Precise And Reliable Fluid Transfer

Product Manual

Kamoer Fluid Tech (Shanghai) Co., Ltd.

Version : A/3

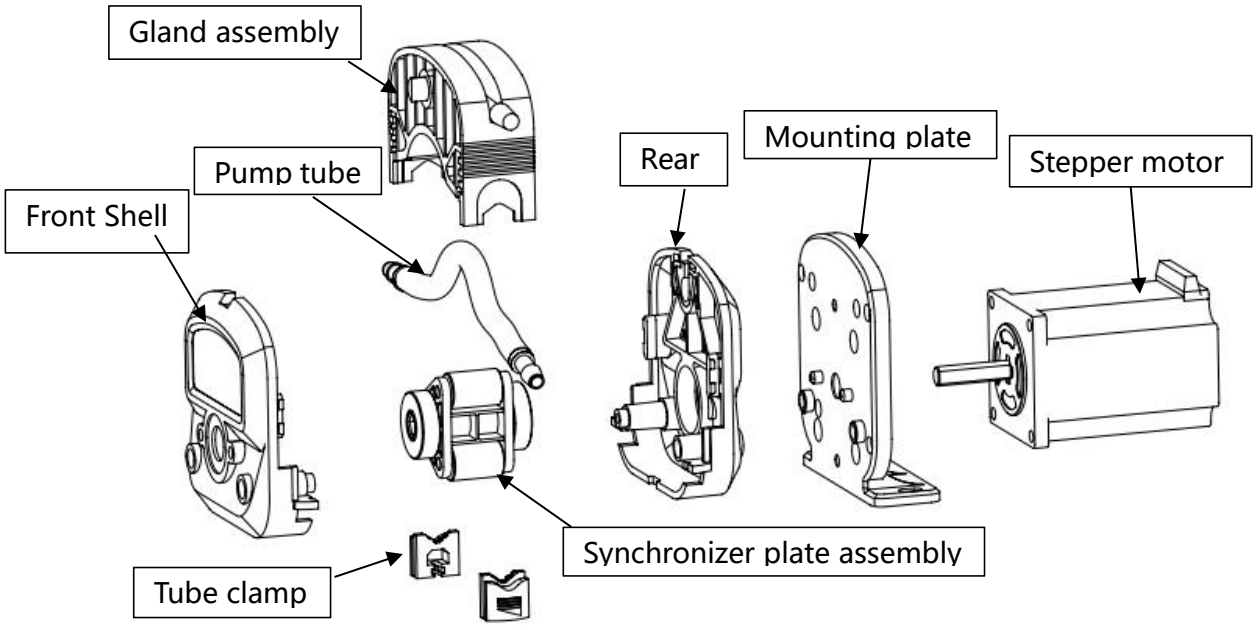
Product name	KK series peristaltic pump
Product model	KKDD/TS
Execution date	2023.01.06
Company name	Kamoer Fluid Tech (Shanghai) Co.,Ltd.

A. Product Overview

1. Product physical picture



2. Product assembly drawing



3. Model definition

KK	DD	12	B	40	Null
model	motor model	motor voltage	cast	tube number	installation method

3.1 Motor model



Brushed motor

DD 12V DC Brushed
DD 24V DC brushed



Stepper motor

TS 24V Stepper Motor

3.2 Motor voltage

12 : 12V 24: 24V

3.3 Tube type

B: BPT tube S: Silicone tube

3.4 Tube number

40#: 4mm×7.2mm 25#: 4.8mm×8.0mm 17#: 6.4mm×9.6mm 18#: 7.9mm×11.1mm

3.5 Installation method

Empty: standard installation

3.6 Product material

Pump head model	Cover	Gland	Sync disk	Rotor	Tube clamp
KKDD/TS	PA	PPS	POM	PET	PA

4. Performance characteristics, typical applications

4.1 Performance characteristics

◆ KKDD/TS series peristaltic pumps are peristaltic pumps driven by two motors. The motors are DC brushed 24V/12V motors and stepping motors, which can meet different application scenarios.

◆ The pump tube is imported PharMed®BPT (B) and silicone tube (S) with a wall thickness of 1.6mm , which can be applied to different transmission liquid requirements

◆ High flow rate, high cost performance, quick replacement of pump tube

◆ The installation methods are straight plate and L plate to adapt to different use occasions (can support customized double pump heads)

◆ The structural parts of the pump body are made of polymer modified materials, and the bearings are imported with original packaging to ensure the long-term reliable operation of the pump

4.2 Typical applications

Analytical instruments: ion chromatograph, automatic car washing machine, five-category blood analyzer, hypochlorous acid water generator;



Ion chromatograph



Auto car wash



Five classification blood analyzer



Hypochlorite water generator

5. Product Certification, Intellectual Property

ZL 2019 2 1270746.9



RoHS certification



CE certification

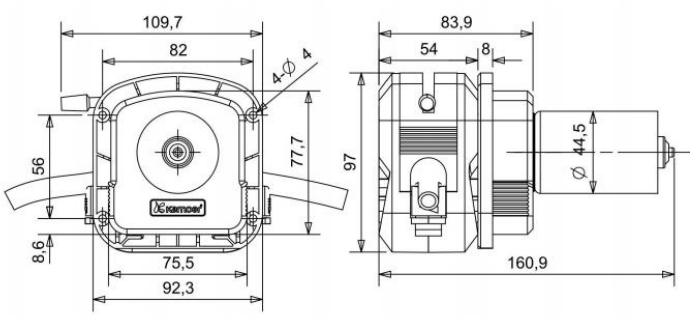


B. Product specification

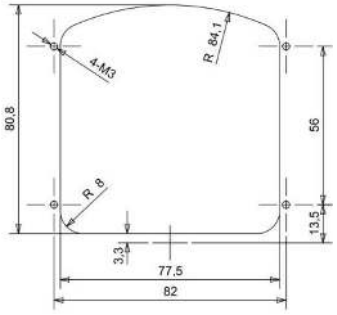
◆ KKDD DC Brush Product Specifications

1. Product Size

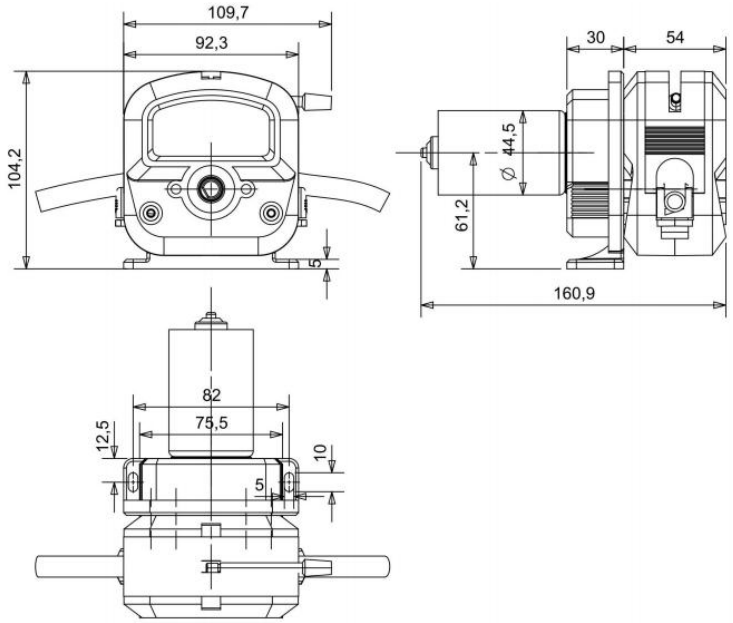
Dimensional drawing of straight plate



Straight plate opening size



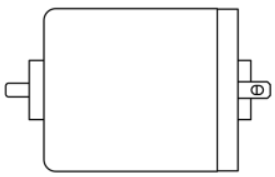
Dimensions of L board

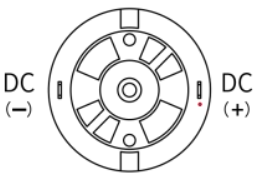


2. Technical Parameters

Project		Technical Parameters						
Basic parameters	Motor type	DC brushed motor						
	Flow range	400ml/min-1300ml/min; accuracy ± 10%						
	Noise	≤75dB						
	Power	15W						
	Control method	switch control						
	Weight	About 888g						
	Rated voltage	12V/24V						
	Pump tube life	S : 200h BPT : 1000h						
	Motor life	800h						
	Reference noise value	In a quiet room with an ambient noise of 35 dB , the product is 50 cm away from the noise tester , and the noise is 72dB						
Pump flow	Reference flow rate (unit: ml/min)							
	Pump tube code	S40	S25	S17	S18	B40	B25	B17
	ID × OD (mm)	4.0×7.2	4.8×8.0	6.4×9.6	7.9×11.1	4.0×7.2	4.8×8.0	6.4×9.6
	ID × OD (Inch)	5/32×9/32	3/16×5/16	1/4×3/8	5/16×7/16	5/32×9/32	3/16×5/16	1/4×3/8
	Pump tube material	Silicone				BPT		
	24V/current: 0.6A	440ml /min	600ml /min	1000ml /min	1300ml /min	440ml /min	600ml /min	860ml /min
	12V/current: 1.2A	400ml /min	570ml /min	900ml /min	1240ml /min	410ml /min	560ml /min	800ml /min
Supplementary Note	The above parameters are measured with pure water without pressure at room temperature and standard atmospheric pressure at 20°C. Actually, there will be certain errors in the flow rate due to different media, different outlet pressures, and DC motor speed errors. The data are for reference only. In addition, it can be customized according to customer needs							

3. Motor control



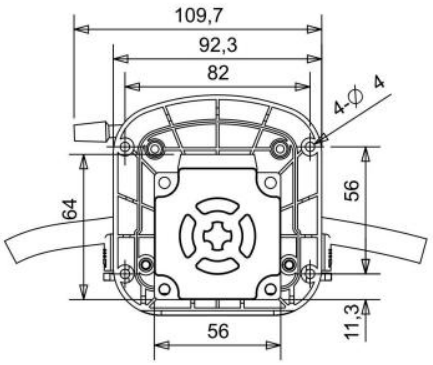


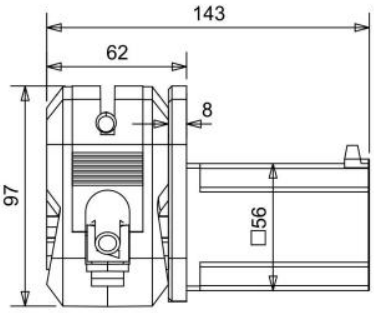
Note: According to the motor wiring diagram, the positive pole of the power supply is connected to positive, negative pole is connected to negative.

◆ KKTS stepper motor product specification

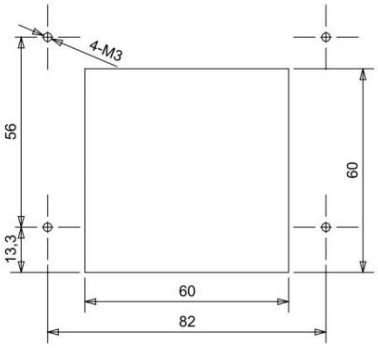
1. Product Size

Dimensional drawing of straight plate

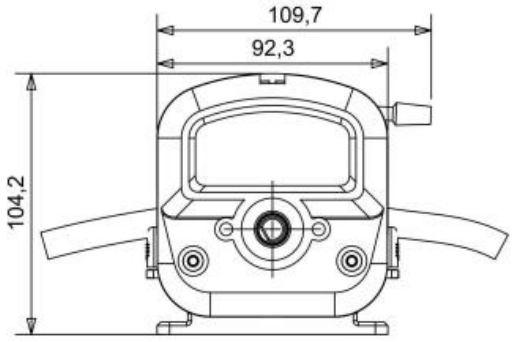


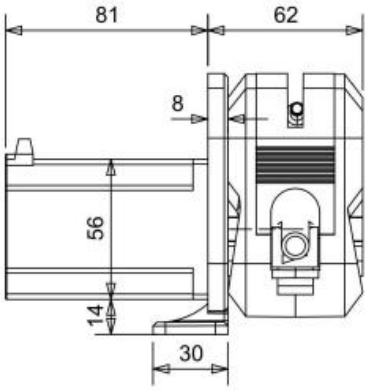


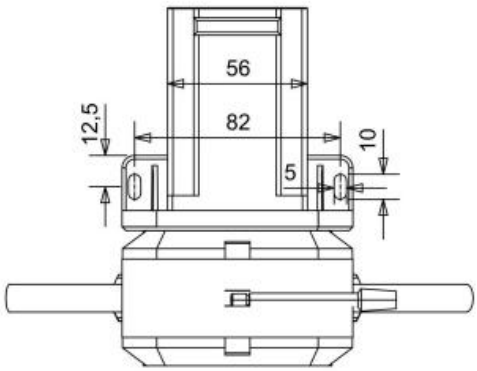
Straight plate opening size



Dimensions of L board





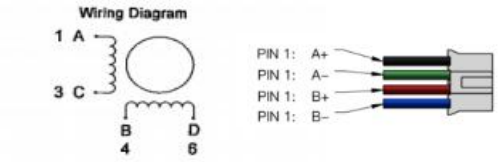


2. Technical Parameters

Project		Technical Parameters						
Basic parameters	Motor type	Stepper motor						
	Flow range	400ml/min-1600ml/min; accuracy ± 10%						
	Noise	≤ 70dB						
	Power	40W						
	Control method	PWM/analog voltage speed regulation						
	Weight	About 1400g						
	Rated voltage	24V						
	Pump tube life	S: 200h BPT: 1000h						
	Motor life	6000h						
	Reference noise value	In a quiet room with an ambient noise of 35 dB , the product is 50 cm away from the noise tester , and the noise is 68dB						
Pump flow	Reference flow rate (unit: ml/min)							
	Pump tube code	S40	S25	S17	S18	B40	B25	B17
	ID × OD (mm)	4.0×7.2	4.8×8.0	6.4×9.6	7.9×11.1	4.0×7.2	4.8×8.0	6.4×9.6
	ID × OD (Inch)	5/32×9/32	3/16×5/16	1/4×3/8	5/16×7/16	5/32×9/32	3/16×5/16	1/4×3/8
	Pump tube material	S				BPT		
	350 rpm flow	420ml /min	650ml /min	1100ml /min	1600ml /min	420ml /min	650ml /min	1000ml /min
Supplementary Note	The above parameters are measured with pure water without pressure at room temperature and standard atmospheric pressure at 20°C. Actually, there will be certain errors in the flow rate due to different media, different outlet pressures, and DC motor speed errors. The data are for reference only. In addition, it can be customized according to customer needs							

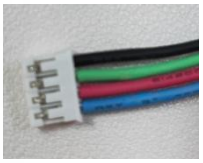
3. Motor parameters

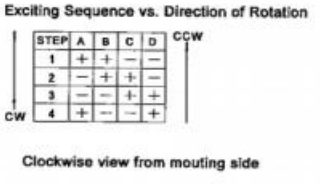
Item Item	Parameter Specifications
1. Number of Phase	2
2. Step Angle	1.8°
3. Rated Voltage	3.6 V DC
4. Rated Current	1.8 A mp
5. Holding moment Holding .Torque	2.1 Nm Typ.(Two phsae on/rated current)
6. Phase Resistance	2.0ohm±15%(20°C)
7. Phase Inductance	8.0mH±20%(1kHz 1V rms)
8. Rotor Inertia	365 gcm^2
9. Motor Weight	0. 84 kg
10. Insulation Class	B (130°C)



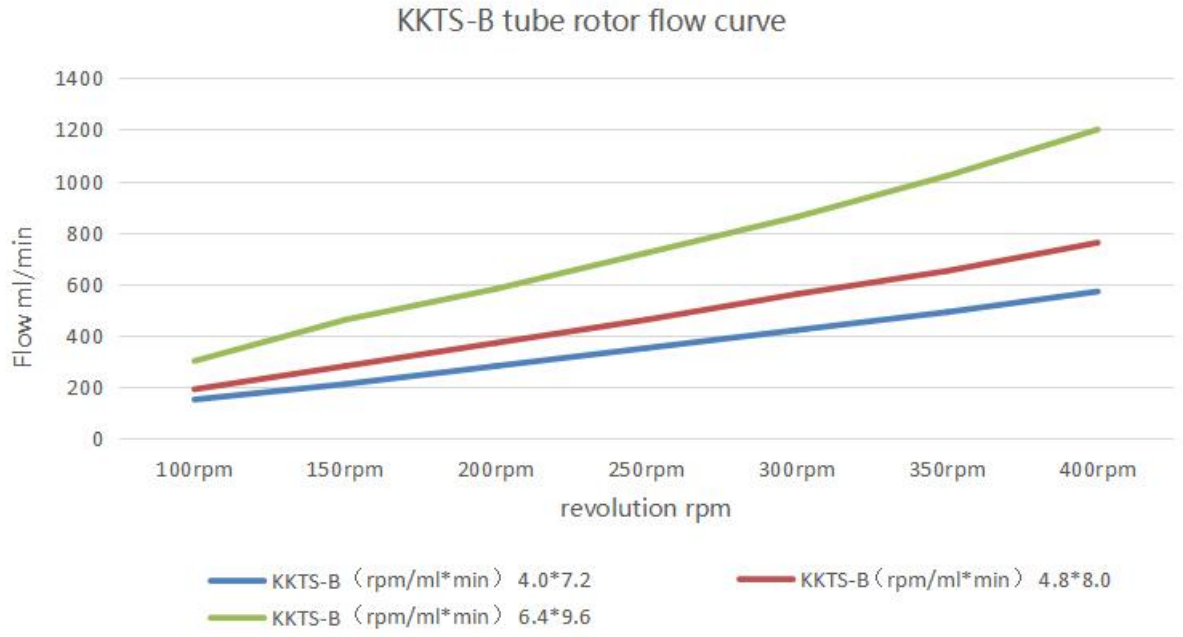
Pin No. vs. Lead Wire Colour

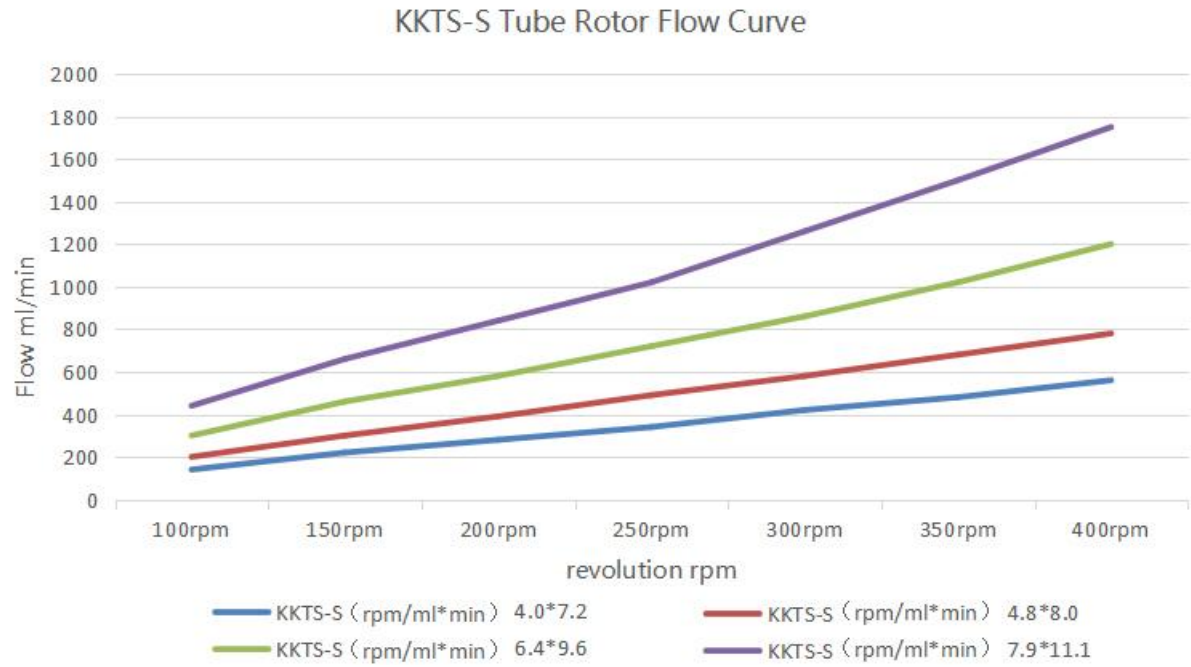
XHP-4 PIN No.	XHP-6 PIN No.	Colour
1	1	Black
2	3	Green
3	4	Red
4	6	Blue





4. Flow curve


KKTS-B tube rotor flow curve
Flow ml/min
1400
1200
1000
800
600
400
200
0
100rpm
150rpm
200rpm
250rpm
300rpm
350rpm
400rpm
revolution rpm
KKTS-B（rpm/ml*min） 4.0*7.2
KKTS-B（rpm/ml*min） 4.8*8.0
KKTS-B（rpm/ml*min） 6.4*9.6


KKTS-S Tube Rotor Flow Curve
Flow ml/min
2000
1800
1600
1400
1200
1000
800
600
400
200
0
100rpm
150rpm
200rpm
250rpm
300rpm
350rpm
400rpm
revolution rpm
KKTS-S（rpm/ml*min） 4.0*7.2
KKTS-S（rpm/ml*min） 4.8*8.0
KKTS-S（rpm/ml*min） 6.4*9.6
KKTS-S（rpm/ml*min） 7.9*11.1

C. Adapter hose

Pump tube material	Characteristic	Standards compliant	Tube number
Silicone tube (S)	Low adsorption, good temperature resistance, good resistance to chemical corrosion, life over 200h	RoHS Comply with food grade certification (4806.11-2016)	17#, 18# 25#, 40#
BPT tube (B)	Good resistance to common chemicals, acid and alkali, and oxidation, with a lifespan of more than 1000h	RoHS FDA	17#, 25#, 40#

D. Optional accessories

Name	Specifications		Function introduction
Peristaltic pump stepper drive	MODBUS - RTU		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, subdivision maximum 32, drive current can be set (0.7A, 1.2A , 1.7A, 2.2A, 2.7A, 2.9A, 3.2A, 4.0A)