



VAT Vakuumventile AG  
CH-9469 Haag, Schweiz

## Product data sheet

**Variable Leak Valve, Series 590 DN 16 (ID 5/8")**

**Ordering No. 59024-GEGG-0003**

### Description

Flange	DN 16 CF-R
Actuator	Stepper Motor with integrated controller RS232 interface / 1 sensor

### Technical data

Leak rate	
- To the outside	$\leq 1 \cdot 10^{-10} \text{ mbar ls}^{-1}$
- Seat "closed position"	$\leq 1 \cdot 10^{-10} \text{ mbar ls}^{-1}$
Molecular conductance	$0.05 \text{ ls}^{-1}$
Adjustable gas flow [air, 1 bar, RT]	$1 \cdot 10^{-10} \text{ mbar ls}^{-1} - 500 \text{ mbar ls}^{-1}$
Dead volume	
- Seat port	$2.7 \text{ cm}^3$
- Side port	$1.1 \text{ cm}^3$
Pressure range	UHV to 10 bar (abs)
Test pressure	1 bar
Differential pressure	$\leq 10 \text{ bar}$
Max. differential pressure at opening	$\leq 10 \text{ bar}$
Cycles until first service	20 000
Bake-out temperature	
- open	$\leq 300^\circ\text{C}$
- closed	$\leq 300^\circ\text{C}$
- actuator	$\leq 50^\circ\text{C}$ (< 35°C recommended)
Heating and cooling rate	$\leq 60^\circ\text{Ch}^{-1}$
Material	
- Body	1.4943, AISI 660 / 1.4404, AISI 316 L
- Diaphragm	1.4310, AISI 301, gold plated
Mounting position	any
Input voltage	+ 24 V DC ( $\pm 10\%$ ) @ 0.5 V pk-pk max.
Power consumption	38 W
Sensor input	
- Signal voltage / Input resistance	0 - 10 V DC / $R_i = 100\text{k}\Omega$ linear with pressure
- ADC resolution	0.23 mV
- Sampling time	10ms
Control accuracy	0.1% of maximum sensor range
Position resolution	100 000 steps (preliminary)
Closing time	3.5 s
Weight	2.5kg / 5.5 lbs

### Dimensions

Dimensional drawing no.	790401
-------------------------	--------

Created by: Simon Naef	Release date: 11.1.2016	Page 1 of 1
Modified by: :	Release date:	<b>826106EA</b>