

# Flapper Valves

## Series 068

FLUID ISOLATION  
2/2 AND 3/2 SOLENOID VALVES  
FOR ANALYTICAL AND MEDICAL TECHNOLOGY



**ASCO**  
**NUMATICS**<sup>TM</sup>

  
**EMERSON**<sup>TM</sup>  
Industrial Automation

# Fluid isolation with flapper technology

Mechanical separation between the fluid handled and the valve's control mechanism is one of the most essential features required for the sensitive applications of analytical and medical technology.

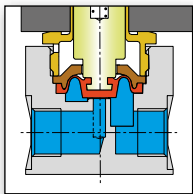
ASCO Numatics offers 6 different fluid isolation technologies. They are designed to:

- exclude particulate contamination caused by friction of moving parts,
- minimise heat transfer from the electromagnetic control system into the fluid,
- ensure a high level of reliability of the solenoid valve when handling extremely aggressive fluids.

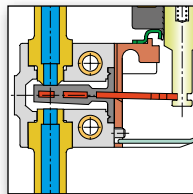
**Flapper technology** is among the most sophisticated and safest solutions for fluid isolation. Due to its specific characteristics, relatively high pressure rates are achieved - whilst the valve's pump effect is eliminated.

Typical **fields of application** are equipment with stringent sterility assurance and process safety requirements, such as analysers, blood and specimen purification equipment, chromatographs, dosing systems, gas mixers, micro-reactors, pipetting workstations etc.

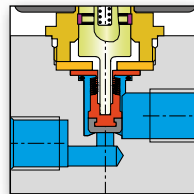
## ASCO's Six Fluid Isolation Technologies



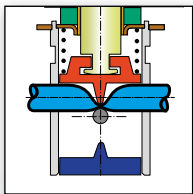
**Diaphragm mechanism**



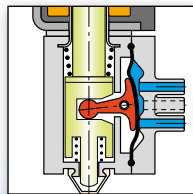
**Lever mechanism**



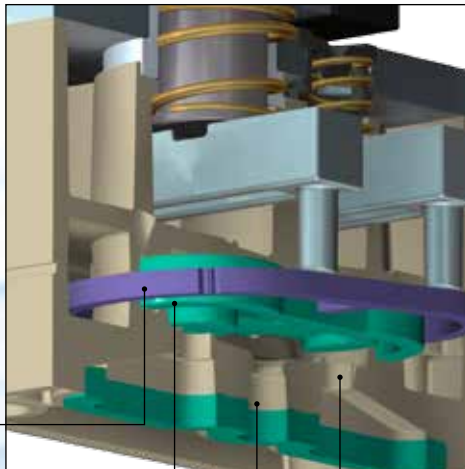
**Bellows mechanism**



**Pinch mechanism**



**Rocker mechanism**



### Flapper mechanism

Flapper technology builds upon a rocker mechanism. It's special design allows significantly higher pressures to be achieved whilst the valve's pump effect is eliminated.

Safe transmission of force

No pump effect

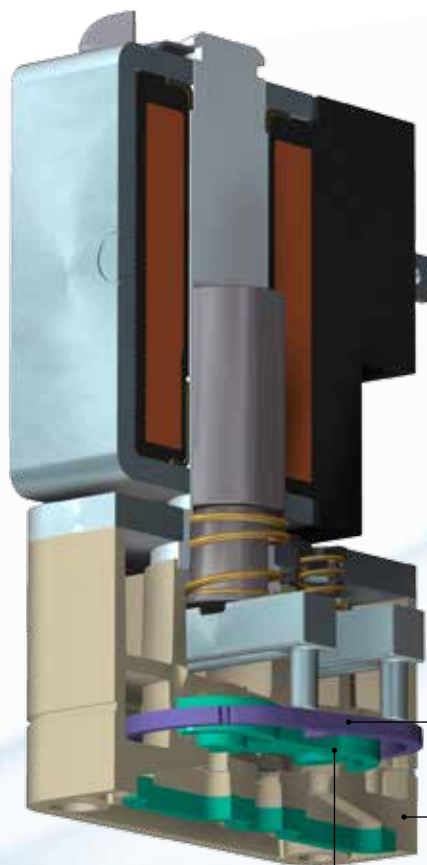
Optimal self-draining capability

Easy-to-flush internal cavity

## Series 068 flapper valves

Series 068 fluid isolation solenoid valves with flapper mechanism are suitable for use with neutral or aggressive liquids and gases. Fluid contamination is prevented by the fluid isolation design and the use of high-quality materials (PEEK and FFPM/FPM/EPDM).

The special flapper mechanism allows high pressures (up to 10 bar) to be achieved at large orifice sizes (0.8 mm to 4 mm). The use of a power-save connector lowers the holding power down to 2.5 Watts (or down to 1.5 Watts), thus minimising the heat transfer into the fluid.



**Special  
flapper mechanism**

**Valve body  
made of PEEK**

**Diaphragm made of  
FFPM/FPM/EPDM**



### Your benefits

- Low power consumption (up to 1.5 watts with power-save connector)
- Low heat transfer into the fluid
- High pressure range
- No pump effect
- Low-volume internal cavity
- Good self-draining capability
- Easy-to-flush internal cavity
- Very good vacuum properties
- High-quality materials
- Long service life
- Various electrical connection options



# Flapper Valve Series 068

## Technical Data

	 <b>Width: 16 mm</b>	 <b>Width: 22 mm</b>
<b>Fluid handled</b>	Gases and liquids	Gases and liquids
<b>Pressure range</b>	-0,9 to 8 bar	-0,9 to 10 bar
<b>Orifice size</b>	0,8 – 1,6 mm	2 – 4 mm
<b>Connection</b>	Flange connection, 1/4 to 28 UNF, push-in hose connection	G1/8 and flange connection
<b>Construction type</b>	Poppet valve	Poppet valve
<b>Function</b>	NC, NO and U	NC, NO and U
<b>Valve body</b>	PEEK	PEEK
<b>Seals</b>	FFPM, FPM and EPDM	FFPM, FPM and EPDM
<b>Power consumption</b>	4 Watts (1,5 W with power save connector)	10 Watts (2,5 W with power save connector)

We will be pleased to advise you on applications for our valves for analytical and medical technology. Just give us a call on +49 7237-996-0 or send us an e-mail at [asconumatics-de@emerson.com](mailto:asconumatics-de@emerson.com) quoting reference "AMT valves".

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