

# **OWNER'S MANUAL**



*PLEASE READ AND SAVE INSTRUCTIONS*

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## ABOUT THIS MANUAL

Thank you for purchasing SEAL branded products. Your new SEAL EP42 has been designed and manufactured to provide years of continuous service. To insure high quality results, please read this instruction manual thoroughly. This manual will provide you with operating and maintenance instructions adequate to operate and clean the machine. For additional product support or ordering information please call Seal Graphics Americas help line at 1-800-486-6502.

## SAFETY PRECAUTIONS

The safety recommendations outlined in this section are to be read, understood and followed before operating machine.

Keep this information for future reference. Failure to comply with any of the following safety procedures could result in serious personal injury.

1. To prevent the possibility of electrical shock, do not immerse machine in water or permit liquid to spill inside.
2. Do not allow articles of clothing (neckties, scarves, papers, etc.) near front or rear machine openings as they could get caught by rollers and be pulled inside, causing personal injury.
3. Do not insert sharp objects into front or rear machine openings. Do not place anything in feed tray openings of machine other than appropriate laminating materials or pouches.
4. Do not attempt to laminate items that exceed total recommended material thickness.
5. Do not operate machine for any other purposes than its intended use.
6. Do not operate machine if electrical plug or power cord is damaged.
7. Turn off the power when unattended or not in use. Unplug machine before moving it or when it is not in use for an extended period of time.
8. This machine is intended for indoor use only.
9. Do not alter or extend electric plug. Plug is configured for appropriate electrical supply.
10. The socket-outlet shall be installed near the equipment and shall be easily accessible.

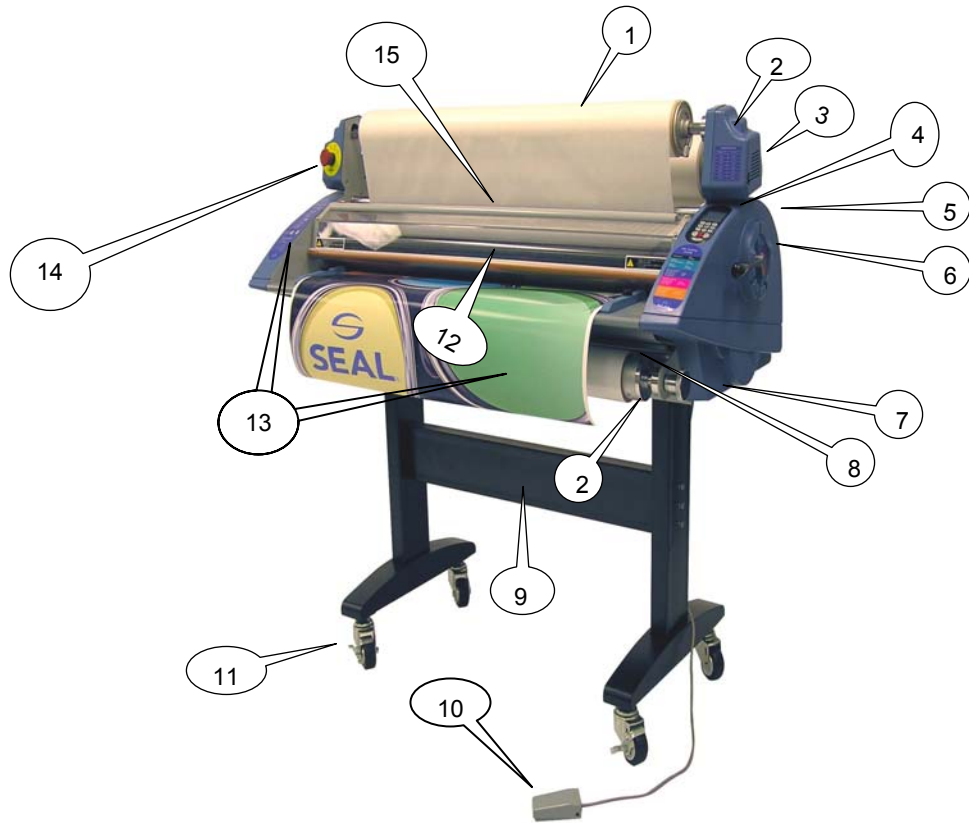
## FEATURES

The design of your new SEAL EP42 Laminator features **Advanced Radiant Heat Technology**, offering higher throughput speeds for most applications and the convenience of encapsulating substrates up to 1/2" without unwebbing the laminator. It's multi channel programmable controller allows you to set individual processing criteria for optimum performance for a desired application regardless of thickness of material or type of film. Autogrip supply shafts allow easy film alignment without tools. The standard Foot-Pedal allows for hands-free operation at the front or rear of the machine. The Color Coordinated Applications Chart and Nip Wheel makes selecting the proper thickness a breeze.

## SPECIFICATIONS

| Description               | EP42 (Encap Pro) 42"<br>Laminator |
|---------------------------|-----------------------------------|
| Dimensions (w x d x h)    | 1400x650x1220mm                   |
|                           | (55.1x25.6x48.0in)                |
| Weight                    | 140Kg                             |
|                           | (308.6lbs)                        |
| Voltage/Cycles            | AC220-240V, 50/60Hz               |
| Power Consumption         | 3000w                             |
| Max. Laminating Speed     | 4m/min                            |
|                           | 13.1ft/min                        |
| Max. Laminating Width     | 1050mm                            |
|                           | (41.3inch)                        |
| Max. Laminating Thickness | 13.0mm                            |
|                           | (0.5inch)                         |
| Film thickness            | 32 - 250micron                    |
|                           | (1.3-10mil)                       |
| COLD and WARM Laminating  | Yes                               |
| Cooling Blowers           | 2                                 |
| Take-Up                   | Yes                               |
| Film Alignment            | Yes - tool less Autogrip          |
| Cutter-Cross              | Yes                               |
| Ass'y Stand               | Yes                               |
| Switch-Foot               | Yes                               |

# NAMES OF MAJOR PARTS OF MACHINE



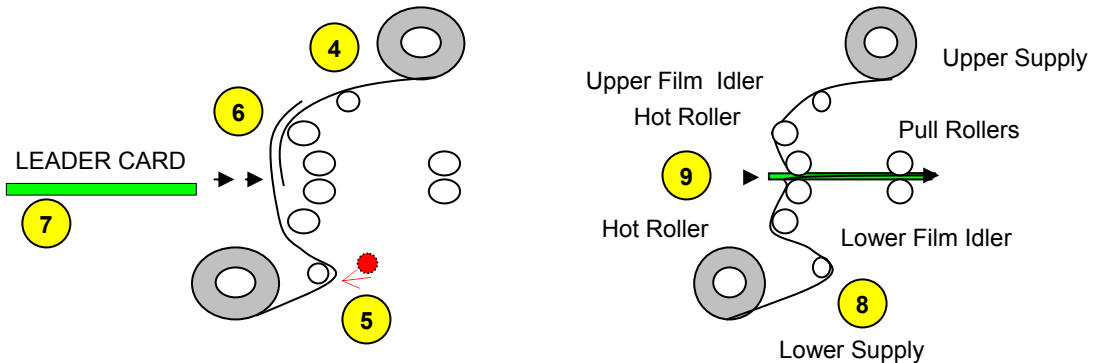
| NO | PART NAME                         | EP42 |
|----|-----------------------------------|------|
| 1  | Take-Up Shaft                     | 1    |
| 2  | Autogrip Supply Shaft             | 2    |
| 3  | Take-Up Shaft Switch              | 1    |
| 4  | Touch Pad Control Center          | 1    |
| 5  | Nip Selector Wheel                | 1    |
| 6  | Nip Adjustment Lever              | 1    |
| 7  | Tension control Knob-Supply       | 2    |
| 8  | Metal Roller-Heated/Teflon Coated | 2    |
| 9  | Frame                             | 1    |
| 10 | Foot Pedal-On/Off                 | 1    |
| 11 | Caster                            | 4    |
| 12 | Print Flattener/Teflon Coated     | 1    |
| 13 | Print Guide                       | 2    |
| 14 | Emergency Stop                    | 2    |
| 15 | Safety Cover/Teflon Coated        | 1    |

\* not shown, rear Emergency Stop, X & Y inline film slitters

# WEBBING FILM FOR APPLICATIONS

## Encapsulation (Hot Film - Top/Bottom w/no release liner)

### STEP 1-7

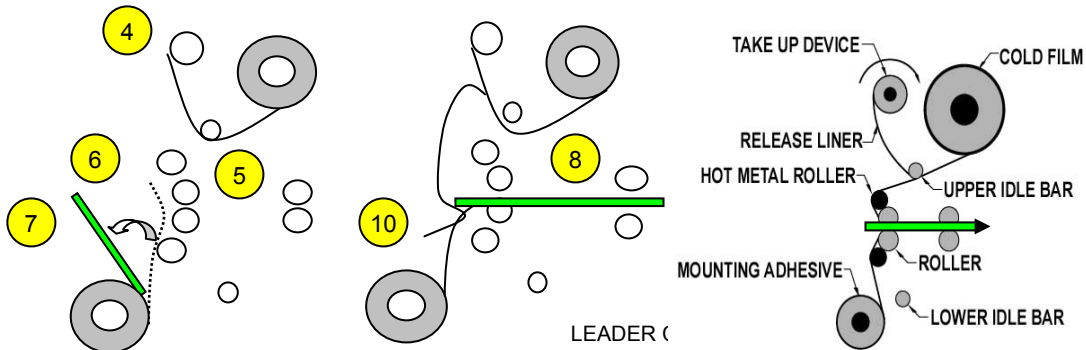


**\* When loading film, make sure the glossy side of (upper/lower) film lies against the rollers. (Glossy side is film surface, whereas matte side is thermal adhesive layer).**

1. Insert (upper/lower) Autogrip Shaft into film core with the tension control knob to the operators right.
2. Remove the Safety Cover and set aside (reinstall after step #7).
3. Remove feed table and print guide, set aside (reinstall after step#7).
4. Web film over the stationary film idler (upper) & Teflon Coated (heated) Film Roller (under the safety cover), making sure to "center the film" on the roller. Leave the film draped in front of the main nip rollers, but do not insert.
5. Move the lower film idler roller from its stationary run position to the load position by pushing up and back, letting gravity take the roller towards the front of the machine.
6. Web the lower film up under the lower idler roller (matte side up) and in front of the lower Teflon Coated (heated) film roller to a position just above the upper Teflon Coated Film Roller. Making sure the films are aligned, lay the bottom film over the top film onto the upper heated Teflon Coated film roller.
7. Set the Nip Adjustment Lever to the hard board setting (purple 1/16").
8. Reinstall table, print guide and upper teflon roller safety shield.
9. Insert a leader card (1/16" card stock, Sintra or other suitable hard stock measuring 40" wide by 12" deep), into the main nip rollers.
10. Reset lower film idler into run position.
11. Press the run button or foot switch to process the leader card through the main nip and pull rollers prior to processing images to be encapsulated.
12. Choose from one of the pre-programmed settings or adjust speed and temperature as desired.

# WEBBING FILM FOR APPLICATIONS

## Pressure Sensitive Applications (Laminate & Adhesive)



1. Insert (upper/lower) Autogrip Shaft into film core with the tension control knob to the operators right (from the front of the machine) and align the films top to bottom by sight.
2. Remove the Safety Cover and set aside (reinstall after step #10).
3. Remove feed table and print guide, set aside (reinstall after step#10).
4. Web upper pressure sensitive film (w/release liner) under the stationary idler, then up onto the take up shaft core, making sure the film is centered on the core. **Note: using a 3" wide strip of double sided adhesive w/release liner, apply it to the take up core, removing 1/4" strips of release liner when needed to expose enough adhesive to tack film securely to the core.**
5. Set the Nip Adjustment Lever to the fully open Position (Orange 3/8 - 1/2").
6. Position the release point of the lower adhesive film roll so that it unwraps from the top of the roll. Now pull the film away from the roll and extend to the mid point of the upper teflon coated roll and then slide downward and tuck to the nip.
7. Place a 10"x40"x1/16" leader card squarely into the crease of the lower supply roll at its separation point. Now take the lead edge of the adhesive (currently tucked to the nip) and press up to the backside of the leader card.
8. Insert the leader card with attached adhesive into the nip. Push leader card through to the pull rolls, leaving approximately 2" of the leader card still visible. Make sure film is taught without wrinkles before proceeding, if required, reinsert.
9. Lower the nip selector position to the Lamination Mode (Sea Foam - Closed).
10. Using a piece of tape, place the sticky side to a corner of the release liner backed adhesive film and pull the film & adhesive away from the release liner. Pull the entire width of film away from the liner (now tacked to the take up core). Once the adhesive film has been pulled cleanly away from the liner, pull the film down over the Upper Teflon Coated roller and press against the lower adhesive just in front of the leader card, making sure to pull the film taught and even across the roll face.
11. Reinstall table, print guide and film cover.
12. Press the run button or foot switch to process the leader card through the main nip and pull rollers.
13. Choose from one of the pre-programmed settings for cold lamination or adjust speed and temperature as desired.
14. Process images to be decal'ed.

# CONTROL OF ROLLER PRESSURE

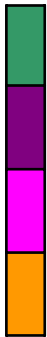


## \*\*\*Setting Downward Roll Pressure\*\*\*

There are 4 color coded pressure settings that match the applications decal on the front of the operators console. Match the colors on the applications decal to the nip selector wheel for desired application.

For setting the pressure, pull the lever out toward you and rotate to the desired position, then lock in place.

### The EP42 Offers the following Nip Settings



Lamination/Encapsulation position for use with films from 32 to 250microns

Mount/Laminate position for use with boards from 1/16" to 1/8"

Mount/Laminate position for use with boards from 3/16" to 1/4"

Mount/Laminate position for use with boards from 3/8" to 1/2"

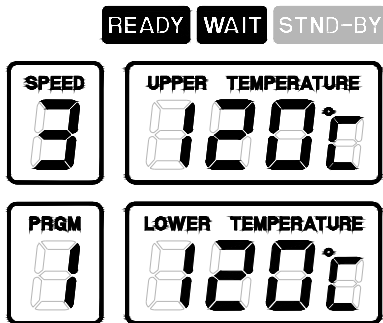
The EP42 is equipped with two sets of rollers (Main & Pull) that are operated in unison by adjustment of the Nip Lever. The pressure is factory preset for optimum results. Certain substrates (Plexiglas™ / Sintra™) may require additional pressure... If silvering does not go away within 24 hours of lamination, consult technical service for advice on increasing roll pressure.

**Note: When not using machine it is highly recommended that you raise the nip rollers to an open position of at least 3/16". This will prevent flat spots from occurring on the nip and pull rollers.**

# INSTRUCTIONS FOR CONTROL PANEL

The operators control panel has been designed with your convenience in mind. It's multi channel programs allow you to customize settings for heat and speed according to your specifications. This can add greatly to the repeatability & performance of the EP42 when used regularly with certain film combinations. Please refer to the following instructions on how to use the EP42 Control Panel. This information will allow you to successfully monitor the machine status, as well as set specific parameters for time and temperature in one of 3 program channels for Cold operations and 9 program channels for Hot applications.

## 1. LCD WINDOW



**READY**

Initially, when turned on, the LCD Panel will display the last condition it was in before being turned off.

Is displayed when the Preset Temperature has been reached.

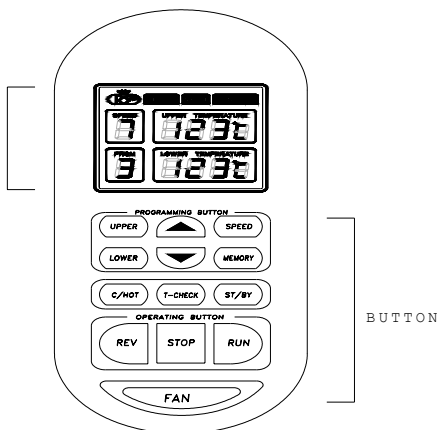
**WAIT**

A "blinking" WAIT will display until the machine has reached the Preset Temperature

**STND-BY**

Indicates the machine is in the Energy Saving Mode

LCD DISPLY



Upper/Lower Temperature  
Indicates the Preset Temperature Status

### Speed

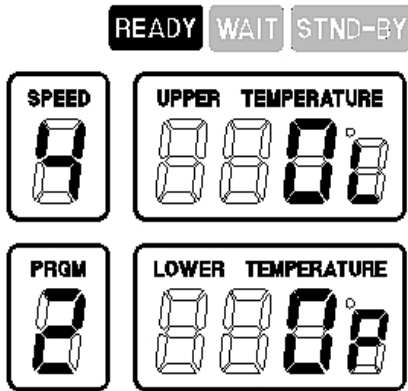
Indicates speed selected for selected program. The EP42 has a speed range from 2.6ft/min over 13ft/min.

### Program

Indicates which program channel is currently being used. There are 4 different channels available for the "cold" process and 9 for "hot"

# INSTRUCTIONS FOR CONTROL PANEL

## 2. FUNCTIONS OF BUTTONS



UPPER

- Upper roller temperature controller
- Lower roller temperature controller

LOWER

SPEED

- Speed controller

MEMORY

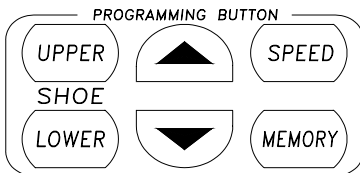
- Choose memorized working condition



- Increase temperature
- Increase speed
- Restore the memorized working setting



- Decrease temperature
- Decrease speed
- Restore the memorized working setting



C/HOT

- Cold and Hot mode change

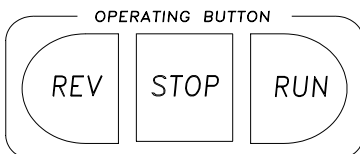
T-CHECK

- Check current temperature



ST/BY

- Energy Savings Mode between jobs



REV

- Reverse function

STOP

- Stop Rollers

RUN

- Start/Stop the rollers



FAN

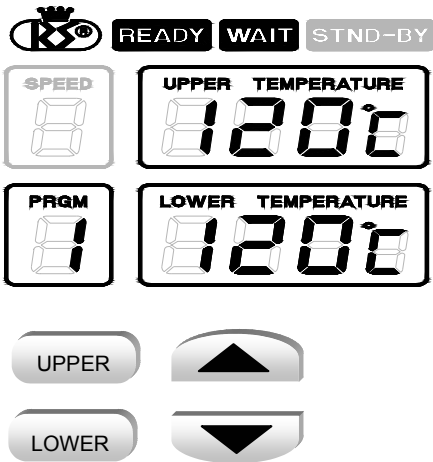
- Start/Stop the fans

# INSTRUCTIONS FOR CONTROL PANEL

## 3. HOW TO USE CONTROLLER

### \*\*\*Setting Temperature on Upper/Lower Teflon Coated Rollers\*\*\*

#### Button & Display



**Note: A beeper will sound when pressing the button repeatedly.**

#### 1. Set Temperature of Upper Teflon Coated Roller.

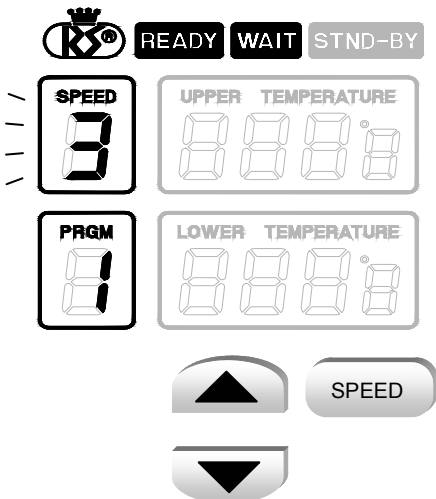
Press **UPPER** button, which will cause the display to blink 6 times. Before blinking is finished, press the or button to reach the desired temperature. The temperature will become set after 5 seconds.

#### 2. Set temperature of lower roller via same method

Press **LOWER** button, followed by the or arrow, until desired setting is reached. The temperature will change 1°C (2°F) each time you press the button. If you hold the button down for more than 1 second it will advance rapidly.

### \*\*\*Speed controls

**\*9 different speeds are attainable from 2.6ft/min to over 13ft/min**



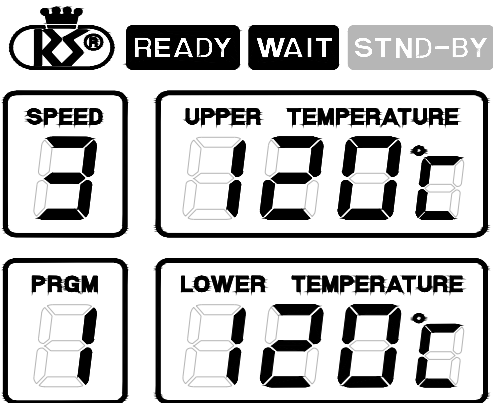
Press **SPEED** button, as before, the display will blink 6 times. Before the blinking stops, press or to reach the desired speed setting.

**Note: A beeper will sound when pressing the key pad repeatedly.**

# \*\*\* SETTING & USING THE CHANNEL MEMORY \*\*\*

## Memorize Working Condition

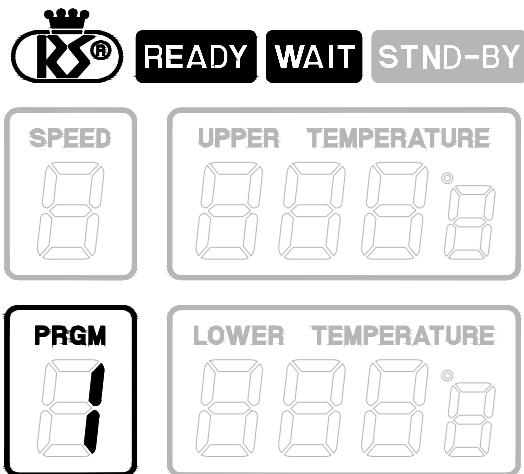
\* Operator can memorize 3 working conditions for Cold Operations and 9 for Hot.



1. Begin by pressing the **C/HOT** button once for Cold, twice for Hot .
2. Select program to be optimized by pressing **MEMORY** then the **▲** or **▼**. Notice speed & temperature will change as you progress through the programs 1-3 for cold or 1-9 for hot.
3. To change parameters, select the appropriate condition to be changed (speed or temp) **while the display is still blinking**, now press **▲** or **▼** .

Once you reach the desired temperature you can permanently change this program's memory by pressing **MEMORY** twice.

**Note the beeper will sound multiple times in rapid succession to indicate that it has memorized the settings**



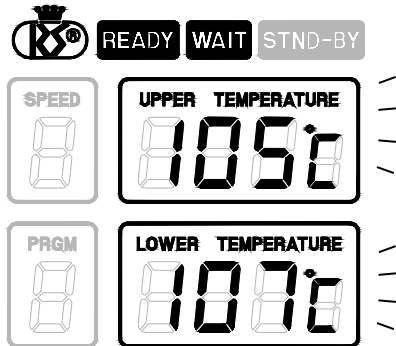
## Using The Memorized Working Condition

\* **Operator can use one of 3 working conditions for Cold Operations or 9 for Hot.**

1. Begin by pressing the **C/HOT** button once for Cold, twice for Hot .
2. Select the program to be used by pressing **MEMORY** then **▲** or **▼** until you reach the desired program.

**Note: the display will blink for several seconds, after the blinking stops you may proceed to use the machine.**

# \*\*\* SETTING & USING THE CHANNEL MEMORY con't\*\*\*





## Checking Temperature Of Hot Rollers

1. Press the **T-CHECK** button, the present temperature will be shown on the display.

*\* Note: the display will blink 5 times and return to the normal working condition*

## Using The Cold Mode

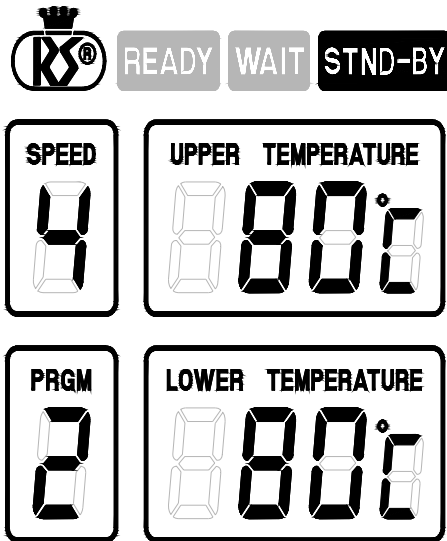
**\*Use this mode for Pressure Sensitive decaling or lamination**

1. Press the **C/HOT** button on the key pad once, so that "Cold" displays in the window
2. Speed can be varied from 1 to 4 on programs 1 & 2 and from 1 to 9 on program 3 by pressing the **SPEED** function and then either the  or  arrow.
3. Once you reach the desired speed release the button, the display will blink several times and then stop. You may now proceed with your job.
4. If desired, the temperature on the upper heated roller may be adjusted on programs 2 & 3. Both the upper & lower temp can be adjusted on program 3 only.
5. Return to the Hot Mode by pressing the **C/HOT** button.

**Note:** It is normal for the buzzer to sound when pressing key pad repeatedly. If there is no sound or you can not effect the display by pressing the key pad, check to ensure the Emergency Stops are not activated.


**Note:** Standby mode is not available in Cold Mode.


# \*\*\* SETTING & USING THE CHANNEL MEMORY con't\*\*\*



## Using The Stand-By Mode

Use the Stand-By mode during long periods between encapsulation jobs to significantly reduce energy costs!

1. Press  button once to enter the Stand By Mode. The word stand by will display on the screen.
2. The temperature will go to 180°F/80°C and remain at this temperature until Stand By button is pressed again.

NOTE: The machine will not "run" while in the Stand By Mode. **Please press the**  **button to return to the previous working condition.**

## Using Fans

1. Press the  button to turn fan on or off.

## Auto Shut Down

1. The EP42 comes equipped with an auto shut down mode designed to shut the machine down, should you forget to. If this occurs you will see PpOF appear in the display.
2. Cycle the main power switch off and on again to return to normal operation.

## Reverse

1. Press and hold the  button to reverse direction of the machine.

## Run

1. Press the   button to start the rollers, to stop.


## \*\* USING THE SLITTERS & CROSS CUTTER \*\*



The EP42 is equipped with both run length (longitudinal) slitters and cross cut (lattitudinal) slitters.

### Adjustment of Longitudinal (X) Slitters

#### Slitting Single Encapsulated Images

1. Adjust front image guides to allow for 1/4" overage beyond the edge of the image.
2. Insert an image and run it into the nip, stopping just in front of the slitter bar.
3. Loosen the thumbscrews on the two slitter assemblies and slide them into position leaving approximately 1/4" of film beyond the image .
4. Adjust the blades to penetrate the film once the slitter knob has been turned to the on position.
5. Once the slitters have been engaged, press the button  or the foot pedal to start.



#### Slitting multiple encapsulated images

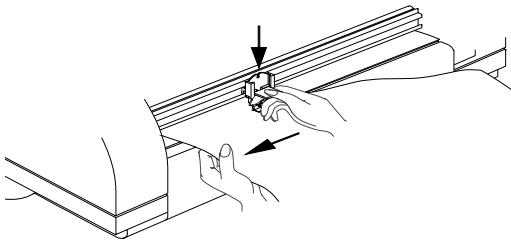
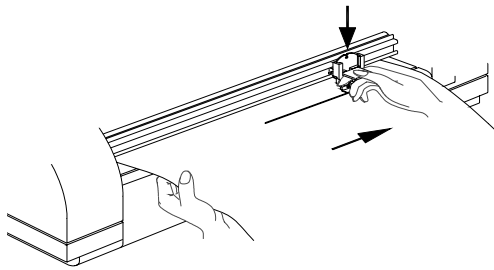
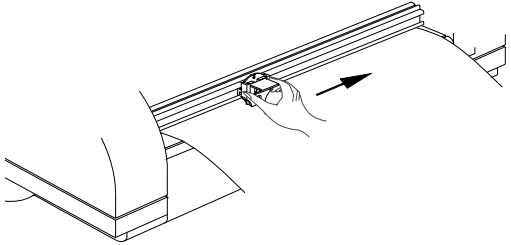
1. Adjust front image guides to allow for at least 1/4" overage beyond the edge of the image.
2. Run the image into the nip and through to the slitters. Loosen the thumbscrews and adjust the slitters so that the edge of the slitter assembly lines up with the print. (approx 1/4" away from blade).

3. Wind up the center portion of the cut out film onto the release liner take up by tucking the end of the cut film into the bottom side of the take up along with the release liner.



**Note: Be sure that the films are aligned top to bottom in order to prevent roller wrap. If you should experience roller wrap, use the reverse button to unwrap the rollers.**

# ADJUSTMENT OF LATITUDINAL SLITTERS



## Adjustment of Latitudinal (Y) Slitters

1. As the image exits, be sure to advance the image far enough so that the image is not cut into when the slitter is used.
2. Slide the latitudinal slitter to the middle of the image, now press down and slide to the right.
3. Return the slitter to the original penetration point, press down and slide to the left until the image has been totally separated.

## PROCESS CHARTS

| PRGM# | FILM TOP / BOTTOM |  | SPEED | TEMP TOP / BOTTOM |  | DATE |
|-------|-------------------|--|-------|-------------------|--|------|
| 1     |                   |  |       |                   |  |      |
| 2     |                   |  |       |                   |  |      |
| 3     |                   |  |       |                   |  |      |
| 4     |                   |  |       |                   |  |      |
| 5     |                   |  |       |                   |  |      |
| 6     |                   |  |       |                   |  |      |
| 7     |                   |  |       |                   |  |      |
| 8     |                   |  |       |                   |  |      |
| 9     |                   |  |       |                   |  |      |

**NOTE: The above process chart should be used to record your final settings for a particular film combination (application). You may consider making several copies of the blank form (before recording newly created chart) for future reference when setting up the laminator for a particular application.**

## IMPORTANT SAFETY INFORMATION

1. Do not wear any loose clothing or jewelry when operating the machine.
2. Keep cleaning materials, rags and cleaners away from machine while in operation.
3. Keep open blade knives away from rollers at all times.
4. Do not allow children to operate machine, unless supervised by an adult.
5. Keep clear of the heated rollers as they are hot and can cause burns.
6. Make sure the power is connected by a licensed electrician.
7. Do not disassemble back panel, unless authorized or instructed to do so by a qualified Seal technician or 3rd party representative.
8. Do not use the machine for any other purpose than as stated herein...failure to do so may cause bodily harm or other injury.


## MAINTENANCE

1. Clean the exterior of the machine with Simple Green™ available from your local grocer.
2. Clean the rubber roller surface with a lint free cloth and warm water (or denatured alcohol).
3. Clean the Teflon coated rollers with a lint free cloth and warm water. Do not use alcohol or any other solvent based cleaner of any kind on this roller.
4. Ensure that the chain does not have more than 3 mm play top to bottom when pinched in the middle.
5. Grease the chain every 6 months with lithium based (white) grease.

## TIPS & TRICKS

1. Do NOT Allow the machine to run with only one roll of film installed. The melted resin will adhere to one roller and ruin future laminations.
2. The width of film should be bigger than the material being laminated/encapsulated.
3. Always use a leader card to web the laminator when cold.
4. To save time, hot splicing films onto existing films is the best and easiest way to web the laminator.
5. When needing to laminate a substrate on two sides it is not necessary to unweb the machine, simply set the nip to the appropriate thickness setting and insert the substrate, being sure to trim the film between the main nip rollers and the pull rolls beginning to process image.

## TROUBLE SHOOTING GUIDE

| Symptom  | Cause  | Check Point  |
|--|--|--|
| *Rollers do not operate after pressing RUN button                  | 1. Check to ensure you have power to the machine.                  | 1. Check that power cord is plugged in.  |
|  | 2. Emergency switch may be active.                                 | 2. Check the main power switch is on.  |
|  | 3. Machine may be in STAND-BY mode.                                | 3. Check that the emergency stop has not been depressed.   |
|  |  | 4. Release STND-BY switch by press the STND-BY button.   |
| *Teflon rollers will not heat up.                                  | 1. Machine is set for Cold Mode.                                   | 1. Press the  button. |
|  | 2. Memorized temperature may be lower than atmosphere temperature. | 1. Set proper temperature for the materials to be used.  |
| *Wrinkled lamination result  | 1. Film tension is not proper, too                                 | 1. Adjust film tension.  |
| *Adjust film tension.  | 1. Temperature on the hot roller.                                  | 1. Increase the temperature on the hot roller or decrease the speed.                                     |
| *Increase the temperature on the hot roller or decrease the speed. | 1. Top/Bottom films are not aligned.                               | Reverse wrapped film from around roller, realign top/bottom film.  |
|  | 2. Leading edge of film has  | Reverse wrapped film from around rollers, reinsert guiding through pull roll.                            |

## WARRANTY

**The EP42 comes with a warranty of one year parts and 6 months labor  
(except for rubber covered rollers, which carry a 6 month warranty)  
Additional extended warranty programs are available.**

SEAL<sup>®</sup> Customer Service  
(For information and placing orders)  
Tel: 1-800-257-7325  
Fax: 1-800-966-4554

SEAL<sup>®</sup> Technical Service  
(For technical assistance & service)  
Tel: 1-800-486-6502  
Fax: 1-800-966-4554



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Part #OMEP-42 OM-E Rev. A