

VIVOHOME

# THANK YOU!

## NOTE:

To continuously improve its products, VIVOHOME reserves the right to modify this information without prior notification.

For any questions regarding assembly, please watch the video on the product page or contact our customer service. Our customer service will gladly assist you with any additional questions, comments, or concerns.

Thank you for using VIVOHOME products in your home!

Thank You for Purchasing from

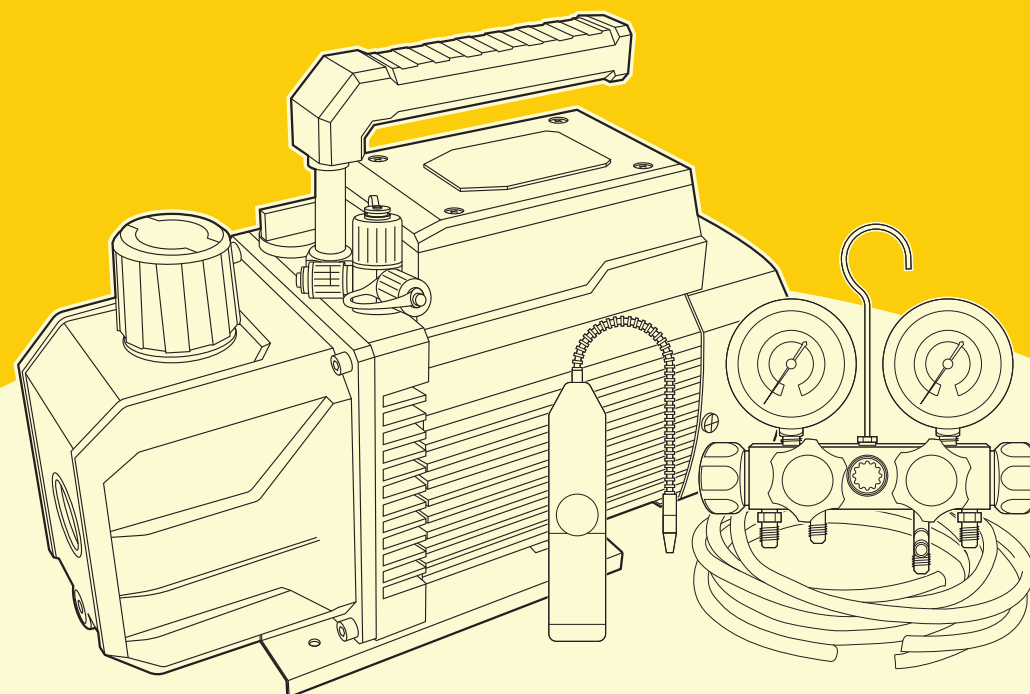
VIVOHOME

Made in China

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# HOW-TO

## USER MANUAL



# Vacuum Pump

Assembly is EASY!

WE WANT  
YOU TO  
ENJOY LIFE  
AT HOME

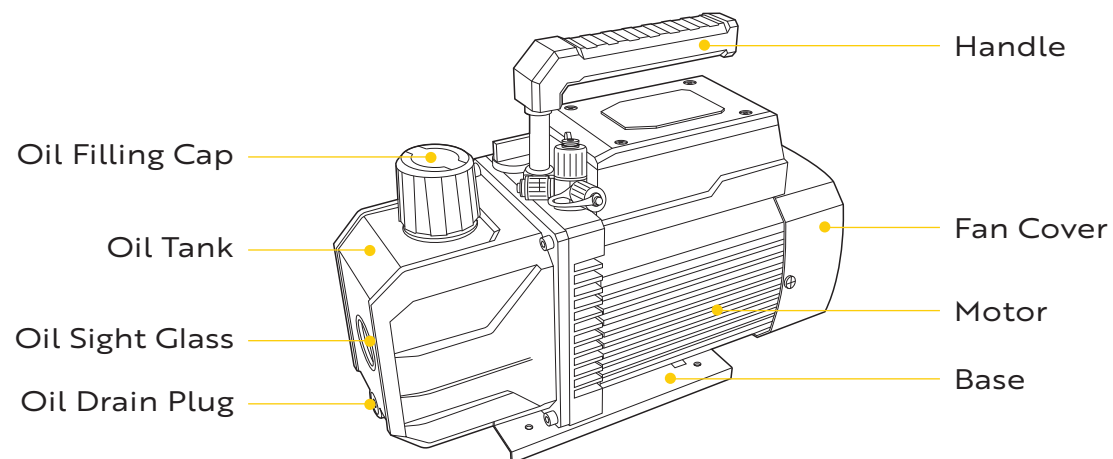
GO TO THE PRODUCT LISTING PAGE FOR  
AN INSTRUCTIONAL VIDEO!

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## Structure



## Technical Data

Model	Single Stage Vacuum Pump			Double Stages Vacuum Pump
	VB130	VB140	VB150	VB240
Rated Power Supply	110V~60Hz	110V~60Hz	110V~60Hz	110V~60Hz
Flow Rate	CFM	3.5	4.5	5
	L/min	100	128	142
Ultimate Vacuum (Micron)	150	150	150	15
Motor Power (HP)	1/4	1/3	1/3	1/2
Intake Fittings	1/4SAE +1/2ACME	1/4SAE +1/2ACME	1/4SAE +1/2ACME+3/8SAE	1/4SAE +1/2ACME
Dimensions (mm)	295×123×230	295×123×230	305×123×230	332×129×242
Oil Capacity (ml)	280	280	280	410
N.W.(kg)	5.7	6	7.5	9



## Applications

VB Series vacuum pumps are used to create a vacuum by evacuating gas from a sealed vessel. The pumps are applicable for refrigeration maintenance to charge CFC, HCFH, and HFC refrigerants such as R12/R22/R134a (the R32 version can be used for R32 and 1234yf) and air extraction in printing machines, food processing, gas analysis, thermo-plastic molding, etc. In some cases, they can be used as fore pumps for high vacuum equipment.

## Features

### 1. High Ultimate Vacuum and High Pumping Speed

High ultimate vacuum and high pumping speed are achieved by taking integral cylinder construction with high precision.

### 2. High-Efficiency Filtration

A high-quality filter element is used to reduce oil mist effectively.

### 3. Comfortable, Robust Handle

Made with a softened rubber-lined handle, this device is comfortable to carry and use.

### 4. Elegant Appearance

Unique and elegant appearance with a square-shaped pump casing and fan cover.

# Preparation, Operation and Safety Precautions



## Preparation

1. Make sure the power supply matches the voltage and frequency marked on the pump data plate.
2. Make sure the switch is in the OFF position before connecting electrical power to the pump.
3. Fill the oil tank until the oil level reaches the middle position on the oil sight glass. A low oil level will cause pump performance loss, while a high oil level may result in oil spraying.

## Operation

1. Before using the vacuum pump, remove the inlet cap and connect the pump to the sealed vessel (Check and make sure the thread of the pipe fits that of the inlet port). The length of the connecting pipe shall be as short as possible.
2. Check and make sure the air inlet is well-sealed and without any leakage.
3. Switch on the pump to start operation.
4. Close the valve between the pump and the sealed vessel when the operation is finished.
5. Switch off the pump and remove the power plug.
6. Remove the connecting pipe.

## Safety Precautions

### WARNING!

**To avoid personal injury, please carefully read and follow the instructions in this manual.**

- ⚠ Always wear goggles when handling air-conditioning refrigerant.
- ⚠ Do not contact the refrigerant directly! A personal injury may occur.
- ⚠ Hot surface! Do not touch the oil tank or pump casing while operating the pump.
- ⚠ Risk of electrical shock! Make sure all equipment is properly grounded when connecting the power supply.

- ⚠ The pump is not allowed to operate for more than 3 minutes while the inlet is exposed to the atmosphere.
- ⚠ The ambient temperature for proper operation is 5°C-40°C (41°F-104°F).
- ⚠ The voltage of the pump is 110V±10%~60Hz. The power socket must be grounded.
- ⚠ The pump body will be damaged to take out the refrigerant when the pump chamber is pressurized. It is recommended to use special equipment to do this work.

# Maintenance, and Troubleshooting



## Maintenance

### 1. Pump oil selection

It's important to select the proper vacuum pump oil to achieve the desired ultimate vacuum. To ensure the best performance of the pump, it is recommended to use vacuum pump oil with a low viscosity grade of 32 - 46.

- ⚠ The pump oil must be replaced immediately while it is emulsified or contaminated.

### 2. Oil changing procedure

1. Operate the pump for about one minute to warm it up before changing the oil;
2. Open the inlet when the pump is running so that the oil in the pump chamber is forced to flow out. Switch off the pump and remove the drain plug to drain the oil. Keep the drained oil in a suitable vessel and dispose of it properly;
3. Tilt the pump body towards the drain plug to completely empty the pump chamber;
4. Tighten the drain plug;
5. Remove the filling plug and add new pump oil;
6. Tighten the inlet cap, operate the pump for one minute, and check the oil level. In case the oil level is below the MIN position on the oil sight glass, fill the oil to a level between the MAX and MIN positions. Install the oil mist trap.

## Troubleshooting

Failure	Possible Reason	Remedy
Low vacuum	1. The air inlet cap is loose	Tighten the air inlet cap
	2. The rubber ring inside the air inlet cap is damaged	Replace rubber ring
	3. Oil is insufficient	Fill oil to the middle line on the oil sight glass
	4. Oil is emulsified or dirty	Replace the oil
	5. The oil inlet is blocked or the oil supply is insufficient	Clean the oil inlet and the filter
	6. The connecting pipe leaks	Check and fix the pipe
	7. The pump is improper	Check the size of the vessel, recalculate and select a proper model
	8. The service time of the pump is so long that parts are worn	Check and repair, or replace the pump
Failure	Possible Reason	Remedy
Oil leak	1. Oil seal is damaged	Replace the seal
	2. Oil tank connections are loose or damaged	Check and repair, or replace the pump
Oil leak	1. Too much oil inside the pump	Drain oil to the middle line on the oil sight glass
	2. Pressure at the inlet remains high for a long time	Choose a pump with a higher pumping speed
Difficult startup	1. Oil temperature is too low	The air inlet is exposed to the atmosphere, repeatedly start the motor or heat the pump oil
	2. Motor or power supply is defective	Check and repair
	3. Foreign objects enter the pump	Check and repair
	4. Voltage is too low	Check the voltage

### Note:

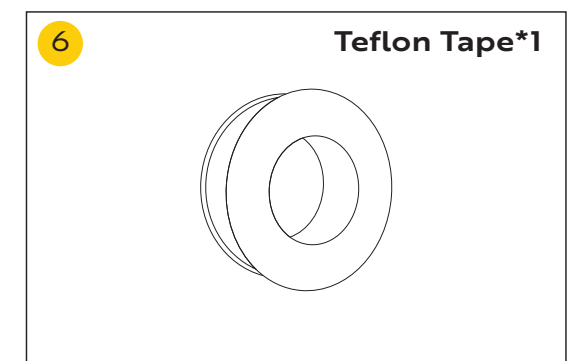
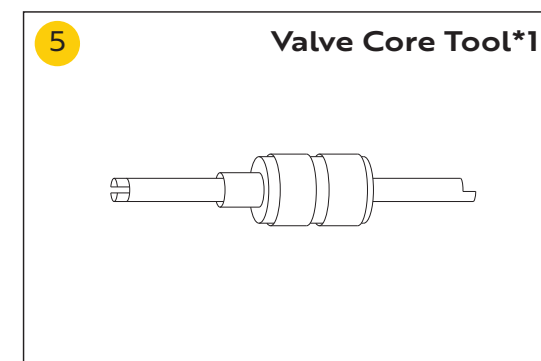
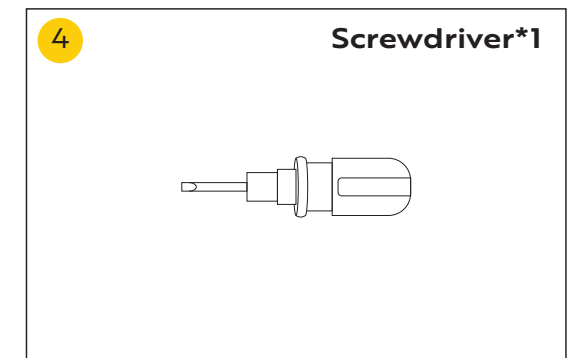
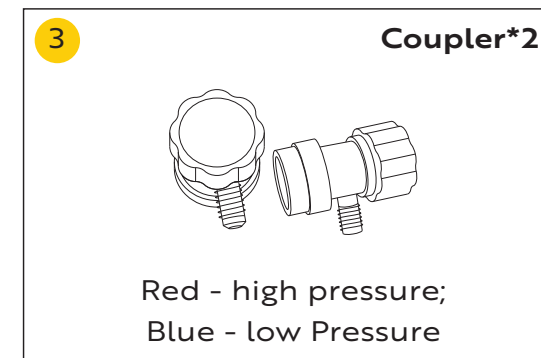
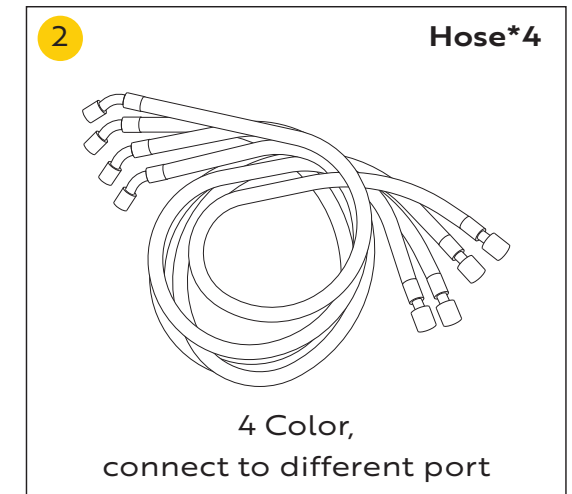
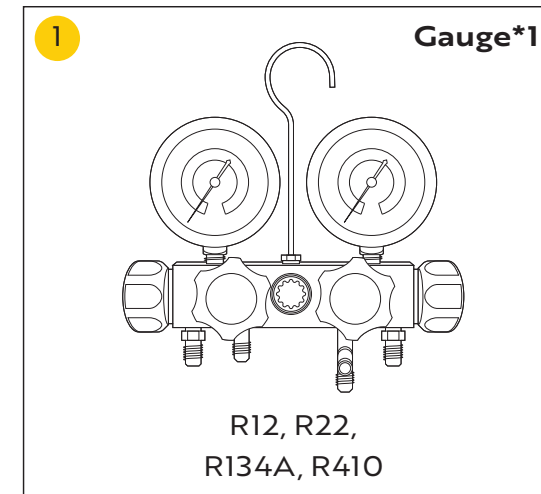
1. If the problem is still not fixed, please contact your local dealer or send the pump to a professional repair center to find out a solution.
2. We reserve the right to modify any information, including design and technical data, in this manual without prior notice.

## SECTION E

# Manifold Gauge Set Instructions

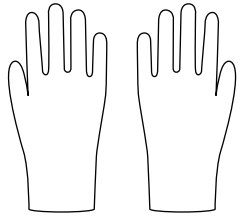


## Parts List

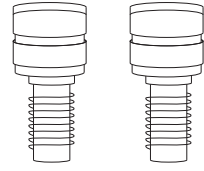


7

Gloves\*1



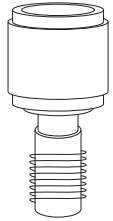
8 Thread Conversion Adapter\*2



1/4SAE External to 5/16 Internal

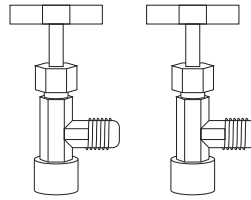
9

Thread Conversion Adapter\*1

1/4SAE External to  
1/2ACME Internal

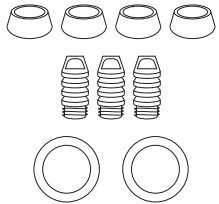
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Bottle Opener\*2

R134A Piercing Type,  
R134A Pin Type

11

Spare Parts



Valve Core Pin, Pipe Seal Ring

## General Safety Instructions

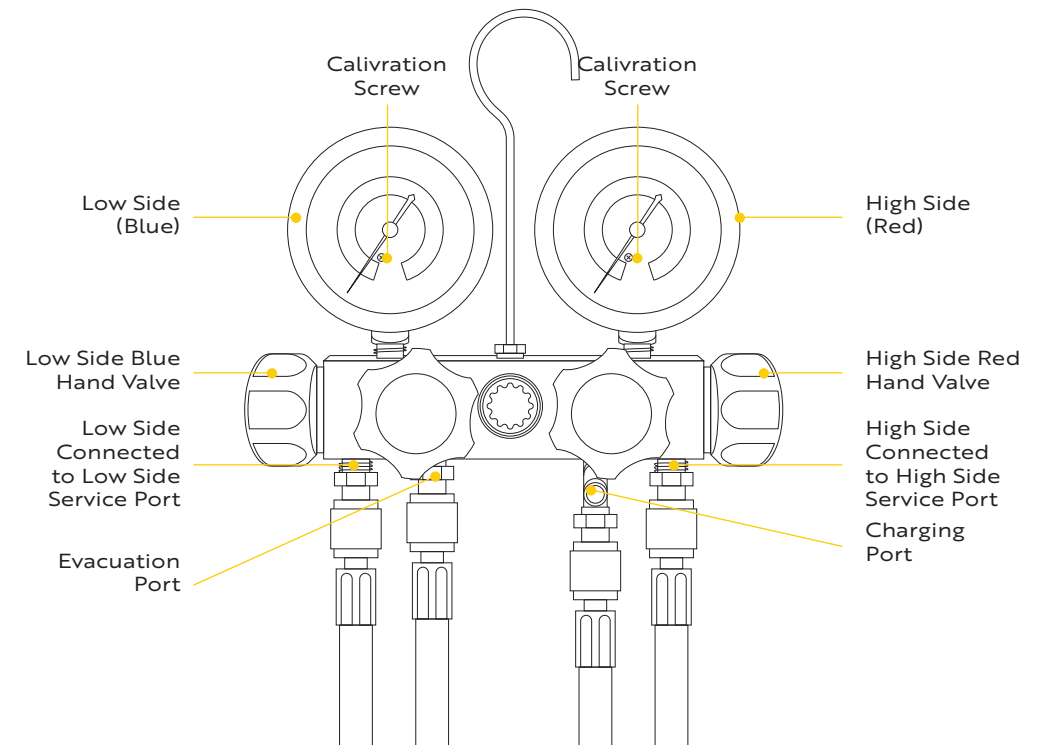
**ONLY QUALIFIED SERVICE PERSONNEL SHOULD OPERATE THIS UNIT. MOST STATES, COUNTRIES, ETC. MAY REQUIRE THAT THE USER BE LICENSED. PLEASE CHECK WITH YOUR LOCAL GOVERNMENT AGENCY.**

**Danger** - Avoid breathing refrigerant vapors and lubricant vapors or mist. Breathing at high concentration levels may cause heart arrhythmia, loss of consciousness, or even cause suffocation. Exposure may irritate eyes, nose, throat, and skin. Please read the manufacturer Material Safety Data Sheet for further safety information on refrigerants and lubricants.

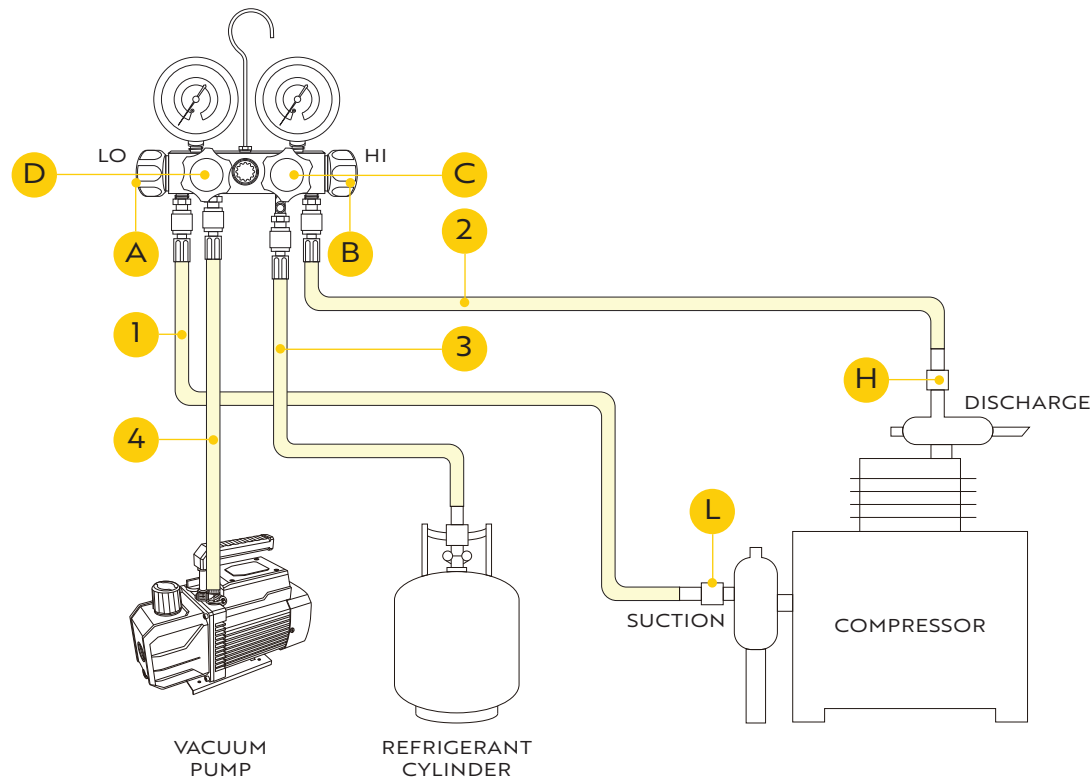
**Danger** - EXPLOSION RISK. Use extreme caution when working with flammable refrigerants. Never use this manifold with Oxygen.

**Danger** - EXPLOSION/RUPTURE RISK. DO NOT use this manifold with unregulated nitrogen, carbon dioxide, or other very high-pressure gases. Unregulated gases can cause components in a refrigeration system to rupture. Severe injury or death can occur.

**Caution** - all hoses may contain liquid refrigerant under pressure. Contact with refrigerant may cause frostbite or other related injuries. Wear proper personal protective equipment, such as safety goggles and gloves. When disconnecting any hose, please use extreme caution.



## Operating Instructions



### 1. TO PURGE HOSES WITH REFRIGERANT GAS.

1. Connect hoses as shown with all valves closed on the MANIFOLD.
2. Loosely connect ① & ② hoses to COMPRESSOR & service ports respectively.
3. Open ① & ② valves on MANIFOLD.
4. Open the valve on the Refrigerant Tank.
5. Slowly open ③ valve on MANIFOLD until gas escapes from ④ & ⑤ service valve connections.
6. Tighten ④ & ⑤ hose nuts on & service valve connections.

### 2. TO CHARGE SYSTEM WITH VAPOR ON SUCTION SIDE

1. Connect hoses as shown with all valves closed on MANIFOLD.
2. Purge hoses as in step 1.
3. Open REFRIGERANT tank valve.
4. Open valve on ③ MANIFOLD.
5. Open valve on ① MANIFOLD.
6. Open valve on ④ MANIFOLD.

### 3. TO MONITOR SYSTEM PRESSURES

#### CONNECTIONS

- Connect hoses as shown with all valves closed on MANIFOLD.
- Open ④ & ⑤ service valves on COMPRESSOR

### 4. TO EVACUATE SYSTEM

1. Connect hoses as shown with all valves closed on MANIFOLD.
2. Start VACUUM pump.
3. Open ④ valve on MANIFOLD.
4. Open ① & ② valve on MANIFOLD.
5. Open ④ & ⑤ service valves on COMPRESSOR.





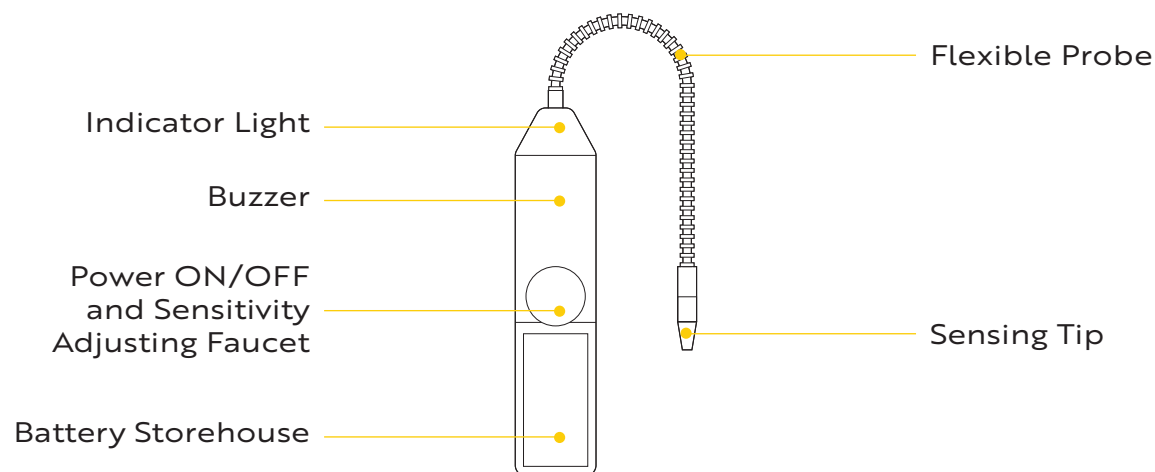
## General Information

Incorporated with advanced leak detection technology, this is our new product with the functions of easy operation, stable function, and small appearance, it's an ideal and economic halogen leak detector.

## Features

- Detect all kinds of halogen refrigerants.
- Sensitivity can be adjusted at any time, and it can be adjusted automatically to the best state of detection.
- Inner precise IC with ultra-low-consumption circuit design, more stability, longer battery life.
- Tricolor visual display of battery voltage.
- Excellent sensor, high sensitivity, longer use time.

## Structure



## Battery Voltage Indication

The front light of the panel indicates the leak and the battery voltage.

Green: The battery voltage is normal and sufficient for proper operation.

Orange: Battery voltage is approaching the lower threshold for operation, replace it as soon as possible.

Red: The battery voltage is below an acceptable operating level.

## Reset Feature/Automatic Circuit

WJL-6000 features on automatic circuit and a reset function that set the unit to ignore ambient concentrations of Halogen.

- Reset: Upon initial power on, the unit automatically sets itself to ignore the level of refrigerant present at the tip in 6's and enter into the best state of detection. If you place the sensing tip near a known leak and switch the unit on, it's convenient to find a higher concentration leak. Or move to fresh air and switch on, adjust to maximum sensitivity, and any concentration above zero will be detected.
- Automatic-circuit: When in the measuring state, the automatic circuit will follow the changing concentration of halogen gas in the environment to avoid a false alarm.

## Adjustment of Sensitivity

The unit features variable-speed sensitivity adjustment and can be adjusted during the course of detection. Clockwise adjusting means high sensitivity, and vice versa. It does not mean that, when selecting, the higher the sensitivity is adjusted, the better the unit will work, because if the air is not fresh, selecting a higher sensitivity will cause an improper alarm.

## Leak Alarm

When the leaked gas is detected, the audible tone will change to a "siren"-type sound. More refrigerant, more sirens. At the same time, the indicator light is flashing quickly.



## Operating Instructions

- Switch the unit on and discontinuous buzzer will be heard.
- Verify the battery voltage level by observing the power indicator.
- Adjust appropriate sensitivity, or adjust the sensitivity at any time during operation. This adjustment will not interrupt detection.
- To detect 6's later after the unit is switched on.
- When refrigerant is detected, the buzzer will change to a "siren" type sound.
- Verify the place of siren and detect continuously until the leak is confirmed.

## Operating Tips

- Adjust to the higher sensitivity, when a leak can't be found. Adjust to the lower sensitivity when unstable.
- When the buzzer alarms for a leak, if the sensing tip remains at the part being detected long enough, the circuit will equalize it.
- In windy areas, even a large leak is difficult to find. Under this condition, it is better to shield the potential leak area.
- Be aware that the detector may alarm if the sensing tip contacts with moisture and/or solvents. Therefore, avoid contact these when leak checking.

## Recommended Procedure

**Note: On Automotive A/C Systems leak test with the engine not in operation**

- The air conditioning or refrigeration system should be charged with sufficient refrigerant to have a gauge pressure of at least 340 kpa (50 psi) when not in operation. At temperatures below 15 (59 ), leaks may not be measurable, since this pressure may not be measureable, since this pressure may not be reached.
- Take care not to contaminate the detector probe tip if the part being tested is contaminated. If the part is particularly dirty, or condensate (moisture) is present, it should be wiped off with a dry shop towel or blown off with shop air. No cleaners or solvents should be used, since the detector may be sensitive to their ingredients.

- Visually trace the entire refrigerant system and look for signs of air conditioning lubricant leakage, damage, and corrosion on all lines. House, and components. Each questionable area should be carefully checked with the detector probe, as well as all fittings, house-to-line couplings, refrigerant controls, service ports with caps in place, brazed or welded areas, and areas around attachment points and hold-downs on lines and components.
- Always follow the refrigerant system around in a continuous path so that no areas of potential leaks are missed. If a leak is found, always continue to test the remainder of the system.
- At each area checked, the probe should be moved around the location, at a rate no more than 25 to 50 mm/second (1-2 in/second). And no more than 5mm (1/4 in) from the surface, completely around the position. Slower and closer movement of the probe greatly improves the likelihood of a leak (see fig.7).
- An apparent leak shall be verified at least once as follows:
  - a) Blow shop air into the area of the suspected leak, if necessary, and repeat the check of the area. In cases of very large leaks, blowing out the area with shop air often helps locate the exact position of the leak.
  - b) First, move the probe to fresh air and reset. Then hold the probe tip as close as possible to the indicated leak source and slowly move around it until the leak is confirmed.

### Automotive A/C systems

Only leak testing of the evaporator core while in the air conditioning module shall be accomplished by turning the air conditioning blower on high for a minimum of 15 seconds, shutting it off, and then waiting for the refrigerant to accumulate for 10 minutes. After such time, insert the leak detector probe into the blower resistor block or condensate drain hole, if no water is present, or into the closet opening in the heating/ventilation/air conditioning case to the evaporator, such as the heater duct or vent duct. If the detector alarms, a leak appears to have been found.

### All Systems

Following any service to the refrigerant systems and any other service that disturbs the refrigerant system, a leak test of the repair and of the service ports of the refrigerant system should be done.

## Applications

The WJL-6000 may also be used to:

- Detect leaks in other systems and storage/recovery containers. It will respond to All halogenated (contains Chlorine or Fluorine) refrigerants. This includes, but is not limited to:  
CFCs, e.g., R12, R11, R500, R503, etc.  
HCFCs, e.g., R22, R123, R124, R502, etc.  
HFCs, e.g., R134a, R404a, R125, etc.  
Blends such as AZ-50, HP62, MP39, etc.
- Detect Ethylene Oxide gas leaks in hospital sterilizing equipment (it will detect the halogenated carrier gas).
- Detect SF-6 in high-voltage circuit breakers.  
Detect most gases that contain chlorine, Fluorine and Bromine (halogen gases).
- Detect cleaning agents used in dry cleaning applications such as perchloroethy.
- Detects halogen gases in a fire-extinguishing system.

## Maintenance

Appropriate maintenance of your leak detector is very important. Carefully following the instructions to reduce the mal-operation and prolong the life expectancy of the unit.

- Keep the sensing tip clean from dust, moisture, and grease.
- If the tip itself is dirty it can be cleaned by immersing in a mild solvent, such as alcohol, for several seconds, and then using compressed air and/or a towel to clean. Never use solvents such as gasoline, turpentine, minerals etc. for they will leave detectable residue and desensitize your unit.

**Warning: Turn the tool off before replacing the sensing tip. Failure to do so may result in a mild electrical shock!**

- Sensing tip replacement: the tip will eventually wear out and require replacement. It is difficult to predict exactly when this will occur since tip longevity is directly related to the conditions and frequency of use. The tip should be replaced whenever the alarm sounds or becomes erratic in a clean and pure environment.

- Take out the batteries in case of a long period of no-use.
- If the tool does not work, please inspect whether the batteries are in a stable connection or the voltage is below an acceptable operating level. If not, please inspect whether the tip is dirty and in a stable connection with the probe.
- Your part in opening the tool is beyond the warranty service.

## Specifications and Parameter

- Operating temperature: 0°C to 52°C (30°F to 125°F)
- Maximum sensitivity: 6 gr/yr, for all halogenated refrigerants.
- Battery life: Approximately 50 hours normal use.
- Response time: Instantaneous.
- Work mode: Continuous, no limitation.
- Fixed Probe Length: 20cm.
- Unit Dimensions: 22.9cm x 6.5cm x 6.5cm.
- Warm-up time: Approximately 6 seconds.
- Reset Time: Two to ten second.
- Power Supply: 6V DC four cell 7# excellent batteries.



The VIVOHOMES warranty program is our commitment to you. We are committed to providing you with a high-quality product that meets your needs and expectations. To demonstrate our confidence in the durability and performance of our products, we offer the following warranty.

## Warranty Coverage

This warranty program applies to any orders, purchases, receipts, or use of any products sold by VIVOHOMES and is valid for a period of 1 year from the date of purchase. However, please note that this warranty period is only valid for the original order. If you receive a replacement order during the warranty period, it will not include a separate warranty period.

## Warranty Exclusions

This warranty does not cover damage resulting from misuse, accident, unauthorized modification, or any other circumstances not directly related to the manufacturing and design of the product, including but not limited to:

- Parts lost during use.
- Normal wear and tear of products or parts.
- Incorrect installation (such as using the wrong voltage) or assembly.
- Exceeding the bearing capacity of the product.
- Use under extremely harsh conditions.
- Improper cleaning or maintenance.
- Damage caused by any reason other than the intended use of the product.
- Indirect loss or damage caused by the product.

## How to Make a Warranty Claim

If you find any defects that affect the use of the product or if the product stops working and cannot be repaired during the warranty period, please contact our customer service team at our email or via Amazon & app's direct messaging service as soon as possible. Provide the following information to expedite the process:

- Order number
- Images and/or videos illustrating the issue
- A detailed description of the problem

VIVOHOMES will provide technical support, replacement, refund, or other solutions based on the nature of the issue. If you wish to return the original package for any reason, please contact us for confirmation before proceeding. You can expect to receive a response within 48 hours.

Thank you for choosing VIVOHOMES. We are committed to ensuring the quality and satisfaction of your purchase. If you have any questions or need assistance, please do not hesitate to contact our customer service team.