



VAT Vakuumventile AG  
CH-9469 Haag, Schweiz

## Product data sheet

**All-metal gate valve, Series 481, DN 250 (ID 10'')**

**Ordering No. 48148-CE74-0001**

### Description

Flange		DN 250 CF-F
Actuator		Pneumatic double acting, compact - with solenoid valve - with position indicator
Feed through		Bellows
Option	=	Standard

### Technical data

Leak rate	- Valve body - Valve seat	$< 1 \cdot 10^{-10}$ mbar ls <sup>-1</sup> $< 1 \cdot 10^{-10}$ mbar ls <sup>-1</sup>
Pressure range		XUHV to 2 bar (abs)
Test pressure		1 bar
Differential pressure on the gate		≤ 2 bar
Differential pressure at opening		500 mbar, 1 bar with reduced cycle life
Conductance (molecular flow)		12 700 ls <sup>-1</sup>
Cycles until first service		5 000
Bake-out temperature (Maximum values: depending on operating conditions and sealing materials)	- Valve body - Actuator - Position indicator - Solenoid	≤ 300 °C ≤ 200 °C (for max. 100h) ≤ 80 °C ≤ 80 °C
Heating and cooling rate		≤ 25 °C h <sup>-1</sup>
Material	- Valve body - Flange - Gate - Mechanism - Bellows	1.4435, AISI 316 L 1.4435 ESU, AISI 316 L ESR 1.4435, AISI 316 L 1.4435, AISI 316 L 1.4435, AISI 316 L
Seal	- Bonnet - Gate - Actuator	metal, silver plated metal, silver plated FKM (Viton®)
Mounting position		Beam tube horizontal, actuator up or down
Radiation resistance	- Valve body - Actuator - Position indicator - Solenoid	10 <sup>8</sup> Gy (10 <sup>10</sup> rad) 10 <sup>5</sup> Gy (10 <sup>7</sup> rad) 10 <sup>5</sup> Gy (10 <sup>7</sup> rad) 10 <sup>4</sup> Gy (10 <sup>6</sup> rad)
Volume of pneumatic actuator		10.7 l / 0.378 ft <sup>3</sup>
Compressed air min. – max. overpressure		4 - 8 bar / 58 - 116 psig
Compressed air connections		R 1/8" (USA: 1/8" NPT)

Created by: Martin Greuter	Release date: 02. September 2011	1 of 2
Modified by: Martin Greuter	Release date: 23. April 2014	<b>291213EA</b>



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Actuation time (valid for RT, Ø6mm tubing at 4 bar with flow rate of 400 l/min)

- Closing ≤ 20.0 sec
- Opening ≤ 20.0 sec

Weight 155 kg / 342 lbs

Behavior in case of compressed air pressure drop

- Valve closed Valve remains in closed position
- Valve open Undefined

Behavior in case of power failure

- Valve closed Valve remains in closed position
- Valve open Valve closes

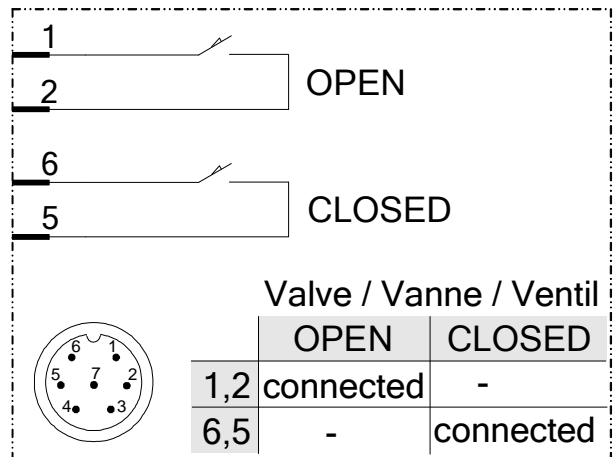
### Related documents

Dimensional drawing No. 216811D

### Electrical connections

#### Position indicator

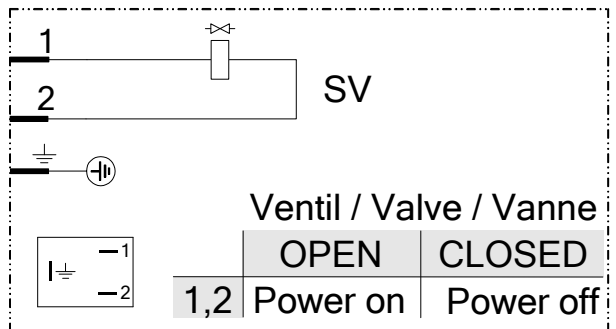
Type micro switch  
Voltage ≤ 50 V AC / DC  
Current max. ≤ 1.2 A



Wiring diagram

#### Solenoid

Voltage according to PO  
Power consumption ≤ 2.5 W



Wiring diagram