

JIAYIN JYPC-3

JIAYIN JYPC-3 Series Electromagnetic Plunger Pump User Manual

Model: JYPC-3

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1. INTRODUCTION

This manual provides essential information for the safe and effective use of your JIAYIN JYPC-3 Series Electromagnetic Plunger Pump. Please read these instructions thoroughly before installation, operation, or maintenance to ensure proper function and to prevent damage or injury. Keep this manual for future reference.

2. PRODUCT OVERVIEW

The JIAYIN JYPC-3 is an original plunger-type electromagnetic pump designed for various applications, including hot water dispensers. It operates on AC 110V-120V power, delivering a flow rate of 700cc/min with a working pressure up to 2.5 bar. Its robust design ensures reliable performance with water or non-corrosive liquids.

Key Features:

- Designed for AC 110V-120V, 60Hz power supply.
- 25W power consumption.
- Flow rate of 700 \pm 10% cc/min.
- Suitable for water or non-corrosive liquids.
- Operating ambient temperature: up to 70°C (158°F).
- Operating medium temperature: up to 60°C (140°F).
- Plunger type mechanism for efficient suction.



Figure 2.1: Front view of the JIAYIN JYPC-3 electromagnetic plunger pump, showing the main body, electrical terminals, and inlet/outlet ports.



Figure 2.2: Angled view of the JIAYIN JYPC-3 pump, highlighting the plunger mechanism and compact design.

3. TECHNICAL SPECIFICATIONS

The following table details the technical specifications of the JIAYIN JYPC-3 electromagnetic plunger pump:

Parameter	Value
Model	JYPC-3
Brand	JIAYIN
Type	Electromagnetic Plunger Pump

Parameter	Value
Voltage	AC 110V-120V
Frequency	60Hz
Power	25W
Flow Rate	700 ±10% cc/min
Working Pressure	0-2.5 bar
Working Medium	Water or non-corrosive liquid
Ambient Temperature	Up to 70°C (158°F)
Medium Temperature	Up to 60°C (140°F)
Pump Shaft Position	Horizontal
Net Weight	137 ±5g (approx. 5.2 ounces)
Product Dimensions	Approx. 3.84 x 1.5 x 1.5 inches (97.5 x 38 x 38 mm)
Material	Plastic

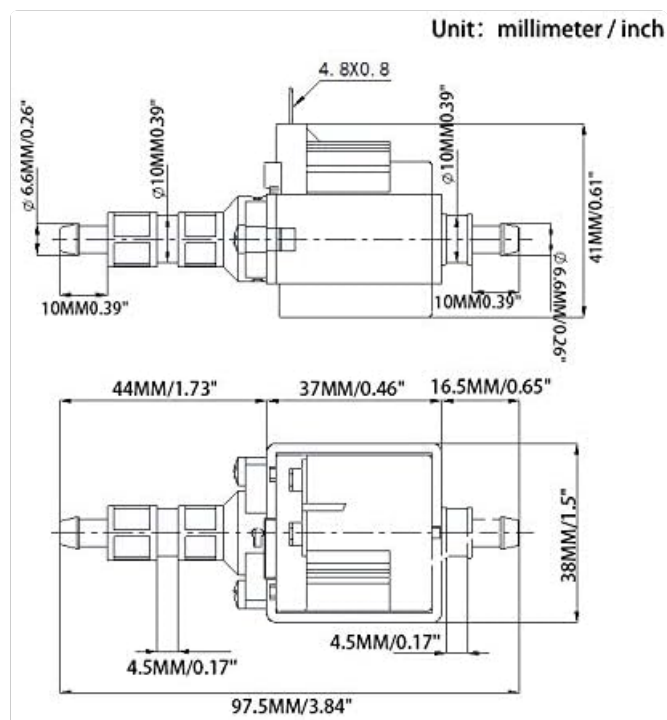
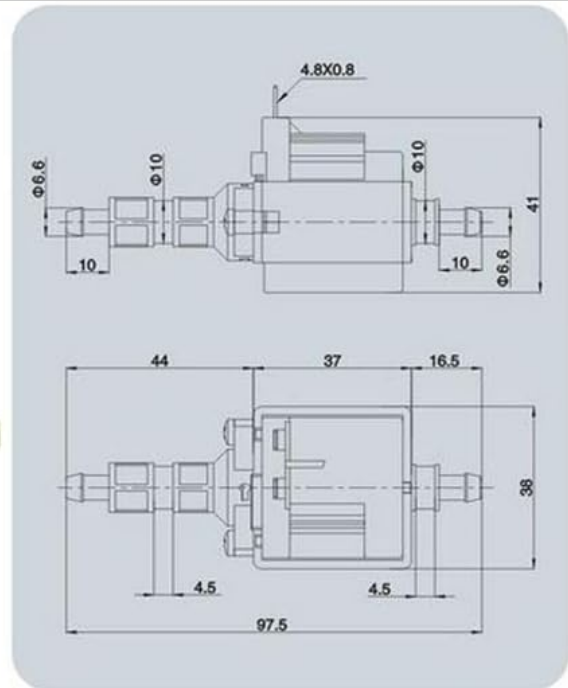


Figure 3.1: Detailed dimensional drawing of the JIAYIN JYPC-3 pump, showing key measurements in millimeters and inches.

JYPC-4A Series



Class H				Model		
Technical parameters				Technical indicators		
Voltage (V)	Frequency (Hz)	ON/OFF	Power (W)	Maximum pressure (bar)	Average flow rate (cc / min)	Noise (dB)
120	60	100%	25	2.5	700	54

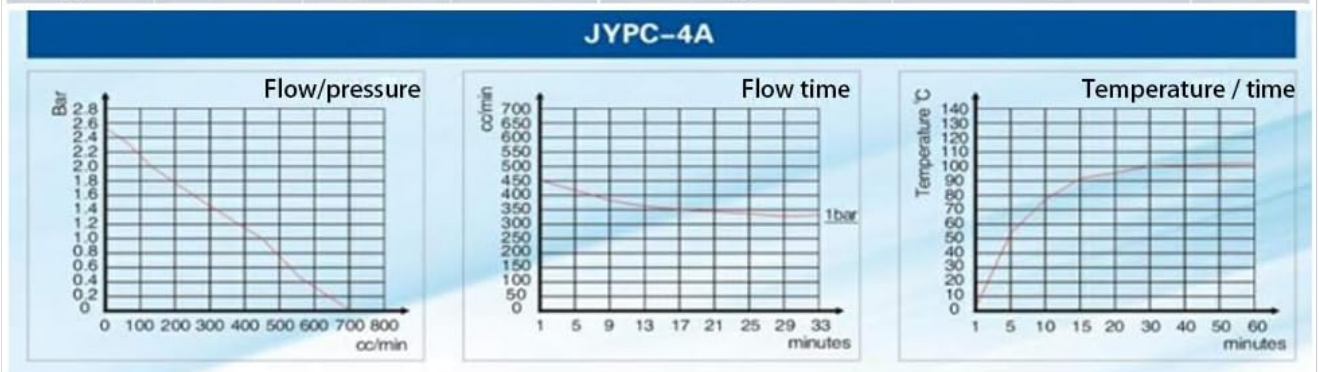


Figure 3.2: Technical parameters and performance graphs for the JIAYIN JYPC-3 pump, illustrating flow/pressure, flow time, and temperature/time relationships.

4. SAFETY INFORMATION

Adhering to safety precautions is crucial for preventing injury and damage to the pump. Please observe the following:

- **Electrical Safety:** Ensure the power supply matches the pump's voltage (AC 110V-120V). Disconnect power before installation, maintenance, or troubleshooting. All electrical connections should be performed by a qualified individual and comply with local electrical codes.
- **Liquid Compatibility:** Use only water or non-corrosive liquids. Using corrosive chemicals can damage the pump and void the warranty.
- **Temperature Limits:** Do not exceed the specified ambient (70°C/158°F) or medium (60°C/140°F) temperature limits. Overheating can lead to pump failure.
- **Proper Installation:** Install the pump in a horizontal position as specified. Incorrect orientation may affect performance and longevity.
- **Avoid Dry Running:** Do not operate the pump without liquid. Dry running can cause severe damage to

internal components.

- **Secure Connections:** Ensure all tubing and electrical connections are secure to prevent leaks or electrical hazards.
- **Children and Pets:** Keep the pump and its associated components out of reach of children and pets.

5. SETUP AND INSTALLATION

Follow these steps for proper installation of your JYPC-3 pump:

1. **Unpacking:** Carefully remove the pump from its packaging. Inspect for any visible damage.
2. **Mounting:** Mount the pump securely in a horizontal position. Ensure there is adequate space for tubing connections and ventilation.
3. **Tubing Connections:**
 - Connect the inlet tubing to the designated inlet port. The product description specifies a flow test method using a 13.8-inch silicon tube with an outer diameter of 0.31 inches and an inner diameter of 0.16 inches. Ensure your tubing is compatible and securely fastened to prevent leaks.
 - Connect the outlet tubing to the designated outlet port.
 - Ensure tubing is not kinked or obstructed.
4. **Electrical Connections:**
 - Ensure the power source is disconnected before making any electrical connections.
 - Connect the pump's electrical terminals to an AC 110V-120V, 60Hz power supply. Refer to the wiring diagram of your specific application for correct polarity if applicable.
 - Verify all electrical connections are tight and insulated to prevent short circuits or electrical hazards.
5. **Priming (if necessary):** Depending on your application, the pump may require priming to ensure it is filled with liquid before initial operation. Consult your system's specific requirements.



Figure 5.1: View of the JIAYIN JYPC-3 pump showing the electrical terminals for power connection.



Figure 5.2: The JIAYIN JYPC-3 pump with protective red caps on the inlet and outlet ports, indicating proper handling before tubing installation.

6. OPERATING INSTRUCTIONS

Once the pump is properly installed and all connections are secure, you can begin operation:

1. **Verify Liquid Supply:** Ensure there is an adequate supply of the intended liquid (water or non-corrosive) available at the pump's inlet. Never operate the pump dry.

2. **Power On:** Connect the pump to the AC 110V-120V, 60Hz power supply. The pump should begin to operate, drawing liquid through the inlet and expelling it through the outlet.
3. **Monitor Performance:** Observe the pump during initial operation. Check for any unusual noises, vibrations, or leaks. Verify that liquid is flowing as expected.
4. **Flow Control:** The pump has a flow control range of $\pm 10\%$. If your system requires precise flow, integrate appropriate external flow control mechanisms.
5. **Power Off:** To stop the pump, disconnect it from the power supply.

7. MAINTENANCE

Regular maintenance helps ensure the longevity and optimal performance of your JYPC-3 pump:

- **Regular Inspection:** Periodically inspect the pump and all connections for signs of wear, damage, or leaks.
- **Cleanliness:** Ensure the pump's exterior is kept clean. Prevent dust and debris from accumulating around the motor housing, which could impede cooling.
- **Prevent Clogging:** If the pump is used with liquids that may contain particulates, consider installing an inline filter on the inlet side to prevent clogging of the pump's internal mechanisms.
- **Storage:** If the pump is to be stored for an extended period, drain any remaining liquid and store it in a dry, clean environment.
- **No User-Serviceable Parts:** The internal components of the pump are not designed for user servicing. Do not attempt to disassemble the pump, as this may cause damage and void the warranty.

8. TROUBLESHOOTING

If you encounter issues with your JYPC-3 pump, refer to the following troubleshooting guide:

Problem	Possible Cause	Solution
Pump does not start	No power supply Incorrect voltage Loose electrical connections	Check power outlet and circuit breaker Verify power supply is AC 110V-120V Secure all electrical connections
Pump runs but no liquid flows	No liquid in supply Inlet tubing kinked or blocked Pump not primed (airlock) Internal blockage	Ensure liquid supply is available Inspect and clear inlet tubing Prime the pump according to system requirements Check for foreign objects (if accessible without disassembly)
Reduced flow rate	Partial blockage in tubing or pump Air leak in inlet line Worn components (after extended use)	Inspect and clear tubing/inlet Tighten all inlet connections Consider pump replacement if wear is suspected
Unusual noise or vibration	Dry running Loose mounting Internal obstruction or damage	Ensure continuous liquid supply Tighten mounting screws If noise persists, discontinue use and contact support
Liquid leaks	Loose tubing connections Damaged tubing or pump housing	Tighten all tubing connections Inspect tubing and pump for cracks; replace damaged components

If the problem persists after attempting these solutions, please contact customer support.

9. WARRANTY AND CUSTOMER SUPPORT

For warranty information or technical assistance, please contact the retailer or manufacturer directly. Provide your product model (JYPC-3) and purchase date when seeking support. Do not attempt to repair the pump yourself, as this may void any applicable warranty.