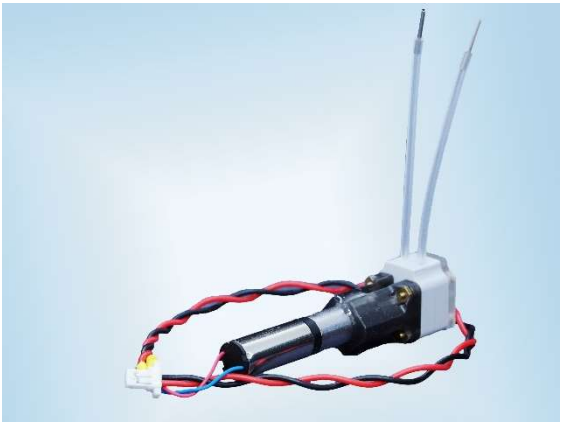
CPP1–180–ZM peristaltic micro pump

Circular Peristaltic Pump for low pump rates and with excellent linearity for the full range

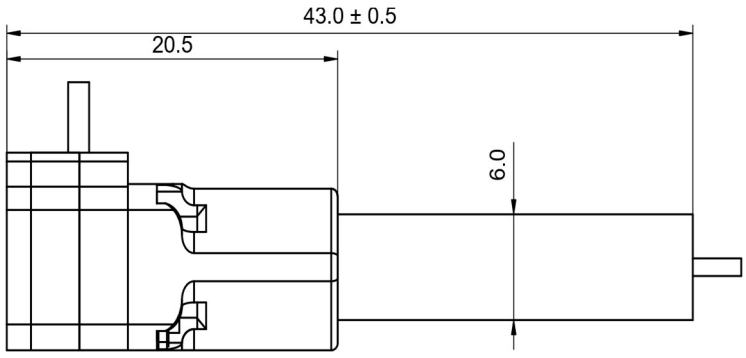
Intended use:	Pumping of fluids and gases
Weight:	5.6 g (without connector)
Size:	9.5 × 11.2 × 43.0 mm
Flow rate range:	± 150 nl/min up to ±180 ul/min
Operation:	Bi-directional
Outlet pressure:	> 1.0 bar overpressure
Self-priming:	< -0.8 bar
Typical current:	30 mA @ 3.0 V
Voltage range:	± 3.3 V (max. ±5 V DC for short time)
Tube material:	Silicone (ISO 10993-1, USP class 1-6)
Tube dimension:	0.5 mm inner / ~1.4 mm outer
Available connectors:	JST-SH female, pin-head male or female
Part number:	10.00152
Typical Vol. per turn	2.75 ul

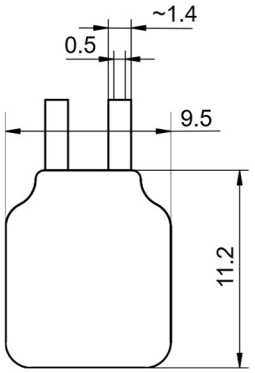


Benefits & Characteristics

- Pumping of various liquids and gases
- Pump rates from only 150 nl/min up to 180 µl/min
- Excellent linearity along the full pump rate range
- Medium only in contact with medical grade silicone tube
- Stable flow rate over lifetime
- Small footprint
- Evaluation kit available that allows to control up to 4 pumps via plug & play to the USB port of a computer

Illustration





All dimensions in mm

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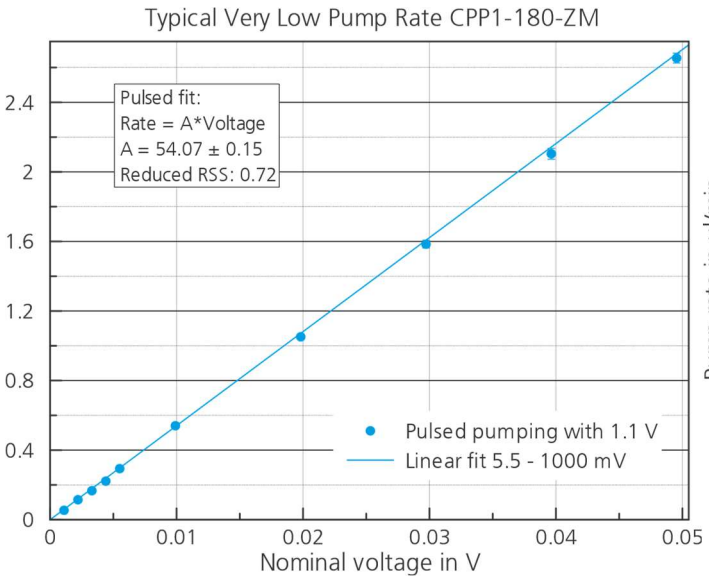
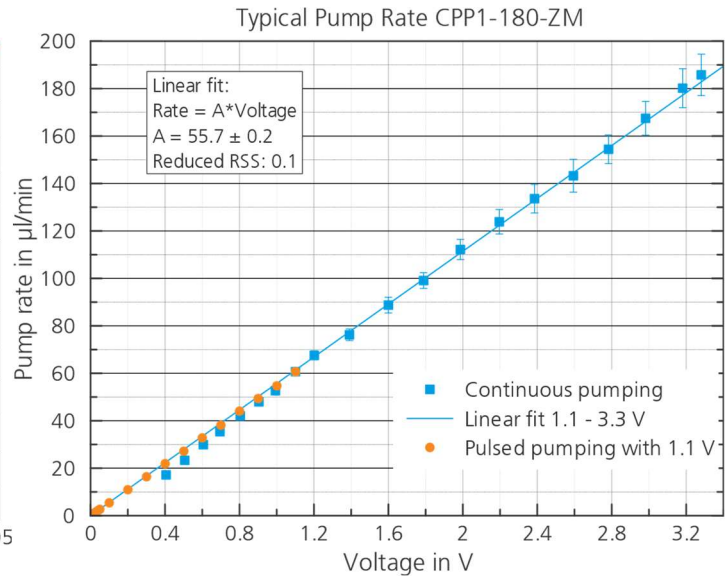
Typical flow rate performance





Lifetime considerations

If the flow rate should be below 60 µl/min (which is the case for voltages < 1.1 V at 100 % duty cycle) for longer time, a duty cycle of less than 100 % at fixed 1.1 V must be used. Otherwise, the pump lifetime will be substantially lower.
The longest accumulated lifetime will be reached with intermittent operation. Continuous operation at high-speed leads to a non-linear degradation behavior of the pump tube.

Handling instructions

The pump does contain exposed metal surfaces; therefore, pump operation is only recommended at relative humidity levels below 90 % and temperatures below 50 °C.
Only media that does not swell or chemically attack silicone should be pumped. Particles in the pumped fluid that can penetrate and harm the tube walls can result in leakage.
The electrical connections to the pump are stranded wires and can break when bent extensively or repeatedly.
Do not open the pump. There are no serviceable parts inside the pump. Warranty will be void if the label containing the serial number is damaged.

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