



AN ISO 9001:2008 CERTIFIED COMPANY

USER MANUAL

Rotary cup Shrink Tunnel

QS2032STVR



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YOUR PACKAGING PARTNER

CONTENTS

SL NO	DESCRIPTION	PAGE NO
1.	Foreword	3
2.	How to use this manual	4
3.	Safety precautions	4
4.	Packing slip	5
5.	Technical specification	5
6.	Unpacking	6
7.	List of parts	7
8.	Power connection	8
9.	Control panel	8
10.	Starting the machine	8
11.	Shut down/switching off	10
12.	Shrinking operation	10
13.	Maintenance	11
14.	Electrical schematic	11
15.	Troubleshooting	12
16.	Service log	14

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

Email	:	support@sevana.com	
Phone	:	+91-484-2680780	Monday to Saturday
Mobile	:	+91-9388180781	8.30 am – 5.00pm IST
Fax	:	+91-484-2680680	

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.



This is a warning symbol indicating a hot surface.



This is a warning symbol indicating moving parts.

- ❖ The machine has to be grounded properly before using.
- ❖ Never try to shrink wrap explosive or inflammable material.
- ❖ Do not insert hand in the chamber when machine is in operation.
- ❖ Do not allow any liquid to go in to the machine.
- ❖ Do not keep Shrinkable film on the machine.

4. PACKING SLIP

NAME	QUANTITY
Machine	1
User manual	1
Tool box with 2 spanners and 3 Allen keys	1

5. TECHNICAL SPECIFICATIONS

Model	QS 2032STVR
Machine's dimensions (L x W x H)	2400mm x 450mm x 1150mm
Conveyor motor	220VDC
Conveyor speed	0 - 10m/min
Window size (B x H)	200mm x 320mm
Max. object size (B x H)	120mm x 300mm
Power	8KW / 415V / 3P / 50Hz

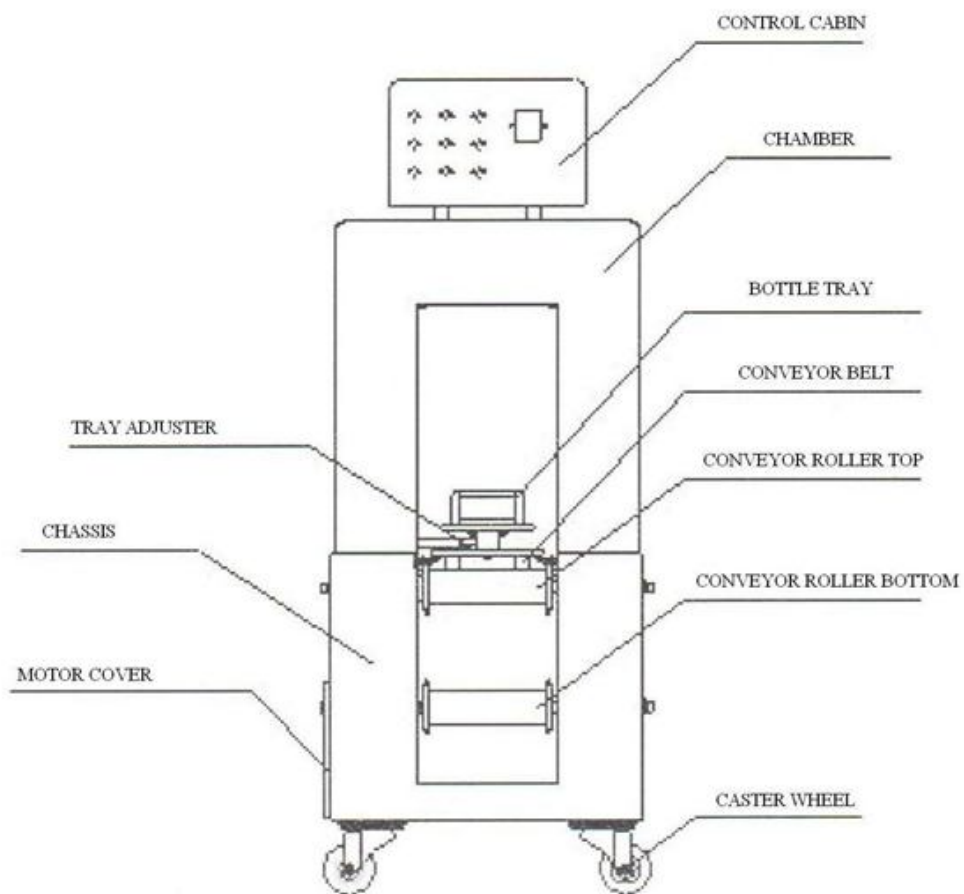
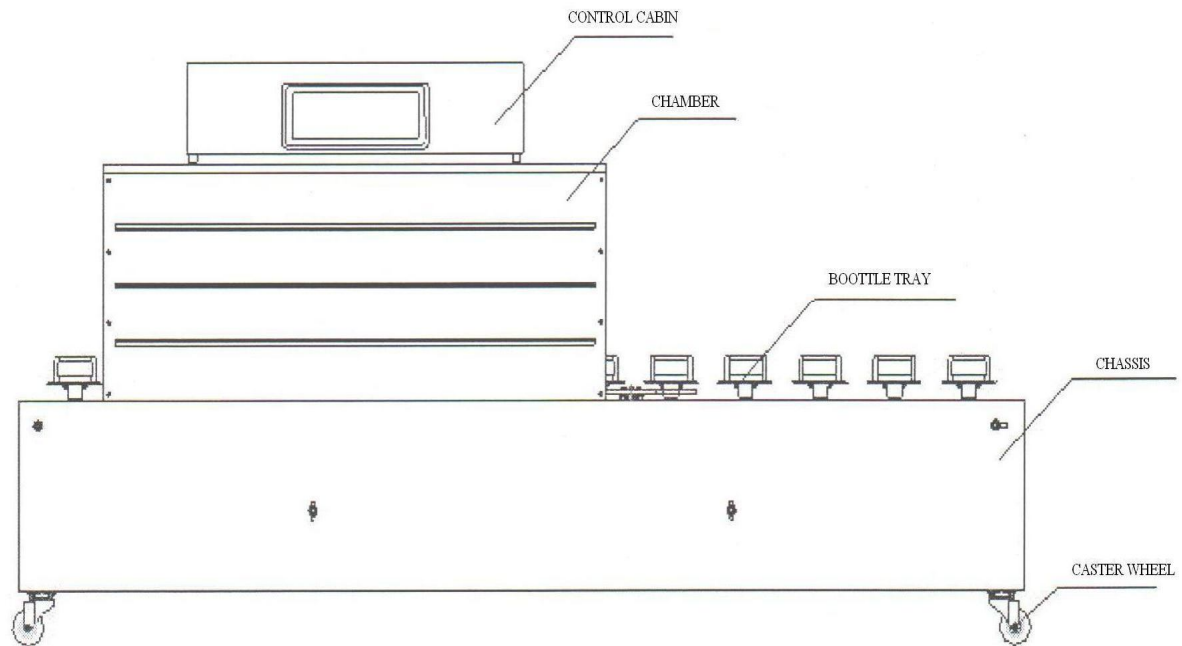
6. UNPACKING

Note: Please verify the items with the packing slip.

- ❖ Inspect for any transit damages. If there are any, notify your dealer/transporter/insurance company or us immediately.
- ❖ The machine is shipped well packed in a wooden box with four bolts holding the machine to the bottom panel.
- ❖ Place the wooden box with the “TOP” marked to the top.
- ❖ Remove all the side panels and top panel of the box.
- ❖ Lift the machine with the crate using a pallet jack.
- ❖ Remove the packing bolts.
- ❖ The legs and side stiffeners are separately packed and kept inside the box. Assemble the leg frame
- ❖ Place the machine on the top of the leg assembly and fasten the screws.
- ❖ Remove the transportation leg.
- ❖ Remove all packing materials.
- ❖ The conveyor chain is tied to arrest movements during transportation. Remove the tie.

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

7. LIST OF PARTS



- Speed of conveyor
- Temperature of Chamber

These parameters can be modified by the operator if required. (Each mode can be used for different type of films/products).

The machine will automatically go to the previously used mode after initializing. Now the temperature will be building up. When the temperature is not built up to the preset level a message “Not ready” is displayed as

NOT READY

TEMP:107° SPD:09

When the temperature is built up to the preset level the message will change to “MODE:x, TEMP: xxx, SPD:xx” also an audio indication is also given.

MODE: 1

TEMP:150° SPD:09

PROGRAM MODES :

Sevana’s micro-processor based shrink tunnel machine has 4 preset modes or programs. Each program can be set with different parameters.

Variable parameters in each mode/program are:

- Temperature
- Speed

Temperature represents the temperature to be set in shrink chamber in degree Centigrade (°C). Speed represents the speed of conveyor (Minimum-maximum = 0-7.5 Meters per minute). Parameter values 0-20.

TO PRESET PROGRAM MODES :

Eg: Target

Temperature : 203

Speed : 18

Select the mode by pressing “MODE” button.

To set the temperature press “SET” button. It displays “Set Temperature”

SETTINGS

TEMP:40°C

To increase the temperature press the “UP” button continuously till the required value is displayed.

SETTINGS

TEMP:203°C

Press the “SET” button to save the values.

Now press the “UP” or “DOWN” button to increase or decrease the speed.

NOT READY TEMP:150° SPD:18
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Any time pressing “UP” or “DOWN” button will increase or decrease the speed of the conveyor. The value is stored to the preset Mode/Program.

FEATURES:

If the temperature sensor probe fails, a message will be displayed on the Digital Display

CHECK TEMPERATURE PROBE

11. SHUT DOWN/ SWITCH OFF

Press the “STOP” button for 1 second.

COOLING DOWN TEMP:100° SPD:18

When the temperature is reduced to safe levels, the heaters, conveyor and fan is switched off automatically.

A message is displayed when ready to switch off.

SAFE TO TURN OFF THE MACHINE

Now the power supply to the machine can be switched off.

12. SHRINKING OPERATION

1. Special plastic films which shrink on application of heat are used for shrink wrapping. Shrink films commonly available are Low Density Poly Ethylene (LDPE), Poly Vinyl Chloride (PVC) and Poly Olefin (POF). The temperature required for shrinking each film varies and this information can be obtained from the film manufactures.
2. Insert the article in a preformed sleeve or tube of shrinkable film of suitable size. Seal the open ends.
3. Place the wrapped article on the conveyor at the inlet. The article will come out of the outlet properly shrunk. Inspect the article.
4. If the shrinking is not sufficient increase the temperature setting or reduce the conveyor speed. If over shrunk reduce the temperature setting or increase the conveyor speed. By manipulating the temperature and conveyor speed one could get the best result and productivity.
5. Make final adjustment of speed and temperature after the temperature has reasonably stabilized.

13. MAINTENANCE

Caution: Isolate electric power supply before doing the maintenance.

❖ Daily Maintenance

- Blow off the dust and film debris using a blower or compressed air.
- Remove any plastic leftover on the conveyor.

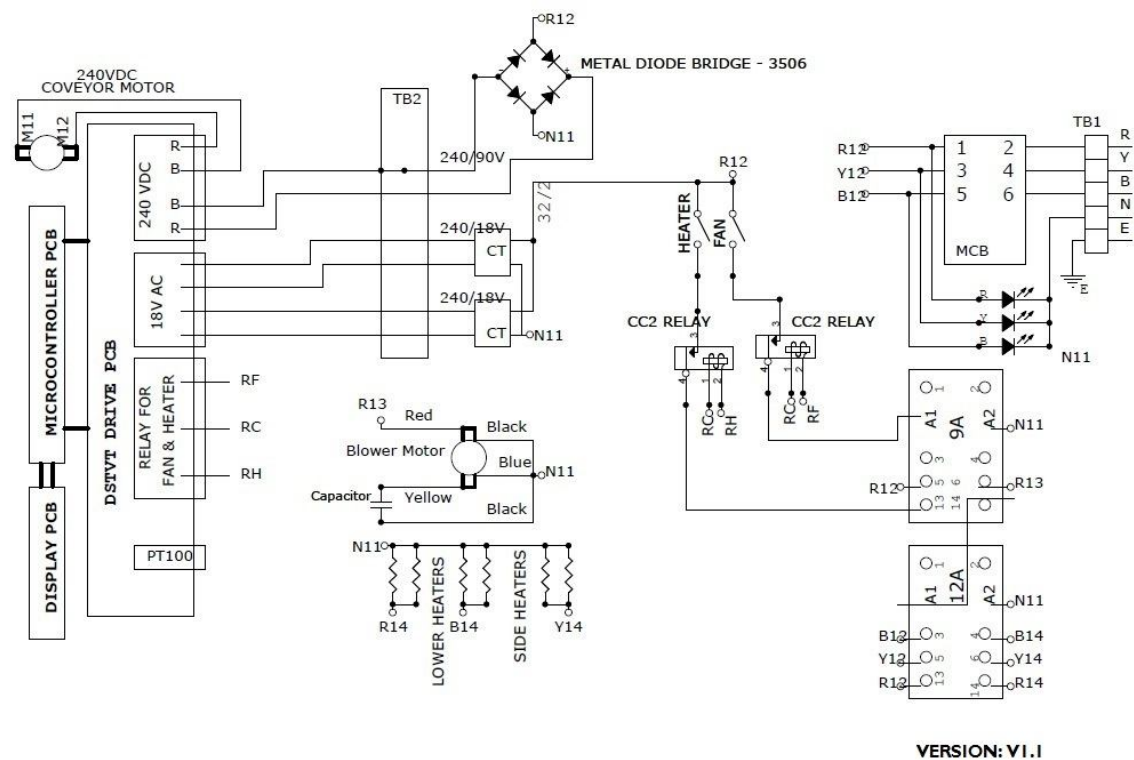
❖ Weekly maintenance.

- Apply graphite grease on the chains
- Check the conveyor chain tension. Adjust if required
- Apply lubricant to other moving parts.

❖ Monthly maintenance.

- Inspect window curtains for damage.

14. ELECTRICAL SCHEMATIC DIAGRAM



15. TROUBLE SHOOTING

No.	Complaint	Reasons	Remedy
1	Machine does not work.	1.No AC supply. 2.MCB tripped. 3.No output from CT18V.	1.Restore AC supply. 2.Check the wiring for any short circuit. If satisfactory, reset the MCB or replace the MCB. 3.Check and replace if defective.
2	Conveyor is not moving.	1.Conveyor speed set to 0. 2.Conveyor motor stalling. 3.Defective conveyor motor. 4.Wear & tear of carbon brush. 5.Conveyor chain disengaged from the sprockets. 6. Conveyor chain breakage. 7.Defective conveyor driver sprocket. 8.Defective board for conveyor drive. 9. Blown out of FUSE in the board. 10.Defective IRF740/optocoupler in the board.	1.Increase the conveyor speed. 2.Reduce load on the conveyor. Install the machine with a slope towards the direction of the conveyor movements to increase the load carrying capacity of the conveyor. Use leveling screws to attain this. 3.Rectify/replace the conveyor motor. 4.Clean & reinsert it. 5.Engage the conveyor chain with the sprocket. 6.Replace both chain together to avoid the mismatching of chains. 7.Replace the conveyor driver sprockets. 8.Replace the board for conveyor drive. 9.Replace the FUSE. 10.Replace it.
3	Conveyor chain slips from the guides.	1.Lower conveyor tension. 2.Misalignment of sprockets and chain rails.	1.Increase the tension by adjusting the conveyor tension adjusters. 2.Align the sprockets and chain rails.
4	Air blower is not working	1.Fan switch is off. 2.Phase sequence RYB is not in sequence. 3.Defective blower motor/No supply at motor end. 4.Defective contactor or relay	1.Switch on the fan. 2.Interchange any of the two phases.(Check Phase sequence indicator LED's and Phase sequence OK indicator). 3.Check supply voltages at the motor end & replace if defective. 4.Replace the defective.
5.	Blower motor works , but the air	1.Shaft fitting Allen screw loose.	(a) Check the fan shaft assembly.

	turbulence fan does not rotate freely		(b) Ensure free rotation of the shaft and a little axial play. (c) Refit the Fan Assembly Mounting Plate.
6.	Insufficient shrinking	1.Heater switch is off. 2.Low temperature setting. 3.Temperature is not building up.	1.Switch on the heater. 2.Increase the temperature setting. 3.Refer to complaint no. 7
7.	Temperature is not building up.	1.Loose connection of heaters. 2.Heater failure. 3.Low temperature setting. 4.Defective contactor for heaters/relay for heaters. 5.Defective PT100.	1.Make proper connections. 2.Replace the defective heater. 3.Increase temperature setting. 4.Replace the relay from the board/ replace the contactor. 5.Replace it.
8	Excessive Shrinking	1.High temperature setting. 2.Low conveyor speed. 3.Defective Temperature Sensor (PT100). 4.Defective Heater Contactor due to contact welding.	1.Reduce the temperature setting. 2.Increase the conveyor speed. 3.Replace the defective part. 4.Replace the contactor for heater.
9.	Shrinking is not uniform	1.Air turbulence fan is not working or rotating in wrong direction. 2.Heaters are not working.	1.Refer complaint troubleshooting Case 4. 2.Identify the defective heater and replace.
10.	Abnormal sound and vibration	1.Air turbulence fan loose. 2.Fan Motor Bearing failure. 3.Machine is not installed on a level surface.	1.Tighten the nut with which the Air Turbulence Fan is attached to the blower drive shaft. 2.Replace the defective bearing. 3.Level the machine using the leveling screws.
11.	Conveyor is moving at constant speed	1.Defective IRF740 in the conveyor drive board.	1.Replace it.
12.	Shows different Temperature values	1.Defective 18V CT. 2.EMI. 3.Open wires.	1.Replace 18V CT 2.Make proper FRC & other cable routing. 3.Check and make proper connections.

16. SERVICE LOG

[illegible]