



VAT Vakuumventile AG
CH-9469 Haag, Schweiz

Product data sheet

All-metal gate valve, Series 481, DN 40 (1 1/2")
Ordering No. 48132-RE24-ATW1

Description

Flange		Weld neck N.D. 40 schedule 10S
Actuator		Pneumatic double acting - without solenoid valve - with position indicator; style rotatable 90°
Feed through		Bellows
Option	ATW =	Product: valve type ITER 1; Flange A+B: weld stub flange schedule 10S; Plate: orifice 0.4 mm; 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 1/4"

Technical data

Leak rate (Test method acc. VAT Standard N-2100; He/air mix, ΔP = 1 bar)	- Valve body - Valve seat	< 1 · 10 ⁻⁹ mbar ls ⁻¹ n/a
Pressure range		XUHV to 2 bar (abs)
Test pressure		1 bar
Differential pressure on the gate		≤ 2 bar
Differential pressure at opening		≤ 1 bar 0.0067
Conductance (molecular flow, calculated value)	- Valve open - Valve closed	30 ls ⁻¹ 9.3 · 10 ⁻³ ls ⁻¹
Cycles until first service (Maximum values: depending on operating conditions and valve contamination)	- Normal conditions ¹ - Extreme conditions ²	20 000 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 - Bellows - Actuator	AISI 316 L AISI 316 L ESR AISI 316 L AISI 316 L 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

Created by: Phil Schneider	Release date: 26.05.2020	1/2
Modified by: Phil Schneider	Release date: 05.02.2021	948078ED



VAT Vakuumventile AG
CH-9469 Haag, Schweiz

Product data sheet

All-metal gate valve, Series 481, DN 40 (1 1/2")
Ordering No. 48132-RE24-ATW1

	- Gate	metal, silver plated
	- Actuator	EPDM
Mounting position		any
Radiation resistance	- Valve body	10 ⁸ Gy (10 ¹⁰ rad)
	- Actuator	10 ⁶ Gy (10 ⁸ rad)
	- Position indicators	10 ⁶ Gy (10 ⁸ rad)
Maximum magnetic field levels		≤ 150 mT
Volume of pneumatic actuator		0.27 l / 0.010 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)	- Closing	≤ 1.5 sec
	- Opening	≤ 1.5 sec
Weight	- Valve complete	13.6 kg / 30.0 lbs
	- Actuator	1.8 kg / 4 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		Depending on control

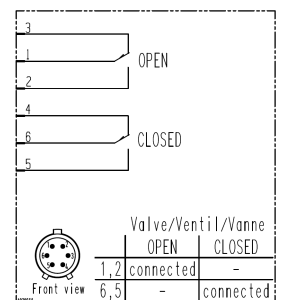
Related documents

Dimensional drawing No. 947769 Rev C
STEP file No. 947767 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.

Created by: Phil Schneider	Release date: 26.05.2020	2/2
Modified by: Phil Schneider	Release date: 05.02.2021	948078ED