



SCIENTIFIC RESOURCES

Didactic guide

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MONOSTADIUM ELECTRIC PUMP



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USE

- The pump for rotary vacuum is a base tool to create vacuum in a sealed container.
- The pump can function for a long period of time without stopping in a place with temperature between 10°C and 40°C and with pressure < 1330 Pa.
- The vacuum pump do not have to be used with high content of oxygen gas, explosive gas, corrosive gas, gas with lots of dust particles or gas containing chemical substances which can cause reactions in contact with the pump oil.
- The vacuum pump cannot be used as compressor or transference pump.

Caution: do not never block the safety valve; do not use the pump for a long time with tap closed.

-The vacuum pump can be used, with different goals and in different situations, for maintenance and revision of: refrigerators, air-conditioners, cars, printers, photo mechanical processes, air-conditioners for cars, medical instruments, packaging, gas analysis, for chemical and physics laboratories, in chemicals and oil factories, in pharmaceutical industries, with scientific tools, lamps, empty thermos.

GENERAL FEATURES

- The rotary camera is designed o the cylinder is always well oiled.
- The pump transport and installation are very simple thanks to the compact volume of pump engine.
 - The pump hull is made of an aluminium alloy that gives the vacuum pump solidity and lightness.
 - The vacuum pump cylinder is calibrated very precisely.
- The safety dispositive prevent any oil leaks or losses from the vacuum pump.
- Some special passages for air inspiration avoid the creation of contrary draughts towards the sense of lubricant oil.

FIRST START

-To start the pump, screw off the oil pump tank, and fill the oil tank **till the marked level**, with the suitable oil (HFV-1 oil).

Do not never mix different types of oil. Check the oil level. It is suggested to maintain a minimal distance between the pump and the connected container.

-For the clutch it is suggested to use plastic pipes or use specifically prepared pipes.

Check that the connection is sure and watertight to avoid any losses.

-Insert the pump plug in a current socket and the start button to activate it.

METHOD OF USE

Connect the vacuum chamber to the pump, check that the valves are open and turn on the pump, once reached the desired vacuum, turn off the taps and turn off the pump immediately.

Maintenance

-During long time uses, assure you that the oil is sufficient. The oil level in the tank do not has to be inferior to the minimum level marked on the tank.

An insufficient or upper oil quantity could damage the pump and alter its efficiency.

_ the oil should be substituted after 250-300 hours of pump functioning.

If the pump oil is exhausted or contaminated by other substances, it has to be changed immediately so the normal functioning of pump inspiration

- After the oil substitution, action the pump for 15-30 minutes so the oil dilutes.

Stop the pump and screw off the tank tap so the exhausted oil goes out.

Fill again in the tank with 300 cc of new oil through the inspiration air pipe and action the pump for a minute to clean the pump room.

Repeat two or three times this operation.

Once the pump is clean, fill in the oil tank up to the marked level, screw the tap of oil tank.

The pump is ready for use.

If you do not use the pump for a long time, keep it covered and clean.

Keep always the pump away from humidity and rust.

For maintenance of oil tank, disassemble it and clean the filter.

Once the filter is cleaned, reassemble it.

Position accurately the plastic gaskets to prevent oil losses. For any difficulties or any information about the pump maintenance , please call the supplier.

PROBLEMS SOLUTION

PROBLEM

Bad inspiration

Overheated pump

Oil loss

Difficulty in pump starting

POSSIBLE CAUSE

- 1)The oil in the tank is not sufficient or the oil is not clean.
- 2) Blocked pump door of entrance or the supplied oil is not sufficient.
- 3) Losses in the connection pipe between pump and the container.
- 4) Damaged escape valves.
- 5) Unsuitable pumping model to the type of pump.
- 6) Too much oil.
- 7) Connection with the oil tank damaged.
- 8) Outsider material in the pump.
- 9) Damaged engine or feeding.
- 10) Wearing of pump components due to long experiments or usages.

SOLUTION

- 1) Fill in the oil tank **up to the marked level** or change the oil
- 2) Clean the oil door and clean the filter
- 3) Check the connection pipe and stop the losses
- 4) Substitute the escape valve
- 5) Check the pump capacity
- 6) Check the level and remove the excess oil
- 7) Check the pump capacity
- 8) Clean, wash and assemble again the superior rotor part
- 9) Contact technical support

TECHNICAL FEATURES

Sucked volume	0.8 m^3 / h
Limit pressure	10-30 Pa
Velocity	1400 rpm (giri/min)
Power	60 W
Power current	220V / 50Hz
Aspiration	6mm Hg
Noise level	$\leq 65dB$
Encumbrance	21x 11x 18 cm
Weight	4.5Kg

WARNING

The small differences in the component feature pieces, collection and drawings, are justified by the technological up-dating.