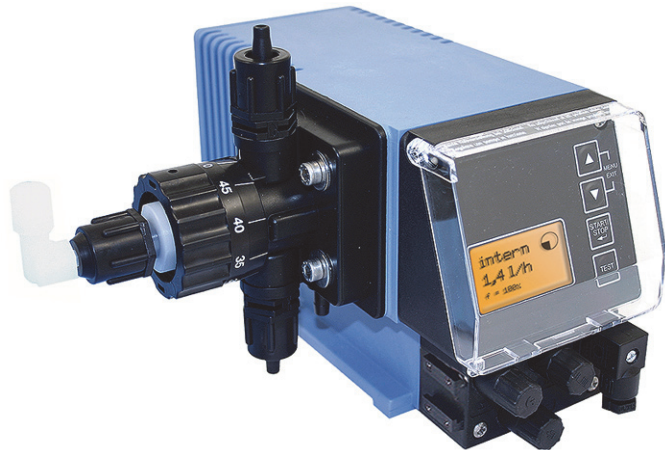


- **Metering with smallest possible rate capability**
- **High reproducibility**
- **High metering accuracy even with degassing products**
- **Self-priming and self-venting with smallest metering volumes**
- **Mechanical stroke adjustment**
- **Stroke frequency regulation**
- **Pulse control**
- **Pulse multiplication and division**
- **Pulse storage**
- **Standard signal drive**
- **Empty signal report and level pre-warning**
- **External metering lock**
- **Empty signal and stroke signal output**
- **Metering regulator (readjustment of metering output) in combination with an oval gear meter**



All metering pumps of the series ELADOS® EMP-KKS operate on the piston-diaphragm principle. The diaphragm serves to feed the product whereas the piston handles the metering. Because of the continuous surplus return this metering pump operates self-venting. Therefore, the pump is appropriate for the conveying of degassing products. The cylindrical piston system without seal

is made of ceramic material and offers maximum resistance to chemicals. Different electronic control variants allow the pump to be adapted to any process for quantity or proportional metering. The reasonable choice of accessories completes the extent of supply and represents a complete program for the metering application.



**Technical Data:**

**Mechanical Data:**

Pump capacity [l/h]:	0.2	0.5	0.9	1.4
Metering back pressure [bar]:	10	10	10	10
Piston diameter [mm]:	3	4.76	6.34	8
Delivery capacity per stroke [cm <sup>3</sup> ]:	0.027	0.068	0.12	0.19
Reproductivity:	± 2 %			
Suction height:	2 mWs, suction height with clean, slightly wet valves			
Metering frequency max:	122 1/min			
Pressure of pre-delivery max. [bar]:	0.3			
Suction and pressure valve (pre-delivery):	without spring			
Pressure valve (metering):	with 1 spring			
Ambient temperature max:	40° C			

**Material:**

Housing:	thermoplastic polyester
Pump head:	PVDF
Metering piston and cylinder:	ceramic
Diaphragm:	PTFE - EPDM compound diaphragm
Valve body:	PVDF
Seals:	FPM 602 (Viton B) <b>optional:</b> EPDM or Kalrez
Valve balls:	ceramic
Valve spring:	Hastelloy C22 PTFE-coated
Weight [kg]:	2.4
Colour:	blue RAL 5007

Special versions on request

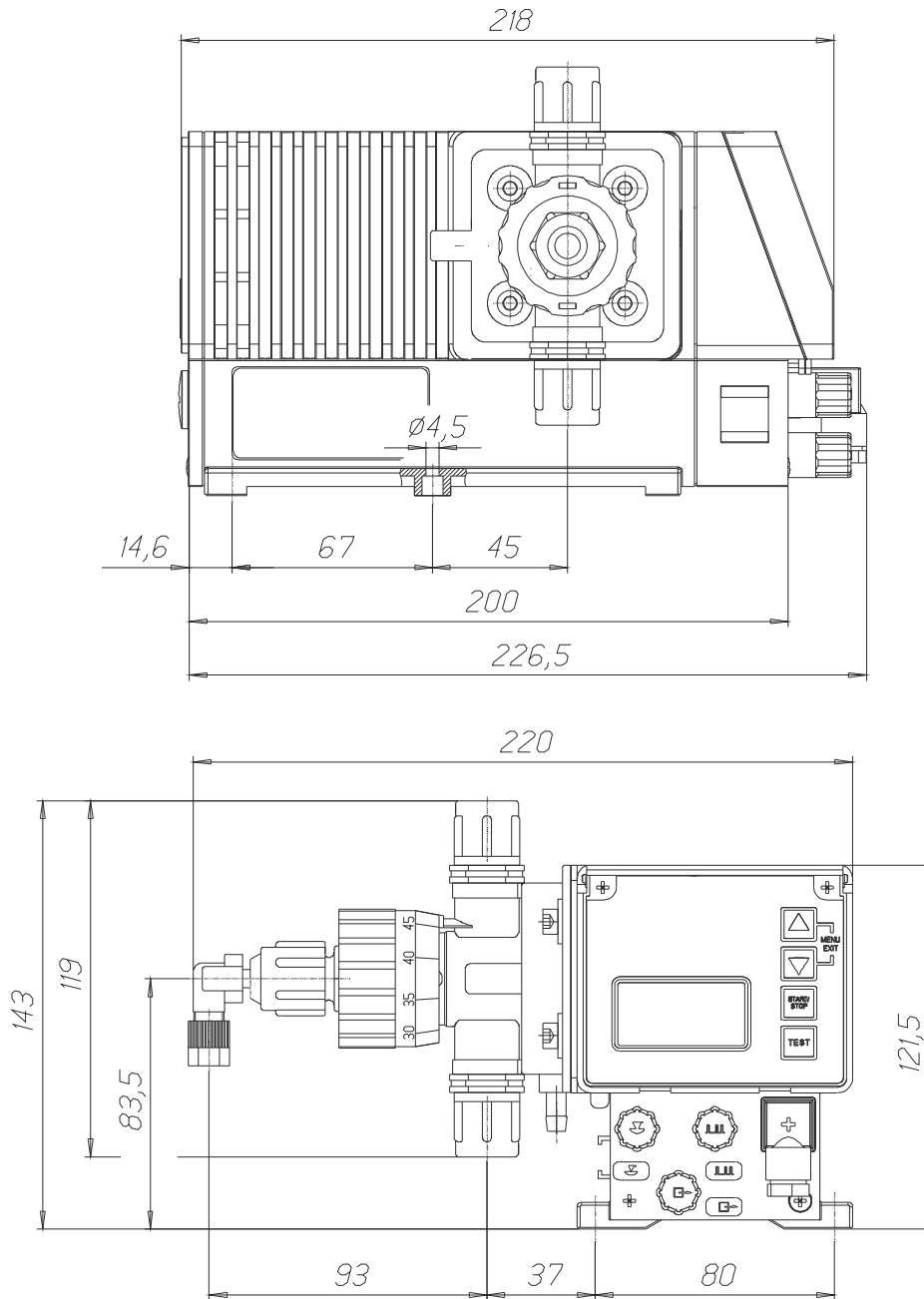
All values at 50 Hz. All data refer to water temperature of 20 °C according to the instructions of the technical manual, subject to!

**Electrical Data:**

Connection:	230 V / 50/60 Hz At a mains frequency of 60 Hz the delivery capacity increases by 20%, the metering back pressure decreases by 20% Special voltage on request
Power input [A]:	0,09
Current consumption [W]	
at 50 Hz:	18.7
at 60 Hz:	19.8
Safety type:	IP 65
Insulation class:	B
Protective class:	I

**ATTENTION:** Due to its principle, this appliance may only be used with a protective device against the pump running dry = empty signal device and suction lance. In the case of control variant E10 this function has to be guaranteed on the appliance side.

**Dimensions:**



Hose connections	0.2 l/h	0.5 l/h*	0.5–1.4 l/h
Suction connection (int.Ø/ext.Ø):	6/10 mm	6/10 mm	6/10 mm
Return connection (int.Ø/ext.Ø):	6/10 mm	6/10 mm	6/10 mm
Pressure connection (int.Ø/ext.Ø):	2/4 mm	2/4 mm	4/6 mm

\* For the connection of PE or PTFE hoses (2/4 mm) with the 0.5 l/h version is optional an angled connection [\(247613\)](#) available.

If metering units with EMP KKS pumps 0.2 and 0.5 l/h are operated with a very low metering rate or in combination with the monitoring system **micro flow**, the metering line should be carried out with 2/4 mm hoses.