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› VIVOHOME 1.5 HP 14.4 CFM 2-Stage HVAC Vacuum Pump Instruction Manual

## VIVOHOME VH1448US

# VIVOHOME 1.5 HP 14.4 CFM 2-Stage HVAC Vacuum Pump Instruction Manual

Model: VH1448US

## 1. INTRODUCTION

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This manual provides essential information for the safe and efficient operation, setup, and maintenance of your VIVOHOME 1.5 HP 14.4 CFM 2-Stage HVAC Vacuum Pump. Please read these instructions thoroughly before using the product and retain them for future reference.



Figure 1: VIVOHOME 1.5 HP 14.4 CFM 2-Stage HVAC Vacuum Pump.

## 2. SAFETY INFORMATION

Always observe the following safety precautions to prevent injury or damage to the equipment:

- Ensure the power supply matches the pump's voltage requirements.
- Operate the pump in a well-ventilated area.
- Wear appropriate personal protective equipment, including safety glasses and gloves.
- Do not operate the pump without sufficient vacuum pump oil.
- Avoid contact with hot surfaces during and after operation.
- Disconnect power before performing any maintenance or repairs.
- Keep children and unauthorized personnel away from the operating area.

## 3. PRODUCT FEATURES

The VIVOHOME vacuum pump is designed for efficient and reliable performance in HVAC and refrigeration applications. Key features include:

- **Powerful Dual-Stage Motor:** 1.5 HP motor with a flow rate of 14.4 CFM, capable of achieving an ultimate partial vacuum of 0.2 Pa.
- **Gas Ballast Valve:** Helps eliminate condensable gases from the pump chamber, improving vacuum performance.
- **Anti-Backflow Design:** Prevents oil from flowing back into the system, ensuring safe operation.
- **Efficient Cooling System:** Features a mesh vent, T-shaped motor heat fins, and a high-power cooling fan for effective heat dissipation and extended lifespan.
- **User-Friendly Design:** Ergonomic grip handle for portability, visible oil window with scale marks for easy monitoring, and a bottom oil drain valve for quick emptying.
- **Versatile Inlet Ports:** Includes 1/4" SAE, 1/2" ACME, and 3/8" SAE ports for compatibility with various systems and refrigerants (R12, R22, R134a, R410a, R404, R502).



Figure 2: Illustration of the pump's powerful performance metrics.

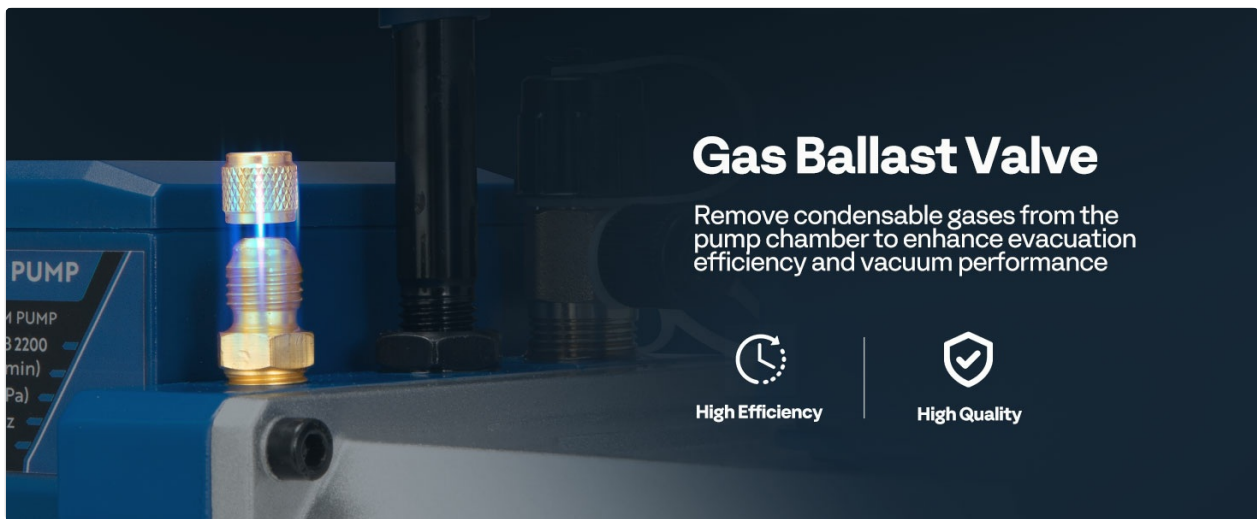
## Efficient Copper Motor

With our pure copper motor, experience superior performance!

- ↑ **14.4 CFM**  
Flow Rate
- ↑ **1.5 HP**  
Motor Power
- ↑ **0.2 Pa**  
Ultimate Partial Pressure

**3456** R/MIN

Figure 3: Diagram highlighting the efficient copper motor and its specifications.



## Gas Ballast Valve

Remove condensable gases from the pump chamber to enhance evacuation efficiency and vacuum performance



High Efficiency



High Quality

Figure 4: Close-up of the gas ballast valve for enhanced evacuation efficiency.

## 4. SETUP

### 4.1. Oil Filling

1. Remove the oil cap.
2. Pour the provided vacuum pump oil into the oil filling port.
3. Monitor the oil level through the visible oil window. Fill until the oil level is between the MIN and MAX marks on the scale. The recommended oil volume is between 520 ml and 630 ml.
4. Replace the oil cap securely.



Figure 5: Illustration of the oil filling port and visible oil window with scale marks.

### 4.2. Connecting to Power

Connect the power cord to a suitable electrical outlet. Ensure the power switch is in the 'OFF' position before plugging in the unit.

### 4.3. Initial Checks

- Verify all connections are tight and secure.
- Ensure the pump is placed on a stable, level surface. The anti-slip feet provide stability.



Figure 6: The pump features a portable handle and anti-slip feet for ease of use and stability.

## 5. OPERATING INSTRUCTIONS

### 5.1. Connecting to the System

1. Select the appropriate inlet port (1/4" SAE, 1/2" ACME, or 3/8" SAE) for your system.
2. Connect the vacuum hose from your HVAC or refrigeration system to the chosen inlet port on the pump. Ensure a tight seal to prevent leaks.



Figure 7: The pump's air inlet ports with anti-backflow mechanism.

### 5.2. Starting the Pump

1. Ensure all connections are secure and the oil level is correct.

2. Turn the power switch to the 'ON' position. The pump will begin to operate.
3. The pump operates with low noise, typically below 70 dB.



Figure 8: The pump is designed for low noise operation, typically below 70 dB.

### 5.3. Monitoring Vacuum and Gas Ballast

Monitor the vacuum level using appropriate gauges connected to your system. If condensable gases are present, activate the gas ballast valve to help remove them and improve evacuation efficiency.

### 5.4. Compatible Refrigerants

This vacuum pump is compatible with various refrigerants, including R12, R22, R134a, R410a, R404, and R502.

### 5.5. Video Demonstration

Watch this official video for a visual guide on the VIVOHOME 14.4 CFM Vacuum Pump's features and operation.

Your browser does not support the video tag.

*Video 1: VIVOHOME 14.4 CFM Vacuum Pump Overview. This video demonstrates key features and basic operation of the vacuum pump.*

## 6. MAINTENANCE

### 6.1. Checking and Refilling Oil

Regularly check the oil level through the visible oil window. If the oil level is below the MIN mark, refill with appropriate vacuum pump oil until it reaches between the MIN and MAX marks.



Figure 9: The visible oil window allows for easy monitoring of oil levels. Two bottles of 330ml vacuum oil are included.

## 6.2. Draining Oil

To drain old oil, place a suitable container under the oil drain valve located at the bottom of the pump. Open the valve to allow the oil to drain completely. Close the valve and dispose of used oil responsibly.



Figure 10: Location of the oil drainage valve for easy and quick oil changes.

## 6.3. Exhaust Port Filter

The exhaust port features a filter to separate oil mist from exhaust gases. Periodically inspect and clean or replace this filter as needed to maintain efficiency and a safer working environment.



Figure 11: The oil-filling port and exhaust port, showing the built-in cotton and metal filter.

## 6.4. Cleaning

Keep the exterior of the pump clean and free from dust and debris. Use a dry cloth for cleaning. Do not use harsh chemicals or abrasive cleaners.

## 7. TROUBLESHOOTING

If you encounter issues with your vacuum pump, refer to the following common problems and solutions:

Problem	Possible Cause	Solution
Pump does not start	No power, faulty switch, motor overheating	Check power connection, inspect switch, allow pump to cool down.
Poor vacuum performance	Low oil level, contaminated oil, leaks in system/connections, clogged filter	Check/refill oil, change oil, check all connections for leaks, clean/replace exhaust filter.
Excessive noise or vibration	Unstable surface, internal mechanical issue	Ensure pump is on a stable surface. If noise persists, contact customer support.
Oil mist from exhaust	Overfilled oil, dirty oil, clogged exhaust filter	Check oil level and adjust, change oil, clean/replace exhaust filter.

## 8. SPECIFICATIONS

Detailed technical specifications for the VIVOHOME 1.5 HP 14.4 CFM 2-Stage HVAC Vacuum Pump:

Feature	Specification
Manufacturer	VIVOHOME
Part Number	VH1448
Item Weight	30.4 pounds

Feature	Specification
Product Dimensions	15.1 x 5.4 x 10 inches
Item Model Number	VH1448US
Size	14.4 CFM
Color	Blue, Silver
Material	Aluminum, Plastic
Item Package Quantity	1
Included Components	1 x 1.5 HP 14.4 CFM Vacuum Pump, 2 x Bottles of Oil (0.35qt./330ml), 1 x Manual Instruction
Batteries Included?	No
Batteries Required?	No



Figure 12: Visual representation of the pump's dimensions.

## 9. WARRANTY

This VIVOHOME product comes with a **1-year warranty** from the date of purchase. This warranty covers defects in materials and workmanship under normal use. It does not cover damage caused by misuse, accident, unauthorized modification, or improper maintenance. Please retain your proof of purchase for warranty claims.

## 10. SUPPORT

For technical assistance, troubleshooting not covered in this manual, or warranty inquiries, please contact VIVOHOME customer support through their official website or the retailer where the product was purchased. Visit the VIVOHOME Store: [VIVOHOME Official Store](#)