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## TOPCHANCES VH12N

# TOPCHANCES VH12N Vacuum Pump User Manual

Model: VH12N

## 1. INTRODUCTION

This manual provides detailed instructions for the safe and efficient operation, maintenance, and troubleshooting of your TOPCHANCES VH12N 220V High Precision Double Stage Vacuum Pump. Designed for evacuating cooling systems, this pump offers reliable performance with a flow rate of 3.6 m<sup>3</sup>/h and an ultimate vacuum of 2Pa. Please read this manual thoroughly before use to ensure proper handling and to maximize the lifespan of your device.



Figure 1: TOPCHANCES VH12N Vacuum Pump. This image shows the overall design of the vacuum pump, highlighting its compact structure and blue and silver color scheme.

## 2. SAFETY INFORMATION

**WARNING: Failure to follow these safety instructions may result in electric shock, fire, serious injury, or death.**

- Always ensure the pump is connected to a 220V/50Hz power supply. Connecting to an incorrect voltage can damage the unit and pose a safety hazard.
- Do not operate the pump in wet conditions or expose it to rain.
- Ensure adequate ventilation around the pump during operation to prevent overheating.
- Always disconnect the power supply before performing any maintenance or cleaning.
- Wear appropriate personal protective equipment (PPE), such as safety glasses and gloves, when handling refrigerants or vacuum pump oil.
- Keep children and unauthorized personnel away from the operating pump.
- Do not use the pump for purposes other than its intended use (evacuating cooling systems).
- Dispose of used oil and refrigerants according to local environmental regulations.

## 3. PRODUCT FEATURES

- **Alloy Aluminum Casing:** The motor is encased in an alloy aluminum housing, providing excellent heat dissipation for efficient and prolonged operation.
- **Oil Anti Flow-Back Design:** Features a specially designed gas inlet that prevents oil from flowing back into the system, protecting connected equipment and hoses from contamination.
- **Environmental Design:** The exhaust port includes separating devices to prevent oil spraying, contributing to a cleaner working environment.
- **Easy Start Design:** Engineered for reliable starting, even in colder temperatures.
- **Versatile Application:** Basic equipment for sealing containers to achieve a vacuum space by pumping gas, ideal for HVAC/R system evacuation.

## 4. PACKAGE CONTENTS

Upon opening the package, please verify that all items are present and undamaged:

- 1 x TOPCHANCES VH12N Vacuum Pump
- *Note: Vacuum pump oil is not included due to customs policy. Please purchase appropriate vacuum pump oil separately.*

## 5. SPECIFICATIONS

Parameter	Value
Model	VH12N
Voltage	220V / 50Hz
Flow Rate	3.6 m <sup>3</sup> /h (1.5 CFM)
Ultimate Vacuum	2 Pa (150 micron)
Power	150W (1/5 HP)
Oil Capacity	150 ml
Overall Size (L x W x H)	255 x 105 x 202 mm
Weight	5 kg (11 pounds)
Color	Blue

## 6. SETUP

1. **Unpacking:** Carefully remove the vacuum pump from its packaging. Inspect for any visible damage.
2. **Placement:** Place the pump on a stable, level surface in a well-ventilated area. Ensure there is sufficient space around the pump for air circulation.
3. **Oil Filling:**
  - Locate the oil fill cap (usually on top of the pump, often blue).
  - Remove the cap and slowly pour high-quality vacuum pump oil into the reservoir until the oil level is between the MIN and MAX marks on the sight glass. Do not overfill.
  - Replace the oil fill cap securely.



Figure 2: Side view of the vacuum pump. This image highlights the oil sight glass, crucial for monitoring the oil level during setup and operation.

#### 4. Power Connection:

- Ensure the power switch on the pump is in the "OFF" position.
- Connect the power cord to a grounded 220V/50Hz electrical outlet.



Figure 3: Rear view of the vacuum pump. This image shows the power cord connection point and the ON/OFF switch, essential for safe operation.

5. **Hose Connection:** Connect the appropriate vacuum hose from the system to be evacuated to the pump's inlet port. Ensure connections are tight to prevent leaks.

## 7. OPERATING INSTRUCTIONS

1. **Pre-Operation Check:**

- Verify oil level is correct.
- Ensure all connections are secure.
- Confirm the power supply matches the pump's requirements (220V/50Hz).

## 2. Starting the Pump:

- Turn the power switch to the "ON" position. The pump should start running smoothly.
- Allow the pump to run for a few minutes to warm up and circulate the oil.

## 3. Evacuation Process:

- Open the valve on the system being evacuated to allow the pump to draw a vacuum.
- Monitor the vacuum gauge (if connected to your system) to observe the evacuation progress.
- The pump will continue to pull a vacuum until the desired level is reached or the system is fully evacuated.

## 4. Stopping the Pump:

- Once evacuation is complete, close the valve on the system to isolate the vacuum.
- Turn the power switch on the pump to the "OFF" position.
- Disconnect the vacuum hose from the pump.

# 8. MAINTENANCE

Regular maintenance is crucial for the longevity and optimal performance of your vacuum pump.

## 1. Oil Change:

- Vacuum pump oil should be changed regularly, typically after every 10-20 hours of operation, or if it appears cloudy or discolored.
- Ensure the pump is off and cool.
- Place a suitable container under the oil drain plug (usually at the bottom or side of the oil reservoir).
- Remove the drain plug and the oil fill cap to allow the oil to drain completely.
- Replace the drain plug and refill with new, clean vacuum pump oil as described in the "Setup" section.

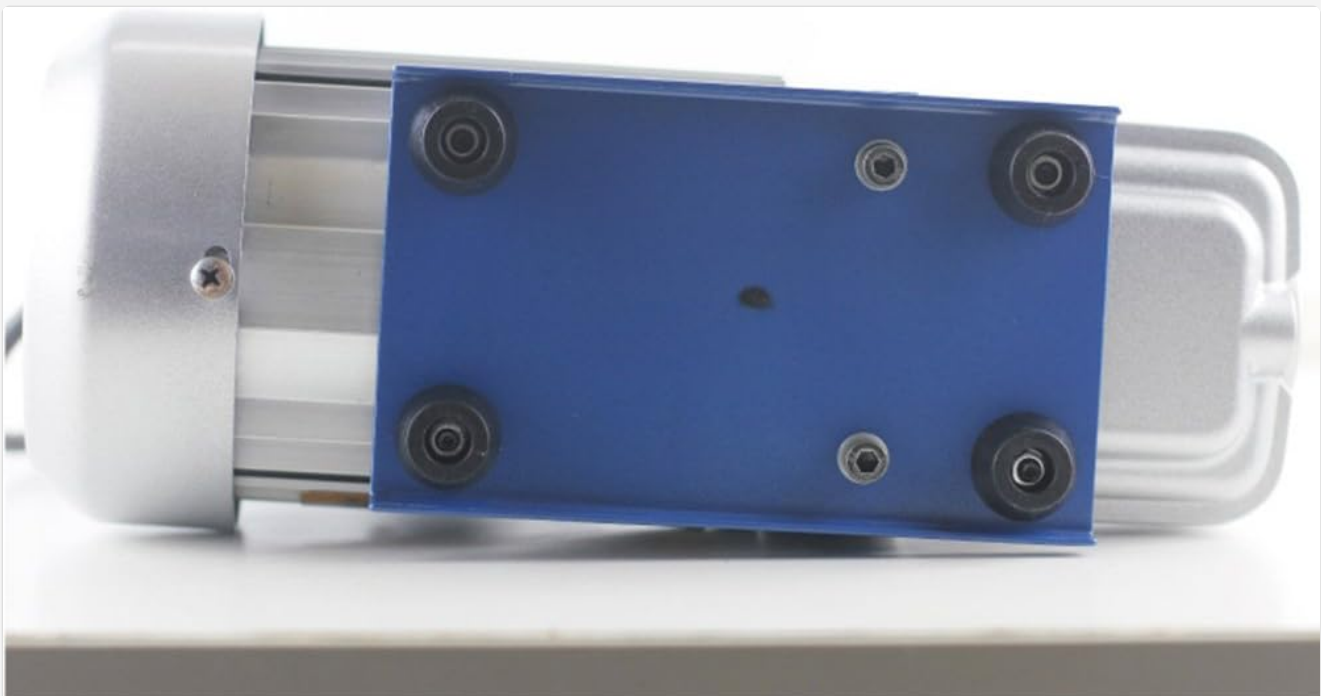


Figure 4: Bottom view of the vacuum pump. This image shows the stable base and rubber feet, which also indicates the general area for the oil drain plug (though not explicitly visible).

## 2. Cleaning:

- Wipe down the exterior of the pump with a clean, damp cloth. Do not use harsh chemicals or solvents.
- Keep the air vents clear of dust and debris to ensure proper cooling.

## 3. Storage:

- When not in use for extended periods, drain the oil and store the pump in a dry, clean environment.
- Cap all ports to prevent contamination.

## 9. TROUBLESHOOTING

Problem	Possible Cause	Solution
Pump does not start	No power supply Power switch off Motor issue	Check power cord and outlet Turn power switch ON Contact qualified technician
Pump runs but no vacuum is pulled	Loose hose connections System leak Insufficient oil Contaminated oil	Tighten all connections Check system for leaks Add oil to correct level Change oil
Pump is noisy or vibrates excessively	Low oil level Contaminated oil Pump not on level surface Internal mechanical issue	Check and add oil Change oil Relocate pump to a level surface Contact qualified technician
Oil mist from exhaust	Normal operation (minimal) Overfilled oil Contaminated oil	Ensure proper ventilation Drain excess oil Change oil

## 10. WARRANTY AND SUPPORT

For warranty information, please refer to the terms and conditions provided at the time of purchase or contact your retailer. TOPCHANCES products are designed for reliability and performance.

For technical support or inquiries, please visit the official TOPCHANCES store on Amazon or contact their customer service directly. You can find more information at: [TOPCHANCES Amazon Store](#)