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VACUUM PUMP OPERATING MANUAL

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VACUUM PUMP

MODEL: 2KQ-2G/2KQ-3G



NEED HELP? CONTACT US!

Have product questions? Need technical support? Please feel free to contact us:

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This is the original instruction, please read all manual instructions carefully before operating. VEVOR reserves a clear interpretation of our user manual. The appearance of the product shall be subject to the product you received. Please forgive us that we won't inform you again if there are any technology or software updates on our product.

INTRODUCTION

Welcome to the user manual for your vacuum pump. This vacuum pump is a versatile tool that can be used in a wide range of applications. It's particularly well-suited for tasks like HVAC vacuuming, epoxy and silicone degassing, wood stabilization, and creating milking machines. Additionally, this pump is also commonly used in medical appliances, printing machinery, vacuum packing, gas analysis, and hot-forming plastics. Its powerful and reliable performance makes it a valuable tool for professionals and DIY enthusiasts alike.

The vacuum pump works by creating a vacuum or negative pressure, which is used to remove air and other gases from an enclosed space. This process can be used for a range of purposes, including reducing air bubbles in resins or other liquids, evacuating HVAC systems, stabilizing wood by removing air from its cells, and many others.

This user manual is designed to help you understand how to operate and maintain your vacuum pump effectively and safely. We will explain the key features and components of the pump. Additionally, we will provide important safety guidelines to help you avoid potential hazards and ensure the proper handling of your vacuum pump.

Please read this user manual carefully before operating your vacuum pump. With proper use and maintenance, your vacuum pump can provide you with years of reliable service and help you achieve your desired results. If you have any questions or concerns about the operation of your vacuum pump, please consult this manual or contact our customer support team for assistance.

SAFETY PRECAUTIONS

Warning about potential hazards and how to avoid them

Your vacuum pump can pose potential hazards if it is not used properly. The most common hazards include electrical shock, fire, or explosion due to pumping flammable, explosive or poisonous gases, or gases that can corrode metals and exert chemical charges. To avoid these hazards, always read and follow the instructions in this manual carefully before using your vacuum pump.

Instructions on how to handle the vacuum pump safely

To ensure the safe handling of your vacuum pump, please follow these guidelines:

- ◆ Never operate the pump without oil, as this can damage the pump and create potential hazards.
- ◆ The temperature of the pumped gas should not exceed 80°C, and the environment temperature should be around 5°C to 60°C. This will help prevent damage to the pump and ensure safe operation.
- ◆ Do not use the vacuum pump as a compression pump or conveyer pump, as this can cause damage to the pump and create potential hazards.
- ◆ The operating voltage for the pump is between 192 to 248V, 50HZ. Use a grounded outlet to prevent electrical shock.
- ◆ When unplugging the pump, pull the plug. Do not unplug the unit by pulling on the wire, as this can cause damage to the cord and create potential hazards.
- ◆ Keep the electrical cord free from all shop equipment, and do not let the pump hang by the power cord to avoid damage to the cord and prevent potential hazards.
- ◆ Do not use a damaged plug or outlet, as this can cause electrical shock or fire.
- ◆ Do not plug or unplug the unit with wet hands, as this can cause electrical shock.

- ◆ Do not plug the unit in, unplug it, or use the switch if there are any flammable or explosive gases present. Always unplug the unit before disassembling it to avoid potential hazards.

Guidelines for handling hazardous materials

Your vacuum pump should not be used to pump flammable, explosive, or poisonous gases, or gases that can corrode metals and exert chemical charges. Additionally, do not pump gas containing any dust or moisture. If you need to handle hazardous materials, use proper personal protective equipment and follow all guidelines for safe handling and disposal of these materials.

GETTING STARTED

Introducing the key features of the pump

- ◆ **Dual-stage Rotary Vane Vacuum Pump with Gas Ballast:**

The vacuum pump features a dual-stage rotary vane design with a gas ballast. This feature reduces moisture corrosion of the machine and extends the life of the machine and oil.

- ◆ **Copper Coil, Four-Pole Motor:**

The pump is equipped with a copper coil and four-pole motor, which provides bigger torque for better starting and produces less heat, making it more durable.

- ◆ **Die-Cut Aluminum Body and Ventilation Fan:**

The vacuum pump features a die-cut aluminum body and a ventilation fan, which allows for easy heat dissipation and guarantees the performance stability of the pump.

- ◆ **Anti-Flow Design:**

The vacuum pump is designed with an auto anti-backflow valve and a manual ball valve, which prevents backflow and allows for control of the vacuum, preventing potential damage to the equipment.

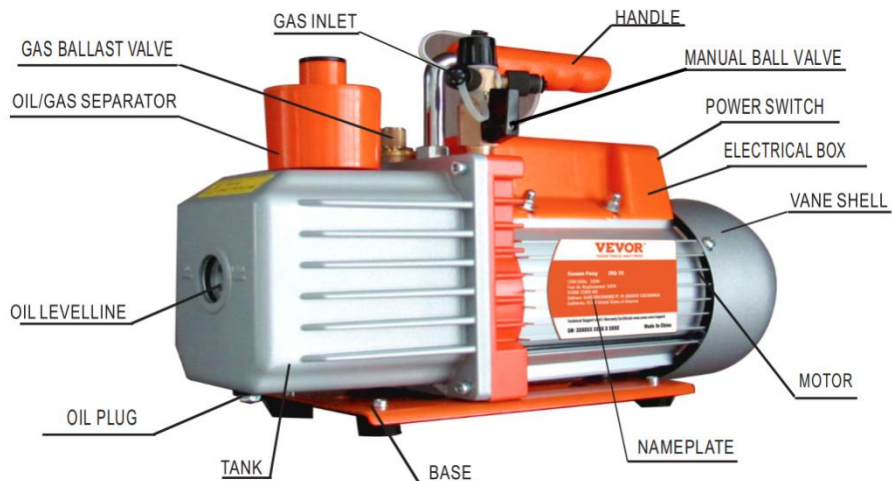
Package contents and specification

Model		2KQ-2G	2KQ-3G
Voltage		120V/60Hz	120V/60Hz
Free Air Displacement	CFM	5	7
Ultimate Vacuum	Pa	8	8
Motor	HP	1/3	12
Intake Fitting		1/4"SAE male; 3/8"SAE male; 1/2"ACME male;	1/4"SAE male; 3/8"SAE male; 1/2"ACME male;;
Oil Capacity	ml	280	340
Dimensions	mm	320*125*230	335*125*250
Net Weight	Kg	8.6	10.4
Applicable Refrigerant		R134a, R22, R410A, and any other A1 refrigerants	

Package list

2KQ-2G	2KQ-3G
5 CFM vacuum pump x 1 280ml oil bottle x 1 User manual x 1	7CFM vacuum pump x 1 250ml oil bottle x 2 User manual x 1

Explanation of the vacuum pump's components



Steps for setting up the vacuum pump

Following these steps will help you set up your vacuum pump correctly and ensure its safe and efficient operation.

- ◆ Before use, remove the oil filling port/oil gas separator and fill it with the recommended vacuum pump oil. Check the oil level before use to ensure it's not lower than the oil-level line. Do not run the pump with a low oil level.
- ◆ Connect the container to be pumped to the gas inlet using a short, sealed hose that's free of dust, dirt, and heavy condensation. Check for leaks before operating the pump.
- ◆ If your vacuum pump comes with an exhaust cap, remove it.
- ◆ Plug in the power supply and turn on the switch.
- ◆ After use, unplug the vacuum pump, remove the connecting hoses, and cover the exhaust cap (if it has one) to prevent oil spills. Also, cover the oil plug to keep the oil clean and prevent dirt from entering the vacuum pump.

INSTALLATION AND MAINTENANCE OF VACUUM PUMP

Installation

To ensure the proper functioning of the vacuum pump, follow these installation guidelines:

- ◆ The pump should be positioned horizontally and in a dry, ventilated area free of dust and other contaminants.
- ◆ Maintain a clearance of at least 10cm (4 inches) around the pump to ensure proper airflow.
- ◆ If you are permanently mounting the pump, remove the rubber pads from the bottom of the base, and use the existing threaded holes to mount the unit with ST4.2 screws.
- ◆ When permanently mounting the pump, be sure to maintain proper clearances, especially at the air intake at the end of the vane shell.
- ◆ If a special electromagnetic valve is needed, it can be installed on the gas inlet.

Connecting the vacuum pump to the system being evacuated

By following these guidelines and steps, you can effectively control the vacuum pressure and safely connect the vacuum pump to the system being evacuated.

- ◆ Identify the gas inlet on the vacuum pump and the gas outlet on the system being evacuated.
- ◆ Use a short, sealed hose to connect the gas inlet on the vacuum pump to the gas outlet on the system being evacuated. Make sure the hose is free of dust, dirt, and heavy condensation.
- ◆ Check for any leaks in the connection before starting the pump.

Maintenance

Proper maintenance of the vacuum pump is essential to ensure its optimal performance. Here are some maintenance guidelines:

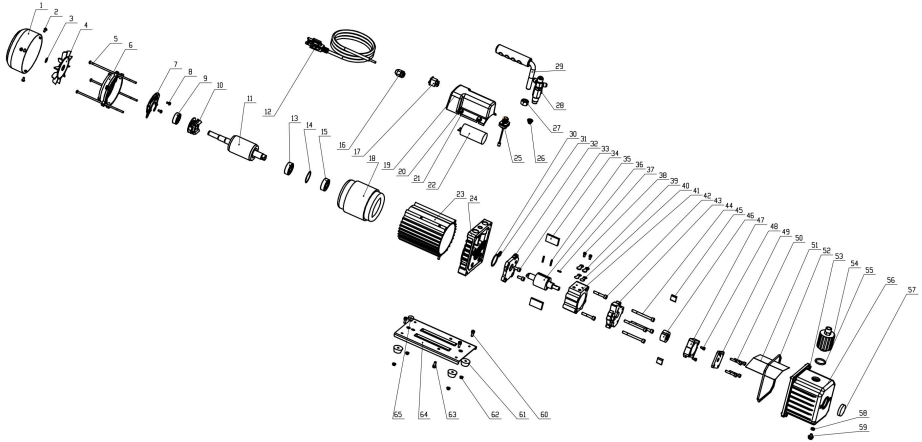
- ◆ Keep the pump clean and free from foreign matter.
- ◆ Keep the oil filled to the oil level, and never let the pump run without oil.

- ◆ Keep the oil clean. If the oil becomes dirty, muddy, or water or other volatile substances get in, it will affect the performance of the pump, and the oil should be replaced. To replace the oil, start the pump and run it for about 30 minutes to make the oil thin. Then stop the pump and drain the oil from the oil drain plug. Open the gas inlet and run the pump for 1-2 minutes while adding a small quantity of clean oil to the gas inlet. This is to replace the residual oil from the inside of the pump. After ensuring that the pump is clean, put the drain plug back in and fill the clean pump oil from the gas inlet to the oil level.
- ◆ To store the pump when not in use for long periods of time, cover the oil cap and exhaust cap (if applicable) and store it in a dry place.
- ◆ Repair of the pump should only be done by a qualified service technician.

TROUBLESHOOTING GUIDE

Problem	Possible Cause	Correction
Low Degree Of Vacuum	1. Insufficient oil	1. Add oil up to the oil level line
	2. Dirty oil	2. Replace the oil
	3. Oil intake is blocked	3. Clean the oil intake or filter
	4. Hose or gas inlet is clogged	4. Check the connecting pipes
	5. Pump is unsuitable for the application	5. Get a suitable pump for the application
Oil Leaks	1. Oil seal is damaged	1. Replace the oil seal
	2. Housing gasket is loose or worn out	2. Replace the housing gasket
Oil Spray	1. Too much oil	1. Adjust the oil level to the recommended level
	2. Gas inlet pressure is too high or too much gas has been pumped	2. Use a bigger pump or reduce gas inlet pressure
Starting Difficulty	1. Oil temperature is too low	1. Attempt to start the pump multiple times to warm the oil

EXPLODED DIAGRAM OF THE PUMP



1	Fan cover	24	Bracket	47	Back-pump stator
2	Screw	25	Gas ballast fitting	48	Screw
3	Snap ring	26	Screenner	49	Back-pump cover
4	Fan	27	Nut	50	Screw
5	Screw	28	Gas inlet	51	Cap board
6	Motor back cover	29	Handle	52	O-ring
7	Centrifugal baseplate	30	O-ring	53	Screw
8	Screw	31	O-ring	54	Oil gas separator
9	Bearing	32	Front-pump stator	55	O-ring
10	Centrifugal	33	Screw	56	Oil tank
11	Motor rotor components	34	Front-pump vane	57	Oil level
12	Power cable	35	Spring	58	O-ring
13	Bearing	36	Front-pump rotor	59	Oil drain plug
14	Waveform gasket	37	Straight pin	60	Screw
15	Bearing	38	Screw	61	Rubber feet
16	Insulating bushing	39	Valve platen	62	Nut
17	Power Switch	40	Exhaust valve plate	63	Screw
18	Motor stator components	41	Front-pump stator	64	Baseboard
19	Junction box base	42	Screw	65	Rubber pad

20	Screw	43	Intermediate connecting block	
21	Gasket	44	Screw	
22	Capacitor	45	Back-pump vane	
23	Motor cover	46	Back-pump rotor	

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