

Product Manual

Kamoer Fluid Tech (Shanghai) Co.,Ltd.

Version: A/2

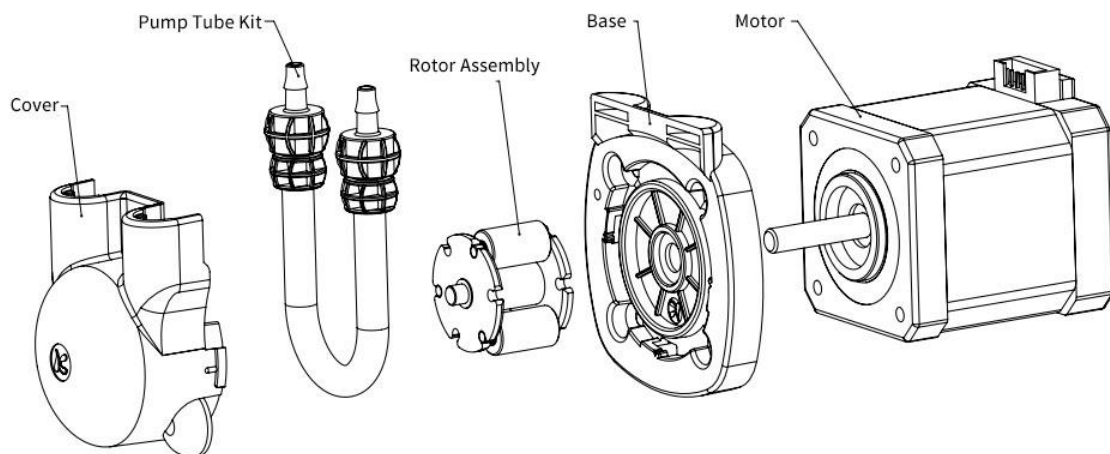
Product name	Micro peristaltic pump
Model	KPAS100
Release Date	2022.11.23
Manufacturer	Kamoer Fluid Tech (Shanghai) Co.,Ltd.

A. Product Overview

1. Product Images



2. Product assembly drawing



3. Model Interpretation

KPAS100	ST	B	14	3	A	A
Model	Motor type	Tube material	Tube size	Number of rotors	Connector model	Installation method

3.1 Motor Type

ST: 24V stepper motor

3.2 Tube type

B: BPT tube S: Silicone tube



3.3 Tube Code

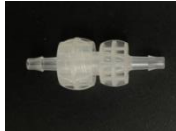
14#: 1.6mm(ID)×4.8mm(OD) 19#: 2.4mm(ID)×5.6mm(OD) 16#: 3.2mm(ID)×6.4mm(OD)

3.4 Number of rotors

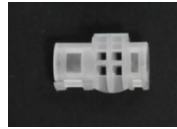
3: 3 rotors

3.5 Connector type

A: Butt joint



B: Clamp



3.6 Installation method

A: Straight board (default installation) L: L plate

Model	Cover	Base	Rotor	Rotor Assembly	Connector
KPAS100	PC	PA	Engineering plastics	POM	PP

4. Features & Applications

4.1 Features

- KPAS100 series peristaltic pump is a stepper motor driven peristaltic pump
- Pump tube selection - the pump tube adopts imported BPT (B) tube and silicone tube (S), which can be applied to different transmission liquid requirements
- Pump tube size is optional (14#, 19#, 16#) to meet different flow requirements
- The pump body comes with a 4-hole mounting plate, no need to add it separately
- 3 rotor transmission, moderate pulse
- Installation method - The installation method is fixed through the plate. In addition, the pump head adopts a quick-release type, and the orientation of the pipe joint can be selected in any direction of up, down, left, and right
- Transmission mode - planetary friction reduction transmission
- Suitable for wall thickness 1.6 pump tubing



4.2 Typical applications

Analytical instruments: ion chromatograph, blood analyzer, hypochlorous acid water generator;
detergent delivery: automatic car washer.



Ion chromatograph



Auto car washer



Blood analyzer



Hypochlorous Acid
Generator

- The hose is resistant to liquid media. It is necessary to check chemical compatibility or perform immersion experiments. Improper hose selection may cause the hose to be damaged quickly.
- The working environment of the product should not exceed 45 °C, and the humidity should not exceed 70% (no condensing water). The harsh working environment will cause premature damage to the product.
- Fluid spills due to ruptured hoses depend on the fluid medium and your specific application
- High overload work may lead to premature product failure

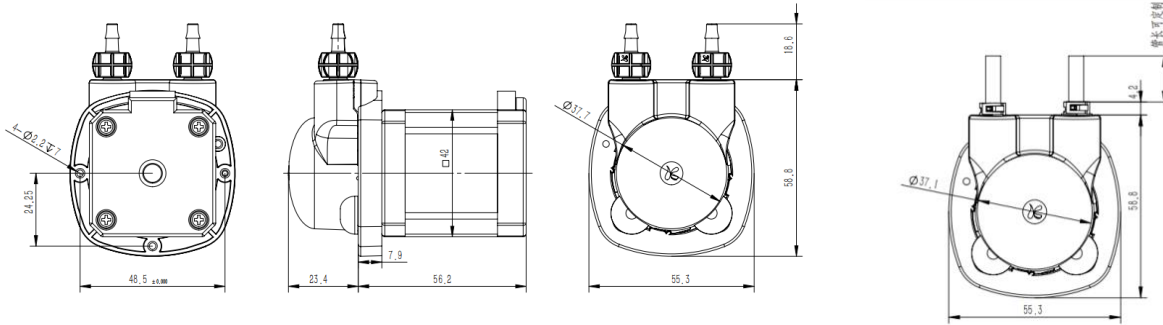
5. Patents

CN 307575335S



B. Product Specifications

1. Dimensions



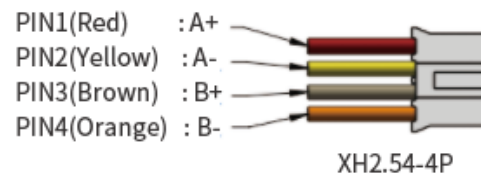
2. Parameters

Item		Technical Parameter					
Basic parameters	Motor type	Stepper motor					
	Flow range	32-110ml/min					
	Power	20W					
	Control mode	Stepper driver					
	Weight	About 400g					
	Rated voltage	24V					
	Pump tube life	S: 200h BPT: 1000h					
	Motor life	6000h					
Flow Rate	Reference flow (unit: ml/min)						
	Pump tube code	S14	S19	S16	B14	B19	B16
	ID x OD	1.6mm×4.8mm	2.4mm×5.6mm	3.2mm×6.4mm	1.6mm×4.8mm	2.4mm×5.6mm	3.2mm×6.4mm
	Pump tube material	Silicone tube			BPT		
	Motor speed	350 rpm					
	ST/Current: 1.2A	32 ml/min	70 ml/min	110 ml/min	32 ml/min	70 ml/min	110 ml/min
Notes	Remark	The above parameters are measured with pure water without pressure under the standard atmospheric pressure at room temperature of 20°C. Actually, there will be certain errors in the flow rate according to different media, different outlet pressures, and DC motor speed errors. The data are only for reference. In addition, it can be customized according to customer needs.					
	Reference noise value	In a quiet room with an ambient noise of 35dB, the product is 50cm away from the noise tester, and the noise is 50dB.					



3. Stepper Motor Parameters & Wiring


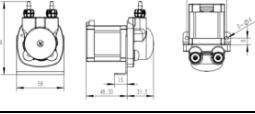


Phase	Step angle	Starting current	Insulation class
2	1.8°	1.2A	B



C. Pump Tube

Pump tube material	Characteristic	Standards compliant	Tube code
Silicone Tube (S)	Low adsorption, good temperature resistance, good chemical corrosion resistance, life time >200h	RoHS Compliant with food grade certification (GB 4806.11-2016)	01 # 02 # 04# 05# 06# 08# 10#
BPT tube (B)	Good resistance to common chemicals, acid and alkali, and oxidation resistance, life time >1000h.	RoHS	04 # 12 # 06# 08#

D. Optional accessories

Accessory name	Specifications	Function
Anti-floating countersunk head	Diameter 6mm Diameter 2.5mm 	Place the inlet of the pump tube completely in the liquid to ensure that the peristaltic pump tube can fully absorb the liquid
Mounting plate	L shape 	Increase the types of installation methods to meet different customer needs
Peristaltic pump stepper driver	MODBUS-RTU 	It can realize built-in and external potentiometer speed regulation, can realize MODBUS RS485 communication and 0-10V analog speed regulation, realize electric and trigger two start and stop modes, the maximum subdivision is 32, and the drive current can be set (0.7A, 1.2A), 1.7A, 2.2A, 2.7A, 2.9A, 3.2A, 4.0A)
Stepper motor driver board	4460.4 	It can realize RS232/RS484 speed regulation, external and built-in potentiometer speed regulation

