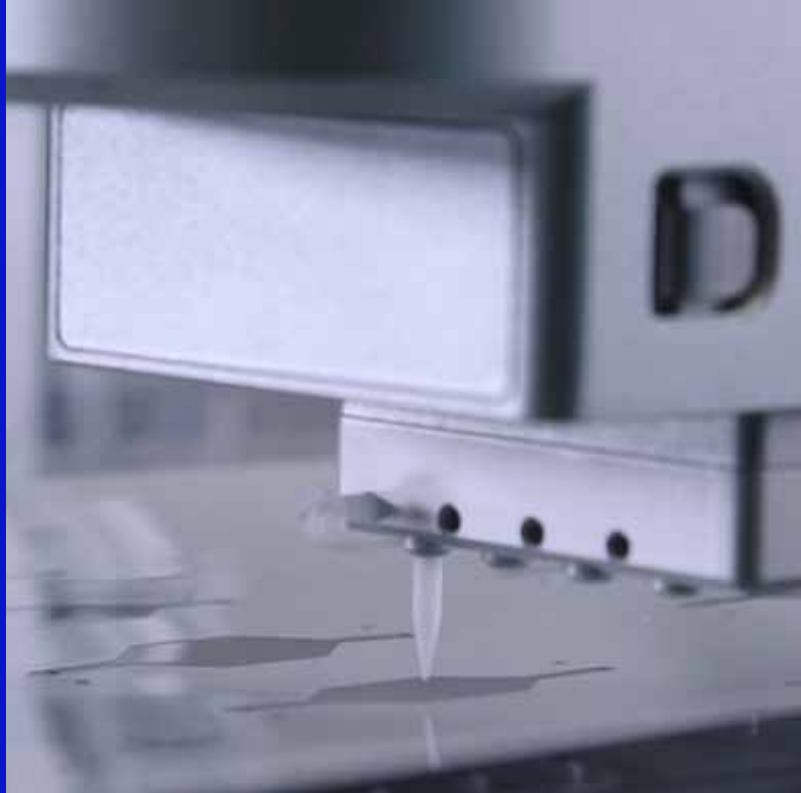


PRODUCT SHEET
Ginolis PMBi Pump

High-precision
dispensing



Features

The Ginolis PMBi Pump is designed for accurate and repeatable dispensing from nanoliter to microliter range volumes. The pump is available in two different models that are differentiated by volume size. The PMBi Pump can be configured with Ginolis Cecilia-L dispensing platform or integrated individually to customized platforms.

Flexible

The PMBi pump can be integrated into automation platforms and is also available in an easy-to-use starter kit.

Intelligent

Integrated pressure sensor for a clog, leak and air in fluid line detection, pump pre-pressurizing, and automated monitoring of pressure stabilization during pre-dispensing.

Low Maintenance

PMB bellows system has no friction parts, resulting in a pump with extremely long life and no need for replacement seals.

Dispensing technology

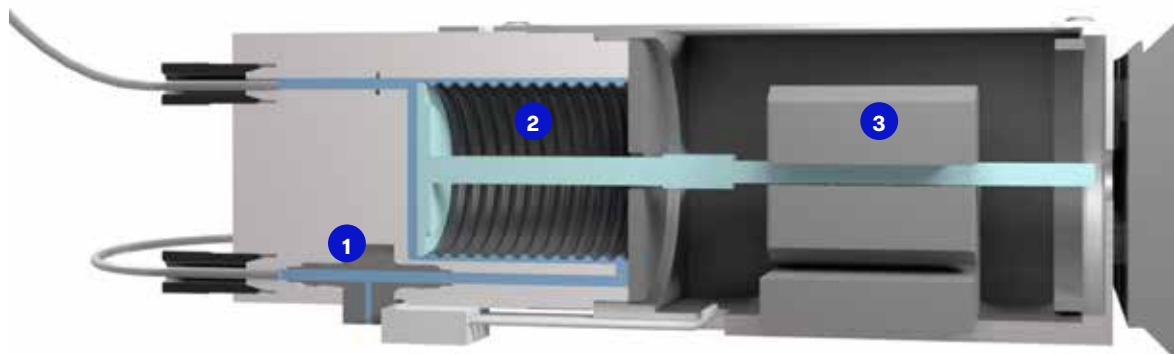
The principle behind the Ginolis PMBi Pump is a highly accurate piezo motor connected to a bellows that is contracted and expanded with the motor. In doing so, the bellows displace a volume in a closed chamber equal to the aspirated or dispensed volume.

The PMBi pump has a solenoid dispensing valve and a ceramic tip to dispense volumes as low as one nanolitre. The dispensing pump displaces a volume of liquid defined by the operator, and the solenoid valve is opened for a short amount of time (100 s of microseconds) to release a drop. The pump can dispense up to 100 drops per second.

Volume range PMBi 150Se	1nl - 150 µl
Volume range PMBi 1500Se	10nl - 1500 µl
Dimensions (mm)	H 127 W 44.5 D 148.5
Bellows material	Coated with Parylene
Bellows housing material	PEEK
Maximum dosing speed	100 dose/sec
Bellow stroke	4 mm
PMBi 150Se precision (depending on the conditions and the liquid)	<1% CV (>50 nl) <3% CV (@50 nl) <8% (@2,5 nl)
Interface	RS-232 and RS-485 Baud rate 9600 bps – 460kbps
Auxiliary	Digital input and output
Optional Interface	Ethernet



Functional description



1. Pressure sensor
2. Bellows
3. Piezo motor



A highly accurate piezo motor is connected to a bellows contracted and expanded with the motor



The bellows displace a volume in a closed chamber equal to the aspirated or dispensed volume



A solenoid dispensing valve and a ceramic tip dispense volumes as low as one nanolitre



The dispensing pump displaces a volume of liquid defined in software



The solenoid valve is opened for a very short time to release a drop



The pump can dispense up to 100 drops per second