

Naroote Z512-604-3000N

Negative Pressure Air Suction Pump User Manual

Model: Z512-604-3000N | Brand: Naroote

INTRODUCTION

This manual provides essential information for the safe and efficient operation of your Naroote Z512-604-3000N Negative Pressure Air Suction Pump. This compact, low-noise vacuum pump is designed for various applications requiring reliable air suction, including gas analysis and medical equipment. It features low power consumption and a robust, maintenance-free design.

SPECIFICATIONS

Technical Parameters

Parameter	Value
Item Type	Mini Vacuum Pump
Model	Z512-604-3000N
Material	ABS, Aluminum
Working Voltage	DC 9V-14V
Rated Voltage	DC 12V
Rated Current	500mA
Rated Power	6W
Suction Flow Rate	5L/minute
Vacuum Degree	65kPa
Maximum Pressure	120kPa
Applicable Tube Size	Approx. 4.5-6mm / 0.18-0.26in

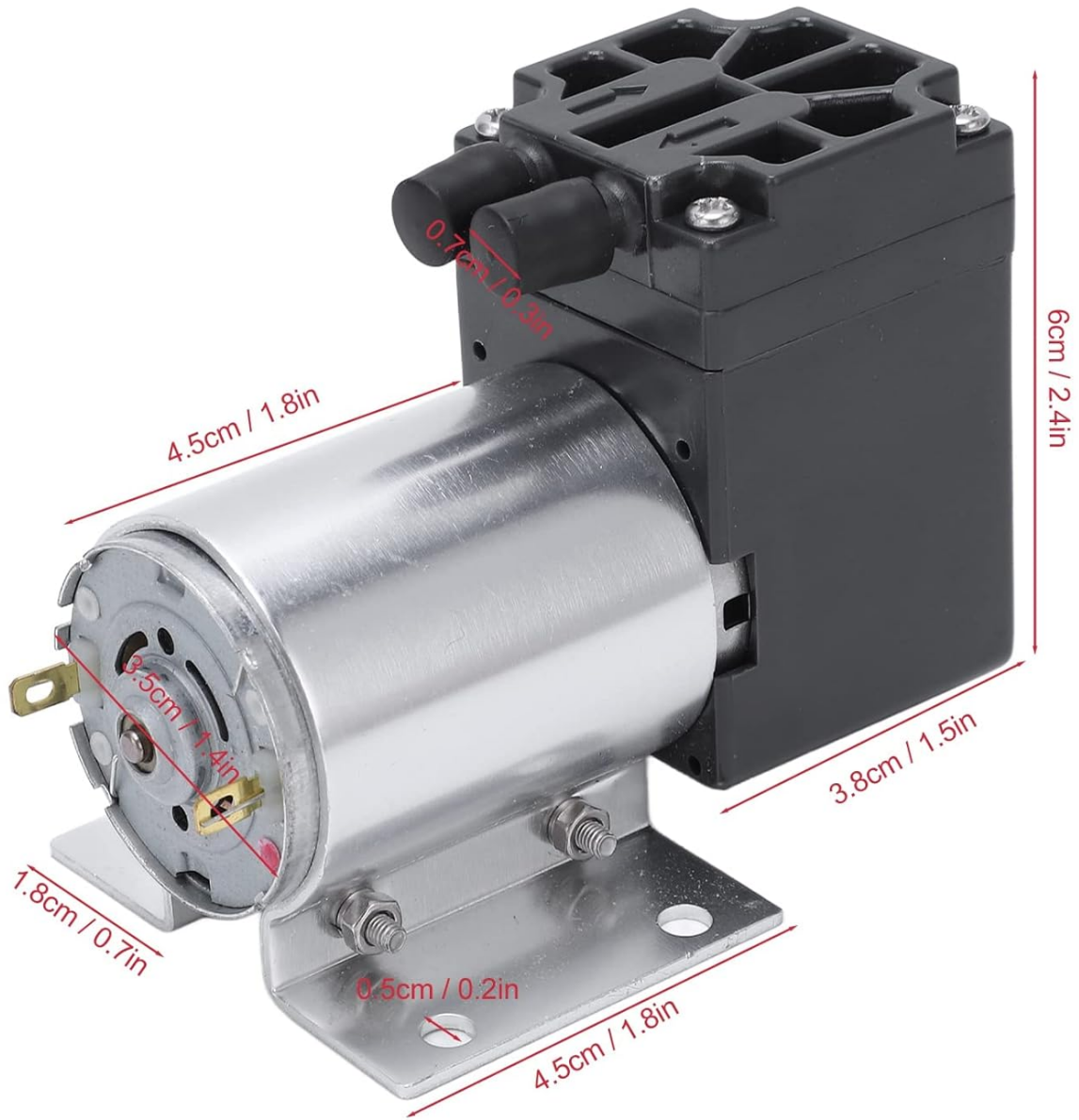
Parameter	Value
Outer Diameter (Largest Part)	Approx. 6.5mm / 0.26in

SETUP AND INSTALLATION

The Naroot Z512-604-3000N vacuum pump is designed for easy integration into various systems. It is a handheld pump suction instrument with four pre-drilled mounting holes for secure installation.

Installation Steps:

- Mounting:** Secure the pump using the four mounting holes provided on its base. Ensure it is mounted on a stable, flat surface to prevent vibration and ensure optimal performance.
- Tubing Connection:** Connect appropriate tubing (approximately 4.5-6mm / 0.18-0.26in outer diameter) to the suction and exhaust ports. Ensure connections are secure and airtight to maintain vacuum integrity.
- Power Connection:** Connect the pump to a DC power source within the working voltage range of 9V-14V. The rated voltage is 12V DC. Observe correct polarity.



Applicable: Approx. 4.5-6mm / 0.18-0.26in tube
Outer Diameter Largest Part: Approx. 6.5mm / 0.26in

Figure 1: Dimensional diagram of the Naroote Z512-604-3000N vacuum pump, illustrating key measurements for installation and tube connection.



Figure 2: Detailed view of the mounting brackets, highlighting the four mounting holes for secure installation.

OPERATING INSTRUCTIONS

The micro pump operates by a micro DC motor driving an internal mechanical eccentric movement. This movement, in turn, drives the reciprocating motion of a diaphragm, which compresses and stretches the air within the pump chamber to create pressure differences for suction and exhaust.

Basic Operation:

1. **Power On:** Once properly installed and connected to a DC 12V power source, the pump will begin operation.
2. **Air Flow:** Air will be drawn in through the suction port and expelled through the exhaust port, creating a negative pressure (vacuum) at the suction end.
3. **Continuous Operation:** The pump is designed for stable and reliable continuous operation over extended periods.



Figure 3: The Naroote Z512-604-3000N pump, ready for operation.

MAINTENANCE

One of the key advantages of the Naroote Z512-604-3000N vacuum pump is its maintenance-free design. This is an oil-free pump, which means it does not require lubrication and will not contaminate the transmission medium. Regular cleaning of external surfaces to prevent dust buildup is recommended to ensure optimal heat dissipation.

TROUBLESHOOTING

While the Naroote Z512-604-3000N pump is highly reliable, here are some basic troubleshooting steps if you encounter issues:

- **No Power:**
 - Check power connections to ensure they are secure and correctly polarized.
 - Verify that the power supply is providing the correct DC voltage (9V-14V, ideally 12V).

- Inspect the power cable for any damage.
- **Low Suction/Pressure:**
 - Ensure all tubing connections are airtight and free of leaks.
 - Check for any blockages in the suction or exhaust lines.
 - Verify that the tube size is within the recommended range (4.5-6mm outer diameter).
- **Unusual Noise:**
 - Ensure the pump is securely mounted and not vibrating against any surfaces.
 - Check for any foreign objects that may have entered the pump's vicinity.

APPLICATIONS

The Naroot Z512-604-3000N micro vacuum pump is versatile and primarily used in a wide range of fields due to its compact size, low noise, and reliable performance. Key application areas include:

- Electrical Products
- Industrial Products
- Vacuum Preservation Machines (e.g., food vacuum sealers)
- Automotive Exhaust Gas Re-emission Equipment
- Medical Equipment
- Gas Analysis and Sampling Systems
- Instrumentation
- Other fields requiring precise negative pressure or vacuum.



Figure 4: The vacuum pump in a typical application environment, such as a medical facility.



Figure 5: Visual representation of the pump's diverse applications and key features.

WARRANTY AND SUPPORT

For information regarding product warranty, technical support, or service, please refer to the documentation provided at the time of purchase or contact your vendor. Keep your purchase receipt as proof of purchase.