

# 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.	



Model: KLVP3

File No .: CPBZ-KLVP3-01

Version No.: A4

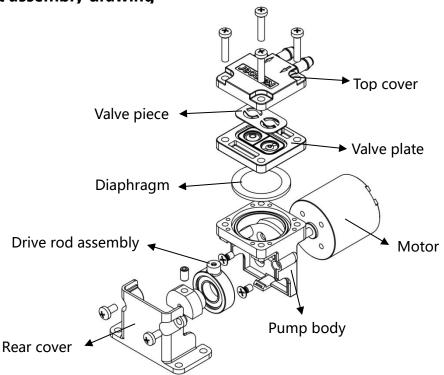
Effective Date: 2022-05-16

## A. Product Overview

## 1. Product physical picture



## 2. Product assembly drawing



### 3. Model definition

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

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## 3.1 Pump head type



S: single head type



D: double head type

Model: KLVP3

## 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

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## 4.2 Typical applications

- Environmental protection industry: such as used as a gas pump for gas monitoring
- Medical equipment: such as used as an air pump for a rehabilitation instrument
- Industrial automation: such as the use of negative pressure pumps as suction cups
- White goods: such as use as a negative pressure pump for a massager

#### 4.3 Known Risk Notification

- The medium will be in contact with the pump head and the rubber, so it is necessary to check the chemical compatibility or conduct an immersion test when selecting the model
- The working environment of the product should not exceed 40°C, and the humidity should not exceed 70% (no condensation). The harsh working environment will cause premature damage to the product
- Frequent start and stop, overpressure or underpressure and other unreasonable working conditions will lead to premature damage of the pump
  - High overloading may result in premature failure of the product
- The medium contains dust, oil and other pollutants that will contaminate the pump components and cause premature damage to the pump (please equip a pre-filter)

# 5. Product Certification, Intellectual Property

#### CN305332646S



#### CE certification



RoHS certification



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# **B. Product specification**

### 1. Technical Parameters

	Project	KLVP3-SB	KLVP3-SBP	KLVP3-DB	KLVP3-SD	
	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				
Basic	Power	≤2.5W	≤4W	≤5W	≤2.5W	
ic p	Noise	≤62dB	≤65dB	≤65dB	≤65dB	
Control method PWM speed regulation work, fixed spe				speed work fixed speed work		
parameters	Weight	about 70g	about 85g	about 105g	about 80g	
Srs	Rated voltage					
	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

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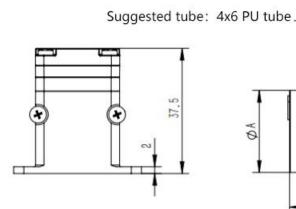


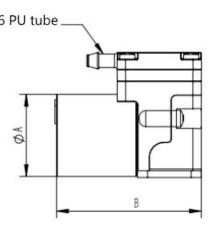
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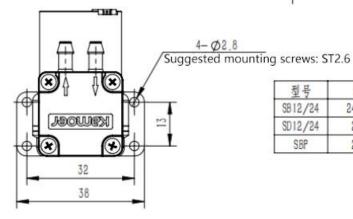
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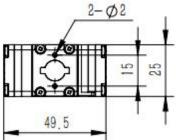
### 3. Product Size

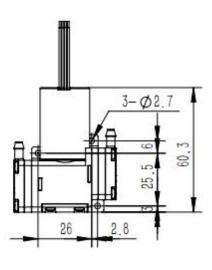


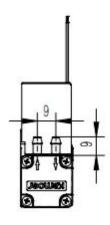




Unit: mm 型号 B 24.5 43 SB12/24 SD12/24 24 58.5 SBP 22 57.5







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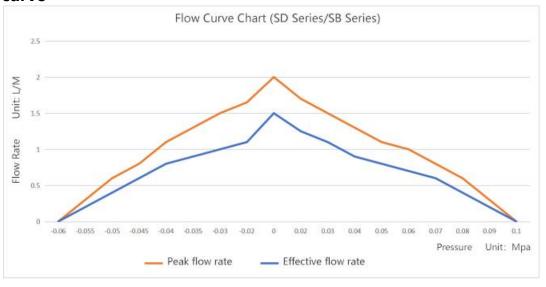
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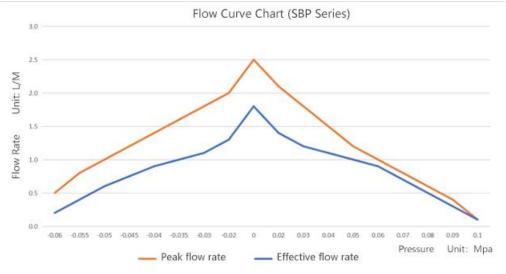
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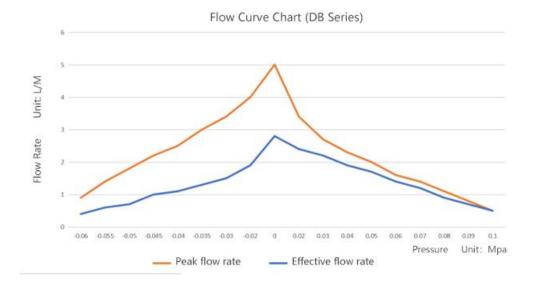
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#### 4. Flow curve







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## 5. Motor Control (for brushless motors)

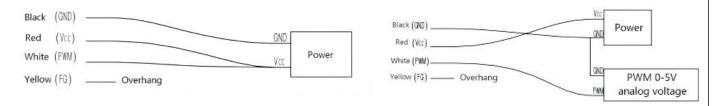
Red line	Yellow line	Bue line (white line)	Black line	
Vcc	FG	PWM	GND	
Positive electrode	Speed feedback	Speed regulation	Negative electrode	

- 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	/	(3))	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.

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