



VAT Vakuumventile AG
CH-9469 Haag, Schweiz

Product data sheet

All-metal gate valve
Series 481, DN 250 (ID 10'')
Ordering No. 48148-RE24-ARG1

Description

Flange		Weld neck N.D. 250 schedule 10S
Actuator		Pneumatic double acting - without solenoid valve - with position indicator
Feed through		Bellows
Option	ARG =	Product: valve type ITER 1; Flange A+B: weld stub flange schedule 10S; Body: double wall body; Actuator: radiation resistant 10 ⁶ Gy; Position indicator: double; 200 °C; Glenair 6 pin connector; 125 °C; radiation resistant 10 ⁶ Gy; Bonnet flange: vacuum feedthrough double bellows; kind of seal double; VATSEAL; intermediate pumping between two bellows, double wall body and double bonnet seal; VCR ¼"

Technical data

Leak rate (Test method acc. VAT Standard N-2100; He/air mix, ΔP = 1 bar)	- Valve body	< 1 · 10 ⁻⁹ mbar ls ⁻¹
	- Valve seat	< 1 · 10 ⁻⁹ mbar ls ⁻¹
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)		5 300 ls ⁻¹
Cycles until first service (Maximum values: depending on operating conditions and valve contamination)	- Normal conditions ¹	5 000
	- Extreme conditions ²	1 000
Bake-out temperature (Maximum values: depending on operating conditions and sealing materials)	- Valve body	≤ 240 °C
	- Actuator	≤ 140 °C (for max. 100h)
	- Position indicator	≤ 200 °C
Heating and cooling rate		≤ 10 °C h ⁻¹
Material	- Valve body	AISI 316 L
	- Flange	AISI 316 L ESR
	- Weld neck	AISI 316 L
	- Gate	AISI 316 L
	- Mechanism	AISI 316 L
	- Bellows	AISI 316 L
	- Actuator	AISI 304; aluminium
	- Seal	metal, silver plated
Seal	- Gate	metal, silver plated
	- Actuator	EPDM

¹ Normal conditions: External pressure 0.1 MPa, pressure inside valve 0 MPa, bellows interspace pressure 0.05 MPa temperatures ambient.

² Extreme conditions: External pressure 0.2 MPa, pressure inside valve 0 MPa, bellows interspace pressure 0 MPa, temperature 100 °C

Created by: Phil Schneider	Release date: 05.06.2020	1/2
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Mounting position		any
Radiation resistance	<ul style="list-style-type: none"> - Valve body - Actuator - Position indicators 	<ul style="list-style-type: none"> 10⁸ Gy (10¹⁰ rad) 10⁶ Gy (10⁸ rad) 10⁶ Gy (10⁸ rad)
Maximum magnetic field levels		≤ 150 mT
Volume of pneumatic actuator		10.7 l / 0.378 ft ³
Compressed air min. – max. overpressure		4 - 8 bar / 58 - 116 psig
Compressed air connections		1/8" ISO/NPT
Actuation time (valid for RT, Ø6mm tubing at 4 bar with flow rate of 400 l/min)	<ul style="list-style-type: none"> - Closing - Opening 	<ul style="list-style-type: none"> ≤ 20.0 sec ≤ 20.0 sec
Weight	<ul style="list-style-type: none"> - Valve complete - Actuator 	<ul style="list-style-type: none"> 230.3 kg / 507.7 lbs 16.9 kg / 37.3 lbs
Behavior in case of compressed air pressure drop	<ul style="list-style-type: none"> - Valve closed - Valve open 	<ul style="list-style-type: none"> Valve remains in closed position Undefined
Behavior in case of power failure		Depending on control

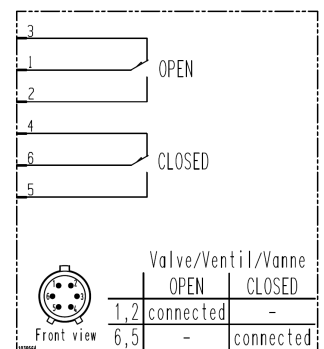
Related documents

Dimensional drawing No.	820064	Rev C
STEP file No.	820063	Rev C

Electrical connections

Position indicator (2x)

Type	micro switch
Voltage	≤ 50 V AC / DC
Current max.	≤ 1.0 A
Connector on the valve:	8070-2530-02Z16-6PA
Mating connector:*	8070-3039-01Z16-6KA (pins compatible with AWG 20 wire)



Wiring diagram

References

The product data is based on either VAT internally/externally performed lab tests or supplier product information. Relevant references listed on document 838738.

*The mating connector is not part of the valve and needs to be ordered separately at Glenair.

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