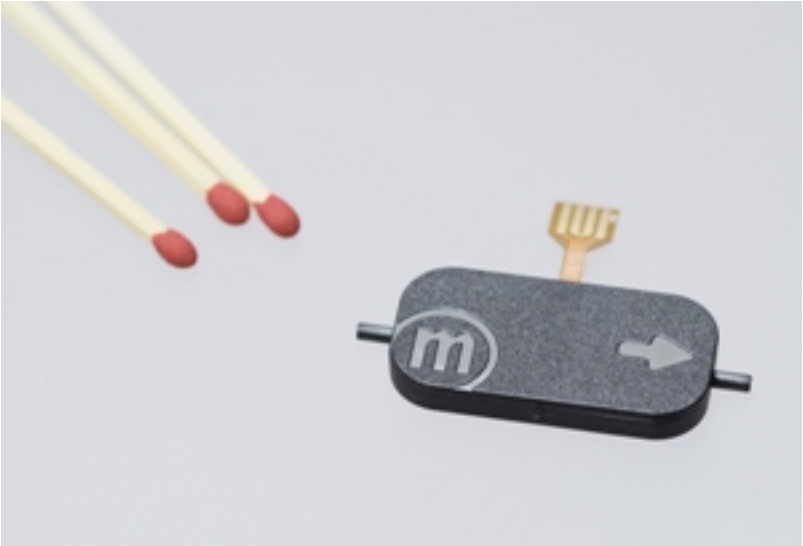
State-of-the-Art Miniature Micropump for Air, Gas & Fluid Delivery



Servoflo Corporation of Lexington, Massachusetts is pleased to announce the MP-6 Series of micropumps. Based on piezoelectric diaphragm pump technology, the MP-6 micropump delivers air, gas or liquid for low flow applications in a wide variety of industries.

The piezo ceramic is mounted on a brass membrane and then deformed when a voltage is applied. With the resulting downstroke, the medium is squeezed out of the pump chamber. The check valves on both sides of the pump chamber define the flow direction. With the voltage decreases, the piezo's corresponding deformation causes an upstroke of the membrane. The medium is sucked in and the chamber is filled again. The pump can do several hundred pump cycles each second.

The MP-6 micropump is extremely small in size, measuring 30 mm X 15 mm X 3.8 mm. With a low power consumption of less than 200 mW, the MP-6 is ideal for portable applications. Typical flow values are 18 ml/min maximum flow with 100 mbar backpressure for gas and 7 ml/min flow and 600 mbar backpressure for water. Various flow rates for other liquids are easily determined by readily available viscosity values. The MP-6 is self-priming.

Unlike other solutions, the MP-6 is an off-the-shelf micropump allowing users to quickly evaluate and integrate into their design. Custom modifications can be made based on customer requirements. A polypropylene version (MP-6-PP) is available for corrosive media. Sterilization is generally acceptable.

Various evaluation kits are available for purchase, which include sample pumps, controller boards, tubing and check valves depending on the users' requirements.

Applications reach across many industries for the MP-6 micropump. In medical applications, drug delivery, infusion pumps, nebulizers, point-of-care platforms, cell

culturing, and breath applications have needs to deliver small amounts of gas or liquids. Additional industries include consumer products and appliances, automotive and fuel cell, instrumentation products, sensor feeding and electronics.

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