

Product Manual

Kamoer Fluid Tech (Shanghai) Co., Ltd.

Version : A/4

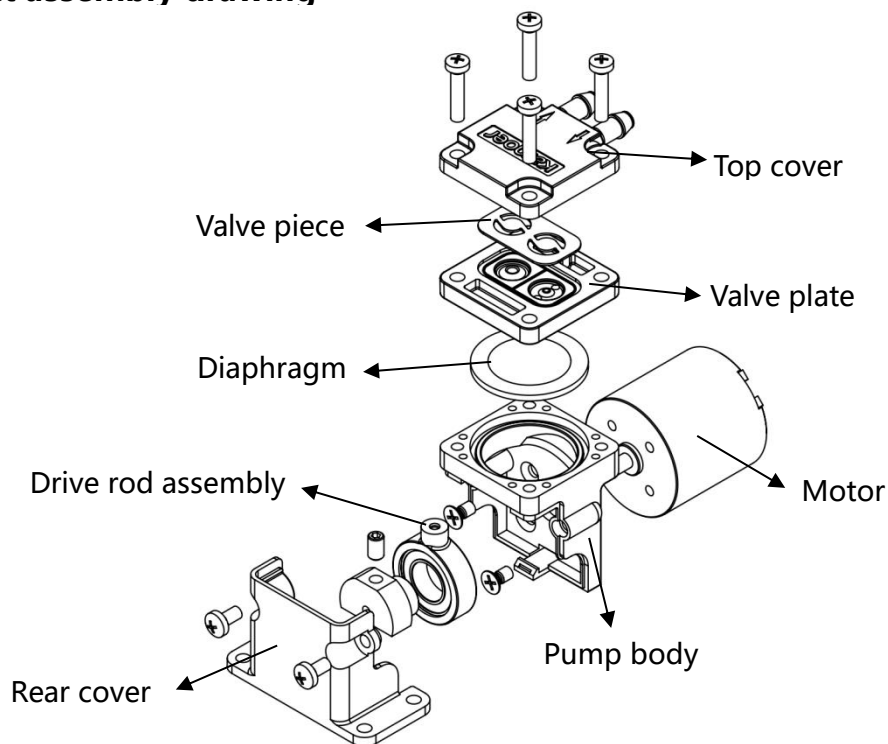
Product name	Micro diaphragm pump
Product model	KLVP3
Execution date	2022.5.16
Company name	Kamoer Fluid Tech (Shanghai) Co.,Ltd.

A. Product Overview

1. Product physical picture



2. Product assembly drawing



3. Model definition

KLVP3	S	B	12
model	pump head type	motor type	Input voltage

3.1 Pump head type



S: single head type



D: double head type

3.2 Motor type



B: Brushless motor



D: brushed motor

3.3 Input voltage

12: 12V voltage input

24: 24V voltage input

4. Performance characteristics, typical applications

4.1 Performance characteristics

- KLVP3 series diaphragm air pumps are available in two voltages of 24V and 12V, and customers can choose the appropriate voltage according to their own usage scenarios
- The appearance of the product is personally checked by the design master, which is beautiful and generous.
- Oil-free, maintenance-free, can work 24 hours a day
- Optional motor, brush motor with cost advantage or brushless motor with performance advantage
- Low noise, low power design
- High-quality engineering plastics and rubber materials, showing good product stability



B. Product specification

1. Technical Parameters

Project		KLVP3-SB	KLVP3-SBP	KLVP3-DB	KLVP3-SD
Basic parameters	Effective traffic	≥1. 2L/ min	≥1. 5 L/ min	≥2. 2 L/ min	≥1. 2 L/ min
	Peak flow	≥2L / min	≥2.5L / min	≥4L / min	≥2L / min
	Negative pressure	≥ - 0.05 Mpa			
	Positive pressure	≥ 0.08 MPa			
	Power	≤2.5W	≤4W	≤5W	≤2.5W
	Noise	≤62dB	≤65dB	≤65dB	≤65dB
	Control method	PWM speed regulation work, fixed speed work			fixed speed work
	Weight	about 70g	about 85g	about 105g	about 80g
	Rated voltage	12V/24V			
	Motor type	DC brushless motor			DC brushed motor
	Product life	≥ 6000h			≥ 600h
	Applicable environment	Temperature range: 0°C ~ 50°C; relative humidity: <80% (no condensation)			
	Supplementary Note	The above parameters are tested under standard atmospheric pressure, room temperature 25°C, and air medium. Under the ambient noise of 35dB, measured at a distance of 50cm, the performance parameters of the product are affected by the comprehensive influence of the environmental state (air pressure, temperature, humidity, etc.), the medium state (temperature, density, viscosity, and chemical properties, etc.) and the load before and after the pump, so the above Parameters may differ from actual parameters.			

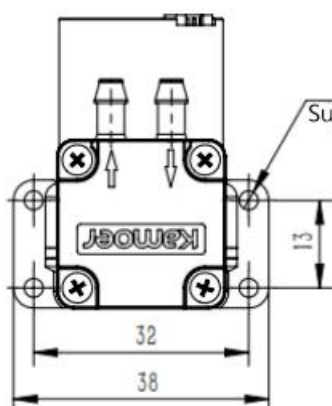
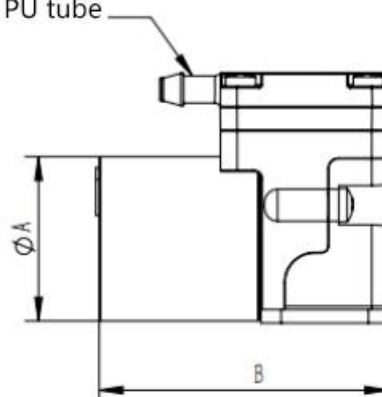
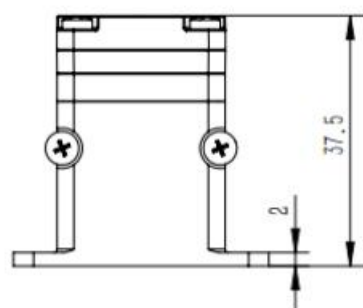
2. Product material

Model	Pump head	Pump body	Diaphragm	Valve	Eccentric wheel
KLVP3	PPE	PA	EPDM	EPDM	Brass



3. Product Size

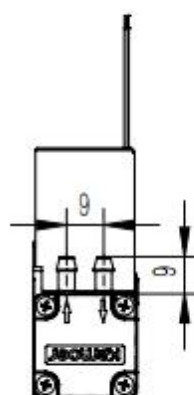
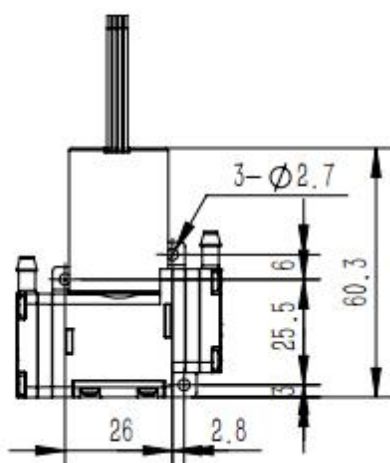
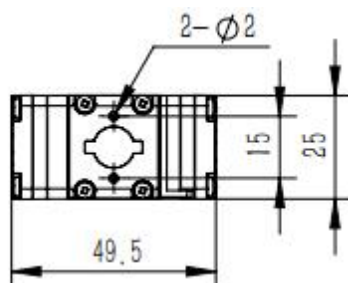
Suggested tube: 4x6 PU tube



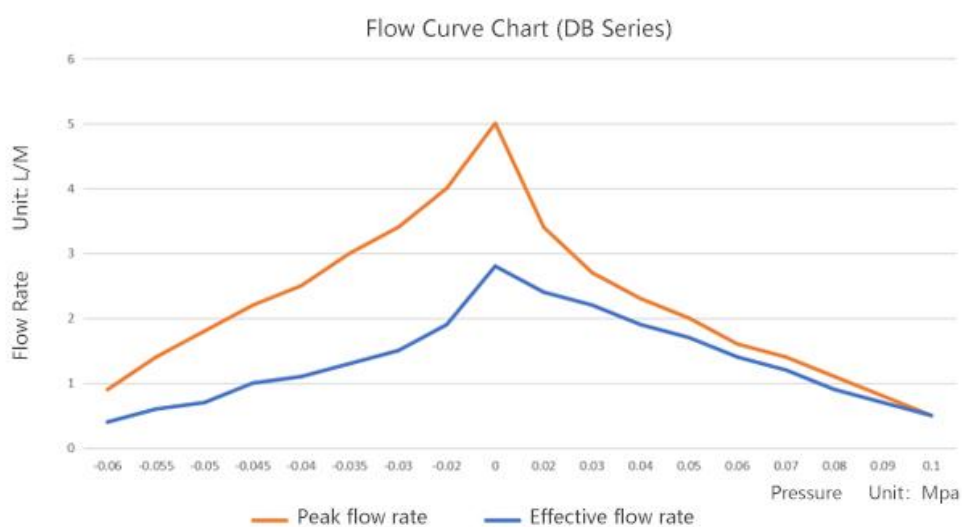
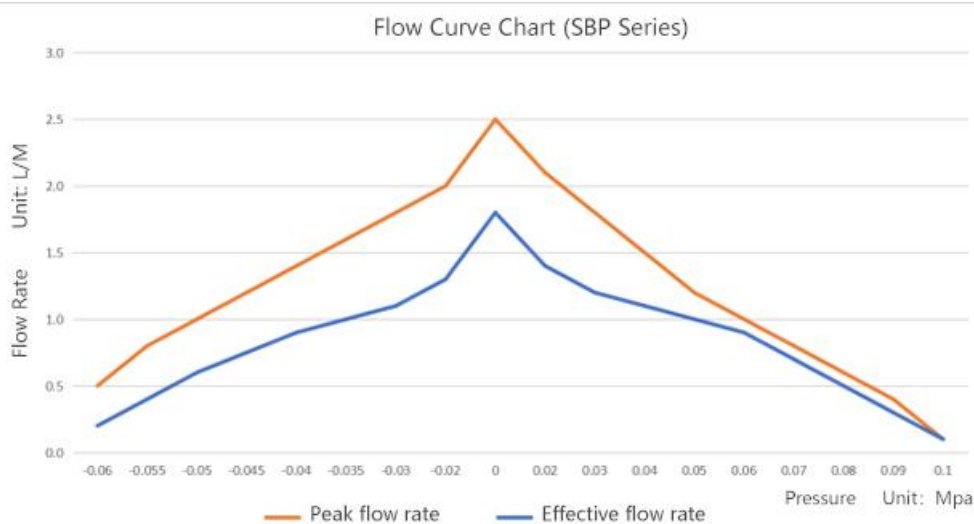
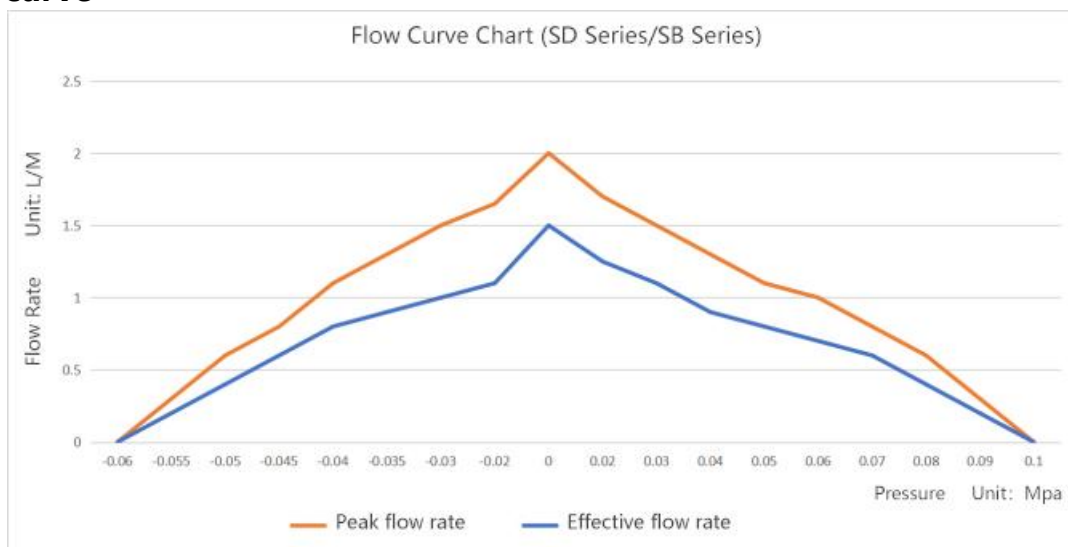
4-Ø2.8
Suggested mounting screws: ST2.6

Unit: mm

型号	A	B
SB12/24	24.5	43
SD12/24	24	58.5
SBP	22	57.5



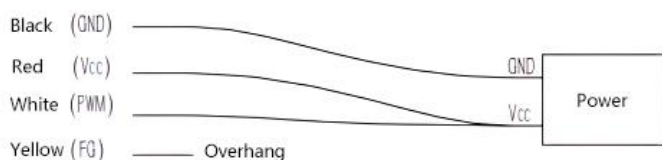
4. Flow curve



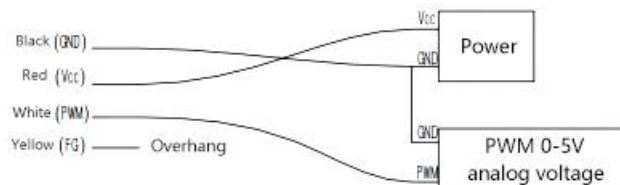
5. Motor Control (for brushless motors)

Red line	Yellow line	Bue line (white line)	Black line
Vcc	FG	PWM	GND
Positive electrode	Speed feedback	Speed regulation	Negative electrode

- PWM and 0-5V two speed regulation methods, PWM speed regulation: 10KHZ ~ 30KHZ, amplitude: 5V.
- Control ratio 0-10% does not turn, 11%-100% speed range.
- Analog voltage speed regulation: voltage 0-5V, 0-0.5V motor does not rotate, 0.6-4.5V speed regulation range.
- The speed feedback of the yellow line is connected to the oscilloscope probe or the host computer.
SD/DB series: 1 pulse/rotation speed (rev/min) = FG signal * 60
SB /SBP series: 6 pulses/rev Speed (rev/min) = FG signal * 60/6
- Full speed operation: connect the positive pole to the red wire and the blue wire (white wire); connect the negative pole to the black wire
- There are two kinds of speed control cables, blue and white, and the performance is the same.





Full speed work



Speed regulation work

C. Optional accessories

Name	Specifications		Quantity	Function introduction
Prefilter	/		1	Prevent dust, oil stains, etc. in the medium from entering the pump head and causing damage to the pump.
Speed control driver board	Three-wire governor		1	The water output of the three-line diaphragm liquid pump and the air output of the diaphragm air pump can be easily adjusted by the external speed knob.

