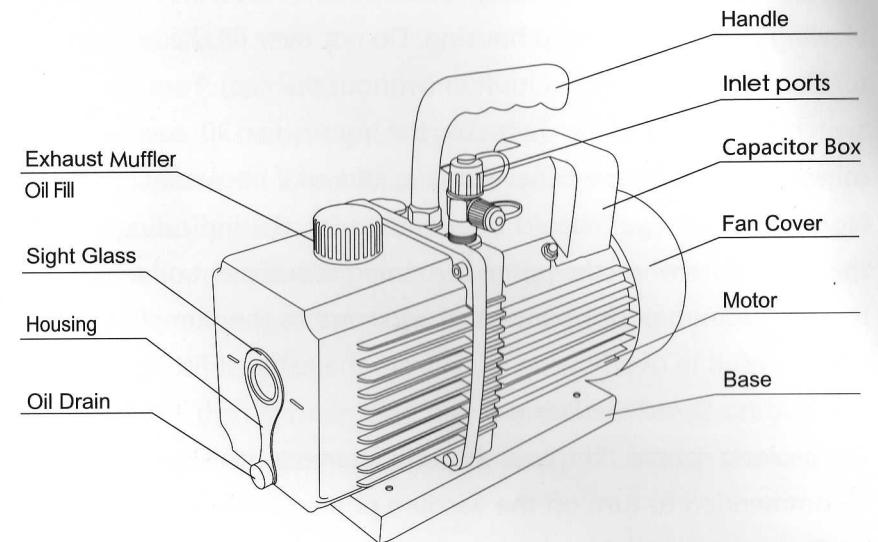


I. Notes and Cautions:

Warning: This vacuum pump is shipped with the vacuum oil drained! Please fill the vacuum pump with vacuum pump oil before turning on the vacuum pump! Running the pump without oil will burn the rotary vanes and void the warranty.

1. Do not use this pump to evacuate combustible, explosive, or poisonous gases.
2. Do not evacuate gases that may contain corrosive materials that may damage the pump chemically or react with vacuum pump oil.
3. Do not evacuate gases that may have small solid particles or dusts that may accumulate in the pump and cause malfunction.
4. Do not use this pump on air streams more than 80°C in temperature.
5. Do not hook up the pump to any pressure higher than atmospheric pressure, refrigerant in AC system needs to be claimed before hooking up to the vacuum pump.
6. Do not operate the pump when the oil is low or dirty.
7. Do not operate this pump with the outlet blocked nor use this pump as a compressing pump.
8. Operate the pump in dry area and do not subject the electric wire or motor to moisture.
9. The exhaust air from this pump may contain oil mist, a harmful health hazard, avoid inhale this air if you have to use it indoors.

II. Pump Components



III. Operational Guide

1. Before operating

The motor on your pump is designed for operating at the voltage as marked, plus or minus 10% of this voltage.

(a) Check the voltage and frequency at the outlet and make sure it matches the specifications on the pump motor metal plate. The ON-OFF switch is in the OFF position before connecting the pump to a power outlet. Remove the exhaust cap(if supplied) and save in a clean place if you are intending to use it for pump storage later.

(b) Remove the whole exhaust muffler from top of the pump housing, fill the oil reservoir with vacuum pump oil which come with the pump or your own supply. Watch the oil level from the sight viewing glass in the pump housing. Do not over fill the pump.

(c) Place back the exhaust muffler (without the cap). Turn the motor switch to ON position. Test run the pump for 30 seconds to a minute, and check the oil level again, add oil if necessary.

Note: The oil level should be aligned with the indicating line on the sight glass when the pump is running. Insufficient oil may result in poor vacuum performance and add ware to the pump. Excessive oil can result in overflowing of oil from the exhaust fitting.

2. Shutting Down the Pump

To prolong pump life and smooth start-up, this procedure is recommended to turn off the vacuum pump:

(a) Close the manifold valve between the pump and the system, or the isolation valve if installed in other operation.

(b) Turn off the power to the pump, unplug the power cord. Remove the utility hose from the pump inlet.

(c) Cover the inlet port openings to prevent any contamination or foreign particles from entering the pump.

IV. Maintenance

1. Vacuum Pump Oil:

Any oil that is labeled as "vacuum pump oil" can be used with this pump, however, low viscosity vacuum pump oil is recommended if you are operation this pump at low temperature, or high viscosity vacuum pump oil is recommended if deep vacuum is desired. We

prefer the High Performance Vacuum Pump Oil as provided by VIOT or other suppliers, which is a special blend for normal running to achieve the maximum vacuum level and to improve cold weather start up.

2. Oil Change Procedure.

(a) A warmed up pump is preferred before oil change.

(b) Remove the Oil Drain Cap. Drain off contaminated oil into a container and dispose it properly according to your local environmental regulation and code. Removing the muffler can enhance the drainage; tilt the pump forward to remove the residual oil.

(c) Place back the Oil Drain Cap. Remove the muffler (if not yet) and fill the oil reservoir with new vacuum pump oil. Watch the oil level from the sight glass.

(d) Test run the pump for a minute or 2, and check oil level, add oil if needed.

(e) Note to clean heavily contaminated pumps:

i) If the oil is badly contaminated with dusts and sludge forms during operation, you may need to remove the pump housing and wipe clean or flush clean the inside, both the pump body and the housing.

ii) Repeat this procedure if desired to make sure all the contaminants is removed from the pump completely.

iii) Reassemble the pump housing and fasten the oil drain cap and refill the oil reservoir to the proper oil level with fresh vacuum pump oil.

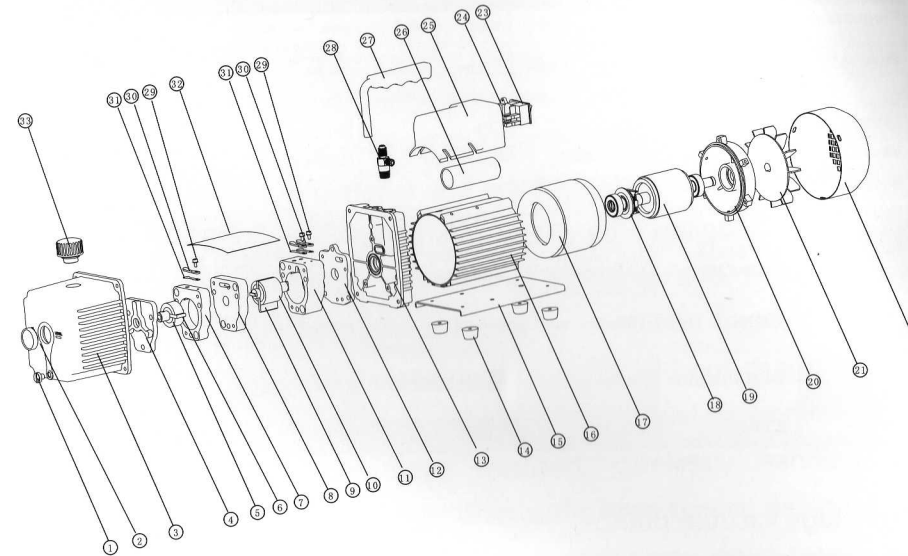
V. Trouble Shooting Guide

Not all problems need a service call, most of them can be corrected by following this trouble shooting guide bellow. If the problem can not be solved, you may initiate a repair service at a VIOT authorized service station.

Trouble Shooting:

Problem	Possible Reason	How to correct it
Not enough vacuum	1. Insufficient oil	1. Add the same vacuum oil
	2. Oil Emulsified or dirty	2. Change oil
	3. Oil inlet blocked	3. Change oil, unblock inlet
	4. Leak on vacuum line	4. Leak prove line/system
	5. Long service line/restriction	5. Short line/eliminate restriction
	6. Wrong pump chosen	6. Upgrade pump
	7. Air valve dirty/not aligned	7. Clean air valve/reposition valve
	8. Vanes/parts worn out	8. Rebuilt pump
Oil Leak	1. Oil seal damaged	1. Replace Oil seal washer
	2. Oump housing damaged	2. Replace pump housing
	3. Bolt(s) loose	3. Tighten bolts in the housing
Heavy Oil mist	1. Too much oil	1. Drain a little oil
	2. Inlet pressure high	2. Pump need load/vacuum control
Hard to Start	1. Oil temperature too low	1. Move to a warmer environment
	2. Vane stuck by foreign matter	2. Open & clean inside of pump
	3. Bad Capacitor	3. Replace start/run capacitor
	4. No electricity	4. Check switch/circuit breaker
	5. Pump burned/motor dead	5. Rebuild pump/replace motor

VI. Technical Drawing



1. OIL DRAIN VALVE	12. PUMP FRONT COVER	23. POWER SWITCH
2. SIGHT GLASS	13. TRESTLE	24. SOCKET
3. HOUSING	14. RUBBER FOOT	25. CAPACITOR
4. PUMP BACK COVER	15. BASE	26. CAPACITOR BOX
5. PUMP BACK ROTOR	16. MOTOR HULL	27. HANDLE
6. BACK ROTARY VANE	17. MOTOR STATOR	28. INLET FITTING
7. PUMP BACK STATOR	18. BEARING	29. SCREW
8. MIDDLE FENCE	19. MOTOR ROTOR	30. RETAINER
9. FRONT ROTARY VANE	20. MOTOR COVER	31. VALVE PLATE
10. PUMP FRONT ROTOR	21. FAN	32. CAP BOARD
11. PUMP FRONT STATOR	22. FAN COVER	33. EXHAUST FITTING

VII. Technical Parameter

Single stage vacuum pumps

Models	VPDS2		VPDS3		VPDS6		VPDS9		VPDS12	
	50HZ	60HZ	50HZ	60HZ	50HZ	60HZ	50HZ	60HZ	50HZ	60HZ
Frequency										
Flow rate	1.5CFM 42L/min	1.8CFM 50L/min	2.5CFM 71L/min	3.0CFM 85L/min	5.0CFM 142L/min	6.0cfm 170L/min	8.0CFM 227L/min	9.0CFM 255L/min	10CFM 283L/min	12CFM 340L/min
Ultimate Vacuum	5Pa		5Pa		5Pa		5Pa		5pa	
Vacuum	0.05mBar		0.05mBar		0.05mBar		0.05mBar		0.05mBar	
Stage	1		1		1		1		1	
Power	1/4HP		1/3HP		1/3HP		3/4HP		3/4HP	
Inlet port	1/4"SAE & 1/2"ACME		1/4"SAE & 1/2"ACME		1/4"&3/8"SAE & 1/2"ACME		1/4"&3/8"SAE & 1/2"ACME		1/4"&3/8"SAE & 1/2"ACME	
Oil Capacity	200ml		230ml		600ml		800ml		890ml	
Dimensions (mm)	240X93X200		240X93X200		305X132X240		370X140X252		390X140X252	
Weight	4.0KG		4.3KG		6.8KG		14KG		14KG	

Two stage vacuum pumps

Models	VPD2		VPD3		VPD6		VPD9		VPD12	
	50HZ	60HZ	50HZ	60HZ	50HZ	60HZ	50HZ	60HZ	50HZ	60HZ
Frequency										
Flow rate	1.5CFM 42L/min	1.8CFM 50L/min	2.5CFM 71L/min	3.0CFM 85L/min	5.0CFM 142L/min	6.0cfm 170L/min	8.0CFM 227L/min	9.0CFM 255L/min	10CFM 283L/min	12CFM 340L/min
Ultimate Vacuum	0.3 Pa		0.3 Pa		0.3 Pa		0.3 Pa		0.3 Pa	
Vacuum	25 microns		25 microns		25 microns		25 microns		25 microns	
Stage	2		2		2		2		2	
Power	1/4HP		1/3HP		1/2HP		1HP		1HP	
Inlet port	1/4"SAE & 1/2"ACME		1/4"SAE & 1/2"ACME		1/4"&3/8"SAE & 1/2"ACME		1/4"&3/8"SAE & 1/2"ACME		1/4"&3/8"SAE & 1/2"ACME	
Oil Capacity	150 ml		450 ml		450 ml		600 ml		600 ml	
Dimensions (mm)	240X93X200		305x132x240		305X132X240		370X140X252		390X140X252	
Weight	4.5KG		11.5 KG		12 KG		15.5 KG		16 KG	

Limited Warranty

VIOT warrant, to the original purchaser, that this product will be free from defect in material and workmanship for a period of one year from the date of purchase. VIOT's sole obligation and your exclusive remedy under this Limited Warranty and, to the extent permitted by the law, any warranty or condition implied by law, shall be the repair or replacement of parts, without charge to the original purchaser, which is defective in material or workmanship and which have not been misused, carelessly handled, or mal-repaired by person other than authorized service personal. To make a claim under this Limited Warranty, you must return the complete product, transportation prepaid to VIOT or authorized service station.