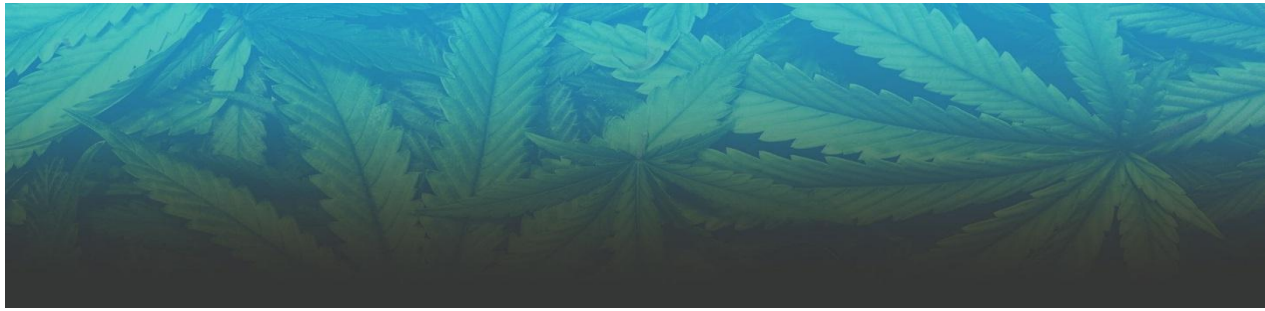
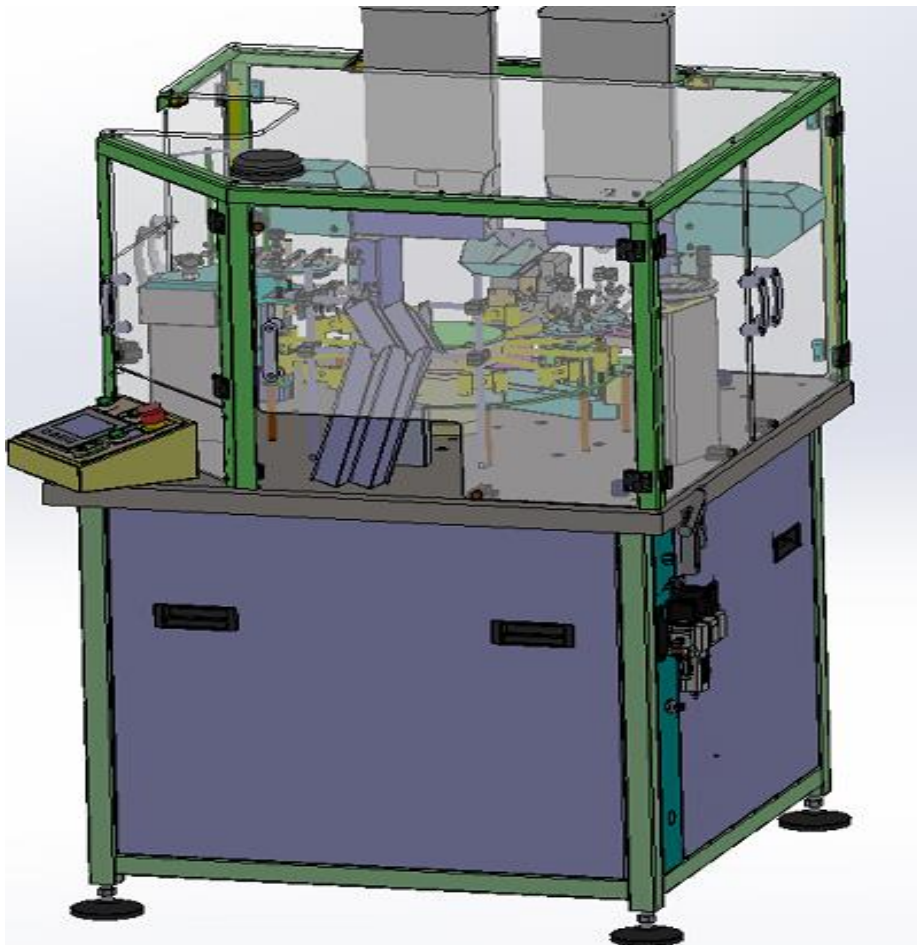




Cone Rolling Robot Automatic Feeding, Filling & tip Closing of Medicinal Cannabis Cones



XXXX 111111



Project No. _____

Table of Contents

1 INTRODUCTION.....	3
PART I: USER MANUAL.....	4
2 PRECAUTIONS.....	4
3 GENERAL DESCRIPTION.....	7
4 OPERATING INSTRUCTIONS.....	19
5 PARTS.....	36
6 MAINTENANCE.....	37
7 TROUBLESHOOTING.....	38
8 WARRANTY AND LIABILITY.....	41
 PART II: TECHNICAL MANUAL AND SPARE PARTS.....	 45
9 SPECIFICATIONS & TECHNICAL DATA.....	45



1. Introduction

This manual is designed as an operating manual for the Cone Rolling Robot. Its primary purpose is to discuss basic machine operation and maintenance.

Make sure, during unpacking, all data on the utility tag, located on the side of the control box, is correct (Figure 1-1).

hefestus
SLB Technologies

Model **AURA2000 V.B2**

Serial No. _____

Automatic Cigarette filling machine
208-240 V / 50- 60 Hz 25 A
1+N Single Phase (US/CAN)

Figure 1-1: Utility tag

The Machine is packed in a treated wood crate. We recommend storing the crate so you can safely re-pack for future transport if necessary.



PART I: User Manual

2 Precautions

2.1 Safety Measures

It is very important that you read the manual before operating the machine. Not only can it be dangerous to start working with an unknown machine, it can also be damage to the machine.



- Check, before the Aura Packing Machine is put into operation, whether the data on the utility tag corresponds with the Voltage (V), Power Rating (W) and Frequency (Hz) of the local power supply.
- If the Machine is not used for a long period of time, disconnect the power plug from the main supply.
- Only use replacement parts provided by HEFESTUS TECHNOLOGIES LTD
- Only instructed & authorized people must operate machine.
- Close all protective covers before operating. On the machine or parts of the machine.
- Do not touch the heating element while the machine is switched ON.
- Beware of possible injury from the sealing plats in the seal head.
- Before cleaning the machine, make sure the main Power Switch is turned OFF.
- Machine must not be cleaned with running water. **Use damp cloth only.**
- Make sure all safety fittings (emergency stop, air pressure valve etc.) are operational.
- Machine must not be left operating without the presence of authorized personnel.
- Hang a warning sign while maintenance or repairs are done.
- Machine parts may be replaced only with written approval from the manufacturer.
- Machine must be used only for the purpose for which it was built.
- Warnings and instructions given here , are not intended to replace operating rules.
- Read the manual carefully before any operation on the Aura Machine is conducted.



Modifications and Alterations on the machine

Due to safety, modifications and/or alterations of any kind on the machine are not allowed, without prior consent. Spare-parts and accessories are specially designed for the machine.

Do not use replacement parts unless provided by HEFESTUS TECHNOLOGIES LTD

Use of other parts may affect the direct and/or indirect safety of the machine. HEFESTUS TECHNOLOGIES LTD excludes any liability concerning damage due to the use of parts not supplied by HEFESTUS TECHNOLOGIES LTD

2.2 Equipment Safety

The built-in features of the machine must be in place for safe operation. This equipment includes:

- A Metal protective cover surrounds the Index drive motor. Never operate the machine without the guard covers the motor. Do not bypass any safety switches or elements.
- Protective Cover located surrounds the Sealing unit. Do not operate the machine without the cover or cover open. Do not bypass the protective elements.
- There are two emergency stop buttons on the machine, one located on the main control panel and the second located on the side of the machine.



Emergency stop PB on control panel



Emergency stop PB on side of machine

The machine side covers, the front and the back covers and the control box must be closed in order to operate the machine. If the covers are not closed it is danger to operate the machine.

E-stop buttons has to be pulled up. If an E-stop button has been pressed or any door has been open, the machine will stop immediately, Compressed air will be released. All stations cycles will be reset to start and not work. In addition, a light will be illuminated on all the eliminated Emergency Push Buttons and will pop up on the Main Operator Screen. To rerun the Machine, pull out all E-stop buttons. Check the position of the elements and start producing.

Do not use the Emergency PB as stop operation buttons. In case of pressing the Emergency PB restart the Machine after checking all stations in start conditions.



2.3 Prohibitions



2.4 Description of the workplace

Place the machine on a solid, smooth surface with space surround the machine for operation. Level the machine and make it stable. This is necessary to guarantee a good operation. Lock the wheels (by pressing the locks, see figure 2-1: Wheel) of the Aura filling system to prevent the Filler from moving.

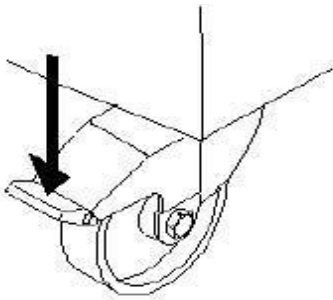
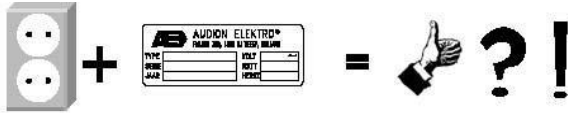


Figure. 2-5: Wheel



Place the machine on the ground in a well-lighted space. Make sure the Aura Machine is not exposed to sunshine, extreme temperatures, humidity, dust or sand. The Aura Machine must not be exposed to mechanical shocks and vibrations. Always leave room free around the machine for loading and unloading packing material and packed products. Plug the power with a socket that has an earth connection and is fused of max. 25 Amps.



Operational requirements:

Power & Air Requirements

Power USA: 208-240V 1x10A 50-60 Hz.

Electrical socket (supply) 200-240V (1+N single Phase)

Machine to be connected by authorized electrician to power 220V (local plug required)

Pressurized Air at: 6 BAR

Air compressor capacity: 80 gal/min + Air Dryer

NOTE: in case air supplied to machine is HUMID (no dryer), pistons & valves may be damaged

Supplier will not cover these damages under warranty

Internet Connection

Land (cable) internet connection to machine (for SECOMEA on-line support)

Temp. & Humidity

Optimal Temp.: ~20°C

Max. room Humidity: 40%-50% (without condensation).

Fastening, fixing: The Machine is placed on 4 wheels or 4 Leveling legs

Explosion safety: Not to be used in explosive surroundings.

Extraction, ventilation: To be used in ventilated spaces.

Make sure the voltage, consumption and frequency of the power supply are the same as on the identification panel

3. General description of the machine

The Aura Machines are based for fully automatic operation. In feeding amount of Paper Cones

Each cycle of station operation takes action on double cone feed-in. Index table carries to move the cones between all stations, transports the product from operation station to the other.

Fed Ready-made paper cones with filter.

Filling material: Medicinal cannabis finely ground homogeneous (like dry spices)

Capacity: 16 cycles/min = 1,920 Pc. /Hour

Man power: Single operator

Machine is constructed of stainless steel.

All parts in contact with cigarette in accordance with food standards.

Cones are packed in easily to separate stacks – awaiting samples.



3.1 Aura Machine Stations and Sections

The Aura Machine contains the following mechanisms:

Rotating index table. Two products in each position

1. Automatic de-nesting of two paper cones into insert
De-nester is a rotating index with many stacks of cones – to enable continuous work.
2. Automatic filling including:
 - 2 Feeding containers, with "built-in" auger
 - Vibrating feeding tray while filling – ALWAYS ON
 - Vibration of cones while filling – ON or OFF advised by operator
3. Electro magnets = pair of "jumpers" EL. MAGNET 1
4. Electro magnets = pair of "jumpers" EL. MAGNET 2
5. Automatic "closing" of filled cone by Tip Folding mechanism
6. Automatic output of ready cones onto. Slide

3.2 Aura Machine Control Panel

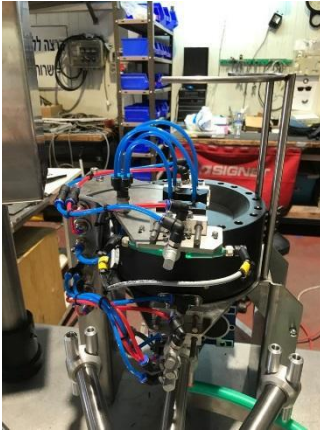


The Aura Machine control panel contains all the elements to control the machine:

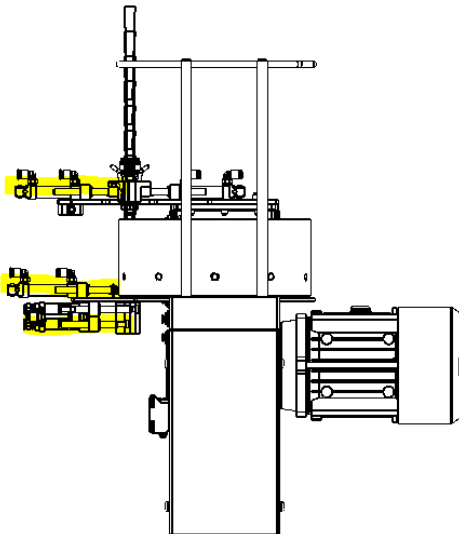
- Display Screen for Manual and Automatic Operation.
- Start / Stop P.B. and green lamp.
- AUTO/0/MAN (Manual) Operation Mode Switch.
- Emergency P.B.
- Feeding Vibrator Power Pulse WT.
- Tamping power adjuster.



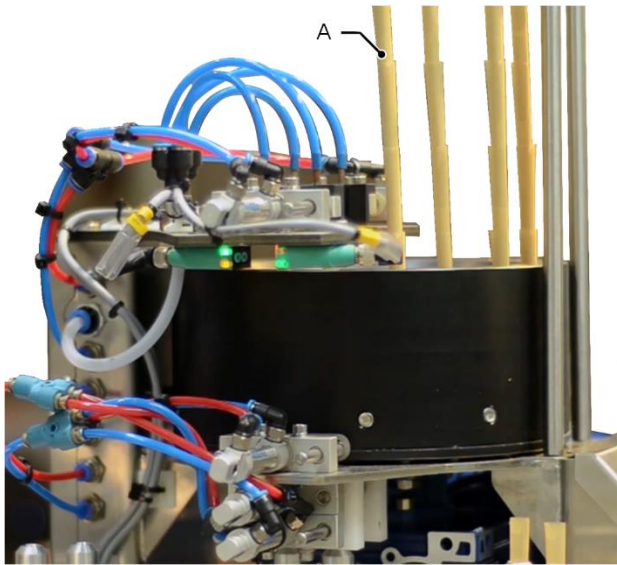
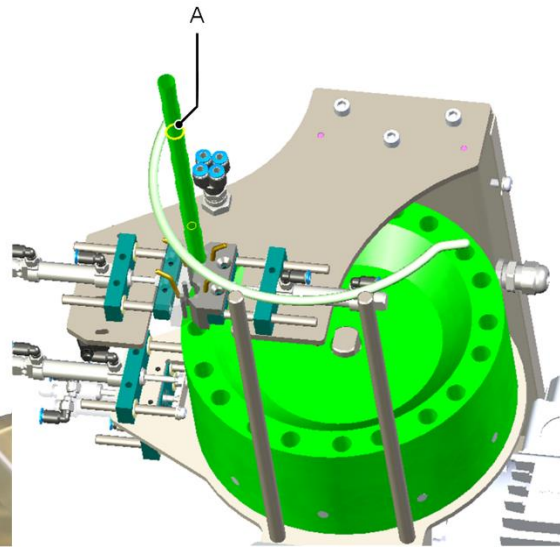
3.3 Aura Feeding Drum Dispenser Unit



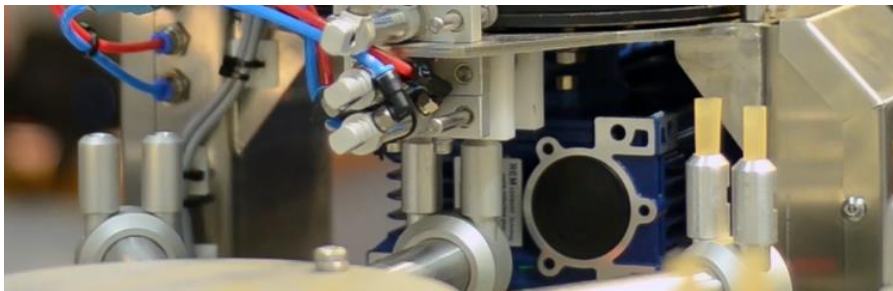
- Cones columns are loaded manually into the drum fixations
The drum will rotate until first cone lines and detected on top of the dispensing area.
Dispensing mechanism, which is built with 3 stages of pneumatic cylinder holders
Will hold the column and separate the 2 cones of the upper columns, the two cones will be dropped into the indexing fixture below.



- Photo electric sensors detect the existing two cones inside the fixture.
- Lack of continues cones will stop the machine and alert by popping a message on the HMI.zz

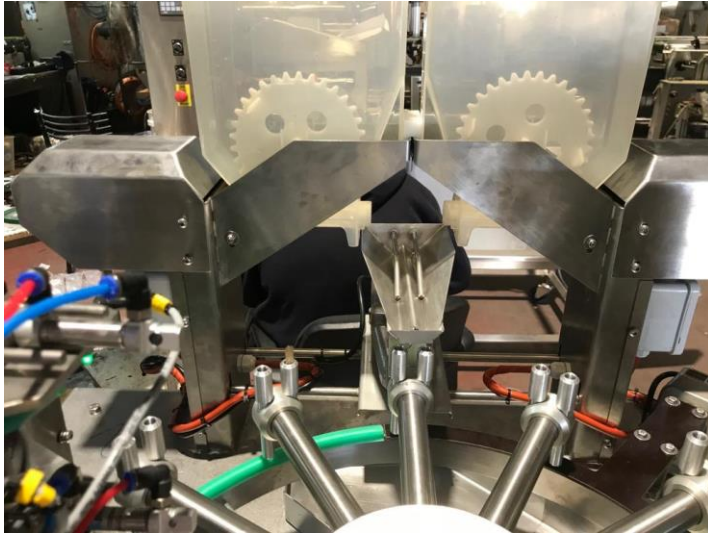


- When emptying the machine at end of production, feeding station will be automatically disabled.

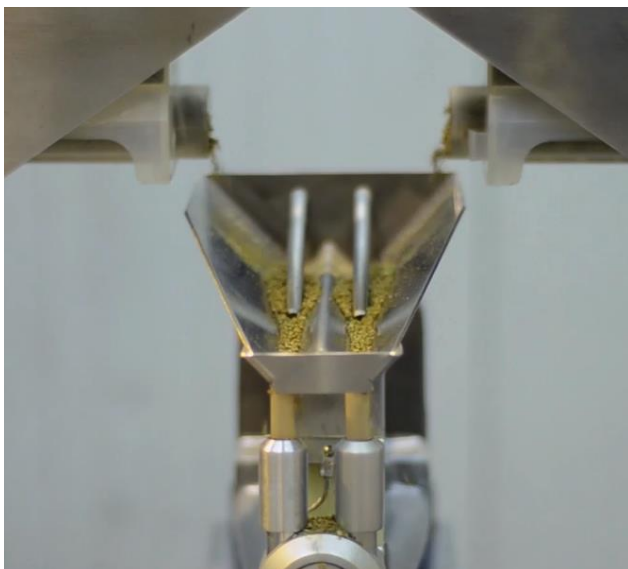


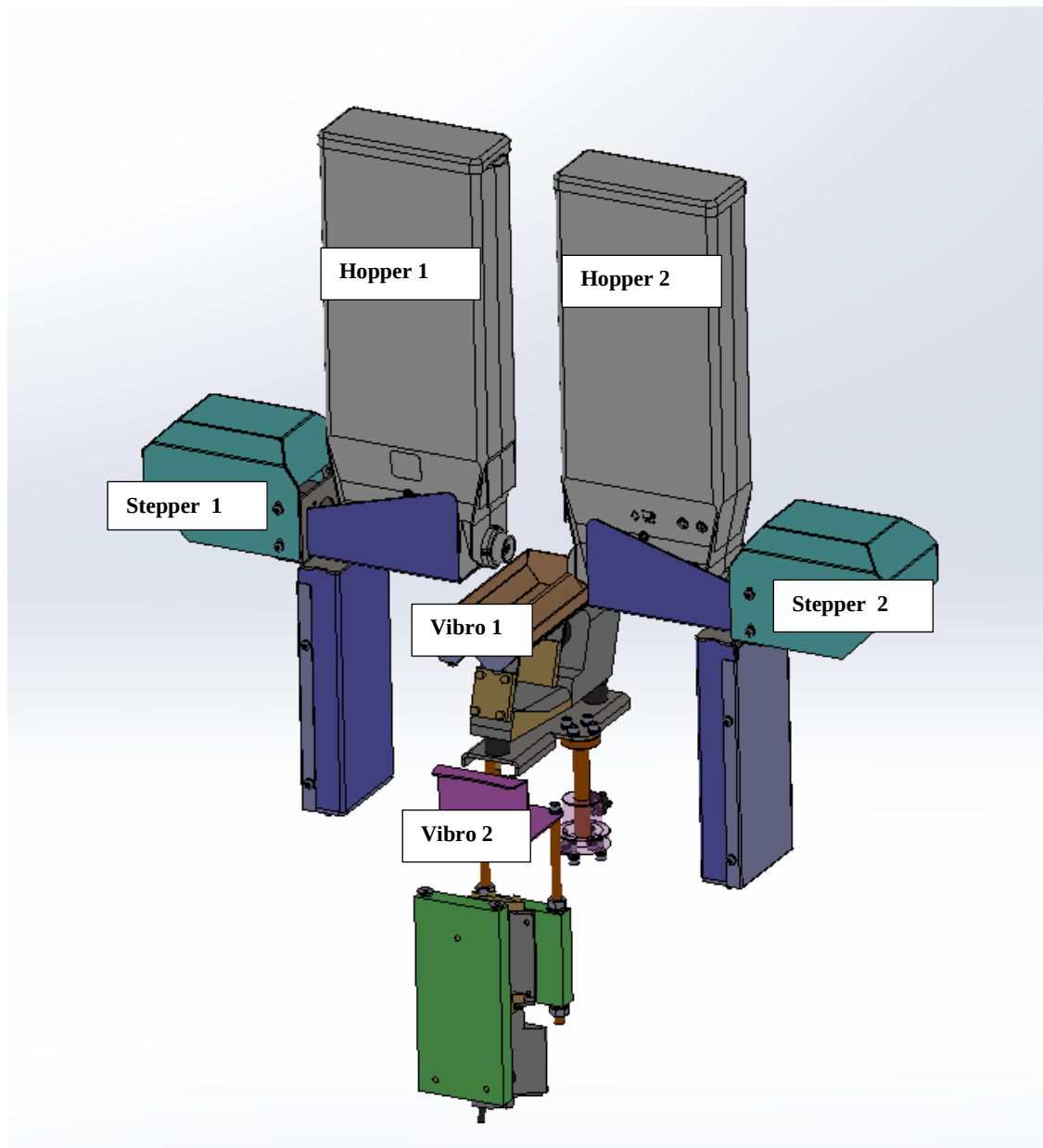


3.4 Aura Auger – Vibro Filling System



- Automatic dual-filling system.
- Square filling Hoppers including Stepping based augers with mechanically transmitted mixing internal wheels.
Vibro-Feeding platform. Specially shaped made in order to transport the product in precise trail.
- Required to create a trail of product on the first run, when the machine is clear of product. The product will fill the vibro-feeder at the first loading procedure, this required In order to be ready for first arrived cones
The procedure could be done on the manual feeding mode.





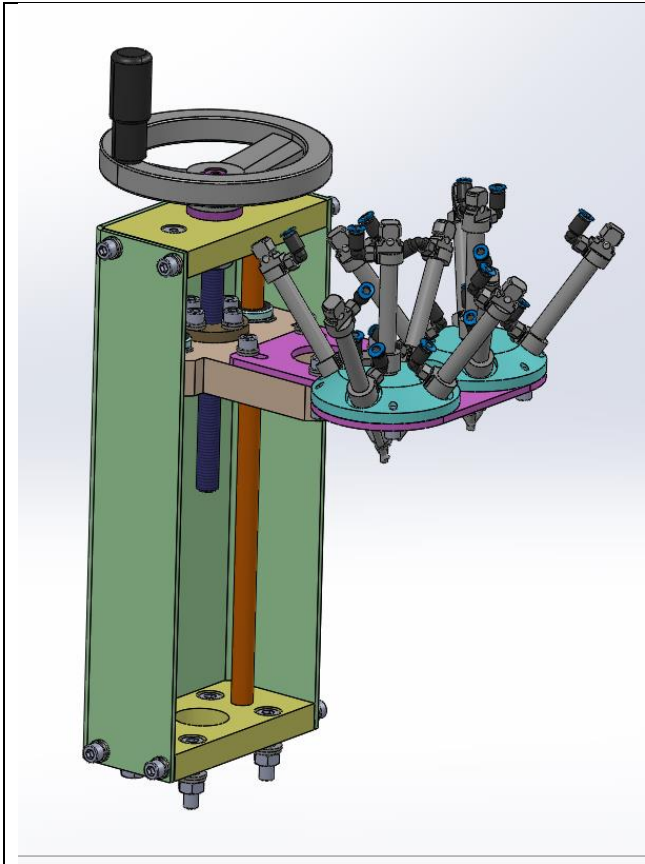
- Filling auger speed and distance is controlled from HMI
While auger is transporting the product, the vibro-feeder is moving material into the cones.



The speed amplitude of the vibro feeders is adjusted with potentiometer wheel knob which is located beside the monitor.



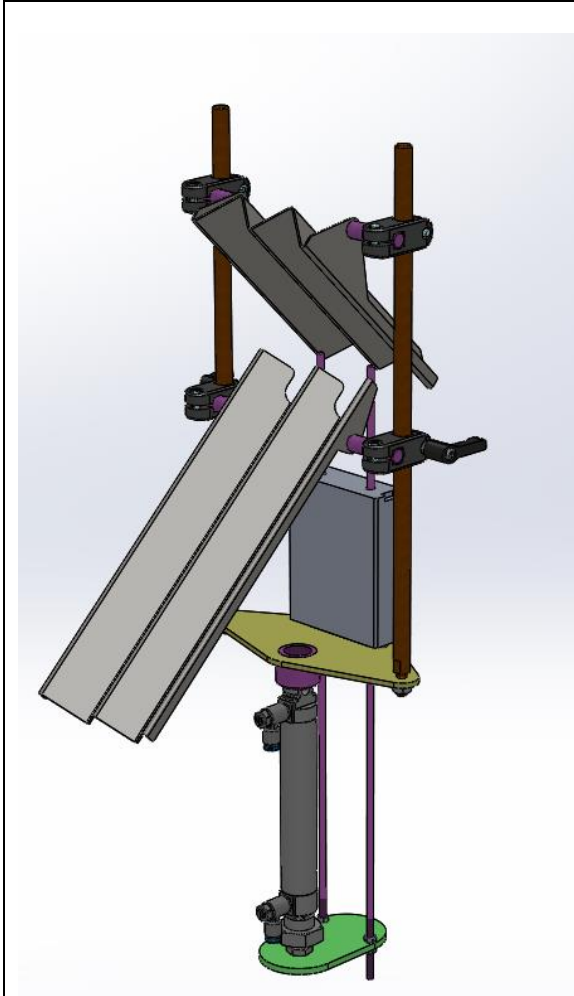
3.5 Aura Tip Folding station



- Folding station includes:
 - 2 sets of 5 pneumatic pistons
 - Manual height adjustment
- When cones are positioned at station, side pistons work one after the other to complete round. Last upper (perpendicular) piston works twice to close.



3.6 Ejecting station



- Ejector contains two main components
 - Shaped orientation plate & slide
 - Dual arm ejecting cylinder
- When the fixture with cones arrives to ejecting station.
The dual arm runs inside the fixture thru the bottom, and launches the finished cones.



3.7 Aura Pneumatic System



- Pneumatic service unit is mounted at the machine chassis to control inlet pressure
- Main manual air valve mounted before the pressure regulator.
- Pursue air gauge mounted on the unit.
- Max Compressed air 7 Bar. **The Air pressure must be between 6 to 7 bars.**
- Adjust the air pressure before operating the Machine.
- Manifold of solenoid valves mounted on the bottom of the chassis.



- All solenoid valves operated 24VDC
- All solenoid valves 5/2 spring return



4 Operating Instructions

The machine can be operated manually, each station full cycle or step by step or automatically all stations together.

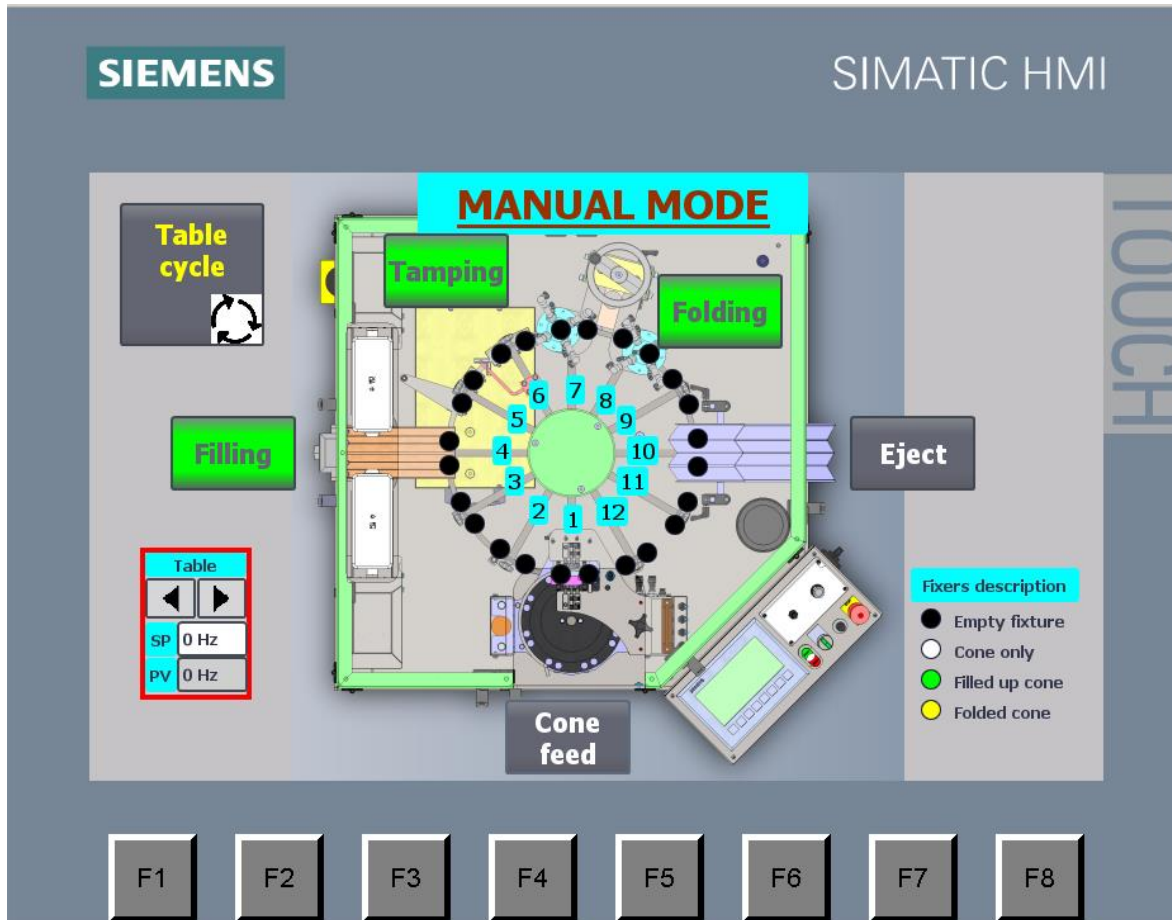
4.1 Operating Instructions Before Using the Machine

The following needs to be done before operating the machine:

1. Make sure the power cord is connected. Check the Voltage. Make sure the machine is grounded.
2. Make sure the air pressure tube is connected and that the pressure has a value of
Roughly 6~7 Bars.
3. Make sure all setup parameters are adjusted for automatic production
4. Emergency switches are pulled out to ON position.
5. Safety cover/doors are completely shut.
6. Verify all settings in the display are correct.
7. Make sure that the cone columns are properly positioned in place.
8. Make sure that the hopper containers are filled halfway.



4.2 Manual Operating Instructions



Switching the Auto-Manual switch to **manual mode**



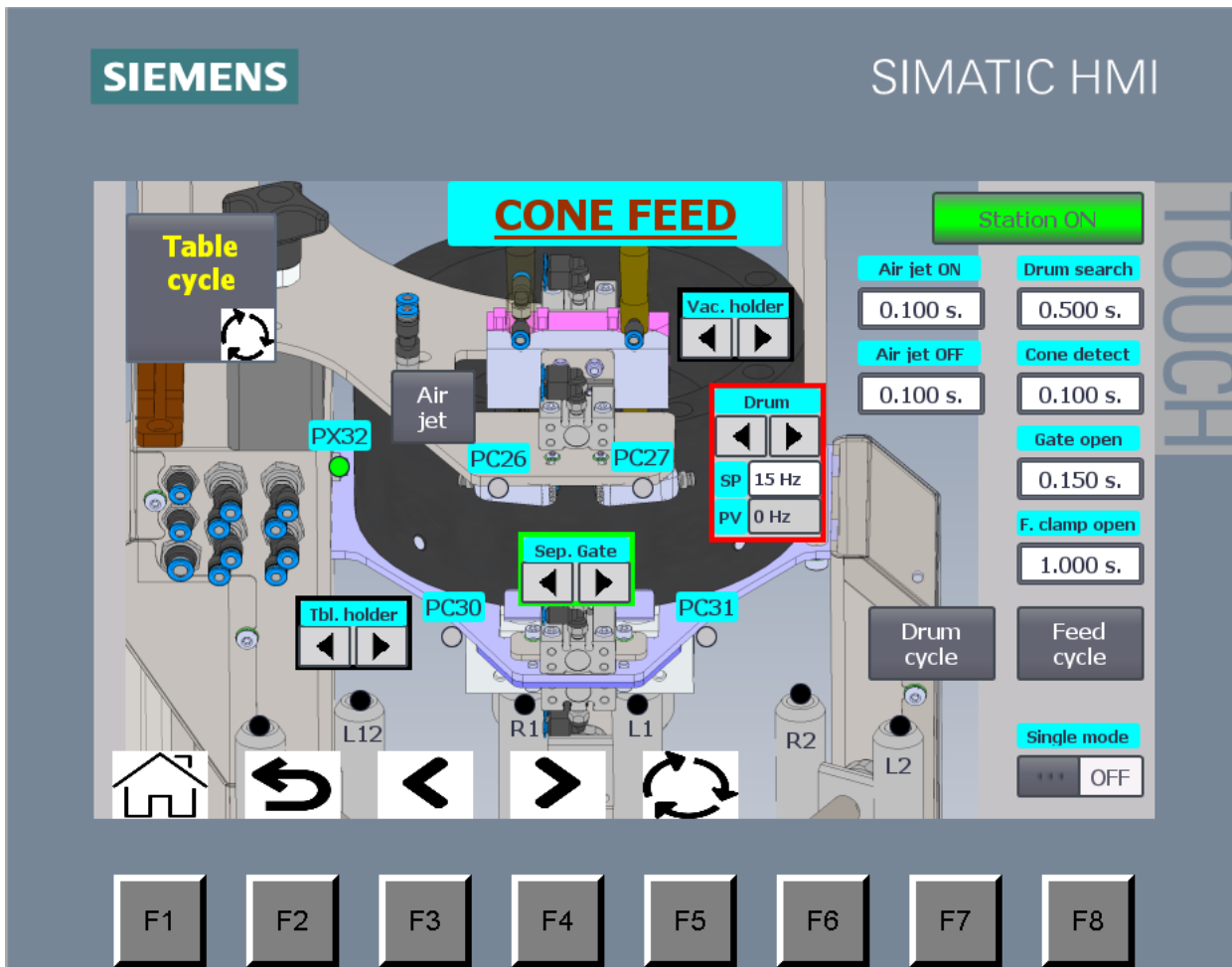
Manual mode enables the operator to make changes in five screens:

- Feeding
- Filling
- Tamping
- Folder
- Ejecting

NOTE: Some functions in the Manual mode require special permissions (see PLC controller Access Table, para 4.5). The stations screens are protected with passwords.



4.2.1 Cone Feed Station

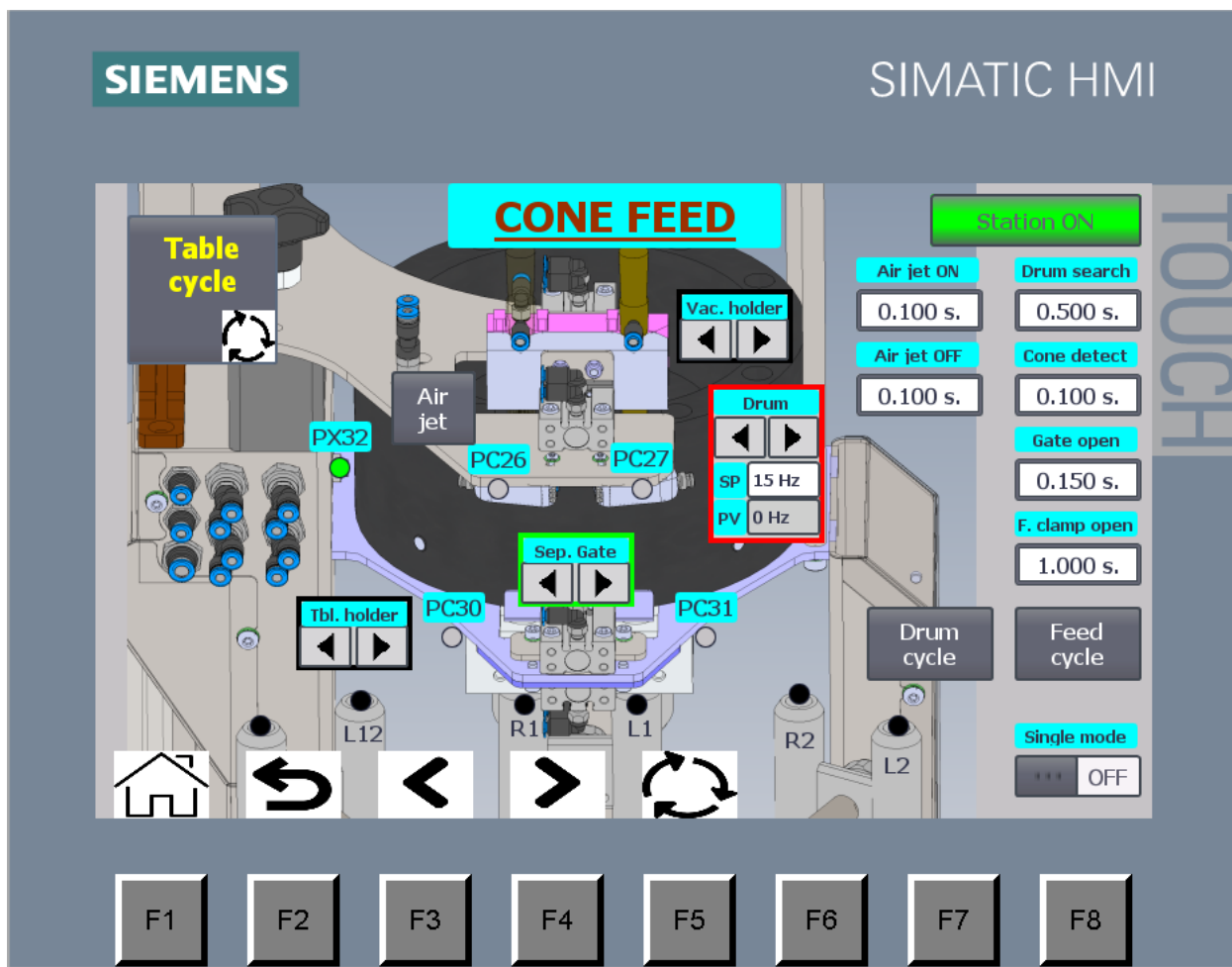


Pressing the start  button in the Enable mode activates 1 full cycle of the station.

- Tapping the Station ON/Station OFF buttons, enables/disables the station operation:



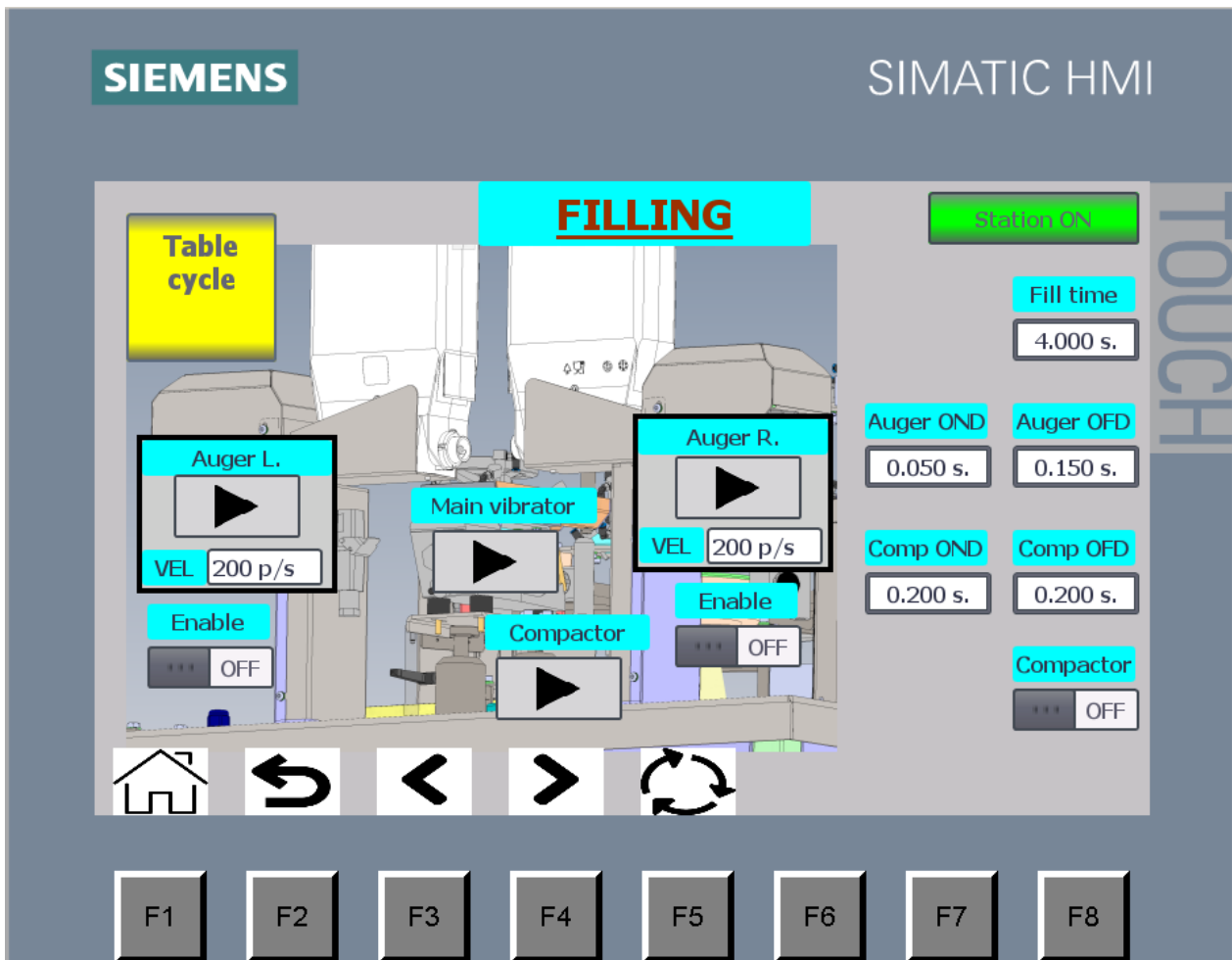
- Tapping the Index Step  button, runs the station 1 cycle.
- To return to the Main Manual screen, tap the F1  button.
- The Cone Feed Parameters are displayed on screen and are editable.



- **Air jet ON/OFF** – Set the air jets cycle duration.
- **Drum search** – Sets the delay duration between the drum cycles then searching for cones.
- **Cone detect** – Sets the cones detection delay by the photoelectric sensors PC26 & PC27.
- **Gate open** – Sets the delay of the separator gate before it opens.
- **F. clamp open** – Sets the fixture clamp open delay.
- **Drum cycle** – Executes one step (cycle) of the drum. If any of PC26 or PC27 detects cones, drum cycle is disabled.
- **Feed cycle** – Executes one cone feed cycle.
- **Single mode** – Enables to perform cone feeding on a single fixture.
- **Vac. holder** – Controls upper clamps (open/shut).
- **Drum** – Enables to manually adjust the drum rotation speed. By adjusting the SP row, the drum is moving according to the set value.
- **Sep. Gate** – Opens (left arrow) or closes (right arrow) the Separator Gate manually.
- **Air jet** – Enables to manually activate the air jets by continuously tapping the displayed button.
- **Tbl. holder** – Enables to manually control the fixtures centering clamps (open/shut).



4.2.2 Filling Station

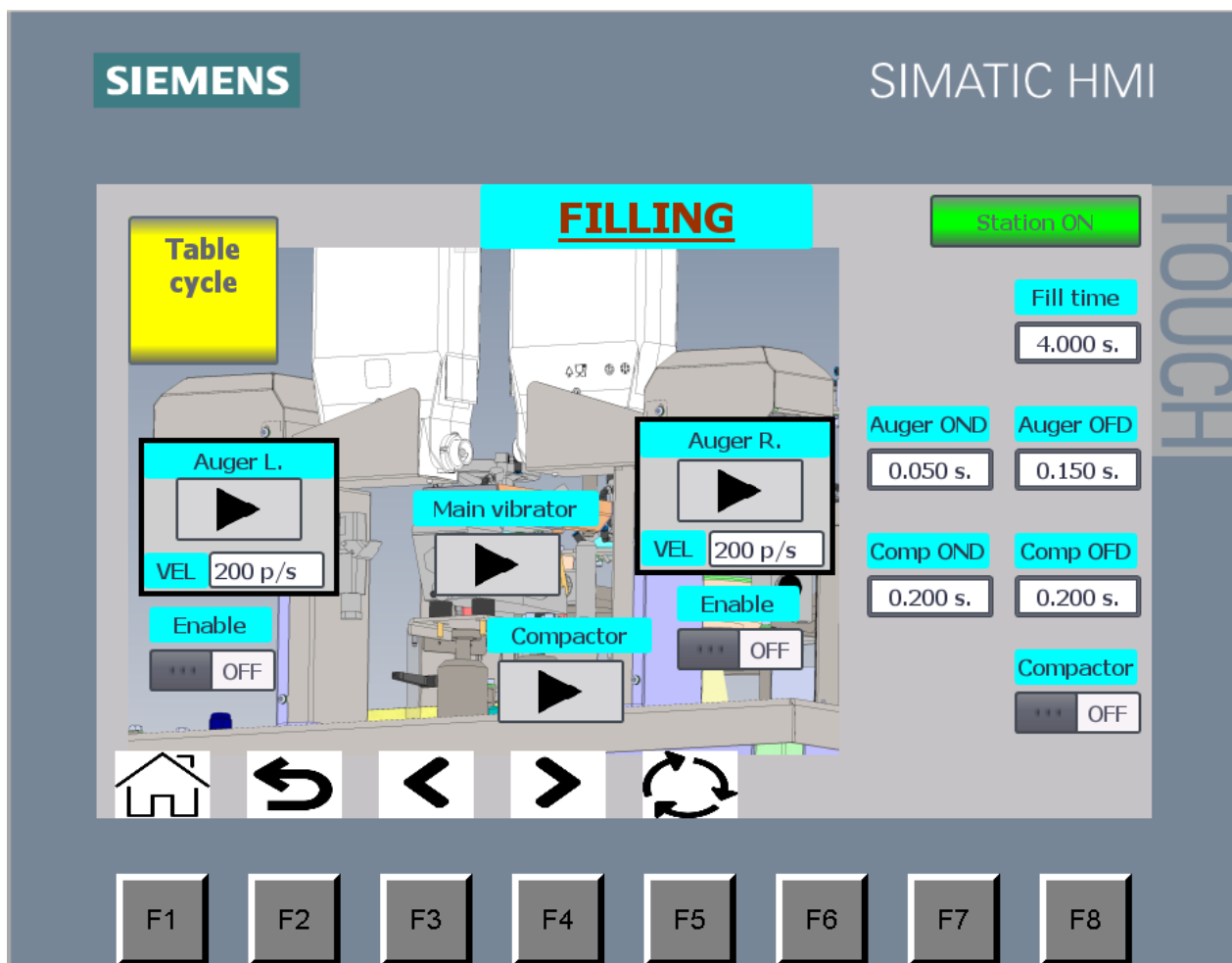


Pressing the start  button in the Enable mode activates 1 full cycle of the station.

- Tapping the Station ON/Station OFF buttons enables/disables the station operation:



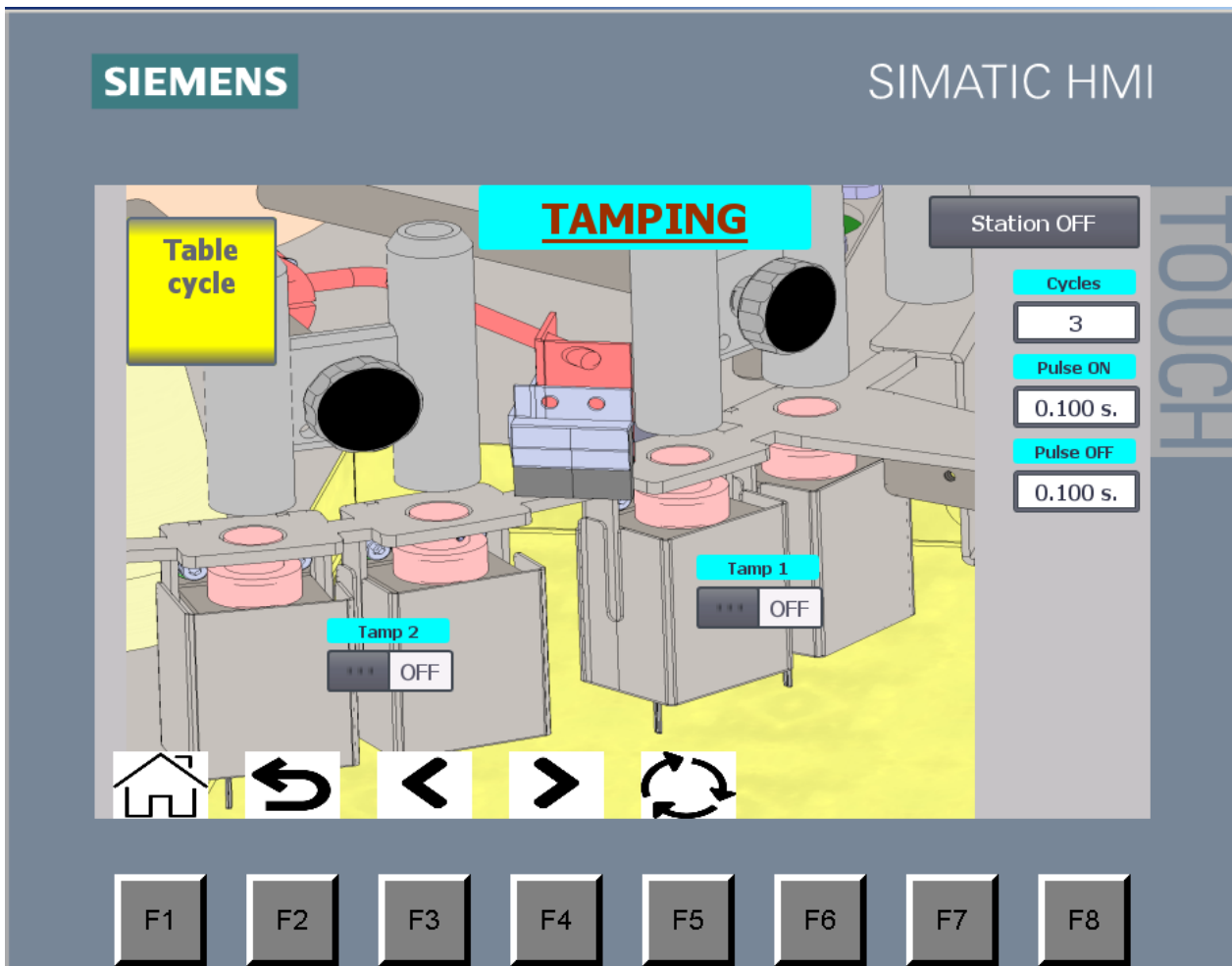
- Tapping the Index Step  button, runs the station 1 cycle.
- To return to the Main Manual screen, tap the F1  button.
- The Filling Parameters are displayed on screen and are editable.



- **Fill time** – Sets the operating duration of the Augers + vibro feeder when automatically activated.
- **Auger OND** – Sets the delay duration prior to activating the augers. Relatively to vibro feeder.
- **Auger OFD** – Sets the delay duration prior to stop the augers. Relatively to vibro feeder.
- **Comp OND** – Sets the delay duration prior to activating the vibro compactor. Relatively to vibro feeder.
- **Comp OFD** – Sets the delay duration prior to stop the vibro compactor. Relatively to vibro feeder
- **Compactor (ON/OFF)**– Enables compactor operation in station cycle.
- **Auger L./R. (▶)** – Enables the operator to manually control the auger operation.
VEL – Sets the substance filling intensity.
- **Enable (ON/OFF)** – Enables/disables the auger operation.
- **Main vibrator (▶)** – Manually activates the Main Vibrator by pressing and holding the button.
- **Compactor (▶)**– Manually activates the Compactor by pressing and holding the button.



4.2.3 Tamping Station

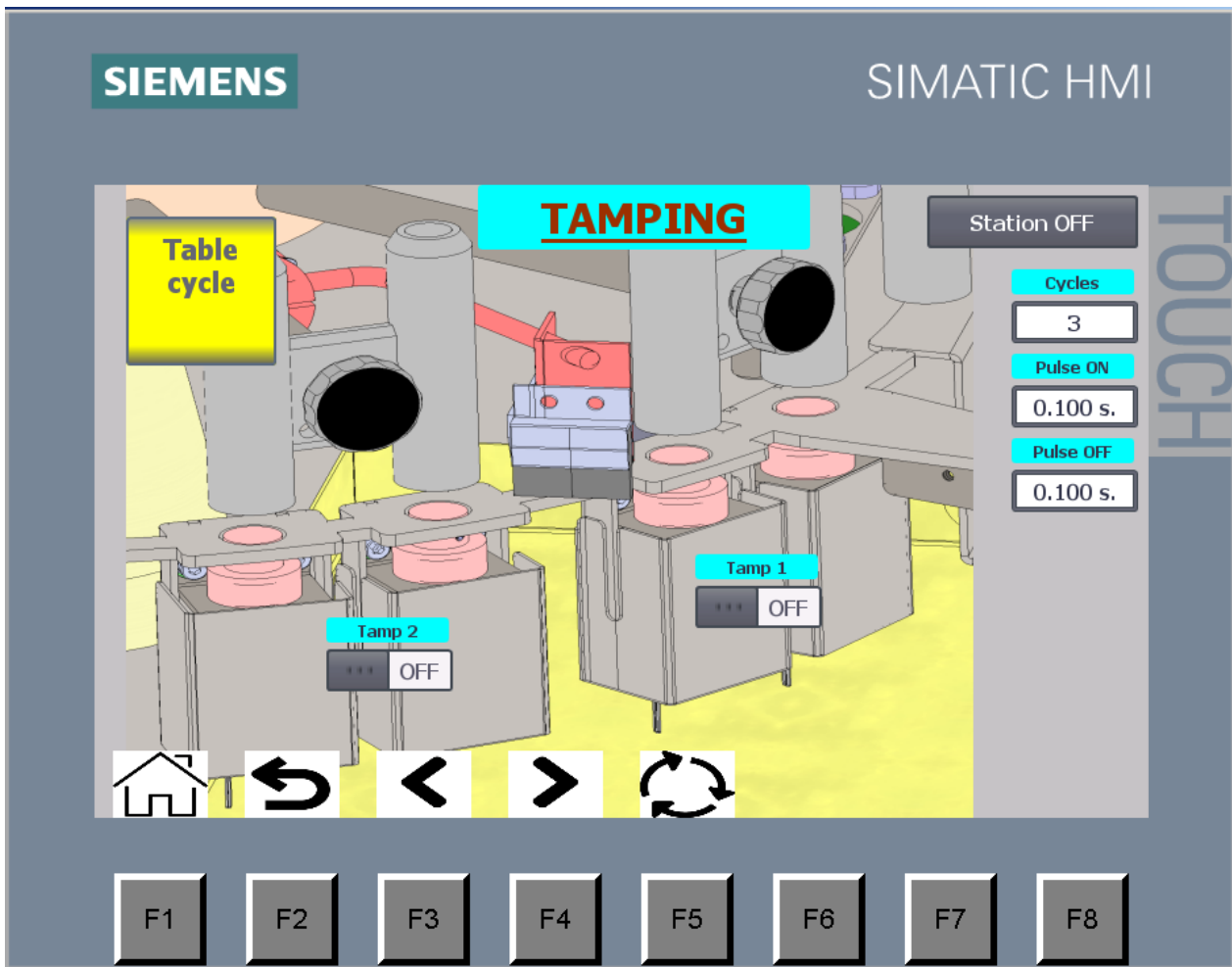


Pressing the start  button in the Enable mode activates 1 full cycle of the station.

- Tapping the Station ON/Station OFF buttons enables/disables station operation:



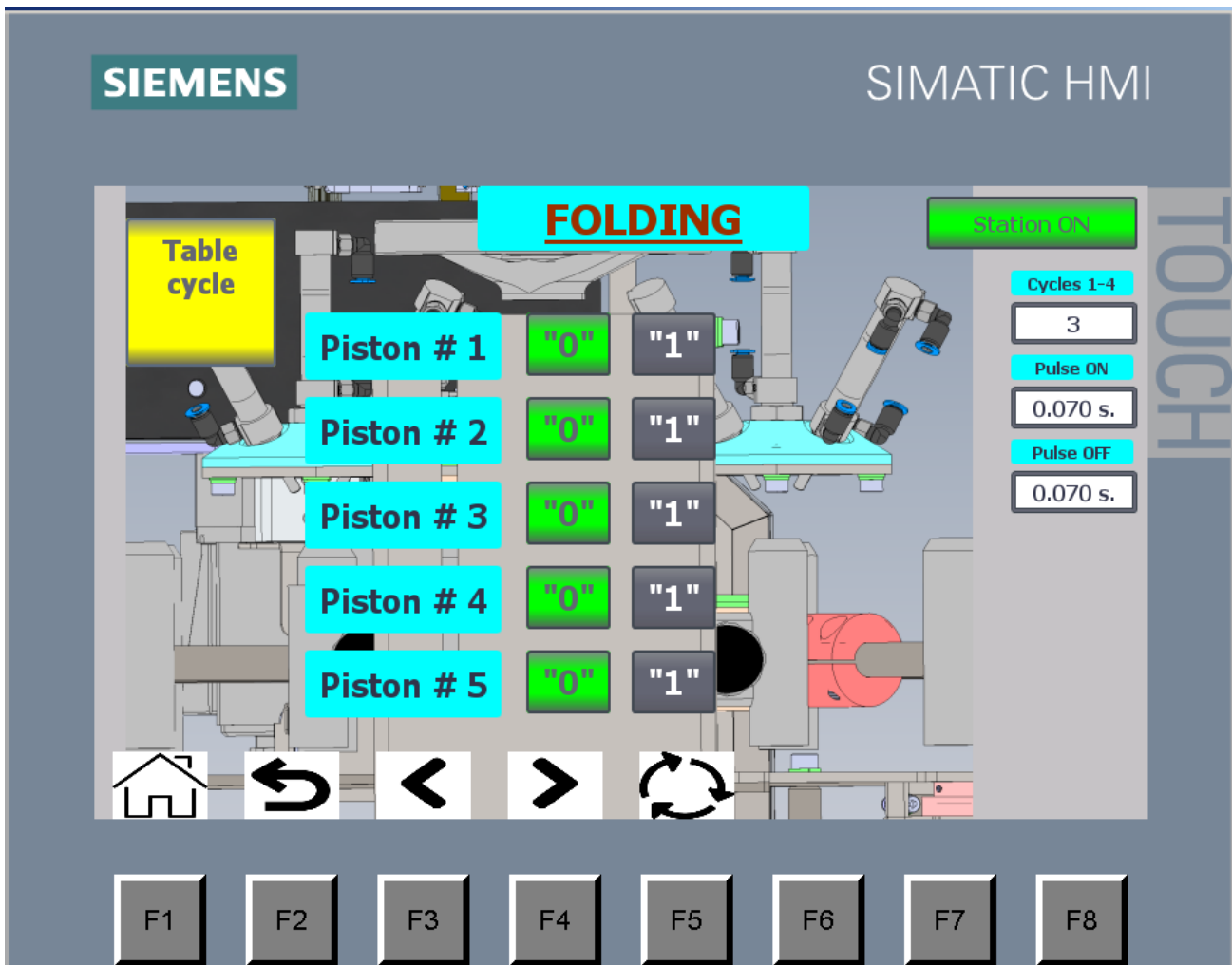
- Tapping the Index Step  button, runs the station 1 cycle.
- To return to the Main Manual screen, tap the F1  button.
- The Tamping Parameters are displayed on screen and are editable.



- **Cycles** – Sets the number of tamping cycles that occur.
- **Pulse ON/OFF** – Sets the cycle duration of a magnets. Adjusts tamping frequency.
- **Tamp 1/2** – Enables/disables the tampers.



4.2.4 Folding Station

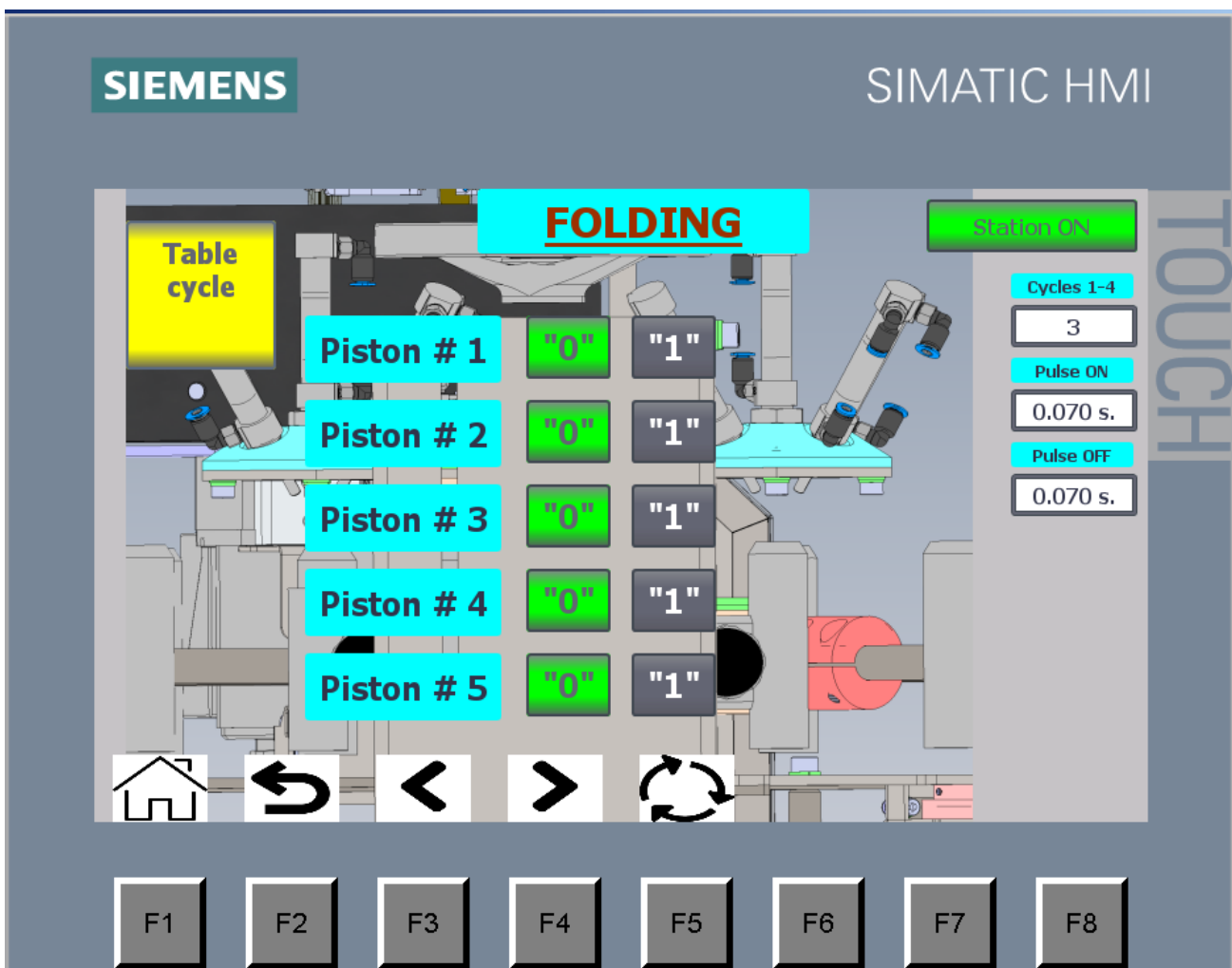


Pressing the start  button in the Enable mode activates 1 full cycle of the station.

- Tapping the Station ON/Station OFF buttons enables/disables the station operation:



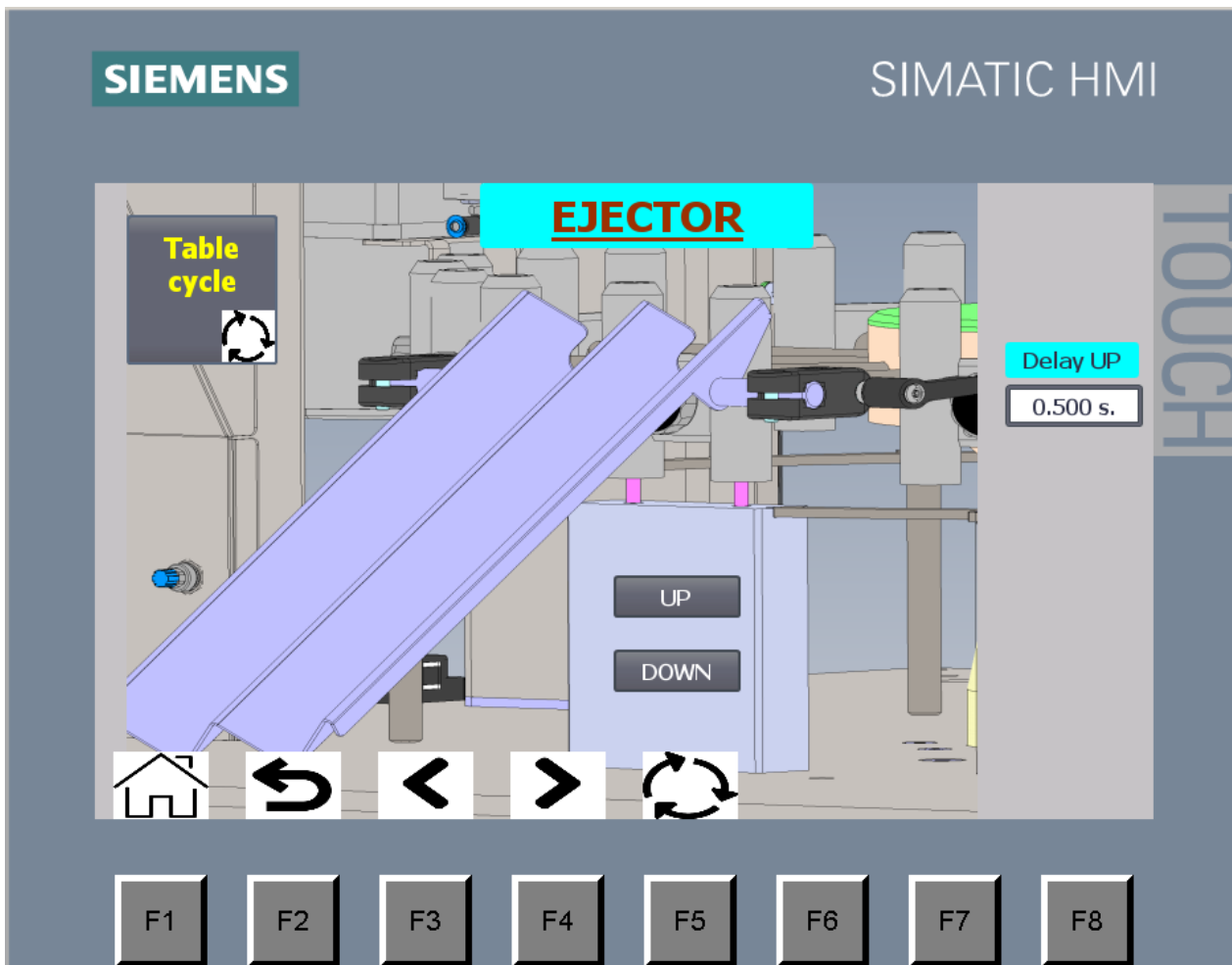
- Tapping the Index Step  button, runs the station 1 cycle.
- To return to the Main Manual screen, tap the F1  button.
- The Folding Parameters are displayed on screen and are editable.



- **Cycles 1-4** – Sets the number of peripheral pistons cycles executed when performing the folding procedure. Cycle consists of (1-2-3-4)*cycles + 5 two times.
- **Pulse ON** – Sets the on-position (down) duration of each piston operation.
- **Pulse OFF** – Sets the off-position (up) duration of each piston operation.
- **Piston #1-#5** – Enables the operator to manually control each piston folding and unfolding.



4.2.4 Ejector Station

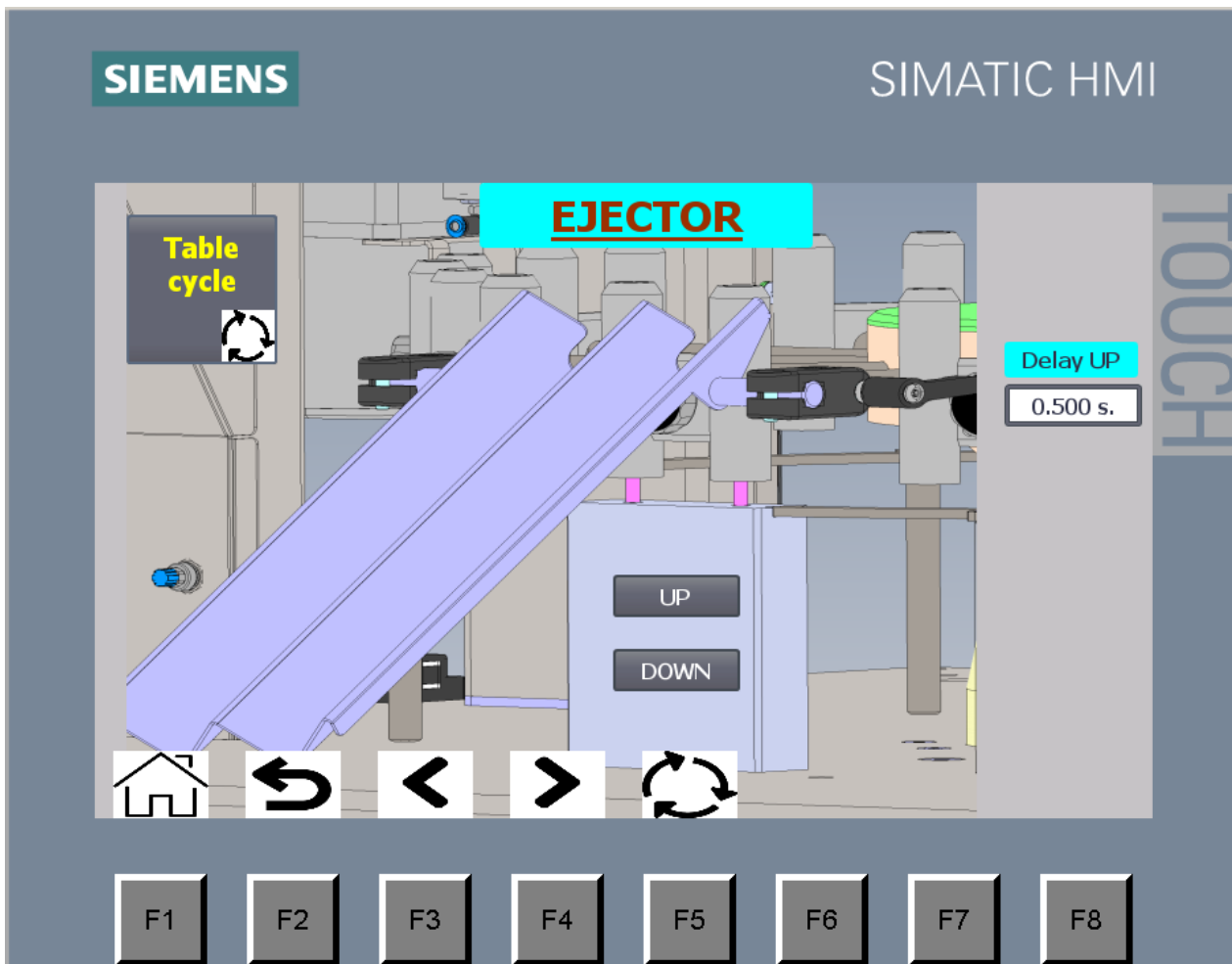


Pressing the start  button in the Enable mode activates 1 full cycle of the station.

- Tapping the Station ON/Station OFF buttons enables/disables the station operation:



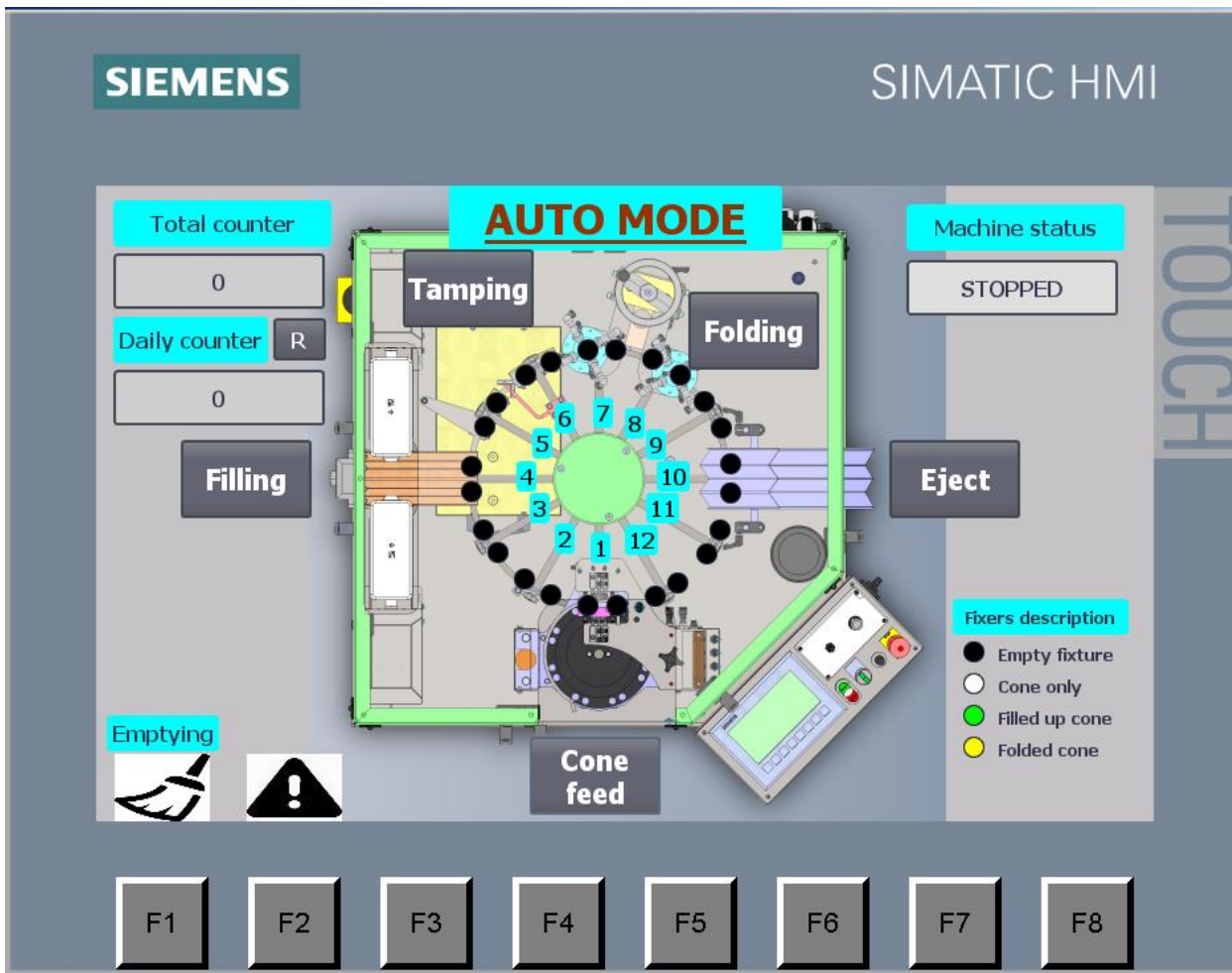
- Tapping the Index Step  button, runs the station 1 cycle.
- To return to the Main Manual screen, tap the F1  button.
- The Ejector Parameters are displayed on screen and are editable.



- **Delay UP** - Sets the delay duration before the ejecting arms retract backwards.
- **UP/DOWN** – Enables the operator to manually control the ejecting arms movement.



4.3 Automatic Mode

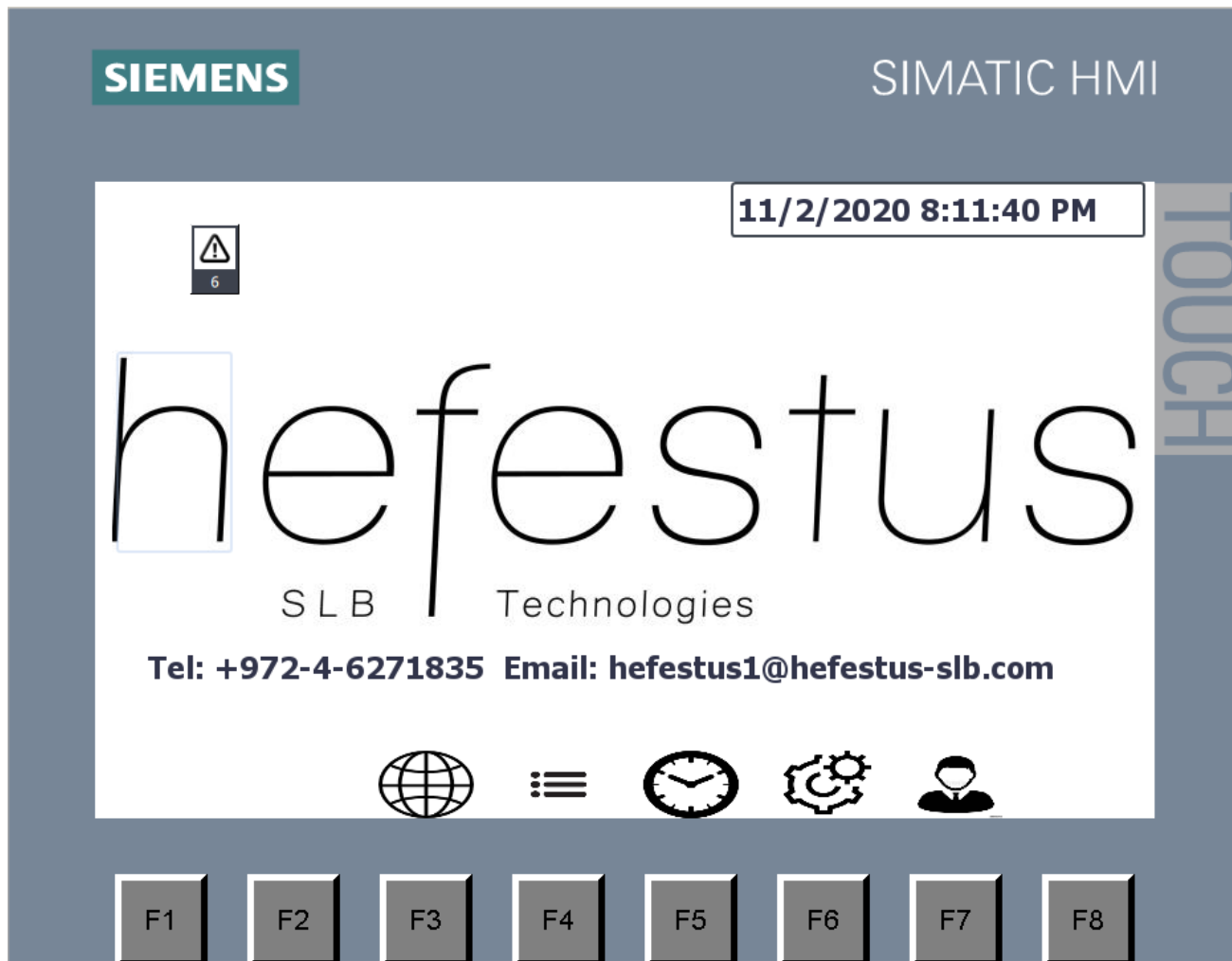


- **Machine status** – Indicates the following:
 - **STOPPED (Grey)** – Indicates the system operation is completely stopped.
 - **RUNNING (Green)** – Indicates the system is during the production cycle.
 - **FAULT (Red)** – The system has detected a malfunction which requires the operator attention.
- **Total counter** – Indicates the total amount of performed production cycles.
- **Daily counter** – Indicates the daily amount of performed production cycles. Pressing the **R** button resets the counter.
- **Emptying** – Enables the operator to override the system and finish the production cycles until cones can no longer be detected in the turnable.
-  - Opens the Faults Screen.
- **Stations indication** – The stations are colored as follows:
 - **Green** – Cycles finished.
 - **Grey** – Cycle in production.



4.3.1 Main Screen

The main screen enables the operator to access the product selection and the settings screens prior to operating the system.



- **F1** – N/A
- **F2** – N/A
- **F3** – N/A
- **F4** – Opens Select Product screen.
- **F5** – Opens Time Settings screen.
- **F6** – Opens System Settings screen.
- **F7** – Opens the Users Setup screen.



- - Indicates the number of detected faults that require the operator attention.



4.3.2 Select Product Screen

SIEMENS

SIMATIC HMI

TOUCH

Click on the desired row

SELECT PRODUCT

Products list

01

Prod Name

02

Prod Name

03

Prod Name

04

Prod Name

05

Prod Name

06

Prod Name

07

Prod Name

08

Prod Name

09

Prod Name

10

Prod Name

Active recipe

0

Prod Name

Store

Load

Store procedure:

1. Click on the desired row

2. Verify active recipe number is equal to your choice

3. Click "Store"

Active data set is now stored

Load procedure:

1. Click on the desired row

2. Verify active recipe number is equal to your choice

3. Click "Load"

Active data set is now changed

Copy procedure:

1. Click on the desired row (source)

2. Verify active recipe number is equal to your choice

3. Click "Load"

4. Click on the desired row (destination)

5. Click "Store"

Active data set is now changed

F1

F2

F3

F4

F5

F6

F7

F8

- **Products List** – Displays the products stored in the system.
- **Active recipe** – Enables to store or load the required product from/to the Product List.

31 | Page



4.3.3 Product Selection Procedure

1. Click on the relevant row located in the Product List.
2. Set the Active Recipe number to the selected Product List row number.
3. Tap  to store the product in the selected row.

4.3.4 Product Loading Procedure

1. Click on the relevant row located in the Product List.
2. Set the Active Recipe number to the selected Product List row number.
3. Tap  to load the required product.

4.3.5 Copy Procedure

1. Click on the relevant row in the Product List to select the required source to copy from.
2. Set the Active Recipe number to the selected Product List row number.
3. Tap .
4. Copy the required product by clicking on the relevant row in the Product List.
5. Tap  to store the product in the selected row.

4.3.6 Starting Automatic Mode



1. Change the operation mode switch to AUTO position.
2. Close all safety doors.
3. Clear errors by pressing the STOP  button if necessary.
4. Verify that the Cones Feeding Drum is fully loaded with cones.
5. Press the START  button to begin
6. Auto Mode will be interrupted by any Fault event.



4.3.7 Time Settings Screen

SIEMENS SIMATIC HMI

TIME SETTINGS

Time zone

UTC offset +2 ▾ Daylight + +60 min ▾

Parameter	Daylight	Standard
Start month	MAR ▾	OCT ▾
Week of month	Forth week ▾	Last week ▾
Weekday	THU ▾	FRI ▾
Hour	03 AM ▾	02 AM ▾
Minute	30 ▾	45 ▾

PLC time

11/2/2020 10:06:56 PM

1/1/1970 12:00:00 AM

OP time

11/2/2020 10:06:56 PM

APPLY

F1 F2 F3 F4 F5 F6 F7 F8

- **Time zone** Sets the month when time will change.
- **Week of month** – Sets the week of the month when time will change.
- **Weekday** – Sets the day of the week when time will change.
- **Hour** – Sets the hour when time will change.
- **Minute** – Sets the minute when time will change.
- **PLC** – The white field allows setting of the PLC time.
- **OP time** – Shows the operator panel time.
- **APPLY** – has to be applied after every change of settings.



4.4 Safety Machinery devices

The machine has 2 types of safety devices to avoid accidents during the machine operations. One is located in the front of the machine on the main control panel and the second is located on the side of the machine near the rolling system.

1. Emergency Stop Buttons – by pushing the emergency stop buttons the machine will stop immediately and the air pressure will be released.

NOTE: DO NOT USE THE EMERGENCY BUTTON TO STOP THE MACHINE STOP CYCLES.



2. The machine is equipped with 7 non-contact interlocks switches for doors and bottom covers. Opening the machine doors stops all machine functions. Red/orange light indicates at least one door is open. Green light indicates all doors are closed.



The interlocks switches locks can be deactivated during the maintenance works by authorized personal.



4.5 Maintenance Authorization

PLC controller Access Table

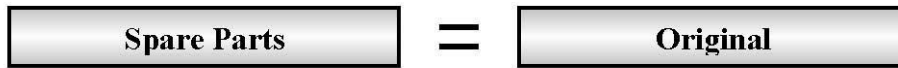
The following table describes PLC controller Access:

SCREEN	Operator	Maintenance	Administrator
1. Auto Mode			
2. Manual			
2.1. F-1 Feeding Station			
2.1.1. Parameters	View Only		
2.2. F-2 Filling Station			
2.2.1. Parameters	View Only		
2.2.2. El. Magnet	View Only		
2.3. F-3 Folding Station			
2.3.1. Parameters	View Only		
2.4. F-4 Ejection			
2.4.1. Parameters	View Only		
3. Reset Total Counter	View Only	View Only	
4. Reset Counter			
5. Program Number			
6. System Settings	View Only	View Only	



5 Parts

The Aura Machine is a machine that needs very little maintenance. However, whenever performing any maintenance always turn the main switch to the OFF position.



Only use original parts recommended by PAC

5.1 Working pneumatic system

Before working on the pneumatic system, relieve the pressure in the system by disconnecting the air from the air supply system.

Check after maintenance that the air system is free of air-leaks.

5.2 Working electrical system

Before working on the electrical installation be aware that the machine is disconnected from the main power supply.

Place clear signs on the machine to inform personnel that maintenance are being performed on the machine.

Regular maintenance of the Aura machine increases its lifetime and reliability.

- Maintenance and repairs should always be done by skilled and trained personnel.
- Always disconnect the main power supply when performing maintenance.
- Always clean the machine with a wet towel.
- Never use high-pressure water for cleaning.
- Before working on the pneumatic system, disconnect the air supply from the machine.



6 Maintenance

The maintenance schedule below is for normal use. In case of intensive use or under extreme circumstances maintenance should be carried out more frequently.

Daily maintenance

- Surface: Clean the machine with a dry brush / compressed air or vacuum.
Hoppers: Clean the hoppers area from inside with compressed air.

Weekly maintenance:

- Hoppers: Clean with compressed air/vacuum and dry brush (disassembly main parts for cleaning).
Pneumatic: Check the air filter reservoir (on the incoming air line)

Monthly maintenance:

- Check main assembly tighten bolts if needed.
Lubricate Geneva-index table mechanism.
Lubricate main cylinders with food-grade grease.

7 Troubleshooting

Alarm Code	Message	Alarm Trigger	Machine Action	Response
1	Emergency Stop	Emergency Stop Button - Pressed	Machine stopped immediately and alarm message displayed on the screen	Clear the emergency stop condition and reset the alarms. Alarms cleared and machine remains stationary and ready to operate.
2	Feeding Cone Missing Alarm	Remove the cone from one of the feeding stations. Ensure no cones are going to index. Start the machine	Machine stopped immediately and alarm message displayed on the screen	Add stack of cones to the missing cone station. Remove the cones from the second station. Press reset button, same as stop. Alarm cleared. Machine is ready to operate.
3	Fixer Cone 2 Missing Alarm	Either sensor 31 disconnected or cone not fed properly into fixer	Machine stopped immediately and alarm message displayed on the screen	Reconnect the disconnected wire to the sensor 31 or open door and remove unfed cone. Press reset button, same as stop button. Alarm cleared. Machine is ready to operate.
4	Fixer Cones Missing Alarm	Either sensors 30 + 31 disconnected or both cones not fed properly into fixer	Machine stopped immediately and alarm message displayed on the screen	Reconnect the disconnected wire of sensors 30, 31 or open door and remove unfed cones. Press reset button, same as stop button. Alarm cleared. Machine is ready to operate.
5	No Cone on Drum!!!!	No cones in magazine. After drum checked 5 rounds	Machine stopped immediately and alarm message displayed on the screen	1. Fill the drum magazine with cones. Press reset button, same as stop button. Alarm cleared. Machine is ready to operate. 2. Or press "Empty" button on screen to empty the machine.
6	Index Overload Alarm	In the electrical cabinet disconnect component "current overload" 6Q0	Machine stopped immediately and alarm message displayed on the screen	Shut Off power. Open Electrical cabinet. Reconnect component "current overload" 6Q0. Press reset button, same as stop button. Alarm cleared. Machine is ready to operate. If reoccurs check mechanical disturbance.
7	Drum Overload Alarm	In the electrical cabinet disconnect component "drum overload" 7Q0	Machine stopped immediately and alarm message displayed on the screen	Shut Off power. Open Electrical cabinet. Press reset button, same as stop button. Alarm cleared. Machine is ready to operate. If reoccurs check mechanical disturbance reconnect component "current overload" 6Q0.



Alarm Code	Message	Alarm Trigger	Machine Action	Response
8	Stepper 1 Alarm	When stepper 1 has not indicated operation	Machine stopped immediately and alarm message displayed on the screen	Reconnect wire 22 in the electrical cabinet and make sure no mechanical blockage. Press reset button, same as stop button. Alarm cleared. Machine is ready to operate.
9	Stepper 2 Alarm	When stepper 2 has not indicated operation	Machine stopped immediately and alarm message displayed on the screen	Reconnect wire 23 in the electrical cabinet and make sure no mechanical blockage. Press reset button, same as stop button. Alarm cleared. Machine is ready to operate.
10	Ejecting Station Alarm	1. Ejection Piston stuck. 2. Sensors 45 or 46 are faulty or wires disconnected.	Machine stopped immediately and alarm message displayed on the screen	Check piston or reconnect wire 45 or 46 to the sensors. Press reset button, same as stop button. Alarm cleared. Machine is ready to operate.
13	Doors Open	One or more safety doors opened	Machine stopped immediately and alarm message displayed on the screen	Close the door and rest the alarm. Press reset button, same as stop button. Alarm cleared. Machine is ready to operate.
14	DC Power Supply Alarm	Main power DC supply 5PS7 at fault	Machine stopped immediately and alarm message displayed on the screen	Reconnect in electrical cabinet component 5F8. Press reset button, same as stop button. Alarm cleared. Machine is ready to operate.
15	VFD Index Fault	Index Table VFD at fault.	Machine stopped immediately and alarm message displayed on the screen	Open parameters check which alarm Open Siemens user's guide of VFD refer to numbered alarm
16	VFD Drum Fault	Drum VFD at fault.	Machine stopped immediately and alarm message displayed on the screen	Open parameters check which alarm Open Siemens user's guide of VFD refer to numbered alarm
17	Fixer Cone 1 Missing Alarm	Either sensor 30 disconnected or cone not fed properly into fixer	Machine stopped immediately and alarm message displayed on the screen	Reconnect the disconnected wire to the sensor 30 Press reset button, same as stop button. Alarm cleared. Machine is ready to operate. Or: open door and remove unfed cone.
18	System Low Pressure Alarm	Air pressure in machine is lower than 6 BAR. Or wire 57 cut or disconnected	Machine stopped immediately and alarm message displayed on the screen	Check air pressure in machine



7.1 Fault/Alarm Code Display

In Case of sudden freeze of machine while the automatic regime is working:

	100	AL00_Emergency	Emergency stop. Release by Reset button
	101	AL01_Drum_VFD	St01 - Drum VFD fault
	102	AL02_IndexTable_...	Index table VFD fault
	103	AL03_EmptyDrum	St01 - No cones in the drum
	104	AL04_OneConeNot...	St01 - Cone not loaded to <Text list, ConeLoadPCFault> fixture
	105	AL05_FillerStepperR	Right auger motor fault
	106	AL06_FillerStepperL	Left auger motor fault
	107	AL07_SteppersDC_...	Power fault to stepper motors
	108	AL08_Ejector_FLT	Ejector not in position Sensor <Text list, EjectorSensorFault>
	109	AL09_DoorsOpened	One of the doors opened
	110	AL10_ModbusFLT	Comm drive <Tag : 1, HMI_DB_ModbusRTU_ERR_Drive> error code <
	111	AL11_St01_NoCon...	Drum not in position. Cycle fail
	112	AL12_St01_DrumL...	Cones missing at drum - left stack
	113	AL13_St01_DrumRi...	Cones missing at drum - right stack
	114	AL14_DoorsBypass	Doors bypass activated - no operation allowed
	115	AL15_AirPressure	No air pressure or pressostat fault
	116	AL16_ixIndexTable...	Index table OverLoad fault
	117	AL17_ixDrum_OL21	St01 - Drum OverLoad fault
	118	AL18_Drum_Timeo...	St01 - Drum sensor I3.2 fault. Drum timeout
	119	AL19_IndexTable_T...	Index table Position sensor I0.6 or Stop sensor I0.5 fault. Timeout

1. Stop the machine (Pressing STOP button).
2. On Manual Run each station 1 cycle.
3. Back to automatic mode and run the system.



8 Warranty and Liability

Manual

This manual may not be copied and/or made public by means of print, photocopy or any other method without the prior written permission of Hefestus Technologies Ltd.

Hefestus Technologies Ltd. reserves the right to change spare parts and/or specifications without prior notice. Contents of this manual can also be changed without prior warning.

Although extreme care has been exercised during the writing of this manual, Hefestus Technologies Ltd. will not be held liable for possible errors thereof and/or for the consequences caused by misinterpretation of its contents.

Hefestus Technologies Ltd. is not responsible for damages or problems incurred by the use of non-original manufacturer spare parts.

On the event this manual has not been supplied with instructions for certain repairs, adjustments and maintenance, you should contact Hefestus Technologies Ltd.

Warranty Information

Hefestus Technologies Ltd. ("**Manufacturer**" or "**Hefestus**") warrants its top-sealing machine and its parts, manufactured by Hefestus and sold through Hefestus' authorized sales channels (collectively, the "**Product**") to be free from defects in material or workmanship, for a period of one (1) year only from the date of shipment from the Manufacturer's factory (the "**Warranty Period**"), subject to each of the following terms and limitations



Hefestus shall have no obligation hereunder with respect to any Product (i) which is not given normal and proper usage at any time; and/or (ii) which is at any time in the possession of any party other than the original buyer; and/or (iii) which is not, at any time, operated solely in accordance with generally approved practice and in accordance with Hefestus' specifications and instructions; and/or (iv) in which repairs, alterations, or replacements are made by any other party without Hefestus' prior written approval; and/or (iv) repair components other than genuine Hefestus repair components are used and/or (v) which is damaged due to defects in the electrical system, compressed air facility or other utilities at the Buyer's site; and/or (vi) which is damaged due to the negligence or willful action by any person other than Manufacturer and/or by force majeure.

All parts claimed defective are subject to factory inspection by Hefestus. Hefestus reserves the right to determine the cause of failure and the necessity of providing replacement parts under this warranty. Defective parts of a Product that have been disassembled or damaged during removal or otherwise tampered with by any party other than Hefestus will not be covered under this warranty.

Damage caused during transport are the responsibility of the Buyer and are not covered under this warranty. All damages detected upon receipt of a Product by Buyer should be reported immediately to the carrier and to Hefestus.

Hefestus' liability under this warranty or in connection with any other claim relating to the Products shall be limited to the repair, or at Hefestus' option, the replacement of any Products, parts or components thereof, which are returned to Hefestus' freight prepaid and which are defective in material or workmanship.

If a defect covered under this warranty requires the replacement of a defective part or parts, Hefestus will supply the same F.O.B. its factory.

Hefestus will, at its discretion, repair or replace any defective parts with a charge to a valid purchase order number. In order to receive credit to a purchase order

number resulting from Defective parts, the parts must have a valid Return Material Authorization number obtained from Hefestus' service department, and must be returned to Hefestus within thirty (30) days of such warranty event becoming known to Buyer (not including the duration of the shipment) along with freight prepaid receipts. Failure to do so will result in zero credit being applied to the original P.O. and shall void this warranty.

At Manufacturer's sole discretion, it may dispatch personnel to oversee or implement the repairs or installation of the replacement Product or component, and in such case the free access of Manufacturer's personnel to the relevant site and assistance shall be granted to such personnel as required for the rendering of such services, as a precondition for the warranty hereunder.

Any products or components not of Hefestus' own manufacture are not covered by this warranty, and if sold to Buyer by Hefestus are subject only to such warranty, if any, as is provided by such manufacturer, and solely to the extent Hefestus and its assigns are able or entitled to enforce such warranty. Such items are not warranted by Hefestus in any way.

In the case of Products sold by Hefestus in the form of components to be assembled per Buyer's design, the warranty hereunder shall be limited to each separate component and shall not apply to any combination or assembly of components.

Buyer shall notify its local distributor immediately upon becoming aware of any warranty event, and shall liaise solely with such distributor, unless instructed otherwise by Hefestus, in connection with any repairs or replacements covered hereunder.



HEFESTUS SHALL IN NO EVENT BE HELD LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGE, LOSSES, EXPENSES OR DELAY CAUSED BY DEFECTIVE PARTS AND WILL NOT ACCEPT ANY CHARGES FOR WORK PERFORMED BY BUYER IN MAKING ADJUSTMENTS OR REPAIRS TO THE PRODUCTS UNLESS SUCH WORK HAS BEEN AUTHORIZED IN WRITING BY HEFESTUS. EXCEPT AS STATED HEREIN, HEFESTUS MAKES NO OTHER WARRANTY, EXPRESSED OR IMPLIED, NOR DOES IT ASSUME OR AUTHORIZE ANYONE ELSE TO ASSUME FOR IT, ANY OTHER OBLIGATION RELATING TO ITS PRODUCTS OR ANY OTHER PRODUCTS.

EXCEPT AS EXPRESSLY STATED ABOVE, HEFESTUS MAKES NO WARRANTY, EXPRESS OR IMPLIED, WHETHER OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE OR USE OR OTHERWISE, ON THE PRODUCTS, OR ANY PARTS OR LABOR FURNISHED DURING THE SALE, DELIVERY OR SERVICING OF THE PRODUCTS.

Hefestus factory trained, qualified technical services personnel are available for start-up and instructional assistance. If the customer does not utilize Hefestus personnel for this function, Hefestus; liability shall be limited to the replacement of defective parts, and not for labor or expenses necessary to adjust any problems, during the start-up period.

Any and all right, title and interest, and intellectual property rights of any type or nature whatsoever, including, without limitation, patent rights, copyrights, trademarks, proprietary information, technology rights and licenses, whether or not patentable, copyrightable or protectable as trade secrets, documents, data, test results, evaluations, plans, studies, instructions and manuals related to the Product or maintenance services other than customer materials, marketing materials and all copies, derivative works and translations of same, at any stage of their development and whether completed hereunder or not, are and shall be the sole and exclusive property of Manufacturer. Distributor shall not make any changes and/or alterations to the Product and shall not remove any identification, copyright or other notices from the Product. Distributor shall not, directly or indirectly, decompile, modify, or disassemble the Product, or any part

This manual may not be copied and/or made public by means of print, photocopy or any other method without the prior written permission of HEFESTUS TECHNOLOGIES LTD.

HEFESTUS TECHNOLOGIES LTD reserves the right to change spare parts and/or specifications without prior notice. Contents of this manual can also be changed without prior warning.

Although extreme care has been exercised during writing this manual, HEFESTUS TECHNOLOGIES LTD will not accept any liability for possible errors in this manual and/or for the consequences of misinterpretation of the contents.

HEFESTUS TECHNOLOGIES LTD is not responsible for damage or problems that result from the use of other than original manufacturer spare parts.

If this manual has not been supplied with instructions for certain repairs, adjustments and maintenance, you should contact HEFESTUS TECHNOLOGIES LTD



Part II: Technical Manual

9 Specifications & Technical Data

Electrical specifications:

1. Frequency 50/60 Hz
2. Phases: 1+N Single Phase (US/CAN)
3. Input power: 208 -240 volt
4. AMP. 10A

Pneumatic specifications:

1. Maximum supply pressure 7 Bar.
2. Nominal working pressure 6.5 Bar.
3. Minimum working pressure 6 Bar.

9.1 Set of Spare Parts (Provided with the Machine) – AURA2000 V.B2

#	Cat no.	Description	Quan.
1	21-012413	Blue Pneumatic pipe D4 1 METER	2
2	21-004162	Pneumatic Pipe RED D4 1 METER	2
3	21-052405	Black Pipe for D6 hose-PEN-6X1-SW-500 1 METER	1
4	35-052379	Magnetic Sensor Eject FESTO SME-8M-DS-24V-K-0,3-M8D	1
5	23-052419	Pneumatic Valve FESTO VUVG-B10-M52-MZT-F-1T1L	1
6	91-056619	Screw M5x10 D-6921-A2	10
7	91-057465	Screw M6x10 D-6921	10
8	21-056572	FESTO Vacuum generator VN-10-M-I3-PQ2-VQ2	5
9	100-052418	Canister 5 Liter- CCO0347C	2
10	22-057160	Folder Piston FESTO DSNU-10-25-P-A-MQ	3
11	22-057260	Folder Piston FESTO DSNU-10-15-P-MQ	1
12	22-056564	Cone Feeding Piston FESTO DFM-10-10-P-A-GF	1
13	22-056565	Cone Feeding Piston ESTO DFM-10-15-P-A-GF	1
14	21-056570	Tube Connector FESTO Push-in L-fitting QSML-M3-4	2
15	37-056533	Thumper M190-32H	1
16	80-999999	Thumper springs	4
17	41-057250	Butterfly Screw (insert holding)	2

9.2 Recommended Spare Part List (Not Provided with the Machine)

#	Cat no.	Description	Quan.
1	23-040125	One Way Valve FESTO GRLA 1/8 QS-6-D	1
2	35-052450	Optical Sensor ESTO SOOE-BS-R-PNLK-T	2
3	35-044776	INDUCTIVE SENSOR Dia. 8 mm SICK IME0804NPSZTOK	1
4	35-044785	INDUCTIVE SENSOR 12mm SICK IME1204BPSZC0S	1
5	34-044736	Filling Auger OTOR triple stack NEMA 23	1
6	37-056503	Feeding Vibrator FTO-C DRIVE ASSY 230/60Hz	1
7	36-017824	Potentiometers E110-1	1
8	37-056504	POWER PULSE WT 230/60 NEMA 4 Material Feeder	1
9	21-040115	FESTO QSML-M5-4 Tube Connector	5
10	35-052379	Magnetic Sensor EJECT FESTO SME-8M-DS-24V-K-0,3-M8D	2
11	23-056509	Pneumatic Valve FESTO VUVG-B10-M52-RZT-F-1T1L	4
12	23-056579	Solenoid valve for Vacuum System FESTO VUVG-B10-T32C-AZT-F-1T1L	1
13	34-052171	Frequency adjust Siemens SINAMICS V20, Rated power 0.55 kW 6SL3210-5BB15-5UV1	1
14	37-056556	PHOENIX Power supply - UNO-PS/1AC/24DC/150W5- A	1
15	37-056557	PHOENIX Power supply - UNO-PS/1AC/24DC/240W10- A	1
16	35-057283	Sick Magnetic safety switch RE13-SA05, 5m cable	2
17	100-052418	Canister 5 Liter- CCO0347C	4
18	21-056572	FESTO Vacuum generator VN-10-M-I3-PQ2-VQ2	1
19	34-056510	Standard 3ph 230V 25W Panasonic 3-Series Motors-Pinion Shaft-Terminal Box	1
20	34-056511	Gear Motor cone feeding 80mm2 Panasonic 3-Series 1/180	1
21	37-056533	Thumper M190-32H	2
22	80-999999	Thumper Springs	10
23	22-057260	Folder Piston FESTO DSNU-10-15-P-MQ	2
24	22-057160	Folder Piston FESTO DSNU-10-25-P-A-MQ	5
25	22-056564	Cone Feeding Piston ESTO DFM-10-10-P-A-GF	2
26	22-056565	Cone Feeding Piston FESTO DFM-10-15-P-A-GF	1
27	21-056570	Tube Connector ESTO Push-in L-fitting QSML-M3-4	4
28	37-056558	PHOENIX Device circuit breakers - CBMC E4 24DC/1-10A S-R	1
29	37-052430	Relay OM LY4I4N 24VDC	1
30	37-052431	Base Relay OM LY4I44N 24 VDC	1
31	37-049672	ILLUMINATED Start/Stop PB, 22MM, GREEN, RED	1