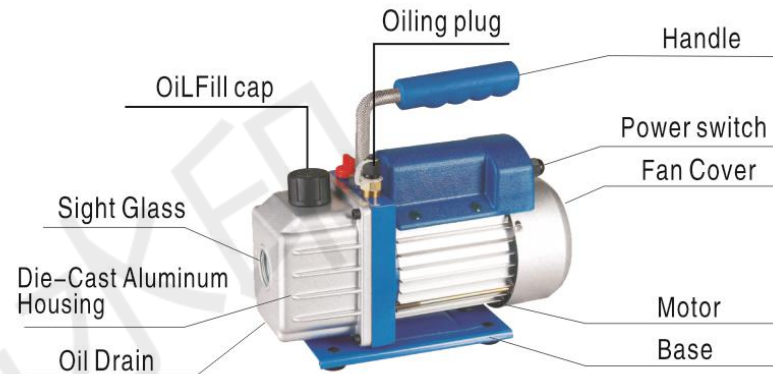


# VACUUM PUMP

Please read the operating manual carefully before using and reserve it properly

## Illustration for each part



## Main technical parameters

Mode	RS-0.5		RS-1		RS-1.5		RS-2		RS-3		RS-4		RS-6	
Voltage	110V	220V	110V	220V	110V	220V	110V	220V	110V	220V	110V	220V	110V	220V
	60HZ	50HZ	60HZ	50HZ	60HZ	50HZ	60HZ	50HZ	60HZ	50HZ	60HZ	50HZ	60HZ	50HZ
Free Air Displacement	CFM													
Ultimate Vacuum	PA													
	Mbar													
Rotating Speed	1720 1440													
Power (HP)	1/4		1/4		1/3		1/3		1/2		3/4		1	
Oil Capacity (ml)	170		220		225		250		250		300		450	
Dimension (mm)	243*114*207		260*110*240		275*115*240		290*120*240		310*125*255		360*135*270		430*142*280	
Weight (Kg)	6.5		7.0		7.5		8.5		12		19		24	

Model	2RS-0.5		2RS-1		2RS-1.5		2RS-2	
	110V60HZ	220V50HZ	110V60HZ	220V50HZ	110V60HZ	220V50HZ	110V60HZ	220V50HZ
Pump Speed(CF M)	2	1.5	3	2.5	4	3.5	5	4.5
Ultimate Pressure	$3 \times 10^{-1}$ Pa		$3 \times 10^{-1}$ Pa		$3 \times 10^{-1}$ Pa		$3 \times 10^{-1}$ Pa	
Rotating Speed	3500	2800	3500	2800	3500	2800	3500	2800
Motor	1/4HP		1/3HP		1/3HP		1/2HP	
Oil Capacity	250ml		250ml		330ml		330ml	
Demension (mm)	280*110*215		280*110*215		290*115*220		290*115*220	
weight (Kg)	7		7.5		8		9	
Model	2RS-3		2RS-4		2RS-5			
	110V60HZ	220V50HZ	110V60HZ	220V50HZ	110V60HZ	220V50HZ		
Pump Speed(CF M)	7	6	12	10	14	12		
Ultimate Pressure	$3 \times 10^{-1}$ Pa		$3 \times 10^{-1}$ Pa		$3 \times 10^{-1}$ Pa			
Rotating Speed	1720	1440	1720	1440	1720	1440		
Motor	3/4HP		1HP		1HP			
Oil Capacity	370ml		500ml		550ml			
Demension (mm)	360*135*275		430*142*280		430*142*280			
Weight (Kg)	11		17		18			

## Usable Range

The single stage series of the single-stroke oil-rotating-vane vacuum pumps and the two stage series of the double-stroke oil-rotatingvane vacuum 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.

## 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

The tank is separated ,and there are separating devices at the exhaust port,It can avoid oil-spraying and reduce pollution.

### ▲Alloy aluminium casing

Alloy aluminium casing is used in this kind of electrical machinery,it has high heat-scattering efficiency,which can keep the pump run-ning normally,long-lasting.And it has better outer-figure quality.

### ▲Overall design

The electric machinery and the pump are wholly designed and direct drive,which makes the product more compact,lighter and more rational.

### ▲Great starting moment

The design of great starting moment is easy for starting and high in efficiency,which can keep it running normally even in lower temperature environment and lower volt.

▲ Forced-feed lubrication system(dual-stage vacuum pump)

The products incorporate the lubrication system designed to provide clean,filtered oil to all internal bearings and wear surface ,regardless of the pump operating pressure.Cleaner oil means reduced maintenance and lower operating costs.

▲Low noise and vibration

An elastomeric coupling insert between the motor and module results in extremely quiet,smooth-running operation.

## Users' Manual

▲ Examine the oil-level before using yo make sure the oil-level is not lower than the oil-level line.If power than that it should be oiled without delay(This pump uses high-speed vacuum oil of HFV 32)

▲Take down the gas-filling cap and connect the pumped container.And the pipe should be short ,sealed and there should' t any drip.

▲Take down the exhaust cap,plug the power supply and switch on.And you can operate now.

▲Pull out the plug after using,removings the connecting pipes and cover the exhaust cap and the oil plug.

## Cautions

▲ Don' t pump inflammable,explosive and poisonous gases.

▲Don' t pump gases which can corrode metals and can exert chemical changes with the pump oil.

▲Don' t pump dases containing pellet dust and gases with plenty of steam.

▲The temperature of the pumped gas should' t be over 80℃,and the environment temperature should be-5℃ ~ 60℃.

▲ Don' t use it as a compression pump or a conveyer pump.

▲It can' t run without oil.

▲Hold the plug when pulling it out.Don' t pull the wire off the outlet.

▲Don' t put heavy weights on the wire to avoid being extruded.

▲Don' t use damaged plug or outlet.

▲Don' t plug or pull out the plug with you wet hand.

▲Don' t plug or pull out the plug or tap on the swich where there is any kind of leak of coal gas.

## Installation

▲ When in use,the pump should be horizontally put where it is dr ventilating and clean.The distance to periphery should be over 2 cm and the space distance between the front and back should be at least 5 cm.When installing it onto the equipment,make sure of the normal air entering at the side of the vane shell.

▲The gas-entering mouth can be connected according to the screw thread of it,and it can also be plugged with a leather pipe.

▲Installation onto a complete set:remove the rubber base from the bottom base.Connect with ST4.2 screw nail.If you have special equipment of installation,welcome to connect with our company.

▲If the pumped gased are harmful to one' s health or have bad effect on the environment,ou can extend pipes from you can extend the exhaust mouth to the outside or deal with it in a way of environmental protection.

▲If specially needed,an electromagnetic valve can be installed at the gas-entering mouth.



## Troubleshooting Guide

Form of breakdown	Causes	Removing ways
Low degree Of vacuum	1.Lack of oil	Oil to above the pil-level line
	2.The pumping oil is Emulsificated or not clean	Change the oil
	3.the oil-entering mouth is blocked up or it is short of oil	Clear the oil-entering mouth;wash the filter net
	4.The connecting pipes drain	Check the connectingd piles
	5.The pump is not suitable	Pumped container, recalculates suitable one
Oil drain	1.The oil-seater is damaged	Changed it
	2.The tank is loose or worn out	Screw it and change the o-shaped ring
Oil spray	1.Too much oil	Oil to the oil-level line
	2.the pressure of the gas-entering pouth is too high or it has pumped much	Choose a bigger pump
Difficulty in starting	1.The oil temperature is too low	Start the machinery several times or heat the oil
	2.There is some breakdown in the electrical machinery	Check and fix it
	3.Some foreign matter is in the pump	Check to remove it



## Maintenance

▲ Keep the pump clean and prevent foreign matter from entering it.

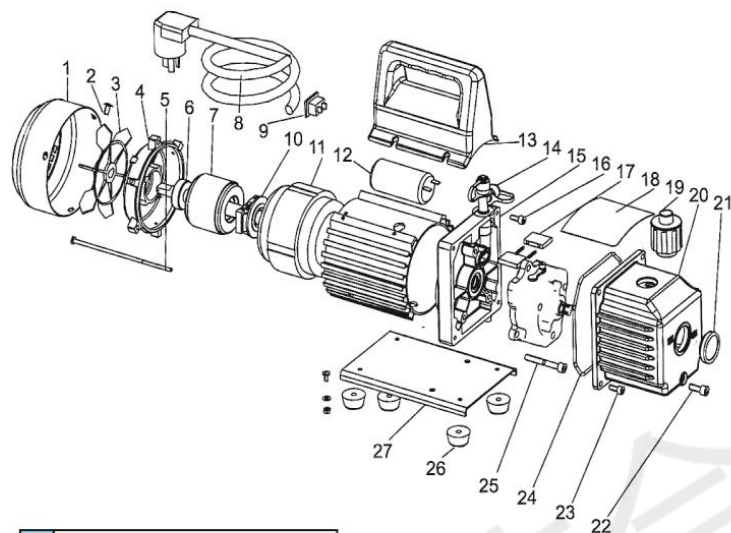
▲ Keep the oil level;Don' t keep it running without oil.

▲ KEEP the oil clean.If it becomes dirty,muddy,or has water or other volatile substances,which affect limit vacuum,the oil should be replaced.Before replacing the oil,start the pump and have it run about 30 minutes to make the oil thin,and then stop it and let out the oil from the oil-outing mouth.Then,have it run 1-2 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 remaining oil in the pump.Do it repeatedly.After making sure the pump is clean,put on the oil-outing screw 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,dampproof and antirust should be considered

▲ If it needs removing and fixing,be sure to have an experienced one do it.

## Exploded Drawing



1	Fan cover
2	Cross screw
3	Fan
4	Motor cover
5	Cross screw
6	Bearing
7	Motor rotor
8	Power supply cords
9	Power switch
10	Centrifugal switch
11	Motor stator
12	Capacitor
13	Handle
14	Inlet fitting
15	Trestle
16	Screw

17	Rotary-vane
18	Cap board
19	Exhaust fitting
20	Die cast aluminum housing
21	Sight glass
22	Oil drain cap
23	Screw
24	Seal
25	Screen
26	Rubber foot
27	Base

