

KLP01 series diaphragm pump

First Generation Diaphragm pump



Applications



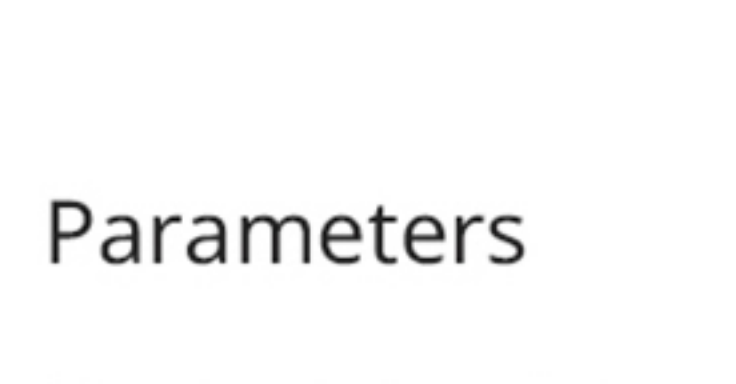
Experiment



Liquid dispensing



Inkjet



Medical equipment



Washer machine



Sewage sampling

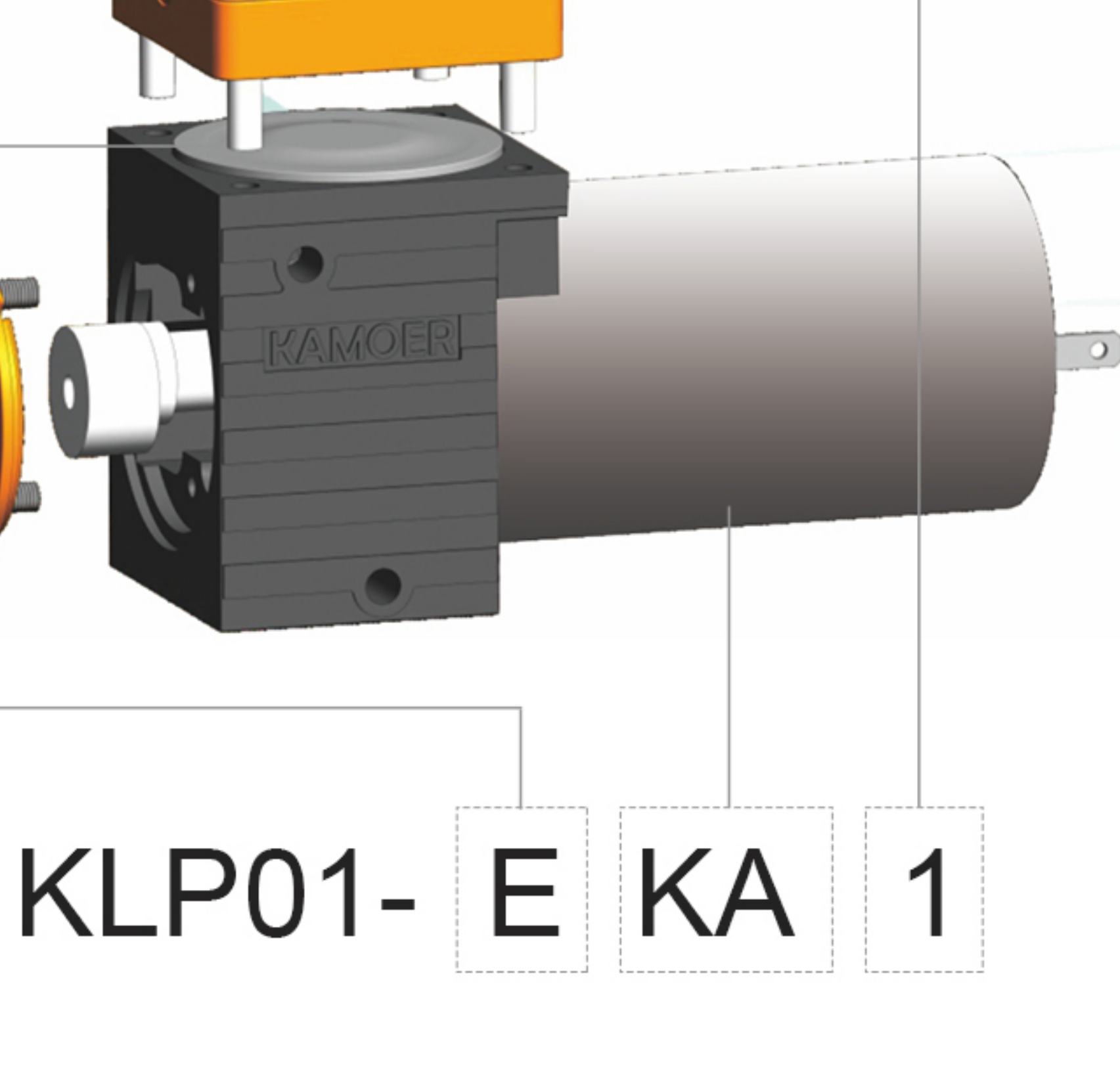
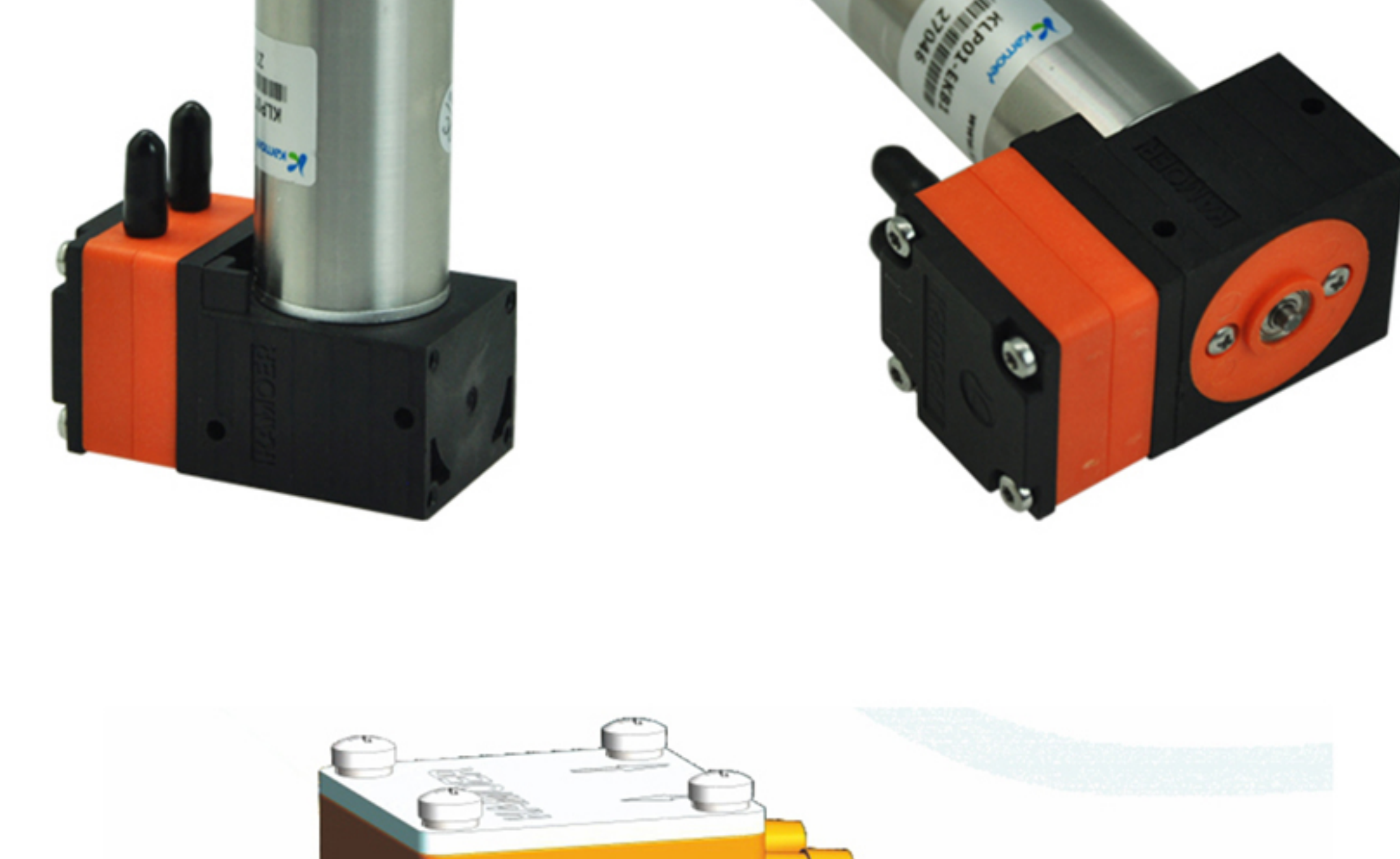
Parameters

KLP micro diaphragm liquid pumps are based on a simple principal of the oscillating displacement pump which is remarkably simple in design. The circular power from the motors is converted into vertical movement by an eccentric. This motion is then transferred to a diaphragm by means of a connecting rod which in conjunction with an inlet and outlet valve creates a pumping action.

KLP01 type liquid pumps can be mounted in any position and can deliver up to 0.3~0.7L/min depending on the model and will operate against pressure to 3 bar.

Features

- Self-priming
- Low power consumption
- Long lifetime
- Small size
- Dry running
- Low sound level
- Compact design
- Corrosive liquid available



KLP01- E KA 1

1. Selection of diaphragm material

We currently offer two types of diaphragms for customers to choose from:

Code	Material	Performance
E	EPDM	Chemicals such as alcohols, acids, bases, oxidants, ketones, and lipids all have good resistance. Poor oil resistance.
V	High fluoride	Non-sticky, excellent corrosion resistance.

Note: EPDM diaphragm is used with plastic (PA66) eccentric wheel.
PTFE diaphragm used with stainless steel (SUS304) eccentric wheel;

Performance table

Pump head	Code	Flow rate (ml/min)	Positive pressure (bar)	Negative pressure (bar)	Fluid pressure (bar)
Single-head pump	E	>400	0.6	0.5	3
	V	>500			
Dual head	E	>800			
	V	>1000			

2. Motor selection

At present we provide 6 kinds of DC motors, the codes are as follows:

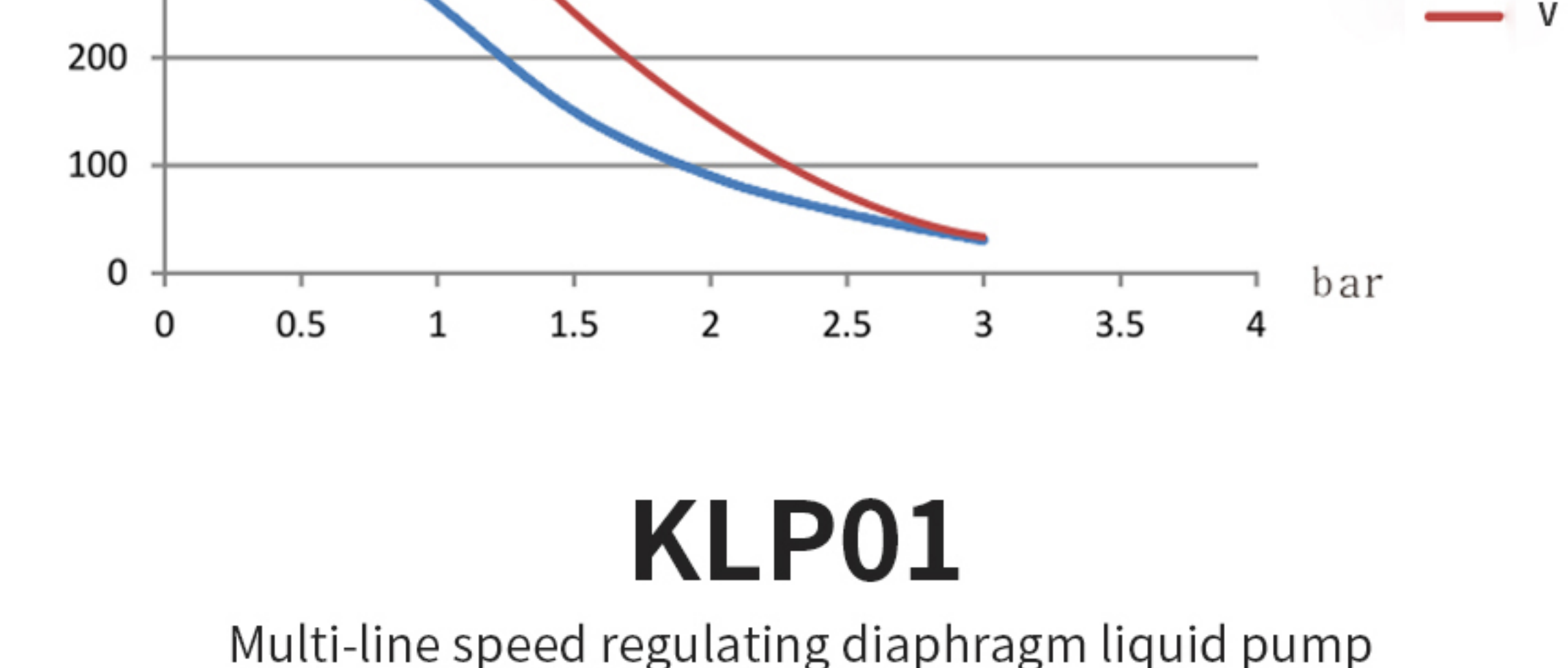
KA:24v DC brush motor (56mm) **KB:**24v DC brushless motor (67mm)
KC:12v DC brush motor (56mm) **KD:**12v DC brushless motor (67mm)
KG:24v DC brush motor (82.5mm) **KH:**12v DC brushed motor (82.5mm)

Note: The number of pump heads for KA, KB, KC, and KD motors is only 1, and the number of pump heads for KG-KH motors can only be 2.

* Subject to usage

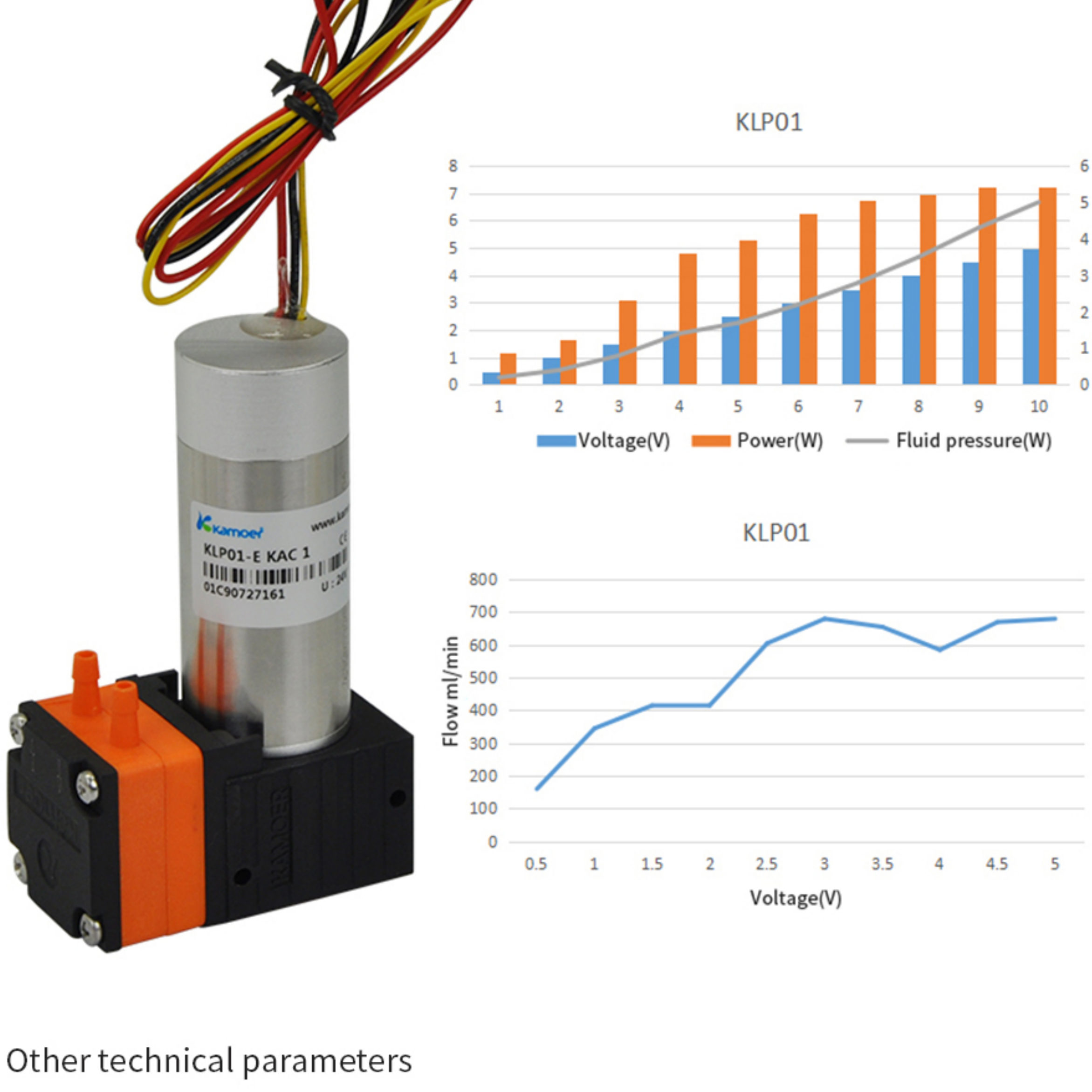
Brush motor life: 2000h ; Brushless motor lifetime: 8000h

Velocity curve



KLP01

Multi-line speed regulating diaphragm liquid pump



Other technical parameters

Code	Voltage (V)	Pump head	No-load current(A)	Rated current (A)	Weight (g)
KA	24	1	0.10	0.30	200
KB	24	1	0.13	0.26	245
KC	12	1	0.19	0.36	200
KD	12	1	0.19	0.38	245
KG	24	2	0.23	0.38	322
KH	12	2	0.42	0.69	322

Note: 1. No-load current is the current when no liquid is being delivered.

2. The rated current is the current value of the liquid (water) conveyed at the input and output terminals at approximately atmospheric pressure. As the viscosity of the liquid increases during actual use,

As the input and output pressures increase, the actual current value will increase accordingly.

Working conditions: Ambient temperature 0 ~ 40 °C

Relative humidity <80%

Brushless speed control series, the parameters are shown below

2-Wire Built-in drive motor 1-UL1332 Red AWG20 Vcc (12V/24V) 2-UL1332 Black AWG20 GND	Description: Red Line: 12V or 24V Black line: GND	Optional Program: 1. Open-loop: The most high-speed operation 2. Closed-loop: fixed speed (such as conventional closed-loop 3500RPM)
3-Wire Built-in drive motor 1-UL1332 Red AWG20 Vcc (12/24V) 2-UL1332 Black AWG20 GND 3-UL1332 Yellow AWG24 SP (0-5V Speed control)	Description: Red Line: 12V or 24V Black line: GND Yellow Line: Analog voltage 0-5V or 5V, 10-30K PWM, Duty 0%-100%	Optional Program: 1. Open loop: 0V or Duty cycle 0% represents the lowest speed 2. Closed loop: 0V or Duty cycle 0% represents the lowest speed 3. Open-loop: 0V or Duty cycle 0% represents the highest speed 4. Closed loop: 0V or Duty cycle 0% represents the highest speed
4-Wire Built-in drive motor 1-UL1332 Red AWG20 Vcc (12/24V) 2-UL1332 Black AWG20 GND 3-UL1332 Yellow AWG24 SP (0-5V Speed control) 4-UL1332 Green AWG24 FG (Speed Feedback)	Description: Red Line: 12V or 24V Black line: GND Yellow Line: Analog voltage 0-5V or 5V, 10-30K PWM, Duty 0%-100% Green Line: Speed feedback, 1 pulses/rpm	Optional Program: 1. Open loop: 0V or Duty cycle 0% represents the lowest speed 2. Closed loop: 0V or Duty cycle 0% represents the lowest speed 3. Open-loop: 0V or Duty cycle 0% represents the highest speed 4. Closed loop: 0V or Duty cycle 0% represents the highest speed
External Drive motor Terminal : PH2, 0-8P	 VS-MD-3039T Driver board	Description: Default welding potentiometer, power transfer (through potentiometer speed control) Customizable requirements: ON switch (effective to ground) SP 0-5V or 5V, 10-30K PWM speed regulation FR Turn forward and backward FB Speed Feedback

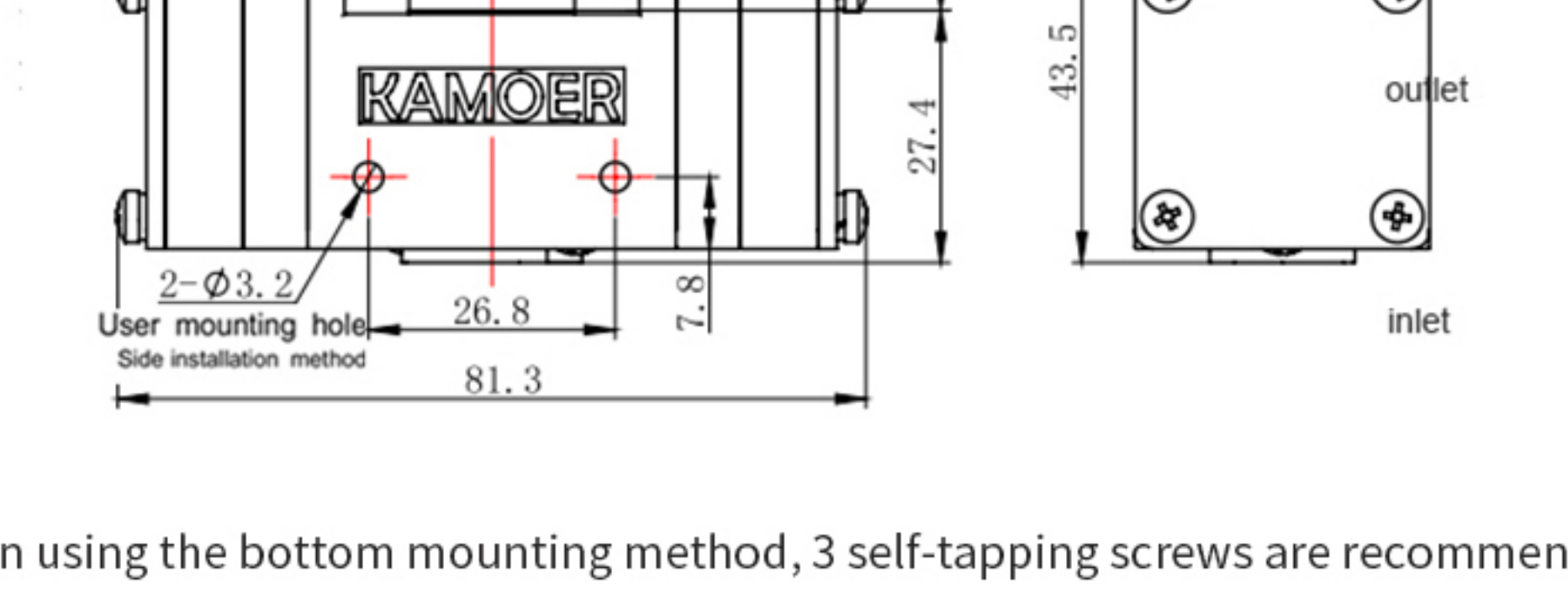
Installation size

Currently we provide users with two installation methods:

- 1.Side mounting method
- 2.Bottom installation

Note: When the number of pump heads is 2, only the side mounting method

Size



Note: When using the bottom mounting method, 3 self-tapping screws are recommended.