



VAT Vakuumventile AG
CH-9469 Haag, Schweiz

Product data sheet
HV gate valve, Series 091, DN 100 (ID 4'')
Ordering No. 09140-UE44

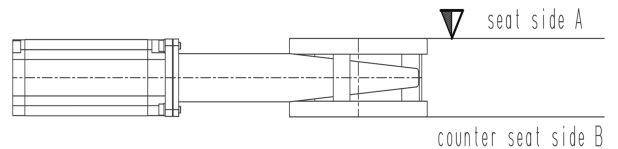
Description

Flange	CF-F 100 UNF
Actuator	pneumatic, double acting – with solenoid valve – with position indicator
Feedthrough	Bellows feedthrough

Technical data

Leak rate	
– Valve body	$< 1 \cdot 10^{-9} \text{ mbar ls}^{-1}$
– Valve seat	$< 1 \cdot 10^{-7} \text{ mbar ls}^{-1}$
Pressure range	$1 \cdot 10^{-8} \text{ mbar}$ to 1.2 bar (abs)
Differential pressure on the gate	$\leq 1.2 \text{ bar}$
Conductance (molecular flow)	$1\,700 \text{ ls}^{-1}$

Max. differential pressure at opening in closing and opening direction with influence to the cycle life



– Higher pressure on seat side A, the differential pressure acts in opening direction	$\leq 1.0 \text{ bar}$ with full cycle life
– Higher pressure on counter seat side B, the differential pressure acts in closing direction	$\leq 30 \text{ mbar}$ with full cycle life
– Higher pressure on counter seat side B, the differential pressure acts in closing direction	$\leq 1.0 \text{ bar}$ with reduced cycle life
Cycles until first service	5 000 (unheated and under clean conditions)
Bellows cycles	100 000 (unheated and under clean conditions)
Bake-out temperature	
– Valve body	$\leq 150 \text{ }^\circ\text{C}$ (bake-out max. 24h)
– Actuator	$\leq 100 \text{ }^\circ\text{C}$
– Solenoid	$\leq 50 \text{ }^\circ\text{C}$
– Position indicator	$\leq 60 \text{ }^\circ\text{C}$

Created by: LOO	Release date: 13.01.2015	1/3
Modified by:	Release date:	782958EA



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Heating and cooling rate		50 °C h ⁻¹
Material		
– Valve body		AISI 304 (1.4301)
– Gate		AISI 304 (1.4301), (1.4308)
– Parts (in contact with media)		A2 Ni-Teflon coated, PEEK
– Bellows		AISI 633, (AM350)
Seal		
– Bonnet		FKM (Viton [®])
– Gate		FKM (Viton [®])
– Actuator		FKM (Viton [®])
Mounting position		any
Volume of pneumatic actuator		0.24 l / 0.008 ft ³
Compressed air min. – max. overpressure		4 – 7 bar / 58 – 102 psi
Compressed air connection		G1/8" (NPT for USA)
Actuation time		
– closing		≤ 2 s
– opening		≤ 2 s
Behavior in case of compressed air pressure drop	– Valve closed – Valve open – During actuation	Valve remains closed (≥ 24h) undefined undefined
Behavior in case of power failure	– Valve closed – Valve open – During actuation	valve remains closed valve closes valve closes
Weight		approx. 7.8 kg / 17.2 lbs

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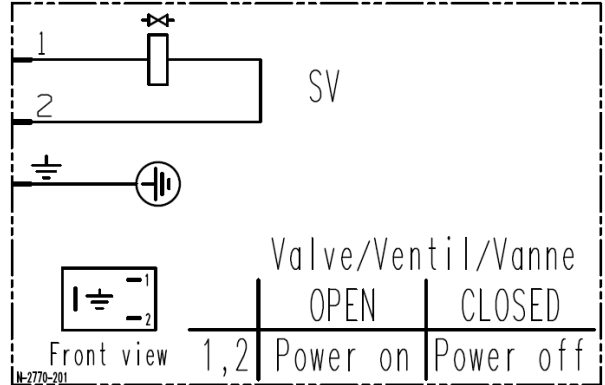
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Electrical connections

Solenoid valve

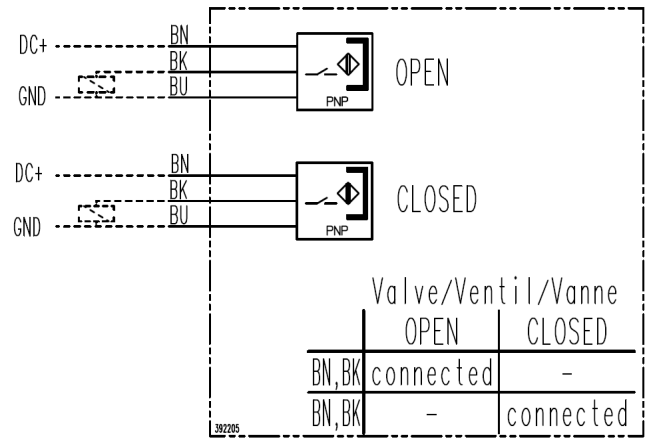
Type 4/2 way
Voltage Defined by order



Wiring diagram

Position indicator

Type PNP (NO with LED)
Voltage 10..30 V DC
Current max. ≤ 0.2 A



Wiring diagram