



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 CDS All Variants Manual

ABSTRACT

This document provides step by step handling and maintenance of ADoST dispensing system, including but not limited to every aspect of the equipment that an operator is expected to know and observe.



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Plot No. A-44/1/A-55, Rajmata Jijau Mahila
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Phase II, Vasuli, Tal-Khed, Dist. Pune- 410501

ADoST- CDS

ADoST- CDS+

ADoST- CDS-PRO

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USER MANUAL

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Manufacturer - 1K2K Dosing and Dispensing Pvt. Ltd.

Address - Plot No. A-44/1/A-55, Rajmata Jijau Mahila Industrial Premises,
CHS, Chakan MIDC Road, Phase II, Vasuli, Tal-Khed, Dist. Pune- 410501



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Revision history

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2.2	07-01-2025	V 02.00.00 – V 03.99.99



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Information Ownership

This handbook is intended exclusively for users of ADoST CDS (all variants) and for the training of maintenance technicians. The drawings, instructions, tables, and all other materials included are strictly technical and are the property of 1K2K Dosing and Dispensing Pvt. Ltd. Reproduction, distribution, or any form of disclosure, whether partial or complete, is prohibited without prior written authorization from 1K2K Dosing and Dispensing Pvt. Ltd.

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

1K2K Dosing and Dispensing Pvt. Ltd. shall not be held liable for any damages arising from the improper use of this user manual. It is imperative that the entire documentation provided with the system is read and understood thoroughly to avoid hazards resulting from incorrect operations or maintenance procedures.



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1 DEFINITIONS

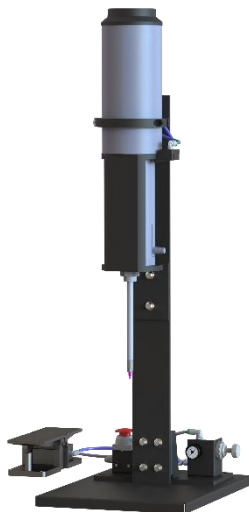
1.	User	The person using the system
2.	Adhesive	Dispensing Adhesive
3.	MCU	Main Control Unit
4.	SCU	Sub Control Unit
5.	HMI	Human Machine Interface
6	Accessory	Device used to dispense adhesive
7	2K Adhesive	Two-component Adhesive

2 INTRODUCTION

ADoST CDS variants are dispensing systems designed to be an industry-standard in accuracy, control, and smart technology, with repeatability and advanced capabilities for applying low to medium viscosity epoxy adhesives also capable of accommodating cartridges of 400ml and 490ml in mix ratios of 1:1, 2:1, 4:1 and 10:1.

ADoST CDS improves application efficiency while nearly eliminating worker fatigue. With ADoST CDS, end users can apply adhesive ergonomically with just the press of a button. ADoST CDS+ comes with an add-on feature of auto purging.

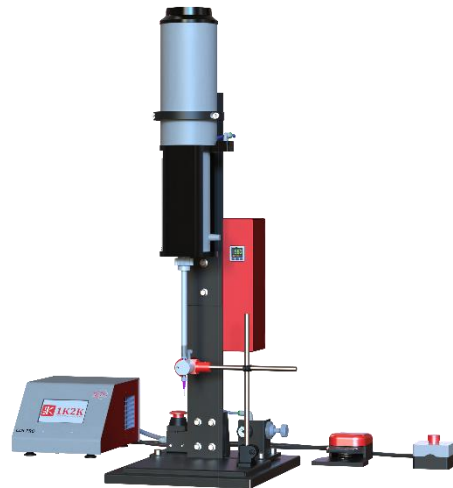
ADoST CDS-PRO digitally controls the amount of adhesive deposited on the application substrate. Digital control allows more precision and comfort and its smart technology contains Purging feature which allow user to prevent curing of Static Mixer in-between ideal time during continues operation. It helps the user to precisely customise the amount of adhesive to be applied to a particular part thereby scaling the efficiency of adhesive dispensing.



ADoST CDS



ADoST CDS+



ADoST CDS PRO



3 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 ADoST CDS variants 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.

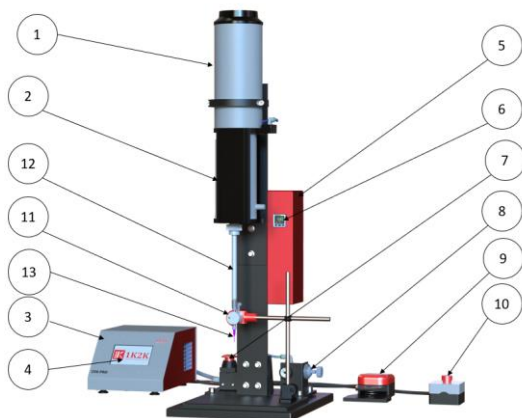
Due to ongoing developments and safety requirements and regulations system outfitting may be different from the one described in this document. In such a scenario, descriptions and procedures should be construed as generic. Quoted drawings and pictures are intended for example only.

4 SYSTEM'S SPECIFICATIONS

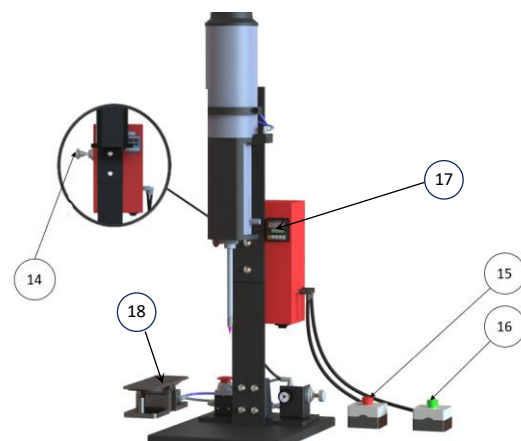
4.1 TECHNICAL SPECIFICATIONS

Model Number	ADoST-CDS	ADoST-CDS+	ADoST-CDS-PRO
Power Supply	NA		Min:100 VAC, Nominal:230 VAC, Max 275VAC
Size (Metric)	300mm x 400mm x 933mm	300mm x 400mm x 933mm	496mm x 400mm x 933mm
Weight	13 Kg	18 Kg	22 Kg
Operating Air Pressure	6 Bar (Max.)		
Ambient temperature range	10°C to +45°C		
Response time	0.02s		
Usage	Indoor use		
Minimum Dispense Size	0.020gm (Medium Viscosity)		
Accuracy	NA		+/-0.006gm (Medium viscous material, low dispensing volume) +/-0.02gm (Medium viscous material, high dispensing volume)
Recommended for	Two-component Adhesive		

4.2 SYSTEM COMPONENTS



ADoST-CDS-PRO



ADoST-CDS+

- 1. Pneumatic Dispenser:** A robust pneumatic cartridge gun designed for dispensing high-viscosity adhesives and sealants. It is compatible with 400ml and 490ml cartridges in mixing



ratios of 1:1, 2:1, 4:1, and 10:1. The dispenser is equipped with easily replaceable conversion kits, allowing quick adaptation to different ratios as needed.

2. **Cartridge Holder:** This holder is designed to ensure easy positioning and secure fixation of adhesive cartridges. It is highly versatile, allowing effortless conversion between all supported ratios using the appropriate conversion kits.
3. **MCU (Main Control Unit):** The Main Control Unit, the core of the cartridge dispenser system, initiates operation via a rear power switch. It coordinates all components through detachable connectors for seamless integration, offering various dispensing features and modes to meet diverse dispensing needs.
4. **HMI:** The 4.3" HMI provides intuitive user interaction, enabling easy operation and monitoring of system settings and status through visual feedback and controls.
5. **SCU (Sub Control Unit):** Contains a pneumatic actuator and digital pressure switch for MCU-to-dispenser communication, managing and regulating system functions with precise control and monitoring.
6. **Digital pressure display/ Digital Switch:** Indicates current pressure with 0.01 precision, provides actuator control signals and sets upper and lower pressure limits for accurate output.
7. **Retraction button:** The pneumatic control system, featuring a retraction push button, regulates compressed air flow to control the pneumatic cylinder's retraction for adhesive cartridge interchange.
8. **Air pressure regulator:** The primary function is to maintain steady pressure inside the gun, protecting the system from air supply variations to ensure consistent adhesive dispensing.
9. **Foot Switch:** Operated by foot, this hands-free control provides an alternative method to initiate dispensing via the primary control's HMI.
10. **Emergency Switch:** The emergency switch immediately halts electrical operations to prevent hazards or damage in critical situations.
11. **Dispensing Valve (Pinch Valve):** This pinch valve controls material flow by squeezing a tube, includes a plug for secure tube output and features a bolt to adjust the valve's stroke for precise adhesive dispensing.
12. **Static Mixer:** Static mixers ensure consistent, thorough mixing of 2K adhesives, optimizing performance and reliability.
13. **Dispensing Nozzle:** The dispensing nozzle precisely controls the adhesive flow, with larger diameters increasing output volume; replace when cured and consult our sales team for selection.
14. **Mode Selection Valve:** Pneumatic Valve in CDS+, Mode can be changed from Manual Operation to Purging Using or vice versa.
15. **Purging On Button:** Electrical Button used to start urging Mode in CDS+.
16. **Purging OFF Button:** Electrical Button used to stop urging Mode in CDS+.
17. **Timer control:** Setting parameters in this, shall help in controlling the purging feature in CDS+ model.
18. **Pneumatic Foot Switch:** Operated by foot, this hands-free control provides method to initiate dispensing for CDS+ and CDS model.



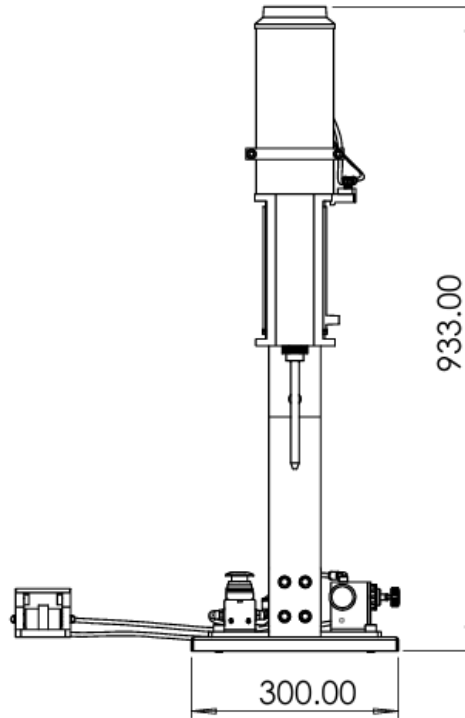
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4.3 DETAILED DIMENSIONS

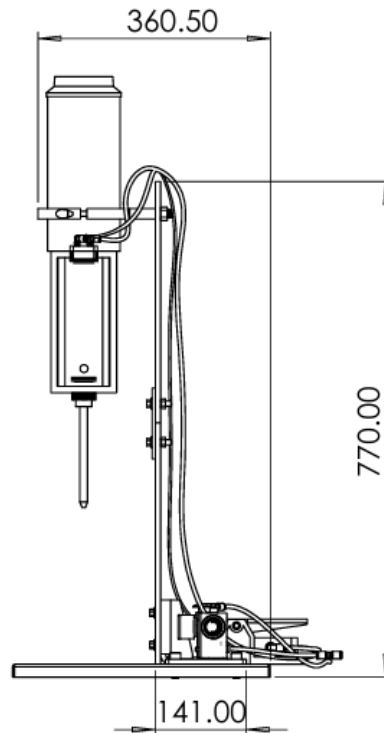
All dimensions are in mm

4.3.1 ADoST CDS

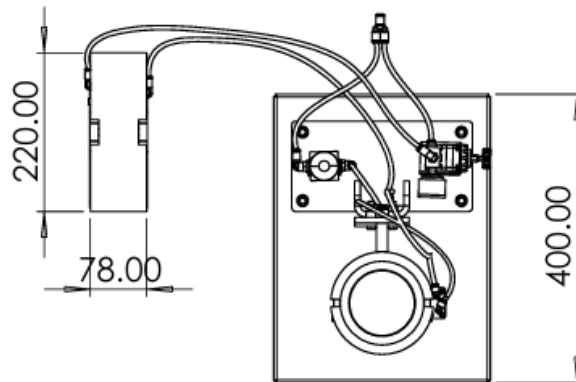
4.3.1.1 Front View



4.3.1.2 Right side view



4.3.1.3 Top view

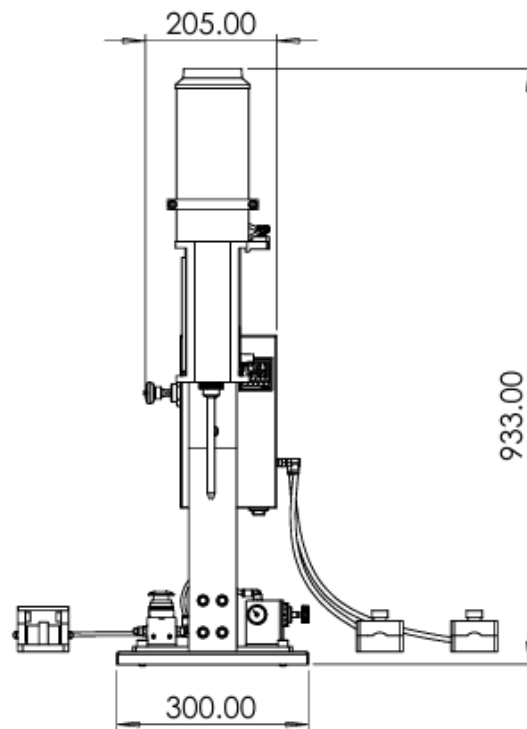




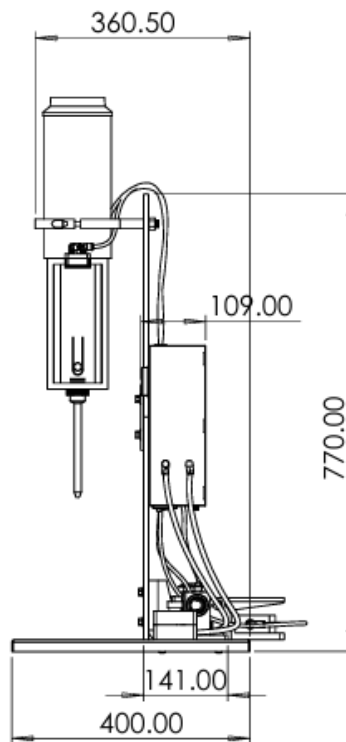
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4.3.2 ADoST CDS+

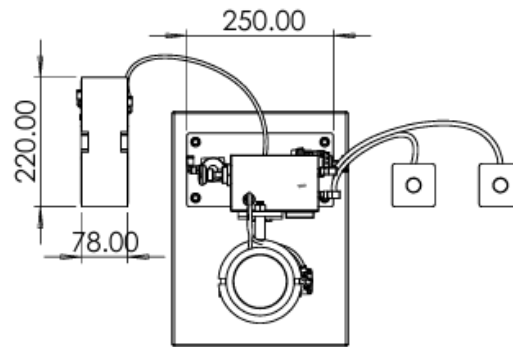
4.3.2.1 Front View



4.3.2.2 Right side view

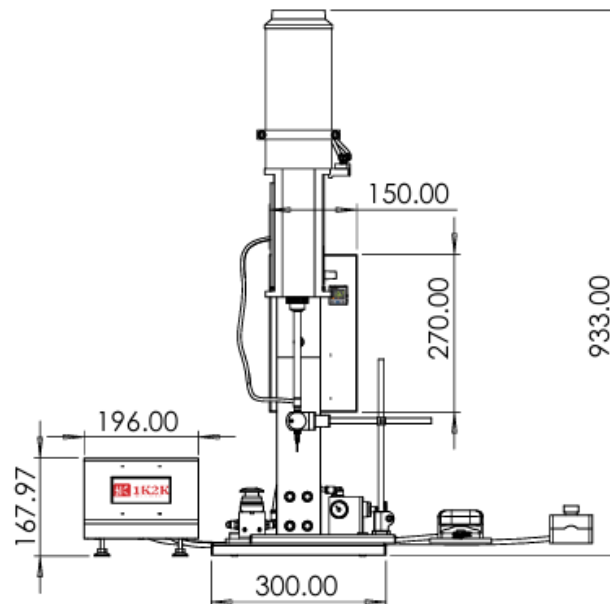


4.3.2.3 Top view



4.3.3 ADoST CDS-PRO

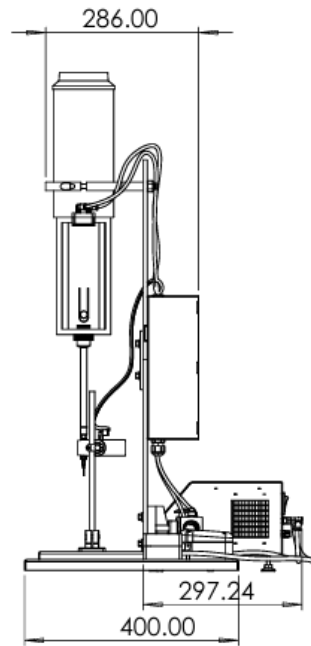
4.3.3.1 Front View



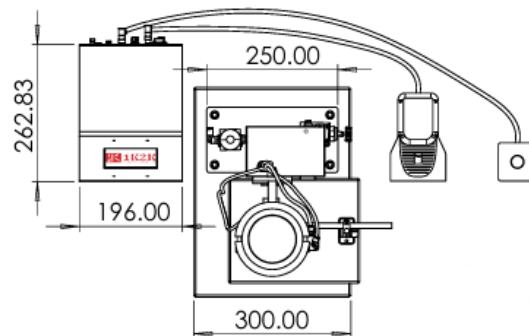
4.3.3.2 Right side view







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4.3.3.3 Top view









































5 SAFETY PRECAUTIONS

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

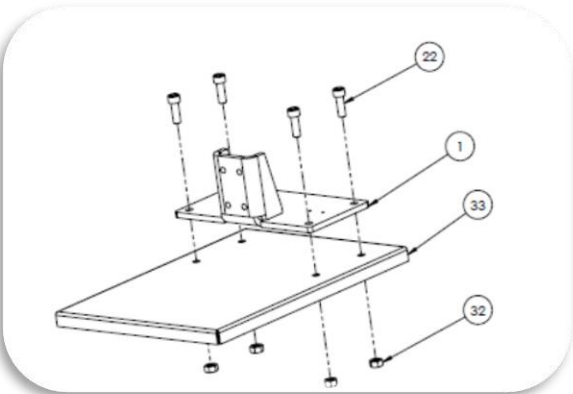
6 SYSTEM SETUP

6.1 STAND ASSEMBLY

6.1.1 ADoST CDS

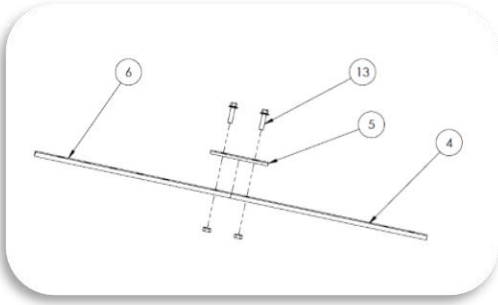
DOCUMENT PREVIEW	ITEM NO.	PART NUMBER	
	1	Base Plate	
	2	Regulator Mounting	
	3	Retraction Push Button Mounting	
	4	Vertical plate Bottom	
	5	Connecting Plate	
	6	Vertical plate Top	
	7	Finch Valve	
	8	Finch Tube	
	9	Plug	
	10	Regulator Dial	
	11	Bolt-M3	
	12	small Bolt-M4	
	13	Long Bolt-M8	
	14	Nut-M8	
	15	Regulator Outer ring	
	16	Nut-M12	
	17	Gun assembly	
	18	Retraction Push Button	
	19	MCU	
	20	Regulator	
	21	Leveling screw	
	22	Bolt-M10	
	23	Long Bolt-M3	
	24	Nut-M3	
	25	Foot switch	
	26	Emergency switch	
	27	cartridge	
	28	static mixer	
	29	Mixer Lock	
	30	Luer lock	
	31	Needle	
	32	Nut-M10	
	33	CDS PRO Base Plate	
	34	PV stand	
	35	Disconnectable connector	
	36	SCU	
	37	Pneumatic Foot switch	
	38	ON/OFF switch	

Step-1



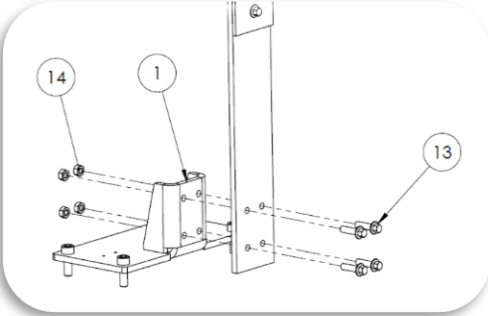
Install the Base Plate(1) on the 1K-CDS PRO Base Plate(33) with 4pcs Bolt(22) and Nut(32) Allen key.

Step-2



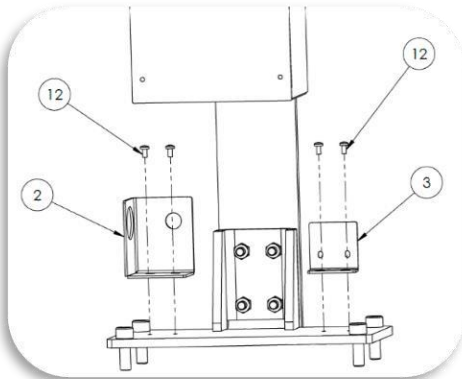
Secure the Vertical plate Bottom (4) and Vertical Plate Top (6), using Connecting Plate (5) Using the 2pcs of Long Bolt (13) and Nuts.

Step-3



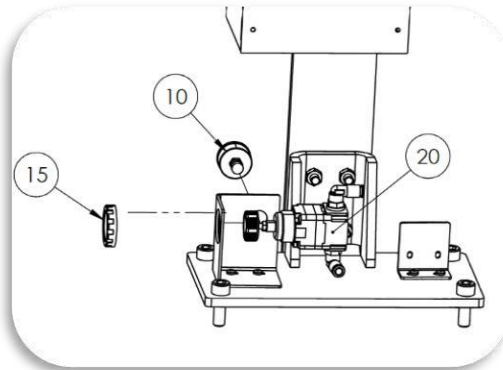
Secure the Assembly of step to the Base Plate(1) using Nut(14) Bolts(13).

Step-4



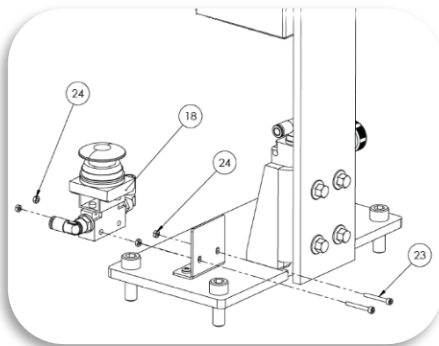
Place the Regulator Mounting (2) and Retraction Push button mounting (3) on the Base plate (1) using 2pcs of small bolts (12) each as shown.

Step-5



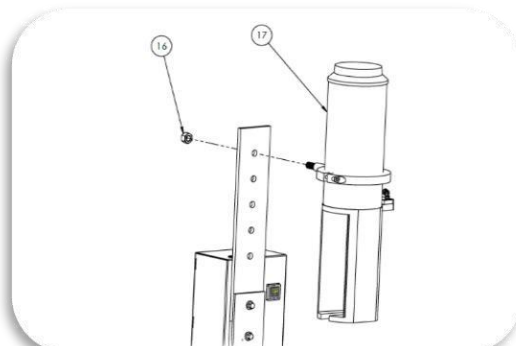
Push the Regulator (20) Into Out and use outer ring(15) to lock the position further connect Dial (10) using clockwise rotation to it.

Step-6



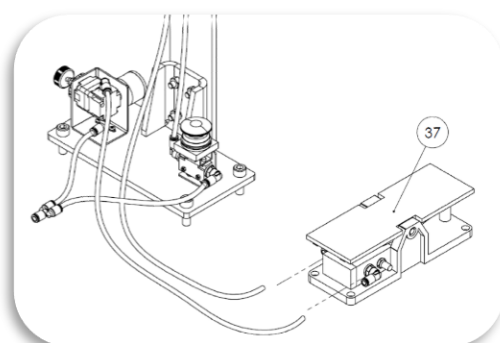
Place the Retraction Push Button (18) with inside face Of Retraction Push Button mounting using 2 pcs of long Bolt (23) and 4 Pcs of Nut (24) with the help of Allen key.

Step-7



Place The Gun assembly (17) in the Hole of Vertical Plate Top (6) with the help of Nut (16). Use Vertical Hole for raise and lower gun assembly or height adjustment.

Step-8









































Connect Pneumatic Foot switch (37) with Gun using Pneumatic Line.

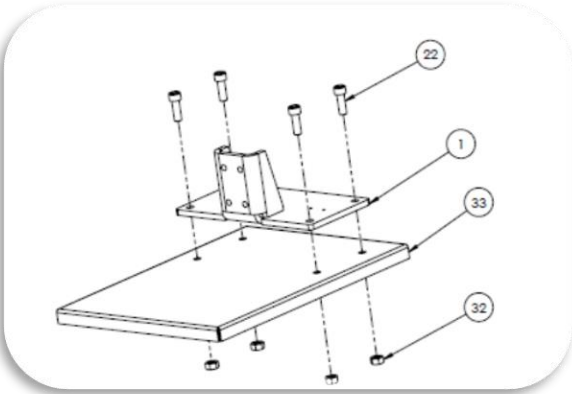
Step-9

Connect all pneumatic lines according to the numbering.

6.1.2 ADoST CDS+

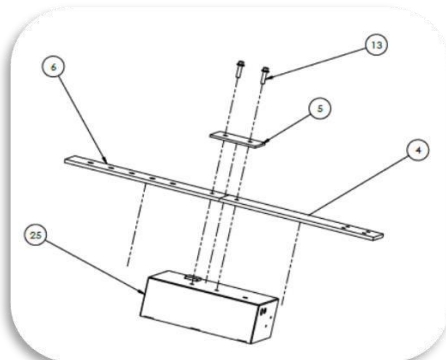
DOCUMENT PREVIEW	ITEM NO.	PART NUMBER
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	6	Vertical plate Top
	7	Pinch Valve
	8	Pinch Tube
	9	Plug
	10	Regulator Dial
	11	Bolt-M3
	12	small Bolt-M4
	13	Long Bolt-M8
	14	Nut-M8
	15	Regulator Outer ring
	16	Nut-M12
	17	Gun assembly
	18	Retraction Push Button
	19	MCU
	20	Regulator
	21	Leveling screw
	22	Bolt-M10
	23	Long Bolt-M3
	24	Nut-M3
	25	Foot switch
	26	Emergency switch
	27	cartridge
	28	static mixer
	29	Mixer Lock
	30	Luer lock
	31	Needle
	32	Nut-M10
	33	CDS PRO Base Plate
	34	PV stand
	35	Disachable connector
	36	SCU
	37	Pneumatic Foot switch
	38	ON/OFF switch

Step-1



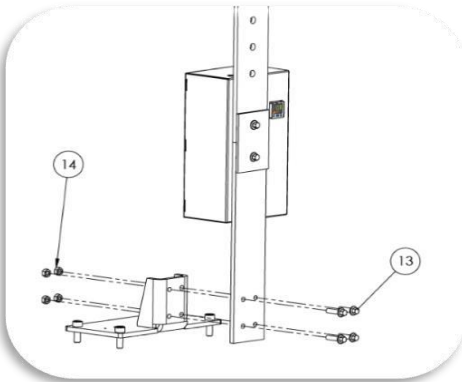
Install the Base Plate(1) on the 1K-CDS PRO Base Plate(33) with 4pcs Bolt(22) and Nut(32) Allen key.

Step-2



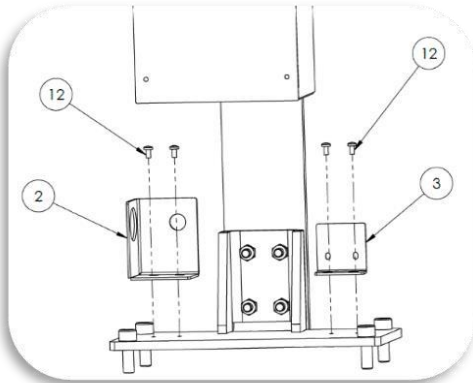
Secure the Vertical plate Bottom (4) and Vertical Plate Top (6) to the SCU(25), using Connecting Plate (5) Using the 2pcs of Long Bolt (13).

Step-3



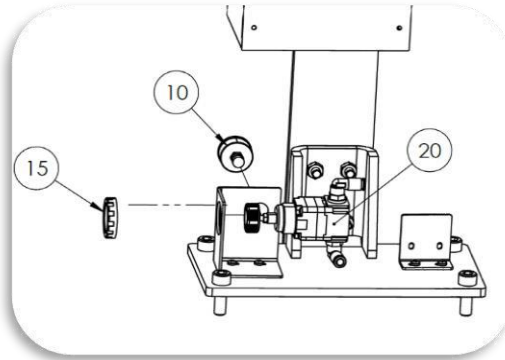
Secure the Assembly of step to the Base Plate(1) using Nut(14) Bolts(13).

Step-4



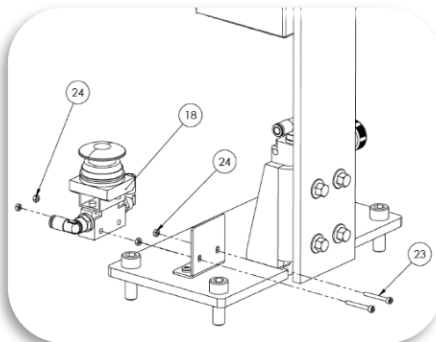
Place the Regulator Mounting (2) and Retraction Push button mounting (3) on the Base plate (1) using 2pcs of small bolts (12) each as shown.

Step-5



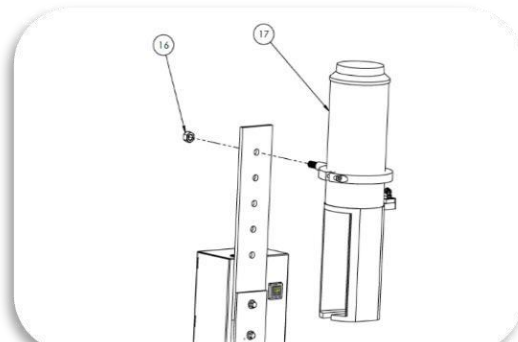
Push the Regulator (20) In to Out and use outer ring(15) to lock the position further connect Dial (10) using clockwise rotation to it.

Step-6



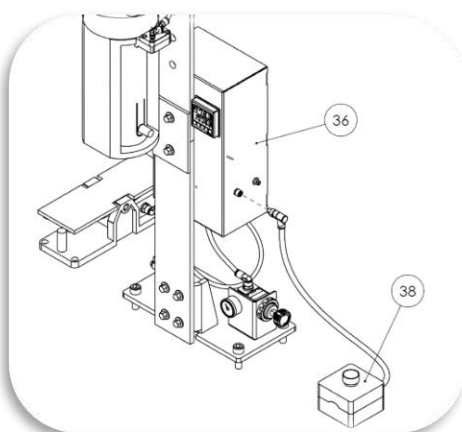
Place the Retraction Push Button (18) with inside face of Retraction Push Button mounting using 2 pcs of long Bolt (23) and 4 Pcs of Nut (24) with the help of Allen key.

Step-7



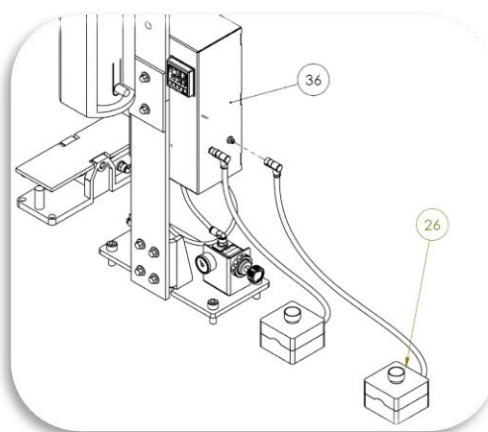
Place The Gun assembly (17) in the Hole of Vertical Plate Top (6) with the help of Nut (16). Use Vertical Hole for raise and lower gun assembly or height adjustment.

Step-8



Connect ON /OFF switch (38) with SCU using Detachable Connector.

Step-9








































Connect Emergency switch (26) with SCU using Detachable Connector.

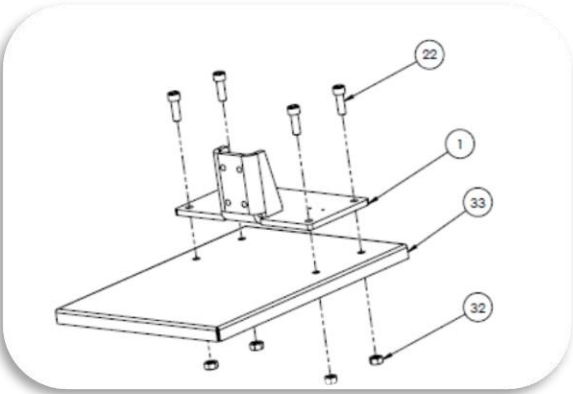
Step-10

Connect all pneumatic lines according to the numbering.

6.1.3 ADoST CDS-PRO

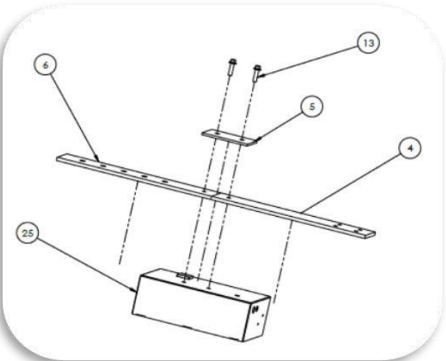
DOCUMENT PREVIEW	ITEM NO.	PART NUMBER	
	1	Base Plate	
	2	Regulator Mounting	
	3	Retraction Push Button Mounting	
	4	Vertical plate Bottom	
	5	Connecting Plate	
	6	Vertical plate Top	
	7	Pinch Valve	
	8	Pinch Tube	
	9	Plug	
	10	Regulator Dial	
	11	Bolt-M3	
	12	small Bolt-M4	
	13	Long Bolt-M8	
	14	Nut-M8	
	15	Regulator Outer ring	
	16	Nut-M12	
	17	Gun assembly	
	18	Retraction Push Button	
	19	MCU	
	20	Regulator	
	21	Leveling screw	
	22	Bolt-M10	
	23	Long Bolt-M3	
	24	Nut-M3	
	25	Foot switch	
	26	Emergency switch	
	27	cartridge	
	28	static mixer	
	29	Mixer Lock	
	30	Luer lock	
	31	Needle	
	32	Nut-M10	
	33	CDS PRO Base Plate	
	34	PV stand	
	35	Disachable connector	
	36	SCU	
	37	Pneumatic Foot switch	
	38	ON/OFF switch	

Step-1



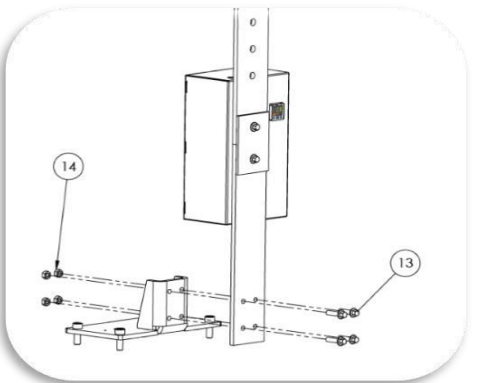
Install the Base Plate(1) on the 1K-CDS PRO Base Plate(33) with 4pcs Bolt(22) and Nut(32) Allen key.

Step-2

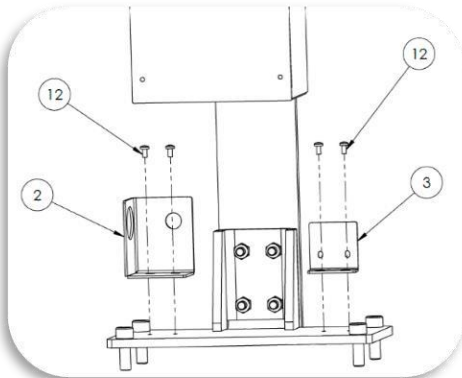


Secure the Vertical plate Bottom (4) and Vertical Plate Top (6) to the SCU(25), using Connecting Plate (5) Using the 2pcs of Long Bolt (13).

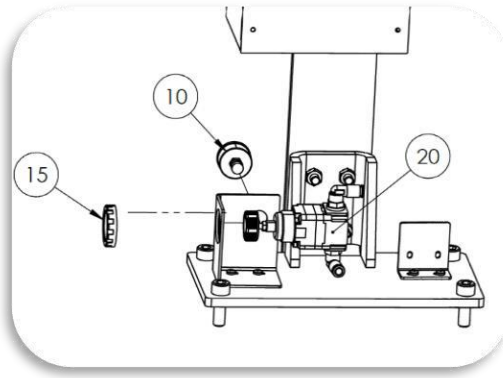
Step-3



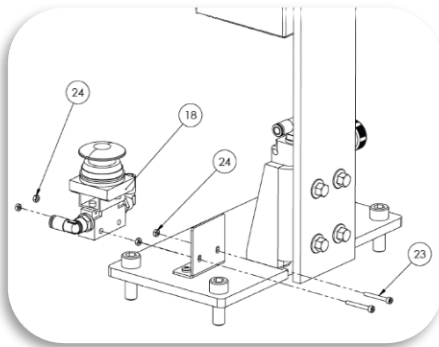
Secure the Assembly of step to the Base Plate(1) using Nut(14) Bolts(13).

Step-4


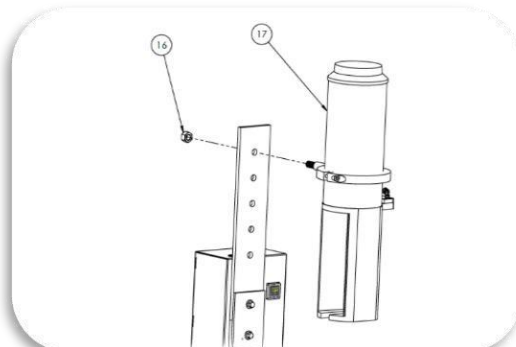
Place the Regulator Mounting (2) and Retraction Push button mounting (3) on the Base plate (1) using 2pcs of small bolts (12) each as shown.

Step-5


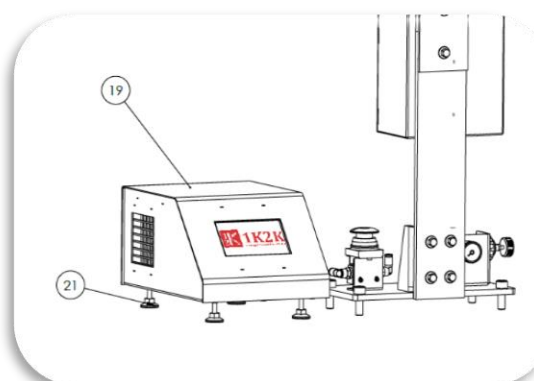
Push the Regulator (20) In to Out and use outer ring(15) to lock the position further connect Dial (10) using clockwise rotation to it.

Step-6


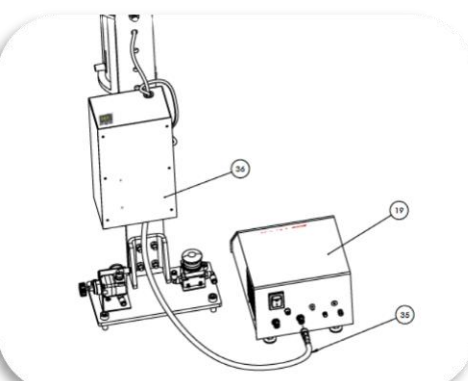
Place the Retraction Push Button (18) with inside face Of Retraction Push Button mounting using 2 pcs of long Bolt (23) and 4 Pcs of Nut (24) with the help of Allen key.

Step-7


Place The Gun assembly (17) in the Hole of Vertical Plate Top (6) with the help of Nut (16). Use Vertical Hole for raise and lower gun assembly or height adjustment.

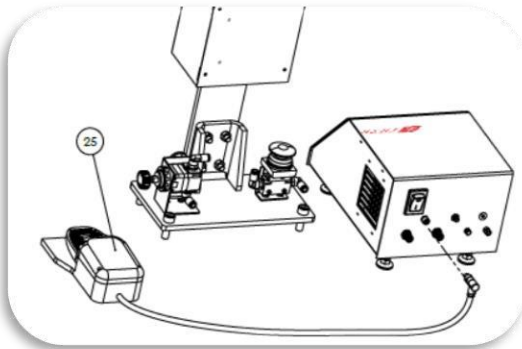
Step-8


The 4pcs Levelling screw (21) into the 4 holes on the MCU(19), Rotate CW to raise and CCW to lower the position of MCU.

Step-9


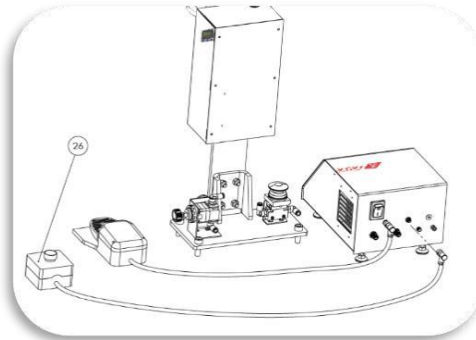
Connect MCU(19) with SCU(36) using Detachable Connector(35).

Step-10



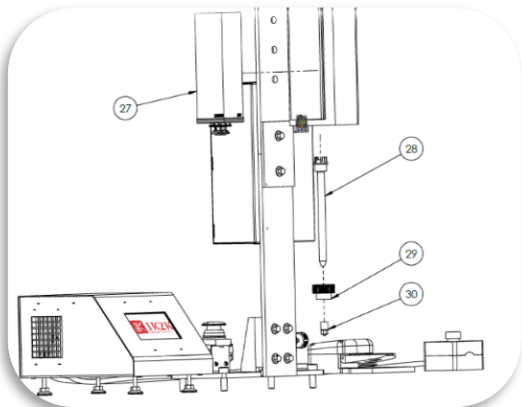
Connect Foot switch (25) with MCU using Detachable Connector.

Step-11



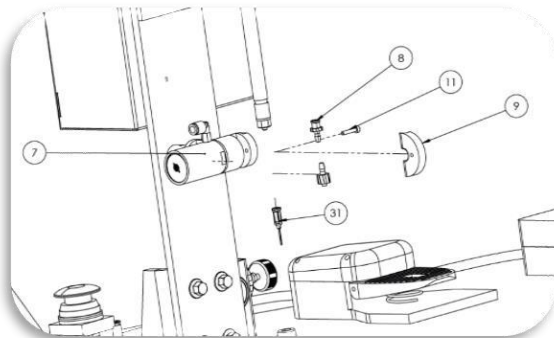
Connect Emergency switch (26) with MCU using Detachable Connector.

Step-12



Connect all Consumable items – Mixer (28), Mixer Lock(29), Luer lock(30), in series with two component cartridge(27).

Step-13

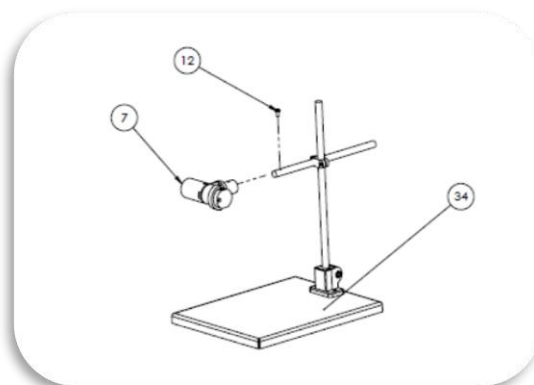


Secure the pinch tube (8) with Plug (9) to the Pinch Valve (7) using long bolt (11). Further connect Nozzle(31).

Step-14

Connect all pneumatic lines according to the numbering.

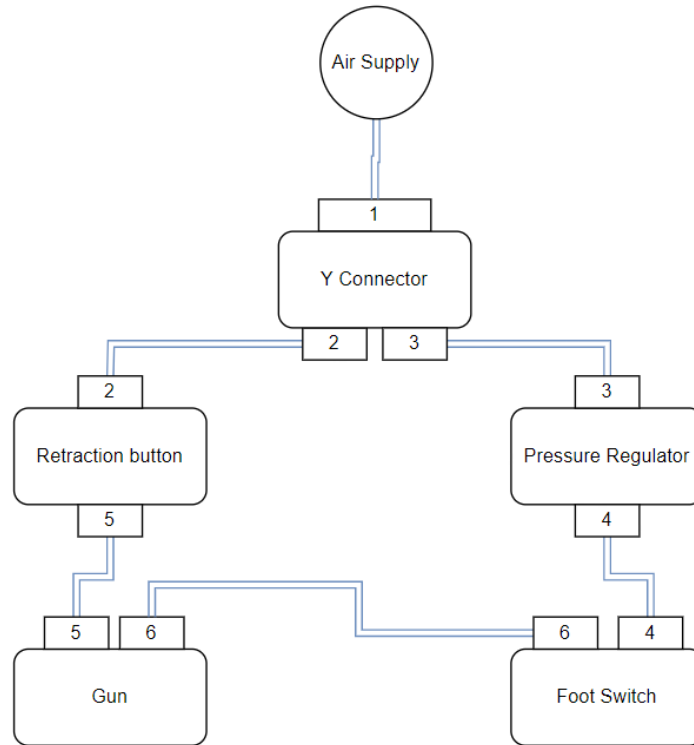
Accessories-1: Pinch Valve stand



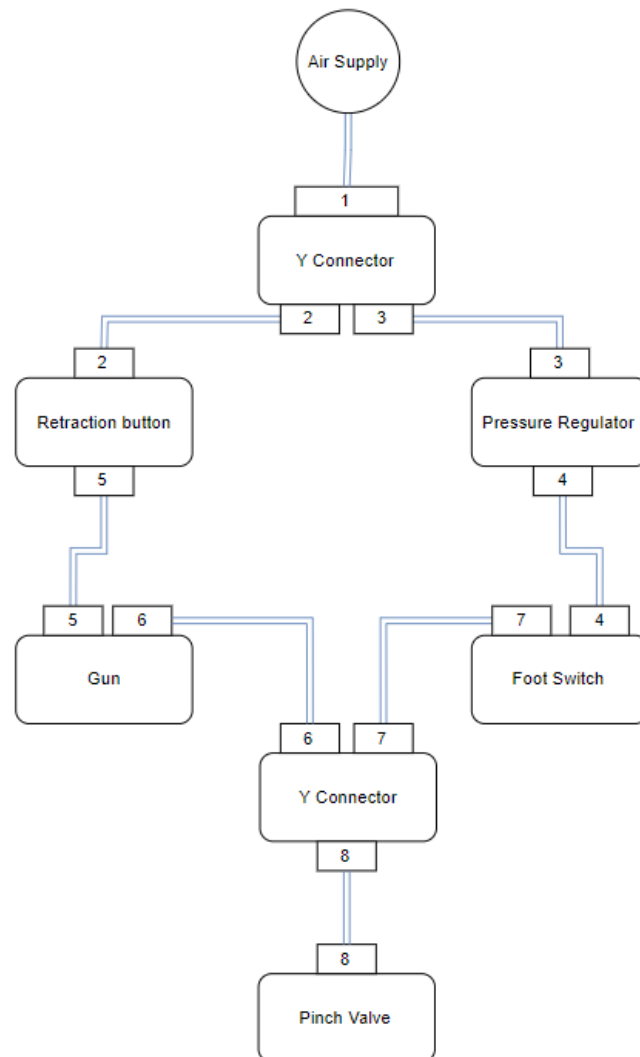
6.2 PNEUMATIC CONNECTION SETUP

Connect pneumatic air pipe (6mm OD and 4mm ID) to indicated connector. Additional connectors (6X8, 6X10, 6X12) are supplied as standard spares. Using FRL (Filter, Regulator, and Lubricator) is advised in order to keep the input air supply dry and clean.

6.2.1 ADoST CDS

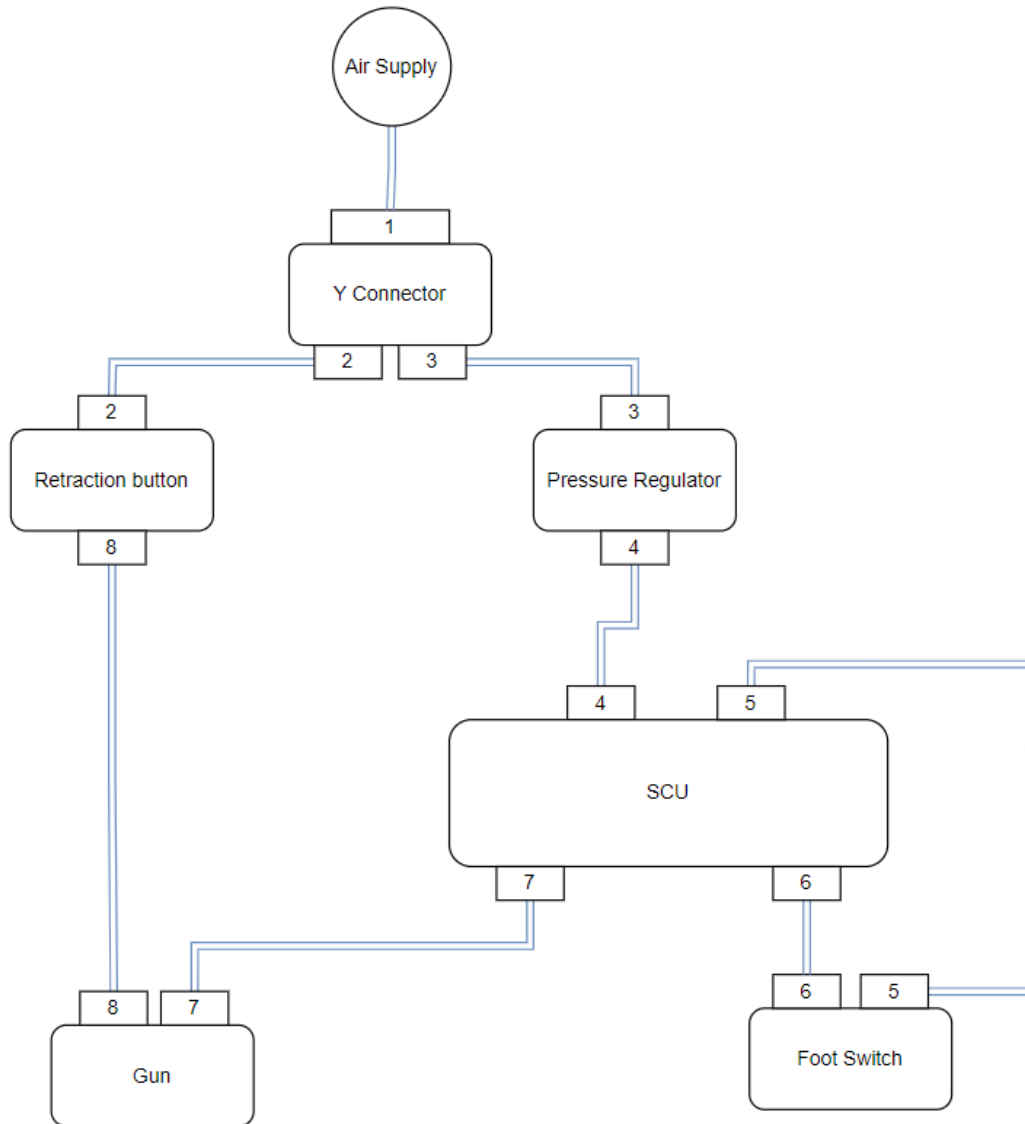


6.2.2 ADoST CDS with ADoST Pinch Valve

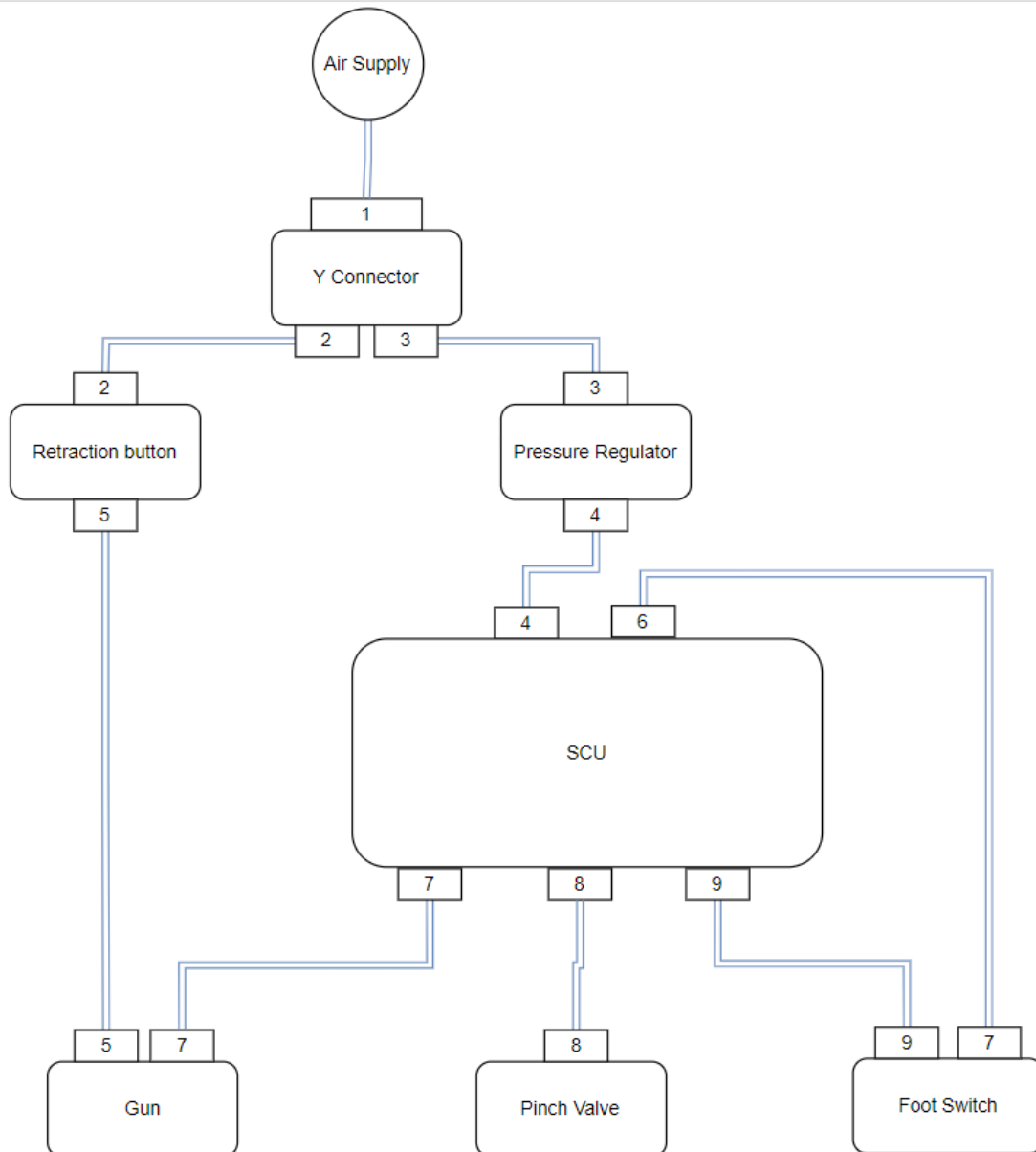


Note: Air pressure through pressure regulator needs to be set above 4 bar to use Pinch Valve.

6.2.3 ADoST CDS+

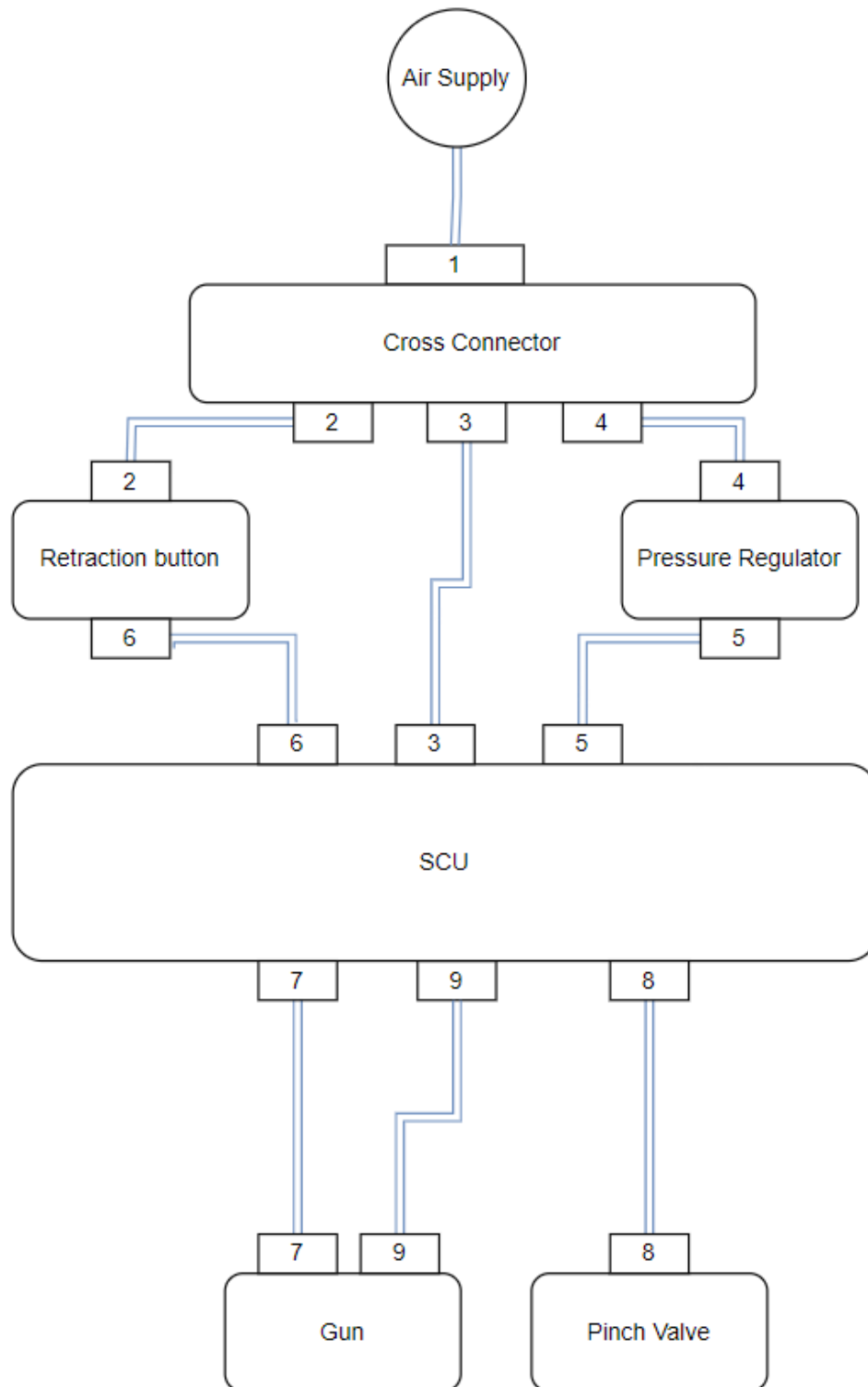


6.2.4 ADoST CDS+ with ADoST Pinch Valve



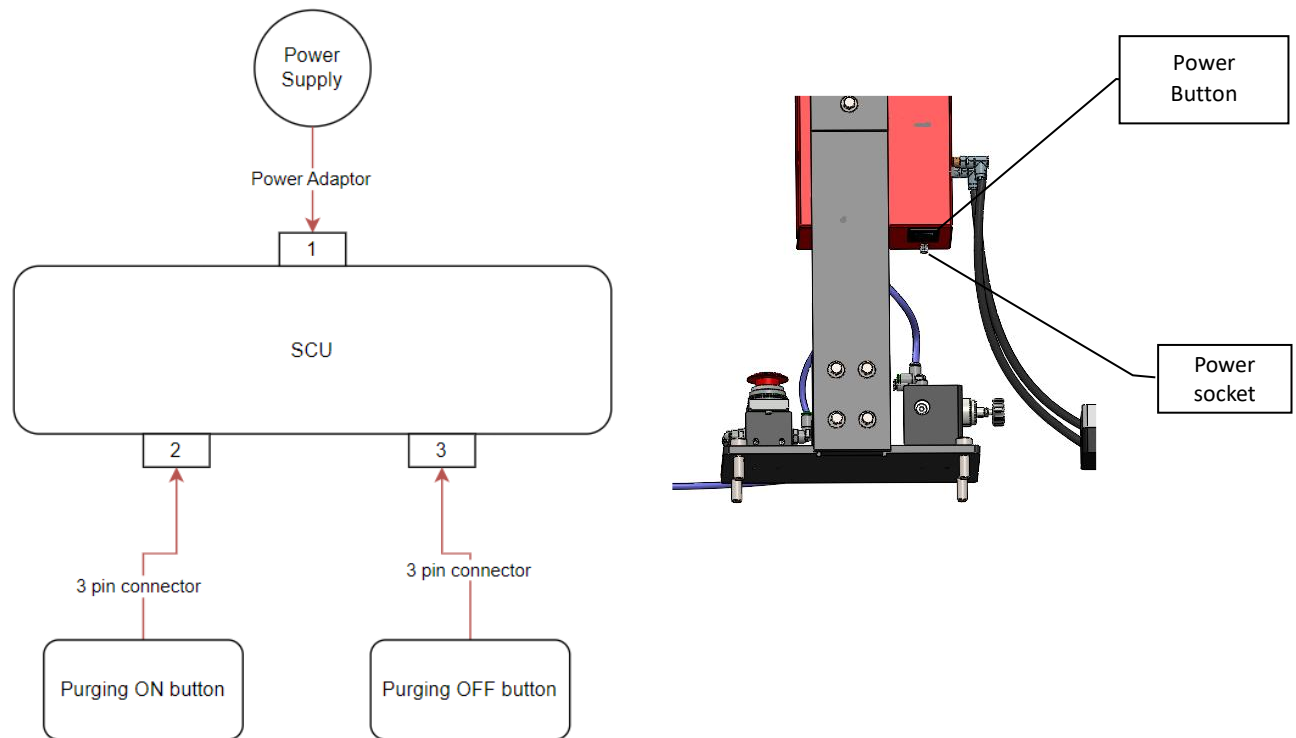
Note: Air pressure through pressure regulator needs to be set above 4 bar to use Pinch Valve.

6.2.5 ADoST CDS-PRO

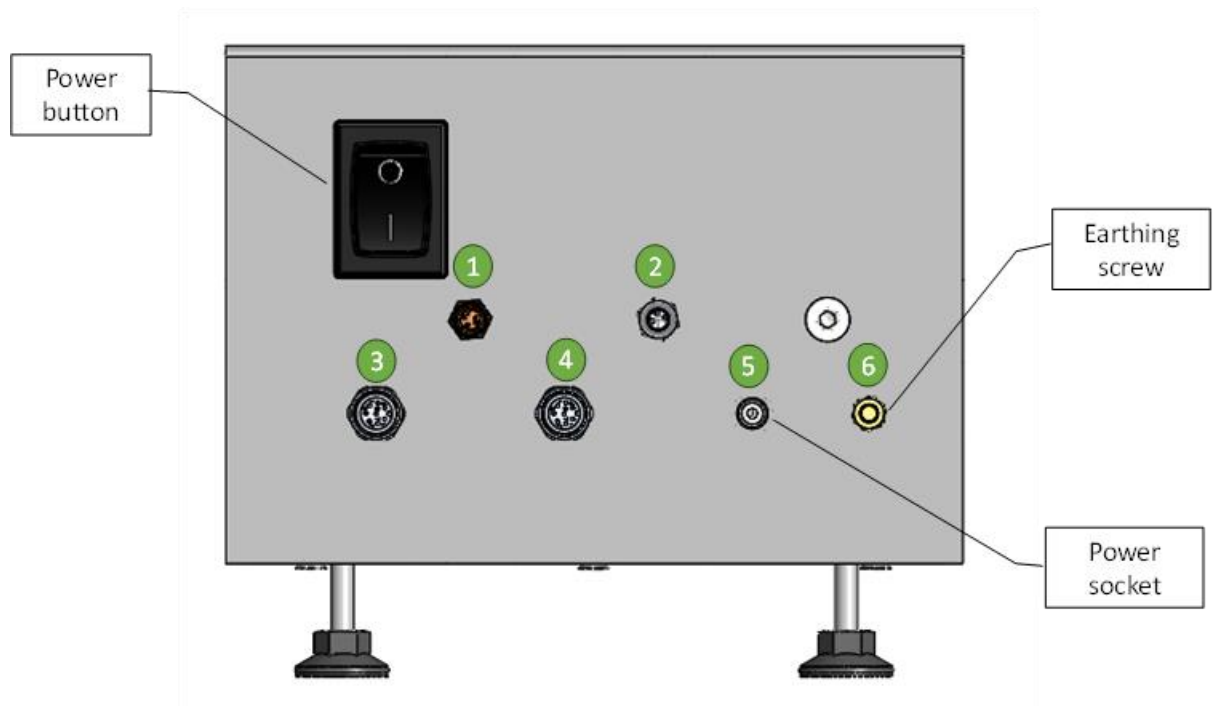


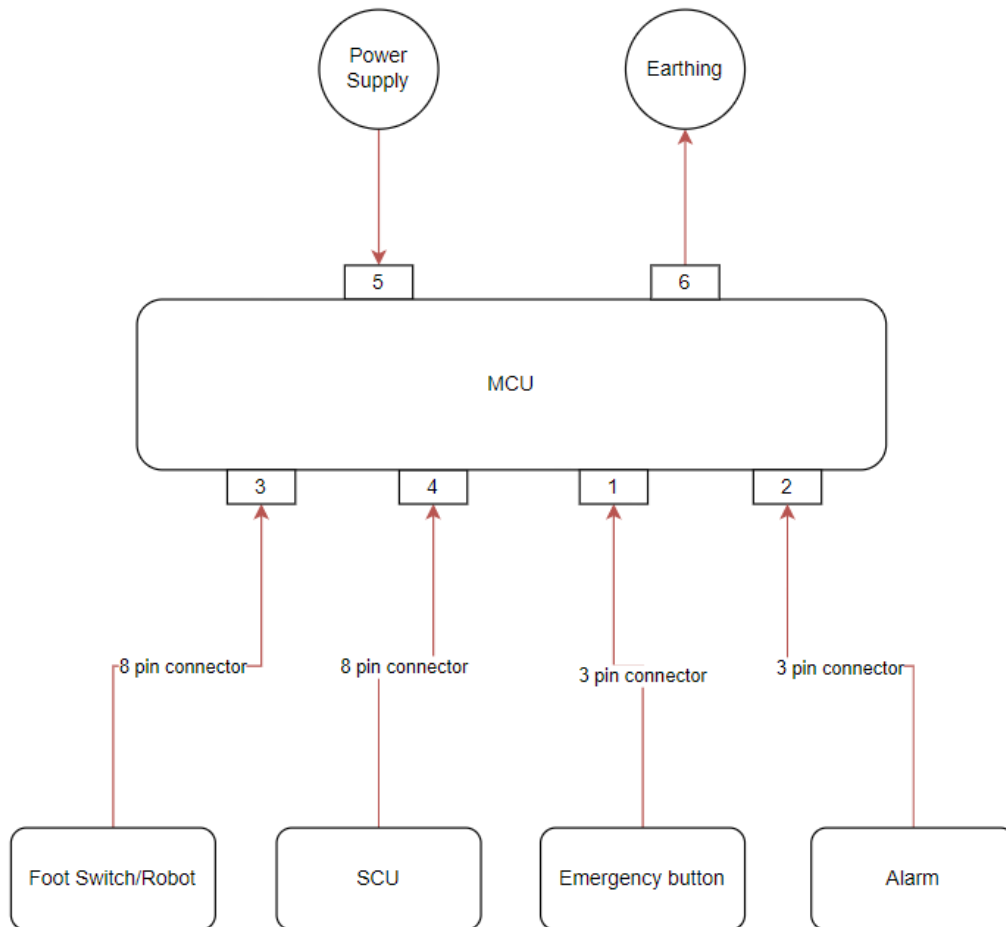
6.3 ELECTRICAL SETUP

6.3.1 ADoST CDS+



6.3.2 ADoST CDS-PRO





6.4 CARTRIDGE PLACEMENT INSIDE THE GUN

1. Press Retraction Button to Move the Piston Back and Make Space for the Cartridge.
2. Remove the Plug from two component cartridges (compatible with the gun) and connect the Static Mixer to the cartridge.
3. Connect Compatible Luar lock with static mixer
4. Place the Cartridge Inside gun and make sure it's properly located at center.
5. Connect Luar Lock
6. Connect the Pinch valve with a compatible pinch tube inside it.

6.5 PROCEDURE TO FIX/REPLACE THE PINCH TUBE AND NOZZLE IN THE PINCH VALVE

1. Dispensing should be stopped while changing the pinch tube.
2. Connect the nozzle to the pinch tube in the indicated place by rotating it clockwise.
3. Follow the Settings screen in the screen flow diagram section to open the Pinch Valve, allowing you to remove the existing pinch tube if any, and insert the new pinch tube prepared in step above.
4. If you are using an ADoST Pen, then please follow the steps in the ADoST Pen manual for tube installation and removal.



7 INITIAL SYSTEM CONFIGURATION & STANDARD OPERATING PROCEDURE

7.1 ADoST CDS

7.1.1 System startup

- 1) Start the Air supply, which is set at not more than 6bars.

7.1.2 Set adhesive flow rate

The adhesive flow rate in the system depends upon the pressure set in the pressure regulator.

Follow the steps below to set the pressure

- 1) Loosen the nut of the pressure regulator.
- 2) Rotate the knob clockwise to increase the pressure
- 3) Rotate the knob anti-clockwise to reduce the pressure
- 4) The Knob dial will show the set pressure.
- 5) Try to dispense the adhesive, if the desired flow rate is achieved the go to next step else go to step 2 and repeat the procedure.
- 6) Once the required flow rate is achieved, lock the nut to set the pressure.

7.1.3 Start/stop adhesive dispensing

Press the foot switch continuously till the required amount of adhesive has dispensed. When foot switch is not pressed there will not be any adhesive dispensing.

7.2 ADoST CDS+

7.2.1 System startup

- 1) Start the Air supply, which is set at not more than 6bars.
- 2) Switch on the power supply.
- 3) Ensure that the hand valve is in the NOT pressed state. The pressed state indicates the purge mode.

7.2.2 Set adhesive flow rate

The adhesive flow rate in the system depends upon the pressure set in the pressure regulator.

Follow the steps below to set the pressure

- 1) Loosen the nut of the pressure regulator.
- 2) Rotate the knob clockwise to increase the pressure
- 3) Rotate the knob anti-clockwise to reduce the pressure
- 4) The Knob dial will show the set pressure.
- 5) Try to dispense the adhesive, if the desired flow rate is achieved go to the next step else go to step 2 and repeat the procedure.
- 6) Once the required flow rate is achieved, lock the nut to set the pressure.

7.2.3 Start/stop adhesive dispensing



Press the foot switch continuously till the required amount of adhesive has been dispensed. When the foot switch is not pressed there will not be any adhesive dispensing.

7.2.4 Set Purge Mode

- 1) Push the hand valve inside to set the system into purge mode
- 2) Pull the hand valve outside to set the system into normal dispensing mode using the foot switch

7.2.5 Timer setting for Purge Mode



- 1) PS1 = delay time between consecutive purge
- 2) PS2 = delay time + purge time
- 3) If purging is required for 1 sec every after 9 sec, then
 - a. PS1 = 9 sec
 - b. PS2 = 10 sec
- 4) Press "MD" to select "PS1", again pressing "MD" will select "PS2"
- 5) Pressing "<<" will allow editing of selected option "PS1" or PS2"
- 6) Use  and  to change the time.

7.2.6 Start/Stop purge

- 1) Push the green button to start the purge.
- 2) Push the Red button to stop the purge

7.3 ADoST CDS-PRO

7.3.1 Initial system configuration

Before starting the dispensing, it is required to configure a few parameters. Please follow the instructions below to complete the basic setting procedure.

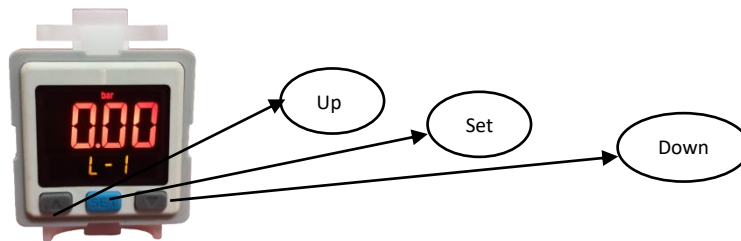
7.3.1.1 Air pressure regulator settings

1. Loosen the nut of the pressure regulator.
2. Rotate the knob clockwise to increase the pressure
3. Rotate the knob anti-clockwise to reduce the pressure
4. The Knob dial will show the set pressure.
5. Once the pressure gauge shows the required pressure, lock the nut to set the pressure.
6. Make sure the Digital Pressure switch lower limit is set as the same or a little lower than the pressure set through the pressure regulator

7.3.1.2 Air pressure switch settings

1. To set the lower and upper pressure limits-
There are 3 buttons on the pressure switch.
 - Up
 - Set
 - Down

On pressing the 'UP' button, 'L1' will appear on the display.



Enter the required pressure using UP, DOWN key and press SET.



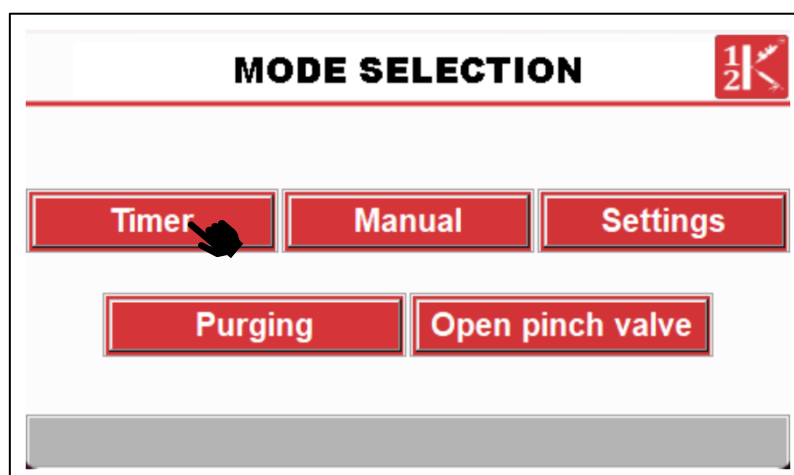
Please note: Quoted pictures are intended for example only.

7.3.1.3 System calibration for dispensing amount

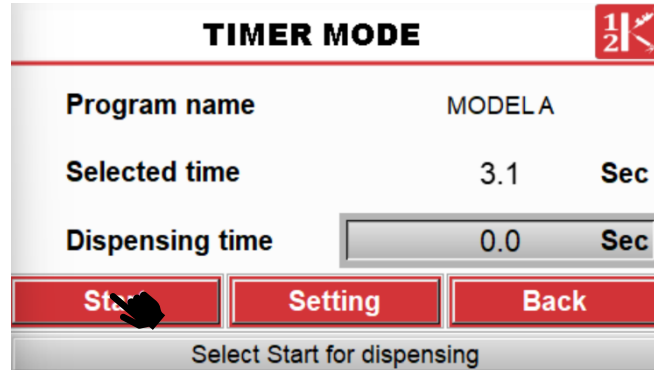
Follow the timer settings section below to create the 1st program with expected dispensing time.

Before starting the system calibration, keep a weighing machine ready to dispense the adhesive dispensed by the system. The weighing machine should be able to provide up to 3 decimals of precision. Keep a cup/small vessel which can be used for dispensing adhesive and dispensed measurements.

- 1) Select the timer mode (to understand the timer mode in detail, please read the section with heading **Timer Mode.**)



- 2) Select start or use accessory/foot switch for dispensing. Ensure you are ready for measurement of dispensed amount.



- 3) Measure the dispense amount, if it's not expected, change the pressure using a regulator and repeat step 2
- 4) Repeat steps 2 and 3 above until you achieve the desired measured output.
- 5) You may change the time of dispense from the setting. If you increase the time, then you will have to reduce the pressure and vice versa to achieve the same dispensing amount.

7.3.1.4 Cycle delay time

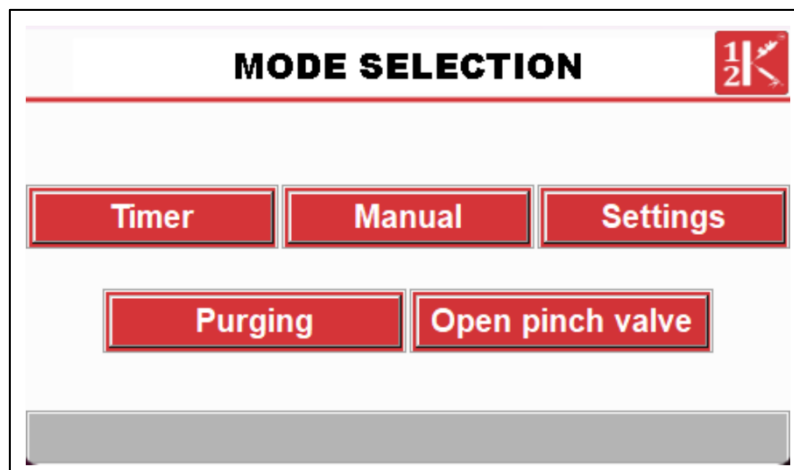
The cycle delay time is required when it's desired to keep the delay between two dispense. This feature is required to be set when using the system with sensors. This is to avoid multiple sensing of same component in short duration by the system and so avoiding more than once dispensing on same component.

Follow the button selection to reach cycle delay time settings

Settings -> Timer Settings -> Cycle Delay time

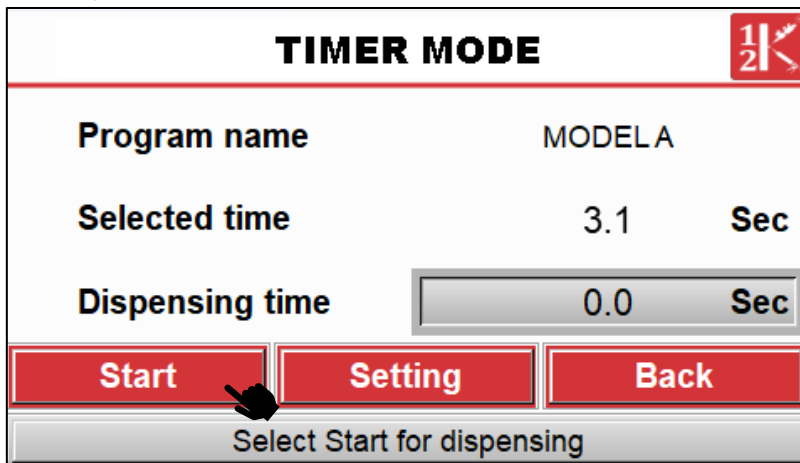
7.3.2 Timer mode

In timer mode, the system will dispense the fixed adhesive volume for a pre-set time and pressure. The system is designed to store 50 programs in the settings. Users can select a particular pre-set timer depending on the application requirement. The minimum and maximum time for dispensing is 0.1 and 3276.8 seconds respectively.



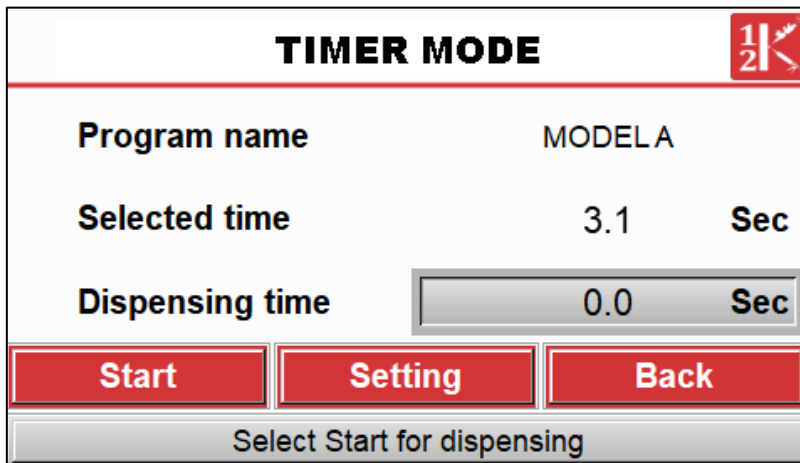
Make sure that the program name, time configuration and pressure settings are done. Then click on the 'Timer' button from mode selection screen. If not configured, then the HMI may show an error.

7.3.2.1 Timer Mode by HMI commands



1. Touch the 'Start' button on the screen to start the dispensing and click on back button to exit the screen.
2. Once the Start command is received then the system waits for the pressure to reach the preset pressure, if the pressure reaches the set value within 6 seconds 'Dispensing is on'.
3. If the preset pressure is not achieved after the Start command the cycle is aborted.
4. To stop the dispensing while the operation is ON, press the 'Emergency push button'

7.3.2.2 Timer Mode by Accessory



1. The accessory could be a sensor, foot switch, robot or a user specific device.
2. If the connected accessory is a sensor, keep the part on the fixture to dispense for the preset time and stop automatically.
3. If the connected accessory is a foot switch, pressing it once will start the dispensing and end after preset time.
4. If the accessory is a robot or user specific device then upon getting an impulse dispensing will start for the preset time and stop automatically.

TIMER MODE		
Program name	MODEL A	
Selected time	3.1	Sec
Dispensing time	1.4	Sec
Start	Setting	Back
Dispensing is on		

- Once the Start command is received then the system waits for the pressure to reach the preset pressure, if pressure reaches the set value within 6 seconds 'Dispensing is on'.
- If the preset pressure is not achieved after the Start command the cycle is aborted.
- To stop the dispensing while operation is ON, press the 'Emergency push button'.

7.3.3 Manual mode (only for CDS-PRO)

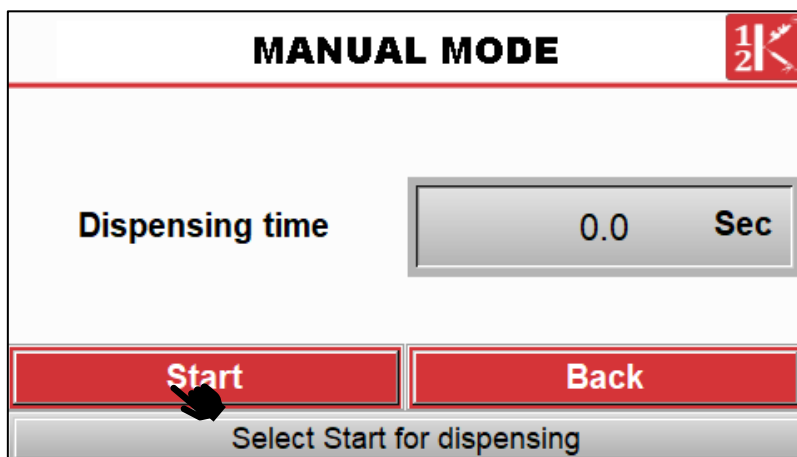
In manual mode, the dispensing is controlled manually by the user. System will dispense the adhesive till the user's command. Manual mode is designed for purging or application on a non-uniform dispensing operation. In this mode, dispensing will continue till the user stops it. The maximum dispensing time in manual mode is 3276.8 seconds. If the dispensing process continues till the maximum time, dispensing will stop automatically. There are two operating options. By HMI commands and by foot switch/accessory connected.

MODE SELECTION		
Timer	Manual	Settings
<div>Purging</div> <div>Open pinch valve</div>		

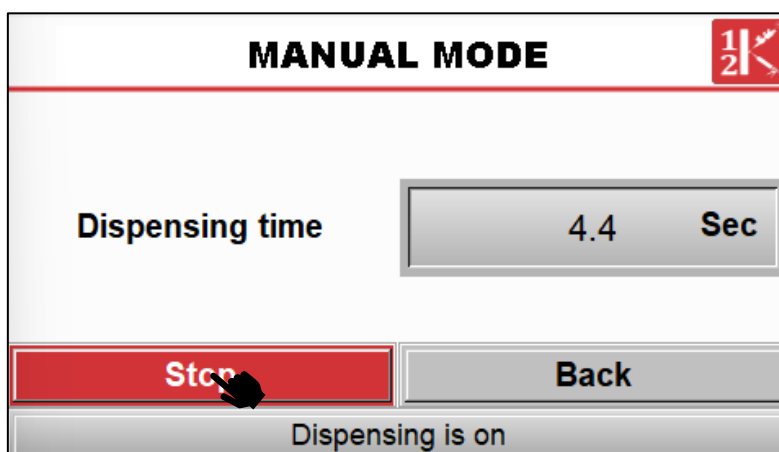
Click on 'Manual' button from mode selection screen.

7.3.3.1 Manual mode by HMI commands

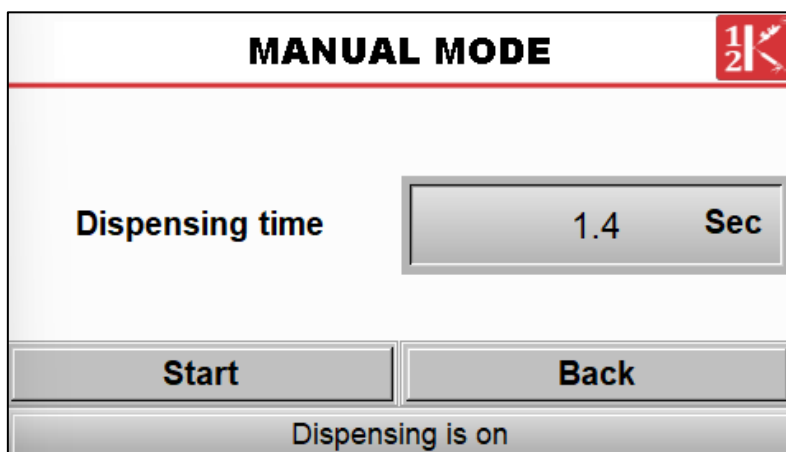
1. Press the 'Start' button on the screen to start the dispensing or use an accessory to dispense.



2. If on screen button is used to start dispensing then 'Stop' will be available to stop the dispensing.



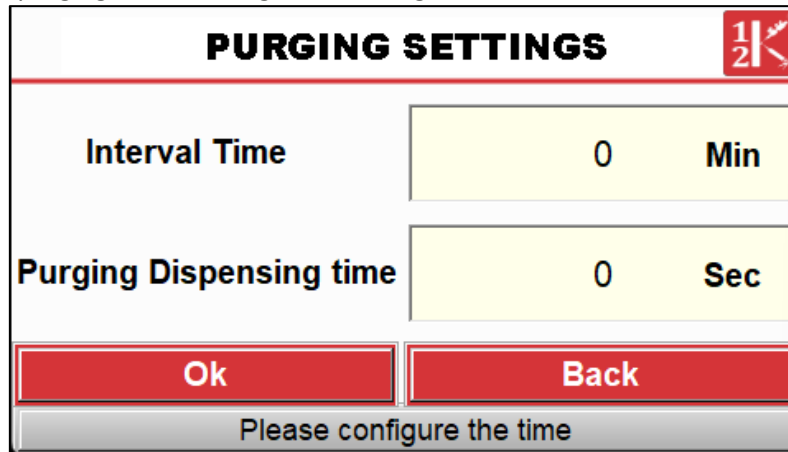
3. If accessory is used to dispense then on screen stop button is disabled and upon withdrawal of the accessory signal Stops the dispensing.



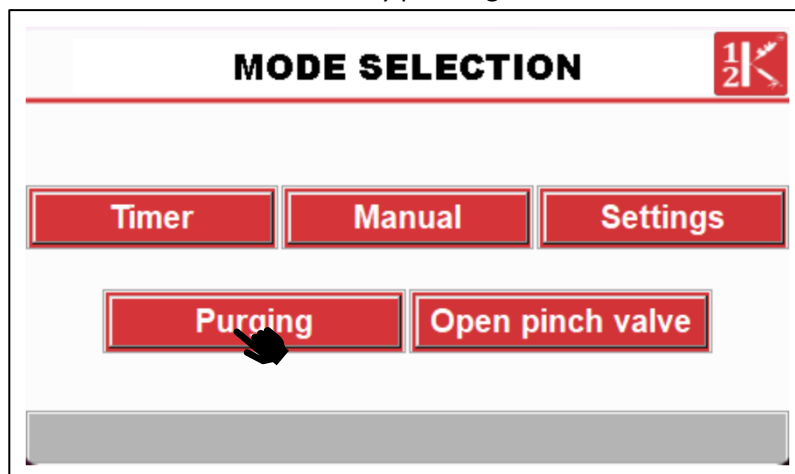
7.3.4 Purging mode

7.3.4.1 Purging mode setting

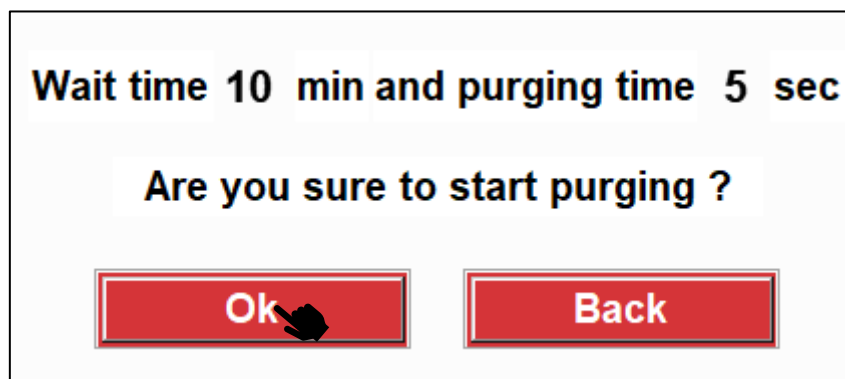
1. Open the purging mode setting from Settings menu



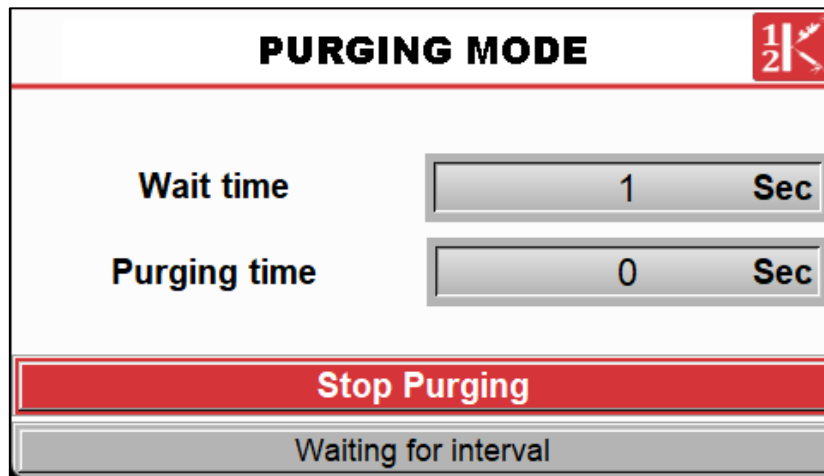
2. Configure with the required time for 'Interval Time' and 'Purging dispensing time'
3. Go back to 'Settings' from Purging settings by pressing Back
4. Go back to the 'Mode selection' screen by pressing Back



5. Select 'Purging' from 'Mode selection'
6. A confirmation popup will be shown, make sure the pneumatic pressure is sufficient.



7. After acknowledging, 'Purging mode' will be open, and starts waiting for the 'Interval time's

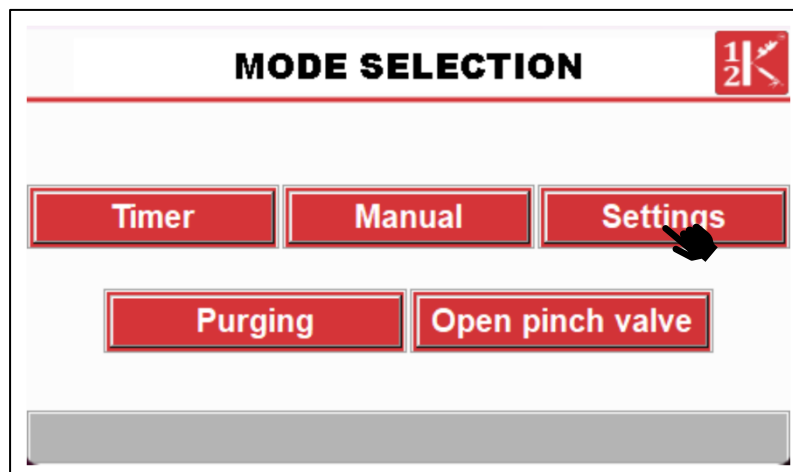


8. As the Interval time is reached purging starts when the pressure configured is achieved and stops after the 'Purging time'
9. This cycle continues till the 'Stop Purging' button is pressed, Emergency is pressed or error from low pneumatic pressure.

7.3.5 Settings

7.3.5.1 Timer Setting

1. Click on the 'Settings' button





2. Enter Login & Password (Please contact your ADoST supplier for Authentication details)

A login dialog box titled "Login" with a close button (X) in the top right corner. It contains two checkboxes: "Security Login" and "Remember Account". Below these are two text input fields labeled "Account" and "Password". At the bottom right is an "OK" button.

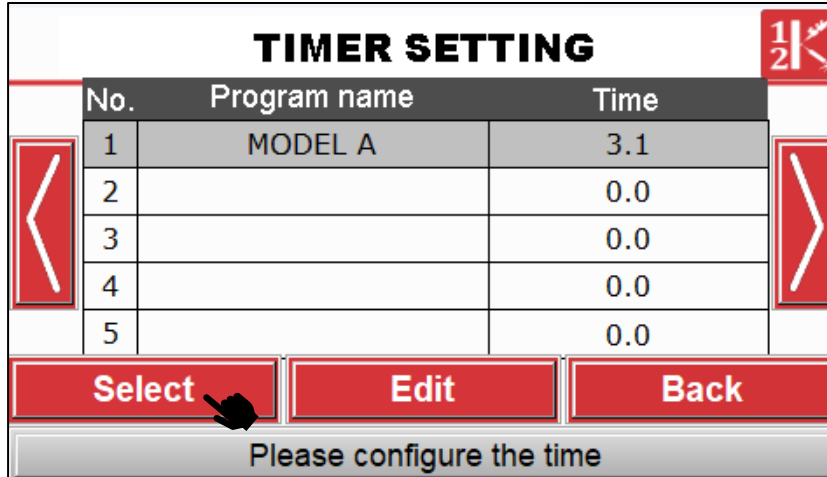
3. Click on Timer setting,

A screen titled "SETTINGS" with a red header bar and a red button with a white icon in the top right corner. Below the header are four red buttons arranged in a 2x2 grid: "Timer setting", "Purging setting", "Change password", and "Back". A black mouse cursor is pointing at the "Timer setting" button. At the bottom is a grey button labeled "Please configure required setting".

4. Select Dispense time to configure.

A screen titled "TIMER SETTINGS" with a red header bar and a red button with a white icon in the top right corner. Below the header are three red buttons arranged horizontally: "Dispense Time", "Cycle delay Time", and "Back". A black mouse cursor is pointing at the "Dispense Time" button. At the bottom is a grey button.

5. Select the required time and click on select. User can have 50 options of different programs



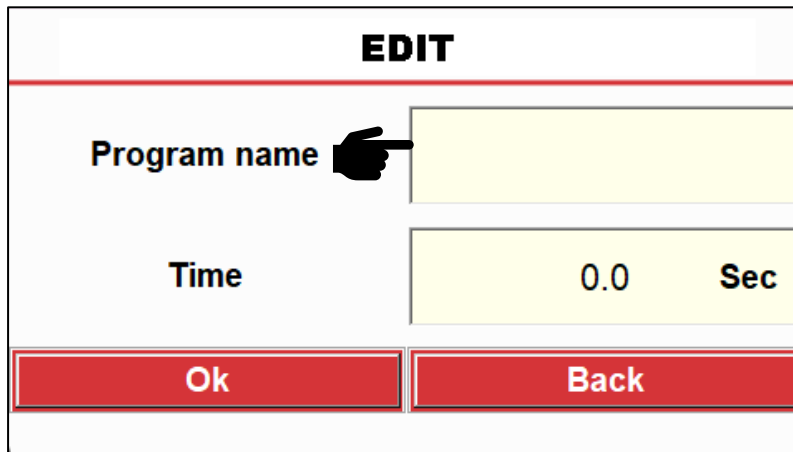
No.	Program name	Time
1	MODEL A	3.1
2		0.0
3		0.0
4		0.0
5		0.0

Select **Edit** **Back**

Please configure the time

7.3.5.2 Edit the Program

1. To edit the program name, click on program name's edit box. (Indicated box)



EDIT

Program name

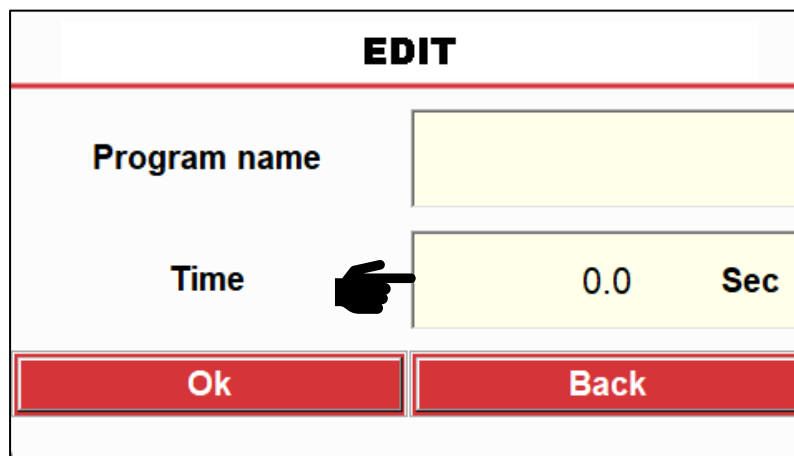
Time Sec

Ok **Back**

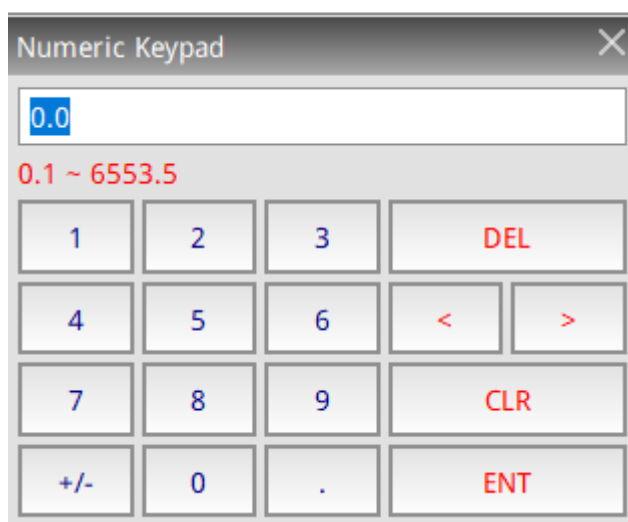
2. Type required name on the keyboard and enter.



3. To edit the timer, click on timer's edit box. (Indicated box)



4. Type required time on the keyboard and enter.





5. By selecting the program will take you back to the previous screen, or Back button also take you back to the previous screen without selecting the program.

6. Click on back to exit the Timer settings

7. Click on back to exit the settings

8 TIMER FACTORY SETTINGS (ADoST CDS+ ONLY)

8.1 FACTORY SETTINGS VALUES:

Setting mode	Default values
Counter/Timer (C-T)	Time
Timer range (SEC)	999.9
UP/DOWN (U-d)	UP
Output mode (Out.n)	ond
Output time (OUT2)	Hold
Output time (OUT1)	Hold
Input logic (SIG)	PnP
Input signal time (In.t)	20
Lock key	L.oFF

Please follow the steps below to set the values as per factory setting. Should be used only on recommendation of supplier



Press  once



Make sure  is set
 if not press   to change

Press  once



Make sure  is set
 if not press  to change


Press  once

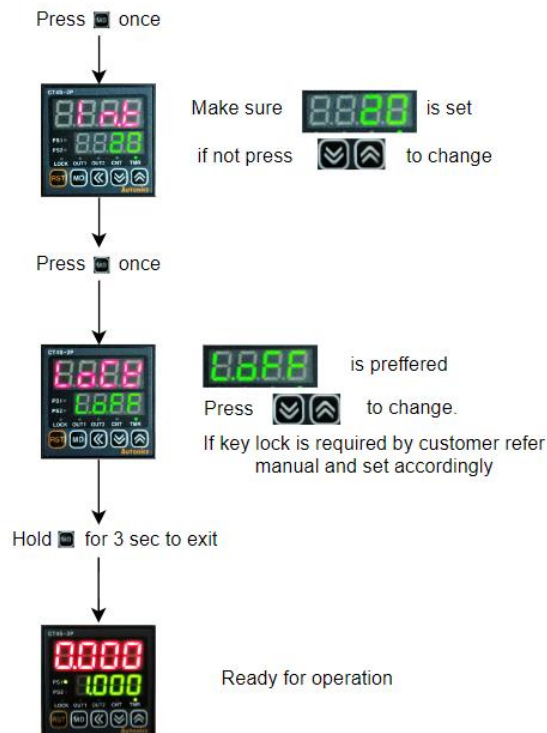


Press  4 times and
 Change to 

Press  once







Make sure  is set
 if not press open the back cover and
 slide switch to PNP position,
 refer manual for detailed information



9 PRESSURE SWITCH FACTORY SETTINGS (ADoST CDS-PRO & ADoST CDS+)

Following are the default factory settings required for desired operation of the machine.

OUT1 operating mode setting	
OUT1 type setting	
OUT2 Operating mode setting	
Response Time setting	



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Unit setting	
H1 set to 6.0 bar	



10 OPERATING ERRORS AND TROUBLESHOOTING

10.1 ADoST CDS /CDS+/CDS-PRO

Sr. No.	Error	Troubleshooting
1	There are air bubbles in the Adhesive.	Check whether the Adhesive line is leak free and check the cartridge is having bubbles.
2	The adhesive is not coming out of the nozzle	Clogged adhesive line, clean and try again.
3	If there is an air leakage from the system	Immediately turn off the air pressure supply and contact the supplier.
5	Unresponsive pressure switch	Check the MCU to SCU 8 pin connector, If persists contact the supplier.


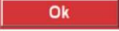
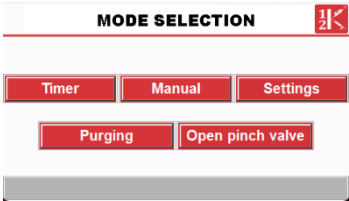

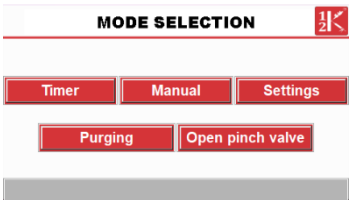
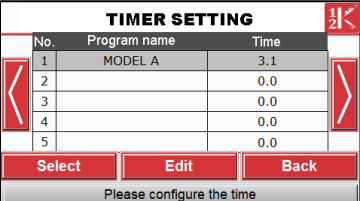
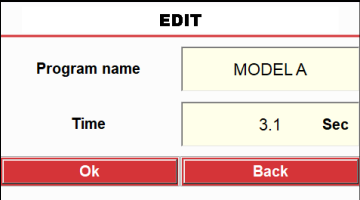

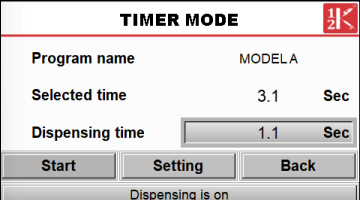
10.2 ADoST CDS +

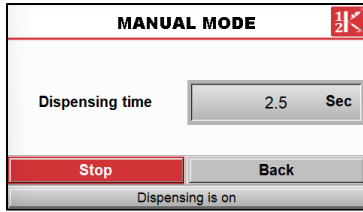

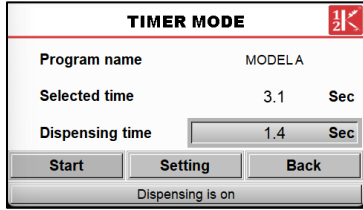
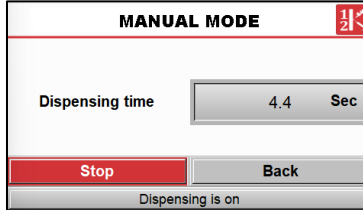
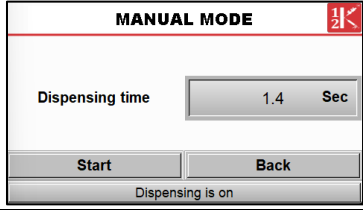

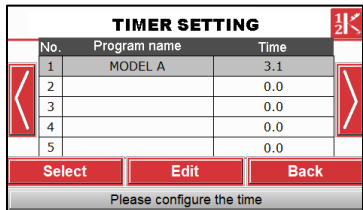
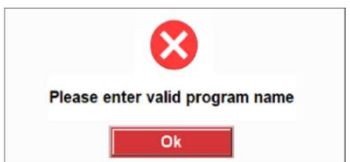
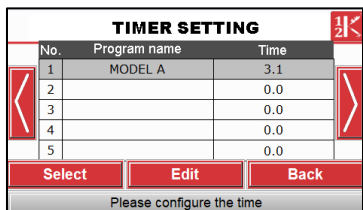
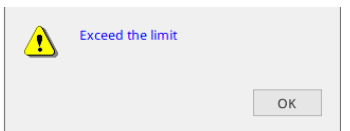
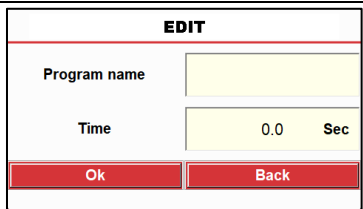
Sr. No.	Error	Troubleshooting
1	There is a short circuit in SCU	Immediately turn off the power supply and contact the supplier.
2	Purging is not working	<ol style="list-style-type: none">1. Ensure the hand valve is in pushed state, power supply is ON and green light of green button is ON2. Ensure the pressure switch factory settings are mentioned in this document.

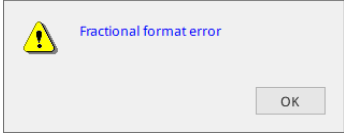
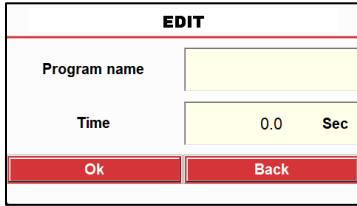

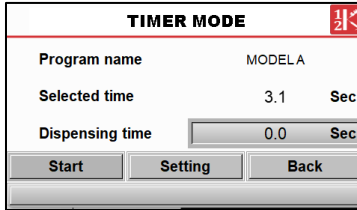
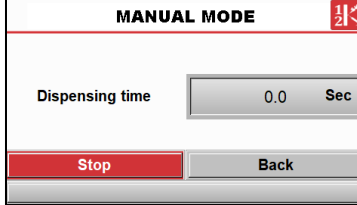
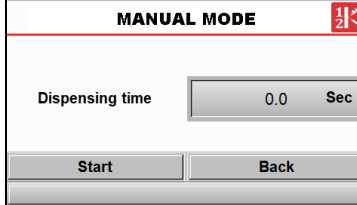
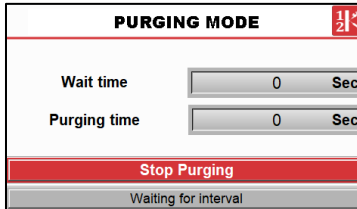

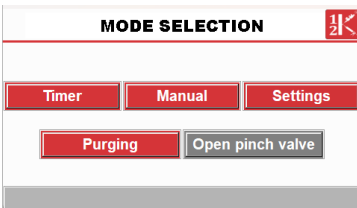
10.3 ADoST CDS-PRO


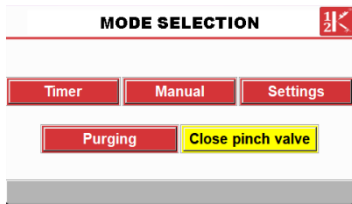

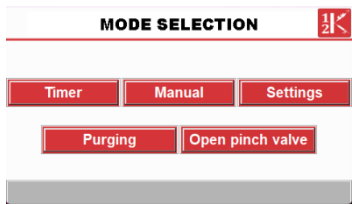

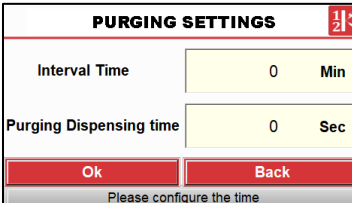

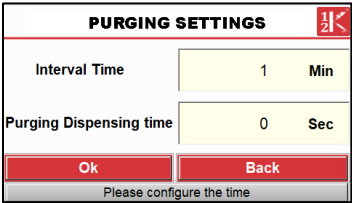
Sr. No.	Error	Troubleshooting
1	There is a short circuit in MCU/SCU	Immediately turn off the power supply and contact the supplier.
2	Unresponsive pressure switch	Check the MCU to SCU 8 pin connector, If persists contact the supplier.
3	Doesn't remember the password to enter into the settings screen	Contact supplier to reset password

If a function does not work, the screen will deliver an error message. When this happens, follow the following table to troubleshoot.

Sr. No.	Error	Screen where the error will appear	Why am I getting this error?	Troubleshooting
1.	 Please configure the program 		Timer button should not be pressed without configuring the program	Click on Ok, configure the program
2.	 Invalid Input		Foot switch or emergency button should not be pressed, sensor should not be sensed.	Wait for 2 seconds, the error screen will disappear
			Foot switch or emergency button should not be pressed, sensor should not be sensed.	Wait for 2 seconds, the error screen will disappear
			Foot switch or emergency button should not be pressed, sensor should not be sensed.	Wait for 2 seconds, the error screen will disappear
3.	 Dispensing is in progress. Accessory can not be operated.		Foot switch should not be pressed when dispensing by screen commands	Wait for 2 seconds, the error screen will disappear

			Foot switch should not be pressed when dispensing by screen commands	Wait for 2 seconds, the error screen will disappear
4.			Dispensing will stop immediately	Release emergency button, Click on Ok
			Dispensing will stop immediately	Release emergency button, Click on Ok
			Dispensing will stop immediately	Release emergency button, Click on Ok
5.			Program with timer ZERO should not be selected	Click on Ok, and select program with a timer greater than ZERO
6.			Program without a name should not be selected	Click on Ok, select program with a name
7.			Entered time should not be less than 0.1 sec and more than 3276.8 sec	Click on Ok, enter time between 0.1 and 3276.8 sec

8.			Entered time should not be more than 1 digit after a decimal point	Click on Ok, enter time with not more than 1 digit after a decimal point
9.		  	Pneumatic pressure is not achieved after cycle start	Acknowledge the error, check pneumatic pressure and check pressure switch settings
			Pneumatic pressure is not achieved when purging started	
10.			Disabled open pinch valve button shouldn't be pressed before releasing emergency button	Acknowledge the error, and release emergency button

11.	 <p>Please close the pinch valve to go back</p> <p>Ok</p>		Pinch valve should be closed before exiting settings	Acknowledge the error, close pinch valve, and exit the settings
12.	 <p>Please select purging time and interval time greater than ZERO</p> <p>Ok</p>		Purging settings should be completed before opening purging mode	Acknowledge the error, Configure the purging settings
13.	 <p>Please select the interval time greater than ZERO</p> <p>Ok</p>		Purging interval time shouldn't be 0	Acknowledge the error, and set a value between 1 to 999 mins
14.	 <p>Please select the purging time greater than ZERO</p> <p>Ok</p>		Purging dispense time shouldn't be 0	Acknowledge the error, and set a value between 1 to 99 secs

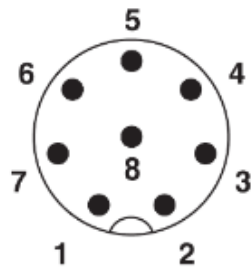
11 CONNECTING WITH PLC/ROBO

Its possible to connect ADoST CDS-PRO with a PLC or Robo to control the dispensing. It's expected to use following connection for achieving the expected results.

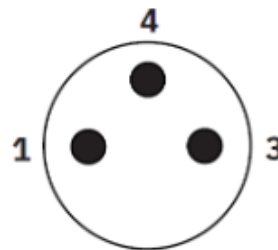
Please connect with sales team or numbers given in contact list if you need the connectors.

11.1 CONNECTION DETAILS

Dispensing control and feedback connector C1



Alarm connector C2



Dispensing control and feedback connector C1

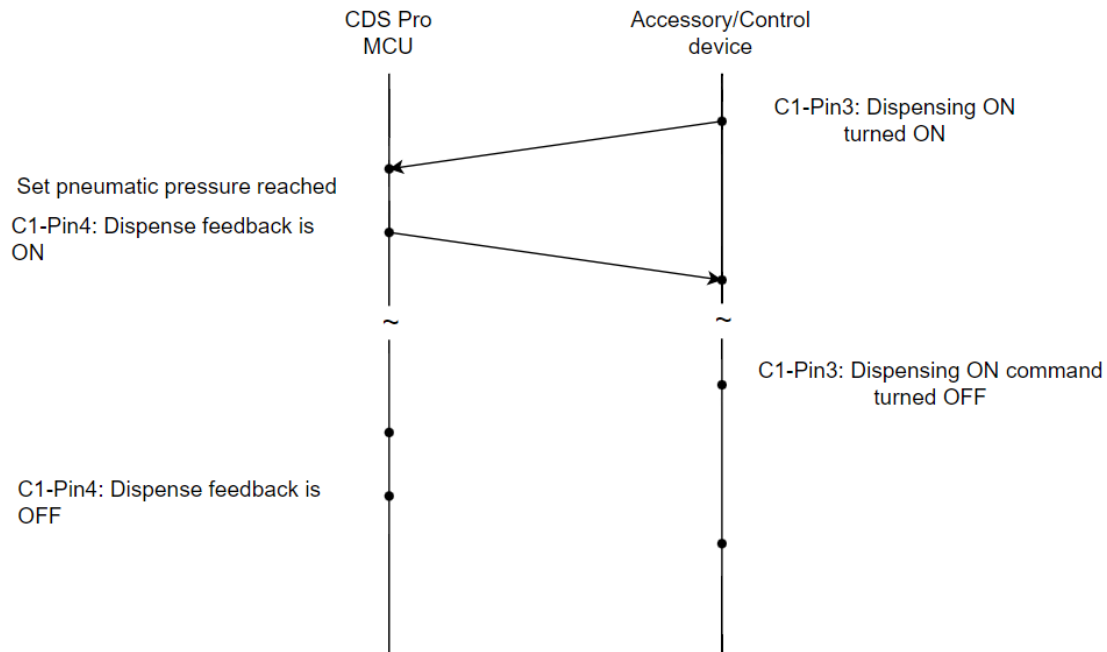
Pin and signal		
Pin number	Signal	Signal type
1	24VDC	Reference ground for Input
2	0VDC	Reference ground for Output
3	Dispense on	Input
4	Dispense feedback	Output
5 - 8	Not used	

Alarm connector C2

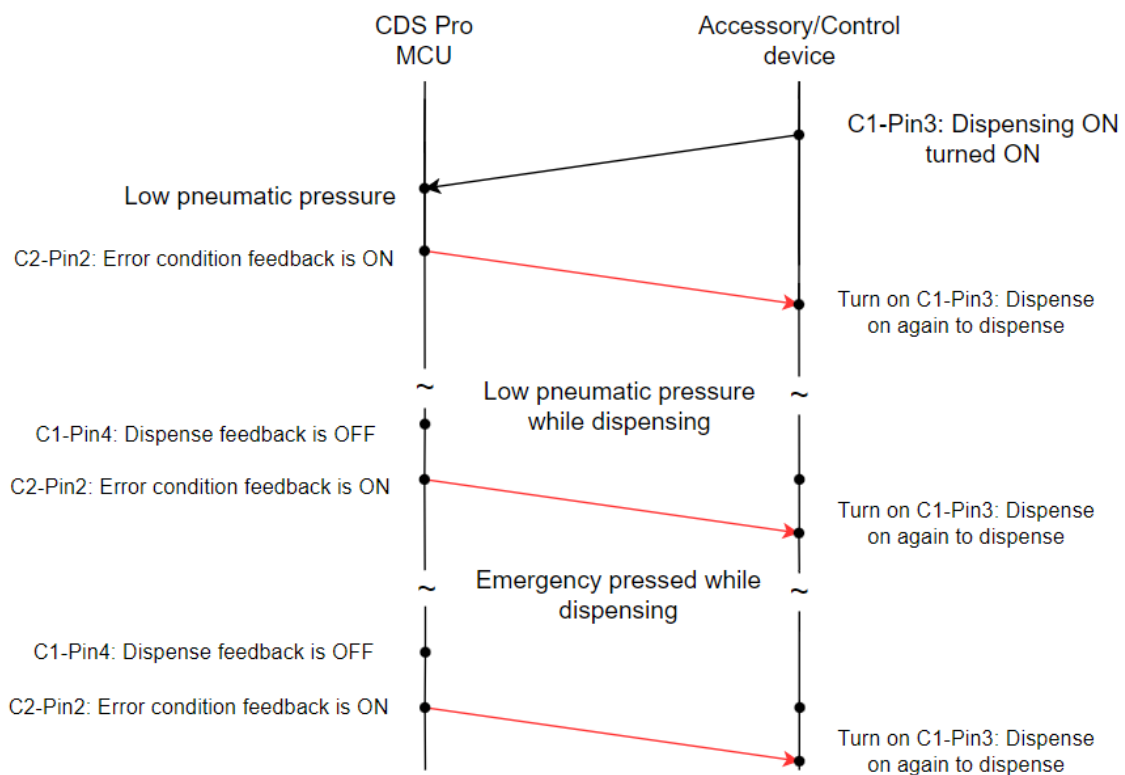
Pin and signal		
Pin number	Signal	Signal type
1	0VDC	Reference ground for Output
3	Error condition	Output
4	Not used	

11.2 CONTROL SEQUENCE DIAGRAM

11.2.1 Normal operation sequence



11.2.2 Error conditions





12 FAQs

1. What is a dispensing system and what does it do?
A dispensing system is an equipment that digitally controls the volume of liquid to be dispensed. The system ensures repeatability in every subsequent shot.
2. What types of Adhesive systems is compatible with ADoST CDS-PRO?
ADoST CDS-PRO is designed to dispense low to medium viscous 2-component adhesive in a cartridge system.
3. How do I change the cartridge?
Make sure there is no dispensing going on, Press the pneumatic push button on the left side of the SCU and the plunger goes up and stops. Now press the knob on the right side of the dispensing gun to push the cartridge from the gun.
4. How often should I clean the system?
It is important to clean the nozzle and pinch valve to prevent any type of contamination and to prevent the clogging of the valve. The exact cleaning frequency will depend dispenser's intended use, but it is generally recommended to clean daily.
5. What cartridge size can be used?
Standard 2 component 400ml/490ml cartridges can used in the ADoST CDS-PRO.
6. For how much time should I keep the Adhesive unused in the system/ what is the cure time for the Adhesive?
Curing time depends on the chemical properties of both the activator and adhesive, contact our sales representative.
7. Can I use a dispenser for outdoor applications?
ADoST CDS-PRO is designed to be used indoors, The System may get affected by outdoor dust, air, etc
8. Can the system work without air pressure?
No. The system needs a minimum air pressure of 0.1 bar.
9. What is the min and max operating Air pressure?
The minimum working pressure is 0.1 bar and The maximum working pressure is 6 bars.
10. Is the system battery operated?
No. The system needs an AC power supply between 100-275 volts 50/60Hz AC.
11. Can I set the timer for dispensing?
Yes, the system has this feature (For detailed information, please refer to point 8.3.4)



13 SYSTEM MAINTENANCE

To ensure smooth functioning and a long service life, perform following maintenance operations as needed.

1. Clean the MCU to protect it from dust or liquid etc.
2. Clean the pinch valve and keep it free of adhesives.
3. Keep the dispensing gun plunger free of adhesives.
4. Ensure the pneumatic regulator is clean and free of any contaminants.
5. Make sure the pneumatic air used is clean and doesn't contain any water droplets.
6. The provided power adaptor should be protected from water or anything which may damage an electronic component.



14 SYSTEM DO'S AND DON'TS

Do's

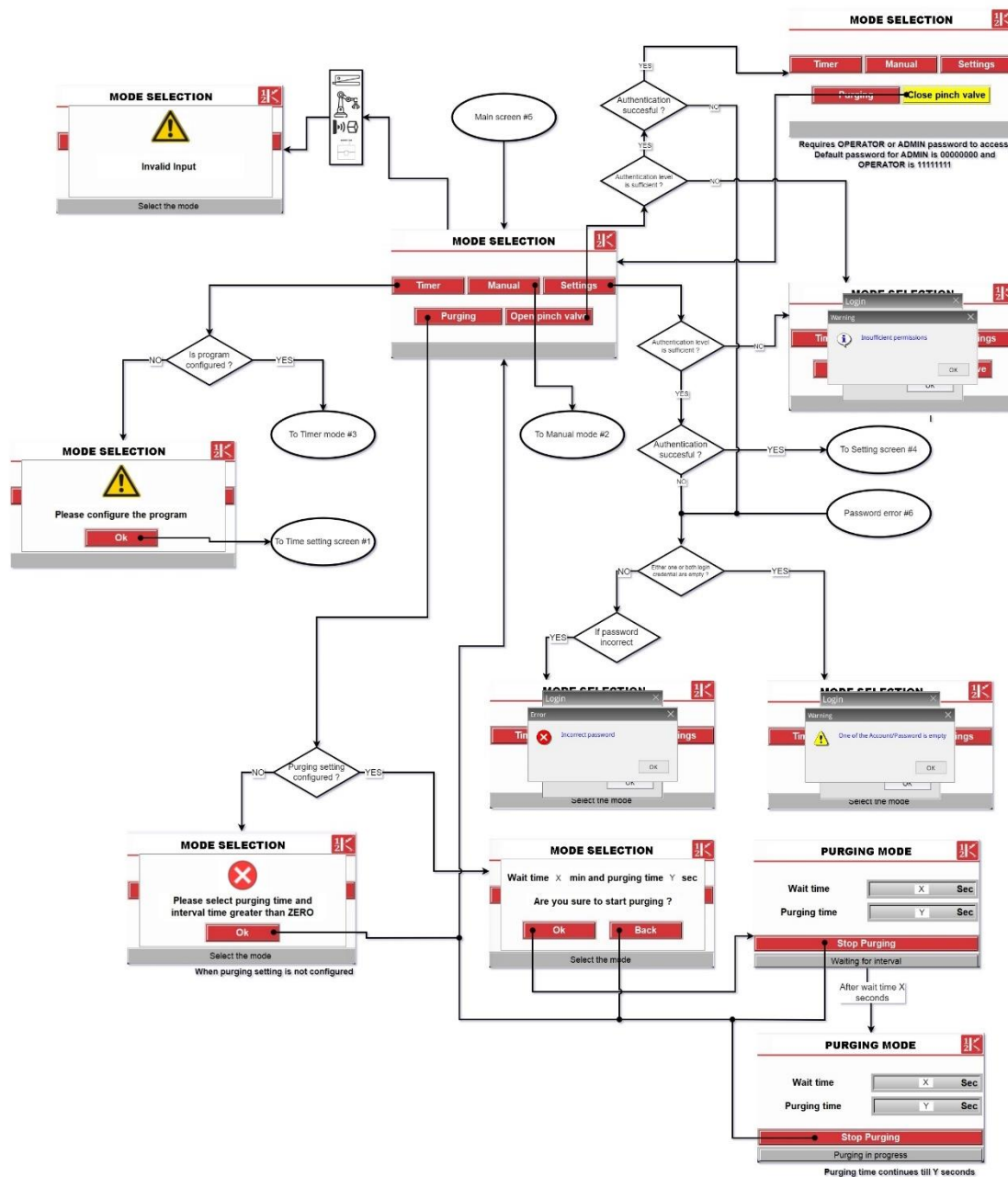
1. Please retract the plunger before changing the cartridge.
2. Please retract the plunger while taking a break.
3. Please if adhesive is changed then the corresponding time and pneumatic pressure should be changed.
4. Please pneumatic pressure switch settings must be done by only an authorised person.
5. Please switch off the air supply when not in use.
6. Please keep the system in such way, any dust or water molecules to enter in air pipe and dispensing gun
7. Please make sure the pneumatic pressure is above the minimum working pressure for dispense pressure
8. Please make sure the pneumatic pressure is sufficient for the pinch valve to operate.
9. Please Keep the dispenser operating within the limits of its maximum settings or ratings.
10. Please Make sure there is a dry, clean air supply connected to the dispenser. Using FRLs (Filters, Regulators, and Lubricators) is advised to keep the input air supply dry and clean.
11. The fluid being discharged might be poisonous and/or harmful. Refer to the Material Safety for correct handling and safety considerations.
12. If the dispenser malfunctions, Press the Emergency switch and disconnect the air line from the dispenser or isolate the air supply.
13. Pressure regulator and Pressure switch values should not be changed or Tamper. Pressure Values should be constant for the whole operation otherwise dispensing amount will change.
14. Always keep the dispenser clean to avoid malfunctioning errors or Physical Damage.

Don'ts

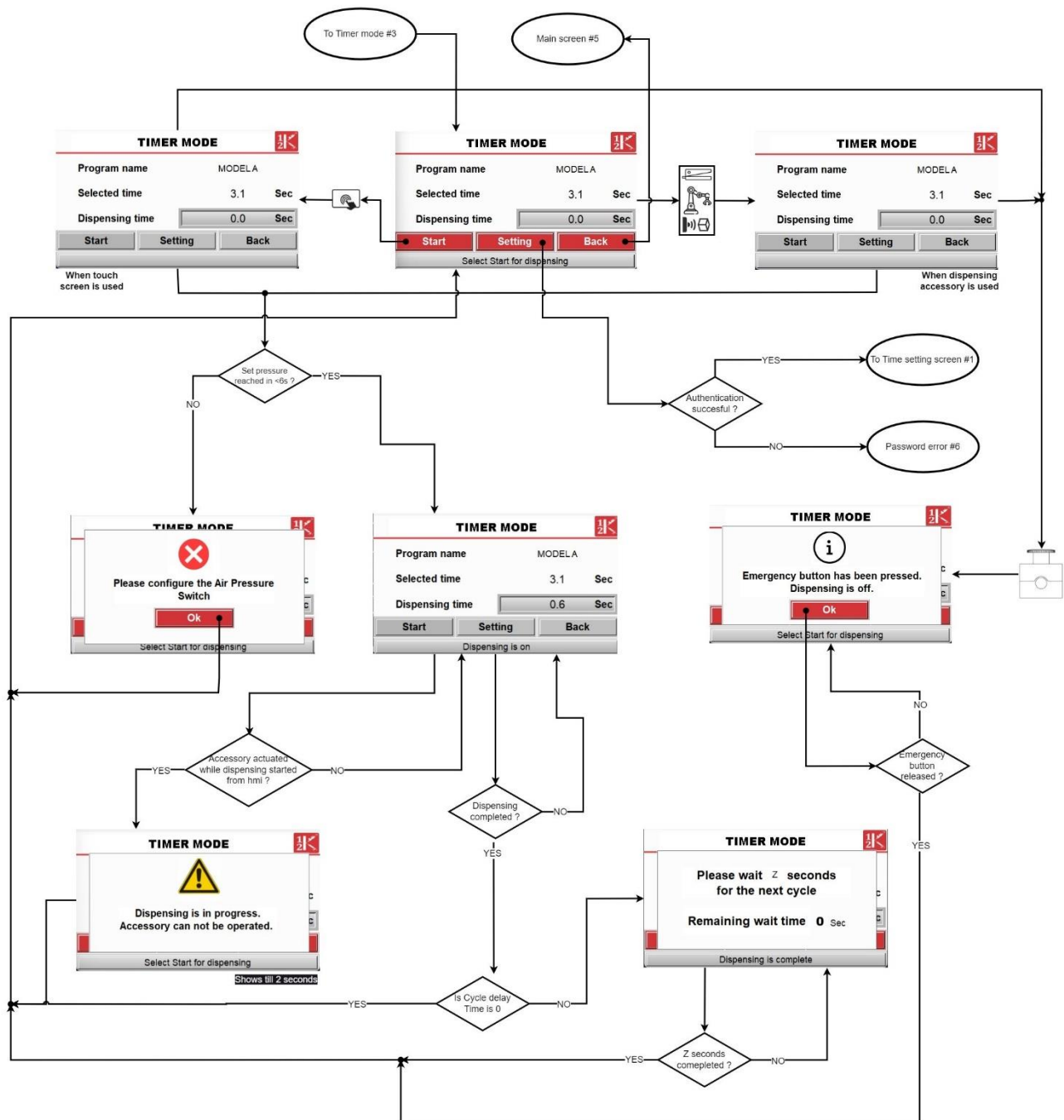
1. Please don't press the retract push button while the system is dispensing adhesive
2. Please don't close the pneumatic pressure before retracting the plunger
3. Please don't turn the pressure regulator knob, once setting is finished
4. Please don't change software setting while using same adhesive
5. Please don't operate machine without training
6. Please don't keep the foot switch pressed in timer mode even after dispensing is in the process
7. Please don't spill any kind of liquid on the MCU, SCU and dispense gun
8. Please don't keep the emergency button pressed without any emergency condition
9. Please don't stretch the accessory wires beyond its capability
10. Please don't yank the SCU, MCU cables or Pneumatic line
11. Please don't connect the connectors other than the designated positions
12. Please don't operate the machine without connecting the pneumatic line to the pinch valve

15 SCREEN FLOW DIAGRAM (ADoST CDS-PRO)

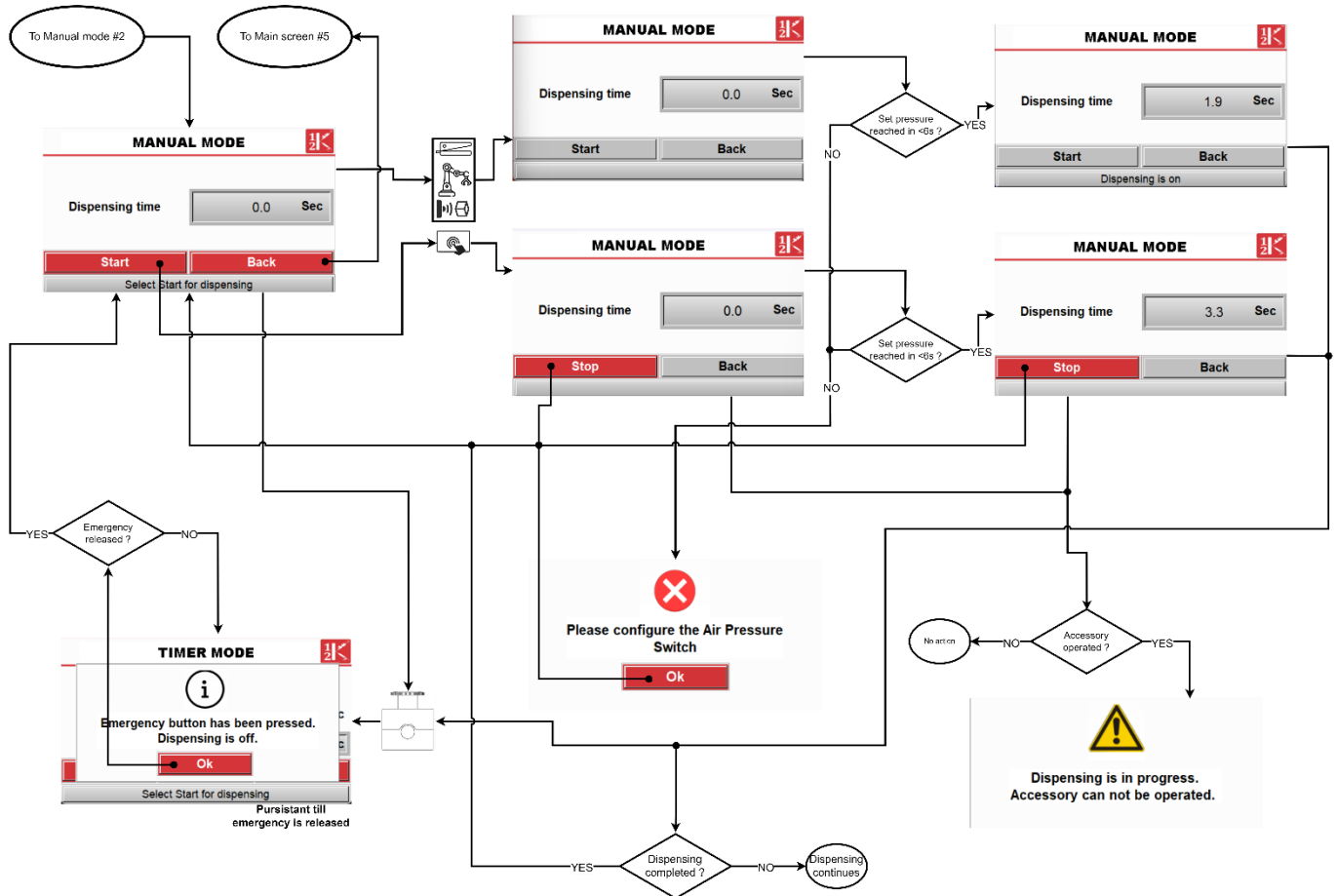
15.1.1 Main screen and Purging setting



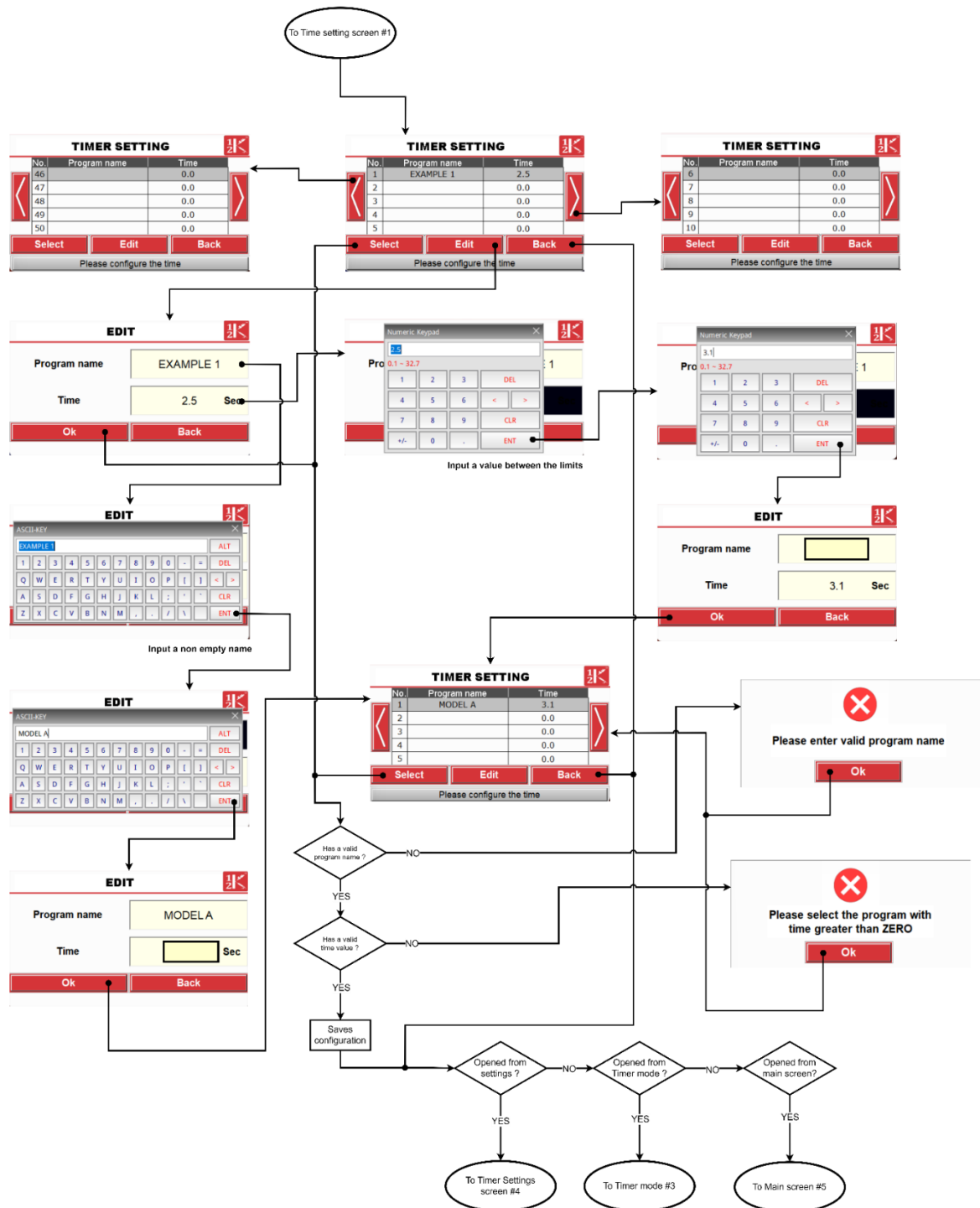
15.1.2 Working in Timer mode



15.1.3 Working in Manual mode







15.1.4 Dispense Time setting








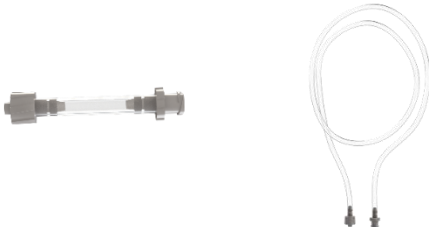
16 ACCESSORIES

	
Pinch valve	Pinch Valve stand
	
Pen	Pen Holder



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17 CONSUMABLES

	
Luer Lock	Static Mixer
	
Nozzle	Pinch Tube



18 DISCLAIMERS

1. Material dispensing behaviour may be unexpected and some components may behave inconsistently if the air pressure is not maintained as mentioned in TDS (The air pressure required to dispense the adhesive is directly proportional to viscosity of the adhesive)
2. The system will not be able to boot if the electrical power supply is less than 100V AC.
3. System may not handle the power and cause danger if the electrical power supply is more than 275V AC.
4. Sufficient pneumatic pressure is ensured before starting purging mode, purging mode will be stopped if there is not enough pneumatic pressure.
5. The emergency button will stop the dispensing when all pipes and wires are connected properly. If any of the pipes loose, or any of the wires is cut, emergency condition will not work.
6. The system may not work properly, if the system is damaged by any external cause like falling, hitting by any object, excessive heat, etc.
7. Dispensing cannot be done if the connector cord is not connected to the MCU's female connector.
8. The Dispensing quantity may not be consistent, when not used in idle conditions as the behaviour of adhesive changes based on applied pressure, external temperature and from one batch to another batch.