

Pregis Sharp™ Max Series Bagging Equipment Operator Manual

Models 1143-03 , 1145-03, 1197-01, 1198-01*

* Models 1197 and 1198 are not CE certified

REV 20 v2 – Original Instructions In English



Products worth protecting deserve Pregis

www.pregis.com



Property of Pregis LLC

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CE Certification



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EU Declaration of Conformity

According to EC Machinery Directive 2006/42/EC, Annex II A

We, Pregis Sharp Systems LLC N59 W22387 Silver Spring Drive, Pewaukee, WI 53072 USA, hereby declare that this Declaration Of Conformity is issued under our sole responsibility and belongs to the following equipment described below:

Product:	MAX 12 Packaging Machine	Model:	1143
Product:	MAX 20 Packaging Machine	Model:	1145

Object of the declaration:



The object of the declaration described above is in conformity with the relevant Union harmonization legislation:

THE INNOVATIVE MANUFACTURER OF FLEXIBLE PACKAGING SYSTEMS: PRE-OPENED BAGS ON A ROLL AND BAGGING MACHINES

Page 1 of 2



Applicable EU Directives:

Machinery Directive 2006/42/EC
 Low - Voltage Directive 2014/35/EU
 Electromagnetic Compatibility Directive 2014/30/EU

Applicable Harmonized Standards:

BSEN 60204-1:2006+A1:2009
 BSENISO 12100:2010
 BSENISO 4414:2010
 BSEN 415-3:1999+A1:2009
 IEC 61000-6-4:2006+A1:2010
 Generic Emission Industrial Standard
 CISPR 16-1-2:2014+A1:2017 Conducted Emissions
 CISPR 16-2-1:2014+A1:2017 Conducted Emissions
 CISPR 16-2-3:2016 Radiated Emissions

 IEC 61000-6-2:2005
 Generic Immunity Industrial Standard
 IEC 61000-4-2:2008 ESD
 IEC 61000-4-3:2006+A1:2007+A2:2010 RF IMMUNITY
 IEC 61000-4-4:2012 EFT
 IEC 61000-4-5:2014+A1:2017 SURGE
 IEC 61000-4-6:2013 COND IMMUNITY
 IEC 61000-4-8:2009 MAG FIELD
 IEC 61000-4-11:2004+A1:2017 DIP & INTERRUPT

In case of alteration of the machine, not agreed upon by us, this declaration will lose its validity.

Authorized Signature:

Printed Name:

ROBERT P. HUBBELL

Title:

ELECTRICAL ENGINEER

Date:

6/5/2018

Airborne Noise Emissions

Test procedure:

1) All measurements were taken of the machine at locations indicated on the attached drawing number:

a) Machine under test location? Engineering/Sales test lab.

2) Meter position was per the Machinery Directive 2006/42/EC.

Where workstations are undefined or cannot be defined, sound pressure levels must be measured at a distance of 1 meter from the surface of the machinery and at a height of 1.6 meters from the floor or access platform. The position and value of the maximum sound pressure must be indicated. (See table below)

3) The meter was set on the “A” - weighting scale, fast response setting. The meter was not calibrated.

Equipment under Test: 1143/MAX 12, 1145/Max 20, 1147/MAX 20-10

Test equipment: EXTECH Instruments Model 407735 Sound level meter.

Location	dB (A) Measured	Machine Speed
PC Display	81	28/inches/second
Loading	81.6	28/inches/second
Unwind	82	28/inches/second
Ambient	49	

Peak C - weighted instantaneous sound pressure was not taken.

Tested by: DCSI

Date: 2/4/2014

DCSI © 2014

Prefix

Introduction

Thank you for purchasing the **Max Series bagger**. The **Max Series bagger** is the low cost solution for manually bagging product, dramatically reducing packaging costs and improving package quality. The **Max Series bagger** has an optional integrated high-performance, low-cost ribbon printer for printing barcodes, text, or graphics on the packaging material.

Both models of the **Max Series bagger** can be upgraded to a version that meets the EU safety, health, and environmental requirements. 

The **Max Series bagger** can be upgraded from a manual, hand-loaded operation, to a fully automated packaging system. A variety of options, including weighers, counters, and conveyors are easily connected via optional interfaces.

Your **Max Series bagger** is a product of extensive research and field testing with the following features:

- State of the art *Step Logic Programming* technique that logically controls each machine action (step) in sequence and verifies that the correct action occurred with sensor feedback.
- Simplified layout of digital outputs in PLC program for ease of troubleshooting.
- Improved fault handling that can display multiple fault conditions simultaneously.
- Simplified operator set-up.
- Displays all PLC I/O status, including Expansion I/O.
- Manual motion pushbuttons on Options Screen that provide both text and color cues as to the state of the device.
- Help Screens show setting range and default values.
- Speed settings in inches/second instead of raw numbers.

The materials used were selected for maximum durability and optimum performance. Every unit is thoroughly inspected and tested prior to shipment.

ABOUT THIS MANUAL

This manual has been prepared for your use in operating the **Max Series bagger** Modular System. Included in the manual are helpful facts on operating and basic troubleshooting information.

It is important that you familiarize yourself with the product as much as possible before operating or troubleshooting.

Make sure you read through the *IMPORTANT SAFETY INFORMATION* and *INTRODUCTION* sections of this manual before operating this machine.

Quick Start-Up Guide*

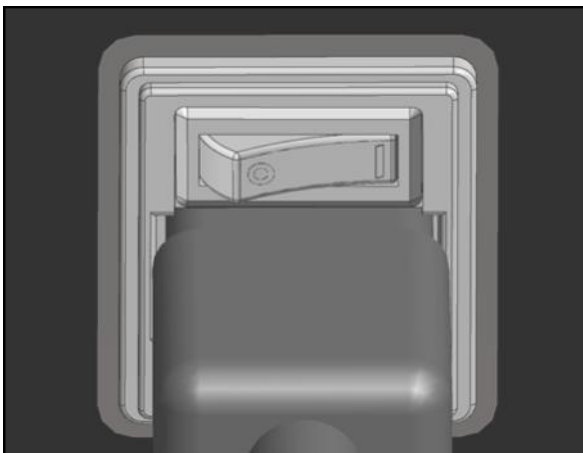
Complete Power-Up Procedure*

	WARNING! Read and understand the entire Operator Manual before attempting any procedures on this machine. Failure to follow these instruction can result in serious injury.
---	--

1. Connect Power Cord to the 120V Power Entry Module.



2. Turn switch to the ON position. The HMI will automatically start up when Power Entry Module Switch is turned ON.



3. Release the E-Stop Button and press the Green Power Button. The green light should illuminate and energize the MCR.

Note: If the bagger has the Stack Light option, the horn will sound until the HMI program has finished loading. To prevent horn blowing, do not press the Green Power Button until HMI program is loaded. The horn then can be silenced by pressing the reset button.

* CE models, see Page 95.



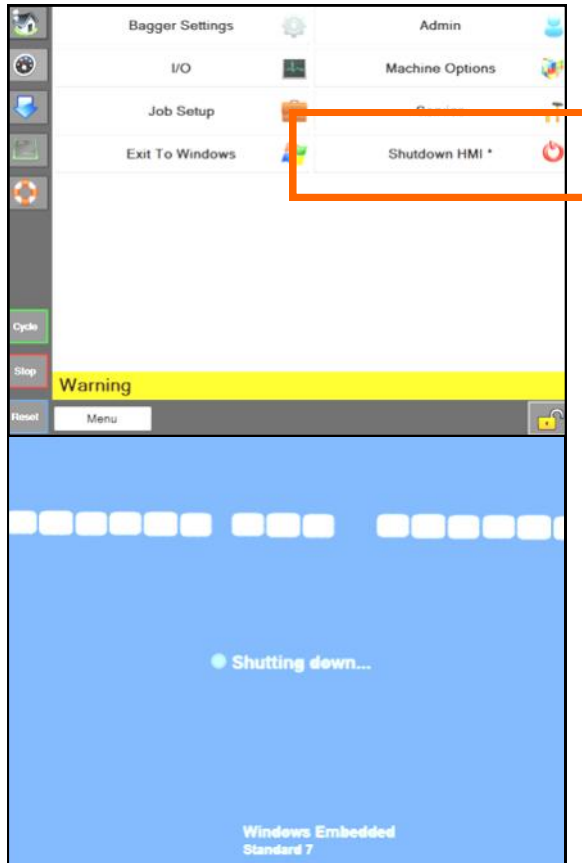
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Bagger Shut Down Procedure*

Complete Power Down Sequence

The bagger must be properly Power down in the correct sequence.

1. From the **Main Menu** Screen, press and hold the **"Shutdown HMI"** button for 3 seconds. The HMI program will start shut down.



2. ***IMPORTANT! ALLOW THE HMI/PC TO POWER DOWN COMPLETELY BEFORE CONTINUING TO NEXT STEP.***

- The Windows software must shut down properly.
- Do not remove power during this process. Corruption of Windows files could occur.

3. ***WHEN SCREEN IS BLACK AND LED STATUS INDICATOR TURNS FROM BLUE TO ORANGE,*** switch Power Entry Module Switch to OFF. The machine is now electrically shut down.

* CE models, see Page 96.



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Introduction

READ ALL INSTRUCTIONS BEFORE OPERATION

- Upon receipt, unpack and inspect the unit for damages that may have occurred during shipment. Pregis is not in any way responsible for any damages that occur during transport. If you receive damaged equipment, it is your responsibility to make a claim with the transporter.
- Read instructions carefully. Be familiar with the controls and proper use of the unit. 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 this equipment. In order to avoid delays due to faulty installation and operation of the machine, please see that these instructions are read by the persons who will install or operate or maintain the machine.
- The WARNING instructions issued on this manual are not meant to cover all possible conditions and situations that may occur. It must be understood that common sense, caution and carefulness are factors that cannot be built into all machines. These factors must be supplied by the persons installing, maintaining, or operating the machine. Failure to install, maintain, and/or operate the equipment according to the manufacturer's instructions may result in conditions which can produce bodily injury and/or property damage. Contact Pregis about any problems or conditions you do not fully understand.

Equipment Safety Features

The safety information presented in this manual are guidelines that should be followed by all personnel. Anyone operating or maintaining the equipment should read and follow all safety information in this manual, without exception.

DO NOT DISABLE OR REMOVE SAFETY DEVICES DESIGNED INTO THIS MACHINE.

All Operators should be familiar with their own Labor Protection Guidelines. Hands, arms, hair and clothing should not be near any moving or heating parts of the machine. Do not turn the machine ON if any of the machine's components have been removed or modified.

Emergency Stop (E-Stop) Button

An Emergency Stop (Red) Button is located on the lower left corner of the Display Panel, which immediately stops the machine when pressed by de-energizing power to the PLC outputs, motors, and motor drives.

Fire Prevention

Keep a fire extinguisher near the machine. Keep machine away from any sparks, flames and flammable materials. Unplug the machine before maintaining or cleaning. All electrical components must be in good condition and clean.

Electrical fires can occur if any wires are scratched, corroded, color-faded, lost their insulation or have damaged wire ends. These should be changed immediately.

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

Electrical Precautions

Ensure no liquids are near the machine to eliminate the possibility of spilling onto any electrical components and creating 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 and keep your body, hand-held

tools and any other electrically conductive objects away from any exposed electrical components.

Ensure the electrical cabinet is always closed, unless needed for maintenance. Always ensure that the ground wire is firmly connected with the ground before starting the machine. Use double grounding for added protections. After installation, check all electrical connections and test all electrical circuits before starting the machine.

Grounding Instructions

Improper connection of the equipment grounding conductor can result in a risk of electrical shock. Check with a qualified electrician or service person if you are in doubt as to whether your machine outlets are properly grounded.

This machine must be grounded. In the event of malfunction or breakdown, grounding will reduce the risk of electrical shock by providing a path of least resistance for electrical current. This machine is equipped with a cord having an equipment-grounding conductor for a 3 prong grounding plug. The plug must be connected into an outlet that is properly installed and grounded in the accordance with all local codes and ordinances. Do not modify the plug provided with the machine.

If your electrical supply does not meet the above specifications, or if you are unsure your building has an effective ground, have a qualified electrician or your local electrical utility company check the ground and correct any problems.

The safety information presented is a guideline that should be followed by all personnel. Anyone operating or maintaining the equipment should read and follow all the information in this manual, without exception.

Storage

If the machine will not be used for a considerable amount of time, it should be stored in the original shipping crate to protect it from damage.

Definition of Terms



Throughout this manual, you will find the following safety notices with this accompanying symbol.

This symbol signifies important safety issues regarding the operation and maintenance of the **Max Series bagger**.

SAFETY RULES AND PROCEDURES

The machine requires regular, periodic maintenance to ensure reliable service. No maintenance should be performed unless the safety precautions for maintenance are thoroughly understood.

- Follow all instructions in this manual for safe operation.
- Follow all company and industry standard safety policies regarding this kind of machinery that may exceed those listed in this manual.
- Keep all safety features, guards, interlocks and sensors in good working order.
- Always ensure that all mechanical motion has stopped and allow any heated components to cool down before removing any machine parts.
- Keep the area surrounding the machine free from debris. Spent film/bags should not be allowed to accumulate around bagger.



CAUTION

GENERAL CAUTION: Indicates information important to the proper operation of the equipment, failure to observe may result in damage to the equipment and minor bodily injury.



WARNING

GENERAL WARNING: Indicates information important to the proper operation of the equipment, failure to observe may result in damage to the equipment and severe bodily injury or death.

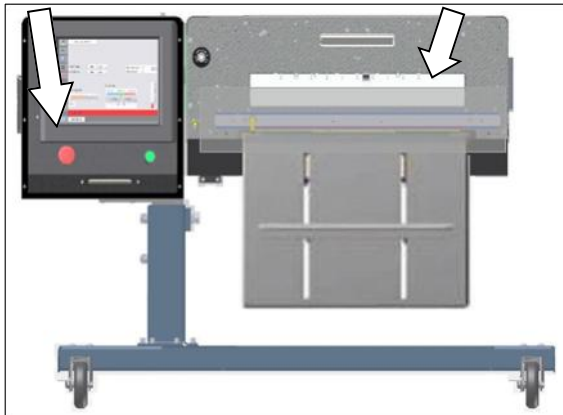
Equipment Safety Features

The **Max Series bagger** is equipped with guards covering the heated sealing area and the underside of the Head Assembly. DO NOT operate the **Max Series bagger** with these or any other guards removed.

The Top Lexan® Guard sits on top of the Jaw Guard. The shape allows for loading of product into the bags. Pregis recommends the **Max Series bagger** be equipped with the optional Dual Palm Buttons to start the cycle to ensure the operator's hands are clear of the sealing and pressure bars when the machine is cycled.

An Emergency-Stop Button is located on the Control Panel, which immediately stops the machine when pressed by de-energizing power to the Master Control Relay, PLC outputs, motor, motor drive and air valves.

Emergency Stop Pushbutton Jaw Guard



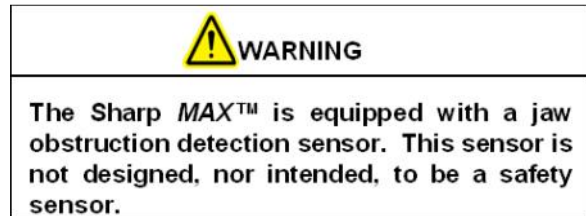
Safety Features

Safety Labels



This label that is placed on the **Max Series bagger** wherever a removable guard or panel is attached. Always disconnect electrical power from the machine prior to removing any guards and/or panels.

Obstruction Sensing Jaw



The Sealing Assembly is equipped with an Obstruction Sensing Jaw, which can detect an obstruction in the sealing area. If the jaw sensors detect an object preventing the jaw from closing, the jaw solenoid will de-energize and place the machine into a fault condition.

A message appears in the display window informing the operator of the jaw fault, allowing the operator to clear the seal area and reset the bagging cycle.

Poly Lite® Mailers and Bags Materials

Call Pregis Customer Service (+1 800-634-6359) to order **Poly Lite® Mailers and Bags** and for information regarding film and bag specifications.

The **Max Series bagger** is designed to use a wide variety of bag sizes and materials. **Poly Lite® Mailers and Bags** are recommended for optimum operating performance, efficiency and safety. System performance specifications are based on utilizing consistent, high quality, pre-opened bags. Any bag used must meet Pregis Sharp™ manufacturing tolerances. The following list shows some of the **Poly Lite® Mailers and Bags** films available through Pregis.

- Low Density Polyethylene (LDPE)
- Linear Low Density Polyethylene (LLDPE)
- High Molecular Weight, High Density Polyethylene (HMWHDPE)
- Laminated Oriented Polypropylene (Laminate/OPP)
- Polypropylene
- Metallic Films (including conductive films)
- Co-Extended Films (combination films)
- Other Laminates (any other laminates laminated with polyethylene)
- Anti-static and Turbo
- Electric films
- VCI corrosion inhibiting films
- Opaque films

Thermal Transfer Ribbons

Pregis Sharp™ thermal transfer ribbons are selected specifically for use with our printer. Use of ribbons other than those supplied by Pregis, may result in a poor quality printing, especially barcodes and their ability to be successfully scanned.

- Recommended Pregis Sharp™ ribbons are:
- Black ink, scratch and smudge resistant
- 2000' (609.6 meters), 3.5 to 4.5 microns thick.
- 1" core, no notch required
- Ink side in
- Back coated ribbons only

Special purpose thermal transfer ribbons, sizes other than those listed above, such as colored ribbons, or low temperature release ribbons are also available.

Specifications

Packaging Specifications

	BAG WIDTH	BAG LENGTH	FILM GAUGE
MINIMUM	2" (5.1 cm)	3.5" (8.9 cm)	.001" (1 mil) 25 Microns
MAXIMUM	12" (30.5 cm)	32" (101.6 cm)	.004" (4 mil) 100 Microns

Table 1-5A. 1143 Packaging Specifications.

	BAG WIDTH	BAG LENGTH	FILM GAUGE
MINIMUM	2" (5.1 cm)	4.5" (11.4 cm)	.001" (1 mil) 25 Microns
MAXIMUM	20" (50.8 cm)	32" (101.6 cm)	.004" (4 mil) 100 Microns

Table 1-5B. 1145 Packaging Specifications.

Machine Specifications

POWER (SOURCE)	WEIGHT	AIR REQUIREMENT	SPEED	OPERATING TEMP	HUMIDITY RANGE
115VAC 50/60 Hz, 10 Amps **230VAC 1Phase, 5 Amp, 50-60 Hz	Est. 500 lbs.^ (227 kg)	80 PSI (5 SCFM) (5.5 Bar)	50 Bags per Minute*	32° - 140° F 0° - 40° C	10% - 90% RH Non-Condensing

Table 1-5B. Machine Specifications

** Power source for CE versions only.

^ Weight depends on installed options and model of bagger.

* **Sealing options**, size of package, along with weight and size of product will cause rate to vary.

Machine Dimensions

Front View

Bagger dimensions viewed from front.*

Measurements are in inches.

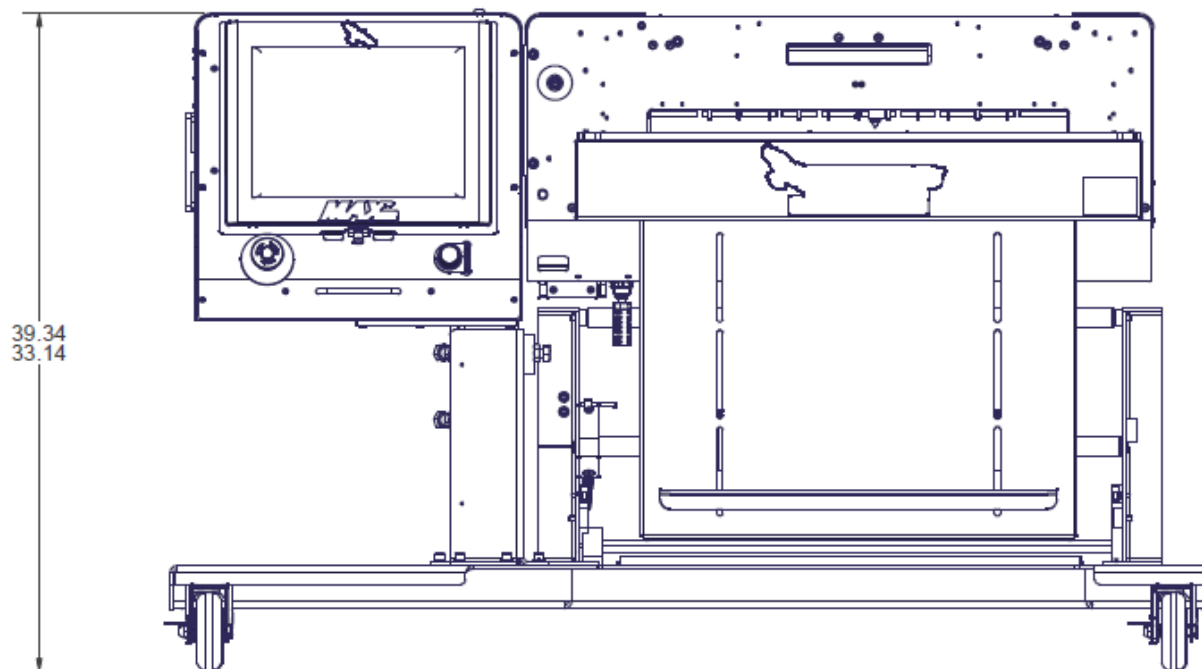


Table 1-6. 1145/1198 Front View.

*** Models 1143/1197 adjusts to the same height.**

Side View

Bagger dimensions viewed from side.*

Measurements are in inches.

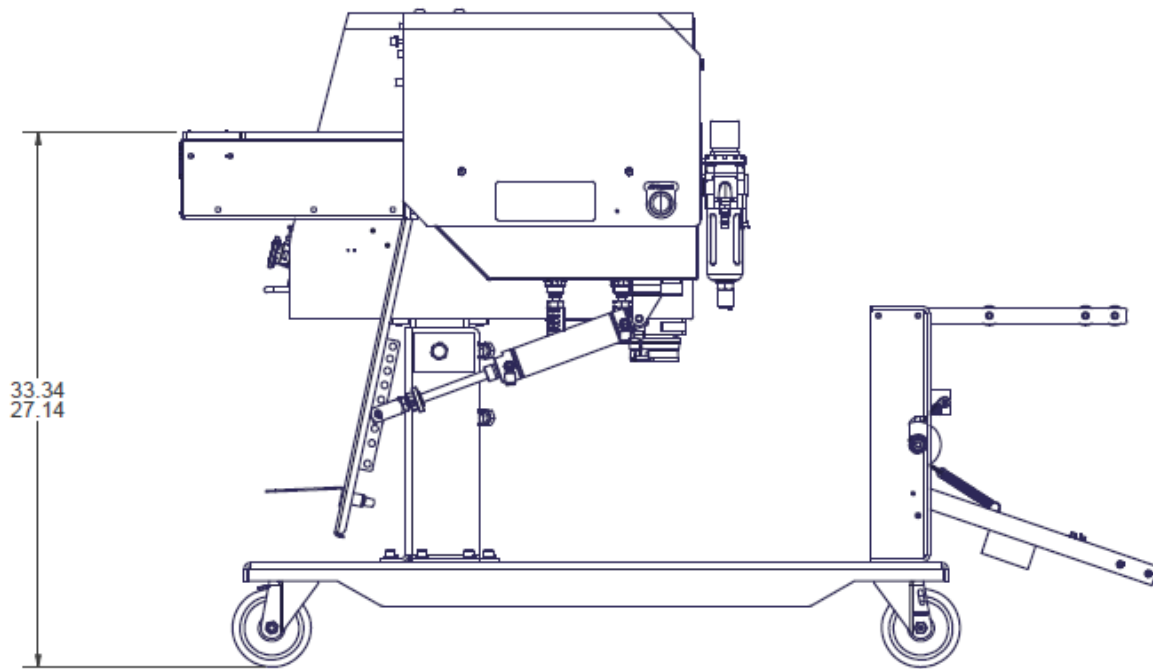


Table 1-7. 1145/1198 Side View

*** 1143/1197 models have same height adjustments.**

Top View

Bagger dimensions viewed from top.*

Measurements are in inches.

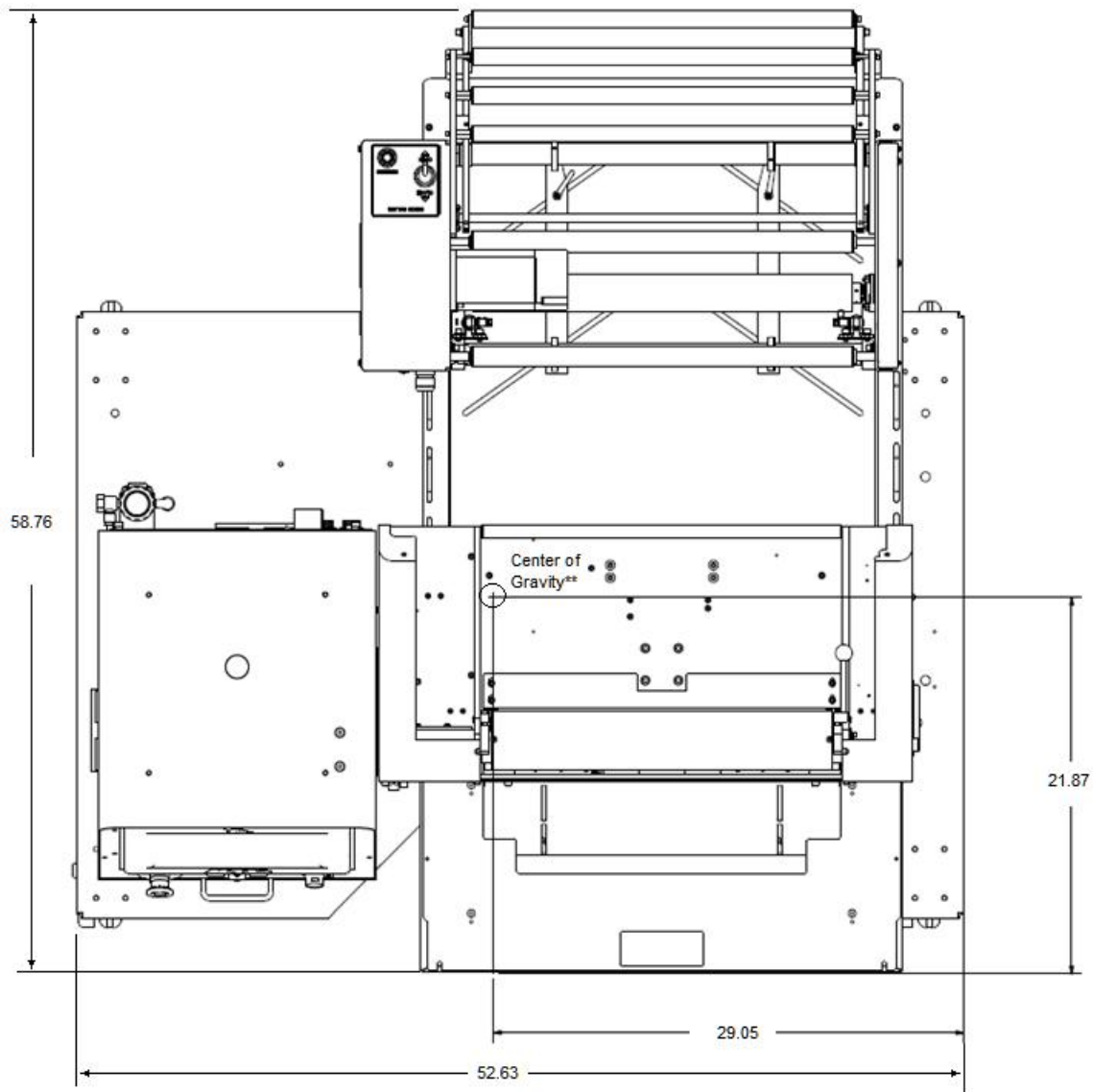


Table 1-8. 1145 /1198Top View

*** The 1143/1197 models are 45.32" wide and 39.81" deep.**

**** Center of Gravity for 1143/1198 Models are 26.90" wide and 23.32" deep.**

Theory of Operation

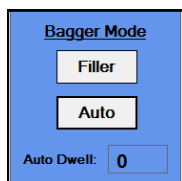
The **Max Series bagger** machines have four distinct operating modes: Manual, Auto, Filler, and Auto Filler. Manual and Auto modes are built into the machine and require no optional equipment or changes to the Factory Configuration. Filler and Auto Filler are optional and must be setup in the Factory Configuration screen.

To better define these terms, a **Filler** is a machine such as a weigh scale, vibratory bowl, or in-feed conveyor that will fill the open bag with product, prior to sealing the bag. A Filler requires the use of Handshaking I/O between the bagger PLC and the Filler, so that the Filler will know when to deliver product to the bagger and the bagger will know when to cycle.

The term **Auto** refers to how the bagger cycles. If the machine cycles bags continuously without the operator manually initiating each cycle start, not including the first bag out, then the machine is cycling automatically (Auto). If each bagger cycle requires the operator to manually press a cycle start button, foot switch, etc., then the machine is said to be cycling in Manual Mode.

Manual Mode

The Bagger Mode viewed from [Dashboard](#) Screen.



Filler = OFF

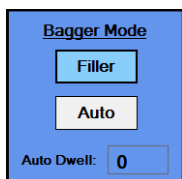
Auto = OFF

Both the Filler and Auto buttons are OFF at the HMI. In manual mode the operator hand loads or fills each opened bag and then cycles the bagger. The operator initiates a cycle by one of these methods:

1. Stepping on the Foot switch.
2. Pressing the Cycle pushbutton on the HMI.
3. Pressing the optional Optical Touch buttons (anti-tie down).

In manual mode, the machine cycles one bag at a time. Cycle rates in this mode are largely dependent upon the loading speed of the operator.

Filler Mode



Filler = ON

Auto = OFF

With Filler ON and Auto OFF, the bagger will run in "Filler Mode". This mode cycles a single bag out each time and requires the operator to initiate a Cycle Start for each bag. In this mode, a filler device or machine does the actual loading or filling of the open bag.

The Filler uses handshake signals to synchronize with the bagger for product delivery. A bagger output, signals the Filler to deliver product and a bagger input, signals when the Filler is done. For example, Filler Mode could be used when an operator is hand loading literature after the in-feed conveyor delivered its separate part or component.

Ready for Filler (O:3/00) - The bagger PLC (Programmable Logic Controller) turns on this output as follows:

1. The machine has successfully completed a cycle and presented a new bag.
2. If the bagger is equipped with a positive entry funnel.
 - The funnel is opened
3. If the bagger is equipped with a positive entry funnel AND "Bag Opened" Sensor (s):
 - The funnel is opened
 - The sensor detects that the bag is positively opened.

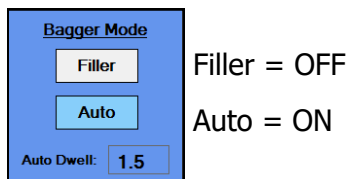
Once the above condition (s) is (are) met the PLC program turns on O:3/00, essentially telling the Filler device that a bag is present and ready to be filled. The filling device releases its product into the open bag.

Filler Done (I:2/00) - The Filler device will turn on the bagger PLC input I:2/00

This signals the bagger that the filler has completed delivery of the product. The filler machine must include a dry contact isolation relay for its signaling device to ensure electrical isolation between the Filler and the Bagger PLC.

The filler function has a separate detailed specification, "Filler Handshaking". The specification covers all Pregis Sharp™ baggers and includes signature sign-off lines so that Filling machine vendors are in 100% compliance with this specification. This also ensures proper operation of a complete system.

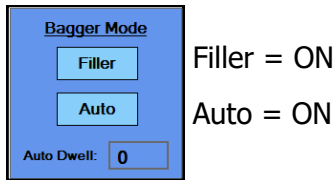
Auto Mode



With Filler OFF and Auto ON, the bagger will run in "Auto Mode". In Auto Mode the machine operator manually fills the opened bag, while the machine cycles automatically. The cycle is started by means of a time delay called the "Auto Dwell Timer". This allows the bagger machine to be self paced, when production rates are critical. The Auto Dwell timer allows the operator time to manually drop product into the open bag. When the time delay is ended the bag is sealed and the next bag is fed out. The Load Dwell time is adjustable at the HMI.

The operator initiates the first bag out and Auto Mode is immediately activated. When the bag is opened, the operator loads the bag (Load Dwell Timer is timing). When the timer finishes, the bagger automatically starts the bagger sealing cycle and feeds out the next bag. To cancel Auto Mode, the operator can press the Stop Button on the HMI.

Auto Filler Mode



Filler = ON

Auto = ON

With Filler and Auto both ON the bagger will run in "Auto Filler Mode". In this mode a Filler device is used to both fill and automatically initiate the next cycle. This is accomplished by means of hand-shaking I/O provided in the bagger's standard control interface. The Filler device must comply with the "Filler Handshaking Specification".

Ready for Filler - This output turns ON only if the following conditions have been met:

1. The machine has successfully completed a cycle and presented a new bag, ready to be filled.
2. IF the bagger is equipped with a positive entry funnel AND "Bag Opened" sensor (s):
 - The sensor detects that the bag was positively opened.

Once the above condition (s) is (are) met the PLC program turns on O:3/00, essentially telling the Filler device that a bag is present and ready to be filled. The filling device releases its product into the open bag. The Filler device will turn on the PLC input I:2/00 Filler Done, signaling the bagger that it has completed filling the bag.

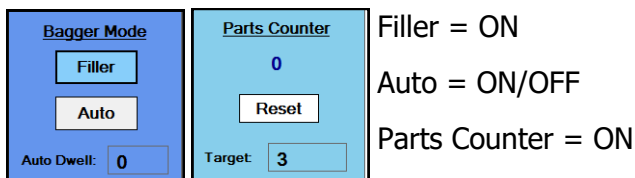
When the PLC reads I:2/00 as ON, it resets handshake output O:3/00 to OFF. This also causes a Filler Drop Timer to start in the PLC. This time delay can be adjusted by the user. The next bagger cycle will automatically start upon completion of the time delay. The bag is sealed and the next bag is fed out, opened, and made ready for the filler. O:3/00 is again turned ON when the bagger cycle is completed without fault.

Auto Filler Mode makes full use of the handshaking I/O signals for the Filler, while automatically cycling the machine on a continuous basis. Auto Filler Mode can be easily cancelled by pressing the Stop Button on the HMI.

Parts Counting

The Batch Counter is turned on from the [Bagger Settings](#) Screen and is viewed from [Dashboard](#) Screen.

The bagger has a setting for counting parts. Parts Counting mode is used in conjunction with the Filler mode. When the parts counter is turned on, the bagger counts each part as it is being loaded into the opened bag. When the terminal count is reached, the Filler Trigger signal is turned on to start the Filler Drop Timer.



Actual Count – The number below “Parts Counter” displays how many parts have been counted. This number resets to 0 once the bagger cycle is initiated or if Part Counter is turned off. The Target is determined in the Job that has been loaded from Job Setting Screen.

Parts can be loaded and counted in the following ways:

1. Filling Machine

- An automatic filling Machine that can deliver one part at a time and signal the bagger using the “FILLER DONE” input I:2/00. The bagger will count each rising edge of I:2/00 as a single part. When the parts counted equals the target value, the filling cycling is completed and the bagger will automatically cycle after the drop timer has expired.
- When the Parts Counting is done by a filler, it must only deliver parts or attempt to count when the O:3/00 output is On. Output O:3/00 remains on until the terminal count is reached. The parts counting must handshake in accordance with “Filler Handshaking Specification”

2. Safety Light Curtain – Hand Load

- When using the Light Curtain in a hand loading operation, the operator places the product into the open bag. When the operator removes their hand from the safety light curtain, the Parts Counter will increment by one count. The PLC logic is properly de-bounced to ensure that each entry and exit of the light curtain produces exactly one count for the parts counter. When the operator has hand loaded the required number of parts (1-999) the filler Cycle will be initiated and the drop timer will start.

Note: The Safety Light Curtain function is 100% effective in this mode. The Light Curtain will always stop the machine cycle if it is violated at any time during the bagger cycle

3. Funnel Mounted High Density Light Curtain

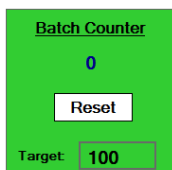
- Parts counting can also be accomplished with a High Density light curtain mounted above the funnel opening and wired into the Filler Trigger Input I:2/0. This would not be a safety light curtain. The parts count will increment by one each time a part drops through the light curtain. An indexing in-feed conveyor could be used to deliver parts to the funnel. The light curtain must have a resolution that is finer than the smallest part to ensure that each part breaks the light curtain.

Batch Counter

The Batch Counter is turned on from the [Bagger Settings](#) Screen and is viewed from [Dashboard](#) Screen.

The bagger has a setting for Batch Counting. Batch Counting allows a customer to make a run of products to a particular quantity and then stop the machine. To use this feature, the operator should cycle the first bag out into the loading position and then reset the counter to 0.

Parts Counter = ON



Target Count - This is the Target Count and can be adjusted by the machine operator in a range of 1-32767. When the actual count equals this value, the bagger will stop and cannot be cycled again until this counter is Rest.

Actual Count - The number below "Batch Counter" displays how many bags have been filled and sealed. The count will be incremented each time the Seal Bar has retracted.

This counter works in all modes and is not tied to the Parts Counter function.

Consecutive Seal Bags

The Consecutive Seal Bags feature is turned on from the [Bagger Settings](#) Screen and is viewed from [Dashboard Screen](#).



The screenshot shows a screen titled "Consecutive Bags" with an orange background. It has two input fields: "Actual:" with the value "0" and "Target:" with the value "3".

This is a special operating mode that allows multiple filled and sealed bags to be connected together in a continuous strip. There are restrictions and limitations to this feature. This mode requires that the Operator pay particular attention to keeping the Drive Rollers cleaned and in good condition. Dirty Drive Rollers can result in loss of registration and slipping.

Recovery Mode will be limited to open retires only, since it is not possible to replace the bag when it is part of a string. The Bag Feed retry will automatically be set to 0 if this mode is chosen.

Consecutive Seal Bags = ON

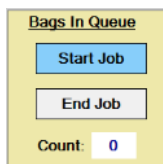
Actual Count - Displays the number of bags of Target that have been sealed.

Target Count - This setting determines the number of bags that will be connected together. The maximum setting is limited to 10 consecutive bags or 50 inches of total strip length, whichever comes first. The Operator can enter the desired number of bags, however if the total length is over 50 inches, the PLC will recalculate the Target Count.

Bags in Queue

The Bags in Queue is turned on from the [Bagger Settings](#) Screen and is viewed from [Dashboard](#) Screen.

The Bags In Queue Setting is useful when changing over printed labels when running a different job. When used as designed, the Start Job and End Job cycles will make a queue which represents the number of bags between the printer and the bag loading position. Start Job gets the first new label into loading position. End Job purges the bagger of the previous label. The length of the queue is set in the Job database.



The screenshot shows a screen titled "Bags In Queue" with a yellow background. It has two buttons: "Start Job" (blue) and "End Job" (grey). Below the buttons is a "Count:" label with the value "0".

Bags In Queue = ON

Start Job - When this maintained button is turned on and the machine is cycled, the bagger will automatically feed out a queue of printed bags until the first printed bag is in the loading position. It will not seal any of the bags in the queue and will not open the last one. If using **Filler/Auto** modes, these should be turned **ON** first before pressing the CYCLE button. This button turns off automatically when the Start Job is finished.

End Job - When this maintained button is turned on and the machine is cycled, the bagger will automatically purge the bagger of all printed bags. It will not print on, seal, open, or attempt to scan barcodes for any of the bags in the queue. If using **Filler/Auto** modes, these should be turned **OFF** first before pressing the CYCLE button. The button turns off automatically when the End Job is done.

Count - This displays the queue counter as each bag is feed out. When the queue is finished it resets to 0.

Recovery Bag Count



The Recovery Mode is turned on automatically when Bag Open Sensors are selected and can be viewed from [Dashboard](#) Screen.

This is the number of bags that failed to open when Recovery Mode was turned on. The count can be reset by pressing the reset button.

Event Log

The bagger has an Event Log that records all Faults, Events, and changes to settings to a flat file stored on the PC. This is a useful diagnostic tool for looking at all the faults or changes that occurred during a single day.

The user can search for a particular event or fault by typing in a text string into the find box. Files are saved as a flat text file on the PC and can be extracted to a USB flash drive for diagnostic purposes.

Permissive & Special Conditions

This section describes and lists Permissive and Special Conditions. In general terms, a Permissive is a condition that must be TRUE in order to permit or allow a particular operation to take place.

1. **All options must be configured.**
 - All optional features must be selected or configured before they can be turned on. By default, if an option is not selected, its function will be turned off.
2. **Recovery Mode:**
 - The recovery mode feature is automatically turned on when the correct bag open type is selected. The bag open must include a bag opened sensor installed on the funnel. The recovery feature can be turned off by setting the Bag Open and Bag Feed Retries to 0.
3. **Ready to Cycle Permissive** - All of the following conditions must be true before the machine will cycle:
 - The Master Control Relay or MCR must be energized for 3 seconds. The MCR is energized when the Green Pushbutton is illuminated.
 - The Bagger cannot be faulted.
 - Printer not in cycle (if equipped)
 - Model Selection Test is not active.
 - Batch Counter NOT done.
 - All Bagger motions must be in their home positions as indicated by Position Sensor Feedback.
 - Pressure Bar Opened.
 - Seal Bar Retracted.
 - Vacuum Cylinder is retracted (if equipped)

If the Batch Counter function is on and the counter has reached its terminal count, then the counter must be reset before the bagger can cycle again.

4. **Complete Power Up Sequence** - Machine must be connected to 120V power source and have an adequate supply of clean, dry compressed air.
 - Make sure the 120V Power Entry Module Switch is in the ON position.
 - Release the E-Stop Button.
 - Press the Green Power Button. The green light should illuminate and energize the MCR.
 - The HMI will automatically start up when Power Entry Module Switch is turned ON.
5. **Complete Power Down Sequence** - The bagger must be properly powered down in the correct sequence.
 - Press the E-Stop Button to cut power to 24V DC power supply.
 - From the Main Menu screen, press and hold the "Shutdown HMI" button for 3 seconds.
 - **ALLOW THE HMI/PC TO POWER DOWN COMPLETELY BEFORE CONTINUING TO NEXT STEP.** The HMI program is shutdown and Windows also needs to shutdown. When completed, the HMI screen will be black.
 - Switch Power Entry Module Switch to OFF. The machine is now electrically shut down.

Security

Security Levels

Security is screen based and defined as three levels: High, Medium, and No Security.



Locked



Unlocked

High Security - The user can access the Main Menu, Dashboard, PLC Settings, Job Download screens.

Medium Security - The user has all permissions of High Security level but cannot access Service, Language, and I/O screens.

No Security - The user has access to all screens and functions except Factory Configuration screen.

When security level is in High, the screen displays a locked padlock icon in lower right corner of screen. **Figure 28A.**

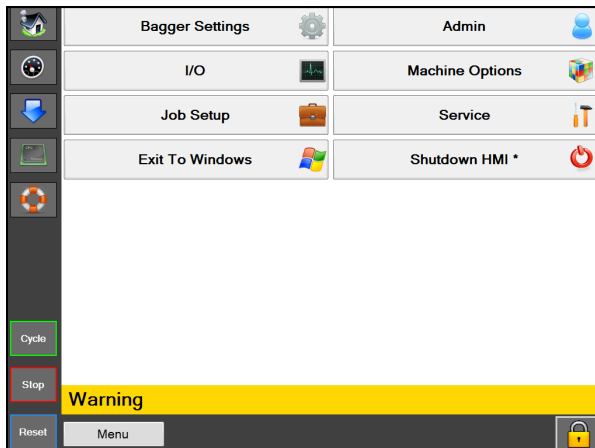


Figure 28A. High Security Screen.

An "Access Denied" message will be displayed when user attempts to access protected screens. **Figure 28B.**

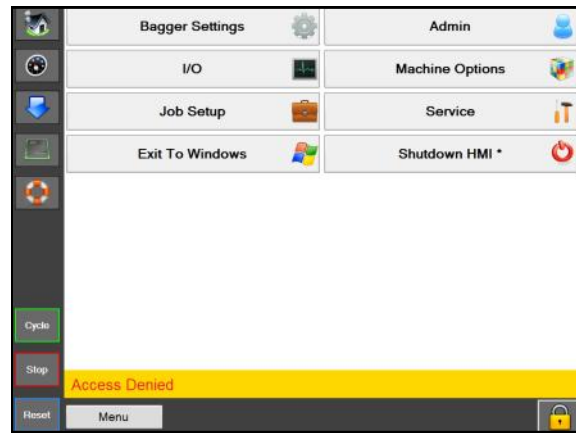


Figure 28B.
High Security - Access Denied Screen.

To Change Security Levels

1. Touch the padlock Icon and enter the designated password. **Figure 28C.**

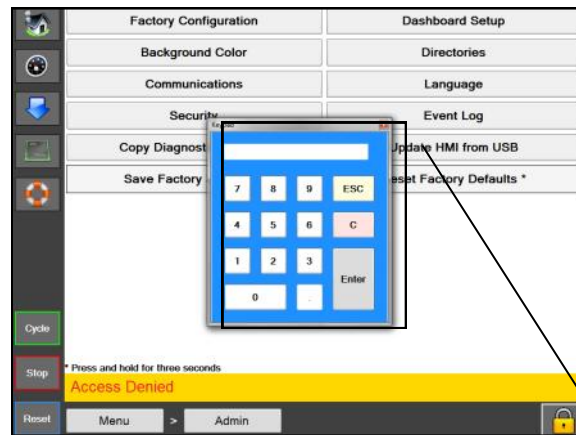


Figure 28C. Keypad

NOTE: See supervisor or manager to change or determine the proper security level for your application.

Setup & Adjustments

Machine Placement*

Your **Max Series bagger** has been shipped to you well crated in order to prevent any damage to the machine. It is important that you follow the Uncrating Instructions attached to crate.

After being uncrated, place the **Max Series bagger** in well ventilated area, on a rigid and vibration free surface. Before continuing with the installation of the machine, ensure all nuts, bolts and screws are tightened as they can come loose during shipping.

The **Max Series bagger** should be placed on a smooth level surface with access to 100 PSI of clean, dry compressed air, and 115 VAC, 50/60 Hz, 10 Amp (minimum) properly grounded electrical outlet.

Locate the machine so there is adequate access to the back side for loading bag film.



WARNING

Do not operate the machine in or around standing water. Failure to observe the warning may result in damage to the equipment and/or severe bodily injury.

Make sure unit is located at a comfortable height for operation and product loading. See *Height Adjustment* (page 35).

The unit is equipped with two swivel locking casters for easy maneuverability. Lock the casters after placing machine in desired location.



WARNING

Failure to have properly grounded outlet may cause damage to equipment or severe bodily injury.

Electrical*

The **Max Series bagger** is equipped with a 3-prong electrical plug for standard, properly grounded, 115 VAC, 50/60 Hz, 10 Amp (minimum) service.

1. Before plugging the cord into the back of the machine, depress the Emergency Stop Button on the front of the control panel. Make sure wall outlet or electrical drop is rated for proper voltage and that the outlet is grounded.



Figure 28A. Electrical Connections.*

2. Plug provided power cord into wall outlet or electrical drop.
3. Place the female end of the electrical cord provided into the back of the machine, **figure 28A**.
4. Turn the switch to ON position.

Note: Power is only supplied to PLC, HMI/PC, and Sensors. HMI/PC will boot automatically.

6. Release the E-Stop Button and press the Green Power Button.
7. The machine now has full power.

* *CE Models*, see page 98.

Air Supply

The **Max Series bagger** has a filter/regulator equipped with a male end 1/4" nominal flow NPT air quick disconnect plug (Figure 28A). The machine requires 100 PSI (regulated to 80 PSI) of non-lubricated clean dry air at 5 SCFM. Connect the air supply line to the machine using a MIL-C-4109E or equivalent disconnect coupling.



WARNING

Before connecting air supply, make sure all machine guards are in place and that there are no obstructions in seal/pressure bar area. Keep clear of all moving parts. When pressurized, machine parts may move.

NOTE: Do not use a lubricator or lubricated air on the machine. Damage to valves and cylinders will occur.

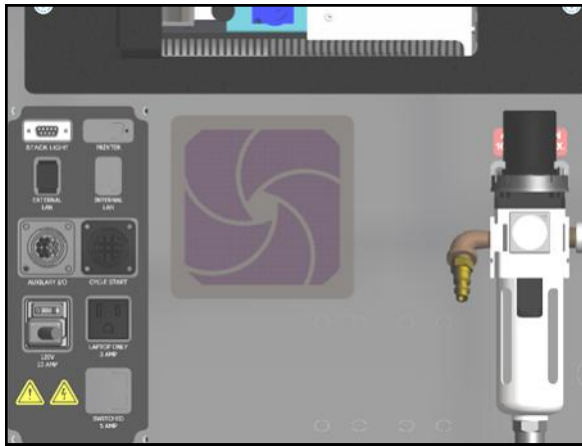


Figure 30A. Air Connections

1. Connect air hose to regulator.
2. Lift the cap on regulator
3. Adjust to 80 PSI.
4. Snap cap down on regulator.

Loading Bag Film—Standard Unwind



WARNING

Use extreme caution when feeding bags into machine; electrical voltage and possible pinch points are present.

1. Remove the bag roll shaft from the unit.
2. Place the film roll onto the shaft with a core chuck on each side of the roll. **Figure 31B.**
3. Align the dowel pins with the holes in the core hub and slide core chucks tight against hub.
4. Locate the roll of bags in the center of the roll shaft and tighten knobs securely.
5. Place the roll shaft on the mounting upright with the bag opening facing towards the rear. Place the roll shaft into the mounting upright on the side of the brake strap (with the brake spring connected), and then place the assembly into the other mounting upright. **Figure 31B.**
6. Manually thread the film through the series of rollers. A Web Threading decal showing the film thread path through the machine is located on the side of the **Max Series bagger**. **Figure 31A.**
7. Place the film at the back of the drive rollers. Bag opening should be on top. **Figure 31C.**



CAUTION

Do not seal on the printed area of the film or Seal Bar can become damaged.

8. Jog the film forward using the Jog Pushbutton (Figure 31A) until a perforation is located between the electric eye and pressure bar.
9. Test the cycle by pressing the foot switch.
10. If necessary, adjust the Bag Length or Seal Dwell as described in [Bagger Settings Screen](#). See page 44.

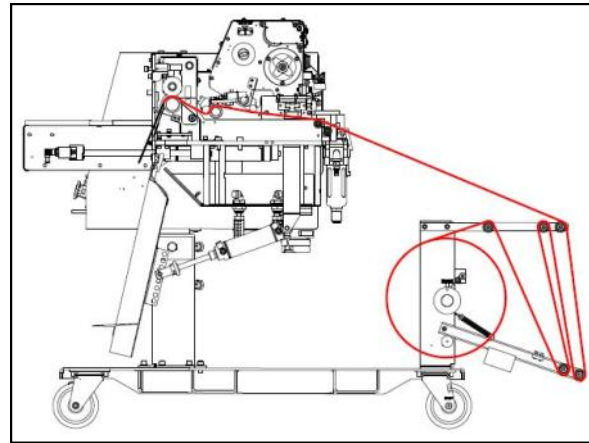


Figure 31A. Web Decal & Jog Button.

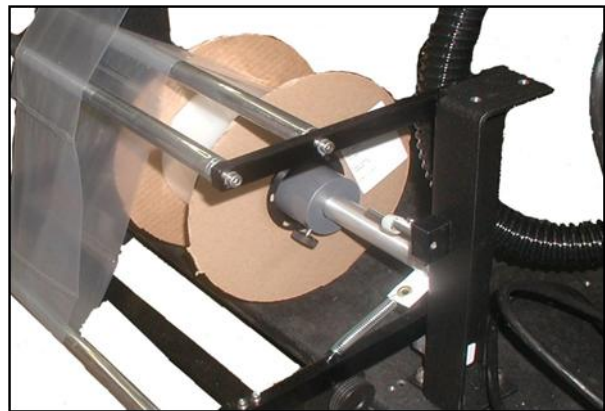


Figure 31B. Core Chuck & Unwind Shaft.



Figure 31C. Bag Opening

Loading Bag Film—Roll Power Unwind



WARNING

Use extreme caution when feeding bags into machine; electrical voltage and possible pinch points are present.

A diagram showing the film threading path through the machine is located on the side of the Roll Power Unwind near the rear of the **Max Series bagger. Figure 32A.**

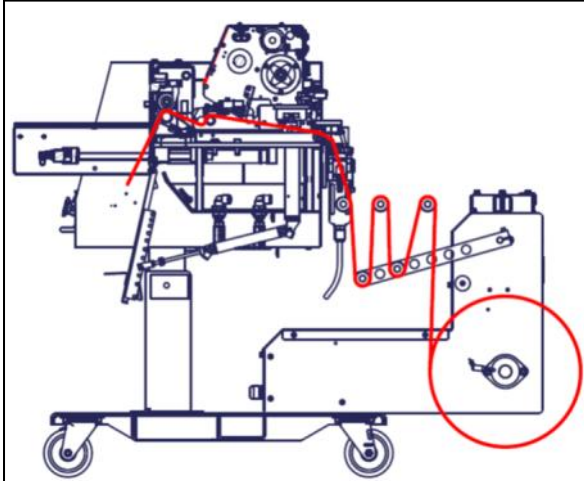


Figure 32A. Web Decal.

3. Place new roll onto shaft with lead on bottom.
4. Pull about 4ft of web straight up and lay across rollers.
5. Move the Dancer Arm down (Unwind Motor will rotate) and allow to rest on Rubber Bumpers.
6. Feed film through I-Frame and Drive Roller as shown by Web Threading Diagram.
7. Return Core Chuck against Roll and tighten handle.

1. Lift Dancer Arm up until it clicks open.
2. Remove outside Core Chuck and slide empty roll from shaft. **Figure. 32B.**

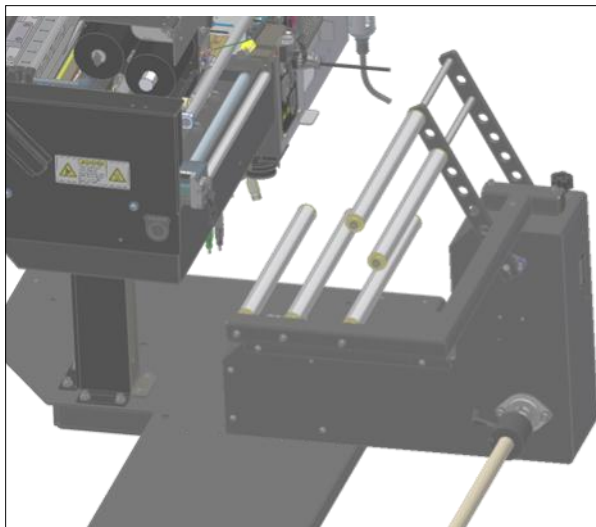


Figure 32B. Roll Removed

Loading Bag Film—Box Power Unwind

Unwind Set-Up

1. Loosen the Box Guides and open the guides to allow room for box of bags.
Figure 33A.

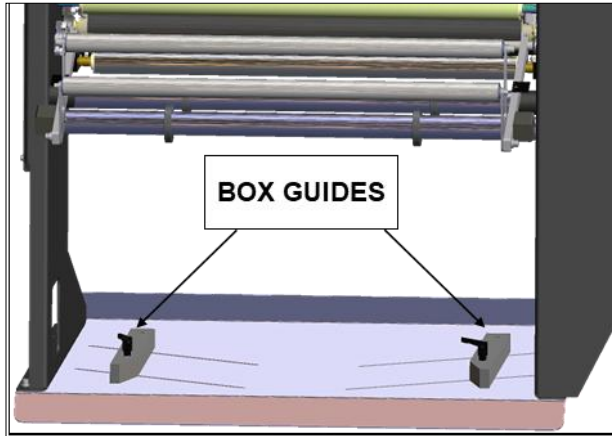


Figure 33A. Box Guides

2. Open the box of fan fold bags. Cut off lid flaps from box, if desired.

NOTE: Position the box in tray so the perforation of first bag opens toward you when standing behind the box.

3. Slide the box between the Box Guides. Center the box on the tray. Slide both guides the against box.
4. Tighten both knobs.
5. Put Toggle Switch to the OPEN position.
Figure 33B.

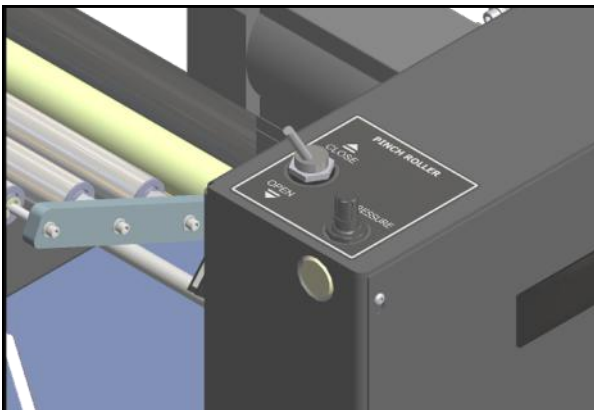


Figure 33B. Toggle Switch

6. Lock the Dancer Arm up against the magnets. **Figure 33C.**

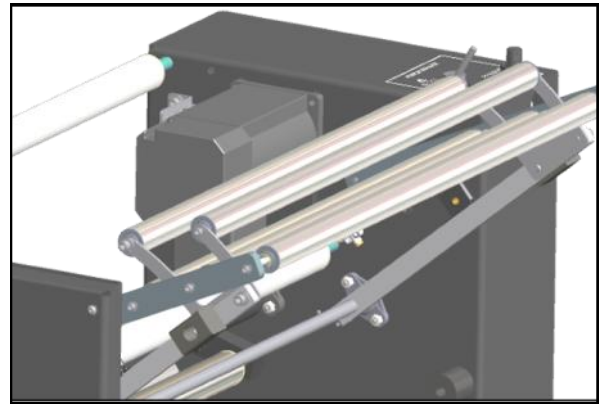


Figure 33C. Dancer Lock

Threading the Web - See Diagram on Unwind

1. Lay film over the Inside Drag Film Tube.
Figure 33D.

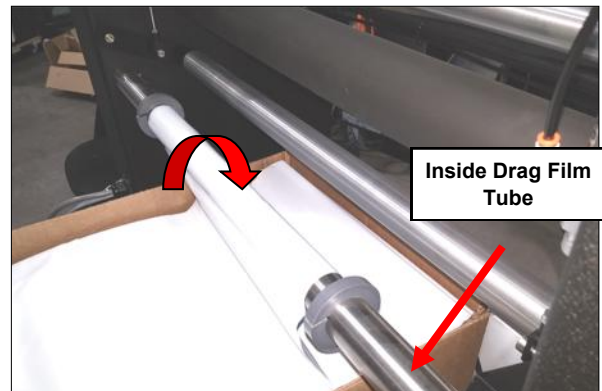


Figure 33D. Web Over Drag Tube

2. Then, under the Pinch Roller and Outside Drag Film Tube. **Figure 33E.**

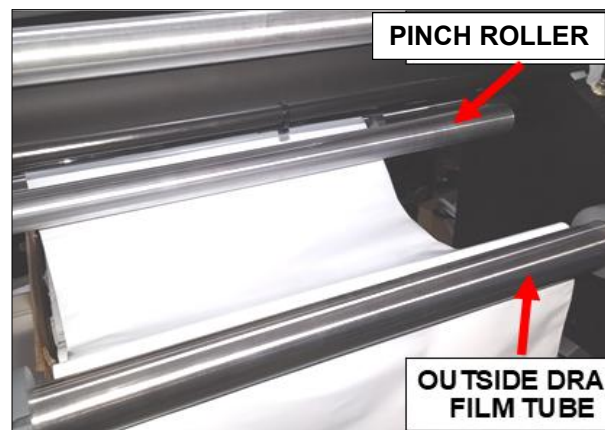


Figure 33E. Web Under Outside Drag Tube

3. Next, wrap film around the Outside Drag Film Tube and feed film between Pinch Roller and Drive Roller. **Figure 34A.**

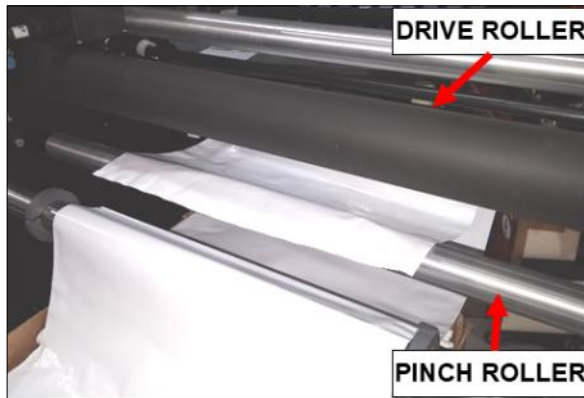


Figure 34A. Web Between Drive & Pinch Roller

4. Wrap film around Drive Roller and under Idler Roller.



Figure 34B. Web Around Drive Roller & Under Idler

5. Feed film through Dancer Rollers. Then under the Outside Dancer Roller. **Figure 34C.**
6. Hold film in hand and Flip the Spool Valve Switch to the CLOSE position. This will "pinch" the web between the Pinch Roller and Drive Roller.
7. Keep holding the film and release the Dancer Arm from magnets. Film will feed until Dancer Arm rests on Rubber Bumpers.
8. Pull on the web until you have enough slack to reach the front of the bagger.
9. Push the Jog Button and slowly feed the web into the Drive Roller until the bagger stops advancing the film, making sure the web is centered.



Figure 34C. Web Through Dancer Rollers

10. Adjust the (4) Web Guides against the edges of film.
11. Place the Tensioning Weight Straps over film. **Figure 34D.**

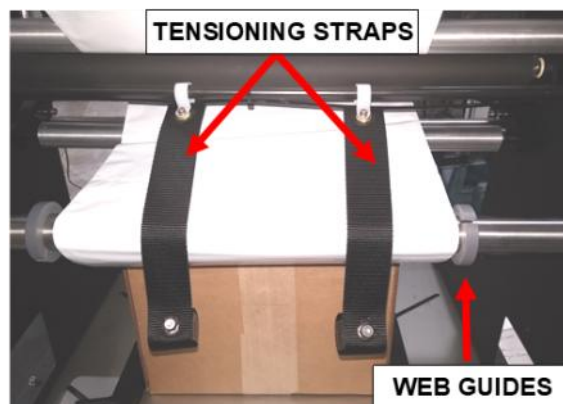


Figure 34D. Tensioning Straps & Web Guides

Height Adjustment



WARNING

Never make adjustments while machine is on or operating as this may cause damage to the machine and could result in severe bodily injury or even death.



WARNING!

Always remove air and electrical power from the MAX™ prior to performing any service on the machine.



WARNING

Machine head must be held in place when loosening rotation adjustment bolts. Head will rotate when bolts are loosened and could cause damage to the machine and/or bodily injury.

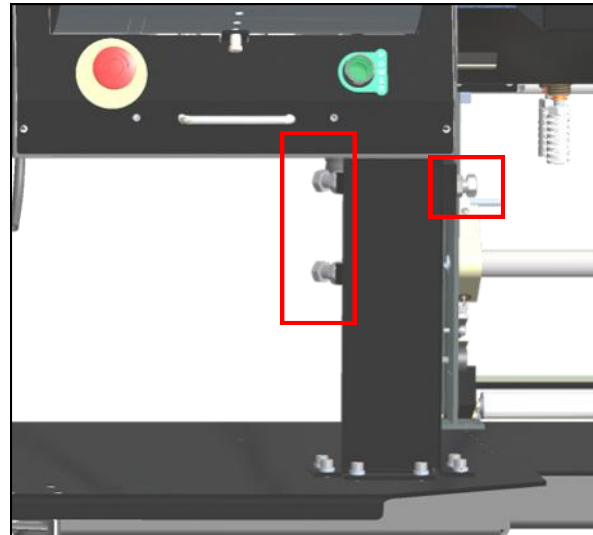


Figure 35A. Height Adjustment Bolts.

Machine height can be adjusted to allow manual loading at a convenient height.

NOTE: Height Adjustment requires two people.

NOTE: A counterbalance spring is located in the frame upright. When bolts are loosened, unit may raise or lower depending on spring tension.

1. Loosen height adjustment bolts located on the Frame Upright. **Figure 35A.**
2. Two people, using both hands, should grasp the electrical enclosure and machine hood. Pull up or push down to place the machine at the desired height.
3. While one person holds the unit at the desired height, tighten the three adjustment bolts to 37 ft-lbs. of torque.

Head Rotation



WARNING

Never make adjustments while machine is on or operating as this may cause damage to the machine and could result in severe bodily injury or even death.



WARNING!

Always remove air and electrical power from the MAX™ prior to performing any service on the machine.



WARNING

Machine head must be held in place when loosening rotation adjustment bolts. Head will rotate when bolts are loosened and could cause damage to the machine and/or bodily injury.

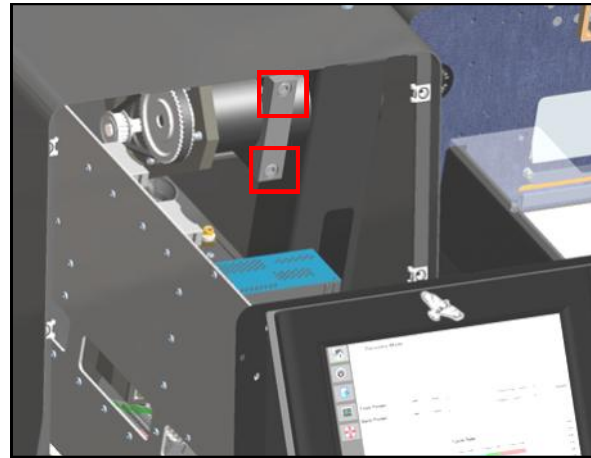


Figure 36A. Head Rotation Bolts.

Some heavier parts (approximately 5 lbs.) may require loading from an angle to prevent bag breakage. To compensate for this, the unit can be infinitely adjusted in a 90° arc from perpendicular to the floor, to completely horizontal.

Note: *Parts heavier than 5 lbs., or requiring additional support, can be accommodated with the addition of optional load shelves and support trays.*

NOTE: *Make sure the air and electrical leads are not binding and are free from obstructions when the machine is rotated.*

1. Disconnect air and power from the unit.
2. Loosen the six 1/4 turn Control Panel screws.
3. Grasp the handle at the bottom of the control panel and pull the panel out to expose the rotation adjustment bolts
Figure 36A.
4. Loosen the adjustment bolts approximately 1/2 to 3/4 turns.
5. Pivot the machine to the desired angle.
6. Tighten rotation bolts to 15 ft-lbs. torque.
7. Close front panel and secure 1/4 turn screws.

Load Plate Adjustment

The Load Plate can be adjusted for different angles.

1. Remove pin securing air cylinder to load plate. **Figure 37A.**



Figure 37A. Load Plate & Shelf Adjustment.

2. Move load plate to desired position and re-insert pin.

Load Shelf Adjustment

The Load shelf can be moved up and down to accommodate different sized bags.

1. Loosen the two Load Shelf Lever Locks on the back of the Load Plate. **Figure 37A.**
2. Move the Load Shelf to the new location, keeping the Load Shelf level.
3. Tighten the Load Shelf Level Locks.

Brake Strap Adjustment—Standard Unwind

If the dancer arm is reaching the top of its travel, move the spring to a hole closer to the pivot point. If the roll of bags continues to spin after cycling, move the spring to a hole further from the pivot point.

1. Lift Dancer Arm to remove tension from spring. **Figure 37B.**

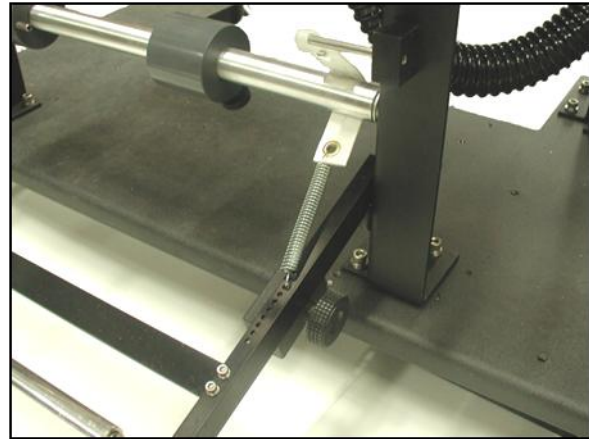


Figure 37B. Unwind Adjustments.

2. Pull spring out of Dancer Arm.
3. Move spring to new location.
4. Release Dancer Arm.

Dancer Weight Adjustment—Standard Unwind

The Dancer Weight is a fine tune adjustment for the brake strap. The further out on the dancer arm the weight is located, the more back tension will be put on the web.

1. Rotate Dancer Weight locking knob counter-clockwise to release Weight. **Figure 37B.**
2. Move weight to new location.
3. Rotate Dancer Weight locking knob clockwise to lock weight.

Adjustments—Box Power Unwind

Air Pressure

This adjustment will reduce the amount of pressure the Pinch Roller has against the Drive Roller of the Unwind.

1. Attach air to the machine.
2. Lift the cap on the Pressure Regulator on the unwind. **Figure 38A.**
3. Rotate cap to desired pressure. The pressure is set at 50psi at the factory.
4. Push cap down to lock in place.

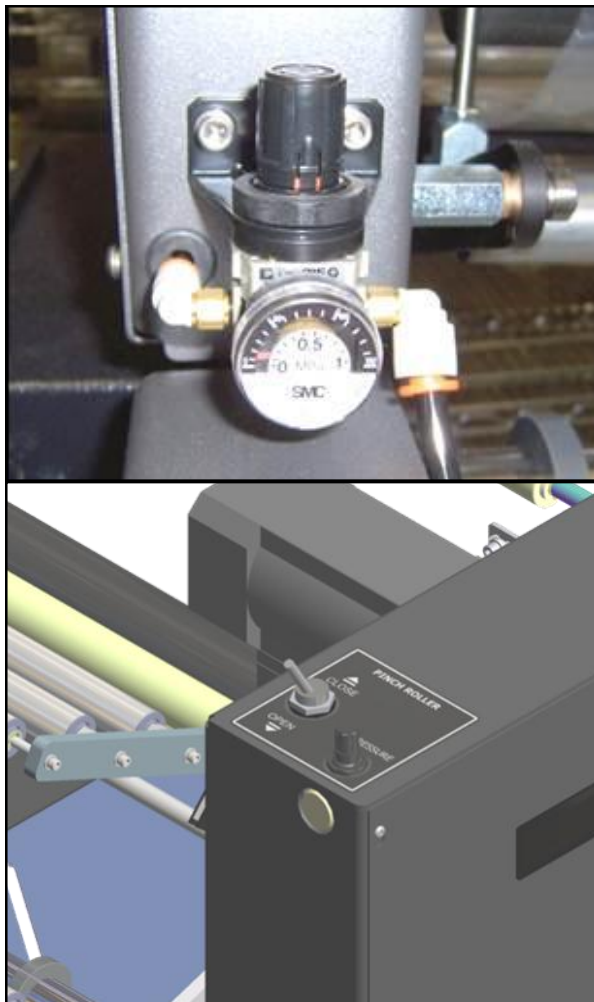


Figure 38A. BPU Air Pressure Regulators.

Pinch Roller Closing Speed

1. Attach air to the machine.
2. Turn the Toggle Switch from OPEN to CLOSE while adjusting the Flow Controls on Pinch Roller Cylinders until desired speed is achieved. **Figure 38B.**

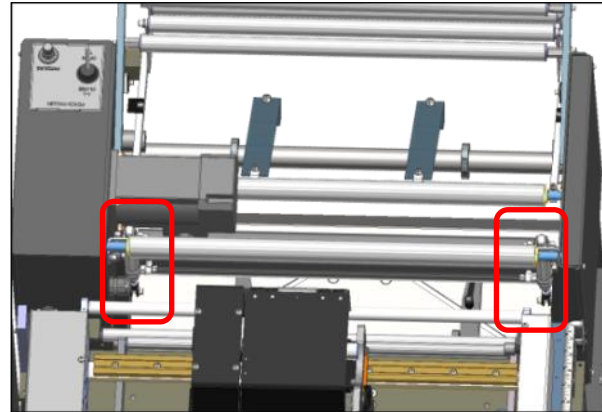
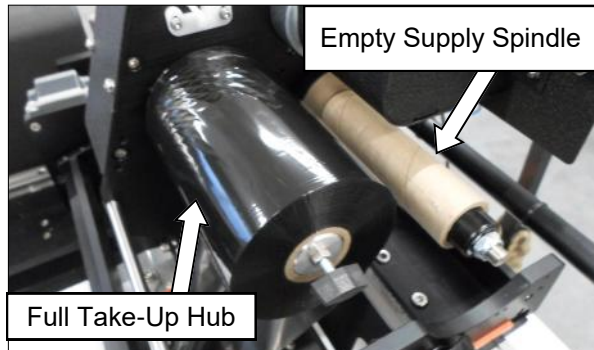


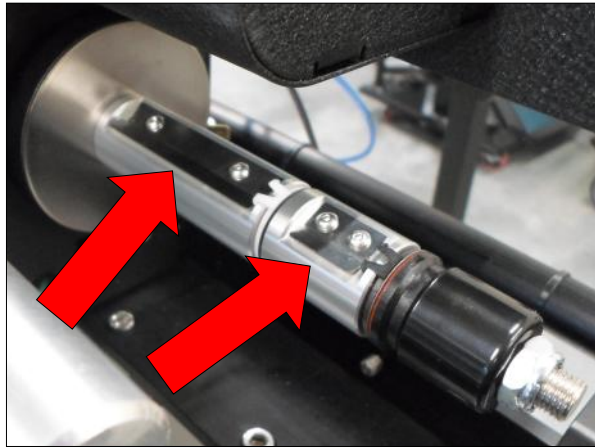
Figure 38B. Pinch Roller Speed

Loading Ribbon

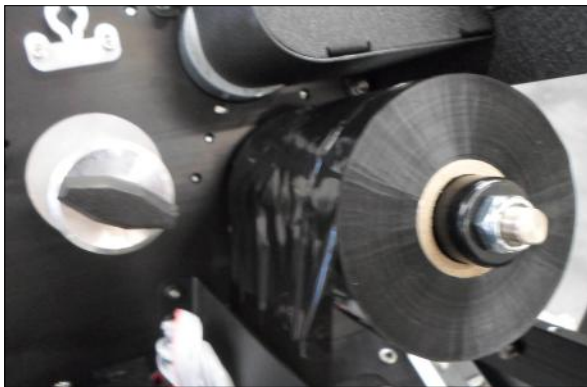
1. Lift the Cover of the Printer.
2. Remove the cardboard roll and used ribbon. Discard.



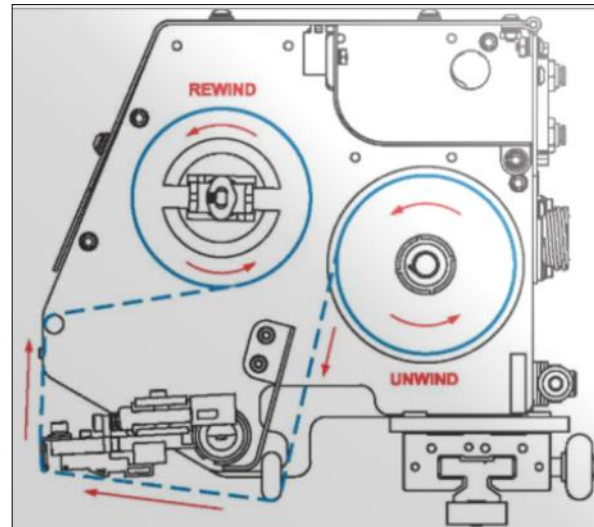
3. Look at Supply Spindle, verify the Flanged Plates are aligned.



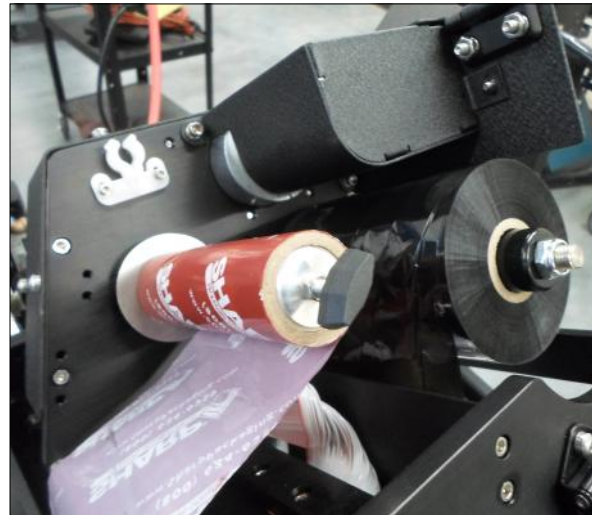
4. Slide full Ribbon onto Supply Spindle so Ribbon is over the top. It unwinds counter-clockwise.



5. Open the Printer Release Clamp to lift Printhead off of Pinch Roller.
6. Thread Printer Ribbon according to Web Threading Diagram. Ribbon travels down around Ribbon Roller across Printhead.



7. Slide empty cardboard tube onto Take-Up roller.
8. Turn Knob until black portion of Ribbon is over the Printhead.



9. Lower Printer Carriage, Secure Clamp and close Cover.

Controls

Touchscreen

The Touchscreen displays all adjustment information along with machine diagnostic and error messages.

- Manual motion pushbuttons on Service Screens provide both text and color cues as to the state of the device or motion.
- Help screens show setting range and default settings.
- Critical error messages have a red background and require the operator to manually correct the problem and press reset.
- Notice messages have a yellow background and do not require the operator to take any action.

Left Menu Bar

The Left Menu Bar is always displayed on the left side of the Touchscreen when HMI program is running.

House Button: Press to display the Home Screen.

Speedometer Button: Press to display the Dashboard Screen.

Down Arrow: Press to display the Job Details screen.

CPU Chip: Press to display the PLC Settings screen.

Life Preserver: Press to display the Help Screen.

Cycle: Press to cycle the bagger.

Stop: Press to stop bagger when in Filler or Auto modes.

Reset Faults: Press to reset faults.



Figure 40A. Left Menu Bar.

Fault Messages

Faults are defined as an error condition that will stop the bagger and prevent subsequent cycles from occurring as long as the fault persists. Faults must be corrected and then reset from the HMI using the Reset Button. Faults are first indicated by a red banner at the bottom of all screens. The number in parenthesis indicates the number of active faults.

Touching the banner will load the fault screen. Touch the individual fault to get a more detailed description of fault.

For a complete list of faults, see [Faults & Alert Management](#), page 83.

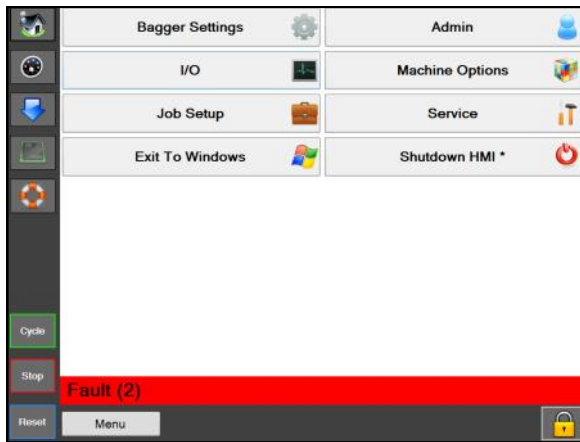


Figure 41A. Fault Banner

Alert Messages

Alert messages are displayed in yellow and will not generally stop a bagger cycle. Alerts are intended to inform the operator of an event or status of the machine. Alerts can be considered minor faults in some cases and may require the operator to intervene.

Touching the banner will load the fault screen. Touch the individual event to get a more detailed description of event.

For a complete list of alerts, see [Fault & Alert Management](#), page 88.

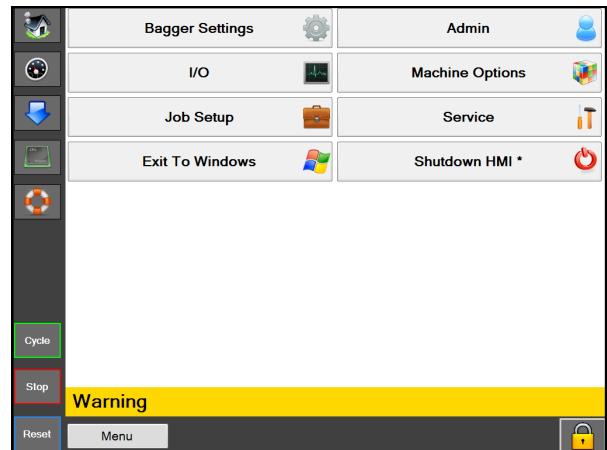


Figure 41B. Warning Banner

Help Screens

A Help Screen provides detailed information of the screen that is displayed on the HMI.

From any screen, press the Life Preserver button on the Left Menu Bar (Figure 42A) and the Help Screen for that screen will appear. **Figure 42B.**

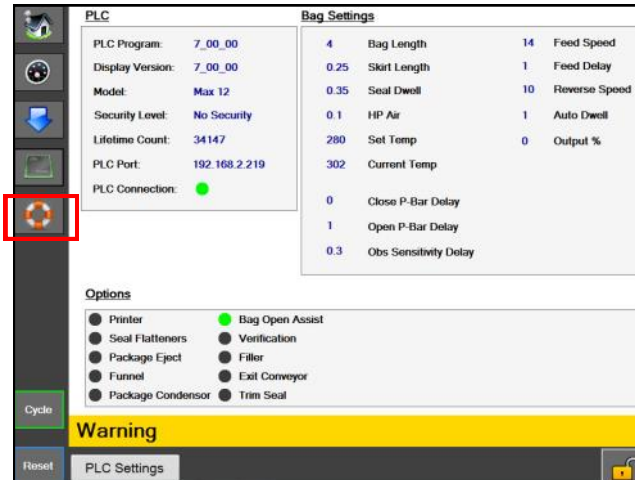


Figure 42A. PLC Settings Screen

The PLC Settings Help Screen is a sub-screen of the PLC Setting Screen. The user can navigate back to the higher level screen by touching the "PLC Settings" button.

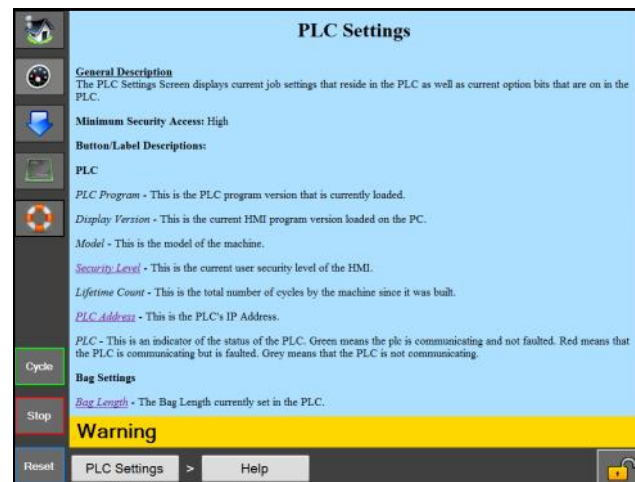


Figure 42B. PLC Settings Help Screen

HMI Screens

Main Menu

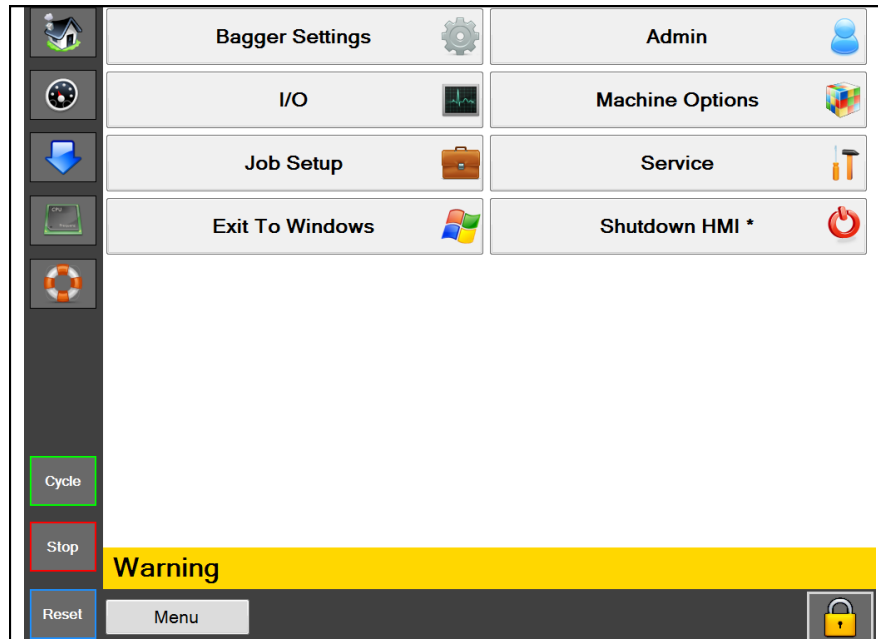


Figure 43A. Home Screen

Home Screen

General Description

The Main Screen is accessed by pressing the Home Button on the Left Menu Bar. This screen gives access to all of the screens not accessible through the left menu bar.

Minimum Security Access: High

Button/Label Descriptions:

Bagger Settings - This will open the Bagger Settings screen that contains bagger setup settings such as Batch Counter, Parts Counter, and the Separate Before Sealing Toggle.

I/O - This will open the I/O screen that will display current input and output readings from the PLC.

Job Setup - This will open the Job Setup screen that allows the creation and loading of jobs.

Exit To Windows - This will safely shut down the HMI program and return to Windows.

Admin - This will open the Admin screen that contains all of the HMI admin options such as communication settings, directories, dashboard setup, background color, security options, and the Event Log.

Machine Options - This will open the Machine Options Screen that allows machine option configuration.

Service - This will open the Service screen that contains machine service related actions.

Shutdown HMI - This will safely shutdown the HMI computer. This would be the correct way to shutdown the HMI during a system power down. This procedure will safely close the HMI program and then safely shut down windows.

Reset Factor Defaults - Resets the machine's settings to Factory Defaults. (Available only when security is off)

Bagger Settings Screen

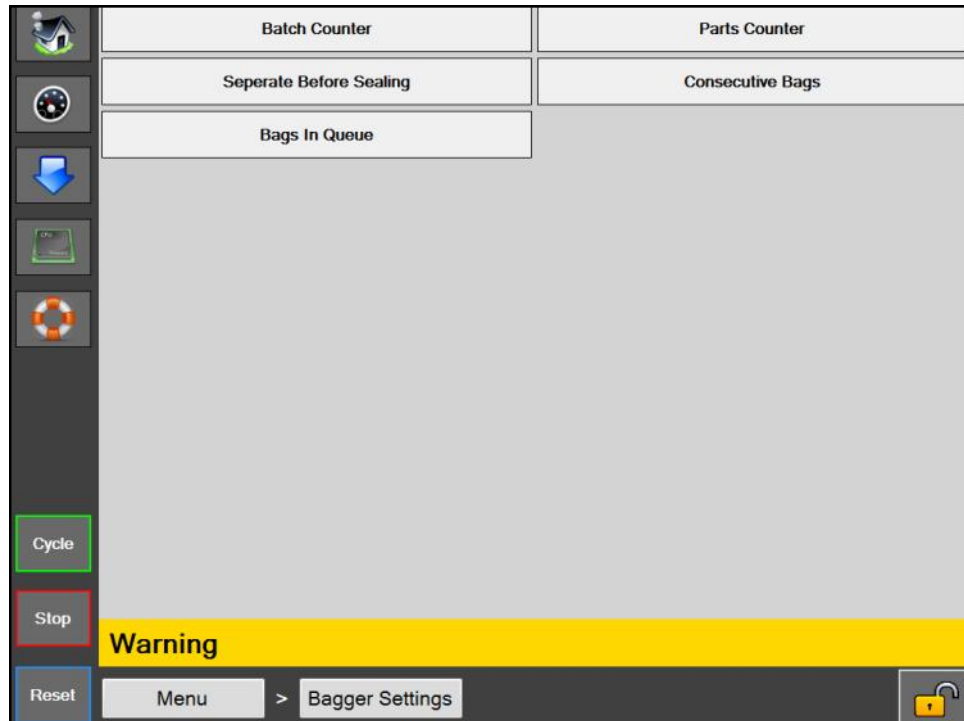


Figure 44A. Bagger Settings Screen.

Bagger Settings

General Description

The Bagger Settings screen manages all of the global bagger settings/functions.

Button/Label Descriptions:

Batch Counter - This will turn on/off the Batch Counter on the Dashboard. When this is enabled, the batch counter will increment with every good bag. The reset button will reset the count to zero. A target can be set by the operator from Dashboard Screen.

Parts Counter - This will turn on/off the Parts Counter on the Dashboard. When this is enabled, the parts counter will count the number of parts that enter the open bag until it reaches its target count. Parts Counter is a sub function of Filler Mode.

Separate Before Sealing - This button turns on a feature that, prior to sealing the bag, will reverse the web when the pressure bar is closed in order to disconnect the bag from the next bag.

Consecutive Bags - This button turns on a feature that causes the bagger to produce a strip of sealed bags. The Operator sets the length of the strip to a number between 2 and 10. The total length of the strip must not exceed 50.0 inches.

Bags in Queue - This button turns on a feature that allows the user to establish a Queue of Printed Bags from the Dashboard. This allows the user to clear out a previously printed label before starting a new print label. The user must set-up the Queue length in the job. The *Start Job* feature will feed out the correct number of bags before opening the first printed bag. The *End Job* button will clear out the printed bags, so that there are no printed bags in the bagger.

Input / Output Screen

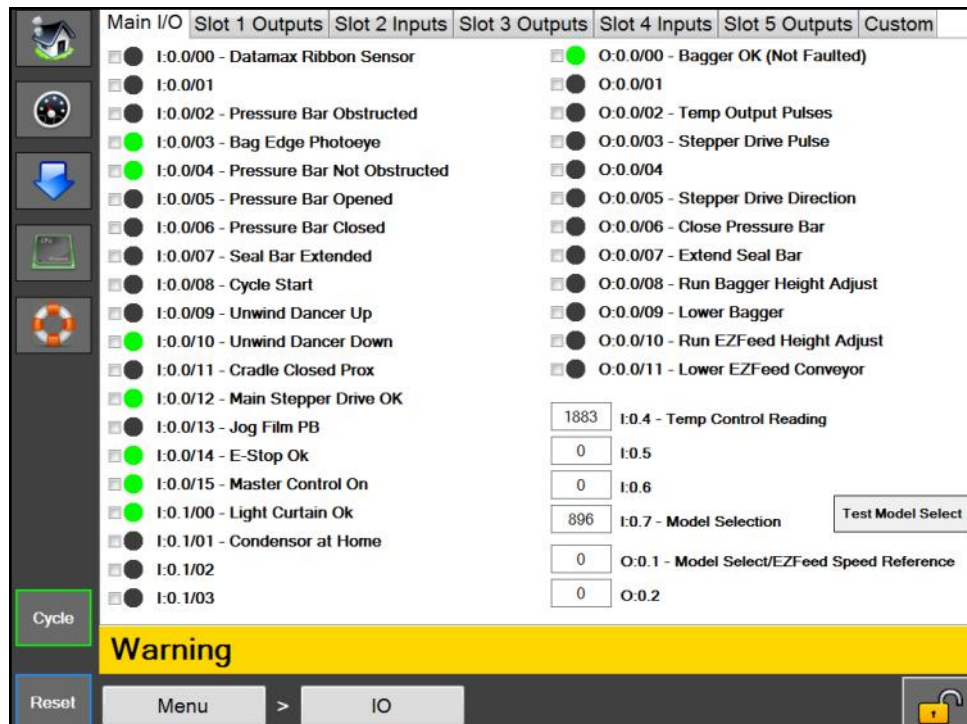


Figure 45A. Input/output Screen.

I/O Screen

General Description

The I/O screen displays the status of all physical I/O (inputs and outputs) in the PLC.

Minimum Security Access: Medium

Button/Label Descriptions:

This page is divided by tabs for each slot on the PLC. The physical I/O for each slot is displayed on the corresponding tab. The HMI is capable of reading from the PLC every 400 Ms, which is much slower than the scan rate of the PLC; therefore, some readings may not show up due to the HMI's latency.

Job Setup Screen

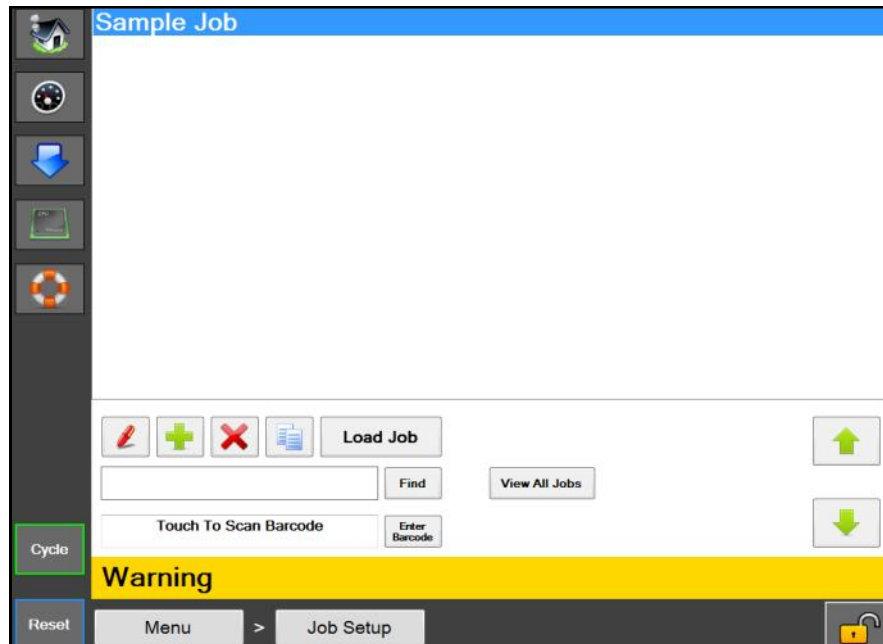


Figure 46A. Job Setup Screen.

Job Setup

General Description

The Job Setup screen manages the machines predefined jobs.

Minimum Security Access: Medium

Button/Label Descriptions:

Pen Button - This button will display the details of the selected job in the list.

Plus Button - This will add a new job with default settings.

X Button - This will delete the selected job in the list.

Two pieces of paper button - This will make a copy of the selected job in the list.

Load Job - This will send all of the settings for the job to the PLC and send the label assigned to the job to the printer if the printer option is on.

Find - This will find all jobs that start with the text specified in the search box.

View All Jobs - This will display all of the stored jobs on the machine.

Touch To Scan Barcode - This will activate the box and allow the operator to scan a barcode. The system will check all of the saved jobs for an EZ Recall value that matches the scanned barcode value. If a match is found the matching job will be loaded.

Enter Barcode - This will allow manual entry of a barcode to search for a job with an EZ Recall value that matches. The system will then load the matching job.

Job Details Screen

Figure 47A. Job Detail Screen.

Job Details

General Description

The Job Details screen displays the details of a job and allows them to be edited.

Minimum Security Access: Medium

Button/Label Descriptions:

Job Name - The name given to a job. This name will be used for job recall.

Label - This is the name of the label that is assigned to the job and will be sent to the printer when the printer option is on and a job is loaded.

Label Magnifying Glass Button - If the label that is chosen was created using Codesoft, then this button can be pressed to show a preview of the label.

Verification - An image assigned to a Job for purposes of job verification. This Image will be presented to the operator when loading that job.

Verification Magnifying Glass Button - If a verification image has been selected, this button will display a preview of the selected image.

EZ Recall - This barcode value can be used to recall the job. On the Job Setup screen, a user can scan a barcode to find and load a job. The barcode scanned is matched up with the value in this EZ Recall box, and if a match is found then the job with that EZ Recall value will automatically be loaded.

Scan Barcode - An EZ recall value can be entered automatically by pressing this box to activate it and then scanning the barcode that should be assigned to this job.

Bag Length - This refers to the usable area inside the bag. This is measured from the bottom of the bag to the seal. The typical setting is .5 to 1.5 inches less than the measured overall bag length.

Skirt Length - The distance from the bottom of the bag to the start of the seal.

Seal Dwell - The amount of time the heated seal bar will remain in contact with the film. High quality seals are accomplished through proper seal time settings. These settings will vary with the film gauge and material.

HP Air Dwell - The amount of time the HP Air Blast remains on. The HP Air Blast is used to begin to open the bag and is then taken over by the LP Air to hold the bag open during loading.

Seal Temp - The set temperature of the seal bar when sealing as bag.

Comments - These are comments that can be used to provide more information about the job.

Feed Delay - Adjusts the delay (in seconds) that occurs before the web feeds forward to present the next bag.

Feed Speed - Adjusts the forward web speed in inches per second.

Close P-Bar Delay - Adjusts the delay (in seconds) that occurs prior to closing the pressure bar.

Open P-Bar Delay - Adjusts the delay (in seconds) that occurs prior to opening the pressure bar.

Obstruction Sensitivity Delay - Adjusts delay (in seconds) of the timer that begins when the pressure bar is fired to closed. This is a factory setting and should only be adjusted by a qualified service technician.

Reverse Speed - Adjusts the reverse web speed in inches per second.

Auto Dwell - Time, in seconds, that the bagger will pause between cycles when in Auto Mode and Filler Mode OFF. This time delay is typically allotted to allow an operator to hand load product into the bag, i.e. a self-pace setting.

LP Air Timeout - Low Pressure Air or LP Air is used to help keep the bag opened or inflated once it is first opened by High Pressure Air (HP Air). LP Air Timeout operates as follows:

1. LP Air Timeout setting is between 0.1-999.8 seconds: LP Air will turn off after this time has expired.
2. LP Air Timeout is set to 999.9 seconds: LP Air will not turn OFF.
3. LP Air timeout is set to 0.0: LP Air will never turn ON.

Job Details Screen

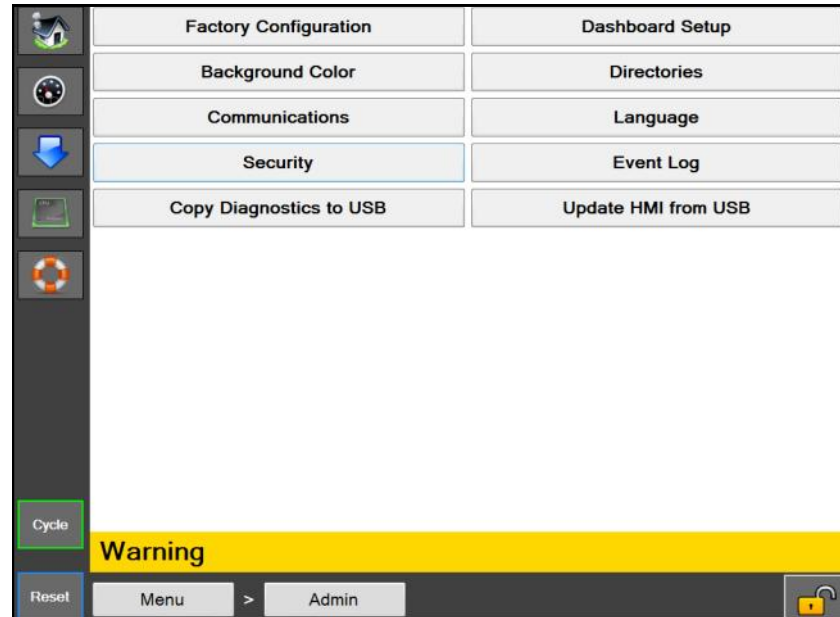


Figure 49A. Admin Screen.

General Description

The Admin screen is a collection of administrative functions used to setup the HMI and monitor bagger performance.

Minimum Security Access: No Security

Button/Label Descriptions:

Factory Configuration - This screen is used by the factory to configure purchased options.

Background Color - This will change the background color of the HMI.

Communications - This will open the Communications screen used to setup the IP communication settings for the PLC and the Printer.

Security - This will open the Security screen used to set security level passwords.

Copy Diagnostics to USB - This will copy the Event Log, and the Machine Settings xml file to a "Diagnostics" folder on a connected USB flash drive. This is a way to export diagnostic information from the machine.

Dashboard Setup - This will open the Dashboard Setup screen that is used to setup the custom dashboard.

Directories - This will open the Directories screen to setup file locations and Database connection settings.

Language - This will open the Language screen to set the Language used for the HMI.

Event Log - This will open the Event Log screen that allows users to view system events.

Update HMI from USB - This will look for a connected USB flash drive with a folder named "Max" and, if found, will copy all of the contents of the folder to the "Max" folder located on C:/Programs Files. This is the common way to do HMI software updates.

Communications Screen

The screenshot shows the Communications Screen with a vertical toolbar on the left containing icons for Home, Settings, Download, CPU, and a Lifebuoy. The main area displays IP Address settings for a Printer and a PLC. The Printer IP Address is 192.168.30.20 and the PLC IP Address is 192.168.10.20. A yellow warning bar is visible at the bottom with the text "Warning". The bottom navigation bar includes buttons for Cycle, Reset, Menu, Admin, and Comm, along with a lock icon.

Device	IP Address
Printer	192.168.30.20
PLC	192.168.10.20

Figure 50A. Communications Screen

General Description

The Communications screen displays the IP Address settings needed for the HMI to communicate with various devices.

Minimum Security Access: High

Button/Label Descriptions:

Printer IP Address - This is the IP Address currently assigned to the Printer

PLC IP Address - This is the IP Address currently assigned to the PLC

Security Screen

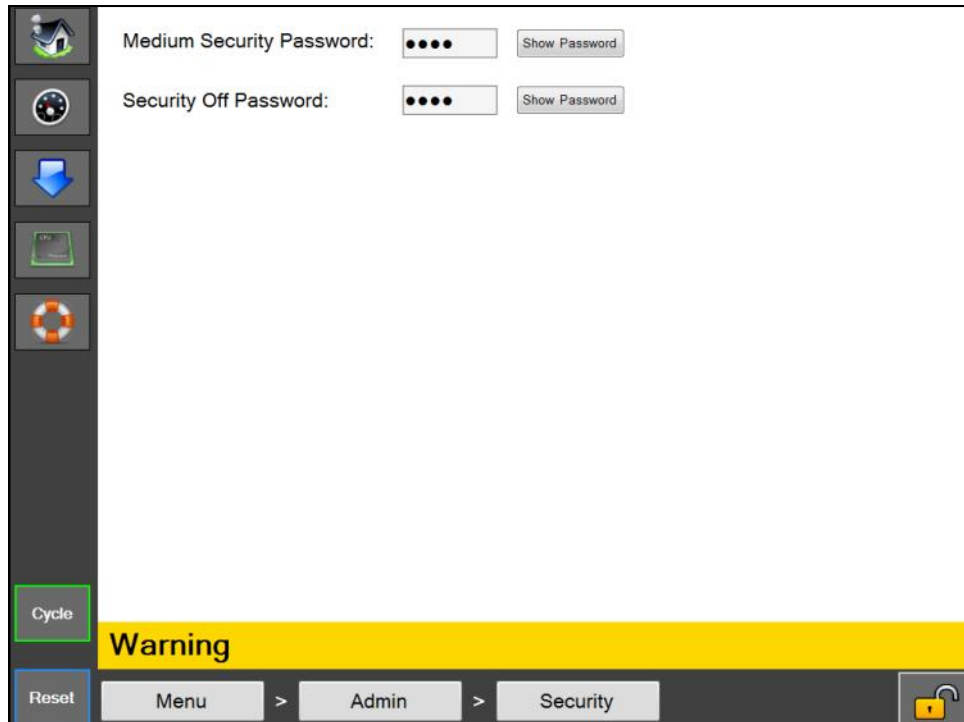


Figure 51A. Security Screen

General Description

The Security screen allows an admin to set custom passwords for each security level. These passwords are entered when a user clicks the Lock icon on the bottom right of the screen.

Minimum Security Access: Medium

Button/Label Descriptions:

Medium Security Password - This will set the Medium security level password. The password must 1 to 5 numbers in length. The current password will be shown.

Security Off Password - This will set the Security to OFF. This password allows access to all HMI screens. The password must 1 to 5 numbers in length. The current password will be shown.

The security levels are defined as follows:

High - The user allowed access to the Dashboard, PLC Settings, Job Download, Main, and Communications screens

Medium - The user has all permissions of the High security level and access to all screens except Service, Language, and I/O.

No Security - The user has access to all screens and functions except Factory Configuration that is for factory access only.

Dashboard Setup Screen

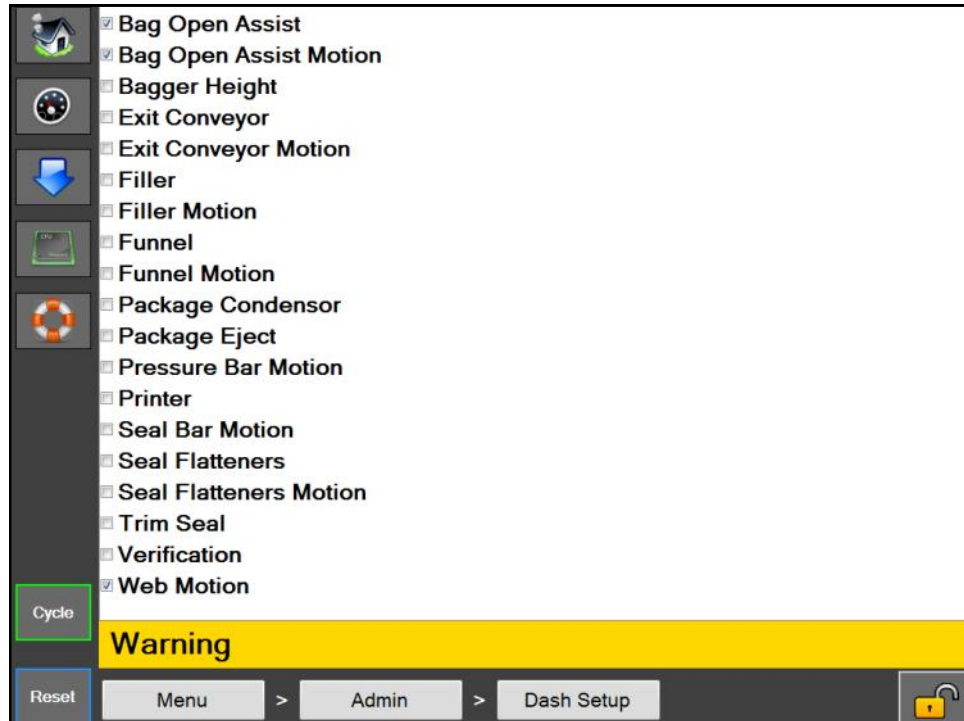


Figure 52A. Dashboard Setup Screen.

General Description

The dashboard setup screen displays a list of available options/functions to be displayed on the Dashboard.

Minimum Security Access: Medium

Button/Label Descriptions:

A checked item in the list indicates the option/function is displayed and can be controlled on the Dashboard Screen.

Dashboard Screen

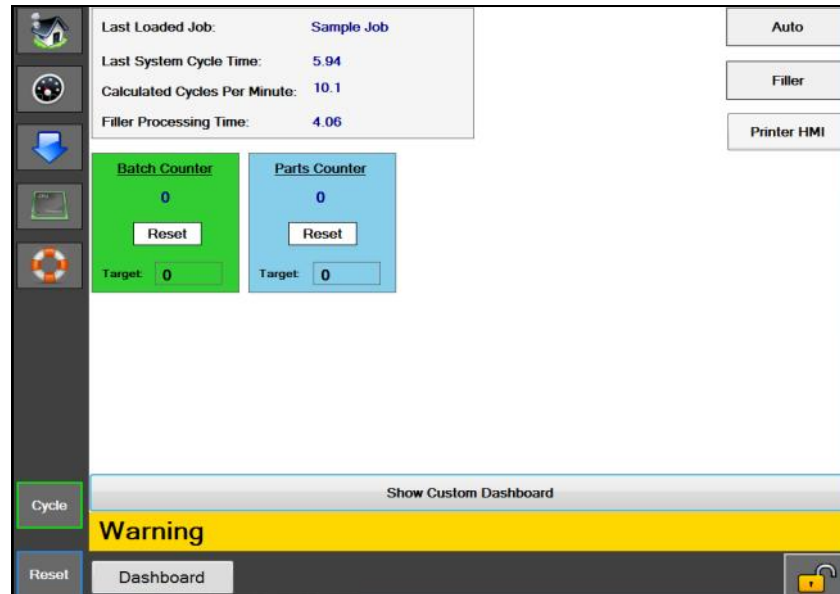


Figure 53A. Dashboard Setup Screen.

General Description

The dashboard is a customizable screen that can be setup to display the most common operator interfaces. Options can be switched on or off from this screen, and many of the individual machine motions can be setup on this screen for operator ease of use. There is also a built in batch counter that is accessible on the bottom of the screen. This dashboard was designed to be the main screen that the operator uses during machine operation.

Minimum Security Access: High

Button/Label Descriptions:

Auto Mode - This will put the bagger in an auto cycle mode

Filler Mode - This will put the bagger in Filler Mode.

Printer HMI - This button will allow the operator to view the printer's HMI (Human Machine Interface)

Parts Counter - The Parts Counter can be enabled from the Bagger Settings screen.

Batch Counter - The Batch Counter can be enabled from the Bagger Settings screen.

Last Loaded Job - The name of the last job that was successfully loaded

Last System Cycle Time - The amount of time, in seconds, the previous successful machine cycle took to complete. Note: This includes filler drop time

Calculated Cycles Per Minute - This is the number of cycles per minute calculated using 60 divided by the last system cycle time.

Filler Processing Time - This displays the measured amount of time from when the bagger turns on the "Ready For Filler" output until it receives the "Filler Trigger" input signal from the Automatic Filler machine.

Directories Screen

Labels Directory
C:\Program Files\Max\Resource\Labels

Images Directory
C:\Program Files\Max\Resource\Label Images

DB Type
OLEDB

DB Connection String

Warning

Reset Menu > Admin > Directories

Figure 54A. Directories Setup Screen.

General Description

The Directories screen displays the file locations of certain files needed by the HMI.

Minimum Security Access: No Security

Button/Label Descriptions:

Labels Directory - This is the location on the HMI where the label formats are stored for jobs

Images Directory - This is the location on the HMI where images are stored for Job Verification

DB Type - This sets the database driver type used for the database storing saved jobs. (This should not be changed unless Job data is being stored in a different database than the one provided.)

DB Connection String - This is the connection string used to connect to the Jobs database. (This should not be changed unless moving the Jobs database to a different location.)

Event Log Screen

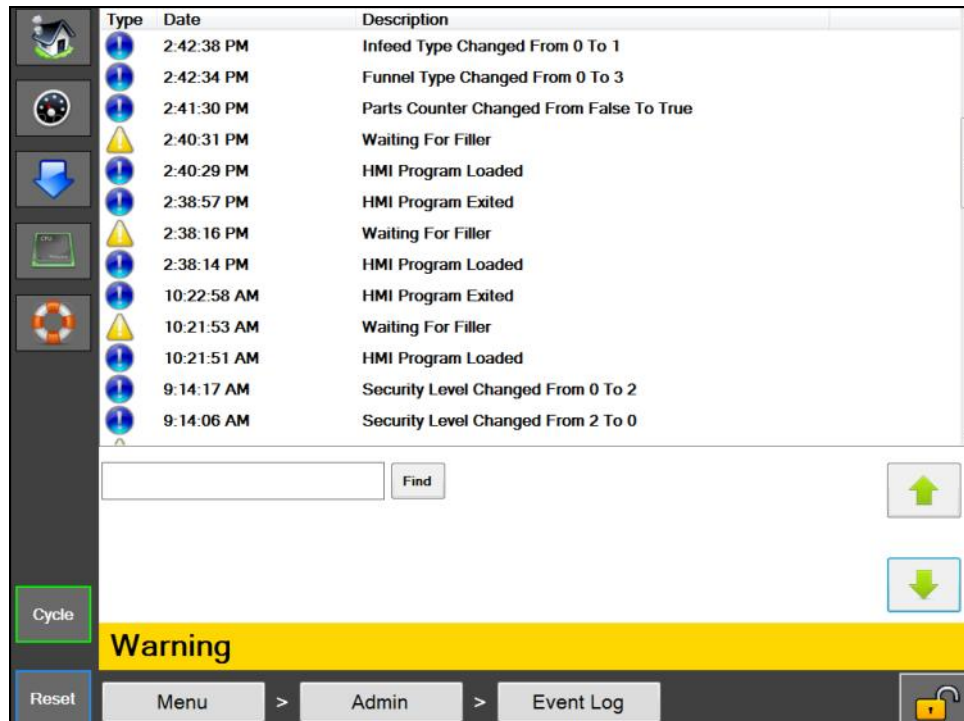


Figure 55A. Event Log Setup Screen.

General Description

The Event Log screen displays a list of events that have occurred on the machine for the current day. This includes faults, warnings and user initiated events.

Minimum Security Access: Medium

Button/Label Descriptions:

The event log displays an indicator, timestamp, and short description of the event. A red indicator means a fault occurred, a yellow means a warning and a blue indicator means a general event. A search box is included that can be used to search specific events according to their description.

Machine Options Screen

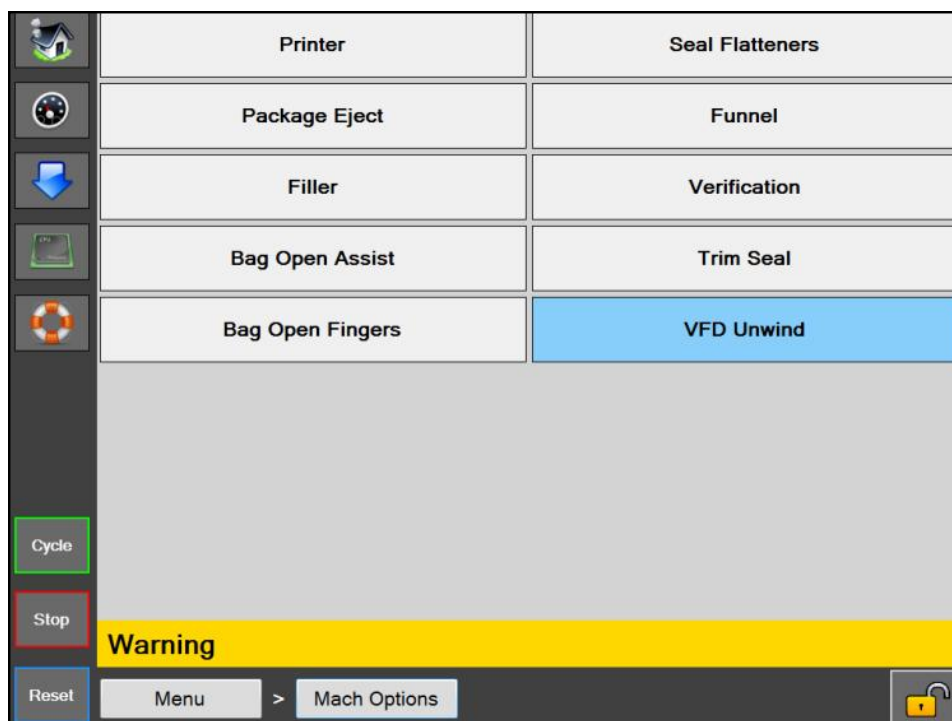


Figure 56A. Machine Options Screen.

General Description

The Machine Options screen displays the many options that can be installed and selected on the bagger. (Not all of these options will be available on every machine. It depends on what has been purchased.) The buttons of the options that are currently selected will be highlighted.

Minimum Security Access: Medium

Button/Label Descriptions:

Printer - This will open the Printer configuration screen.

Seal Flatteners - This will open the Seal Flatteners configuration screen. Seal Flatteners are used to create an aesthetic seal.

Package Eject - This will open the Package Eject configuration screen. This option is used to support the bag during loading and then drop the finished package from the bagger.

Funnel - This will open the Funnel configuration screen. This option is used on baggers that have a funnel for loading product.

Filler - This will open the Filler configuration screen.

Verification - This will open the Verification configuration screen. This option will automatically verify a taught barcode that is printed on a bag.

Bag Open Assist - This will open the Bag Open Assist configuration screen. Bag Open Assist includes high/low pressure air, bag open sensor, and vacuum assist.

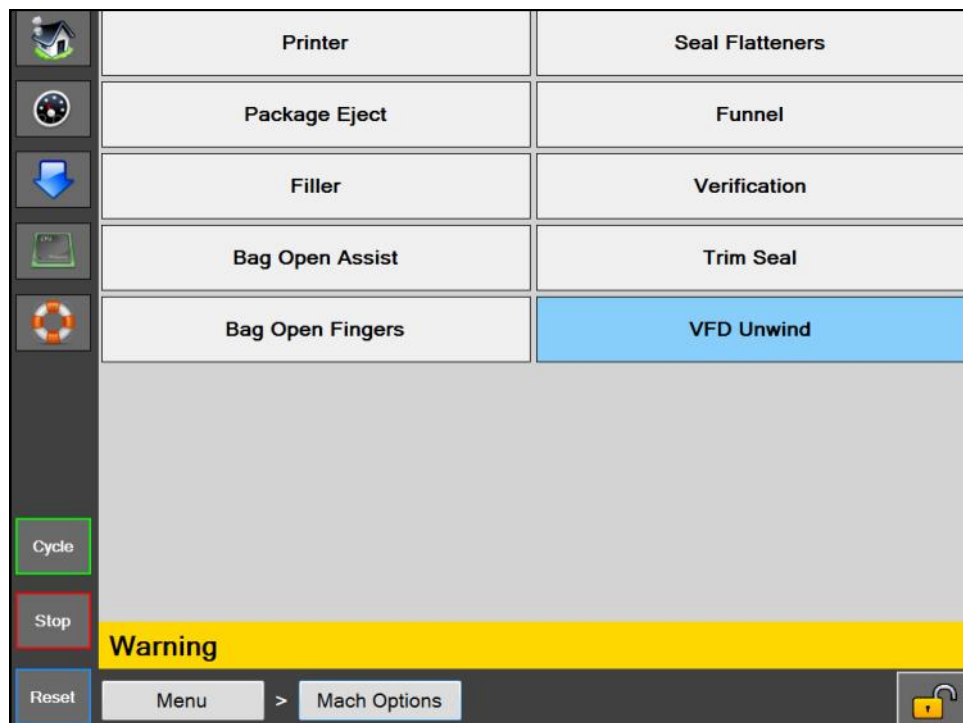


Figure 57A. Machine Options Screen.

Trim Seal - This will open the Trim Seal configuration screen. This option is used to simultaneously seal and trim excess bag material.

Bag Open Fingers - This will open the Bag Open Fingers configuration screen. This option is found on the Max 20 with 10" pass-thru equipped with Pressure Bar mounted vacuum open.

VFD Unwind - This will open the VFD Unwind configuration screen.

Printer Screen

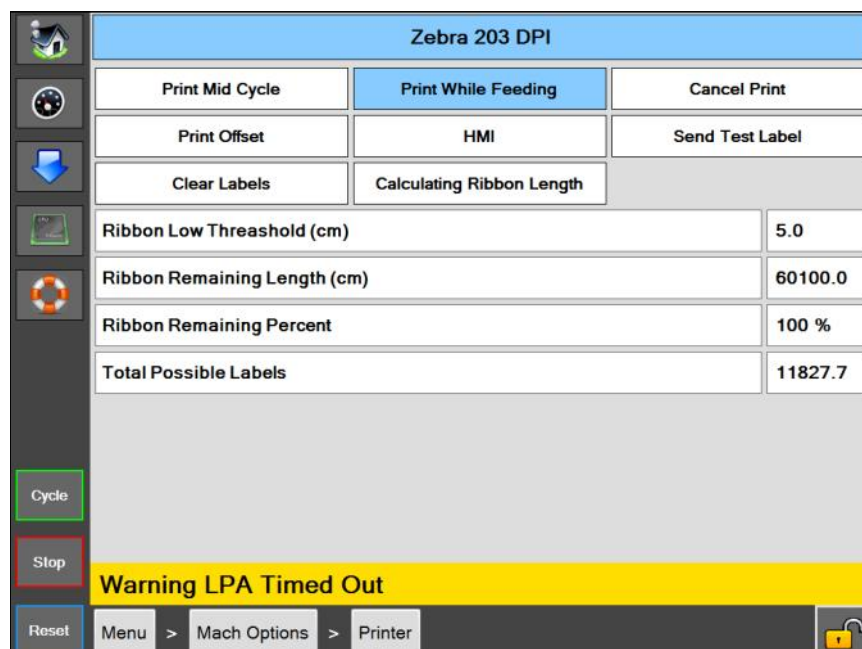


Figure 58A. Printer Screen.

General Description

The Printer Option screen displays available Printer settings

Button/Label Descriptions:

Zebra 203/300 DPI - This will toggle on/off the Printer option.

Print Mid Cycle - When this is on, the intermittent printer will print when the web has reversed and stopped. When it is off, an intermittent printer will print at the end of the bag.

Print While Feeding - When this is on, the Videojet Continuous or Zebra Printer will print while the bag is feeding out. The bag feeds at the print speed for the print length, as determined in the Job Settings. When the printing is done, the bag feeds the remaining bag length at the Feed Speed setting. This option is mutually exclusive from the Print Mid Cycle.

Cancel Print - this button can be used when the bagger displays the "Waiting for Printer" alert. Pressing this button cancels the print request and the alert message. This allows the bagger to finish a bagger cycle without printing a label.

Print Offset - This numeric setting determines the starting position of the printed label. This can be used to adjust the label position on the bag. It is adjustable from 0 to 10.00.

Send Test Label - 100 pre-determined test labels will be sent to printer.

HMI - This will open the printer control panel for the Videojet printer. (Not accessible on Zebra printers)

Calculating Ribbon Length - This button will turn blue, like Print While Feeding, while the PLC is calculating how much ribbon is left on a roll.

Ribbon Low Threshold - The end-user sets the amount of ribbon left to trigger the ribbon low warning in centimeters.

Ribbon Remaining Length - The length of printer ribbon has left in centimeters.

Ribbon Remain Percent - The percentage of ribbon left on the roll.

Total Possible Labels - The number of labels that may be printed before the ribbon is out.

Seal Flatteners Screen

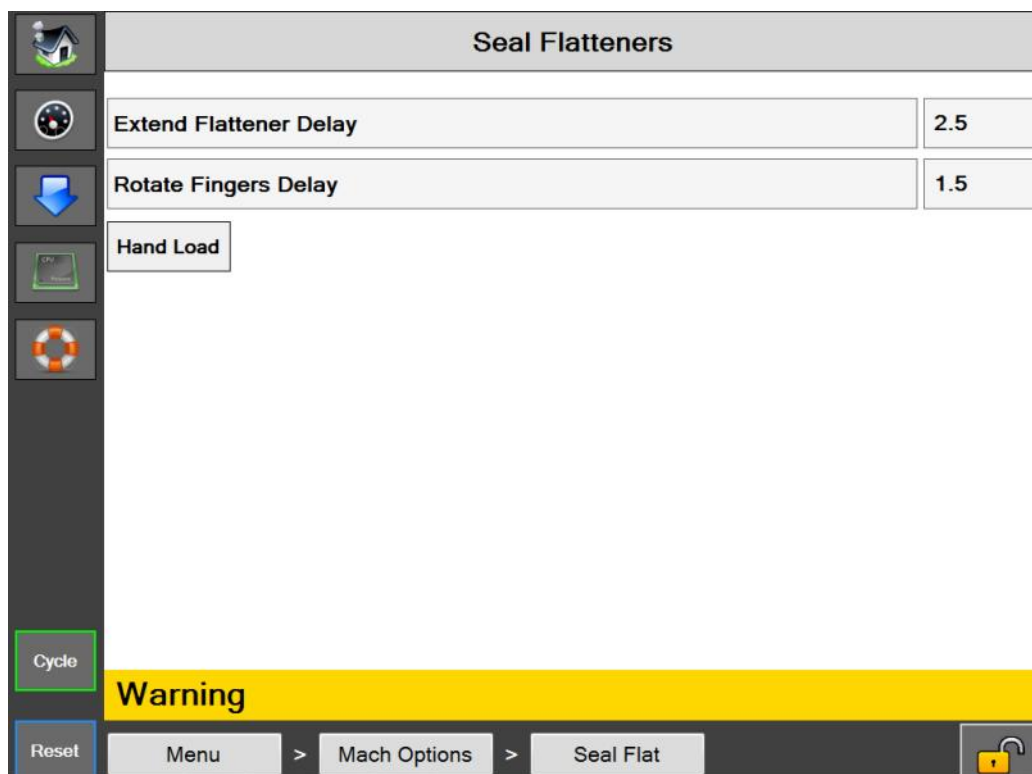


Figure 59A. Seal Flatteners Screen.

General Description

Seal Flatteners are designed to flatten out the opening of the bag prior to sealing. This has the effect of removing wrinkles from film in the seal area and creates an anasthetically pleasing seal.

Button/Label Descriptions:

Seal Flatteners - This will toggle on/off the Seal Flatteners option.

Extend Flattener Delay - Amount of time, in seconds, that the seal flattener fingers extend motion is delayed following the completion of the HP Air timer.

Rotate Fingers Delay - Amount of time, in seconds, that the seal flattener finger rotate motion is delayed following the completion of the extend motion.

Hand Load - This feature changes the sequence of the seal flattener operation. With Hand Load active, the seal flatteners do not enter the bag until the product is loaded and the cycle is initiated. With Hand Load inactive, the seal flatteners will enter the bag directly following the opening of the bag.

Package Eject Screen

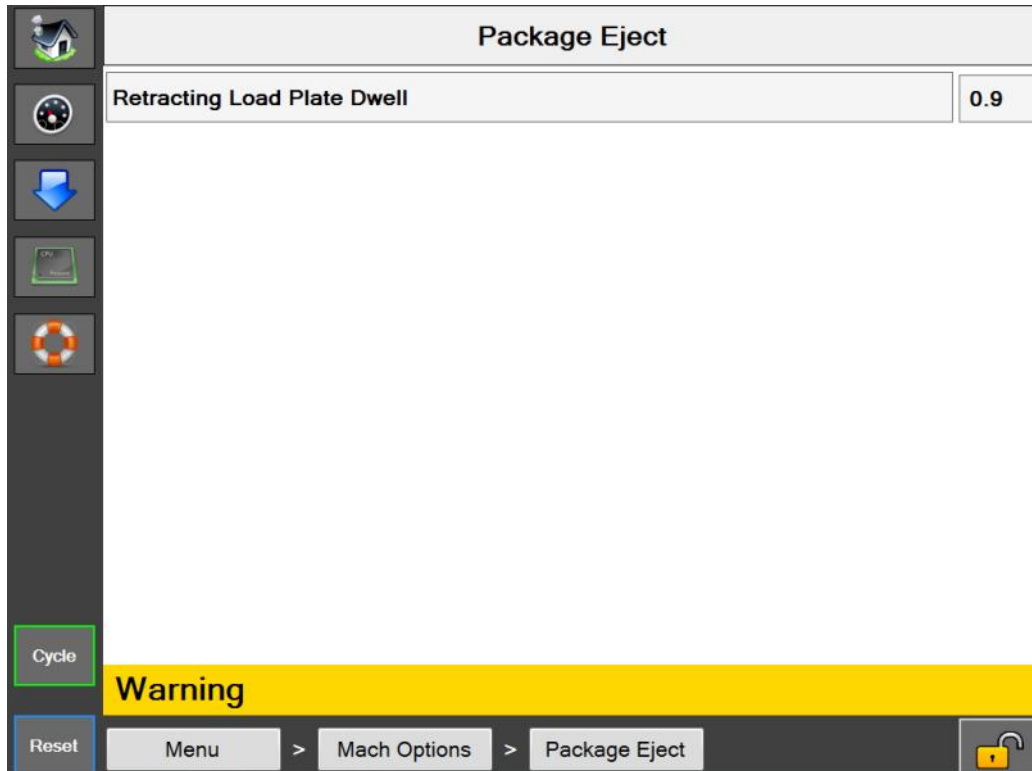


Figure 60A. Package Eject Screen.

General Description

The Package Eject option helps remove the sealed bag from the loading area. There are several versions of this option. A Retracting Load Plate, Retracting Load Shelf, Side Retracting Load Shelf, and 2-Axis Package Eject.

Button/Label Descriptions:

Package Eject - This will toggle on/off the Package Eject Option.

Retracting Load Plate Dwell - The amount of time the Load Plate is retracted.

Funnel Screen

Funnel	
Accumulating Funnel Air Dwell	0
Accumulating Funnel Drop Time	0
Open Funnel Delay	0

Warning

Reset Menu > Mach Options > Funnel

Figure 61A. Funnel Screen.

General Description

The Funnel Option screen displays available Funnel settings.

Minimum Security Access: Medium

Button/Label Descriptions:

Funnel - This will toggle on/off the Funnel Option.

Accumulating Funnel Air Dwell - Amount of time, in seconds, that the accumulating funnel air knife will be active starting from the moment the accumulating doors are opened.

Accumulating Funnel Drop Time - Needed amount of time, in seconds, from the time the accumulating funnel has closed to allow the product to clear the pressure bar.

Open Funnel Delay - Amount of time, in seconds, that the opening of the Positive Entry Funnel will be delayed before opening. This delay begins after the completion of the HP Air Dwell.

Filler Screen

Filler	
Filler Drop Time	0.5
EZ Feed Conveyor High Speed	0
EZ Feed Conveyor Low Speed	0
EZ Feed Conveyor Parts Slow Count	0
EZ Feed Conveyor Index Dwell	0

Parts Counting Mode

Indexing Mode

Lower EZFeed Conveyor

Raise EZFeed Conveyor

Warning

Reset

Menu > Mach Options > Infeed

Lock Icon

Figure 62A. Filler Screen.

General Description

The Filler Option screen displays available Filler settings.

Minimum Security Access: Medium

Button/Label Descriptions:

Filler - This will toggle on/off the Filler option.

Filler Drop Time - This setting determines the amount of time from when the Filler Trigger is applied until the bagger cycles. This should be set long enough to allow the product to drop below the pressure before the sealing cycle begins.

EZ Feed Conveyor Index Dwell - The time that the EZ Feed is stopped between Indexing Cycles.

Parts Counting - Used when counting parts in Filler Mode.

EZ Feed Indexing Mode - Conveyor runs starts/stops in a cyclical fashion.

EZ Feed Continuous Mode - Conveyor runs in continuous fashion.

Verification Screen

The screenshot shows the 'Verification' screen with a sidebar on the left containing icons for Home, Settings, a downward arrow, a green box, and a life preserver. The main area is titled 'Verification' and contains the following elements:

- Bad Read Fault Count:** 5
- Consecutive Bad Read Count:** 0
- Consecutive Good Read Count:** 0
- Scan Barcode:** A button with a barcode icon.
- Good Read:** A radio button.
- Bad/NoRead:** A radio button.
- Start Scanning Offset:** 4.5
- Scanning Distance:** 1.5
- Scan Barcode At Offset:** A blue button.
- Cycle:** A green button.
- Stop:** A red button.
- Reset:** A blue button.
- Warning:** A yellow banner at the bottom.
- Navigation:** Menu > Mach Options > Verification
- Lock Icon:** A yellow lock icon in the bottom right corner.

Figure 63A. Verification Screen.

General Description

The Verification Option screen displays available Verification settings.

Minimum Security Access: Medium

Button/Label Descriptions:

Verification - This will toggle on/off the Verification option.

Bad Read Fault Count - This setting determines how many consecutive bad reads are required before the machine is faulted.

Consecutive Bad Read Count - A numeric display of how many *Consecutive* bad reads attempts have occurred.

Consecutive Good Read Count - A numeric display of how many *Consecutive* good reads attempts have occurred.

Start Scan Offset - A numeric setting to start the barcode scan some distance from where the web starts to either print or feed forward.

Scanning Distance - A numeric setting which determines the scanning distance or length in inches. This value gets added to the Scan Offset and determines when the scanner stops.

Scan Barcode At Offset - This button selects the Scan Offset feature.

Scan Barcode - This is a test button that allows the user to scan a barcode when the bagger is not cycling.

Good Read Indicator - This will light up when a good read occurs. It stays on until the next scan

Bad/NG Indicator - This will light up when a either bad read or no read occurs. It stays on until the next scan.

Bag Open Assist

Bag Open Assist	
Low Pressure Air Timeout	5
High Pressure Air Dwell	0.1
Vacuum Dwell	0.5
Vacuum Timeout	0
Bag Open Retry Count	1
Feed New Bag Count	0

LP Air Bag Open Assist LP Air Early

Cycle

Warning

Reset Menu > Mach Options > Bag Open

Figure 64A. Bag Open Assist Screen.

General Description

The Bag Open Assist Option screen displays available Bag Open settings

Bag Open Assist - This will turn on Bag Open Assist. When OFF, the High/Low pressure air opens the bag.

Minimum Security Access: Medium

Button/Label Descriptions:

Bag Open Assist - This will toggle on/off the Bag Open Assist option.

Low Pressure Air Timeout - [Enter Text Here]

High Pressure Air Dwell - [Enter Text Here]

Vacuum Dwell - [Enter Text Here]

Vacuum Timeout - [Enter Text Here]

Bag Open Retry Count - Adjustable setting (0-9) that determines how many times the funnel door will cycle in an effort to open the bag. Once the terminal count is reached, the bagger will attempt to feed a new bag if the Feed New Bag Count is greater than 0. If the Feed New Bag Count setting = 0, then the bagger will fault when the Bag Open Retry Count has reached its terminal count.

Feed New Bag Count - Adjustable setting (0-9) that determines how many total bags will be fed out during the bagger Recovery Cycle. If this counter and the Bag Open Retry Counts reach their terminal counts, then the bagger will fault with "Bag Failed to open". $X * Y = \text{Total Rejected Bags}$ when $X = \text{print queue}$ and $Y = \text{Feed New Bag Count}$

LPA Vacuum Assist - This option uses Low Pressure Air to inflate the bag once it is opened. When this is ON LPA turns on when vacuum switches Off. When this is OFF, LPA turns on at the end of the bagger cycle. If no LPA is desired, set the LPA timeout to 0.

LP Air Bag Open Assist - LPA will help the HPA open the bag.

LP Air Early - This feature turns on the LPA at the beginning of the bag feed instead of the end of feed.

Trim Seal Screen

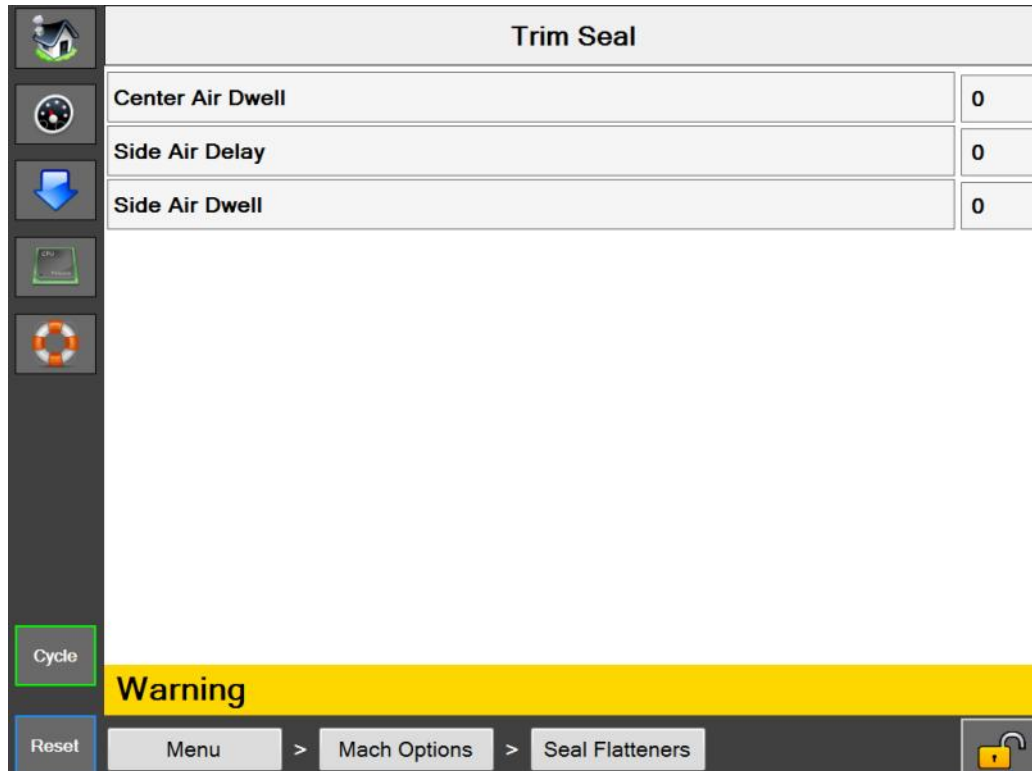


Figure 65A. Trim Seal Screen.

General Description

This option utilizes a Seal Trimming Knife attached to the Seal Bar. This removes the excess material from the sealed bag. The options includes Air Knives to blow off the trimmed scrap material into a waste bag.

Button/Label Descriptions:

Trim Seal - This will toggle on/off the Trim Seal option.

Center Air Dwell - Adjustable from 0.0 to 3.0 seconds.

Side Air Delay - Adjustable from 0.0 to 1.0 seconds.

Side Air Dwell - Adjustable from 0.0 to 3.0 seconds.

A Feed Delay may be needed. This can be added from the Job Settings Screen. In this case, the Feed Delay should be set to a value greater than or equal to the combined Side Delay and Side Dwell settings. This ensures that the scrap is out of the way before feeding out the next bag.

Bag Open Fingers Screen

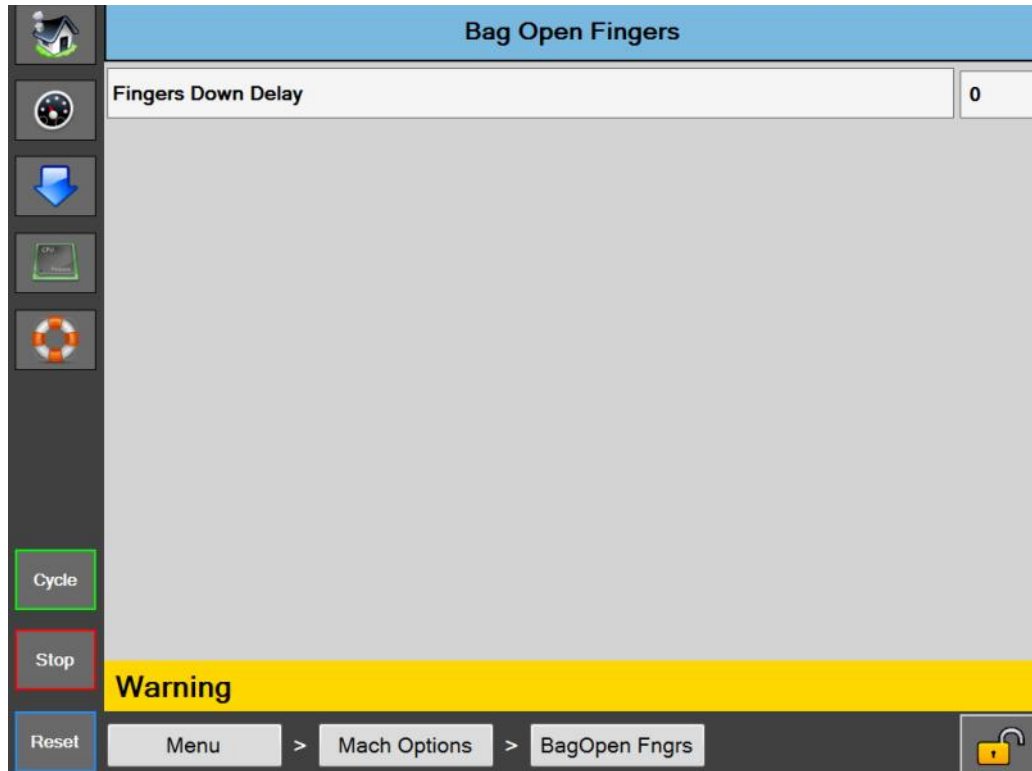


Figure 66A. Bag Open Fingers

General Description

This option consists of two mechanical fingers operated by rotary air actuators. The fingers are mounted outside the Finger Funnel. The fingers rotate into the bag as the Pressure Bar begins to open the bag. When the fingers are down, they pin the bag to the Pressure Bar and held to open or form the bag into a 10" x 10" square opening.

Button/Label Descriptions:

Fingers Down Delay - The fingers Down Delay will delay the rotation of the fingers. It is recommended to keep this setting to a minimum. Start with 0 and add time only if necessary.

VFD Unwind Screen

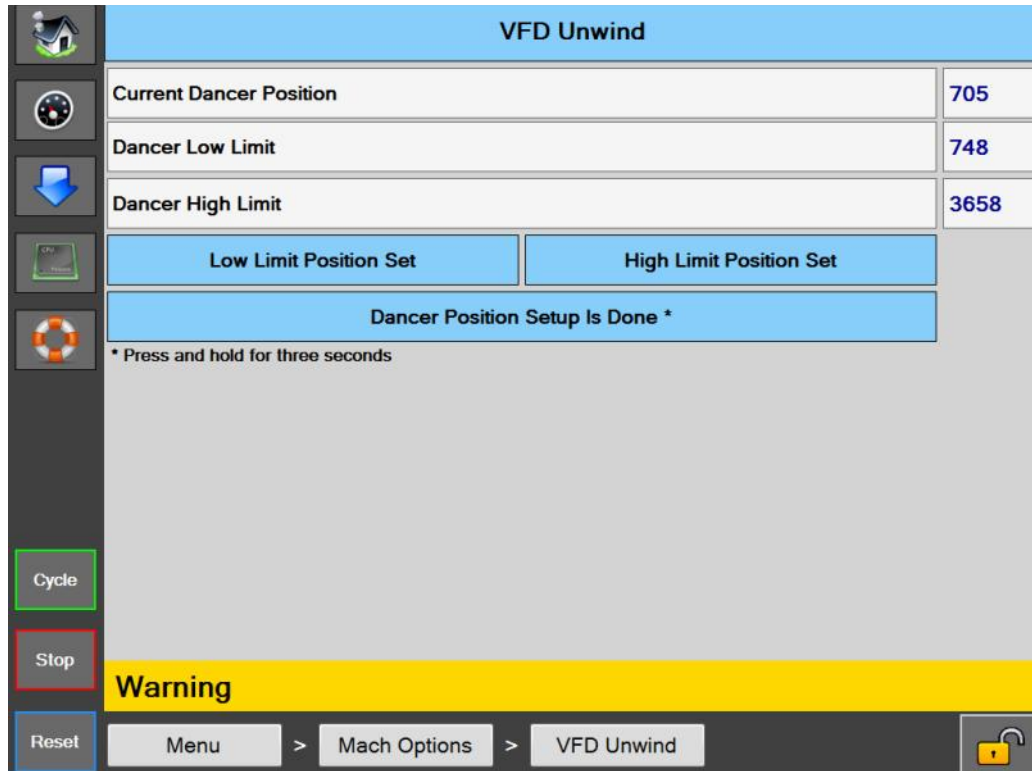


Figure 67A. VFD Unwind Screen

General Description

The VFD Unwind Option screen is used to setup the Dancer Feedback positions.

Minimum Security Access: Medium

Button/Label Descriptions:

VFD Unwind - This button is automatically turned on by the PLC and can not be turned off whenever a VFD Unwind is enabled in the Factory Configuration

Current Dancer Counts - This is a live numeric reading of the raw analog counts from the dancer position sensor.

Low Dancer Position - This is the numeric value that was captured when the Set Low Position button is pressed.

Dancer Upper Limit Position - This is the numeric value that was captured when the Set High Limit Position button is pressed.

Set Low Dancer Position - Pressing this button during the Setup Mode will capture and store the Low Position.

Set High Dancer Limit - Pressing this button during the Setup Mode will capture and store the High Operating Limit Position.

Setup Dancer Positions - Press and Hold This Button for 3 seconds to activate the Dancer Set-up mode.

Service Screen—Main

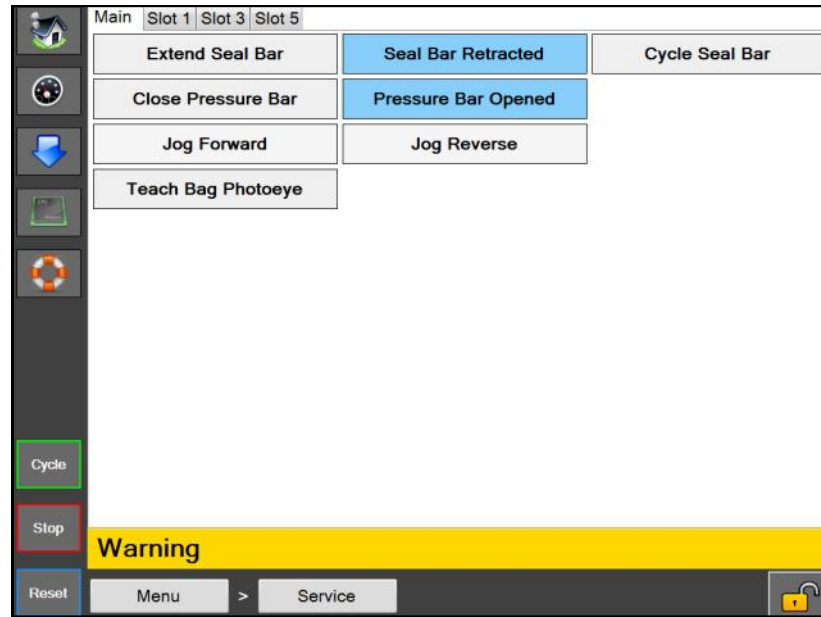


Figure 68A. Service Screen.

General Description

The Service Screen provides manual control over the major components of the machine. Use this screen when troubleshooting options on the machine.

Minimum Security Access: No Security

Button/Label Descriptions:

Main

Extend Seal Bar - This will extend the seal bar. The button will display *Seal Bar Extended* when the Seal Bar Extended Sensor is made.

Retract Seal Bar - This will retract the seal bar. The button will display *Seal Bar Retracted* when the Seal Bar Retracted Sensor is made.

Cycle Seal Bar - This will extend the Seal Bar and then retract the Seal Bar.

Close Pressure Bar - This will close the pressure bar. The button will display *Pressure Bar Closed* when the Pressure Bar Closed Sensor is made.

Open Pressure Bar - This will open the pressure bar. The button will display *Pressure Bar Opened* when the Pressure Bar Opened Sensor is made.

Jog Web Forward - This will move the web forward.

Jog Web Reverse - This will back the web up.

Teach Bag Photoeye - Film should not be in between eye and reflector. Pressing this button will teach the eye. The button will display *Teaching Bag Photoeye* for 3 seconds.

Service Screen—Slot 1

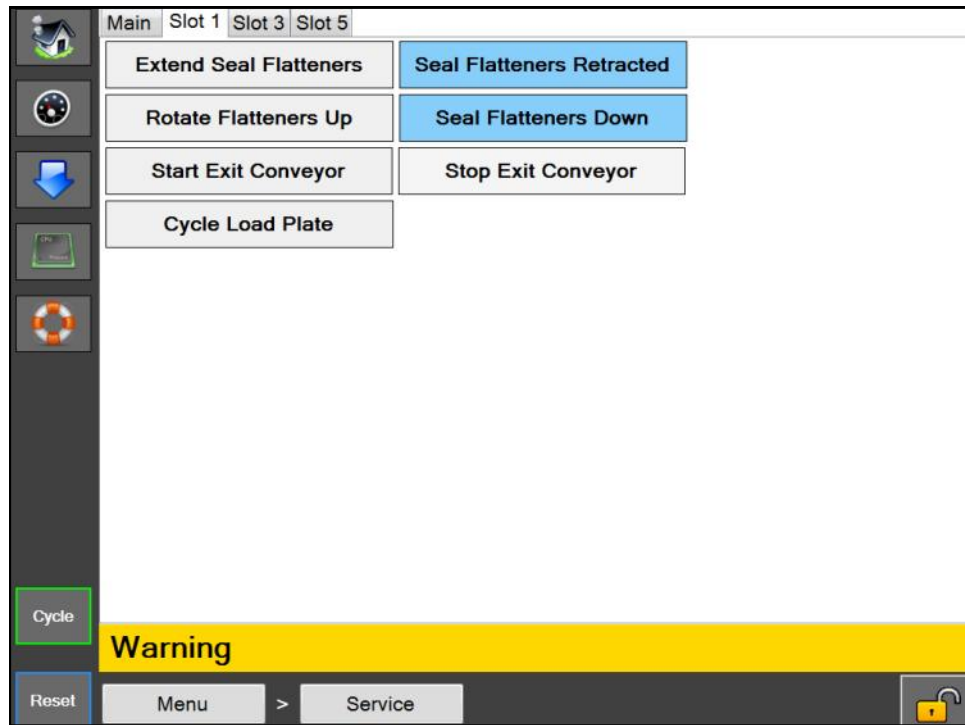


Figure 69A. Service Screen - Slot 1.

Extend Flatteners - This will extend the seal flatteners. The button will display *Flatteners Extended* when the Seal Flatteners Extended Sensor is made.

Retract Flatteners - This will retract the seal flatteners. The button will display *Flatteners Retracted* when the Seal Flatteners Retracted Sensor is made.

Rotate Flatteners Up - This will rotate the seal flatteners up. The button will display *Seal Flatteners Up* when the Seal Flatteners Up Sensor is made.

Rotate Flatteners Down - This will rotate the seal flatteners down. The button will display *Seal Flatteners Down* when the Seal Flatteners Down Sensor is made.

Start Exit Conveyor - This will start indexing the Exit Conveyor.

Stop Exit Conveyor - This will stop indexing the Exit Conveyor.

Cycle Load Plate - This will retract and then extend the Load Plate.

Service Screen—Slot 3

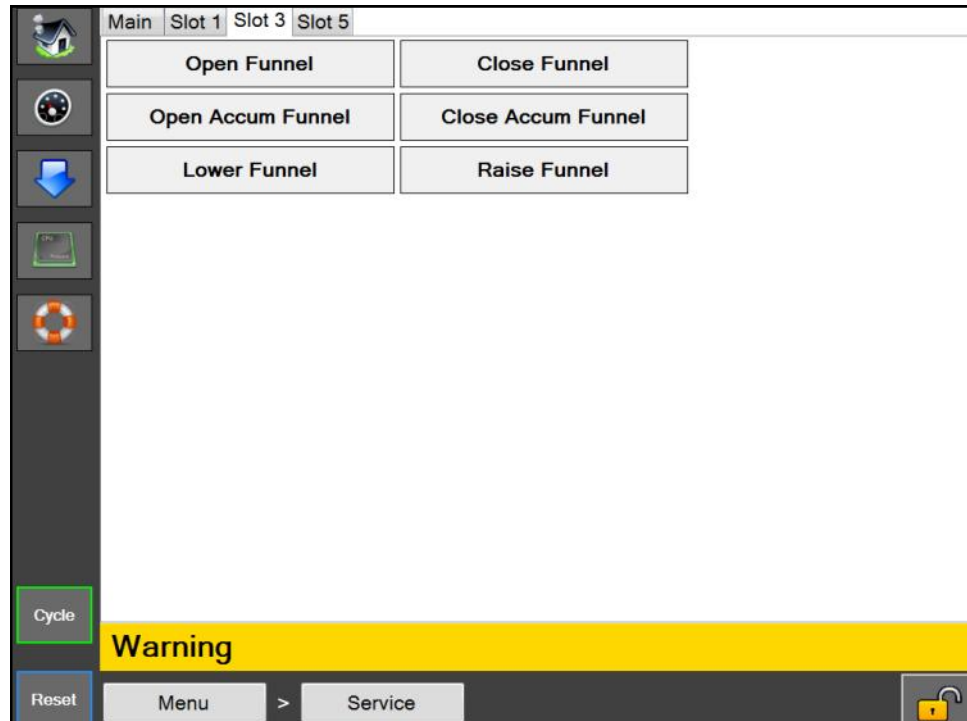


Figure 70A. Service Screen - Slot 3.

Open Funnel - This will open the funnel door. The button will display *Funnel Opened* when the Funnel Opened Sensor is made.

Close Funnel - This will close the funnel door. The button will display *Funnel Closed* when the Funnel Closed Sensor is made.

Open Accum Funnel - This will open the accumulating funnel door. The button will display *Accum Funnel Opened* when the Accumulating Funnel Opened Sensor is made.

Close Accum Funnel - This will close the accumulating funnel door. The button will display *Accum Funnel Closed* when the Accumulating Funnel Closed Sensor is made.

Raise Funnel - This will raise the dunk funnel. The button will display *Funnel Raised* when the Dunk Funnel Raised Sensor is made.

Lower Funnel - This will lower the dunk funnel. The button will display *Funnel Lowered* when the Dunk Funnel Lowered Sensor is made.

Service Screen—Slot 5

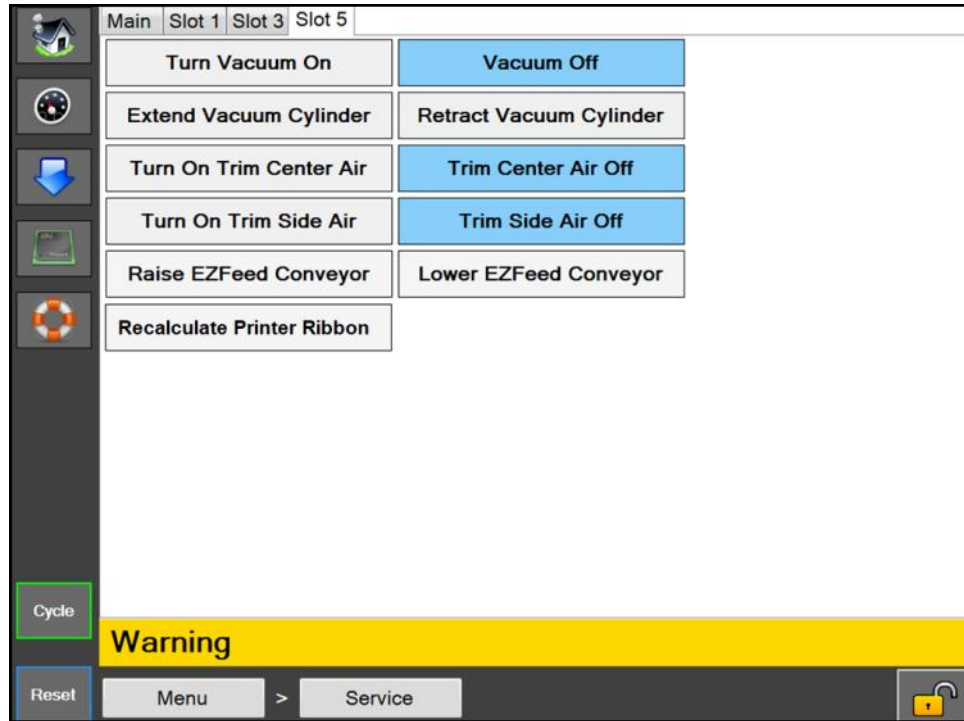


Figure 71A. Service Screen - Slot 5.

Turn Vacuum On - This will turn the vacuum on. The button will display *Vacuum On* when the vacuum is ON.

Turn Vacuum Off - This will turn off the vacuum. The button will display *Vacuum Off* when the vacuum is OFF.

Extend Vacuum - This will extend the Vacuum Cylinder on a cylinder-mounted vacuum. The button will display *Vacuum Extended* when the Vacuum Cylinder Extended Sensor is made.

Retract Vacuum - This will retract the vacuum cylinder on a cylinder-mounted vacuum. The button will display *Vacuum Retracted* when the Vacuum Cylinder Retracted Sensor is made.

Turn On Trim Center Air - This will turn the Trim Seal Center Air ON. The button will display *Trim Center Air On* when the Trim Seal Center Air is ON.

Turn Off Trim Center Air - This will turn OFF the Trim Seal Center Air. The button will display *Trim Center Air Off* when the Trim Seal Center Air is OFF.

Turn On Trim Side Air - This will turn the trim seal side air on. The button will display *Trim Side Air On* when the trim seal side air is on.

Turn Off Trim Side Air - This will turn OFF the Trim Seal Side Air. The button will display *Trim Side Air Off* when the Trim Seal Side Air is OFF.

Raise EZ Feed Conveyor - This will raise an attached EZ Feed Conveyor with lift column.

Lower EZ Feed Conveyor - This will lower an attached EZ Feed Conveyor with lift column.

Recalculate Printer Ribbon - Press to have PLC to start calculating how much ribbon is left on the roll. When pressed, button will change to blue and text will read Calculating Ribbon Length.

Printer Display

The blue background of the Home Screen normal operation. A yellow or red background indicates an alert or error state.



The following items are located on the Home Screen Print Status tab:

- ◆ Menu - Allows operator to change the printer settings.
- ◆ Wizards - Allows operator to change printer settings by going through prompts.
- ◆ Shortcuts - Allows Operator to quickly access the most recent menu items and to save your favorites. Touch the darkened heard icon next to a menu item to save it to your list of favorites. Items in the favorites are shown in the order in which they were saved.

The printer's User Menus can be used to configure the printer.



For Detailed descriptions of User Menus, visit Zebra Printer's web page. See Zebra ZT610-TZ620 Color Touch User Guide.

<https://www.zebra.com/us/en/support-downloads/printers/industrial/zt610.html>

Printer Faults

All printer functions are internally monitored. When a problem (Fault) or a potential problem (Warning) is detected, a corresponding message will appear in the display. Fault messages receive the highest display priority. If more than one fault is detected the display will cycle between messages.

Note : To return to normal operation following a fault, the fault must be corrected and then press the 'Reset' key from Service Screen\Printer must be pressed to clear the condition.

Display Message	Description	Possible Solution (s)
Ribbon Out	In thermal transfer mode: - Ribbon is not loaded - Ribbon is loaded incorrectly - The ribbon sensor is not detecting ribbon.	Load ribbon correctly. See Load Printer Ribbon on page 39.
Head Identification Failed	Printhead is not a Zebra™ Certified Product.	Install a genuine Zebra™ printhead.
Head Element Out	A printhead element is no longer working.	If the location of the failed element affects printing, replace the printhead.
Replace Printhead	The printhead is nearing the end of its life and should be replaced.	Replace the printhead.
Head Maintenance Needed	The printhead needs to be cleaned.	Clean the printhead.
Head Under Temp / Head Thermistor Fault The printer shows one of these messages or cycles between them.	The printhead Data or Power Cable are not properly connected. The printhead has a faulty Thermistor.	Connect cables. Replace the printhead.
Out of Memory Storing XXX	There is not enough memory to perform the function specified.	Free up some of the printer's memory by adjusting the label format or Printer parameters. One way to free up memory is to adjust the print width to the actual width of the label instead of leaving the print width set to the default. Ensure that the data is not directed to a device that is not installed or is unavailable.
Printer is low on ribbon and needs to be replaced soon.	Warning of low ribbon.	Replace printer ribbon with a new roll.

Printer Troubleshooting

Barcode Does Not Scan		
Issue	Possible Cause	Possible Solution (s)
The barcode printed on label does not scan.	The barcode is not within specifications because the printer is set at an incorrect darkness level.	1. Print a test label. 2. If necessary, manually adjust the darkness or print speed settings.
	There is not enough blank space around the barcode.	Leave at least 1/8 in. (3.2mm) between the barcode and other printed areas on the label and between the barcode and the edge of the label.
Poor Print Quality		
Issue	Possible Cause	Possible Solution (s)
Smudge marks on labels	The Media or ribbon is not designed for high-speed operation	Replace supplies with those recommended for high-speed operation.
Poor results with thick labels	The print line is not at an optimal position for your media.	Adjust the print line for thick media.
Print Consistently Too Light or Too Dark		
Issue	Possible Cause	Possible Solution (s)
Printing is too light or too dark over the entire label	The Printer is set at an incorrect darkness level.	For optimal print quality, set the darkness to the lowest possible setting for your application.
	Incorrect printhead pressure	Set the printhead pressure to the minimum needed for good print quality.
Printing is too light or too dark on one side of the label	Uneven printhead pressure	Set the printhead pressure to the minimum needed for good print quality.
General print quality issues	The printer is set at an incorrect print speed or darkness level. Keep in mind that the printer settings may be affected by the driver or software being used.	1. Clean the printhead and platen roller. 2. For optimal print quality, set the darkness to the lowest possible setting for your application. 3. Set the printhead pressure to the minimum needed for good print quality.

Angled Gray Lines on Blank Labels		
Issue	Possible Cause	Possible Solution (s)
Fine, angular gray lines on blank labels	Wrinkled ribbon	Verify the ribbon is loaded properly, smooth out ribbon
Missing Print		
Issue	Possible Cause	Possible Solution (s)
Long tracks of missing print on several labels	Print element damaged	Call for service
	Wrinkled ribbon	Verify the ribbon is loaded properly, smooth out ribbon

Machine Operation

Operation

Before attempting to operate the machine, read all information under Important [Safety Information](#), page 13 and [Controls](#), page 40.

1. Make sure machine is plugged into the properly grounded outlet and connected to clean dry air regulated to 80 psi. See [Air Pressure Regulator Adjustment](#), page 29.
2. Release the E-Stop Button. **Figure 76A.**
3. Turn on power switch at Power Entry Module. **Figure 76B.** On **CE** Models, the PEM is on the Step-Down Transformer, [See Appendix B.](#)
4. Push the green Power Pushbutton. **Figure 76A.**

NOTE: The machine will be in fault status until set temperature is achieved.

1. Load film material as illustrated in Web Threading Diagram on machine. See [Loading Bag Film](#), page 31.

NOTE: If an optional Box Power Unwind or Roll Power Unwind is installed, the Web Threading Diagram will be on the side of power unwind.

2. Load product into bag.
3. Press Foot Control or optional Dual Palm Buttons to initiate sealing cycle.

NOTE: To stop the machine for any reason, press the Emergency Stop Button. To completely remove all power from the machine turn off the Power Switch at Power Entry Module or remove Power Cord.

Technical Assistance

Assistance with your **Max Series bagger** can be obtained by contacting Pregis Technical Service Hotline by phone or e-mail. To help serve you better, Pregis requests that you provide the serial number of bagger and a brief description of the problem.

Phone: +1 800-634-6359

E-mail: sharpservice@pregis.com



Figure 76A. E-Stop & Power Pushbutton.

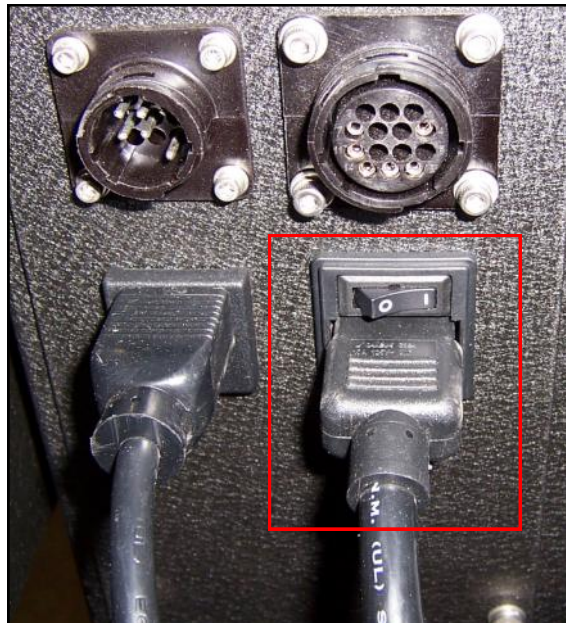


Figure 76B. Power Entry Module Switch.

Creating a Job

The following steps will create a job. The security level is medium for this procedure. To change security, See [Security Pass Codes](#), page 28.

1. From the Main Menu, press the Job Setup button.
2. From the Job Setup Screen, press the Green Plus (+) button. **Figure 77A.**

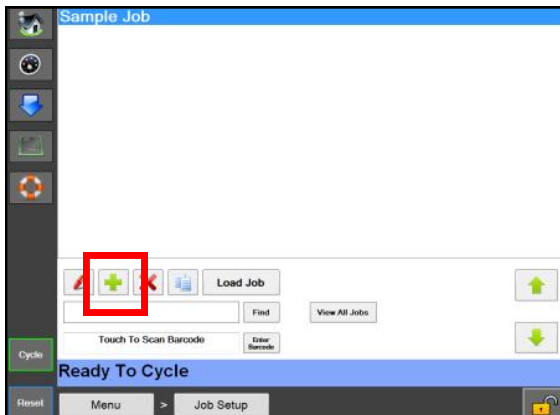


Figure 77A. Job Setup Screen.

3. Highlight the **New Job** in the Job Details Screen. **Figure 77B.**

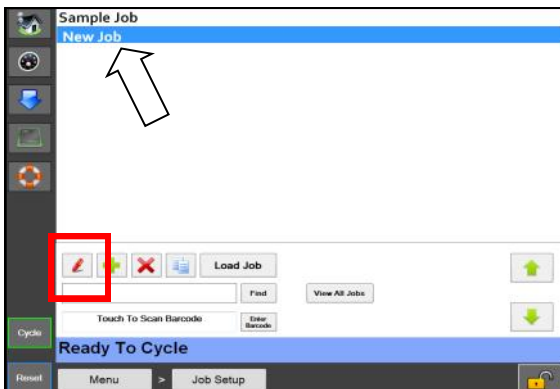


Figure 77B. New Job Listed.

4. Then press the Red Pen button. **Figure 77B.**
5. Rename job in Job Details Screen, then enter the appropriate information in each box.

6. Press the back button. **Figure 77C.**

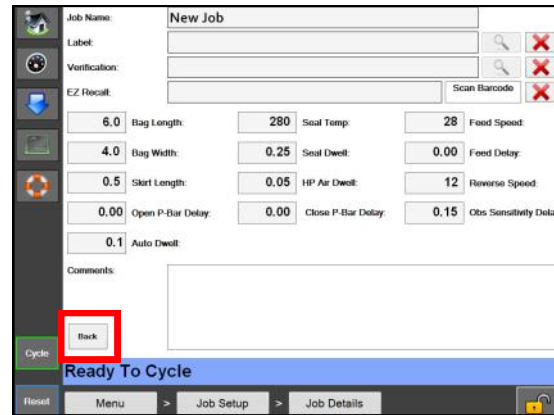


Figure 77C. Job Details Screen.

7. Press the Load Job Button. This will send the highlighted job to the PLC and send the label, if applicable, to the printer. **Figure 77D.**

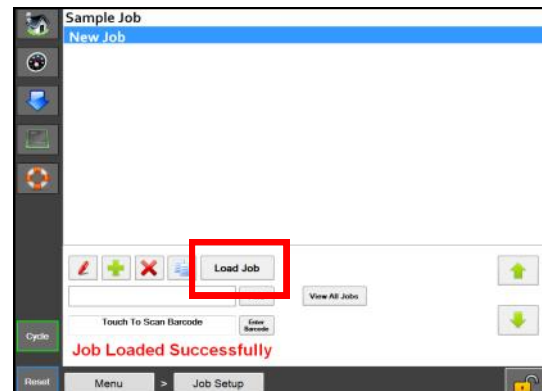


Figure 77D. Load Job Button.

NOTE: If temperature settings are +/- 10° from previously loaded job, a fault message will appear. The message will automatically resolve when temperature setting is reached.

Editing a Job

The following steps will edit a saved job. The security level is medium for this procedure. To change security, See [Security Pass Codes](#), page 28.

1. From the Main Menu, press the Job Setup button.
2. From the Job Setup Screen, highlight the job to be edited and press the Red Pencil button. **Figure 78A.**

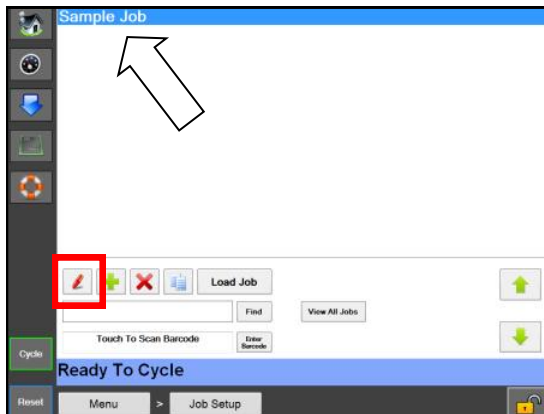


Figure 78A. Editing Job.

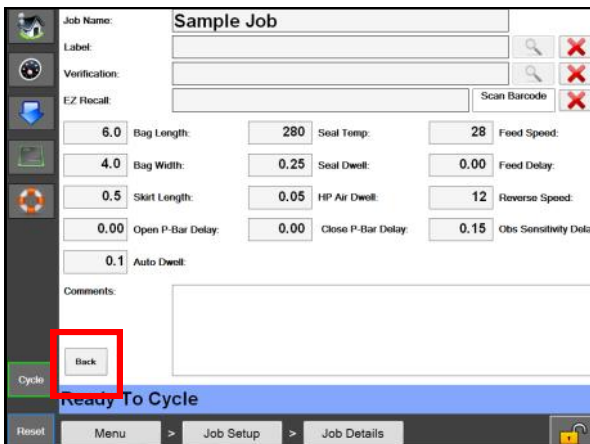


Figure 78B. Job Details Screen.

3. Edit the appropriate information in each box. **Figure 78B.**
4. Press the back button. **Figure 78B.**
5. Press the Load Job Button. This will send the highlighted job to the PLC and send the label, if applicable, to the printer. **Figure 78C.**

NOTE: If temperature settings are +/- 10° from previously loaded job, a fault message will appear. The message will automatically resolve when temperature setting is reached.

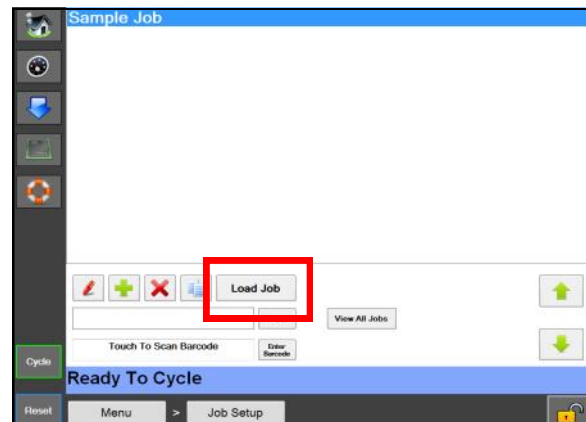


Figure 78C. Load Job Button.

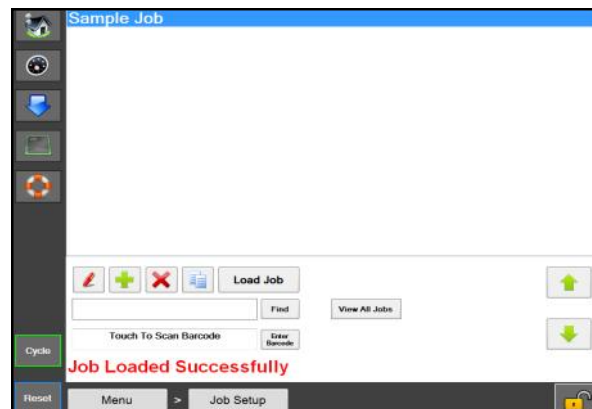


Figure 78D. Job Loaded Successfully Message.

Deleting a Job

The following steps will delete a saved job. The security level is medium for this procedure. To change security, See [Security Pass Codes](#), page 28.

1. From the Main Menu, press the Job Setup button.
2. From the Job Setup Screen, highlight the job to be deleted.
3. Press the Red "X" button. **Figure 79A.**
4. A pop-up window will appear asking if you are sure you want to delete job. If you are, press yes. If not, press no.

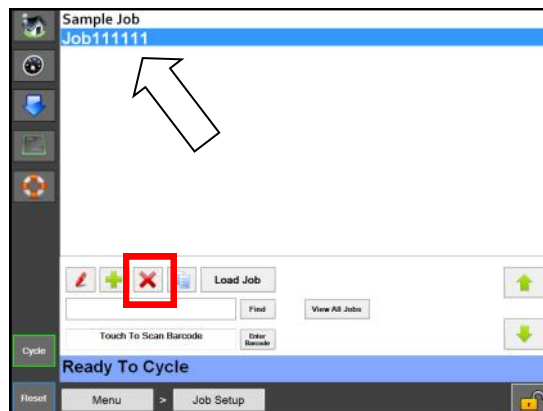
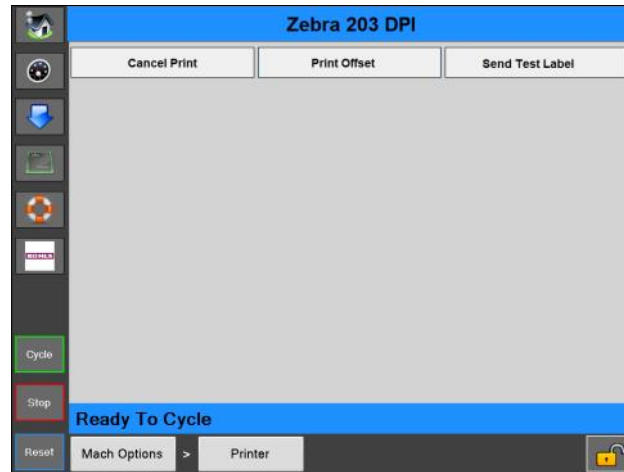


Figure 79A. Deleting Job.

Printing Test Label

1. On the Bagger HMI screen, navigate to Printer screen via the Options screen.



2. Press '**Send Test Label**'. 100 pre-determined test labels will be sent to printer.
3. Cycle bagger.
4. To clear labels, press '**Cancel Print**'.

Label Software

Codesoft 2019 Users:

- Reference Technical Bulletin 4000-0052 1143 & 1145 Codesoft 2019 Programming.

ZPL Users:

- Reference Technical Bulletin 4000-0051 Max (1143 & 1145) HMI - ZPL Labels.
- Reference Technical Bulletin 4000-0053R1 ZPL Template Specification

Cleaning

This machine requires regular, periodic cleaning to ensure reliable service. The Operator with a minimum of training can perform daily cleaning.

Regular cleaning is important for the proper operation and performance of the machine. During operation, there will be a normal build up of dirt, dust, and film residue on various parts of the machine.

Keep the areas directly adjacent to machine clean of debris as these can create safety hazards for the Operator and/or damage the machine.

	WARNING
DISCONNECT THE MAX™ 20 FROM ALL ELECTRICAL POWER SOURCE AND AIR HOSES FROM THE MACHINE PRIOR TO PERFORMING ANY MAINTENANCE ON MACHINE. UNEXPECTED START-UP CAN RESULT IN PERSONAL INJURY AND DAMAGE TO THE MACHINE.	
	WARNING
DO NOT SPRAY ANY ELECTRICAL COMPONENTS OF THIS MACHINE WITH ANY LIQUID AT ANY TIME. LIQUIDS CAN CAUSE ELECTRICAL SHORT CIRCUITS, DAMAGE COMPONENTS, AND PERSONAL INJURY.	
	WARNING
DO NOT ATTEMPT TO CLEAN THE MACHINE WHILE IT IS RUNNING. SPONGES AND CLEANING RAGS CAN BECOME FOULED IN THE CYCLING MOTION OF THE MACHINE AND CAUSE SERIOUS INJURY AS WELL AS DAMAGE THE MACHINE.	

No cleaning should be performed unless these safety precautions are thoroughly understood and are adhered to without exception.

Inspect the machine to determine if there has been an accumulation of dust or other contaminations. Clean if necessary.

- ALWAYS SHUT-OFF & UNPLUG machine power cord AND dump air supply before cleaning or removing any guards.
- Never defeat any safety device or interlock on the machine.

- DO NOT use steel wool on machine surfaces. Particles of steel wool may break off and cause rusting or contaminate lubricated surfaces.
- DO NOT allow wrenches, fittings or other metallic objects to lie on machine surfaces during operation.
- DO NOT use chlorine, ammonia, alkalis, acids, or cleaning solutions that will damage metallic machine surfaces, cause corrosion, or contaminate containers.

Severe Duty Applications

Some applications may require a more comprehensive maintenance procedure performed by a qualified Service Technician.

The applications, which may require the extra-ordinary maintenance, include, but are not limited to, extremely dusty or corrosive environments. Pregis recommends the use of a vacuum, compressed air or both to remove all foreign substances that may have accumulated on or inside the packaging machine.

It may be necessary to remove some or all of the guards and covers protecting the machine to access the areas in need of cleaning. Some disassembly of the sealer and film feed assemblies may also be necessary.

It is extremely important to follow all of the safety guidelines and warning detailed inside the Pregis Operator Manual before removing any guards or servicing the machine.

Maintenance

Weekly Maintenance

	WARNING! Read and understand the entire Operator Manual before attempting any advanced maintenance procedures on this machine. Failure to follow these maintenance instructions can result in serious injury or death.
WARNING!	
THIS MACHINE IS EQUIPPED WITH A COATED SEALER BAR. DO NOT SCRUB OR SCRAPE WITH METALLIC OBJECTS OR WIRE BRUSHES. THE COATING WILL BE DAMAGED AND THE BAGS WILL STICK TO THE HEATER BAR.	
WARNING!	
AVOID HOT SURFACES. DO NOT SERVICE THE MACHINE UNTIL THE HEATED SURFACES HAVE COOLED AFTER DISCONNECTING POWER.	

- Inspect the rubber Driver Roller. Clean as needed. Use a lint free cloth and isopropyl alcohol to scrub all debris from the surface of roller.
- Inspect the aluminum Pinch Roller. Clean as needed. Clean with a lint free cloth and isopropyl alcohol to scrub all debris from the surface of the roller.
- Verify the Driver Roller Assembly moves freely with power removed.
- Inspect and clean the Seal Bar. Extend the Seal Bar by using the **Extend Seal Bar** button located on the [Service Screen](#), page 68.
 - **NOTE: The machine must be at normal operating temperature for best results. Care must be taken to avoid scratching the surface of the Seal Bar. Use the supplied cleaning tool for best results. Remember to retract the Seal Bar when finished.**
- Inspect the Electric Eye. Clean with a cotton swab if dirty. Do not use any solvents or cleaning solutions on the sensing portions of the Electric Eye.

- Inspect the Teflon® Tape that covers the Pressure Bar Anvil Rubber and replace is worn or damaged.

Monthly Maintenance

- All of Weekly maintenance.
- Inspect the Air Filter for debris and replace as necessary.
- Inspect all external wiring for loose connections and wear. Tighten any loose connections and replace any worn cables.

Semi-Annual Maintenance

- All of Weekly and Monthly maintenance.
- Inspect the Linear Guide Bearings located on the Pressure Bar Guide Shafts for wear and replace.
- Inspect the Linear Guide Bearings located on the Sealer Assembly Guide Shafts for wear. Replace as necessary.

Annual Maintenance

- All of Weekly, Monthly, and Semi-Annual maintenance.
- Inspect entire machine for loose hardware.
- Inspect all air lines for any sign of wear or damage. Replace any lines that appear worn or damaged.
- Inspect all wires and cables for any sign of wear, damage, or loose connections. Tighten any loose connections and replace anything that appears worn or damaged.
- Inspect all Drive Belts for wear and proper tension. Replace any belts that appear to be worn or damage.

Fault & Alert Management

Fault	Cause	Solution
Printer Offline	Printer Option is turned on, but the printer is faulted or offline	Go to Printer HMI Screen for detailed information.
Barcode Fault	Consecutive Bad Read Counter = Barcode Fault Setting.	There is a problem with the Barcode Scanner. The taught label is not the same as the printed label or the print quality of the label is poor and cannot be read.
Master Control Relay Failed to Open	Master Control Relay contact is welded in the closed position after the E-Stop button was pressed.	Master Control Relay should be inspected and/or replaced by a qualified service technician.
Light Curtain Violation	Safety Light Curtain was broken while the bagger was in cycle.	Operators must wait until the bagger cycle is completed before loading parts.
Zebra Ribbon Fault	Broken or missing printer ribbon on printer. The Ribbon Motion Sensor did not register any rotation of the Rewind Roll during a print cycle.	Replace or repair ribbon.
Model Select R1 Missing	The electronic circuit for model detection did not find the R1 resistor in the circuit or the circuit is open.	Power down the system and power back up. Contact Pregis Packaging Service Department.
Model Selection Failed	The model selection cycle did not function on power-up. The bagger does not know what model is selected.	Power down the system and power back up. Contact Pregis Packaging Service Department.
Excessive Parts Counted	The Actual Number of parts loaded into the open bag exceeded the Target Count.	The Filling Device is delivering parts after the "Ready for Filler" switched off, or the filling device delivered multiple parts in a single charge and those parts were counted by the counting device, i.e. Light Curtain, Photo eye, etc.
Vacuum Cylinder Failed to Extend	The commanded motion did not complete before the fault time expired.	See Cylinder Motion Fault.
Vacuum Cylinder Failed to Retract	The commanded motion did not complete before the fault timer expired.	See Cylinder Motion Fault.

Fault	Cause	Solution
Vacuum Cylinder Sensor Conflict	The cylinder position sensors are providing conflicting position status.	See Sensor Conflict Fault.
Master Control Relay is Off	E-Stop Button was pressed or E-Stop is released but the green Power Button has not been pressed.	Release the E-Stop and press the green Power Button.
Funnel Door Did Not Open	The commanded motion did not complete before the fault time expired.	See Cylinder Motion Fault.
Funnel Door Did Not Close	The commanded motion did not complete before the fault time expired.	See Cylinder Motion Fault.
Funnel Open/Close Conflict	The cylinder position sensors are providing conflicting position status.	See Sensor Conflict Fault.
Funnel Door Did Not Lower	The commanded motion did not complete before the fault time expired.	See Cylinder Motion Fault.
Funnel Door Did Not Raise	The commanded motion did not complete before the fault time expired.	See Cylinder Motion Fault.
Funnel Raise/Lower Sensor Conflict	The cylinder position sensors are providing conflicting position status.	See Sensor Conflict Fault.
Pressure Bar Failed to Open	The commanded motion did not complete before the fault time expired.	See Cylinder Motion Fault.
Pressure Bar Failed to Close	The commanded motion did not complete before the fault time expired.	See Cylinder Motion Fault.
Pressure Bar Sensor Conflict	The commanded motion did not complete before the fault time expired.	See Sensor Conflict Fault.

Fault	Cause	Solution
Pressure Bar Obstruction	The Pressure Bar attempted to close, but was blocked by an obstruction.	This is usually a part that did not drop past the Pressure Bar. Increase the Filler Drop Timer setting.
Seal Bar Failed To Close	The commanded motion did not complete before the fault time expired.	See Cylinder Motion Fault.
Accumulating Funnel Did Not Open	The commanded motion did not complete before the fault time expired.	See Cylinder Motion Fault.
Accumulating Funnel Did Not Close	The commanded motion did not complete before the fault time expired.	See Cylinder Motion Fault.
Accumulating Funnel Open/Close Sensor Conflict.	The cylinder position sensors are providing conflicting position status.	See Sensor Conflict Fault.
Reverse Fault	The Bag Edge Photo-Eye did not detect the trailing edge of the film as the web was backing up.	Check that the Photo-Eye is not falsely sensing the Funnel Door. It should only turn on when it sees the film in front of it. It should turn off just as the trailing edge of the film unblocks the eye. Clean the Photo-Eye lens with a soft cloth.
No Bag Covering The Eye	There is no film in the machine or the film is not being detected by the Bag Edge Photo-Eye.	Press the Job Button once and the bagger will jog the web for 10 seconds until the Photo-Eye is covered by film.
Seal Bar Over Temp.	The actual Seal Bar temperature is 10 or more degrees below the Set Point.	If the temperature Set Point was just lowered, wait for Seal Bar Temperature to cool down. If the Over Temp. Fault occurred when no change was made to the Set Point, there may be a failure in the Temperature Control System. Press the E-Stop button if the temperature continues to rise. A qualified service technician must troubleshoot the circuits.

Fault	Cause	Solution
Seal Bar Under Temp.	The actual Seal Bar temperature is more than 10 degrees below the Set Point.	If the temperature Set Point was just raised, wait for Seal Bar Temperature to heat up. If the Under Temp. Fault occurred when no change was made to the Set Point, there any be a failure in the Temperature Control System. Press the E-Stop button if the temperature continues to fall. A qualified service technician must troubleshoot the circuits.
Thermocouple Failed - Open Circuit	The Seal Bar actual temperature display reads 32 degrees. The Thermocouple circuit is open and is not being read by the Thermocouple/Voltage Transducer or the PLC Analog input.	A qualified service person should test the Thermocouple and its associated circuits.
Dancer at Upper Limit	The Unwind Dancer made the Upper Limit Switch during the Film Feed.	The Unwind Speed Setting is too low for the Film Feed Speed Setting. Lower the Film Speed Setting or increase the Unwind Speed.
Out Of Bags	The bagger detected that the web is broken or the bagger is out of bags.	Splice the broken web or replace the empty roll/box.
Stepper Drive Faulted	The Film Stepper Drive is reporting a fault condition.	Reset the fault. If it does not clear, power down the bagger for 2 minutes and power back up. If fault does not clear, a qualified service person must diagnose the problem.
Opened Bag Was Removed	A bag was opened and verified as open by the Bag Open Sensor. The opened bag was physically removed or came off the Bag Opened Sensor before the Filler could finish delivering its product.	Check that the Funnel door is pinning the opened bag to the Pressure Bar. Verify that the bag is properly supported by the Load Shelf as it is being filled. It may be that as the bag is being filled, it shifts or slips off the shelf and pulls the bag away from the Funnel.
Bag Failed To Open	The Bag Opened Sensor failed to make as the Funnel Door was attempting to open the bag.	This fault is usually the result of a bag quality problem or a problem with the Funnel Door/Pressure Bar Pass Through Adjustment. Also check that the Sensor operates correctly.

Fault	Cause	Solution
Print Label Failed To Load	A label was sent to printer but did not load correctly.	This fault should clear if the label is sent again and loads correctly. The fault can also be reset by turning off the printer option.
Temp. Transducer Failed	The Seal Bar actual temperature display reads 616 degrees or higher.	A qualified service person should test the Thermocouple to Voltage Transducer and its associated circuits.
Cylinder Motion Fault	1. Check the compressed air supply to machine is 80 PSI Clean & Dry. 2. Check for a kinked or disconnected air line to the cylinder. 3. Check for mechanical interference or binding in the cylinder motion. 4. Check the Cylinder Position Sensor operation. Verify that the correct sensor is ON when the cylinder is fully extended or retracted. Verify that the matching PLC input is ON when the sensor is ON. 5. Check that the Solenoid Valve energizes when the designated PLC Output switches ON. 6. Check that the Flow Controls are not misadjusted and causing a lazy or excessively slow cylinder motion.	
Sensor Conflict Fault	1. The PLC has detected that both Cylinder Position Sensors were on at the same time (Conflict - a cylinder can not be both extended and retracted at the same time). One of the sensors has failed in the ON condition (short circuit). Replace the defective sensor. 2. An unknown magnetic or ferrous object is within sensing range of the sensor and causing unintended switching of the sensor. Remove the foreign object and retest circuit.	
Print Length Too Long	The Print Length setting must be less than the Bag Length Setting	Adjust the Print Length to be less than the Bag Length.
Excessive Length for Consecutive Bags	The Bag Length Setting multiplied by the Consecutive Bags setting may not exceed 50 inches total.	Lower the number of consecutive bags until the fault clears itself.

Fault	Cause	Solution
Batch Count Is Completed	The Batch Counter actual value has reached the Target Count. This alert will not interrupt the bagger cycle, but subsequent cycles are not possible until the Alert has been reset.	Batch is done. Reset and bagger is free to cycle again.
Factory Setting Saved	The current bagger settings and options have been backed up to the PLC Data Table.	This is simply an alert to let the user know that the settings have been successfully saved. The message can be cleared by pressing the Reset button, or it will automatically clear on the next bagger cycle.
Waiting For Filler	The bagger has signaled the Filler machine that it is read to accept produce and is waiting for the Filler to trigger the next bagger cycle.	Filler must complete the delivery of product and turn on the Filler Trigger Input.
Recovery Mode Bag Open Retry	The bagger Funnel Door is cycling and retrying to open the original bag.	No action is required.
Recovery Mode Feeding New Bag	The bagger is feeding out a replacement bag. It could not open the original bag.	No action is required.
Cycle Bagger To Activate Filler	The bagger is in Filler Mode. The operator must cycle out the first bag to activate the Filler cycle.	Cycle Start is required by operator. This can be done from the HMI, Foot Switch, etc.
Bag Is Filled	A bag has been filled and sealed in Filler Mode.	No action is required.

Fault	Cause	Solution
Infeed Conveyor Out Of Parts	Applies when equipped with an EZ-Feed Integrated Conveyor. The conveyor was running in Parts Counting Mode and not parts are being counted at the Parts Counting Light Curtain. The conveyor is either empty or there is a problem with the Part Counting device.	Load parts on the conveyor belt and the Cycle Start device. Conveyor should resume running to count parts.
E-Stop Button Pressed	The E-Stop button is pressed.	Twist to release the E-Stop.
Service Mode Testing Model Selection	Service Personnel are testing the Model Selection Circuits. No cycle is possible.	Service person should cancel this function when finished with testing.
Low Pressure Air Timed Out	Low Pressure Air Timed Out	No intervention required by operator.
Machine Not Tested	The bagger has not passed the QA test of 1000 cycles without a fault.	Bagger should be run for 1000 continuous cycles without a fault to clear alert.
Waiting For Printer	The bagger requested a print form the printer, but the printer has not responded with "Printer Busy".	Printer is either not printing or there is a signaling problem between the PLC and the printer.
Factory Settings Loaded	The settings stored in the PLC have been recalled by the user.	This is simply an alert to let the user know that the setting have been successfully reloaded.

Appendix

Terms & Condition

Pregis®

1. ACCEPTANCE AND TERMS AND CONDITIONS:

Seller may accept this Order and any amendments by signing the acceptance copy of the Order and returning it to Purchaser promptly. Even without such written acknowledgment, Seller's full or partial performance under this Order will constitute acceptance of these Terms. By acceptance of this Order, Seller agrees to be bound by, and to comply with all these Terms, which include any supplements to it, and all specifications and other documents referred to in this Order. These Terms apply to everything listed in this Order and constitute Purchaser's offer to Seller, which Purchaser may revoke at any time prior to Seller's acceptance. This Order is not an acceptance by Purchaser of any offer to sell, any quotation, or any proposal. Reference in this Order to any such offer to sell, quotation, or proposal will not constitute a modification of any of these Terms. Terms and conditions different from or in addition to these Terms, whether contained in any acknowledgment of this Order, or with delivery of any goods or services under this Order, or otherwise, will not be binding on Purchaser, whether or not they would materially alter this Order, and Purchaser hereby rejects them. These Terms may be modified only by a written document signed by duly authorized representatives of Purchaser and Seller.

2. DEFAULT:

Time is of the essence of this Order. Purchaser may by written notice of default to Seller (a) terminate all or any part of this Order if Seller fails to perform, or so fails to make progress as to endanger performance of this Order in accordance with its terms, and does not cure such failure within a period of ten (10) days (or such longer period as Purchaser may authorize in writing) after receipt of notice from Purchaser specifying such failure; and (b) procure, on such terms as it will deem appropriate, goods or services similar to those so terminated. Seller will continue performance of this Order to the extent not terminated and will be liable to Purchaser for any excess costs for such similar goods or services. As an alternate remedy, and in lieu of termination for default, Purchaser, at its sole discretion, may elect to extend the delivery schedule and/or waive other deficiencies in Seller's performance, in which case an equitable reduction in the Order price will be negotiated. If Seller for any reason anticipates difficulty in complying with the required delivery date, or in meeting any of the other requirements of this Order, Seller will promptly notify Purchaser in writing. If Seller does not comply with Purchaser's delivery schedule, Purchaser may require delivery by fastest way and charges resulting from the premium transportation must be fully prepaid and absorbed by Seller. The rights and remedies of Purchaser provided in this Section 2 will not be exclusive and are in addition to any other rights and remedies provided by the Uniform Commercial Code, by law, at equity or under this Order.

3. PRICE:

This Order must not be filled at a price higher than shown on the face of the Order. If no price is set forth on the front of the Order, the goods or services will be billed at the price last quoted or at the prevailing market price, whichever is lower, and, in any event, goods and services ordered under this Order will not be billed at a higher price than last quoted or charged without Purchaser's specific written authorization. Purchaser will be entitled at all times to set off any amount owed at any time by Seller or any of its affiliates to Purchaser or any of its affiliates against any amount payable at any time by Purchaser in connection with this Order. No extra charges of any kind will be allowed unless specifically agreed to in writing by the Purchaser. All applicable taxes arising out of transactions contemplated by the Order will be borne by Seller except as otherwise specified by the parties in writing. If Seller reduces its prices for such goods and/or services during the term of this Order, Seller shall correspondingly reduce the prices of goods and/or services sold thereafter to Purchaser under this Order.

4. INVOICES, PAYMENT, AND TAXES:

- (a) Invoices shall be rendered on completion of services or delivery of goods and shall contain the Purchase Order Number, item number, description of goods or services, quantities, unit prices, date(s) rendered and total purchase price. Each invoice must refer to one, and only one, purchase order.
- (b) Invoices for contingent workers must contain all of the above where applicable and include a copy of the AAMC's time tracking document for each contingent worker for the time period being billed.
- (c) Payment shall be made on the terms of 2% 10 days, net 60 days from the date of invoice. Cash discount periods shall be computed from either the date of actual delivery of the goods or the date an acceptable invoice is received, whichever is later. All claims for money due or to become due from Purchaser shall be subject to deduction by Purchaser for any setoff or counterclaim arising out of this or any other of Purchaser's Orders with Seller.

5. PACKAGING:

All goods must be packaged in the manner specified by Purchaser and shipped in the manner and by the route and carrier designated by Purchaser. If Purchaser does not specify the manner in which the goods must be packaged, Seller shall package the goods so as to avoid any damage in transit. If Purchaser does not specify the manner of shipment, route, or carrier, Seller shall ship the goods at the lowest possible transportation rates, consistent with Seller's obligation to meet the delivery schedule set forth in this Order.

6. INSPECTION:

All goods and services will be subject to inspection and test by Purchaser at all times and places, including the period of manufacture and in any event prior to final acceptance. Final acceptance or rejection of the goods or services will be made as promptly as practical after delivery except as otherwise provided in this Order, but failure to inspect and accept or reject goods or services or failure to detect defects by inspection, will neither relieve Seller from responsibility for such goods or services as are not in accordance with this Order nor impose liabilities on Purchaser for them. Purchaser's payment for the goods shall not constitute its acceptance of the goods. Goods rejected and goods supplied in excess of quantities ordered may be returned to the Seller at Seller's expense. Payment, if any, made for any goods rejected hereunder shall be promptly refunded by Seller. Seller will provide and maintain an inspection and process control system acceptable to Purchaser covering the goods and services ordered. Records of all inspection work by Seller will be kept complete and available to Purchaser during the performance of this Order and for seven (7) years after Seller's completion of this Order. If any of the goods or services are found at any time to be defective in material or workmanship, or otherwise not in conformity with the requirements of this Order, including any applicable drawings and specifications, then Purchaser, in addition to such other rights and remedies it may have by contract or by law or equity, at its sole discretion may reject and return such goods at Seller's expense, require Seller to inspect the goods and remove nonconforming goods and/or require Seller to replace nonconforming goods or services with conforming goods or services. If Seller fails to make the necessary inspection, removal, and replacement in a time and manner satisfactory to Purchaser, Purchaser may at its option inspect and sort the goods; Seller will pay any related costs.

7. WARRANTIES:

Seller represents and warrants that (a) all goods and services are free of any claim of any nature by any third person and that Seller will convey clear title to Purchaser, (b) all services are performed in a manner acceptable in the industry and in accordance with generally accepted standards, are free from all defects, are fit for the particular purposes for which they are acquired, and are provided in strict accordance with the specifications or other requirements (including performance specifications) approved or adopted by Purchaser, (c) all goods sold will be of merchantable quality, free from all defects in design, workmanship and materials, and fit for the particular purposes for which they are purchased and that the goods and services are provided in strict accordance with the specifications, samples, drawings, designs or other requirements (including performance specifications) approved or adopted by Purchaser, (d) the prices for the goods or services sold to Purchaser under this Order are not less favorable than those currently extended to any other customer for the same or similar goods and/or services in equal or lesser quantities, and (e) Seller shall not act in any fashion or take any action that will render Purchaser liable for a violation of any applicable anti-bribery legislation (including without limitation, the U.S. Foreign Corrupt Practices Act and the U.K. Bribery Act 2010), which prohibits the offering, giving, or promising to offer or give or receiving, directly or indirectly, money or anything of value to any third party to assist it, them or Purchaser in retaining or obtaining business or in procuring the goods or services. Purchaser's inspection, test, acceptance, or use of the goods shall not affect Seller's obligations under these warranties. Seller shall replace or correct, at Purchaser's option and at Seller's cost, defects of any goods not conforming to these warranties. If Seller fails to correct defects in or replace nonconforming goods within ten (10) days from the date the Purchaser notifies Seller of the defect or defects, Purchaser may, on ten (10) days prior written notice to Seller, either (i) make such corrections or replace such goods and charge Seller for all costs incurred by Purchaser, or (ii) revoke its acceptance of the goods in which event Seller shall be obligated to refund the purchase price and make all necessary arrangements, at Seller's cost, for the return of the goods to Seller. All warranties of Seller herein or that are implied by law shall survive any inspection, delivery, acceptance, or payment by Purchaser. Any attempt by Seller to limit, disclaim, or restrict these warranties or any remedies of Purchaser, by acknowledgment or otherwise, in accepting or performing this Order, will be null, void, and ineffective without Purchaser's written consent.

8. INDEMNIFICATION:

Seller shall indemnify and hold Purchaser and its affiliates harmless and, on Purchaser's request, shall defend each of them from and against any or all third party claims, demands, litigation, or proceedings of whatever kind, whether based upon negligence, breach of express or implied warranty, strict liability, infringement of intellectual property rights, or any other theory, and from and against all direct, indirect,

special, exemplary, incidental or consequential damages of every kind whatsoever, arising out of, by reason of, or in any way connected with the goods and/or services, the design, manner of preparation, manufacture, construction, completion, or delivery or non-delivery of any goods and/or services by Seller, any breach by Seller of any of its obligations hereunder, or any other act, omission or negligence of Seller or any of Seller's employees, workers, servants, agents, subcontractors, or suppliers. Seller shall, on request, pay or reimburse Purchaser or any other party entitled to indemnification hereunder for all costs and expenses, including attorneys' fees, as incurred by Purchaser or such other party in connection with any such claim, demand, litigation, proceeding, loss, or damage. In addition, for infringement claims, Seller will, at its own expense and at Purchaser's option, either procure for Purchaser the right to continue using the allegedly infringing item, replace it with a non-infringing equivalent, or remove it and refund the purchase price and the transportation and installation costs thereof.

9. LIMITATION OF LIABILITY:

PURCHASER'S AGGREGATE LIABILITY ARISING FROM OR RELATING TO THIS ORDER IS LIMITED TO THE AMOUNT PAID BY PURCHASER FOR THE GOODS AND/OR SERVICES. TO THE MAXIMUM EXTENT ALLOWABLE UNDER APPLICABLE LAW, PURCHASER SHALL NOT BE LIABLE UNDER THIS ORDER FOR ANY SPECIAL, INCIDENTAL, CONSEQUENTIAL, INDIRECT, OR PUNITIVE DAMAGES INCLUDING, WITHOUT LIMITATION, LOST REVENUES EVEN IF PURCHASER HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

10. PURCHASER'S PROPERTY:

Tangible or intangible property of any nature furnished to Seller by Purchaser or specifically paid for in whole or in part by Purchaser, and any replacements or attachments, are the property of Purchaser and, unless otherwise agreed in writing by Purchaser, will be used by Seller solely to render services or provide goods to Purchaser. Seller will not substitute any property or take any action inconsistent with Purchaser's ownership of such property. While in Seller's custody or control such property will be held at Seller's risk, will be kept insured by Seller at its expense for its replacement cost with loss payable to Purchaser, and will be subject to removal at Purchaser's written request, in which event Seller will prepare such property for shipment and redelivery to Purchaser in the same condition as originally received by Seller, reasonable wear and tear excepted, all at Seller's expense.

11. CHANGES:

At all times Purchaser will have the right to make changes to this Order, including changes to drawings, designs, configurations, specifications, quantities, methods of shipment or packing and delivery schedules or location of delivery. If any such changes cause an increase or decrease in the cost of or the time required for the performance of any work under this Order, an equitable adjustment will be made in the contract price or delivery schedule, or both, and this Order will be modified in writing accordingly. Nothing in this Section, including any disagreement with Purchaser as to any claimed adjustment, will excuse Seller from proceeding with this Order as changed. Any claim by the Seller for adjustment under this Section 11 must be in a detailed writing and delivered to Purchaser within five (5) days after the date Seller receives notification of change. Any change will be authorized only by a duly executed amendment to this Order. Information, such as technical information or guidance provided to Seller by representatives of Purchaser, will not be construed as a change within the meaning of this Section. If Seller considers that the conduct of any of Purchaser's employees has constituted a change under this Order, Seller will immediately notify Purchaser in writing, as to the nature of the change and any proposed adjustment, which will then be subject to this Section 11.

12. COMPLIANCE WITH LAWS:

Seller represents and warrants that it is in compliance with and all goods and/or services supplied hereunder have been produced or provided in compliance with the applicable provisions of all federal, state, or local laws or ordinances and all related lawful orders, rules and regulations. Seller shall comply with any provisions, representations, or agreements or contractual clauses required to be included or incorporated by reference or operation of law in any Order. Seller shall be required to obtain and pay for any license, permit, inspection or listing by any public body or certification organization required in connection with the manufacture, performance, completion or delivery of any good and/or service.

13. CONFIDENTIAL OR PROPRIETARY INFORMATION:

Notwithstanding any document marking to the contrary, any knowledge or information that the Seller has disclosed or may later disclose to Purchaser, and which in any way relates to the goods or services covered by this Order will not, unless otherwise specifically agreed to in writing by Purchaser, be deemed to be confidential or proprietary information, and will be acquired by Purchaser, free from any restrictions. Seller will not transmit to Purchaser any sensitive personal information, including, but not limited to, identified health information, financial information, social security numbers, biometrics or other personally identified or identifiable information of like sensitivity. Seller will keep confidential any

technical, process, economic, or other information derived from drawings, specifications and other data furnished by Purchaser in connection with this Order (in whatever form or format) and will not divulge, export, or use, directly or indirectly, such information for the benefit of any other party without obtaining Purchaser's prior written consent. Except as required for the efficient performance of this Order, Seller will not use such information or make copies or permit copies to be made of such drawings, specifications, or other data without the prior written consent of Purchaser. If any reproduction is made with prior consent, this notice will be provided. Upon completion or termination of this Order, Seller will promptly return to Purchaser all materials incorporating any such information and any copies, except for one record copy. Seller agrees that no acknowledgment or other information concerning this Order and the goods or services provided will be made public by Seller without the prior written agreement of Purchaser.

14. WORK ON PURCHASER'S PREMISES:

If Seller's work under this Order requires Seller to be on the premises of Purchaser or at Purchaser's direction, Seller will take all necessary precautions to prevent any injury to persons or damage to property, including following any rules, procedures or other requirements of Purchaser.

15. INSURANCE:

Seller will maintain Comprehensive General Liability (including Contractual Liability coverage insuring the liabilities assumed in these Terms), Automobile Liability and Employers' Liability insurance with limits as reasonably required by Purchaser, as well as appropriate Workers' Compensation insurance as will protect Seller from all claims under any applicable workers' compensation and occupational disease acts. At Purchaser's request, Seller will furnish to Purchaser a Certificate of Insurance completed by its insurance carrier(s) certifying that the required insurance coverage is in effect, with waiver of subrogation, naming Purchaser as an additional insured, and containing a covenant that such coverage and will not be canceled or materially changed until ten (10) days after prior written notice has been delivered to the Purchaser.

16. TERMINATION:

Purchaser may terminate all or any part of this Order for convenience at any time by written notice to Seller. Upon such termination, Purchaser's liability will be limited to reasonable termination charges mutually agreed by Seller and Purchaser, provided that Seller must specify any proposed charges in writing within fifteen (15) days after termination. This Order shall terminate automatically, without notice, if Seller becomes insolvent or the subject of any proceeding under the laws relating to bankruptcy or the relief of debtors.

17. GOVERNMENT CONTRACTS:

If this Order bears a government contract number on the face of this Order, Seller shall comply with all pertinent provisions of said government contract and pertinent executive orders and directives to the extent that they apply to the subject matter of this Order and all such pertinent contract provisions, orders and directives are hereby incorporated by reference into this Order. A copy of the government contract's pertinent terms and conditions will be given to Seller on request.

18. MISCELLANEOUS:

(a) NON-ASSIGNMENT: Assignment of this Order or any interest in it or any payment due or to become due under it, without the written consent of the Purchaser, will be void. An assignment will be deemed to include not only a transfer of this Order or such interest or payment to another party but also a change in control of Seller, whether by transfer of stock or assets, merger, consolidation, or otherwise.

(b) TRANSPORTATION: All the prices are established as F.O.B. Seller and/or Origin Dock, Freight Prepaid, unless otherwise specifically provided on the front of this Order. Title and risk of loss shall not pass to Purchaser until delivery of the goods to the location designated on the face of this Order and acceptance by Purchaser. If Purchaser rightfully rejects the goods, receives a non-conforming tender, or revokes its acceptance, risk of loss and title shall be deemed to have remained with Seller. The responsibility for freight damaged merchandise will be assumed by Seller. No charges for unauthorized transportation will be allowed. Any unauthorized shipment, which will result in excess transportation charges, must be fully prepaid by the Seller. Seller will not declare any value on such materials shipped via United Parcel Service, Rail Express, Air Express, Air Freight or Parcel Post. Seller will release rail or truck shipments at the lowest released valuation permitted in the governing tariff or classification.

(c) ANTICIPATION OF DELIVERY SCHEDULE: Unless otherwise agreed in writing, Seller will not make material commitments or production arrangements in excess of the amount or in advance of the time necessary to meet Purchaser's delivery schedule. Goods shipped to Purchaser in advance of schedule may be returned to Seller at Seller's expense.

(d) **SELLER'S INVENTORY:** Purchaser will have no obligation to request quotations or place Orders with Seller, both of which will be in Purchaser's sole discretion. Purchaser acting in its sole discretion will determine the actual quantity of goods or services to be purchased. The quantity of goods or services, if any, specified in forecasts supplied by Purchaser from time to time, or otherwise, is an estimate only. Seller bears sole responsibility for managing Seller's raw material, work in process, and inventory, and Purchaser will have no liability with respect thereto (whether upon termination of this Order or otherwise) other than in connection with termination as provided in Section 16.

(e) **FORCE MAJEURE:** Purchaser may delay delivery and/or acceptance occasioned by causes beyond its control.

(f) **REMEDIES:** Each of the rights and remedies reserved to Purchaser in this Order shall be cumulative and additional to any other remedies provided in law or equity. No delay or failure by Purchaser in the exercise of any right or remedy shall affect any such right or remedy and no action taken or omitted by Purchaser shall be deemed to be a waiver of any such right or remedy.

(g) **PUBLICITY:** Seller will not use Purchaser's name or logo in publicity, advertising, or similar activity, except with Purchaser's prior written consent. Seller will not disclose the existence of this Order or any of its respective terms to any third party without Purchaser's prior written consent.

(h) **DOCUMENTATION:** It is agreed that all technical documentation and other literature necessary for the proper use of the goods or services will be provided to Purchaser with the goods or services, unless otherwise directed by Purchaser, and its cost is included in the price.

(i) **GOVERNING LAW:** This Order, these Terms, and all related transactions, will be interpreted under and governed by the laws of the United States of America.

(j) **DISPUTE RESOLUTION:** Disputes arising under this Agreement will be resolved by the parties through good faith negotiations in the ordinary course of business. Any dispute not so resolved will be submitted for binding arbitration, at the written request of either party, before an arbitrator. Selection of the arbitrator will be by mutual agreement of the parties. The amount and responsibility for payment of arbitration costs will be one of the issues decided by the arbitrator, whose decision will be in accordance with the terms and conditions of this Agreement. No damages excluded by or in excess of the damage limitations set forth in this Agreement shall be awarded. During any such arbitration, the parties will continue diligent performance of this Agreement. The arbitrator will render a written decision stating reasons therefore in reasonable detail within ninety (90) days after the respondent receives the Commencement Letter. The provisions of this section, and any award issued by an arbitrator, may be enforced by either party in any court of competent jurisdiction. Arbitration is the exclusive remedy for disputes arising under this Agreement; the parties hereby waive their rights to bring a lawsuit to resolve a dispute arising under this Agreement.

(k) **SURVIVAL:** Seller's obligations under Sections 6, 7, 8, 9, 10, 12, 13, and 18 (f), (i), (j), (k), (l), (o), and (q) will survive any termination of this Order.

(l) **WAIVER; MODIFICATION:** No claim or right arising out of a breach of this Order can be discharged in whole or in part by a waiver or renunciation of the claim or right unless supported by consideration and in a writing signed by the aggrieved party. The failure of Purchaser to enforce at any time or for any period of time any of the provisions hereof will not be construed to be a waiver of such provisions or of the right of Purchaser thereafter to enforce each and every such provision. This Order can be modified or rescinded only by a writing signed by authorized representatives from both parties.

(m) **NOTICES:** All notices, consents, waivers, and other communications required or permitted to be given pursuant to this Order, shall be in writing and shall be deemed to have been delivered either (i) on the delivery date, if personally delivered, or if delivered by confirmed facsimile or e-mail, (ii) one (1) business day after delivery to any national overnight courier directing delivery on the next business day, receipt requested, or (iii) three (3) business days after deposit in the United States mail, registered or certified mail, return receipt requested, with adequate postage affixed thereto.

(n) **SEVERABILITY:** If any provision of this Order shall be held or deemed to be or shall, in fact, be illegal, inoperative or unenforceable, this provision shall not affect any other provision or provisions contained in this Order.

(o) **PARAGRAPH TITLES:** The paragraph titles are solely for convenience of reference and shall not affect the meaning or construction of any provision of this Order.

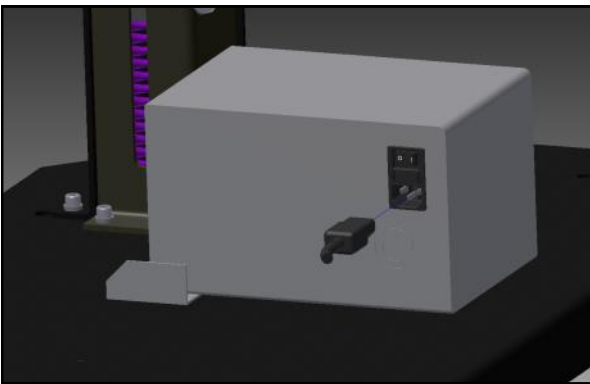
(p) **ENTIRE AGREEMENT:** Provided that there is no written agreement, duly executed by both parties, applying to the transaction, this Order, with such documents as are expressly incorporated by reference, is intended by the parties as a final expression of their agreement with respect to such terms as are included in it, and is intended also as a complete and exclusive statement of the terms of their agreement. No course of prior dealings between the parties and no usage of the trade will be relevant to determine the meaning of this agreement even though the accepting or acquiescing party has knowledge of the nature of the performance and opportunity for objection.

Power Up Procedure—CE Models

Complete Power Procedure

	WARNING! Read and understand the entire Operator Manual before attempting any procedures on this machine. Failure to follow these instructions can result in serious injury.
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1. Connect Power Cord to the 230V Power Entry Module.



2. Turn switch to the ON position. The HMI will automatically start up when Power Entry Module Switch is turned ON.



3. Release the E-Stop Button and press the Green Power Button. The green light should illuminate and energize the MCR.



Note: If the bagger has the Stack Light option, the horn will sound until the HMI program has finished loading. To prevent horn blowing, do not press the Green Power Button until HMI program is loaded. The horn then can be silenced by pressing the Reset Button.

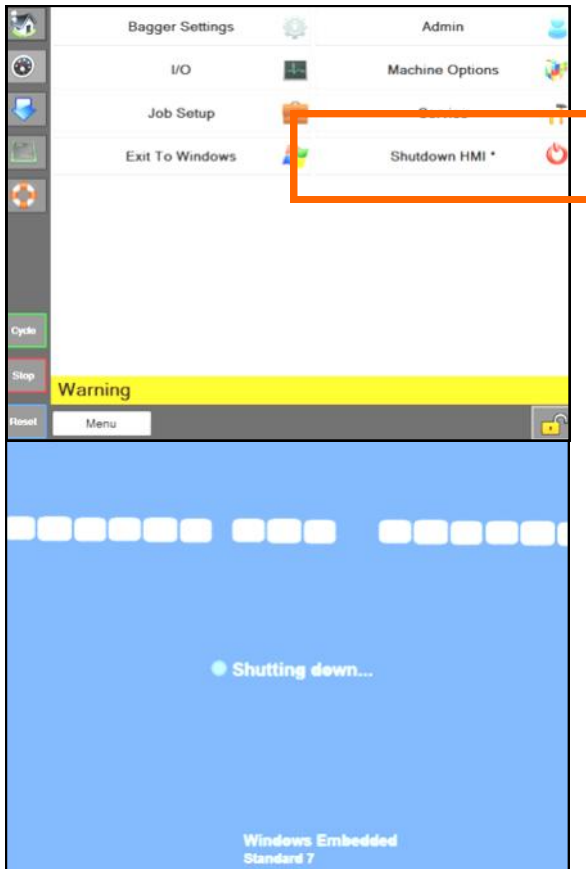


Power Down Procedure—CE Models

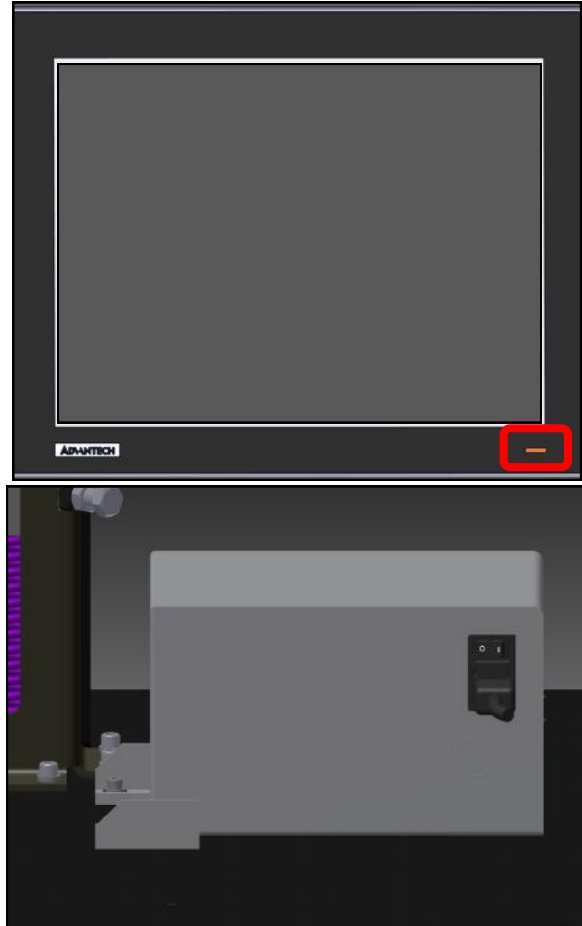
Complete Power Down Sequence

The bagger must be properly power down in the correct sequence.

1. From the **Main Menu** Screen, press and hold the “**Shutdown HMI**” button for 3 seconds. The HMI program will start shut down.



WHEN SCREEN IS BLACK AND LED STATUS INDICATOR TURNS FROM BLUE TO OR-ANGE, switch Power Entry Module Switch to OFF. The machine is now electrically shut down.



2. ***IMPORTANT! ALLOW THE HMI/PC TO POWER DOWN COMPLETELY BEFORE CONTINUING TO NEXT STEP.***
 - The Windows software must shutdown properly.
 - Do not remove power during this process. Corruption of Windows files could occur.

Setup & Adjustments

Machine Placement—CE Models

Your **Max Series bagger** has been shipped to you well crated in order to prevent any damage to the machine. It is important that you follow the Uncrating Instructions attached to crate.

After being uncrated, place the **Max Series bagger** on a rigid and vibration free surface. Before continuing with the installation of the machine, ensure all nuts, bolts and screws are tightened as they can come loose during shipping.

The **Max Series bagger** should be placed on a smooth level surface with access to 100 PSI of clean, dry compressed air, and 230 VAC, 1 Phase, 5 Amp, 50/60 Hz, (minimum) properly grounded electrical outlet.

Locate the machine so there is adequate access to the back side for loading bag film.

 WARNING
Do not operate the machine in or around standing water. Failure to observe the warning may result in damage to the equipment and/or severe bodily injury.

Make sure unit is located at a comfortable height for operation and product loading. See [Height Adjustment](#) (page 35).

The unit is equipped with two swivel locking casters for easy maneuverability. Lock the casters after placing machine in desired location.

 WARNING
Failure to have properly grounded outlet may cause damage to equipment or severe bodily injury.

Electrical

The **Max Series bagger** is equipped with a 3-prong electrical plug for standard, properly grounded, 230 VAC, 1 Phase, 5 Amp, 50/60 Hz service.

1. Before plugging the cord into the back Step-Down Transformer, depress the Emergency Stop Button on the front of the control panel. [See Figure 15A.](#)

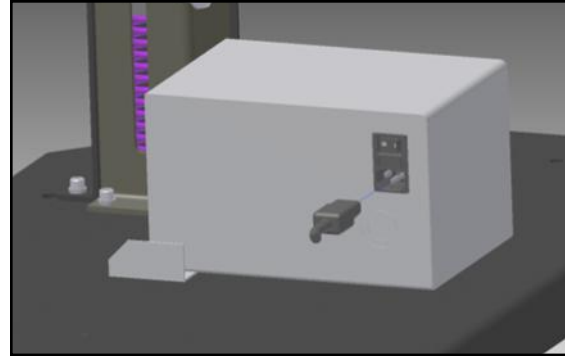


Figure 97A. Electrical Connections

2. Make sure wall outlet or electrical drop is rated for proper voltage and that the outlet is grounded.
3. Plug power cord into wall outlet or electrical drop.
4. Place the female end of the electrical cord provided into the back of the machine, **Figure 28A.**
5. Turn the switch to ON position.

Note: Power is only supplied to PLC, HMI/PC, and Sensors. HMI/PC will boot automatically.

6. Release the E-Stop Button and press the Green Power Button.
7. The machine now has full power.