



VAT Vakuumventile AG  
CH-9469 Haag, Schweiz

## Product data sheet

**UHV angle valve, Series 284, DN 100 (4")**  
**Ordering No. 28440-QE21-CQD1**

### Description

Flange		ISO-K 100
Actuator		Pneumatic, single acting with closing spring – without solenoid valve – with position indicator
Feedthrough		Bellows
Options	CQD =	– Product: valve type ITER 21

### Technical data<sup>1</sup>

Leak rate	– Valve body – Valve seat	$\leq 1 \cdot 10^{-8}$ mbar ls <sup>-1</sup> $< 1 \cdot 10^{-8}$ mbar ls <sup>-1</sup>
Leak rate (accidental condition)	– Valve body – Valve seat	$\leq 1 \cdot 10^{-8}$ mbar ls <sup>-1</sup> n/a
Pressure range		$1 \cdot 10^{-8}$ mbar to 1.5 bar (abs)
Differential pressure on the plate <sup>2</sup>	– In opening direction – In closing direction	$\leq 1.2$ bar $\leq 1.5$ bar
Differential pressure at opening		$\leq 1$ bar
Conductance (molecular flow)		440 ls <sup>-1</sup>
Closing time		$\leq 1$ sec.
Cycles until first service (Tmax 80 °C, under clean conditions)		10 000
Temperature (Maximum values: depending on operating conditions and sealing materials)	– Valve body – Actuator – Position indicator	$\leq 150$ °C $\leq 120$ °C $\leq 120$ °C
Material	– Valve body – Actuator – Plate – Bellows	AISI 316L (1.4404) Aluminum AISI 316L (1.4404) AISI 316L (1.4404), AISI 316 Ti (1.4571)
Seal	– Bonnet – Plate – Actuator	metal EPDM EPDM
Weight		10 kg / 22 lbs
Mounting position		any
Radiation resistance		$10^6$ Gy ( $10^8$ rad)
Maximum magnetic field levels		$\leq 150$ mT
Volume of pneumatic actuator		0.3 l / 0.01 ft <sup>3</sup>
Compressed air min. – max. overpressure		4.5 – 7 bar / 65 – 102 psi
Compressed air connection		1/8" female ISO/NPT

<sup>1</sup> Values according technical specification D\_R8752R v.1.1

<sup>2</sup> Deviation to technical specification D\_R8752R v.1.1 in agreement with responsible IO department

Created by: GARM	Release date: 13.02.2019	1/2
Modified by:	Release date:	<b>921518EB</b>



VAT Vakuumventile AG  
CH-9469 Haag, Schweiz

## Product data sheet

**UHV angle valve, Series 284, DN 100 (4")**  
**Ordering No. 28440-QE21-CQD1**

Behavior in case of compressed air pressure drop	– Valve closed – Valve open – During actuation	valve remains closed and leaktight valve closes leaktight valve closes leaktight
Behavior in case of power failure	– Valve closed – Valve open – During actuation	depending on customer installation depending on customer installation depending on customer installation
Assembly cleanliness level		ISO Class 8

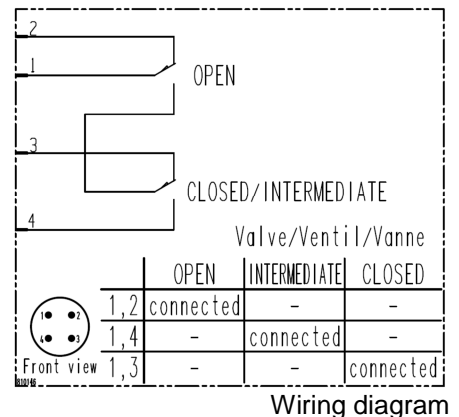
### Related documents

Dimensional drawing No.	855622
STEP file No.	855621

### Electrical connections

#### Position indicator

Type	Micro switch
Voltage	≤ 50 V AC / DC
Current	5 – 100 mA
Short circuit protected	No
Male plug (VAT valve)	4 pin
Female connector (ITER) <sup>3</sup>	8070-2201-01Z16-4SA (Glenair)



<sup>3</sup> Not included with delivery

Created by: GARM	Release date: 13.02.2019	2/2
Modified by:	Release date:	<b>921518EB</b>