1K2K Dosing and Dispensing Private Limited
Plot No. A-44/1/A-55, Rajmata Jijau Mahila
Industrial Premises, Chakan MIDC Road,
Phase II, Vasuli, Tal-Khed, Dist. Pune- 410501

ADoST Rotolin Manual

ABSTRACT

This document provides step-by-step instructions for handling and maintaining the ADoST Rotolin system. It covers every aspect of the equipment that an operator is expected to know and follow, ensuring proper usage and maintenance.

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ADoST - Rotolin

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USER MANUAL

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Manufacturer - 1K2K Dosing and Dispensing Pvt. Ltd.

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1.0	12/11/2025	Initial version created

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Technicians and operators are expressly forbidden from reusing the information contained in this manual or using it for any purpose other than the proper maintenance and operation of the ADoST dosing system.

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CONTENTS

1 DEFINITIONS

1.	User	The person using the system
2.	Object	Application part
3.	Adhesive	Dispensing Adhesive

2 GENERAL

This Handbook is divided into sections to make it useful to understand every information about the system life cycle and to easily find that information necessary for the end user.

This document is specifically developed for Rotolin model and the information given in this handbook can help users in achieving the best system performances while ensuring the long life-cycle to its components.

Due to ongoing developments and safety requirements and regulations system outfitting may be different from the one described in this document. In such a scenario, descriptions and procedures should be construed as generic. Quoted drawings and pictures are intended for example only.

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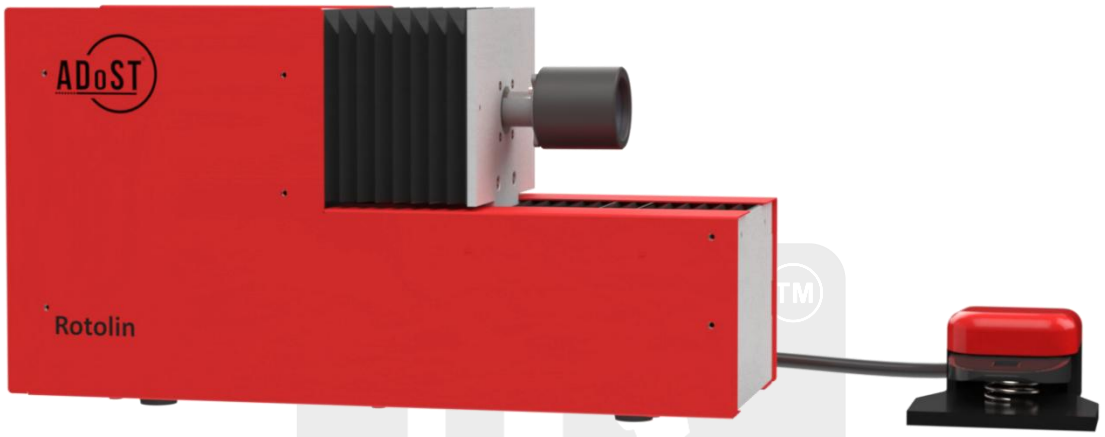
3 INTRODUCTION

ADoST Rotolin is a semi-automatic equipment especially designed for applying adhesives on outer diameter of cylindrical machined components. Its dual action of rotation while simultaneously providing linear movement makes it possible to use this system on all types of components, not just limited to cylindrical. The applied spiral or linear pattern spreads evenly when the component is assembled. The amount of adhesive dispensed can be easily controlled through adjustments to dual motions. When integrated with ADoST Dispensing Systems, Rotolin enables most comprehensive surface coverage while nearly eliminating material wastage.

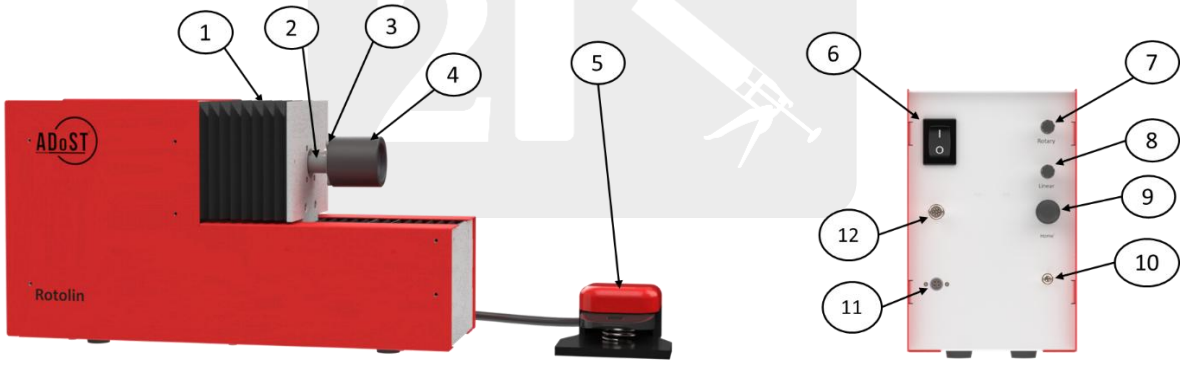


4 SYSTEM'S SPECIFICATIONS

4.1 TECHNICAL SPECIFICATIONS

Model no	**ADoST-Rotolin**
Application Type	For applying anaerobic retaining compound on cylindrical parts
Adhesive Type	Anaerobic Retaining Compound
Dispensing	Continuous Bead (Spiral)
Object Outer Diameter	Max 100mm
Size (Metric)	450 X 153 X 250mm
Movement	Linear and Rotational
Max Rotational Speed (RPM)	245
Max Linear speed(mm/sec)	20
Maximum Travel Length	100mm
Net Weight	10Kg
Compatible Dispensing Machine	ADoST PPS-NXT, ADoST PPS-PRO, ADoST CDS-PRO, ADoST SDS-PRO
Power Supply	Nominal:230VAC
Usage	Indoor Use
Storage Condition	Clean, cool & dry (25°C)
Operational Method	Semi-automatic electrically operated
Operating Temperature	–20°C to +80°C
Operating Humidity	10% to 95% RH

4.2 SYSTEM COMPONENTS



1. **Bellow:** A flexible, expandable element that absorbs movement, vibration, and misalignment while maintaining a sealed barrier between components. Its primary function is to shield internal parts from adhesive exposure and to enclose the assembly, allowing controlled motion through its flexibility.
2. **Job Holder Mounting:** The designated area where the Job Holder is securely installed. It serves as the foundation for mounting the job, ensuring precise circular or spherical adhesive bead dispensing.
3. **Job Holder:** A rotating collet equipped with an O-ring that securely holds the job with gentle pressure, preventing slippage. It provides stable support for smooth rotation, adaptable to the user's specific requirements (combine Circular and Linear motion).
4. **Job:** This is a circular work piece on which adhesive need to be apply.

5. **Foot switch:** The foot switch serves as the trigger to initiate the operation cycle. When pressed, it activates synchronized communication between the ADoST Dispensing System and the Rotolin unit. This coordination enables simultaneous object movement and dispensing, ensuring both systems operate in parallel for efficient workflow.
6. **ON/OFF Switch (Rocker Switch):** This switch controls the power supply to the Rotolin machine and its connected electronic components. It provides a straightforward and secure method for powering the system on or off.
7. **Rotary Control:** A knob used to adjust the rotational speed of the fixture holding the customer's object. It enables the generation of a consistent circular motion profile for adhesive application.
8. **Linear Control:** This knob regulates the linear movement of the mounted object. When combined with rotary control, it facilitates spherical motion, allowing uniform adhesive distribution across the object's surface.
9. **Home Button:** A function button that returns the mounted object to its original starting position from any location within the system's range.
10. **Foot Switch Connector:** This port is used for connecting the foot switch
11. **DC Power Connector:** This port is used to provide the input supply to Rotolin machine.
12. **Dispensing system Connector:** The Rotolin is integrated with ADoST dispensing machines through this port. This connection is necessary to provide the data for dispensing the adhesive.

4.3 Detailed Dimensions

For detailed specification, please refer to the TDS of ADoST Rotolin.

5 SAFETY PRECAUTIONS

1.	Wear safety gloves	
2.	Wear safety glasses	
3.	Wear face mask	
4.	Wear safety shoes	

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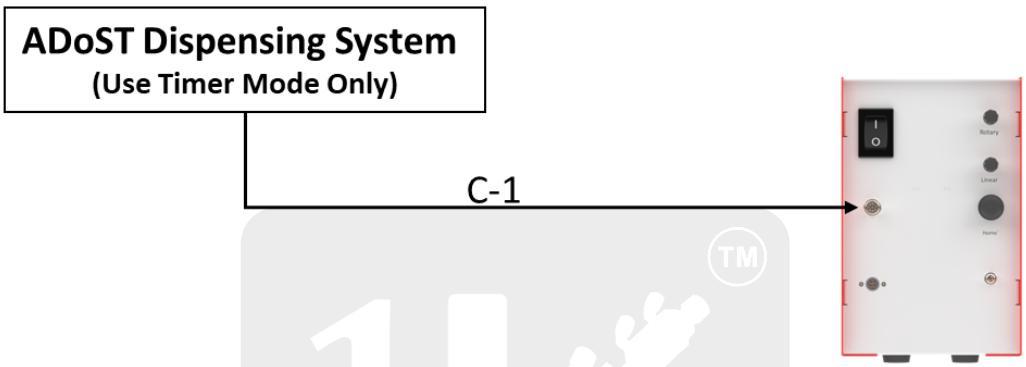
6 SYSTEM SETUP

6.1 ELECTRICAL SETUP

6.1.1 Connection with Dispensing Machine

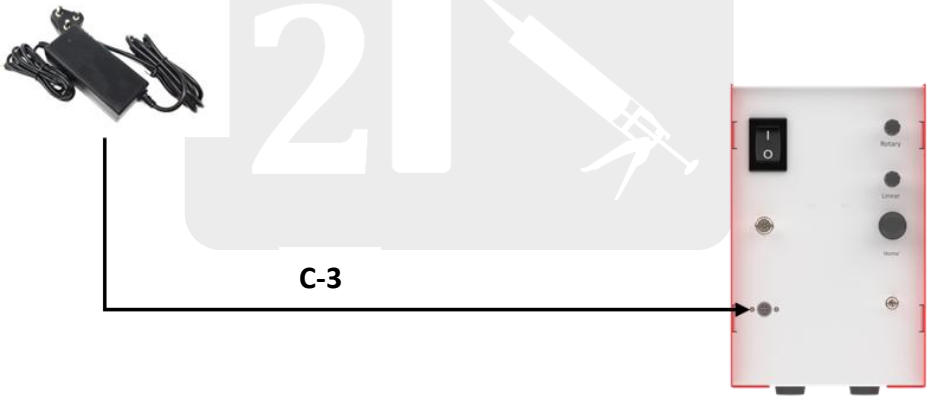
Use the C-1 cable to connect the dispensing Unit with the Rotolin. Locate the designated 8-pin port on the Rotolin's rear panel and ADoST Dispensing machine, as illustrated in the figure below and connect. A secure and connection is essential for reliable operation of the dispensing system.

Note: ADoST Dispensing Machine should be in Timer Mode.



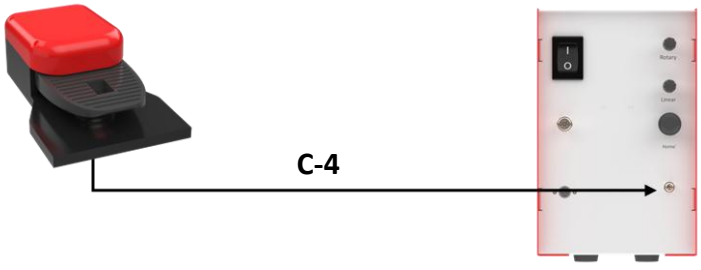
6.1.2 Power Supply

To provide 230VAC input power supply to the Rotolin.



6.1.3 Foot Switch

Connect the Foot Switch with Rotolin using Cable C-2 to the designated 3-pin port on the Rotolin's back panel, as shown in the figure below.

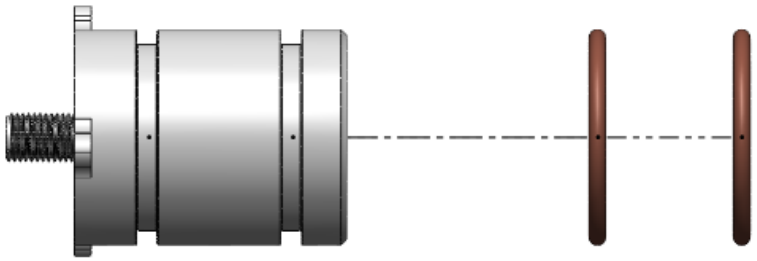


6.2 SYSTEM POWER ON

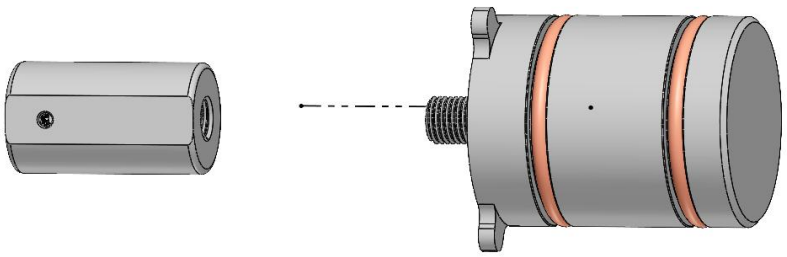
Power on the system by pressing Power switch after making necessary electrical connection as explained in sections above section.

6.3 PROCEDURE TO MOUNT JOB HOLDER

Securely position the compatible O-ring onto the job holder, making sure it is accurately seated within its designated groove.

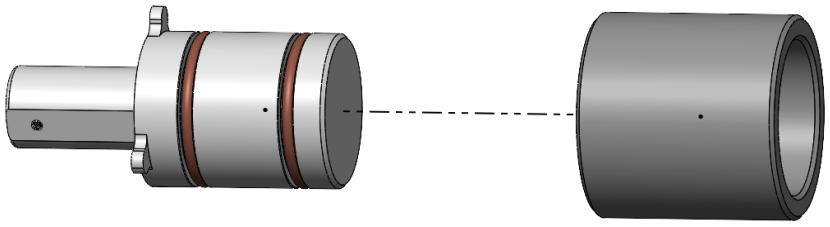


Attach the above appropriate assembly to the Job Holder mounting, making sure the threads are fully engaged for a stable and secure connection. (Note: Job Holder Mounting should not be opened by user)



6.4 PROCEDURE TO MOUNT JOB

Once the Job holder is mounted, the Rotolin is ready to receive the job. The integrated O-ring within the job holder facilitates smooth movement, allowing easy placement and removal of the job. The Job should be pushed up to stopper available in Job Holder to maintain position or object always at constant position.



Note: Job Holder will be Customized as per requirement

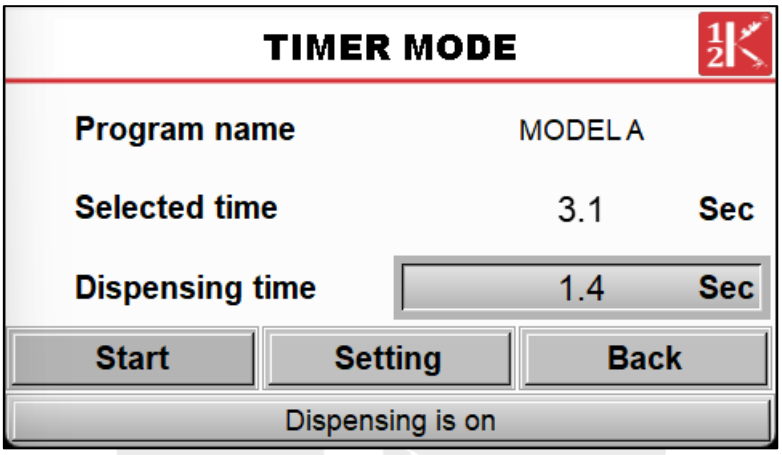
7 ROTOLIN INITIAL SETUP

7.1 INTRODUCTION

An initial setup of Rotolin is required to achieve the desired adhesive spiral within the specified timeline. The steps for the initial setup are explained below and should be performed after completing the hardware and electrical setup.

7.2 DISPENSING SYSTEM SETTING

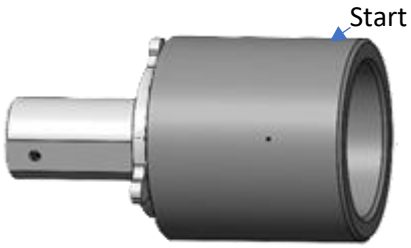
Complete the electrical setup of the dispensing system as described in the previous section. Switch on the system and select Timer Mode.



Configure the Timer Mode with the desired job cycle time to control adhesive dispensing on the job.

7.3 PLACEMENT OF DISPENSING NOZZLE

Mount the ADoST pinch valve nozzle above the job using the ADoST pinch valve holder. Maintain a gap between the nozzle and the job that is equal to or slightly greater than the required bead size. Ensure the nozzle is positioned at the starting point of the job where adhesive application is to begin. Depending on the application, this starting point may also be at the centre of the job.

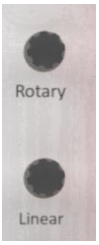


7.4 NO OF CIRCLE IN SPIRAL

Determine the number of circles required while creating the spiral pattern on the job.

7.5 RESET SPEED CONTROL

Turn both the linear and rotary speed control knobs counterclockwise to reset the linear and rotational speeds to zero.



7.6 ROTATIONAL SPEED CONTROL

Start the dispensing using foot switch and adjust the rotational speed by turning the rotation knob until the number of rotations matches the number of circles determined in the previous step.

7.7 LINEAR SPEED CONTROL

Start the dispensing using foot switch and carefully adjust the linear speed by turning the linear speed control knob so that the adhesive covers the required length of the job.

7.8 ADJUST PARAMETERS TO ACHIEVE THE DESIRED RESULT

Once the desired speed is met, adjust the bead size as per the conditions and possible solutions mentioned below

Condition	Possible solution	Comment
Bead width is too Thick	• Decrease the dispensing pressure. • Reduce the nozzle size.	Combination of all variables should be tried to achieve best result
Bead width is too Thin	• Increase the dispensing pressure. • Use a larger nozzle if necessary.	

8 HARDWARE TROUBLESHOOTING

Troubleshooting a Rotolin along with Dispensing machine can involve addressing common issues like mechanical faults, adhesive clogging or uneven dispensing. Here are some key areas to check:

S. No.	Issue	Possible Cause	Solution
1	Rotolin not powering on	Faulty power connection or damaged cable	Check power supply
			Check Power switch
2	Excessive vibration during operation	Loose mounting bolts or over weight	Reduce Load
			Reduce Operational Speed
			Ensure O Ring is not damaged
			Proper Job Mount
3	No Linear or Rotational movement on foot switch press	Reset required	Do homing
4	Emergency switch not working	Loose connection	Reconnect Connector.
5	Axis movement is jerky or unresponsive	High speed or job load	Reduce Load
			Reduce the speed
6	Overheating of components	Excessive workload	Check Working Environment
			Reduce operational load
			Contact 1K2K Representative for solution
7	Inconsistent adhesive dispensing	• Fluctuations in pressure. • Clogged or improperly maintained nozzles. • Adhesive degradation over time.	• Clean or replace nozzle • Adjust dispensing pressure • Store adhesives in temperature-controlled environments.
8	Unwanted strings of adhesive forming during or after application	• High adhesive viscosity. • Inadequate nozzle design. • Improper dispensing speed or pressure.	• Optimize dispensing speed and pressure settings. • Upgrade to anti-drip or string-resistant nozzles.
9	Wobble in Job holder	• Damaged O-Ring over job holder • Improper placement of job	• Check job ID is uniform and have uniform coverage over job holder • Check O-Ring condition and replace if required

Note:

- Contact 1K2K Representative in case your problem not resolved by above given troubleshooting.

9 MAINTENANCE AND INSPECTION

Routine maintenance and regular inspections are essential to ensure ADoST Rotolin functions safely and reliably. Implementing preventive measures helps reduce unexpected breakdowns and supports long-term performance and durability.

To keep the ADoST Rotolin in optimal condition:

- Ensure all external surfaces remain clean and free of dust or adhesive buildup. Clean using a a soft, dry cloth.
- The linear rail is designed for low maintenance but requires periodic Maintenance to ensure smooth and efficient operation. Periodic Maintenance helps prevent wear and extends the lifespan of the mechanism. (This should be done by 1K2K Representative only)

Adhere to the following periodic maintenance checklist to maintain safety and efficiency for every shift or batch change:

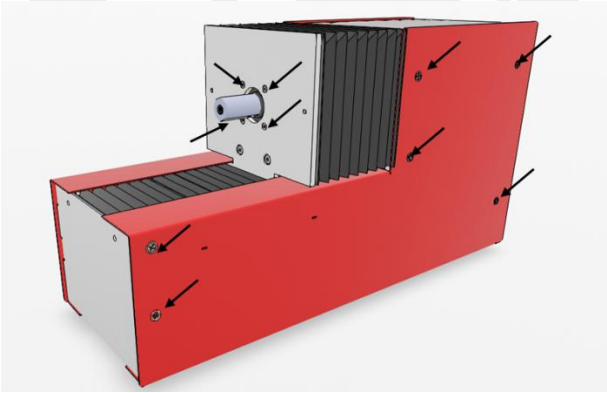
1. Inspect for machine position.
2. Identify and address any signs of damage or loose parts.
3. Test the emergency stop button.
4. Verify homing.

9.1 INSPECT FOR MACHINE POSITION.

Use a spirit level to check if the machine is properly levelled. Visually inspect its alignment and positioning to ensure there is no tilt or uneven placement.

9.2 IDENTIFY AND ADDRESS ANY SIGNS OF DAMAGE OR LOOSE PARTS.

Examine the machine for any signs of physical damage or loosened parts. Inspect all visible nuts and bolts, and securely tighten them as indicated in the image below.



9.3 TEST THE EMERGENCY STOP BUTTON.

1. Power on the machine.
2. Press the foot switch to start dispensing
3. Press the emergency stop button.
4. Machine should stops at current position.
5. This confirms that the emergency stop function is operating correctly.
6. Release the emergency stop switch to resume normal operation.

10 SAFETY INSTRUCTIONS

WARNING
• The product poses a risk of electric shock if used in an unsafe manner. • Push the emergency button in emergency situation. • Forbid working while the power wire is damaged. • If the device remains unused for a long period of time remove the power cord out of power socket. • Disconnect the power cord from the machine before performing any maintenance or inspection. • Operate the machine within the specified specifications (such as payload, speed, operational range, user environment). • Do not plug or unplug cables when the machine is powered on. • Do not move the axis by hand, to avoid damaging the machine. • Avoid touching any moving parts during operation. • While the dispense operation is paused, inspect before continuing operation. • Ensure that the machine's working area is clear of obstacles before starting the dispensing operation. • Remove unsecured parts when moving machine location. • Caution: Watch your hand and be mindful of the machine's edges when moving around it. • Carry safely to an applicable work area and install the machine on a flat, stable and robust workstation. • Before moving and carrying, ensure the axis is secured. • Regularly inspection and maintenance will ensure durability and performance.

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11 FAQs

1. What are the key applications of this Rotolin?

ADoST Rotolin is a semi-automatic machine designed for precise adhesive dispensing on cylindrical components. It facilitates the formation of both circular and spherical-shaped adhesive beads on the object's surface.

2. What types of jobs can it work with?

Only Circular jobs (as defined in TDS)

3. Does it have safety features?

Yes, Press Emergency stop button connected to ADoST System in case of Emergency.

4. Is the system battery operated?

No, the system needs AC power supply between 230-250 Volt AC.

5. Can it be integrated with other systems?

Yes, it can be integrated with: ADoST Products such as PPS-NXT, PPS-PRO, CDS-PRO and SDS-PRO.

12 CONSUMABLES

Job Holder O-Ring

13 DISCLAIMER

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