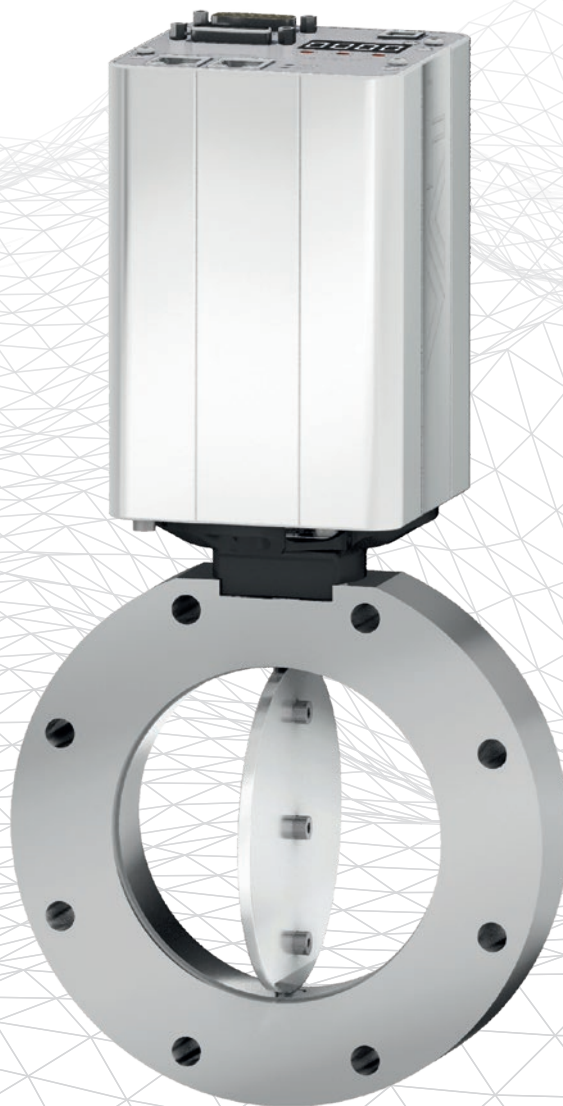


61.3

Butterfly Control Valve – Fast and Precise Downstream Pressure Control

VACUUM VALVE SOLUTIONS



61.3 Butterfly Control Valve – Outstanding Pressure Control Under All Conditions

The 61.3 Butterfly Control Valve provides outstanding pressure control performance. With its fast and precise acting motion controller (0.1s) it's the perfect solution for fine control in CVD and ALD processes. The plate acts as a throttling element and varies the conductance of the valve opening. The integrated pressure controller of the 61.3 calculates the required plate position to achieve the set pressure as fast as possible.

It is especially designed for harsh downstream processes with particle in the gas stream. The 61.3 stays fully operational despite high particle loads and debris accumulation by design.

Already installed in thousands of demanding applications under various process conditions, the 61.3 series has proven its outstanding reliability. With a robust design and direct mounting option, as well as reduced and easy maintenance, the 61.3 series convinces in all aspects.

Various design options in body material, surface treatment, elastomers, flange connections, special sizes as well as special control algorithms (adaptive, fix PI down-stream/soft-pump) simplify the integration into various vacuum applications.



61.3 Butterfly Control Valve is available in aluminum or stainless steel, with standard flange connectors in ISO-KF and ISO-F. Customer-specific flanges can be integrated as well as special features like an integrated heater with insulation. Various FFKM/FKM elastomers are available on request (FKM is standard).

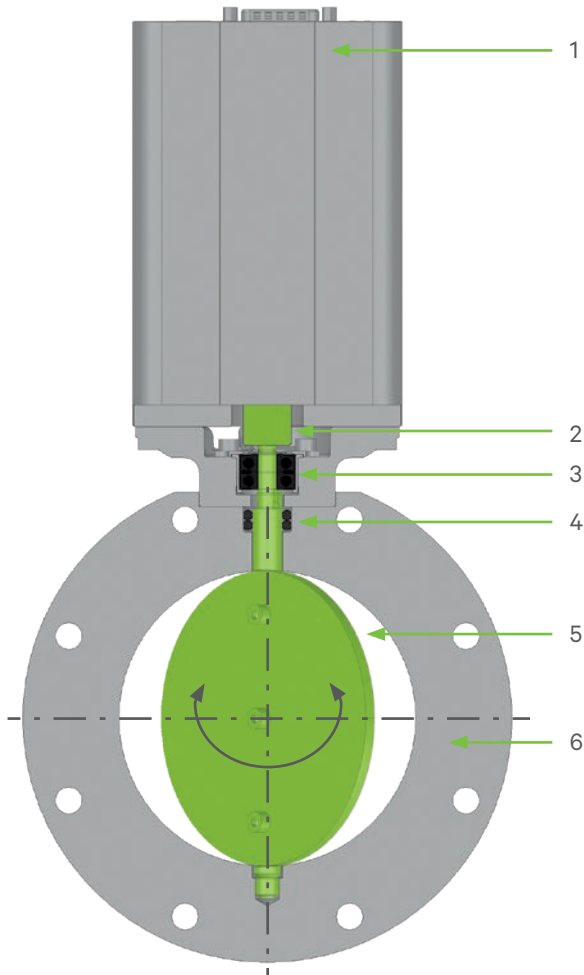
Features:

- Excellent pressure control
- Very fast operation
- On-board software for local operation
- Reliable operation in harsh processes conditions

Benefits:

- Better process controllability
- High uptime / unrestricted performance
- Low cost of operations

Control



- 1 Controller
- 2 Coupling
- 3 Bearing
- 4 Double seal
- 5 Plate
- 6 Valve body

TECHNICAL DATA

Sizes	DN 25 – 320 mm (1" – 12")	
Actuator	integrated controller with stepper motor, field oriented control (foc)	
Body material	aluminum or stainless steel	
Standard flanges	ISO-KF, ISO-F	
Leak rate: valve body ¹⁾	aluminum stainless steel	< 1 × 10 ⁻⁹ mbar ls ⁻¹ < 1 × 10 ⁻⁹ mbar ls ⁻¹
Pressure range ¹⁾	< 1 × 10 ⁻⁸ mbar to 1.2 bar	
Cycles until first service ²⁾	pressure control	2 million
Temperature ²⁾	valve body	≤ 150 °C
Material	valve body / plate shaft	aluminium stainless steel
Seal	feedthrough	FKM (others on request)
Feedthrough	rotating shaft, direct driven	
Mounting position	any (shaft on pump side recommended)	
Max. differential pressure	on the plate	DN 25 ... DN 320 1000 mbar ... 75 mbar
Conductance	molecular flow	22 ls ⁻¹ ... 27 000 ls ⁻¹
Minimum controllable conductance	molecular flow	0.15 ls ⁻¹ ... 6 ls ⁻¹
Typical closing or opening time "position only" version	aluminum, stainless steel	0.09 s ... 0.29 s
Weight	aluminum valve stainless steel valve	2.0 kg (4.40 lbs) ... 10.4 kg (23 lbs) 2.5 kg (5.5 lbs) ... 12.3 kg (27.1 lbs)

¹⁾ Unheated on delivery.

²⁾ Maximum values depending on operating conditions and sealing materials.

OPTIONS, CUSTOMIZED SOLUTIONS

VALVE

Reinforced version for harsh conditions (up to DN 160)

Customer specific flanges

Alternative body sizes

Alternative body materials

Alternative sealing materials

CONTROLLER

Calculates the required plate position to achieve the setpoint pressure

Sensor Power Supply Option

Power Failure Option

³⁾ CanOpen/EtherCAT CiA-402 Drive Profile (position, velocity, torque, homing...)

- ETG.5003 Semiconductor Device Profile
- ETG.5003.1 à Common Device Profile (CDP)
- ETG.5003.0002 à Firmware Update over EtherCAT
- ETG.5003.3030 à Process Control Valve Profile (profile under development; ETG release pending)

CONTROLLER-MODES

Adaptive, fix PI down-stream/soft-pump

CONTROLLER INTERFACES

Logic (analog/digital) RS232 + AO RS485 + AO

DeviceNet® EtherCAT ³⁾ CC-Link

Profibus Ethernet Position Only

TEMPERATURE OPTIONS

200 °C or 400 °C version

Heater with insulation jacket

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