



VAT Vakuumventile AG  
CH-9469 Haag, Schweiz

## Product data sheet

**Angle valve with soft-pump function**  
**Series 290, DN 40 (ID 1 1/2")**  
**Ordering No. 29032-KA11-0001**

### Description

|             |             |  |
|-------------|-------------|--|
| Flange      |             | ISO-KF 40  |
| Actuator    |             | Pneumatic, single acting with closing spring<br>– without solenoid valve<br>– without position indicator |
| Feedthrough | – Main      | Bellows  |
|             | – Soft-pump | Shaft feedthrough  |

### Technical data

|  |                        |  |
|--|------------------------|--|
| Leak rate  | – Valve Body           | $< 1 \cdot 10^{-9}$ mbar ls <sup>-1</sup>        |
|  | – Valve seat           | $< 1 \cdot 10^{-9}$ mbar ls <sup>-1</sup>        |
| Pressure range   |                        | $1 \cdot 10^{-8}$ mbar to 1.2 bar (abs)          |
| Differential pressure on the plate   | – In opening direction | $\leq 1.2$ bar                                   |
|  | – In closing direction | $\leq 1.2$ bar                                   |
| Differential pressure at opening   |                        | $\leq 1$ bar                                     |
| Conductance (molecular flow)   |                        | 45 ls <sup>-1</sup>                              |
| Cycles until first service<br>(Tmax 80 °C, under clean conditions)                       |                        | 2 million  |
| Temperature<br>(Maximum values: depending on operating conditions and sealing materials) | – Valve Body           | $\leq 150$ °C                                    |
|  | – Actuator             | $\leq 120$ °C                                    |
| Material   | – Valve body           | Aluminum (EN AW-6082)                            |
|  | – Actuator             | Aluminum   |
|  | – Plate                | AISI 316L (1.4435 ESU)                           |
|  | – Bellows              | AISI 316L (1.4404, 1.4435), AISI 316 Ti (1.4571) |
| Seal   | – Bonnet O-ring        | FKM (Viton®)                                     |
|  | – Plate O-ring         | FKM (Viton®)                                     |
|  | – Feedthrough O-ring   | FKM (Viton®)                                     |
|  | – Actuator O-ring      | FKM (Viton®)                                     |
| Mounting position  |                        | any  |
| Volume of pneumatic actuator   |                        | 0.035 l / 0.0012 ft <sup>3</sup>                 |
| Compressed air<br>min. – max. overpressure   |                        | 4 – 8 bar / 58 – 116 psi                         |
| Compressed air connection  |                        | M5 female (10-32 UNF suitable)                   |
| Actuation time   | – Closing              | $\leq 0.55$ sec.                                 |
| Weight   |                        | 1.20 kg / 2.65 lbs                               |

|                  |                          |                 |
|------------------|--------------------------|-----------------|
| Created by: WARO | Release date: 25.08.2014 | 1/2             |
| Modified by:     | Release date:            | <b>765279EA</b> |



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Behavior in case of compressed air pressure drop

- Valve closed
- Valve opened
- During actuation

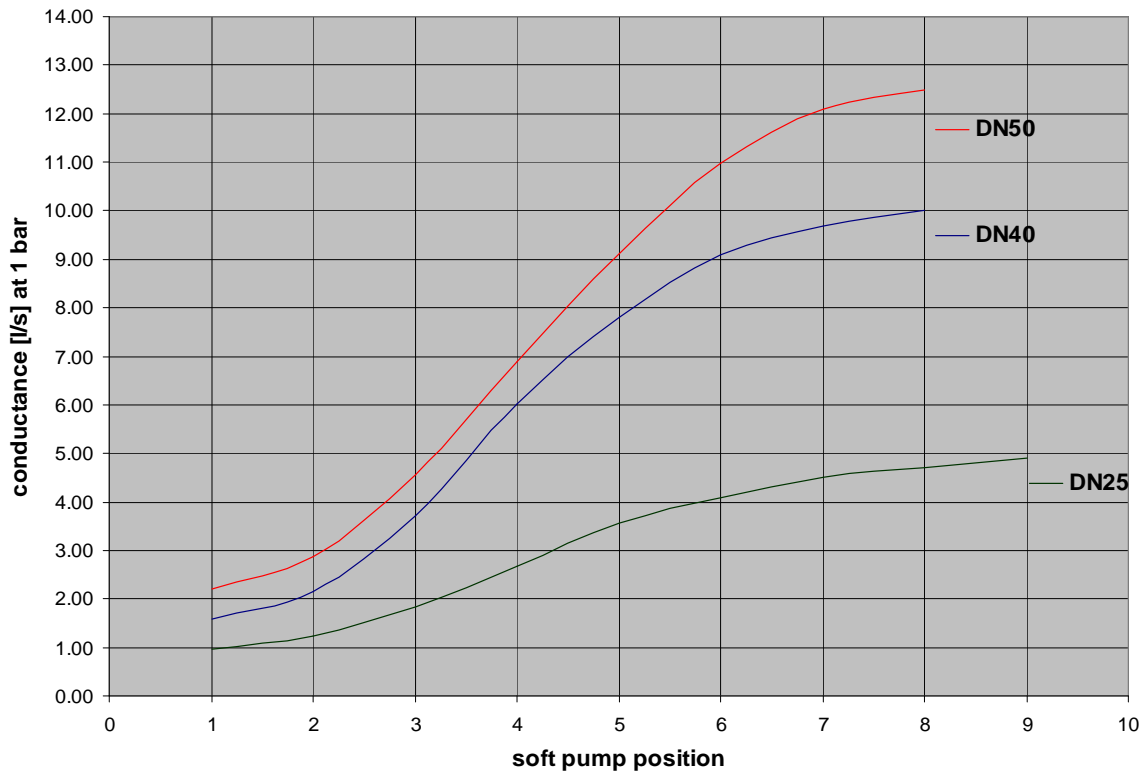
valve remains closed and leaktight  
valve closes leaktight  
valve closes leaktight

Behavior in case of power failure

- Valve closed
- Valve opened
- During actuation

valve remains closed and leaktight  
depending on customer installation  
depending on customer installation

### conductance diagram



|                  |                          |                 |
|------------------|--------------------------|-----------------|
| Created by: WARO | Release date: 25.08.2014 | 2/2             |
| Modified by:     | Release date:            | <b>765279EA</b> |