GBC Explorer 107 Laminator

Instruction Manual

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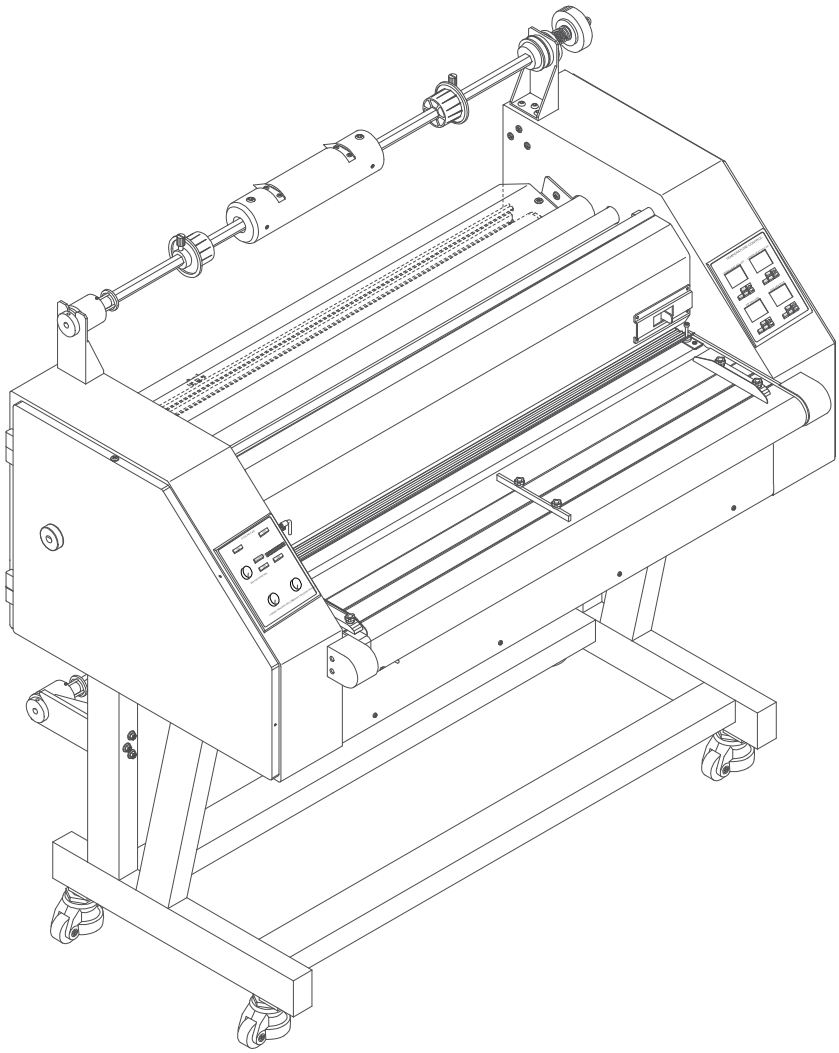
EXPLORER 107 OPERATION &

MAINTENANCE MANUAL



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What section ? _____ What Page # ? _____

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Section 1 Safety

CAUTION

Do not attempt to operate your Falcon 160 laminator until you have read this section carefully!

Your safety, as well as the safety of others, is important to GBC Pro - Tech. This section contains important safety information.

The following symbols are used throughout this manual to indicate **Information, Caution**, **Warning**, **Danger** and **Electrical Shock** conditions.

1.1 Symbols

INFORMATION

Indicates helpful information that should be considered before, during, or after an action, step or procedure is given.

CAUTION

Indicates a potentially hazardous situation which, if not avoided, could result in minor or moderate injury, or alerts against unsafe practices or alerts against actions which could damage the product.

WARNING

Indicates a potentially hazardous situation which, if not avoided, could result in serious injury.

DANGER

Indicates an imminently hazardous situation which, if not avoided, could result in death or serious injury.

ELECTRICAL SHOCK

Indicates an electrical shock situation which, if not avoided, could result in serious paralyzation of the body or death.

1.2 Safety features

The Explorer 107 laminator has been designed with safety as a primary consideration; however, you must become thoroughly familiar with the controls, proper operation, proper service procedures and safety features of the laminator before using or servicing the unit.

In addition, the heating components of the Explorer 107 can reach temperatures of over 200°F (100°C).

DANGER

At these temperatures there is a danger of severe burn if the rolls are touched during setup, operation or servicing.

INFORMATION

Only a qualified service technician should perform any procedure requiring the cabinet doors to be opened.

An important feature of the Explorer 107 laminator are the safety latches and the interlocks. The front safety shield and the feed table are both equipped with safety latches. When a safety latch is not in the locked position, the motor is disabled. Refer to **Figure 1.2.1**

WARNING

Caution should always be exercised when using the laminator with the safety shields raised. You can be seriously HURT or INJURED!

Figure 1.2.1 Safety latches

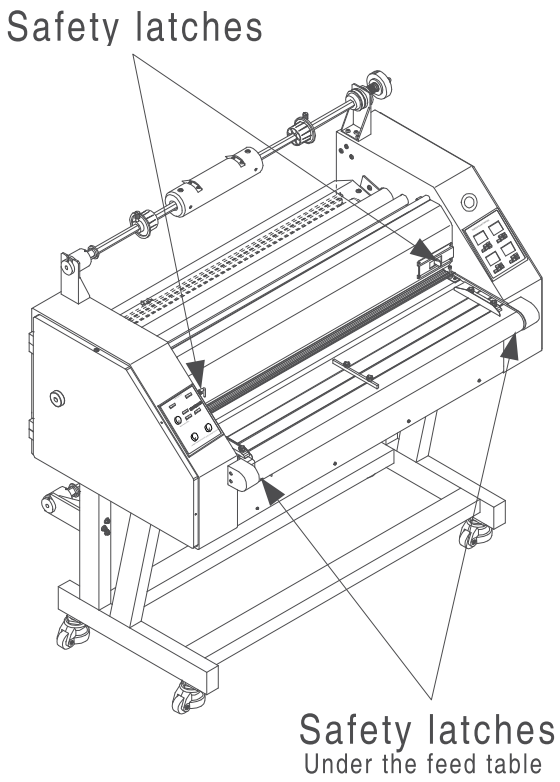
The word qualified is defined below;

Qualified ;

• Any engineer that has experience with electrical and mechanical design of lamination equipment.The engineers should be fully aware of all aspects of safety with regards to lamination equipment.

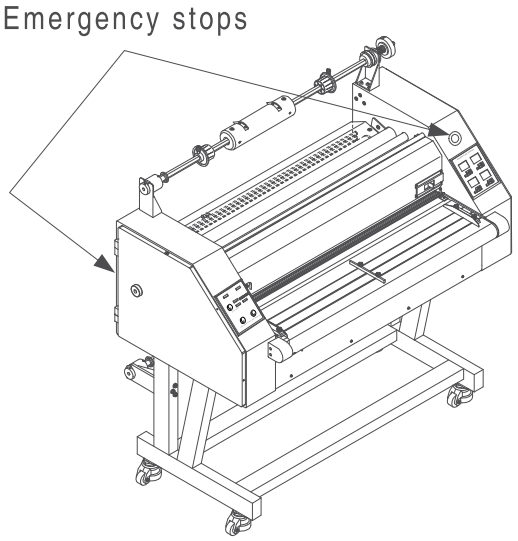
• Any commissioning or service engineer must be of competent nature, trained and qualified to GBC Pro-Tech standards to fulfill that job. This person will have completed and passed the full service training course from GBC Pro-Tech.

• Any GBC Technician, GBC Specialist, and / or GBC Pro-Tech Technician that has been through the GBC Pro-Tech service training course.

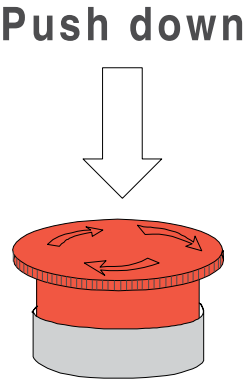


The laminator is equipped with two **EMERGENCY STOPS** (**E-STOP**).One is located above the **TEMPERATURE CONTROL** panel and the second is located above machine **POWER**. Refer to **Figure 1.2.2**

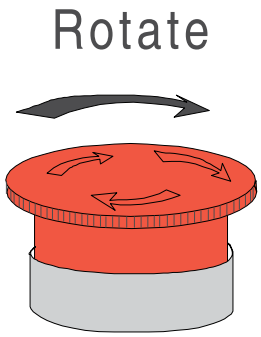
Figure 1.2.2 Emergency stops



To engage the **EMERGENCY STOP** feature, press down. Either of these, when engaged, removes power to the motor.



To continue operation, both **E-STOPS** must be in the up position. To reset the **E-STOP,** twist the button 1/4 turn clockwise.



INFORMATION

The laminator will operate only when all safety latches are in the fully latched position.

1.3 Installation

The following symbols are positioned at various points in **Section 4 Installation.**

CAUTION

Failure to follow the pre-installation check list can result in damage to the laminator.

WARNING

The operating environment must be free of dust, flammable liquids and vapors. You can be injured by inhaling chemical vapors.

INFORMATION

ALL SHIPMENTS ARE EX-WORKS. At our dock, title passes to the buyer. Please review your insurance coverage prior to shipment, as you are responsible for all subsequent freight charges and risks.

WARNING

Vapor build up or stored flammable liquids can cause a fire. Excessive dust can damage the laminator.

INFORMATION

Before signing the Bill of Lading, you should be sure to inspect the crate and / or pallet for signs of damage or missing items; if applicable, make note of this on the Bill of Lading.

CAUTION

Do not locate the laminator where air is blowing directly on the machine. The air flow can cool the rolls unevenly and result in poor quality output.

INFORMATION

Depending on the destination and customer preference, the Falcon 160 may be shipped in various ways. The laminator may arrive shrink wrapped or in a plywood crate on a skid. Please follow the unpacking procedure that pertains to your method of shipment.

WARNING

The Explorer 107 Laminator is a large and heavy piece of equipment. It is necessary to employ LICENSED RIGGERS ONLY to move the laminator. The laminator is not designed to be tipped up or sideways in any way. Such action disturbs the exact alignment of the rolling parts of the machine and requires extensive realignment. You can be crushed or seriously injured.

WARNING

The unpacking process requires at least two people. You can be severely injured, crushed or cause damage to the laminator.

CAUTION

Do not use a knife or other sharp object to remove the shrink wrap from around the laminator. You can cause irreparable damage to the rollers.

CAUTION

A second person must support the side labeled 5 in Figure 4.4.1 It can fall and damage the laminator or cause harm to you and others.

WARNING

Do not attempt to move the laminator across anything other than a flat level surface without trained and qualified riggers. You can be crushed or seriously injured.

INFORMATION

GBC Pro-Tech's warranty does not cover malfunction of the equipment due to mishandling and / or tipping. GBC Pro-Tech bears no responsibility for personal injury or damage due to moving the laminator improperly.

CAUTION

Do not allow the top to fall into the crate. It can damage the laminator.

INFORMATION

About recycling: The crate components can be reused for shipping the laminator again or can be disassembled and the wood and screws recycled. The shrink wrap is not recyclable, so it must be discarded.

INFORMATION

Do not put packing screws on the floor. They can cause problems when trying to roll the laminator into position or you can become injured if stepped on.

WARNING

Do not wear ties, loose fitting clothes or dangling jewelry while operating or servicing the laminator. These items can get caught in the nip and choke you or you can be crushed or burned.

WARNING

If a safety feature is not functioning properly, contact your local service representative immediately

INFORMATION

When the laminator is first turned on, the control panels display the default settings.

Default setting; Cooling Fan = Off, Motor Speed = Off, Top Teflon Roller = 32 °F, Nip Rollers = 32 °F, Bottom Teflon Roller = 32 °F and Sub Heaters = 32 °F.

INFORMATION

When any command is pressed (with the exception of Reverse) on the Operations Control Panel, a "beep" will sound. If the command is held down, the panel will continually "beep".

INFORMATION

Leave the motor speed adjust at 5 to continue with the function check.

INFORMATION

Reverse speed can be controlled by Speed Adjust.

INFORMATION

A second person is needed to assist with the idler tension checks.

INFORMATION

Lower film tension idler: gray rubber covered idler located below the lower cooling fan assembly.

INFORMATION

Upper film tension idler: gray rubber covered idler located above the upper cooling fan assembly.

INFORMATION

When MEAS, HOT or COLD is pressed once, you will hear one "beep", when pressed and held, you will only hear one "beep".

INFORMATION

The handle will stop after making initial contact, then can be turned more to apply pressure and will lock into position.

INFORMATION

When pressing ^ or v, "Beeps" once for every one increment of change.

WARNING

Extreme caution should always be exercised working around the core gripper support, the gripper tabs can cut you!

INFORMATION

Number indicated is an approximate of room temperature. Your display may differ.

WARNING

At no time should the slitter guard be removed! Sharp blades can cut you!

WARNING

Keep hands and fingers clear of the laminator roller nip when changing GAP. You can be CRUSHED or BURNED!

INFORMATION

The large inner dials on the left and right cabinet doors will lower and raise the slitters.

CAUTION

Never leave the rollers in the down position without rolling. Prolonged contact in one area can form flat spots on the rollers.

INFORMATION

The center slitter can not be lowered without lowering the side slitters.

WARNING

Caution should always be exercised when using the rear cut-off blade.
Sharp blade can cut you!

INFORMATION

When any command is pressed (with the exception of Reverse) on the Operations Control Panel, a "beep" will sound. If the command is held down, the panel will continually "beep".

WARNING

Keep hands and fingers away from the path of the rear cut-off blade.
Sharp blade can cut you!

INFORMATION

1 increment on the Motor Speed Adjust is equal to approximately 3.5 ft./ min. (1.1 m/ min.).

1.4 Operations

INFORMATION

Reverse speed can be controlled by Speed Adjust.

The following symbols are positioned at various points in **Section 5 Operations.**

WARNING

Do not wear ties, loose fitting clothes or dangling jewelry while operating or servicing the laminator. These items can get caught in the nip and choke you or you can be crushed or burned.

INFORMATION

Always use the minimum film tension necessary to complete the task.

INFORMATION

When the laminator is first turned on, the control panels display the default settings.

Default setting; Cooling Fan = Off, Motor Speed = Off, Top Teflon Roller = 32 °F, Nip Rollers = 32 °F, Bottom Teflon Roller = 32 °F and Sub Heaters = 32 °F.

INFORMATION

The unit of measurement can be set to display °F or °C.

INFORMATION

It is recommended that you press HOT (HOT) first, then adjust for desired temperature setting.

INFORMATION

"Beeps" once for every one increment of change.

INFORMATION

"Beeps" once for every one increment of change.

WARNING

At these temperatures there is a danger of severe burn if the rollers are touched during set up, operation or servicing.

INFORMATION

When an EMERGENCY STOP is engaged, all motion stops. The nip will not change from the operating setting.

INFORMATION

The Temperature control panel settings are not affected when an E-STOP has been pushed.

INFORMATION

Power to the motor is removed when the safety shield is not in the fully locked position.

WARNING

Extreme caution should always be exercised when removing an unwind shaft, the grippers tabs can cut you!

INFORMATION

For 2-1/4 core film, turning the roll film in the same direction as the gripper tabs while sliding makes loading the film onto the unwind shaft easier.

INFORMATION

Refer to Figure 6.1.1 under Section 6 Applications for unwind direction for Poly-In and Poly-Out films

WARNING

Always use safe and proper lifting practices when lifting heavy objects. You can become seriously injured or crushed.

INFORMATION

The gripper tabs should point in the opposite direction of film rotation.

INFORMATION

Ensure the roll pins are on top. They should not be in the saddle!

CAUTION

Ensure the roll of laminate is loaded properly on the unwind shaft. Exposed adhesive should be facing away from the rollers. This will prevent hours of roll cleaning!

INFORMATION

Use Chart 5.3.1 Film centering chart in Section 5 Operations for measurements.

INFORMATION

If not exactly centered, lateral film adjustment can be made during the webbing process.

INFORMATION

When raising the main roller, the heat platen and the Top Teflon roller (upper heat assembly) moves as well.

WARNING

Keep hands and fingers clear of the laminator roller nip when changing GAP. You can be CRUSHED or BURNED!

WARNING

Keep hands and fingers away from the heating components and the nip of the rollers. You may be CRUSHED or BURNED!

INFORMATION

When lowering the main roller, the heat platen and the Top Teflon roller (upper heat assembly) moves as well.

INFORMATION

Lateral film adjustments can be made while the laminator is in operation.

CAUTION

Never leave the rollers in the down position without rolling. Prolonged contact in one area can form flat spots on the rollers.

INFORMATION

Quality of the output may be affected during a lateral film adjustment.

INFORMATION

Excessive brake tension may cause the output to curl. Always use the minimum brake tension required to complete the task.

INFORMATION

The center slitter can not be lowered without lowering the side slitters.

WARNING

At no time should the slitter guard be removed! Sharp blades can cut you!

INFORMATION

The side slitters can not be raised without raising the center slitter.

CAUTION

Do not webb the laminator with inline slitters in the down position! The leader board can damage the blades.

WARNING

Caution should always be exercised when using the rear cut-off blade. Sharp blade can cut you!

INFORMATION

The large inner dials on the left and right cabinet doors will lower and raise both, the left and right, sliiters.

CAUTION

Stop the laminator before using the rear cut-off blade. Moving material can damage the rear cut-off blade!

WARNING

Keep hands and fingers away from the path of the rear cut-off blade. Sharp blade can cut you!

INFORMATION

Locator latches on the pressure plate are not associated with an interlock switch. The laminator will operate without the pressure plate installed.

WARNING

Keep hands and fingers away from the bottom of the rear cut-off blade. Sharp blade can cut you!

1.5 Applications

The following symbols are positioned at various points in **Section 6 Applications.**

DANGER

At no time should you attempt to over ride any of the safety latches on the laminator.

WARNING

Do not wear ties, loose fitting clothing or dangling jewelry while operating or servicing the laminator. These items can get caught in the nip and choke you or you can be crushed or burned.

INFORMATION

The laminator will operate only when all safety latches are in the fully latched position.

INFORMATION

Proceed to Webbing while waiting for the heaters to come up to temperature.

CAUTION

Never leave the rollers in the down position without rolling. Prolonged contact in one area can form flat spots on the rollers.

WARNING

Extreme caution should always be exercised working around the core gripper support, the grippers tabs can cut you!

WARNING

The following steps are performed while the laminator is HOT! Avoid contact with the heating components!

CAUTION

Ensure the roll of laminate is loaded properly on the unwind shaft. Exposed adhesive should be facing away from the heated components. This will prevent hours of cleaning!

INFORMATION

Refer to Figure 6.1.1 under Section 6 Applications for unwind direction for Poly-In and Poly-Out films

INFORMATION

For 2-1/4 core film, turning the roll film in the same direction as the gripper tabs while sliding makes loading the film onto the unwind shaft easier.

INFORMATION

The gripper tabs should point in the opposite direction of film rotation.

WARNING

Always use safe and proper lifting practices when lifting heavy objects. You can become seriously injured or crushed.

INFORMATION

Ensure the roll pins are on top. They should not be in the saddle!

WARNING

Caution should always be exercised when using the laminator with the safety shields raised.
You can be seriously HURT or INJURED!

INFORMATION

Use Chart 5.3.1 Film centering chart in Section 5 Operations for measurements.

DANGER

At no time should you attempt to over ride any of the safety latches on the laminator.

INFORMATION

If not exactly centered, lateral film adjustment can be made during the webbing process.

INFORMATION

The laminator will operate only when all safety latches are in the fully latched position.

WARNING

The following steps are performed while the laminator is HOT! Avoid contact with the heating components!

INFORMATION

The threading card will guide the two films into the pull rollers.

INFORMATION

Excessive brake tension may cause the output to curl. Always use the minimum brake tension required to complete the task.

WARNING

The following steps are performed while the laminator is HOT! Avoid contact with the heating components!

INFORMATION

The laminator will operate only when all safety latches are in the fully latched position.

CAUTION

Do not use an open blade to cut the web near the rollers. You can put cuts into the rollers!

CAUTION

Never leave the rollers in the down position without rolling. Prolonged contact in one area can form flat spots on the rollers.

INFORMATION

The laminator will operate only when all safety latches are in the fully latched position.

INFORMATION

The laminator must be heated for this method of webbing.

WARNING

Keep hands and fingers away from the path of the rear cut-off blade. Sharp blade can cut you!

1.6 Troubleshooting

WARNING

Caution should always be exercised when using the rear cut-off blade.
Sharp blade can cut you!

The following symbols are positioned at various points in **Section 7 Troubleshooting.**

WARNING

Caution should always be exercised when using the laminator with the safety shield raised.
You can be seriously HURT or INJURED!

WARNING

Do not wear ties, loose fitting clothes or dangling jewelry while operating or servicing the laminator. These items can get caught in the nip and choke you or you can be crushed or burned.

WARNING

Extreme caution should be exercised when gripping the film near the heating components.

INFORMATION

For optimal temperature settings of various laminates, contact your supplier or sales representative.

WARNING

Caution should always be exercised when using the laminator with the safety shield raised.
You can be seriously HURT or INJURED!

1.7 Maintenance

INFORMATION

Locator latches on the pressure plate are not associated with an interlock switch. The laminator can operate without the pressure plate installed.

The following symbols are positioned at various points in **Section 8 Maintenance.**

INFORMATION

The laminator will operate only when all safety latches are in the fully latched position.

WARNING

Do not wear ties, loose fitting clothes or dangling jewelry while operating or servicing the laminator. These items can get caught in the nip and choke you or you can be crushed or burned.

INFORMATION

Rollers only turn in reverse while depressing REVERSE

INFORMATION

Improper maintenance, can result in poor output quality.

INFORMATION

Below is a recommended maintenance schedule. Before performing any of the steps listed, read through the procedures first. Please follow the instructions pertaining to the step you are performing.

ELECTRICAL SHOCK

Remove power from the laminator before servicing. You can be severely shocked, killed or cause a fire.

CAUTION

Harden adhesive deposits on the rollers can cause damage to the rollers.

CAUTION

The following procedure is performed while the laminator is HOT! Use extreme caution!

CAUTION

Do NOT pick or pull heat activated adhesive off the rolls when they are cold. You can cause irreparable damage to the laminating rolls.

WARNING

Heating components are HOT! You can become severely burned !

INFORMATION

The most efficient time to clean the rollers is after a lamination process is completed.

CAUTION

Never clean the rollers with sharp or pointed objects. You may put irreparable cuts into the rollers.

INFORMATION

The laminator will operate only when all safety latches are in the fully latched position.

INFORMATION

If the rolls are heated, proceed to Removing adhesive build up..

INFORMATION

Rollers only turn in reverse while depressing REVERSE .

WARNING

Caution should always be exercised when using the laminator with the safety shields raised. You can be seriously HURT or INJURED!

INFORMATION

The upper nip roller as well as the Teflon rollers are free spinning.

CAUTION

Excessive pressure can destroy the silicone layer by pressing to hard or scrubbing too long in one spot.

ELECTRICAL SHOCK

Remove power from the laminator before cleaning. You can be severely shocked, killed or cause a fire.

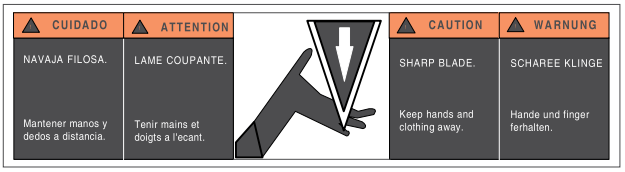
INFORMATION

Locator latches on the pressure plate are not associated with an interlock switch. The laminator will operate without the pressure plate installed.

ELECTRICAL SHOCK

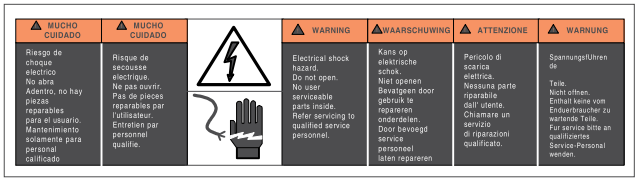
Do not use liquid or aerosol cleaners on the laminator. Do not spill liquid of any kind on the laminator. You can be severely shocked, killed or cause a fire. Use only a damp cloth for cleaning unless other wise specified.

1.8 Label Explanations

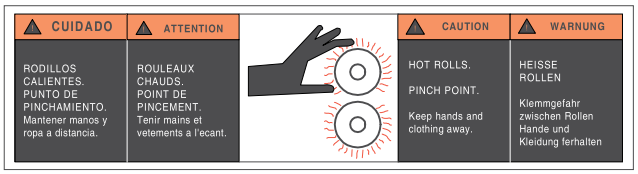


Posted at various locations on the Explorer 107 Laminator are important safety labels. **Pay careful attention to these labels at all times! Figure 1.8.1** illustrates the location of each of these labels.

(1) SHARP BLADE: Sharp blade comes down. Keeps hands and fingers away.

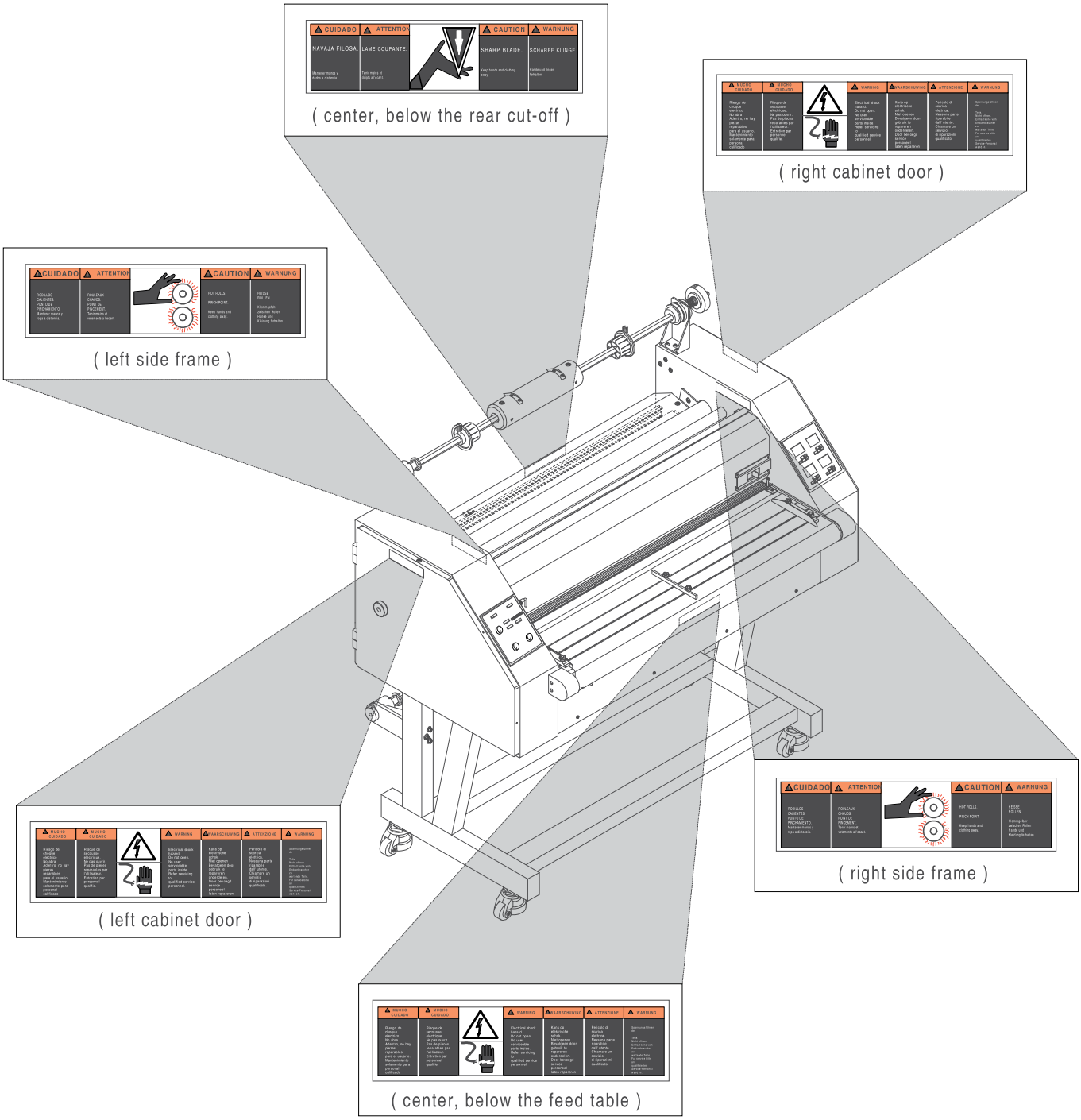


(3) ELECTRICAL SHOCK: Electrical shock hazard. Electrical voltage behind panel.



(2) Roller Pinch Point: Keep hands and fingers away. You may be crushed and/ or burned.

Figure 1.8.1 Label locations



Section 2 Warranty

GBC Pro-Tech warrants the equipment sold is free from defects in material and workmanship for a period of **one (1) year parts and 90 days labor** from the date of installation. This warranty is the only warranty made by GBC Pro-Tech and connot be modified or amended.

GBC Pro-Tech's sole and exclusive liability and the customer's sole and exclusive remedy under this warranty shall be, at GBC Pro-Tech's option, to repair or replace any such defective part or product. These remedies are only available if GBC Pro-Tech's examination of the product discloses to GBC Pro-Tech's satisfaction that such defects actually exist and were not caused by misuse, neglect, attempt to repair, unauthorized alteration or modification, incorrect line voltage, fire, accident, flood, or other hazard.

2.1 Limited Warranty

This warranty specifically does not cover damage to the laminating rollers caused by knives, razor blades, other sharp objects, failure caused by adhesives or improper use of the machine. Warranty repair or replacement does not extend the warranty beyond the initial one year period from the date of delivery.

CAUTION

Unauthorized customer alterations will void this warranty.

THE WARRANTY MADE HEREIN IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ANY WARRANTY OR MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. GBC PRO-TECH WILL NOT BE LIABLE FOR PROPERTY DAMAGE OR PERSONAL INJURY (UNLESS PRIMARILY CAUSED BY ITS NEGLIGENCE), LOSS OF PROFIT OR OTHER INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE EQUIPMENT.

2.2 Exclusions to the Warranty

This warranty specifically does not cover;

1. Damage to the laminating rolls caused by knives, razor blades, other sharp objects or failure caused by adhesives.

2. Damage to the machine caused by lifting, tilting and/or any attempt to position the machine other than rolling on the installed castors on even surfaces.

3. Improper use of the machine.

4. Damage due from unqualified person(s) servicing the machine.

Qualified

• Any engineer that has experience with electrical and mechanical design of lamination equipment.The engineers should be fully aware of all aspects of safety with regards to lamination equipment.

• Any commissioning or service engineer must be of competent nature, trained and qualified to GBC Pro-Tech standards to fulfill that job. This person will have completed and passed the full service training course from GBC Pro-Tech.

• Any GBC Technician, GBC Specialist, and / or GBC Pro-Tech Technician that has been through the GBC Pro-Tech service training course.

Section 3: Specifications

Specifications provide all of the technical data for the Explorer 107 Laminator.

Section 3.1 General

Description :

A high speed laminator for the graphic arts professional as well as the manufacturer who produces promotional pieces in-house. A laminator with the capability to run even heavy gauge films at higher speeds without scratching.

Features :

- Tri-Plex heating
- Independent control of each heating surface
- Top and bottom electronic tension controls
- Fan cooled component cabinets
- Slip clutch tension for the pull rollers
- Easy to use computer interface controls
- LCD temperature displays for each heating surface

Applications :

- Encapsulation - Promotional materials, posters, counter cards, POP displays, calendars, instructional displays, phone/ debit cards, blueprints, menus, placemats, maps, flipcharts, etc.

Section 3.2 Consumables

Film Types :

- Poly-in films
- Poly-out films

Film Diameters :	• Up to a 20 in. outside roll diameter (51 cm)
Core Size :	• 2-1/4 in. adapters included (57 mm) • 3 in. core standard (76 mm)
Film Widths :	• 42 in. Thermal films (107 cm)
Paper Widths :	• 42 in. maximum paper width (107 cm)

Section 3.3 Function

Speed :	• 0 - 35 fpm (0 - 10.7 m / min)
Motor :	• 2-1/4 horse power drive motor • Bi-directional D.C. motor
Heating Capabilities :	• 32°F - 290°F (0°C - 143°C)
Controls :	• Operations control panel • Temperature control panel
Roll Design :	• High release silicone nip rollers • High release silicone pull rollers • Teflon coated pre-heat rollers

Section 3.4 Electrical

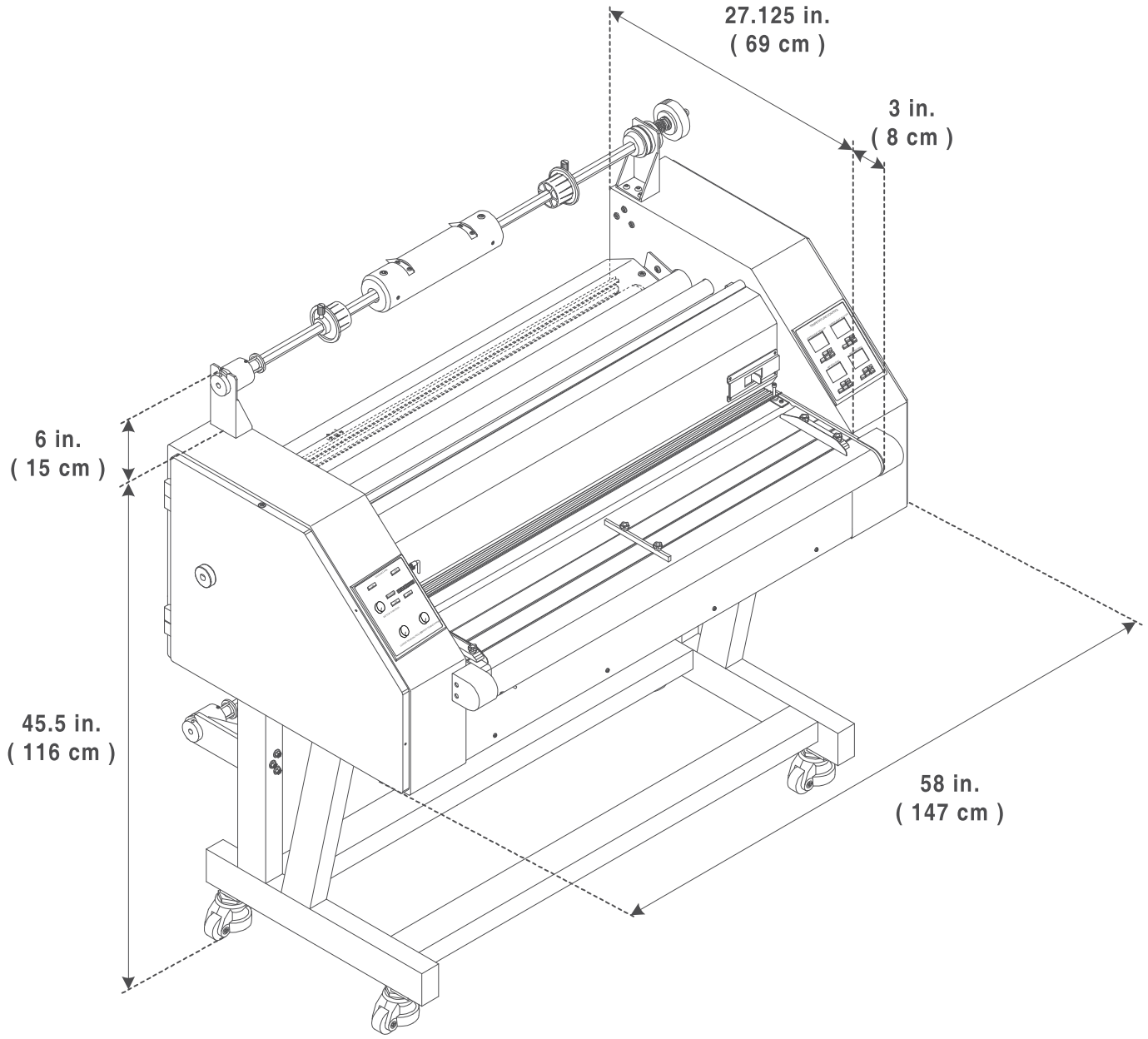
United States :	• 230 - 240 VAC, 50/60 Hz, single phase, 50 amps.

B.T.U. output :	• 23549 B.T.U. / hour
Heater Wattages :	• Heat platen = 872 W • Teflon rollers heater = 1040 W (55.4 ohms) • Nip roller heater = 1553 W (37.1 ohms)
Amperage Draw :	• Drive motor = 3.3 amps • Fan motor = 0.5 amps • Motors and heaters = 13 amps
D/C Voltage used :	• 36 vdc motor voltage • 24 vdc fan motor
A/C Voltage used:	• 230 vac (minimum)

Section 3.5 Dimensions

Weight :	• Crated : 600 lbs. (272 kg.) • Uncrated : 470 lbs. (213 kg.)
Dimensions :	• Crated : 90 in. (H) x 72 in. (W) x 46 in. (D) (229 cm (H) x 183 cm (W) x 107 cm (D) • Uncrated : 52 in. (H) x 60 in. (W) x 30 in. (D) (132 cm (H) x 152 cm (W) x 76 cm (D) Refer to **Figure 3.1.1**
Nip Height :	35.75 in. (91 cm)

Figure 3.1.1 Dimensions



Section 4 Installation

GBC Pro-Tech is committed to a program of ongoing product improvement. As a result, we are providing these instructions so that you can insure that your new Explorer 107 Laminator is properly and securely unpacked, moved, and installed.

Before an Explorer 107 Laminator can be installed, there are a few requirements that must be met. Make certain that each of the requirements listed in the following pre-installation checklist are met before beginning installation.

CAUTION

Failure to follow the pre-installation check list can result in damage to the laminator.

4.1 Pre-installation

- ☐ Are doorways and hallways wide eneough for the laminator to be moved to the installation site?
- ☐ Is there ample room for the laminator?
- ☐ A work area must be established that allows for unrestricted movement around the laminator and provides space for efficient material flow. **Figure 4.1.3** illustrates a typical machine area layout.
- ☐ Is the environment appropriate for the laminator? The laminator requires a clean, dust and vapor free environment to operate properly. It must not be located where there is air blowing directly on the machine.
- ☐ Have you contacted a certified electrician to install a receptacle for the laminator and ensure that adequate power is being supplied, having the appropriate capacity, over current protection and safety lockouts are available.

WARNING

The operating environment must be free of dust, flammable liquids and vapors. You can be injured by inhaling chemical vapors.

WARNING

Vapor build up or stored flammable liquids can cause a fire. Excessive dust can damage the laminator.

CAUTION

Do not locate the laminator where air is blowing directly on the machine. The air flow can cool the rollers unevenly and result in poor quality output.

☐ The laminator requires 220 to 240 vac, 50/60 Hz, 30 amps, Single Phase.

WARNING

The Explorer 107 Laminator is a large and heavy piece of equipment. It is necessary to employ LICENSED RIGGERS ONLY to move the laminator. The laminator is not designed to be tipped up or sideways in any way. Such action disturbs the exact alignment of the rolling parts of the machine and requires extensive realignment. You can be crushed or seriously injured.

Figure 4.1.1 Plug

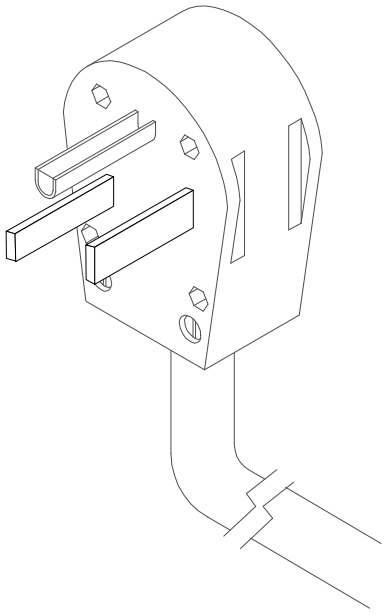


Figure 4.1.2 Suggested receptacle

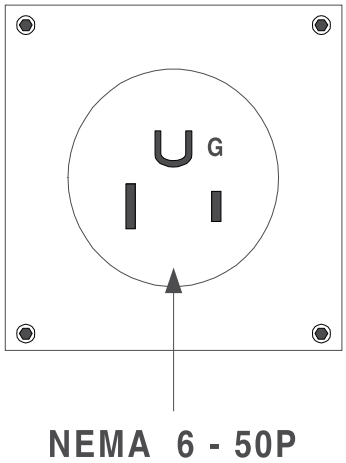
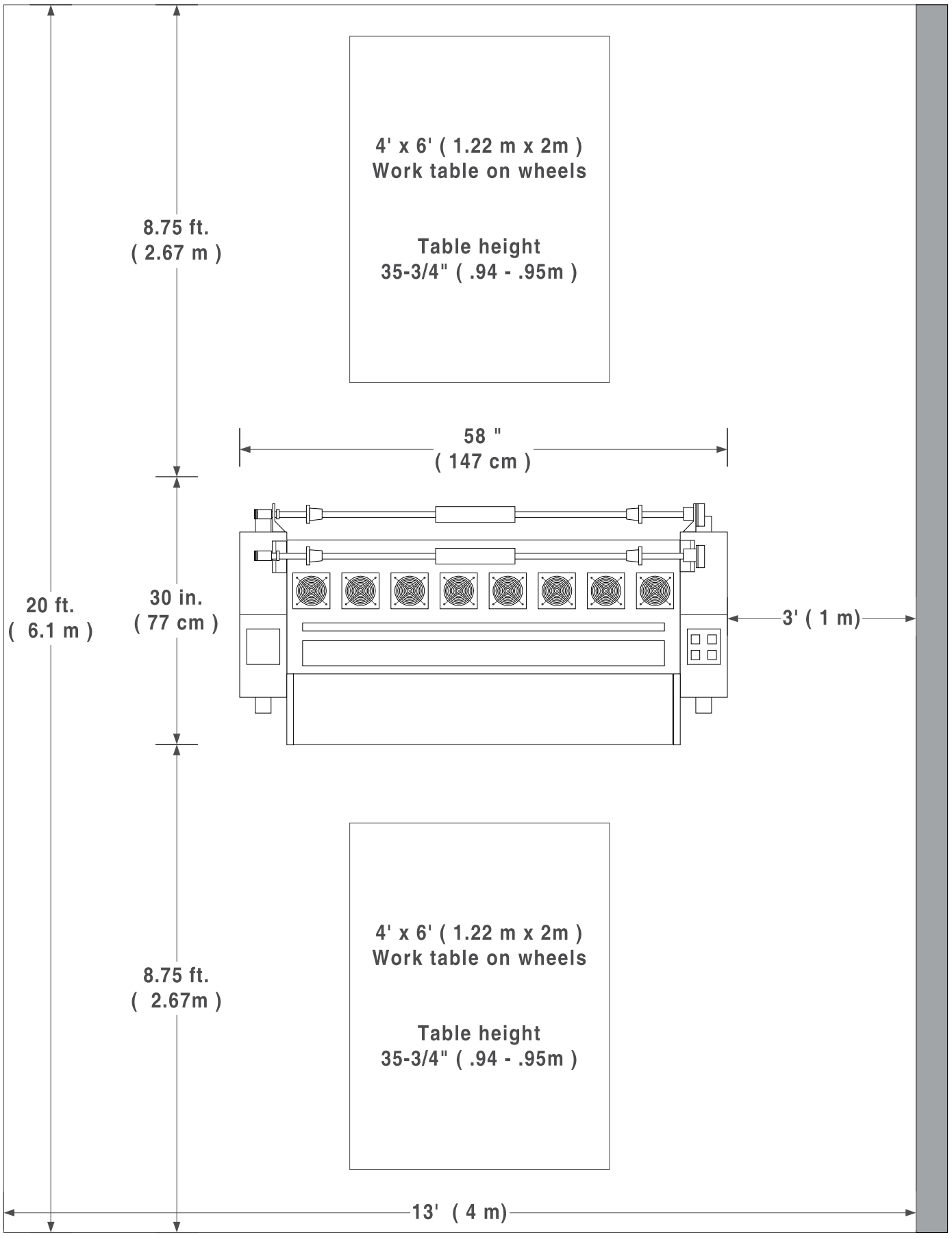


Figure 4.1.3 Suggested Floor Layout



4.2 Unpacking

With regards to your shipping methods, use one of the following procedure described to safely and properly unwrap / uncrate your laminator.

INFORMATION

ALL SHIPMENTS ARE EX-WORKS. At our dock, title passes to the buyer. Please review your insurance coverage prior to shipment, as you are responsible for all subsequent freight charges and risks.

INFORMATION

Before signing the Bill of Lading, you should be sure to inspect the crate and / or pallet for signs of damage or missing items; if applicable, make note of this on the Bill of Lading.

INFORMATION

Depending on the destination and customer preference, the Explorer 107 may be shipped in various ways. The laminator may arrive shrink wrapped or in a plywood crate on a skid. Please follow the unpacking procedure that pertains to your method of shipment.

WARNING

The unpacking process requires at least two people. You can be severely injured, crushed or cause damage to the laminator.

4.3 Shrink Wrapped

a) Inspect the machine for any obvious shipping damages upon receipt.

b) Carefully unwrap the shrink wrap from around the laminator.

CAUTION

Do not use a knife or other sharp object to remove the shrink wrap from around the laminator. You can cause irreparable damage to the rollers.

c) With another person, carefully wheel your Explorer 107 Laminator to the installation site.

WARNING

Do not attempt to move the laminator across anything other than a flat level surface without trained and qualified riggers. You can be crushed or seriously injured.

4.4 Crated

Tools required

- # 2 Phillips head screwdriver
- Large adjustable wrench
- Crow bar
- A second person

To uncrate the laminator

a) Remove the top of the crate and then the sides in the order shown in **Figure 4.4.1**

CAUTION

Do not allow the top to fall into the crate. It can damage the laminator.

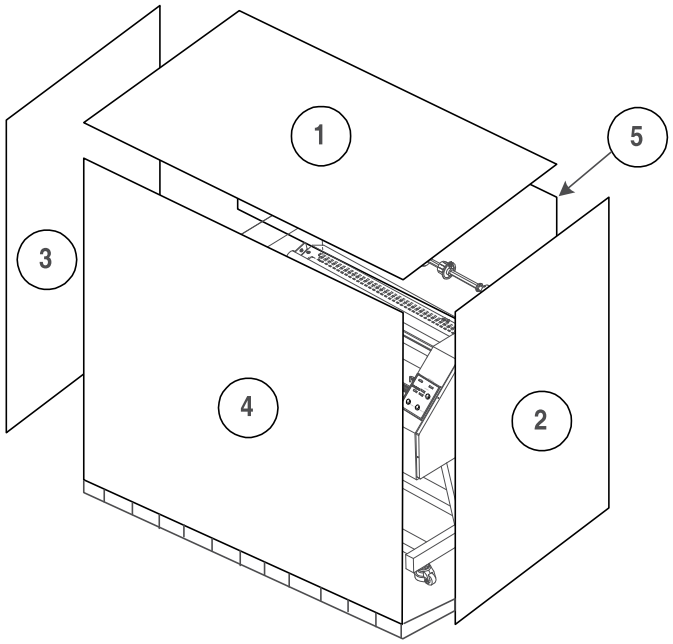
INFORMATION

Do not put packing screws on the floor. They can cause problems when trying to roll the laminator into position or you can become injured if stepped on.

CAUTION

A second person must support the side labeled 5 in Figure 4.4.1 It can fall and damage the laminator or cause harm to you and others.

Figure 4.4.1 Disassembling of the crate



Removing the shrink wrap

a) Gently unwrap the shrink wrap from around the laminator.

CAUTION

Do not use a knife or other sharp object to remove the shrink wrap from around the laminator. You can cause irreparable damage to the rollers.

Moving the laminator

a) Have the laminator lifted off the skid and placed on the floor by licensed riggers.

WARNING

Do not attempt to move the laminator across anything other than a flat level surface without trained and qualified riggers. You can be crushed or seriously injured.

WARNING

The Explorer 107 Laminator is a large and heavy piece of equipment. It is necessary to employ LICENSED RIGGERS ONLY to move the laminator. The laminator is not designed to be tipped up or sideways in any way. Such action disturbs the exact alignment of the rolling parts of the machine and requires extensive realignment. You can be crushed or seriously injured.

INFORMATION

GBC Pro-Tech's warranty does not cover malfunction of the equipment due to mishandling and / or tipping. GBC Pro-Tech bears no responsibility for personal injury or damage due to moving the laminator improperly.

b) Remove any plastic strapping and/or packing paper taped to the machine.

CAUTION

Do not use a knife or other sharp object to remove the shrink wrap from around the laminator. You can cause irreparable damage to the rollers.

c) Move all packing materials to a safe distance from the laminator and dispose of properly.

d) Use two people to carefully roll the laminator to the desired location.

INFORMATION

About recycling: The crate components can be reused for shipping the laminator again or can be disassembled and the wood and screws recycled. The shrink wrap is not recyclable, so it must be discarded.

e) Use **Figure 4.1.1** for the suggested floor layout.

4.5 Safety check

The safety check will ensure that all safety devices and interlock switches are functioning properly.

WARNING

Do not wear ties, loose fitting clothes or dangling jewelry while operating or servicing the laminator. These items can get caught in the nip and choke you or you can be crushed or burned.

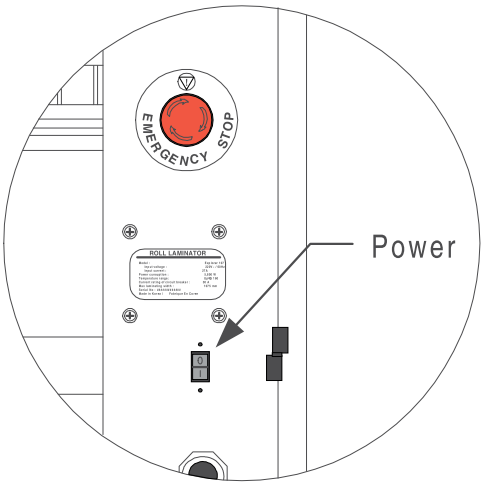
WARNING

If a safety feature is not functioning properly, contact your local service representative immediately

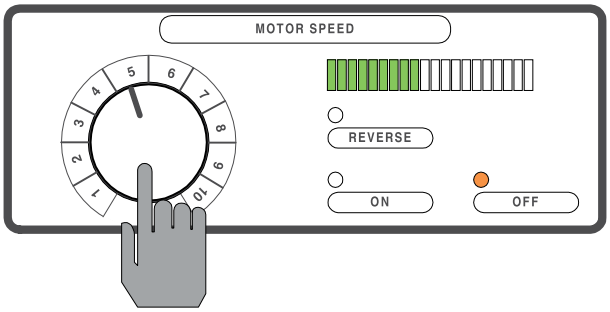
Feed table

a) Ensure an **E-Stop** is not depressed. If depressed, unlatch the **E-Stop**.

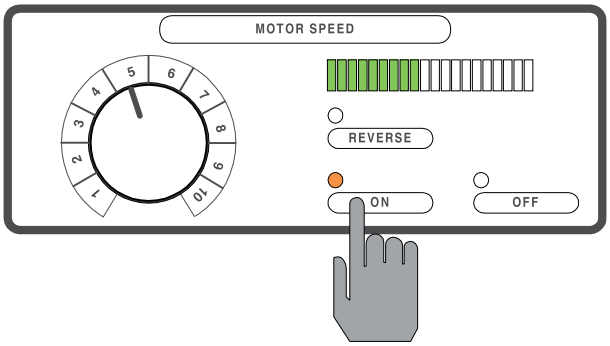
b) Press **POWER** to **" I "** .



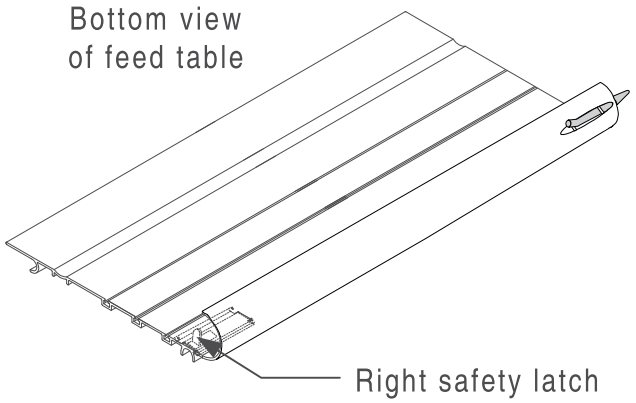
c) Rotate **SPEED** to " 5 ".



c) Press ON .

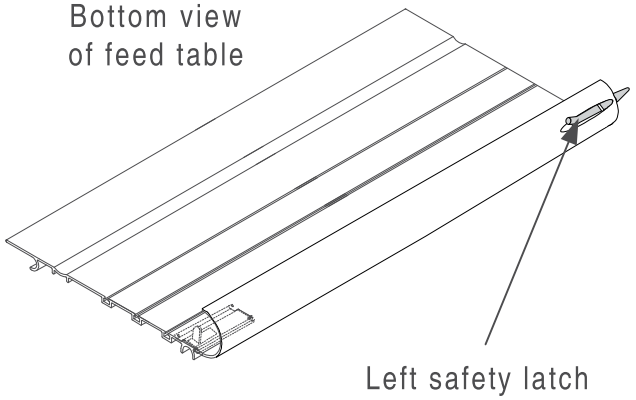


d) Under the right side of the feed table, slide the right safety latch to the left. Bottom rollers stop.



e) Slide the right safety latch to the right into the interlock, the bttom rollers begin turning.

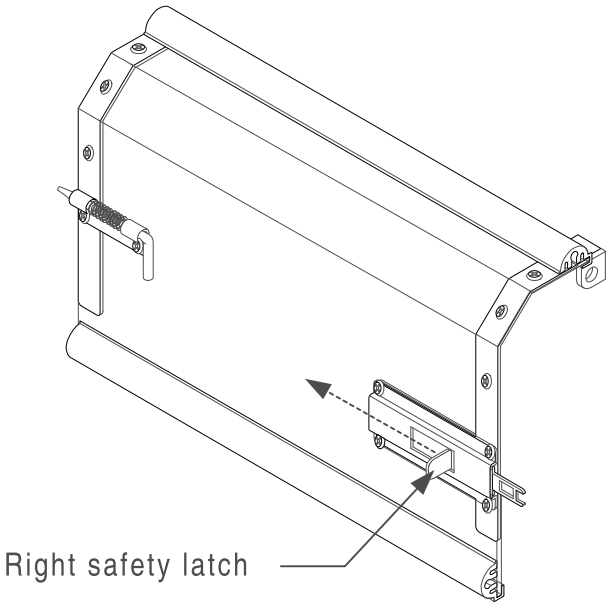
f) Pull the left safety latch to the right. The bottom rollers stop turning



g) Release the left safety latch. The bottom rollers begin turning.

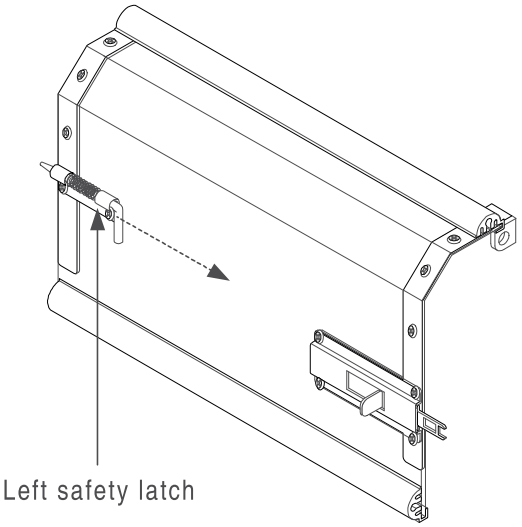
Front safety shield

a) Slide the right safety latch of the front safety shield to the left. The bottom rollers stop turning.



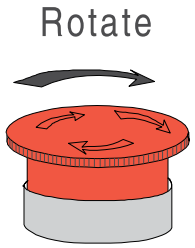
b) Slide the right safety latch to the right into the interlock, the bttom rollers begin turning.

c) Pull the left safety latch to the right. The bottom rollers stop turning

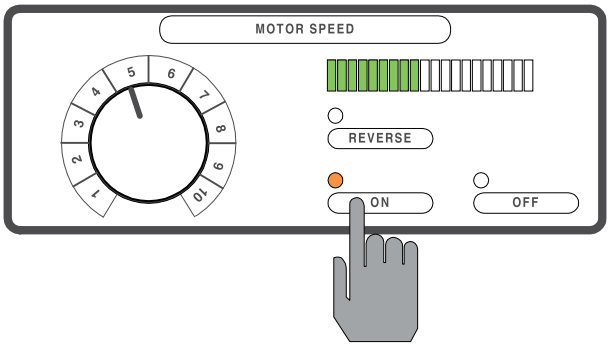


d) Release the left safety latch. The bottom rollers begin turning.

b) Rotate the E-STOP clockwise to reset.

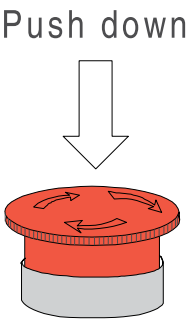


c) Press ON . Bottom rollers begin turning.

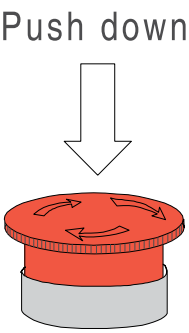


Emergency stops

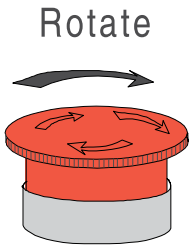
a) Press the front emergency stop **(E-STOP)** down. The bottom rollers stop turning.



d) Press the rear **E-STOP** down. The bottom rollers stop turning.



e) Rotate the **E-STOP** clockwise to reset.



4.6 Control panel check

INFORMATION

When the laminator is first turned on, the control panels display the default settings.

Default setting; Cooling Fan = Off, Motor Speed = Off, Top Teflon Roller = 32 °F, Nip Rollers = 32 °F, Bottom Teflon Roller = 32 °F and Sub Heaters = 32 °F.

The control panels should be checked to ensure all controls function properly.

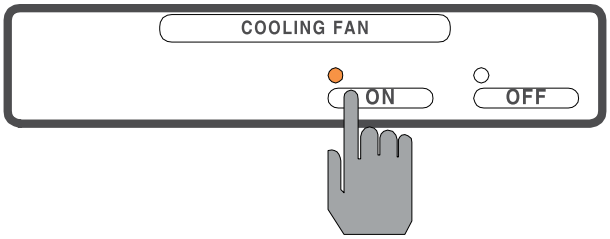
For a detailed explanation of the control panels, refer to **Section 5 Operations**.

Operations Control panel

INFORMATION

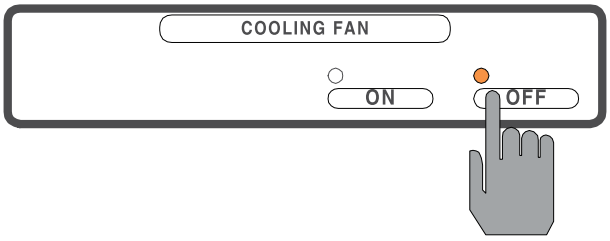
When any command is pressed (with the exception of Reverse) on the Operations Control Panel, a "beep" will sound. If the command is held down, the panel will continuously "beep".

a) Press ON under **COOLING FAN**.



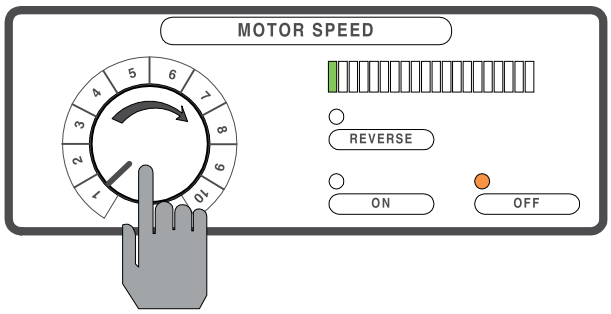
- Cooling fans turn on.

b) Press OFF under **COOLING FAN**.



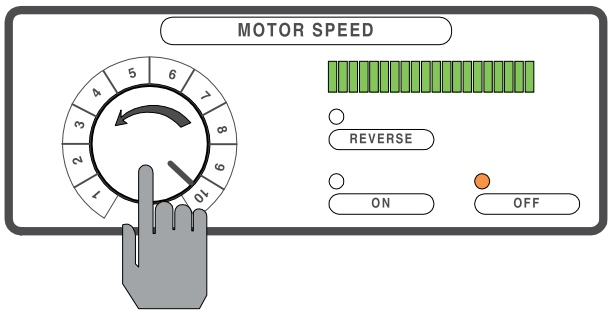
- Cooling fans turn off.

c) Rotate the motor speed adjust clockwise under **MOTOR SPEED**.



- Motor speed indicator illuminates accordingly.

d) Rotate the motor speed adjust counter clockwise under **MOTOR SPEED**.

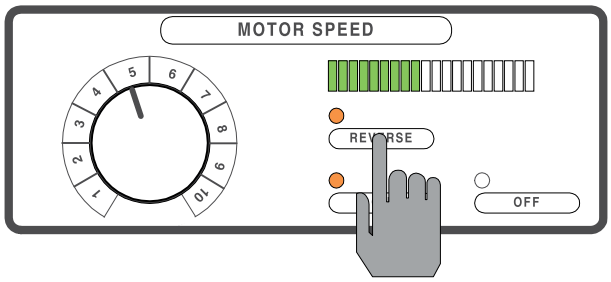


- Motor speed indicator de-illuminates accordingly.

INFORMATION

Leave the motor speed adjust at 5 to continue with the function check.

e) Press and hold REVERSE under **MOTOR SPEED** then release.

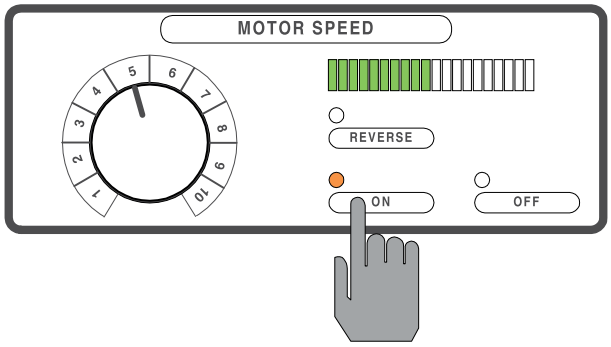


- Bottom rollers turn in reverse only when pressed.

INFORMATION

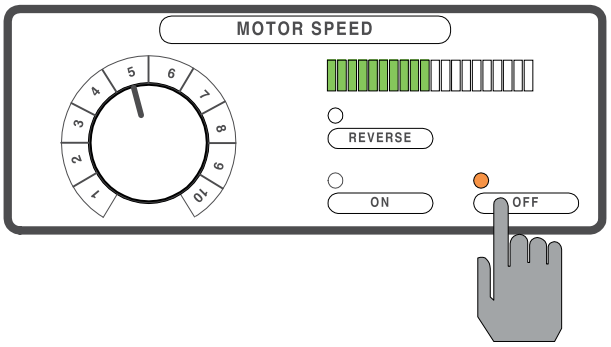
Reverse speed can be controlled by Speed Adjust.

f) Press ON under **MOTOR SPEED**.



- Bottom rollers turn in a forward direction.

g) Press OFF under **MOTOR SPEED**.

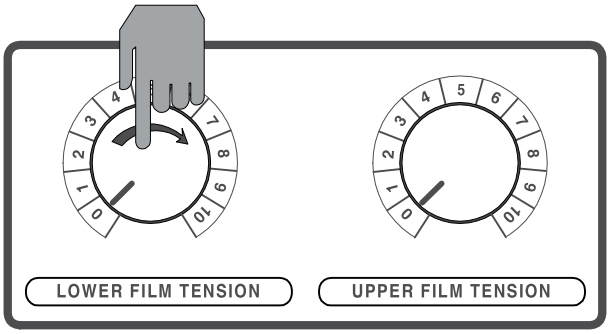


- Bottom rollers stop turning.

INFORMATION

A second person is needed to assist with the idler tension checks.

h) One person slowly rotates the lower film tension adjust fully clockwise.

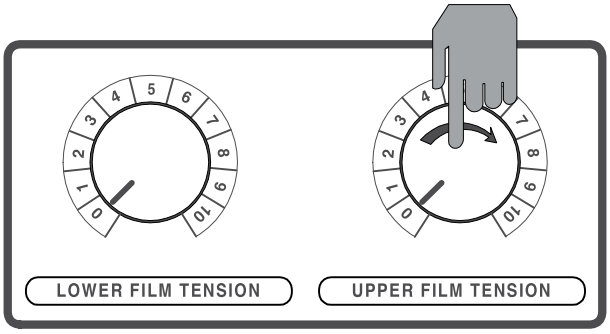


- The second person is turning the lower film tension idler from the rear position of the laminator and can feel an increase in resistance while turning.

INFORMATION

Lower film tension idler: gray rubber covered idler located below the lower cooling fan assembly.

i) One person slowly rotates the upper film tension adjust fully clockwise.



- The second person is turning the upperr film tension idler from the rear position of the laminator and can feel an increase in resistance while turning.

INFORMATION

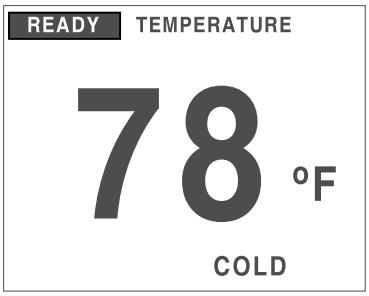
Upper film tension idler: gray rubber covered idler located above the upper cooling fan assembly.

Temperature control panel

- Temperature display shows actual temperature of the related component, (room temperature) for two seconds.

INFORMATION

When MEAS, HOT or COLD is pressed once, you will hear one "beep", when pressed and held, you will only hear one "beep".



INFORMATION

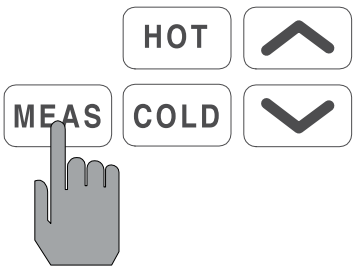
When pressing ^ or v, "Beeps" once for every one increment of change.

INFORMATION

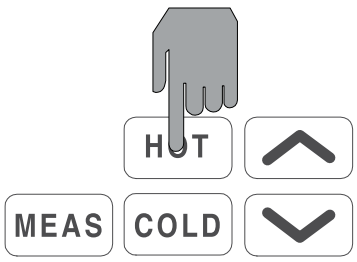
Number indicated is an approximate of room temperature. Your display may differ.

Perform each of the following steps for each heater controller. (Top Teflon Roller, Nip Roller, Bottom Teflon Roller and Sub Heaters)

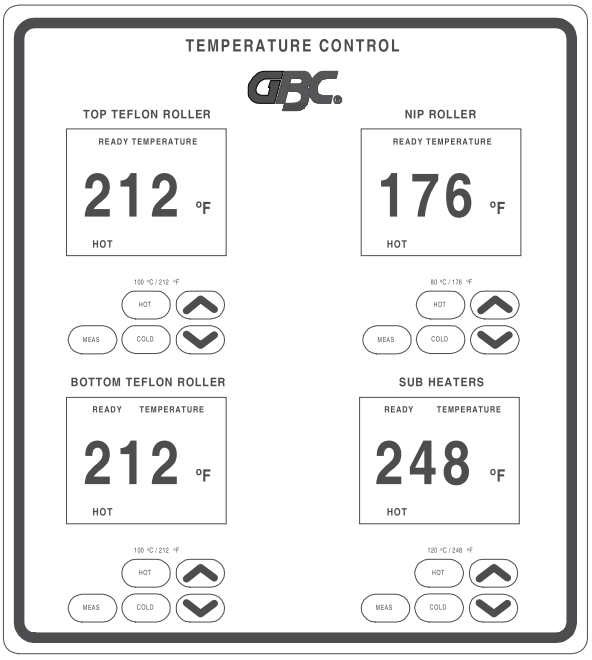
a) Press MEAS .



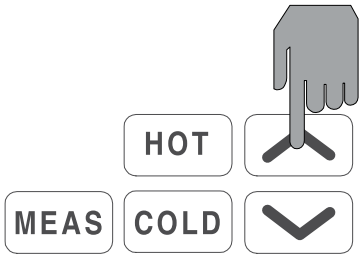
b) Press HOT .



- Top Teflon Roller indicates 212 °F (100 °C), Nip Roller indicates 176 °F (80 °C), Bottom Teflon Roller indicates 212 °F (100 °C) and Sub Heaters indicates 248 °F (120 °C) in the temperature displays and **COLD** changes to **HOT**.



c) Press ^ five times.

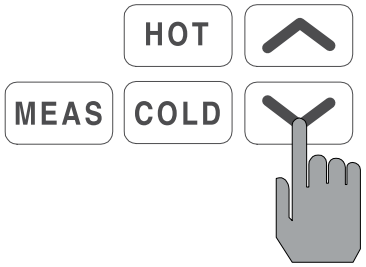


- The temperature display will increase in single increments for each press.

INFORMATION

When pressing ^ or v, "Beeps" once for every one increment of change.

d) Press v five times.

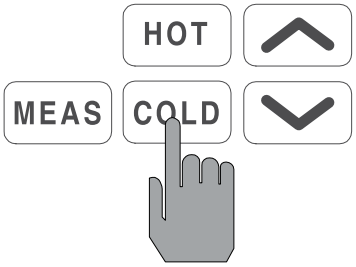


- The temperature display will decrease in single increments for each press.

INFORMATION

When pressing ^ or v, "Beeps" once for every one increment of change.

e) Press COLD .



- All temperature displays will revert to 32 °F (0 °C) and **HOT** reverts to **COLD**.

4.7 Main roller handle

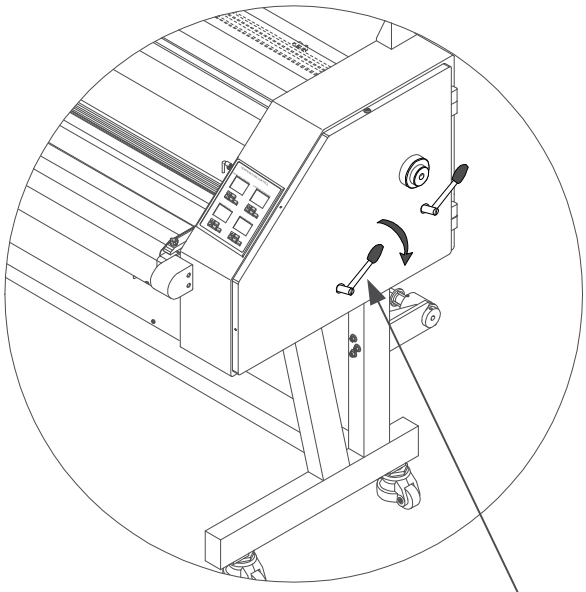
WARNING

Keep hands and fingers clear of the laminator roller nip when changing GAP. You can be CRUSHED or BURNED!

CAUTION

Never leave the rollers in the down position without rolling. Prolonged contact in one area can form flat spots on the rollers.

a) Turn the main roller handle fully clockwise.



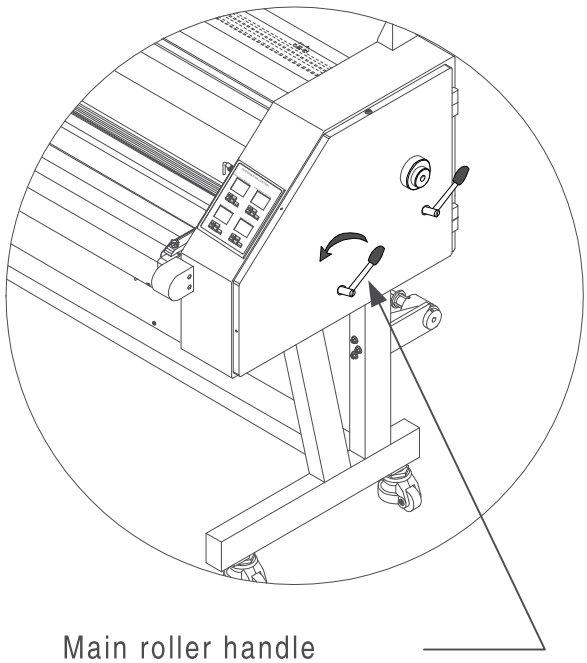
Main roller handle

INFORMATION

The handle will stop after making initial contact, then can be turned more to apply pressure and will lock into position.

- The upper main roller lowers to make contact with the bottom main roller.

b) Turn the main roller handle fully counter clockwise.



Main roller handle

- The upper main roller raises as it separates from the bottom main roller.

4.8 Pull roller handle

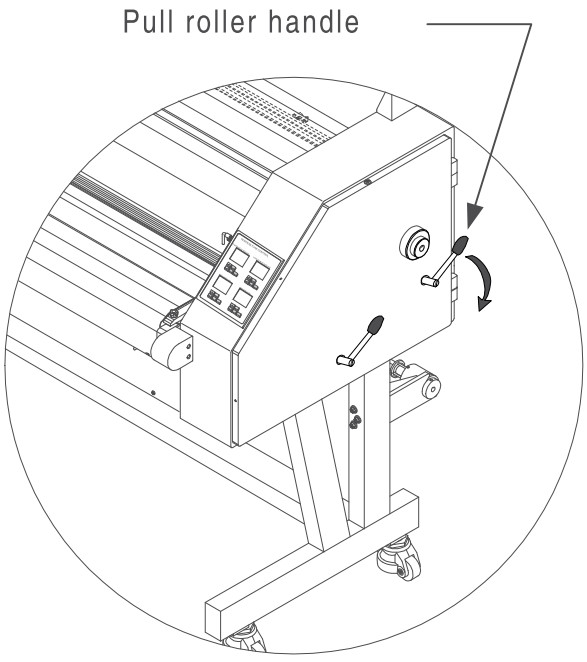
WARNING

Keep hands and fingers clear of the laminator roller nip when changing GAP. You can be CRUSHED!

CAUTION

Never leave the rollers in the down position without rolling. Prolonged contact in one area can form flat spots on the rollers.

a) Turn the pull roller handle fully clockwise.

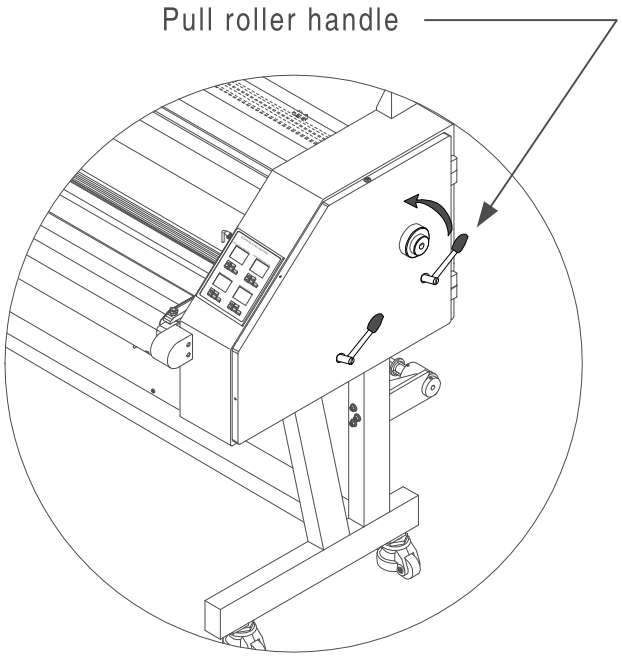


INFORMATION

The handle will stop after making initial contact, then can be turned more to apply pressure and will lock into position.

- The upper pull roller lowers to make contact with the bottom pull roller.

b) Turn the pull roller handle fully counter clockwise.



- The upper pull roller raises as it separates from the bottom pull roller.

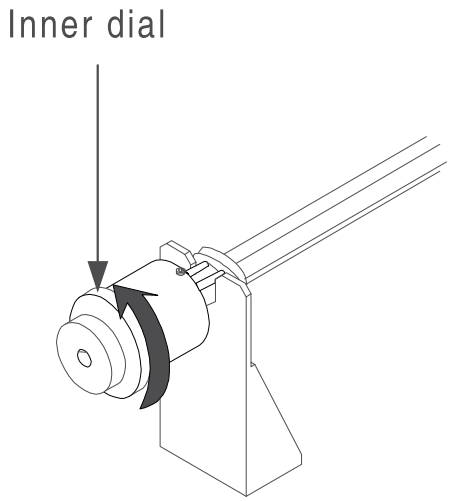
4.9 Lateral film adjustment

Perform each of the following steps for the upper and lower unwind shaftswhile standing to the left of the front operating position.

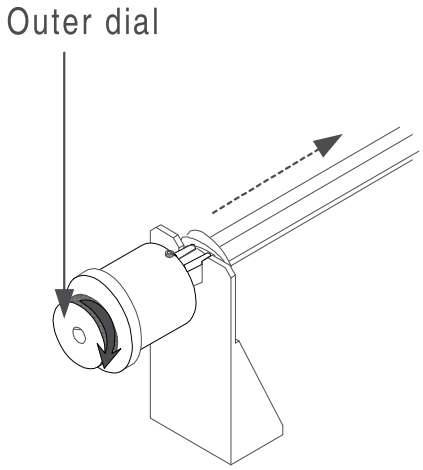
Illustrations are for the upper unwind. The lower unwind is identical to the upper unwind withthe exception of the saddle for the lateral film adjustment assembly.

For a detailed explanation of the lateral film adjustments, refer to **Section 5.4 Lateral film adjustmen**t.

a) Be sure the large inner dial is turned fully counterclockwise.

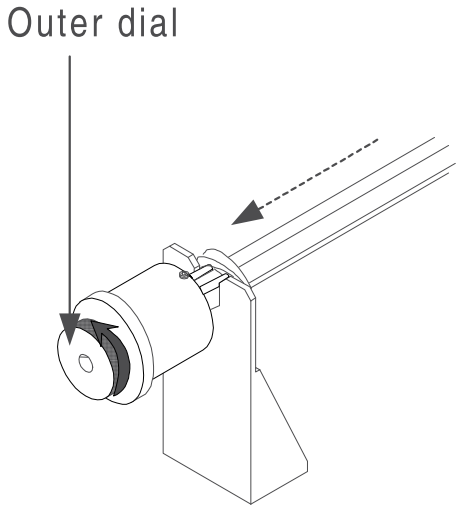


b) Rotate the small outer dial clockwise.



- The unwind shaft moves towards the right of the laminator.

c) Rotate the small outer dial counterclockwise.



- The unwind shaft moves towards the left of the laminator.

4.10 Film brake adjustment

Perform each of the following steps for the upper and lower unwind shaftswhile standing to the right of the front operating position.

Illustrations are for the upper unwind. The lower unwind is identical to the upper unwind withthe exemption of the saddle for the film brake adjustment assembly.

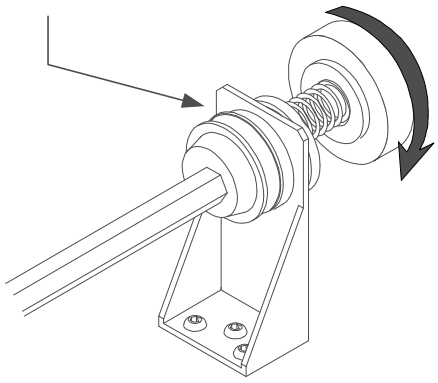
For a detailed explanation of the film brake adjustment, refer to **Section 5.5 Film brake adjustmen**t.

WARNING

Extreme caution should always be exercised working around the core gripper support, the gripper tabs can cut you!

a) Use one hand to rotate the unwind shaft while the other hand is turning the film brake adjustment dial clockwisewith the other hand.

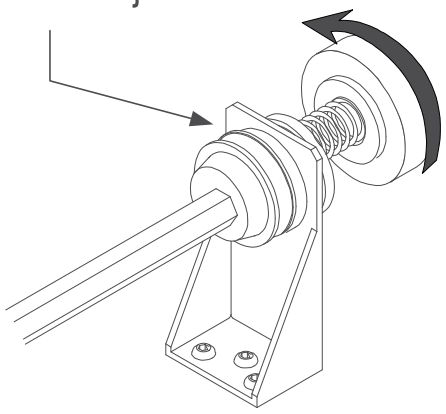
Film brake adjustment



- As you turn the film brake adjustment dial, you feel an increase in resistance while turning the unwind shaft.

b) Rotate the unwind shaft while turning the film brake adjustment dial counter clockwise.

Film brake adjustment



- As you turn the film brake adjustment dial, you feel a decrease in resistance while turning the unwind shaft.

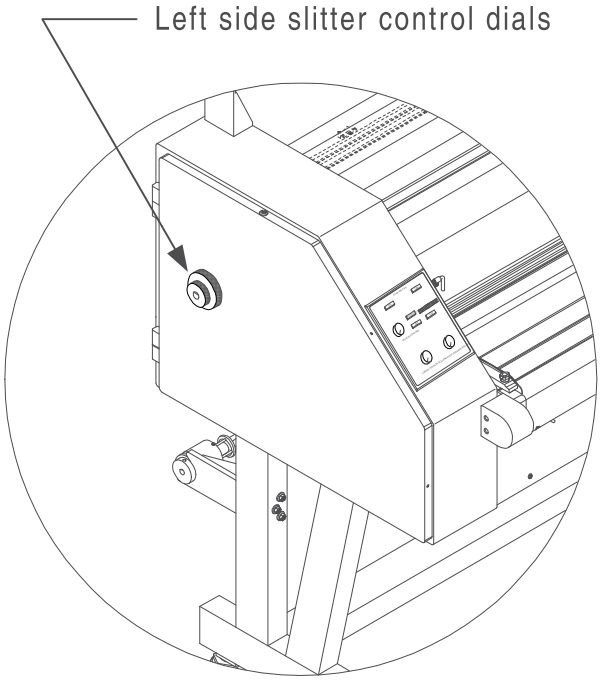
4.11 Inline slitters

WARNING

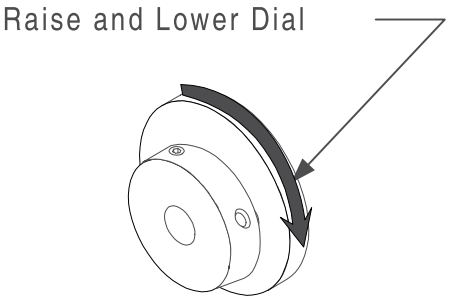
At no time should the slitter guard be removed! Sharp blades can cut you!

For a detailed explanation of the inline slitters, refer to **Section 5.6 Using inline slitters**.

Left side slitter controls



a) Rotate the large inner dial clockwise.

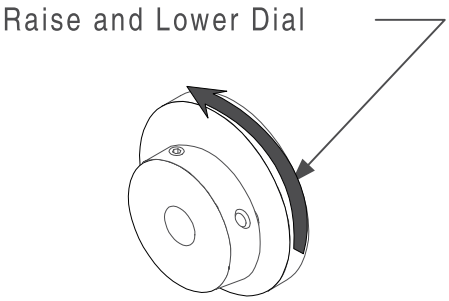


- The left and right slitters are lowered into the engaged position.

INFORMATION

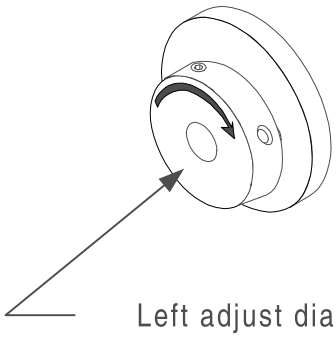
The large inner dials on the left and right cabinet doors will lower and raise the slitters.

b) Rotate the large inner dial counterclockwise.

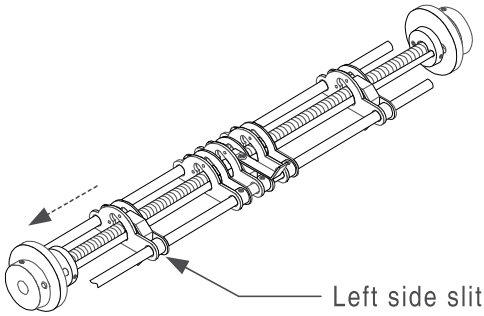


- The left and right slitters are raised.

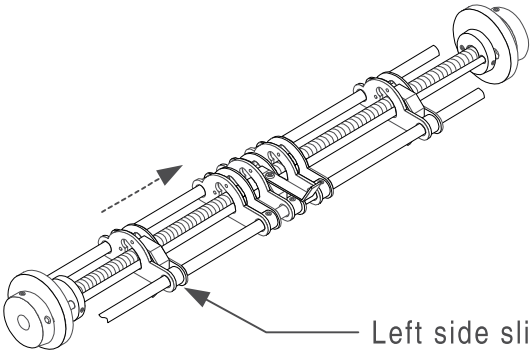
c) Rotate the small outter dial clockwise.



- The left slitter moves to the left side of the laminator as you rotate.



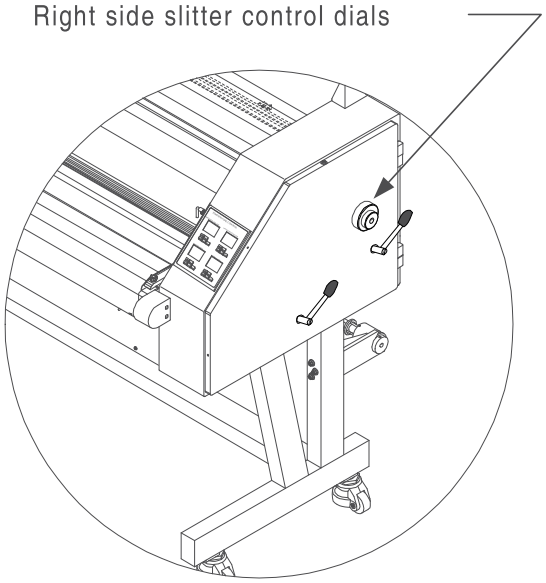
- The left slitter moves to the right side of the laminator as you rotate.



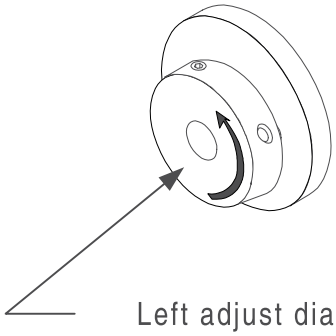
Right side slitter controls

WARNING

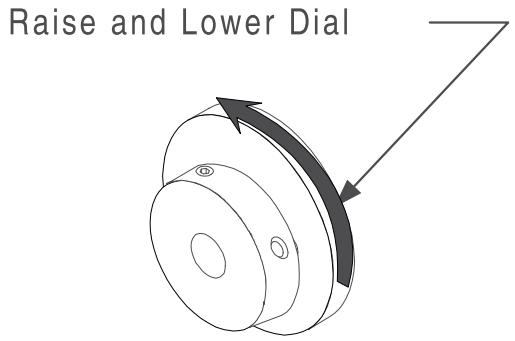
At no time should the slitter guard be removed! Sharp blades can cut you!



c) Rotate the small outter dial counterclockwise.



a) Rotate the large inner dial counterclockwise.

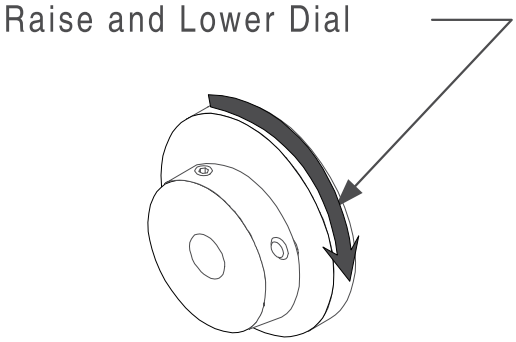


- The left and right slitters are lowered into the engaged position.

INFORMATION

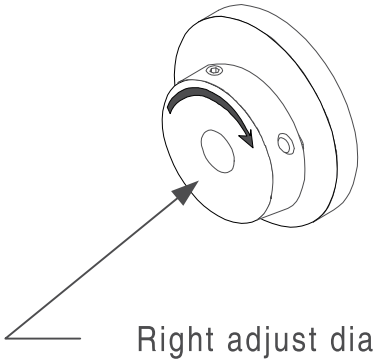
The large inner dials on the left and right cabinet doors will lower and raise the slitters.

b) Rotate the large inner dial clockwise.

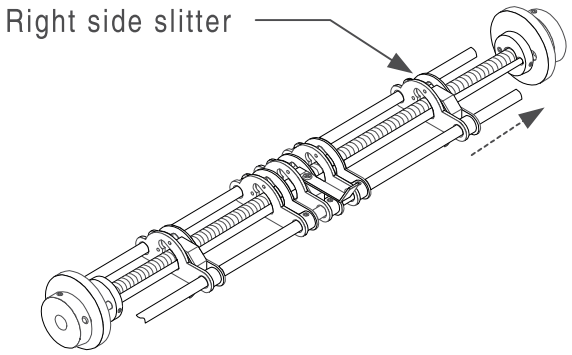


- The left and right slitters are raised.

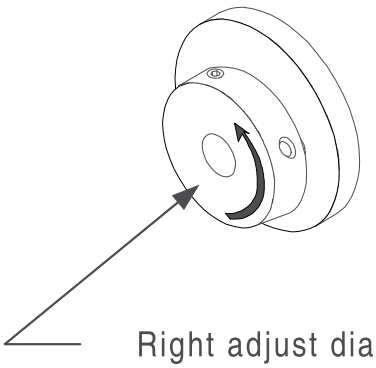
c) Rotate the small outter dial clockwise.



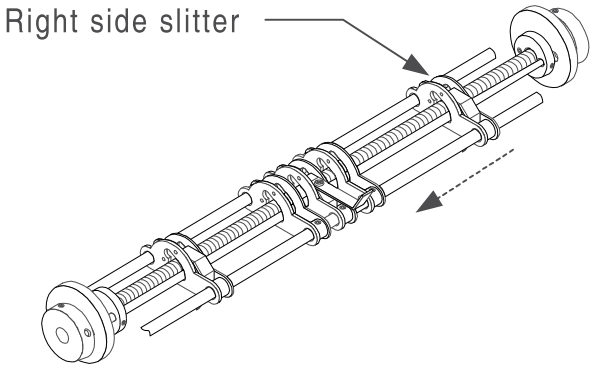
- The right slitter moves to the right side of the laminator as you rotate.



c) Rotate the small outter dial counter clockwise.



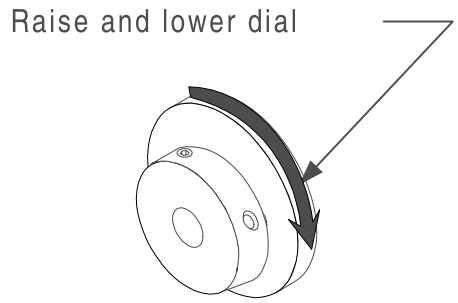
- The right slitter moves to the left side of the laminator as you rotate.



INFORMATION

The center slitter can not be lowered without lowering the side slitters.

a) Rotate the large inner dial clockwise on the left side slitter controls to lower the side slitters.



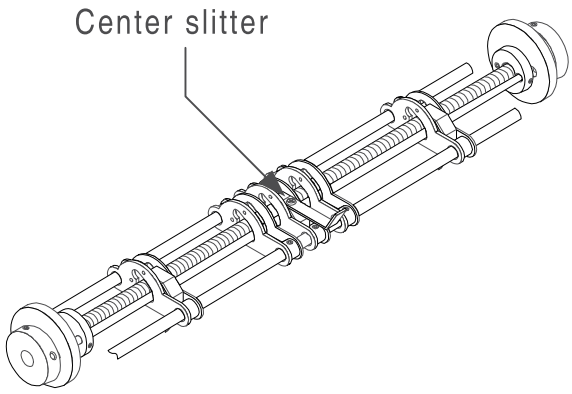
Center slitter lever

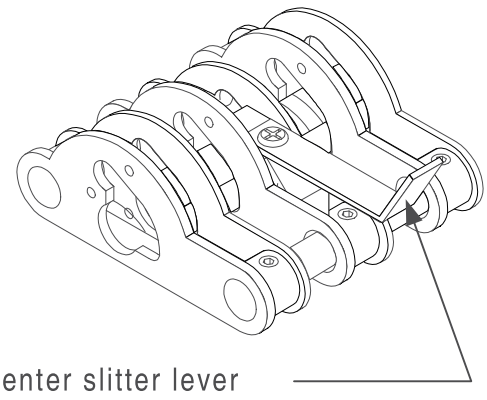
WARNING

At no time should the slitter guard be removed! Sharp blades can cut you!

- The left and right side slitters lower into the engaged position.

b) Push the center slitter lever towards the front of the laminator.



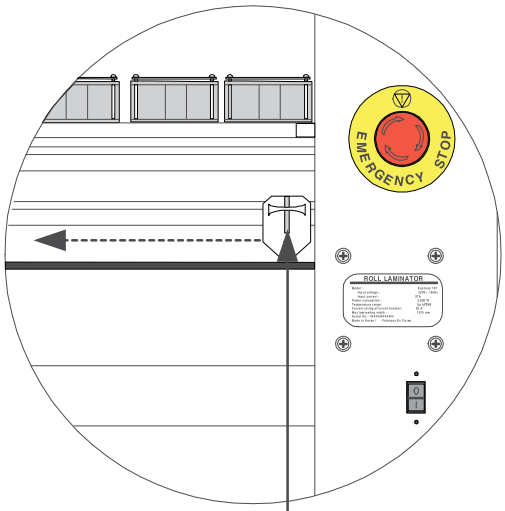


- The center slitter is lower into the engaged position.

b) Rotate the large inner dial counter clockwise on the right or left side slitter controls to raise all the slitters.

- All three slitters are raised.

a) Slide the rear cut-off blade to one side of the laminator.



Rear cut-off blade

4.12 Rear cut-off blade

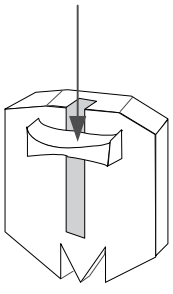
- The rear cut-off blade moves smoothly from one side to the other side.

WARNING

Caution should always be exercised when using the rear cut-off blade. Sharp objects can cut you!

b) Press down on the blade engage lever.

Blade engage lever



WARNING

Keep hands and fingers away from the path of the rear cut-off blade. Sharp objects can cut you!

- The blade slides down easily as the tip of the blade is exposed.

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Section 5 Operations

WARNING

Do not wear ties, loose fitting clothes or dangling jewelry while operating or servicing the laminator. These items can get caught in the nip and choke you or you can be crushed or burned.

This section discusses Emergency, Set up and features of the Control panels.

5.1 Control Panels

The control panels of the Explorer 107 Laminator are located at the front operating position of the machine.

To the left of the front operating position is the **Operations Control Panel**. This panel enables the operator to control motor direction, motor speed, cooling fans, Lower idler tension and Upper idler tension.

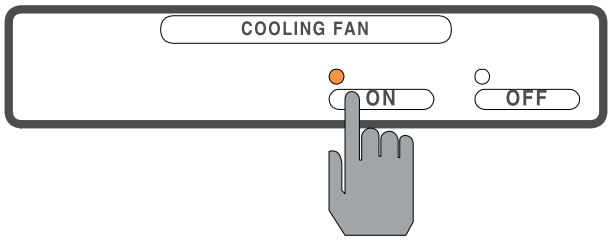
To the right of the front operating position is the **Temperature Control Panel**. This panel enables the operator to control the temperature settings for the Top Teflon roller, Nip rollers, Bottom Teflon roller and the Sub heaters.

5.1.1 Operations Control Panel

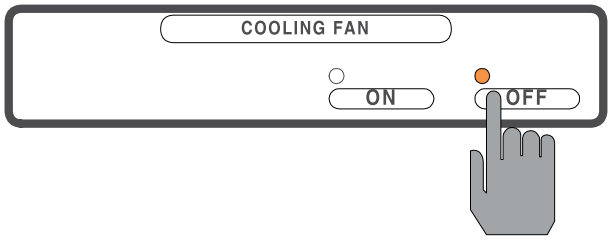
INFORMATION

When any command is pressed (with the exception of Reverse) on the Operations Control Panel, a "beep" will sound. If the command is held down, the panel will continuously "beep".

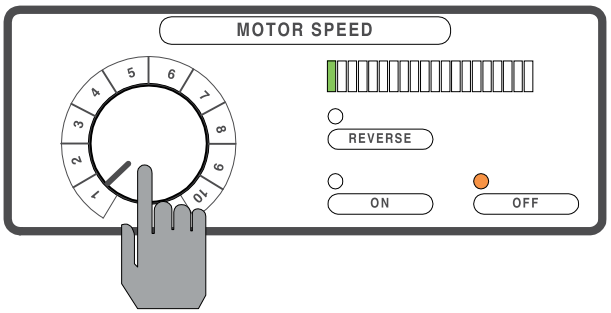
(1) Cooling Fan On (ON): When pressed, starts the cooling fans. Cooling fans are not motor circuitry dependent.



(2) Cooling Fan Off (OFF): When pressed stops the cooling fans.



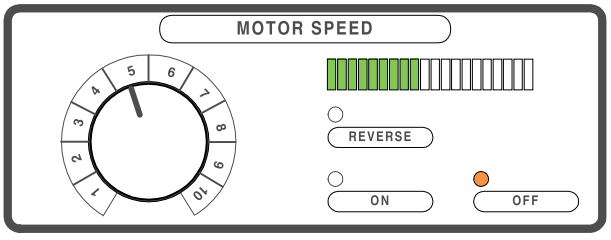
(3) Motor Speed Adjust: When rotated fully clockwise, increases the motor speed from 3.5 - 35 ft./ min.. Rotated fully counterclockwise dcreases the motor speed from 35 - 3.5 ft./ min..



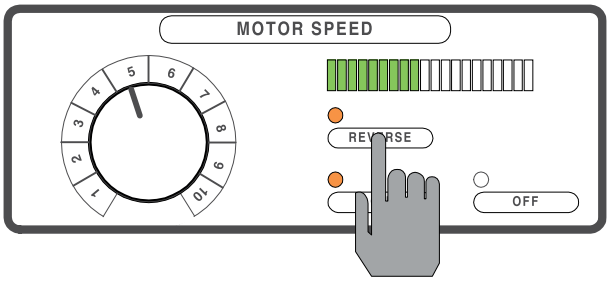
INFORMATION

1 increment on the Motor Speed Adjust is equal to approximately 3.5 ft./ min. (1.1 m/ min.).

(4) Motor Speed Indicator: Illuminate from left to right when the speed is increased and de-illuminates when speed is decreased.



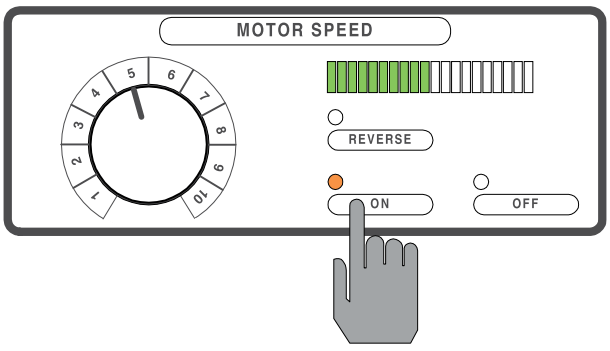
(5) Motor Speed Reverse REVERSE **:** When pressed and held, applies reverse motor power to the laminator. Power is removed when released.



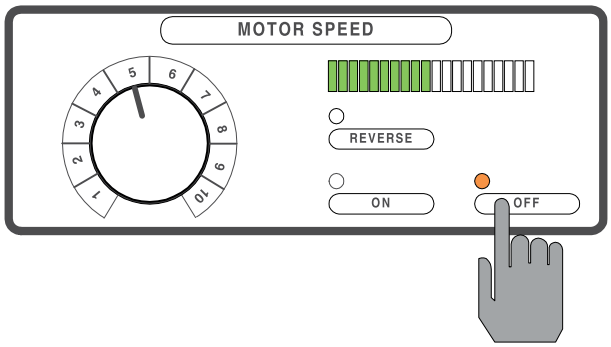
INFORMATION

Reverse speed can be controlled by Speed Adjust.

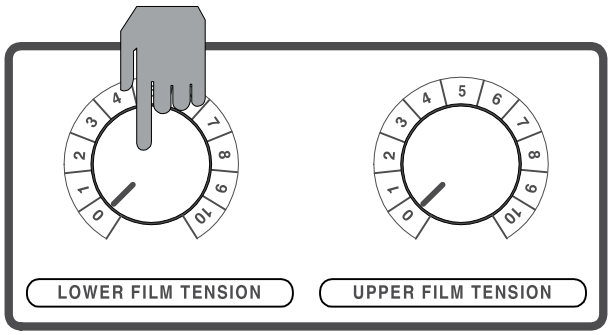
(6) Motor Speed On ON **:** When pressed, applies forward motor power to the laminator.



(7) Motor Speed Off OFF **:** When pressed removes forward motor power to the laminator.



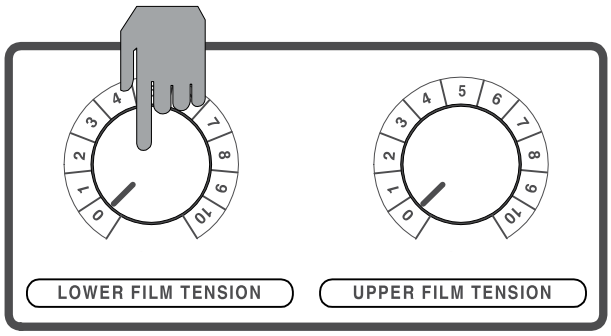
(8) Lower Film Tension Adjust: Rotated clockwise, increases tension on the lower film tension idler. Rotated counter clockwise decreases tension on the lower film tension idler.



INFORMATION

Always use the minimum film tension necessary to complete the task.

(9) Upper Film Tension Adjust: Rotated clockwise, increases tension on the upper film tension idler. Rotated counter clockwise decreases tension on the upper film tension idler.

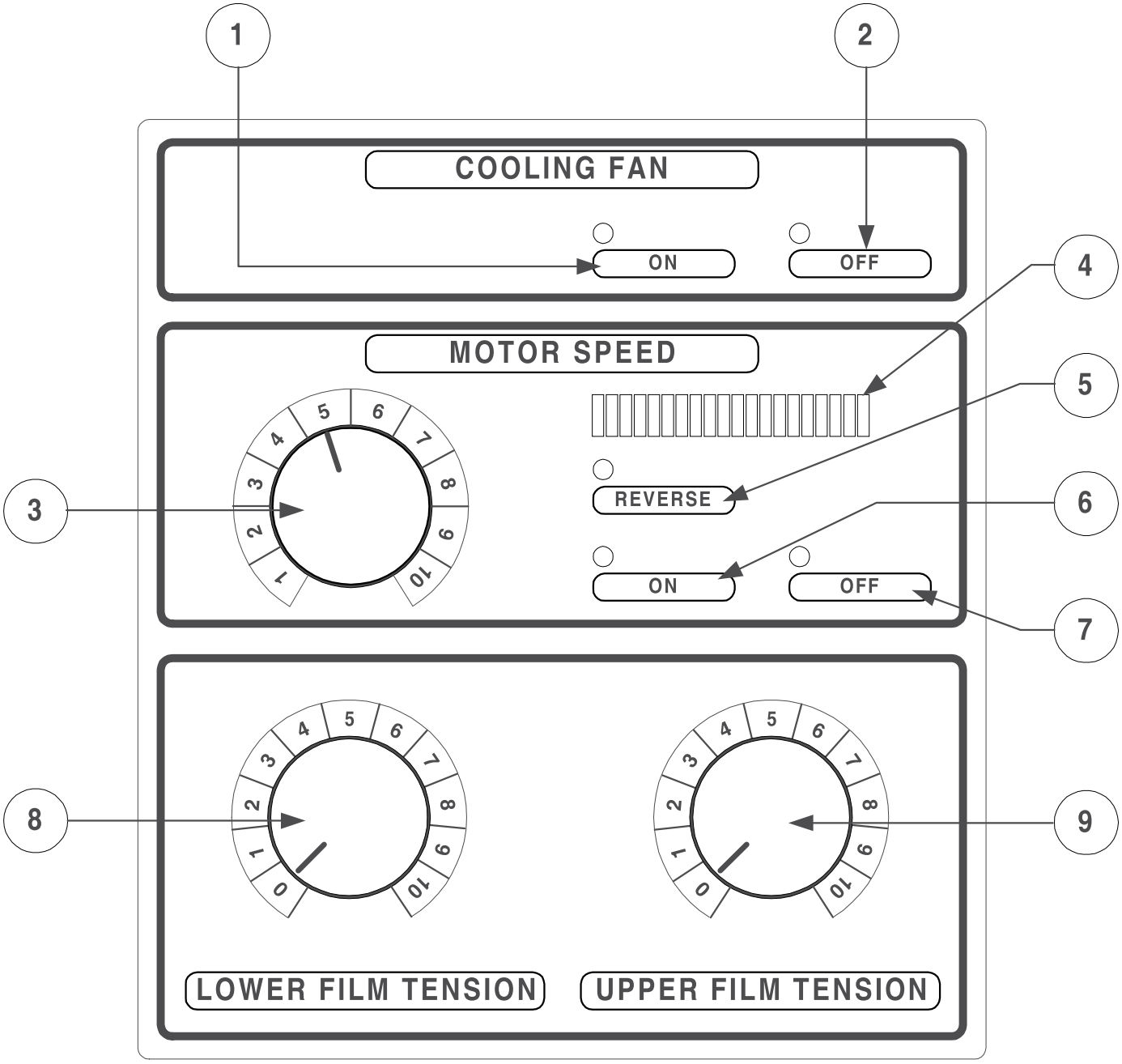


INFORMATION

Always use the minimum film tension necessary to complete the task.

Refer to **Figure 5.1.1** for a complete illustration of the Operations Control Panel.

Figure 5.1.1 Operations Control Panel



5.1.2 Temperature Control Panel

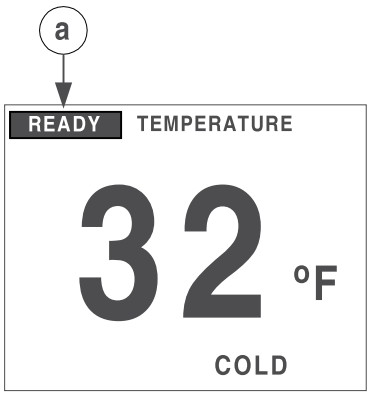
INFORMATION

When the laminator is first turned on, the control panels display the default settings.

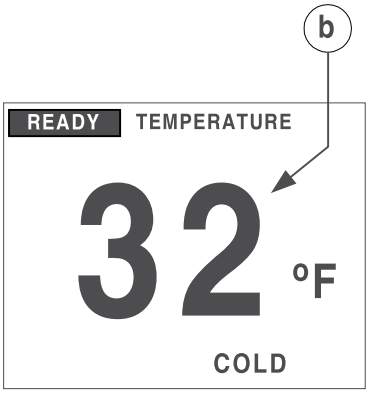
Default setting; Cooling Fan = Off, Motor Speed = Off, Top Teflon Roller = 32 °F, Nip Rollers = 32 °F, Bottom Teflon Roller = 32 °F and Sub Heaters = 32 °F.

(1) Temperature control displays: (Top Teflon Roller, Nip Roller, Bottom Teflon Roller and Sub Heaters)

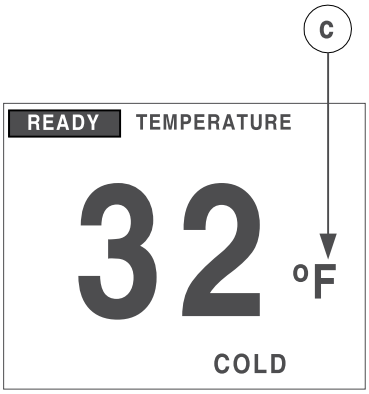
(a) Ready Indicator: Flashes when the actual temperaure exceeds the +/- 10 degrees tolerance. Once the actual temperature falls within the +/- 10 degree tolerance, it changes to solid.



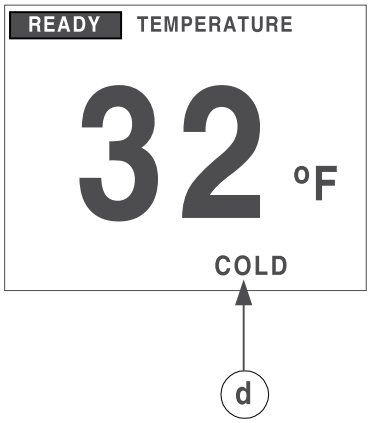
(b) Temperature Display: the number 32 is displayed as the default setting. This display setting will change when an alternate value is inputted.



(c) Unit of Measurement Display: Indicates the current unit of measurement.



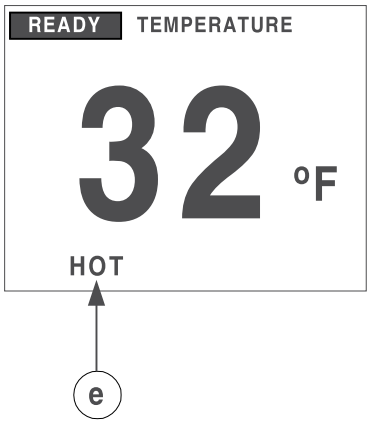
(d) Cold Indicator: Is diplayed when (COLD) is pressed. If the set point temperature has been increased using (^), **COLD** will still be displayed although heat is being supplied.



INFORMATION

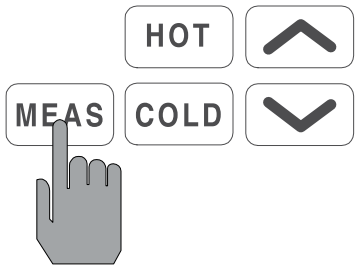
It is recommended that you press HOT (HOT) first, then adjust for desired temperature setting.

(e) Hot Indicator: Is only displyed when (HOT) is pressed.

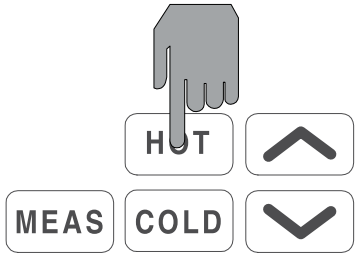


(2) (MEAS) , (HOT) , (COLD) , (^) and (v) **:** (Top Teflon Roller, Nip Roller, Bottom Teflon Roller and Sub Heaters)

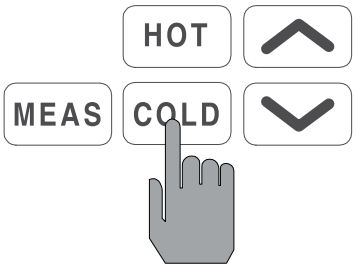
(MEAS) **:** When pressed and released, changes the **Temperature Display** to show current temperature reading for 2 seconds, then reverts to set point reading.



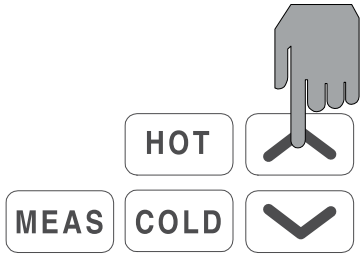
(HOT) **:** When pressed, sets the hot default set point for the corresponding heaters. (Top Teflon Roller = 212 °F (100 °C), Nip Roller = 176 °F (80 °C), Bottom Teflon Roller = 212 °F (100 °C) and Sub Heaters = 248 °F (120 °C)).



COLD : When pressed, sets the cold default set point for the corresponding heaters. (All heaters have a default value of 32 °F (0 °C) for Cold)



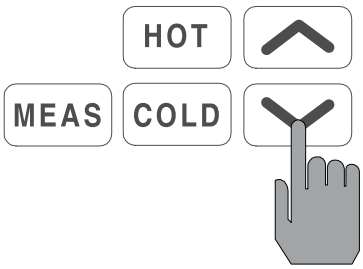
: Pressed once, increases the set point temperature for the corresponding heater by one increment. When pressed and held, automatically increases the set point value by single increments.



INFORMATION

"Beeps" once for every one increment of change.

: Pressed once, decreases the set point temperature for the corresponding heater by one increment. When pressed and held, automatically decreases the set point value by single increments.

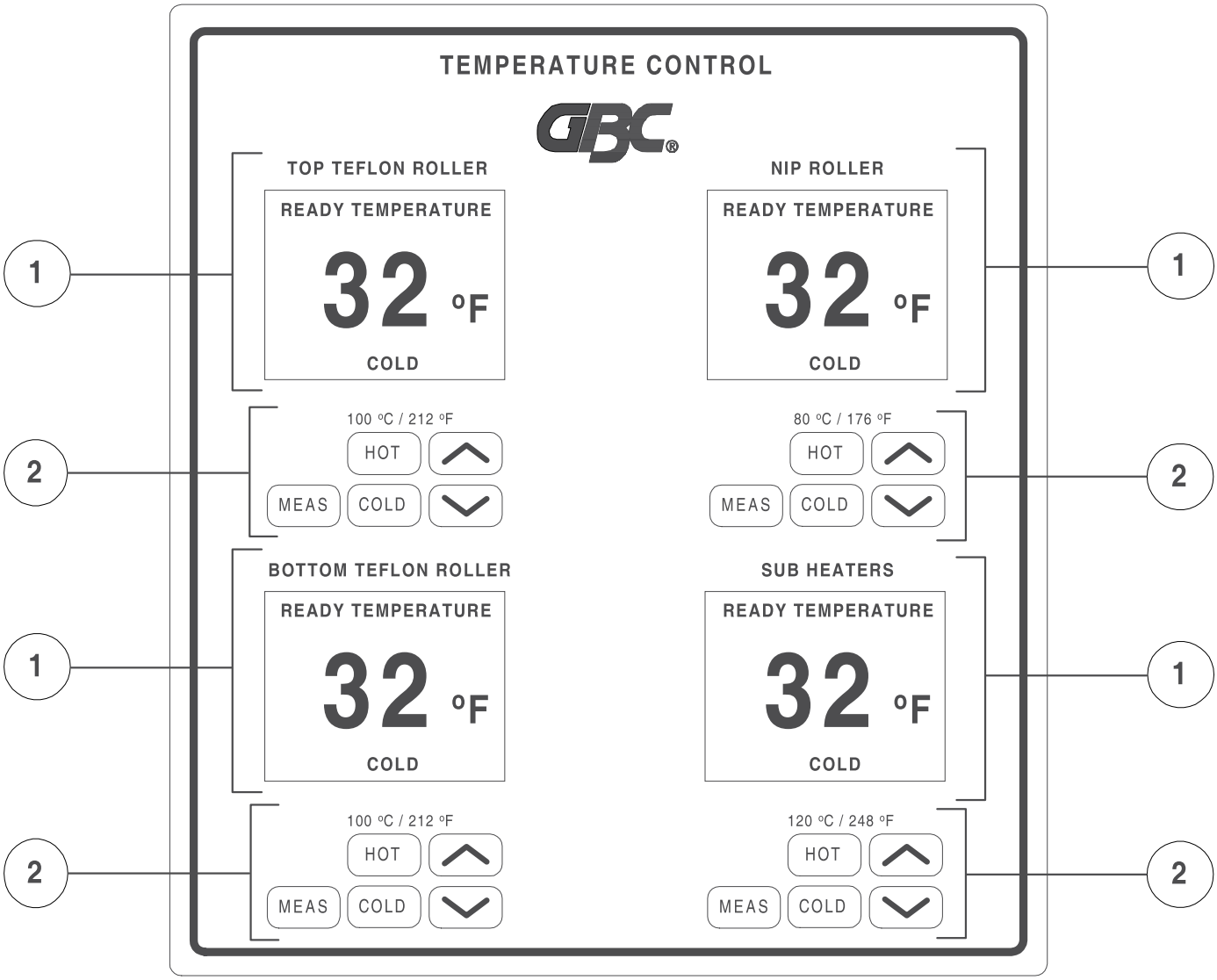


INFORMATION

"Beeps" once for every one increment of change.

Refer to **Figure 5.1.2** for a complete illustration of the Temperature Control Panel.

Figure 5.1.2 Temperature Control Panel



5.2 Emergency

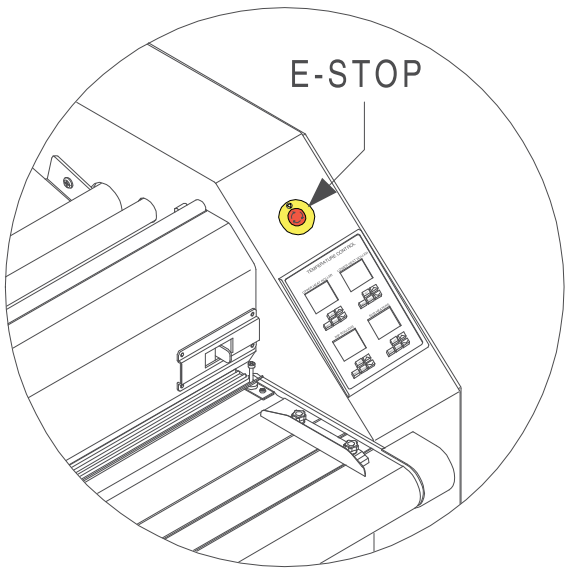
The Explorer 107 Laminator has been designed with safety as a primary consideration; however, you must become thoroughly familiar with the controls, proper operation, proper service procedures, and safety features of the laminator before using or servicing the unit.

Use care in lowering the top laminating roller and know how to react quickly in an emergency. Before lowering the roller, ensure that nothing is in the nip area.

Know where the two emergency stop **(E-STOP)** are located before operating the laminator.

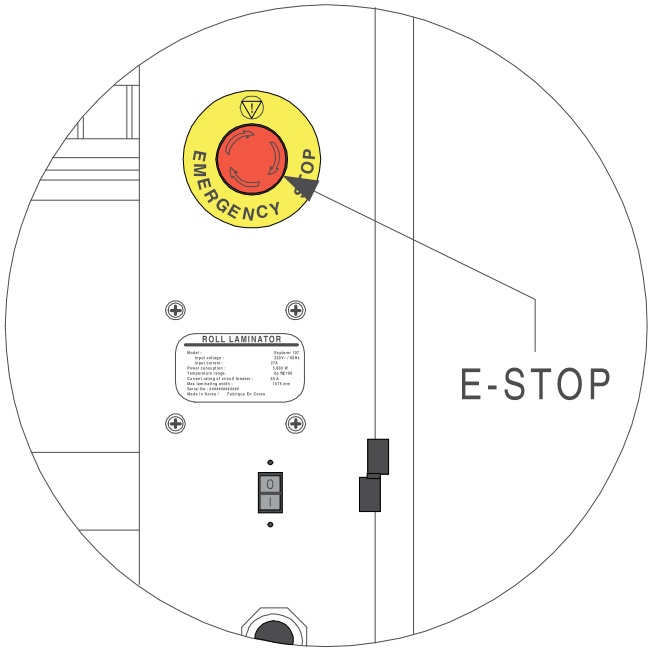
E-STOP located above the Temperature Control Panel on the right side of the front position of the laminator. Refer to **Figure 5.2.1**

Figure 5.2.1 Front E-STOP



E-STOP located above the serial plate on the right side from the rear position of the laminator. Refer to **Figure 5.2.2**

Figure 5.2.2 Rear E-STOP



In addition, the NipRollers, Teflon Rollers and Sub Heaters of the Explorer 107 can reach temperatures over 200°F (93°C).

WARNING

At these temperatures there is a danger of severe burns if the rollers are touched during set up, operation or servicing.

Reacting to an emergency situation

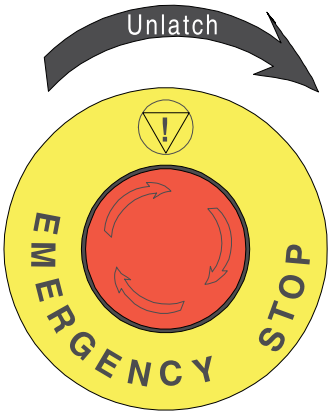
a) In the event of an emergency, press an **E-STOP.**

INFORMATION

When an EMERGENCY STOP is engaged, all motion stops. The nip will not change from the operating setting.

b) Resolve the emergency situation.

c) Reset the **E-STOP** by rotating 1/4 turn clockwise. The **E-STOP** will unlatch.



INFORMATION

The Temperature control panel settings are not affected when an E-STOP has been pushed.

d) Ensure that the front safety shield is located in the fully locked position.

INFORMATION

Power to the motor is removed when the safety shield is not in the fully locked position.

e) Press **ON** to resume running.

5.3 Set up

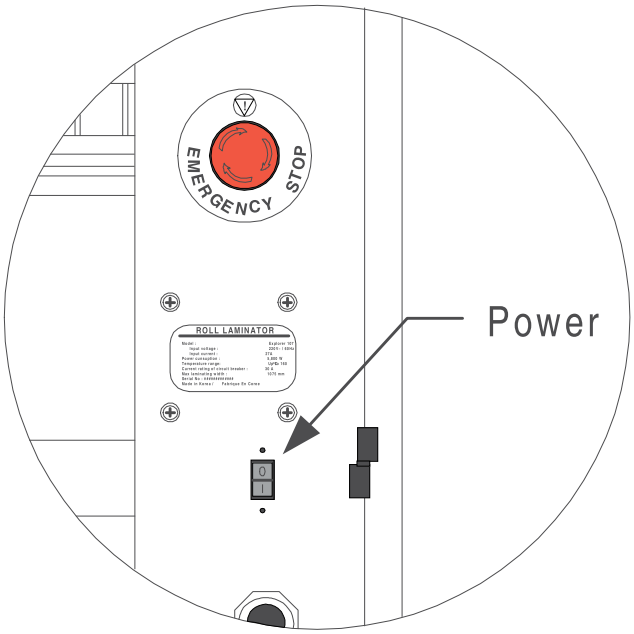
Initial set up of the Explorer 107 laminator is easily attained when instructions are followed exactly. It is suggested and helpful if you take the time to read this section thoroughly before attempting to do any of the steps.A complete understanding of this section will enable you to follow the procedures descibed in **Section 6.1 Application**.

5.3.1 Power

a) Clear the area around the laminating rollers and pull rollers.

b) Ensure that the laminator is plugged in and no **E-STOP** is depressed.

c) Press **POWER** to the "**I** " position to turn on the laminator.



d) Press POWER to "O" position to turn off the laminator.

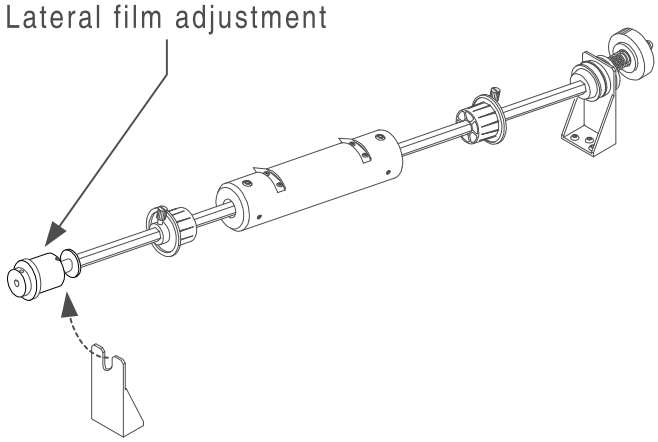
5.3.2 Film loading

The Explorer 107 can accommodate Poly-In or Poly-Out films. Each film requires a different loading procedure. Refer to **Section 6 Applications** for webbing methods. With regards to webbing methods, both require the adhesive side of the film to face away from the heating components.

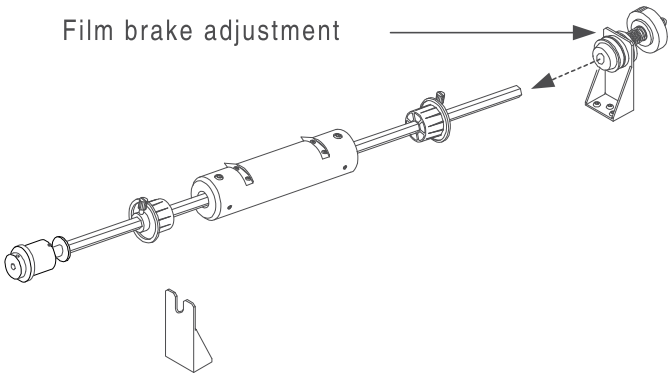
WARNING

Extreme caution should always be exercised when removing an unwind shaft, the gripper tabs can cut you!

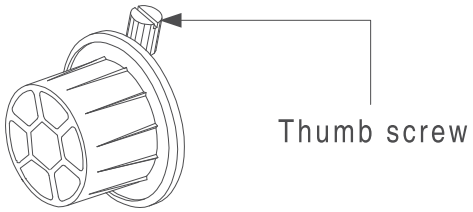
a) Lift the upper unwind shaft from the **lateral film adjustment** side out of its support saddle.



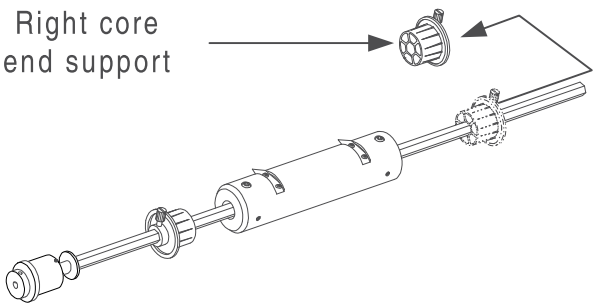
b) Pull the upper unwind shaft out from the upper **film brake adjustment** .



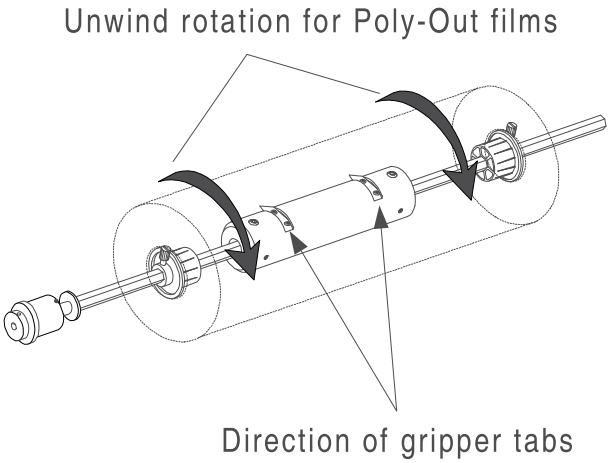
c) Loosen the thumb screw to the two **film core end supports.**



d) Slide the **Right core end support** off of the unwind shaft.



e) Ensure the **core gripper support** is properly positioned for the type of film being used and is centered on the unwind shaft.



INFORMATION

Refer to Figure 6.1.1 under Section 6 Applications for unwind direction for Poly-In and Poly-Out films

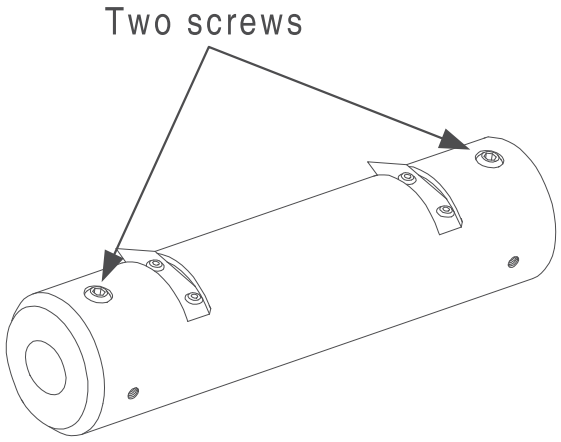
INFORMATION

The gripper tabs should point in the opposite direction of film rotation.

WARNING

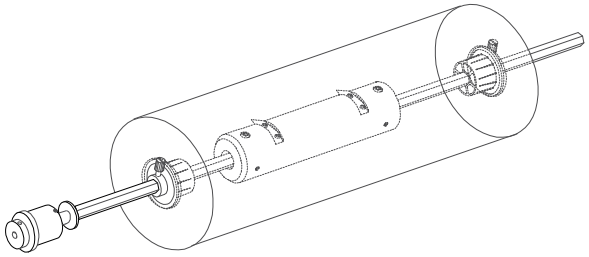
Extreme caution should always be exercised working around the core gripper support, the grippers tabs can cut you!

f) Use a 4 mm allen wrench to loosen the two screws if the **core gripper support** requires adjustment or removal.



g) Slide the roll of film onto the unwind shaft and push the **left core end support** into the core of the film roll..

h) Slide the **right core end support** onto the unwind shaft.



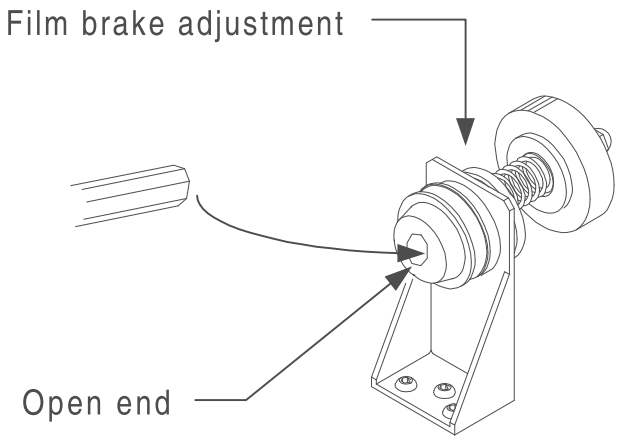
WARNING

Always use safe and proper lifting practices when lifting heavy objects. You can become seriously injured or crushed.

CAUTION

Ensure the roll of laminate is loaded properly on the unwind shaft. Exposed adhesive should be facing away from the heated components. This will prevent hours of cleaning!

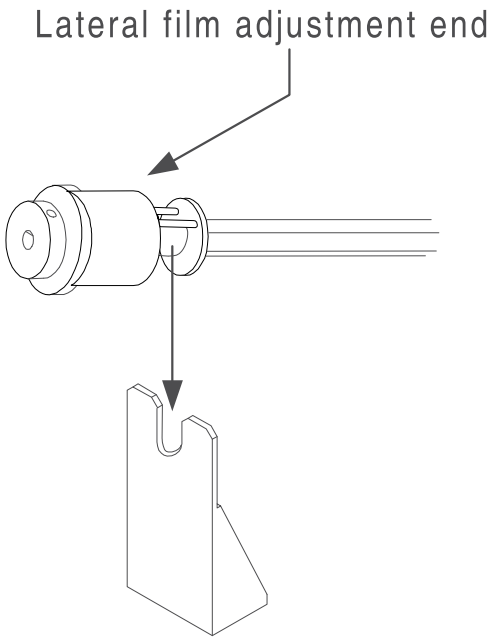
i) With the help of a second person, lift the unwind shaft with the roll of film and reinsert the unwind shaft into the open end of the **film brake adjustment** slot.



INFORMATION

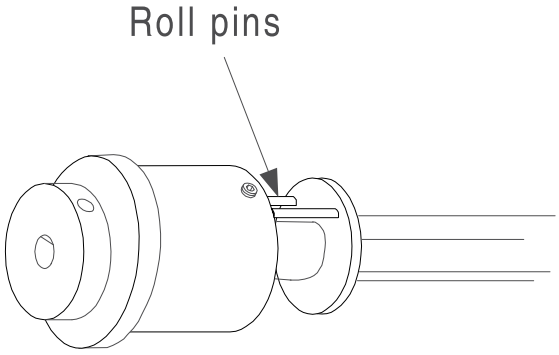
For 2-1/4 core film, turning the roll film in the same direction as the gripper tabs while sliding makes loading the film onto the unwind shaft easier.

j) Carefully set the **lateral film adjustment** end of the unwind shaft into its saddle.

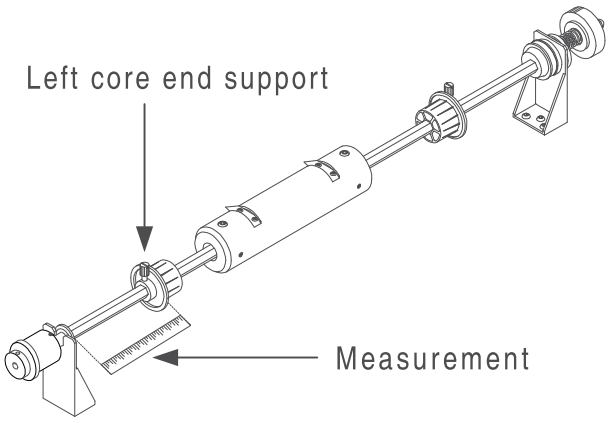


INFORMATION

Ensure the roll pins are on top. They should not be in the saddle!



k) From the rear position of the laminator, center the film on the unwind shaft.



INFORMATION

Use Chart 5.3.1 Film centering chart in Section 5 Operations for measurements.

Chart 5.3.1 Film centering chart

Common film widths	
Film widths	Measurement
12 in. (30 cm)	17 in. (43 cm)
18 in. (46 cm)	14 in. (36 cm)
24 in. (61 cm)	11 in. (28 cm)
38 in. (97 cm)	4 in. (10 cm)

INFORMATION

If not exactly centered, lateral film adjustment can be made during the webbing process.

l) Once the roll of film has been centered, tighten the thumb screws to sdecure in place.

m) For the bottom roll of film, follow the same procedure just described.

5.3.3 Roller handles

WARNING

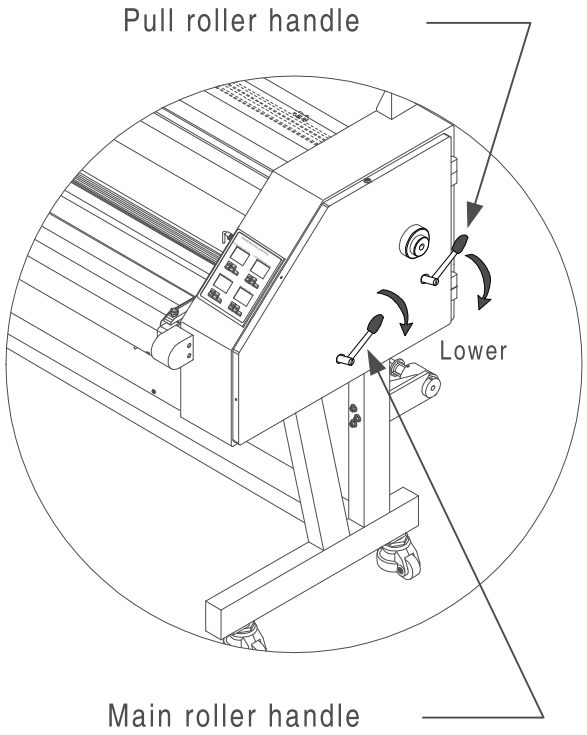
Keep hands and fingers clear of the laminator roller nip when changing GAP. You can be CRUSHED or BURNED!

INFORMATION

When lowering the main roller, the heat platen and the Top Teflon roller (upper heat assembly) moves as well.

Lowering the rollers

a) Turn the roller handle clockwise to lower the roller.



CAUTION

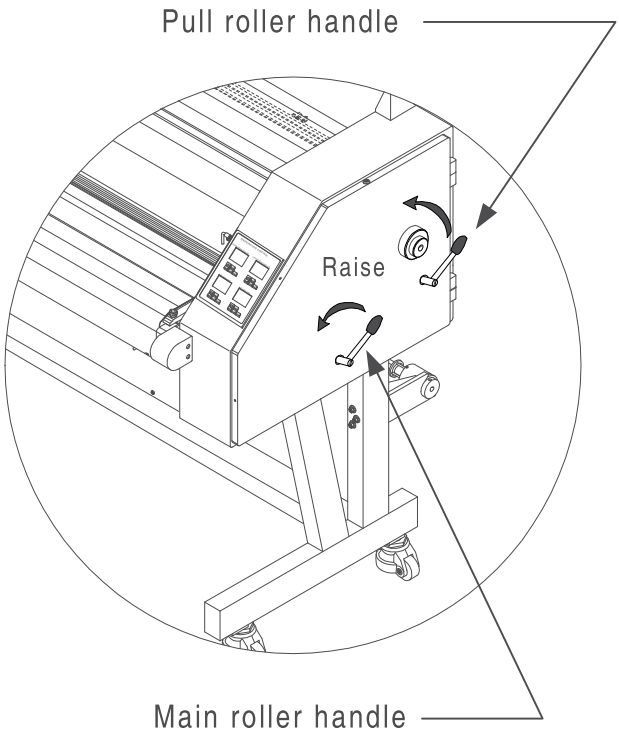
Never leave the rollers in the down position without rolling. Prolonged contact in one area can form flat spots on the rollers.

Raising the rollers

INFORMATION

When raising the main roller, the heat platen and the Top Teflon roller (upper heat assembly) moves as well.

a) Turn the roller handle counterclockwise to raise the roller.



5.3.4 Heating

When heating the Teflon rollers and the nip rollers, it is recommended that the rollers turn slowly during the heat up process. This allows the heat to evenly distrubute through out the rollers.

The heat platens heat quicker than the rollers. With the rollers slowly turning, the platens assist the rollers during the heating process resulting in a faster heat up time.

WARNING

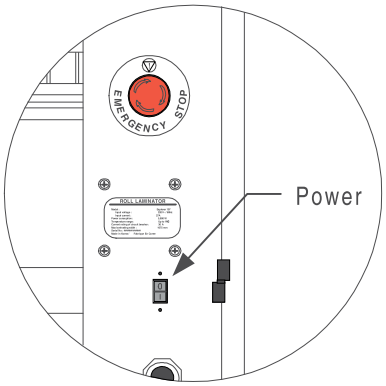
Keep hands and fingers away from the heating components and the nip of the rollers.
You may be CRUSHED or BURNED!

The heating components of the Explorer 107 can exceed temperatures of 200 °F (93 °C), at these temperatures severe burn can occur if contacted.

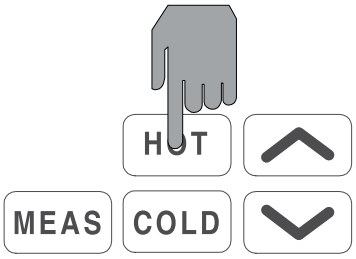
a) Clear the area around the laminating rollers and pull rollers nip.

b) Ensure the laminator is plugged in and no **E-STOP** is depressed.

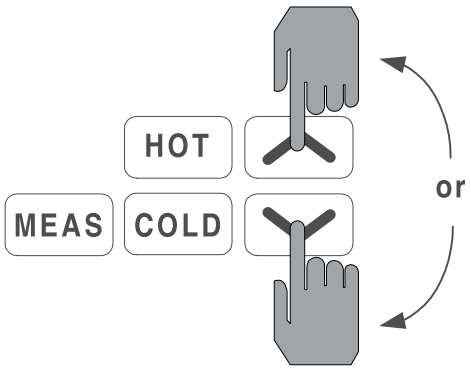
c) Turn the **POWER** to the "**I** " position.



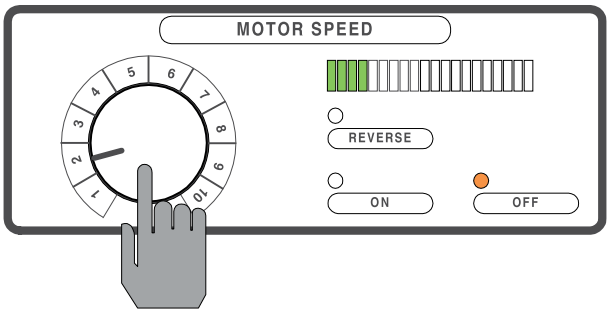
d) Press HOT on the temperature control panel for theTop Teflon Roller, Nip Roller, Bottom Teflon Roller and the Sub Heaters.



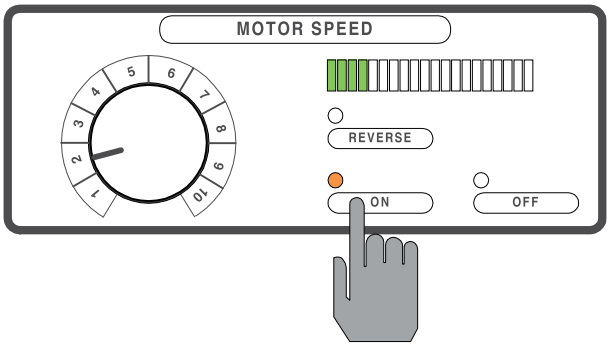
e) Press ^ or v to adjust for desired set point temperature.



f) Use **motor speed adjust** to set a motor speed of 2 on the Operations Control Panel.

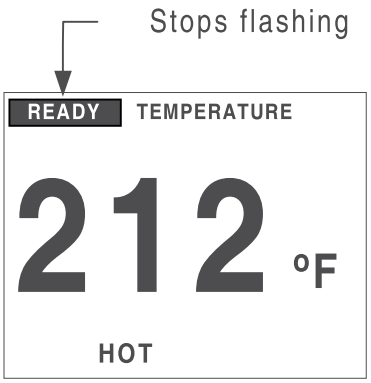


g) Press ON. The rollers begin turning



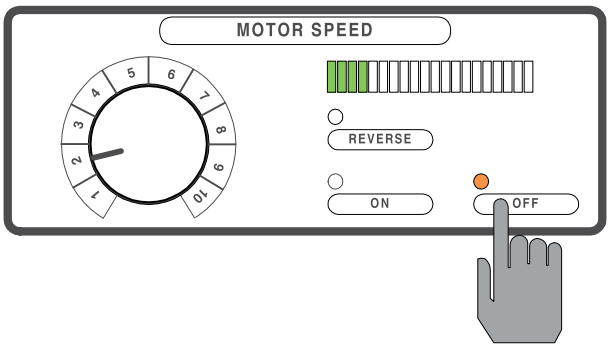
h) Lower the upper heat assembly by turning the roller handle clockwise until the nip rollers contact.

i) When **READY** stops flashing on the Temperature Displays for all the heating components, proceed with webbing of the laminator.



j) Raise the upper heat assembly by turning the roller handle counter clockwise.

k) Press OFF. The rollers stop turning.



5.4 Lateral film adjustment

Centering the roll may not always align the top roll of film evenly with the bottom roll of film. The Explorer 107 is equipped with lateral film adjustment devices on the upper and lower unwind shafts.

The lateral film adjusters allow you to shift the the shaft either to the left or to the right without having to recenter the roll of film on the unwind shafts.

The lateral film adjuster allows for 5/16 of an inch lateral movement from full left or full right position.

INFORMATION

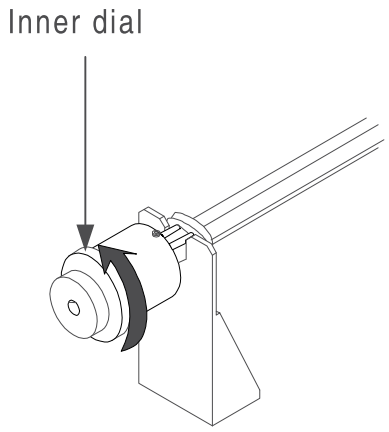
Lateral film adjustments can be made while the laminator is in operation.

INFORMATION

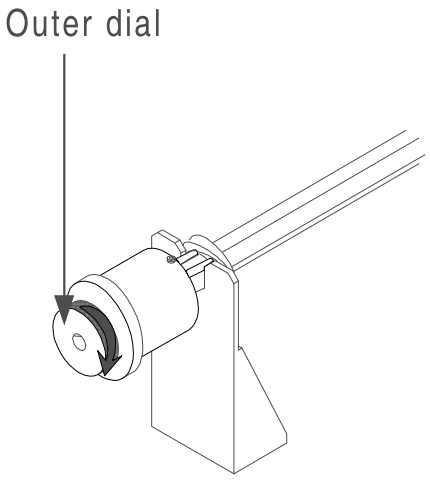
Quality of the output may be affected during a lateral film adjustment.

Lateral film adjustment right

a) Ensure the large inner dial is in the loose position. Turn fully counterclockwise.



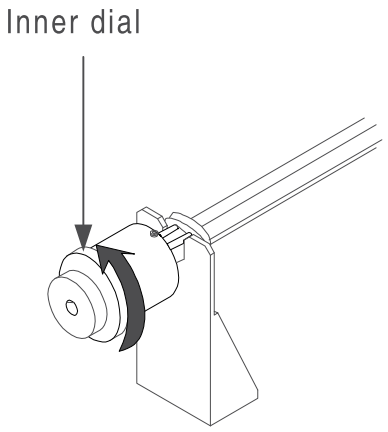
b) Rotate the small outer dial clockwise to shift the unwind shaft to the right.



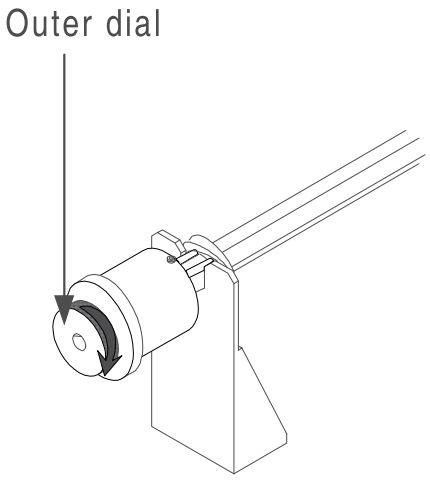
c) Once adjusted, secure the lateral film adjuster by turning the large inner dial fully clockwise.

Lateral film adjustment left

a) Ensure that the large inner dial is in the loose position. Turned fully counterclockwise.



b) Rotate the small outer dial clockwise to shift the unwind shaft to the left.



c) Once adjusted, secure the lateral film adjust by turning the large inner dial fully clockwise.

5.5 Film brake adjustment

Use the film brake adjustments to prevent the roll of film from free spinning. For film tension, use the **UPPER FILM TENSION** and **LOWER FILM TENSION** on the Operations control panel.

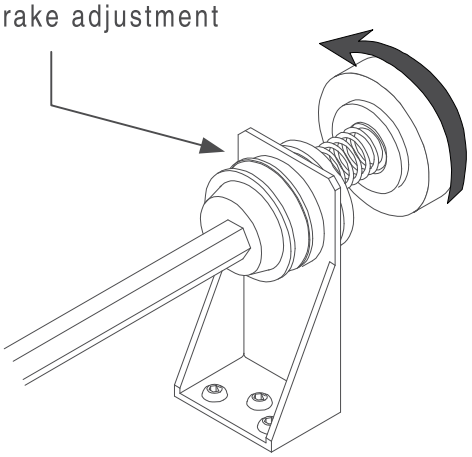
INFORMATION

Excessive brake tension may cause the output to curl. Always use the minimum brake tension required to complete the task.

Increase film brake tension

a) Rotate the film brake adjust dial clockwise slowly to gradually increase tension to the unwind shaft.

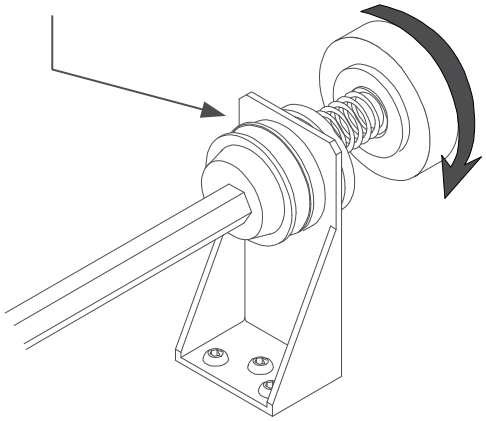
Film brake adjustment



Decrease film brake tension

a) Rotate the film brake adjust dial clockwise slowly to gradually decrease tension to the unwind shaft.

Film brake adjustment



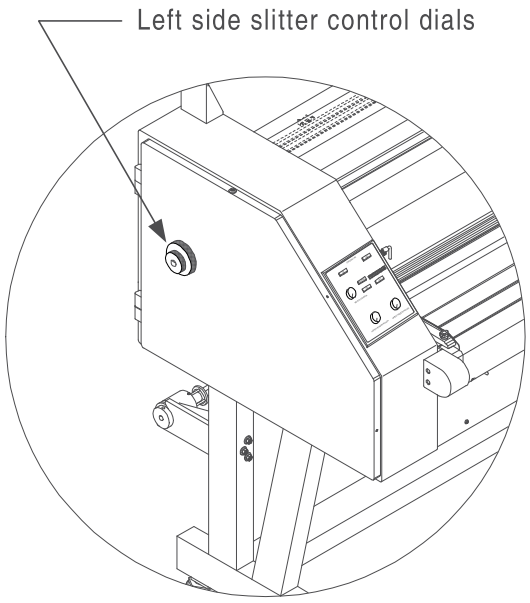
5.6 Using inline slitters

WARNING

At no time should the slitter guard be removed! Sharp blades can cut you!

Inline slitters have three slitting points. Center, left and right. All three may be used simultaneously or independently.

The laminator must have film webbed through the rollers before engaging the sliiters.



CAUTION

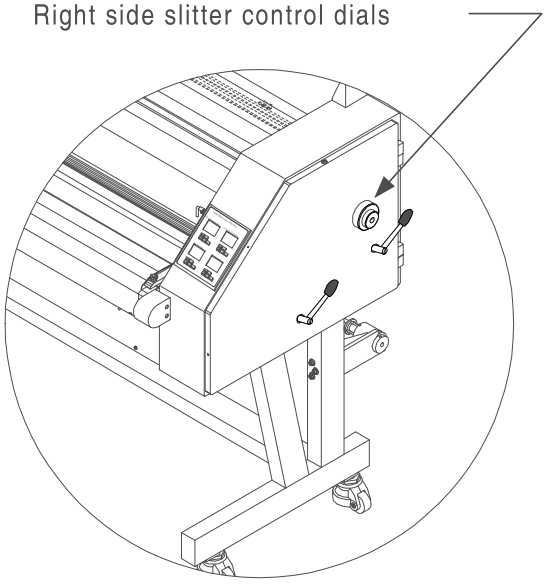
Do not webb the laminator with inline slitters in the down position! The leader board can damage the blades.

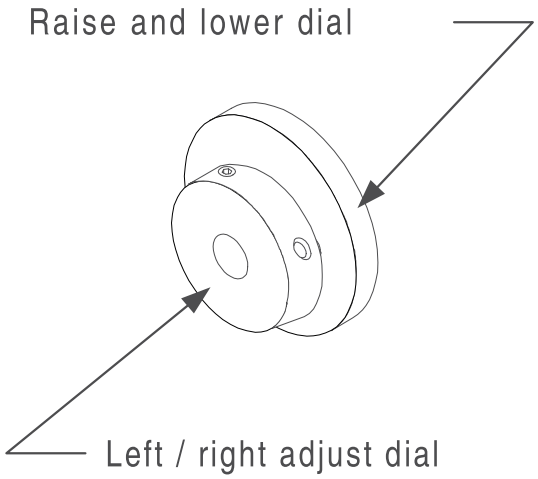
INFORMATION

The large inner dials on the left and right cabinet doors will lower and raise both, the left and right, sliiters.

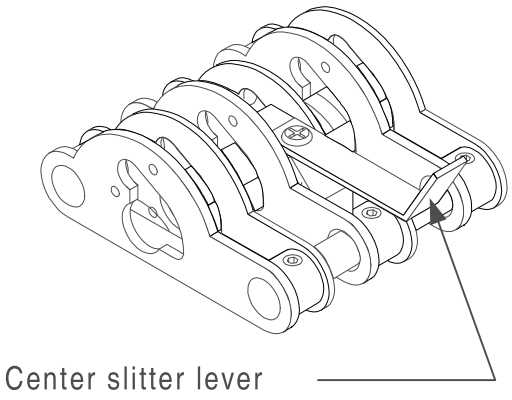
Lower the slitters

a) Turn the large inner dial (left side - clockwise / right side - counterclockwise) to lower the left and right slitters.





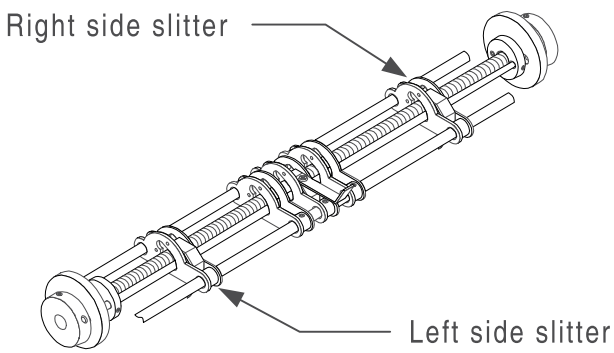
b) Push the center slitter lever towards the front of the laminator to lower the center slitter.



INFORMATION

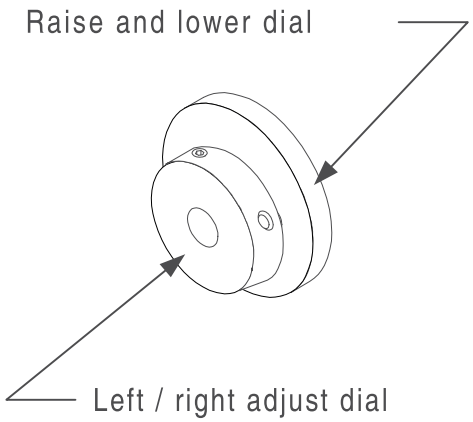
The center slitter can not be lowered without lowering the side slitters.

c) Use the small outer dial on the left to adjst the position of the left side slitter. Use the small outer dial on the right to adjust the position of the right side slitter.

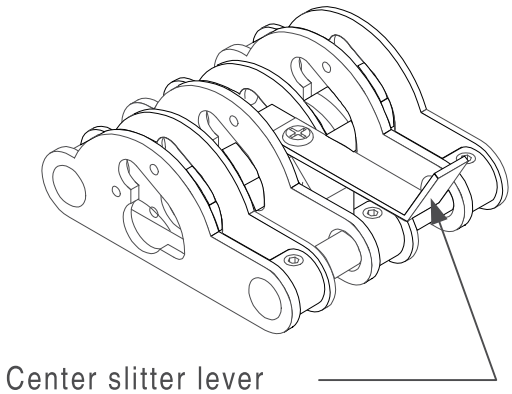


Raise the slitters

a) Turn the large inner dial (left side - counter clockwise / right side - clockwise) to lower the left and right slitters.



b) Lift the center slitter lever towards the rear of the laminator to raise the center slitter.



INFORMATION

The side slitters can not be raised without raising the center slitter.

WARNING

Keep hands and fingers away from the path of the rear cut-off blade.
Sharp blade can cut you!

a) Slide the rear cut-off blade fully to one side of the laminator.

5.7 Rear cut-off blade

WARNING

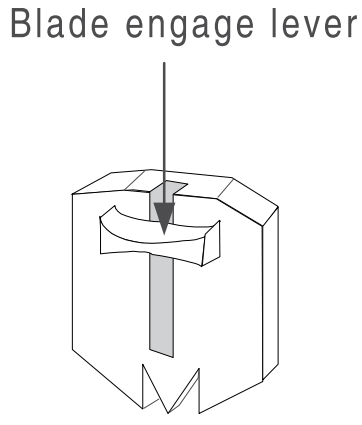
Keep hands and fingers away from the bottom of the rear cut-off blade.
Sharp blade can cut you!

WARNING

Caution should always be exercised when using the rear cut-off blade.
Sharp blade can cut you!

b) Press and hold down the blade engage lever while pushing to the opposite side of the laminator.

The rear cut-off blade is intended to cut the web output from the laminator and should not be used for any other purposes.



CAUTION

Stop the laminator before using the rear cut-off blade. Moving material can damage the rear cut-off blade!

5.8 Front safety shield

The primary function of the front safety shield is to protect the operator from the heated components and the nip of the rollers.

The second function of the front safety shield is to assist the heating components maintain a stable temperature and keep dust away from the activated adhesive.

DANGER

At no time should you attempt to over ride any of the safety latches on the laminator.

WARNING

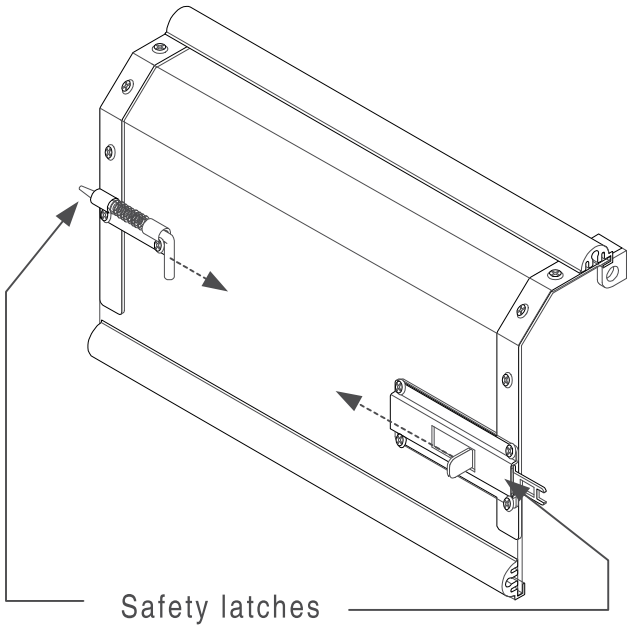
Caution should always be exercised when using the laminator with the safety shields raised. You can be seriously HURT or INJURED!

INFORMATION

The laminator will operate only when all safety latches are in the fully latched position.

Raise the shield

a) Pull both safety latches on the front safety shield toward the center of the laminator.



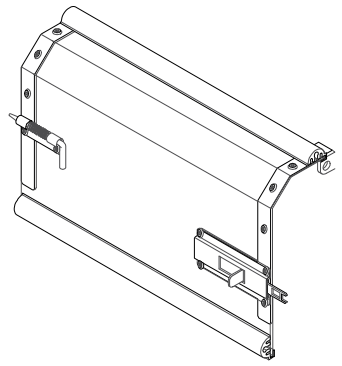
WARNING

Caution should always be exercised when using the laminator with the safety shields raised. You can be seriously HURT or INJURED!

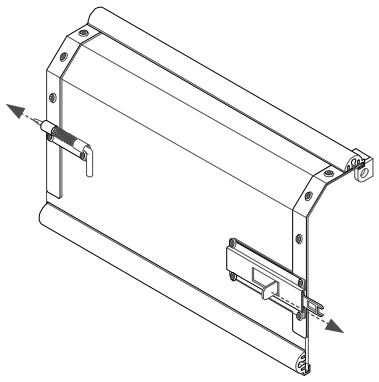
b) Raise the safety shield to its full up right position.

Lower the shield

a) Pull both safety latches on the front safety shield toward the center of the laminator and lower.



b) Align the safety latches with their respective interlocks and slide the safety latches outwards.



INFORMATION

The laminator will operate only when all safety latches are in the fully latched position.

5.9 Pressure plate

INFORMATION

Safety latches on the pressure plate are not associated with an interlock switch. The laminator will operate without the pressure plate installed.

The pressure plate is provided to assist with keeping the leading edge and trailing edge of a print flat.

Removing the pressure plate

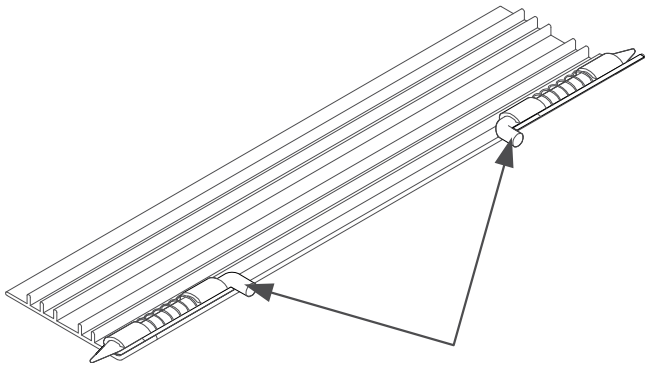
WARNING

Caution should always be exercised when using the laminator with the safety shield raised. You can be seriously HURT or INJURED!

a) Pull both safety latches on the front safety shield toward the center of the laminator.

b) Raise the safety shield to its full up right position.

c) Pull the two locator latches of the pressure plate toward the center of the laminator.



d) Remove the pressure plate and set in a safe place away from the laminator if not used.

Replacing the pressure plate

a) Pull the two locator latches of the pressure plate towards the center and position so the locator latch pins align with thier respective holes.

b) Pull both safety latches on the front safety shield toward the center of the laminator and lower.

c) Align the safety latches with thier respective interlocks and slide the safety latches outwards.

INFORMATION

The laminator will operate only when all safety latches are in the fully latched position.

5.10 Feed table

The feed table is equipped with a safety latch and an interlock. These safety devices are in place for your protction and at no time should they be over ridden.

DANGER

At no time should you attempt to over ride any of the safety devices on the laminator.

INFORMATION

The laminator will operate only when all safety latches are in the fully latched position.

Removing the feed table

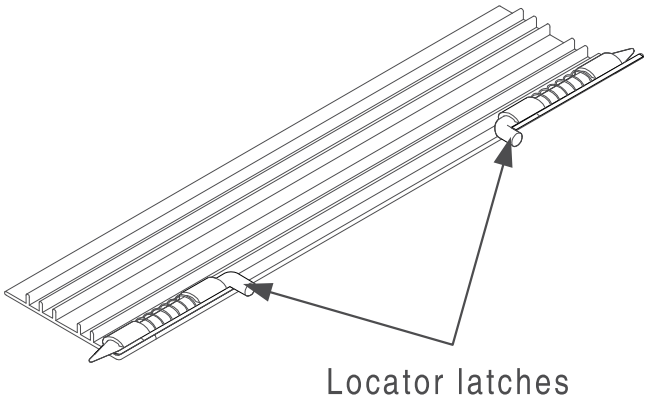
WARNING

Caution should always be exercised when using the laminator with the safety shields raised. You can be seriously HURT or INJURED!

a) Pull both safety latches on the front safety shield towards the center of the laminator.

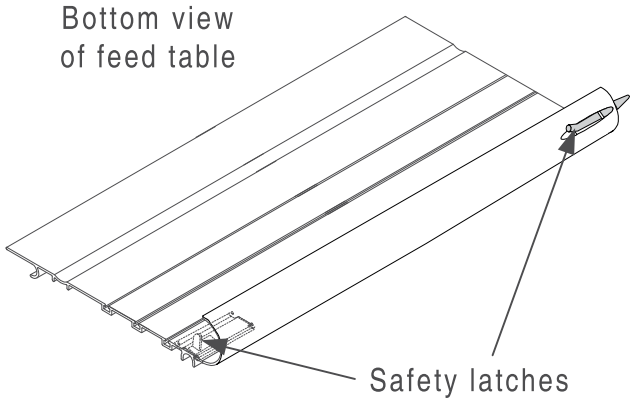
b) Raise the safety shield to its full up right position.

c) Pull the two locator latches of the pressure plate toward the center of the laminator.

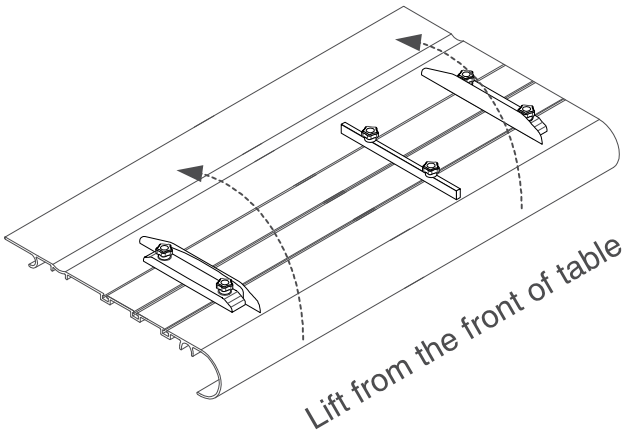


d) Remove the pressure plate and set in a safe place away from the laminator if not being used.

e) Pull the two safety latches on the feed table toward the center of the laminator.



f) Lift the table from the front and pull out away from the laminator.



Replacing the feed table

a) Lift the table from the front and set the rear of the table into the rear feed table supprot bolts.

b) Lower the front of the feed table into the front feed table support bolts while pulling the safety latches toward the center of the feed table.

c) Latch the two safety latches of the feed table into thier respective interlocks.

INFORMATION

The laminator will operate only when all safety latches are in the fully latched position.

d) Pull the two locator latches of the pressure plate toward the center and position the pins with thier respective holes.

e) Pull both safety latches on the front safety shield toward the center of the laminator and lower.

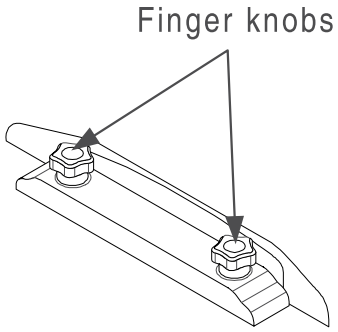
f) Align the safety latches with thier respective interlocks and slide the safety latches outward.

INFORMATION

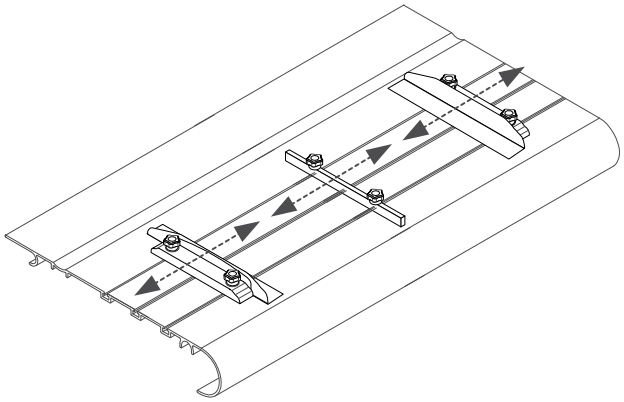
The laminator will operate only when all safety latches are in the fully latched position.

5.11 Feed guides

To move the feed guides, loosen the two finger knobs to the guide.



Adjust the guides as necessary and secure by tightening the finger knobs.



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Section 6 Applications

The Explorer 107 can accommodate Poly-in or Poly-out films. Poly-out means the adhesive is on the outside of the roll. Each film requires a slightly different loading procedure.

The shiny side of clear film must contact the heating components with the dull sides (adhesive side) facing out. Use caution when loading matte or delustered film since both sides appear dull.

The top and bottom rolls of laminating film must be of the same width and be present simultaneously.

WARNING

Do not wear ties, loose fitting clothing or dangling jewelry while operating or servicing the laminator. These items can get caught in the nip and choke you or you can be crushed or burned.

The procedures and parameters described in this section are reference points only. Parameters will vary with regards to laminate thickness, laminate widths, laminate types, print types, ink or toner types, environment conditions and operator experience.

6.1 Initial Webbing

Follow the procedure below to web the Explorer 107 from a cold. If you are changing film, follow the procedure described in **6.2 New film to existing film**.

Materials need

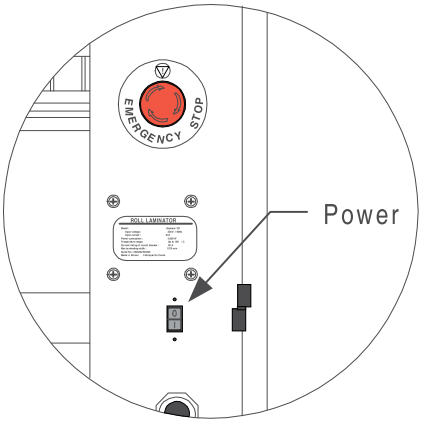
- 2 rolls of thermal film
  (Must be the same in width)
- Threading card
  (Film width by 6 inches)
- Enclosed blade
  (i.e. Zippy™ knife)
- Second person
  (assist with loading the film)
- Images
  (i.e. Inkjet, piezo, electrostatic, offset)

Set up

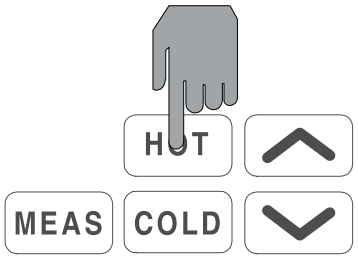
a) Clear the area around the laminating rollers and pull rollers nip.

b) Ensure the laminator is plugged in and no **E-STOP** is depressed.

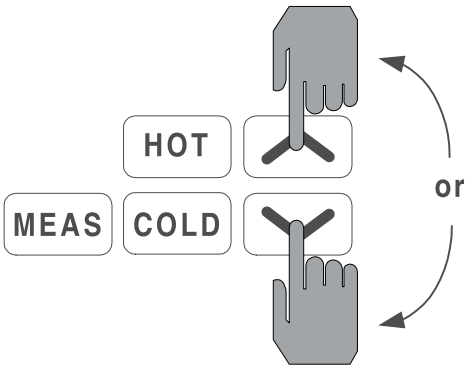
c) Turn the **POWER** to the "**I**" position.



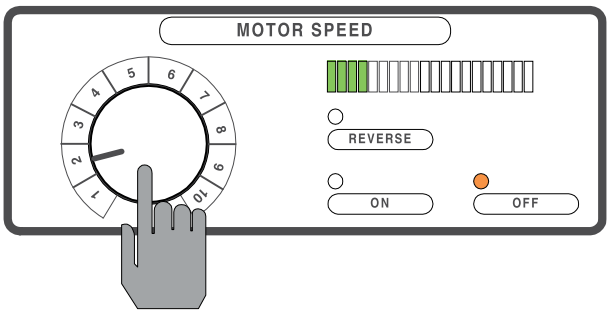
d) Press HOT on the temperature control panel for theTop Teflon Roller, Nip Roller, Bottom Teflon Roller and the Sub Heaters.



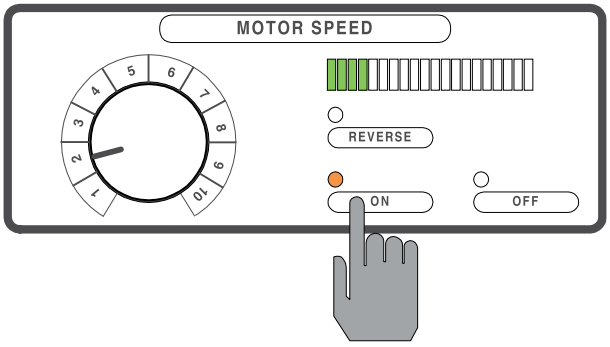
e) Press ^ or v to adjust for desired set point temperature.



f) Using **motor speed adjust**, set a motor speed of 2 on the operations control panel.



g) Press ON. The rollers begin turning

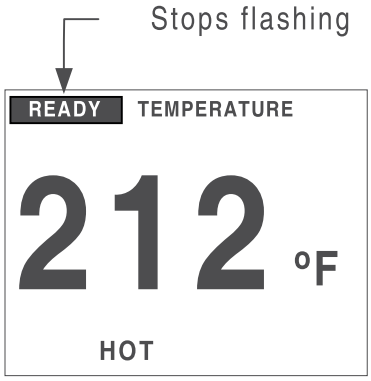


h) Lower the upper heat assembly by turning the roller handle clockwise until the nip rollers contact.

INFORMATION

Proceed to Webbing while waiting for the heaters to come up to temperature.

i) When **READY** stops flashing in the temperature displays for all the heating components, that is your indication to proceed with webbing of the laminator.

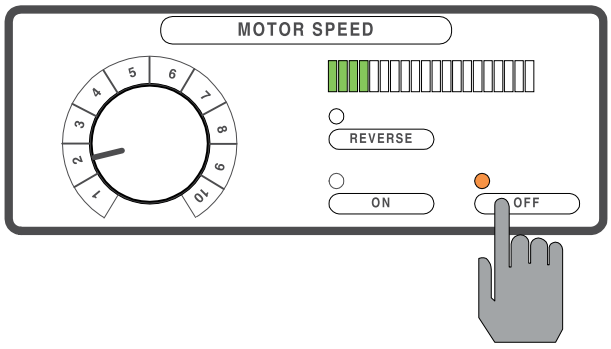


CAUTION

Never leave the rollers in the down position without rolling. Prolonged contact in one area can form flat spots on the rollers.

j) Raise the upper heat assembly by turning the roller handle counter clockwise.

k) Press OFF. The rollers stop turning.

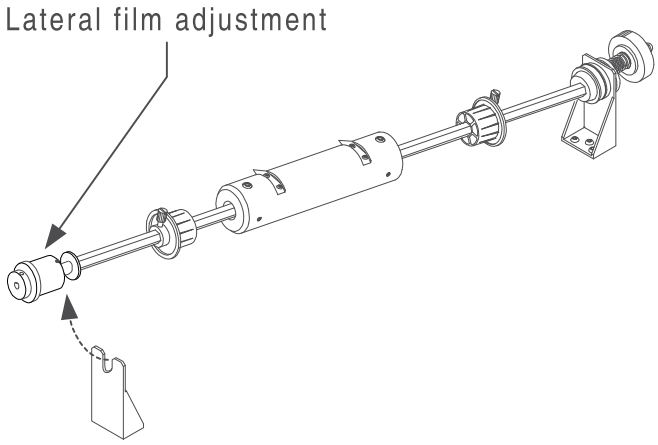


Webbing

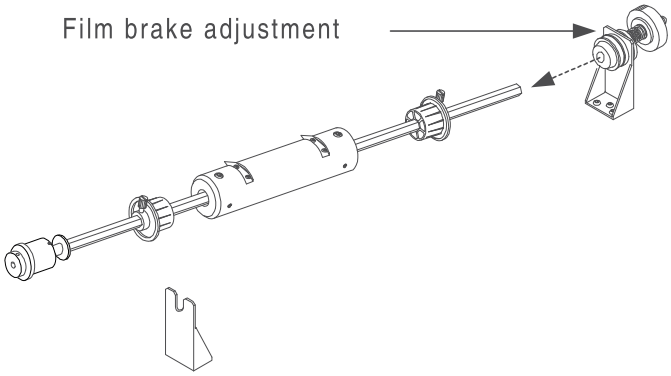
WARNING

The following steps are performed while the laminator is HOT! Avoid contact with the heating components!

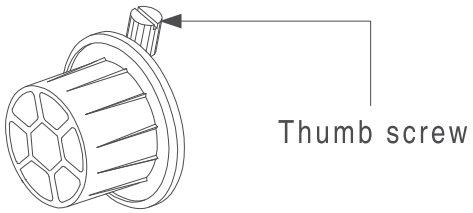
a) Lift the upper unwind shaft from the **lateral film adjustment** side out of its support saddle.



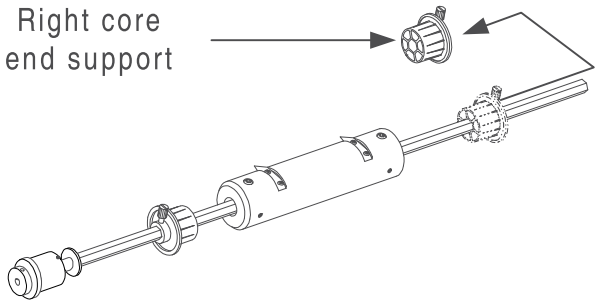
b) Pull the upper unwind shaft out from the upper **film brake adjustment** .



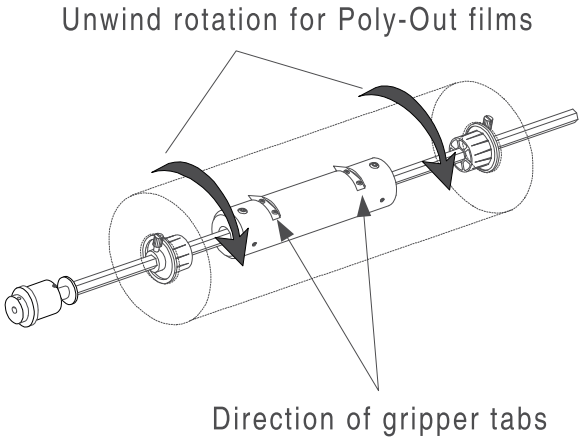
c) Loosen the thumb screw to the two **film core end supports.**



d) Slide the **Right core end support** off of the unwind shaft.



e) Ensure the **core gripper support** is properly positioned for the type of film being used and is centered on the unwind shaft.



INFORMATION

Refer to Figure 6.1.1 under Section 6 Applications for unwind direction for Poly-In and Poly-Out films

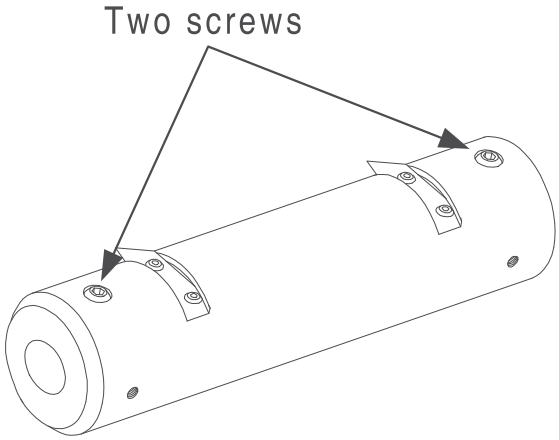
INFORMATION

The gripper tabs should point in the opposite direction of film rotation.

WARNING

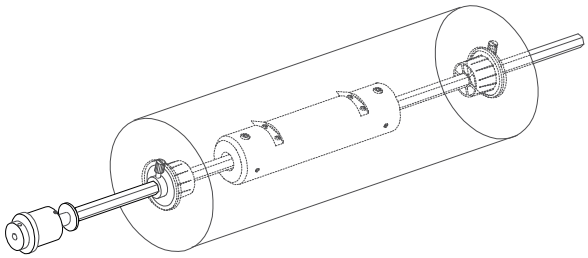
Extreme caution should always be exercised working around the core gripper support, the grippers tabs can cut you!

f) Use a 4 mm allen wrench to loosen the two screws if the **core gripper support** requires adjustment or removal.



g) Slide the roll of film onto the unwind shaft and push the **left core end support** into the core of the film roll..

h) Slide the **right core end support** onto the unwind shaft.



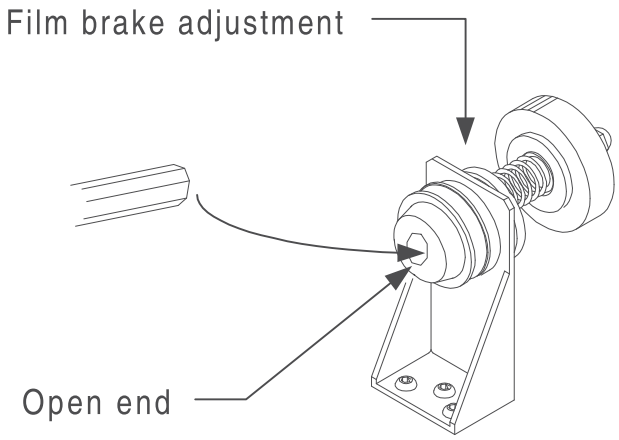
WARNING

Always use safe and proper lifting practices when lifting heavy objects. You can become seriously injured or crushed.

CAUTION

Ensure the roll of laminate is loaded properly on the unwind shaft. Exposed adhesive should be facing away from the heated components. This will prevent hours of cleaning!

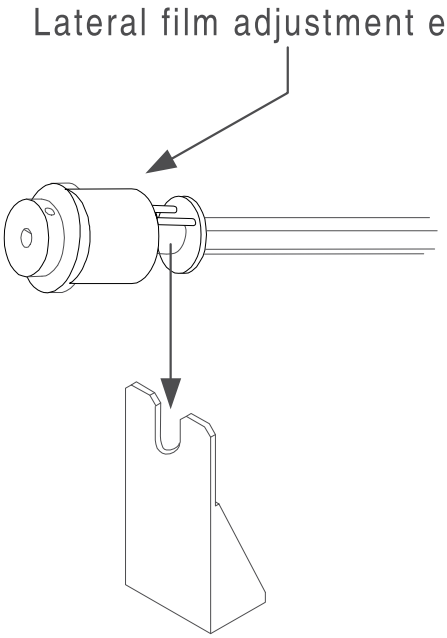
i) With the help of a second person, lift the unwind shaft with the roll of film and reinsert the unwind shaft into the open end of the **film brake adjustment** slot.



INFORMATION

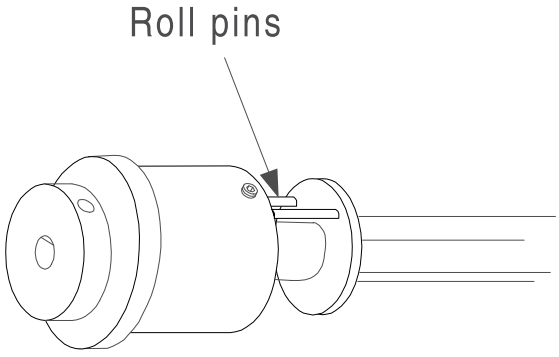
For 2-1/4 core film, turning the roll film in the same direction as the gripper tabs while sliding makes loading the film onto the unwind shaft easier.

j) Carefully set the **lateral film adjustment** end of the unwind shaft into its saddle.

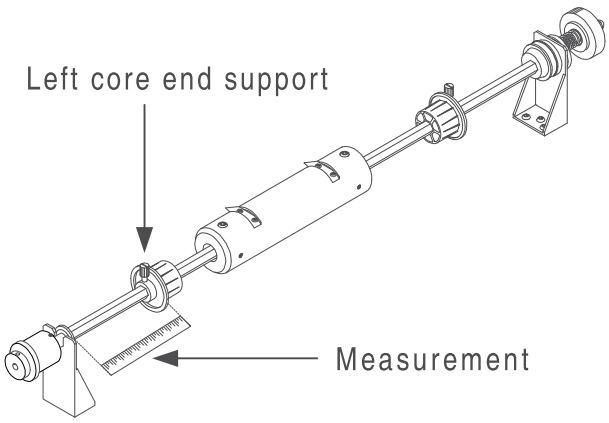


INFORMATION

Ensure the roll pins are on top. They should not be in the saddle!



k) From the rear position of the laminator, center the film on the unwind shaft.



INFORMATION

Use Chart 5.3.1 Film centering chart in Section 5 Operations for measurements.

Chart 5.3.1 Film centering chart

Common film widths	
Film widths	Measurement
12 in. (30 cm)	17 in. (43 cm)
18 in. (46 cm)	14 in. (36 cm)
24 in. (61 cm)	11 in. (28 cm)
38 in. (97 cm)	4 in. (10 cm)

INFORMATION

If not exactly centered, lateral film adjustment can be made during the webbing process.

l) Once the roll of film has been centered,, tighten the thumb screws to sdecure in place.

m) For the bottom roll of film, follow the same procedure just described.

Threading

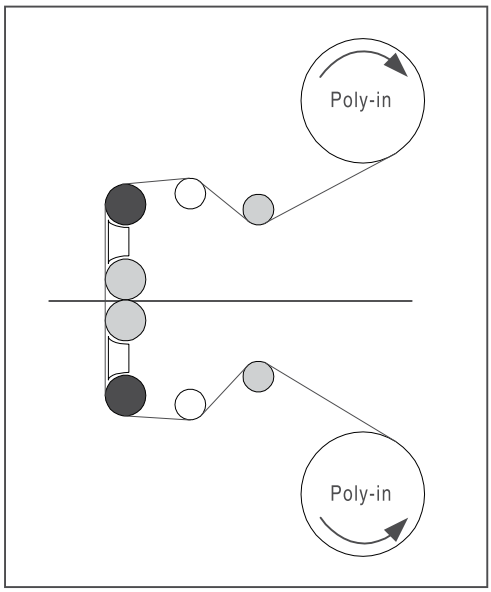
WARNING

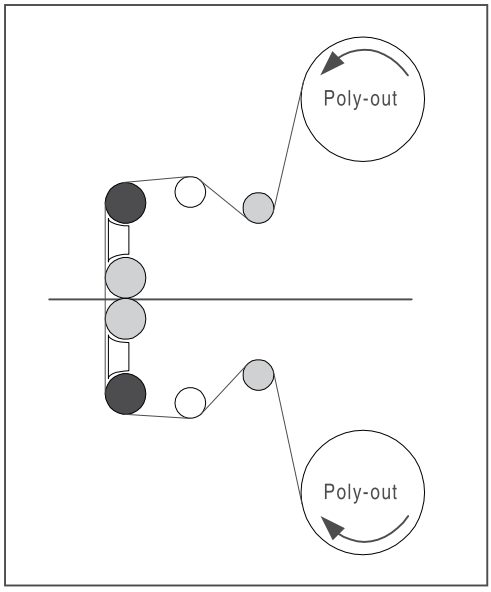
The following steps are performed while the laminator is HOT! Avoid contact with the heating components!

a) Start with the upper roll of film. Unwrap about 2-3 feet (61-91 cm) of film from the roll.

b) Pull the film under the rubber tension idler and over the metal idler. Refer to **Figure 6.1.1 Poly-in / Poly-out**

Figure 6.1.1 Poly-in / Poly-out





c) Guide the film under the pivot bar of the front safety shield and over the upper heating components

WARNING

Caution should always be exercised when using the laminator with the safety shields raised. You can be seriously HURT or INJURED!

DANGER

At no time should you attempt to over ride any of the safety latches on the laminator.

d) Raise the front safety shield and remove the pressure plate along with the feed table.

INFORMATION

The laminator will operate only when all safety latches are in the fully latched position.

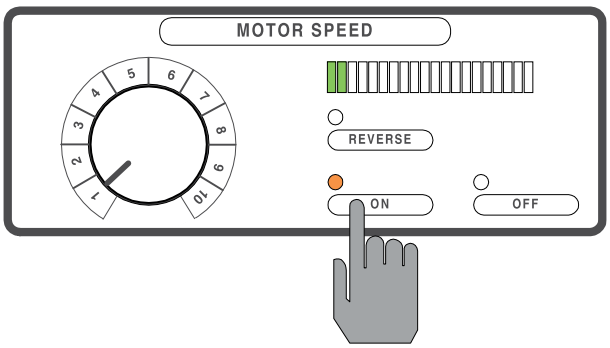
e) From the rear of the machine, unwrap about 2-3 feet (61-91 cm) of film from the bottom roll.

i) Slide the threading card into the two overlapping filmsand push into the nip rollers.

f) Pull the film over the rubber tension idler and under the metal idler. Refer to **Figure 6.1.1 Poly-in / Poly-out**

j) Lower the main roller and pull roller pressure handles to the closed position.and press ON under **MOTOR SPEED**.

g) Guide the bottom film up through the front of the machine and overlap it with the film from the upper roll of film.



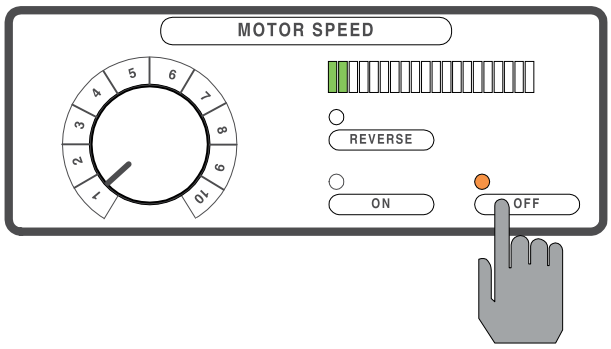
h) Reinstall the feed table and lower the front safety shield. Slide all safety latches into the interlocks.

k) Watch the leading edge of the threading card to ensure that it enters the nip rollers and is being pulled intothe laminator.

INFORMATION

The threading card will guide the two films into the pull rollers.

l) Once the threading card has passed completely through the pull rollers, press OFF under **MOTOR SPEED**.

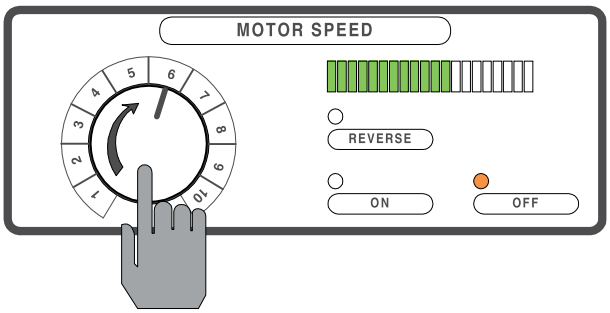


m) Check film alignment and film tention. Adjust as neccessary.

INFORMATION

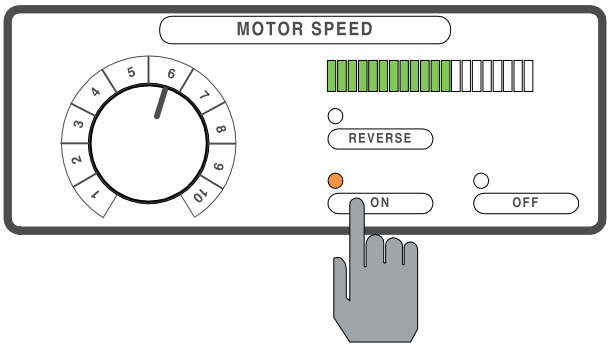
Excessive brake tension may cause the output to curl. Always use the minimum brake tension required to complete the task.

n) Set a desired working speed by turning the **SPEED ADJUST** dial clockwise.



o) Set the feed guides on the feed table if desired.

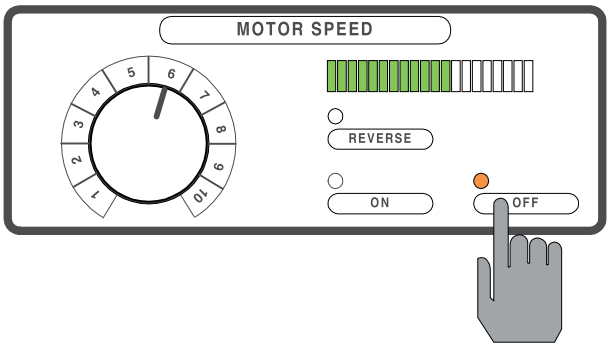
p) Press ON under **MOTOR SPPED** when ready to laminate.



INFORMATION

The laminator will operate only when all safety latches are in the fully latched position.

r) Once the last image has completely traveled pass through the pull rollers, press OFF under **MOTOR SPEED**.

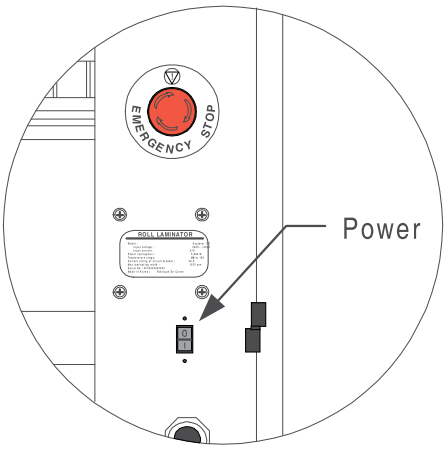


s) Raise the main roller and pull roller.

CAUTION

Never leave the rollers in the down position without rolling. Prolonged contact in one area can form flat spots on the rollers.

g) Press **POWER** to "**O**" if finished with the laminator.



6.2 New film to existing film

The following describes a method for loading film whereby the existing filmpresent on the heat rollers may be used in place of the threading card to draw the new film through the laminator.

The adhesive from the existing film must be tacky or activated. The leading edges of the new film will be overlapped onto the tacky adhesive of the old film.

The existing film and the new film will be pulled through the laminator together. Refer to **Figure 6.1.1 Poly-in / Poly-out**.

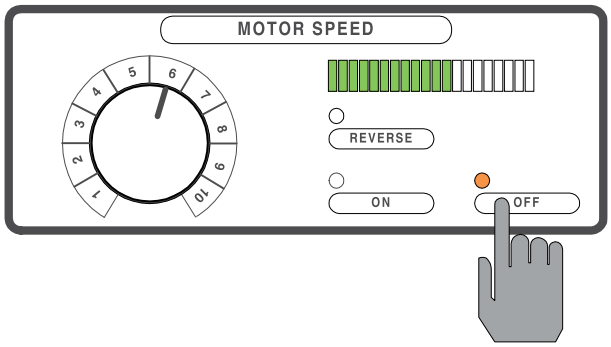
INFORMATION

The laminator must be heated for this method of webbing.

WARNING

The following steps are performed while the laminator is HOT! Avoid contact with the heating components!

a) Once the last image has completely traveled pass pull rollers, press OFF under **MOTOR SPEED**.



b) Raise the main roller and pull roller.

CAUTION

Do not use an open blade to cut the web near the rollers. You can put cuts into the rollers!

c) With an enclosed blade, cut the web of film from the upper and lower supply roll.

d) Replace the current roll of film with the new roll roll of film.

e) Unroll eneough film to tack to the existing web of film.

f) Using masking tape, attach film from the top roll of film to the existing top web.

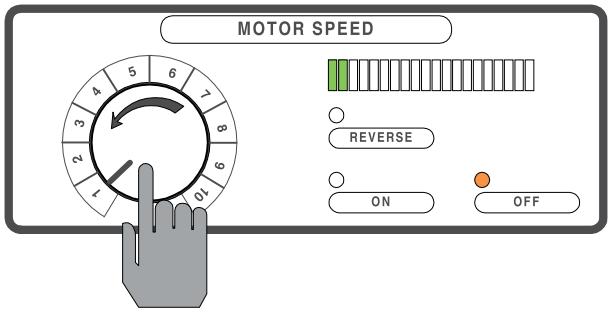
g) Using masking tape, attach film from the bottom roll of film to the existing bottom web.

h) Install the feed table and lower the front safety shield. Lock all safety latches into the interlocks.

INFORMATION

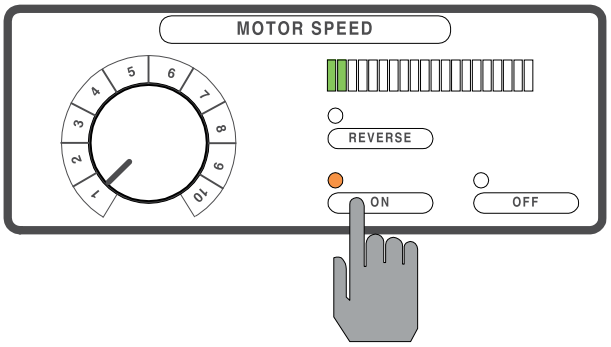
The laminator will operate only when all safety latches are in the fully latched position.

i) Rotate the motor speed adjust counterclockwise to **1**.



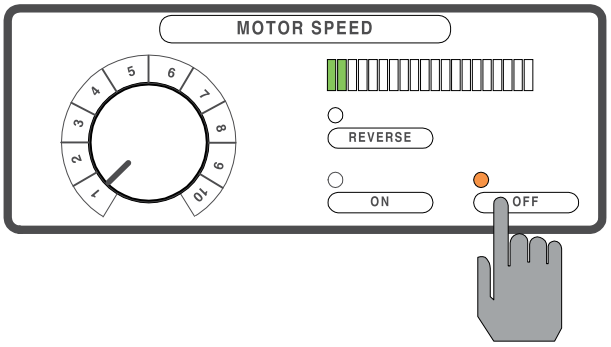
j) Raise the main roller and pull roller.

k) Press ON under **MOTOR SPEED**.



l) Observe the film being pulled through the laminator to assure that the remaining existing film and the new film are advancing concurrently.

m) Press OFF under **MOTOR SPEED** once the newly threaded film web has completely exited the laminator.



n) Adjust motor speed and resume laminating.

6.3 Unwebbing

WARNING

Keep hands and fingers away from the path of the rear cut-off blade. Sharp blade can cut you!

WARNING

Caution should always be exercised when using the rear cut-off blade. Sharp blade can cut you!

a) Use the rear cut-off blade to separate the finished product from the laminator web.

b) With an enclosed blade, cut the web of film from the upper and lower supply roll.

WARNING

Caution should always be exercised when using the laminator with the safety shields raised. You can be seriously HURT or INJURED!

c) Raise the front safety shield.

d) Remove the pressure plate and feed table.

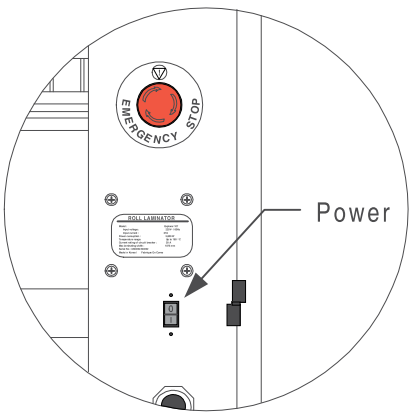
WARNING

Extreme caution should be exercised when gripping the film near the heating components.

e) Grip the laminate from the front of the laminator near the nip rollers and pull straight back.

f) Clean the heating components as described in **Section 8 Maintenance**.

g) Press **POWER** to " **O** " if finished with the laminator.



6.4 Parameter Charts

Parameter charts are starting references only. Temperature and speeds will vary. Adjust your settings accordingly for optimal ouput quality..

INFORMATION

Temperatures and speeds will vary due to environment conditions, humidity, film ratios, film thickness, film composition, operator experience, line voltage and stock.

For films not listed in the parameter charts, consult your sales representative or the film manufacturer for the recommended temperature and speed settings.

Parameter charts for Nap-Lam II, Nap-Lam I and Premium films with respect to 20# bond, 60# bond and 80# bond stock are proveded in SAE and Metric. Refer to **Charts 6.4.1** through **Charts 6.4.6**.

Use the conversion chart (**Chart 6.4.7**) provided for temperatures not shown within the parameter charts.

Chart 6.4.1 Nap-Lam II (SAE)

Stock	Film Gauge	Nap-Lam II			
		Preset positions			
		Temperatures (°F)			Control panel
	mil	Teflon rollers	Nip rollers	Sub heaters	Speed
20# Bond	1.7 3 5 10	270 - 290 250 - 270 230 - 250 200 - 230	200 - 230 200 - 220 200 - 210 200	Pre- set	7 - 10 5 - 8 3 - 5 1 - 3
60# Bond	1.7 3 5 10	260 - 280 240 - 270 220 - 240 200 - 230	200 - 230 210 - 230 210 - 220 210 - 220	Pre- set	7 - 10 5 - 8 3 - 5 1 - 3
80# Bond	1.7 3 5 10	260 - 280 240 - 270 220 - 240 200 - 230	200 - 230 210 - 230 210 - 230 210 - 230	Pre- set	6 - 10 4 - 8 2 - 5 1 - 3

* You may have to adjust temperature or speed depending on stock, finish, thickness and ink coverage. ** Turn heat off when not in use.

Chart 6.4.2 Nap-Lam I (SAE)

Stock	Film Gauge	Nap-Lam I			
		Settings			
		Temperatures (°F)			Control panel
	mil	Teflon rollers	Nip rollers	Sub heaters	Speed
20# Bond	1.5 3 5	290 - 320 270 - 300 240 - 270	250 - 270 240 - 260 230 - 250	Pre- set	6 - 9 4 - 7 2 - 4
60# Bond	1.5 3 5	290 - 320 270 - 300 240 - 270	250 - 270 240 - 260 230 - 250	Pre- set	6 - 9 4 - 7 2 - 4
80# Bond	1.5 3 5	290 - 320 270 - 300 240 - 270	250 - 270 240 - 260 230 - 250	Pre- set	6 - 9 4 - 7 2 - 4

* You may have to adjust temperature or speed depending on stock, finish, thickness and ink coverage. ** Turn heat off when not in use.

Chart 6.4.3 Premium (SAE)

Stock	Film Gauge	Premium			
		Settings			
	mil	Temperatures (°F)			Control panel
		Teflon rollers	Nip rollers	Sub heaters	Speed
20# Bond	3 5 10	250 - 270 230 - 250 200 - 230	200 - 220 200 - 210 200	Pre- set	4 - 7 2 - 4 1 - 2
60# Bond	3 5 10	240 - 270 220 - 240 200 - 230	210 - 230 210 - 220 210 - 220	Pre- set	4 - 7 2 - 4 1 - 2
80# Bond	3 5 10	240 - 270 220 - 240 200 - 230	210 - 230 210 - 230 210 - 230	Pre- set	3 - 7 2 - 4 1 - 2

* You may have to adjust temperature or speed depending on stock, finish, thickness and ink coverage. ** Turn heat off when not in use.

Chart 6.4.4 Nap-Lam II (Metric)

Stock	Film Gauge	Nap-Lam II			
		Preset Positions			
	mic	Temperatures (°C)			Control panel
		Teflon rollers	Nip rollers	Sub heaters	Speed
75 gsm	38 75 125 250	132 - 143 121 - 132 110 - 121 93 - 110	93 - 110 93 - 104 93 - 99 93	Pre- set	7 - 10 5 - 8 3 - 5 1 - 3
225 gsm	38 75 125 250	127 - 138 116 - 132 104 - 116 93 - 110	93 - 110 99 - 110 99 - 104 99 - 104	Pre- set	7 - 10 5 - 8 3 - 5 1 - 3
300 gsm	38 75 125 250	127 - 138 116 - 132 104 - 116 93 - 110	93 - 110 99 - 110 99 - 110 99 - 110	Pre- set	6 - 10 4 - 8 2 - 5 1 - 2

* You may have to adjust temperature or speed depending on stock, finish, thickness and ink coverage. ** Turn heat off when not in use.

Chart 6.4.5 Nap-Lam I (Metric)

Stock	Film Gauge	Nap-Lam I			
		Settings			
		Temperatures (°C)			Control panel
	mic	Teflon rollers	Nip rollers	Sub heaters	Speed
75 gsm	38 75 125	143 - 160 132 - 149 116 - 132	121 - 132 116 - 127 110 - 121	Pre- set	6 - 9 4 - 7 2 - 4
225 gsm	38 75 125	143 - 160 132 - 149 116 - 132	121 - 132 116 - 127 110 - 121	Pre- set	6 - 9 4 - 7 2 - 4
300 gsm	38 75 125	143 - 160 132 - 149 116 - 132	121 - 132 116 - 127 110 - 121	Pre- set	6 - 9 4 - 7 2 - 4

* You may have to adjust temperature or speed depending on stock, finish, thickness and ink coverage. ** Turn heat off when not in use.

Chart 6.4.6 Premium (Metric)

Stock	Film Gauge	Premium			
		Settings			
		Temperatures (°C)			Control panel
	mic	Teflon rollers	Nip rollers	Sub heaters	Speed
75 gsm	75 125 250	121 - 132 110 - 121 93 - 110	93 - 104 93 - 99 93	Pre- set	4 - 7 2 - 4 1 - 2
225 gsm	75 125 250	116 - 132 104 - 116 93 - 110	99 - 110 99 - 104 99 - 104	Pre- set	4 - 7 2 - 4 1 - 2
300 gsm	75 125 250	116 - 132 104 - 116 93 - 110	99 - 110 99 - 110 99 - 110	Pre- set	4 - 7 2 - 4 1 - 2

* You may have to adjust temperature or speed depending on stock, finish, thickness and ink coverage. ** Turn heat off when not in use.

Chart 6.4.7 Temperature conversion chart

° F		° C	° F		° C	° F		° C	° F		° C	° F		° C
68	=	20	113	=	45	158	=	70	203	=	95	248	=	120
69	=	20.6	114	=	45.6	159	=	70.6	204	=	95.6	249	=	120.6
70	=	21.1	115	=	46.1	160	=	71.1	205	=	96.1	250	=	121.1
71	=	21.7	116	=	46.7	161	=	71.7	206	=	96.7	251	=	121.7
72	=	22.2	117	=	47.2	162	=	72.2	207	=	97.2	252	=	122.2
73	=	22.7	118	=	47.8	163	=	72.8	208	=	97.8	253	=	122.8
74	=	23.3	119	=	48.3	164	=	73.3	209	=	98.3	254	=	123.3
75	=	23.9	120	=	48.9	165	=	73.9	210	=	98.9	255	=	123.9
76	=	24.4	121	=	49.4	166	=	74.4	211	=	99.4	256	=	124.4
77	=	25	122	=	50	167	=	75	212	=	100	257	=	125
78	=	25.6	123	=	50.6	168	=	75.6	213	=	100.6	258	=	125.6
79	=	26.1	124	=	51.1	169	=	76.1	214	=	101.1	259	=	126.1
80	=	26.7	125	=	51.7	170	=	76.7	215	=	101.7	260	=	126.7
81	=	27.2	126	=	52.2	171	=	77.2	216	=	102.2	261	=	127.2
82	=	27.8	127	=	52.8	172	=	77.8	217	=	102.8	262	=	127.8
83	=	28.3	128	=	53.3	173	=	78.3	218	=	103.3	263	=	128.3
84	=	28.9	129	=	53.9	174	=	78.9	219	=	103.9	264	=	128.9
85	=	29.4	130	=	54.4	175	=	79.4	220	=	104.4	265	=	129.4
86	=	30	131	=	55	176	=	80	221	=	105	266	=	130
87	=	30.6	132	=	55.6	177	=	80.6	222	=	105.6	267	=	130.6
88	=	31.1	133	=	56.1	178	=	81.1	223	=	106.1	268	=	131.1
89	=	31.7	134	=	56.7	179	=	81.7	224	=	106.7	269	=	131.7
90	=	32.2	135	=	57.2	180	=	82.2	225	=	107.2	270	=	132.2
91	=	32.8	136	=	57.8	181	=	82.8	226	=	107.8	271	=	132.8
92	=	33.3	137	=	58.3	182	=	83.3	227	=	108.3	272	=	133.3
93	=	33.9	138	=	58.9	183	=	83.9	228	=	108.9	273	=	133.9
94	=	34.4	139	=	59.4	184	=	84.4	229	=	109.4	274	=	134.4
95	=	35	140	=	60	185	=	85	230	=	110	275	=	135
96	=	35.6	141	=	60.6	186	=	85.6	231	=	110.6	276	=	135.6
97	=	36.1	142	=	61.1	187	=	86.1	232	=	111.1	277	=	136.1
98	=	36.7	143	=	61.7	188	=	86.7	233	=	111.7	278	=	136.7
99	=	37.2	144	=	62.2	189	=	87.2	234	=	112.2	279	=	137.2
100	=	37.8	145	=	62.8	190	=	87.8	235	=	112.8	280	=	137.8
101	=	38.3	146	=	63.3	191	=	88.3	236	=	113.3	281	=	138.3
102	=	38.9	147	=	63.9	192	=	88.9	237	=	113.9	282	=	138.9
103	=	39.4	148	=	64.4	193	=	89.4	238	=	114.4	283	=	139.4
104	=	40	149	=	65	194	=	90	239	=	115	284	=	140
105	=	40.6	150	=	65.6	195	=	90.6	240	=	115.6	285	=	140.6
106	=	41.1	151	=	66.1	196	=	91.1	241	=	116.1	286	=	141.1
107	=	41.7	152	=	66.7	197	=	91.7	242	=	116.7	287	=	141.7
108	=	42.2	153	=	67.2	198	=	92.2	243	=	117.2	288	=	142.2
109	=	42.8	154	=	67.8	199	=	92.8	244	=	117.8	289	=	142.8
110	=	43.3	155	=	68.3	200	=	93.3	245	=	118.3	290	=	143.3
111	=	43.9	156	=	68.9	201	=	93.9	246	=	118.9		=	
112	=	44.4	157	=	69.4	202	=	94.4	247	=	119.4		=	

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Section 7 Troubleshooting

WARNING

Do not wear ties, loose fitting clothes or dangling jewelry while operating or servicing the laminator. These items can get caught in the nip and choke you or you can be crushed or burned.

As an operator, you can perform simple troubleshooting to correct typical output problems. Use the following guide for assistance.

7.1 Wave problems

Following is a list of common output wave problems you may encounter.

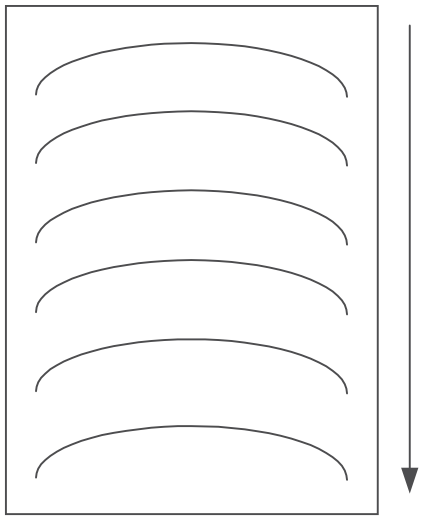
The arrow along the length of the web represents the direction of (travel).

INFORMATION

For optimal temperature settings of various laminates, contact your supplier or sales representative.

Problem: D waves in the image but not in the laminate

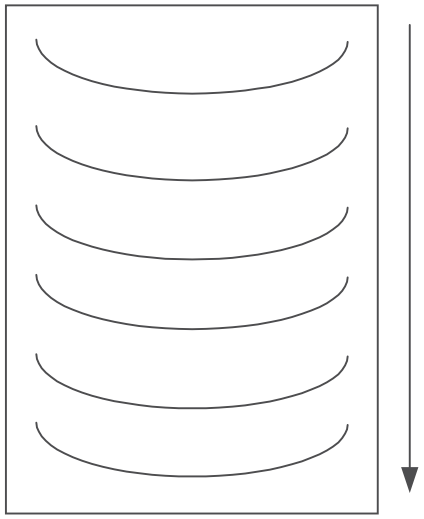
Cause: Excessive roller pressure.



Hints: • Check paper tension
• Check relative moisture content of the paper

Problem: D Waves in the laminate

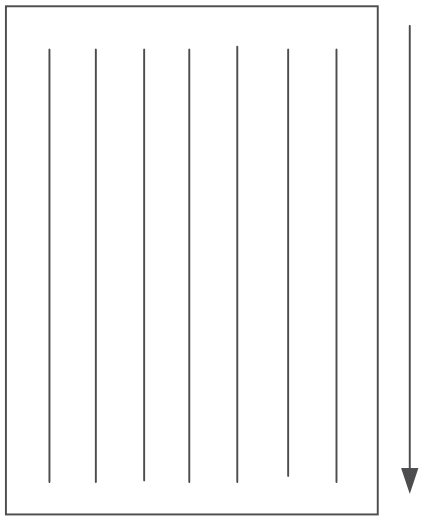
Cause: Insufficient roller pressure.



Hints: • Check the roll pressure
• Check the main roll nip settings
• Check the pull roll nip settings

Problem: Straight waves in the output

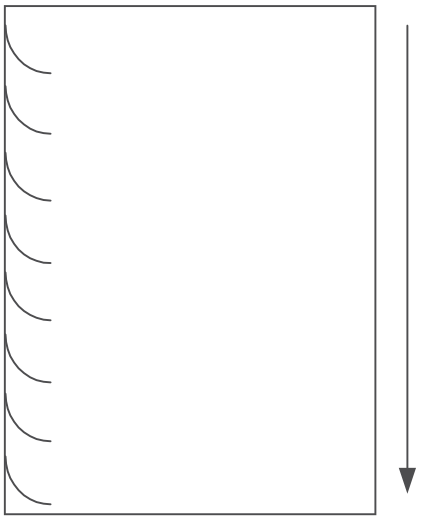
Cause: Excessive heat at the nip rollers



Hints: • Check operational settings for materials being used.

Problem: Waves on only one side of the output

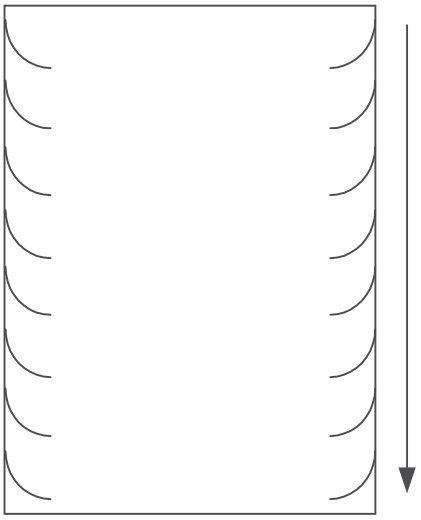
Cause: Insufficient roller pressureon one side.



Hints: • Check the nip setting of main rolls
• Check the nip setting of pull rolls
• Check for even paper tension

Problem: Angled waves in the output on both sides

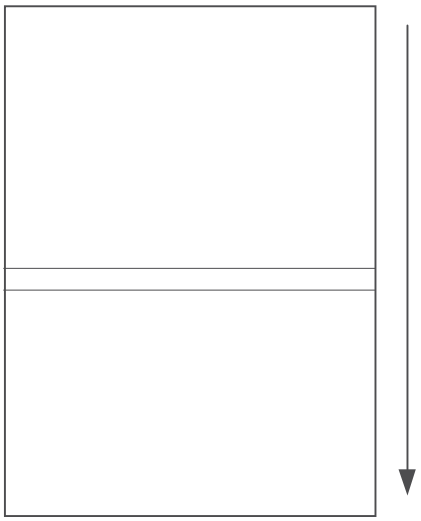
Cause: Slight amount of insufficient roller pressure.



Hints: • Check for insufficient main roller pressure
• Check for insufficient pull roller pressure
• Check the main roller nip settings
• Check the pull roller nip settings

Problem: Indent waves in output after the pull rollers

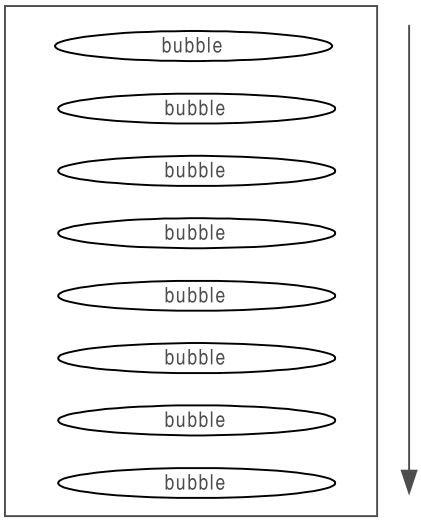
Cause: Handling the web before it has a chance to cool.



Hints: • Insufficient cooling time
• Allow output to cool before handling
• Check operating temperatures of material

Problem: Evenly spaced bubbles in the web.

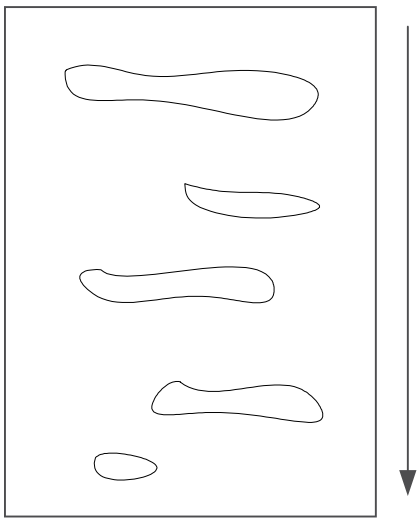
Cause: Bowed rollers



Hints: • Check for consistent distance between bubbles.
• Verifythat bubbles are present with and without paper in the web.

Problem: Sparatic bubbles in the web

Cause: Excessive moisture



Hints: Store prints in a dry place.

7.2 Output problems

Following is a list of common film problems you may encounter. Film problems are separate from wave problems.

Wave problems are typically caused by machine characteristics.

Output problemsare usually caused from improper operating parameters.

For definitions of terminologies, please refer to **7.4 Glossary of terminology**.

7.2.1 Problems/Cause/Hints

Problem: Blistering within the image

Cause: • Long dwell time
• Set point is too high
• Image is wet

Hints: • Increase the speed
• Decrease the operating temperature
• Store images in a dry atmosphere

Problem: Coiling or curling of encapsulated images

Cause: • Excessive upper film tension
• Excessive lower film tension

Hints: • Balance the upper and the lower film tension

Problem: Silvering in the laminate

Cause: • Short dwell time in the nip
• Insufficient heat

Hints: • Decrease the speed
• Increase the operating temperature

Problem: Delamination

Cause: • Insufficient temperatures
• Speed is too fast
• Insufficient roller pressure

Hints: • Increase operating temperatures
• Check operating speed
• Laminate compatibility with ink
• Ink compatibility with paper
• Check roller pressure

7.3 Machine problems

Once the **Hints** are all checked, and your problem still exists, a service call must be placed for a qualified Technician to fix the problem.

You may do this by dialing **1 (800) 790 - 7787**. This will connect you with GBC National Service dispatch. You will be required to give the serial number of your machine when placing a service call.

The space below has been provided to keep this number readily available if and when needed.

My Explorer 107 Laminator serial number

is : _____

At no time does GBC Pro-Tech suggest or recommend that you attempt to fix the machine by opening the cabinets yourself.

WARNING

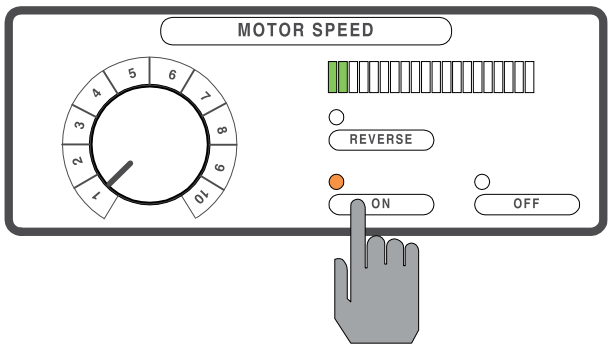
Do not wear ties, loose fitting clothes or dangling jewelry while operating or servicing the laminator. These items can get caught in the nip and choke you or you can be crushed or burned.

7.3.1 Problem/Hints

Problem : No illumination to the control panels.

Hints : • Confirm that **POWER** is on the " **I** " position.
• Ensure that the plug is fully seated in the receptacle.

Problem : Press ON under Motor Speed, rollers will not turn..

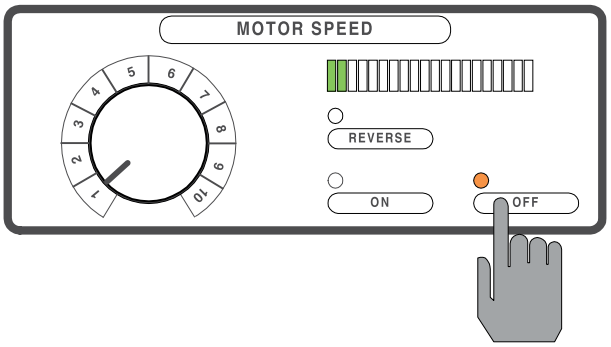


Hints: • Ensure that no **E-STOP** is depressed.
• Ensure that the feed table safety latches are in the fully locked position.
• Ensure the safety shield latches are in the fully locked position..

7.3.2 Clearing a jam

Film jams (wrap-ups) may occur if the film is loaded backwards or if the area at which film exits the laminator is blocked. The film, when jammed, wraps around the main rollers or pull rollers. To clear a jam it is necessary to rotate the rollers in the reverse direction.

a) Press OFF under Motor Speed immediately to stop the laminator.



WARNING

Caution should always be exercised when using the laminator with the safety shields raised. You can be seriously HURT or INJURED!

b) Raise the front safety shield.

c) Remove the pressure plate.

INFORMATION

Locator latches on the pressure plate are not associated with an interlock switch. The laminator can operate without the pressure plate installed.

d) Remove the feed table.

e) Cut the top and bottom film webs.

f) Grasp the loose ends of the web

g) Reinstall the feed table so that the loose ends of the web rest on top and lock the safety latches into the interlocks..

INFORMATION

The laminator will operate only when all safety latches are in the fully latched position.

h) Close the front safety shield and lock the safety latches into the interlocks..

i) Press and hold REVERSE while guiding the web out of the nip rollers.

INFORMATION

Rollers only turn in reverse while depressing REVERSE

j) Thread the film as described in **Section 6 Application**.

7.4 Glossary

The glossary can help you understand some of the terminology used when referring to the laminator, applications, or troubleshooting aspects of the machine.

Blistering

A condition where the paper coating is bubbled up from the image paper causing a "blister". It is created by using excessive heat during the lamination process. Blistering is most commonly found with photographic and ink jet media.

Bond strength

Refers to one of three conditions; 1) the anchor strength of adhesive to laminate substrate, 2) the anchor strength of the laminating film to the product that has been laminated, or 3) when two layers of film are laminated together, the strength of the adhesive to adhesive bond.

Curling

A term used to describe an image rolling up on itself. This is caused by differences in the brake tension used between the upper and lower laminates during and application process.

D waves

A term used to describe a wave pattern caused, generally, by incorrect roller tension.

Delamination

Refers to either one of two conditions; 1) the adhesive separating from the laminate substrate, or 2) the laminate separating from the product being laminated.

Dwell time

Dwell time is controlled by the speed of the motor and is defined as the amount of time the film is in contact with the heat rollers.

Encapsulation

When an image is completely encased in laminating film, it is encapsulated.

Film

A two part material consisting of an adhesive layer and a substrate. The adhesive and the substrate may or may not be clear. This is the material used for lamination. Please refer to laminate.

Laminate

A two part material consisting of an adhesive layer and a substrate. The adhesive and the substrate may or may not be clear. This is the material used for lamination.

Main rollers

The main rollers are the laminators primary source of heat.

Media

Term used to describe the materials used to print an image, i.e. papers

Nip

The point at which the top and bottom rollers make contact.

Heat platens

The heating component between the nip roller and the Teflon roller. This is also known as a heat shoe.

Pull rollers

These rollers are used to pull the web through the laminator. Tensioning of the laminated media helps to make it flat and smooth.

Scarring

The visual effect of folding papers or laminates and breaking the surface. When done to a printed material it will be seen as a white crack in the image.

Silvering

A term used to describe one of two occurrences;
1) air bubbles trapped between the product and a thermal laminate, generally caused by insufficient heat being applied to the film.
2) Film used does not have eneough adhesive for the product being laminated.
3) Excessive amount of Offset powder on the prints.

Web

The material from a supply roll going through the laminator.

Section 8 Maintenance

GBC Pro-Tech laminators require minimal maintenance. However, regular maintenance is essential to keep any piece of precision machinery at peak performance. A maintenance schedule and a section of procedures are included in this section.

WARNING

Do not wear ties, loose fitting clothes or dangling jewelry while operating or servicing the laminator. These items can get caught in the nip and choke you or you can be crushed or burned.

INFORMATION

Improper maintenance, can result in poor output quality.

GBC offers Cleaning kits (P/N 1711515) as well as Extended Maintenance Agreements.

The only maintenance required by the operator is to maintain clean and adhesive free nip rollers, heat platens and Teflon rollers and overall cleanliness of the laminator itself.

8.1 Maintenance Schedule

INFORMATION

Below is a recommended maintenance schedule. Before performing any of the steps listed, read through the procedures first. Please follow the instructions pertaining to the step you are performing.

Daily

- Clean the rollers
  (See cleaning in this section)
- Inspect the electrical cord for damage.
  (If damaged, you should replace or repair it immediately)

Monthly

- Adjust the nip if needed.
  (Performed by a qualified Service Technician)
- Check the chain tension.
  (Performed by a qualified Service Technician)
- Inspect the area around the laminator for possible hazards
  (dust buildup, combustible items stored too close, etc.)

Semi-Annual

- Lubricate the chains, and gears.
  (Performed by a qualified Service Technician)
- Check wire termination tightness.
  (Performed by a qualified Service Technician)

CAUTION

Never clean the rollers with sharp or pointed objects. You may put irreparable cuts into the rollers.

ELECTRICAL SHOCK

Remove power from the laminator before servicing. You can be severely shocked, killed or cause a fire.

CAUTION

Harden adhesive deposits on the rollers can cause damage to the rollers.

8.2 Cleaning the rollers

CAUTION

The following procedure is performed while the laminator is HOT! Use extreme caution!

CAUTION

Do NOT pick or pull heat activated adhesive off the rolls when they are cold. You can cause irreparable damage to the laminating rolls.

WARNING

Heating components are HOT! You can become severely burned !

INFORMATION

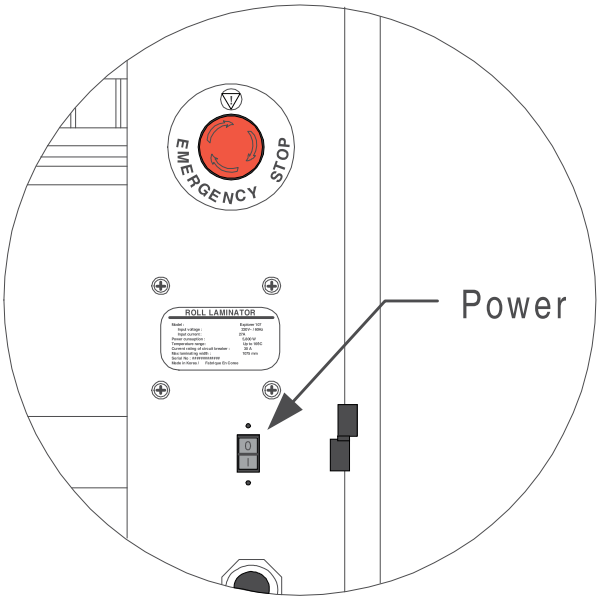
The most efficient time to clean the rollers is after a lamination process is completed.

Tools required

- Damp cloth
  (Use water only to dampen the cloth)
- Rubber cement eraser
  (a belt sander dressing block may be used instead)
- Several 100% cotton terry cloths
  (best for lint free cleaning)
- 3M™ Scotchbrite™ pad

Preparation of the laminator

a) Turn the **POWER** to the "**I** ".

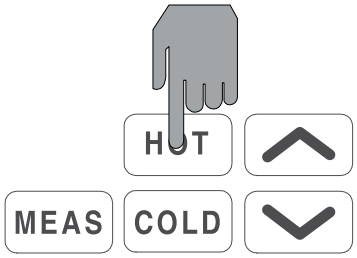


b) Ensure no **E-STOP** is depressed and all safety latches are in the fully locked position.

INFORMATION

The laminator will operate only when all safety latches are in the fully latched position.

c) Press HOT for the Top Teflon roller, Nip Roller, Bottom Teflon Roller and Sub Heaters..

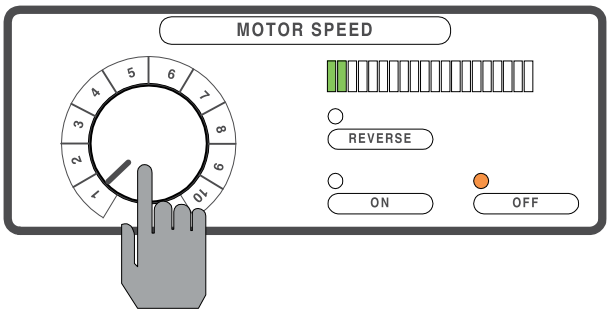


INFORMATION

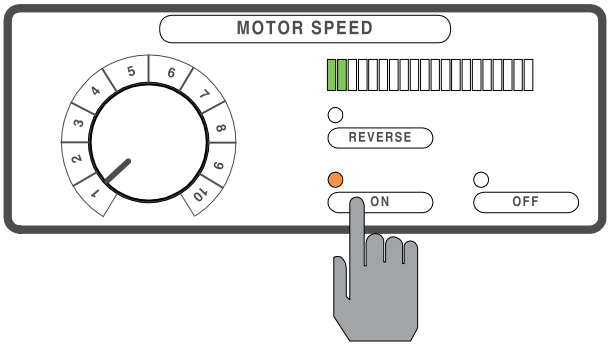
If the rolls are heated, proceed to Removing adhesive build up..

d) Lower the main rollers.

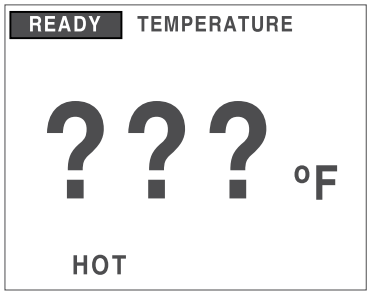
e) Set the motor speed adjust to "1".



f) Press ON under motor speed.



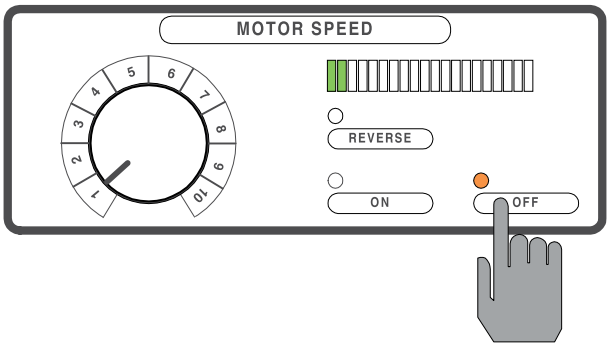
g) When the **READY** indicator in the temperature displays stop flashing, proceed with **Removing adhesive build up**.



Removing adhesive build up

a) Raise the upper main roller.

b) Press OFF under motor speed.

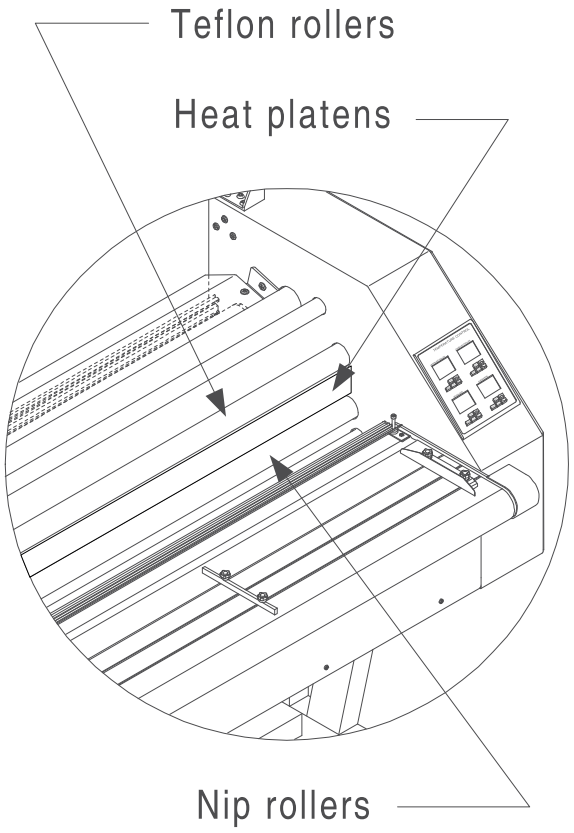


WARNING

Caution should always be exercised when using the laminator with the safety shields raised. You can be seriously HURT or INJURED!

c) Raise the front safety shield, remove the pressure plate and the feed table.

d) Use the 3M™ Scotchbrite™ pad to clean the adheisive off of the top Teflon roller, the two heat platens and the bottom teflon roller.



e) Use the rubber cement eraser to clean the nip rollers.

CAUTION

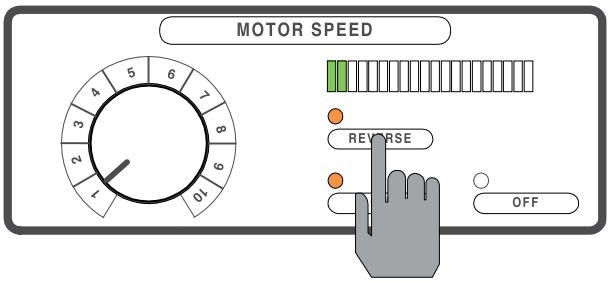
Excessive pressure can destroy the silicone layer by pressing to hard or scrubbing too long in one spot.

f) Replace the feed table and lower the front safety shield.

INFORMATION

Locator latches on the pressure plate are not associated with an interlock switch. The laminator will operate without the pressure plate installed.

g) Press REVERSE to move the bottom roller to an unclean area and release.



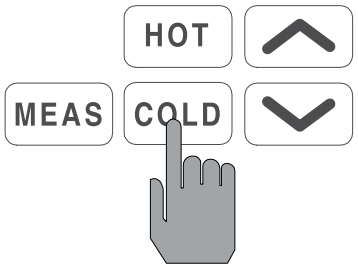
INFORMATION

Rollers only turn in reverse while depressing REVERSE **.**

h) Repeat steps "**a**" through "**g**" until the adhsive is beaded on the rollers.

Cleaning the beads of adhesives, dust and dirt

a) Press COLD on all temperature controls.



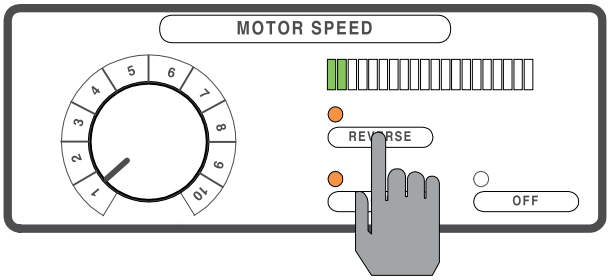
b) Use a damp cloth to clean the beads of adhesives off of the rollers.

c) Replace the feed table and lower the front safety shield.

INFORMATION

Locator latches on the pressure plate are not associated with an interlock switch. The laminator can operate without the pressure plate installed.

d) Press REVERSE to move the bottom roller to an unclean area and release.



INFORMATION

The upper nip roller as well as the Teflon rollers are free spinning.

INFORMATION

Rollers only turn in reverse while depressing REVERSE .

e) Repeat steps "**c**" and "**d**" until the rollers are clean.

i) Replace the feed table, pressure plate and front safety shield.

j) Press **POWER** to "**0**".

ELECTRICAL SHOCK

Do not use liquid or aerosol cleaners on the laminator. Do not spill liquid of any kind on the laminator. You can be severely shocked, killed or cause a fire. Use only a damp cloth for cleaning unless other wise specified.

8.3 Clean the cabinets and covers

ELECTRICAL SHOCK

Remove power from the laminator before cleaning. You can be severely shocked, killed or cause a fire.

a) Use a damp cotton terry cloth (water only), clean the exterior of the laminator.

b) If water is not strong enough, you may use a mild dishwashing detergent with water and a cotton terry cloth.

8.4 Cleaning the control panels

ELECTRICAL SHOCK

Remove power from the laminator before cleaning. You can be severely shocked, killed or cause a fire.

a) Use only a slightly damp (water only) non abrasive cloth.

ELECTRICAL SHOCK

Do not use liquid or aerosol cleaners on the laminator. Do not spill liquid of any kind on the laminator. You can be severely shocked, killed or cause a fire. Use only a damp cloth for cleaning unless other wise specified.

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