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> VIVOHOME 1.5 HP 14.4 CFM HVAC Vacuum Pump and AC Manifold Gauge Set Instruction Manual

## VIVOHOME VH1567US

# VIVOHOME 1.5 HP 14.4 CFM HVAC Vacuum Pump and AC Manifold Gauge Set Instruction Manual

Model: VH1567US

Brand: VIVOHOME

## PRODUCT OVERVIEW

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This manual provides detailed instructions for the safe and efficient operation and maintenance of your VIVOHOME 1.5 HP 14.4 CFM 2 Stage HVAC Vacuum Pump and 4 Way AC Manifold Gauge Set Kit. This comprehensive kit is designed for automotive air conditioning, HVAC work, refrigeration, and various industrial applications requiring high vacuum pull.



Image: Complete VIVOHOME HVAC Vacuum Pump and AC Manifold Gauge Set Kit, including the vacuum pump, manifold gauge set, leak detector, hoses, and accessories.

## WHAT'S IN THE BOX

Verify that all components are present and undamaged upon unboxing:

- 1 x Dual-stage Vacuum Pump
- 1 x Manifold Gauge Set
- 1 x Leak Detector
- 4 x Color-Coded Hoses (Blue, Yellow, Red, Black)

- 3 x Fitting Adapters (1/4" SAE male to 1/2" ACME female, 2x 1/4" SAE male to 5/16" SAE female)
- 2 x R134a Quick Couplers
- 2 x Can Taps (adaptable to self-sealing and piercing-style cans)
- 2 x Bottles of 0.35 qt./330 ml Vacuum Oil
- 1 x Storage Box for Manifold Gauge Set
- 1 x Instruction Manual

## KEY FEATURES

### Powerful Vacuum Pump

The VIVOHOME vacuum pump features a durable aluminum alloy housing and a shock-absorbing, non-slip base for stability. It is equipped with a powerful 1.5 HP dual-stage motor, achieving a flow rate of up to 14.4 CFM and capable of drawing systems down to 0.2 Pa. A gas ballast valve is included to remove condensable gases, enhancing vacuum performance and evacuation efficiency.

# Powerful Performance

## Dual-stage design



Fast Cooling



High Quality



**3456** R/MIN

↑ **14.4** CFM  
Flow Rate

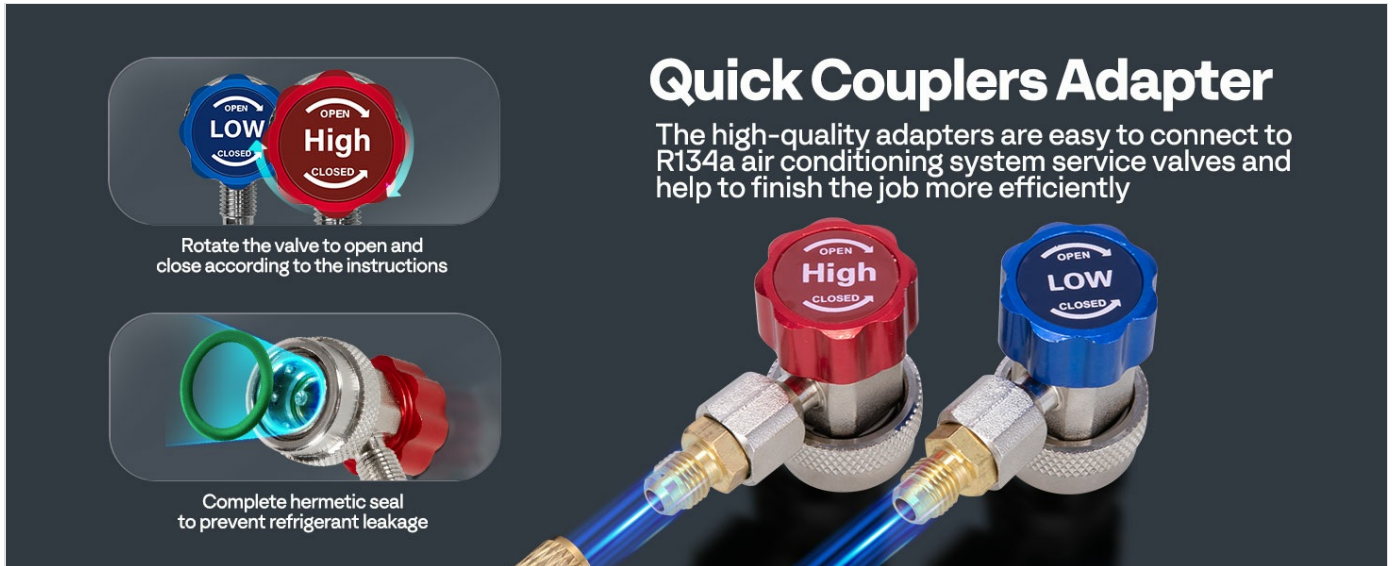
↑ **1.5** HP  
Motor Power

↑ **0.2** Pa  
Ultimate Partial Vacuum

*Image: Diagram illustrating the powerful performance of the vacuum pump, highlighting 14.4 CFM flow rate, 1.5 HP motor power, and 0.2 Pa ultimate partial vacuum.*

## Safe Operation and Heat Dissipation

The vacuum pump incorporates several safety features: a mesh vent, T-shaped motor heat fins, and a high-power cooling fan for effective heat dissipation. Overheating protection ensures stable performance and extends the pump's lifespan. A coarse filter at the inlet port prevents dust, and a filtration device at the exhaust port separates oil mist, reducing noise below 70 dB. The anti-backflow design prevents oil from returning into the system.



*Image: Visual representation of the vacuum pump's heat dissipation features, including T-shape motor heat fins, cooling fan, mesh vent, and overheat protection motor.*

## Precise Gauge and Leak Detection

The manifold gauge set provides accurate pressure monitoring, allowing observation of refrigerant flow through its sight glass. It is compatible with R134a, R12, R22, and R410a systems. The included leak detector efficiently identifies most refrigerants, aiding in pinpointing leak locations. Note: The leak detector requires 2 C batteries (not included).

# Pressure Gauge

Precise data and more secure operation



Image: Close-up of the manifold pressure gauge, showing the blue low-pressure gauge and red high-pressure gauge, along with the on/off switch.

# Leak Detector

Ensure the safe operation of the machine



Image: The leak detector with its flexible probe, highlighting sound and light alarm, reset function, battery test, and 7 sensitivity levels.

## High-Strength 4-Color Hoses and Adapters

The kit includes color-coded hoses (red for high-pressure, blue for low-pressure, yellow for refilling, black for vacuuming) made from durable rubber with a leak-proof seal. These hoses offer flexibility and resilience. Three fitting adapters are provided: one 1/4" SAE male to 1/2" ACME female, and two 1/4" SAE male to 5/16" SAE female adapters.



Image: Close-up of the color-coded hoses, showing their durable construction and different colors for easy identification.

## SETUP INSTRUCTIONS

### 1. Prepare the Vacuum Pump:

Before first use, ensure the vacuum pump is filled with the provided vacuum oil. Remove the oil-filling cap and pour oil until it reaches the 'MAX' level visible through the oil window. The oil window allows monitoring of oil levels for timely refilling.



Image: Diagram showing the oil filling port and visible oil window with MIN/MAX levels (520ml to 630ml).

### 2. Connect the Manifold Gauge Set:

Attach the color-coded hoses to the corresponding ports on the manifold gauge set. The blue hose connects to the low-pressure side, red to the high-pressure side, yellow for refilling, and black for vacuuming. Ensure all connections are tight to prevent leaks.

### 3. Install Adapters and Couplers:

Depending on your AC system, attach the appropriate fitting adapters and R134a quick couplers to the hoses. The kit includes adapters for various SAE and ACME connections.

#### 4. Prepare the Leak Detector:

Insert 2 C batteries (not included) into the leak detector. Test its functionality before use.

### Setup and Operation Video Guide

Your browser does not support the video tag.

*Video: Official VIVOHOME video demonstrating the setup and basic operation of the 1.5 HP 14.4 CFM 2 Stage HVAC Vacuum Pump Set, including unboxing, oil filling, hose connections, and usage of the manifold gauge and leak detector.*

## OPERATING INSTRUCTIONS

### 1. Vacuuming the System:

Connect the black vacuum hose from the manifold gauge set to the vacuum pump's inlet port. Connect the blue and red hoses to the low and high-pressure service ports of the AC system, respectively. Ensure all valves on the manifold gauge are closed. Turn on the vacuum pump. Open the manifold gauge valves to begin evacuation. Monitor the vacuum gauge until the desired vacuum level (e.g., 0.2 Pa or 15 microns) is reached. Allow the pump to run for an extended period to ensure thorough dehydration.

### 2. Checking for Leaks:

After achieving the desired vacuum, close the manifold gauge valves and turn off the vacuum pump. Observe the vacuum gauge for at least 15-30 minutes. If the vacuum holds steady, the system is leak-free. If the vacuum drops, use the leak detector to pinpoint the leak location. The leak detector provides sound and light alarms and has 7 sensitivity levels for precise detection.

### 3. Refrigerant Charging (if applicable):

Once the system is confirmed leak-free, connect the yellow hose to the refrigerant source (can or tank) using the appropriate can tap. Follow the refrigerant manufacturer's instructions and the manifold gauge readings to charge the system to the correct pressure.

## MAINTENANCE

#### • Oil Level Check and Replacement:

Regularly check the oil level through the visible oil window. Maintain the oil level between the MIN and MAX marks. Replace the vacuum pump oil after every 10-20 hours of operation or if it appears cloudy or discolored. To drain oil, use the oil drainage valve located at the bottom of the pump.

#### • Cleaning:

Keep the vacuum pump and manifold gauge set clean and free from dust and debris. Wipe down surfaces with a clean, dry cloth. Ensure the air inlet port and exhaust port are clear of obstructions.

#### • Storage:

When not in use, store the vacuum pump and accessories in a dry, cool place. Utilize the provided storage box for the manifold gauge set to keep components organized and protected.

## TROUBLESHOOTING

Problem	Possible Cause	Solution
Pump not starting or running	No power, motor overheating, faulty switch.	Check power connection. Allow pump to cool down. Inspect power switch.

Problem	Possible Cause	Solution
Poor vacuum performance	Low oil level, contaminated oil, system leak, clogged filter.	Add/replace oil. Check for leaks with detector. Clean/replace filters.
Oil mist from exhaust	Excessive oil, worn exhaust filter.	Ensure correct oil level. Replace exhaust filter.
Leak detector not working	Dead batteries, faulty sensor.	Replace C batteries. Contact support if issue persists.

## SPECIFICATIONS

Attribute	Detail
Brand	VIVOHOME
Model	VH1567US
Item Weight	44 pounds
Product Dimensions	15.1 x 5.4 x 10 inches
Country of Origin	China
Flow Rate	14.4 CFM (408L/min)
Ultimate Partial Vacuum	0.2 Pa (15 Microns)
Rated Power	1.5 HP
Voltage	110V
Motor Speed	3456 r/min

# Specifications

Ultimate Partial Vacuum **0.2 Pa**

Voltage **110V**

Vacuum Total Pressure **15 Microns**

Motor Speed **3456 r/min**

Flow Rate **14.4 CFM (408L/min)**

Rated Power **1.5 HP**



Image: Diagram showing the dimensions and key specifications of the VIVOHOME vacuum pump.

## WARRANTY AND SUPPORT

For warranty information, technical support, or replacement parts, please contact VIVOHOME customer service directly. Refer to the contact information provided on the product packaging or the official VIVOHOME website.

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