



VAT Vakuumventile AG  
CH-9469 Haag, Schweiz

## Product data sheet

**Angle valve with soft-pump function**  
**Series 290, DN 80 (ID 3")**  
**Ordering No. 29038-QA11-0003**

### Description

Flange		ISO-K 80
Actuator		Pneumatic, single acting with closing spring – without solenoid valve – without position indicator
Feedthrough	– Main – Softpump	Bellows Bellows

### Technical data

Leak rate (static)	– Valve body – Valve seat	$< 1 \cdot 10^{-9}$ mbar ls <sup>-1</sup> $< 1 \cdot 10^{-9}$ mbar ls <sup>-1</sup>
Pressure range		$1 \cdot 10^{-8}$ mbar to 2 bar (abs)
Differential pressure on the plate	– In opening direction – In closing direction	$\leq 1.2$ bar $\leq 4$ bar
Differential pressure at opening		$\leq 1$ bar [1 bar with reduced number of cycles]
Conductance (molecular flow)		200 ls <sup>-1</sup>
Actuation time main	– Closing – Opening	$\leq 0.7$ sec. $\leq 1$ sec.
Actuation time softpump	– Closing – Opening	$\leq 0.2$ sec. $\leq 0.2$ sec.
Cycles until first service (Tmax 80°C, under clean conditions)	– Main – Softpump	1 million 3 million
Temperature (Maximum values: depending on operating conditions and sealing materials)	– Valve body – Actuator	$\leq 150$ °C $\leq 120$ °C
Material	– Body main – Body softpump – Actuator – Plate main – Plate soft – Bellows main – Bellows soft	Aluminum (EN AW-5083) Aluminum (EN AW-6060) Aluminum AISI 316L (1.4435 ESU) AISI 316L (1.4404) AISI 316L (1.4404, 1.4435), AISI 316 Ti (1.4571) AISI 316L (1.4404, 1.4435), AISI 316 Ti (1.4571)
Seal	– Bonnet O-ring – Plate O-ring – Actuator O-ring	FKM (Viton®) FKM (Viton®) FKM (Viton®)
Weight		3.8 kg / 8.377 lbs
Mounting position		any

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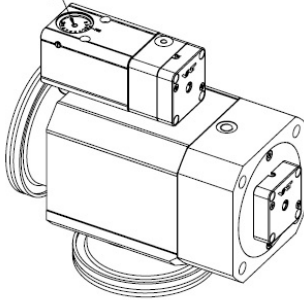
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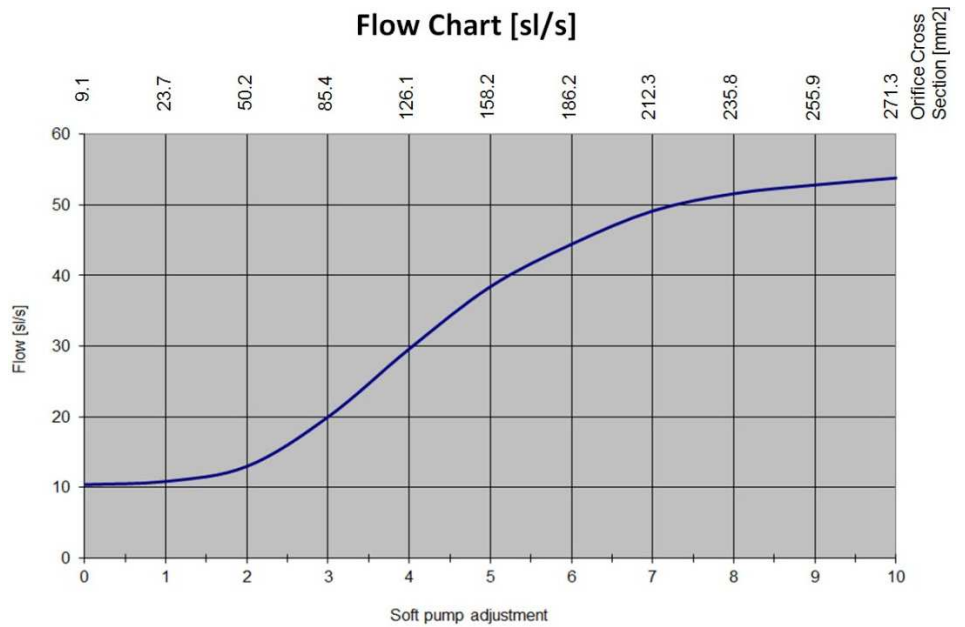
Volume of pneumatic actuator	- Main	0.112 l / 0.0040 ft <sup>3</sup>
	- Softpump	0.011 l / 0.0004 ft <sup>3</sup>
Compressed air min. – max. overpressure	- Main	4 – 8 bar / 58 – 115 psi
	- Softpump	4 – 8 bar / 58 – 115 psi
Compressed air connection	- Main	Female 1/8" ISO/NPT
	- Softpump	M5 (10-32 UNF 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	Depending on customer installation
	- During actuation	Depending on customer installation

#### Conductance diagram

soft-pump orifice  
pos. 4 (standard)



#### Flow Chart [sl/s]



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