

MV-2

LOW-PRESSURE MICROVALVE

The MV-2 is an embedded on/off valve designed to achieve a reliable liquid seal with minimal actuation pressure. These valves may be operated with as little as 250 mbar of externally supplied air pressure making them a great pairing with compact and low power pressure sources. Performance benefits of the MV-2 include optical clarity, moderate solvent resistance, fast switching times, and reliable sealing. Multiple valves can be attached to a single microfluidic chip for either simultaneous or independent control.

Product information

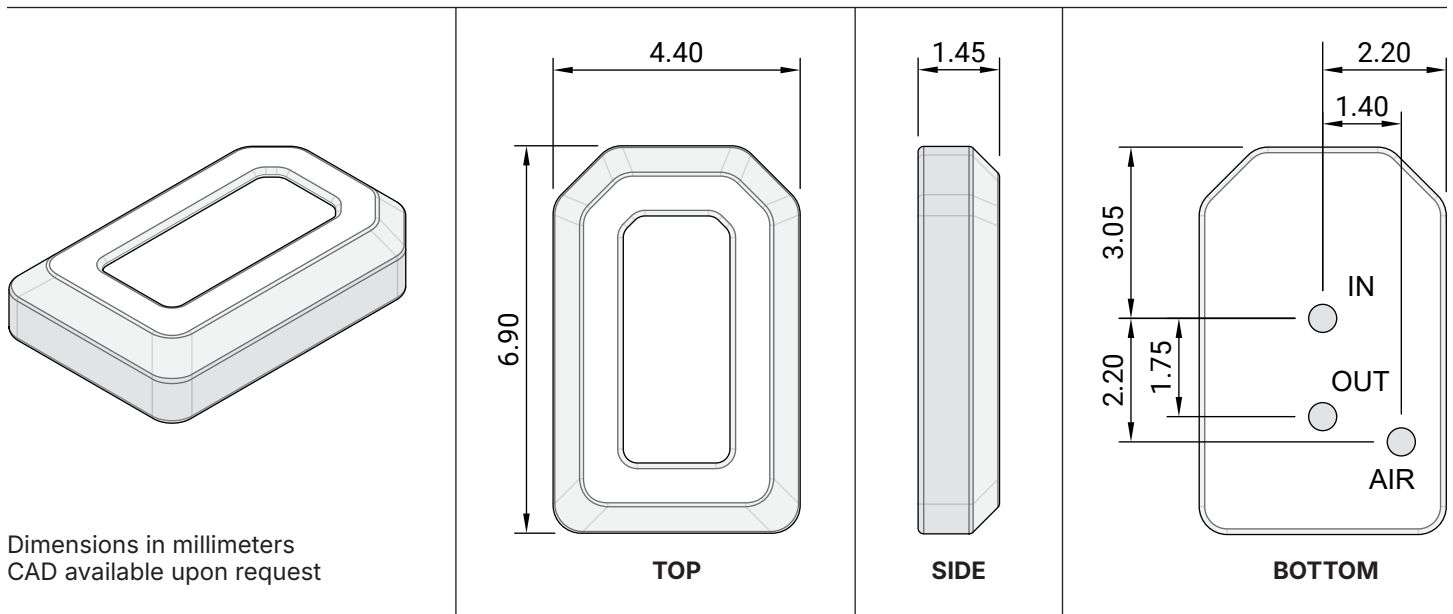
Model ID	MV-2
Overall dimensions	4.5 × 7.0 x 1.5 mm
Body material	PMMA, PC, PS, or COP
Wetted material	SEBS elastomer
Default position	Normally open
Total internal volume *	1.5 µL
Actuation displacement volume	< 1.0 µL
Actuation method	Externally applied air pressure
Actuation pressure	250 mbar for liquid pressures up to 200 mbar 500 mbar for liquid pressures up to 400 mbar 1000 mbar for liquid pressures up to 600 mbar
Compatible media	Aqueous solutions, most polar organic solvents, acids and bases, fluorinated oils and surfactants
Device assembly method	Laser welded

* Reported internal volume includes all wetted features including the fluidic inlet and outlet

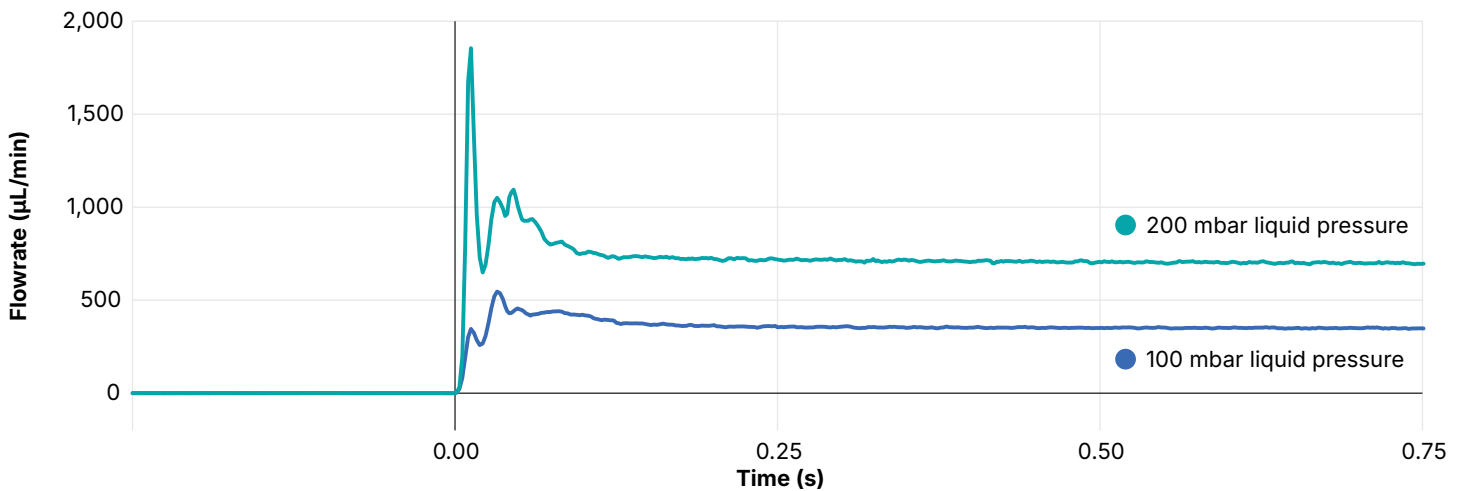
Performance specifications

Response time **	< 80 ms
Maximum compatible particle size	20 µm
Maximum operating temperature	45 °C
Expected lifetime	> 1 × 10 ⁶ cycles

Product dimensions



Opening response with 250 mbar air pressure



** Response time may vary based on the solenoid valve, air pressure source, and actuation pressure used

Closing response with 250 mbar air pressure

