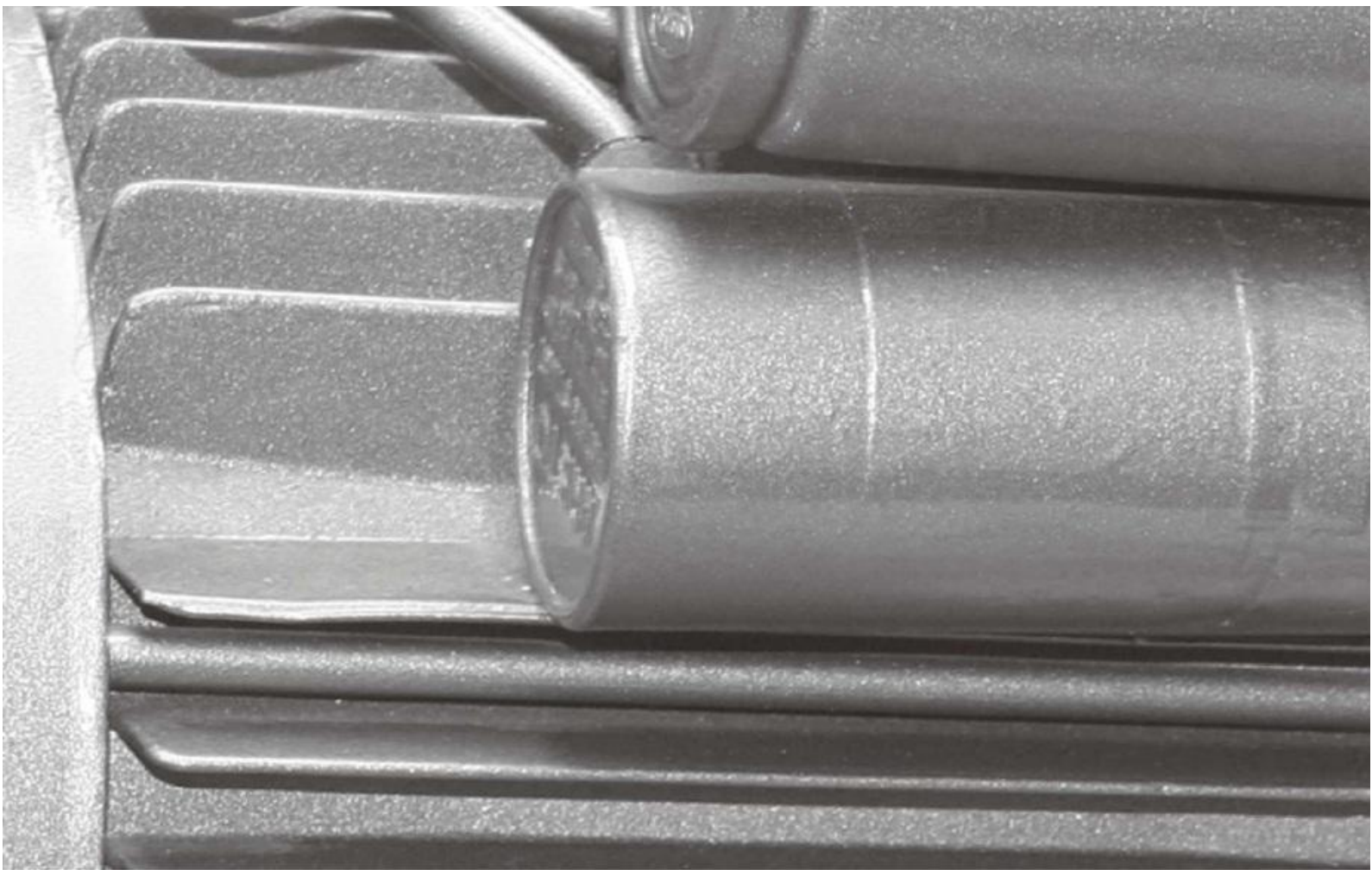




AN ISO 9001:2015 CERTIFIED COMPANY

USER MANUAL

Floor-top Vacuum machine

QS500VSGV4



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	:	18004250780	
Email	:	customercare@sevana.com	
Phone	:	+91-484-2680780	Monday to Saturday
Mobile	:	+91-9388180781	8.30 am – 5.00pm IST

We value your partnership

Yours sincerely

For Sevana Electrical Appliances Pvt. Ltd.

Manager in charge, Customer support

While contacting the support center 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.

- ✧ Never try to vacuum pack explosives or corrosive gassing materials.
- ✧ Do not start the machine before filling oil in the vacuum pump. The machine is shipped after draining the vacuum pump. Use “Sevol V” vacuum pump oil to fill the vacuum pump. Do not overfill the vacuum pump.
- ✧ Do not plug the machine to any 2 pin socket or ungrounded 3pin socket.
- ✧ If the plug has to be changed, follow the colour code ,

Red - Phase

Black - Neutral

Green/Gray - Earth

- ✧ Remove all the packaging from the chamber. Wipe with a dry cloth.
- ✧ If the machine is used continuously; drain out and replace the oil in the pump once in a month/5000 production count with new Sevol V vacuum pump oil.
- ✧ Stuff the necessary buffer plates in the chamber such that evacuation volume is the least. This will enhance the efficiency of the machine.

❖ 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. PRODUCT DESCRIPTION



5. PACKING SLIP

Item	Qty
User manual	1.26 mtr
Warranty card	1
Heating element	1
Vacuum pump oil	0.5 litre
Poly urethane tube 8mm	1.5 mtr
Male connector 1/4-inch x 8mm	1
Union t 8mm	1
Screwdriver	1
Allen key 4 mm	1
Double end spanner 12x13	2
Double end spanner 27x32	1

6. UNPACKING

- ❖ The machine is shipped well packed in wooden box
- ❖ Place the packet with the “top” marked to the top
- ❖ Remove the 4 sides and the top cover
- ❖ The machine comes with 4 castor wheels; push the machine to the level of ground
- ❖ Remove the stretch wrapping film wrapped around the machine.
- ❖ Inspect for any transit damages. If any damages are found, notify the dealer or company immediately.

Tools required to unpack
● Pry bar/Crowbar ● Claw hammer

7. INSTALLATION

- a. Fit the shock absorber on both sides



- b. Open the back door & fill vacuum pump oil.
- c. Connect plug to a single phase power socket .
- d. Switch on the MCB & then press power button on the front panel.
- e. Select MODE & set parameters (vacuum level, flushing level, sealing time & cooling time) as per product & pouch.
- f. For gas flushing,
 - a) Use 8mm PU tube to connect gas cylinder to gas inlet marked on the machine.
 - b) Use MODE1 / MODE2 / MODE3.
- g. The Vacuum level should be higher than the Flush1 value. Flush2 & Flush 3 facility not available in this model.
- h. Shutdown process: switch off the MCB.

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.

- a. Open the back cover.
- b. Loose oil filling cap.
- c. Fill the machine with Sevol V vacuum pump oil(500ml).
- d. Close the cap and fix the back door.

Note: for draining the oil loosens the oil removing cap. The oil comes out through the hole and can be collect in a tray kept under the outlet.



9.MAINTENANCE

CAUTION : Remove mains cord before maintenance



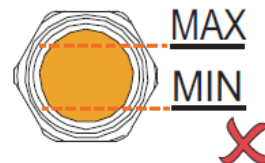
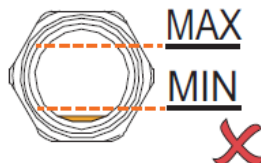
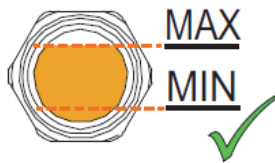
Clean the machine daily after usage.



Clean element & element bed to remove any adhesive deposited on it.



Check the Oil level every week.



Change oil every 5000-cycle count or every 2 months depending upon the production. if the product is moisture based. (Like Paneer, fish, meat etc.) replace oil every 1 month.

Note: Use vacuum pump grade oil. Common automotive lubricants must not be used. We recommend using SEVANA vacuum pump oil.

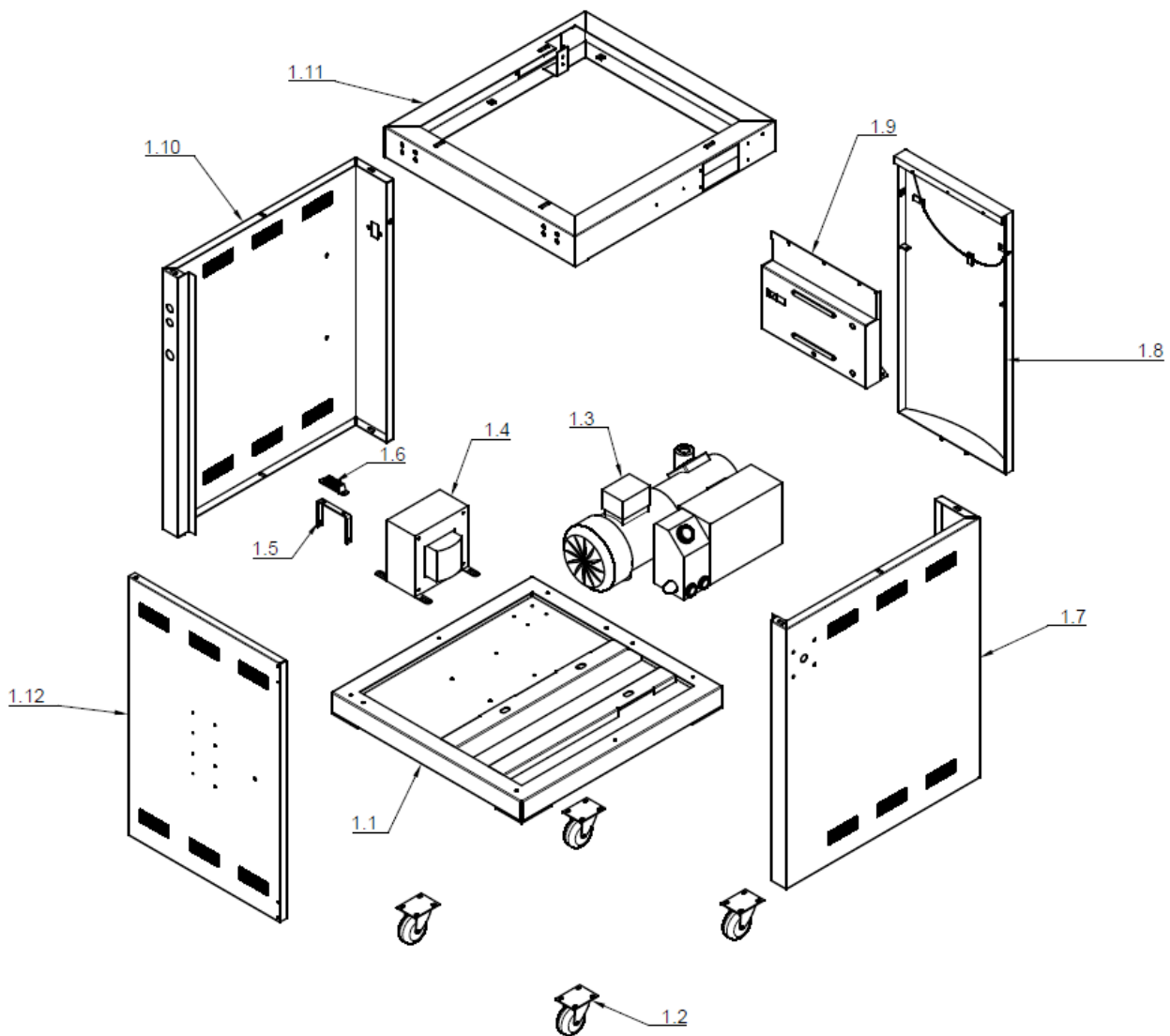


An "Oil change" message will be displayed upon the completion of every 5000 operation cycles. Drain out the existing oil and pour in new oil as per instructions. Then press the SET, UP and DOWN buttons together to reset the Oil alarm.

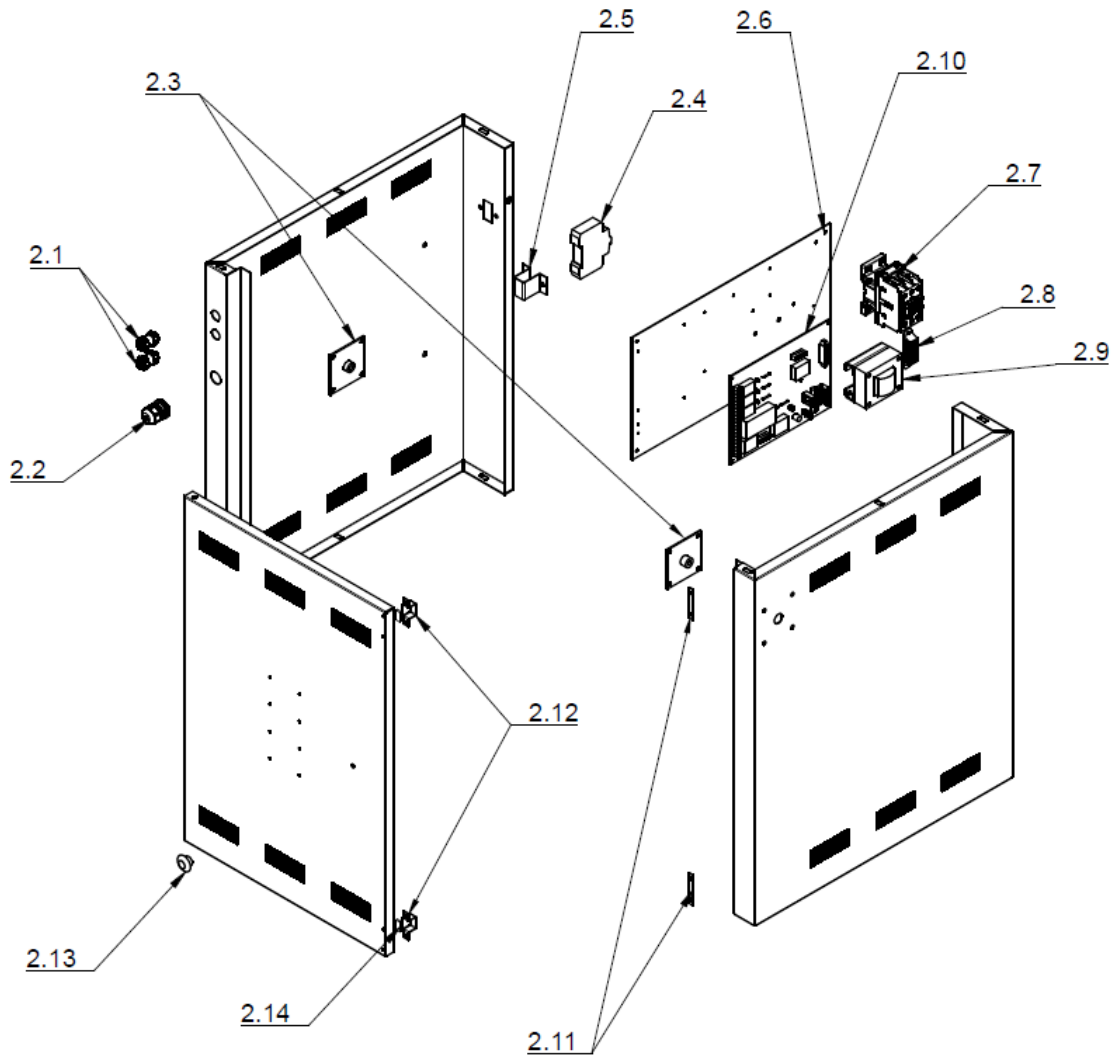
Regularly inspect the gasket, teflon cloth and teflon tape. Replace these depending on the condition.



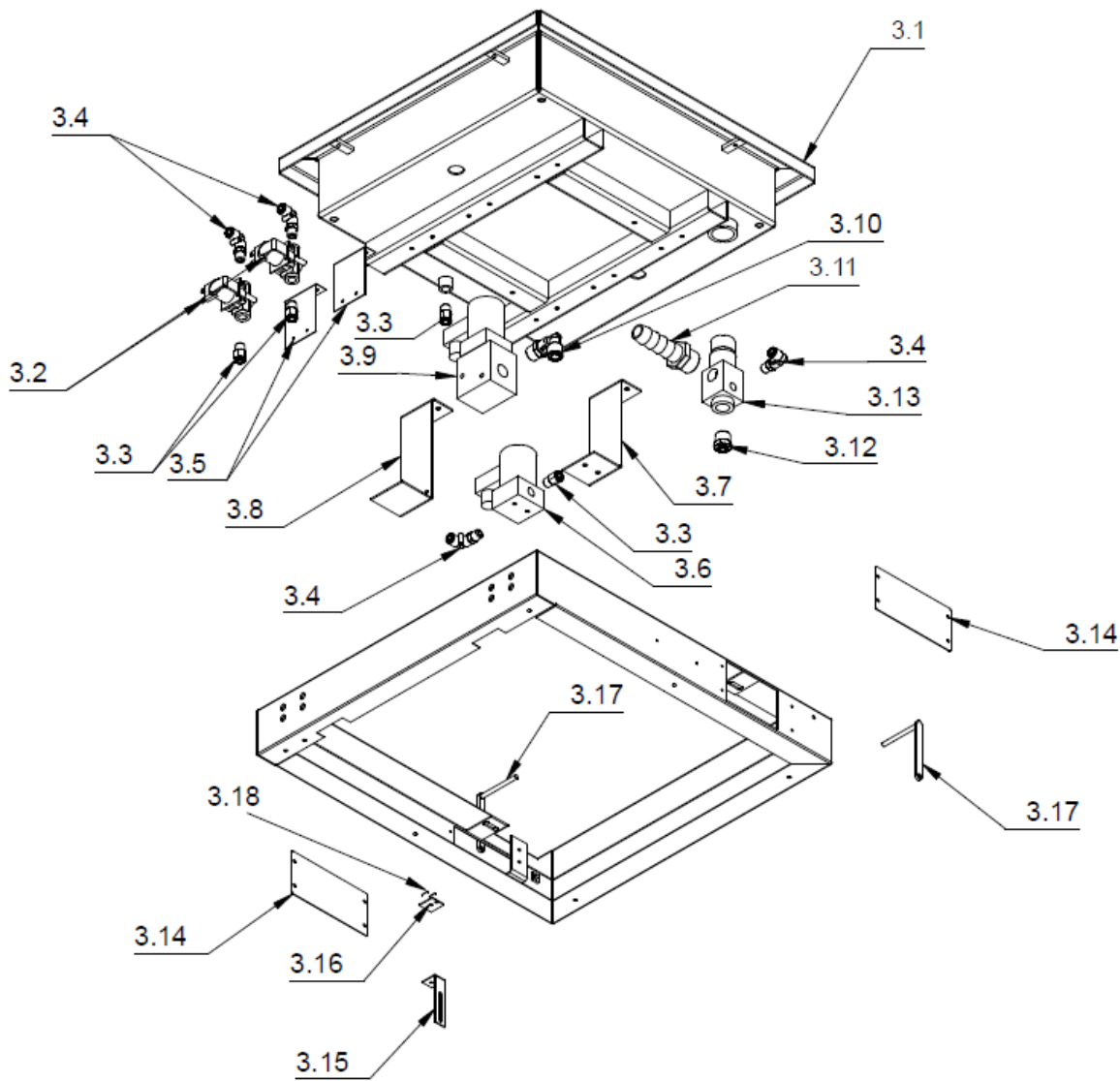
10. LIST OF PARTS



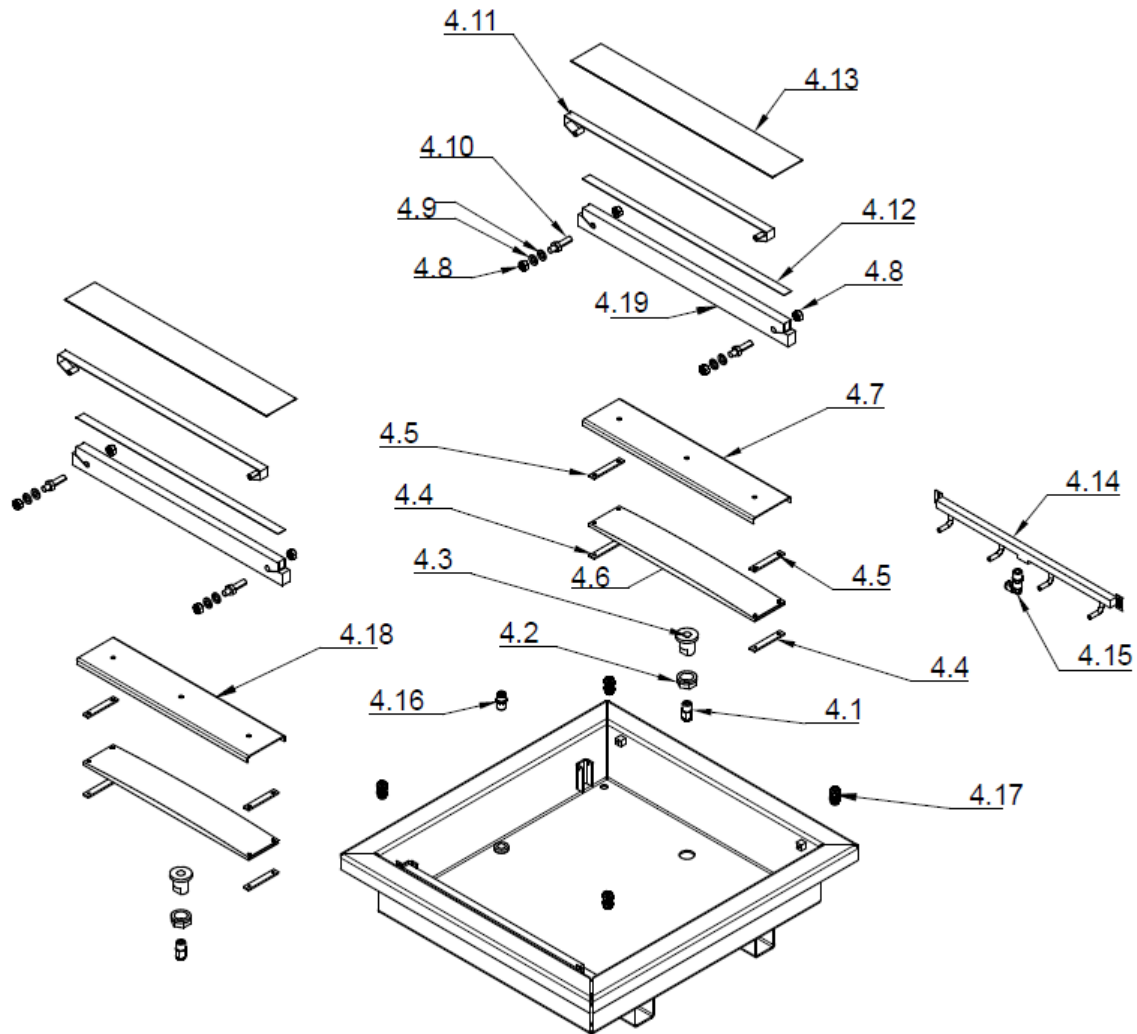
No.	Item Description	Item code
1.1	CHASSIS 500VSV4	1015111
1.2	CASTOR WHEEL	1049133
1.3	VACUUM PUMP SEVAC	1047023
1.4	POWER TRANSFORMER	1060219
1.5	CONNECTOR MNTG. PLATE 500VSGV4	1016084
1.6	TERMINAL BLOCK	1022057
1.7	SIDE PANEL LH 500VS V4	1014994
1.8	MIDDLE PANEL FRONT 500VSV4	1015123
1.9	MICRO CONTROLLER COVER BOX	1014518
1.10	SIDE PANEL RH 500VSGV4	1014995
1.11	CHAMBER CARRIER 500VSV4	1015113
1.12	BACK PANEL 500VS V4 SS	1014996



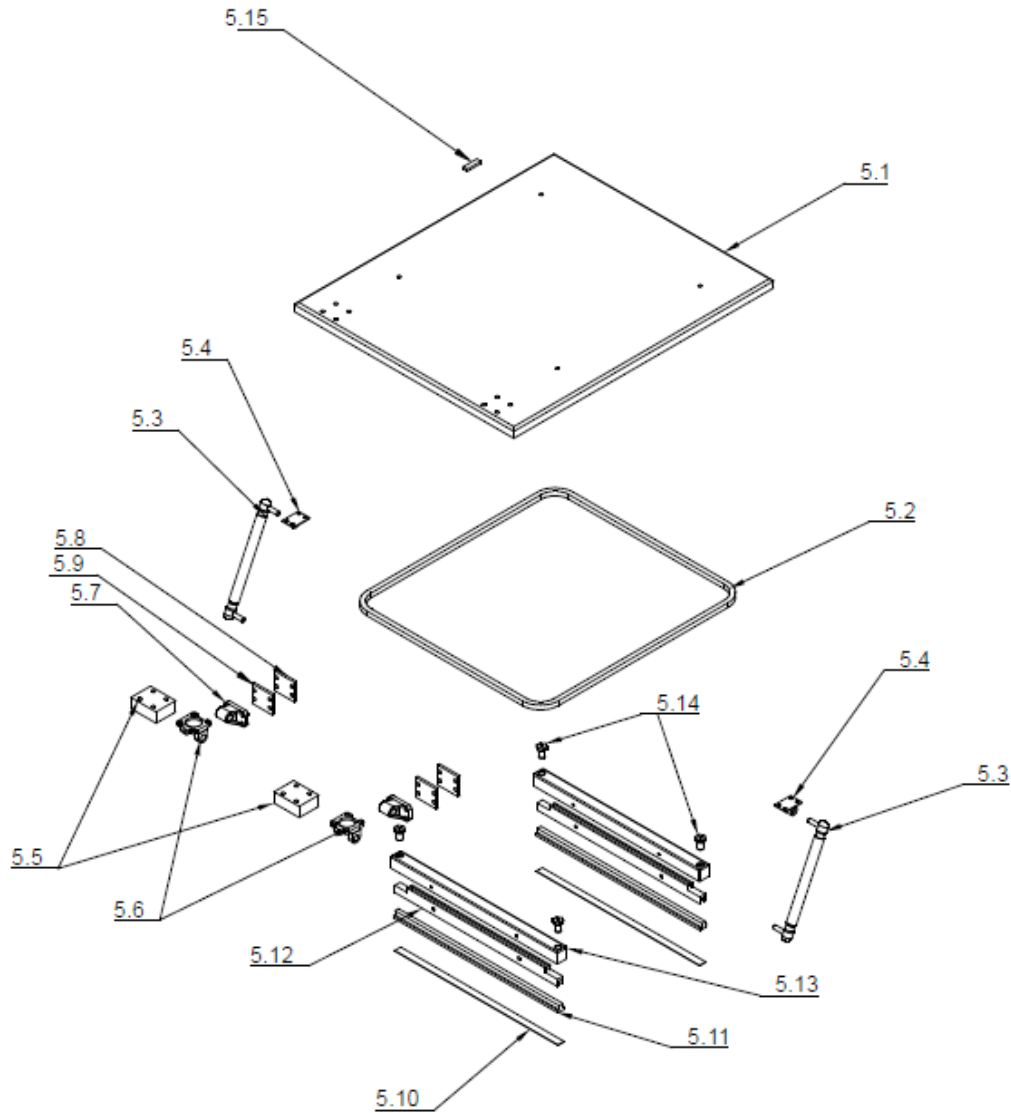
No.	Item Description	Item code
2.1	BULKHEAD UNION 8MM	1036002
2.2	CABLE GLAND	1050305
2.3	SHOCK ABSORBED MTY PLATE 500VSV4	1015119
2.4	MCB	1022063
2.5	MCB MOUNTING BRACKET	1014503
2.6	RELAY PLATE 500VSV4	1015108
2.7	CONTACTOR	1020008
2.8	TERMINAL BLOCK	1022057
2.9	CONTROL TRANSFORMER	1043025
2.10	RELAY PCBA	1033329
2.11	MAGNET PLATE	1052443
2.12	MAGNET HOLDER	1015128
2.13	MUSHROOM KNOB	1051031
2.14	MAGNET	1022010



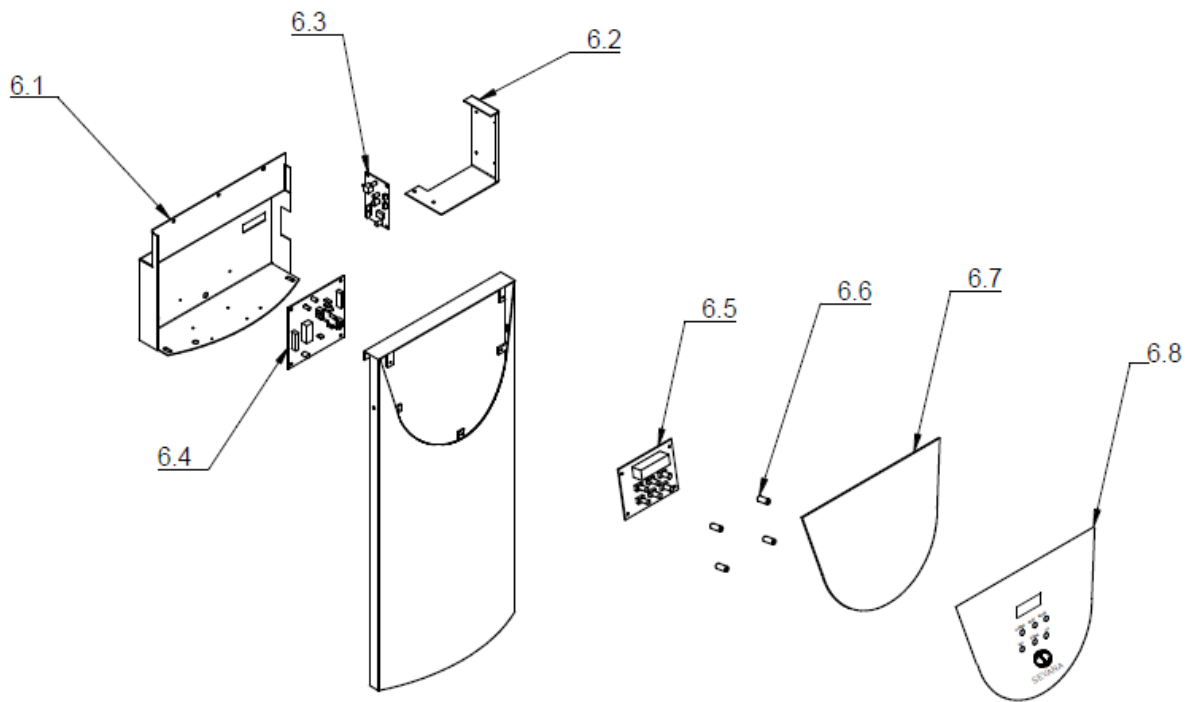
No.	Item Description	Item code
3.1	VACUUM CHAMBER 500VSV4	1046085
3.2	SOLENOID VALVE IMSUBS	1041014
3.3	MALE CONNECTOR 1/4 Inch x 8MM	1036020
3.4	MALE ELBOW 1/4 Inch x 8MM	1036025
3.5	SOLENOID VALVE IMSUBS MOUNTING BRACKET	1015153
3.6	SOLENOID VALVE 3/2WAY	1050298
3.7	SOLENOID 3/2 MOUNTING BRACKET	1014991
3.8	SOLENOID 2/2 MOUNTING BRACKET	1014986
3.9	SOLENOID VALVE 2/2WAY	1050359
3.10	MALE ELBOW 1/2 Inch x 12MM	1036023
3.11	HOSE HOLDER 1/2 X 3/4	1045230
3.12	MALE CONNECTOR 1/2 Inch x 12MM	1036016
3.13	MANIFOLD	1052096
3.14	CHAMBER CARRIER LID 500VSV4	1015124
3.15	CLAMP FOR MAGNETIC REED SWITCH	1014308
3.16	REED SWITCH PCB	1033042
3.17	LID LOCKING CLAMP	1015120
3.18	MAGNETIC REED SWITCH	1023103



No.	Item Description	Item code
4.1	MALE CONNECTOR 1/4 Inch x 8MM	1036020
4.2	CHECK NUT 1/2 Inch	1045064
4.3	ACTUATOR TUBE BOTTOM CONNECTOR	1045004
4.4	TUBE CLAMP TYPE-1(THREADED)	1039285
4.5	TUBE CLAMP TYPE-2(FREE HOLE)	1039286
4.6	FIRE HOSE	1049392
4.7	ACTUATOR FRONT	1015229
4.8	M8 HEX NUT	1025307
4.9	M8 BRASS WASHER	1025384
4.10	HOLDING SCREWS FOR SEALING BAR	1060234
4.11	HEATING ELEMENT	2000051
4.12	TEFLON TAPE 15MM	2000104
4.13	TEFLON TAPE 60MM WITH TWO SIDE GUM	2000159
4.14	GAS MANIFOLD 500 VSGV4	1015130
4.15	MALE ELBOW 1/8 Inch x 6MM	1036026
4.16	MALE CONNECTOR 1/4 Inch x 6MM	1036019
4.17	CABLE GLAND	1050306
4.18	ACTUATOR BACK	1015230
4.19	ELEMENT BED	1024054

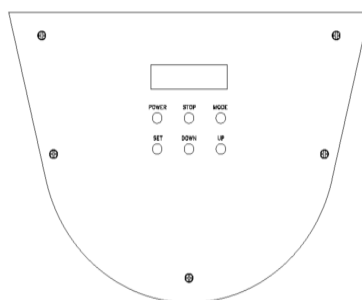


No.	Item Description	Item code
5.1	PERSPEX LID	1060756
5.2	GASKET LID	2000022
5.3	SHOCK ABSORBER	1049977
5.4	SHOCK ABSORBER CLAMP TOP	1015115
5.5	HINGE ADAPTOR BLOCK	1049483
5.6	WALL MNTG. BRACKET	1050241
5.7	CLEVIS FOOT BRACKET	1049181
5.8	HINGE ADJUSTER VAC FEMALE	1014976
5.9	HINGE ADJUSTER VAC MALE	1014439
5.10	TEFLON TAPE 15MM	2000104
5.11	GASKET SILICON	2003067
5.12	PAD HOLDER	1039203
5.13	HOLDER SUPPORT	1015233
5.14	PAD HOLDER ADJUSTER	1015133
5.15	MAGNET	1022010



No.	Item Description	Item code
6.1	MICRO CONTROLLER COVER BOX	1014518
6.2	TRANSDUCER MNTG CLAMP	1060547
6.3	TRANSDUCER PCBA VM V1.0	1052081
6.4	MICROCONTROLLER PCBA VT V3.0/V3.1	1033082
6.5	DISPLAY PCBA VM V3.0(16MM SWITCH)	1033034
6.6	STUD FOR PANEL BOARD	1050102
6.7	ACRYLIC VAC	1032010
6.8	STICKER 500VSV4	1050351

11. CONTROL PANEL



- ❖ LCD display
- ❖ Control buttons

12. PROGRAM MODES

Sevana's micro-processor 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
Flush2(Gas2)	0-760mm Hg
Flush3(Gas3)	0-760mm Hg
Sealing time	0.0 - 4.0 sec(Depending up on the pouch material)
Cooling time	1 - 9 sec

*Flush2 & Flush3 features are not available in this machine

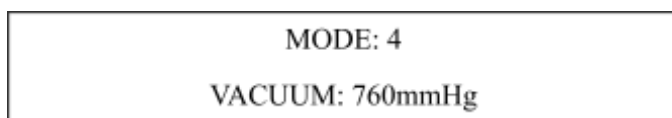
- Vacuum levels represents in millimetre mercury up to vacuum has to be achieved (-760mmHg absolute vacuum, 0 is normal atmospheric pressure).
- Flush 1 represents the level up to which gas is flushed. If vacuum level is 720and flush 1 is 500, chamber is vacuumized to level 720mmHg (95%vacuum) and gas is flushed to the chamber till vacuum level reaches 500. Always set Flush 2 & Flush 3 on 760.

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 760,flush 3 to 760,so no gas is flushed after flush 1.

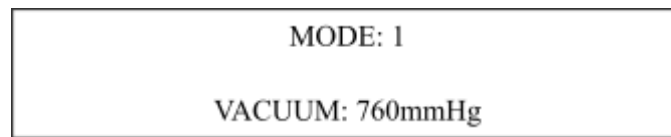
USING ONLY VACUUM:

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



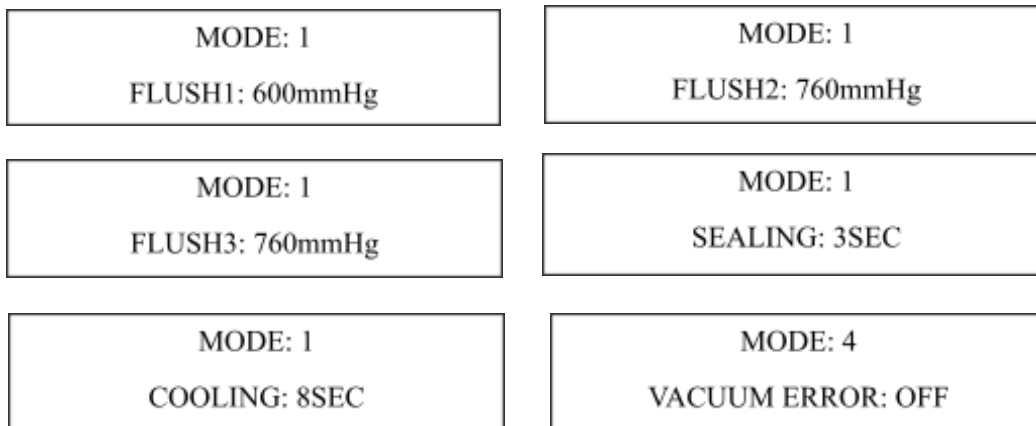
TO PRESET PROGRAM MODES:

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



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



If again presses SET, machine will go to READY MODE.

Vacuum Error ON/OFF option is given with Mode4 for vacuuming the Frozen Products.

13.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.



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 QS VAC 4.00

MODE: 1 READY MODE

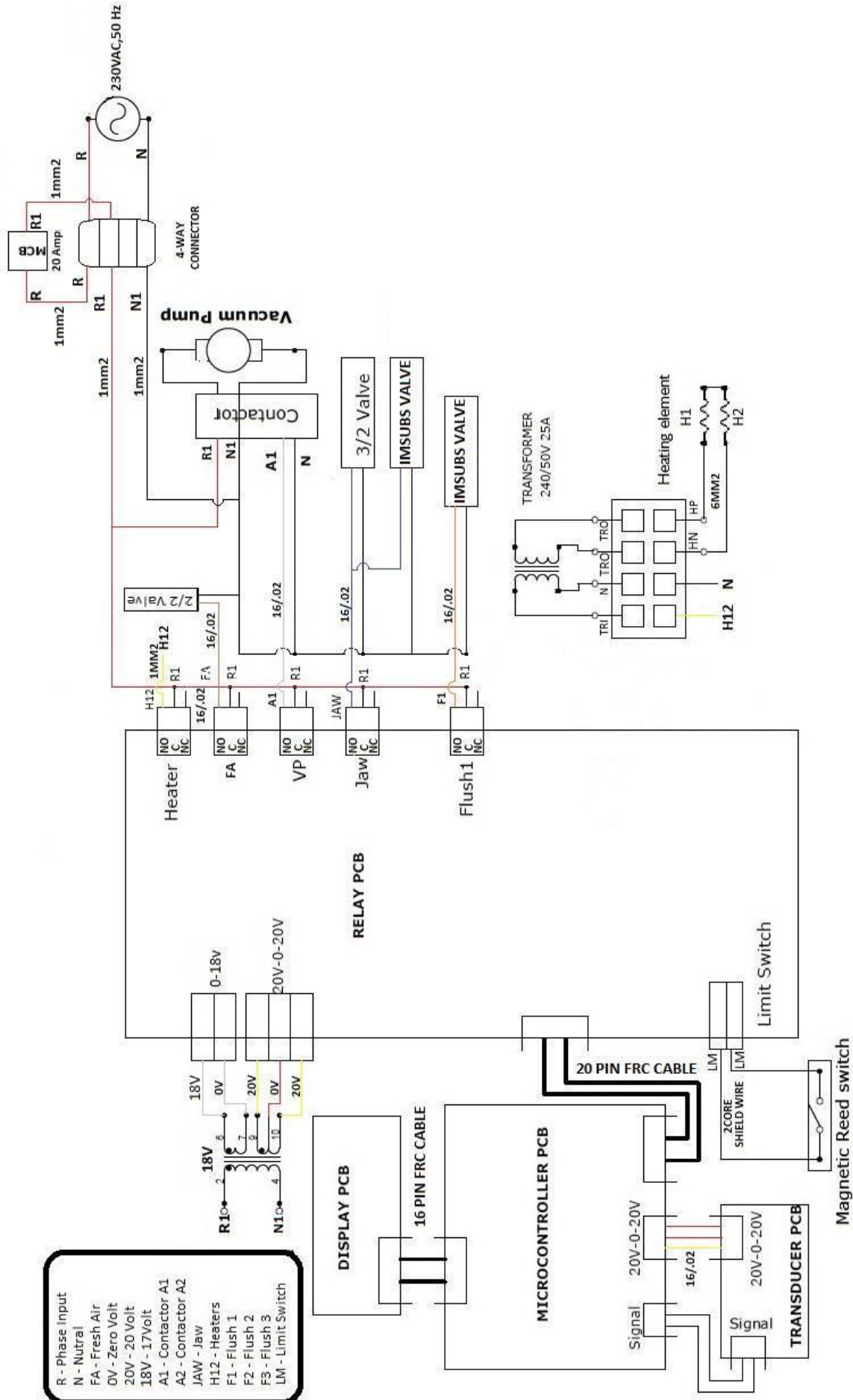
14. OPERATION

- ❖ Switch on the supply
- ❖ Adjust the vacuum and other parameters
- ❖ Select the required mode
- ❖ Keep the product having filled in a barrier/high barrier film pouch, in such a way that the mouth part of the pouch is on the sealing head, leaving sufficient margin. (High barrier film does not allow entry of air or exit of aroma from the pouch once sealed).
- ❖ Close the acrylic lid and press gently, the vacuum pump starts automatically evacuating the whole chamber till the set pressure is reached
- ❖ The sealing jaw is actuated and seals the pouch
- ❖ After sealing operation fresh air is let to the chamber, and when the inside and outside pressures are equal, lid opens automatically. All operations will be displayed on the display when they take place.
- ❖ During the air intake in to the chamber, one could see, the pouch getting shrunk, due to higher atmospheric pressure outside and inside the pouch. In wet products this shrinking will be seen initially but will disappear later due to evaporation of liquid inside the pouch.
- ❖ Now the machine is ready for next cycle.

15. TECHNICAL SPECIFICATIONS

Model (VS/VSG)	500
Chamber dimensions(LxWxH)(mm)	525*455*100
Seal dimensions(LxW)(mm)	500*10
Seal to seal distance	350
Machine dimensions(LxWxH)(mm)	700*665*920
Power supply(1P)	240V/50Hz
Power	2.6 KW

16.ELECTRICAL SCHEMATIC



17.TROUBLESHOOTING

No.	Complaint	Reasons	Remedy
1	Machine does not work; power indicator does not light up at power switch on position.	1. No AC supply 2. MCB tripped 3. Mains cord failure 4. Power switch failure	1.Restore AC supply 2. Check for any short circuit and reset the MCB. 3. Replace mains cord. 4. Replace the switch.
2	Vacuum pump does not work when lid is closed and display READY MODE only	1.Reed switch does not operate. 2.Defective reed switch.	1. Adjust the reed switch clamp suitably to operate the switch when lid is closed. 2.Replace the reed switch.
3	Vacuum pump does not work when lid is closed and display showing vacuum level.	1.Defective contactor (coil open or contact burned out). 2.Defective relay pcba. 3.Defective motor.	1.Replace the contactor. 2.Replace the relay board. 3.Replace or rectify the motor.
4	The lid does not remain closed even after vacuum pump starts	1.Lid gasket does not touch the chamber face uniformly.	1.Press the lid with both the hands at the corner of lid. 2.Check the gasket for any damage and replace if necessary.
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	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	No flushing operation. Sealing operation starts after vacuum time.	1.Flush pressure settings are not proper.	1.Set flush pressure properly. Set Flush level flush1 < Vacuum level
6	No flushing operation. Machine halts after evacuation. Display shows gas flush.	1.Defective solenoid valve. 2.Very low pressure in gas cylinder. 3.Gas cylinder valve closed. 4.Defective Relay.	1.Replace solenoid valve. 2.Replace/refill the gas cylinder. 3. Open the gas cylinder valve. 4.Replace the relay board/Relay.
7	Machine skips flushing and sealing operation does not takes place.	1.Flush pressure setting is high.	1.Set flush pressure properly. Flushing pressure should be lower than the vacuum pressure setting.

8	Sealing head operate but sealing does not takes place	1.Low sealing time setting. 2.heating element failure. 3.Defective sealing transformer. 4.Flush setting is high.	1.Increase sealing time. 2.Replace heating element. 3.Replace defective sealing transformer. 4.Use compressor for operating jaw for flush setting above 300.
9	Machine halts after sealing	1.Defective relay. 2.Defective air inlet solenoid valve.	1.Replace the relay board. 2.Replace solenoid valve.
10	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.
11	Nonuniform sealing	1.High gap between sealing head and pad holder assembly. 2.Sealing head and pad holder not align properly. 3.Burnt Teflon fabric.	1.Reduce the gap. 2.Align sealing head and pad holder. 3.Replace the Teflon fabric.
12	Machines works fine, but blank/garbage display	1.Defective display. 2.FRC cable of display or its connector defective.	1. Replace display board. 2.Replace cable and connector.
13	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.
14	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.
15	Display does not change from fresh air to ready	1.Misalignment of reed switch.	1.Correct the position of reed switch.
16	Overheating of Heating element/Transformer	1.Short circuit with body of machine. 1.Defective Relay/IRF 540 of heater in Relay PCB	1.Make proper wire connections. 1.Replace Relay PCB.
17	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.
18	Display shows fresh air always	1.Misalignment of magnetic reed switch. 2.Magnetic reed switch shorted.	1.Correct the position. 2.Replace the switch.
19	Improper sealing	1.Misalignment of sealing bed.	1.Correct the position.
20	Lid doesn't open after completing the operation.	1.Defective relay in the relay board. 2.Defective solenoid valve.	1.Replace it. 2.Replace it.

18. SERVICE LOG

[illegible]