

# **QUICK START GUIDE**

**S-7000**

**CIGARETTE MAKING MACHINE**





## FOREWORD

### Notes About Documents

This description is intended only for use by trained specialists in the field of control and automation engineering who understand the applicable national standards. The following documents, notes, and explanations must be followed when installing and operating components. It is the duty of technical personnel to use the documents issued at the time of each installation and *commissioning*.

Responsible staff must ensure that the application or use of the described product meets all safety requirements, including all relevant laws, regulations, guidelines and standards.

### Statement

This document has been carefully prepared. However, the described product is still being developed. We reserve the right to revise and amend this document at any time and without prior notice. Claims for product modifications that have been provided should not be made based on the data, diagrams and descriptions in this document.

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## SUMMARY



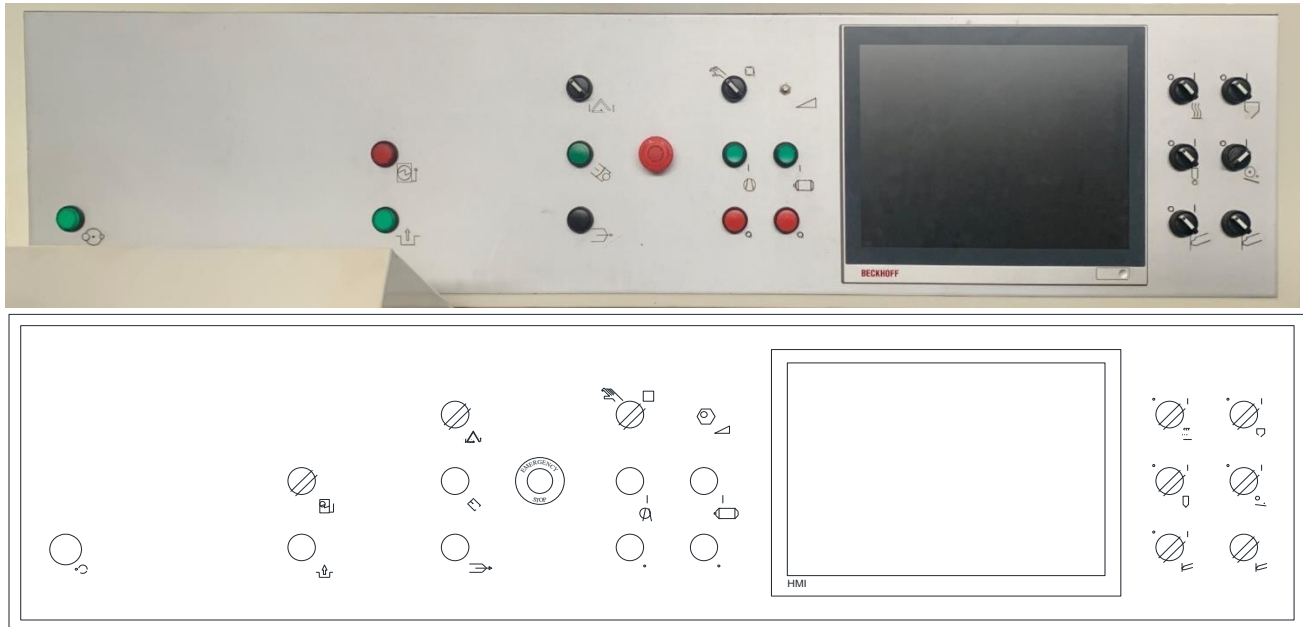
*Figure 0.1 S-7000 Cigarette Making Machine*

The S-7000 machine is an automatic cigarette making machine that can produce high-quality cigarettes, with a production speed of up to 7,000 cigarettes per minute. This machine arranges various cigarette materials such as tobacco, cloves, tobacco wrapping paper, filters, tipping paper, and tipping adhesives into cigarette sticks through a mechanical system.

The S-7000 engine is an ideal choice for cigarette production in smaller cigarette brands. Operation is very simple through an integrated industrial PC equipped with a touch screen, making it easy to monitor and control the functions of the machine. The entire control system is connected to the modular unit using PLC, thereby increasing the efficiency of the production process. This machine technology has been tested and is the basis for ensuring optimal quality in cigarette production.

## CONTROL PANEL

### 1. S-7000 Control Panel



*Figure 1.1 Panel Control S-7000*

A control panel equipped with buttons and selectors is one of the key elements in machine operations, designed to give the operator the ability to manage and control various aspects of machine performance. With these buttons, the operator can easily make adjustments to parameters such as speed, temperature, and others, depending on the complexity and function of the machine. Physical buttons offer quick and intuitive tactile feedback, ensuring changes can be made efficiently without the need to dive into complicated digital menus.

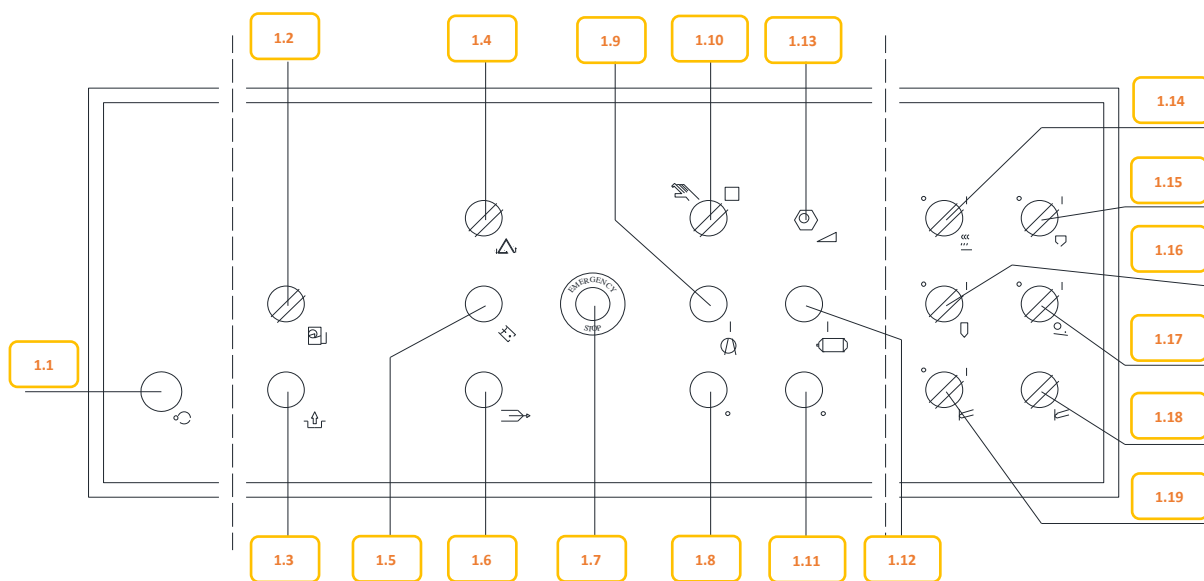



Figure 1.2 Functions of the S-7000 Panel Button

Position Function	Description
<b>M-7000 PANEL BUTTON</b>	
1.1	Indicator lights that indicate when the <i>small bobbin</i> has shrunk and must be replaced.
1.2	An indicator light indicating if <i>the power</i> is on.
1.3	Indicator lights indicating when the S-7000 engine is <i>ready</i> .
1.4	Selector that functions to open/close the <i>cut off door</i> .
1.5	The button that functions to do the <i>knife adv.</i> on the <i>cutoff knife</i> .
1.6	The button that functions to turn on the cleaning wind on the <i>weight control</i> .
1.7	<b>Emergency Switch.</b>
1.8	Selector that serves to turn off the vacuum fan.
1.9	A button that serves to turn on the vacuum fan.
1.10	Selector that functions to set the running mode of the machine to manual/auto.
1.11	A button that serves to stop the running of the engine.
1.12	A button that serves to start the running of the engine.



1.13	Potentiometer that serves to regulate engine speed.
1.14	Selector that functions to turn on/off the <i>heater</i> .
1.15	Selector that functions to turn on/off <i>auto feeding</i> .
1.16	Selector that functions to set the manual/auto heater down mode.
1.17	Selector that functions to turn on/off needle.
1.18	Selector that functions to turn glue on/off manually.
1.19	Selector that functions to turn on/off <i>glue</i> automatically.



## 2. M-7000 Control Panel

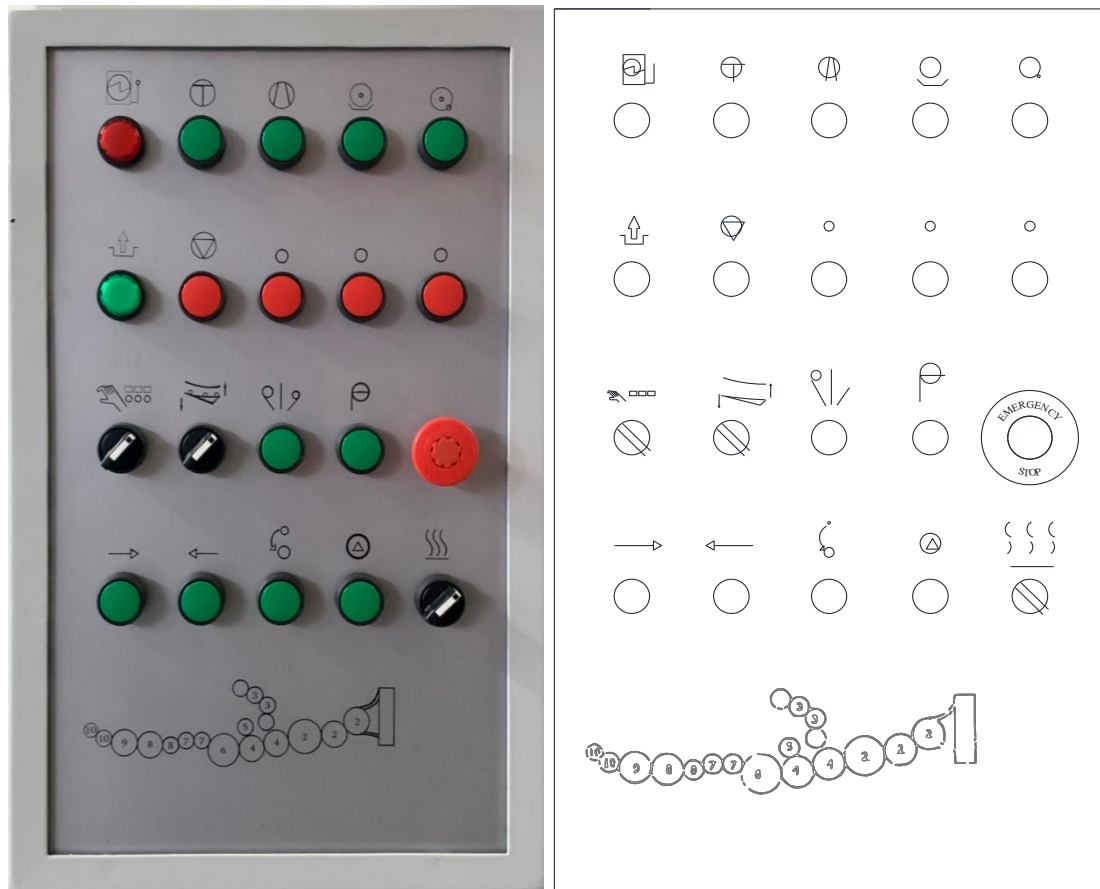


Figure 1.3 M-7000 Control Panel

The control panel on this machine is designed with various buttons and selectors that allow the user to precisely adjust the operation of the machine. The buttons make it easy to activate or stop certain functions, while the selector is used to choose between various operating modes or parameter settings, ensuring efficient and adaptive control to the specific needs of use.

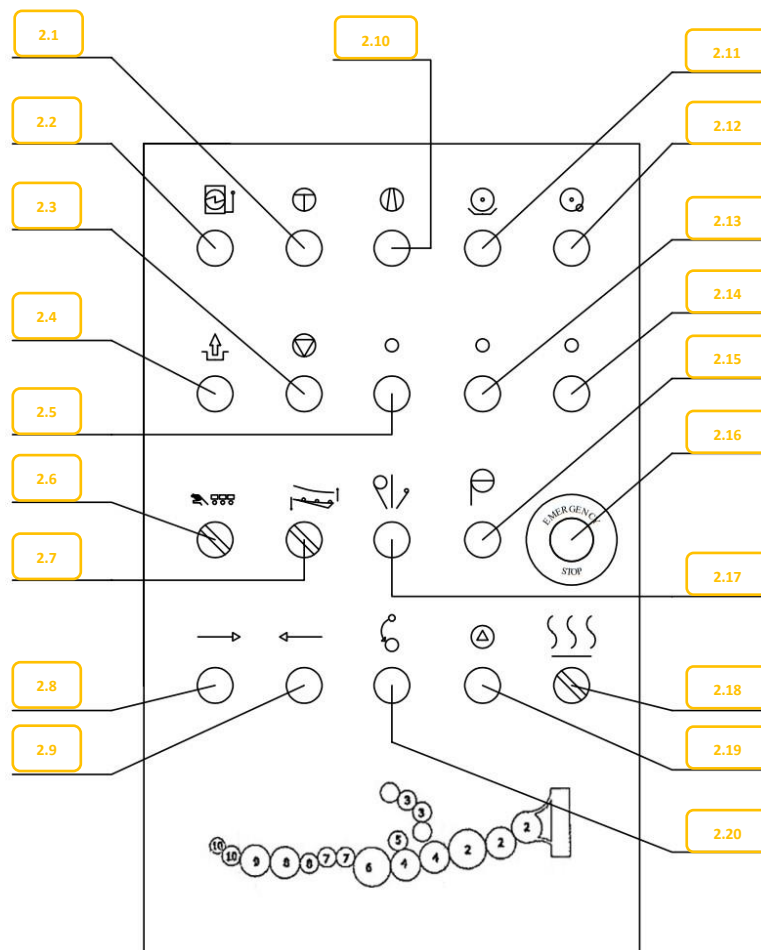


Figure 1.4 M-7000 Panel Button Function

Position Function	Description
<i>M-7000 PANEL BUTTON</i>	
2.1	A button that serves to start the M-7000 engine.
2.2	An indicator light indicating if <i>the power</i> is on.
2.3	The button serves to stop the running of the M-7000 engine.
2.4	Indicator light indicating when the M-7000 engine is <i>ready</i> .
2.5	A button that serves to turn off the M-7000 vacuum fan.
2.6	Selector that functions to select manual/auto in lowering the filter.
2.7	The selector that functions to turn the <i>rolling block</i> position on or off is above or below.
2.8	The button that serves to adjust the print to the right.

2.9	The button that serves to adjust the print to the left.
2.10	A button that serves to turn on the M-7000 vacuum fan.
2.11	A button that serves to turn on the stirrer on the M-7000 engine.
2.12	A button that serves to turn on the rotation of the knife on the M-7000 engine.
2.13	A button that serves to turn off the stirrer on the M-7000 machine.
2.14	The button that functions to turn off the rotation of the knife on the M-7000 engine.
2.15	A button that functions to lock/open the <i>bobbin holder</i> .
2.16	<i>Emergency Switch.</i>
2.17	The button that serves to perform manual <i>bobbin splice</i> on the M-7000 engine.
2.18	Selector that functions to turn on/off the <i>heater</i> .
2.19	The button that serves to turn on <i>the inch</i> .
2.20	The button that serves to perform a manual <i>bobbin turn</i> on the M-7000 engine.



Figure 1.5 Tombol Cleaning M-7000

Position Function	Description
<i>TOMBOL CLEANING M-5000</i>	
2.19	Button that serves to turn on the drum cleaning wind 1.
2.20	Button that serves to turn on the drum cleaning wind 2.
2.21	Button that serves to turn on the drum cleaning wind 3.
2.22	Button that serves to turn on the drum cleaning wind 4.
2.23	Button that serves to turn on the drum cleaning wind 5.
2.24	Button that serves to turn on the drum cleaning wind 6.
2.25	Button that serves to turn on the drum cleaning wind 7.
2.26	Button that serves to turn on the drum cleaning wind 8.
2.27	Button that serves to turn on the drum cleaning wind 9.
2.28	Button that serves to turn on the drum cleaning wind 10.
2.29	<p>Selector that serves to set <i>the eject</i> mode.</p> <p>MAN (Manual): <i>eject</i> mode that lets all cigarettes enter the next route.</p> <p>OFF: <i>eject</i> mode that lets all cigarettes fall into the trash.</p> <p>AUTO : <i>eject</i> mode that activates inspection that allows good cigarettes to go to the next route and those detected as damaged, will be thrown into the trash.</p>

The previous drum numbering can be seen in the picture below.

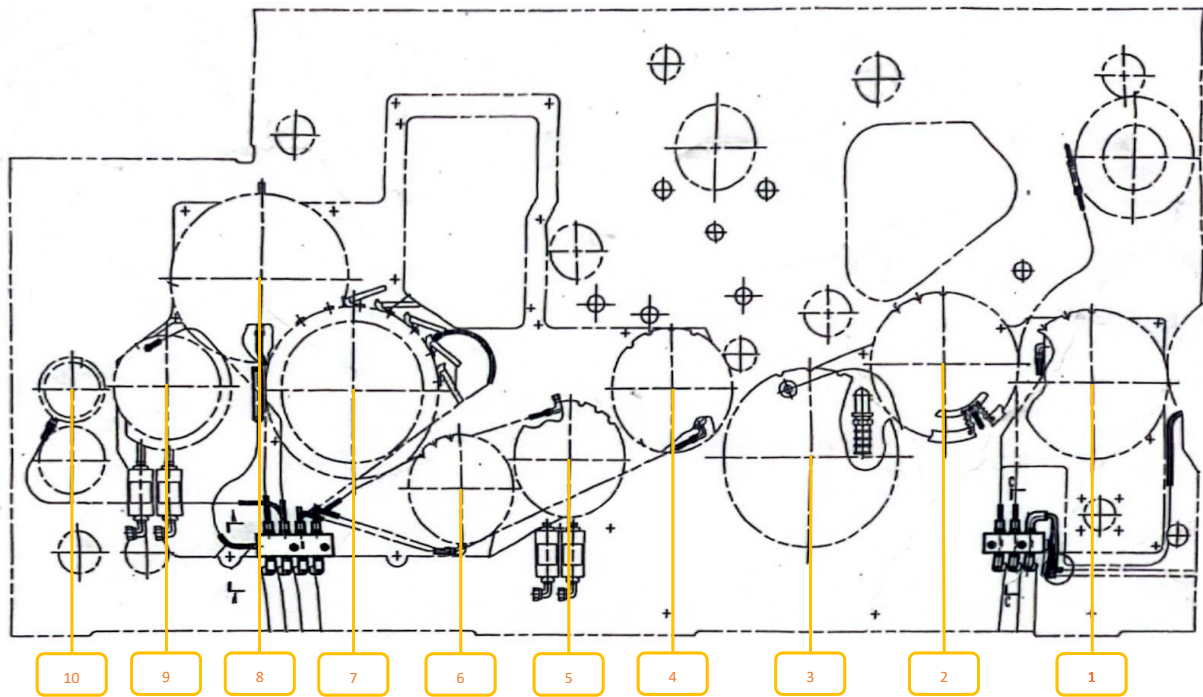


Figure 1.6 M-7000 Drum Numbering

### 3. F-80 Control Panel

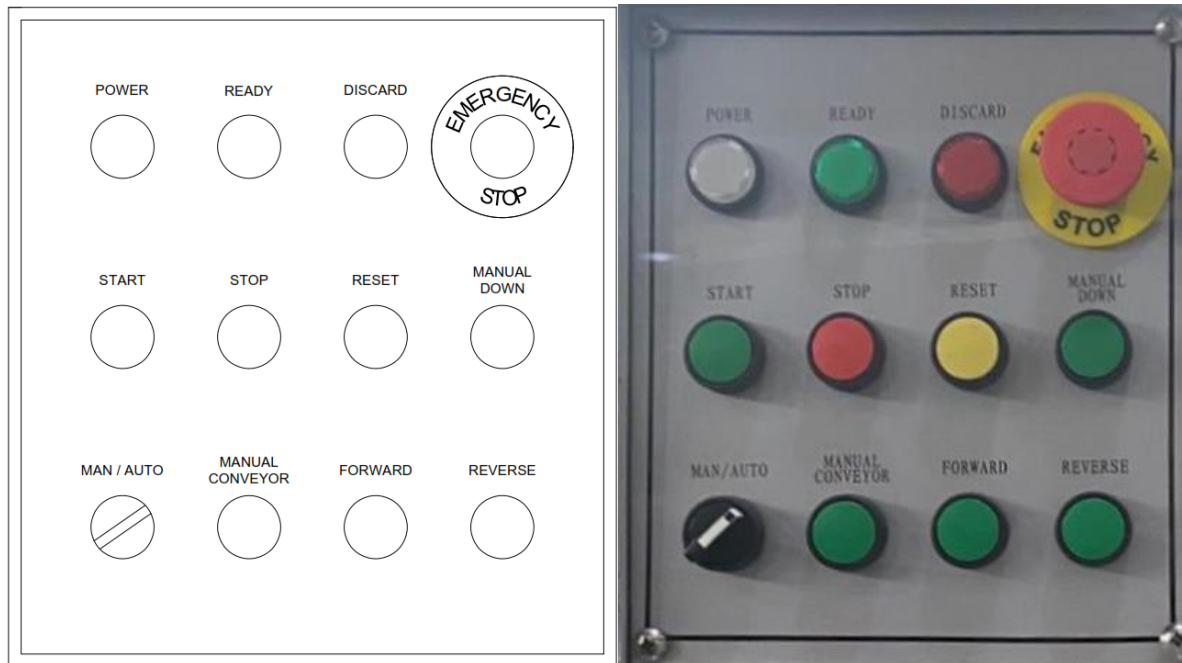


Figure 1.7 Panel Control F-80

Control panels that have a wide range of functions are designed to improve efficiency and ease of use in a variety of applications, allowing users to quickly access various features or operations by pressing specific buttons. Each button on this panel is usually created to perform a specific task so that the user can operate the device or system more intuitively and effectively.

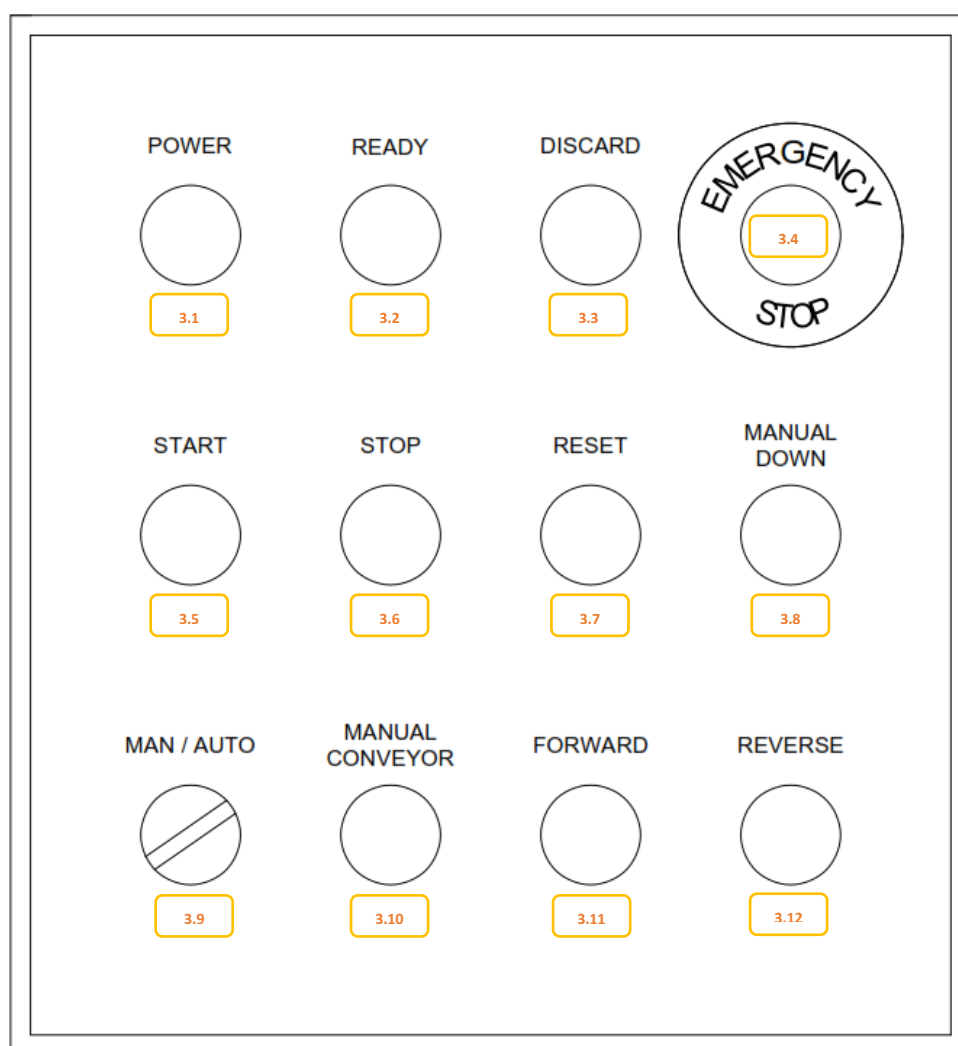


Figure 1.8 F-80 Panel Button Function

Position Function	Description
<b>PANEL CONTROL F-80</b>	
3.1	An indicator light indicating if <i>the power</i> is on.
3.2	Indicator lights indicating when the F-80 engine is <i>ready</i> .
3.3	Indicator light that indicates when a cigarette has entered.
3.4	<b>Emergency Switch.</b>
3.5	The button that serves to start the machine.
3.6	A button that serves to stop the running of the engine.
3.7	A button that serves to reset data on the HCF machine.

3.8	A button that serves to lower the <i>tray</i> manually. Only when manual mode
3.9	Selector that functions to select manual/auto mode of running HCF machine.
3.10	A button that serves to run the cigarette conveyor manually. Only when manual mode.
3.11	The button serves to run the forward conveyor tray manually. Only when manual mode.
3.12	A button that serves to manually run the reverse conveyor tray. Only when manual mode.



## FUNCTIONS OF THE S-7000 SCREEN

When the device is turned on, the screen displays various interactive menus. Users can explore a more comprehensive menu section to access various features and functions such as, home screen, settings, alarms, *shifts*, reports, device and links. Users can easily see the number of products that have been produced, including information on the number of good items, missing filters, imperfect cigarette tips, and *exit trays*.

Through the presentation of detailed menus, it gives users the ability to control specific S-7000 operations, and monitor engine performance.



Figure 2.1 Main Menu Display

Position Function	Description
<i>TOP OF SCREEN</i>	
0.1	Displays the alarm status on the machine.
0.2	Displays the number of products produced by the machine every one minute.
0.3	Displays the total amount of production.
0.4	Displays the number of failed products because there is no filter.
0.5	Displays the number of failed products because the tobacco at the end of the cigarette is not completely filled
0.6	Displays the working shifts of the machine.
0.7	Displays the number of containers/baskets of production that come out of HCF.
0.8	Displays the date and time.
<i>BOTTOM OF THE SCREEN</i>	
1	The button that serves directs to the home screen display.
2	The button that serves directs to the settings display.
3	The button that serves directs to the alarm display.
4	The button that serves to direct to the display of production results.
5	The button that serves directs to the shift settings view.
6	The button directs to the network display of the device, input and output addresses.
7	A button that functions to turn off the screen or device.

## 1. Home Screen

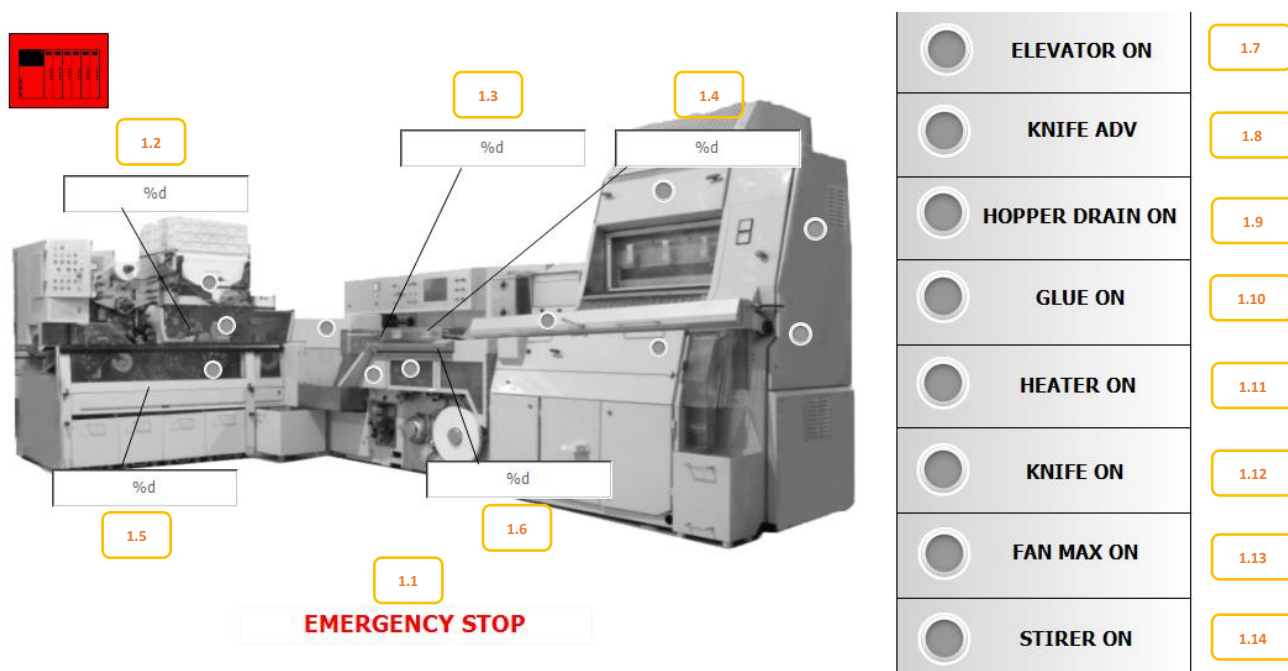



Figure 2.2 Home Screen

Position Function	Description
1.1	Emergency Stop Button.
1.2	Displays the temperature of the heater tip.
1.3	Displays heater temperature 2.
1.4	Display heating temperature 1.
1.5	Displays the temperature of <i>the rolling block heater</i> .
1.6	Displays <i>garniture temperature</i> .
1.7	The elevator indicator is active.
1.8	Knife Progress Indicator
1.9	<i>Active hopper drain</i> indicator.
1.10	Indicator Glue is on.
1.11	The Heater indicator is active.



1.12	The Blade indicator is active.
1.13	The Fan M-7000 indicator is on.
1.14	The Stirrer indicator is active.

## 2. Settings

By pressing the "settings" button, the screen will switch to the display of the settings menu. With easy navigation, users can explore the available options in the settings menu.

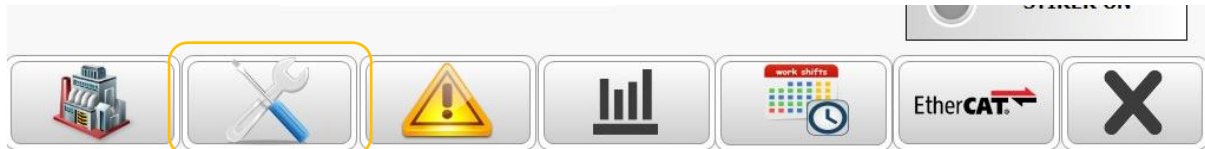


Figure 2.3 Settings button

The settings menu on the S-7000 engine presents a number of customizable features, giving the user control over various aspects of the machine. Some of these include configuration options S-7000 set, M-7000 set, festo S-7000, and temperature settings. These overall features are designed with the aim of providing the maximum level of flexibility, allowing users to customize the machine as per the user's specific needs and preferences.

Jogging Slow Speed	0	Cig/min	Heater 2 Down	0	Cig/min	SPEED SETTING
Start & Inc Speed	0	Cig/min				
working Speed AUTO	0	Cig/min	working Speed Manual	500		BOBBIN SETTING
Ratio Speed Needle	0	0				
Ratio Speed Glue	0					
Ratio Speed Elevator	0					
Splicing Speed	0	Cig/min	Knife Empty Set	0		
Knife ADV Set	0	Rod	Knife Empty Act	0		
Knife ADV Act	0	Rod			reset	
Piston Ink Set		Rod	<input type="checkbox"/> ELEVATOR ON			
Piston Ink Act		Rod				
			MANUAL PISTON	MANUAL ALKOHOL		

2.1

2.2

2.3

2.4

Figure 2.4 Settings View

Position Function	Description
2.1	The button directs the screen to the display of the S-7000 engine configuration.
2.2	The button that serves directs the screen to the display of the M-7000 engine configuration.
2.3	The button directs the layer to the <i>temperature set display</i> .
2.4	The button that serves to direct the screen to the Festo S-7000 configuration display.

## 2.1 S-7000 Set

By pressing the "S-7000 set" button, the screen will switch to the *S7000 set* display. On the display, there are two settings menus, namely "*speed setting*" and "*bobbin setting*".

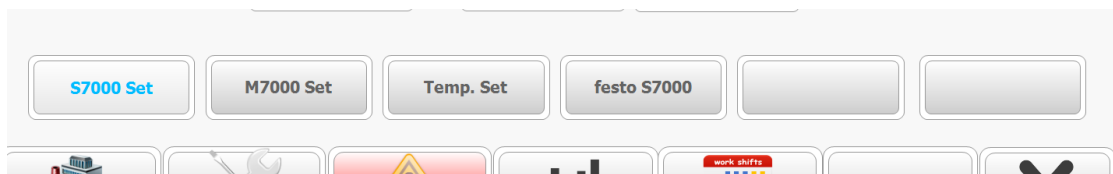


Figure 2.5 Tombol S-7000 Set

After pressing the "S-7000 set" button, the screen will switch to the *S-7000 set* display, in the "*speed setting*" menu. The display on the "*speed setting*" menu has several features that can be used by users.

## SPEED SETTING

Figure 2.6 Display S-7000 Speed Set

Position Function	Description
<b>MENU S7000 SET</b>	
2.1.A	A button that serves to display all speed settings contained in the S6000 engine.
2.1.B	A button that serves to display all <i>bobbin settings</i> contained in the S6000 machine.
<b>SPEED SETTING</b>	
2.1.1	Regulation of engine speed in jogging state. This condition occurs when the <i>cover cut off</i> is open and the inc button is pressed.
2.1.2	Setting the engine speed at the time of the inch button and the engine speed when the engine starts working. This condition occurs when <i>the cover cut off</i> has been closed.
2.1.3	Speed regulation on the machine in the engine position runs automatically.

2.1.4	Regulation of hopper motor speed. The speed of the <i>hopper motor</i> will affect the amount of tobacco that comes out when the engine runs.
2.1.5	Regulation of the speed of the glue pump motor. The speed of the glue pump motor will affect the amount of glue that comes out when the engine runs.
2.1.6	Regulation of the speed of the elevator motor at the time of tobacco filling.
2.1.7	Machine settings at the time of paper splicing. When the diameter of the paper has reached the specified limit, then from the maximum speed position, the speed will decrease according to the predetermined number.
2.1.8	Setting the value for the blade forward towards grinding. When the knife has cut the cigarette stick with a predetermined amount, the knife will advance towards the grind so that the sides of the knife are honed and the knife remains sharp.
2.1.9	Displays the calculation ( <i>counter</i> ) of the number of cigarettes (rods) that have been detected after being cut in the <i>cut off</i> section. when the number of cigarettes has reached the target that has been set in the " <i>Knife ADV Set</i> " section, the <i>cut off knife</i> will advance slightly.
2.1.10	Setting the value to refill ink before ink runs out. The ink will be automatically refilled after printing the number of cigarettes according to the predetermined settings.
2.1.11	Displays the calculation ( <i>counter</i> ) of the number of cigarettes (rods) that have been printed.
2.1.12	Setting the engine speed value in cpm which is used as the target speed on the engine to lower the <i>heater</i> .
2.1.13	Speed regulation on the engine in the engine position is running manually.
2.1.14	Setting to stop the machine when the blades have reached their maximum limit for advancing and sharpening. When the knife has reached a predetermined number, the machine will stop and send an alarm for the technician to replace the knife on the <i>cut off part</i> .



2.1.15	Displays the calculation ( <i>counter</i> ) of the number of cigarettes (rods) that have been detected after being cut in the cutoff section. when the number of cigarettes has reached the target set in the " <i>Knife Empty Act</i> " section, the machine will stop and the value will be reset automatically.
2.1.16	Reset button to restart the value in the " <i>Knife Empty Act</i> " section. This reset button is used when there is a new cut off knife change. The machine will not start if the value is not reset.
2.1.17	A button that serves to idle and turn off the elevator.
2.1.18	The button that serves to perform tests on the piston.
2.1.19	The button that serves to perform the test inserts alcohol.

## BOBBIN SETTING

After pressing the "*bobbin setting*" button, the screen will switch to the S7000 set display, on the "*bobbin setting*" menu. The display on the "*bobbin setting*" menu has several features that can be used by users.

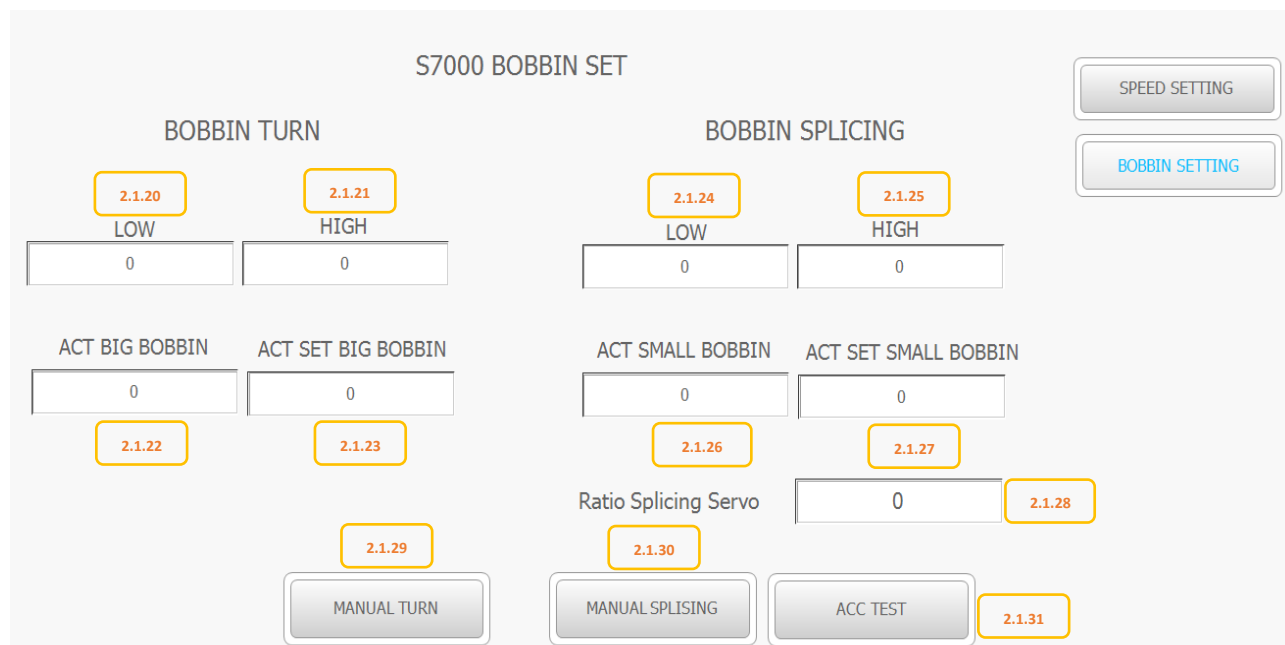


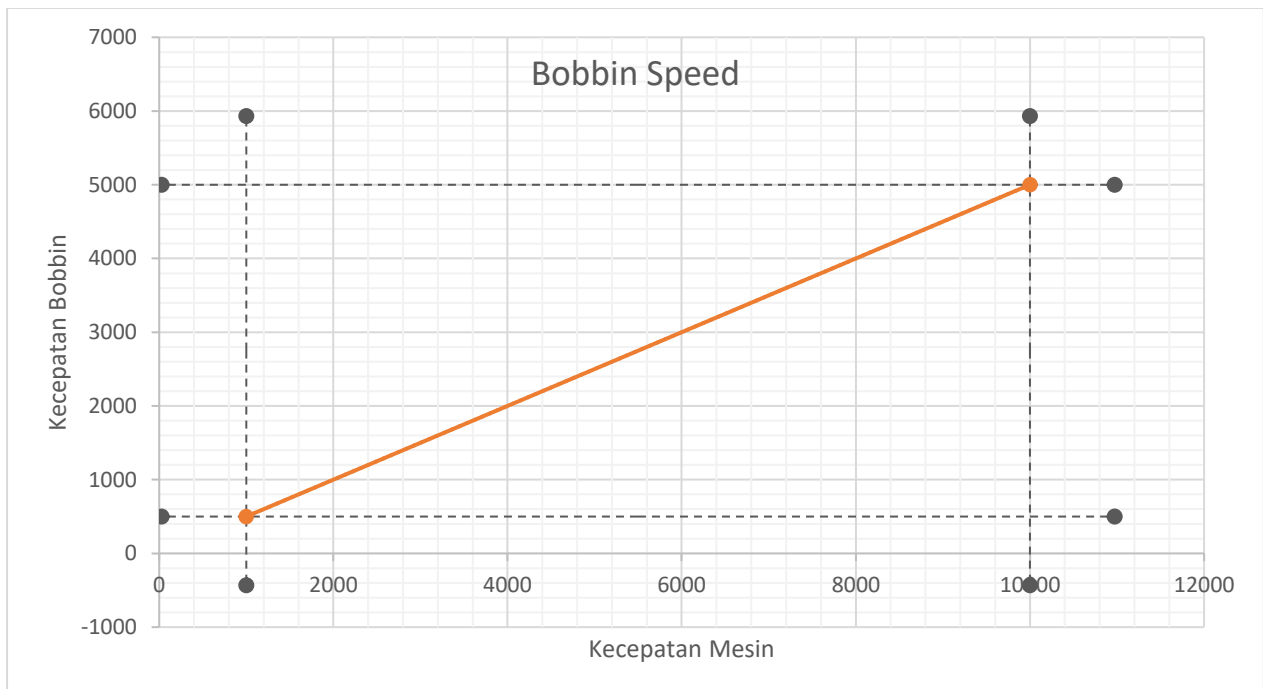
Figure 2.7 Display of S-7000 Bobbin Set

Position Function	Description
<b>BOBBIN SETTING</b>	
2.1.20	Setting the big bobbin <i>speed value</i> that is sought to adjust the big bobbin diameter for the machine can bobbin <i>turn</i> on the <i>maker machine</i> when the machine is in low speed conditions.
2.1.21	Setting the big bobbin <i>speed value</i> that is sought to adjust the big bobbin diameter for the machine can bobbin <i>turn</i> on the <i>maker machine</i> when the machine is in high speed conditions.
2.1.22	Displays a number that shows the actual speed of <i>the big bobbin</i> on the <i>maker machine</i> in <i>real time</i> .
2.1.23	Displays a number that shows the reference value of <i>the big bobbin</i> speed to bobbin <i>turn</i> on the maker machine. This value will adjust to the set engine speed.
2.1.24	Setting the <i>small bobbin</i> speed value that is sought to adjust the size of <i>the small bobbin</i> diameter for the machine can perform <i>bobbin splicing</i> on the <i>maker machine</i> when the machine is in low speed conditions.
2.1.25	Setting the small bobbin <i>speed value</i> that is sought to adjust the size of the <i>small bobbin diameter</i> on the maker machine for the machine can perform <i>bobbin splicing</i> when the machine is in high speed conditions.
2.1.26	Displays a number showing the actual speed of <i>the small bobbin</i> in <i>real time</i> .
2.1.27	Displays a number that shows the reference value of <i>the small bobbin</i> speed to perform <i>bobbin splicing</i> on the <i>maker machine</i> . This value will adjust to the set engine speed.
2.1.28	The motor speed setting is used to pull the new paper to be in sync with the movement of the previous paper.
2.1.29	The button used to perform playback on <i>bobbin (bobbin turn)</i> manually.
2.1.30	The button used to perform the disconnect accompanied by the paper connection ( <i>bobbin splicing</i> ) manually.
2.1.31	The button used to start the motor is used to pull the replacement paper.

To get the *LOW* and *HIGH* values, a search for the corresponding value is performed first. It is said to be appropriate if the *LOW* or *HIGH* value matches the desired bobbin diameter both when the machine performs a "*bobbin turn*", or "*bobbin splicing*".

This equation can be described as follows:

$$\frac{Kec. Bobbin - LOW Y}{HIGH Y - LOW Y} = \frac{Kec. Mesin - LOW X}{HIGH X - LOW X}$$



**Example:** *LOW X* = 1000 (Usually this value is already set in the program)  
*HIGH X* = 10000 (Usually this value is already set in the program)  
*LOW AND* = 500 (This value is obtained from the results *trial run*)  
*HIGH Y* = 5000 (This value is obtained from the results *trial run*)  
*Engine District* = 7000 (This value is the speed of the machine when working normally)

$$\begin{aligned} \frac{Kec. Bobbin - 500}{5000 - 500} &= \frac{7000 - 1000}{10000 - 1000} \\ \frac{Kec. Bobbin - 500}{4500} &= \frac{6000}{9000} \\ Kec. Bobbin - 500 &= \frac{6000 \cdot 4500}{9000} \\ Kec. Bobbin &= 3000 + 500 \\ Kec. Bobbin &= 4000 \end{aligned}$$

The Kec. Bobbin value for turn/splicing is 4000 at an engine speed of 7000 cpm. Bobbin turns and splicing will be different when working for real.

## 2.2 M-7000 Set

By pressing the "M-7000 set" button, the screen will switch to the M7000 set display. On the display, there are four settings menus, namely "reject", "inspection", "bobbin", and "timing".

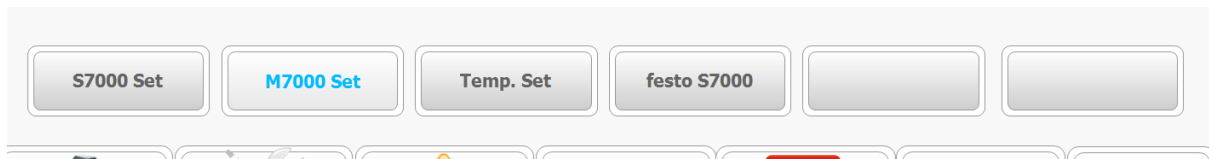


Figure 2.8 Tumble M-7000 sets

## BOBBIN SET

After pressing the "M-7000 set" button, the screen will display the "M-7000 bobbin set" configuration. There are several configurations that can be set by the user.

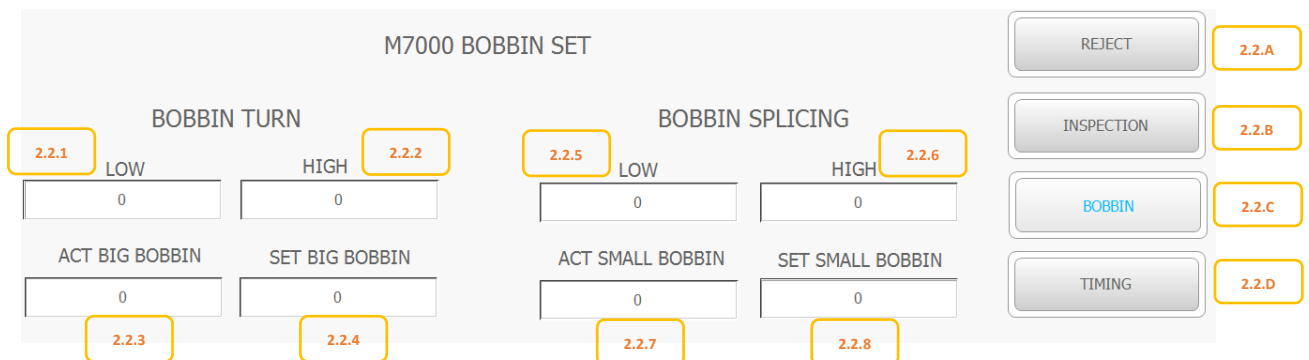


Figure 2.9 Display M-7000 Bobbin Set

Position Function	Description
<i>MENU M7000 SET</i>	
2.2.A	Button that serves to display all reject settings contained in the M-7000 machine.
2.2.B	Button that serves to display all <i>inspection</i> settings contained in the M-7000 engine.
2.2.C	A button that serves to display all <i>bobbin</i> settings contained in the S-7000 engine.
2.2.D	A button that serves to display all timings contained in the M-7000 machine.
<i>M7000 BOBBIN SET</i>	
2.2.1	Displays <i>the bobbin</i> speed parameter <i>input</i> that is sought to adjust the bobbin diameter size for the machine to be able to bobbin <i>turn</i> when the machine is in low speed conditions.
2.2.2	Displays the bobbin speed parameter input that is sought to adjust the bobbin diameter size for the machine to be able to bobbin <i>turn</i> when the machine is in high speed conditions.
2.2.3	Displays numbers showing the actual speed of <i>the big bobbin</i> in <i>real time</i> .
2.2.4	Displays a number that shows the reference value of <i>the big bobbin</i> speed to make a <i>bobbin turn</i> . This value will adjust to the set engine speed.
2.2.5	Displays the bobbin speed parameter input that is sought to adjust the bobbin diameter size for the machine to be able to bobbin <i>turn</i> when the machine is in low speed conditions.
2.2.6	Displays the bobbin speed parameter input that is sought to adjust the bobbin diameter size for the machine to be able to bobbin <i>turn</i> when the machine is in high speed conditions.
2.2.7	A number that shows the actual speed of <i>the small bobbin</i> in real time.
2.2.8	Displays a number that shows the reference value of the small bobbin speed to perform <i>bobbin splicing</i> . This value will adjust to the set engine speed.

## REJECT SET

After pressing the "Reject" button, the screen will display the "M-7000 reject set" configuration. There are several configurations that can be set by the user.

M7000 REJECT SET		
2.2.9	REJECT DRUM SET	0
2.2.10	REJECT SPLICING MAKER SET	0
2.2.11	REJECT SPLICING MAKER QTY	0
2.2.12	REJECT SPLICING MAX SET	0
2.2.13	REJECT SPLICING MAX QTY	0

Buttons: REJECT, INSPECTION, BOBBIN, TIMING

Figure 2.10 Display M-7000 Reject Set

Position Function	Description
<i>M7000 REJECT SET</i>	
2.2.9	Setting the value of the number of cigarettes to be discarded the first time the machine combines tobacco and filters.
2.2.10	Setting the value in the form of counting is used as a benchmark on the machine to reject <i>the drum</i> after <i>bobbin splicing</i> occurs on the maker machine.
2.2.11	Setting the value of the number of cigarettes to be discarded after <i>bobbin splicing</i> occurs on the <i>maker machine</i> .
2.2.12	Setting the value that is used as a benchmark on the engine to <i>reject</i> after <i>bobbin splicing</i> occurs on the M-7000 engine part.
2.2.13	Setting the value of the number of cigarettes to be discarded after <i>bobbin splicing</i> occurs on the M-7000 engine part.

## INSPECTION SET

After pressing the "*inspection*" button, the screen will display the "*inspection setting*" configuration. There are several configurations that can be set by the user.

Figure 2.11 Tampilan M-7000 Inspection Set

Position Function	Description
<b>M7000 INSPECTION SET</b>	
2.2.14	Button to activate " <i>Inspection Setting Mode</i> " mode
2.2.15	Button to activate the sensor " <i>Filter Miss</i> ". The sensor will detect cigarette sticks that do not have a filter.
2.2.16	Button to activate the " <i>Cigarette Miss</i> " sensor. The sensor will detect missing cigarettes while the process is in progress.
2.2.17	Button to activate the " <i>Lose End</i> " sensor. The sensor will detect the tip of the cigarette stick that is not filled properly.
2.2.18	Button to activate the sensor " <i>Presure Drop</i> ". The sensor will detect torn cigarettes.
2.2.19	Setting the calculation of the time needed to dispose of the windray cigarettes that experience " <i>Lose End</i> ". When the Rejek product is detected, the program will calculate the pulse according to the settings, after arriving at the timing calculation the Rejek product will be wasted.

2.2.20	Setting the calculation of the time needed to dispose of the project cigarette that experienced a " <i>Pressure Drop</i> ". When the reject product is detected, the program will calculate the pulse according to the settings, after arriving at the timing calculation the reject product will be wasted.
--------	--

## TIMING SET

After pressing the "*TIMING*" button, the screen will display the "*M7000 timing*" configuration. There are several configurations that can be set by the user.

Figure 2.12 Display M-7000 Timings

Position Function	Description
<i>M-7000 TIMING</i>	
2.2.21	The timing is used as a benchmark on the machine to start lowering the filter. The comparison value will begin to calculate as the sensor on the <i>link up</i> has detected that the tobacco stem has entered.
2.2.22	The timing is used as a benchmark on the machine to start running the tipping paper. The comparison value will begin to calculate as the sensor on the link up has detected that the tobacco stem has entered.



## 2.3 Temp Set

By pressing the "*Temp Set*" button, the screen will switch to the *Temperature set* display. On the display, there are several settings menus, namely "*heater 1*", "*heater 2*", "*garniture*", "*tipping*" and "*rolling block*".



Figure 2.13 Tumble Temp Set

After pressing the "*Temp Set*" button, the screen will display the "*Temp set*" configuration. There are several configurations that can be set by the user.

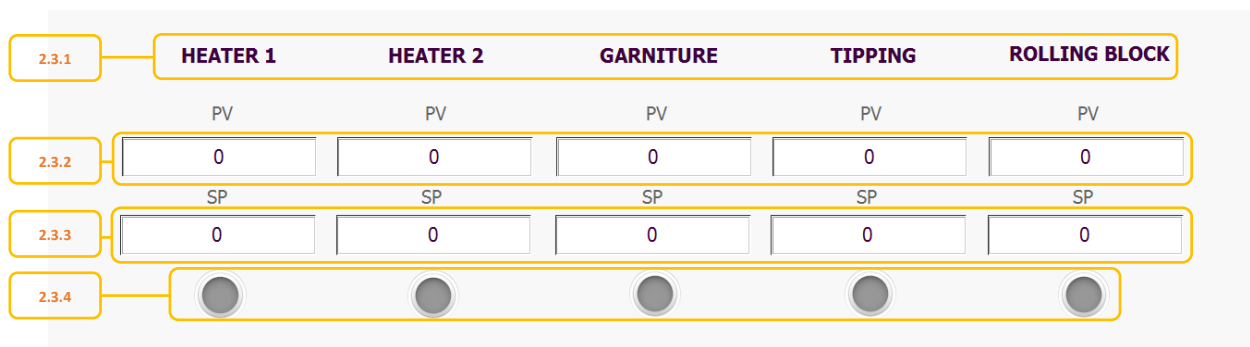


Figure 2.14 Display Temp Set

Position Function	Description
<i>Temp Set</i>	
2.3.1	Displays a description of the <i>temperature</i> value to be set.
2.3.2	Displays the value of each <i>heater</i> . The value is the actual value detected in <i>real-time</i> in celsius.
2.3.3	Displays the value that is the maximum value of each <i>temperature</i> . This value can be set.
2.3.4	Indicator when the <i>heater</i> of each part is active.

## 2.4 Festo S-7000

By pressing the "Festo S7000" button, the screen will switch to the Festo S-7000 menu display. This menu has the purpose of testing festo in certain parts.

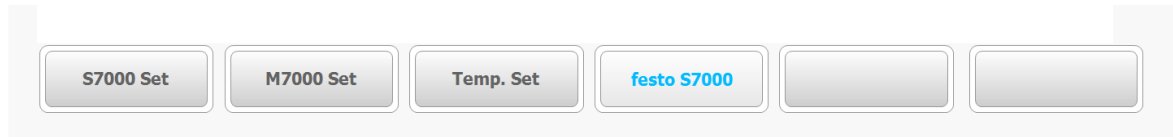


Figure 2.15 Tumble Festo S-7000

After pressing the "Festo S7000" button, the screen will display the "Festo S-7000" configuration. There are several configurations that can be set by the user.



Figure 2.16 Festo S-7000 Display

Position Function	Description
<i>Festo S-7000</i>	
2.4.1	Button to activate " <i>Heater 1 Down</i> " manually.
2.4.2	Button to activate " <i>Heater 1 Up</i> " manually.
2.4.3	Button to activate " <i>Heater 2 Down</i> " manually.
2.4.4	Button to activate " <i>Heater 2 Up</i> " manually.
2.4.5	Button to activate " <i>Garniture Cleaning</i> " manually.
2.4.6	Button to activate " <i>Glue Up</i> " manually.
2.4.7	Button to activate the " <i>Glue Gun</i> " manually.
2.4.8	Button to activate " <i>Glue Test</i> " manually.

2.4.9	Button to activate "Spider Blow" manually.
2.4.10	Button to activate "Rod Feed" manually.

### 3. Alarm

By pressing the "alarm" button, the screen will switch to the alarm menu display.

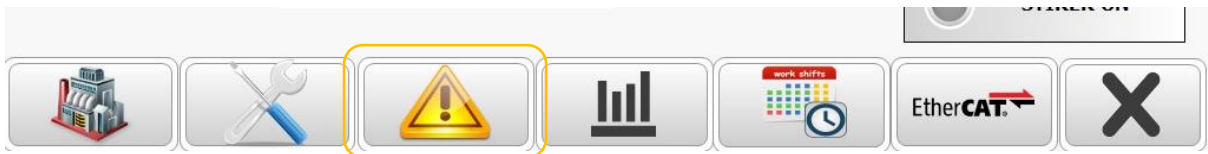


Figure 2.17 Alarm Menu Button

The alarm display will display a description of *the error* detected on the machine "S7000" as shown below.

3.1		3.2
	TIME	DISCRIPTION
0	2024-01-19-14:19:07.483	Emergency Stop
1	2024-01-19-14:19:07.483	SE Emergency Stop
2	2024-01-19-14:19:07.483	Ve Emergency Stop
3	2024-01-19-14:19:07.483	Max Emergency Stop
4	2024-01-19-14:19:07.483	SE Back Cover Open
5	2024-01-19-14:19:07.483	SE motor overload
6	2024-01-19-14:19:07.483	air Pressure low
7	2024-01-19-14:19:07.483	remote IO error
8	2024-01-19-14:19:07.483	Max Tipping break
9	2024-01-19-14:19:07.483	Feed Roller
10	2024-01-19-14:19:07.483	max not Ready
11	2024-01-19-14:19:07.483	Max Safety open
12	2024-01-19-14:19:07.483	HCF not Ready
13	2024-01-19-14:19:07.483	Max Overload
14	2024-01-19-14:19:07.483	Ve Not Ready

Figure 2.18 Alarm List View

Position Function	Description
ALARM	
3.1	Indicates the time when an error occurred or was detected on the machine.
3.2	Shows a description of <i>the error</i> that occurred on the machine.

## ALARM LIST

<b>NUM</b>	<b>DESCRIPTION</b>
<i>error_0</i>	<i>Emergency Stop</i>
<i>error_1</i>	<i>SE Emergency Stop</i>
<i>error_2</i>	<i>VE Emergency Stop</i>
<i>error_3</i>	<i>M-7000 Emergency Stop</i>
<i>error_4</i>	<i>SE Back Cover Open</i>
<i>error_5</i>	<i>SE Cut Off Cover Open</i>
<i>error_6</i>	<i>SE Tape Drum Cover Open</i>
<i>error_7</i>	<i>SE Ink Cover Open</i>
<i>error_8</i>	<i>SE Motor Overload</i>
<i>error_9</i>	<i>SE MCB Overload</i>
<i>error_10</i>	<i>VE MCB Motor Overload</i>
<i>error_11</i>	<i>Lenze Fault</i>
<i>error_12</i>	<i>Splicer Servo Error</i>
<i>error_13</i>	<i>Servo VE Error</i>
<i>error_14</i>	<i>Suction Chamber Not Ready</i>
<i>error_15</i>	<i>Heater 1 Low Temperature</i>
<i>error_16</i>	<i>Heater 1 High Temperature</i>
<i>error_17</i>	<i>Heater 1 Sensor Broken</i>
<i>error_18</i>	<i>Heater 2 Low Temperature</i>
<i>error_19</i>	<i>Heater 2 High Temperature</i>
<i>error_20</i>	<i>Heater 2 Sensor Broken</i>
<i>error_21</i>	<i>Heater 1 Broken</i>
<i>error_22</i>	<i>Heater 2 Broken</i>
<i>error_23</i>	<i>Chiller High Temperature</i>
<i>error_24</i>	<i>Paper Broken</i>
<i>error_25</i>	<i>Fan Blower Low Pressure</i>
<i>error_26</i>	<i>Air Pressure Low</i>
<i>error_27</i>	<i>Ledger Broke</i>
<i>error_28</i>	<i>Remote IO Error</i>
<i>error_29</i>	<i>M-7000 Tipping Break</i>
<i>error_30</i>	<i>Feed Roller</i>

<i>error_31</i>	<i>Motor Belting Loose</i>
<i>error_32</i>	<i>Rod Break</i>
<i>error_33</i>	<i>M-7000 Rolling Block Jammed</i>
<i>error_34</i>	<i>SE No Rod Started</i>
<i>error_35</i>	<i>VE Stepangle Overload</i>
<i>error_36</i>	<i>M-7000 Not Ready</i>
<i>error_37</i>	<i>M-7000 Safety Open</i>
<i>error_38</i>	<i>Low Tobacco</i>
<i>error_39</i>	<i>HCF Not Ready</i>
<i>error_40</i>	<i>M-7000 Overload</i>
<i>error_41</i>	<i>Step-by-step overload</i>
<i>error_42</i>	<i>VE Not Ready</i>
<i>error_43</i>	<i>VE Magnet Cover Open</i>
<i>error_44</i>	<i>VE Step Angle Open</i>
<i>error_45</i>	<i>VE Side Cover Open</i>
<i>error_46</i>	<i>VE Picker Roller Guard Open</i>
<i>error_47</i>	<i>Tobacco Choke UP</i>
<i>error_48</i>	<i>SE Front Cover Open</i>
<i>error_49</i>	<i>M-7000 Fan Not Ready</i>
<i>error_50</i>	<i>M-7000 Glue Door Open</i>
<i>error_51</i>	<i>M-7000 Roll Cover Open</i>
<i>error_52</i>	<i>M-7000 Filter Door Open</i>
<i>error_53</i>	<i>Filter Jam</i>
<i>error_54</i>	<i>Rolling Block Jams</i>
<i>error_55</i>	<i>Rolling Block Position</i>
<i>error_56</i>	<i>Knife Empty</i>
<i>error_57</i>	<i>Servo Step Angle Error</i>
<i>error_58</i>	<i>Servo Needle Rod Error</i>
<i>error_59</i>	<i>Inverter/encoder Main Motor Error</i>
<i>error_60</i>	<i>Servo Splicing Error</i>
<i>error_61</i>	<i>VE Overload engine</i>
<i>error_62</i>	<i>Belting Need Changes</i>
<i>error_63</i>	<i>SE Vacuum Motor Overload</i>

<i>error_64</i>	<i>SE External Vent Motor Overload</i>
<i>error_65</i>	<i>SE Bobbin Motor Overload</i>
<i>error_66</i>	<i>SE Oil Pressure Low</i>
<i>error_67</i>	<i>M-7000 Glue Empty</i>
<i>error_68</i>	<i>VE Overload Picker Roller</i>
<i>error_69</i>	<i>VE Suction Tape Break</i>
<i>error_70</i>	<i>VE Overload Small Fan</i>
<i>error_71</i>	<i>VE Overload Bottom Piddle Roller</i>
<i>error_72</i>	<i>VE Overload Vibrator Conveyor</i>
<i>error_73</i>	<i>VE Overload Recycling Conveyor</i>
<i>error_74</i>	<i>VE Overload Conveyor Belt</i>
<i>error_75</i>	<i>VE Overload Over Upper piddle Roller</i>
<i>error_76</i>	<i>VE Overload Brush</i>
<i>error_77</i>	<i>VE Overload Tobacco Reservoir</i>
<i>error_78</i>	<i>VE Overload Big Fan</i>
<i>error_79</i>	<i>OverCurrent Protection Error</i>

## 4. Report

By pressing the report button, the screen will switch to the report menu display, on that display there are three menus namely "weight", "error", "production".



Figure 2.19 Report Menu button

After pressing the "report" button, the screen will display the report screen on the "weight" menu. The menu display on *this weight* displays a description of the cigarette weight report graph.

### 4.1 Weights Report

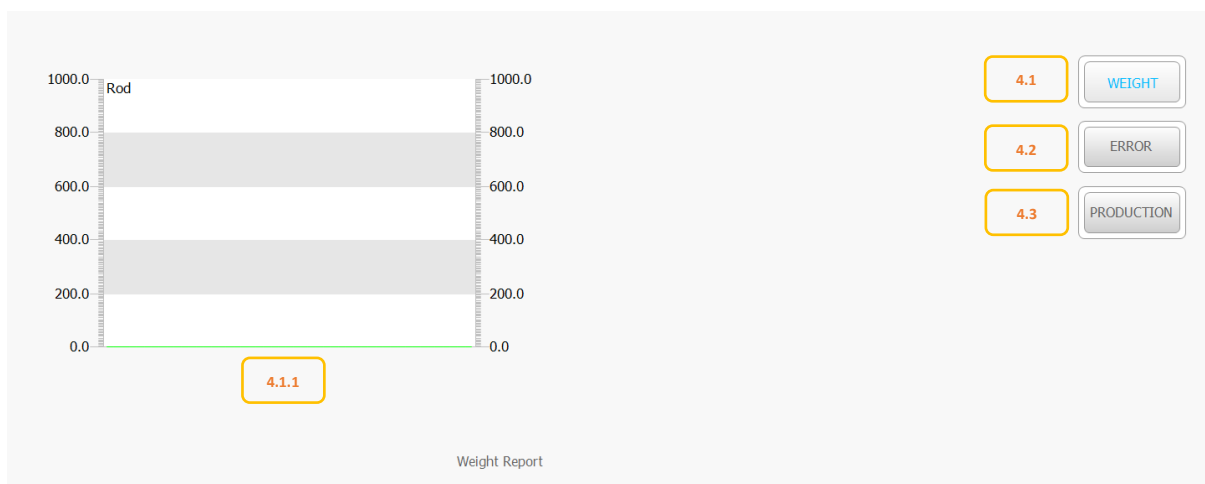


Figure 2.20 Weights Report View

Position Function	Description
<i>REPORT MENU</i>	
4.1	The button that serves to display the weight report screen in the "REPORT" menu section.
4.2	The button that serves to display the error report screen in the "REPORT" menu section.
4.3	The button that serves to display the production report screen in the "REPORT" menu section.

WEIGHT REPORT	
4.1.1	Displays a report on the weight of cigarettes produced and displayed in graphic form.

## 4.2 Error Report

By pressing the "Error" button, the screen will display a counter description of *the error that* occurred on the machine.

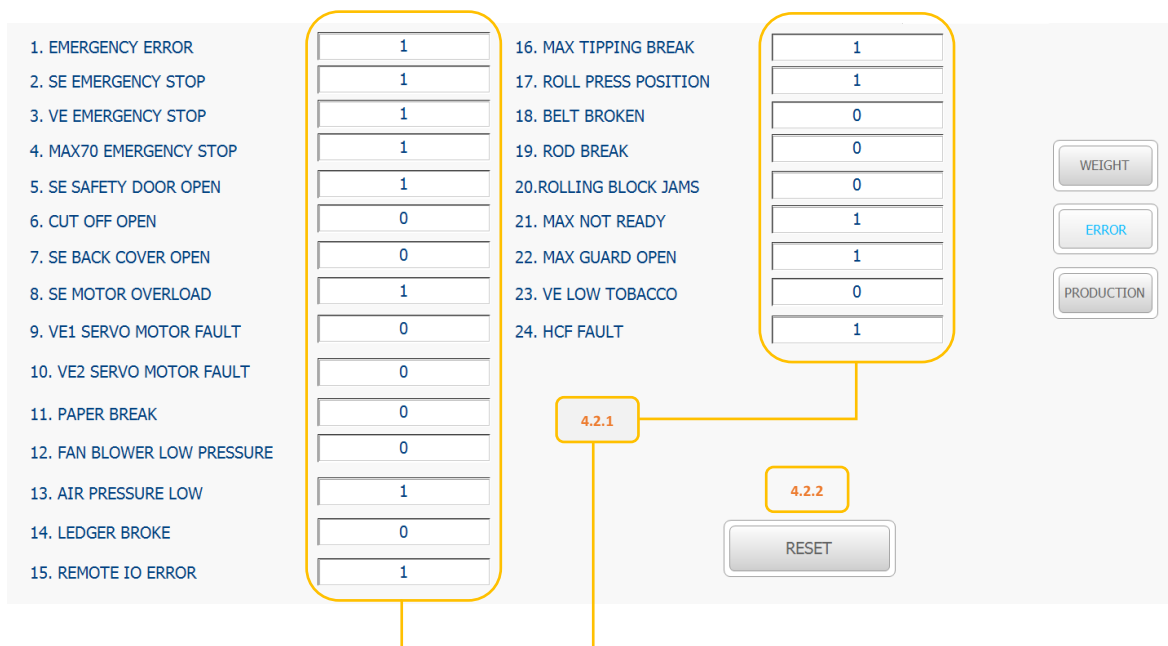


Figure 2.21 Error Report View

NOTE: THE ERROR IS DESCRIBED IN THE PREVIOUS CHAPTER.

Position Function	Description
ERROR REPORTS	
4.2.1	Displays the number of <i>errors</i> that occurred on the machine.
4.2.2	Button to reset the number of <i>errors</i> that occur on the machine.



## 4.3 Production Report

By pressing the "*production*" button, the screen will display a description of the machine's production information.

4.3.1

TARGET (cpm)	6000	SHIFT 1	SHIFT 2	SHIFT 3
4.3.2 MACHINE RUN		00:00:00	00:00:00	00:00:00
4.3.3 MACHINE STOP		00:00:00	00:00:00	00:00:00
4.3.4 QTY GOODS PRODUCT		0	0	0
4.3.5 QTY TRAY OUT		0	0	0
4.3.6 QTY TOTAL REJECT		0	0	0
4.3.7 QTY REJECT FILTER MISS		0	0	0
4.3.8 QTY REJECT CIG MISS		0	0	0
4.3.9 QTY REJECT LOOSE END		0	0	0
4.3.10 QTY REJECT PRESS DROP		0	0	0
4.3.11 % REJECT		0	0	0
4.3.12 EFFICIENCY MACHINE		0	0	0

4.3.13

WEIGHT  
ERROR  
PRODUCTION

Figure 2.22 Production Report View

Position Function	Description
<i>PRODUCTION REPORT</i>	
4.3.1	Displays the number of cigarette production targets to be achieved per minute.
4.3.2	Displays the amount of time the machine is running.
4.3.3	Displays the amount of time the machine stopped.
4.3.4	Displays the total amount of production output on the machine.
4.3.5	Displays the number of <i>trays</i> that have exited.
4.3.6	Displays the total number of failed products in the production process.
4.3.7	Displaying the overall number of products failed because the filter on the cigarette was missing.

4.3.8	Displays the number of cigarettes lost during the journey on the drum.
4.3.9	Displays the number of products that failed because the tip of the cigarette was not completely filled.
4.3.10	Shows the number of products that failed due to torn cigarettes.
4.3.11	Displays the total percentage of cigarette products that fail.
4.3.12	Displays the percentage of production efficiency of working machine. This percentage is obtained through a comparison of the number of cigarettes produced with 100% of the target value of the amount of production to be achieved during the machine work.
4.3.13	Displays the value report of each production report that occurs during 3 shifts in a day.

## 5. Shift

By pressing the "shift" key, the screen will switch and display the *shift screen*.



Figure 2.23 Shift Menu key

Screen *shift* on the S-7000 machine displays the time schedule of the machine's work shift, on the machine we can set the machine's work schedule.

WORKING SHIFT TIME SCHEDULE

	SHIFT 1	SHIFT 2	SHIFT 3
5.1 START TIME	0 : 0	0 : 0	0 : 0
5.2 END TIME	0 : 0	0 : 0	0 : 0
5.3 BREAK TIME	0 : 0	0 : 0	0 : 0
5.4 ELAPSE TIME	00:00:00	00:00:00	00:00:00

5.5

Figure 2.24 Work Time Shift Schedule Display

Position Function	Description
<i>Working Shift Time Schedule</i>	
5.1	The timing for starting the machine works.
5.2	The timing of the machine stops working.
5.3	The timing of the machine paused for a moment.
5.4	Displays the total running time of the machine.
5.5	Displays the settings and the amount of time the machine runs on all three shifts.

## 6. EtherCAT

By pressing the "EtherCat" button, the screen will switch to the "EtherCat" menu display, on the display, there are three menus, namely "Device Link", "Input M-7000", and "Input S-7000"



Figure 2.25 EtherCAT Menu Button

### 6.1 Device Link

After pressing the "EtherCat" button, the screen will display the EtherCat screen on the "Device Link" menu. The display on this menu displays connections between commonly used devices.

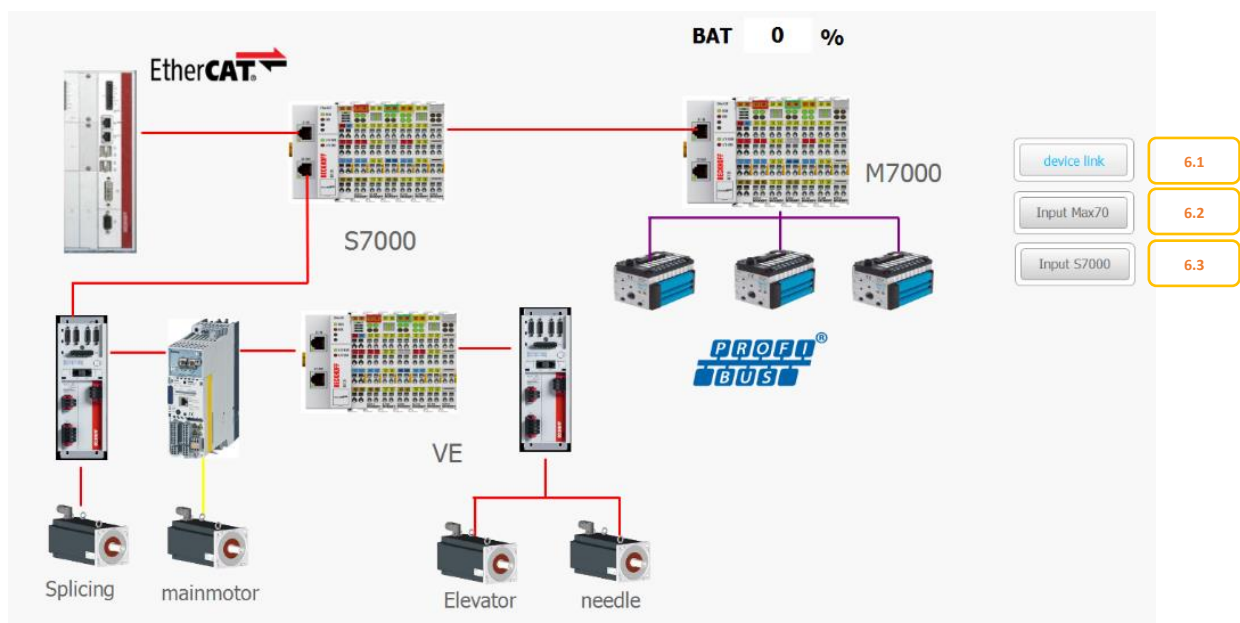


Figure 2.26 Device Link EtherCAT screen view

Position Function	Description
<i>EtherCAT</i>	
6.1	The button that serves to display the <i>device link</i> screen on the " <i>ETHERCAT</i> " menu section.
6.2	The button that serves to display the M-7000 input screen in the " <i>ETHERCAT</i> " menu section.
6.3	The button that serves to display the S7000 input screen in the " <i>ETHERCAT</i> " menu section.

## 6.2 Input M-7000

After pressing the "Input M-7000" button, the screen will switch to the *EtherCAT* display, on the "Input M-7000" menu. The display on this menu displays the M-7000 Input address, as shown below.

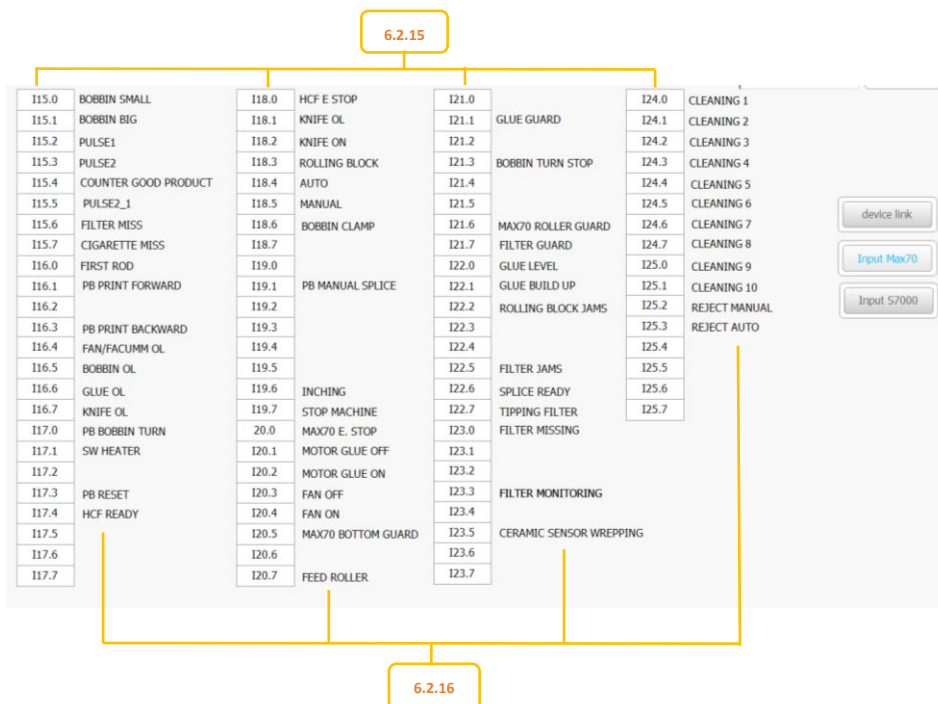


Figure 2.27 M-7000 EtherCAT Input screen display

Position Function	Description
6.2.15	Input Address on M-7000
6.2.16	Description of the input address on the M-7000

## 6.3 Input S-7000

After pressing the "Input S-7000" button, the screen will switch to the EtherCAT display, on the "Input S-7000" menu. The display on this menu displays the input address of the S-7000, as shown below.

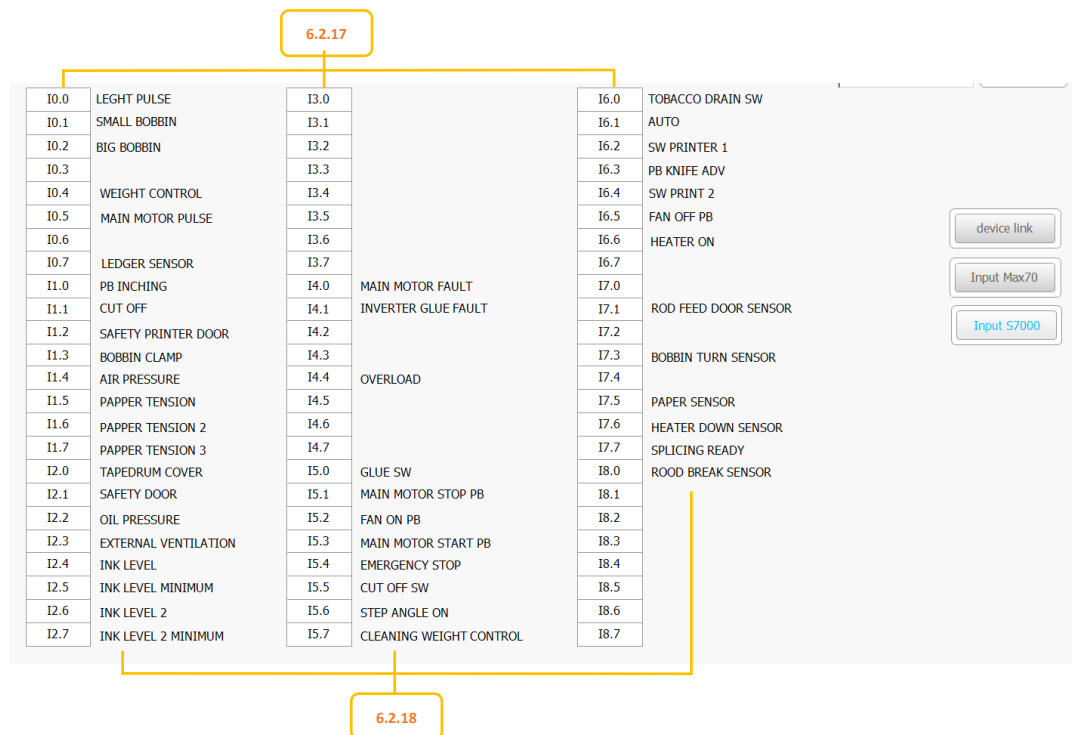


Figure 2.28 S7000 Input Screen Display

Position Function	Description
6.2.17	Input Address on S-7000.
6.2.18	Description of the input address on the S-7000.

## 7. Shutdown

By pressing the "*Shut Down*" button, the screen and device will automatically turn off.



Figure 2.29 Tumble shutdown



## **CLOSING**

Thus, we close the manual book of the S-7000 cigarette making machine as a complete source of information to ensure efficient operations and optimal production results. We hope that this guide will provide a clear and deep understanding for users to be able to manage this machine well.

For further questions or technical assistance, please contact our customer service team. Thank you for your trust in choosing our products, and may the S-7000 cigarette making machine make a positive contribution to the smooth running of your business.