



V50 Oil-Free Vacuum Pump

Please read the User Manual carefully before use, and follow all operating and safety instructions!



user manual

english

User Manual



V50 Vacuum pump with valve and vacuum gauge, 90 l/min, 85 mbar

Important Notes

This instrument is designed for laboratory use only. Please read this manual carefully before installing or operating this equipment. The instrument shall not be modified in any way. Any modification will void the warranty and may result in potential hazard. We are not responsible for any injury or damage caused by any non-intended purposes and modifying the instrument without authorization.

1. Check the voltage specified on the nameplate and ensure it matches the line voltage in your location.
2. Install the instrument in a clean, dustless, and ventilated area under 40 °C.
3. Never use the instrument with any corrosive, chemical, flammable gas, or toxic material.
4. Please connect the instrument with high-pressure hoses or tubes.
5. The filter cartridge is used to absorb moisture and block dust. Please replace the cartridge to maintain pumping efficiency when it becomes dirty or changes color.
6. The instrument is not designed to start against applied vacuum / pressure. To prevent damage, verify that the inlet and outlet are at atmospheric pressure before each start. If necessary, the inlet can be vented to atmosphere by partially unscrewing the regulator knob.
7. This instrument has a thermal protection device that automatically shuts off when it becomes overheated.
8. The temperature of the instrument surface is very high after use or during operation. Please avoid touching it to prevent burns.
9. The instrument must not be used to create vacuum and pressure simultaneously.
10. Do not use any lubricant, which may damage the instrument.
11. If the supply cord is damaged, please contact the manufacturer or your service agent for a replacement to prevent hazards.
12. Please discard packing material according to local related regulations.
13. Operating condition:
 - a. Ambient temperature: 5~40 °C
 - b. Relative humidity: 80 % RH max.
 - c. Power supply: 100-120 V~, 50/60 Hz or 200-240 V~, 50/60 Hz
 - d. Altitude: up to 2000 m
 - e. Pollution degree: II
 - f. Indoor use



Caution: Hot surface

Service

In order to guarantee this equipment works safely and efficiently, regular maintenance is required. In case of any faults, do not try to repair it yourself. If help is needed, you can always contact your supplier or Labbox via www.labbox.com.

Please provide the customer care representative with the following information:

- Serial number
- Description of the problem
- Your contact information

Assembly and Disassembly Diagram



Position	Designation
1	Power Switch
2	Air Outlet (Muffler)
3	Handle
4	Air Inlet
5	Vacuum Gauge
6	Filter Cartridge
7	Moisture Trap
8	Vacuum Regulator

Operation

- A. Press the power switch (1) to activate the instrument after ensuring all tubing is properly connected.
 - It is recommended to connect a cold trap or trap bottle before the air inlet (4) of the vacuum pump when there is moisture and steam present.
- B. Set up the vacuum by adjusting the vacuum regulator (8).
- C. Check the liquid level of the moisture trap (7) daily and drain the liquid when it reaches the neck of the bottle.

*** Warning:**

When the pump is used for aqueous solution filtration, ensure that the liquid level in the flask does not exceed the safety level. Failure to comply could result in serious damage to the pump and void the warranty. If this occurs, please contact the distributor immediately for service.

Maintenance

1. Please remove the liquid from the moisture trap after each use and continue pumping air for at least 2 minutes to remove residual steam.
2. If the liquid level in the moisture trap exceeds 70 %, please stop the experiment immediately and empty the liquid.
3. The instrument is not autoclavable. Clean the surface with pure water or 75 % ethanol.
4. Replace the cartridge to maintain pumping efficiency when it becomes dirty or changes color.
5. Valve plate(s), O-ring(s), and silicone tube(s) are consumables; it is recommended to replace them annually or as needed to ensure proper operation.

How to Replace the Cartridge

1. Replace the cartridge when it becomes dirty or changes color.
2. Remove the moisture trap (7/11) by rotating it clockwise.
3. Replace the cartridge in the same manner.

Troubleshooting

Problem	Designation
Failed to start	<ul style="list-style-type: none">• Loose plug → Reconnect the plug to the power supply.• Incorrect voltage → Reconnect to the power specified on the nameplate.• Vacuum or pressure present → Release vacuum / pressure and restart.• Switch is broken → Contact the distributor for assistance.
Poor vacuum / pressure	<ul style="list-style-type: none">• Improper vacuum / pressure setting → Adjust the regulator.• Faulty gauge → Replace with a new gauge.• Air leakage → Replace or tighten the tubing and accessories that may be leaking.

Warranty

This instrument is warranted to be free from defects in materials and workmanship under normal use and service, for a period of 24 months from the date of invoice. The warranty is extended only to the original purchaser. It shall not apply to any product or parts which have been damaged on account of improper installation, improper connections, misuse, accident, or abnormal conditions of operation.

For claim under the warranty please contact your supplier.

Nota importante para los aparatos electrónicos vendidos en España

Instrucciones sobre la protección del medio ambiente y la eliminación de aparatos electrónicos:



Los aparatos eléctricos y electrónicos marcados con este símbolo no pueden ser eliminados en forma de residuos urbanos.

De conformidad con la Directiva 2012/19/UE, los usuarios de la Unión Europea de aparatos eléctricos y electrónicos, tienen la posibilidad de devolver sus RAEE para su eliminación al distribuidor o fabricante del equipo después de la compra de uno nuevo. La eliminación ilegal de aparatos eléctricos y electrónicos es castigada con multa administrativa.

Remarque importante pour les appareils électroniques vendus en France

Informations sur la protection du milieu environnemental et élimination des déchets électroniques :



Les appareils électriques et électroniques portant ce symbole ne peuvent pas être jetés dans les décharges.

En réponse à la réglementation, Labbox remplit ses obligations relatives à la fin de vie des équipements électriques de laboratoire qu'il met sur le marché en finançant la filière de recyclage de ecosystem dédiée aux DEEE Pro qui les reprend gratuitement (plus d'informations sur www.ecosystem.eco).

L'élimination illégale d'appareils électriques et électroniques est punie d'amende administrative.

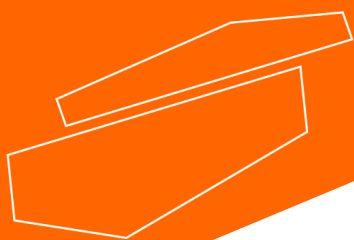
Nota importante per le apparecchiature elettroniche vendute in Italia

Istruzioni sulla protezione ambientale e sullo smaltimento dei dispositivi elettronici:



Le apparecchiature elettriche ed elettroniche contrassegnate con questo simbolo non possono essere smaltite come rifiuti urbani.

In conformità con la Direttiva 2012/19 / UE, gli utenti dell'Unione Europea di apparecchiature elettriche ed elettroniche hanno la possibilità di restituire i propri RAEE per lo smaltimento al distributore o al produttore di apparecchiature dopo averne acquistato uno nuovo. La rimozione illegale di apparecchiature elettriche ed elettroniche è punibile con una sanzione amministrativa.



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