



VAT Vakuumventile AG  
CH-9469 Haag, Schweiz

## Product data sheet

**Angle valve with soft-pump function**  
**Series 290, DN 50 (ID 2")**  
**Ordering No. 29034-KA21-0002**

### Description

Flange		ISO-KF 50
Actuator		Pneumatic, single acting with closing spring – without solenoid valve – with 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)		80 ls <sup>-1</sup>
Cycles until first service (Tmax 80 °C, under clean conditions)		2 million
Temperature (Maximum values: depending on operating conditions and sealing materials)	– Valve Body	$\leq 150$ °C
	– Actuator	$\leq 120$ °C
	– Position indicator	$\leq 80$ °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		0.047 l / 0.0017 ft <sup>3</sup>
Compressed air min. – max. overpressure		4 – 8 bar / 58 – 116 psi
Compressed air connection		M5 female (10-32 UNF suitable)
Actuation time	– Closing	$\leq 0.65$ sec.
Weight		1.95 kg / 4.30 lbs

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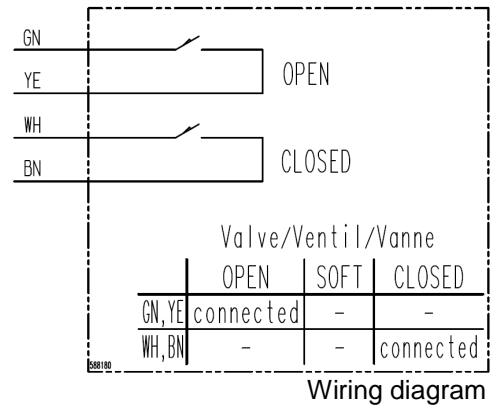
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Behavior in case of compressed air pressure drop	<ul style="list-style-type: none"> <li>- Valve closed</li> <li>- Valve opened</li> <li>- During actuation</li> </ul>	<ul style="list-style-type: none"> <li>valve remains closed and leaktight</li> <li>valve closes leaktight</li> <li>valve closes leaktight</li> </ul>
Behavior in case of power failure	<ul style="list-style-type: none"> <li>- Valve closed</li> <li>- Valve opened</li> <li>- During actuation</li> </ul>	<ul style="list-style-type: none"> <li>valve remains closed and leaktight depending on customer installation</li> <li>depending on customer installation</li> </ul>

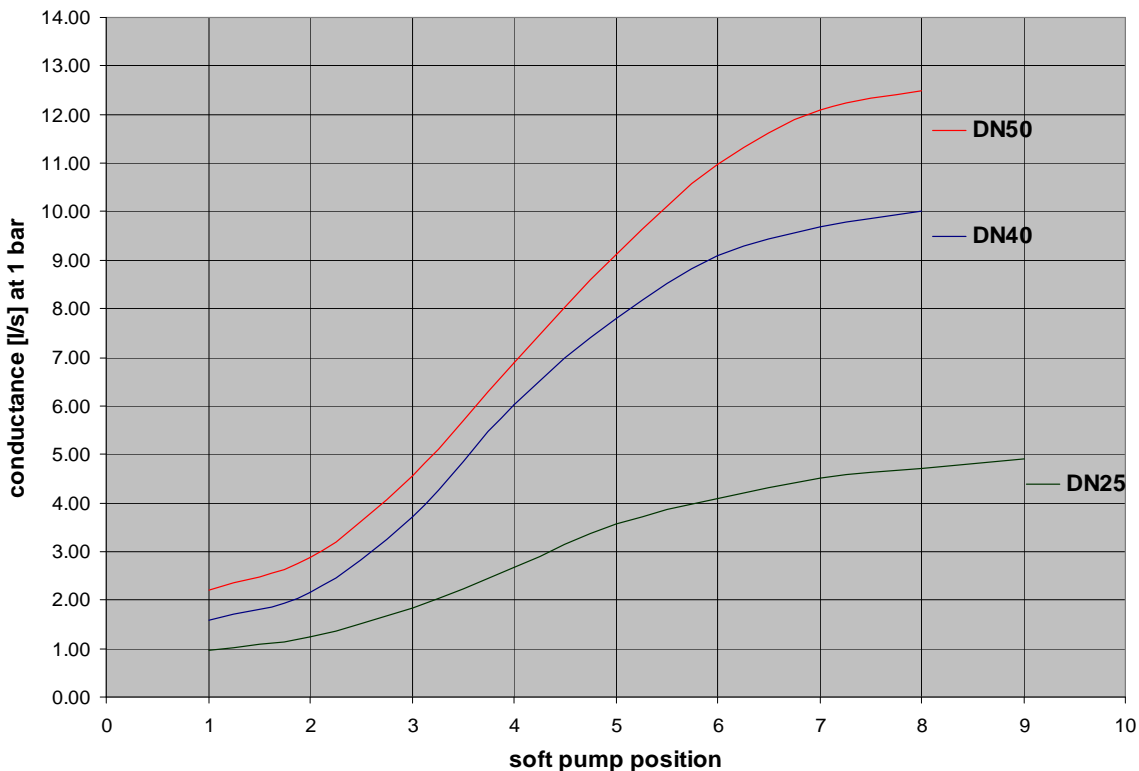
### Electrical connections

#### Position indicator

Type	Micro switch
Voltage	≤ 50 V AC / DC
Current	5 – 100 mA
Short circuit protected	No
Connection	Cable, 4 wires
Cable length	500 mm
Cable cross section	0.25 mm <sup>2</sup>



### conductance diagram



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