

BARTELS

MP6-gas

Piezo Pump for Gases

DESCRIPTION

The Bartels MP6-gas micropump is a miniature double diaphragm pump which functions by using two piezo actuators in conjunction with passive check valves to push gas in a set direction. This pump is designed for applications moving small volumes of gas/air, and ideal for applications which require multiple pumps running in parallel. As a result of the principle of operations and materials of construction, this pump has high temperature and particle tolerance for its size.

Innovative design combined with automated assembly makes this high quality micropump cost effective and configurable for customer applications. Configurations of the MP6-Gas can be provided with a choice of inert and biocompatible wetted materials, appropriate electronic drivers, and can have flow curves catered toward the application. The flow curve can be customized by modifying the stroke of the pump, and through the use of control signal. Resources and engineering time are available upon request to configure and integrate the pump drivers with each OEMs unique electronics.

MP6-gas micropump is well suited for a variety of applications in the medical, analytical, and process fields.

FEATURES

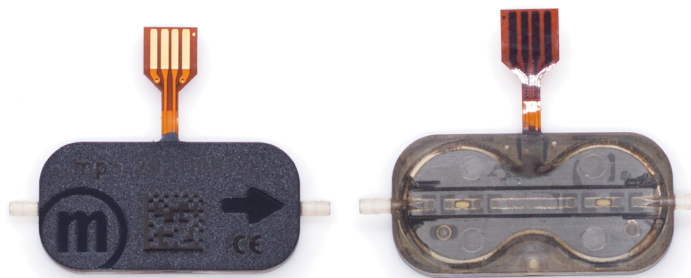
- Compact: just over ½” wide and ~1” long
- 0-70°C operating temperature range
- Inert and biocompatible wetted materials
- Self-priming
- Cost-effective in high quantities

Typical Flow and Pressure Values

Typical values of flow and back pressure for selected media (values measured with mp-x: 300 Hz, 250 V, SRS):	
Gases - air	
typ. volume flow Q (p=0)	25 ml/min (300 Hz) ¹
typ. back pressure p (Q=0)	100 mbar (300 Hz) (1.45 PSI) ^{1,2}
Liquid - water	
typ. volume flow Q (p=0)	8 ml/min (300 Hz) ¹
typ. back pressure p (Q=0)	500 mbar (300 Hz) (1.45 psi) ^{1,2}

1 Conditions: settings mp-labtronix: 300 Hz, 250 V, SRS

2 The mp6-gas is available as mp6-gas+ version with 150 mbar (2.18 PSI) of back pressure.



Front View

Back View

SPECIFICATIONS¹

GENERAL

Pump Type	piezoelectric diaphragm pump
# of Actuators	2
Dimensions (w/o actuators)	30 x 15 x 3.8 mm
Weight	2 g
Fluidic connectors	barbed tube clip (outer dia. 1.9mm, length 3.5mm) ²
Electric connector	flex connector 1.25 mm pitch
Power consumption	~ 150 mW ³
Self-priming	yes ⁴
Pumping media	Gases
Operating Temperature	0-70°C
Life time	5000 h ³
IP Code	IP33 ⁵
Wetted Material	PPSU ⁶
Suitable pump drivers	mp-Labtronix, mp-Multiboard, mp-Highdriver, mp-Lowdriver

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.

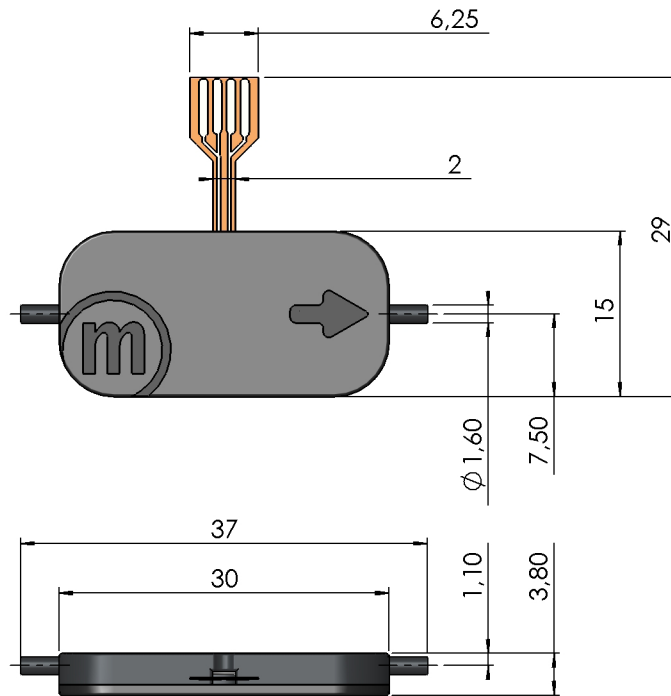
3 Conditions: settings mp-labtronix: 300 Hz, 250 V, SRS

4 Conditions: air, room temperature 23°C, settings mp-labtronix: 300Hz, 250 V, SRS, the max. volume flow will be reached after a few minutes of operation time.

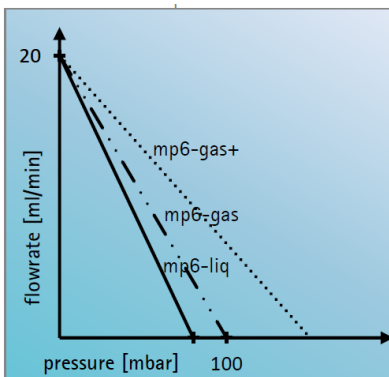
5 Can be changed to IP44.

6 For media compatibility details, please contact us for more information.

Dimensions (MM)



FLOW CURVE - Selected Media: Gases - Air



ORDERING INFORMATION

Order Code
MP6-GAS

Special materials and connections are available in OEM quantities. Please consult us.