

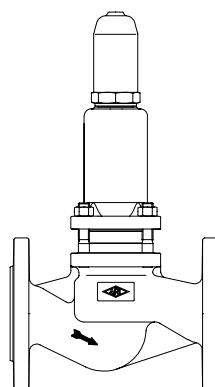
Pressure regulating valve, spring loaded  
DN 15 - 100

**ARI-PRESO® - Pressure regulating valve**  
**Straight through with flanges**

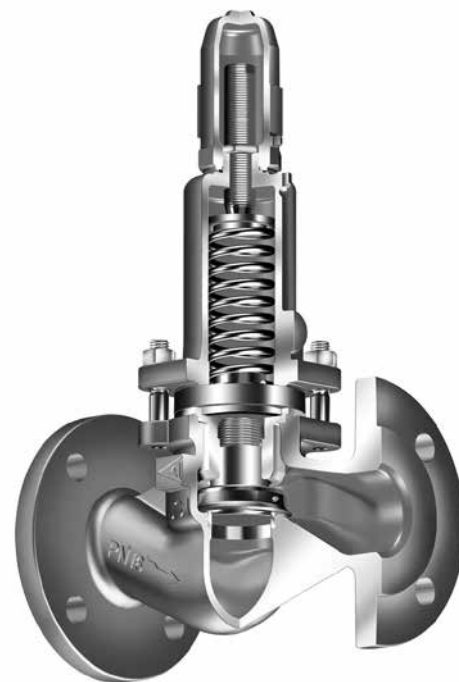
- Spring loaded
- TA - Luft

Grey cast iron  
SG iron  
Cast steel  
Stainless steel

**Fig. 753**



Page 2

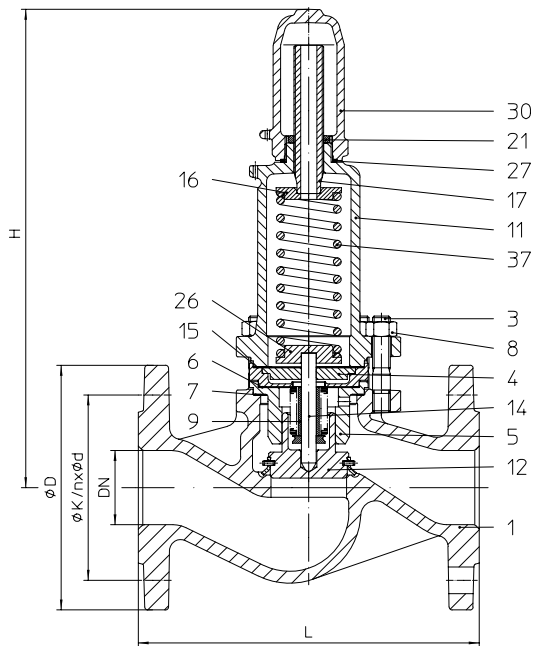


**Fig. 753**

**Features:**

- Spring loaded
- Standard bellows seal
- Compact design
- Regulating plug
- Shaft plug guide
- Pressure range:
  - 0,5 - 1,5 bar
  - 1,0 - 3,0 bar
  - 2,0 - 5,0 bar
  - 4,0 - 10,0 bar
- Exact and easy adjustment
- Proportional flow characteristic
- Maintenance-free

## Pressure regulating valve - straight through with flanges - spring loaded (Grey cast iron, SG iron, Cast steel, Stainless steel)



| Figure | Nominal pressure | Material  | Nominal diameter |
|--------|------------------|-----------|------------------|
| 12.753 | PN 16            | EN-JL1040 | DN15-100         |
| 22.753 | PN 16            | EN-JS1049 | DN15-100         |
| 32.753 | PN 16            | 1.0619+N  | DN15-100         |
| 52.753 | PN 16            | 1.4408    | DN15-100         |

|       |             |
|-------|-------------|
| Test: | • TA - Luft |
|-------|-------------|

| Parts |               |                       |                                                           |                                 |                     |                           |
|-------|---------------|-----------------------|-----------------------------------------------------------|---------------------------------|---------------------|---------------------------|
| Pos.  | Sp.p.         | Description           | Fig. 12.753                                               | Fig. 22.753                     | Fig. 32.753         | Fig. 52.753               |
| 1     |               | Body                  | EN-JL1040, EN-GJL-250                                     | EN-JS1049,<br>EN-GJS-400-18U-LT | GP240GH+N, 1.0619+N | GX5CrNiMo19-11-2, 1.4408  |
| 1.2   |               | Seat                  | X20Cr13+QZ, 1.4021+QT                                     |                                 |                     | --                        |
| 3     |               | Stud                  | 25CrMo4, 1.7218                                           |                                 |                     | A4-70                     |
| 4     |               | Stem guide            | X20Cr13+QZ, 1.4021+QT                                     |                                 |                     |                           |
| 5     |               | Guide housing         | X20Cr13+QZ, 1.4021+QT                                     |                                 |                     | X6CrNiMoTi17-12-2, 1.4571 |
| 6     | x             | Gasket                | Pure graphite (CrNi laminated with graphite)              |                                 |                     |                           |
| 7     | x             | Gasket                | Pure graphite (CrNi laminated with graphite)              |                                 |                     |                           |
| 8     |               | Hexagon nut           | C35E, 1.1181                                              |                                 |                     | A4                        |
| 9     |               | Travel limiter ring   | ≥ DN40: X6CrNiMoTi17-12-2, 1.4571                         |                                 |                     |                           |
| 11    |               | Bonnet                | EN-JS1049, EN-GJS-400-18U-LT                              |                                 |                     | GX5CrNiMo19-11-2, 1.4408  |
| 12    | x             | Plug unit             | X20Cr13+QZ, 1.4021+QT                                     |                                 |                     | X6CrNiMoTi17-12-2, 1.4571 |
| 14    | x             | Stem unit             | X6CrNiMoTi17-12-2, 1.4571                                 |                                 |                     |                           |
| 15    | x             | Gasket                | Pure graphite (CrNi laminated with graphite)              |                                 |                     |                           |
| 16    |               | Spring plate (top)    | DN15-20: X6CrNiMoTi17-12-2, ≥ DN25: 1.4571 S235JR, 1.0037 |                                 |                     | X6CrNiMoTi17-12-2, 1.4571 |
| 17    |               | Adjusting screw       | X20Cr13+QZ, 1.4021+QT                                     |                                 |                     | X6CrNiMoTi17-12-2, 1.4571 |
| 21    |               | Lock nut              | 11SMn30+C, 1.0715+C                                       |                                 |                     | X6CrNiMoTi17-12-2, 1.4571 |
| 26    |               | Spring plate (bottom) | DN15-20: X6CrNiMoTi17-12-2, ≥ DN25: 1.4571 S235JR, 1.0037 |                                 |                     | X6CrNiMoTi17-12-2, 1.4571 |
| 27    | x             | Sealing ring          | CuFA                                                      |                                 |                     | X6CrNiMoTi17-12-2, 1.4571 |
| 30    |               | Cap, gastight         | EN-JS1049, EN-GJS-400-18U-LT                              |                                 |                     | GX5CrNiMo19-11-2, 1.4408  |
| 37    | x             | Compression spring    | FDSiCr                                                    |                                 |                     |                           |
|       | L Spare parts |                       |                                                           |                                 |                     |                           |

| DN | 15 | 20 | 25 | 32 | 40 | 50 | 65 | 80 | 100 |
|----|----|----|----|----|----|----|----|----|-----|
|----|----|----|----|----|----|----|----|----|-----|

| Face-to-face dimension FTF series 1 according to DIN EN 558 |      |     |     |     |     |     |     |     |     |     |
|-------------------------------------------------------------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Standard-flange dimensions refer to page 4                  |      |     |     |     |     |     |     |     |     |     |
| L                                                           | (mm) | 130 | 150 | 160 | 180 | 200 | 230 | 290 | 310 | 350 |
| H                                                           | (mm) | 230 | 230 | 290 | 300 | 325 | 330 | 400 | 440 | 500 |

| Dimensions   |                                                        |    |     |     |     |    |     |    |    |     |
|--------------|--------------------------------------------------------|----|-----|-----|-----|----|-----|----|----|-----|
| Kvs-value    | (m³/h)                                                 | 2  | 2,5 | 3   | 5   | 10 | 20  | 22 | 29 | 45  |
| Seat-Ø       | (mm)                                                   | 21 | 21  | 27  | 31  | 41 | 51  | 66 | 81 | 101 |
| Travel       | (mm)                                                   | 2  | 2   | 2,5 | 2,5 | 4  | 5,5 | 7  | 8  | 10  |
| Leakage rate | IV acc. to DIN EN 1349 (≤ 0,01% from the nominal flow) |    |     |     |     |    |     |    |    |     |

| Weights            |      |     |     |     |     |      |      |      |      |      |
|--------------------|------|-----|-----|-----|-----|------|------|------|------|------|
| 12./22./32./52.753 | (kg) | 3,6 | 4,1 | 6,6 | 7,7 | 10,4 | 12,9 | 20,2 | 28,9 | 43,7 |

Information / restriction of technical rules need to be observed!

Operating and installation instructions can be downloaded at [www.ari-armaturen.com](http://www.ari-armaturen.com).

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

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

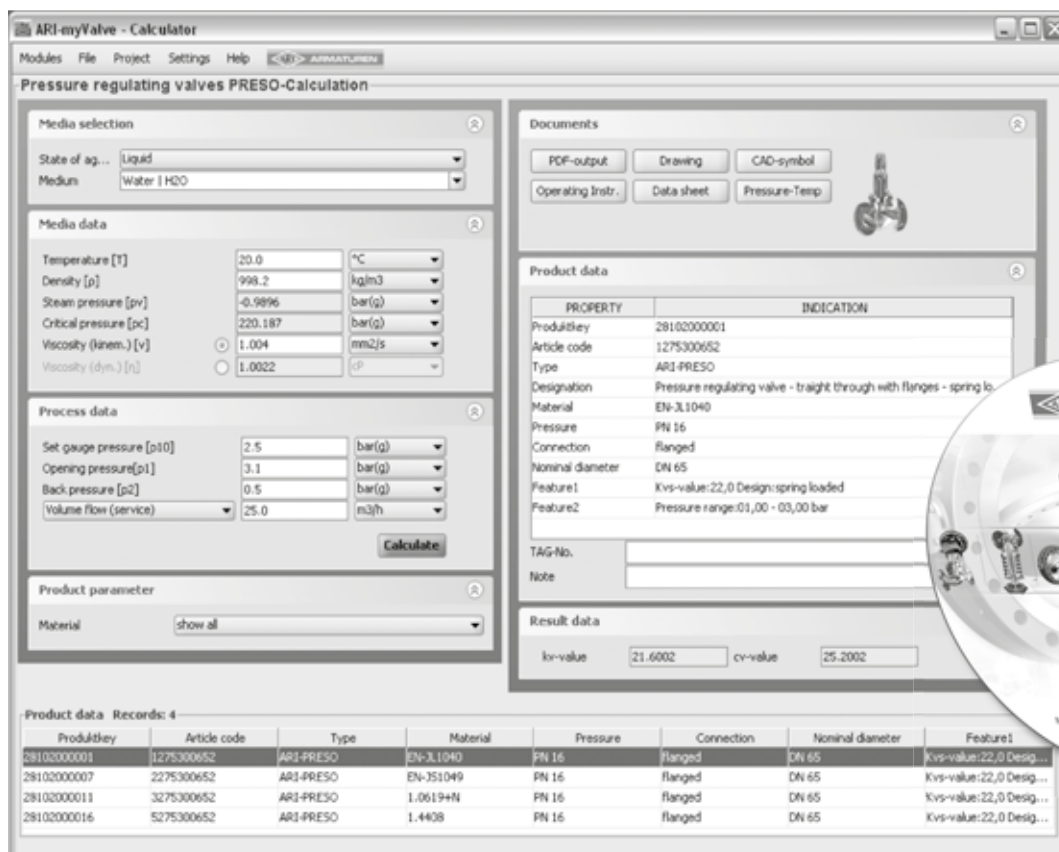
The engineer, designing a system or a plant, is responsible for the selection of the correct valve.

Resistance and fitness must be verified (contact manufacturer for information, refer to Product overview and Resistance list).

## Application

The pressure regulating valve PRESO is a spring loaded differential pressure-control valve. The main applications are:

- Pump protection: PRESO inserted parallel to the pump, this secures a minimum flow.
- Application in bypass lines from users, e.g. heat exchanger in thermal oil systems to sustain a minimum flow.
- Parallel to piping systems to avoid to higher differential pressures.
- Pressure maintaining valve to avoid the flashing in condensate systems.



| PROPERTY         | INDICATION                                                            |
|------------------|-----------------------------------------------------------------------|
| Productkey       | 28102000001                                                           |
| Article code     | 1275300652                                                            |
| Type             | ARI-PRESO                                                             |
| Designation      | Pressure regulating valve - traight through with flanges - spring lo. |
| Material         | EN-3.1040                                                             |
| Pressure         | PN 16                                                                 |
| Connection       | Flanged                                                               |
| Nominal diameter | DN 65                                                                 |
| Feature1         | Kvs-value:22,0 Design:spring loaded                                   |
| Feature2         | Pressure range:01,00 - 03,00 bar                                      |

| Productkey  | Article code | Type      | Material  | Pressure | Connection | Nominal diameter | Feature1                 |
|-------------|--------------|-----------|-----------|----------|------------|------------------|--------------------------|
| 28102000001 | 1275300652   | ARI-PRESO | EN-3.1040 | PN 16    | Flanged    | DN 65            | Kvs-value:22,0 Design... |
| 28102000007 | 2275300652   | ARI-PRESO | EN-351049 | PN 16    | Flanged    | DN 65            | Kvs-value:22,0 Design... |
| 28102000011 | 3275300652   | ARI-PRESO | 1.0619+N  | PN 16    | Flanged    | DN 65            | Kvs-value:22,0 Design... |
| 28102000016 | 5275300652   | ARI-PRESO | 1.4408    | PN 16    | Flanged    | DN 65            | Kvs-value:22,0 Design... |



## myValve - Valve Sizing-Program

### Contents:

#### Module ARI-Pressure regulating valves PRESO-Calcaution

- Sizing (calculation of valve-size with given temperature, flow, set pressure, opening pressure and set pressure)

### Media:

#### Integrated media-data bank (more than 160 media) with conditions:

- Vapours / gases
- Steam (saturated and superheated)
- Liquids

### Special features:

- Project administration of the calculation and product data incl. spare part drawings concerning to project and tag number
- Direct output of calculation and product data in PDF format
- Product data could be taken for a direct order
- SI- and ANSI-units with direct conversion to another data bank
- Settings with over pressure or absolute pressure
- All ARI Pressure regulating valves are integrated in a data bank
- Direct access concerning to the product on data sheets, operating instructions, pressure-temperature-diagram and spare part drawings
- Operation in company networks possible (no complex installations on individually PC's necessary)

### System Requirements:

Windows operating systems, Linux, etc.

| max. permissible back pressure p <sub>2</sub> |                        | (Observe pressure-temperature-limits)         |     |      |      |     |      |      |      |      |
|-----------------------------------------------|------------------------|-----------------------------------------------|-----|------|------|-----|------|------|------|------|
| DN                                            |                        | 15                                            | 20  | 25   | 32   | 40  | 50   | 65   | 80   | 100  |
| Setting range $\Delta p_0$                    | Set point $\Delta p_0$ | max. permissible back pressure p <sub>2</sub> |     |      |      |     |      |      |      |      |
| (bar)                                         | (bar)                  | (barg)                                        |     |      |      |     |      |      |      |      |
| 0,5 - 1,5                                     | 0,5                    | 4,5                                           | 4,5 | 6,9  | 6,4  | 6,6 | 9,5  | 4,9  | 6,7  | 5,9  |
|                                               | 1                      | 3                                             | 3   | 5,4  | 4,4  | 4,7 | 6,5  | 3,3  | 4,9  | 4,2  |
|                                               | 1,5                    | 1,5                                           | 1,5 | 3,9  | 2,4  | 2,7 | 3,5  | 1,7  | 3,1  | 2,5  |
| 1 - 3                                         | 1                      | 8                                             | 8   | 10,6 | 11,2 | 9,9 | 14   | 7    | 7,7  | 6,8  |
|                                               | 2                      | 5                                             | 5   | 7,6  | 7,2  | 6   | 10,4 | 3,8  | 4,2  | 3,5  |
|                                               | 3                      | 2                                             | 2   | 4,6  | 3,2  | 2   | 6,8  | 0,5  | 0,6  | 0,1  |
| 2 - 5                                         | 2                      | 8                                             | 8   | 12   | 12   | 12  | 12   | 11,3 | 10,8 | 10,2 |
|                                               | 3                      | 5,8                                           | 5,8 | 9,3  | 9,2  | 8,4 | 9,8  | 8,1  | 7,2  | 6,8  |
|                                               | 4                      | 3,7                                           | 3,7 | 6,6  | 6,5  | 4,9 | 7,7  | 4,8  | 3,7  | 3,5  |
|                                               | 5                      | 1,5                                           | 1,5 | 3,9  | 3,7  | 1,3 | 5,5  | 1,6  | 0,1  | 0,1  |
| 4 - 10                                        | 4                      | 10                                            | 10  | 8    | 8    | 8   | 8    | 8    | 8    | 8    |
|                                               | 6                      | 7                                             | 7   | 5,7  | 5,7  | 5,7 | 5,7  | 5,7  | 5,7  | 5,7  |
|                                               | 8                      | 4                                             | 4   | 3,3  | 3,3  | 3,3 | 3,3  | 3,3  | 3,3  | 3,3  |
|                                               | 10                     | 1                                             | 1   | 1    | 1    | 1   | 1    | 1    | 1    | 1    |

$\Delta p_0$  = Differential pressure (Set pressure p<sub>1</sub> – Back pressure p<sub>2</sub>)

| DN | 15 | 20 | 25 | 32 | 40 | 50 | 65 | 80 | 100 |
|----|----|----|----|----|----|----|----|----|-----|
|----|----|----|----|----|----|----|----|----|-----|

| Standard-flange dimensions |        |      | Flanges acc. to DIN EN 1092-1/-2 (Flange holes / -thickness tolerances acc. to DIN 2533/2544/2545) |      |      |      |      |      |                    |      |      |
|----------------------------|--------|------|----------------------------------------------------------------------------------------------------|------|------|------|------|------|--------------------|------|------|
| PN16                       | ØD     | (mm) | 95                                                                                                 | 105  | 115  | 140  | 150  | 165  | 185                | 200  | 220  |
|                            | ØK     | (mm) | 65                                                                                                 | 75   | 85   | 100  | 110  | 125  | 145                | 160  | 180  |
|                            | n x Ød | (mm) | 4x14                                                                                               | 4x14 | 4x14 | 4x18 | 4x18 | 4x18 | 4x18 <sup>1)</sup> | 8x18 | 8x18 |

<sup>1)</sup> also with 8 bore holes acc. to DIN EN 1092-1/-2 possible.

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

| acc. to DIN EN 1092-2 |    |       | -60°C to <-10°C <sup>1)</sup> | -10°C to 120°C | 150°C | 200°C | 250°C | 300°C | 350°C | 400°C | 450°C |
|-----------------------|----|-------|-------------------------------|----------------|-------|-------|-------|-------|-------|-------|-------|
| EN-JL1040             | 16 | (bar) | --                            | 16             | 14,4  | 12,8  | 11,2  | 9,6   | --    | --    | --    |
| EN-JS1049             | 16 | (bar) | on request                    | 16             | 15,5  | 14,7  | 13,9  | 12,8  | 11,2  | --    | --    |

| acc. to manufacturers standard |    |       | -60°C to <-10°C <sup>1)</sup> | -10°C to 120°C | 150°C | 200°C | 250°C | 300°C | 350°C | 400°C | 450°C |
|--------------------------------|----|-------|-------------------------------|----------------|-------|-------|-------|-------|-------|-------|-------|
| 1.0619+N                       | 16 | (bar) | 12                            | 16             | 15,3  | 14    | 13    | 11    | 10,2  | 9,5   | 5,2   |

| acc. to DIN EN 1092-1 |    |       | -60°C to <-10°C <sup>1)</sup> | -10°C to 100°C | 150°C | 200°C | 250°C | 300°C | 350°C | 400°C | 450°C |
|-----------------------|----|-------|-------------------------------|----------------|-------|-------|-------|-------|-------|-------|-------|
| 1.4408                | 16 | (bar) | 16                            | 16             | 14,5  | 13,4  | 12,7  | 11,8  | 11,4  | 10,9  | --    |

<sup>1)</sup> 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
- Setting range
- Special design / accessories

#### Example:

Figure 22.753; Nominal diameter DN50; Nominal pressure PN16; Body material EN-JS1049; metal seat; Kvs 20; Setting range 1 - 3 bar.