VAT Vakuumventile AG
CH-9469 Haag, Schweiz

Product data sheet

All-metal gate valve, Series 481, DN 200
Ordering No. 48146-RE24-ASG1

Description

Flange		Weld neck N.D. 130 schedule 40S
Actuator		Pneumatic double acting - without solenoid valve - with position indicator
Feed through		Bellows
Option	ASG =	Product: valve type ITER 6; Flange A+B: weld stub flange schedule 40S; 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"; Bellows with protection tube in open position

Technical data

Leak rate (Test method acc. VAT Standard N-2100; He/air mix, ΔP = 1 bar)	– Valve body – Valve seat	$< 1 \cdot 10^{-9}$ mbar ls^{-1} $< 1 \cdot 10^{-9}$ 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)		approx. 720 ls^{-1}
Cycles until first service (Maximum values: depending on operating conditions and valve contamination)	– Normal conditions[1] – Extreme conditions[2]	5 000 1 000
Bake-out temperature (Maximum values: depending on operating conditions and sealing materials)	– Valve body – Actuator – Position indicator	≤ 240 °C ≤ 140 °C (for max. 100h) ≤ 200 °C
Heating and cooling rate		≤ 10 °C h^{-1}
Material	– Valve body – Flange – Weld neck – Gate – Mechanism – Dust protection – Bellows – Actuator	AISI 316 L AISI 316 L ESR AISI 316 L AISI 316 L AISI 316 L AISI 316 Ti, AISI 316 L AISI 316 L AISI 304; aluminium
Seal	– Bonnet	metal, silver plated

[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

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	– Gate – Actuator	metal, silver plated EPDM
Mounting position	– Aperture axis – Actuator axis	horizontal vertical or horizontal
Radiation resistance	– Valve body – Actuator – Position indicators	10^8 Gy (10^{10} rad) 10^6 Gy (10^8 rad) 10^6 Gy (10^8 rad)
Maximum magnetic field levels		≤ 150 mT
Volume of pneumatic actuator		8.3 l / 0.293 ft^3
Compressed air min. – max. overpressure		4 - 8 bar / 58 - 116 psig
Compressed air connections		⅛" ISO/NPT
Actuation time (valid for RT, Ø6mm tubing at 4 bar with flow rate of 400 l/min)	– Closing – Opening	≤ 18.0 sec ≤ 18.0 sec
Weight	– Valve complete – Actuator	205.5 kg / 453.1 lbs 15.8 kg / 34.9 lbs
Behavior in case of compressed air pressure drop	– Valve closed – Valve open	Valve remains in closed position Valve remains in open position
Behavior in case of power failure		Depending on control

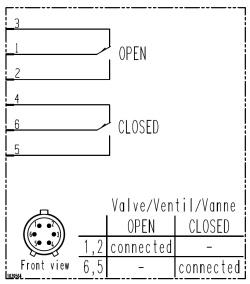
Related documents

Dimensional drawing No.	851998 Rev A
STEP file No.	848167 Rev A

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.