KIRANDY V-i140sv

KIRANDY V-i140sv Vacuum Pump Instruction Manual

Model: V-i140sv

1. Introduction

This manual provides essential instructions for the safe and efficient operation, setup, and maintenance of your KIRANDY V-i140sv Vacuum Pump. Please read this manual thoroughly before using the product and retain it for future reference. This pump is designed for automotive air conditioning refrigerant vacuum applications.

2. Safety Instructions

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

- Always ensure the pump is connected to a grounded power outlet with the correct voltage (220V~/50Hz).
- Do not operate the pump in wet conditions or expose it to rain.
- Ensure adequate ventilation when operating the pump to prevent overheating.
- Wear appropriate personal protective equipment, including safety glasses and gloves, when handling refrigerants or operating the pump.
- Never attempt to service the pump while it is connected to a power source. Disconnect power before any maintenance or inspection.
- Keep children and unauthorized personnel away from the operating area.
- Use only genuine KIRANDY replacement parts and accessories.
- Before use, ensure the oil level is correct. Operating without sufficient oil can damage the pump.

3. Product Overview and Components

The KIRANDY V-i140sv is a high-power vacuum pump featuring a two-stage rotating blade design for improved vacuum performance and reduced pumping time. It incorporates an anti-oil back structure and a gas ballast design for efficient and clean operation.

Figure 3.1: Overview of the KIRANDY V-i140sv Vacuum Pump and included accessories. This image displays the main unit, a vacuum gauge, various fittings, and a hose.

Key Features:

- **High-End Vacuum and High-Speed Pumping:** Two-stage rotating blade design enhances final vacuum and reduces pumping time.
- **Robust Pump Structure:** Designed with cylindrical pins for improved reliability and ease of maintenance.
- **Mandatory Refueling Port:** Ensures constant pressure oil supply for optimal lubrication and sealing, with a large viewing window for oil level monitoring.
- **Anti-Oil Back Structure:** Integrated solenoid valve and vacuum table at the air inlet prevent oil from entering the system, maintaining vacuum and protecting the working container.
- **Gas Ballast Design:** Allows injection of non-condensable gas to reduce condensation of pumped gases.
- **Long-Life Filter Design:** Intake filter prevents foreign matter, and the fluid supplement separates oil mist from the exhaust.
- **Ergonomic Handle:** Comfortable metal handle for easy operation and safe transport.

4. Specifications

Parameter	Value
Model	V-i140SV
Rated Voltage	220V~/50Hz
Pumping Speed	7.2 m^3/h
Final Pressure	2 Pa
Motor Power	250 W
Refueling Volume	50 ml
Dimensions (L x W x H)	318 x 124 x 234 mm
Weight	8.6 Kg
Intake Line	7/16" -20unf

Note: Some specifications may vary slightly. Always refer to the product label for the most accurate information. The refueling volume is listed as 50ml in the product description.

5. Setup

1. **Unpacking:** Carefully remove the vacuum pump and all accessories from the packaging. Inspect for any shipping 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:** Before initial use, the pump must be filled with vacuum pump oil.

Figure 5.1: Location of the oil hole (yellow cap) and oil catcher (blue cap) for the KIRANDY V-i140sv Vacuum Pump. Ensure the oil catcher is installed before use.

- Locate the oil filling port (often marked "OIL" or with a yellow cap).
- Remove the cap and carefully pour appropriate vacuum pump oil into the reservoir until the oil level reaches the center of the sight glass. Do not overfill.
- Ensure the oil catcher (blue cap in Figure 5.1) is securely installed before operation.

4. **Electrical Connection:** Connect the pump to a 220V~/50Hz grounded power outlet.
5. **Hose Connection:** Connect the appropriate vacuum hose to the intake line (7/16" -20unf) of the pump and to the system you intend to evacuate. Ensure all connections are tight to prevent leaks.

6. 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.
2. **Starting the Pump:**

Figure 6.1: Location of the start-stop switch on the KIRANDY V-i140sv Vacuum Pump.

- Locate the start-stop switch on the pump (refer to Figure 6.1).
- Flip the switch to the "ON" (I) position to start the pump. The pump will begin to evacuate the connected system.

3. **Monitoring Vacuum:** Use a vacuum gauge (if connected) to monitor the evacuation process. Allow the pump to run until the desired vacuum level is achieved.
4. **Gas Ballast (if needed):** If evacuating systems with high moisture content, you may open the gas ballast valve to help prevent condensation of vapors within the pump oil. Consult specific application guidelines for proper use.
5. **Stopping the Pump:**
    - Once the desired vacuum is reached, close the valve to the system being evacuated.
    - Flip the start-stop switch to the "OFF" (O) position to turn off the pump.
    - Disconnect the vacuum hose from the pump and the system.

7. Maintenance

Regular maintenance ensures the longevity and optimal performance of your KIRANDY V-i140sv Vacuum Pump.

- **Oil Change:** Vacuum pump oil should be changed regularly, especially after evacuating systems with

high moisture or contaminants.

  - Ensure the pump is off and disconnected from power.
  - Locate the oil drain plug (usually at the bottom or side of the oil reservoir).
  - Place a suitable container beneath the drain plug and remove it to drain the old oil.
  - Replace the drain plug and refill with new, clean vacuum pump oil to the correct level (refer to Section 5, Oil Filling).
  - Dispose of used oil responsibly according to local regulations.

- **Filter Cleaning/Replacement:** The intake filter and exhaust oil mist filter should be inspected periodically. Clean or replace them if they appear dirty or clogged to maintain pumping efficiency and prevent contamination.
- **General Cleaning:** Keep the exterior of the pump clean and free of dust and debris. Use a dry cloth; do not use solvents that may damage the casing.
- **Storage:** When not in use for extended periods, ensure the pump is clean, the oil is fresh, and store it in a dry, cool place. Cap all ports to prevent contamination.

8. Troubleshooting

Problem	Possible Cause	Solution
Pump does not start	No power; faulty switch; motor issue	Check power connection and outlet; inspect switch; contact qualified technician.
Poor vacuum performance	Low oil level; contaminated oil; leaks in system/hoses; clogged filter	Check/add oil; change oil; check all connections for leaks; clean/replace filter.
Excessive noise/vibration	Low oil level; worn components; pump not level	Check/add oil; ensure pump is on a level surface; contact qualified technician for internal inspection.
Oil mist from exhaust	Overfilled oil; clogged oil mist filter; high moisture in system	Check oil level and drain if overfilled; clean/replace oil mist filter; use gas ballast if applicable.

9. Warranty and Support

For warranty information, please refer to the documentation provided with your purchase or contact your retailer. For technical support, service, or genuine replacement parts, please contact KIRANDY customer service or an authorized service center. Always provide your product model number (V-i140sv) and serial number when seeking support.
Manufacturer: SENMIAO-UK