NITA
SMART LABELING SYSTEMS

SynerG XP series

OPERATOR AND PARTS MANUAL

The SynerG system is a packaged with one or several labeling heads; a conveyor and several options such as a top hold down mechanism, wrap station, container spacing belt, orienting device, tail gates and/or wipe gates.

HMI Password: 12345678
Adv. Settings: 222183600

Some of the options described in this manual may not apply to your equipment.

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1 MANUAL PREFACE – Machine identification

Thank you for choosing NITA. We have designed and manufactured this equipment with the upmost pride and care ensuring you the absolute best quality, maximum versatility and reliability

GENERAL DESCRIPTION OF THE EQUIPMENT

The AE612MKII labeling head included in this SynerG XP model is the product of many years of research and development. Its compact and robust design truly accentuates its versatility in a multitude of applications. We guarantee constant precision and repeatability in a virtually maintenance-free operation. Being built with high grade anodized aluminum and stainless steel ensures that it provides multiple long-lasting benefits in a hostile and humid environment (please note: it is NOT considered a WASH DOWN-friendly system). Its open design, controlled by a servo motor and drive as well as an HMI touch screen operator interface, offers great flexibility suited to handling the most demanding labeling applications.

WHAT IS A LABELING SYSTEM?

Found in almost every sector of manufacturing, a labeling system is used to apply pressure sensitive labels onto boxes, cartons and plastic and glass containers. A labeling system is generally a stand-alone machine and does not require the use of a computer or label software program in order to perform its operations. It is typically built to automatically dispense one label at a time. Using a variety of different media roll widths the NITA system can run to the maximum dispensing speed of 1570 inches / minute and conveying speed of 130 feet/minute. Depending on the application the system will typically receive a signal from a product sensor to allow the dispensing of a label onto a specific product

This equipment is intended to be used only as described in this document. NITA Labeling Equipment Inc. cannot be held responsible for the improper use or functioning of non-described functions of this machinery. Liability for any personal injury, loss of production or revenues, or property damage occasioned by the use of this manual in effect maintenance; operation, or repair of the equipment is in no way assumed by NITA Labeling Equipment Inc. Anyone using a procedure not recommended by the end user should first completely satisfy himself/herself that personal safety and equipment integrity will not be jeopardized in the method selected.

This manual will provide operating instructions, parts listing and schematics. The information contained in this manual will help the user in his/her operations, troubleshooting and maintaining the machine in good operating conditions. Information, illustrations and specifications contained in this manual are based on the latest product information available at the time of this manual release. Nita Labeling Equipment Inc. reserves the right to alter and substitute information contained herein at any time.

It is also possible that you have received a different variation of this equipment, with several different options. This is normal since the same system is used in our, front & back, camera orientation, pail, tamper evident and wrap around and top lid labeling systems. Some pictures used in this manual may not totally reflect your configuration, although the labeling is completely the same.

2 CERTIFICATION APPROVALS

All the NITA systems mentioned in this manual conform to the following certification ensuring quality standards.

Standard 73 from Underwriter's Laboratory (UL) Standard C22.2 no 68 from Canadian Standards Association, (CSA) Tests and certification have been executed and allotted by UL and CSA mandated firm by the name of Intertek and bare the certification markings ETL. FILE IDENTIFICATION NUMBER: 318227

Intertek

AUTHORIZATION TO MARK

This authorizes the application of the Certification Mark(s) shown below to the models described in the Product(s) Covered section when made in accordance with the conditions set forth in the Certification Agreement and Listing Report. This authorization also applies to multiple listee model(s) identified on the correlation page of the Listing Report.

This document is the property of Intertek Testing Services and is not transferable. The certification mark(s) may be applied only at the location of the Party Authorized To Apply Mark.

Applicant:	Nita Labeling Equipment Inc.	**Manufacturer:**	Nita Labeling Equipment Inc.
Address:	1051, rue Le Viger Lachenaie, Qc J6W 6B6	**Address:**	1051, rue Le Viger Lachenaie, Qc J6W 6B6
Country:	Canada	**Country:**	Canada
Contact:	Mr. Luc Harvey	**Contact:**	Mr. Luc Harvey
Phone:	(450) 961-4000	**Phone:**	(450) 961-4000
FAX:	(450) 961-4240	**FAX:**	(450) 961-4240
Email:	lharvey@nita.ca	**Email:**	lharvey@nita.ca

Party Authorized To Apply Mark: Same as Manufacturer
Report Issuing Office: Lachine, Quebec, Canada

K.F. July 16, 2009

Control Number: _____ **Authorized by:** _____
William T. Starr, Certification Manager

This document supersedes all previous Authorizations to Mark for the noted Report Number.

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Intertek Testing Services NA Inc.
165 Main Street, Cortland, NY 13045
Telephone 800-345-3851 or 607-753-6711 Fax 607-756-6699

Standard(s):	UL 73 - Motor-Operated Appliances-Ninth Edition; Revisions Through and Including 12/03/2008 CSA C22.2 no. 68-92 (R2004) - Motor-Operated Appliances
Product:	Labeling Systems
Models:	XP with suffix, JOUST, SS, Lance, AE612-MKII and ST-616

ATM for Report 3176075MTL-001 Page 1 of 1 ATM Issued: _____
ED 8.9 4 (1-Dec-08) Mandatory

3 WARNINGS AND CAUTION INFORMATION

Machine use disclaimer

This equipment must NOT be used for the purposes other than for which it has been supplied to the customer under the purchase agreement and reflected in the quotation provided to the distributor or end user prior to purchase. Failure to use the equipment for the purpose described in this manual nullifies any warranty claim or injury claim that could arise as a result.

Safety

Be certain that the operators and maintenance personnel read this manual before attempting to operate perform maintenance or service to this equipment. Failure to follow these instructions could possibly result in serious personal injury, and cause damage to the equipment, or its components. Recognize safety symbols, words, and labels. Warning and Safety Instructions appearing in this manual are not meant to cover all possible conditions and situations that can occur. Common sense, caution, and care must always.

The SYNERG XP system is engineered to feed and apply labels on your products. In designing this device, NITA valued personal safety; however we would like to draw your attention to the following safety acknowledgments.

⚠	**WARNING**	Hazards or unsafe practices, which COULD result in severe personal injury or death
⚠	**CAUTION**	Hazards or unsafe practices, which COULD result in minor injury
⚠	**CAUTION**	The presence of safety systems in these units does not exempt the operators to act cautiously, avoiding behaviours that could endanger their health or the equipment. These models are engineered to feed and apply labels on your products. In designing this device, NITA valued personal safety; however we would like to draw your attention to the following safety acknowledgments: • Operators should know the basic operations and setup procedures before operating this equipment. • Safe operations should be maintained at all times. • Know the location of E-stops and power switches prior to operating machinery such as this.
⚠	**WARNING**	To reduce risk of fire, electrocution or other personal injury when operating or maintaining the SynerG system, follow basic safety precaution, including the following: • This equipment must have an operator attending the machine at all times to monitor the operations at all times. Do NOT leave this equipment un-attended during maintenance or perform any maintenance on the equipment unless the E-Stop condition has been activated or power turned off. • The electrical power to this device is 240 Vac, 1 Phase, 60 HZ, and 10 Amps. While installing, make sure the electrical cord (supplied without

		a connector plug) is properly configured and connected by a qualified electrical technician. • Do not bypass any of the safety circuits or safety features designed into this equipment. • ALWAYS turn off the power before performing any repairs. • The control box door must always be closed as well as the stainless steel back panel cover of the label head. Do NOT remove this back cover label when machine is under tension (plugged in). • The electrical connection must be done through the end user's electrical panel directly without using a quick-connect or twist lock plug.
⚠	**CAUTION**	To reduce risk of fire, electrocution or other personal injury when operating or maintaining the SynerG system, follow basic safety precaution, including the following: • This device is built to perform in humid conditions, but must not be pressure washed. In case of wash down conditions, it is recommended to cover with a plastic wrapping or Nita's optional head cover. It is always best to remove the system from the wash down environment temporarily to return it afterwards. The use of compressed air and wiping down the device is the recommended cleaning method. • This equipment is designed to function in automatic mode. Do NOT stand, sit or allow any personnel to be within reach of tamp cylinder activation.(if so equipped) • Report any malfunctions, or problems with the equipment to qualified maintenance personnel for repair or adjustments that may be required. • For devices equipped with a pneumatic air cylinder, you must first shut-off the air supply to the device in order to change label roll (or perform all set-up operations).

For systems containing conveyors, you must be vigilant with loose clothing or bodily parts as they can get caught in the conveyor's belt or chains as direct injury or death can incur. DO NOT use the conveyor as a working platform or walkway.

TUCK IN ANY LOOSE CLOTHING. DO NOT WEAR TIES, PENDANTS, JEWLERY OR ANY OTHER ARTICLE OF CLOTHING OR ACCESSORY THAT MAY GET CAUGHT ON ANY PORTION OF THE SYSTEM

4 PRODUCT INTRODUCTION

The SynerG XP system is a conveyor with many options packaged together to make a complete system. Each additional component will be described in this manual. With the appropriate settings, the XP100-200 can fulfill all your labeling requirements. The XP100-200 can accept cylindrical as well as parallel lipped products in a tapered or non-tapered form. In its normal operation mode, the XP100-200 can apply labels on one side or offer 360 degree of freedom around a container; it can label multiple panels of the container as well as cater to front & back applications.

The XP100-200 is an assembly of 3 major components

- Conveyor
- Wipe-on label applicator
- HMI and electrical cabinet

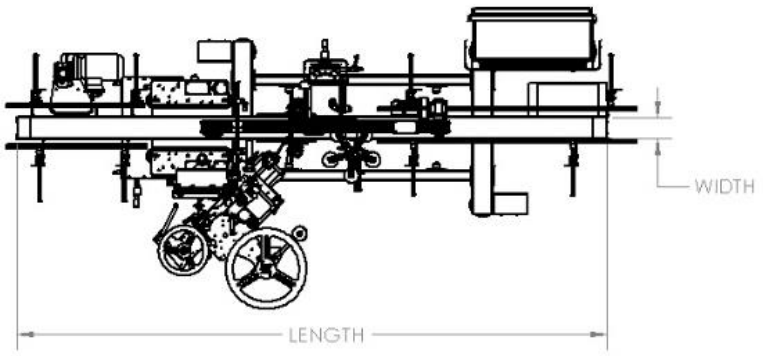
Four different models are available

- XP100 Conveyor with one labeling head
- XP100-T Conveyor with one labeling head and top hold down belt
- XP200 Conveyor with two labeling heads
- XP200-T Conveyor with two labeling heads and top hold down belt

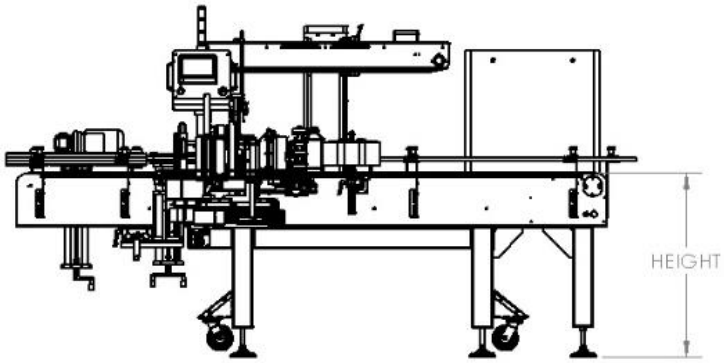
Physical dimensions	**XP-100 series**	**XP-200 series**
Length foot print (conveyor)	6' Long x 4" Wide	
	8' Long x 4" Wide	
	10' Long x 4" Wide	
	12' Long x 4" Wide	
	8' Long x 12" Wide	
	10' Long x 12" Wide	
	12' Long x 12" Wide	
Height with HMI pole mount	67" to 83"	
Power requirements	200-240 VAC, 10 Amp, 50/60 Hz, 1 Phase	
Air requirements	With Tamp blow, wipe gate, prism, air assist = 80 Psi / 3 scfm	

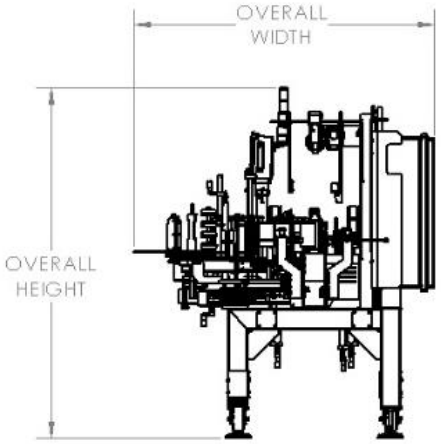
Dimensions:

XP100 – XP100T:

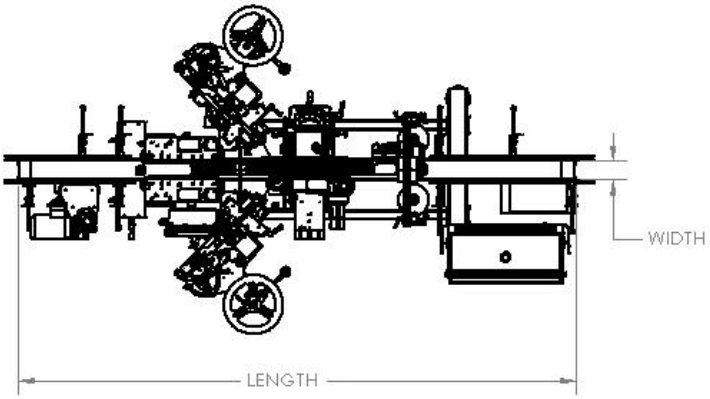


SynerG XP-100 CARACTERISTICS					
WIDTH	LENGTH NOMINAL	LENGTH	OVERALL WIDTH	HEIGHT	OVERALL HEIGHT
4 in	6 FEET	74-1/4 in	60-1/4 in	34in - 40in	67in - 83in
	8 FEET	94-1/4 in			
	10 FEET	118-1/4 in			
	12 FEET	142-1/4 in			
12 in	8 FEET	94-1/4 in	68-1/4 in		
	10 FEET	118-1/4 in			
	12 FEET	142-1/4 in			

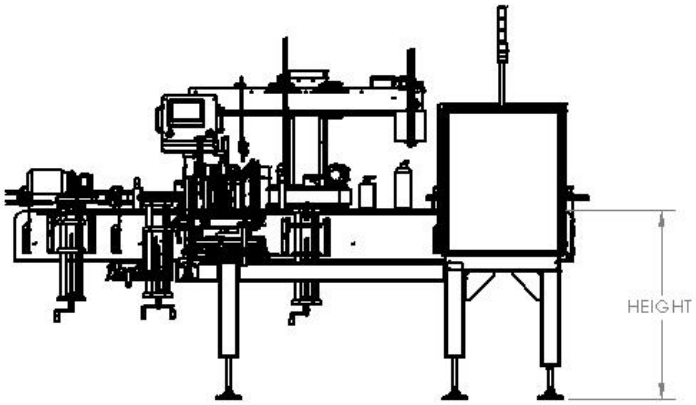


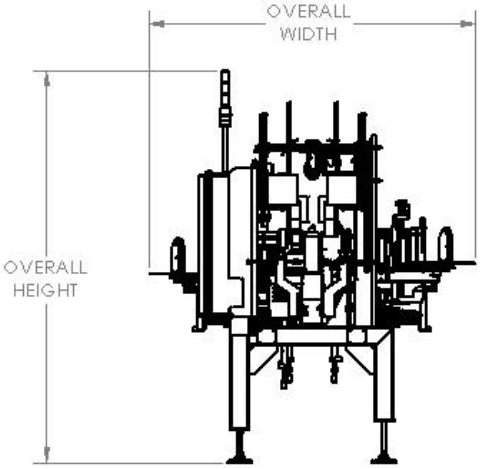


XP200 – XP200T:

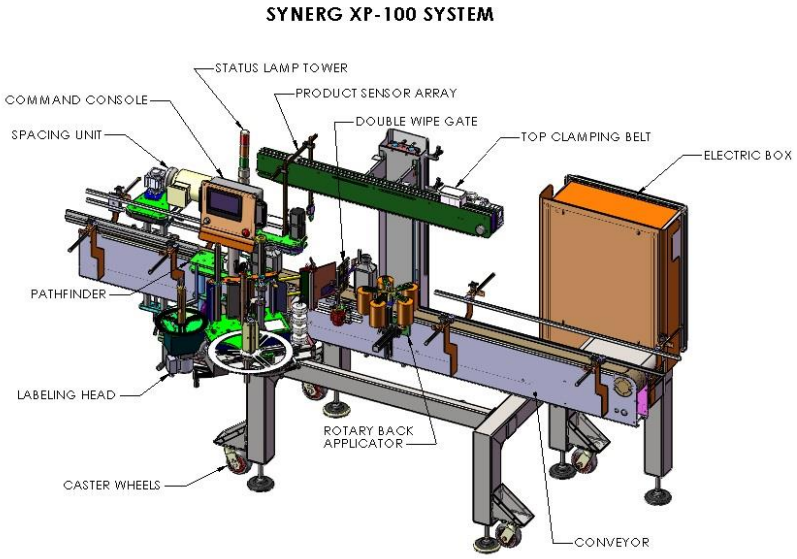


SynerG XP-200 CARACTERISTICS					
WIDTH	LENGTH NOMINAL	LENGTH	OVERALL WIDTH	HEIGHT	OVERALL HEIGHT
4 in	6 FEET	74-1/4 in	69-1/2 in	34in - 40in	67in - 83in
	8 FEET	94-1/4 in			
	10 FEET	118-1/4 in			
	12 FEET	142-1/4 in			
12 in	8 FEET	94-1/4 in	77-1/2 in		
	10 FEET	118-1/4 in			
	12 FEET	142-1/4 in			

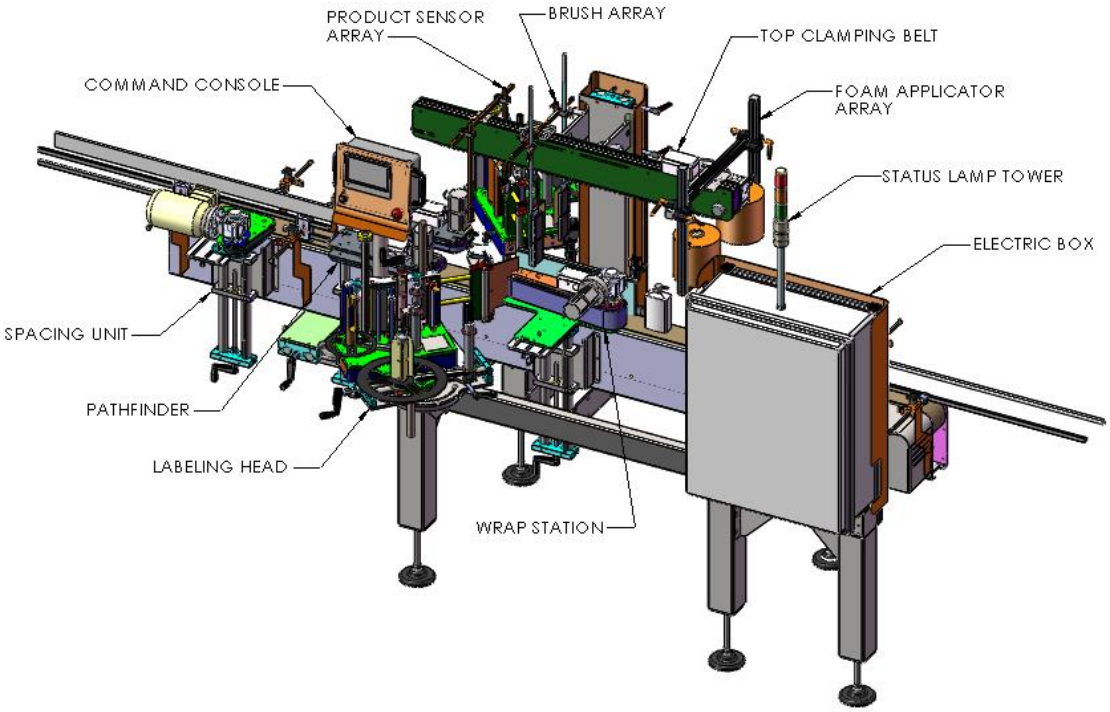




Bird's eye view



SYNERG XP-200 SYSTEM



5 SHIPMENT RECEPTION (uncrating)

For shipping purposes, a half crate is used. This avoids any damage to the device as well as protects the adjustment settings allowing for a very stable product once installed in its final destination.

The crate is generally pop-nailed together and can be taken apart by using a simple hammer or a nail crowbar. Proceed in removing the side wood panels from the crate and work your way inward.

⚠	**WARNING**	Always be vigilant while using any tools as they can result in bodily injury.

The SynerG was carefully packaged and protected prior to transportation. On reception of the machine, a complete visual inspection should be done in order to detect any apparent damage before proceeding with the equipment power up.

If any anomaly is detected, verify if the packaging/crating shows apparent damage. If it is the case, please contact the transporter right away (it is always a good idea to take pictures of the damages).

After the visual inspection is done, proceed with the un-packaging of the SynerG. The SynerG should be installed on a level floor with **200 - 240Vac, 1 phase, 60 Hz, 10 amps** and compressed air 80 PSI available in proximity.

Ensure the SynerG is perfectly level to the ground. If necessary, the level of the SynerG can be adjusted with the adjustable legs located at the extremities of the frame.

Once the SynerG system is perfectly levelled, you can connect the power (200 - 240 vac) and the compressed air (80 PSI).

To turn power ON or OFF, simply turn the main handle power switch on the electrical panel (as shown here)

6 SYSTEM SETUP

This equipment can accommodate many variations of containers on the market. There are adjustable components on this machine that allows the operator to effectively make changeovers. The proper adjustments are described in the following pages.

6.1 MAIN CONTROL PANEL with HMI Touch Screen

The main control panel is a HMI (touch screen) controller and appears such as the picture below shown below.

The HMI panel allows the user to switch between manually and automatically controlling the speeds and all peripheral functions of the equipment.

6.2 Labeling Head:

6.2.1 Loading & unloading the label stock roll

⚠	**CAUTION**	To avoid injuries, you must keep the unit in MANUAL mode!

Look carefully at the diagram and follow the threading procedures indicated below.

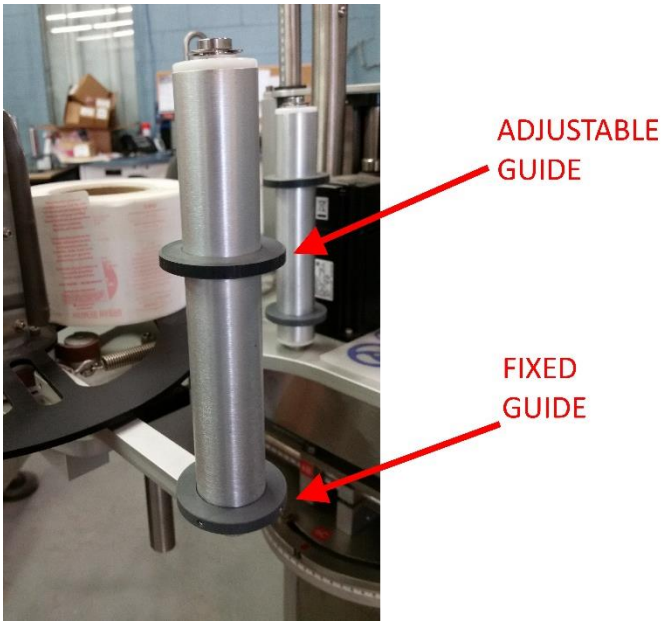
You will also find the threading diagram directly on the Label applicator head as well as a quick reference

1) Place the label stock roll on the label support cylinder. Make sure that the stock roll is well secured

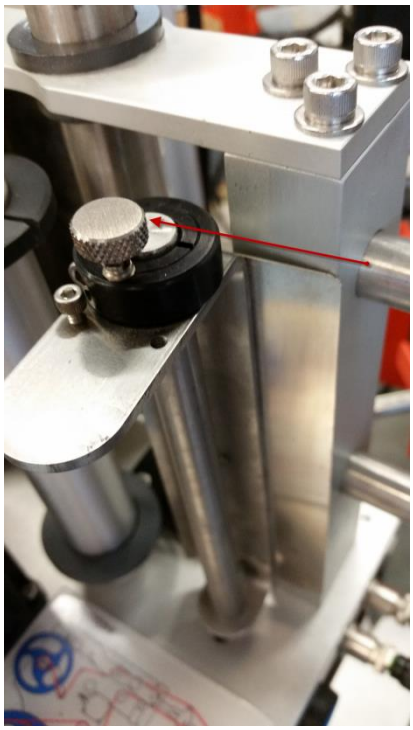
2) Pull approximately 36 inches of stock from label stock roll.

3) Follow the webbing diagram as shown in this manual or on the ID plate of the device itself.

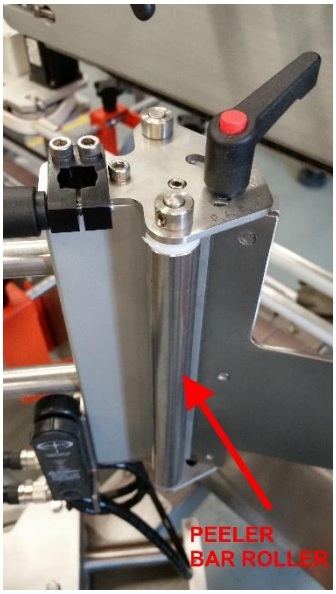
4) For different label widths, slide the guides on the rollers to avoid label swirling. Do not move the guides closest to the main plate, these are the zero point.



5) Release the spring-loaded tension plate by gently pulling the lock.



6) Feed the label stock under the peeler bar rollers



7) Release the pressure on the feed roll by pulling the door and then feed the label stock. Close the door when done.

8) Wind the label stock on the re-winder and lock it in place with the u-shaped hook.

9) Loading and unloading the re-winder

Release the u shaped pin by simply turning counter clockwise, gently pull away at the u-pin and remove waste. To reload the pin, place the pin into slot with the flat portion of pin guided throughout the core, and simply twist clock wise into rounded slot to lock down.

PRACTICAL HINTS:

Set the machine in manual mode, this will avoid any undesired signals from the product sensor.

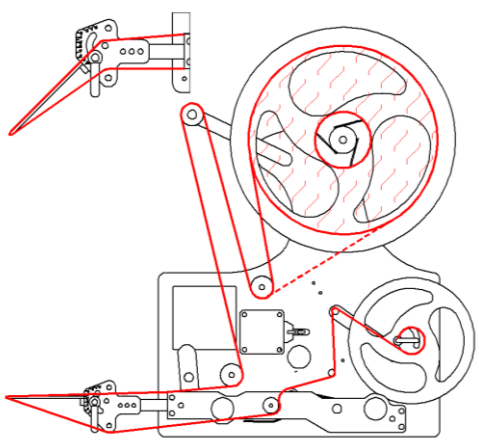
To avoid labels from sticking to the drive roll, **do not override label on the peel bar**.

Turn CCW and gently pull the hook to remove the waste on the re-winder roll

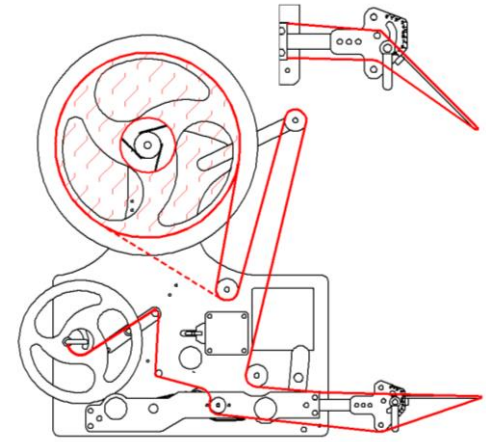
Label threading and machine components

Look carefully at the diagram and follow the threading procedures indicated below. You will also find the threading diagram directly on the Label applicator head as a quick reference.

AE612MKII

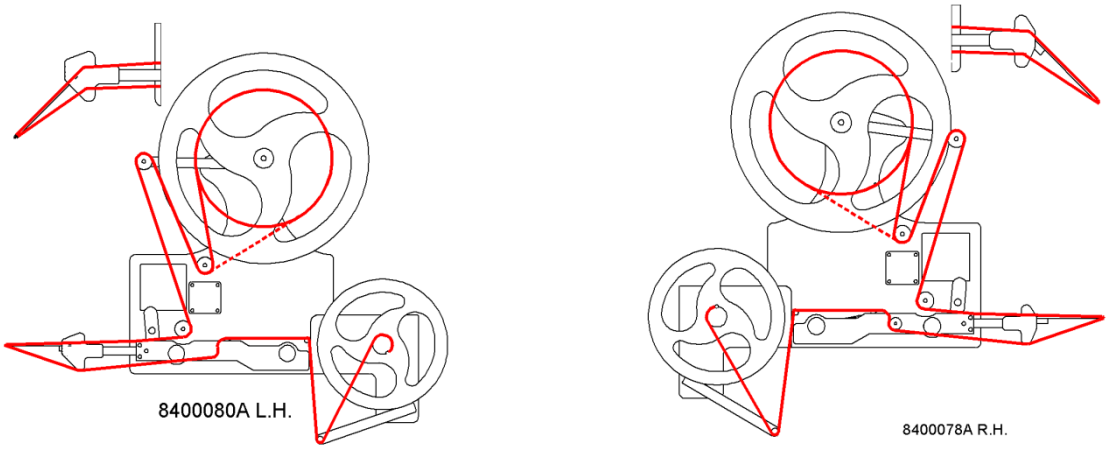


8400044C L.H.



8400045C R.H.

AE616MKII



6.2.2 Connectivity and labeler head manual feed control button

On the side of the labeling head you will find:

A manual feed button (which is also found on the HMI touch screen). Note: the system must be set to Manual mode on the HMI in order for this button to function. It will not work in Auto mode.

Two inputs are also present. One is for the gap sensor which detects the GAP between the labels and provides proper dispensing of labels. This may also be a sensor that can read black marks. The other input is for the product sensor.

6.2.3 Setting the Label GAP sensor

6.2.3.1 Standard GAP sensor – for Opaque labels Tritronic model # LER

Normal Label Opacity Autoset™ Button

This category includes most paper or metallic film labels adhering to paper or transparent backing materials. To implement the one button Autoset™ routine, utilize the external alignment guides to position the gap between labels in line with the dot shown in the center of the detection zone.

Then push the Autoset™ button marked "Normal". An alternative set up procedure would be to remove a label and the push the "Normal" Autoset™ button.

This is why we recommend setting up the sensor with the actual "gap" between the labels properly positioned. On rare occasions, when the light is unable to penetrate the backing materials, both the red and green LED indicators will blink four times. When this indication occurs, the sensor will be unable to detect the presence of the labels.

Translucent Label Opacity Autoset™ Button

This category includes translucent labels adhering to transparent backing materials. This sensor can detect transparent labels adhering to transparent backing materials. The question is how close to transparent can the labels be and still be detected? There is no definitive answer to that question. Trials on every stock is mandatory in advance of application.

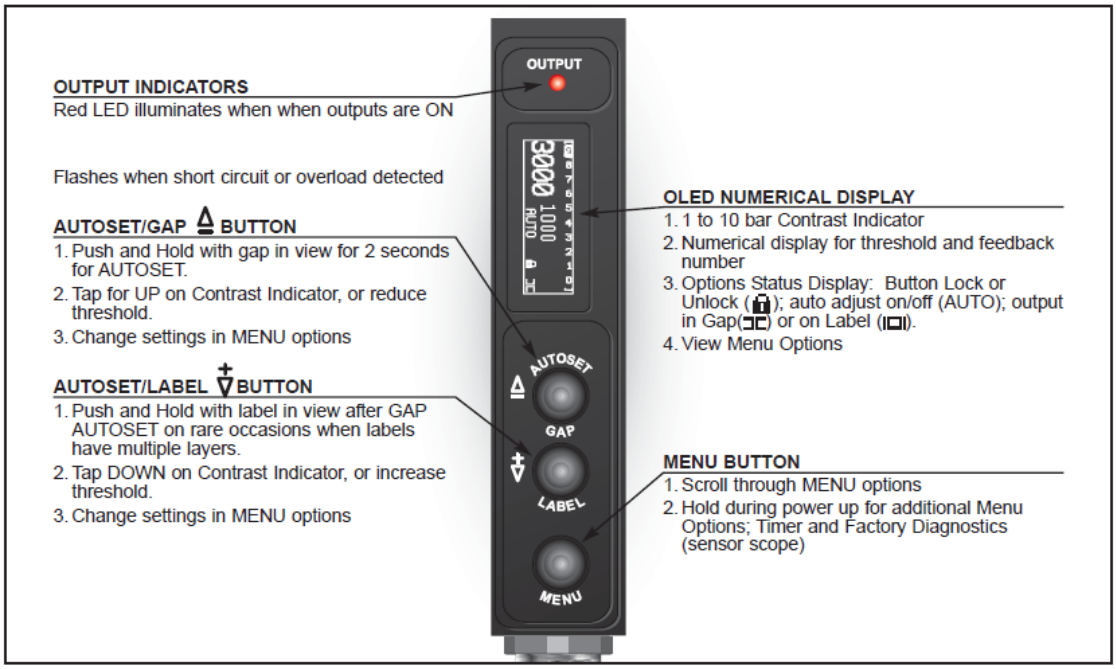
To determine if detection of a translucent label adhering to transparent backing material is to try the following:

Autoset™ procedure: First utilize the external alignment guides to position the gap between labels in line with the dot shown in the center of the detection zone. Then, push the Autoset™ button marked "Translucent". The next step is to move the web so that the translucent label goes in and out of the light beam. If detection is possible, the red LED output indicator should go on when the label passes through the detection zone.

INVERT OUTPUT: The status of the red LED and output transistors can be inverted by pressing both buttons simultaneously. When the output status has been inverted, the red LED and the output transistors **will turn off when the label comes into view**.

6.2.3.2 GAP sensor for transparent label Tritronic Model # CLS

Sensor overview:



Calibration procedure:

1) Put the backing material only and press and hold **Autoset/GAP** for 2 seconds

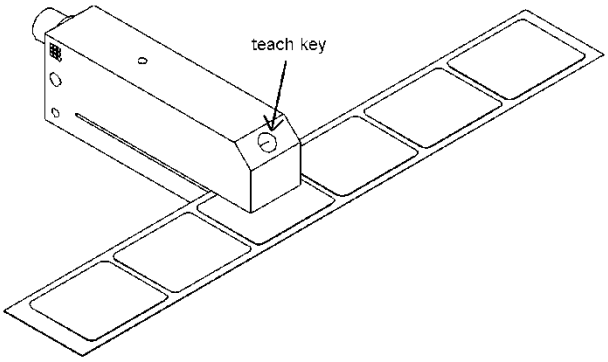
2) Put the backing material with the label, press and hold **Autoset/Label** for 2 seconds

6.2.3.3 GAP sensor calibration - CLEAR label - Quick procedure Di-Soric Model # KSSTI 1000 (Capacitive - Black)

1) Press teach key and hold for 2 sec.

2) The LED on the sensor will flashes

3) Pull the label thru to the slit of gap sensor and pass at least 2 labels.



6.2.4 Product sensors

The product sensors are each connected to the electrical box via the input slot. Ideally when installed on the bracket correctly, the sensitivity of the optical beam is reflecting off the reflector. Too sensitive and the sensor will not reach the reflector.

To ensure that the proper sensitivity is obtained:

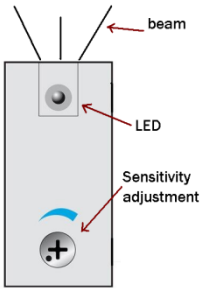
Make sure that the sensor beam is aligned with the reflector on its opposite side of the product.

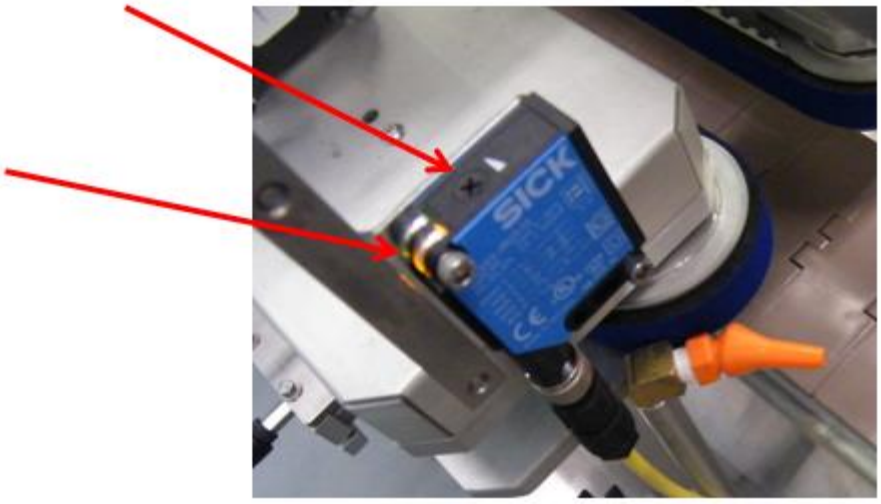
1) To adjust, use the sensitivity adjustment, control how far you beam will detect. Turn the adjustment (CCW) (see drawing) until the LED turns off.

2) Turn the adjustment (CW) slowly until the LED lights up again.

3) Continue turning CW for an additional ½ turn.

4) Check the calibration by simply placing your hand between the reflector and the sensor. The beam should be broken and the lead light should turn off. If this is the case, the sensor adjustment is set.



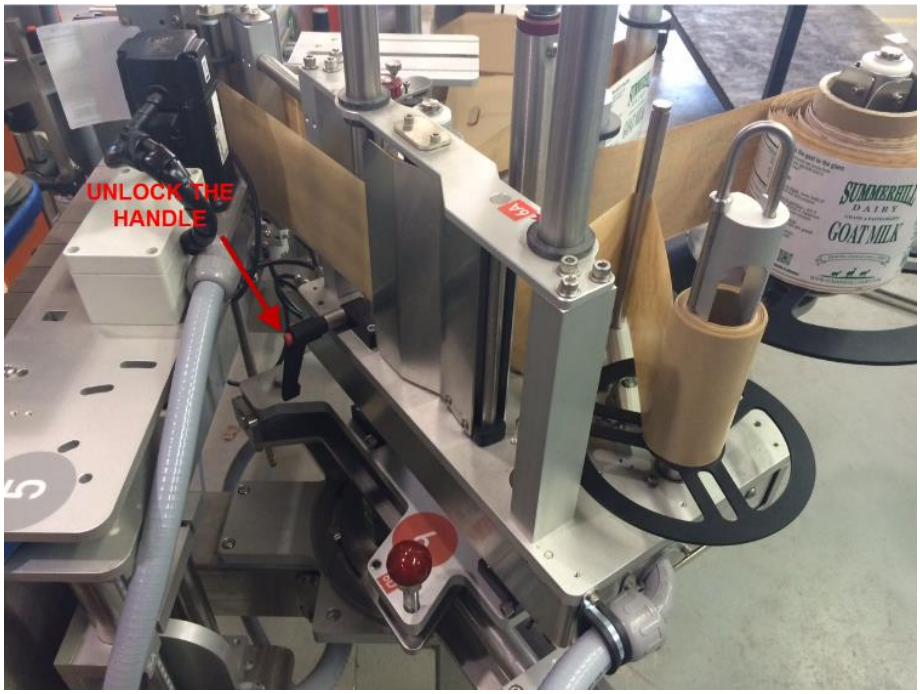


<u>HINT:</u> By hand, allow the product (empty in the case of a clamshell) resting on the conveyor to pass in front of the sensor reflector at a low speed and confirm that the sensor LED stays off all through the passage of the clamshell.

6.2.5 Mechanicals Setup with Rulers:

6.2.5.1 Vertical adjustment: Letter A

The vertical adjustment is to position the label at different heights. It's practical if you have different size labels and/or container formats. To adjust the height, you will **FIRST need to unlock the adjustment holder**. To do this, lift and turn the small lock handle counter clock-wise to loosen the adjustment.



Next, using the crank handle located on top of the labeler; turn CW to lift the label head and CCW to lower the label head. Use the gradient ruler to obtain a perfect positioning reference as per your requirements and register it in your HMI (touch screen), if it hasn't already been done.

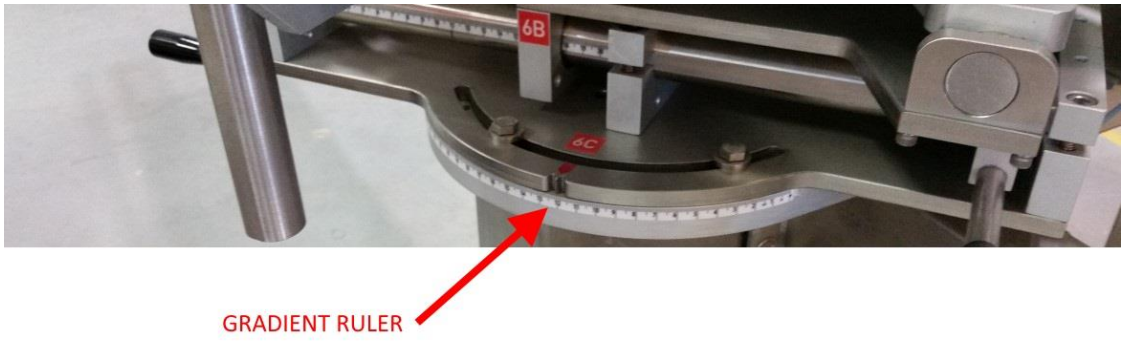
6.2.5.2 **Lateral adjustment: Letter B**

The lateral adjustment is to position the peel plate over the conveyor. The size of your container will determine the position of adjustment. To adjust the position, lift the handle with the orange center by pressing down on the center to access the unlocking mechanism of the handle. Next, using the RED KNOB, position the peel plate as close to the container as possible. Turn CW to go approach the container or turn CCW to move away from the container. Use the gradient ruler to obtain perfect positioning reference as per your requirements and register it in your HMI (touch screen), if it hasn't already been done.

6.2.5.3 **Angular adjustment: Letter C**

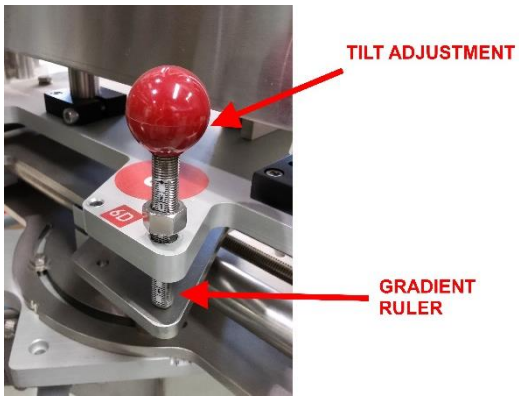
The angular adjustment is very important to increase the repeatability of the process. A good adjustment is when the exit of the label is tangent with the surface of application (at approximately a 15 to 20 degree angle against the surface of application).

This result is achieved when you set the lateral adjustment and position the label head using the slotted hole on the table.



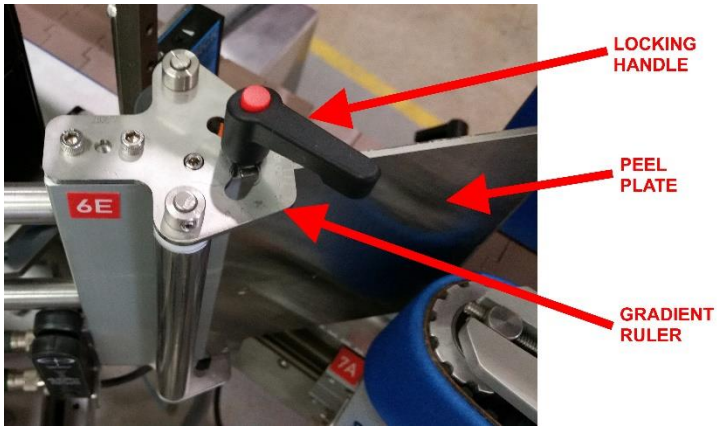
6.2.5.4 **Tilt adjustment: Letter D**

There is another possible way to position the label head for best results. It is a fine adjustment that increases the parallelism of the label compared to the shape of your container.



6.2.5.5 **Peel plate angle adjustments: Letter E**

The peel plate is also angle adjustable. Use the locking device to loosen the peel plate, place the angle as desired and re-fasten.



HINT:

A good adjustment is when the exit of the label is at a 15 to 20 degree angle against the surface of application.

Peel Plate:

The stainless steel peel plate removes the label from the liner. Different peel plates can be adapted to the "Wipe-on Label Applicator".

6.3 Conveyor settings

Every SynerG XP system comes standard with a mono-bloc stainless steel structure (one piece) to allow for cleaning below the belts (acetyl or Delrin). This provides a much more sanitary use since there is no risk of contamination. Each conveyor is driven by a maintenance-free AC motor and is synchronized to all other motorized components via an encoder.

It is possible to start/stop the conveyor as well as change its speeds by using the CONVEYOR icon on the HMI touch screen. - Refer to the HMI section in this manual.

Conveyor Accessories:

Guiding rails:

There may be many guiding rails used in each labeling application. Each has an identification letter and a gradient ruler for easy settings. These rails, at the entrance, are used to position the product on the conveyor belt for optimum labeling.

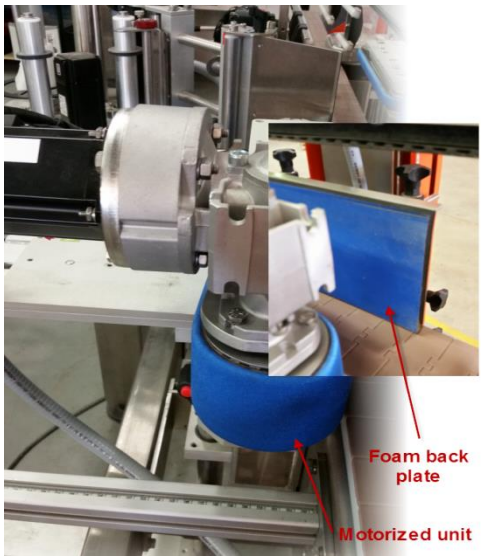
Guiding rails settings:

The position of each rail can be adjusted independently. To move the rails, simply unlock the adjustment and move the rail, either toward the center or the side, of the conveyor. ***It is important that the guiding rails be parallel to the conveyor to ensure proper product displacement on the conveyor. The values on the precision scales should be entered into the HMI (touch screen) as part of the recipe. SEE HMI (touch screen) SECTION***

6.4 Wrap station

The wrap station is generally positioned near the labeler head and is made up of a belt activated by a servo-motor coupled to a transmission and an adjusting plate. The wrap station is used with cylindrical products to ensure proper labeling around the container.

This module is servo-driven and synchronized to the system's main conveyor speed. It is composed of two parts; Motorized belt and foam back plate. It is generally used for wrapping the label around a (non-tapered) cylindrical container.

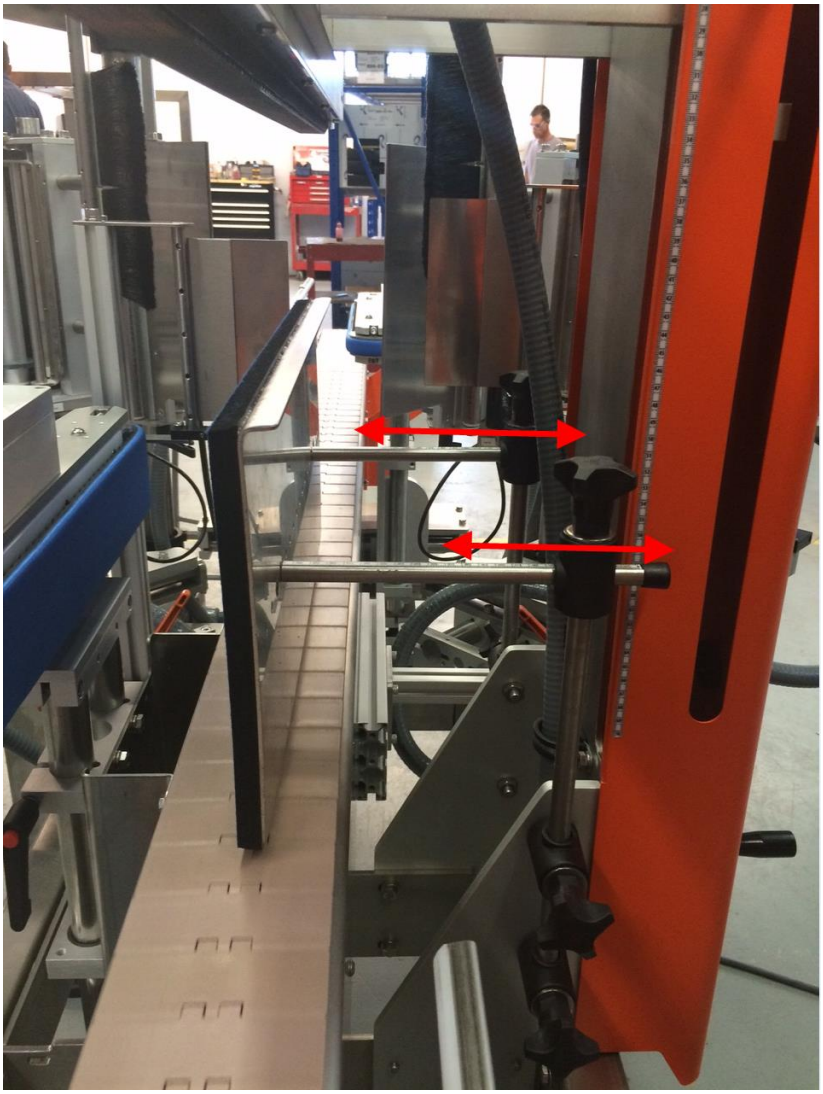


This module has three possible adjustments, the depth of the motorized belt according to conveyor height adjustments, the foam back plate module positioning.

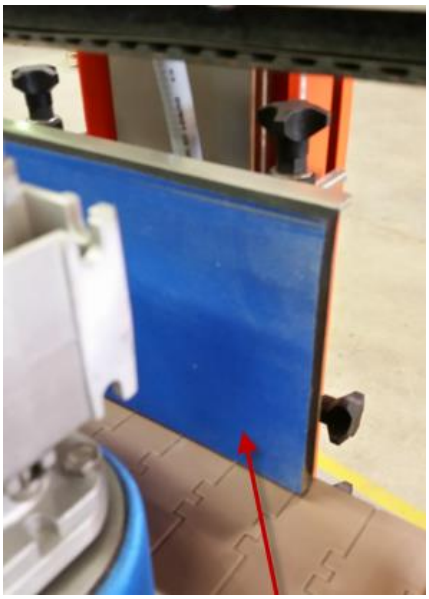
Settings:

The wrap station has its enable/disable selector in the screen.

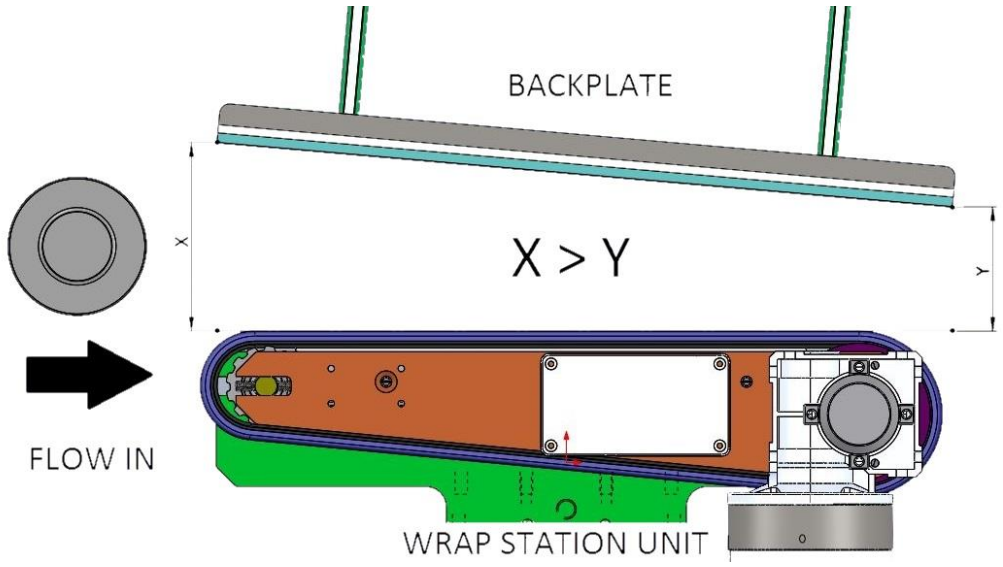
The spacing between the belt and the adjustment plate can be modified. To move the belt position, press down on the handle's orange knob to un-lock and slightly loosen the position adjustment handle, slide into position and re-tighten the knob handle. For the main plate adjustment, unscrew the bottom screws, skew to desired location and then re-fasten.



The foam base on the opposite side of the wrap station allows for the container and label to be compressed together. You can adjust the amount of compression by simply using the knobs that hold the bracket to the pad.



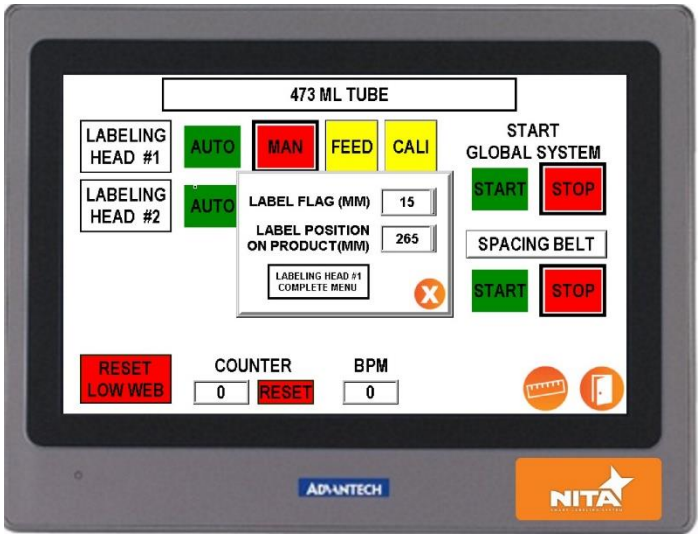
In order to facilitate the entry of the bottle into the wrap (especially if it is travelling empty) you can open the foam back plate so that it is slightly more open at the entrance and slightly closed at the exit of the wrap station (+2mm). This will avoid slight bottle stoppage which can create creases on the label.



To set the position and the label start, 2 values must be adjusted:

Label Flag: this value must be set between 10mm and 20 mm

Label position on product: this value allows for the label trigger to start with the right trigger timing, if this value is too low, the label will start too quickly and you will observe a crease at the beginning of the application. The reverse is also true, if the value is too high, the label triggering will be late and will have a tendency to fall slightly and be applied in a skewed fashion.



TOO LOW VALUE

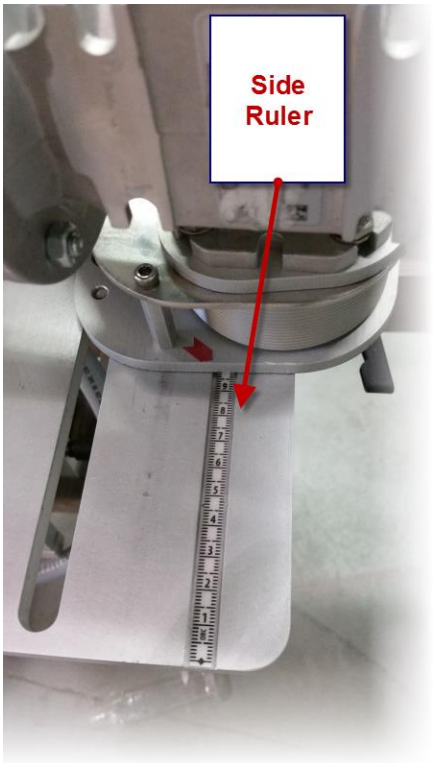
TOO HIGHT VALUE

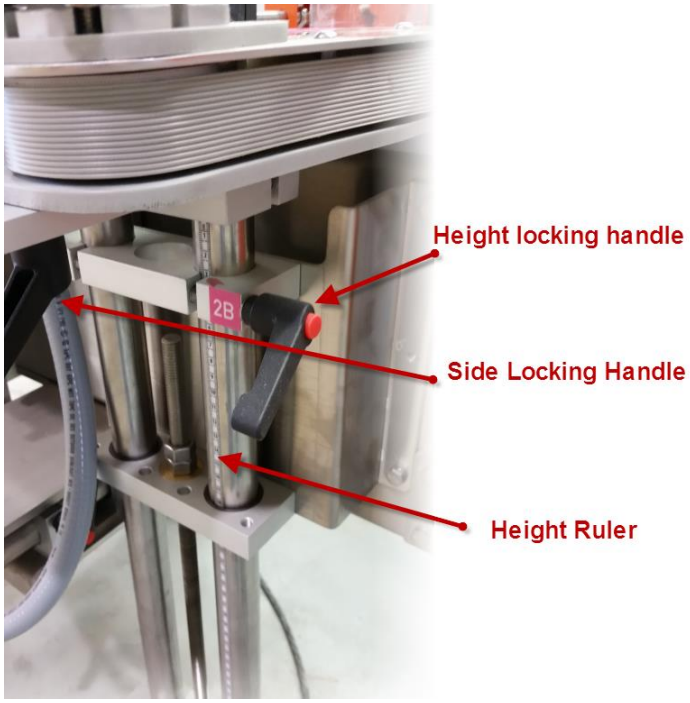
6.5 Container Spacing Wheel – Spacing Belt

The spacing wheel / Belt are an optional module that is generally placed at the entrance of the conveyor to allow adequate spacing of products as they travel towards the labeling head. The speed of the wheel / Belt will vary how much spacing is created between the products. It is controlled from the HMI and can be modified by the operator. The value is in % of the conveyor speed (ratio).

Manual adjustments of the spacing wheel/belt are performed by loosening the lock handles (2) and physically moving (side and height) the spacing wheel/belt assembly to the desired position. The adjustment is guided by gradient rulers for consistency and is identified by a letter.


2


Side
Ruler


Height locking handle
Side Locking Handle
Height Ruler
2B

6.6 Motorized Top Clamping Belt (Synchronized Support belt)

The top clamping belt module applies overhead pressure to the containers and enables the product to remain stable as the label is applied. This TCB is completely synchronized with the main conveyor. The Top Clamping Belt has its enable/disable selector in the screen.

It can be adjusted in height, simply by loosening the brake handles, and turning the overhead handle to elevate or lower the TCB. Place to desired position and fasten the lock handle. NB: The ideal adjustment is to have enough pressure to keep the container from being pulled off (when wedged). Do NOT over-squeeze the product.

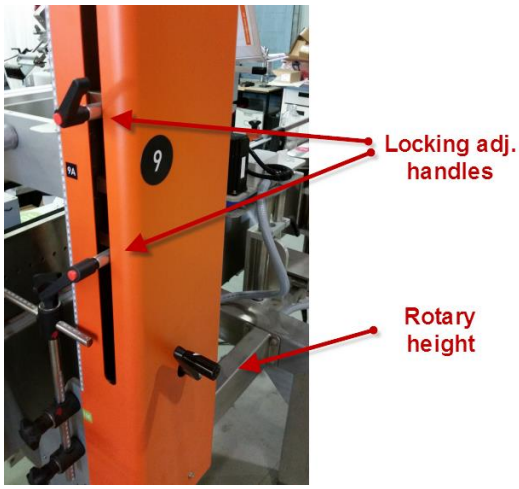
In order to adjust the top clamping belt:

1) Loosen the lock handles

2) Turn the top handle for up or down movement as desired

3) Notice the scale ruler reading and enter it into you HMI (for recipe)

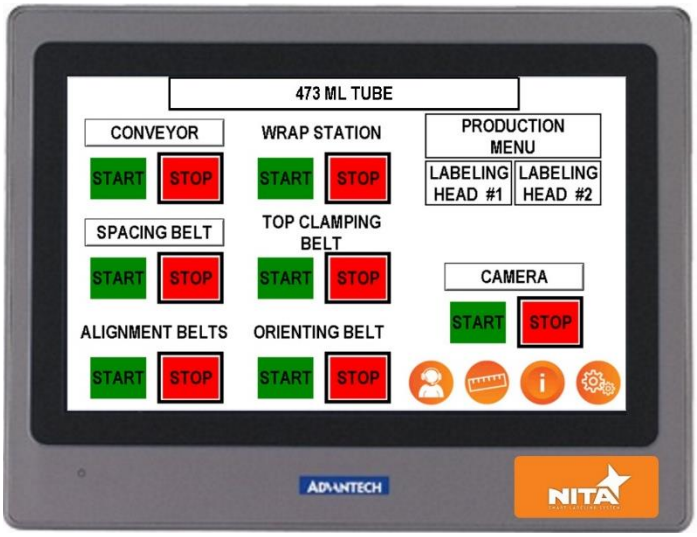
4) Tighten the lock handle



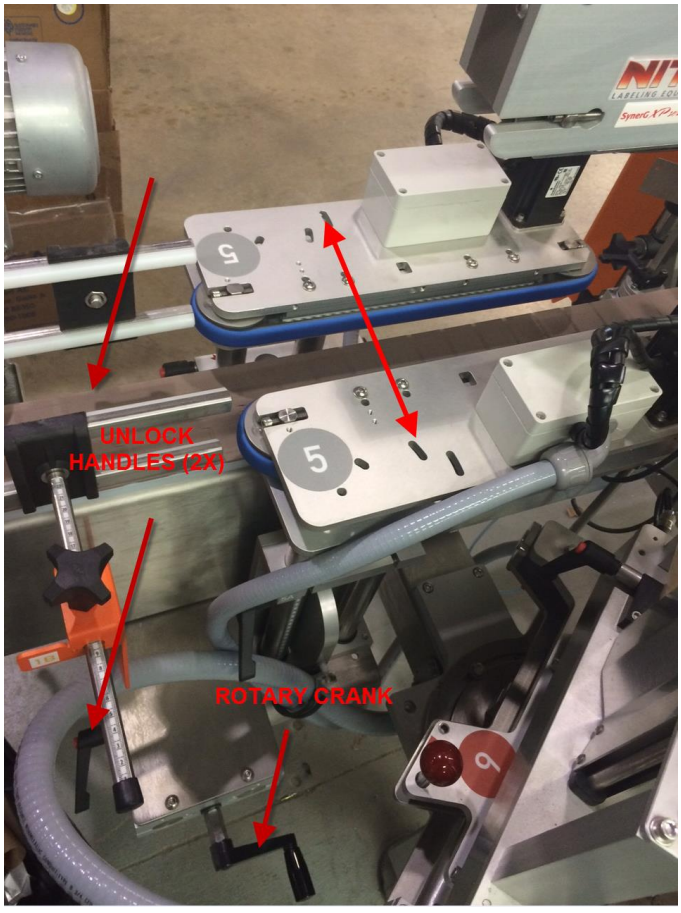
6.7 Orienting device - Pathfinder

The pathfinder, generally located at the front end of the conveyor, is used to align oval or rectangular-shaped products prior to entering to the labeling process. The orienting device is composed of two belts, one on each side of the conveyor. These belts turn on a series of bearings. The orienting device is powered by a servo-motor. The orienting device will be used for parallel-lipped products (flat bottles or containers).

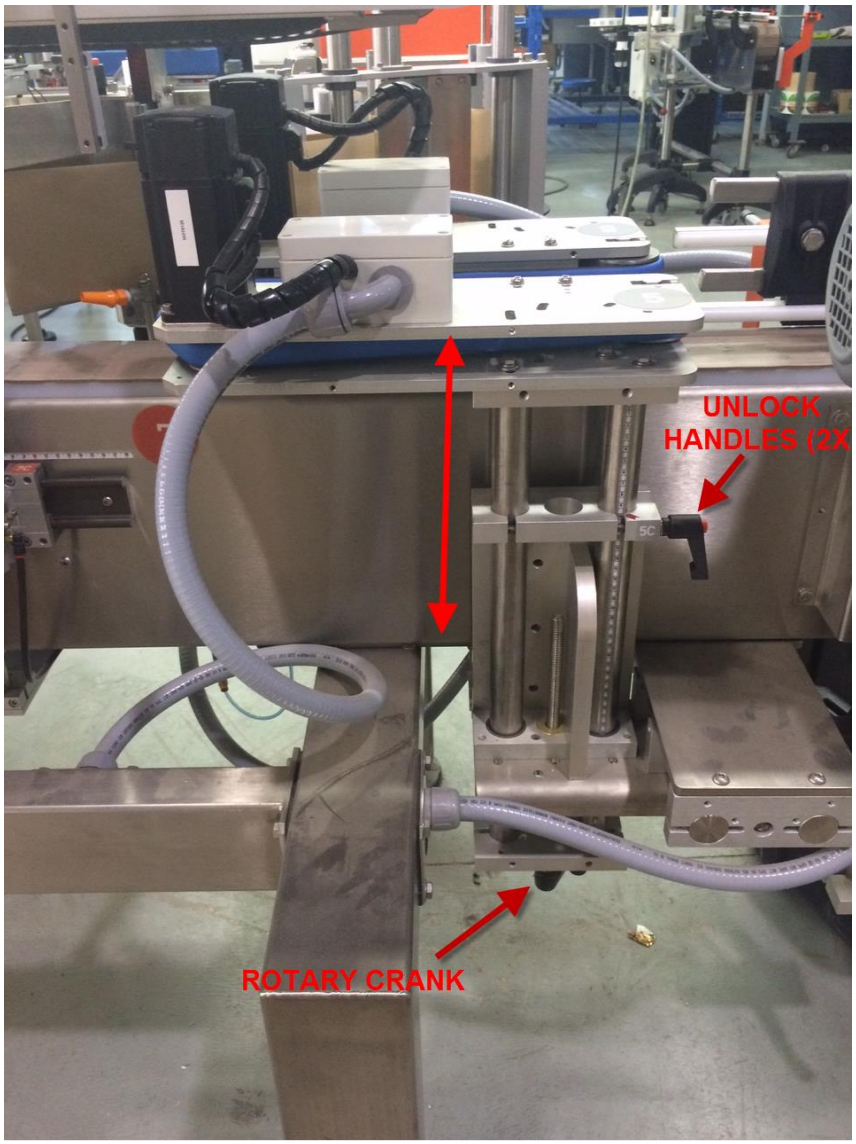
The Pathfinder has its enable/disable selector in the screen.



6.7.1 With adjustment (A)



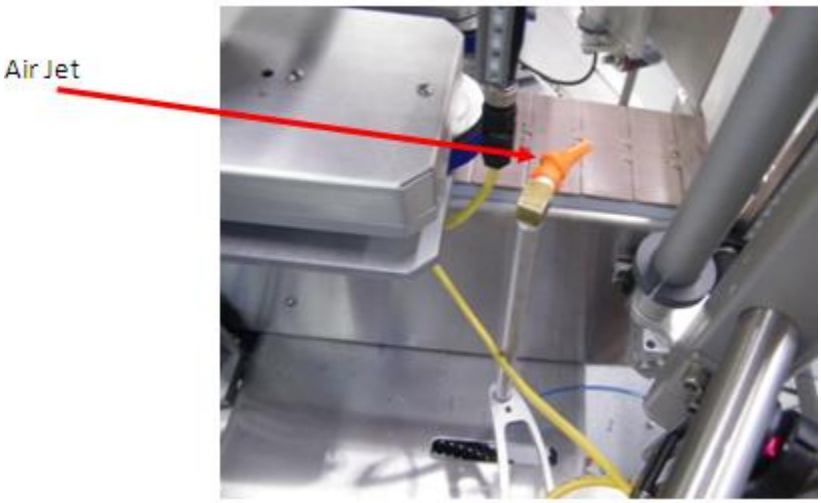
6.7.2 Height adjustment (B & C)



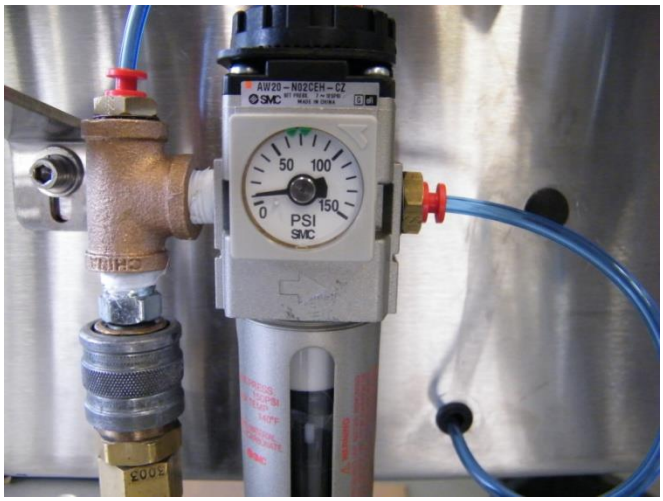
6.8 Wipe gates

The wipe gate option is a module that allows for containers to go through (as though it were saloon doors). It is placed very close to the labeling head's peel plate. Its principal duty to correctly hold the flagged label over the conveyor and releasing it when the product comes in contact with it. It allows the application of the label on the front of the containers as well as closing the label on either side creating a *tri-panel* application. It works in conjunction with the Top clamp down belt. An air jet helps to hold the label.

The gate position is determined by two adjustments (usually A & B) which correspond to the physical height, lateral adjustments and depth of the module with respects to the conveyor. These will all have reference letters which can be entered as a recipe setting in the HMI touch screen for future use.



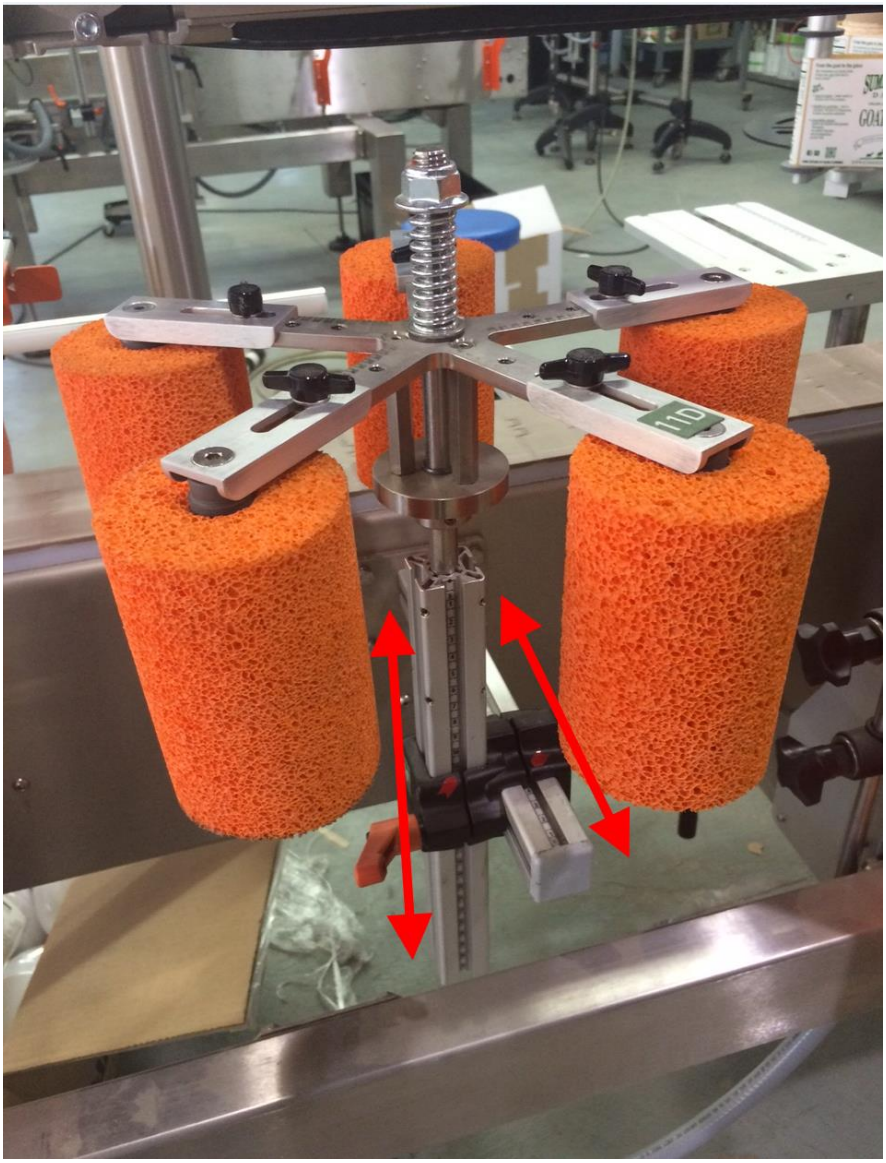
Also an adjustment of the door force is possible by using the pressure regulator located near of the wipe gate unit. A pressure between 10 to 20 psi is enough.

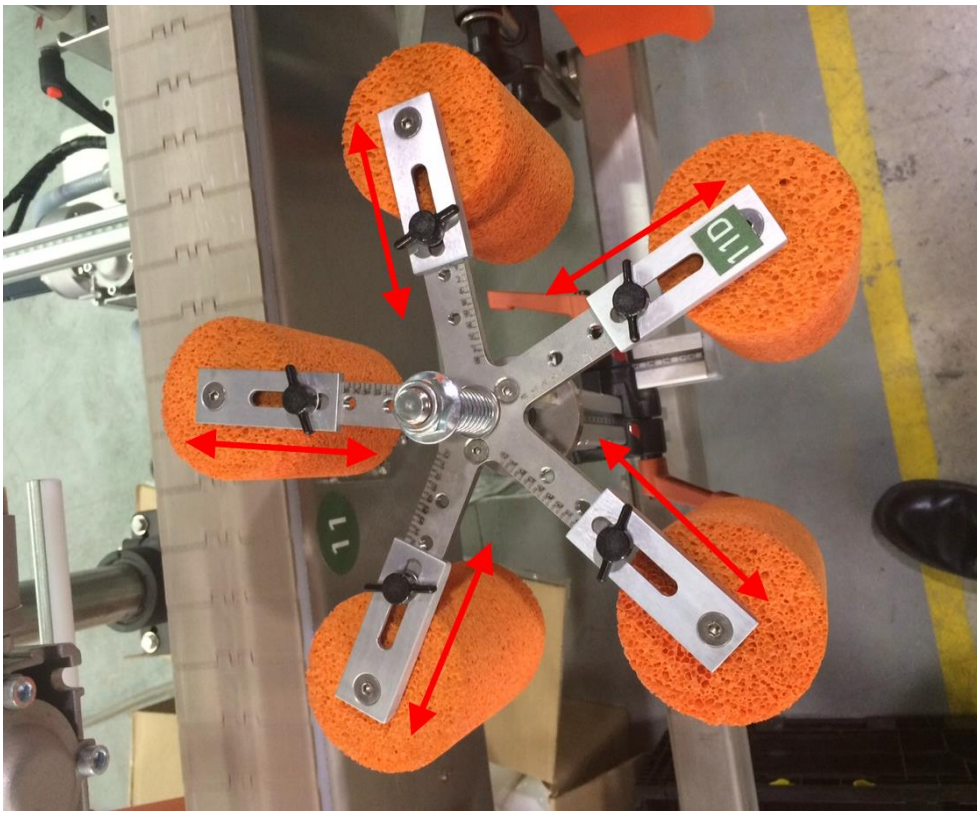


6.9 Rotary Back Applicator

This device allows for the closing of the label on the back side of an oval, square or rectangular container. It is a free turning module and works in conjunction with the Top clamping belt. It must therefore be positioning in an area under the TCB so that it can operate while the container is still being held by the TCB

The Rotary Back Applicator module positioning is determined by adjustments, usually A, B & C on front side and D, E and F on back side, which correspond to the physical height and depth of the module with respects to the conveyor.



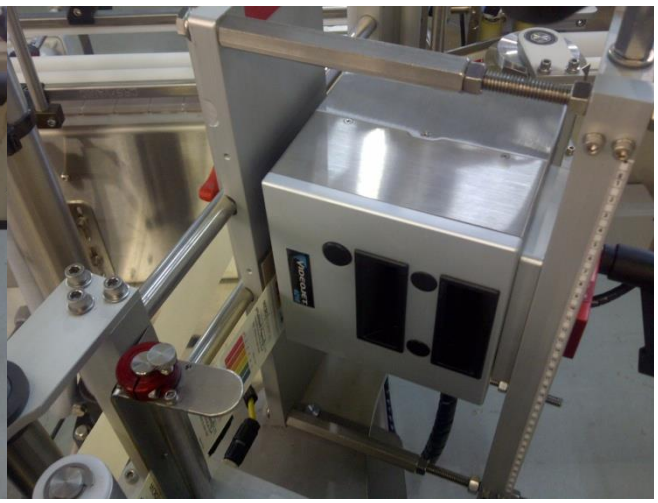


6.10 Thermal Transfer coder

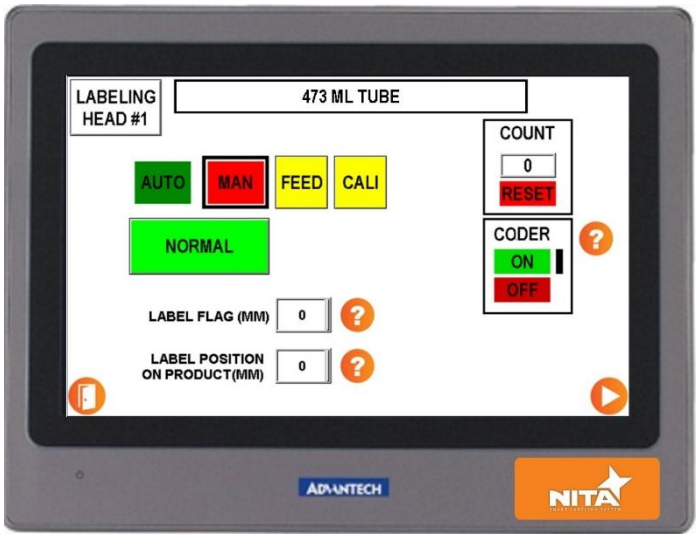
This section describes the thermal transfer coder and all the related settings.

The coder is usually located between the peeler plate and the main labeling head platform. Its function is to code each label. It can be activated / deactivated through the coder HMI terminal or HMI of the machine. The coder is held with a specially designed rack mount. The coder has its own HMI programming screen.

Coder's HMI Terminal



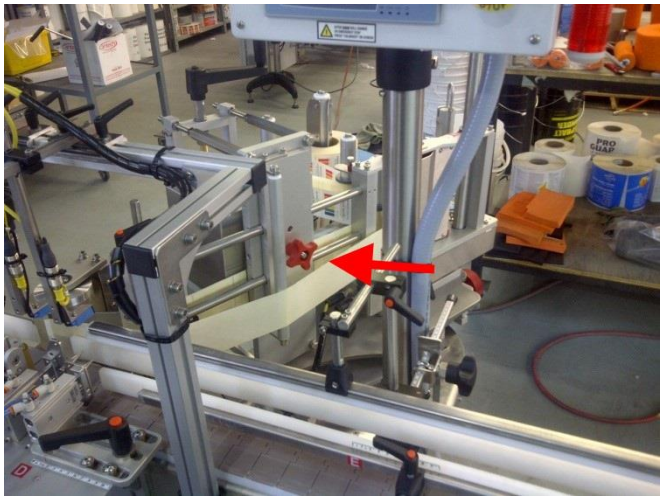
Coder itself



Screen to activate / deactivate coder

Mechanical Settings:

The Coder has position adjustments as well as operating settings. Firstly, the Coder can be moved horizontally. To move the coder on its horizontal axis, simply unlock the handle (on the back of the main support) and gently move the whole assembly (coder and rack) to the desired position. When the new position is obtained, lock the handle again. The horizontal position will determine where the code will be printed on the label.



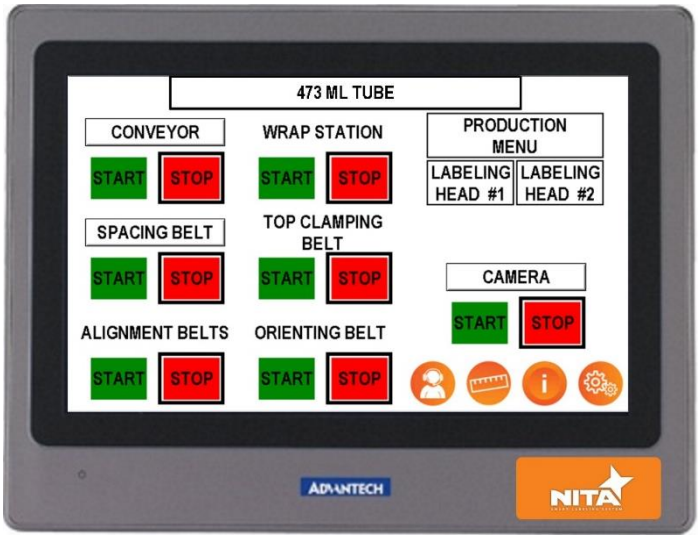
Secondly, the coder can be rotated 90 degrees on its own axis. This will be used to change the orientation of the code on the label. To change the orientation, simply loosen the rotation adjustment handle and rotate the Coder 90 degrees. When the coder reaches its new position, you will hear (and feel) a little “click”, meaning that it is well seated in its rack mount.

For more information on the coder operation refer to the manual.

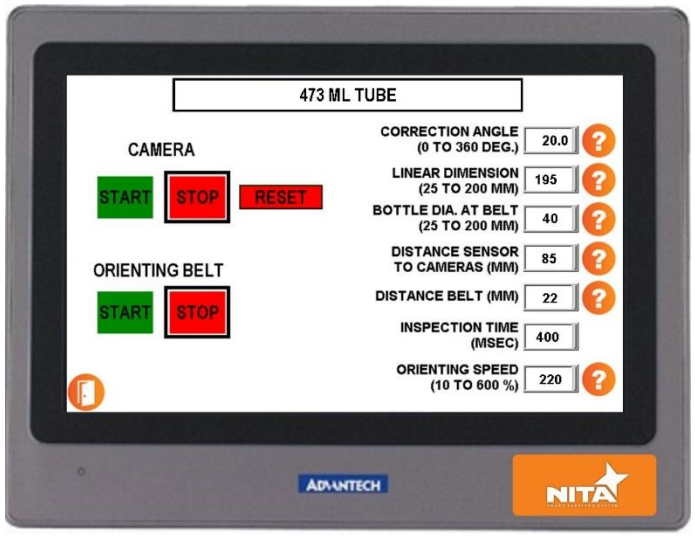
6.11 Digital (Camera) Orienting device

It is important to specify that this option comes with a digital camera which also has its own touch screen controller and electrical box from which we can control all the values and settings of the camera software.

This screen on the SynerG XP system, allows for the settings pertaining to the Camera Orienting device.



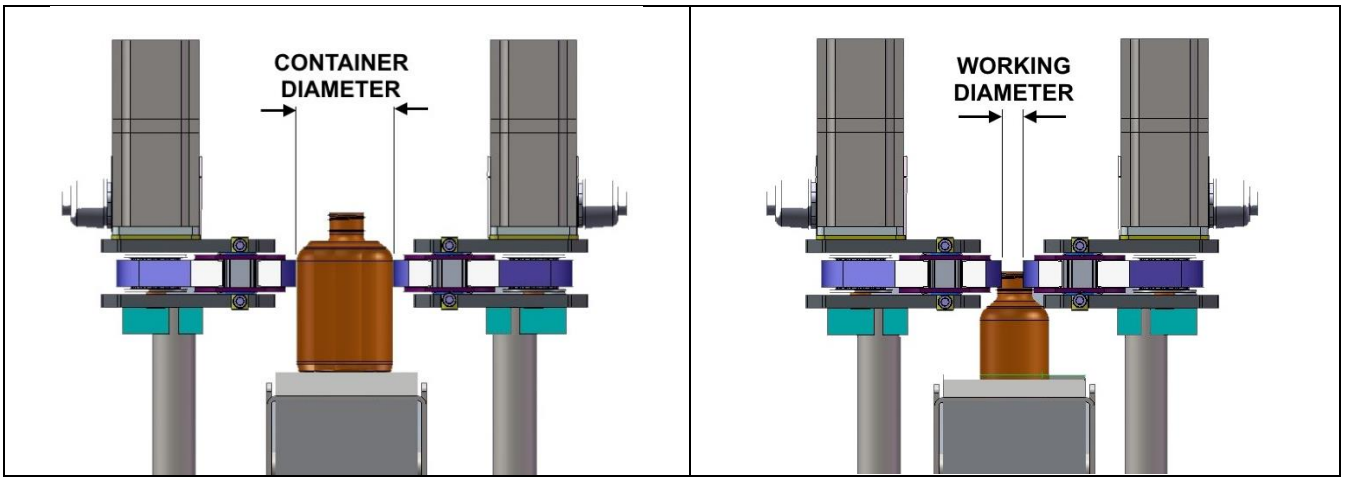
Correction Angle setting allows you to correct the orientation of your container as per the reference image in the system. If you would like to change the orientation of the container differently from the image in memory, enter the angle that you now require corresponding to the new orientation.



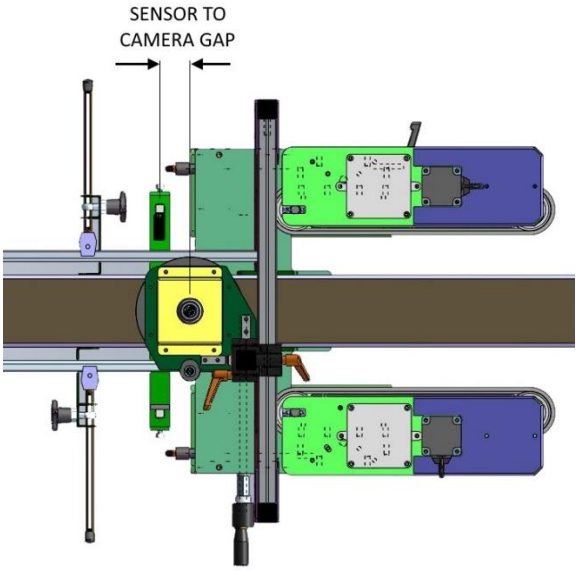
The next two points are extremely important*

The first value to be entered is the **linear dimension** of the container (base of container, towards the sensor).

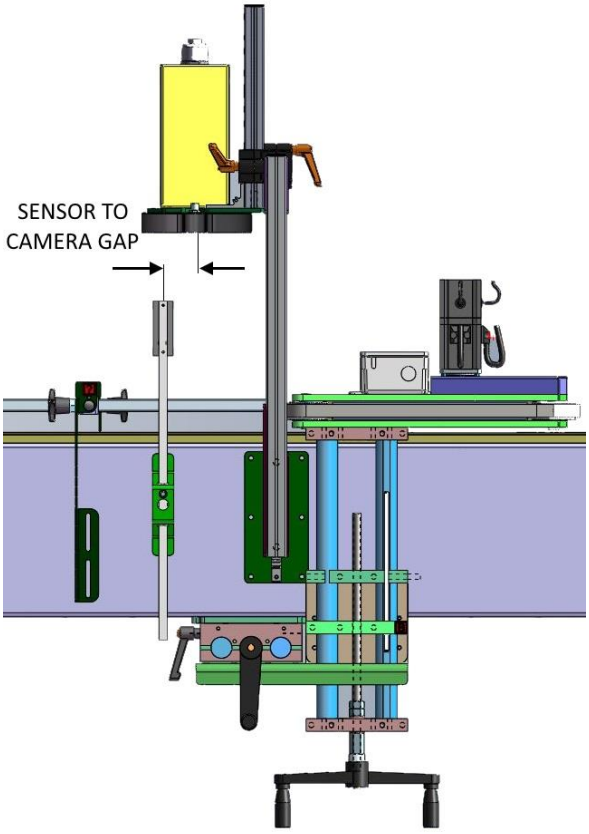
The second is the **Bottle diameter at Belt** where the orientation device belts rotate. In fact it may be useful to set up the orientation of the container using a height that DOES NOT corresponds to the maximum diameter. See illustration for more information.



DIST Camera corresponds to the distance between the camera and the product sensor (this distance is entered in MM's). Use the schematic below as a reference to guide you.



TOP VIEW



SIDE VIEW

The **DIST Belt** is the distance between the beginnings of the belt that orients the product and the product sensor. This distance is set in MM's.

The second is necessary to determine the speed and the work time of the orientation belts. It is possible to change this value

Orienting Device setting:

The Pathfinder is activated /deactivated with the corresponding On/Off selector located on the HMI screen (control panel). The speed of the orienting device is automatically synchronized to the conveyor but has a built-in ratio. It is completely synchronized with the main conveyor.

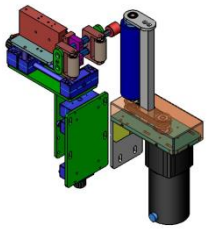
The width of the orienting device can be changed by turning the crank located below the orienting device. The same is true for the INWARD and OUTWARD positioning. This will move the two belts inward or outward.

For cylindrical products that do not require alignment, simply retract the orienting device by moving them away from the conveyor. The possible adjustments will have corresponding letters. These values on the gradient scales serve as reference points to be entered as recipes in the HMI touch screen.

The manual height adjustment is done through using the two handles on the operator side of the component. Use the rulers to obtain the desired positioning. The values should be on the HMI screen (in the case of a new set up, adjust the device and then enter it in the HMI).

6.12 Spin in Place

This device (model may vary according to bottle) is operated with a mechanical sensor activation. When the product is detected, a signal is sent to activate the air cylinder, bring forward the 2 rollers in order to meet the bottle. This applies pressure to the product as well as the center roll (on opposite side) allowing for a rotation on the product to take place. The peel plate must be brought as close to the wrap station as possible. (Maximum ¼ inch away). Make sure the air hose is connected to a compressor or house air. 80PSI



All possible adjustments have scales and corresponding letters so that their values may be entered as a recipe in the HMI on the respective screen.

7 HMI – Getting to know the HMI touch screen – Operator interface

The HMI operator controller is a touch screen module as shown below. You can touch the screen to help you navigate from one screen to the next.

HMI Password: 12345678
Adv. Settings: 222183600

The *initial password* for the operator to begin using the HMI immediately is 12345678**.**

It will be a good idea to change it!

R E A D C A R E F U L Y

All settings and operations are done through the HMI- therefore moving the GAP sensor or the product sensor is a thing of the past. **(IMPORTANT TO NEVER… physically move the sensors!)**

The HMI is a touch screen interface that allows you to…

- Control the length of label that slides out (called flagging)
- Digitally control the GAP sensor positioning without physically moving the sensor at all
- Digitally control the product sensor positioning, product detection is done without physically moving the sensor

- Get a clear indication (reference guide or recipe) of what the settings on the gradient rulers should be for maximum output for each pre-programmed sizes of the product.
- Assign a “set-up” manager to change the default settings using a password.
- Get information pertaining to alarms (stoppage/ errors & why)

QUESTION MARK ON THE SCREEN… 

The **question mark** icons lead to a ‘help’ screen which provides a brief explanation or tips on the adjustment method of the specific setting. This helps to minimize the time taken to make adjustments.

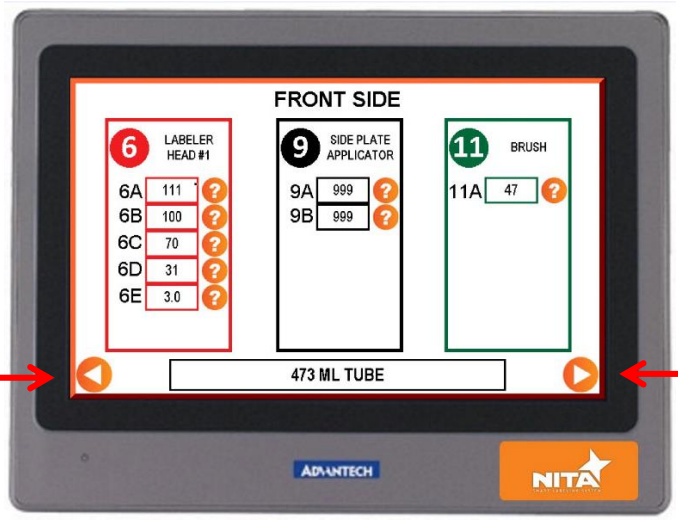
7.1 Start-up screen

The system will turn ON when you turn the main power switch clockwise. (BIG, black handle or RED dial-like knob located on the front of the electrical box).

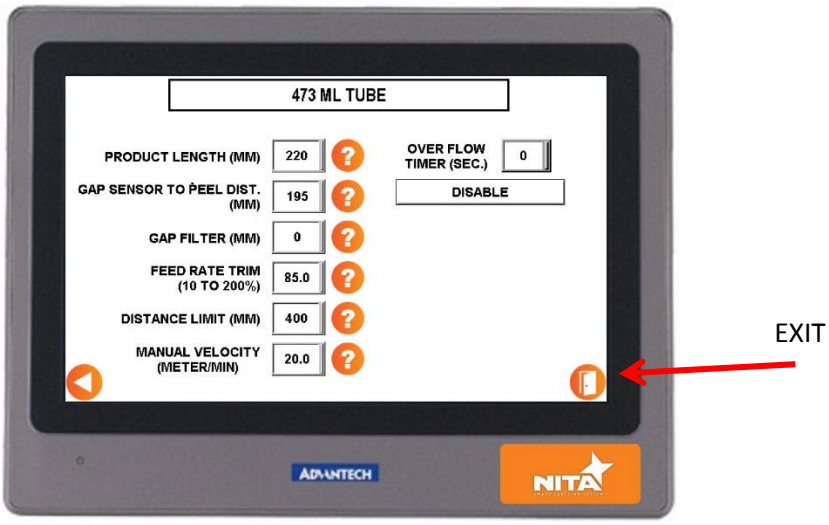
General info on how to proceed

The different functions on all the screens are activated by simple touch of the keys on the screen. Each **screen has these keys. Press either to navigate from screen to screen**

Previous Screen



Next Screen



7.2 Main screen

After power on the machine, you will obtain the following main screen. From here, you will be able to navigate throughout all the screens to see and modify the pre-programmed settings.

At the top center, is a shaded key which always indicates the container in operation. It is possible to change this recipe by touching this key. Upon touching it, you will be brought to the appropriate screen to do so.

This key also allows you to reach the save/modify screen to either choose a new product or create one and save it. (See section - Save screen).

On this main screen, you will find main component keys that allow you to control the settings/ parameters of the equipment's main components.

For example, press the **LABELING HEAD #1** key, a new screen will appear (see HMI section). That will allow you to access the said labeler settings.

The **CONVEYOR** icon, when pressed, will bring allow you to change the conveyor speed. (It is important to note that the conveyor speed is synchronized to all other motorized components. The faster the conveyor, the faster all motorised items will run, including the labelers. See details on the page pertaining to the conveyor screen.

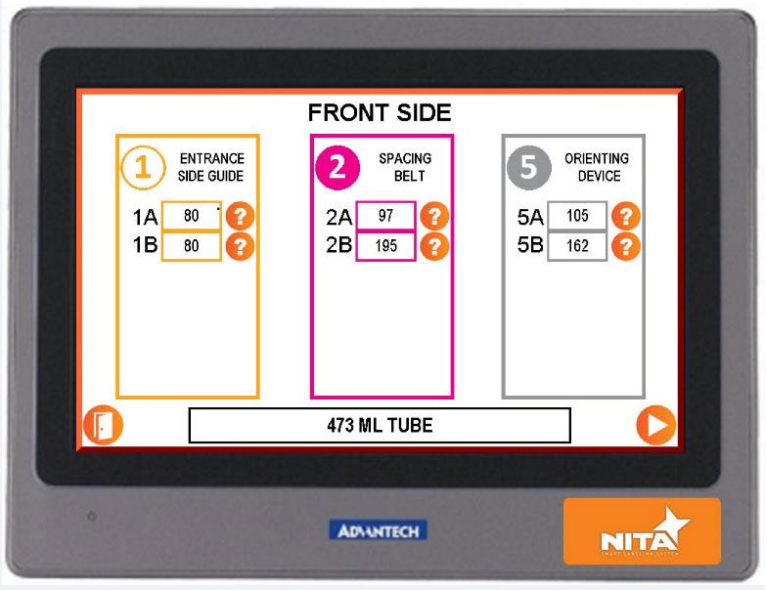
7.2.1 Ruler values screen

These screens contains the settings or recipes (in millimetres) pertaining to the manual adjustments to be performed by the user for each of the products in memory (as well as the new ones to be added). Instead of having a spread sheet, you simply enter the information here, save it and recall it whenever required.

The system contains many screens that are divided into sections such as Labeling Head #1, Labeling Head #2, Entrance guides, etc… Each of the sections contains one or many corresponding letter positions and reflects a ruler value (on the scale) for your set ups.

These screens help to reduce set up time required for adjustments or changeovers. To change any of these settings, just click on the square at the right of the value to be changed. To save the new settings, follow the saving procedures explained in section: “Save screen”.

The **RULER VALUES** key shows the optimum values given during set-up of a specific product. These values refer to the proper positioning of physical rulers on the system bearing the corresponding letters. Let these guide you for the setup of each product.

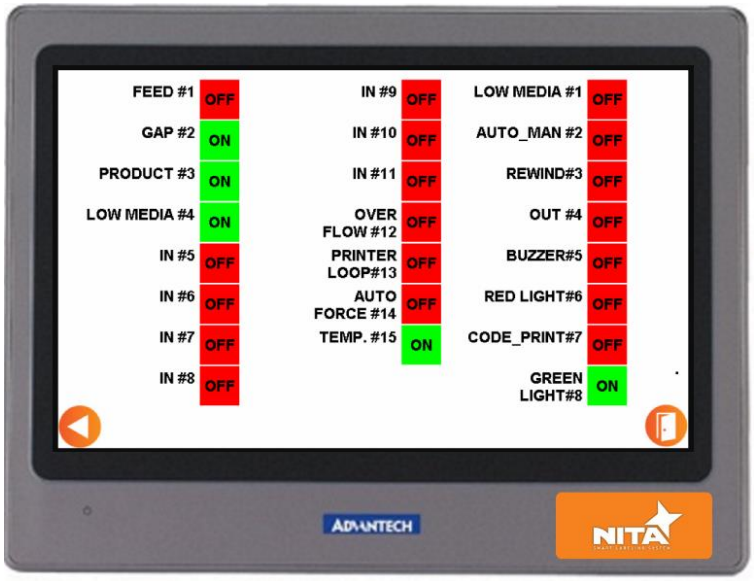


7.2.2 Information

This screen is used to visually confirm the input signals from the sensors to the HMI controller. Each option has its own verification tabs that allow the technician to verify the proper relaying of signals for the product sensors, gap sensors… By waving hand in front of the sensors, the technician can emulate the signal and confirm the status using the tabs. These will change from on to off or vice versa when the sensor beam is activated. If your system contains multiple options, you will find a similar screen for each additional options.


CONVEYOR
PATHFINDER (NODE 9-10)
LABELER 1 (NODE 1)
CHANGE PASSWORD
LABELER 2 (NODE 2)
TCB (NODE 5)
LANGUAGE
ADVANTECH
NITA


LABELER #1 (NODE 1)
PROGRAM NUMBER
5104500H
DRIVE ENABLE
ON
DRIVE STATUS
OK
TORQUE %
7.9
CONVEYOR SPEED
0.0
ADVANTECH
NITA



7.3 Labeler - Screen

This screen is used to see and/ or change the settings of the labeler.

The top left corner indicate witch **labeling head screen**. Click on this key and you can scroll to the next Labeling Head.

The top middle key indicates the **product currently in use**. You can press on it to select a different product. Also is used to save and or modify the settings according to the product you are working on (see section "Creating/Saving recipe screen".

A **counter** indicating the number of products labeled

Reset Counter: initialises the counter to zero

Press **MAN** or **AUTO** switch from one mode to the next (Auto gets the trigger signal from the sensor to apply a label, while manual requires that you press **FEED** to obtain a label…seen here in manual mode).

The **manual mode** is handy while adjusting the settings of the labeler during physical changes where you do not want to waste the labels.

NORMAL – 3 PANELS is used to switch from a normal mode to 3 Panel (which allows for the label to start feeding, stop and start feeding the same label again). This is used for long labels that need to be labeled on the front of a product. Generally, these labels rest on wipe gates, hence, they feed, wait and then release when the product goes through the wipe gates.

When the **CALIBRATE** key is pushed, (it simply keeps all the labels in memory from the sensor to the peel plate's edge) all labels between the gap sensor and the peel plate's edge will be fed. The system is now ready to begin labeling as long as the physical product set up has been made.

There is however an exception; When the label's shape has a specific form, (non rectangular) and/or round. This exception dictates that if the label is of an odd shape or round, You MUST (after pressing calibrate) correct the label positioning using the GAP OFFSET parameter (under the OFFSETS key) See this explanation in (OFFSET) Setting for label application - screen .

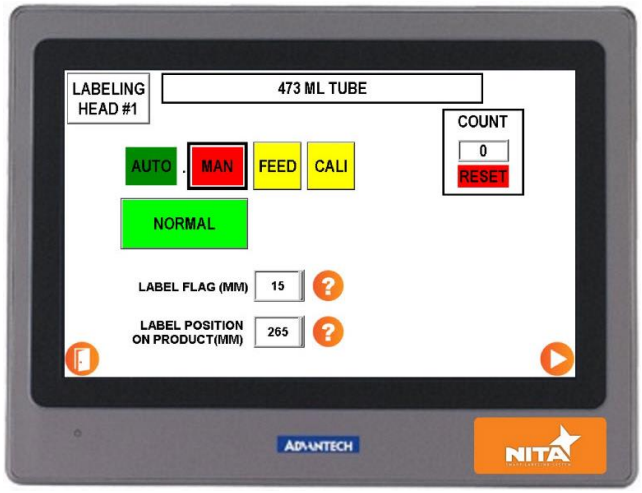
The **OFFSET** key is used to see the pre-programmed distance for the labeling GAP and PRODUCT. For full details on this screen (see section OFFSET SECTION)

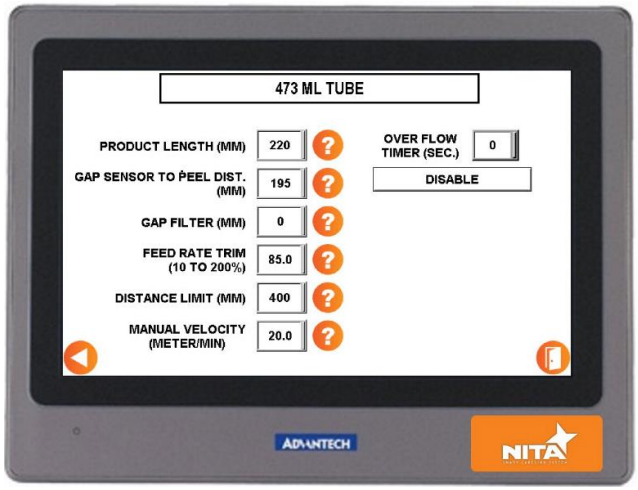
PRINTER ON – PRINTER OFF: is used to activate the print start. You need to have a tabletop printer in loose loop with a loop sensor (see Printer in loose loop section).

CODER ON – CODER OFF: is used to activate the CODER.

SIDE APPLY ON – SIDE APPLY OFF: is used to activate the cylinder of side apply.

7.3.1 Offset Setting for label application - Normal Mode





Each labeling head has its own screen and corresponding settings. Top right hand icon shows the product in use... Note that this key has the same purpose as the **recipe** key (see details further below).

Most of the settings seen here have been factory entered when your available products were tested. It is possible however that the results you are trying to achieve are different than the ones entered.

You can change / modify these anytime. **Here's how…**

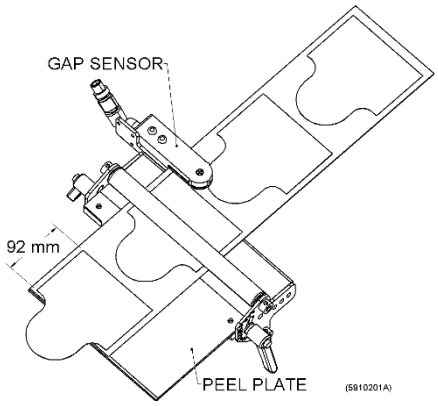
Firstly, slow the conveyor down significantly to be able to properly identify requirements (there is no need to do this at regular speed). Since your system is completely synchronized, you WILL obtain the same results when the speed is increased to its production level.

Now that the speed is reduced, touch the AUTO icon to activate the manual mode. You will notice that a FEED key is now visible. This FEED button will allow you to feed the labels manually as desired.

7.3.1.1 Label flag (normal mode)

The part that surpasses the peel plate is called the flag. The flag allows for label positioning. In Normal mode, this value (label flag) should be equal to Zero as long as the label has a straight edge (square or rectangle). IF not (round and other shape labels), we must add a value to the parameter gap sensor to peel distance and this value will correspond to the distance between the peel plate's tip and the edge of the next label (After having pressed Calibrate). *Values are in millimetres.*

On the following example, we will need to enter 92 as the ideal offset. Once this is done, you will need to save this new setting for the appropriate product name to always obtain the proper calibration when recalled from memory.



Now that the flag has been set, it is important to set its position on the product. Use the **label position on product (normal mode)** setting.

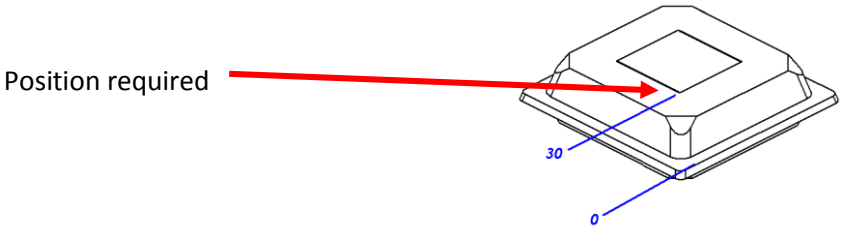
7.3.1.2 Label position on product

In order to properly place the label exactly where you need it on the product, all you need to do is, enter the right **label position on product** value.

The value to be entered (in MMs) is determined as follows…

It is the length where you would like for the label to begin in accordance to the beginning of the product. For example, you would like for the label to begin 30mm from the beginning of your product's edge then simply enter 30 as a value. The label will be positioned as the illustration shows below.

Position of label from edge of product



You can gradually increase or decrease the value by touching the corresponding arrows on either side of the value.

To save the changes to the settings, the user (if has proper password and authorizations) must save these new entries by touching the shadowed rectangle on the top of the screen. (You will then be navigated to the recipe save screen.)

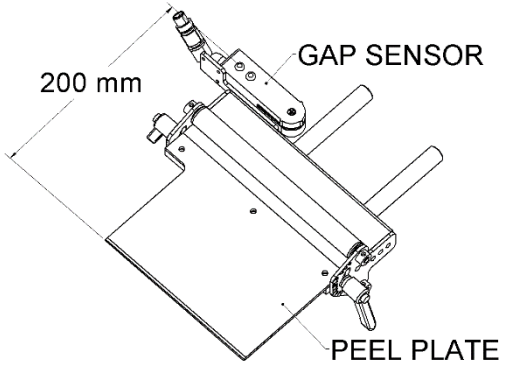
7.3.1.3 Product length (normal mode)

This third setting has no use for the normal mode. It will not affect any changes no matter which value is set

7.3.1.4 Gap sensor to peel plate (normal mode)

Distance Gap to peel plate

This **c**orresponds to the distance between the label GAP Sensor and the peel plate's edge. On the drawing below we can clearly see that the distance is 200mm, therefore the value to be entered should be 200 The distance value may change if the angle of the peel plate has been moved, in this case you can compensate on a case by case or re-save with the new values.



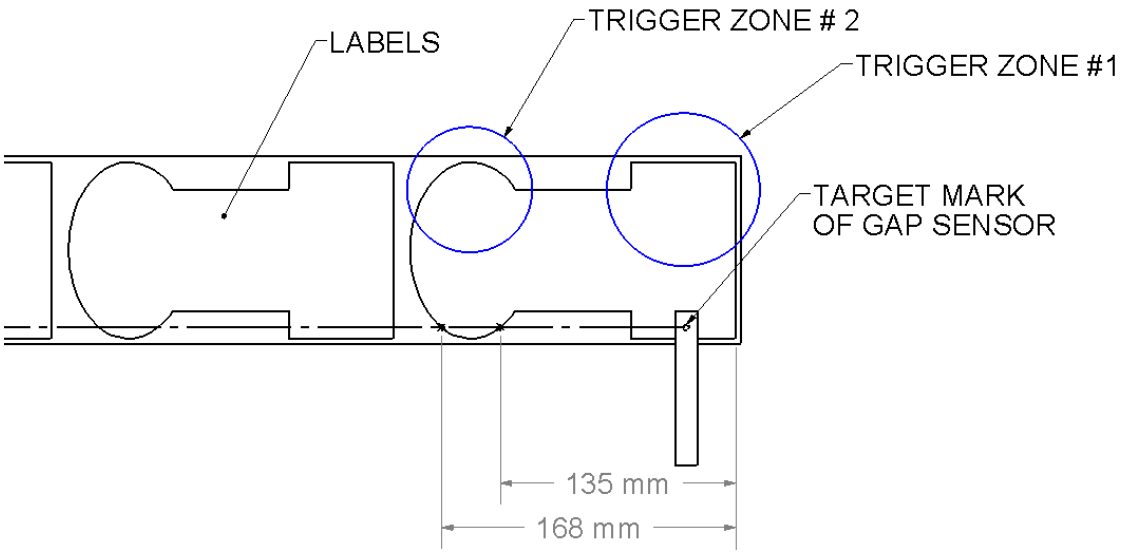
NOTE: This value may change from one application type to the next (if the peel plate angle has changed, so will the distance) and therefore must be saved for each recipe

7.3.1.5 **Filtering the Gap sensor trigger**

This is a procedure to be applied when the label shape is such where a double trigger on the gap would happen (such as illustrated).

On this example we can clearly see that the signal from the gap sensor would get triggered by two zones of the same label. This will cause two feed triggers for the same label when in fact there is only one label to be fed. To avoid this double feed… **you must adjust** the "GAP FILTER MM" setting which is located in the OFFSET SCREEN (as demonstrated here). This setting is present for each label head on the system (when equipped by multiple labeler).

On this screen you will enter the label length to be ignored by the sensor. The example above shows us that the proper value to be entered is between 135 & 168 mm a recommended value to be entered in the HMI screen, for this application would be 152mm.



7.3.1.6 **Feed Rate Trim**

Works with the encoder. At 100% the speeds of the labeling head is synchronized 1:1 with the conveyor speed. If the value is augmented, the labeler will be faster than the conveyor. If the value is lower than 100%... the labeler will be slower than the conveyor speed.

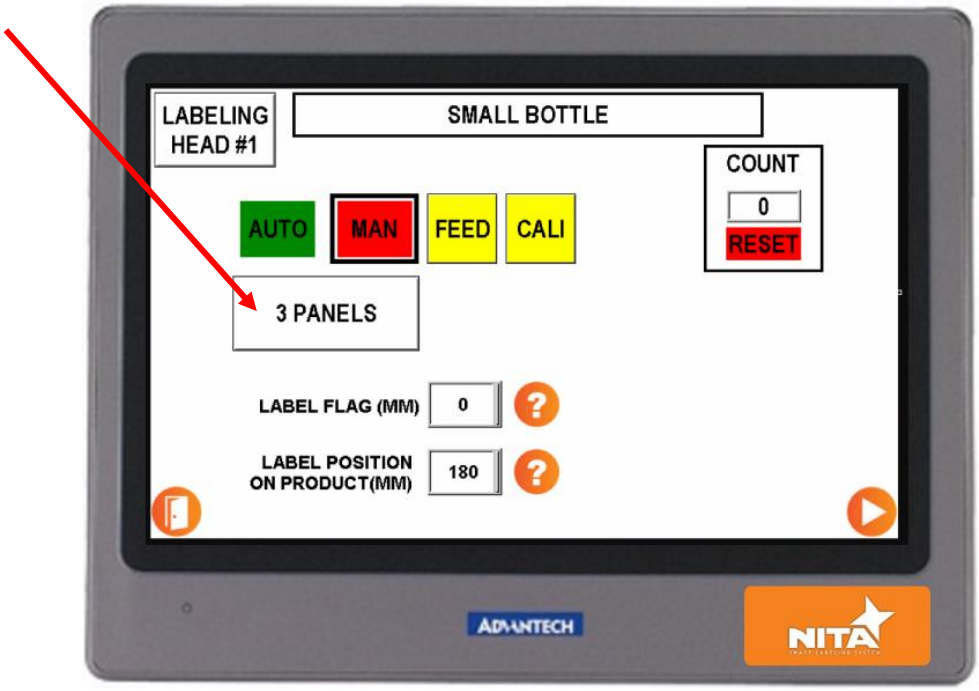
7.3.1.7 **Distance limit**

This value corresponds to the maximum distance traveled before a “label out” alarm will sound.

7.3.1.8 **Man velocity**

This corresponds to the labeler speed in manual mode and the flagging speed of the label in TRI PANEL mode.

7.3.2 Offset Setting for label application – 3 Panels Mode



7.3.2.1 Label flag (Tri-panel mode)

This setting should be set for any value above Zero.

In tri-panel mode

This Gap offset value should be entered according to how much flag you would like on the label as it hangs beyond the peel plate's edge waiting for the second signal to apply. Simply determine the length (in MM) and enter this value or use the small arrows to add or lessen the value. To flag further through the conveyor, augment the value. Be careful not to enter a value that is greater than the overall length of the entire label. If you overflag the label, a LABEL OUT error will be seen.

LABEL OUT ERROR, when you get this error, simply press reset or refer to LABEL OUT section of this manual.

7.3.2.2 Label position on product (Tri-panel mode)

Now that the flag has been set, it is important to set the length of the label according to its position on the product. Use the **label position on product setting**.

7.3.2.3 **Product Length (Tri-panel mode)**

The third setting corresponds to the product length itself. This is only used when working in tri-panel mode. (Disregard this setting for NORMAL MODE) For a round product this value should correspond to its diameter. This value allows for the container to clear the path of the product sensor before flagging the next. You can modify or enter a value of the product length by using the arrows or by pressing the value and entering a new one on the touch screen pop-up keypad (Which is the total length of the product).

To save the changes to the settings, the user (if has proper password and authorizations) must save these new entries by touching the shadowed rectangle on the top of the screen (You will then be navigated to the recipe save screen).

7.3.2.4 **Gap sensor to peel plate (Tri-panel mode)**

This setting has the same adjustability in both modes

7.4 Production menu screen

Once all the settings have been done and saved for the recipe(s). Use this production menu to operate the system. Depending on the system used, you may have either of the following two screens. This screen has all the important elements required for any production operation.

Top icon shows the recipe which is being used. It can be changed simply by pressing the icon which will lead you to a toggle menu for a new recipe selection. See explanation further down in manual…

Choose from Manual or Automatic modes.

Choose to make adjustments to the labeling head settings by pressing on the Labeler #1 or Labeler #2 icons respectively.

As you can see all the important operations can be reached and controlled from this production menu screen.

7.5 Conveyor screen

This screen allows you to start and stop the conveyor, change the speed settings as well as save the new variations for each of the products you have in the HMI memory. Simply touch the value and enter a new one with the pop-up numeric keypad and exit out by using the X. The jog button allows to start-stop the conveyor belt to do the setup.

7.6 Recipe screen

To access the Recipe Screen, press any of Name Recipe Box locate in any screen

This is the screen where all you products, scales, speeds and values are collected and saved as a recipe for each of your jobs (or products) called recipes. A recipe holds the name of the container, the bar code, the picture, the ruler values for all gradient scales, the speeds you require and all pertinent information specific to that product.

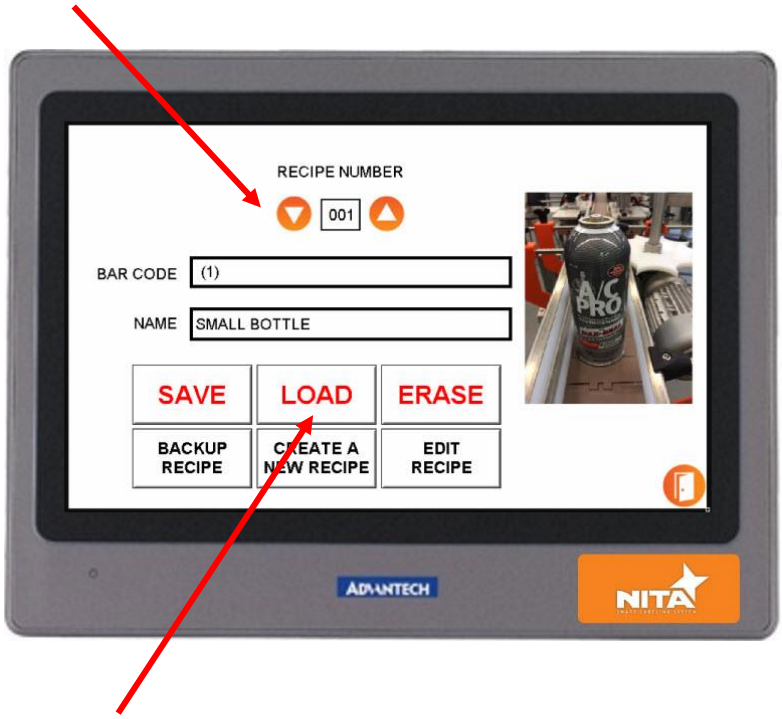
As we have mentioned, you can change, modify and remove any recipe you desire. It is also possible to upload them to a memory stick for backup and future downloads into the system.

You can scroll the recipes using the arrows to go to an empty recipe slot or simply choose one that is active. Use the arrows to accomplish this.

7.6.1 Saving a recipe

7.6.2 Load an existing recipe:

1) Use the scroll up arrow or down to locate the desired recipe



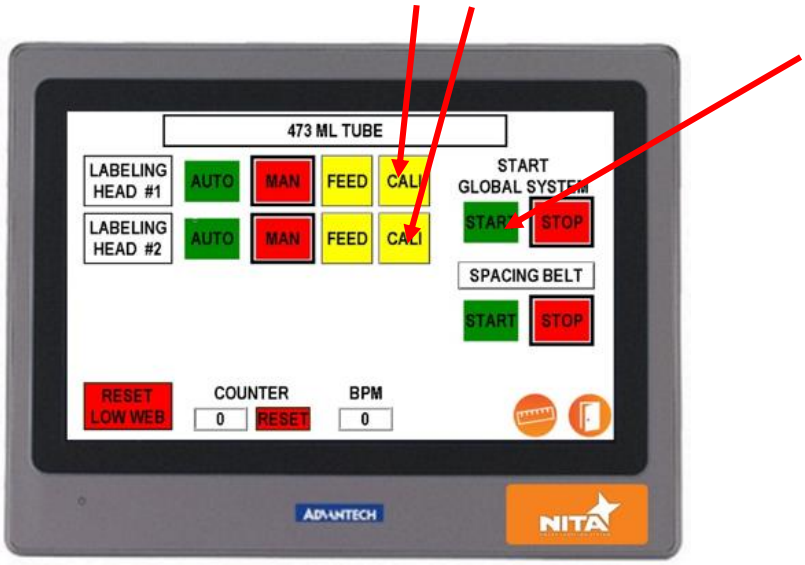
2) Press "**LOAD"** to load the recipe you desire with all its pre-sets. This will give you the physical values to change your guides, heights and other adjustments…simply follow the recipe. You do not need to enter the speeds and other settings; they have already been set for existing recipes.

3) Adjust the labelers and side guides according to the settings displayed.

4) Load labels and calibrate the gap sensor on the labeler. (see manual for details)

5) Perform CALIBRATE for labelers being used while conveyor is stopped.

6) Press the START button



The operator can also change settings here but unless someone with a password confirms those settings, they will TAKE EFFECT BUT NOT BE SAVED FOR NEXT TIME USUAGE. Note: Make sure you save the recipe every time you make a change otherwise those changes will not be remembered the next time it is recalled. Also, make sure the system is running in full auto mode at your desired production speed when you save. All saved recipes remember the exact status of the operational machine at the moment the recipe is saved. Those are the settings that are recalled.

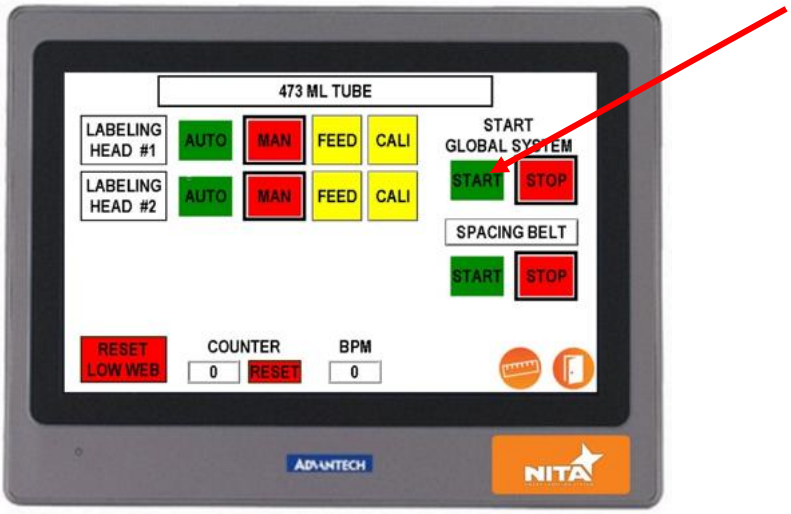
7.6.3 Erase a Recipe

Simply hit the erase button and that title will disappear. The recipe number will still exist. You can then enter a new recipe title and enter new measurements into the appropriate fields.

7.6.4 Creating a new recipe

To create a brand new product recipe:

1. Adjust all of the mechanical adjustments (Side Guide, Labelers, TCB…) according to the product.
2. Enter an approximate value for LABEL FLAG, LABEL POSITION ON PRODUCT etc…
3. Enter those numbers in the ruler values.
4. Press START and place a product on the belt, make sure that everything runs like you want



5. Press CREATE A NEW RECIPE button

6. Use the scroll Arrow Up or Down to locate a blank Recipe and press NEXT STEP

7. Press the Name Box beside the Recipe ID to enter a Recipe Name (A keypad will allow you to enter desired name or item) and press NEXT STEP

8. Use the scroll Arrow Up or Down to find the right picture and press NEXT STEP

9. Press SAVE to save the recipe

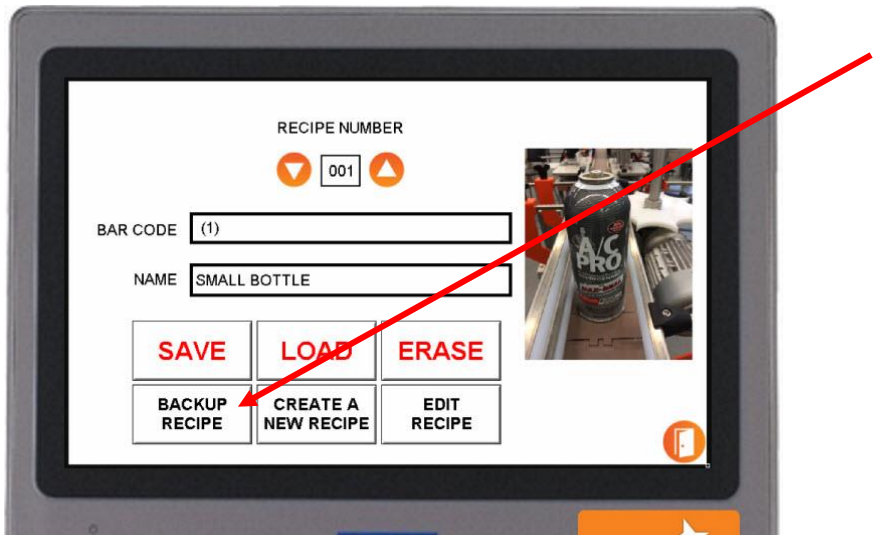
7.6.5 Memory Stick

The memory stick icon allows you to download or upload the recipe to/from a USB memory stick.

Follow instructions onscreen to perform these operations.

1) Insert USB stick in USB Key port under the HMI control panel

2) Press MEMORY STICK key



3) Now you have two choices:

BACKUP RECIPE TO USB STICK: Take the entire recipe (machine setting) and save on the memory stick

UPLOAD RECIPE FROM USB STICK: Take all recipes on the stick and load in the machine memory

Note: The recipes cannot be uploaded or downloaded individually. The whole recipe book will be transferred each time.

7.7 Alarm screen

7.7.1 Temperature screen alarm

In accordance to the UL73 and CSA C22.2 68 certification norms, an alarm will sound when the internal temperature of the electrical panel reaches 40 C or 104 F. The system will not stop, you simply have to press RESET to remove this alarm. The alarm will not reappear for as long as the machine stays ON. Although, please make sure that the vent traps are clean and dust free to ensure a proper air circulation within the box.

7.7.2 Emergency screen

YOU WILL NEED TO PRESS CALIBRATE ON THE HMI AFTER THIS

The whole system can be stopped by pressing the red emergency, mushroom-shaped button located on top of the electrical panel. A screen (as shown) will appear and indicates that the emergency button is engaged. An audible alarm signal will also ring.

This screen will stay as long as the emergency button is not released.

7.7.3 Label Out

This screen appears when a problem with labeling the containers occurs. As you can see, it will indicate from which labeling head the problem is coming from. (Front labeler in this case shows the Fault) An audible alarm will also sound at the same time as this message is displayed.

To reactivate the system, simply press the Reset key. It will lead you to the screen of the faulty labeling head and will stop the audible alarm. You will have to reposition the web (or tend to empty roll) and restart the system.

8 MAINTENANCE

This labeler has been designed with the minimal maintenance requirement possible. There are however some things to take into consideration.

The system is built to perform in humid conditions, but **must not be pressure washed**. In case of wash down conditions, it is recommended to cover each labeling head with plastic tarp.

For the overall cleaning, it is recommended to use compressed air and clean, damp wipes.

Always turn off the system before proceeding with cleaning and maintenance.

The following section explains the preventive maintenance for each section

After every 100 hours of operation, a visual inspection of the system should be done and where it is necessary, lubrication and cleaning should be performed.

⚠	**CAUTION**	**WEAR PROTECTIVE EYEWEAR when performing any maintenance on this equipment**
⚠	**CAUTION**	**To reduce risk of fire, electrocution or other personal injury when operating or maintaining the labeling head, follow basic safety precaution, including the following:**

DO NOT perform any servicing or maintenance with the Power ON.

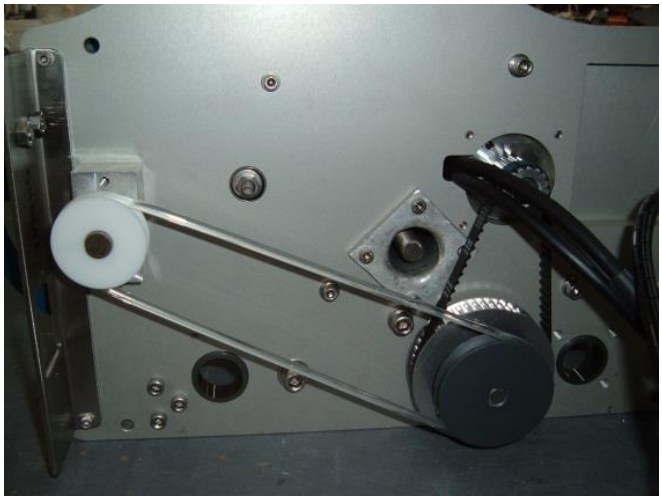
Always disconnect the electrical plug from wall socket

Make sure that the power is OFF or that available E-stop buttons have been activated

LABELING HEADS

Belts:

Monthly, a visual inspection of the rewind belt and timing belt, in back panel should be performed. To do this, you must gain access to the rear panel by removing 4 screws and removing the rear cover.

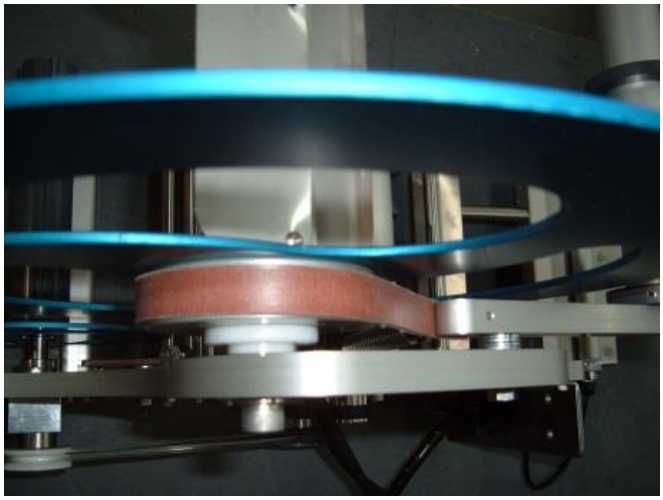


⚠	**CAUTION**	**DO NOT ATTEMPT** doing this with the equipment under tension (with power on).

The visual inspection should consist of looking for cracks or defects in the belts. If this is the case, change the belts that are defective. Refer to the parts listing at the back of this manual (parts section)

The braking mechanism requires a monthly visual inspection as well. Also once every 12 months or so, you should consider replacing the belt (it is possible that this belt be changed prior to the 12 months' time frame therefore a visual inspection to determine cracks or tears in the belt is necessary.

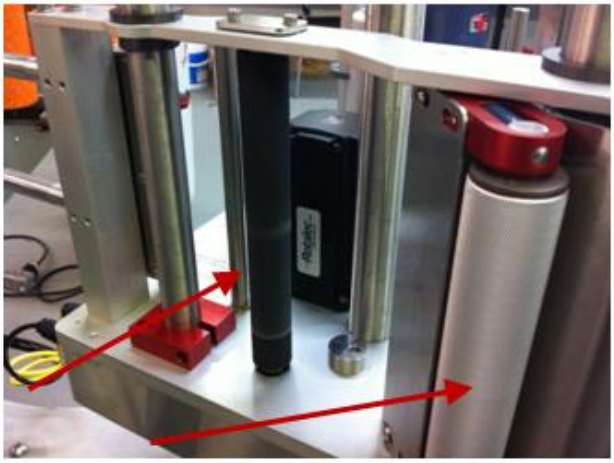
This leather brake belt is located at the rear of the media wheel and is held by a spring & hook assembly. These components are all part of their commanded spare parts kit and are listed at the beginning of this manual.

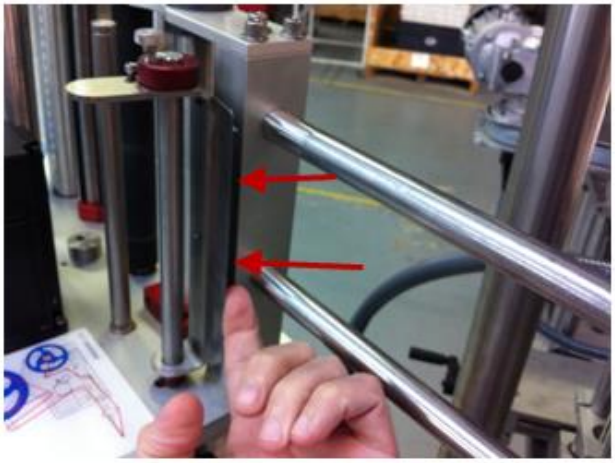


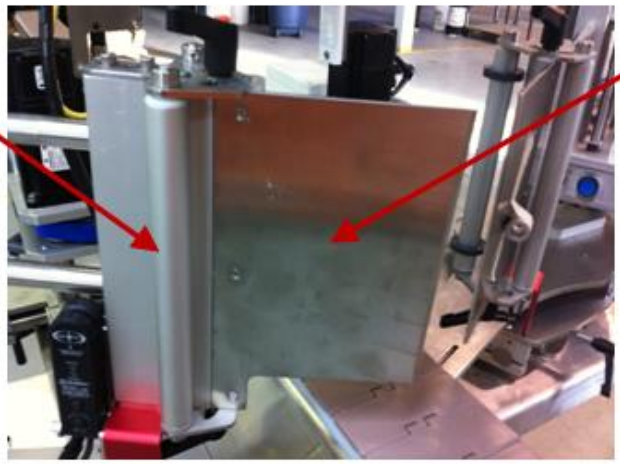
Rollers:

It is important that your labeler is as clean as possible in its environment in order for it to perform properly.

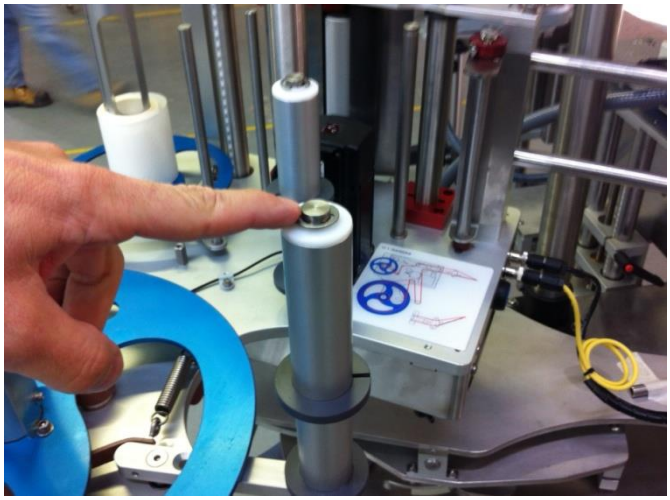
Daily, you may want to clean all the rollers including the drive roller (the rubber one), the tension door and the peel plate using a damp cloth with alcohol. Make sure those parts have no glue or labels on it.







Weekly, spray a silicone base lubricant on each end of the plastic bushing.



Sensors:

The sensors all have an electronic eye called a photocell; these must be free of lint or dirt. Since the photocells are generally made with glass or plastic lenses, they naturally attract substances which could easily fool the sensor, use a cotton swab to gently clean the eye of the sensor as you would any lens, in a circular motion.

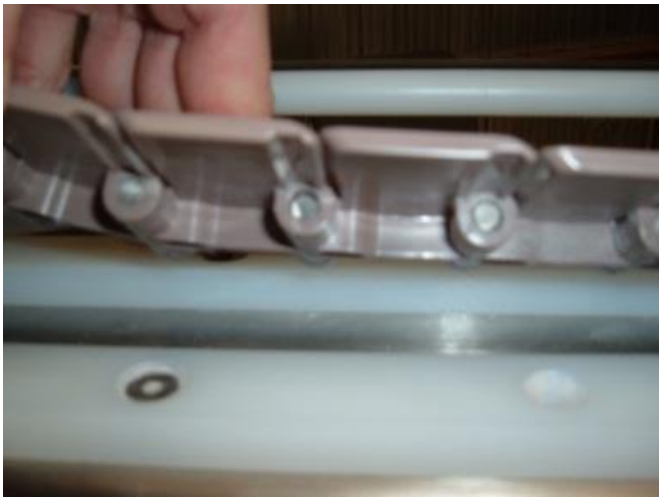
Conveyor:

Always keep the belt clean. To clean it, simply use compressed air and/or damp wipes. If necessary, a soft cleaning agent can be used.

Cleaning

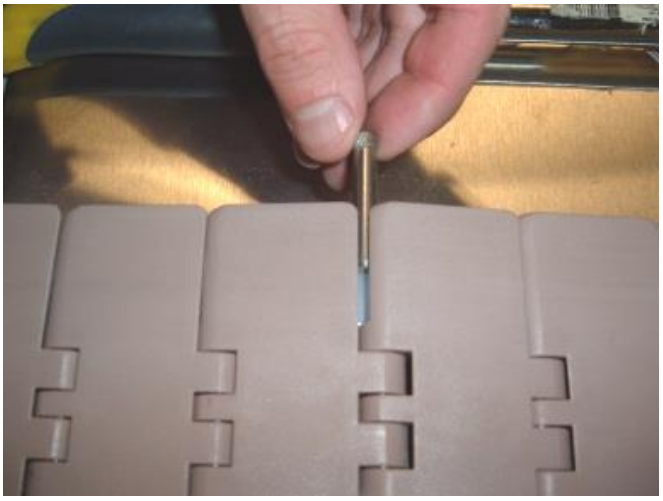
To clean the under carriage portion of the conveyor, simply remove the belt using a pin or nail like tool and a hammer to tap out the retaining belt link pin. (see pics below, there is an orientation to the pins, you must tap it out from the narrow diameter) Clean the desired portion with a damp cloth and replace the pin in the belt as seen below

1) Lift belt

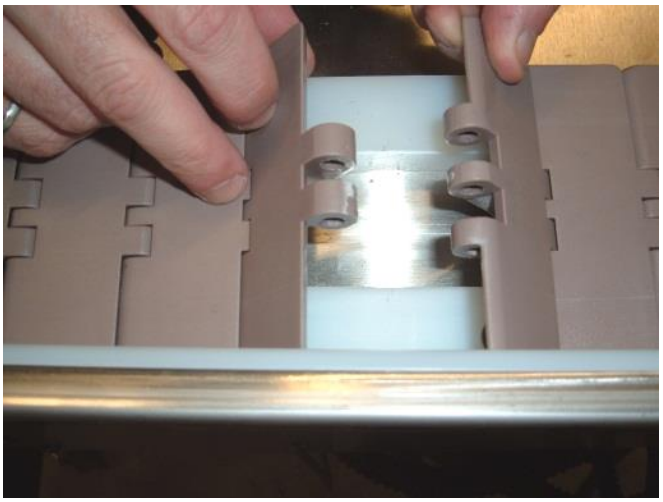


2) Tap out Link Pin

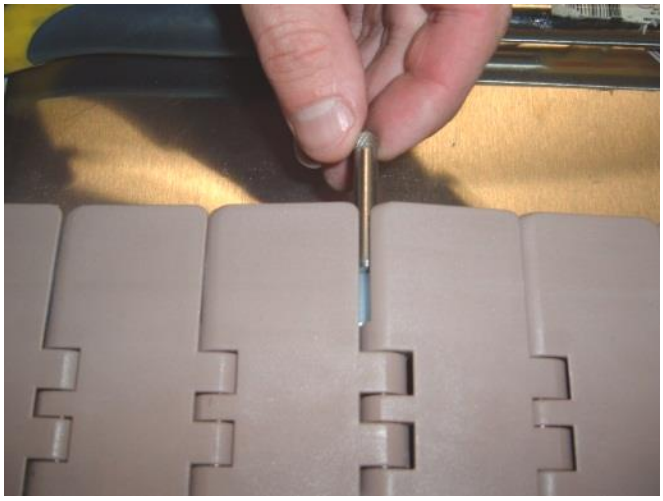
3) Remove pin



4) Separate the belt chain



5) Once cleaned, replace pin



You can also leave the belt on the carriage portion and simply wipe a damp cloth between the belt and the undercarriage structure.

Vents

The electrical panel comes standard with a vent opening (120 x 120mm) to evacuate the possible heat accumulation from the electronic components. On the opposite side of the vent, there is a fan of the same dimensions. One opening has filters which should be cleaned periodically. The frequency in which they require cleaning is based on the amount of dust within each factory. To clean the filters, remove the outside grill portion, remove the filter and clean using an air house or can of compressed air. Simply clean, and /or replace if required.

9 TROUBLE SHOOTING – QUICK GUIDE

PROBLEM	POSSIBLE CAUSE	SOLUTION
LABEL OUT ALARM	• The label roll is finished, no more labels in the roll • Dirty label sensor • Sensor not well adjusted • Broken Timing pulley • The label cannot not pass thru GAP sensor • The LABEL FLAG are greater than the label length	• Replace label roll • Check sensor, clean it is necessary • Adjust calibration of sensor • Replace belt • Thread the label correctly • Decrease the label flag under the label length
DOUBLE LABEL APPLIED ON SAME PRODUCT	• Gap sensor does not read correctly • Product sensor is obtaining multiple product reading	To determine if the problem comes from the GAP or Product sensor follow this rule: 1) Place the system in manual mode 2) Press feed 3) If the machine gives 2 or more labels then the problem is the GAP sensor. 4) If not look at the product sensor and re-calibrate it. This sensor may be giving out two signals. Replace sensor if cannot be resolved
SLANTED LABEL DURING APPLICATION	• Machine not oriented properly to the product • Aliment of label within the machine • Product too humid, wet or too cold to be labeled	• Verify position of the machine • Check label tensioner & roll • Use only dry (not too cold) products unless using a special label specific to application
CURLING OF LABELS OR AIR BUBBLES	• Uneven product surface	• Use brush wipe-on adaptor • Improve the product's surface
LABEL IS LATE, NOT CONSTANT	• The label is incorrectly threaded • Dirty drive roller	• Check the threading diagram and re-thread the machine correctly

	• **Drive roller is worn** • **The bushing on the tension roll are worn**	• **Clean the drive roller with an alcohol based cleaner** • **Replace drive roller** • **Replace the tension roll bushing**

10 WARRANTY

The standard warranty period for this Nita equipment is 12 months following invoicing. The warranty covers all parts with consideration taken towards reasonable use and normal wear and tear. Not covered by warranty are parts that have a limited wear factor, any required labor by Nita and any shipping to or from Nita of defective or new parts. Prior to return to Nita, parts must be verified defective. The regular hours covered by the Nita warranty fall under the Nita business hours which are from 8:00 a.m. to 5:00 p.m. Monday through Friday Eastern time.

Return of defective parts

To return a defective part, you need to get a RMA number from Nita. Specify the serial number of the equipment, the client's name, address and phone number, contact name and the nature of the problem.

To get a replacement part, you must produce a purchase order as you would with any regular part order. You will be billed for the new part and credited for the defective one after evaluation. If the part is determined to be defective due to improper use, no credit will be issued. **Note**: shipping charges for the new part and for the return of the defective one are at your expense.

Proprietorship and Risk of Loss

NITA reserves ownership of all equipment ordered by (END USER) until complete payment is received. NITA has the right to claim and repossess any equipment which has not been paid on date, wherever it is, whether it has been installed or not, and to use any means necessary or useful to exercise said right, at (END USER'S) expenses.

Notwithstanding NITA's reservation of ownership, (END USER) becomes fully responsible for loss of or damages to NITA's equipment, as of the date where NITA made the equipment available for pick-up by (END USER).

Appropriate Use of Equipment

The equipment supplied to the end user by Nita are to be used for the sole purpose for which they were intended and must follow Nita's specifications on usage as well as appropriate functions. Nita will not assume any responsibility for any inappropriate use or modifications to the said equipment other than for the use it was initially built for.

The warranty will cease to apply forthwith if, in NITA's opinion, the equipment has been used abnormally or in an abusive manner, of it has not been properly maintained, if it has not been carried on a truck equipped with an air-ride suspension when required by NITA or if it has been used or maintained contrary to the owner's manual provided by NITA.

Responsibility Limits

The solution put forth has been prepared with the information that has been provided to Nita by the end user. Subsequently, Nita cannot assume any responsibility for the exactitude, precision and validity of the information which was supplied. Moreover, Nita cannot be held responsible for (a) any damages, direct or indirect, secondary, or accessory , including, without limitations, the loss of profit, workflow interruption, loss of production, loss of profits and other; (b) any and all damages claimed against the end user by a third party ; (c) all or any damages caused to the property of end user or any other third party; (d) any or all damages resulting in an act from end user or third party, major force, or act of God, unforeseen cause, or event.

With all reservation, in the eventuality where the responsibility is that of Nita relative to any defect of quality of said equipment or proposed solution Nita would be able to Accept the responsibility, to its entire discretion, with the replacement of part of or the said equipment or solution. By a compatible or identical equipment or solution or by a reimbursement of value agreed upon. In no case can Nita's responsibility exceed the total monetary sums received for the said defective equipment or solution.

11 PARTS - COMPONENTS SCHEMATICS SECTION

11.1 SynerG Xp Quick reference spare parts list (5900044)

Spacing Belt unit

- #8130094 Belt gray Pvc

Control Panel

- #8379146 Filter kit for fan
- #9400126 Fuse 10 amp

Wrap Station 16''

- #5113822 Timing Belt 3'' Blue Sponge
- #5112907 Small Back plate foam Blue Zucco

Wrap Station 32''

- #8130026 Timing 0.50 '' Belt Black (700H300)
- #5112082 LargeBack plate foam Blue Zucco

Top Clamping Device 48''

- #5111887 Foam 1'' For Backing belt
- #8130202 Belt black rubber (1000H100)
- #8131083 Belt White Fda (M1000H100JS)

Top Clamping Device 24''

- #5111929B Foam 1'' For Backing belt
- #8131077 Belt black rubber (570H100)
- #8131095 Belt White Fda rubber (M570H100JS)

Sensor And Acc.

- #8325103 Plastic reflector
- #8325058 Reflex product sensor
- #5101796 Sensor Gap Label eye w/ connector
- #8325086 Sensor Gap clear Label
- #8325087 Sensor low web

Orienting device (cam device)

- #5111550 Timing Belt white neoprene

Labeler head AE612MKII Spare kit 5101906

- #5123806 Roller kit knurled 3''
- #5111139 Belt transmission rewind
- #5111167 Strap Braking for Unwind
- #8130199 Belt Timing 3/8 type XL
- #8708019 Bolt Eye 8/32
- #8180030 Spring ext. ½ x 2 1/2
- #8181064 Spring tension
- #8184010 ½'' Collar (2x)

Labeler Head Wide AE612MKII Spare kit 5101907

- #5123806 Roller kit knurled 3'' (2x)
- #5111139 Belt transmission rewind
- #5111167 Strap Braking for Unwind
- #8130199 Belt Timing 3/8 type XL
- #8708019 Bolt Eye 8/32
- #8180030 Spring ext. ½ x 2 1/2
- #8181064 Spring tension
- #8184010 ½'' Collar (3x)

Labeler HeadAE616MKII Spare kit 5101910

- #5123806 Roller kit knurled 3'' (1x)
- #8125003 Clutch for rewind
- #5111167 Strap Braking for Unwind
- #8130258 Belt Timing 1/2 type L
- #8708019 Bolt Eye 8/32 (2x)
- #8180030 Spring ext. ½ x 2 1/2
- #8180065 Spring Rewind
- #8184010 ½'' Collar (2x)

Labeler HeadAE616 wide spare kit 5101911

- #5123806 Roller kit knurled 3'' (2x)
- #8125003 Clutch for rewind
- #5111167 Strap Braking for Unwind
- #8130258 Belt Timing 1/2 type L
- #8708019 Bolt Eye 8/32 (2x)
- #8180030 Spring ext. ½ x 2 1/2
- #8180065 Spring Rewind
- #8184010 ½'' Collar (3x)

Pathfinder (Skew corrector) ●#5112221 Timming Belt with Blue Zucco cover	**Acc.** ●#5102300 Brush 4'' ●#5111177 Peel Plate STD head ●#5111398 Peel Plate Wide head
Ratchet Handle ●#8181022 Handle w/stud ¼-20 x ¾ ●#8181057 Handle Fem. 5/16 ●#8181068 Handle w/stud 10-32	

11.2 Parts List Electrical

Part #	Description	Qty
5101796	GAP SENSOR, LABEL EYE	1
8325093	GAP SENSOR, CLEAR LABEL (TRITRONIC)	1
8325058	PRODUCT REFLECTIVE SENSOR FOR CLEAR PRODUCT (STANDARD ON ALL SYNER G XP AND JOUST SYSTEM)	1
8325066	PRODUCT PROXIMITY REFLEX SENSOR	1
8325087	LOW WEB PROXIMITY PHOTOELECTRIC PNP	1
8301107	HMI 7" COLOR	1
8301095	POWER SUPPLY 24 VDC, 120 W	
8301091	INTERFACE BOARD EPSILON EP 16 IN – 8 OUT	1
8307057	NC CONTACT BLOCK EARLY BREAK	1
8310089	INCREMENTAL HOLLOW SHAFT ENCODER (OLD MODEL) WITH DB09 CONNECTOR (MACHINE BUILT BEFORE MID 2011)	1
8310119	INCREMENTAL HOLLOW SHAFT ENCODER (OLD MODEL) WITH DIRECT CABLE (MACHINE BUILT AFTER MID 2011)	
8310121	INCREMENTAL HOLLOW SHAFT ENCODER (NEW MODEL) WITH DIRECT CABLE	
8311027	AC DRIVE COMMANDER SKA, 0.5 HP, 230 VAC	1
8311032	EPSILON SERVO DRIVE EPP EMERSON	1
8311034	EPSILON SERVO DRIVE EPB EMERSON	1
8320078	EMERGENCY STOP BUTTON, TWIST RELEASE	1
8320105	START RELAY 24 VDC – CONTACTOR, MINIATURE	1
8320107	NON-FUSIBLE DISCONNECT SWITCH 25A	1
8325080	TEMPERATURE SENSOR 24 VDC ANALOG VERSION , 0 to 100º C (OLD MODEL MACHINE BULT BEFORE 2010)	1
8325090	TEMPERATURE SENSOR 24 VDC 40º C DIGITAL VERSION (NEW MODEL MACHINE BUILT IN 2010 AND AFTER)	1
8379139	EUROPEAN STYLING AIR GRILL WITH FILTER 150 X150mm	1

Part #	Description	Qty
9400126	FUSE 10 A 10 X 30 MM	4

12 MANUFACTURER'S COORDINATES

Ultimately, the dealer which sold you the machine should be your first contact as they have been trained to perform any work on these devices and troubleshooting.

Should you require any additional information about our equipment, feel free to call us

NITA LABELING EQUIPMENT INC.

1051 du VIGER STREET

TERREBONNE, QUEBEC, CANADA

J6W 6B6

TEL : 450-961-4000 or 1-877-961-4008

FAX : 450-961-4240

WEB : www. nitalabelingequipment.com