BOMBA DE VACÍO DE MEMBRANA
DIAPHRAGM VACUUM PUMP
POMPE À VIDE À MEMBRANE

Ref. - Code - Réf. PXB010, PXB011, PXB016

Este manual es parte inseparable del aparato por lo que debe estar disponible a todos los usuarios del equipo. Le recomendamos leer atentamente el presente manual y seguir rigurosamente los procedimientos de uso para obtener las máximas prestaciones y una mayor duración del mismo.

This manual should be available for all users of these equipments. To get the best results and a higher duration of this equipment it is advisable to read carefully this manual and follow the processes of use.

Ce manuel est une partie indissociable de l'appareil et doit être mis à la disposition de tous les utilisateurs de l'équipement. Nous vous recommandons de lire attentivement ce manuel et de suivre scrupuleusement les procédures d'utilisation afin d'obtenir des performances maximales et une plus longue durée de vie de l'appareil.

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1. What this Series Offers

This series diaphragm vacuum pump has the features of continuous oil free pumping, low noise level, higher efficiency and a long lifetime. It is mainly used in medicinal products analysis, tenuously chemical engineer, Ing. biochemical pharmacy, food examination, investigating and solving criminal case, etc. This rang of vacuum pumps were developed especially for laboratory operations. It satisfies the highest expectations in terms of precision, reliability and ease of use...

2. Application Examples

- Vacuum filtration
- Vacuum distillation
- Vacuum drying
- On rotary evaporators
- To extract and transfer gases
- Gel drying

3. Features

1. Works without oil.
2. New technologies and materials are used in production. It is easy to move and can work smoothly, which can guarantee the vacuum and high rate of air flow.
3. It adopts the operation containing no friction, producing no calories, and having no friction exhausts. The diaphragm is made of Nitrile Rubber, which resists the corrosion and has long operating life.
4. The self-cooling air draft system is designed in the body. This system can keep the machine continuously running for 24 hours.
5. The pressure can be regulated by a valve to meet various vacuum needs within certain range.
6. The axles emit a low noise level with high operating efficiency.

4. Technical specifications

PXB010

PXB011

PXB016

Code	PXB010	PXB011	PXB016
Pumping speed (L / Min)	20	30	30
Ultimate Vacuum Pressure	≥0.08 Mpa 200 mbar	≥0.095 Mpa 50 mbar	≥0.08 Mpa 200 mbar
Dimensions (LxAxH)(mm)	215x120x235	300x120x235	230x180x265
Motor Power (w)		160	
Inlet (mm)		ϕ6	
Outlet (mm)	Silenciador		ϕ6
Working temperature (ºC)		7-40	
Pump head	1	2	1
Voltage rating		230Vac,50Hz	
Weight (Kg)	7.5	9	7.5
Diaphragm/ Valves		NBR	
Noise leve (dB)	<50		<60
Positive pressure (psi)	-	-	≥30

5. Operational instructions

Read these instructions carefully before you attempt to use this product. Only qualified engineer/electricians suitably trained should undertake the installation and com- missioning of this product.
Read this information carefully before proceeding.
The following is an explanation of the two different types af hazards:

 Danger Electric shock

 Caution, hot surface

5.1. Use of product

- This product must only be used for the purpose of pumping/evacuating air.
- Do not allow corrosive gases or particulate material to enter pump. For example: water vapour, oil-based pollutants or other liquids..
- Ambient temperature should not exceed 40ºC.
- The performance of the product will be adversely affected at high altitudes.
- Performance is reduced by lower atmospheric pressure found at high altitudes.
- Your reciprocating diaphragm pump is a precision product. Protect it against dirt and excessive moisture.
- Do not try to obtain higher pressure or vacuums than those recommended. Refer to technical data sheet supplied.

5.2. Pump Installation

- Refer to the technical sheet supplied for all technical specification.
- Disconnect electrical power supply before installing and/or servicing. Failure to do so could result in electrical shock, personal injury, or death.
- To avoid risk of electrocution do not use this product in an area where it could come in contact with water or other liquids. If exposed to the elements it must be weather protected.
- The wiring of the electric engine should be made in accordance with local electrical regulations.
- It must be ensured that both the inlet and outlet vents must be free of obstructions and ensure good air flow. A space of at least 10 cm all around must be respected. Please note that when the ambient temperature is higher, this space should be increased.
- Do not place any objects, metals, tools, etc. through the grille holes.
- Check that the supply voltage is suitable for the products (see characteristics table).
- Contact the factory immediately if the voltage conditions are different.
- Do not touch the product during and just after operating as all parts of the products get very hot.
- Do not lubricate any part of this oil-less pump. The sealed bearings are permanently lubricated.
- Do not install with pipes that are smaller than the size at the head ports. Fit a recommended filter/ muffler to the inlet/exhaust port.

5.3. Recommendations for use

- To reduce noise and vibration use shock mounts, mount the product in the horizontal plane using anti-vibration mounts, so that they will not resonate.
- Do not block flow of cooling air over pump in any way.

6. Product failure

- Disconnect the electricity supply.
- Do not attempt to dismantle any part of the product before the electricity is disconnected.
- Wait until the product has cooled down.
- Refer to the Trouble Shooting Guide.
- Contact the factory or distributor for more information.
- Make sure that the product is working properly to avoid overheating due to continuous use and/or electrical overload.

7. Maintenance & Service

- Switch the electricity supply OFF for any revision and cleaning.
- Vent all pressure/vacuum from the product.
- After inspection/cleaning is complete, reconnect to mains power supply
- Filer will become blocked quickly in dirty environments, it is therefore recommended to clean it frequently (only for reference PXB011)

8. Inspection

- Regular inspections can prevent damage and unnecessary repairs.
- Check that the air inlet and outlet grilles are not clogged or filled with dust/dirt.
- Regularly check the air outlet filter (model PXB011 only).
- If necessary, clean the pump head using only water-based solvents. Do not use petroleum-based compounds, acids, caustics or organic solvents to clean or lubricate any parts. It will reduce the life of the pump.

9. Service and Installation

A pump that has been manipulated/repaired by the user exempts you from warranty. You may return the pump for repair according to the manufacturer's procedure.

Each unit contains the following:
- 1 piece of vacuum gauge (- 0. 1Mpa)
- 1 piece of rubber pipe (φ7mm *φ12mm *φ800mm)
- 1 filter to be placed in the air outlet (only reference PXB011)

9.1. Pump Disassembly

Take PXB010 model as an example.

1. Disconnect pump from electrical power
   Warning: Always disconnect power before servicing. Failure to do so can result in severe personal injury.
2. Relief the pressure valve, and vent all air lines to pump to remove pressure
   Warning: Failure to so can result in severe personal injury or cause damage to the pump.
3. Disconnect air lines to pump
4. Label pressure and vacuum gauges and pump ports sa you can reassemble them correctly later. Remove gauges.
5. Remove screws in head cover and remove cover and cover gasket. Discard old cover gasket.
6. Remove slotted valve screw, valve and stainless valve leaf. Remove and discard three old filter materials, noting their position.
7. Remove socket head cap screws and washers from pump head and remove head.
8. Turn head over. On underside of head, remove slotted valve screw, valve and
9. stainless valve. Discard old valves.
10. If necessary, clean pump head using water-base solvents and/or blow off with air.
    Caution: Do not use petroleum-base compounds, acids, or caustics solvents to clean or lubricate any parts. It will reduce service life of pump. Use only water-base solvents for cleaning.
11. Visibly check diaphragm and retainer plate for excessive wear or corrosion. If replacing diaphragm, remove countersunk screws from diaphragm retainer plate and discard damaged/old diaphragm.

9.2. Pump Reassembly

1. Place diaphragm over raised ring the connecting rod. Apply adhesive to counter- sunk screws and reinstalled retainer plate.
2. On underside of head install the new valve.
3. Position four thin washers on corners of pump body. Refer to labels made earlier to orient pump head correctly.Install pump head with cap screws and washers.
4. Install new leaf valve, valve limiter, and new sloted screw in top of pump head. Make sure that valve and valve limiter are securely raised locating bar so they point directly toward valve seat.
5. Install new filter element in pump head. Small element goes in recess nearest to inlet port.
6. One of four gasket screw holes is farther from edge than other three.Position new gasket on pump head with side up that allow all four-screw holes to be visible at once. Install head cover using slotted screws.
7. Reinstall handle with hex nuts and washers.
8. Reinstall gauges referring to labels make earlier.

10. Troubleshooting

Always disconnect power before servicing. If motor fails to start, or it slows down under load,turn it off and unplug it. Make sure that voltage at power oudet agrees with motor nameplate. Examinc plug,cord,and switch for deterioration. If the pump gets overheat or is noisy,stop pump immediately for repair.

Possible Reason	Low Pregsure	Low vacuum	Excesgive Noise	Over Heating	Will Not Start
Damaged Valves	✓	✓			
Damaged Diaphragm	✓				
Low Voltage	✓	✓		✓	✓
Wrong Voltage			✓	✓	✓
Back Pressure On Head					
Relief Valve Set Too Low	✓	✓	✓		
Hose Leak	✓	✓			
Check Valve Leak					✓

11. Warranty

Our warranty does not extend to any goods or parts which have been subjected to misuse, lack of maintenance, neglect, damage by accident or transit damage.
Our maximum liability under this exclusive remedy shall never exceed the cost of the subject product and we reserves the right at its sole discretion to refund the purchase price in lieu of repair or replacement.
We will not responsible or liable for indirect or consequential damages of any kind, however, arising, including but not limited to those for use of any products, loss of time, inconvenience, lost profit, labor charges, or other incidental or consequential damagers with respect to persons, business, or property, whether as a result of breach of warranty, negligence or otherwise. Notwithstanding any other provision of this warranty, buyer's remedy against us for goods supplied or for non-delivered goods or failure to furnish goods, whether or not based on negligence, strict liability or breach of express or implied warranty, is limited solely, at our option to replacement of or cure of such non-conforming or non-delivered goods or return of the purchase price for such goods and in no event shall exceed the price or charge for such goods. We expressly disclaim any warranty of merchantability or fitness for a particular use or purpose with respect to the goods sold.
Unauthorized extension of warranties by the customer shall remain the customer's responsibility.
Customer is responsible for determining the suitability of our products for customer's use or resale or for incorporating them into objects or applications which customer designs, assembles, constructs or manufactures.
This warranty only can be modified by an authorized personnel by signing a specific, written description of any modification.