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61.6
HV Control Butterfly Valve – Fast & Precise Downstream Pressure Control and Isolation

VACUUM VALVE SOLUTIONS

www.vatvalve.com

61.6 HV Control Butterfly Valve – Outstanding Pressure Control and Isolation Under All Conditions

The 61.6 HV Control Butterfly Valve delivers outstanding pressure control and isolation performance. With its fast and precise acting motion controller (0.45 s) it's the perfect solution for fine control and isolation in CVD processes. The plate acts as a throttling element and varies the conductance of the valve opening. The integrated pressure controller of the 61.6 calculates the required plate position to achieve the set pressure as fast as possible.

The 61.6 series isolation function is specially designed to avoid the characteristic higher seal wear of butterfly valves. With it out-of-center plate shaft and the special geometry of the valve body and seal seat, seal friction is minimized and the sealing performance is increased.

Already installed in thousands of demanding applications under various process conditions, the 61.6 series has proven its outstanding reliability. With a robust design and direct mounting option, as well as reduced and easy maintenance, the 61.6 series convinces in all aspects.

Various design options in body material, surface treatment, elastomers, flange connections, sealing material, special sizes as well as special control algorithms (adaptive, fix PI down-stream/soft-pump) simplify the integration of the 61.6 series into various vacuum applications.

61.6 HV Control Butterfly Valves are available in hard anodized aluminium 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 integrated heater with insulation. FFKM/FKM elastomers are available on request (FKM is standard).

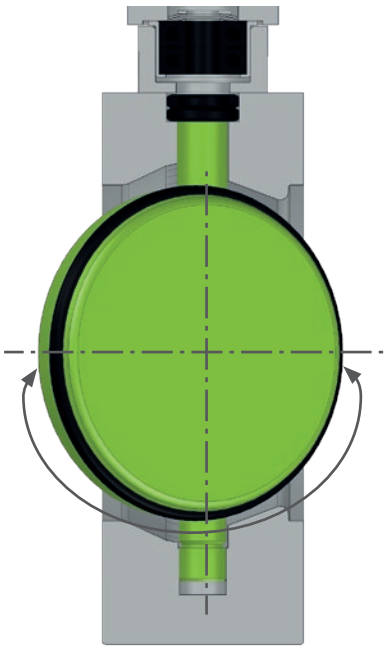
Features:

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

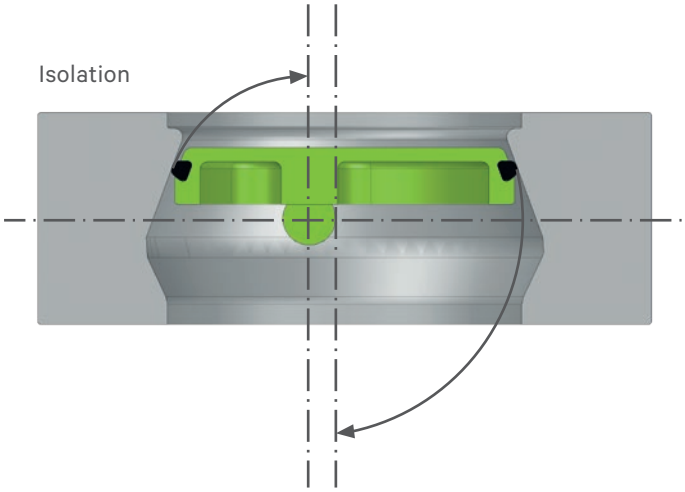
Benefits:

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

Control



Isolation



TECHNICAL DATA

Sizes		DN 40 – 100 mm (1½" – 4")
Actuator		integrated controller with stepper motor, field oriented control (foc)
Body material		hard anodized aluminum or stainless steel
Standard flanges		ISO-KF, ISO-F
Leak rate: valve body [1]	hard anodized aluminum stainless steel	$< 1 \times 10^{-5}$ mbar $l s^{-1}$ $< 1 \times 10^{-9}$ mbar $l s^{-1}$
Leak rate: valve seat [1]	hard anodized aluminum stainless steel	$< 1 \times 10^{-4}$ mbar $l s^{-1}$ $< 1 \times 10^{-9}$ mbar $l s^{-1}$
Pressure range [1]	hard anodized aluminum stainless steel	$< 1 \times 10^{-6}$ mbar to 1.2 bar (abs) $< 1 \times 10^{-8}$ mbar to 1.2 bar (abs)
Cycles until first service [2]	pressure control isolation	2 million 250 000 (DN 40 - 50) 100 000 (DN 63 - 100)
Temperature [2]	valve body	≤ 120 °C
Material	alu valve body/plate SS valve body, shaft	EN AW-6082 (3.2315) AISI 316L (1.4404 or 1.4435)
Seal	plate feedthrough	FKM FKM
Feedthrough		rotary feedthrough
Mounting position		valve seat towards chamber

[1] Unheated on delivery.
[2] Maximum values depending on operating conditions and sealing materials.

OPTIONS, CUSTOMIZED SOLUTIONS

VALVE

- Customer specific flanges
- Alternative body sizes
- Alternative sealing materials

CONTROLLER

- Calculates the required plate position to achieve the setpoint pressure
- Sensor Power Supply Option
- Power Failure Option

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

[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)

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