | 2 | | | | |
| | | II. | 16 | 16 | 9 | 6,5 | 3,2 | 1,7 | | | | |
| | | III. | 9 | 9 | 7,4 | 5,2 | 1,9 | 0,9 | | | | |
| | Operating time ²⁾ (s) (Op. speed 0,29 mm/s) | | 69 | | | | | | | | | |
| Operating time on voltage failure (s) | | 5,5 | | | | | | | | | | |
| Actuator ¹⁾ FR 2.2 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 ²⁾ (s) (Op. speed 0,29 mm/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 | | | |

| Fig. 440 / 441 with pressure balanced plug (Design refer to page 16) | | | | | | | | | | | | |
|--|---|------|--|-----|-----|----|----|-----|-----------------------------|-----|--|--|
| DN | | | | 25 | 32 | 40 | 50 | 65 | 80 | 100 | | |
| Seat-ø (mm) | | | | 27 | 31 | 41 | 51 | 66 | 81 | 101 | | |
| Standard Kvs-values | | | | 10 | 16 | 25 | 40 | 63 | 100 | 160 | | |
| Reduced Kvs-values ³⁾ | | | | 6,3 | 10 | 16 | 25 | 40 | 63 | 100 | | |
| Travel (mm) | | | | 20 | | | | 30 | | | | |
| Actuator ¹⁾ FR 2.1 1 kN | Closing pressure (bar) | I. | | 20 | 20 | 20 | 16 | 16 | 16 | 12 | | |
| | | II. | | | | 20 | 16 | 16 | | | | |
| | | III. | | | | 16 | 15 | 2 | | | | |
| | Operating time ²⁾ (s) (Op. speed 0,29 mm/s) | | | | 69 | | | | 103 | | | |
| Operating time on voltage failure (s) | | | | 5,5 | | | | 8,5 | | | | |
| Actuator ¹⁾ FR 2.2 2,2 kN | Closing pressure (bar) | I. | | | | 40 | 40 | 40 | 40 | | | |
| | | II. | | | | 40 | 40 | 40 | 40 | | | |
| | | III. | | | | 40 | 40 | 40 | 40 | 40 | | |
| | Operating time ²⁾ (s) (Op. speed 0,29 mm/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 Type 440 - FR 2.1 acc. to DIN 32730 (EN-JL1040, EN-JS1049, 1.0619+N)

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

2) Indicated operating times with 50Hz.

3) Other Kvs-value-reductions are possible with screwed seat ring (Fig. 445/446 or Fig. 470/471).
For max. permissible closing pressures refer to corresponding data sheet.

Control valve in straightway form with electric actuator AUMA

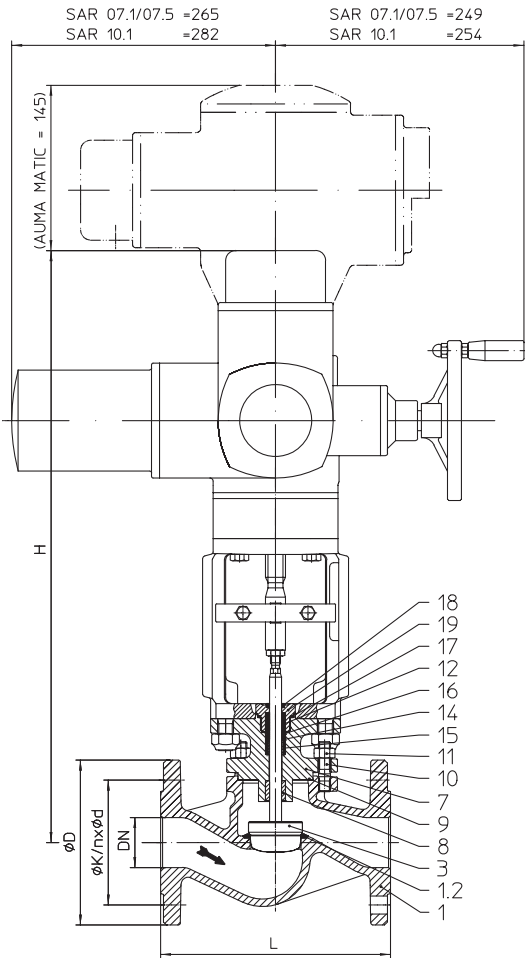


Fig. 440

| Figure | Nominal pressure | Material | Nominal diameter |
|-----------------|------------------|-----------|------------------|
| 12.440 / 12.441 | PN16 | EN-JL1040 | DN40-150 |
| 22.440 / 22.441 | PN16 | EN-JS1049 | DN40-150 |
| 23.440 / 23.441 | PN25 | EN-JS1049 | DN40-150 |
| 34.440 / 34.441 | PN25 | 1.0619+N | DN40-150 |
| 35.440 / 35.441 | PN40 | 1.0619+N | DN40-150 |
| 55.440 / 55.441 | PN40 | 1.4408 | DN40-150 |

Other materials and versions on request.

Stem sealing

- Fig. 440:
- PTFE-V-ring unit -10°C up to +220°C
 - PTFE-packing -10°C up to +250°C
 - Pure graphite-packing -10°C up to +450°C

- Fig. 441:
- Stainless steel bellows seal with safety stuffing box -60°C up to +450°C

Plug design

- standard:
- Parabolic plug, metal seat
- optional:
- Parabolic plug with PTFE soft seat (max. 200°C)
 - V-port plug, metal seat
 - Parabolic pressure balanced plug, metal seat,
Material of piston seal:
PTFE with stainless steel spring (max. 200°C)

Guiding

- Parabolic plug: Stem guiding
- V-port plug: Stem and port guiding

Flow characteristic

- Equal percentage or linear

Rangeability

- 50 : 1 on parabolic plug
- 30 : 1 on V-port plug

Shut off class (seat / plug leakage classes)

- Metal seat - Leakage class IV acc. to DIN EN 1349 or IEC 60534-4
- Soft seat Leakage - class VI acc. to DIN EN 1349 or IEC 60534-4

Closing pressures refer to page 16.

Technical data for actuator refer to data sheet.

Selection of possible applications

Industrial installations, processing technology, plant manufacturing, etc.
(other applications on request)

Selection of possible flow media

Fig. 440: Cooling water, cooling brine, warm water, hot water, steam, gas, etc.

Fig. 441: Refrigerant, Cooling water, warm water, hot water, thermal oil, steam, gas, etc.
(other flow media on request)

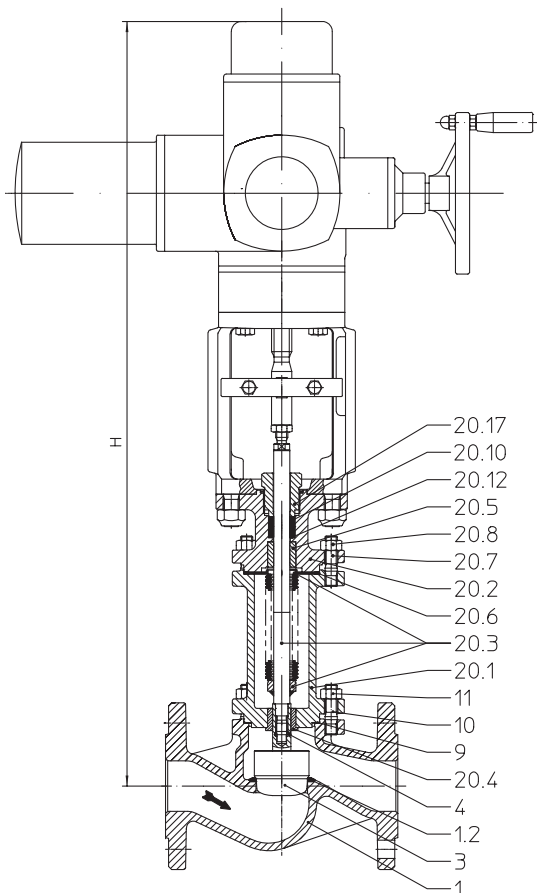


Fig. 441

Dimensions and weights

| DN | | | 40 | 50 | 65 | 80 | 100 | 125 | 150 | |
|----------|---------------|---------|------|------|------|------|------|------|------|-----|
| L | | (mm) | 200 | 230 | 290 | 310 | 350 | 400 | 480 | |
| Fig. 440 | H | (mm) | 611 | 617 | 630 | 645 | 664 | 703 | 763 | |
| | AUMA SAR 07.1 | PN16 | (kg) | 35 | 37,9 | 44,5 | 50,2 | 60 | 87 | 109 |
| | | PN25/40 | (kg) | 37,1 | 39,8 | 48,5 | 54,7 | 68 | 99 | 131 |
| | AUMA SAR 10.1 | PN16 | (kg) | -- | -- | 49 | 54,7 | 65 | 91 | 113 |
| | | PN25/40 | (kg) | -- | -- | 53 | 59,2 | 72 | 103 | 135 |
| Fig. 441 | H | (mm) | 780 | 782 | 866 | 878 | 894 | 1058 | 1089 | |
| | AUMA SAR 07.1 | PN16 | (kg) | 40,3 | 44,3 | 47,3 | 58,3 | 74 | 94 | 126 |
| | | PN25/40 | (kg) | 49,3 | 53,3 | 60,3 | 70,3 | 87 | 106 | 151 |
| | AUMA SAR 10.1 | PN16 | (kg) | | | | | | 98 | 130 |
| | | PN25/40 | (kg) | | | | | | 110 | 155 |

Standard-flange dimensions refer to page 23.

(For version with AUMA SAR Ex other heights.)

Face-to-face dimension FTF series 1 according to DIN EN 558-1

Parts

| Pos. | Description | Fig. 12.440 Fig. 12.441 | Fig. 22.440 / Fig. 23.440 Fig. 22.441 / Fig. 23.441 | Fig. 34.440 / Fig. 35.440 Fig. 34.441 / Fig. 35.441 | Fig. 55.440 Fig. 55.441 |
|-------|------------------------|---|--|--|----------------------------|
| 1 | Body | EN-GJL-250 , EN-JL 1040 | EN-GJS-400-18U-LT, EN-JS1049 | GP240GH+N, 1.0619+N | GX5CrNiMo19-11-2, 1.4408 |
| 1.2 | Seat ring | X20Cr13+QT, 1.4021+QT | | X20Cr13+QT, 1.4021+QT >DN50: G19 9 Nb Si, 1.4551 | -- |
| 3 | Plug * | X20Cr13+QT, 1.4021+QT | | | X6CrNiMoTi17-12-2, 1.4571 |
| 4 | Straight spin * | X10CrNi18-8, 1.4310 | | | A4 - 70 |
| 5 | Stem | X20Cr13+QT, 1.4021+QT (DN125-150) | | | X6CrNiMoTi17-12-2, 1.4571 |
| 7 | Mounting bonnet | EN-GJS-400-18U-LT, EN-JS1049 | | GP240GH+N, 1.0619+N | GX5CrNiMo19-11-2, 1.4408 |
| 8 | Guide bushing | X20Cr13+QT, 1.4021+QT (hardened) | | | X6CrNiMoTi17-12-2, 1.4571 |
| 9 | Gasket * | Pure graphite (CrNi laminated with 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 * | PTFE (reinforced) | | | |
| 17 | Sealing ring * | Cu / Soft iron | | | |
| 18 | Scraper * | PTFE (reinforced) | | | |
| 19 | Screw joint * | X8CrNiS18-9, 1.4305 | | | |
| 20.1 | Bellows housing | EN-GJS-400-18U-LT, EN-JS1049 | | GP240GH+N, 1.0619+N | GX5CrNiMo19-11-2, 1.4408 |
| 20.2 | Mounting bonnet | EN-GJS-400-18U-LT, EN-JS1049 | | 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 * | Pure graphite (CrNi laminated with 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 | | | |

* Spare parts

Information / restriction of technical rules need to be observed!

ARI-Valves of EN-JL1040 are not allowed to be operated 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.)

The engineer, designing a system or a plant, is responsible for the selection of the correct valve.

max. permissible closing pressures on flow-to-open P2 = 0

(Observe regulations, refer to page 23. Plug design acc. to „Selection STEVI“, refer to techn. annex.)

| Fig. 440 | | | | 40 | 50 | 65 | 80 | 100 | 125 | 150 |
|---|----------------------------------|--------|-------------|-----|------|------|------|------|------|------|
| DN | | | | 40 | 50 | 65 | 80 | 100 | 125 | 150 |
| Seat-ø (mm) | | | | 41 | 51 | 66 | 81 | 101 | 126 | 151 |
| Standard Kvs-values | | | | 25 | 40 | 63 | 100 | 160 | 250 | 400 |
| Reduced Kvs-values ³⁾ | | | | 16 | 25 | 40 | 63 | 100 | 160 | 250 |
| Travel (mm) | | | | 20 | | 30 | | 50 | | |
| Actuator ¹⁾ AUMA SAR 07.1 Output drive Form A 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 ²⁾ (s) | | | 54 | | 56 | | 94 | | |
| Output drive (rpm) | | | | 5,6 | | 8 | | 8 | | |
| Actuator ¹⁾ AUMA SAR 07.5 Output drive Form A 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 ²⁾ (s) | | | | 43 | | 64 | | 55 | |
| Output drive (rpm) | | | | | 5,6 | | 5,6 | | 11 | |
| Actuator ¹⁾ AUMA SAR 10.1 Output drive Form A 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 ²⁾ (s) | | | | | | 64 | | 55 | |
| Output drive (rpm) | | | | | | | 5,6 | | 11 | |

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

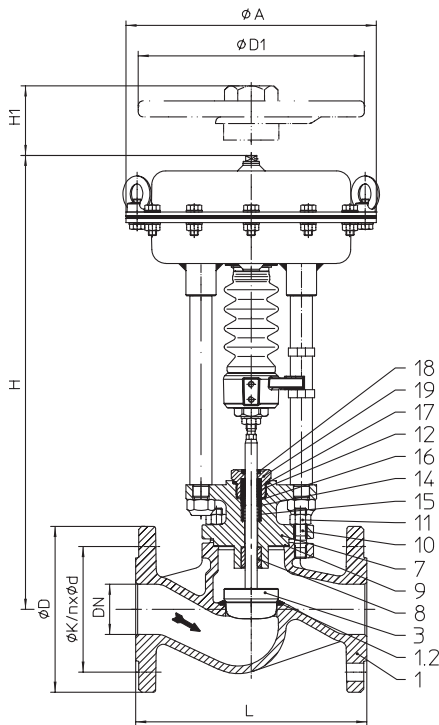
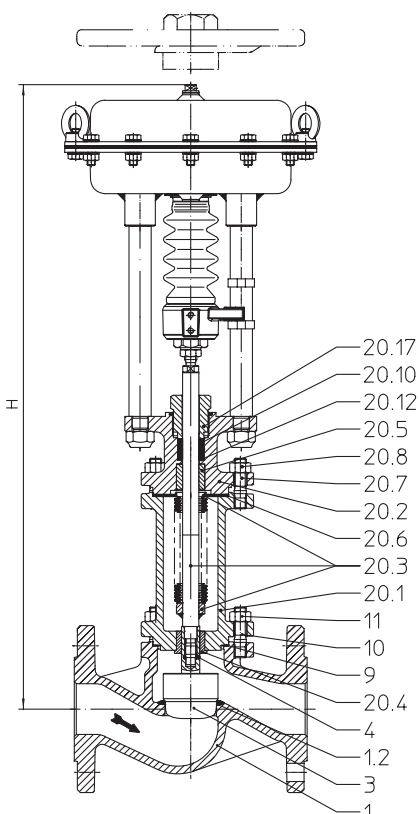
| Fig. 441 | | | | 40 | 50 | 65 | 80 | 100 | 125 | 150 |
|---|----------------------------------|------|-------------|-----|------|------|------|------|------|------|
| DN | | | | 40 | 50 | 65 | 80 | 100 | 125 | 150 |
| Seat-ø (mm) | | | | 41 | 51 | 66 | 81 | 101 | 126 | 151 |
| Standard Kvs-values | | | | 25 | 40 | 63 | 100 | 160 | 250 | 400 |
| Reduced Kvs-values ³⁾ | | | | 16 | 25 | 40 | 63 | 100 | 160 | 250 |
| Travel (mm) | | | | 20 | | 30 | | 50 | | |
| Actuator ¹⁾ AUMA SAR 07.1 Output drive Form A TR 20 x 4 | Closing pressure (bar) | III. | shut off | 40 | 40 | 40 | 29,5 | 18,9 | 11,9 | 8,2 |
| | | | controlling | 40 | 35,7 | 21,1 | 13,8 | 8,7 | 5,4 | 3,6 |
| | Torque (Nm) | | | 15 | 20 | 30 | 30 | 30 | 30 | 30 |
| | Operating time ²⁾ (s) | | | 54 | | 56 | | 94 | | |
| Output drive (rpm) | | | | 5,6 | | 8 | | 8 | | |
| Actuator ¹⁾ AUMA SAR 07.5 Output drive Form A TR 26 x 5 | Closing pressure (bar) | III. | shut off | | 40 | 40 | 30,8 | 19,7 | 17 | 11,8 |
| | | | controlling | | 40 | 30,2 | 19,8 | 12,6 | 7,9 | 5,4 |
| | Torque (Nm) | | | | 30 | 45 | 45 | 45 | 60 | 60 |
| | Operating time ²⁾ (s) | | | | 43 | | 64 | | 55 | |
| Output drive (rpm) | | | | | 5,6 | | 5,6 | | 11 | |
| Actuator ¹⁾ AUMA SAR 10.1 Output drive Form A TR 26 x 5 | Closing pressure (bar) | III. | shut off | | | | | | 26,1 | 18,1 |
| | | | controlling | | | | | | 17 | 11,8 |
| | Torque (Nm) | | | | | | | | 90 | 90 |
| | Operating time ²⁾ (s) | | | | | | | | 55 | |
| Output drive (rpm) | | | | | | | | | 11 | |

III. Fig. 441: Bellows seal

1) Motor voltage: 400V 50Hz 3-
(Other voltages on request)
Technical data for actuator refer to price list.

2) Indicated operating times with 50Hz.

3) Other Kvs-value-reductions are possible with screwed seat ring (Fig. 445/446 or Fig. 470/471).
For max. permissible closing pressures refer to corresponding data sheet.

Control valve in straightway form with pneumatic actuator ARI-DP

Fig. 440

Fig. 441

| Figure | Nominal pressure | Material | Nominal diameter |
|-----------------|------------------|-----------|------------------|
| 12.440 / 12.441 | PN16 | EN-JL1040 | DN15-150 |
| 22.440 / 22.441 | PN16 | EN-JS1049 | DN15-150 |
| 23.440 / 23.441 | PN25 | EN-JS1049 | DN15-150 |
| 34.440 / 34.441 | PN25 | 1.0619+N | DN15-150 |
| 35.440 / 35.441 | PN40 | 1.0619+N | DN15-150 |
| 55.440 / 55.441 | PN40 | 1.0619+N | DN15-150 |

Other materials and versions on request.

Stem sealing

- Fig. 440:
- PTFE-V-ring unit -10°C up to +220°C
 - PTFE-packing -10°C up to +250°C
 - Pure graphite-packing -10°C up to +450°C

- Fig. 441:
- Stainless steel bellows seal with safety stuffing box -60°C up to +450°C

Plug design

 standard:

- Parabolic plug, metal seat

optional:

- Parabolic plug with PTFE soft seat (max. 200°C)
- V-port plug, metal seat
- Parabolic pressure balanced plug, metal seat,
Material of piston seal:
PTFE with stainless steel spring (max. 200°C)

Guiding

- Parabolic plug: Stem guiding
- V-port plug: Stem and port guiding

Flow characteristic

- Equal percentage or linear

Rangeability

- 50 : 1 on parabolic plug
- 30 : 1 on V-port plug

Shut off class (seat / plug leakage classes)

- Metal seat - Leakage class IV acc. to DIN EN 1349 or IEC 60534-4
- Soft seat Leakage - class VI acc. to DIN EN 1349 or IEC 60534-4

Closing pressures refer to page 20.

Technical data for actuator refer to data sheet.

Selection of possible applications

 Industrial installations, processing technology, plant manufacturing, etc.
 (other applications on request)

Selection of possible flow media

Fig. 440: Cooling water, cooling brine, warm water, hot water, steam, gas, etc.

Fig. 441: Refrigerant, Cooling water, warm water, hot water, thermal oil, steam, gas, etc.

(other flow media on request)

Top mounted handwheel

| Actuator | | DP32 | DP33 | DP34 |
|----------|------|------|------|------|
| Ø D1 | (mm) | 225 | 300 | 400 |
| H1 | (mm) | 270 | 284 | 442 |
| Weight | (kg) | 5 | 8 | 17 |

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

Dimensions and weights

| 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 | |
| DP32 | Ø A | | (mm) | 250 | | | | | | | | | -- | -- | |
| | | Fig. 440 | H | (mm) | 442 | 442 | 450 | 450 | 457 | 463 | 476 | 491 | 510 | -- | -- |
| | | | PN16 | (kg) | 12,6 | 13,3 | 14,2 | 15,8 | 17,7 | 20,6 | 25,7 | 31,4 | 42 | -- | -- |
| | Fig. 441 | H | (mm) | 627 | 627 | 635 | 635 | 626 | 628 | 712 | 724 | 740 | -- | -- | |
| | | PN16 | (kg) | 17 | 17 | 18 | 20,5 | 23 | 25,5 | 28,5 | 39,5 | 55 | -- | -- | |
| | | PN25/40 | (kg) | 19 | 20,5 | 23 | 26 | 32 | 34,5 | 41,5 | 51,5 | 68 | -- | -- | |
| DP33 | Ø A | | (mm) | 300 | | | | | | | | | -- | -- | |
| | | Fig. 440 | H | (mm) | 497 | 497 | 505 | 505 | 512 | 518 | 531 | 546 | 565 | -- | -- |
| | | | PN16 | (kg) | 18,6 | 19,3 | 20,2 | 21,8 | 23,7 | 26,6 | 31,7 | 37,4 | 48 | -- | -- |
| | Fig. 441 | H | (mm) | 682 | 682 | 690 | 690 | 681 | 683 | 767 | 779 | 795 | -- | -- | |
| | | PN16 | (kg) | 23 | 23 | 24 | 26,5 | 29 | 31,5 | 34,5 | 45,5 | 61 | -- | -- | |
| | | PN25/40 | (kg) | 25 | 26,5 | 29 | 32 | 38 | 40,5 | 47,5 | 57,5 | 74 | -- | -- | |
| DP34 | Ø A | | (mm) | -- | -- | -- | -- | -- | -- | 405 | | | | | |
| | | Fig. 440 | H | (mm) | -- | -- | -- | -- | -- | -- | 666 | 681 | 700 | 739 | 779 |
| | | | PN16 | (kg) | -- | -- | -- | -- | -- | -- | 61,7 | 67,4 | 78 | 104 | 126 |
| | Fig. 441 | H | (mm) | -- | -- | -- | -- | -- | -- | 902 | 914 | 930 | 1074 | 1105 | |
| | | PN16 | (kg) | -- | -- | -- | -- | -- | -- | 64,5 | 75,5 | 91 | 110 | 143 | |
| | | PN25/40 | (kg) | -- | -- | -- | -- | -- | -- | 77,5 | 87,5 | 104 | 123 | 168 | |

Standard-flange dimensions refer to page 23.

Face-to-face dimension FTF series 1 according to DIN EN 558-1

Parts

| Pos. | Description | Fig. 12.440 Fig. 12.441 | Fig. 22.440 / Fig. 23.440 Fig. 22.441 / Fig. 23.441 | Fig. 34.440 / Fig. 35.440 Fig. 34.441 / Fig. 35.441 | Fig. 55.440 Fig. 55.441 |
|-------|------------------------|---|--|--|----------------------------|
| 1 | Body | EN-GJL-250 , EN-JL 1040 | EN-GJS-400-18U-LT, EN-JS1049 | GP240GH+N, 1.0619+N | GX5CrNiMo19-11-2, 1.4408 |
| 1.2 | Seat ring | X20Cr13+QT, 1.4021+QT | | X20Cr13+QT, 1.4021+QT >DN50: G19 9 Nb Si, 1.4551 | -- |
| 3 | Plug * | X20Cr13+QT, 1.4021+QT | | | X6CrNiMoTi17-12-2, 1.4571 |
| 4 | Straight spin * | X10CrNi18-8, 1.4310 | | | A4 - 70 |
| 5 | Stem | X20Cr13+QT, 1.4021+QT (DN125-150) | | | X6CrNiMoTi17-12-2, 1.4571 |
| 7 | Mounting bonnet | EN-GJS-400-18U-LT, EN-JS1049 | | GP240GH+N, 1.0619+N | GX5CrNiMo19-11-2, 1.4408 |
| 8 | Guide bushing | X20Cr13+QT, 1.4021+QT (hardened) | | | X6CrNiMoTi17-12-2, 1.4571 |
| 9 | Gasket * | Pure graphite (CrNi laminated with 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 * | PTFE (reinforced) | | | |
| 17 | Sealing ring * | Cu / Soft iron | | | |
| 18 | Scraper * | PTFE (reinforced) | | | |
| 19 | Screw joint * | X8CrNiS18-9, 1.4305 | | | |
| 20.1 | Bellows housing | EN-GJS-400-18U-LT, EN-JS1049 | | GP240GH+N, 1.0619+N | GX5CrNiMo19-11-2, 1.4408 |
| 20.2 | Mounting bonnet | EN-GJS-400-18U-LT, EN-JS1049 | | 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 * | Pure graphite (CrNi laminated with 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 | | | |

* Spare parts

Information / restriction of technical rules need to be observed!

ARI-Valves of EN-JL1040 are not allowed to be operated 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.)

The engineer, designing a system or a plant, is responsible for the selection of the correct valve.

max. permissible closing pressures on flow-to-open P2 = 0

(Observe regulations, refer to page 23. Plug design acc. to „Selection STEVI“, refer to techn. annex.)

| Spring closes on air failure | | | | | | | | | | | | | | | | |
|----------------------------------|--------------------|--------------------------------|---------|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|--------|-----|
| 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 ¹⁾ | 2,5 | 4; 2,5 | 6,3 | 10 | 16 | 25 | 40 | 63 | 100 | 160 | 250 | | | | | |
| Travel (mm) | 20 | | | | | | 30 | | | 50 | | | | | | |
| Actuator DP32 | Spring range (bar) | Air supply pressure min. (bar) | 1,2 | I. | 5,5 | 5,5 | 2,6 | 1,6 | | | | | | | | |
| | | | | II. | 2,3 | 2,3 | | | | | | | | | | |
| | | | | III. | | | | | | | | | | | | |
| | | | 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 | | | | | |
| | | | | | III. | 8,6 | 8,6 | 7,1 | 5 | 1,7 | | | | | | |
| | | | 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 | | |
| | | | | | III. | 26,4 | 26,4 | 23,2 | 17,3 | 8,9 | 5,4 | 2,9 | 1,7 | | | |
| | | | 1,5-2,5 | 2,8 | I. | | | 40 | 40 | 23,5 | 15 | | | | | |
| | | | | | II. | | | 40 | 40 | 22,7 | 14,4 | | | | | |
| | | | | | III. | 40 | 40 | 40 | 38,9 | 21,4 | 13,6 | | | | | |
| 2,0-3,3 | 3,6 | I. | | | | | 32,5 | 20,8 | | | | | | | | |
| | | II. | | | | | 31,6 | 20,2 | | | | | | | | |
| | | III. | | | | 40 | 30,3 | 19,4 | | | | | | | | |
| Actuator DP33 | Spring range (bar) | Air supply pressure min. (bar) | 1,2 | I. | 13,3 c) | 13,3 c) | 7,4c) | 5,2 c) | 2,4 c) | 1,2 c) | | | | | | |
| | | | | II. | 10,1 c) | 10,1 c) | 5,4 c) | 3,7 c) | 1,5 c) | | | | | | | |
| | | | | III. | 5 a) | 5 a) | 3,8 a) | 2,5 a) | | | | | | | | |
| | | | 0,4-1,2 | 1,4 | I. | 34,2 c) | 34,2 c) | 20,2 c) | 15,1 c) | 8,1 c) | 4,9 c) | 2,5 | 1,4 | | | |
| | | | | | II. | 31 c) | 31 c) | 18,3 c) | 13,6 c) | 7,3 c) | 4,4 c) | 2,1 | 1,1 | | | |
| | | | | | III. | 19,1 a) | 19,1 a) | 16,6 a) | 12,3 a) | 5,9 a) | 3,5 a) | 1,8 a) | | | | |
| | | | 0,8-2,4 | 2,7 | I. | 40 a) | 40 a) | 40 a) | 34,7 a) | 19,5 a) | 12,3 a) | 7 | 4,4 | 2,6 | | |
| | | | | | II. | 40 a) | 40 a) | 40 a) | 33,2 a) | 18,6 a) | 11,8 a) | 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 a) | 40 a) | 29 a) | | | | | |
| | | | | | II. | | | | 40 a) | 40 a) | 28,4 a) | | | | | |
| | | | | | 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 DP34 | Spring range (bar) | Air supply pressure min. (bar) | 1,2 | I. | | | | | | 2,5 b) | 1,5 b) | | | | | |
| | | | | II. | | | | | | 2,1 b) | 1,2 b) | | | | | |
| | | | | III. | | | | | | 1,8 e) | 1 e) | | | | | |
| | | | 0,4-1,2 | 1,4 | I. | | | | | | | 7 b) | 4,4 b) | 2,7 b) | 1,6 | 1 |
| | | | | | II. | | | | | | | 6,6 b) | 4,1 b) | 2,5 b) | 1,4 | |
| | | | | | III. | | | | | | | 6,3 d) | 3,9 d) | 2,3 d) | 1,3 a) | |
| | | | 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 b) | 9,9 b) | 6,2 b) | 3,7 | 2,5 |
| | | | 1,5-3,0 | 3,3 | I. | | | | | | | | | | 8,4 | 5,7 |
| | | | | | II. | | | | | | | | | | 8,2 | 5,6 |
| | | | | | III. | | | | | | | | | | 8,1 | 5,5 |
| | | | 2,0-4,0 | 4,5 | I. | | | | | | | | | | 11,5 | 7,9 |
| | | | | | II. | | | | | | | | | | 11,3 | 7,8 |
| | | | | | III. | | | | | | | | | | 11,2 | 7,7 |
| | | | 2,1-3,0 | 3,3 | I. | | | | | | | 40 | 29,7 | 19 | | |
| | | | | | II. | | | | | | | 40 | 29,4 | 18,8 | | |
| | | | | | III. | | | | | | | 40 a) | 29,2 a) | 18,7 a) | | |
| 2,4-3,6 | 4,5 | I. | | | | | | | | 34,2 | 21,9 | | | | | |
| | | II. | | | | | | | | 33,9 | 21,7 | | | | | |
| | | III. | | | | | | | | | | | | | | |

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

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

III. Fig. 441: Bellows seal

¹⁾ Other Kvs-value-reductions are possible with screwed seat ring (Fig. 445/446 or Fig. 470/471).
 For max. permissible closing pressures refer to corresponding data sheet.

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

max. permissible closing pressures on flow-to-open P2 = 0

(Observe regulations, refer to page 23. Plug design acc. to „Selection STEVI“, refer to techn. annex.)

Spring opens on air failure

| 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 ¹⁾ | 2,5 | 4; 2,5 | 6,3 | 10 | 16 | 25 | 40 | 63 | 100 | 160 | 250 | | | | |
| Travel (mm) | 20 | | | | | | 30 | | | 50 | | | | | |
| Actuator DP32 | 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 DP33 | Air supply pressure min. (bar) | 1,4 | I. | 34,2 d) | 34,2 d) | 20,2 d) | 15,1 d) | 8,1 d) | 4,9 d) | 2,5 d) | 1,4 d) | | |
| | | | | | II. | 31 d) | 31 d) | 18,3 d) | 13,6 d) | 7,3 d) | 4,4 d) | 2,1 d) | 1,1 d) | | |
| | | | | | III. | 19,1 d) | 19,1 d) | 16,6 d) | 12,3 d) | 5,9 d) | 3,5 d) | 1,8 d) | | | |
| | | | | 2 | I. | 40 d) | 40 d) | 40 d) | 40 d) | 25,2 d) | 16 d) | 9,2 d) | 5,9 d) | 3,6 d) | |
| | | | | | II. | 40 d) | 40 d) | 40 d) | 40 d) | 24,3 d) | 15,5 d) | 8,7 d) | 5,6 d) | 3,4 d) | |
| | | | | | III. | 40 d) | 40 d) | 40 d) | 40 d) | 23 d) | 14,6 d) | 8,4 d) | 5,4 d) | 3,3 d) | |
| 3 | I. | | | | | | | 40 d) | 34,6 d) | 20,3 d) | 13,3 d) | 8,4 d) | | | |
| | II. | | | | | | | 40 d) | 34 d) | 19,9 d) | 12,9 d) | 8,2 d) | | | |
| | III. | | | | | | | 40 d) | 33,1 d) | 19,6 d) | 12,8 d) | 8,1 d) | | | |
| 4 | I. | | | | | | | | 40 c) | 31,4 | 20,6 | 13,1 | | | |
| | II. | | | | | | | | 40 c) | 31 | 20,3 | 12,9 | | | |
| | III. | | | | | | | | 40 a) | 30,7 a) | 20,1 a) | 12,8 a) | | | |
| 5 | I. | | | | | | | | 40 | 28 | 17,9 | | | | |
| | II. | | | | | | | | 40 | 27,7 | 17,7 | | | | |
| | III. | | | | | | | | 40 a) | 27,5 a) | 17,6 a) | | | | |
| 6 | I. | | | | | | | | | 35,4 | 22,7 | | | | |
| | II. | | | | | | | | | 35,1 | 22,5 | | | | |
| Actuator DP34 | Air supply pressure min. (bar) | | | 1,4 | I. | | | | | 7 b) | 4,4 b) | 2,7 b) | 1,6 | 1 | |
| | | | | | II. | | | | | 6,6 b) | 4,1 b) | 2,5 b) | 1,4 | | |
| | | | | | III. | | | | | 6,3 e) | 3,9 e) | 2,3 e) | 1,3 a) | | |
| | | | | 2 | I. | | | | | | 20,5 b) | 13,3 b) | 8,4 b) | 5,3 | 3,6 |
| | | | | | II. | | | | | | 20 b) | 13 b) | 8,2 b) | 5,1 | 3,5 |
| | | | | | III. | | | | | | 19,7 e) | 12,9 e) | 8,1 e) | 5 a) | 3,4 a) |
| | | | | 3 | I. | | | | | | 40 b) | 28,2 b) | 18 b) | 11,5 | 7,9 |
| | | II. | | | | | | | 40 b) | 27,9 b) | 17,8 b) | 11,3 | 7,8 | | |
| | | III. | | | | | | | 40 e) | 27,7 e) | 17,7 e) | 11,2 a) | 7,7 a) | | |
| | | 4 | I. | | | | | | | 40 b) | 27,6 b) | 17,7 | 12,2 | | |
| | | | II. | | | | | | | 40 b) | 27,5 b) | 17,5 | 12,1 | | |
| | | | III. | | | | | | | | | 17,4 a) | 12 a) | | |
| | | 5 | I. | | | | | | | | | 23,9 | 16,6 | | |
| | | | II. | | | | | | | | | 23,7 | 16,5 | | |
| | | | III. | | | | | | | | | 23,6 a) | 16,4 a) | | |
| | | 6 | I. | | | | | | | | | 30,9 | 20,9 | | |
| | | | II. | | | | | | | | | 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:

max. permissible 6 bar

Air supply pressure max. limit of control valve:

max. permissible a) 5 bar b) 4,5 bar c) 4 bar d) 3,5 bar e) 3 bar

¹⁾ Other Kvs-value-reductions are possible with screwed seat ring (Fig. 445/446 or Fig. 470/471).

For max. permissible closing pressures refer to corresponding data sheet.

Standard-flange dimensions

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

| DN | | | 15 | 20 | 25 | 32 | 40 | 50 | 65 | 80 | 100 | 125 | 150 |
|------|--------|------|------|------|------|------|------|------|------|------|------|------|------|
| PN16 | ØD | (mm) | 95 | 105 | 115 | 140 | 150 | 165 | 185 | 200 | 220 | 250 | 285 |
| PN16 | ØK | (mm) | 65 | 75 | 85 | 100 | 110 | 125 | 145 | 160 | 180 | 210 | 240 |
| PN16 | n x Ød | (mm) | 4x14 | 4x14 | 4x14 | 4x18 | 4x18 | 4x18 | 4x18 | 8x18 | 8x18 | 8x18 | 8x22 |
| PN25 | ØD | (mm) | 95 | 105 | 115 | 140 | 150 | 165 | 185 | 200 | 235 | 270 | 300 |
| PN25 | ØK | (mm) | 65 | 75 | 85 | 100 | 110 | 125 | 145 | 160 | 190 | 220 | 250 |
| PN25 | n x Ød | (mm) | 4x14 | 4x14 | 4x14 | 4x18 | 4x18 | 4x18 | 8x18 | 8x18 | 8x22 | 8x26 | 8x26 |
| PN40 | ØD | (mm) | 95 | 105 | 115 | 140 | 150 | 165 | 185 | 200 | 235 | 270 | 300 |
| PN40 | ØK | (mm) | 65 | 75 | 85 | 100 | 110 | 125 | 145 | 160 | 190 | 220 | 250 |
| PN40 | n x Ød | (mm) | 4x14 | 4x14 | 4x14 | 4x18 | 4x18 | 4x18 | 8x18 | 8x18 | 8x22 | 8x26 | 8x26 |

Pressure-temperature-ratings acc. to DIN EN 1092-2

| Material | | | -60°C to <-10°C* | -10°C to 120°C | 150°C | 200°C | 250°C | 300°C | 350°C | 400°C | 450°C |
|-----------|------|-------|------------------|----------------|-------|-------|-------|-------|-------|-------|-------|
| EN-JL1040 | PN16 | (bar) | -- | 16 | 14,4 | 12,8 | 11,2 | 9,6 | -- | -- | -- |
| EN-JS1049 | PN16 | (bar) | on request | 16 | 15,5 | 14,7 | 13,9 | 12,8 | 11,2 | -- | -- |
| EN-JS1049 | PN25 | (bar) | on request | 25 | 24,3 | 23 | 21,8 | 20 | 17,5 | -- | -- |

Pressure-temperature-ratings acc. to DIN EN 1092-1

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

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)

Please indicate when ordering:

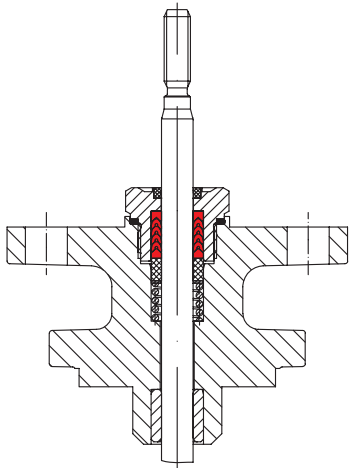
- Figure-No.
- Nominal diameter
- Nominal pressure
- Body material
- Plug design
- Kvs-value
- Flow characteristic
- Stem sealing
- Actuator
- Special design / accessories

Example:

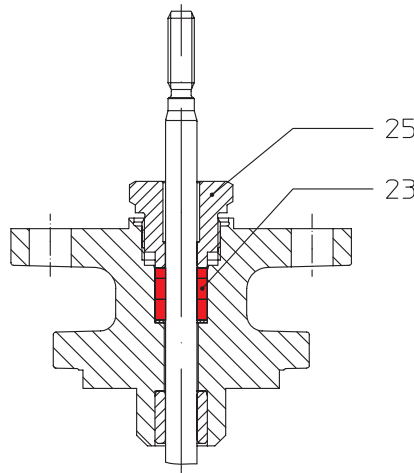
Figure 35.440; Nominal diameter DN100; Nominal pressure PN40; Body material 1.0619+N; Parabolic plug; Kvs 160; GLP; Stem sealing PTFE-V-ring unit; Actuator ARI-PREMIO 5 kN.

| |
|--|
| Dimensions in mm Weights in kg Pressures in barg (gauge) 1 bar $\hat{=}$ 10 ⁵ Pa $\hat{=}$ 0,1 MPa Kvs in m ³ /h |
|--|

Stem sealing



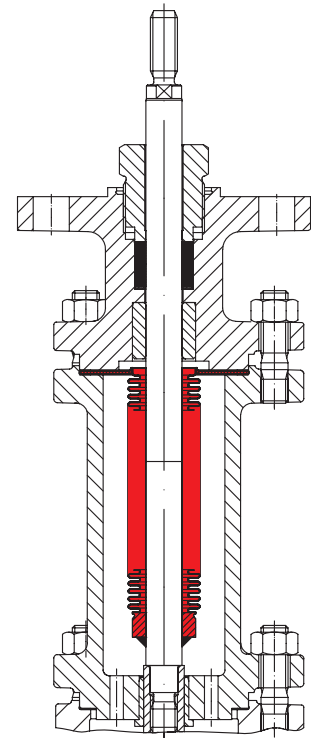
Spring loaded PTFE-V ring packing unit



PTFE-/ Pure graphite-packing

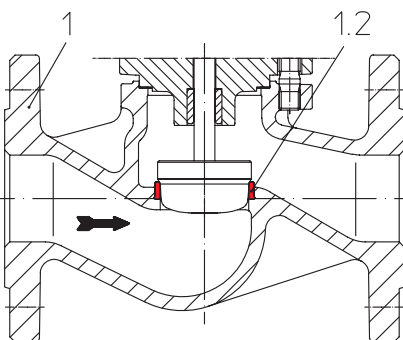
| Pos. | Description | |
|------|----------------|-----------------------|
| 23 | Packing ring * | PTFE or Pure graphite |
| 25 | Screw joint * | X8CrNiS18-9, 1.4305 |

* Spare part

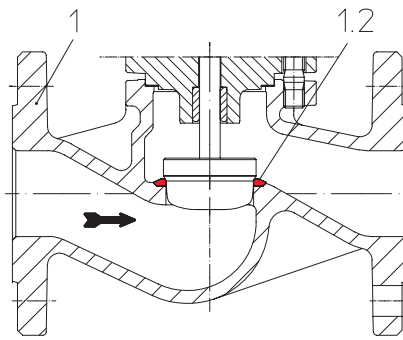


Bellows seal with safety stuffing box

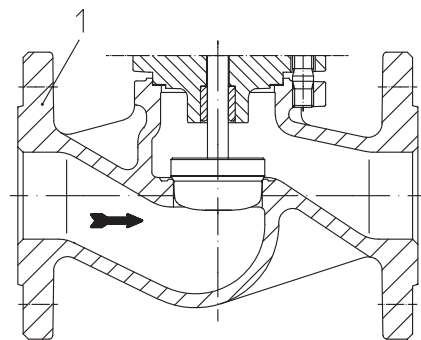
Body design



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

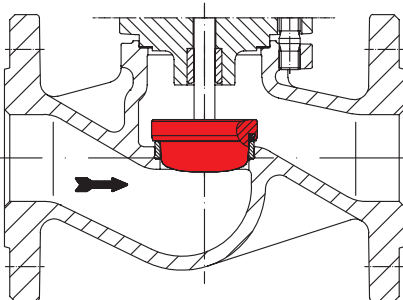


Body with welded seat (1.0619+N)

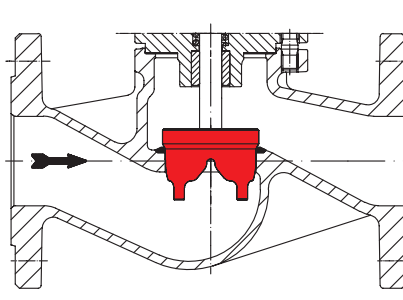


Body with machined seat (1.4408)

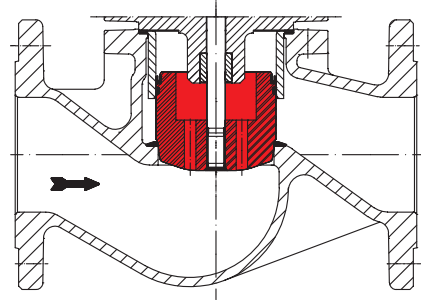
Plug design



Parabolic plug with PTFE soft seat



V-port plug with stem and port guiding



Parabolic pressure balanced plug



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