



VAT Vakuumventile AG
CH-9469 Haag, Schweiz

Product data sheet

Angle valve with soft-pump function
Series 292, DN 160 (ID 6")
Ordering No. 29244-QA41-0001

Description

Flange		ISO-K 160
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	$< 1 \cdot 10^{-9}$ mbar ls ⁻¹
	– Valve seat	$< 1 \cdot 10^{-9}$ mbar ls ⁻¹
Pressure range		$1 \cdot 10^{-7}$ mbar to 2 bar (abs)
Differential pressure on the plate	– In opening direction	≤ 1.2 bar
	– In closing direction	≤ 2 bar
Differential pressure at opening		≤ 1 bar [1 bar with reduced number of cycles]
Conductance (molecular flow)		1000 ls ⁻¹
Actuation time main	– Closing	≤ 1.5 sec.
	– Opening	≤ 1.5 sec.
Actuation time softpump	– Closing	≤ 0.2 sec.
	– Opening	≤ 0.2 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	≤ 150 °C
	– Actuator	≤ 120 °C
	– Solenoid valve	≤ 50 °C
	– Position indicator	≤ 80 °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		16.5 kg / 36 lbs
Mounting position		any

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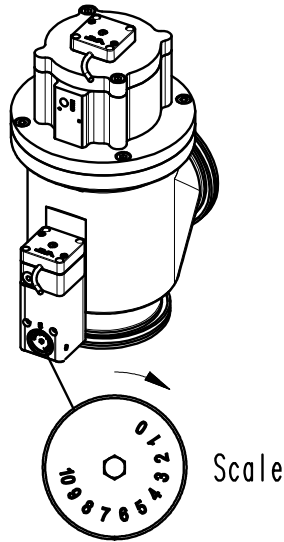
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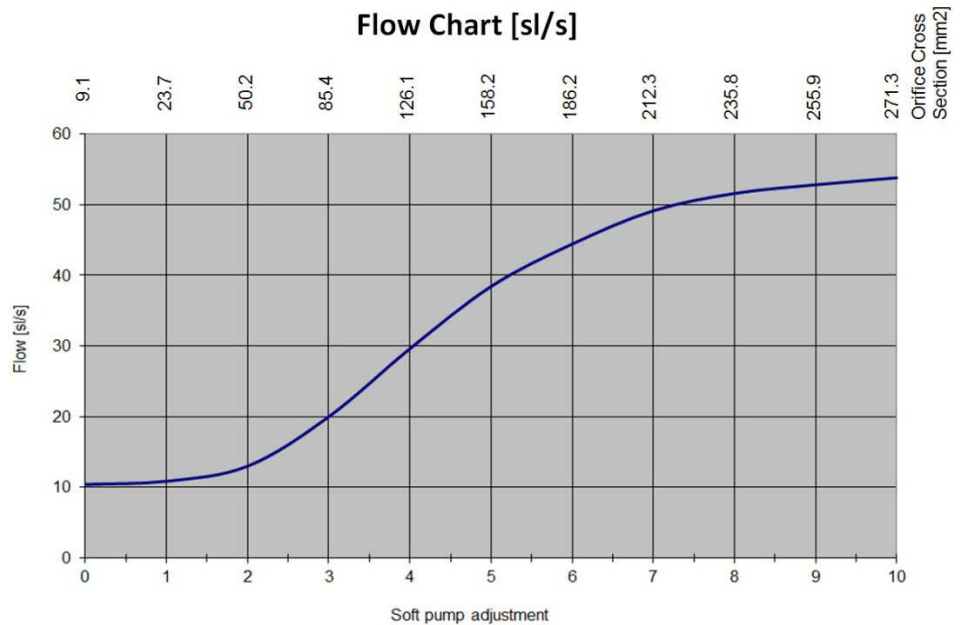
Angle valve with soft-pump function Series 292, DN 160 (ID 6") Ordering No. 29244-QA41-0001

Volume of pneumatic actuator	- Main	0.65 l / 0.023 ft ³
	- Softpump	0.011 l / 0.0004 ft ³
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



Flow Chart [sl/s]



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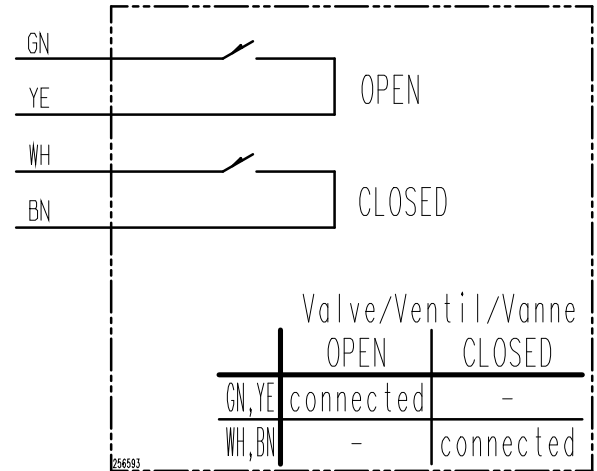
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Electrical connection

Position indicator Main and Soft

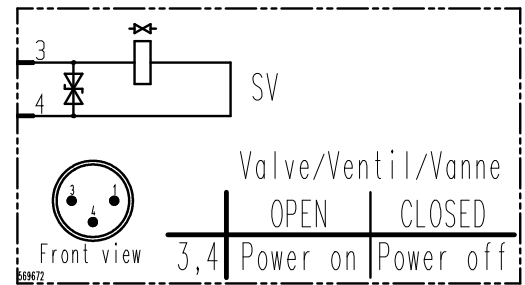
Type	Micro switch
Voltage	≤ 50 V AC / DC
Current	5...100 mA
Short circuit protected	No
Connection	cable, 4 wire
Cable length	500 mm
Wire cross section	0.25 mm ²



Wiring diagram

Solenoid valve Main

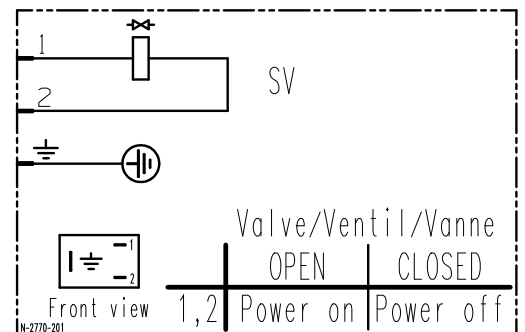
Type	3/2 way
Voltage	See label on solenoid
Connection type	plug, male M8x1
Additional feature	LED orange; overvoltage protection; adjustable emergency operation; silencer



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