As a specialized enterprise in making vacuum pumps, we are always devoting ourselves to satisfying users’ need of high-quality products. We adopt the latest design and technique, to make sure that our products not only cost less energy, produce less noise and last well, but also are the best design for environment protecting and less pumped gas pollution. Excellent design and making will bring you more convenience.

### 1. Usable range

This single stage series of the single-stroke oil-rotating-vane pumps and two stage series of the double - stroke oil - rotating-vane pumps are the equipments for obtaining vacuum by pumping the gases from sealed containers, especially suitable for the pumping work for cold-producing maintenance (for the vacuum pumping with R12, R22, or R134a as cold-producing medium), medical appliances printing machinery, vacuum packing, gas-analysis and hot-forming plastics. And they can also be used as the fore-stroke pumps of all kinds of high-vacuum equipments.

### II. Features

#### Preventing oil-returning design

The passage for gas entering is specially designed, which can prevent the oil flowing back and so prevent the pumped container and tubes from being polluted.

#### Environment-protecting design

### III. User’s Manual

- **Examine the oil-level before using to make sure the oil-level is not lower than the oil-level line.** If lower than that it should be filled without delay. (This pump uses high-speed vacuum oil of API 32)
- **Take down the gas-filling cap and connect the pumped container.** And the pipe should be short, sealed and there should be any drip. Take down the exhaust cap, plug the power supply plug and switch on. And you can operate now.
- **Pull out the plug after using, remove the connecting pipes and cover the exhaust cap and the oil plug.**

#### VI. Cautions

- Don't pump inflammable, explosive and poisonous gases.
- Don’t pump gases which can corrode metals and can exect chemical changes with the pump oil.
- Don’t pump gases containing dust and gases with plenty of steam.
- The temperature of the pumped gas shouldn't be over 80°C, and the environment temperature should be -5°C-60°C.
- Don’t use it as a compression pump or a conveying pump.
- It can’t run without oil.
- The voltage is 162-248V, 50HZ; the socket should be in ground connection.
- Hold the plug when pulling it out. Don’t pull the wire off the outlet.
- Don’t put heavy weight on the wire to avoid being extruded.
- Don’t use damaged plug or outlet.
- Don’t plug or pull out the plug with your wet hand.
- Don’t plug or pull out the plug or tap on the switch where there is any kind of leak of cool gas.

### VIII. Breakdown Filling

<table>
<thead>
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<th>Form of the leak</th>
<th>Causes of the leak</th>
<th>Removing way</th>
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<tbody>
<tr>
<td>1. Leak caused by the oil-feeding valve</td>
<td>The oil-feeding valve is damaged or not well fixed</td>
<td>Change the oil-feeding valve</td>
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<tr>
<td>2. The oil-feeding valve is not well fixed</td>
<td>The oil-feeding valve is tightly fixed</td>
<td>Tighten the oil-feeding valve</td>
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<tr>
<td>3. The connecting pipe is leaked</td>
<td>The connecting pipe is fixed tightly</td>
<td>Check the oil-feeding valve</td>
</tr>
<tr>
<td>4. The oil-feeding valve is not well fixed</td>
<td>The oil-feeding valve is tightly fixed</td>
<td>Tighten the oil-feeding valve</td>
</tr>
</tbody>
</table>

### IX. Maintenance

- Keep the pump clean and prevent foreign matter from entering it.
- Keep the oil level; Don’t keep it running without oil.
- Keep the oil clean. If it becomes tiny, muddy, or has water or other volatile substances, which affect limit vacuum, the oil should be replaced. Before replacing the oil, the pump should be run for about 3 minutes to make the oil thinner, and then stop it and let out the oil from the oil-outing mouth. Then, have it run 5-10 minutes with the gas-entering mouth open. During this time, add a small quantity of clean oil from the gas-entering mouth so as to replace the old oil in the pump. Do it repeatedly. After making sure the pump is clean, put on the oil-inlet oil plug and then fill clean pump oil to the oil-level line from the oiling mouth.
- If it is not in use for long, cover the oiling cap and exhaust cap and put it in a dry place. Meanwhile, damproof and antitrust should be considered.
- If it needs removing and fixing, be sure to have an experienced one do it.