

WARRANTY INFORMATION

One year warranty. Ritchie Engineering guarantees this vacuum pump product to be free of defective material and workmanship which could affect the life of this product when used for the purpose for which it was designed. This warranty does not cover items that have been altered, abused (including failure to use the correct type of vacuum pump oil) or returned solely in need of field service maintenance.

If found defective, we will either repair or replace at our option products within warranty period. Returns must be prepaid.

Warranty does not cover the use of lithium bromide, ammonia, or leak stop type products.

How to Obtain Service

Most returned pumps are merely in need of normal field service maintenance, such as changing oil or making minor adjustments. If the pump is within the one year warranty period and the information contained in this manual does not solve the problem, please call for service:

Phone: 00-44-(0) 1738-459-020
 Fax: 00-44-(0) 1738-550-015
 E-mail: info@fairfieldtechnologies.co.uk

You will receive personal help in determining if the problem can be solved without sending your pump in for repair and taking it out of service.

Returns:
 Ritchie Engineering Co., Inc.
 Unit 10, Riverview Business Park
 Friarton Road
 Perth
 PH2 8DF
 United Kingdom

Corporate Office:
 Ritchie Engineering Co., Inc.
 10950 Hampshire Avenue South
 Bloomington, MN 55438-2623
 United States
 www.yellowjacket.com

YJII™ Vacuum Pump

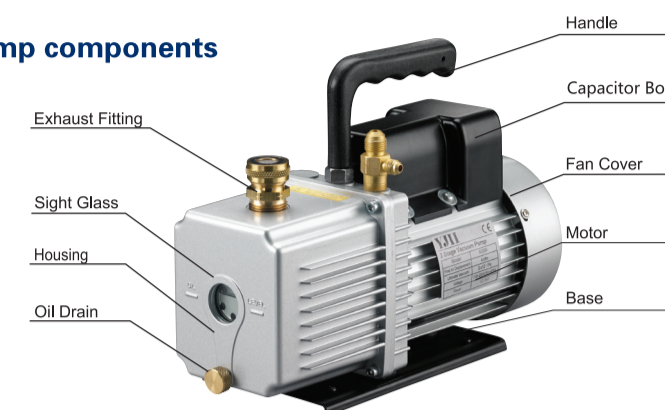
4 cfm

Operating Manual



Read carefully before using

I. Pump components



II. Operating Manual

1. Before operating

All motors are designed for operating voltages plus or minus 10% of the normal rating. Single voltage motors are supplied fully connected and ready to operate.

(a) Check the voltage and frequency at the outlet and ensure it matches the specifications on the pump motor metal plate. Ensure that the ON-OFF switch is in the OFF position before connecting the pump to a power source. Remove and discard the exhaust plug from the exhaust fitting.

(b) If required, fill the oil reservoir with oil before turning on the pump. Remove the Oil Fill cap and add oil until oil shows at the bottom of the sight glass. Refer to technical data in manual for the correct oil capacity of pump.

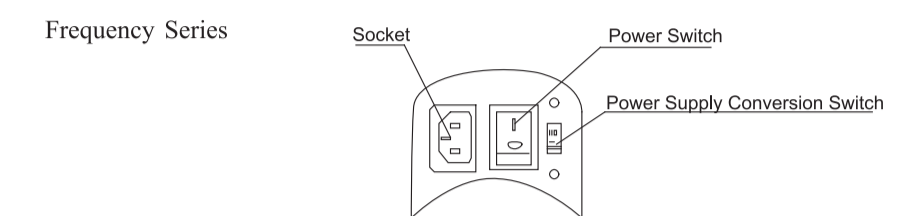
(c) Replace the Oil Fill cap and remove the cap from the inlet fitting. Turn the motor switch to ON position. Place back the cap on the inlet fitting when the pump runs smoothly. This may take 2 to 30 seconds depends on the ambient temperature.

After the pump operates for approximately one minute, check the sight glass for proper oil level, which should be aligned with the sight glass Oil Level line. Refill oil if necessary.

VII. Dual Voltage & Dual Frequency Series

1. Outlook Structure

Use below outlook drawing for better understanding of Dual Voltage & Dual Frequency Series



2. Technical Parameter:

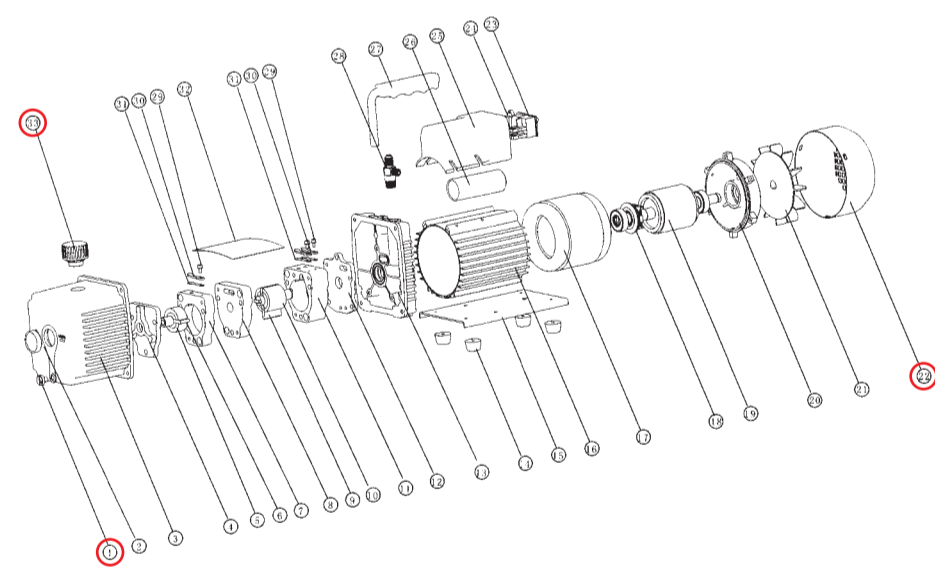
Dual Voltage vacuum pump

Model	93265
Frequency	50/60Hz
Flow Rate	4.0CFM 115L/min
Ultimate Vacuum	2x10 ⁻¹ Pa 15 microns
Stage	2
Power	1/2HP
Inlet Port	1/4" & 3/8" SAE
Oil Capacity	350ml
Dimensions(mm)	320x125x232
Weight	8.3kg

Note:

- This product operates in ambient temperature: 5°C–40°C
- Power supply for this product is 110-220V 50/60Hz
 Check the power supply parameter before using the vacuum pump to ensure the power supply conversion switch is at the right setting: 110V or 220V.
- This product is equipped with Thermal Protection function: If the ambient temperature is too hot or the voltage is too high, the product may stop functioning. It is recommended not to switch off the power supply immediately. If the product automatically restarts after three minutes, it is recommended to cool the product by lowering the ambient temperature or power supply voltage to prolong the life of the vacuum pump.

V. Technical Drawing



PART DESCRIPTIONS (Available parts in red)

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. MID. SUPPORT ON 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 (includes filter)

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

2. To shut off pump after use

To prolong pump lifespan and smooth start-up, these procedures to shut off pump should be followed.

- Turn off the manifold valve between the pump and the system.
- Remove the hose from the pump inlet.
- Cover the inlet port openings to prevent any contamination or foreign particles from entering the port.

III. Maintenance

1. Vacuum pump oil:

The condition and type of oil used in any high performance vacuum pump are extremely important in determining the ultimate attainable vacuum. It is recommended to use High Performance Vacuum Pump Oil, which is specifically blended to maintain maximum viscosity at normal running temperatures and to improve cold weather start up.

2. Oil Change Procedure

- Ensure the pump is warmed up.
- Remove the Oil Drain cap. Drain off contaminated oil into a container and dispose it properly. Oil can be removed from the pump by opening the inlet and partially blocking the exhaust with a cloth while the pump is running. Do not operate the pump for more than 20 seconds using this method.

(c) When the drainage of oil completed, tilt the pump forward to remove the residual oil.

(d) Replace the Oil drain plug. Remove the Oil Fill cap and fill the oil reservoir with new vacuum pump oil until the oil level is seen at the bottom of the sight glass.

(e) Ensure that the inlet ports are covered before turn on the pump. Allow it to run for one minute to check the oil level. If the oil level is below the sightglass Oil Level line, fill oil slowly (with the pump running) until the oil reaches the Oil Level line. Replace the Oil Fill cap, ensure the inlet is covered and the oil drain cap is closed tightly.

(f) i) If the oil is badly contaminated with sludge that forms during operation, you may need to remove the oil reservoir cover and wipe it.

ii) The alternative method to deal with heavily contaminated oil is to force the oil from the pump reservoir. Leave the pump to run until it is warmed up. While the pump is still running, remove the oil drain cap and restrict the exhaust slightly. This will back-pressure the oil reservoir and purge the oil with contaminants. Turn off the pump when oil stop flowing.

iii) Repeat this procedure as required until the contaminants is removed completely.

iv) Replace the Oil Drain cap and refill the oil reservoir to the proper oil level with clean vacuum pump oil.

IV. Troubleshooting Guide

Following guide will help you to recover the functionality should there be any malfunctions:

1. Failure To Start

Check the operating voltage. The pumps are designed to start at ±10% operating voltage (loaded) at 5°C. However, if the maximum voltage is exceeded, switch malfunction may occur.

2. Oil leakage

- Ensure the oil is not spilled from vacuum pump, etc.
- If leakage occurs, the housing gasket or the shaft seal may need to be replaced. If leakage exists in the area of the oil drain plug, you may need to resal the plug using a commercial pipe thread sealer.

3. Failure To Attain A Good Vacuum

(a) Ensure the vacuum gauge and all connections are in good condition and leakfree. You can confirm leakage by monitoring the vacuum with a thermistor gauge while applying vacuum pump oil at connections or suspected leak points. The vacuum will improve briefly while the oil is sealing the leak.

(b) Ensure the pump oil is clean. A badly contaminated pump may require several oil flushes.

(c) Ensure the oil is at the proper level. For optimum pump operation, the oil must be even with the Oil Level line on the sight glass when the pump is running. Do not overfill as operating temperatures will cause the oil to expand, which will appear at a higher level than when the pump is not running. To check the oil level, start the pump with the inlet covered. Check the oil level in the sight glass. Add oil if necessary.