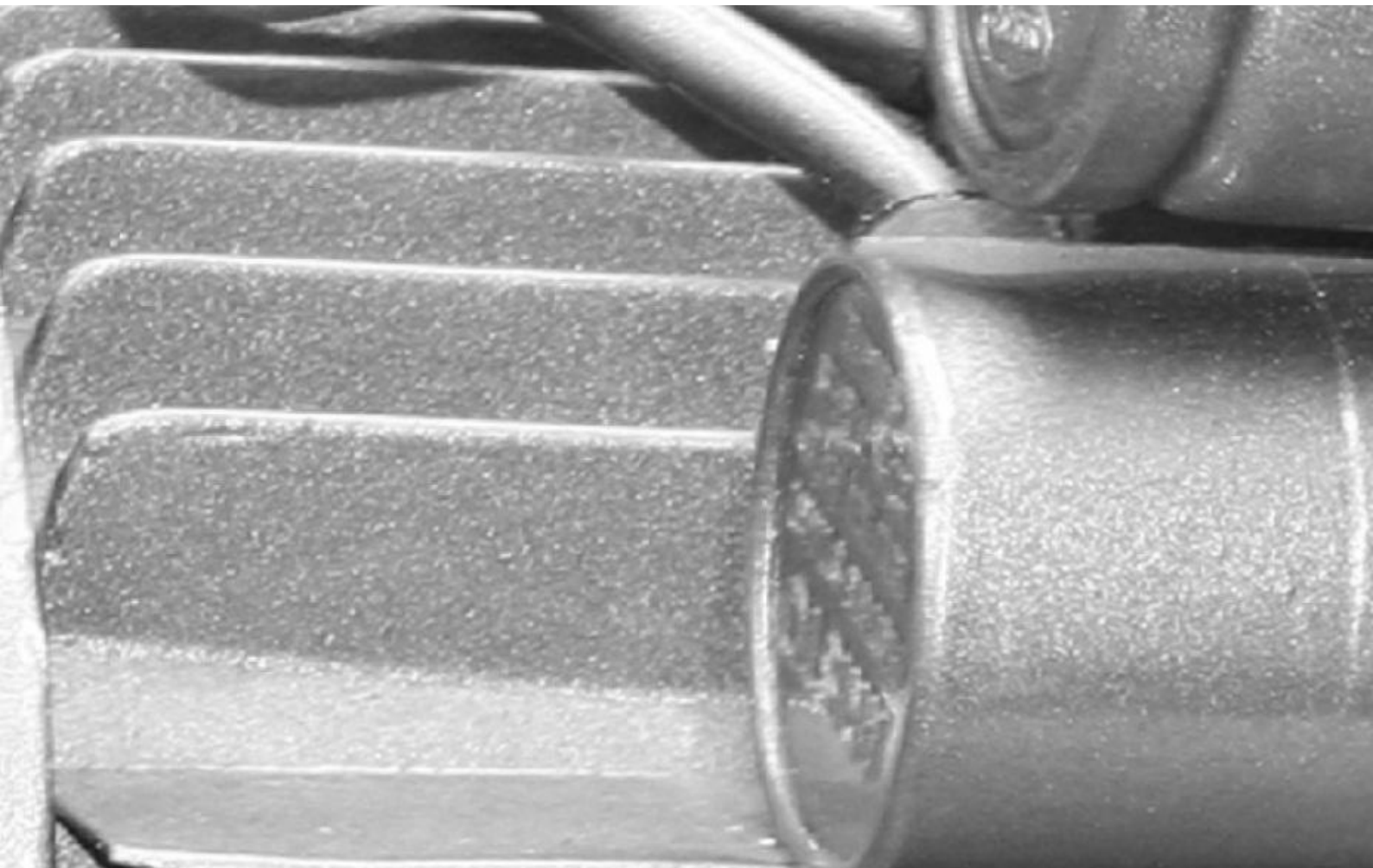




AN ISO 9001:2008 CERTIFIED COMPANY

USER MANUAL

VACUUM MACHINE

QS 780 VSG



www.sevana.com

YOUR PACKAGING PARTNER

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1. FOREWORD

Thank you for choosing Sevana. You now belong to the Sevana family of over one million satisfied customers across the world. We are confident that you will have many years of complete satisfaction from this Sevana product.

We want you to derive maximum value from Sevana's reliable service and support infrastructure in India. We maintain Sevana's service mission of working continuously to provide customers with highest level of service, thereby ensuring mutually successful long term business association.

You can contact us through

Toll Free No	:	1800 425 0780	
Phone	:	+91-484-2680780	Monday to Saturday
Mobile	:	+91-9388180781	8.30 am – 5.00pm IST
Fax	:	+91-484-2680680	
Email	:	support@sevana.com	

We value your partnership

Yours sincerely

For Sevana Electrical Appliances Pvt. Ltd.

Manager in charge, Customer support

While contacting the support centre kindly provide the following information for a speedier support and service.

- i. Model
- ii. Serial no.
- iii. The nature of problem

2. HOW TO USE THIS MANUAL

- ❖ Please read this manual carefully before installing and commissioning the machine.
- ❖ Please keep a copy of this manual for reference near the machine.

The information in this document is believed to be accurate and reliable. However, Sevana Electrical Appliances Pvt Ltd, cannot accept any financial or other responsibilities that may result from the use of this information. No warranties are granted or extended by this document.

Sevana Electrical Appliances reserves the right to change any or all information contained herein without prior written notice. Revisions may be issued at the time of such changes and/or deletions.

3. SAFETY PRECAUTIONS

❖ Introduction

Machines of Sevana have been designed to provide extremely safe and dependable operation when properly used. Safety precautions must be observed during normal operation and when servicing the machines of Sevana.

❖ Warning

A warning describes safety hazards or unsafe practices which could result in personal injury or loss of life. A warning message is accompanied by a symbol as described in the following paragraphs and is also surrounded by a box to attract your attention.



Open the back cover of the machine only after isolating the power supply



Check oil level of vacuum pump regularly

4. PACKING SLIP

Name	Quantity
User manual	1
Warranty card	1
Vacuum pump oil	2000 ml /pump

5. TECHNICAL SPECIFICATIONS

Machine's dimensions (L x W x H)	1100mm x 620mm x 860mm
Chamber dimensions (L x W x H)	920mm x 600mm x 190mm
Sealing dimensions (L x W)	780mm x 10mm, 580mm x 10mm
Voltage/frequency	415V / 50Hz / 3P
Power	3 kW
Pump capacity	40m ³ /h

6. INSTALLATION

- ❖ Open the back door & fill vacuum oil.
- ❖ Give three phase power & check phase sequence indicator.
- ❖ Switch on the machine by press power button on the front panel.
- ❖ Set parameters (vacuum level, flushing level, sealing time & cooling time) as per product & pouch.
- ❖ Shutdown process: switch off the MCB.

7. CONTROL PANEL



1. LCD display
2. Control buttons
3. Phase indicator
4. Power LED

8. FILLING VACUUM PUMP WITH OIL

There is no vacuum pump oil in the newly delivered machine. If the vacuum pump works without oil it will damage the pump, even in a short time. Please make sure that the vacuum pump has been filled with the oil up to the mark before the start-up.

1. Open the back cover.
2. Fill the machine with Sevol V/equivalent vacuum pump oil (2000ml).
3. Make sure the oil level is between 1/2 and 3/4 of the oil level indicator.
4. Close the oil filler plug.
5. Wait for 3 minutes.
6. Check the oil level is between 1/2 and 3/4 of the oil level indicator. If it is less than 1/2, please add more.
7. If the oil level is between 1/2 and 3/4 of the oil level indicator fix the back door.

9. POWER CONNECTION

- ❖ Check whether the supply voltage is as per the specification.
- ❖ Connect the power cord to three phase power socket.
- ❖ Please replace the cable if it is damaged
- ❖ Please isolate the power supply during maintenance
- ❖ Isolate the power supply after use.

10. PROGRAM MODES

Sevana microprocessor based vacuum machine has 4 preset modes or programs. Each program can be set with different parameters. Variable parameters in each mode are

PARAMETER	RANGE
Vacuum level	0-760mm Hg(Vacuum level in the chamber)
Flush1 (Gas1)	0-760mm Hg
Flush(Gas2)	0-760mm Hg
Flush3(Gas3)	0-760mm Hg
Sealing time	0.0 - 6.0 Sec(Depending up on the pouch material)
Cooling time	1 - 9 sec

- Vacuum levels represents in millimeter mercury up to vacuum has to be achieved (-760mmHg absolute vacuum, 0 is normal atmospheric pressure).
- Flush 1 represents level up to which first gas is flushed. If vacuum level is 720 and flush 1 is 500, chamber is vacuumized to level 720mmHg (95%vacuum) and first gas is flushed to the chamber till vacuum level reaches 500.
- Flush 2 represents level up to which second gas is flushed. If vacuum level is 720, flush 1 is 500 and flush 2 is 400(53% vacuum) chamber is vacuumized to level 720 and first gas is flushed to the chamber till vacuum level reaches 500, second gas is flushed to the chamber till vacuum level reaches 400.
- Flush 3 represents level up to which third gas is flushed. If vacuum level is 720, flush 1 is 500 and flush 2 is 400 and flush 3 is 300(40% vacuum) chamber is vacuumized to level 720, first gas is flushed to the chamber till vacuum level reaches 500, second gas is flushed to the chamber till vacuum level reaches 400, and third gas is flushed till vacuum level reaches 300.

TO FLUSH SINGLE GAS:

Set the levels to desired value. Set Flush1 to the level to which gas has to be flushed.(Eg: If the required vacuum is 720mmHg, gas has to be flushed up to 300 mmHg, set vacuum to 720, flush 1 to 300, flush 2 to 300, flush 3 to 300, so no gas is flushed after flush 1.

USING ONLY VACUUM:

If only vacuum is required, select MODE 4 by pressing the "MODE" button.

MODE: 4 VACUUM: 760mmHg

TO PRESET PROGRAM MODES :

Select the mode by pressing "MODE" button. To set the parameters press "SET" button.

MODE: 1 VACUUM: 760mmHg

To change the vacuum press the "UP" or "DOWN" button continuously till the required value is displayed.

To select the next parameter and save the preset value press SET again.

MODE: 1 FLUSH1: 600mmHg	MODE: 1 FLUSH2: 570mmHg
MODE: 1 FLUSH3: 720mmHg	MODE: 1 SEALING: 3SEC
MODE: 1 COOLING: 8SEC	MODE: 4 VACUUM ERROR: OFF

If again presses SET, machine will go to READY MODE. Vacuum Error ON/OFF option is given with Mode4 for vacuuming the Frozen Products.

11. STARTING THE MACHINE

CONTROL BUTTONS:

- | | |
|---------|--------------|
| ❖ Power | ❖ Stop/Reset |
| ❖ Mode | ❖ Set |
| ❖ Up | ❖ Down |

A LCD check function is done first. Version of the software is displayed.

INITIALIZING.....	SEVANA OS VAC 4.00
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The machine has four (4) modes/program presets. Each mode preset parameters are

- ❖ VACUUM LEVEL
- ❖ FLUSHING(1,2,3)
- ❖ SEALING TIME
- ❖ COOLING TIME

These parameters can be modified by the operator if required. The machine will automatically go to the previously used mode after initializing.

MODE: 1 READY MODE

Now the lid is closed, then vacuum increases up to the preset level.

MODE: 1 VACUUM: 0000mmHg

When the vacuum is built up to the preset level the message will change to an indication given below.

MODE: 1 FLUSH1:600mmHg

When the preset level pressure value reached, sealing will be ON. After sealing cooling ON

MODE: 1 SEALING: - ON

MODE: 1 SEALING: - OFF

MODE: 1 COOLING: - ON

After that the lid open automatically and the display changes to “ready mode”

MODE: 1 READY MODE

TO RESTART THE MACHINE:

Press the “STOP” button for 1 second.

INITIALIZING.....

SEVANA OS VAC 4.00

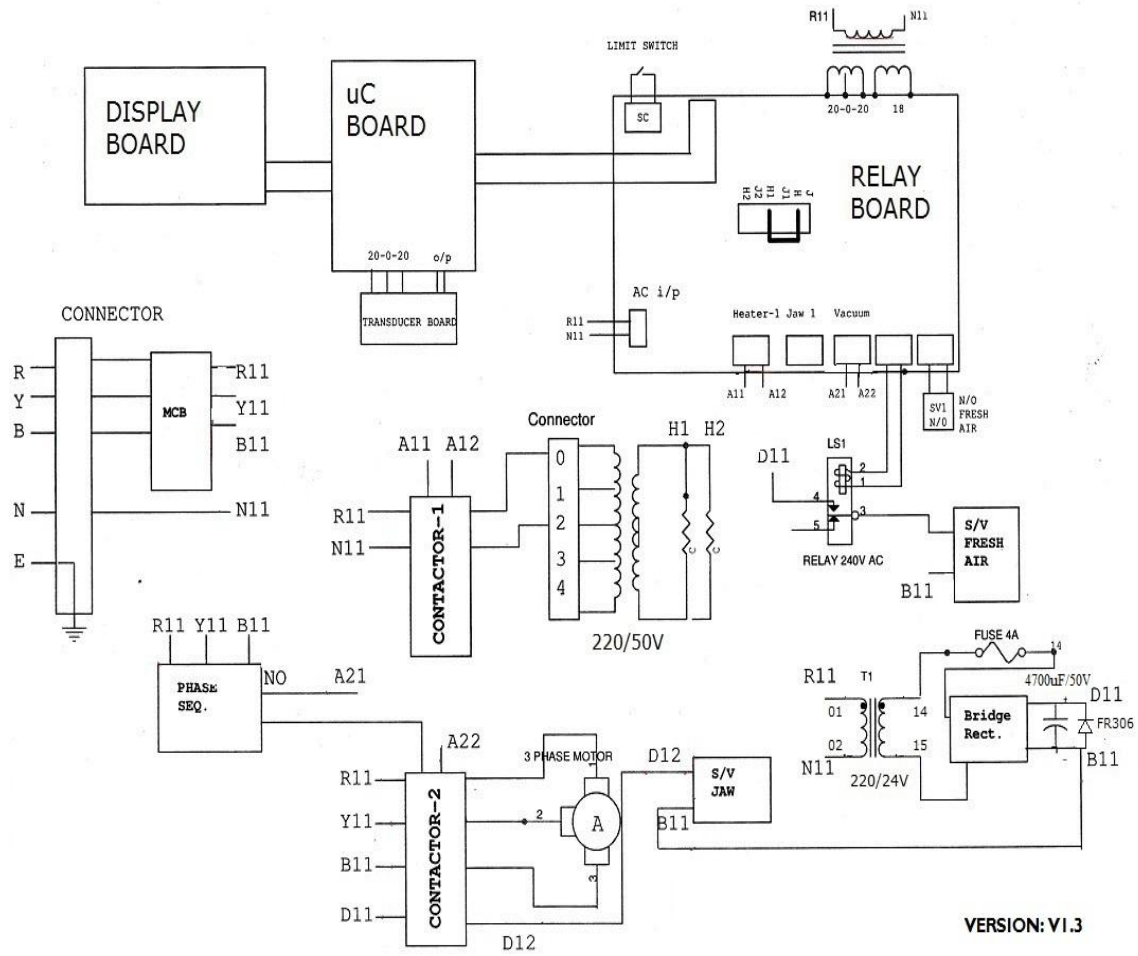
MODE: 1 READY MODE

12. OPERATION

- ❖ Switch on the supply
- ❖ Adjust the vacuum and other parameters
- ❖ Select the required mode
- ❖ Select the sealing side by turning heater switch at front of machine.
- ❖ Insert the product into the film pouch and then place it in the vacuum chamber in such a way that the open end of the pouch is in between sealing element and jaw.
- ❖ Close the lid.
- ❖ After the operation cycle, lift the lid and inspect the product.

Machine is now ready for next operation

13. ELECTRICAL SCHEMATIC



14. TROUBLESHOOTING

No.	Complaint	Reasons	Remedy
1	Machine does not work; power switch does not light up at switch on position.	1.No AC supply. 2.Fuse blown/MCB tripped. 3.Mains cord failure. 4.Power switch failure.	1.Restore AC supply. 2.Check for any short circuit or replace the fuse/reset the MCB. 3.Replace mains cord. 4.Replace the switch or board.
2	Vacuum pump does not work when lid is closed and vacuum level is always displayed	1.Micro switch does not operate. 2.Defective micro switch. 3.Defective contactor (coil open or contact burned out). 4.Defective relay. 5.Defective motor.	1. Adjust switch operating lever screw suitably to operate the switch when lid is closed. 2.Replace the micro switch. 3.Replace the contactor. 4.Replace the relay board. 5.Replace or rectify the motor.
3	The lid does not remain closed even after vacuum pump starts	1.Lid gasket does not touch the chamber face uniformly.	a.Press the lid with both the hands at the corner of lid. b.Check the gasket for any damage and replace if necessary. c.Check the height of lid hinge. If the hinge height is optimum, the lid can be closed easily and the gasket touches the chamber uniformly.
4	Insufficient Vacuum Reading	1.Low vacuum setting 2.Solenoid valve leaks: atmospheric air enters in to the chamber through the solenoid valve due to, a)Defective solenoid valve. b)Defective relay. 3.Low oil level in the vacuum pump. 4.Moister contaminated oil. 5.Vacuum leaks through lid gasket/bolt holes on the lid/pipe joints/bushes at cable entry. 6.Wear and tear of vanes of vacuum pump. 7.Defective transducer Board or twisted cable to transducer board.	1.Increase the vacuum setting. 2. a)Replace the solenoid valve. b)Replace relay board. 3.Keep the required oil qty in the vacuum pump. 4.Drain the oil completely and refill. 5.Identify the location of leakage and replace the defective components or rectify the problem by tightening the joints. 6.Overhaul /replace the pump. 7.Replace the defective.
5	Sealing head operate but sealing does not takes place	1.Low sealing time setting. 2.heating element failure. 3.Defective sealing transformers.	1.Increase sealing time. 2.Replace heating element. 3.Replace defective sealing transformers.
6	Machine halts after sealing	1.Defective relay. 2.Defective air inlet solenoid valve.	1.Replace the relay board. 2.Replace solenoid valve.
7	Pouch expands during vacuum time	1.Low gap between sealing head and pad holder assembly.	1.Increase the gap by adjusting the pad holder assembly.
8	Nonuniform sealing	1.High gap between sealing head and pad holder assembly. 2.Sealing head and pad holder	1.Reduce the gap. 2.Align sealing head and pad

		not align properly. 3.Burnt Teflon fabric.	holder. 3.Replace the Teflon fabric.
9	Machines works fine, but blank/garbage display	1.Defective display. 2.FRC cable of display or its connector defective. 3.EMI issue	1. Replace display board. 2.Replace cable and connector. 3.Give 103 disc capacitor between 1 st & 2 nd , 15 th & 16 th pins of LCD.
10	The Microcontroller does not responding to push button pressing.	1.Defective switches. 2.Defective FRC Cable of Display PCB	1.Replace display board. 2.Replace cable and connector.
11	System hangs during operation	1.Temporary bug in program due to noise. 2.Defective micro controller board.	1.Switch off and restart the machine. 2.Replace Microcontroller board.
12	Overheating of Heating element/Transformer	1.Short circuit with body of machine. 2.Defective Relay/IRF 540 of heater in Relay PCB	1.Make proper wire connections. 2.Replace Relay PCB.
13	Machine trips while pump starts working or abnormal sound of pump.	1.Winding short with body. 2.Defective centrifugal switch. 3.Defective love jaw coupling bush.	1.Rewind or replace the pump. 2.Replace the switch or pump. 3.Replace the bush or pump.
14	Lid doesn't open after completing the operation.	1.Defective relay in the relay board. 2.Solenoid coil burned out.	1.Replace it. 2.Replace the coil.
15	Display shows fresh air always	1.Misalignment of micro switch. 2.Defective micro switch.	1.Correct the position. 2.Replace the switch.
16	Fuse blown out when machine is switched on	1.Short circuit of any part with machine body.	1.Check and correct it.
17	24V Transformer Fuse blown out.	1. Solenoid coil burned out.	1.Replace it.

15. SERVICE LOG

[illegible]