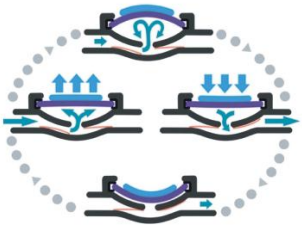
Bartels Micropumps

New entry in the mp6 product family – the mp6-pi micropump

mp6-pi – double actuator micropump

When using the Bartels micropumps only one single material gets in contact with pumped medium inside the pump.

Currently Bartels Mikrotechnik offers two different versions: The mp6 which all media-touching parts are produced of Polyphenylsulfon (PPSU) and since 2012 the mp6-pp, which are all media-touching parts constructed of Polypropylen (PP).



Functional principle.

Both products are already showing a good chemical permanence and compatibility for many materials, but not for everything. To cover further areas, we are happy to introduce another variation.

A saying means „ A chain is only as strong as the weakest limb. " We identified the weakest limb and substituted it. In this variation of the micropump the valve foil consists of Polyimidfoil (PI) (e.g. Kapton).

Polyimides are a group of plastics highly resistant to temperature which contain a typical Imid-group.
Polyimides are resistant against watered acids, organic solvents, fuels, fat, nicotine, odoriferous substances, aromas and oils.

Already in the beginning of 2017 the mp6-pi will be available in small to middle quantities.

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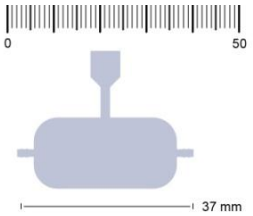
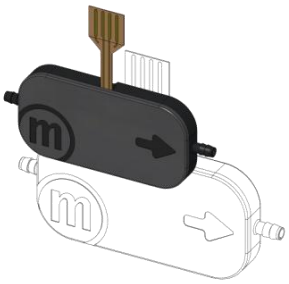
Technical Data of the mp6-pi



mp6-pi	Order code: mp6-pi
Pump type	piezoelectric diaphragm pump
Number of actuators	2
Dimensions without connectors	30 x 15 x 3.8 mm 1.1811 x 0.5906 x 0.1498 in.
Weight	2 g
Fluidic connectors	barbed tube clip, (outer diameter 1.9 mm, length 3.5 mm) [2]
Electric connector	flex connector 1.25 mm pitch
Power consumption	~ 50 mW
Self-priming	yes [3]
Pumping media	Liquids and mixtures
Operating temperature	0–70°C
Life time	t.b.d.
IP code	IP33 [5]
Material in contact with media	Polyimid foil (PI), polyphenylsulfone (PPSU)[6]
Suitable evaluation controller	mp-x, mp6-EVA, mp6-OEM, mp6-QuadEVA, mp6-QuadOEM and mp6-QuadKEY
Typical values of flow and back pressure for selected media (values defined with mp-x: 100 Hz, 250 V, SRS):	
Liquids – water	
max. volume flow	7 ml/min +/- 15% (5.95 ml/min – 8.05 ml/min) [4]
max. back pressure	600 mbar +/- 15% (510 - 690 mbar) [4]



[1] Typical values. Values can vary under application conditions. Content is subject to changes without notice.
[2] Recommended tubing: Tygon tubing 1.3 mm inner diameter.
[3] Conditions: Suction pressure < 10 mbar, DI water, settings mp-x: 100 Hz, 250 V, SRS, the max. volume flow will be reached after a few minutes of operation time.
[4] Conditions: DI water, room temperature 23°C, settings mp-x: 100 Hz, 250 V, SRS
[5] Can be changed to IP44.
[6] Compatible for kerosene, scents, ethanol, methanol, a.s.o.

Please find more information concerning the controller and the equipment in the corresponding data sheets.

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