VAT Vakuumventile AG
CH-9469 Haag, Schweiz

# Product data sheet

## HV gate valve, Series 091, DN 160 (6")
## Ordering No. 09144-JE44-0003

### Description

| | |
|---|---|
| Flange | JIS 160 |
| Actuator | Pneumatic, double acting<br>– with solenoid valve<br>– with position indicator |
| Feedthrough | Bellows |

### Technical data

| | | |
|---|---|---|
| Leak rate | – Valve body<br>– Valve seat | $< 1 \cdot 10^{-9}$ mbar ls$^{-1}$<br>$< 1 \cdot 10^{-7}$ 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<br>– In closing direction | ≤ 1 bar[1]<br>≤ 30 mbar (1 bar with reduced cycle life)[2] |
| Conductance (molecular flow) | | 4'500 ls$^{-1}$ |
| Cycles until first service | | 5'000 (unheated and under clean conditions) |
| Temperature<br>(Maximum values: depending on operating conditions and sealing materials) | – Valve body<br>– Actuator<br>– Solenoid valve<br>– Position indicator | ≤ 180 °C<br>≤ 100 °C<br>≤ 50 °C<br>≤ 70 °C |
| Heating and cooling rate | | 50 °C h$^{-1}$ |
| Material | – Valve body<br>– Gate<br>– Bellows<br>– Small parts | AISI 304 (1.4301)<br>AISI 304 (1.4301, 1.4308)<br>AISI 633 (AM350)<br>A2 Ni-PTFE coated, PEEK |
| Seal | – Bonnet<br>– Gate<br>– Actuator | FKM<br>FKM<br>FKM, PU |
| Mounting position | | any |
| Volume of pneumatic actuator | | 0.55 l / 0.019 ft$^3$ |
| Compressed air<br>min. – max. overpressure | | 4 – 7 bar / 58 – 102 psi |
| Compressed air connection | | G1/8" (NPT for USA) |
| Actuation time | | ≤ 0.6 s |
| Weight | | 14.5 kg / 36.3 lbs |

[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

| | | |
|---|---|---|
| Behavior in case of compressed air pressure drop | – Valve closed | valve remains closed (≥ 24h) |
| | – Valve open | undefined |
| | – During actuation | undefined |
| Behavior in case of power failure | – Valve closed | valve remains closed (≥ 24h) |
| | – Valve open | valve closes |
| | – During actuation | valve closes |

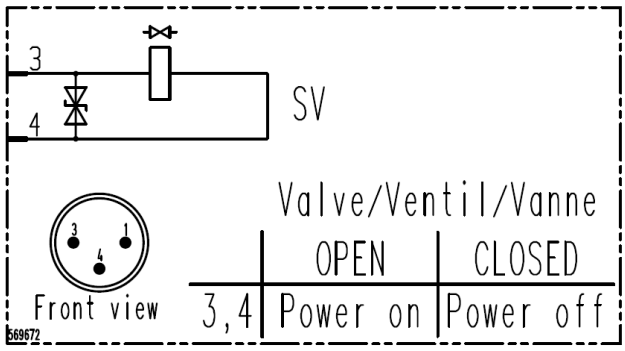
## Related documents

| | |
|---|---|
| Dimensional drawing No. | 1190199 |

## Electrical connections

### Solenoid valve

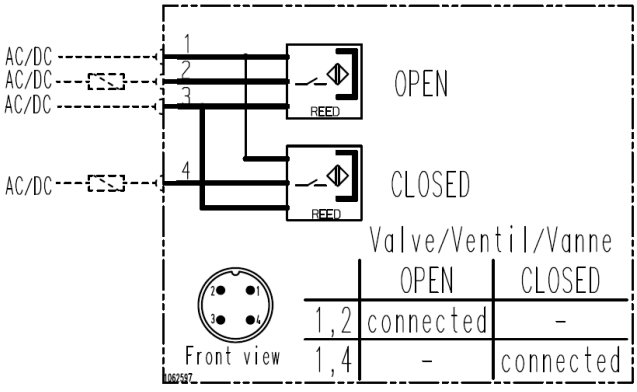
| | |
|---|---|
| Type | 5/2 way |
| Voltage | 24 V DC |




Wiring diagram

### Position indicator

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




Wiring diagram