

NC-VALVE SERIES09 - fully PEEK

autoclavable and robust



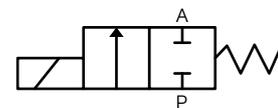
The memetis normally closed 2/2-way valve enables complex fluidic systems in small dimensions with very low power consumption. The fully PEEK valve variant is especially robust and can be sterilized by autoclavation.

Specifications

Parameter	Value
Functionality	2/2-way seat valve normally closed (NC)
Media (separated)	Liquids and gases
Dimensions	20.0 x 5.0 x 8.0 mm ³
Internal volume	< 4 µl
Nominal width DN	0.75 mm
Max. pressure @input	2.0 bar
Max. pressure @output	1.2 bar
Switching time* on/off	< 0.07s / < 0.16s
Typical flow rates*	3000 ml/min (air) 90 ml/min (water)
K _v value	~ 0.007 m ³ /h
Temperature range	< 50 °C
Thermal impact on medium**	< 30 °C
Lifetime	> 10 ⁷ cycles
Weight	0.8 g
Housing material***	PEEK
Membrane material***	Silicone
Fluidic connection	Screwed flange connection (FKM O-rings included)
Electrical connections	Pin-header (pitch 2.54 mm)
Sterilization	Autoclavation, 20 min at 134 °C

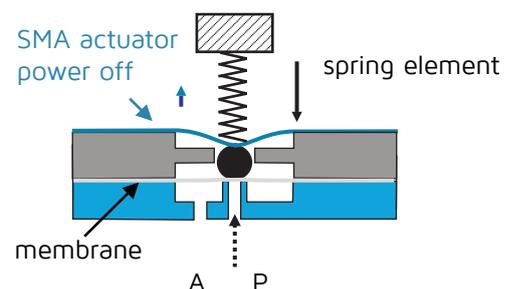
Functionality

2/2-way NC

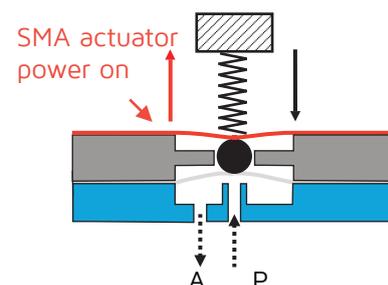


The miniature valve from memetis contains a shape memory alloy actuator that opens the valve.

closed state



open state

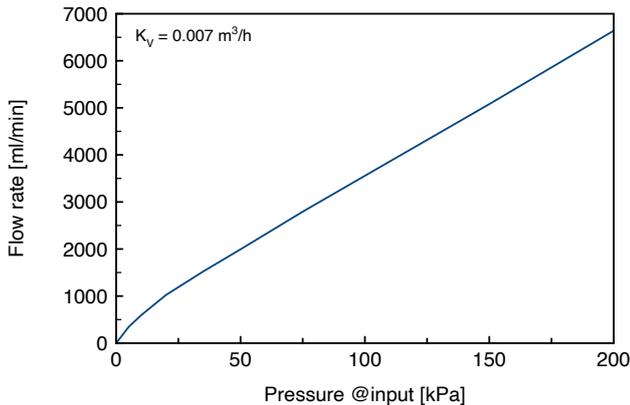


* @20 °C & 1 bar (optimized heating current)

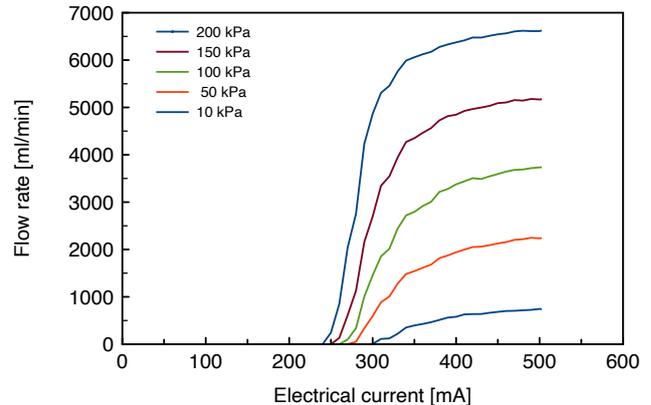
** depending on medium, flow rate and ambient temperature

*** contact us for other material requirements

Typical Flow Characteristics

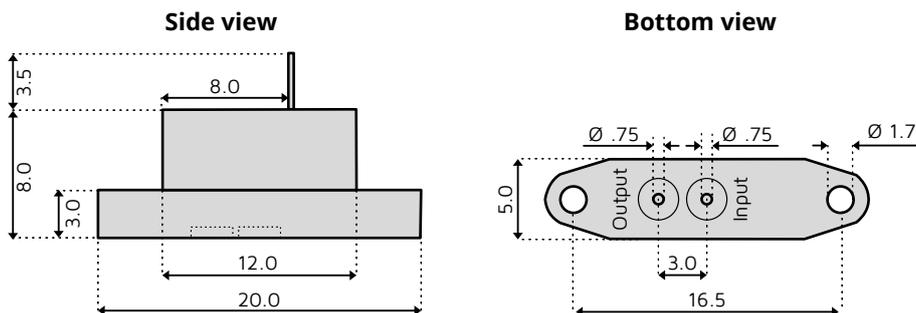


Graph 1: Flow rate of a memetis 2/2-way NC valve (PPS) for pressures up to 2 bar (input pressure) for air at room temperature without output pressure.



Graph 2: Flow rate depending on applied electrical current for a memetis 2/2-way NC valve (PPS). A current of 0.5 A corresponds to a power consumption of 0.3 W.

Drawings and Integration



The memetis NC valve can be integrated by flange mount, using two M1.6 screws. O-rings are integrated in the valve.

Complementary memetis Products



Ready-to-use **electronic control unit (ECU-S1-nc)**, powered by 5 V microUSB-port or external power supply, to control memetis normally closed valve. This ECU offers push buttons and digital input channels.



memetis **fluidic adapter** enables to connect our valves with different fluidic connectors. Available with a Polycarbonate base plate to observe the liquid flow or with a black base plate.



memetis offers customized **smart valve manifolds** to enable easy operation of complex fluidic systems.

Now available in our online shop: shop.memetis.com

Contact information