

# Product Manual

**Kamoer Fluid Tech(Shanghai) Co., Ltd.**

Version : A/5

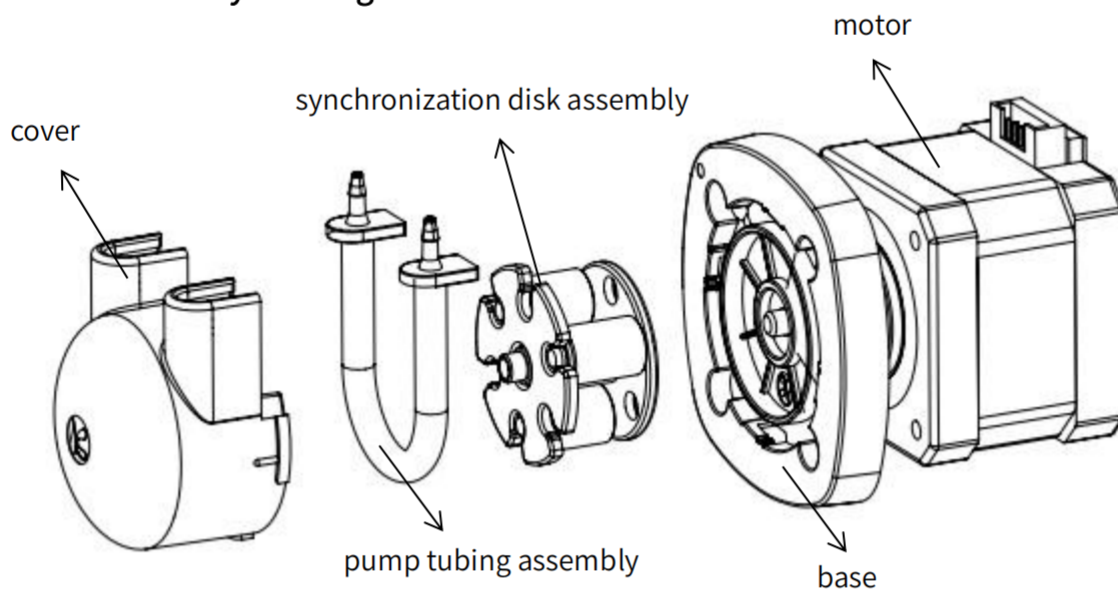
Product name	Micro peristaltic pump
Product model	KAS-ST
Execution date	2023.03.20
Company name	Kamoer Fluid Tech (Shanghai) Co.,Ltd.

## A. Product Overview

### 1. Product picture



### 2. Product assembly drawing



### 3. Model definition

Model	Motor model	Motor board	Cast	Tube number	Number of rotors
KAS-ST	ST	I	B	06	3

#### 3.1 Motor model

ST: 24V stepper motor SU: 12V stepper motor

#### 3.2 Motor Board

I: mold motor board

#### 3.3 Tube type

B: BPT pump tube S: Silicone tube



## 3.4 Tube number

06#: 2.0mm × 4.0mm, ID 2.0mm, OD 4.0mm

08#: 2.5mm × 4.5mm, ID 2.5mm, OD 4.5mm

10#: 3.0mm × 5.0mm, ID 3.0mm, OD 5.0mm

## 3.5 Number of rotors

Model	Cover	Motor mount	Rotor	Sync disk	Connector
KAS-ST	PC	PA	engineering plastics	POM	PP

## 4. Performance characteristics, typical applications

### 4.1 Performance characteristics

- ◆ KAS-ST series peristaltic pump is a peristaltic pump driven by 42 stepper motors
- ◆ Pump tube selection - the pump tube is imported BPT (B) tube and silicone tube (S), which can be applied to different transmission liquid requirements,
- ◆ Pump tubing size optional (06#, 08#, 10#) peristaltic pump tubing to meet different flow requirements
- ◆ The pump body comes with a 2-hole mounting plate, no need to add it separately
- ◆ 3 rotors, moderate pulse
- ◆ Installation method - the installation method is fixed through the plate, and the pump head adopts quick release type,
- ◆ Transmission mode-planetary friction reduction transmission
- ◆ pump tubing with wall thickness 1.0 mm

### 4.2 Typical applications

- ◆ Food and drink
- ◆ Medical diagnosis
- ◆ Analytical Instruments
- ◆ Inkjet ink
- ◆ Washing clear
- ◆ Environmental Instruments
- ◆ Experimental research
- ◆ Industrial machinery
- ◆ White goods
- ◆ Biochemical analysis



## 4.3 Known Risk Notification

- ◆ Hoses are resistant to liquid media Need to check chemical compatibility or conduct immersion tests, improper hose selection may cause hose damage quickly
- ◆ The working environment of the product should not exceed 45°C, and the humidity should not exceed 70% (no condensation). The harsh working environment will cause premature damage to the product
- ◆ Fluid leakage accidents due to hose ruptures depend on the fluid medium and your specific application conditions
- ◆ High overloading may result in premature failure of the product

## 5. Product Certification, Intellectual Property

CN304758085S

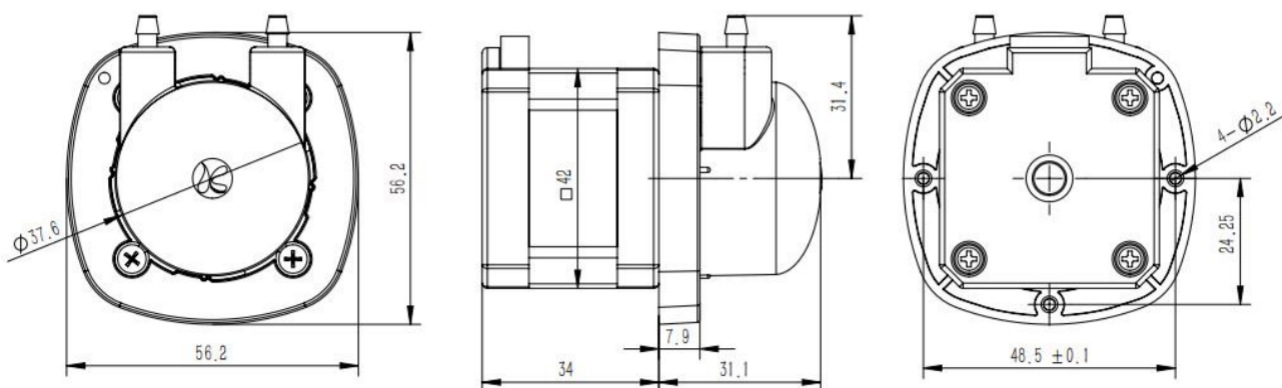


RoHS attestation



## B、Product specification

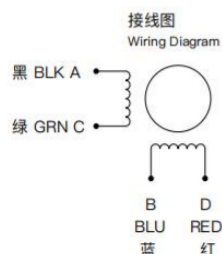
### 1. Product Size



## 2. Technical Parameters

Items			Technical Parameters					
Basic parameters	Motor type		stepper motor					
	Flow range		42ml /min~88ml/min					
	Power		20W					
	Control method		stepper driver					
	Weight		about 285g					
	Rated voltage		24V					
	Pump tube life		S : 200h or BPT : 1000h					
	Motor life		6000h					
Pump flow	Reference flow rate (unit: ml/min)							
	Pump tube code		S06	S08	S10	B06	B08	B10
	ID × OD		2mm×4mm	2.5mm×4.5mm	3 mm×5 mm	2mm×4mm	2.5mm×4.5mm	3mm×5mm
	Pump tube material		Silicone tube			BPT		
	Rotating speed		300rpm					
	24V ST 1.2A	3 rotors	45ml /min	60ml /min	85ml /min	42ml /min	66ml /min	88ml /min
	12V SU 1.2A	3 rotors	48ml /min	60ml /min	85ml /min	43ml /min	65ml /min	84ml /min
Precautions	Remark		The above parameters are measured with pure water and no pressure at room temperature and standard atmospheric pressure at 20°C. Actually, depending on the medium, the outlet pressure, the motor speed error, etc., there will be certain errors in the flow rate, and the data are for reference only. In addition, it can be customized according to customer needs					
	Reference noise value		Under the ambient noise of 35dB, the measured distance of 50cm is less than 53dB					

## 3. Motor control



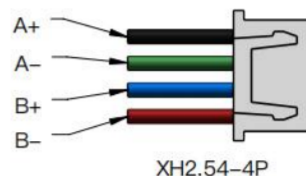
连接器针位 vs. 引线颜色  
Pin NO. vs. Lead Wire Colour

PIN NO.	颜色 Colour
1	黑 BLK
3	蓝 BLU
2	绿 GRN
4	红 RED

励磁顺序 vs. 旋转方向  
Exciting Sequence vs. Direction of Rotation

STEP	A	B	C	D	
1	+	+	-	-	
2	-	+	+	-	
3	-	-	+	+	
4	+	-	-	+	


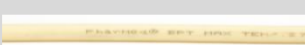
从安装面看为顺时针方向  
Clockwise view from mounting side






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



## C、Adapter hose

Pump tube material	Characteristic	Standards compliant	Tube number
Silicone tube (S) 	Low adsorption, good temperature resistance, good chemical corrosion resistance Lifespan over 200h	RoHS Comply with food grade certification (GB 4806.11-2016)	06# 08# 10#
BPT tube (B) 	Resistance to common chemicals, acid and alkali and oxidation resistance life over 1000h	RoHS	06# 08# 10#

## D、Optional accessories

Name	Specifications		Function introduction
Anti-floating sinking head	Diameter 6.0 Diameter 2.5		Place the inlet of the pump tube completely in the liquid to ensure that the peristaltic pump tube can fully absorb the liquid
Peristaltic pump stepper drive	MODBUS - RTU		Can realize built-in and external potentiometer speed regulation, can realize MODBUS RS485 communication and 0V~10V analog speed regulation, realize electric and trigger two start and stop modes, subdivision maximum 32, drive current can be set (0.7A, 1.2A, 1.7A, 2.2A, 2.7A, 2.9A, 3.2A, 4.0A)
Pulse generator board + stepper driver board	2802 + KMD-42B-P		Support clockwise and counterclockwise operation, LED 4 -digit digital tube display, various control methods: rotary encoder, foot switch, external analog, 4 85 communication control

Special declaration: The company reserves the right to improve the appearance and technical specifications of the product without prior notice.

