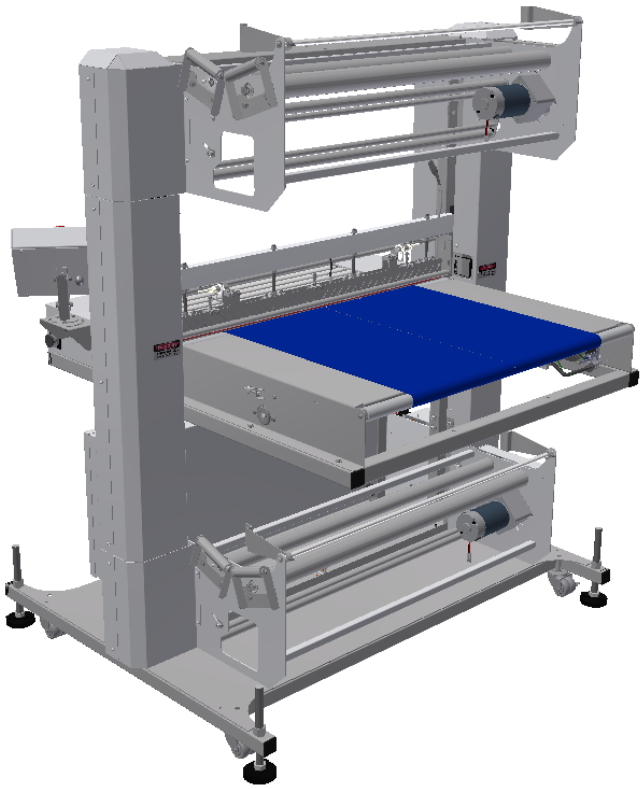
HEATSEAL®

QUALITY MADE IN THE USA

OPERATING MANUAL

SHRINK BUNDLING SYSTEM SW-3614



READ ALL INSTRUCTIONS CAREFULLY BEFORE OPERATING EQUIPMENT

Redesigned 2020

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MACHINE SPECS

BASIC SPECIFICATIONS

POWER REQUIREMENTS		115V, 18A, Single Phase
	OPTIONAL	220V, 9A, Single Phase
HEATER (HOT KNIFE)		*Two (2) 500W, 1000W Total*
AIR PRESSURE		2 Cu. Ft. per min. @ 80 psi
MACHINE DIMENSIONS		*47" L x 53" W x 63.5" H (70.5 W/FILM)*
WORKING/CONVEYOR HEIGHT		34.7-39"
SEALING LENGTH		36" (W) X 15" (H)
FILM CAPACITY		36" W, 10" OD on 3" core

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SHIPPING DAMAGE CLAIMS

Upon the arrival of your new machine, inspect the crate for any visible damage and then carefully uncrate or unpack the machine and inspect it for any visible damage or missing parts.

If any damage is found, it is your responsibility to contact the carrier and immediately file a claim. Heat Seal is not responsible for any damages to the machine incurred during the shipment once it leaves our facility in Cleveland, Ohio. If there are any missing parts, contact Heat Seal Customer Services immediately.

HEAT SEAL LIMITED WARRANTY

Heat Seal will warrant its equipment against defective parts for a period of one year from the shipment date to your address unless specified otherwise.

Parts will be replaced by Heat Seal to your Authorized Distributor upon the receipt of the defective part at our factory at Cleveland, Ohio. Any related labor, service or expendable parts such as sealing bars, cut-off rules, sealing pads, and belting material are not included.

Any part not manufactured by Heat Seal carries the manufacturer's warranty.

THE WARRANTY WILL BE VOIDED IF THE EQUIPMENT IS NOT INSTALLED BY A HEAT SEAL AUTHORIZED DISTRIBUTOR SERVICE TECHNICIAN. THE PURCHASER IS SOLELY RESPONSIBLE FOR THE SAFE INSTALLATION AND OPERATION OF THE EQUIPMENT. DAMAGE DUE TO MISUSE, MISAPPLICATION, OR MODIFICATIONS WILL NOT BE COVERED BY THIS WARRANTY.

HEAT SEAL WARRANTY RETURN PROCEDURE

Have your service technician examine the application, the machine and the parts to determine if they can be covered by the above warranty.

Next have the technician call Heat Seal Customer Services (See back page for contact information) and request a Return Authorization number (RA#).

Place an order for the replacement part(s). On the order, refer to the RA number and model/serial numbers (found on the nameplate on the machine). Heat Seal will ship FedEx Ground. Provide carrier account for next day air shipments.

Return the defective part or parts pre-paid to Heat Seal. The customer service department will examine the returned part or parts and issue a credit should the part be found defective.

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PRINCIPLE OF OPERATION

- The SW-3614 Shrink Bundling System is a semi-automatic system that is designed to package bundles in a complete overwrap of bundling film.

- The system utilizes two rolls of single wound polyethylene film which are heat sealed together by a seal bar assembly to form a web of film. The bundle to be packaged is pushed through the web of film and placed onto a powered take away conveyor. The seal bar is lowered and it draws the film webs together behind the bundle. The seal bar simultaneously seals and cuts the film web to produce a sleeve of bundling film around the bundle and the film web that is ready for the next bundle.

MACHINE SET UP

The Sleeve Wrapper/Bundler is shipped as a complete unit and requires minimal installation. To set up the system, proceed as follows:

- Remove the machine from the shipping pallet and inspect it for any damage. Then move the machine to its desired location, it is equipped with casters for easy movement.

- Lower the four adjustable levelers (1) to raise the machine off the casters and to your desired height. Make sure that the seal pad is level.

- Connect the pneumatic assembly to your compressed air supply (2). The compressed air supply must be capable of delivering 2 CFM at 80 PSI. Set system air pressure to 80 PSI (3).

- Plug the power cord into a dedicated, grounded 110/120 volt AC circuit with a minimum capacity of 20 amps. It is highly recommended that the electrical circuit be checked prior to installation to insure adequate voltage is available to the machine.

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MAIN POWER SWITCH

Turns the machine on and off.

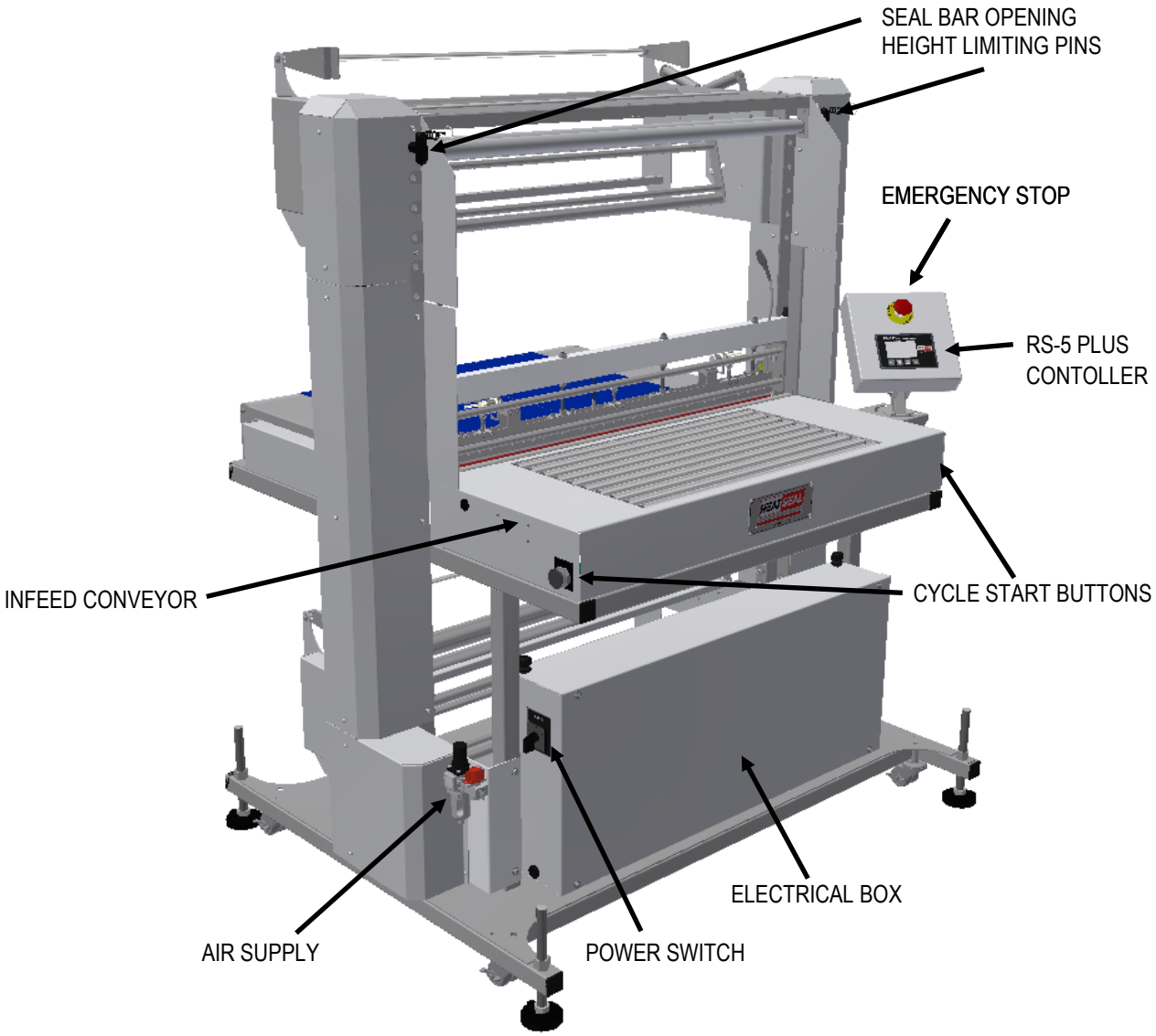
MAIN CONTROL PANELS

- RS-5 Plus Digital Controller: Controls the functions of the sleeve wrapper.
- Emergency Stop
- The instructions for setting the machine controls are included with this manual. Please refer to these instructions to set the functions of the system.

MACHINE CYCLE BUTTONS

Located on the sides of the infeed conveyor.

- CYCLE START BUTTONS: Both buttons must be pressed at the same time and held in until the seal bar down in the sealing position.



MACHINE CONTROLS
(LAYOUT AND DESCRIPTION)

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UPPER/LOWER FILM UNWIND CRADLES

- Hold single wound film. Film passes around a “Dancer Bar”, that, when lifted, actuates the film unwind motors.

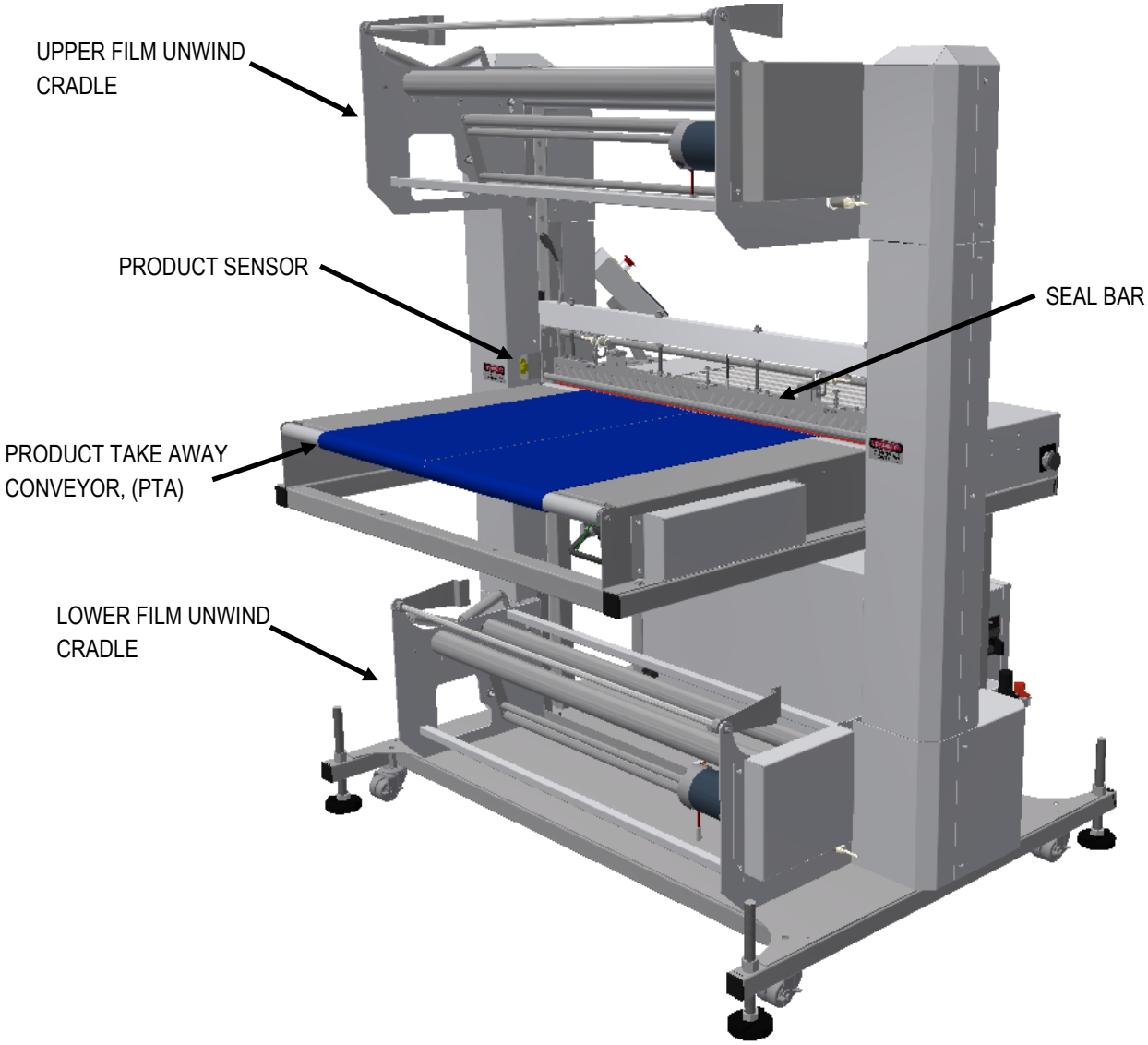
SEAL BAR

- Always on, temperature controlled Hot Knife style seal bar that cuts and seals upper and lower film layers.

- Equipped with two safety sensors that will stop and reverse the motion of the seal bar if it makes contact with an object in the seal area while the bar is being lowered.

PRODUCT SENSOR

- Detects product as it passes through the seal area and actuates the PTA conveyor to continue carrying product until it is beyond the seal area.



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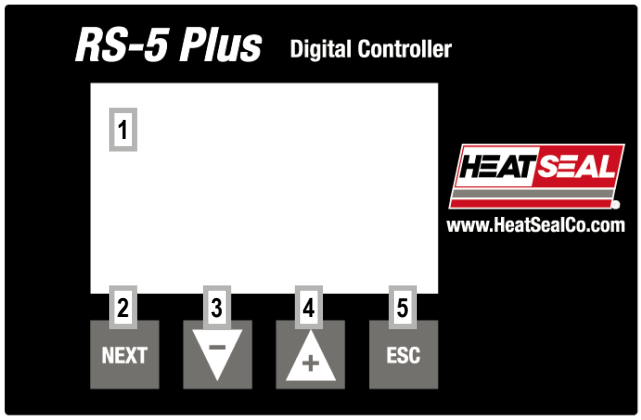
The *RS-5 Plus* is a programmable digital controller designed to control adjustable machine settings with the easy to use control pad. The digital controller is configured to control impulse or hot knife L Sealers equipped with or without a shrink tunnel as well as the Heat Seal sleeve wrapper.



MENU SCREEN (1)

The Menu Screen displays the programmed machine settings.

NEXT (2)

The 'NEXT' button navigates through menu options.

DOWN/UP (3/4)

Both the '▼& ▲' keys are used to make changes to individual variables within the menu options. By pressing the '▲' key, the value of the menu option will increase, and pressing the ' ▼' key will decrease the value.

ESC (5)

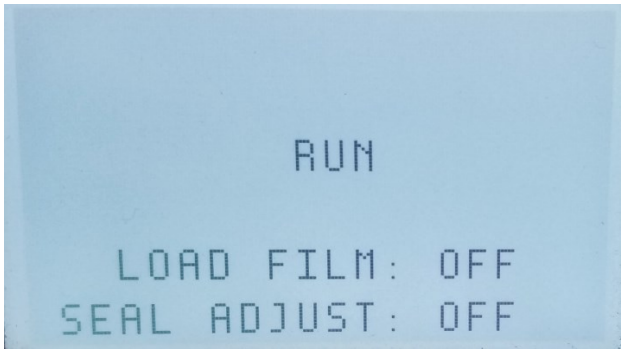
The 'ESC' key gives the operator access to the parameters. When in the 'RUN', or home menu screen, the 'ESC' key is used to access the parameters. To exit the parameter screen, the 'ESC' key is used to return back to the 'RUN' screen. After 10 seconds of inactivity the display will automatically revert to the 'RUN' or home screen.

POWERING ON AND WARM UP

When the ON/OFF switch is ON, the machine is beginning the warming up process. This is the screen that will show in the warm up mode:

- **For Sleeve Wrapping Machines**—the menu screen read 'MACHINE ELEMENTS WARMING UP, PLEASE WAIT'.

Upon reaching the temperature set points, the home screen will read 'RUN'. The operator may now begin the packaging process.



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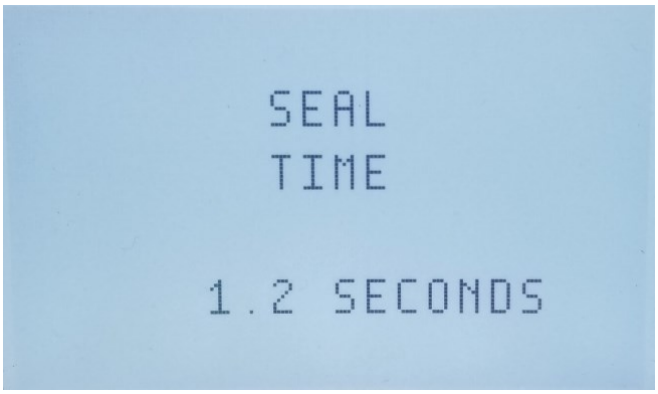
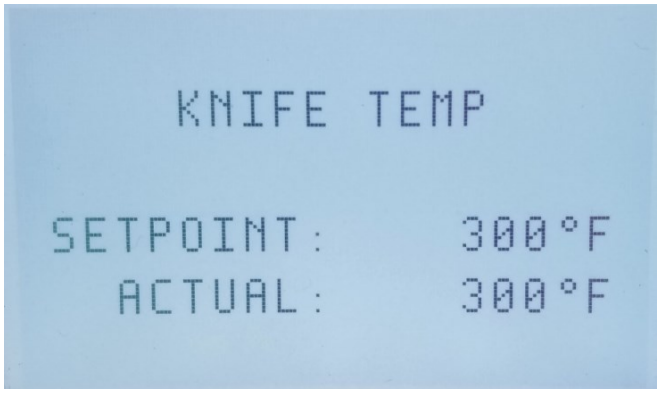
SEAL TIME

'SEAL TIME' is the amount of time the seal bar is held in the sealing position. This setting ranges from 0 (Off) to 2 (Max) seconds. The factory default setting is 1.2 second. Press the '▼or ▲' keys to decrease or increase the value of the menu option.



KNIFE TEMPERATURE

This menu option shows the temperature reading for the hot knife versus the setpoint. The first temperature reading is the Set Point, the second temperature reading is the Actual temperature. The factory default setting for the Set Point is 300°F, and the Max setting is 375°F. Press the '▼or ▲' keys to decrease or increase the value of the menu option.



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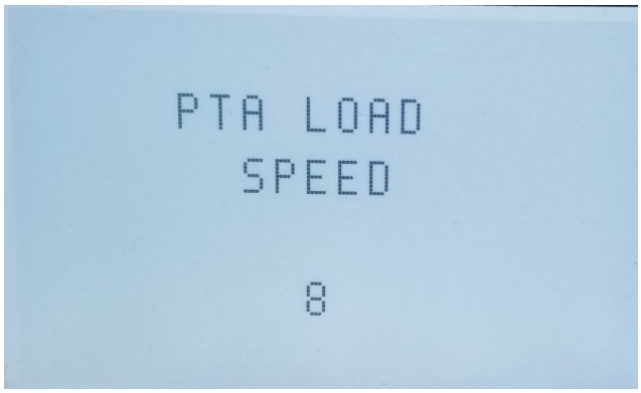
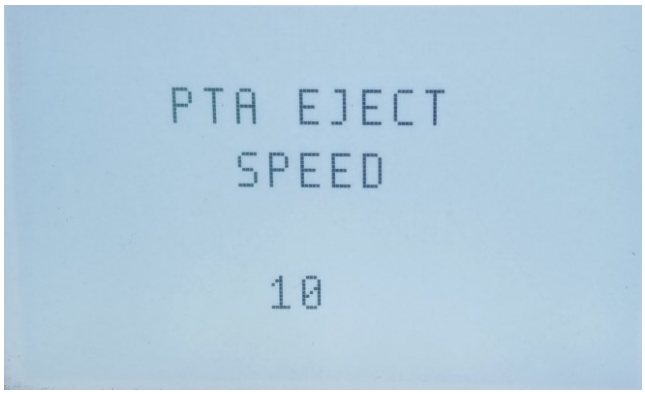
PTA LOAD SPEED

The factory default setting for the PTA LOAD SPEED is set at 8 on a range from 0 (Off) to 20 (Fast). Press the '▼or ▲' keys to decrease or increase the value of the menu option. This setting determines how quickly the conveyor runs when the product sensor is triggered.



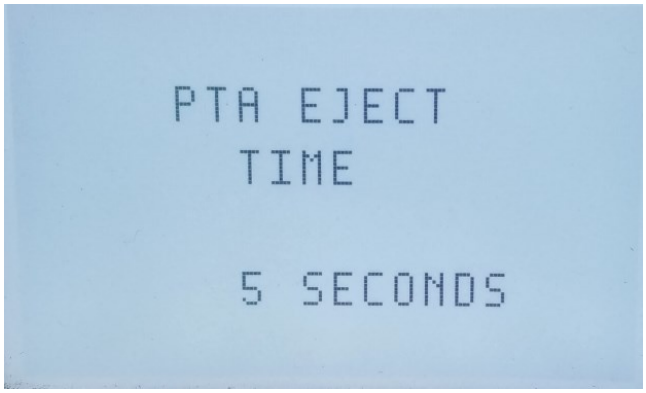
PTA EJECT SPEED

The factory default setting for the PTA EJECT SPEED is set at 10 on a range from 0 (Off) to 20 (Fast). Press the '▼or ▲' keys to decrease or increase the value of the menu option. This setting determines how quickly the conveyor carries the product away after a cut/seal.



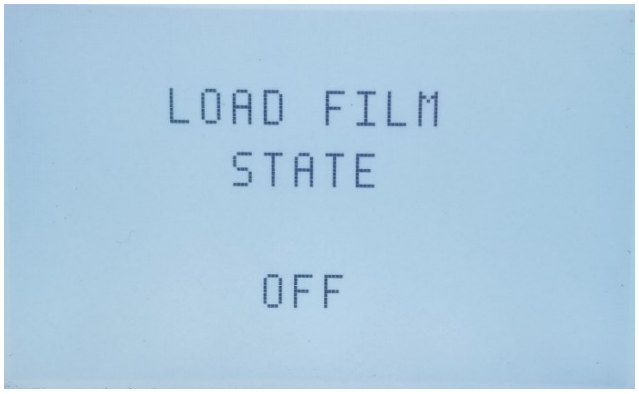
CONVEYOR EJECT TIME

The CONVEYOR EJECT TIME is the time the sealing conveyor runs after the seal has been made to transfer the product away from the seal area and/or into the Shrink Tunnel. The factory default setting is 5 seconds on a scale from 0 (Off) to 10 (Max) seconds. Press the '▼or ▲' keys to decrease or increase the value of the menu option.



LOAD STATE

When LOAD FILM STATE is turned on, the machine only allows the user to cycle the seal arm. The conveyor is dormant and the upper and lower power film unwind motors are actuated by the proximity switches only. The factory default setting is OFF. Press the '▼or ▲' keys to alternate between 'ON' and 'OFF'.



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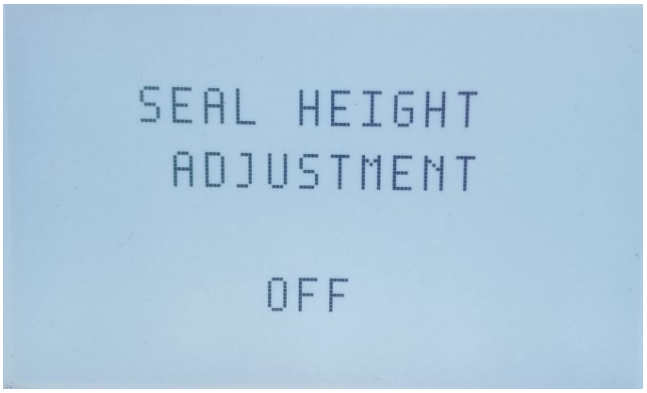
AUTOMATIC FILM FEED

When AUTOMATIC FILM FEED is turned on, the upper film unwind motor will begin feeding film when the palm buttons are pressed to call the seal arm to descend. The motor will stop feeding when the seal arm has completed its downward motion. Otherwise, both the upper and lower power film unwind motors will feed film based upon when proximity sensors for each are tripped. The factory default setting is ON. Press the '▼or ▲' keys to alternate between 'ON' and 'OFF'.

SEAL HEIGHT ADJUST

When SEAL HEIGHT ADJUSTMENT is turned on, the palm buttons may be used to lower the seal arm without the arm retracting upwards once the buttons are released. This feature allows the operator to relocate the pins used to control how far the seal arm raises. The factory default setting is OFF. Press the '▼or ▲' keys to alternate between 'ON' and 'OFF'.



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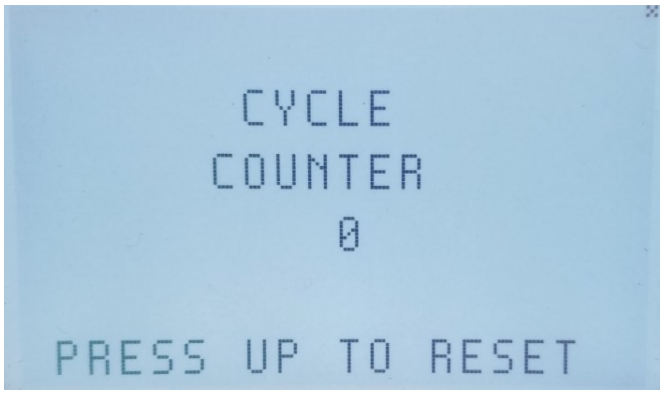
CYCLE COUNTER

This menu option is used to display the number of cycles the machine has successfully completed. The counter may be reset by pressing the '▲'key.



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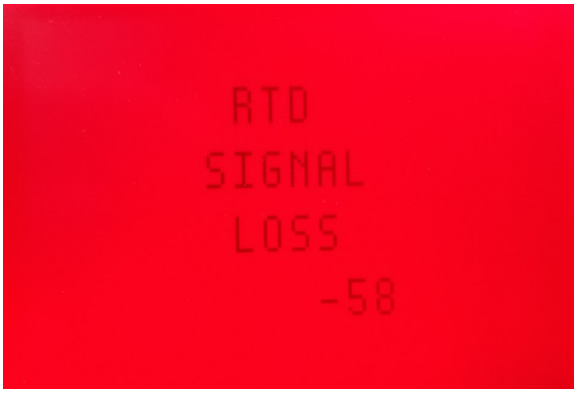
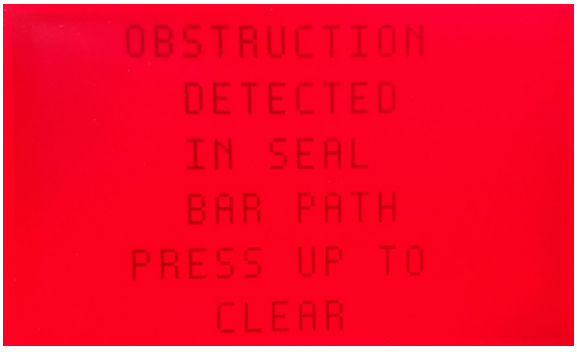
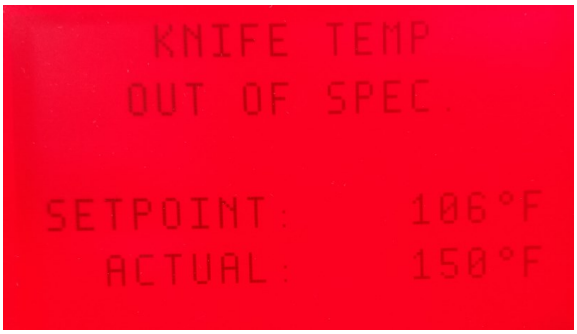


There are three alarms that can occur anytime the controller is powered. The L Sealer will not operate during any of these alarm conditions. The alarms will show on the screen until the solution is fixed.

1. 'KNIFE HEAT SIGNAL LOST, CHECK RTD'
    - This alarm signals when the RTD for the hot knife is disconnected or malfunctioning.



2. 'OBSTRUCTION IN SEAL BAR PATH, PRESS UP TO RESET'
    - This alarm signals when an object interferes with the film clamps before the film clamps hit the seal pad.



3. 'MACHINE ELEMENT TEMPERATURE OUT OF SPEC, PLEASE WAIT'
    - This alarm will signal when the hot knife is out of spec. 'OUT OF SPEC' refers to the temperature being more than 15 °F above or below the set point. This could mean the heating element is still warming to temperature, or there may be an issue with the RTD or heating element. Call a local Heat Seal distributor to properly diagnose and fix this issue.

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THREADING THE FILM

The sleeve wrapper/bundler utilizes two rolls of single wound bundling film and is equipped with upper and lower powered film cradles. To thread the film from the upper cradle, proceed as follows:

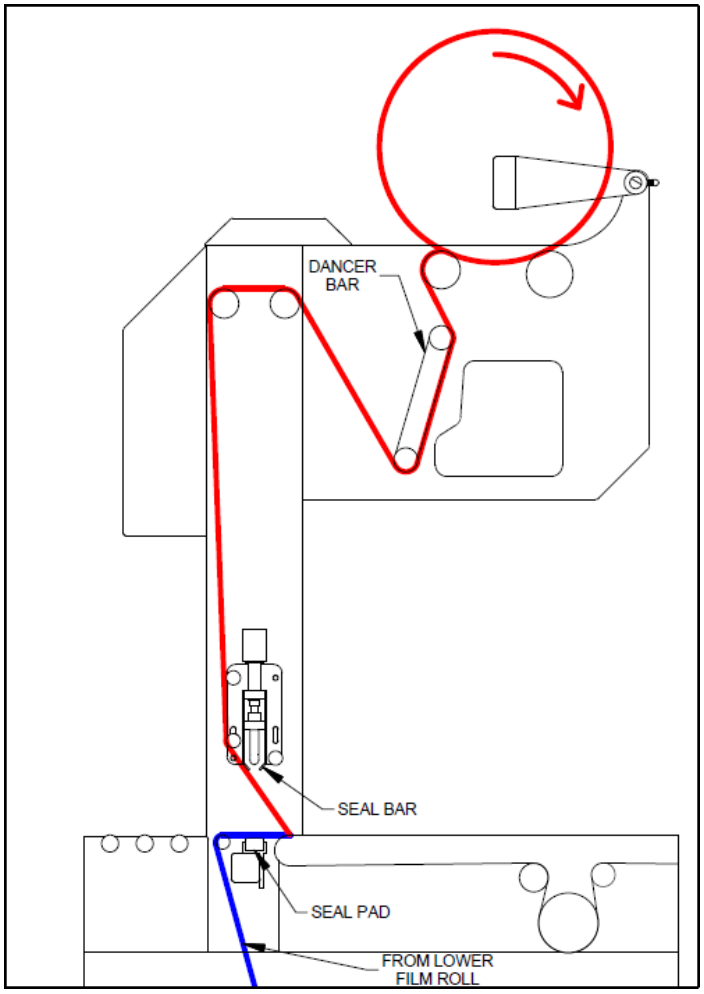
UPPER FILM ROLL CRADLE

- Place a roll of film in the center of the upper cradle so that the edge of the film rolls out from the bottom of the roll.
- Adjust the guide brackets and tighten the thumb screws to lock the brackets to the shaft. Leave about 1/8” clearance between brackets and the film roll.
- Pull about three feet of film from the roll to thread to rollers.

NOTE:

Please refer to the upper cradle diagram (below) as your guide. (Full Diagram is on upper film cradle of machine on the film unwind power box)

(To thread Lower Film Cradle, see next page)



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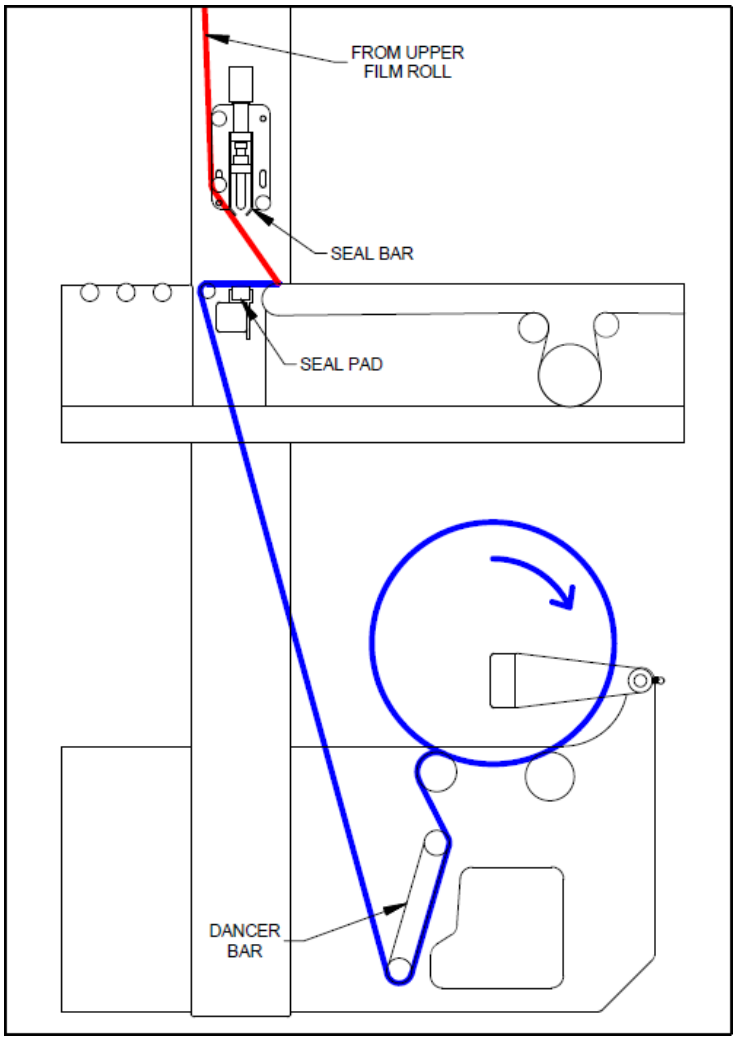
LOWER FILM ROLL CRADLE

- Place a roll of film in the center of the lower film cradle so that the film unwinds from the bottom of the roll and towards the sealing bar.
- Adjust the guide brackets and tighten the thumb screws to lock the brackets to the shaft. Leave about 1/8” clearance between the brackets and film roll.
- Pull about three feet of film from the film roller.

NOTE:

Refer to the threading diagram on the lower cradle (below) as a guide. (Full diagram is located on the lower film cradle on the switch box for the film unwind)



SEALING THE FILM

- Pull about two to three feet of the upper and lower film webs through the sealing area.
- Then straighten out both ends of the film web and let them rest on the power take away conveyor and the sealing pad, then simultaneously press the cycle start push buttons located on the sides of the infeed conveyor to activate the sealing process to close the end of the film web to prepare film for wrapping.
- After the sealing bar has sealed and cut the film and returned to its open position, inspect the seal quality on the film web. If the seal is unsatisfactory, adjust the seal temperature and time, but only one setting at a time to insure that the minimum settings are used.
- If the seal temperature is adjusted, be sure to allow the seal bar sufficient time to reach the new settings before activating the sealing process.
- To begin sealing your products, place the items to be wrapped neatly onto the infeed rollers in front of the sealed film web.

HOW TO PACKAGE A BUNDLE

- After placing the bundle to be wrapped onto the Infeed rollers, slide the bundle onto the Outfeed conveyor. Once the bundle is detected by the product sensor the PTA conveyor will start running. Continue pushing the bundle until it is properly supported by the PTA conveyor. Once the bundle is passes the product sensor the conveyor will stop.

[IF THE PTA CONVEYOR DOES NOT START WHEN PUSHING THE BUNDLE THOUGH THE SEAL AREA THE CYCLE NEEDS TO BE RESET. THIS CAN BE DOWN BY PERFORMING A SEAL CYCLE OR BY TURNING ON AND THEN OFF THE FILM LOADING OR SEAL HEIGHT ADJUSTMENT STATES]

- Check that the hot knife has warmed to the preset sealing temperature. Adjust using the RS-5 Plus Digital Controller only if the seal made is unsatisfactory for your needs.
- Then press the start buttons on the side of the Infeed platform to start the cycle. The seal bar comes down and seals the open end of the film leaving it ready for the next bundle.
- Once the open end has been sealed, the PTA conveyor will move the bundle at a preset rate to the end and either shrink the wrap in a shrink tunnel or the package can be moved by a gravity conveyor to its next destination.

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To extend the life of the bundler/wrapper, occasional maintenance should be performed to keep the machine running smoothly. The following are regular maintenance suggestions:

Knife Blade and Seal Bar:

Clean daily with a clean, soft and damp cloth while the seal bar assembly is warm.

Seal Pad:

Clean daily with a clean, soft cloth.

Infeed/Outfeed conveyors:

Clean daily with a clean, soft cloth and degreaser.

Base, Uprights and Rollers:

Clean weekly with a multi purpose cleaner.

Linear Bearings:

Lubricate bearings every 6 months.

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PROBLEM: Film Roll Overruns
Possible Solution: A.) Check for proper film threading.
B.) Check for excess film sag along path.

PROBLEM: Too Much Film Roll Tension
Possible Solution: A.) Check for proper film threading.
B.) Readjust the film roll guide collars.

PROBLEM: Incomplete Cut
Possible Solution: A.) Check and clean the knife insert.
B.) Check and replace the seal pad and Non-Stick tape.
C.) Check for even arm pressure.
D.) Increase the seal time.
E.) Increase the seal temperature.

PROBLEM: Incomplete or Weak Seal
Possible Solution: A.) Check and clean the knife insert.
B.) Check the seal pad and Non-Stick tape.
C.) Check for proper film threading.
D.) Slow the speed that the seal bar closes.
F.) Increase the seal time.
H.) Increase the seal temperature.

PROBLEM: Seal Bar Assembly Reverses Before Sealing
Possible Solution: A.) Reduce film tension.
B.) Cycle start switch is too low.
C.) Slow the speed that the seal bar closes.
D.) Check and adjust the film clamp switches.

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