



VAT Vakuumventile AG
CH-9469 Haag, Schweiz

Product data sheet

HV gate valve, Series 091, DN 100 (4")
Ordering No. 09140-PE44-0004

Description

| | |
|-------------|--|
| Flange | ISO-F 100 |
| Actuator | Pneumatic, double acting – with solenoid valve – with position indicator |
| Feedthrough | Bellows |

Technical data

| | | |
|--|--|---|
| Leak rate | – Valve body – Valve seat | $< 1 \cdot 10^{-9}$ mbar ls ⁻¹ $< 1 \cdot 10^{-7}$ mbar ls ⁻¹ |
| Pressure range | | $1 \cdot 10^{-8}$ mbar to 1.2 bar (abs) |
| Differential pressure on the plate | | ≤ 1.2 bar |
| Differential pressure at actuation | – In opening direction – In closing direction | ≤ 1 bar ¹ ≤ 30 mbar (1 bar with reduced cycle life) ² |
| Conductance (molecular flow) | | 1 700 ls ⁻¹ |
| Cycles until first service | | 5 000 (unheated and under clean conditions) |
| Temperature (Maximum values: depending on operating conditions and sealing materials) | – Valve body – Actuator – Solenoid valve – Position indicator | ≤ 180 °C ≤ 100 °C ≤ 50 °C ≤ 70 °C |
| Heating and cooling rate | | 50 °C h ⁻¹ |
| Material | – Valve body – Gate – Bellows – Small parts | AISI 304 (1.4301) AISI 304 (1.4301, 1.4308) AISI 633 (AM350) A2 Ni-PTFE coated, PEEK |
| Seal | – Bonnet – Gate – Actuator | FKM FKM FKM, PU |
| Mounting position | | any |
| Volume of pneumatic actuator | | 0.25 l / 0.009 ft ³ |
| Compressed air min. – max. overpressure | | 4 – 7 bar / 58 – 102 psi |
| Compressed air connection | | G1/8" (NPT for USA) |
| Actuation time | | ≤ 0.5 s |

¹ Differential pressure supports gate to open

² Differential pressure supports gate to stay closed. Therefore cycle life reduced due to increased wear of gate seal

| | | |
|-----------------|--------------------------|------------------|
| Created by: BRR | Release date: 20.04.2021 | 1/2 |
| Modified by: | Release date: | 1010206EC |



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| | | |
|--|--|---|
| Weight | | 7.3 kg / 16.1 lbs |
| Behavior in case of compressed air pressure drop | <ul style="list-style-type: none"> - Valve closed - Valve open - During actuation | valve remains closed ($\geq 24h$) undefined undefined |
| Behavior in case of power failure | <ul style="list-style-type: none"> - Valve closed - Valve open - During actuation | valve remains closed ($\geq 24h$) valve closes valve closes |

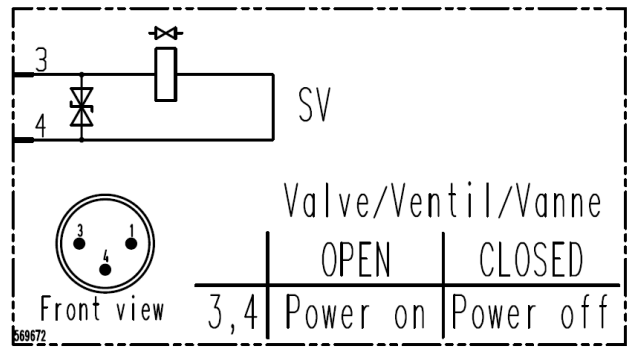
Related documents

Dimensional drawing No. 1004850

Electrical connections

Solenoid valve

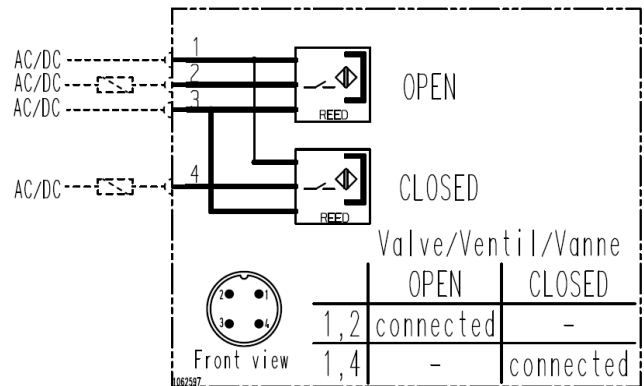
Type 5/2 way
Voltage 24 V DC



Wiring diagram

Position indicator

Type Reed (NO with LED)
Voltage 24 V AC/DC
Current max. ≤ 0.5 A



Wiring diagram

| | | |
|-----------------|--------------------------|-----------|
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