

TURBISC pump



Miniaturized pulsation-free, bi-directional pump for liquid handling

TURBISC pump is a continuous flow, pulsation-free, bi-directional, high performance miniature pump for applications such as metering or dosing of liquids with a wide viscosity range. The small size and weight of the pump make it ideal for integration into compact fluidic systems or for systems in lab automation or metering of adhesives.

Applications

- OEM metering pump
 - Flow through
 - Droplet dispensing
- Pipetting robots (fits 9 mm raster)
- Adhesives/Grease dispensing

Key features

- Bidirectional, pulsation free, continuous flow
- Max. flow rate
1300 $\mu\text{l}/\text{sec}$ (with water @ $\sim 18'500$ rpm)
- Max. pressure
> 420 hPa (mbar, cm-water)
(with water @ $\sim 18'500$ rpm)
- Self priming (< 10 hPa)
- Dispensing mode
 - 0.8 μl droplets, SD 3.5%
 - 100 μl droplets, SD 0.1%

- Low internal volume (< 100 μl)
- Width 8 mm
- Mass 1.8 g (excluding motor)
- Linear flow-pressure-correlation
- Linear viscosity-pressure-correlation
- Fast acceleration, switching of pump direction
- Insensitive to particles
- Materials PEI, PEEK, PEEK-HPV, Stainless Steel
- Lifetime > 10'000 hours (excl. motor)
- Runs with DC-motor or EC-motor (low voltage)
- Pump is scalable.
In a larger version flow-rates of up to 10 ml/s (motor-diameter below is 45 mm) and in a geared-version viscosities of up to 100'000 mPa·s have been achieved.

