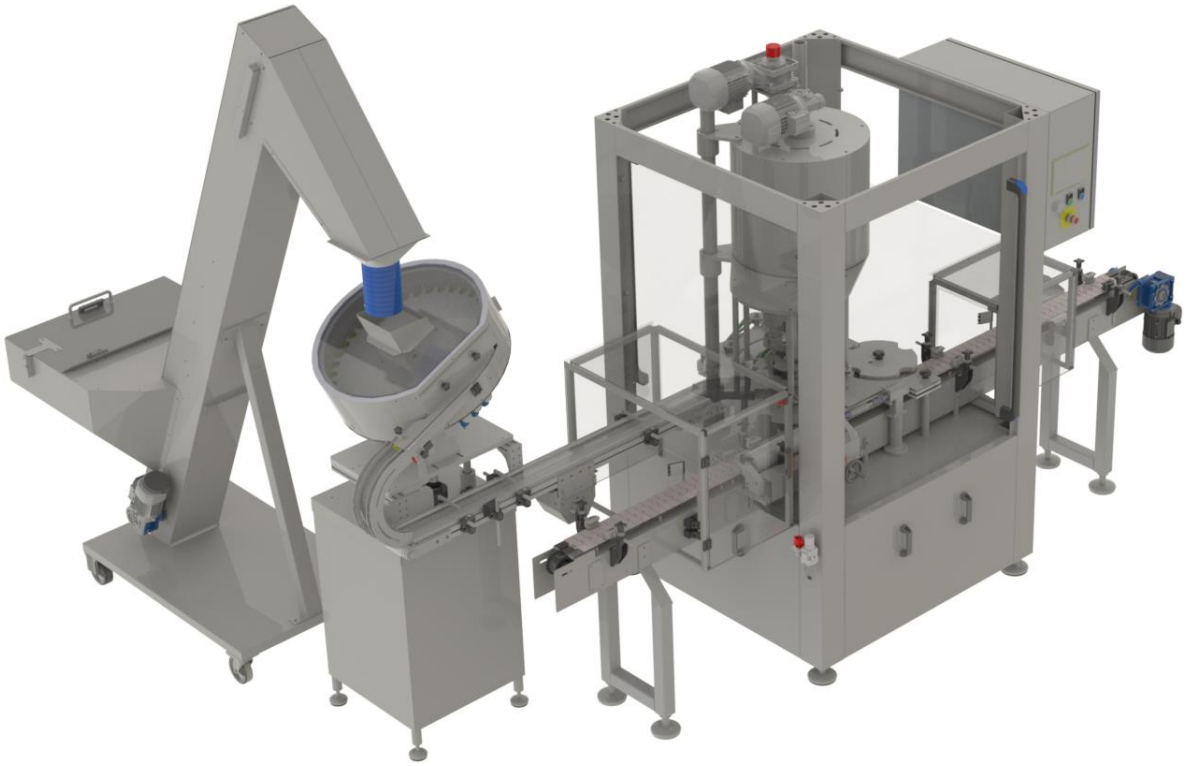
VALTARA™

PAXIOM®

FOUR HEAD CAPPER T4 VP



OPERATOR'S MANUAL

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Preface

Thank you for purchasing from Valtara LLC.

It is strongly recommended that this manual be read before use of the Valtara machine.

This manual contains detailed descriptions of the structure, function, operation and maintenance of the Valtara machine. Please note that due to continuous improvements, the contents of this manual may differ slightly from the machine received. In the event this document cannot provide the answers to problems arising from machine operation or other circumstances, please contact the Valtara service department immediately.

Contact Us

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LIABILITY DISCLAIMER

All statements, technical information and recommendations contained in this manual or any other information supplied by Valtara in connection with the use, features and qualifications of the Valtara machine are based on tests believed to be reliable, but the accuracy or completeness thereof is not guaranteed. Before using the Valtara machine, the owner should determine the machine's suitability for its intended use based on the owner's knowledge and the characteristics of materials intended to be used with the machine. The Buyer bears all risk in connection with the use of the Valtara machine.

Since the use of this manual and the conditions or methods of installation, operation, use and maintenance of the Valtara machine is beyond the control of Valtara, Valtara does not assume responsibility and expressly disclaims liability for loss, damage or expense, whether direct, indirect, consequential or incidental, arising out of or anyway connected with such installation, operation, use, or maintenance. Damage caused by neglect, misuse or failure to comply with this manual will invalidate the warranty of the Valtara equipment.

1. SAFETY

IMPORTANT SAFETY INFORMATION

READ ALL INSTRUCTIONS BEFORE OPERATING

Do not operate the machine when tired, ill, or under the influence of alcohol, drugs or medication.

The instructions and data in this manual are vital to the proper installation and operation of the machine. In order to avoid accidents due to faulty installation or operation of the machine, please ensure that these instructions are read by the individuals who will install, operate or maintain the machine. The instructions issued in this manual are not meant to cover all possible conditions and situations that may occur.

1.1 Injury prevention

Limbs, hair, loose clothing and accessories should remain clear of moving or heated parts of the machine, as it may get caught and pull the operator into the machine.

Do not power on the machine if any of the machine's components have been removed or modified.

Do not to leave any objects near any of the machine's moving components, or on top of the machine.

Do not perform maintenance or cleaning on machinery while it is in operation or energized.

Always lock out / tag out the machine before performing any maintenance work.

1.2 Fire Prevention

Keep a fire extinguisher near the machine.

All electrical components must be kept dry, clean and in good condition.

Lockout / Tagout the machine before maintenance.

Electrical fires can occur if any wires are scratched, corroded, color-faded, uninsulated, or have damaged ends. Wires should be changed immediately if presenting any of the

above conditions. Any exposed electrical components should never come into contact with the ground-connector or any other electrically conductive objects, such as tools.

1.3 Electrical Precautions

Only trained professionals should install, examine and maintain the electronics of the machine.

Do not store liquids near the machine or near the machine's electrical components. Exposing electrical components to excess moisture or direct contact with liquids risks a short-circuit.

Should a liquid spill onto the machine, turn off the power immediately and once having cleaned the liquid, test all the electrical components to ensure they are functioning properly.

To avoid short-circuiting, keep all wires and connections clean. Keep limbs, hand-held tools, and any other electrically conductive objects away from exposed electrical components.

Ensure the electrical cabinet is always closed, unless needed for maintenance.

The machine must be grounded. Ensure that the ground wire is firmly connected with the ground before starting the machine.

After installation check all electrical connections and test all electrical circuits before powering on.

Improper connection of the machine's grounding conductor can result in a risk of electrical shock. Check with a qualified electrician or serviceman if there is doubt as to whether or not the machine's outlets are properly grounded.

Warnings

Warning labels serve to advise the operator of potential danger. Warning labels should be kept clearly visible at all times and are not to be ignored or removed from the machine. Removal of warning labels from the machine could result in an increase in machine related accidents. Should the machine require a replacement label please contact the company immediately.

Symbol	Description
	**PHYSICAL HARM** Take caution when in the presence of moving parts as they may cut, crush, dismember or otherwise injure body parts in close proximity. Loose clothing or accessories around moving components may get caught and pull the operator into the machine.
	**BURN HAZARD** Many surfaces of the machine will become extremely hot during the course of its operation. Please avoid contacting the indicated hot surfaces to avoid burns. Surfaces will remain hot for an extended period of time after powering down the machine. Ensure the machine is completely cool before contact.
	**HIGH VOLTAGE** While powered, the machine's electrical systems possess sufficient voltage to electrocute any who misuse it. Do not attempt to tamper with the electrical systems of the machine. If damaged wiring or damaged circuits are discovered, please power the machine down and contact the company immediately.

2. SPECIFICATIONS

Four Head Capper T4 VP					
Power Supply	230	Vac			
	60	Hz			
	15	Amps			
	3	Phase			
Speed	Up to 80 Cycles per minute				
Container Diameter	71.44 (2-13/16)	mm (in)	to		mm (in)
Container Height	56 (2-3/16)	mm (in)	to	73 (2-7/8)	mm (in)
Air Pressure	90	PSI		6.2	Bar
Air Consumption	14	CFM		6.6	LPS
Weight	3,968	lbs		1800	kg
Dimensions (Cap Feeder Included)	**Length:**	410.2 (161.48)	cm (in)		
	Width:	320.4 (126.2)	cm (in)		
	Height:	281.3 (110.73)	cm (in)		

(Speeds may vary based on bag dimensions, material and application)

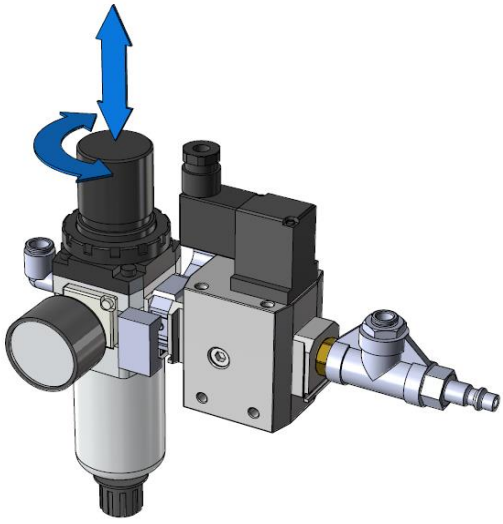
3. INSTALLATIONS

3.1 Electrical

Static electricity can cause problems with electrical equipment and operation, ensure that the equipment is properly grounded during installation. Ground the machine and test its ground resistance, if resistance is less than 5Ω then it is acceptable. Any auxiliary equipment should be grounded as well. If static is present in bags, the installation of static eliminator may be required. If this feature is needed, please contact the company for additional information.

3.2 Pneumatic

The Filter Regulator is located on the right panel of the Four Head Capper T4 VP. The Four Head Capper T4 VP operates at 90psi and has an air consumption of 7cfm. It is important to ensure that the air supply of the owner's facility can meet these specifications.



To Adjust Air Pressure

1. Pull the knob to release it and adjust the pressure.

2. If the knob is rotated clockwise, the inlet pressure will increase, if rotated counter clockwise it will decrease.

3. Press down on the knob to lock it in place again once the pressure changes have been

NOTE: THE FILTER REGULATOR IS ALREADY LUBRICATED.
PLEASE DO NOT ADD ANY LUBRICATION TO THE FILTER REGULATOR AS IT MAY CAUSE

4. MACHINE OVERVIEW

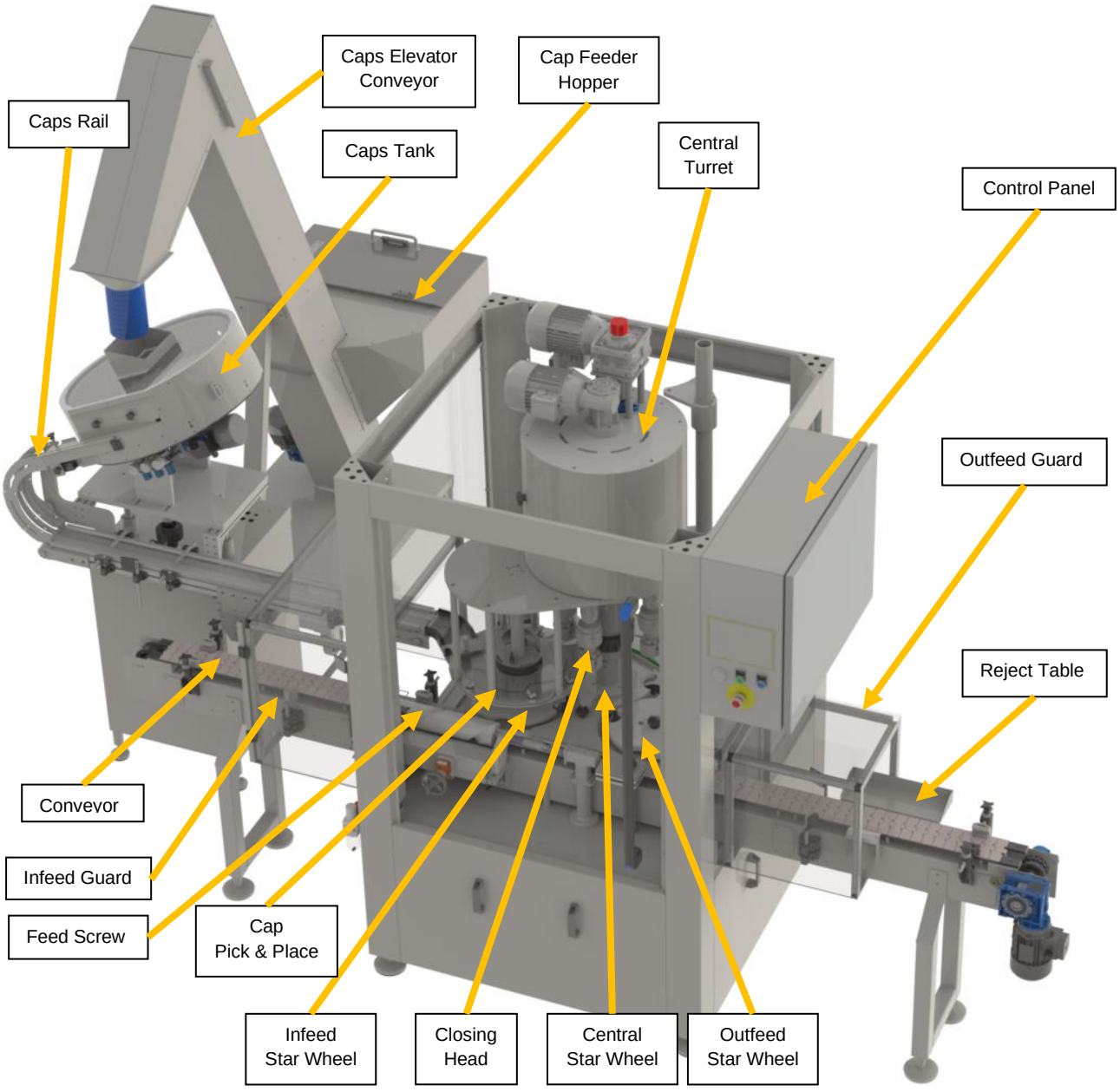


Figure 4-1 FOUR HEAD CAPPER T4 VP Overview

5. MECHANICAL ASSEMBLIES

WE RECOMMEND HAVING THE FOLLOWING TOOLS AVAILABLE WHEN MAKING ADJUSTMENTS TO THE MACHINE: METRIC ALLEN KEYS, METRIC SOCKET SET, METRIC WRENCHES, VOLTMETER, SCREW DRIVERS, TAPE MEASURE, RULER, CALIPER, ADJUSTABLE WRENCHES AND A GREASE GUN.

5.1 Caps Feeder

The Caps Feeder picks up caps from a Hopper, feeds them to a sorting Caps Tank to ultimately dispense them by conveyor to the Capper via a Transfer Tunnel.

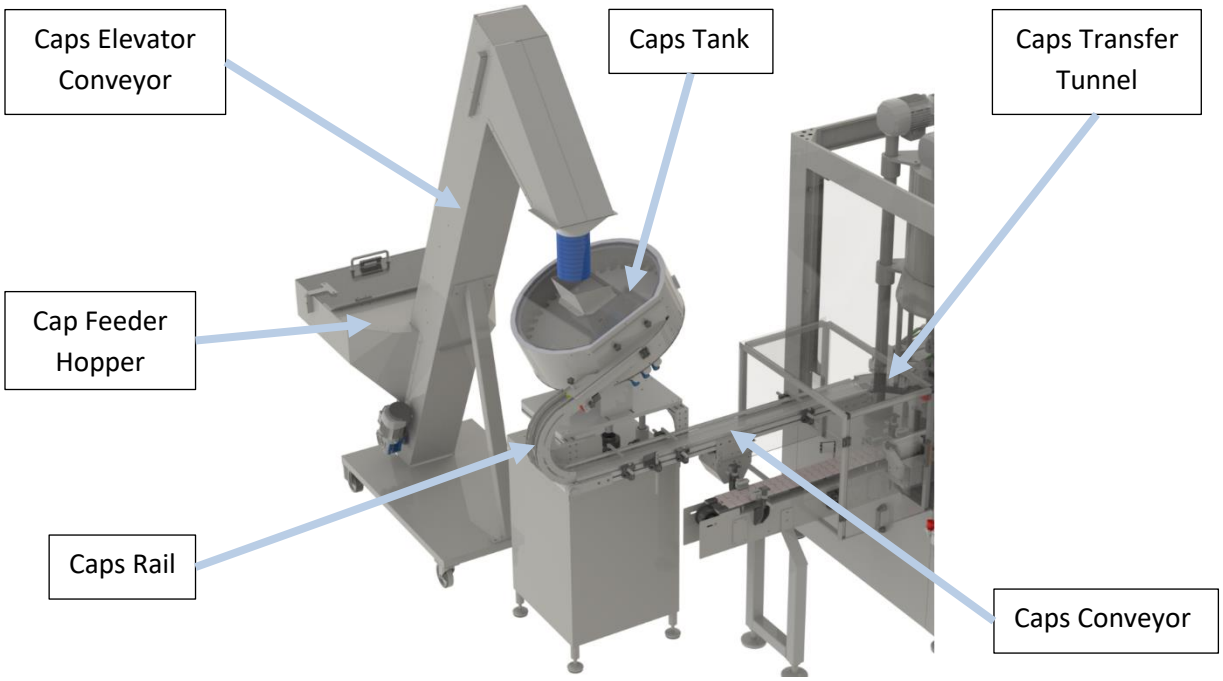


Figure 5-1 Caps Feeder

5.1.1 CAPS FEEDER HOPPER

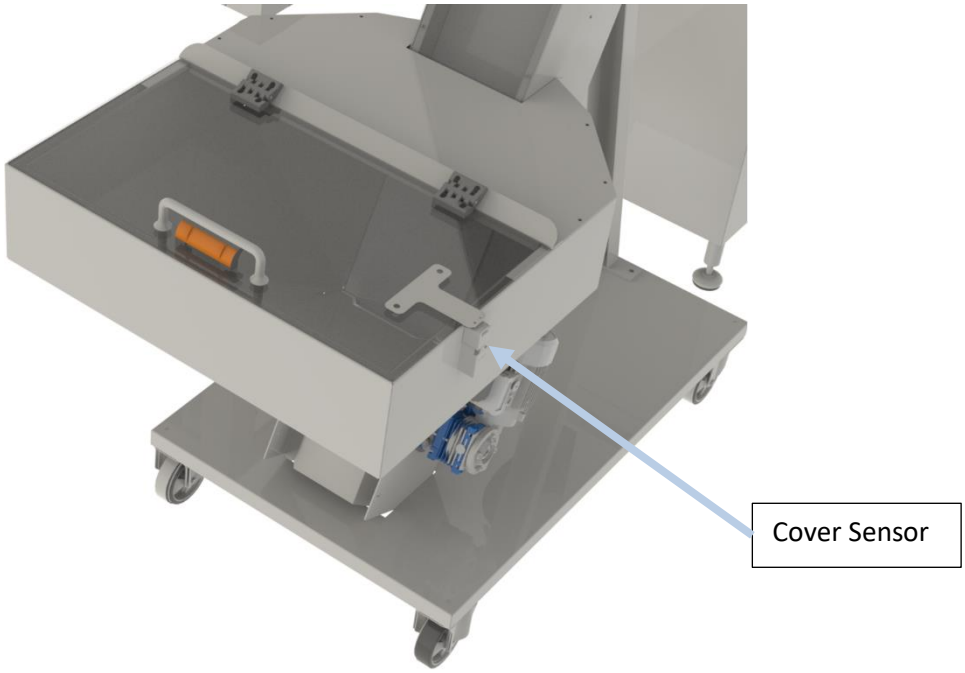


Figure 5-2 Caps Elevator Hopper

The Hopper contains the caps that are picked up by the Elevator Conveyor.

There are no sensors to indicate the level of the Hopper.

A sensor on the Hopper's cover indicates when the cover is open. If the cover is opened during normal operation, the Capper, the Caps Feeder, and the Elevator Conveyor stop.

5.1.2 CAPS ELEVATOR

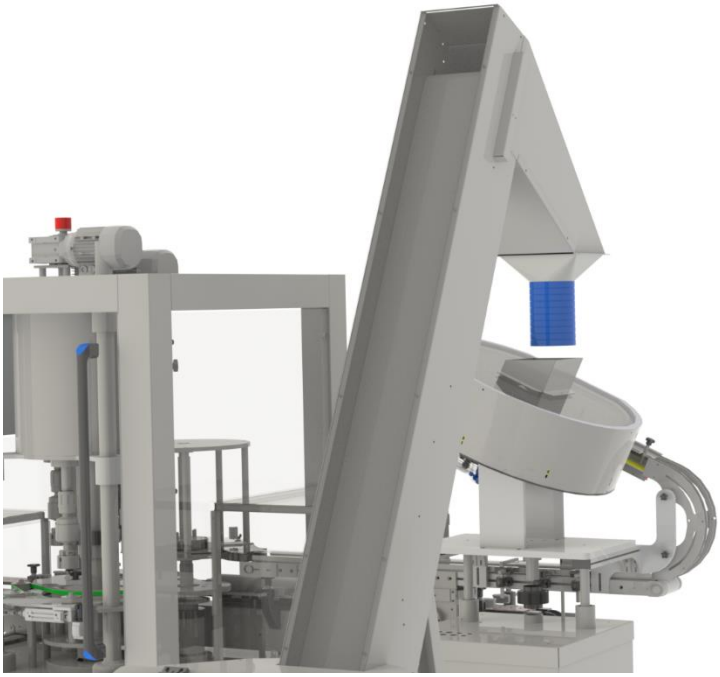


Figure 5-3 Caps Elevator Conveyor

The Caps Elevator consists of an Elevator Conveyor that retrieves the caps from the Hopper by means of a cleated belt and transfers them to a chute right above the Caps Feeder.

There are no sensors to indicate the level of the Hopper.

A sensor on the Hopper's cover indicates when the cover is open. If the cover is opened during normal operation, the Capper, the Caps Feeder, and the Elevator Conveyor come to a full stop.

5.1.3 CAPS FEEDER

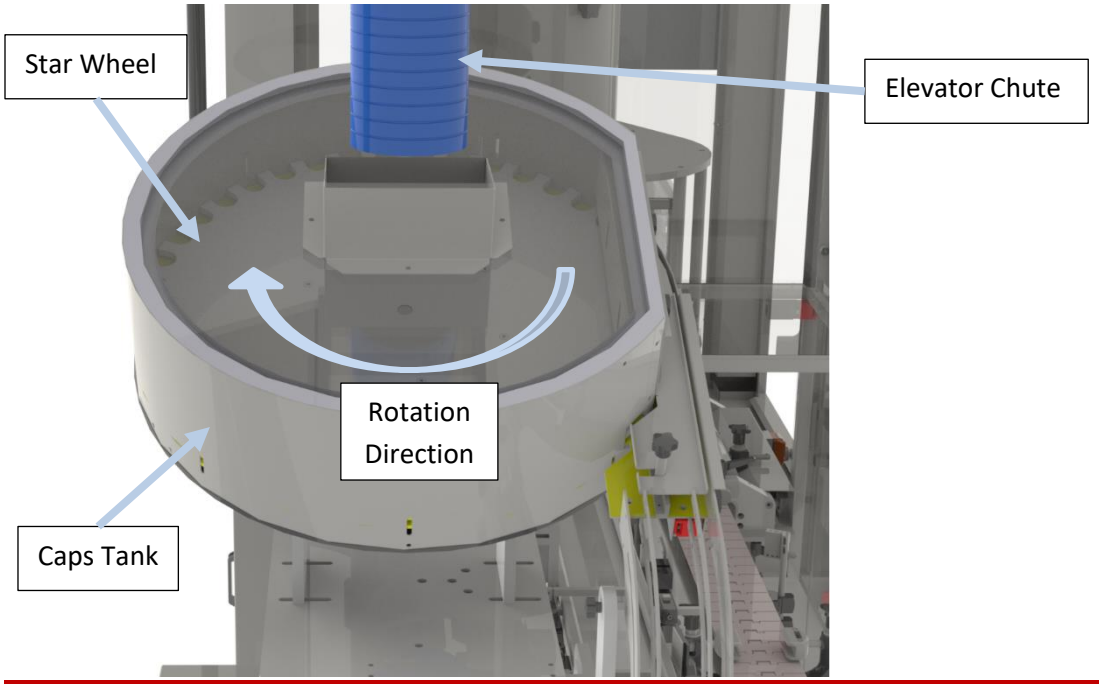


Figure 5-4 Caps Feeder

The Caps Feeder consists of a Caps Tank that receives the caps from the Caps Elevator, sorts them in the right position in the pockets of a Star Wheel and transfers them to the Capper.

The tank has a level sensor that triggers the Elevator Conveyor into picking up caps when there aren't enough. If no caps are detected after certain amount of time, an alarm is issued and the Capper, the Caps Feeder, and the Elevator Conveyor come to a full stop.

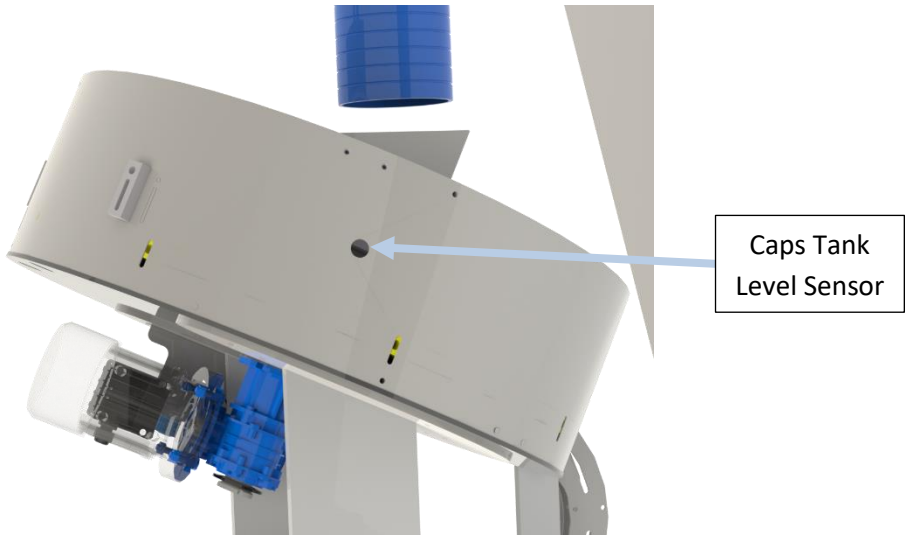


Figure 5-5 Caps Tank Level Sensor

An air jet blows the caps that are on top of caps already in the star Wheel's pocket.

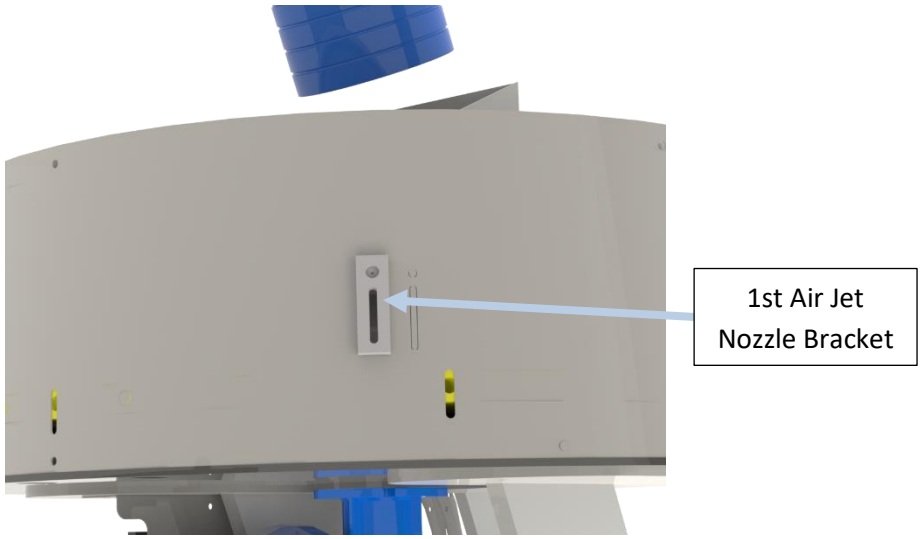


Figure 5-6 Caps Tank 1st Air Jet

A second air jet (with a backup), creates a vacuum when the cap is in the right position (upside) inside the pocket. If the cap is in the wrong position (upside-down), it is blown out the Star Wheel's pocket.

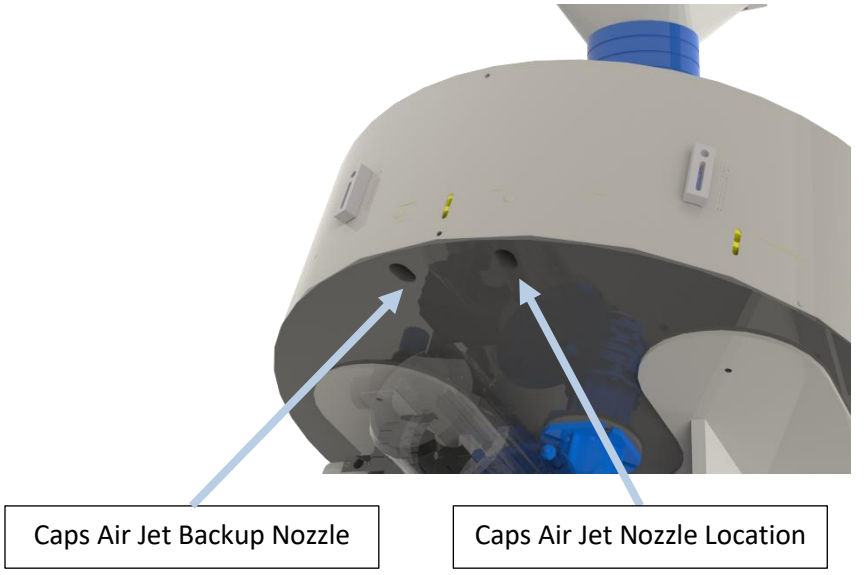


Figure 5-7 Caps Tank 2nd Air Jet (with backup)

And a third air jet is right after the second one an ensures the cap just blown out the pocket is really blown away inside the tank.

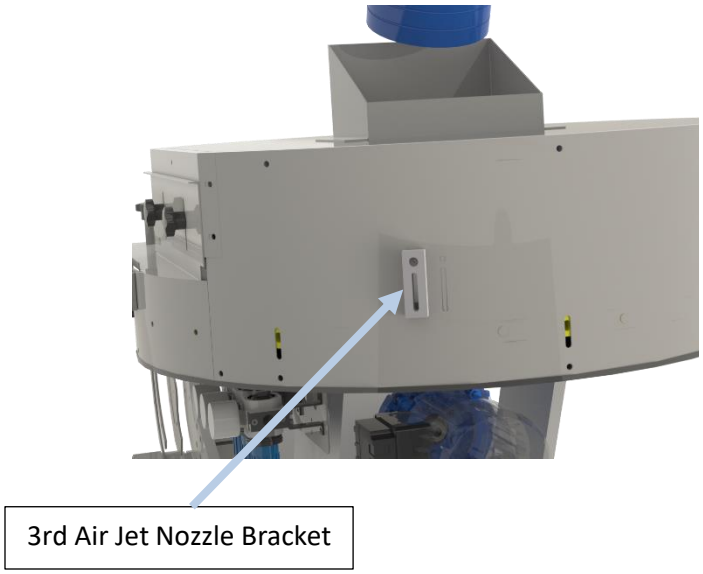


Figure 5-8 Caps Tank 3rd Air Jet

All three Air Jets have their own air flow Pressure Regulator.

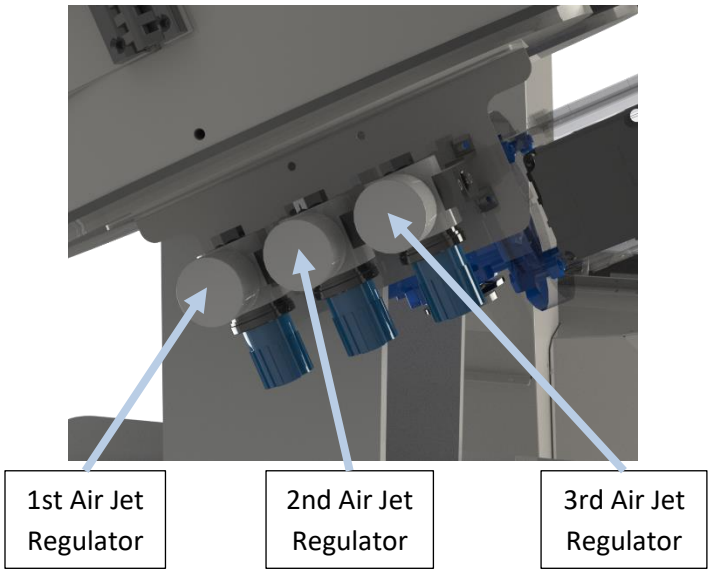


Figure 5-9 Air Jets Pressure Regulators

A Caps Diverter on the side of the machine allows the exit of the caps, in the right position, from the Star Wheel and then from the Feeder into the Caps Rail and Caps Conveyor.

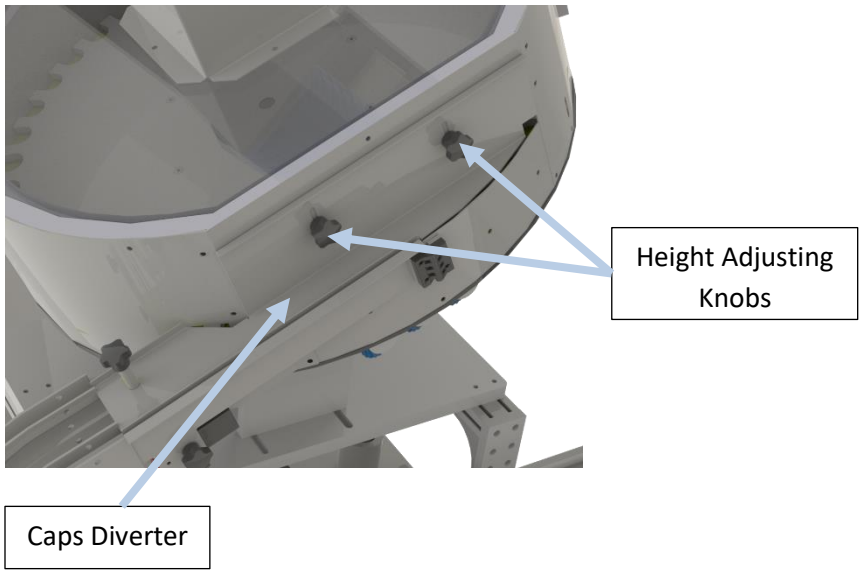


Figure 5-10 Caps Diverter

5.1.4 CAPS RAIL

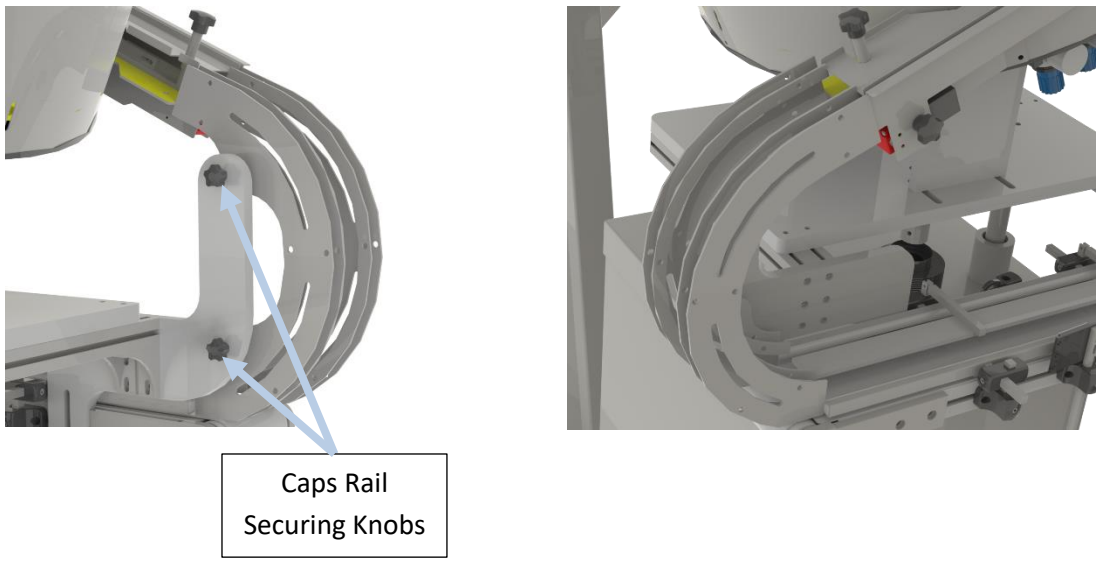


Figure 5-11 Caps Rail

The Caps Rail is a curved rail that directs the caps from the Caps Feeder to the Caps Conveyor.

There is a Caps Rail for every cap format that is to be used in the machine. All Caps Rails are properly labeled.

5.1.5 CAPS CONVEYOR

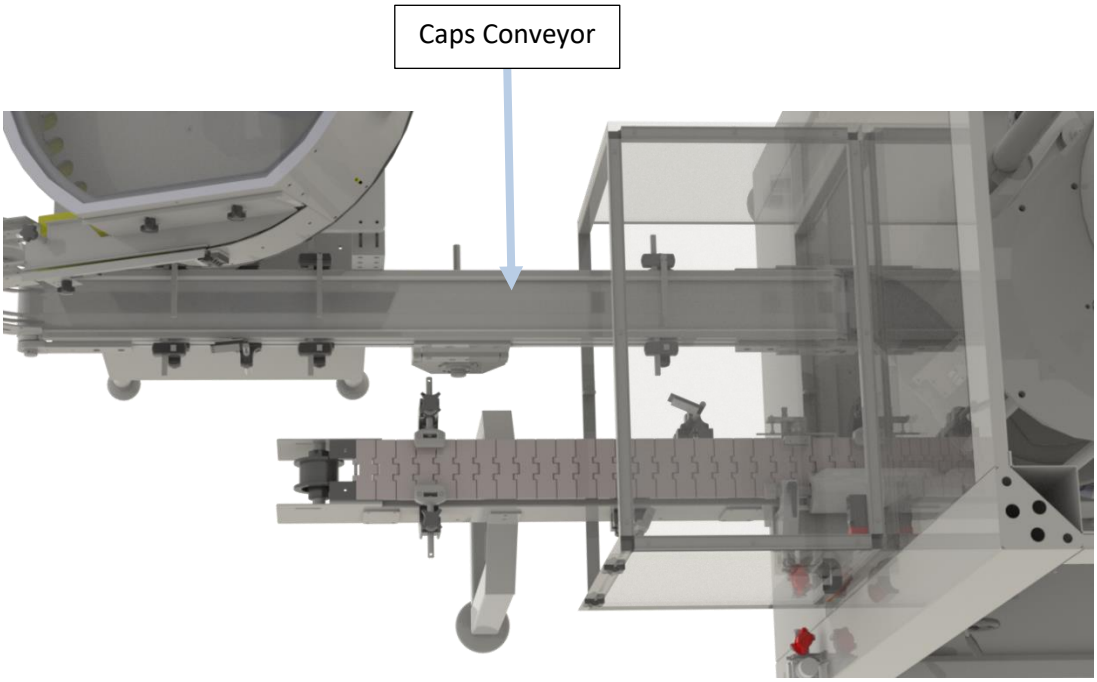


Figure 5-12 Caps Conveyor

The Caps Conveyor feeds the caps inside the Capper to the Pick & Place, where they are retrieved by the Closing Heads to be afterwards screwed on to the containers.

Consists of a rubberized belt that transports the caps to the Transfer Tunnel.

5.2 Capper

The Capper receives caps from the Caps Feeder and screws them onto containers that get into the machine by the Conveyor.

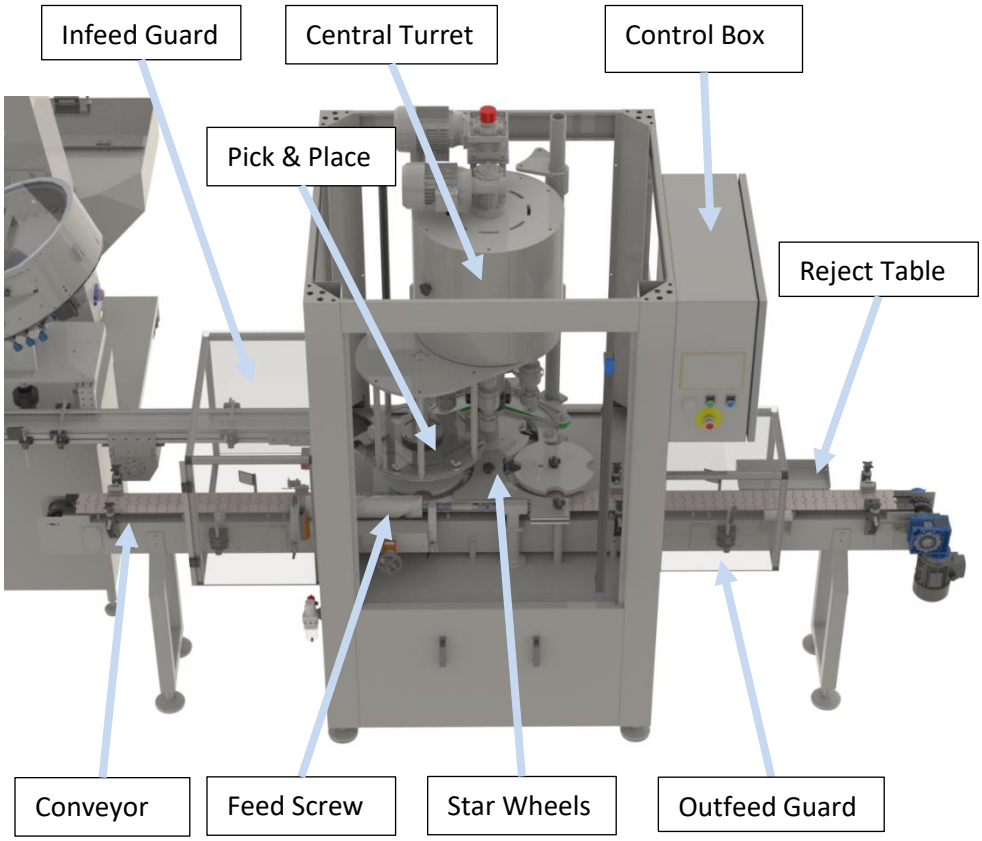


Figure 5-13 Capper

The Capper is conformed from the following components:

- Infeed
- Conveyor
- Feed Screw
- Pick & Place
- Central Turret
- Starr Wheels
- Outfeed
- Reject Table

5.2.1 INFEED

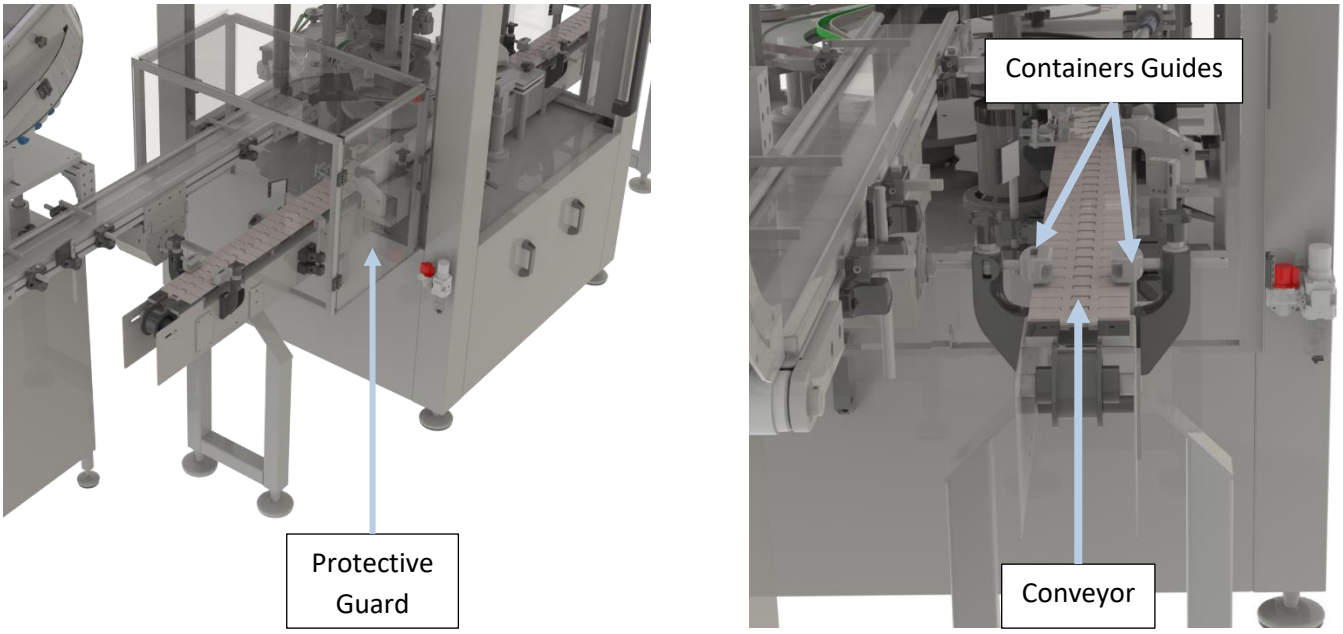


Figure 5-14 Infeed

The Infeed of the T4 VP is where the containers enter the Capper. The Infeed is protected by a fixed guard.

5.2.2 CONVEYOR

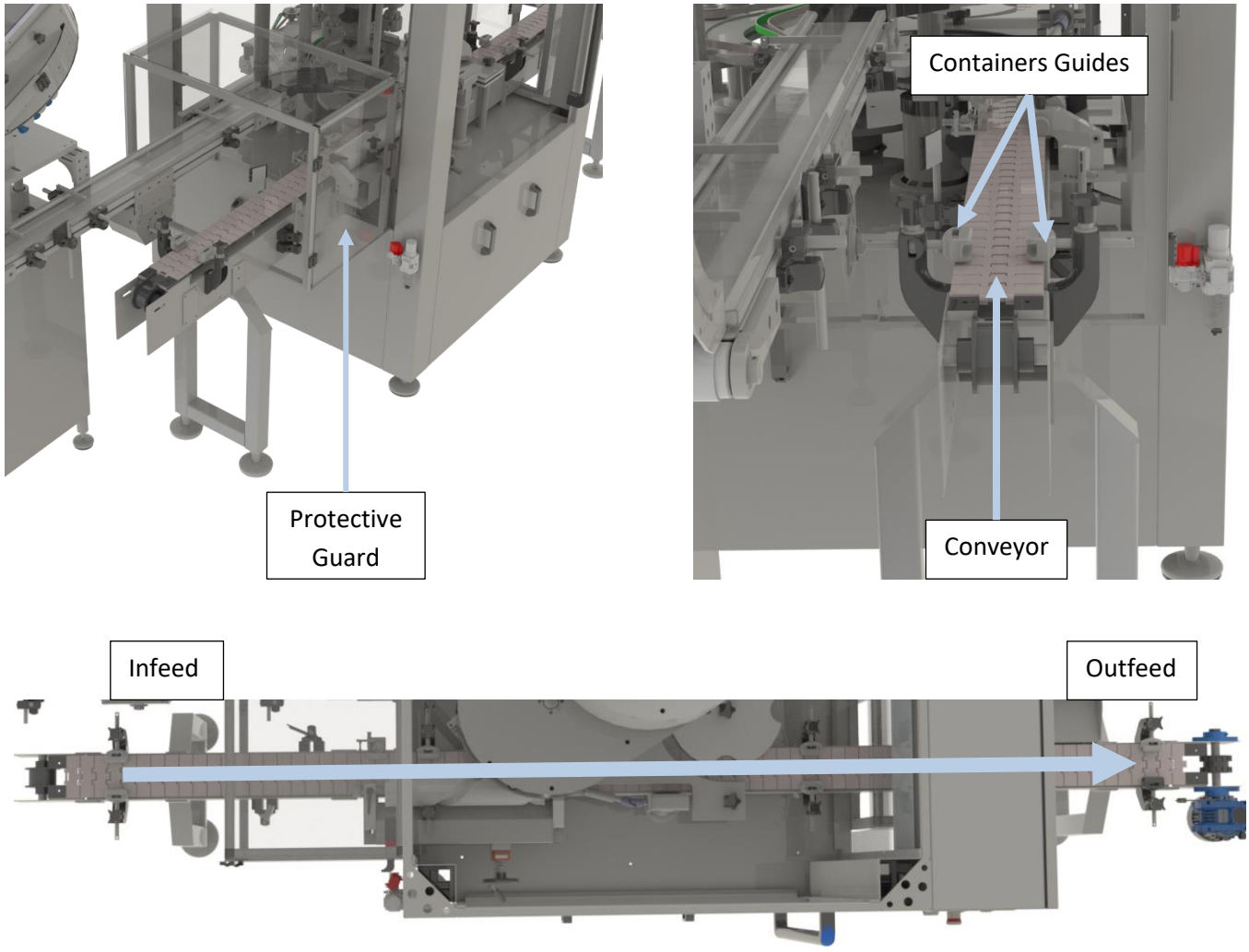


Figure 5-15 Capper Conveyor

The Conveyor runs across the Capper from the Infeed to the Outfeed. The conveyor delivers the containers to the Feed Screw by means of a motorized belt and receives them back from the Outfeed Star Wheel, to finally take them out of the Capper to the Outfeed.

The Capper is equipped with one or more Conveyor Container Guides, which guide the containers towards the Feed Screw and Infeed Star Wheel and past the Outfeed Star Wheel to the exit. The settings of the Conveyor Container Guide will vary, depending on the Container.

Container sensors can be installed at the Infeed and Outfeed to detect containers accumulation (back-up).

5.2.3 FEED SCREW

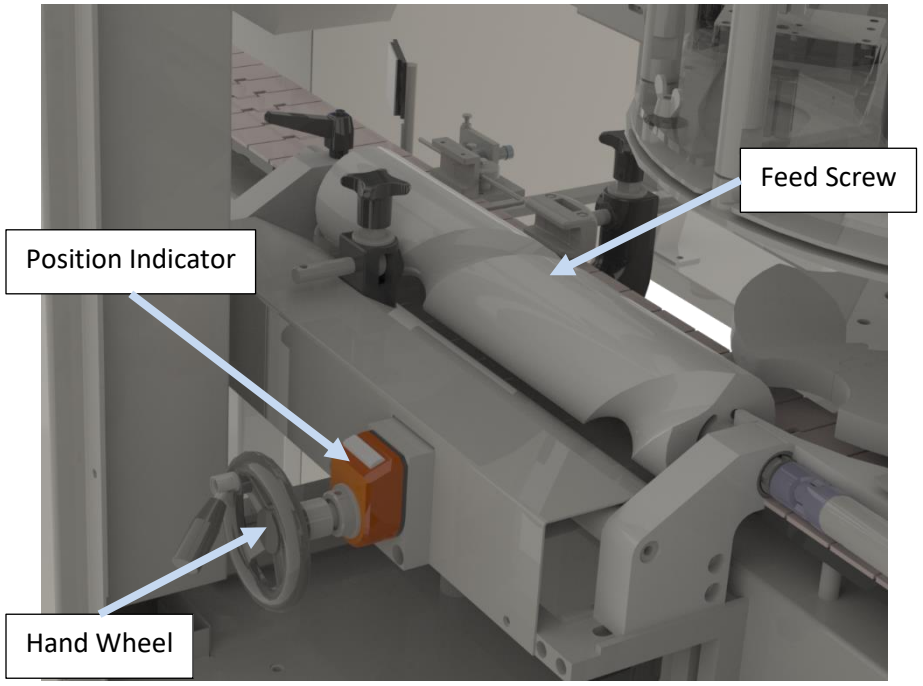


Figure 5-16 Feed Screw

The T4 VP is equipped with a Feed Screw that helps space the containers before feeding them to the Infeed Star Wheel.

The back/forth position of the Feed Screw is adjusted with a Lead Screw actioned by a Hand Wheel. A Lead Screw Position Indicator displays the actual position of the Feed Screw.

5.2.4 PICK & PLACE

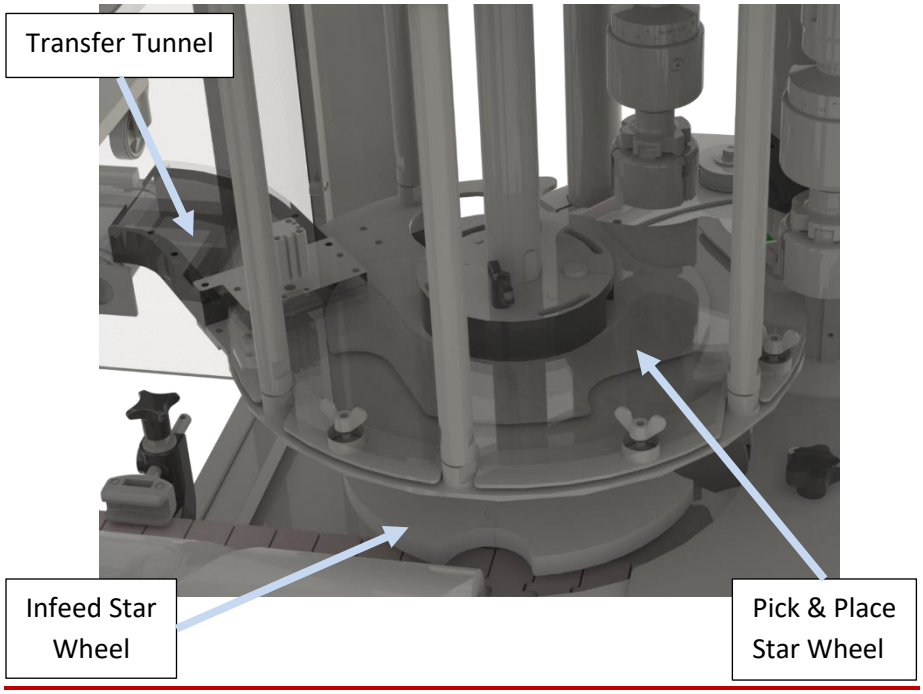


Figure 5-17 Pick & Place

The Pick & Place receives the caps from the Caps Conveyor via the Transfer Tunnel and presents them to the Closing Heads by means of a Star Wheel, where the caps are picked-up for screwing onto the containers.

A pneumatic blocking arm timely allows the entering of the caps, so their transit is synchronized with the containers delivered by the Feed Screw.

5.2.5 CENTRAL TURRET

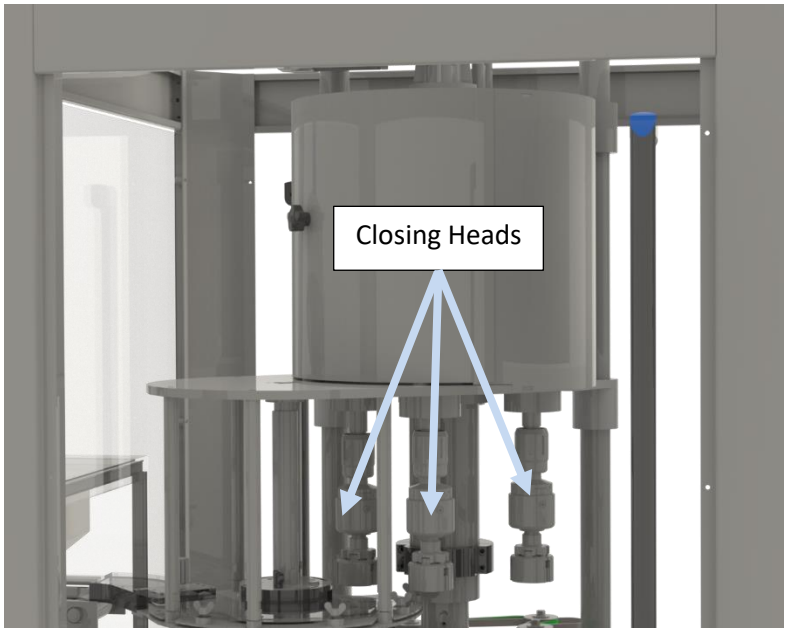


Figure 5-18 Central Turret

The Central Turret holds the Closing Heads, which pick the caps from the Pick & Place.

There are several Closing Heads, depending on the Capper model.

The Closing Heads are synchronously rotated, and made rotate while they pickup the caps, and then descended on top of the containers to screw the caps on them.

The Closing Heads are composed of a shaft and an articulated pincer. The pincer articulations are referred to as Sectors.

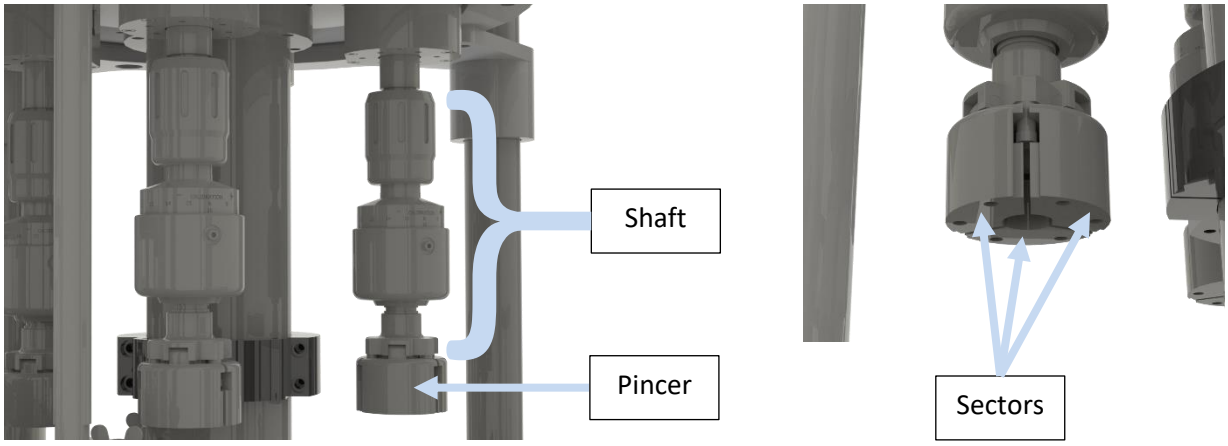


Figure 5-19 Closing Head

As the Closing Heads are rotated, the Sectors are opened, the Closing Head is rotated and the Sectors are closed, hence pinching the cap. As the Turret rotates, the Closing Head descends onto the container and the cap is screwed on to it. The Turret rotation continuous, and once the cap is screwed tight, the Sectors are opened and the Closing Head is raised, and the process repeats again.

5.2.6 STAR WHEELS

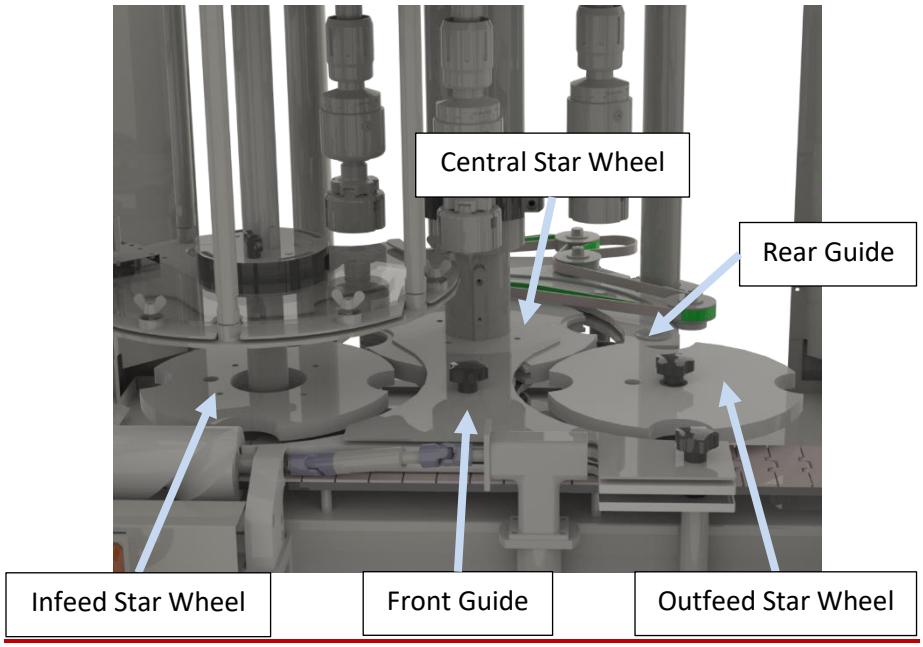


Figure 5-20 Star Wheels

There are three Star Wheels used to transport the containers through the whole capping process:

- Infeed Star Wheel
- Central Star Wheel
- Outfeed Star Wheel

A Front and a Rear-Guide help in keeping the containers in the Star Wheels' pockets.

The Front Guide seats between the Infeed and Outfeed Star Wheels and helps keep the containers in the Star Wheels' pockets.

For Cappers with Closing Heads between one and three, a polyurethane belt is used in place of the Rear Guide. The belt is fed through a system of pulleys and its tension is set by means of a pneumatic cylinder.

The Infeed Star Wheel picks the containers from the Infeed Feed Screw and transfers them to the Central Star Wheel.

The Central Star Wheel transports the containers while the actual capping process takes place.

The Outfeed Star Wheel receives the containers from the Central Star Wheel and delivers them back to the Conveyor at the Outfeed end of the machine.

All these polyethylene parts are change parts and might need to be changed when changing containers format.

5.2.7 OUTFEED

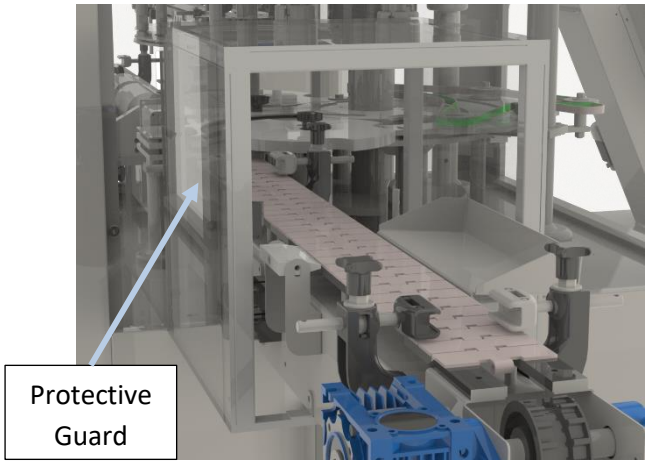


Figure 5-21 Outfeed

The Outfeed of the T4 VP is where the containers exit the Capper. The Outfeed is also protected by a fixed guard.

5.2.8 REJECT TABLE

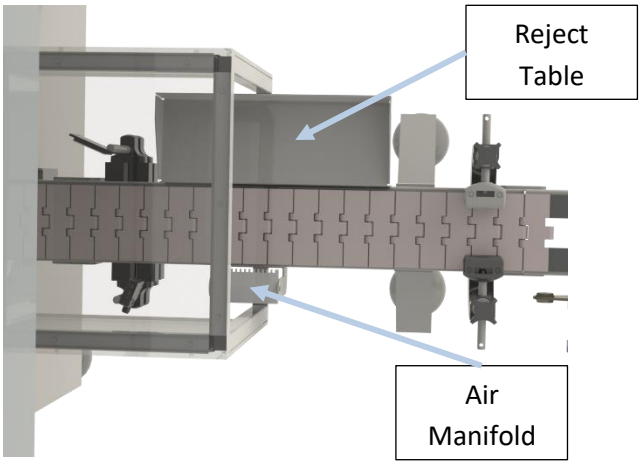


Figure 5-22 Reject Table

A Reject Table at the Outfeed is used to recover containers that have not been capped properly.

An Air Manifold blows air onto the conveyor at the right moment and the container is removed from the conveyor. The manifold air pressure is adjusted with an air regulator besides the manifold.

6. CONTROL PANEL

6.1 Controls

For details concerning the H.M.I. Software and Machine Operation, please see their respective sections.

CONTROL PANEL

Item		Description
1	**H.M.I. Touch Screen**	The Sleek Wrapper F650 is equipped with a 10.1” TFT color graphic touchscreen that is used to input variable data and to control the machine.
2	**Reset Button**	The reset button is used to restore the M.C.R. (Master Control Relay) immediately after an Emergency Stop.
3	**Emergency Stop Button**	The Emergency Stop button is used to bring the machine to a total stop in case a dangerous situation arises.
4	**Power Switch**	Use this switch to turn the machine **ON/OFF**.
5	**Power ON**	Lights up when the machine is energized

CONTROL PANEL

Item		Description
6	**Manual Jog**	Press to manually jog the machine.
7	**Aut./ Man. Key Switch**	Turn the key to select either **AUTOMATIC** or **MANUAL** mode.

Alarms

In the event of a machine malfunction, such as a jam, an alarm warning will display on the H.M.I. Touch Screen. After an alarm has been triggered, the machine should be inspected and the alarm must be reset. Alarms may be reset on the H.M.I. Touch Screen. Refer to ***SECTION 8.2*** for a more detailed description.

Emergency

In the event of an emergency, pressing the Emergency Stop button will cut power to the machine and halt its moving parts. While the Emergency Stop remains depressed, servo motors will stop and air will be cut off from pneumatics.

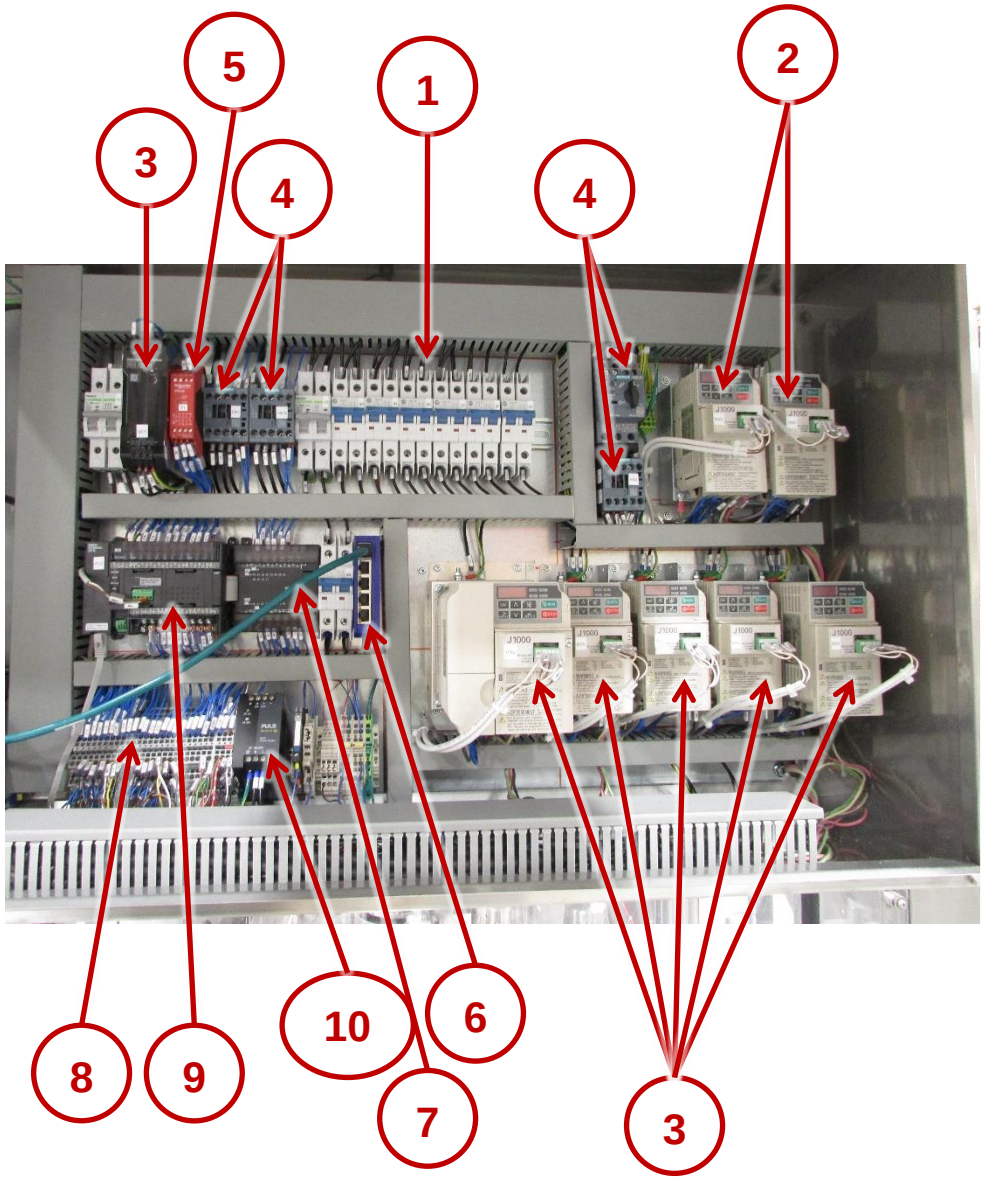
Immediately following the use of the Emergency Stop button, the operator may also need to halt the functions of any auxiliary machinery feeding the bagger.

After having been pressed, the Emergency Stop button must be reset before the machine can be operated. Pull out the Emergency Stop button, it should snap back into its original position. If Emergency Stop button has been pulled out, press the “MCR Enabled” Button to reactivate the machine. The machine should now be ready to run.

6.2 Control Box Interior

ELECTRICAL COMPONENTS

Item	Description
1	Breakers
2	Inverter
3	Power Supply
4	Power Contactor
5	Safety Relay
6	Network Switch
7	Expansion Module
8	Terminal Block
9	Programmable Logic Controller (PLC)
10	Auxiliary Power



6.3 Electrical Schematics

For detailed Electrical Schematics, please see attached Appendix A.

7. HUMAN MACHINE INTERFACE (H.M.I)

7.1 Screen Layout

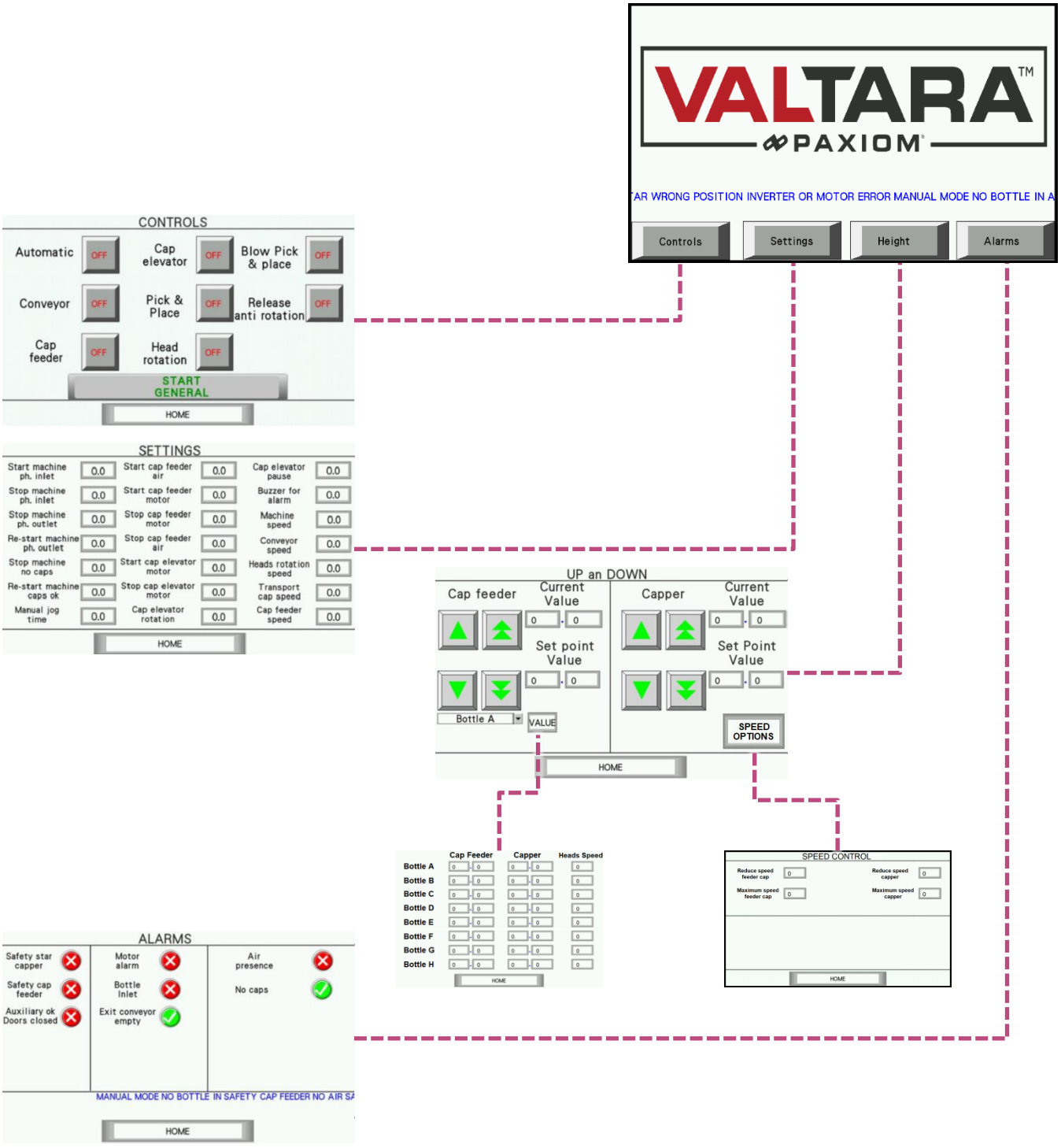


Figure 7-1 FOUR HEAD CAPPER T4 VP H.M.I. Layout

7.2 Screen Description

7.2.1 NUMERIC KEYPAD.

This pad pops-up when entering data values.

The numeric keypad indicates the minimum and maximum values available for the variable.

Figure 7-2 Numeric Keypad

7.3 Menus Description

The following paragraphs provide descriptions for the different screens displayed in the system's H.M.I.

7.3.1 MAIN SCREEN

When the wrapper is first powered on, the Home screen will appear.

Figure 7-3 Main Screen

MAIN SCREEN

Item	Description
Controls	Tap to access the **CONTROLS** screen (page 7-4).
Settings	Tap to access the **SETTINGS** screen (page 7-5).
Height	Tap to access the **HEIGHT** screen (page 7-7).
Alarms	Tap to access the **ALARMS** screen (page 7-10).

Table 7-1 Description of the Main Screen

7.3.2 CONTROLS SCREEN

The **CONTROLS** screen is accessed from the **MAIN** screen.

From this page is possible to turn **ON** or turn **OFF** all the motors and the movements of the machine while in **MANUAL** mode.

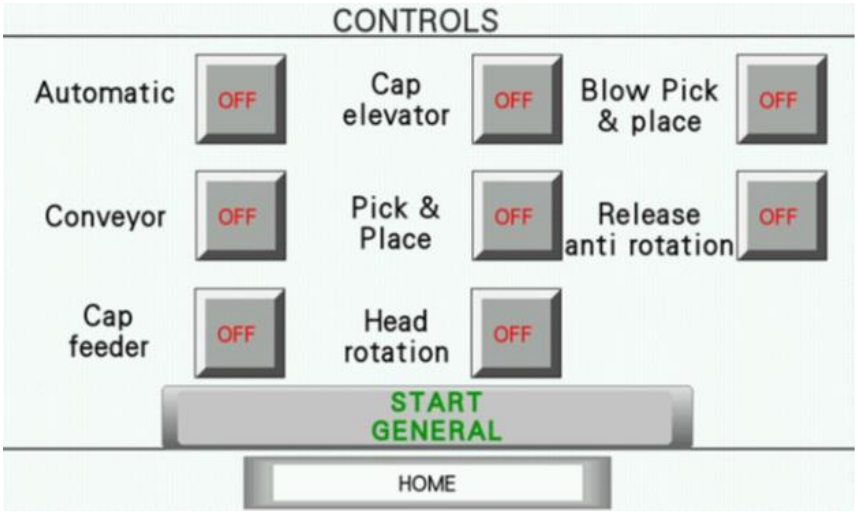


Figure 7-4 Controls Screen

CONTROLS

Item	Description
Automatic	Tap to **ENABLE** (**ON**) / **DISABLE** (**OFF**) the automatic cycle.
Cap Elevator	Tap to **ENABLE** (**ON**) / **DISABLE** (**OFF**) the Cap Elevator.
Blow Pick & Place	Tap to **ENABLE** (**ON**) / **DISABLE** (**OFF**) the Pick & Place Blower.
Conveyor	Tap to **ENABLE** (**ON**) / **DISABLE** (**OFF**) the conveyor belt.
Pick & Place	Tap to **ENABLE** (**ON**) / **DISABLE** (**OFF**) the Pick & Place.
Release Anti Rotation	Tap to **ENABLE** (**ON**) / **DISABLE** (**OFF**) the Release Anti Rotation.
Cap Feeder	Tap to **ENABLE** (**ON**) / **DISABLE** (**OFF**) the Cap Feeder.
Head Rotation	Tap to **ENABLE** (**ON**) / **DISABLE** (**OFF**) the Head Rotation.
START GENERAL	Tap to **START** / **STOP** the automatic cycle.
HOME	Tap to access the **MAIN** screen (page 7-3).

Table 7-2 Description of the Controls Screen

7.3.3 SETTINGS SCREEN

The **SETTINGS** screen is accessed from the **MAIN** screen.

It allows to adjust all the timing of the machine.

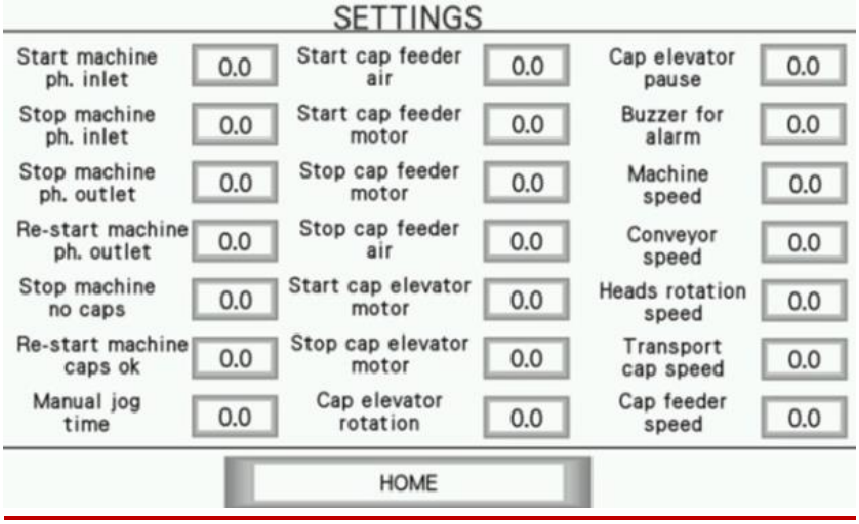


Figure 7-5 Settings Screen

SETTINGS

Item	Description
Start Machine Ph. Inlet	Tap to enter, in seconds, the time for the machine to wait before starting in automatic mode, once the photocell at the machine infeed is blocked by bottles (maximum 1,5 s).
Stop Machine Ph. Inlet	Tap to enter, in seconds, the time for the machine to wait before stopping in automatic mode, once the photocell at the machine infeed is cleared of bottles (maximum 1,5 s).
Stop Machine Ph. Outlet	Tap to enter, in seconds, the time for the machine to wait before stopping in automatic mode, once the photocell at the machine outfeed is cleared of bottles (maximum 1,5 s).
Re-Start Machine Ph. Outlet	Tap to enter, in seconds, the time for the machine to wait before starting in automatic mode, once the photocell at the machine outfeed is cleared of bottles (maximum 1,5 s).
Stop Machine No Caps	Tap to enter, in seconds, the time for the machine to wait before stopping in automatic mode, once the photocell at the machine's caps rail is cleared of caps (maximum 6 s).
Re-Start Machine Caps OK	Tap to enter, in seconds, the time for the machine to wait before starting in automatic mode, once the photocell at the machine's caps rail is blocked by caps (maximum 1 s).
Manual Jog Time	Tap to enter, in seconds, the maximum allowed time for manual jog (10 s).
Cap Feeder Blower Start	Tap to enter, in seconds, the time for the Cap Feeder to wait before starting in automatic mode (maximum 1 s).
Cap Feeder Blower Stop	Tap to enter, in seconds, the time for the Cap Feeder to wait before stopping in automatic mode (maximum 1 s).

SETTINGS

Item	Description
Cap Feeder Start	Tap to enter, in seconds, the time for the Cap Feeder to wait before starting in automatic mode, once the photocell at the machine's caps rail is cleared of caps (maximum 1 s).
Cap Feeder Stop	Tap to enter, in seconds, the time for the Cap Feeder to wait before stopping in automatic mode, once the photocell at the machine's caps rail is blocked by caps (maximum 1 s).
Cap Elevator Start	Tap to enter, in seconds, the time for the Cap Elevator to wait before starting in automatic mode, once the photocell at the machine's caps rail is blocked by caps (maximum 1 s).
Cap Elevator Stop	Tap to enter, in seconds, the time for the Cap Elevator to wait before stopping in automatic mode, once the photocell at the machine's caps rail is cleared of caps (maximum 1 s).
Cap Elevator Jog ON	Tap to enter, in seconds, the time for the Cap Elevator to function, while the Cap Feeder is running, and while the sensor inside the Cap Feeder Bowl indicates there are no caps.
Cap Elevator Jog OFF	Tap to enter, in seconds, the time for the Cap Elevator to pause, while the Cap Feeder is running.
Buzzer for Alarm	Tap to enter, in seconds, the maximum time the buzzer remains active (maximum 1,5 s).
Machine Speed	Tap to enter the Capper speed.
Conveyor Speed	Tap to enter the Conveyor speed.
Cap Conveyor Speed	Tap to enter the Capper Conveyor speed.
Cap Feeder Speed	Tap to enter the Capper Feeder speed.
	Tap to access the **MAIN** screen (page 7-3).

Table 7-3 Description of the Settings Screen

7.3.4 HEIGHT SCREEN

The **HEIGHT** screen is accessed from the **MAIN** screen. It allows to adjust the machine height.

NOTE: make sure to access this screen.

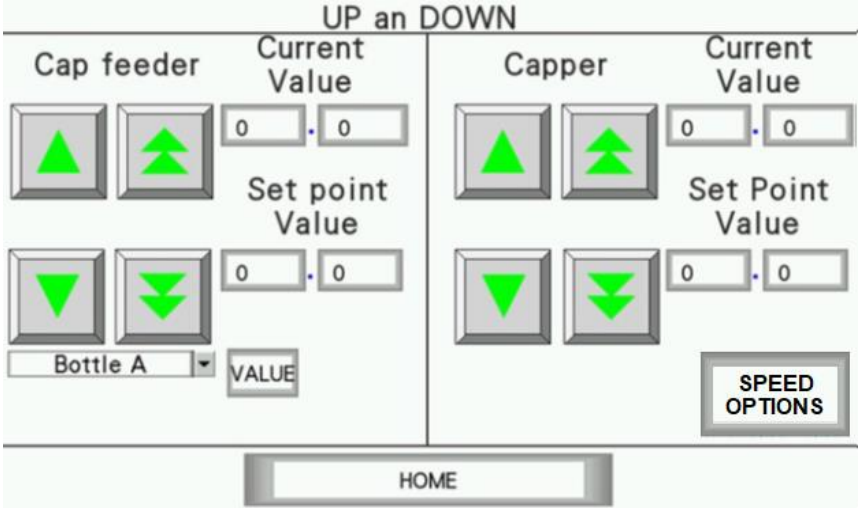


Figure 7-6 Height Screen

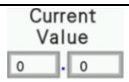
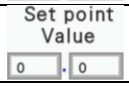
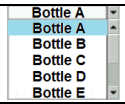
HEIGHT	
Item	**Description**
	Displays the current value of the Cap Feeder/Capper height.
	Tap to enter, in meters, the Cap Feeder/Capper target height.
	Tap to make the Cap Feeder Bowl/Capper Turret move up. Keeping the button tapped will make the Cap Feeder Bowl/Capper Turret move continuously until it reaches its maximum limit.
	Tap to make the Cap Feeder Bowl/Capper Turret go up to its maximum limit.
	Tap to make the Cap Feeder Bowl/Capper Turret move down. Keeping the button tapped will make the Cap Feeder Bowl/Capper Turret move continuously until it reaches the **SET POINT** value.
	Tap to make the Cap Feeder Bowl/Capper Turret go up to the **SET POINT** value.
	Tap to select the bottle to be processed. A Drop-Down List displays the available options.
	Tap to access the **SET POINT VALUE** screen (page 7-8).
	Tap to access the **SPEED OPTIONS** screen (page 7-9).
	Tap to access the **MAIN** screen (page 7-3).

Table 7-4 Description of the Height Screen

7.3.5 SET POINT VALUE SCREEN

The **SET POINT VALUE** screen is accessed from the **HEIGHT** screen by taping on the **VALUE** button.

It allows to adjust each processable bottle height Set Point Value.

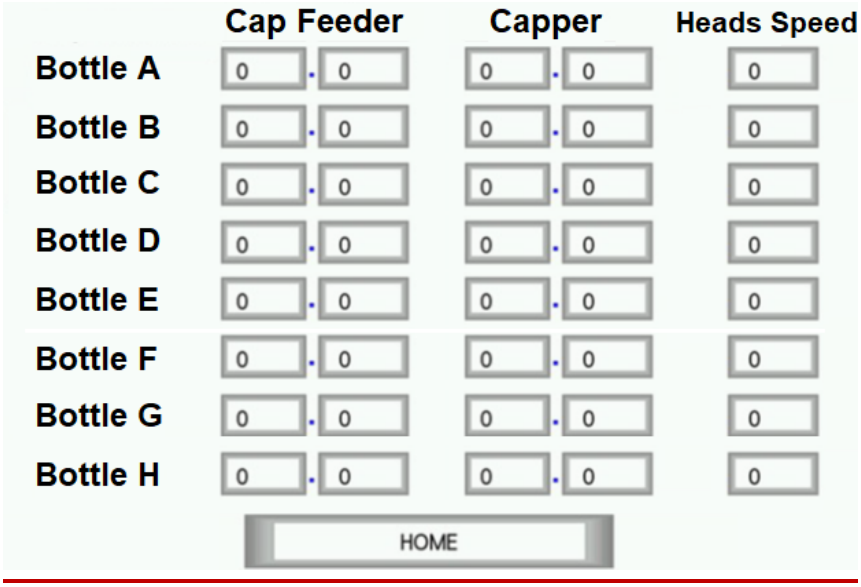


Figure 7-7 Set Point Value Screen

SET POINT VALUE

Item	Description
Bottle [A..H]	Tap to enter, in meters, the machine target height for a specific bottle.
HOME	Tap to access the **MAIN** screen (page 7-3).

Table 7-5 Description of the Set Point Value Screen

7.3.6 SPEED OPTIONS SCREEN

The **SPEED OPTIONS** screen is accessed from the **HEIGHT** screen by taping on the **SPEED OPTIONS** button.

It allows to adjust the Capper speed limits.

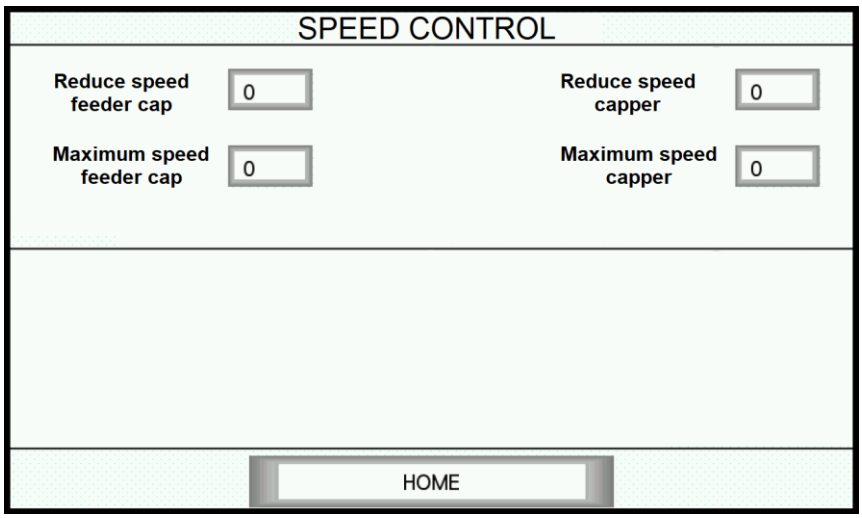


Figure 7-8 Speed Options Screen

SPEED OPTIONS

Item	Description
Reduce Speed Feeder Cap	Tap to enter the Feeder Capper slow speed.
Maximum Speed Feeder Cap	Tap to enter the Feeder Capper maximum speed.
Reduce Speed Capper	Tap to enter the Capper slow speed.
Maximum Speed Capper	Tap to enter the Capper maximum speed.
HOME	Tap to access the **MAIN** screen (page 7-3).

Table 7-6 Description of the Speed Options Screen

7.3.7 ALARMS SCREEN

The **ALARMS** screen is accessed from the **MAIN** screen by taping on the **ALARMS** button.

In this screen, the icon corresponding to the faulty system/component will display as  . When no alarm is present, the icon corresponding to the system/component will display as  .

Figure 7-9 Alarms Screen

8. MACHINE OPERATION

8.1 Starting the Machine

ENSURE ALL COVERS ARE CLOSED AND THE EMERGENCY STOP BUTTON IS NOT ENGAGED.

Follow the steps bellow:

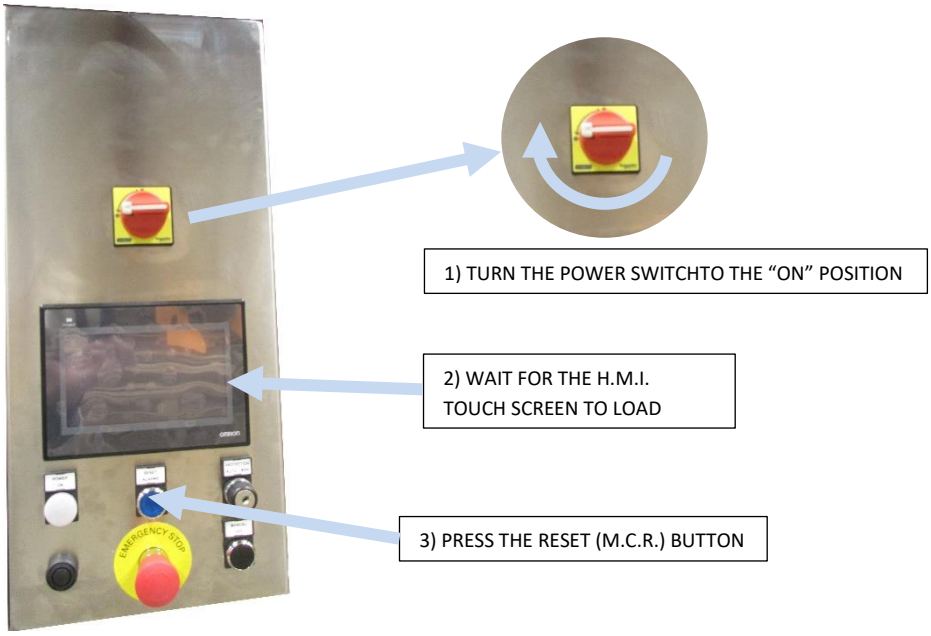


Figure 8-1 Starting the Machine

1. Ensure all covers are closed and the Emergency Stop button is not engaged.
2. Locate the Power Switch on the Control Box. Turn the Power Switch to the "**ON**" position. It will take a few seconds for the H.M.I. Touch Screen to power up.
3. Press the Reset (M.C.R.) button.
4. Navigate to the H.M.I.'s Height Screen and select the bottle to be processed from the drop-down list.
5. Tap the **HOME** button to navigate back to the **MAIN** screen (***SECTION 7.3.1***).
6. Tap the **CONTROLS** button to navigate to the **CONTROLS** screen (***SECTION 7.3.2***) to enable all the desired options.
7. Make sure there are containers at the Infeed and that the Outfeed is clear of any blockage.
8. Tap the **START GENERAL** button to home all the systems. The "Start" button will start flashing once all systems are homed, the capping process begin and will repeat until the operator taps the **START GENERAL** button again.
9. For emergency machine shut off, use the Emergency Stop button. Pressing the E-stop will cut power to the machine. Air will be cut off from pneumatics and inverters will immediately stop.

10. To resume using the machine: resolve any issues with the machine, close all covers, pull out the Emergency Stop Button and press the Reset (M.C.R.) button.

8.2 Working with Recipes

The Capper does not use recipes per se.

Access the ***HEIGHT*** screen (***SECTION 7.3.4***) and select the container from the Drop-Down List.

8.3 Alarms

The ***ALARMS*** screen (***SECTION 7.3.7)*** display all the possible alarms that can be triggered in the system.

8.3.1 ALARMS

Alarm	Description	Solution
Safety Star Capper	One of the machine's Star Wheels is blocked.	- Open the guard(s) to remove the container that is blocking the Star Wheel. - Close the guard(s). - Push the blue **RESET** button. - Jog the machine (**Manual Jog** button) until the Star Wheel pocket where the blockage occurred returns to its position. - Resume normal operation.
Motor Alarm	The machine's motor is not working properly.	- Check the Inverter screen and User's Manual for information on the alarm and how to fix it. - Push the blue **RESET** button and resume normal operation.
Air Presence	Air pressure from the facility is not good enough or absent.	- Verify the facility's air pressure. - Verify pneumatic connections. - Verify air valve/filter. - Push the blue **RESET** button and resume normal operation.
Safety Cap Feeder	Either the Elevator's Hopper cover is opened, or the Feeder's Exit Door safety has been triggered.	- Close the Hopper's guard. - Check the Feeder Exit Door's safety is no longer triggered. - Check caps are exiting the Feeder's Exit Door smoothly. - Push the blue **RESET** button. - Resume normal operation.
Bottle Inlet	There are no containers present at the Capper infeed.	- Check the cause of the containers not being fed and clear it. - Push the blue **RESET** button and resume normal operation.
No Caps	No caps are being detected at the Caps Conveyor	- Check there are caps on the Elevator's Hopper. - Check the Caps Elevator is working properly. - Check the Feeder is working properly. - Push the blue **RESET** button and resume normal operation.
Auxiliary OK, Doors Closed	Either one, or more of the protective guards are open.	- Close the Guard (s). - Make sure to pull the E-stop button. - Push the blue **RESET** button and resume normal operation.

Alarm	Description	Solution
Exit Conveyor Empty	There is a backup of containers at the Capper outfeed.	- Check the cause of the containers backup and clear it. - Push the blue **RESET** button and resume normal operation.

Table 8-1 Four Head Capper T4 VP Alarms

8.4 Resetting the Alarms

Proceed as follows in order to clear the alarms from the system:

1. Access the ***ALARM SCREEN*** for a description of the alarm.
2. Solve the alarm as per the Working with Recipes

The Capper does not use recipes per se.

Access the ***HEIGHT*** screen (***SECTION 7.3.4***) and select the container from the Drop-Down List.

3. Alarms table.
4. Clear the alarm.
5. Tap the **START GENERAL** button on the ***CONTROL SCREEN***.

9. MAINTENANCE & CLEANING INFORMATION

We recommend having the following tools available when performing maintenance on the machine: metric Allen keys, metric socket set, metric wrenches, voltmeter, screw drivers, tape measure, ruler, caliper, adjustable wrenches and a grease gun.

Maintenance depends on the machine's operating conditions. The machine may require more frequent maintenance, depending on the environment in which it operates. All damaged components must be replaced; failure to do so will affect the machine's performance and result in further damage.

9.1 lubrication

Use 3 in 1 Professional White Lithium Grease for lubricating gears & shafts mentioned in the checklist.

9.2 Storage

When storing the machine for a long period of time, disconnect the air, power off and clean the machine thoroughly. After periods of inactivity, it is recommended the machine is tested and adjusted. All the electrical components and connections should be thoroughly checked before powering the machine on.

Do not store the machine in a corrosive environment.

9.3 Cleaning

WHAT IS MEANT BY "STAINLESS" STEEL?

STAINLESS STEEL & RUST

stainless steel does not rust… **false!**

All metals rust, stainless steel is simply highly rust resistant. The only exceptions to this rule are gold and platinum. Stainless Steel is a term derived from the concept that it "stains less" than other steels, it is not immune to the rusting process or any chemical reaction.

WHAT CAUSES RUST?

RUST CAUSED BY ENVIRONMENT

- Areas with high humidity or excessive cold (where condensation can occur).
- Areas where there are trace amounts of salt in the air or other chemical products.

RUST CAUSED BY PRACTICES

- Cross contamination caused by materials which were used to clean another rusty surface.
- Rusted metal components coming into contact with stainless steel components.
- Damage to the stainless steel surface caused by cleaning tools that are **not designed** for the specific purpose of cleaning stainless steel. Examples include: scouring pads/mesh cloths (for non-stainless steel surfaces) and metal tools such as scrapers or steel wool.

RUST CAUSED BY CLEANING PRODUCTS

- Using cleaning solutions which contain **Sodium Hypochlorite**.
- Not diluting cleaners before using them, dilute solutions as per supplier instructions.
- Not rinsing the machine soon enough, rinse off cleaning product as per supplier instructions.

CLEANING RECOMMENDATIONS

Failure to follow any of our Cleaning Recommendations or misuse of a cleaning product will result in voiding your warranty.

See Page 9.4 for a list of all cleaning and rust removal products

1. Follow Section **Error! Reference source not found.** in order to clean the machine.
2. ***Do not*** use high pressure jets of water to clean machinery, water may get into the electrical enclosure.
3. Always use clean cloths when wiping the machine in order to avoid cross contamination.
4. If rinsing a surface, use clean non-contaminated water.
5. Dry all surfaces thoroughly to avoid water spots.
6. ***Do not*** use metal scouring pads/mesh cloths or metal tools such as scrapers or steel wool when.
7. If using ammonia to clean transparent viewing surfaces, take care not to allow any ammonia to touch the stainless steel. Clean viewing surfaces with different cloths than stainless steel surfaces.
8. **Before cleaning, please wear protective safety equipment, including rubber gloves and eye protection.**

FOOD GRADE SANITAZION

A sanitizer must reduce the presence of bacteria by 99.9% when used during cleaning. Not to be confused with the legally distinct term “disinfecting” which must eliminate between 99.9999% and 100% of all bacteria and microorganisms on a given surface.

CLEANING A MACHINE BEFORE OR AFTER A PRODUCT RUN

1. Consult our list of pre-selected cleaning products meant to be used to decontaminate stainless steel surfaces without damaging them. See Page 9-4 for the full list.
2. Look up information on the Cleaning Product you have chosen, finding and fully understanding the instructions for the proper use of the Cleaning Product. See the links on Page 9-4 for details, contact information should be available on the supplier’s website.
3. Mix the correct concentration of the Cleaning Product, if applicable and as directed by the information obtained from the supplier.
4. Follow Section **Error! Reference source not found.** in order to clean the food contact parts of the machine. Do not apply corrosive cleaning products to the internal workings of the machine.
5. Scrub and remove any and all contaminants from the machine’s food contact surfaces, use non-metallic hand pads to do so. Examples of such scrubbing pads include the “Blendex™” hand pad mentioned on Rust Removal section.
6. Thoroughly rinse off all of the cleaning product from the machine, do not miss any spots as any lingering cleaning product is corrosive and will cause permanent rusting which will spread to the other metallic components of your machine.
7. Dry the machine thoroughly and make sure that no moisture is left behind at the end of the cleaning process, any wet spots are not only form water spots but are unhygienic and may facilitate the growth of bacteria on a surface.

RUST REMOVAL

FOR RUST REMOVAL ON STAINLESS STEEL SURFACE

The following is intended for small amounts of surface level rust on stainless steel surfaces such as rust spots. Surfaces excessively covered in rust cannot be recovered using this process.

1. Spray the clean stainless steel surfaces with “E-Nox Clean™”.
2. Spread the “E-Nox Clean™” cleaning product over the surface of the stainless steel part using a clean cloth.
3. Wait 10 minutes.
4. Scrub the surfaces of the stainless steel part with a clean white “Blendex™” hand pad or similar non-metallic scrubbing pad.
5. Rinse the surface with non-contaminated water at approx. 22°C (room temperature.)
6. Examine the surface of the stainless steel part, paying close attention to weld seams. If the rust persists, then repeat steps 1 through 5 again until all rust has been eliminated.
7. Once the surface of the stainless steel part is free from all signs of rust, spray the parts with the neutralizing agent “Surfox-N™.”
8. Wait 5 minutes.
9. Rinse the surface with clean non-contaminated water at approx. 22°C.
10. Dry the surfaces of the part thoroughly with a clean dry cloth.

CLEANING PRODUCT INFORMATION

Please seek out and carefully read any instructions related to the use of your selected cleaning product, information is available on the cleaning product supplier's website.

METALLURGY COMPANY – CONTACT FOR MATERIAL & METALLURGICAL CONSULTATION

https://cep-experts.ca/service/materials-and-metallurgical/

SUPPLIER: WALTER CLEANING TECHNOLOGIES (NORTH AMERICA)

RUST TREATMENT ***"E-Nox Clean™"*** stainless steel cleaner

https://www.walter.com/products/environmental-solutions/industrial-cleaning-degreasing/e-nox-clean

RUST TREATMENT ***"Surfox-N™"*** neutralizing formula

https://www.walter.com/products/-/producttradename/welding/surfox-liquids/surfox-n

RUST TREATMENT ***"Blendex™"*** hand pads

https://www.walter.com/en_US/products/abrasives/sanding/blendex-hand-pads

SUPPLIER: MICRO GREEN CLEAN (NORTH AMERICA & EUROPE)

LIQUID SANITIZER ***"Micro Green Clean"***

https://www.coleparmer.com/p/micro-green-clean-biodegradable-cleaner/72372

SUPPLIER: PURE BIOSCIENCE (NORTH AMERICA)

LIQUID SANITIZER ***"Pure Hard Surface"***

https://www.purebio.com/products/pure-hard-surface.htm

FOAM SANITIZER ***"Pure Hi-Foam Cleaner"***

https://www.purebio.com/products/pure-hi-foam-cleaner.htm

SUPPLIER: SAN ECO TEC (NORTH AMERICA)

LIQUID SANITIZER ***"Clean 20"***

https://sanecotec.com/sanitizers/

SUPPLIER: BIO GUARD HYGIENE (EUROPE)

FOAM SANITIZER ***"Hi & Lo Foam Food Processing Cleaner"***

https://www.bioguardhygiene.co.uk/products/hi-lo-foam-food-processing-cleaner/

CLEANING PRODUCTS

The customer is responsible for any damages resulting from the use of a product not reviewed by Paxiom Group. If the customer seeks out their own sanitizer product, they must keep in mind to not use solutions which contain **Sodium Hypochlorite**.

9.4 Cleaning Steps

POWER OFF AND UNPLUG:

Begin by turning off the machine. Turn the Main Power Switch located on the Control Box to the off position. Ensure that all components are cool to the touch before continuing.

When unplugging the machine, ensure that the power plug is carefully covered in order to avoid exposure to moisture.

DISLODGE DEBRIS:

Use compressed air to dislodge debris from components and clean the electrical panel.

REMOVE AND CLEAN FOOD CONTACT COMPONENTS:

Remove food contact components including pans, buckets, chutes, funnel, center cone and the hopper so they may be cleaned individually and away from the body of the machine. Do not apply excessive force on components attached to the load cell as this may cause damage to the load cell.

BODY OF THE MACHINE:

Clean the machine with a damp cloth; this machine has not been designed to be washed down with a low- or high-pressure water hose. Do not expose the machine to large quantities water such as pouring water on the machine. Clean all metal surfaces thoroughly to remove any contaminants. Use non-corrosive cleaning products.

DRY COMPONENTS:

Dry all components with a clean, dry cloth. No water spots should remain on the machine. Leftover cleaning solution can cause damage to stainless steel surfaces.

REINSTALL COMPONENTS:

Once cleaning is completed, reinstall all components.

10. MAINTENANCE CHECKLIST

DAILY CHECKLIST

ENSURE THE MACHINE HAS BEEN TURNED OFF, LOCKED OUT / TAGGED OUT AND THAT ALL COMPONENTS ARE COOL TO THE TOUCH BEFORE PERFORMING MAINTENANCE ON PARTS.

	MON.	TUES.	WEDS.	THURS.	FRI.
CLEAN THE CAPPER HEADS					
Use compressed air to remove any glass or other residues.	☐	☐	☐	☐	☐
CHECK THE JOINTS					
Check the joints are working properly.	☐	☐	☐	☐	☐
PNEUMATICS					
Drain the Filter Regulator completely. 	☐	☐	☐	☐	☐
ELECTRONICS					
Machine must be powered ON for this test. Power it OFF and Lock Out when the test is complete. Test the safety switches by opening the doors and checking if the machine stops.	☐	☐	☐	☐	☐
Test the Emergency Stop button.	☐	☐	☐	☐	☐

WEEKLY CHECKLIST

(or after 48 hours of continuous operation)

ENSURE THE MACHINE HAS BEEN TURNED OFF LOCKED OUT / TAGGED OUT AND THAT ALL COMPONENTS ARE COOL TO THE TOUCH BEFORE PERFORMING MAINTENANCE ON PARTS.

	1ST WEEK	2ND WEEK	3RD WEEK	4TH WEEK
CAPPER HEADS				
Grease the holding pistons, their control rollers and cams. Grease all bearings and gears. Check the reducer oil level and top it if necessary	☐	☐	☐	☐
PNEUMATICS				
Check if the air supply to the machine is functioning correctly. Ensure air lines are free of moisture.	☐	☐	☐	☐
ELECTRONICS				
Check the interior of the Control Box and clean all electrical contacts if there are signs of dust build up or residue.	☐	☐	☐	☐

MONTHLY CHECKLIST

ENSURE THE MACHINE HAS BEEN TURNED OFF LOCKED OUT / TAGGED OUT AND THAT ALL COMPONENTS ARE COOL TO THE TOUCH BEFORE PERFORMING MAINTENANCE ON PARTS.

MECHANICAL COMPONENTS

Grease the Capper head holding pistons, their control rollers and cams. ☐

Grease all the metal mechanisms: bearings, gears, etc. ☐

LUBRICATION

Grease for Gears/Misc:
ROL OIL – "MERCURI 2"
ESSO – "BEACON"
AGIP – "GR MU 2" - SHELL "AVANIA R 2"
MOBIL – "MOBILUX 2"

Oil for Gearbox:
OL OIL– "VARIAX 140"
ESSO – "GEAR C Z 85W/140
AGIP – "ROTARA SAE 85W/140"
SHELL –"VELTAX Z 140"
MOBIL – "MOBILUBE C 140

Spray Grease for Chains:
AGIP – "ROCOL CHAIN DRIVE SPRAY"
KLUBER – "UNIMOLY 007"

PNEUMATICS

Machine must be powered ON for this test. Power it OFF and Lock Out when the test is complete: ☐

Test if the Filter Regulator is functioning properly and check for air leaks in the machine.

ELECTRONICS

Check for any damaged electrical wiring or damaged power cables. ☐

11. TROUBLESHOOTING

You can also access troubleshooting information from our web resources. This information is constantly updated.

Go to https://www.paxiom.com/service/, click on **SELF-SERVE – IT'S AWESOME!**, follow the registration instructions and access the machine's FAQ.

Problem	Possible Cause	Solution
Caps not being fed to the Feeder	Elevator not dumping caps in the Feeder	- Check the Elevator is working properly. - Check the Elevator's belt has not broken and is in good shape. - Check the Elevator's Chute is not blocked.
	No caps in the Elevator's Hopper	- Fill the Elevator's Hopper with caps.
	Caps Tank Level Sensor detecting caps all the time	- Check the Level Sensor is working properly. - Check there is no debris blocking the Level Sensor. - Check the Level Sensor wiring.
Caps not being screwed to the containers	Transfer Tunnel not delivering caps to the Pick & Place	- Check the Pneumatic Blocking Arm is working properly. - Verify the pneumatic connections to the Blocking Arm.
	Closing Heads not picking-up the caps.	- Check the Central Turret is working properly. - Check the Central Turret height is properly set-up. - Check the Closing Heads are rotating properly. - Check the Pincer opens and close properly. - Check the Closing Heads are picking-up the caps and that are not dropping them.
Containers at the Infeed but the Conveyor doesn't start	Infeed Container Sensor malfunction	- Check the Infeed Container Sensor is working properly. - Check the Infeed Container Sensor wiring. - Verify the Protective Guard is well closed.
No containers at the Outfeed and the Conveyor doesn't start	Outfeed Container Sensor malfunction	- Check the Outfeed Container Sensor is working properly. - Check the Outfeed Container Sensor wiring. - Check the Outfeed Container Sensor is free from debris.
Container jamming at Star Wheels	Wrong Star Wheels or bad setting.	- Verify the right Star Wheels are installed and tight securely.

12. PROCEDURES

12.1 Capper Star Wheels Removal/Installation

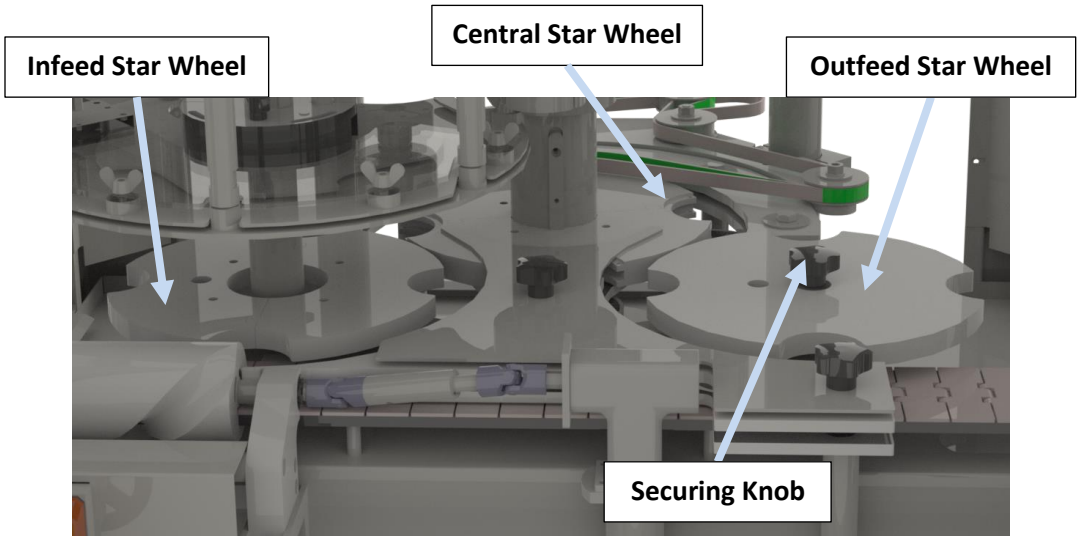


Figure 12-1 Star Wheels

12.1.1 STAR WHEELS REMOVAL

1. Remove any containers from the Infeed.
2. Stop the machine and press the E-Stop button.
3. Open the guards and remove caps from the Transfer Tunnel.
4. Close the guards.
5. Set the machine in **MANUAL** mode, access the ***HEIGHT*** screen and **JOG** the Central Turret all the way up.
6. Stop the machine and press the E-Stop button.
7. Open the guards.
8. Remove the Securing Knobs and Wing Nuts by turning them counterclockwise.
9. Carefully lift the Star Wheels. Pay attention not to lose the Securing Caps.

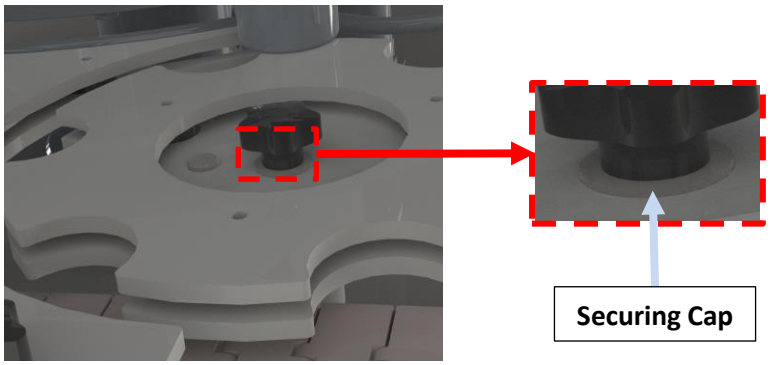


Figure 12-2 Star Wheel Securing Cap

This completes the procedure.

12.1.2 STAR WHEELS INSTALLATION

1. Line up the Star Wheels with the guiding pins.

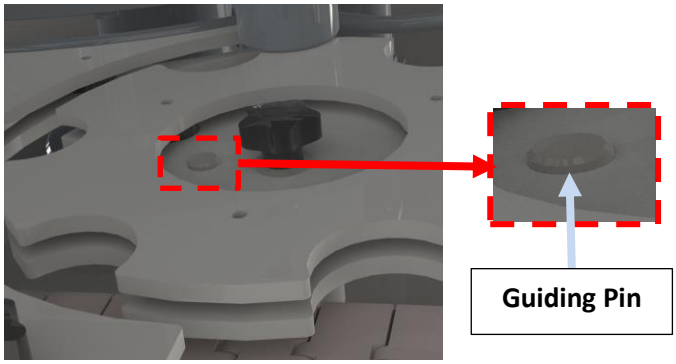


Figure 12-3 Star Wheel Guiding pin

2. Set the Star Wheels in place, place the Securing Caps, and install the Securing Knobs and Wing Nuts. Do not overtighten.
3. Place a cap on the Pick & Place

Figure 12-4 Manually Placing a Cap

4. Manually jog the Capper for the Closing Head to pick-up the cap.

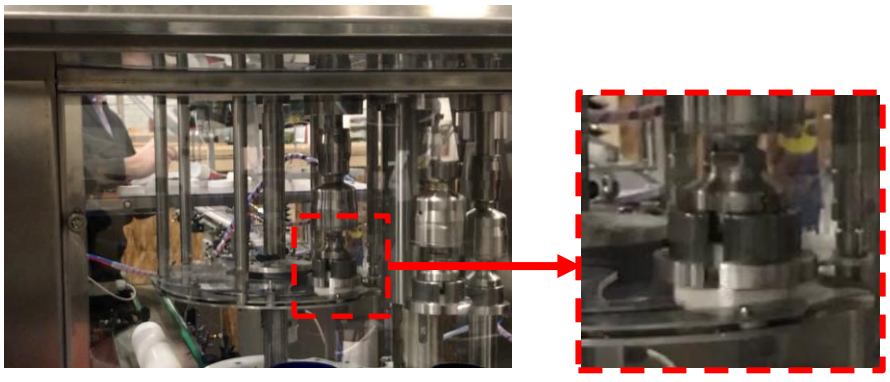


Figure 12-5 Picking Up the Cap

5. Keep jogging the machine until the Closing head reaches its lowest point at the back of the Capper.

Figure 12-6 Closing Head at its Lowest Position

6. Screw a container tight to the cap.

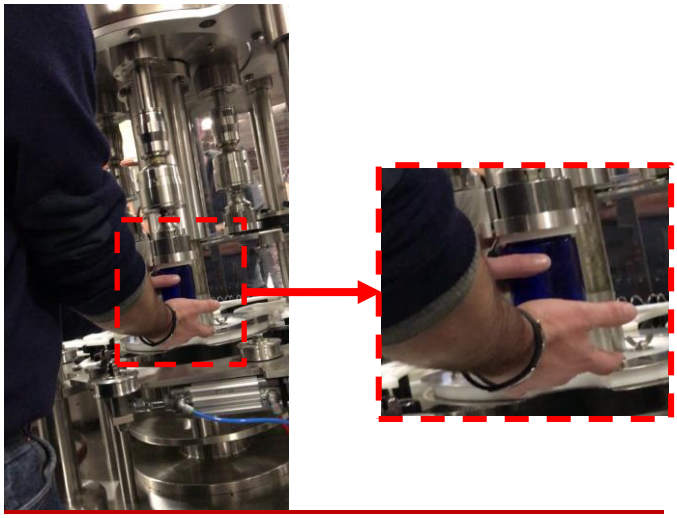


Figure 12-7 Screwing a Container to the Cap

7. Adjust the Turret height until the container bottom touches the Center Star Wheel transport plate.

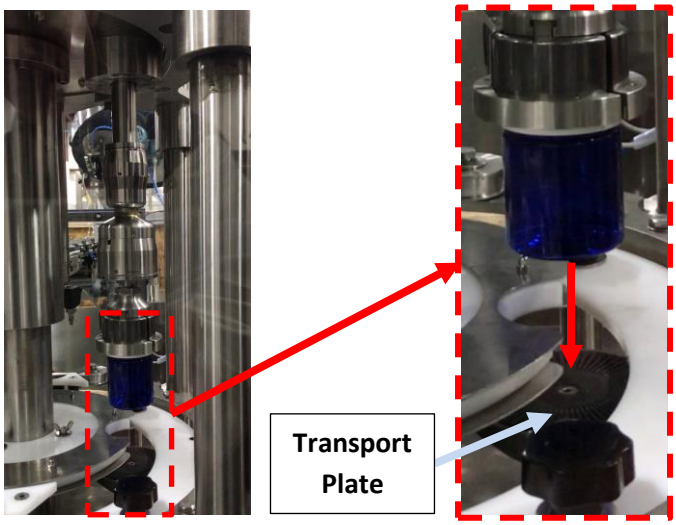


Figure 12-8 Lowering the Turret

8. **JOG** the machine to verify the Star Wheels were installed properly and that the Closing Head releases the container
9. Close the guards.
10. Release the E-Stop button.
11. Press the **RESET** button.
12. Place containers at the infeed.
13. Set the machine in **AUT.** mode and start normal production.

This completes the procedure.

12.2 Feed Screw Removal/Installation

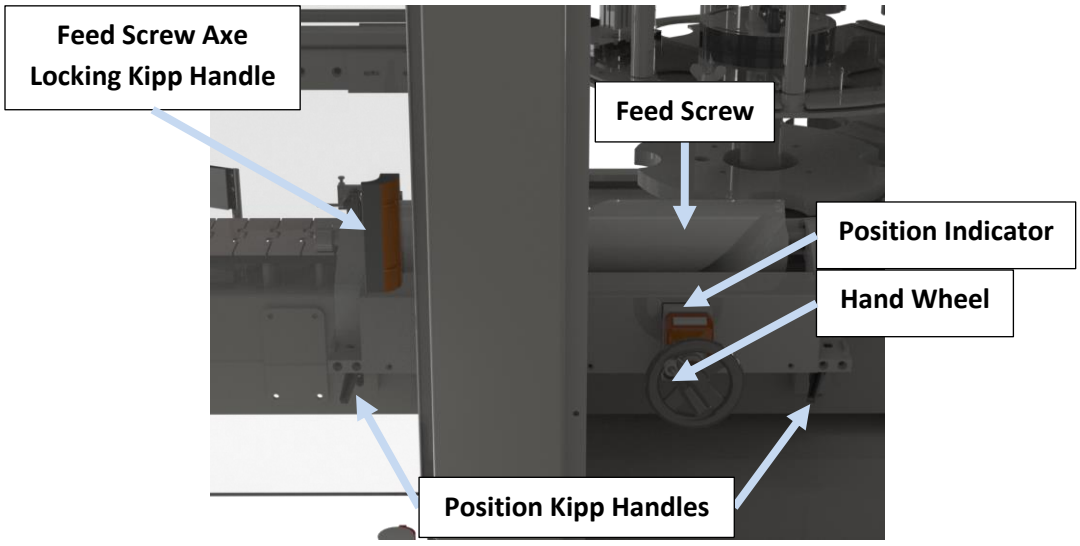


Figure 12-9 Feed Screw

12.2.1 FEED SCREW REMOVAL

1. Remove any containers from the infeed.
2. Set the machine in **MANUAL** mode and **JOG** the machine to empty all the remaining containers.
3. Stop the machine and press the E-Stop button.
4. Open the front guards.
5. Loosen the conveyor's front container guides knobs and push the guides all the way to the back.

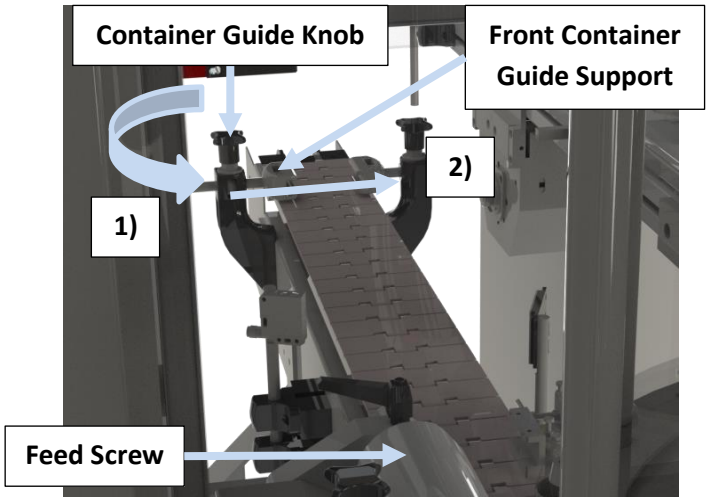


Figure 12-10 Container Guides Displacement

6. Loose the Position Kipp Handles.

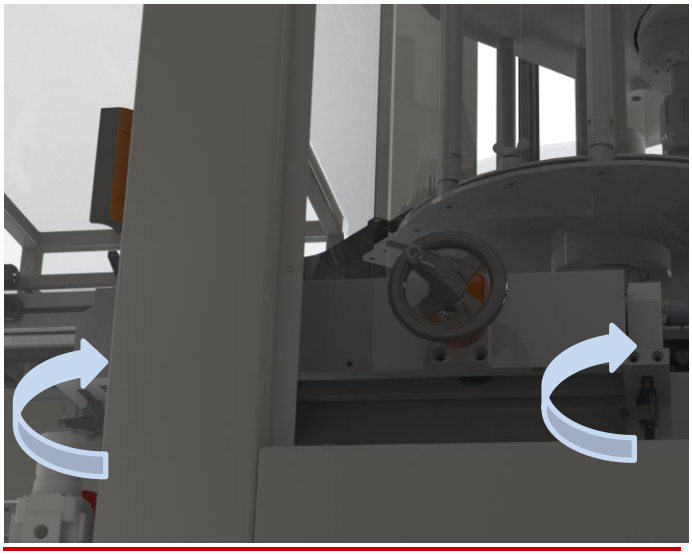


Figure 12-11 Position Kipp Handles

7. Rotate the Hand Wheel counterclockwise to bring the Screw to the front.

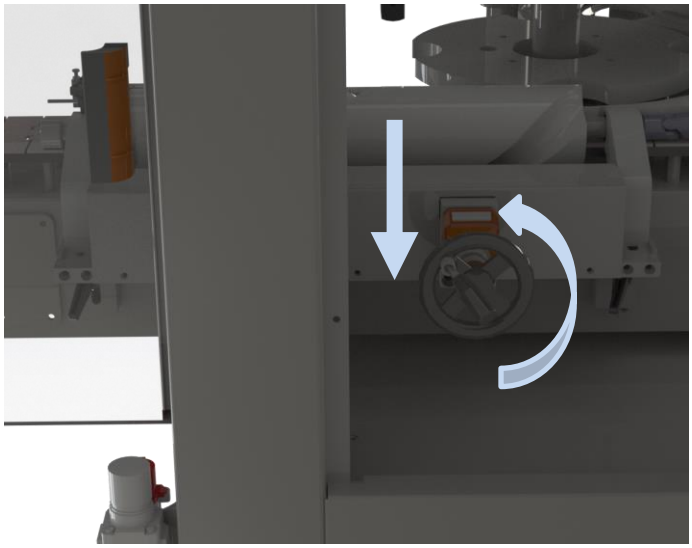


Figure 12-12 Bringing the Feed Screw to the Front

8. While holding the Feed Screw, loose the Feed Screw left shaft Locking Kipp Handle and pull the shaft to the left out from inside the Feed Screw.

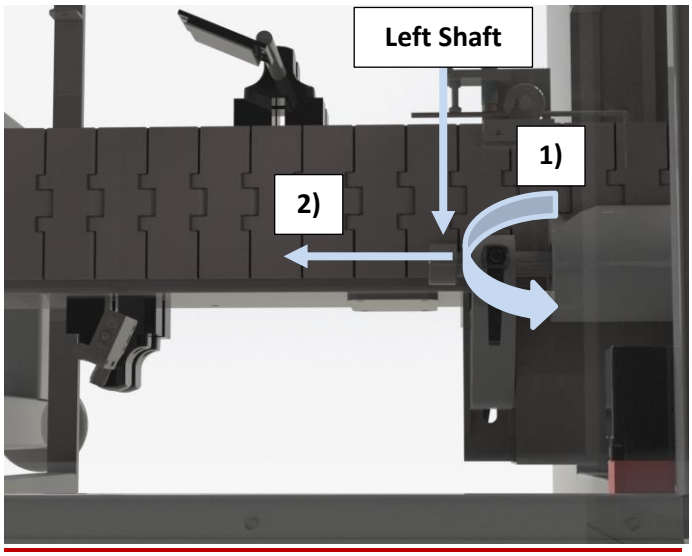


Figure 12-13 Removing the Left Shaft

9. Lift the Feed Screw by the Axe end and pull it away to the left.

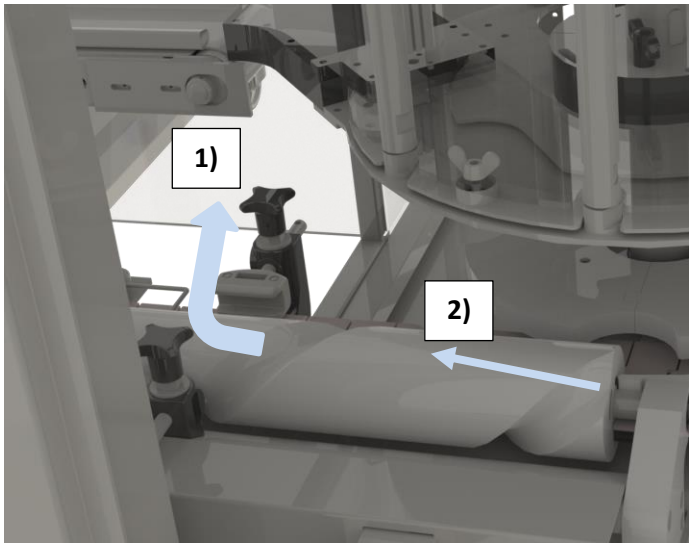


Figure 12-14 Removing the Feed Screw

This completes the procedure.

12.2.2 FEED SCREW INSTALLATION

1. Install the Feed Screw by inserting the right shaft inside the Feed Screw and lower the Feed Screw until it is aligned with the right shaft.

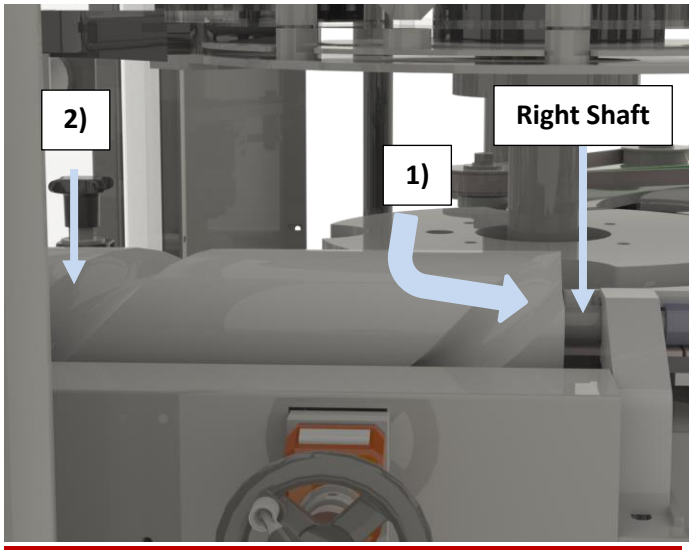


Figure 12-15 Installing the Feed Screw

2. Insert the left shaft inside the Feed Screw and lock its position with the Kipp Handle.

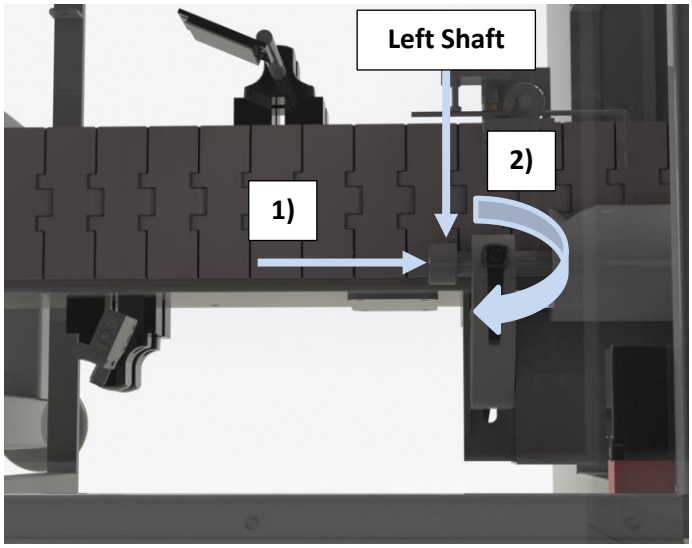


Figure 12-16 Securing the Left Shaft

3. Rotate the Hand Wheel clockwise to bring the Screw to the back, on top of the Conveyor Belt.

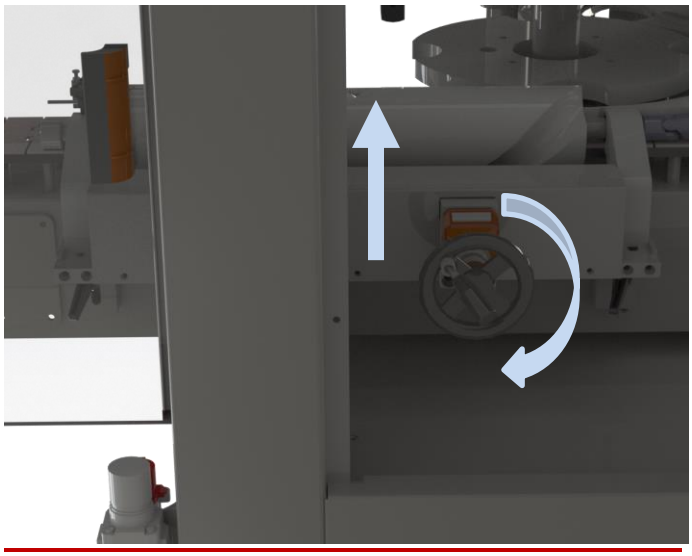


Figure 12-17 Bringing the Feed Screw Back Inline

4. Lock the Position Kipp Handles.

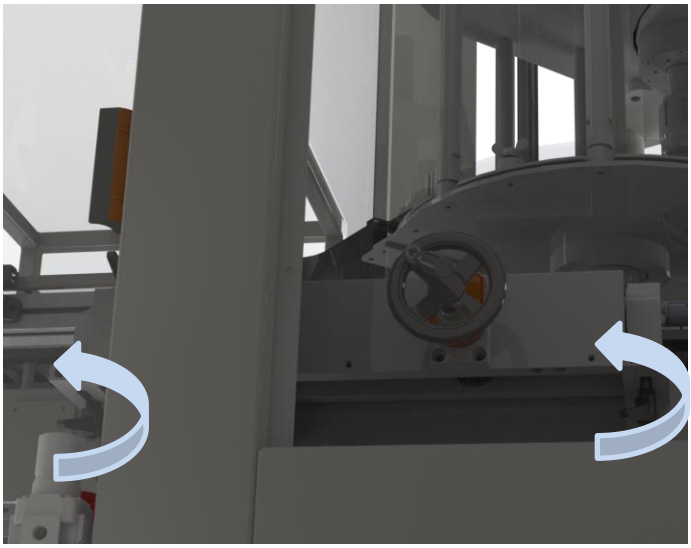


Figure 12-18 Position Kipp Handles Locking

5. Pull the conveyor's front container guides all the way to the front.

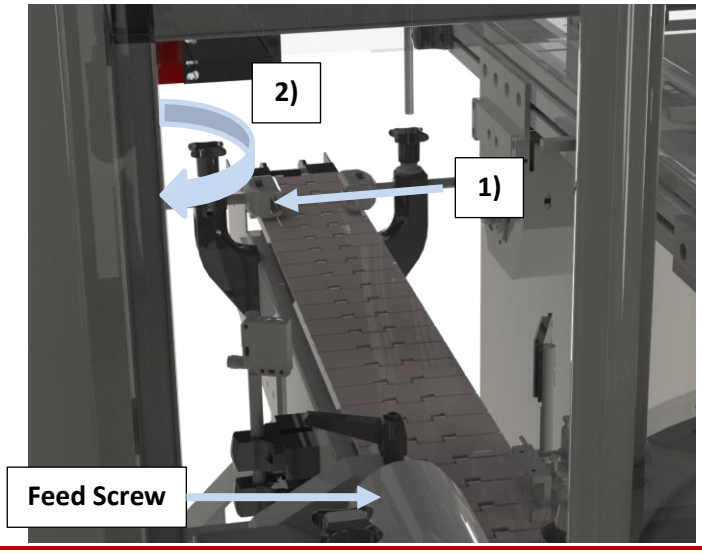


Figure 12-19 Container Guides Repositioning

6. Place containers between the Feed Screw and the Infeed Star Wheel and adjust the Feed Screw position with the Hand Wheel.
7. Lock the Position Kipp Handles
8. Close the front guards.
9. Release the E-Stop button.
10. Press the **RESET** button.
11. Place containers at the infeed.
12. Set the machine in **MANUAL** mode and **JOG** the machine to pass containers and make sure the Feed Screw was installed properly.
13. Set the machine in **AUT.** mode and start normal production.

This completes the procedure.

12.3 Capper Change Over

Follow these steps to perform a container format change over:

1. Remove any containers from the Infeed.
2. Stop the machine and press the E-Stop button.
3. Open the guards and remove caps from the Transfer Tunnel.
4. Close the guards.
5. Set the machine in **MANUAL** mode, access the ***HEIGHT*** screen and **JOG** the Central Turret all the way up.
6. Stop the machine and press the E-Stop button.
7. Open the guards.
8. Remove the Feed Screw (page 12-5).
9. Remove the Rear Guide.

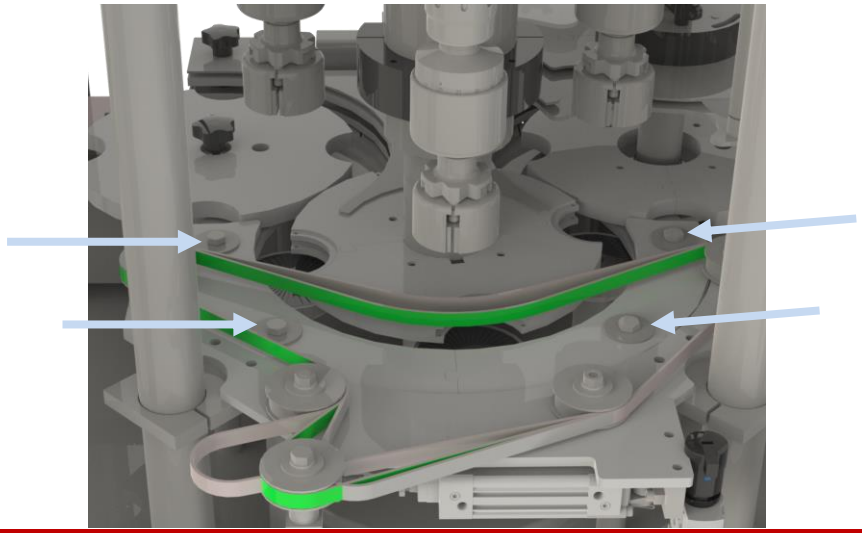


Figure 12-20 Rear Guide Removing

10. Remove the Infeed and Outfeed Star Wheels (page 12-1).
11. Remove the Front Guide.
12. Remove the Central Star Wheel.
13. Install the new Change Over parts in the reverse sequence (Central Star Wheel, Front Guide, Outfeed Star Wheels (page 12-2), Rear Guide, Feed Screw (page 12-8)).
14. Follow steps 3 to 13 of Section 12.1.2.

This completes the procedure.

12.4 Caps Rail Removal/Installation

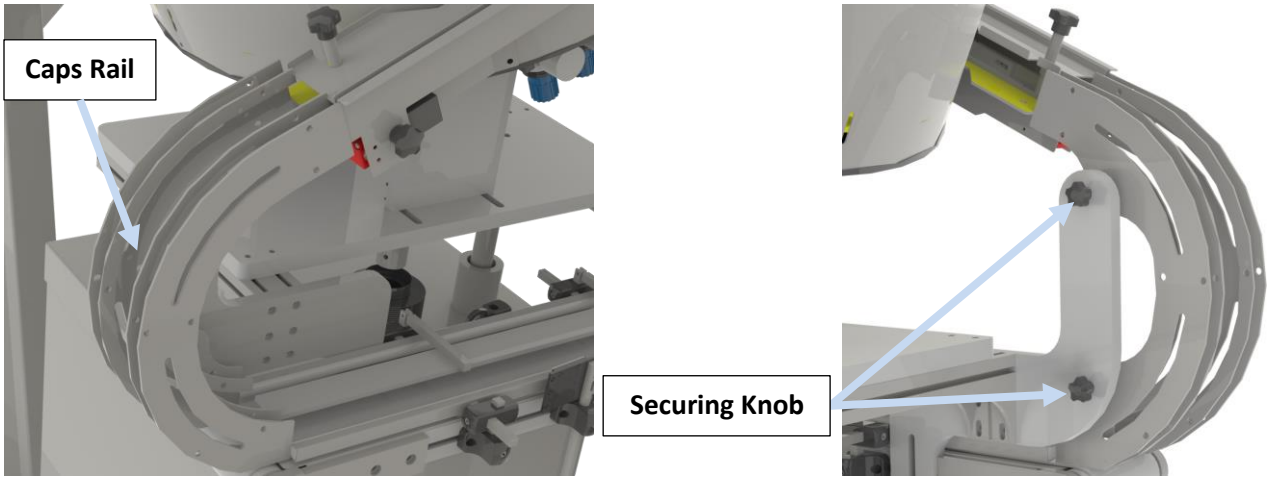


Figure 12-21 Caps Rail Removal/Installation

12.4.1 CAPS RAIL REMOVAL

1. Remove any containers from the Infeed.
2. Stop the machine and press the E-Stop button.
3. Loose the Securing Knobs.
4. While holding the Caps Rail, finish unscrewing the Securing Knobs, grab the Caps Rail and move it to a secure place.

This completes the procedure.

12.4.2 CAPS RAIL INSTALLATION

1. Secure the new Caps Rail by only starting the bottom Securing Knob.
2. Set the machine in **MANUAL** mode, access the **HEIGHT** screen and adjust the Caps Feeder height to match the new Caps Rail.
3. Start the top Securing Knob and secure the new Caps Rail.
4. Fill the Caps Tank with caps and **JOG** the Feeder to make sure caps are fed to the Rail and they glide down freely through it.

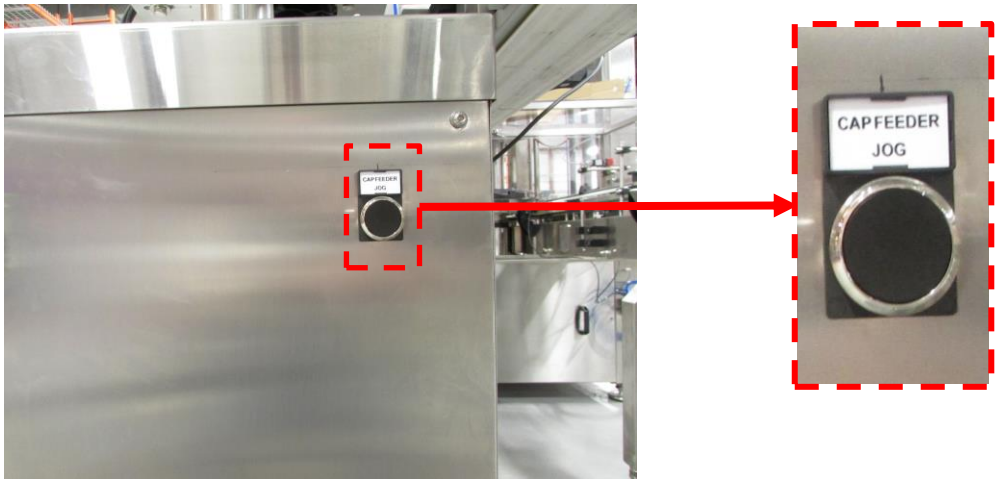


Figure 12-22 Caps Feeder Jog Button

5. Release the E-Stop button.
6. Press the **RESET** button.
7. Set the machine in **AUT.** mode and start normal production.

This completes the procedure.

12.5 Caps Feeder Change Over

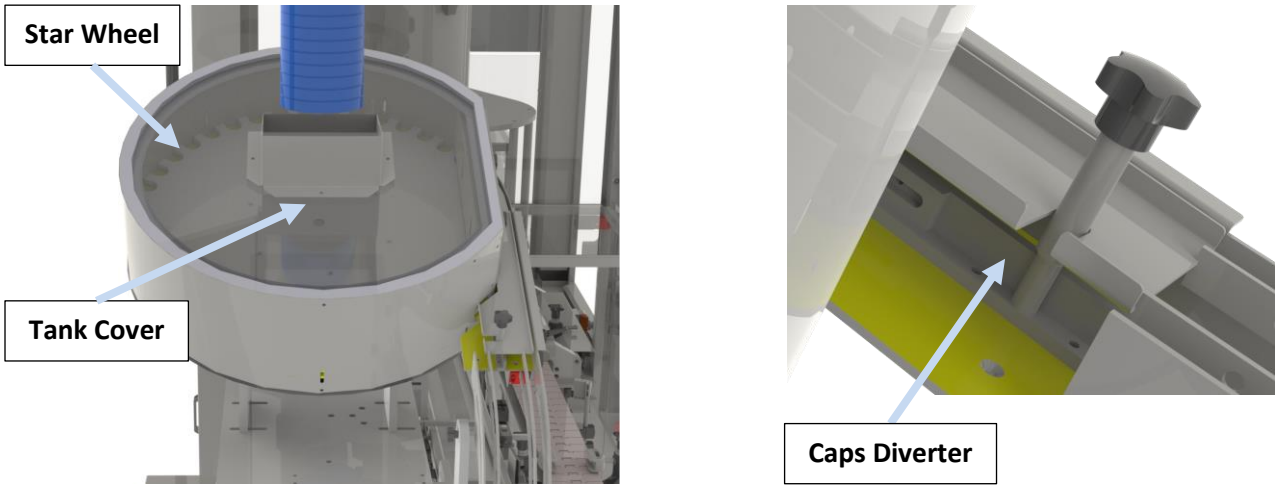


Figure 12-23 Caps Feeder Change Over

Follow these steps to perform a container format change over:

1. Stop the machine and set it in **MAN**.
2. Remove the Tank Cover.

Figure 12-24 Caps Feeder Tank Cover Removal

3. Remove any caps from the Feeder.
4. Unlatch the Star Wheel sections and remove them. Jog the Feeder as needed (Figure 12-22) to clear any section at the Tank's Outfeed.

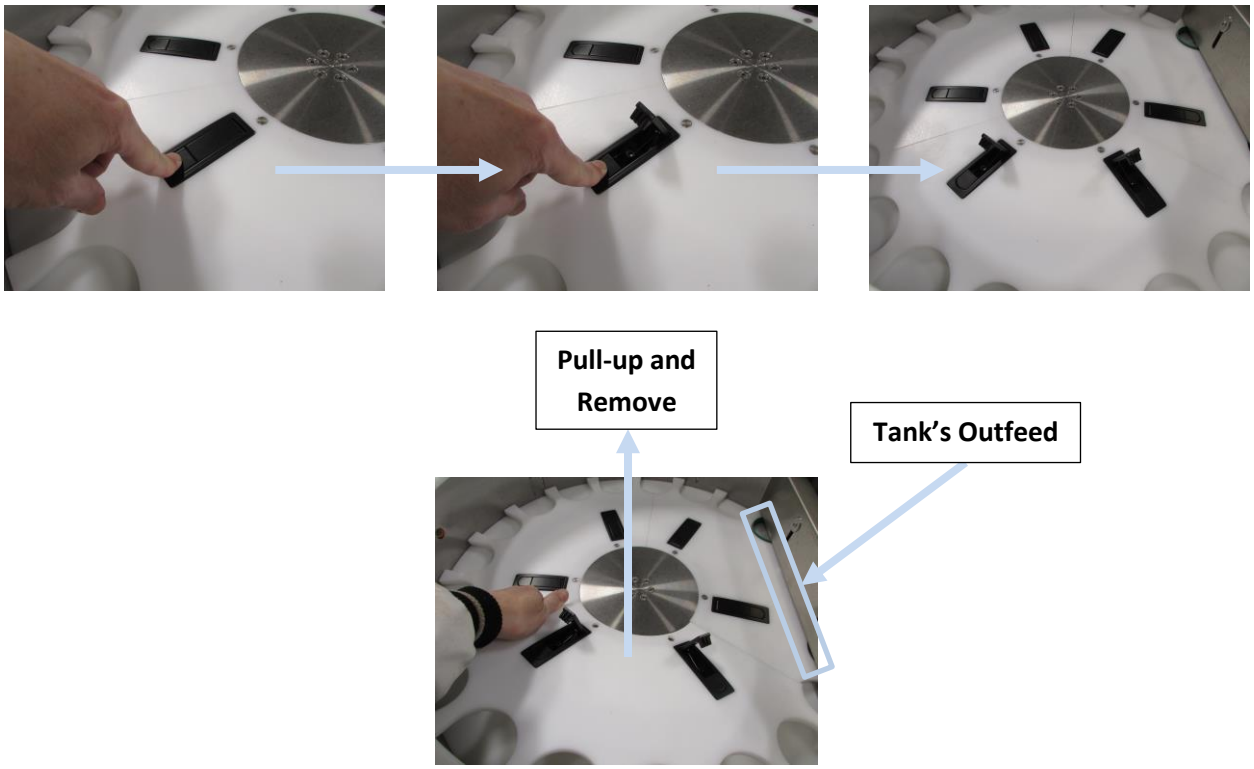


Figure 12-25 Removing the Caps Feeder Star Wheel

5. Remove the Outfeed Door Cover.
6. Remove the Caps Diverter if needed.

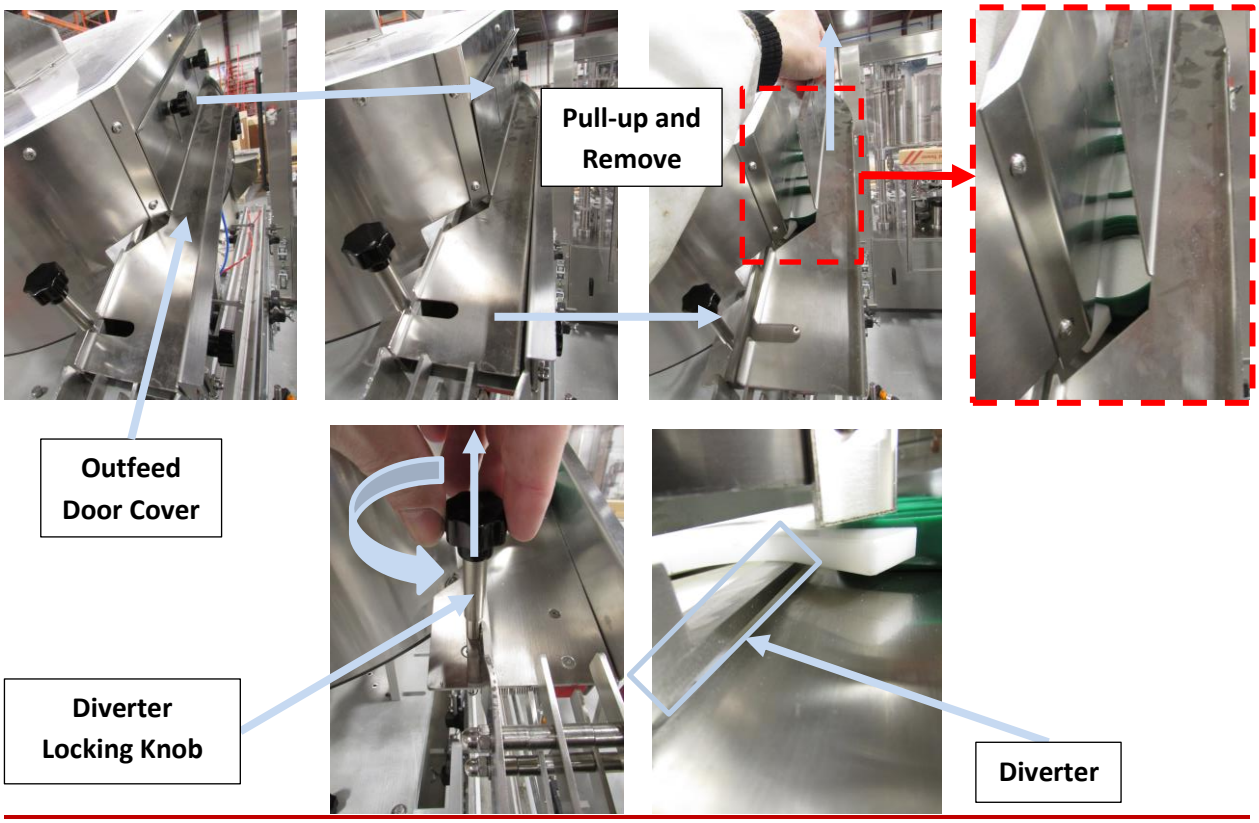


Figure 12-26 Removing the Caps Feeder Star Wheel

7. Install the new Caps Diverter (if previously removed).
8. Line-up the new Star Wheel Sections with their guiding pins and install them. Jog the Feeder as needed (Figure 12-22).

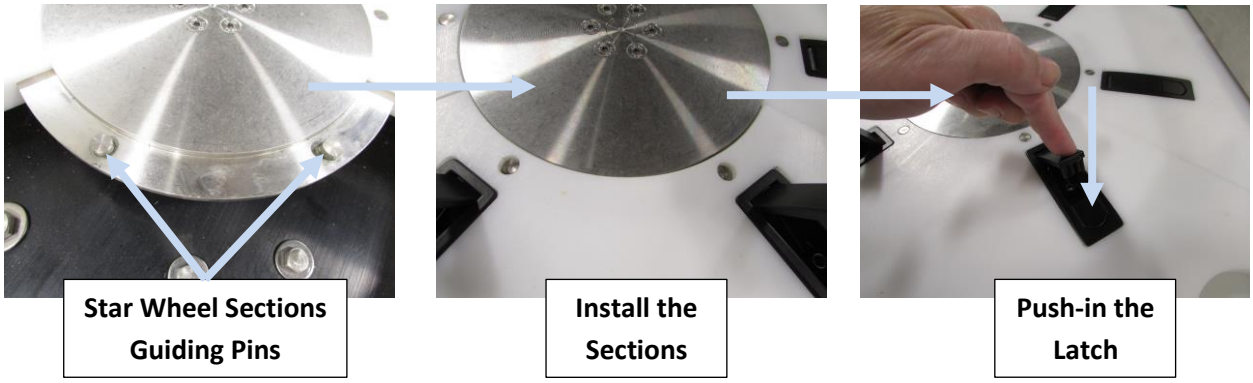


Figure 12-27 Installing the Caps Feeder Star Wheel

9. Fill caps to the Feeder and jog the machine to make sure caps are being properly dislodged from the Star Wheel pockets without triggering the Exit Door safety.

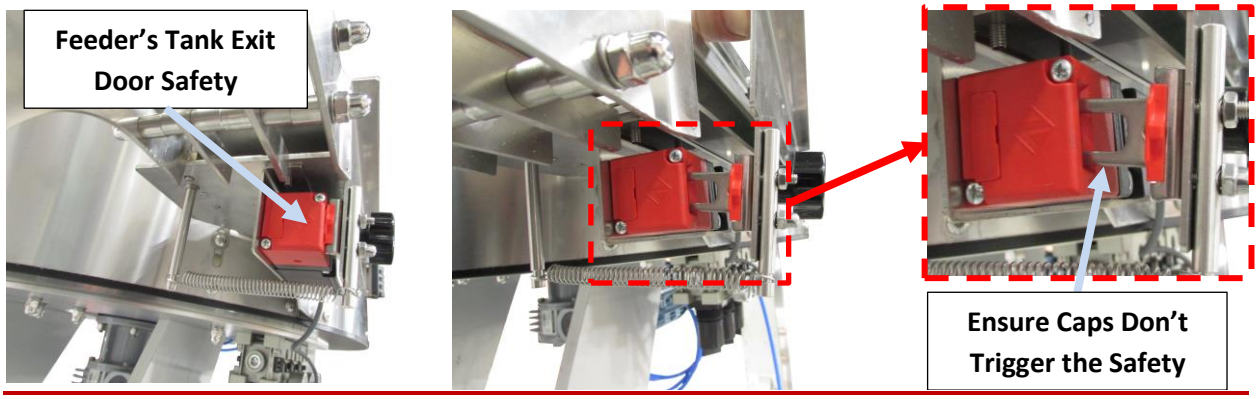


Figure 12-28 Caps Feeder's Tank Exit Door Safety

10. Install the Outfeed Door Cover. Let the cover touch the caps, rim and lift it approximately +1mm to leave space needed for the passage of the caps. Secure the door with the knobs.
11. Jog the Feeder (Figure 12-22) to ensure caps are exiting the Feeder's Tank into the Caps Rail.
12. Replace the Tank Cover.
13. Line-up the Elevator's Chute with the cover's opening.
14. Set the machine in **AUTO** and start normal production.

This completes the procedure.