

# Laboratory pump

## General application data of the laboratory pumps

### Technical Data

<b>Your application data</b>	Laboratory
<b>Temperature</b>	0 to 85 °C
<b>Ambient temperature</b>	0 to 40 °C
<b>Viscosity</b>	1.0 to 500 mPa s

- Maximum possible differential pressure: 10 bar
- Maximum possible system pressure: 16 bar abs.
- The pressure on the suction side has to be 0.1 bar above the vapour pressure of the liquid
- The needs inflow, means the maximum flow has to flow freely into the pump so that the pump has not to suck
- Differential pressure, capacity and speed (rpm) according to the performance curve (for 1.0 mPa s)
- Because of the manufacturing tolerances the performance curve of the pump head itself may differ. Therefore we recommend calibrating each pump head individually.

### Your laboratory pump (gear pump head), magnetic drive – Series 1

**Types** LAB-ZP-6, LAB-ZP-9, LAB-ZP-12

#### Materials

<b>Body</b>	Stainless steel 1.4571
<b>Shafts</b>	Stainless steel 1.4571
<b>Diving/driven gear</b>	PEEK (30% CFK)
<b>Bearings</b>	Slide bearings – PEEK (30% CFK)
<b>O-Ring (seals)</b>	PTFE
<b>Magnet type D-magnet</b>	Shrouded in stainless steel 1.4571

#### Ports

1/4" NPT female (lateral)  
*In combination with the drive unit (including connecting parts) LAB-Alpha*

According to the intended use of the pump you additionally have to follow the remarks of the manuals.

## Drive unit with included converter, model: LAB-Alpha

Drive unit with connecting parts made of aluminium, driving D-magnet and with thermal ring, three phase motor, air cooled

<b>Operating voltage</b>	1 x 230 V, 50 Hz (to the motor: 3 x 230 V),
<b>Speed</b>	200 to 4,500 rpm
<b>Power</b>	0,12 kW
<b>Insulation class</b>	F/IP 55

Controlled by a frequency converter mounted in connection box (with filter class B/C1, motor overloading electronically controlled), speed control externally: 0-10 V/0-20 mA/4-20 mA/Modbus RTU or manually at the operating unit (**please state in order**), operation with FI-circuit Type A (calibration fault current >30 mA) is possible, leakage current 10 mA, relative humidity <95%, dewing is not permitted, control cable to motor 2 m long, shock-proof plug included.

**Completely programmed, operating unit with cable included.**