

K KAMOER KCPA600

Kamoer KCPA600 Peristaltic Pump Instruction Manual

Model: KCPA600

1. PRODUCT OVERVIEW

The Kamoer KCPA600 is a 24V peristaltic dosing pump designed for high flow rate liquid transfer applications. It features an adjustable flow rate ranging from 180 ml/min to 520 ml/min, making it suitable for various industrial and scientific uses. The pump utilizes a durable Norprene tube (4mm ID x 7.2mm OD) known for its good UV and chemical resistance, ensuring a long operational lifetime.

This pump is characterized by its simple structure, ease of tube replacement, and minimal maintenance requirements. Its compact design and adjustable speed control make it a versatile tool for precise liquid handling.



Adjustable flow $\leq 520\text{ml/min}$

Chemical stable

Brush motor



Figure 1: Kamoer KCPA600 Peristaltic Pump. This image displays the pump unit, highlighting its adjustable flow capability and the use of a chemical-stable brush motor.

Key Features:

- **Adjustable Flow Rate:** Manually adjust speed via a knob, supporting flow rates from 180 ml/min to 520 ml/min.
- **Durable Tubing:** Equipped with Norprene tubing (4mm ID x 7.2mm OD) offering excellent UV and chemical resistance, with a lifespan exceeding 1000 hours.
- **Compact Design:** Weighs approximately 490g, making it portable and easy to integrate into various setups.
- **Low Noise Operation:** Operates at a noise level below 68dB.
- **Easy Maintenance:** Simple structure with an easily replaceable pump tube.
- **Power Specifications:** Operates on 24V DC, with a current of 1A and power consumption less than 24W.

2. SETUP AND INSTALLATION

2.1 Unpacking and Components Check

Before installation, carefully unpack the pump and verify that all components are present and undamaged. The standard package includes:

- Kamoer KCPA600 Peristaltic Pump (Host)
- Power Adapter (US power plug)
- Silicone Tubing (4mm ID x 7.2mm OD)
- Cable Ties (x2)
- Certificate of Qualification



Figure 2: Package Contents. This image illustrates the main components included with the Kamoer KCPA600 pump: the pump unit, power adapter, silicone tubing, and cable ties.

2.2 Power Connection

1. Ensure the pump is placed on a stable, level surface.
2. Connect the power adapter to the DC 24V input port located at the back of the pump.
3. Plug the power adapter into a suitable electrical outlet. The pump requires a 24V DC power supply.



Figure 3: Power Input. This image shows the rear of the pump with the DC 24V 1A power input port clearly visible.

2.3 Tubing Installation

1. Identify the inlet and outlet ports on the pump head.
2. Cut the provided Norprene tubing to the desired lengths for your application.
3. Securely connect one end of the tubing to the inlet port and the other end to the outlet port. Ensure connections are tight to prevent leaks.
4. Route the tubing to your liquid source and destination, ensuring there are no kinks or obstructions.

3. OPERATING INSTRUCTIONS

3.1 Starting the Pump

Once the pump is connected to power and tubing is installed, it is ready for operation. There is no separate power switch; the pump starts when power is supplied.

3.2 Adjusting Flow Rate

The flow rate of the KCPA600 pump is adjusted manually using the knob located on the front panel. This knob controls the motor speed, which directly impacts the flow rate.

1. Locate the speed adjustment knob on the front of the pump, labeled "MIN" and "MAX".
2. Rotate the knob clockwise towards "MAX" to increase the flow rate.
3. Rotate the knob counter-clockwise towards "MIN" to decrease the flow rate.
4. The speed can be adjusted while the pump is running, allowing for real-time flow optimization.



**Adjustable flow:
180ml/min~520ml/min**

Figure 4: Flow Rate Adjustment. A hand is shown turning the speed adjustment knob, which allows for precise control of the pump's flow rate between 180 ml/min and 520 ml/min.

Note: This pump supports speed adjustment but does not support forward and reverse operation. The direction of flow is fixed.

4. MAINTENANCE

The Kamoer KCPA600 peristaltic pump is designed for low maintenance. The primary maintenance task involves

replacing the pump tubing as needed.

4.1 Pump Tube Replacement

The Norprene pump tube has a lifespan of over 1000 hours under normal operating conditions. Regular inspection of the tubing for wear, cracks, or discoloration is recommended. Replace the tubing if any signs of degradation are observed to maintain optimal performance and prevent leaks.

1. Disconnect the pump from the power supply.
2. Carefully detach the old tubing from the inlet and outlet ports.
3. The pump head is designed for easy access. Refer to Figure 5 for the internal structure.
4. Remove the worn tubing from the pump head mechanism.
5. Insert the new Norprene tubing (4mm ID x 7.2mm OD) into the pump head, ensuring it is correctly seated around the rollers.
6. Reconnect the new tubing to the inlet and outlet ports securely.
7. Reconnect power and test the pump for proper operation and absence of leaks.



Figure 5: Pump Head Structure. This image shows the KHM pump head with its gear structure (POM) and the path for the easily replaceable tubing. Rotors are made of PET and connectors are PP.

4.2 General Cleaning

Keep the exterior of the pump clean and free from dust and liquid spills. Use a soft, dry cloth for cleaning. Do not immerse the pump in water or use harsh chemical cleaners.

5. TROUBLESHOOTING

This section provides solutions to common issues you might encounter with your Kamoer KCPA600 pump.

Problem	Possible Cause	Solution
Pump does not start	No power supply or loose connection.	Check if the power adapter is securely plugged into both the pump and the electrical outlet. Verify the outlet is functional.
No liquid flow or reduced flow	<ul style="list-style-type: none">◦ Tubing kinked or blocked.◦ Pump tube worn out.◦ Speed adjustment knob set too low.	<ul style="list-style-type: none">◦ Inspect tubing for kinks or blockages and clear them.◦ Replace the pump tube if it shows signs of wear.◦ Rotate the speed adjustment knob clockwise to increase flow.
Liquid leakage	<ul style="list-style-type: none">◦ Loose tubing connections.◦ Damaged pump tube.	<ul style="list-style-type: none">◦ Ensure all tubing connections are tight and secure.◦ Inspect and replace the pump tube if it is damaged.
Unusual noise during operation	<ul style="list-style-type: none">◦ Pump not on a stable surface.◦ Internal component issue (less common).	<ul style="list-style-type: none">◦ Ensure the pump is on a flat, stable surface.◦ If noise persists and is excessive, contact customer support.

6. SPECIFICATIONS

Parameter	Value
Brand	K KAMOER
Model Number	KCPA600
Voltage	24V DC
Current	1A
Power Consumption	<24W
Maximum Speed	400 rpm
Flow Rate Range	180 - 520 ml/min
Motor Type	DC Brush Motor
Pump Tube Material	Norprene

Parameter	Value
Pump Tube Dimensions	4mm ID x 7.2mm OD
Tube Lifetime	>1000 hours
Noise Level	<68dB
Item Weight	0.49 kg (approx. 1.08 lbs)
Material (Housing)	Engineering plastics
Control Method	Manual knob for speed adjustment
Special Features	Support speed regulation, easy pump tube replacement



Figure 6: Pump Dimensions. This image provides the physical dimensions of the KCPA600 pump: 138mm (height), 95mm (width), and 159mm (depth).

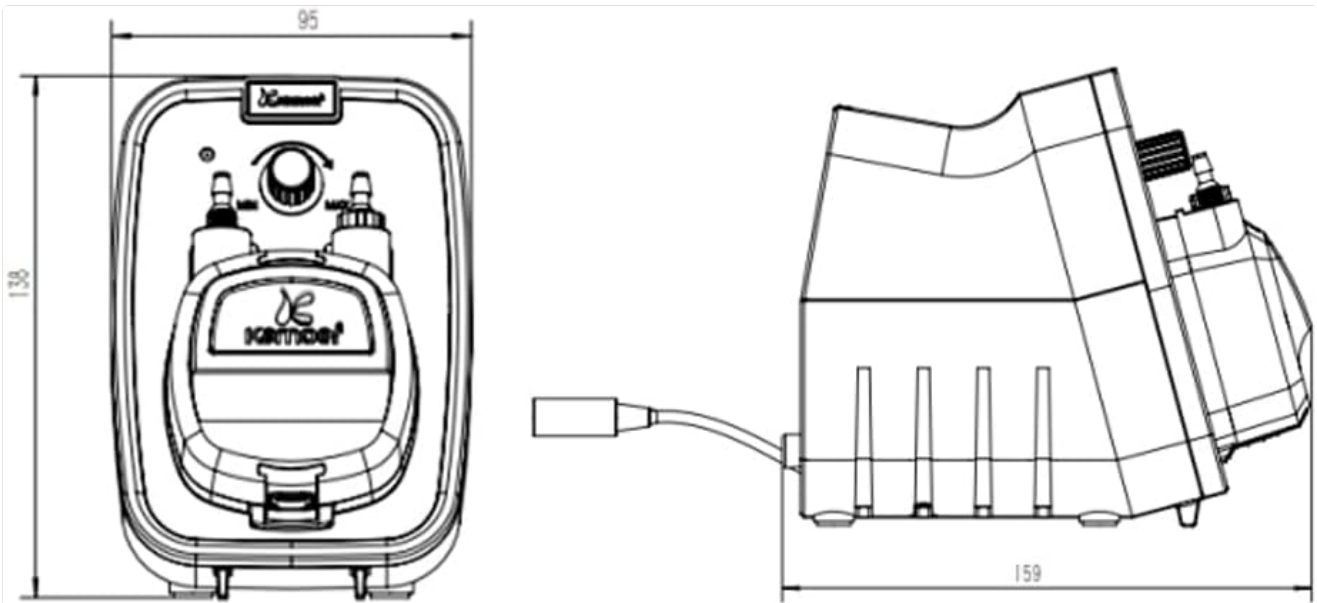


Figure 7: Technical Drawing. A detailed technical drawing illustrating the pump's dimensions from multiple perspectives.

7. WARRANTY INFORMATION

The Kamoer KCPA600 Peristaltic Pump comes with a **1-year warranty** from the date of purchase. This warranty covers manufacturing defects and material faults under normal use conditions.

The warranty does not cover damage resulting from:

- Improper installation or operation.
- Unauthorized modifications or repairs.
- Accidental damage, misuse, abuse, or neglect.
- Normal wear and tear, including consumable parts like pump tubing.

Please retain your proof of purchase for warranty claims.

8. CUSTOMER SUPPORT

For technical assistance, troubleshooting beyond this manual, or warranty inquiries, please contact Kamoer Fluid Tech (Shanghai) Co., Ltd. customer support.

Please visit the official Kamoer website or refer to your purchase documentation for the most current contact information.

Manufacturer: Kamoer Fluid Tech (Shanghai) Co., Ltd.

