



VAT Vakuumventile AG  
CH-9469 Haag, Schweiz

## Product data sheet

**Angle valve with soft-pump function**  
**Series 292, DN 100 (ID 4'')**  
**Ordering No. 29240-QA41-0001**

### Description

Flange		ISO-K 100
Actuator		with solenoid valve with position indicator
	– Main	Pneumatic, single acting with closing spring
	– Softpump	Pneumatic, single acting with closing spring
Feedthrough	– Main	Shaft feedthrough
	– Softpump	Bellows

### Technical data

Leak rate (static)	– Valve body	$< 1 \cdot 10^{-9} \text{ mbar ls}^{-1}$
	– Valve seat	$< 1 \cdot 10^{-9} \text{ mbar ls}^{-1}$
Pressure range		$1 \cdot 10^{-7} \text{ mbar}$ to 2 bar (abs)
Differential pressure on the plate	– In opening direction	$\leq 1.2 \text{ bar}$
	– In closing direction	$\leq 2 \text{ bar}$
Differential pressure at opening		$\leq 1 \text{ bar}$ [1 bar with reduced number of cycles]
Conductance (molecular flow)		$440 \text{ ls}^{-1}$
Actuation time main	– Closing	$\leq 1 \text{ sec.}$
	– Opening	$\leq 1 \text{ sec.}$
Actuation time softpump	– Closing	$\leq 0.2 \text{ sec.}$
	– Opening	$\leq 0.2 \text{ sec.}$
Cycles until first service (Tmax 80°C, under clean conditions)	– Main	1 million
	– Softpump	3 million
Temperature (Maximum values: depending on operating conditions and sealing materials)	– Valve body	$\leq 150 \text{ °C}$
	– Actuator	$\leq 120 \text{ °C}$
	– Solenoid valve	$\leq 50 \text{ °C}$
	– Position indicator	$\leq 80 \text{ °C}$
Material	– Body main	Aluminum (EN AC-42000)
	– Body softpump	Aluminum (EN AW-6060)
	– Actuator	Aluminum
	– Plate main	Aluminum (EN AW 6082)
	– Plate soft	AISI 316L (1.4404)
	– Feedthrough main	Aluminum (EN AW 6082)
	– Feedthrough soft	AISI 316L (1.4404, 1.4435), AISI 316 Ti (1.4571)
	– Spring	AISI 301 (1.4310)
	– Snap ring for axle	AISI 301 (1.4310)
Seal	– Bonnet O-ring	FKM (Viton®)
	– Plate O-ring	FKM (Viton®)
	– Feedthrough O-ring	FKM (Viton®)
	– Actuator O-ring	FKM (Viton®)
Weight		9.5 kg / 21 lbs
Mounting position		any

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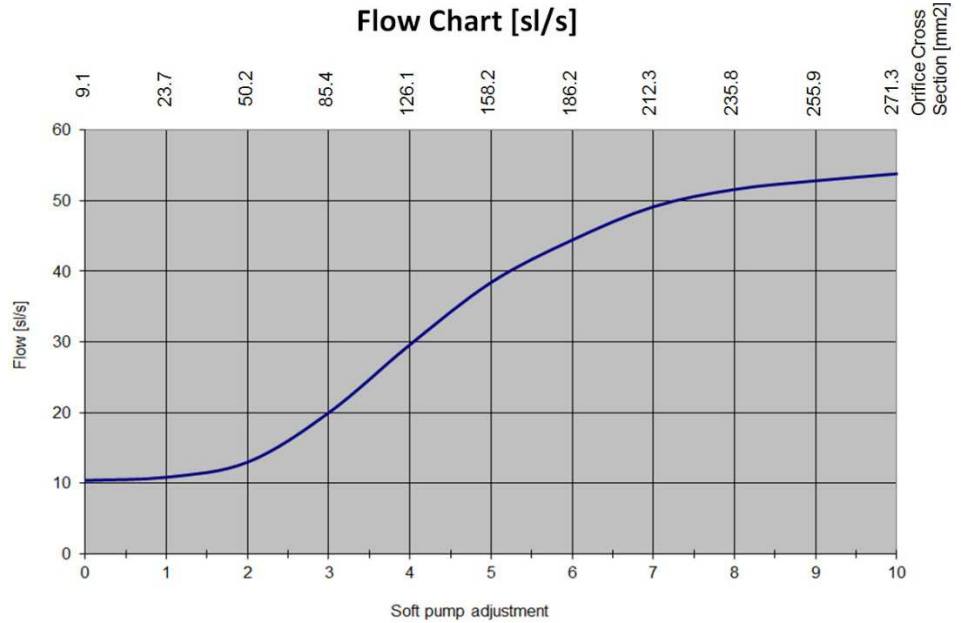
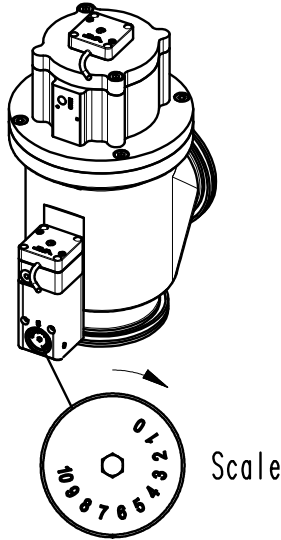
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Volume of pneumatic actuator	- Main	0.3 l / 0.01 ft <sup>3</sup>
	- Softpump	0.011 l / 0.0004 ft <sup>3</sup>
Compressed air	- Main	4.5 – 7 bar / 65 – 102 psi
min. – max. overpressure	- Softpump	4 – 8 bar / 58 – 115 psi
Compressed air connection	- Main	G $\frac{1}{8}$ " female
	- Softpump	M5 (10-32 UNF suitable)
Behavior in case of compressed air pressure drop	- Valve closed	Valve remains closed and leaktight
	- Valve opened	Valve closes leaktight
	- During actuation	Valve closes leaktight
Behavior in case of power failure	- Valve closed	Valve remains closed and leaktight
	- Valve opened	Valve closes leaktight
	- During actuation	Valve closes leaktight

Conductance diagram



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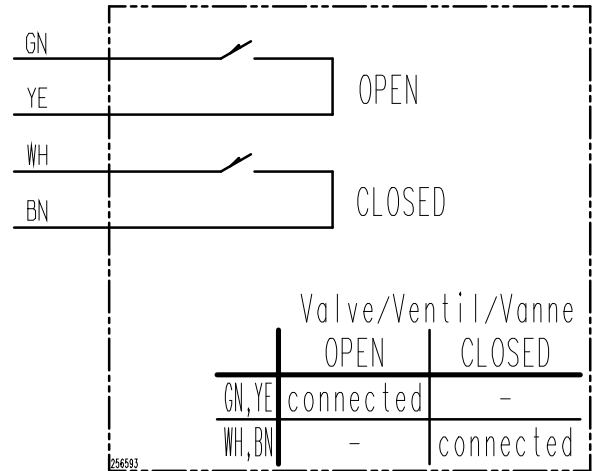
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### Electrical connection

#### Position indicator Main and Soft

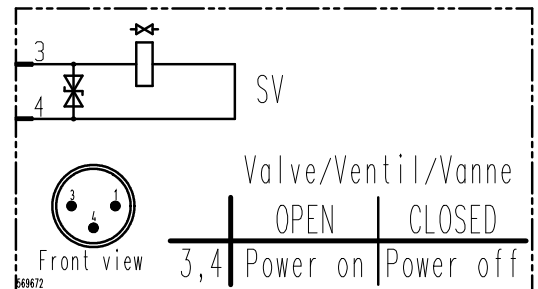
Type	Micro switch
Voltage	≤ 50 V AC / DC
Current	5...100 mA
Short circuit protected	No
Connection	cable, 4 wire
Cable length	500 mm
Wire cross section	0.25 mm <sup>2</sup>



Wiring diagram

#### Solenoid valve Main

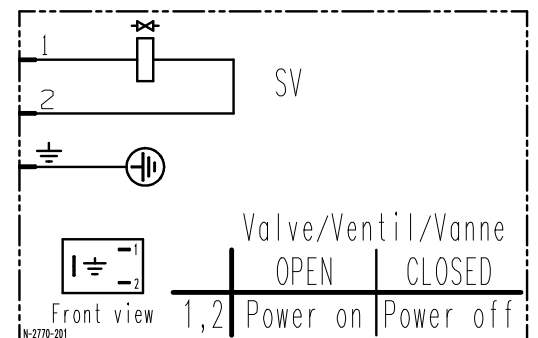
Type	3/2 way
Voltage	See label on solenoid
Connection type	plug, male M8x1
Additional feature	LED orange; overvoltage protection; adjustable emergency operation; silencer



Wiring diagram

#### Solenoid valve Soft

Type	3/2-way
Voltage	See label on solenoid
Connector	Rectangle plug, Type B (DIN standard)
Cable	Ø6 – 8 mm



Wiring diagram