# Product instruction manual
# Matrix MX-530DP Duplex Laminating System

MATRIX® 530 DUPLEX


The Matrix has been designed to be user friendly, however we strongly recommend you take a few minutes to read through this manual to ensure correct operation.

Keep this manual safe for future reference.

# Contents



| Specifications | **MX-530DP** |
|---|---|
| Max. Laminating Speed (m/ft/min) | 10m/33ft |
| Max. Lamination Film Width (mm/inches) | 500mm/20" |
| Minimum Paper Thickness (gsm/lbs) | 100/68lbs |
| Maximum Sheet Width (mm/inches) | 550mm/22" |
| Warm-up Time (mins) | 10 |
| Temperature Range (ºC/ ºF) | 0-140ºC/32-284ºF |
| Power Supply (V) | 220/240 |
| Power Supply Required (Amps) | 32 |
| Power Consumption (W) | 4500 |
| Overall Dimensions - Width (mm/inches) | 900mm/35" |
| Overall Dim. - Depth x Height (mm/inches) | 2050x1400/81x55" |
| Gross Machine Weight (kg/lbs) | 250kg/551lbs |
| Warranty | 1 year |

If you are using your own air supply please note the following:

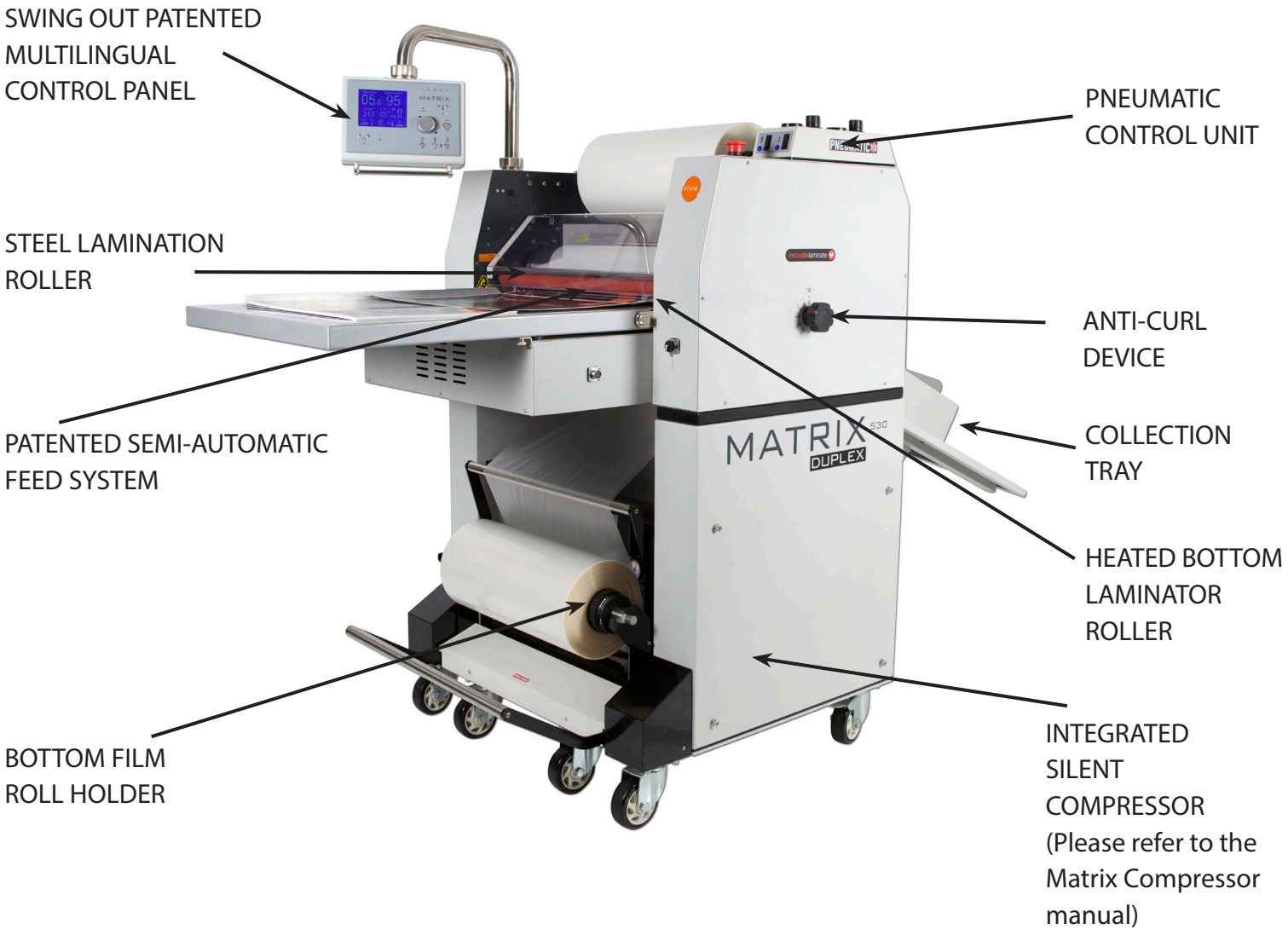

# Introduction

Thank you for purchasing the Matrix Duplex laminator.

Matrix Duplex is a high performance double-sided laminating system with a solid construction built to last.

Please read these instructions carefully before starting to use the system to ensure you get the best results and are competent at operation.

Should you experience any problems please contact us and we will be happy to help.



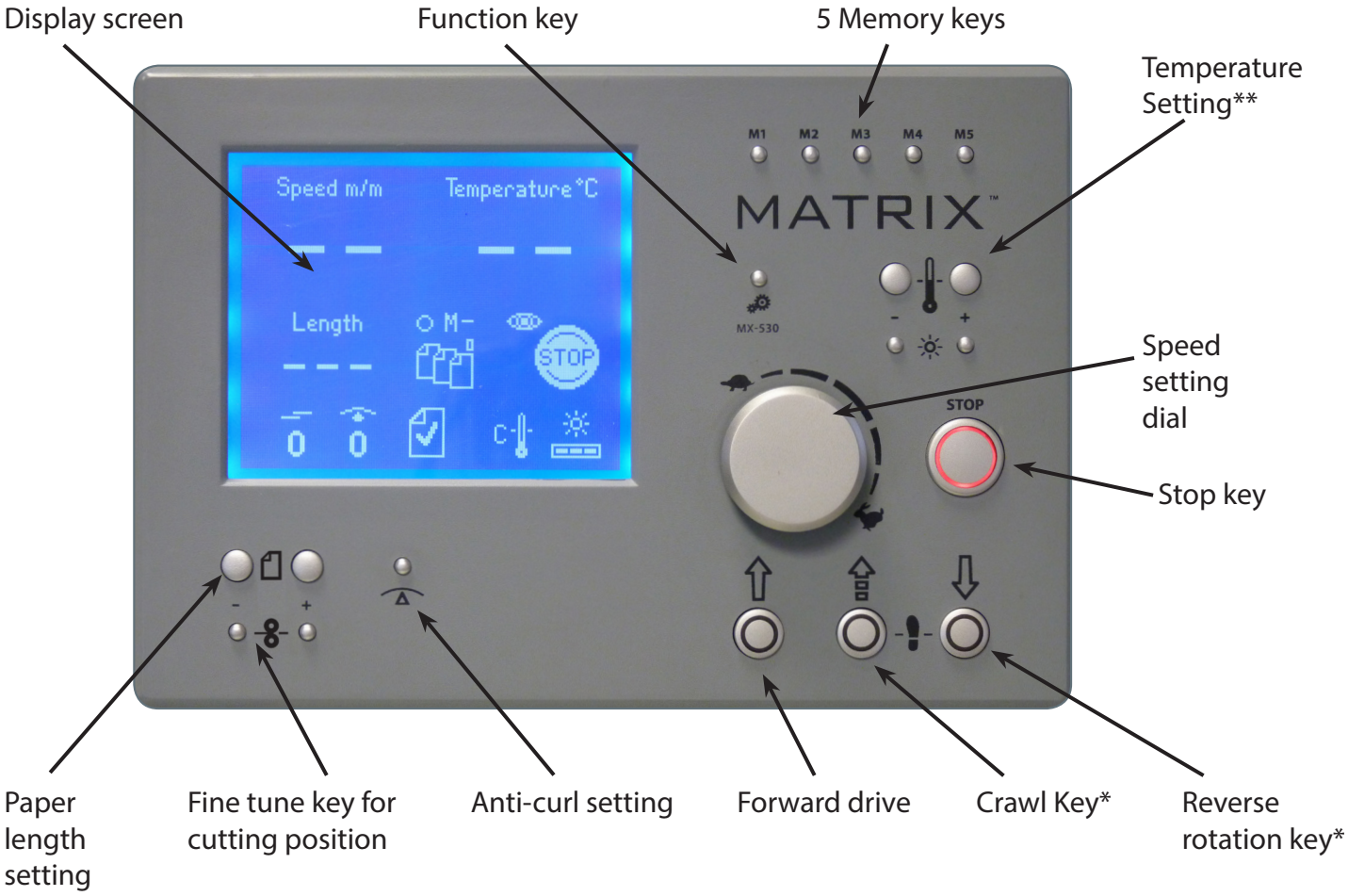
# Safety Instructions

- Please ensure that the voltages of power supply you are using match with rated working voltages before operating the system
- The power supply should be close to the system for convenient use
- The power supply should provide reliable protective earthing connection
- This system must be earthed reliably so as to ensure the safety of the system during operation
- Only the operators of this system should operate the electric or motion components/ controls
- Please don't use damaged wires or sockets
- Please keep children away from touching and operating this system
- Please do not spray water or other liquid on the system otherwise electric shock or machine faults could occur
- Please do not replace power cord or plugs yourself, do not put heavy objects on the power lines as this may cause electric shocks
- During use please take care that no clothes, neckties, hair, necklaces etc are near the system otherwise injuries could occur
- Please don't put burrs, sharp blades or over thick rigid materials into the two rubber covered rollers (for example, tools, rulers and knives etc.)
- Don't cut adhesive films directly on the surfaces of the rubber covered rollers to avoid damage
- Please shut down the system after laminating to avoid misuse
- At the end of the working day always gape the rollers to ensure no flat spots or distortions occur
- When you need to move this system, please shut down the power switch and pull out the plugs
- Please be aware of the location of the wheels during moving or operating the system to avoid foot injuries
- Always ensure the system is positioned on a flat and level floor
- Please shut off the power supply (pull out the power plug) when the system isn't going to be used for long periods of time.
- Please be cautions of the foot pedal when operating and moving the system. As this could be a trip hazard.

# Environmental Requirements

- Ambient temperature 10°C - 60°C / 50°F - 140°F, humidity 30% - 80%, Ideal humidity 55%
- Dust - Due to the static adherence of the film, you should keep the environment clean, a dust cover is provided with the system
- Please do not keep the systems in direct sunlight
- Please do not keep the system in or around dusty areas
- Enough space should be kept around the system to ensure the secure and effective application. The minimum holding areas are 2.5 x 3m / 8x10ft

# The Control Panel - **Single-sided Lamination**




* Functions with foot pedal only
** Temperature settings are also used to scroll through setup screen information

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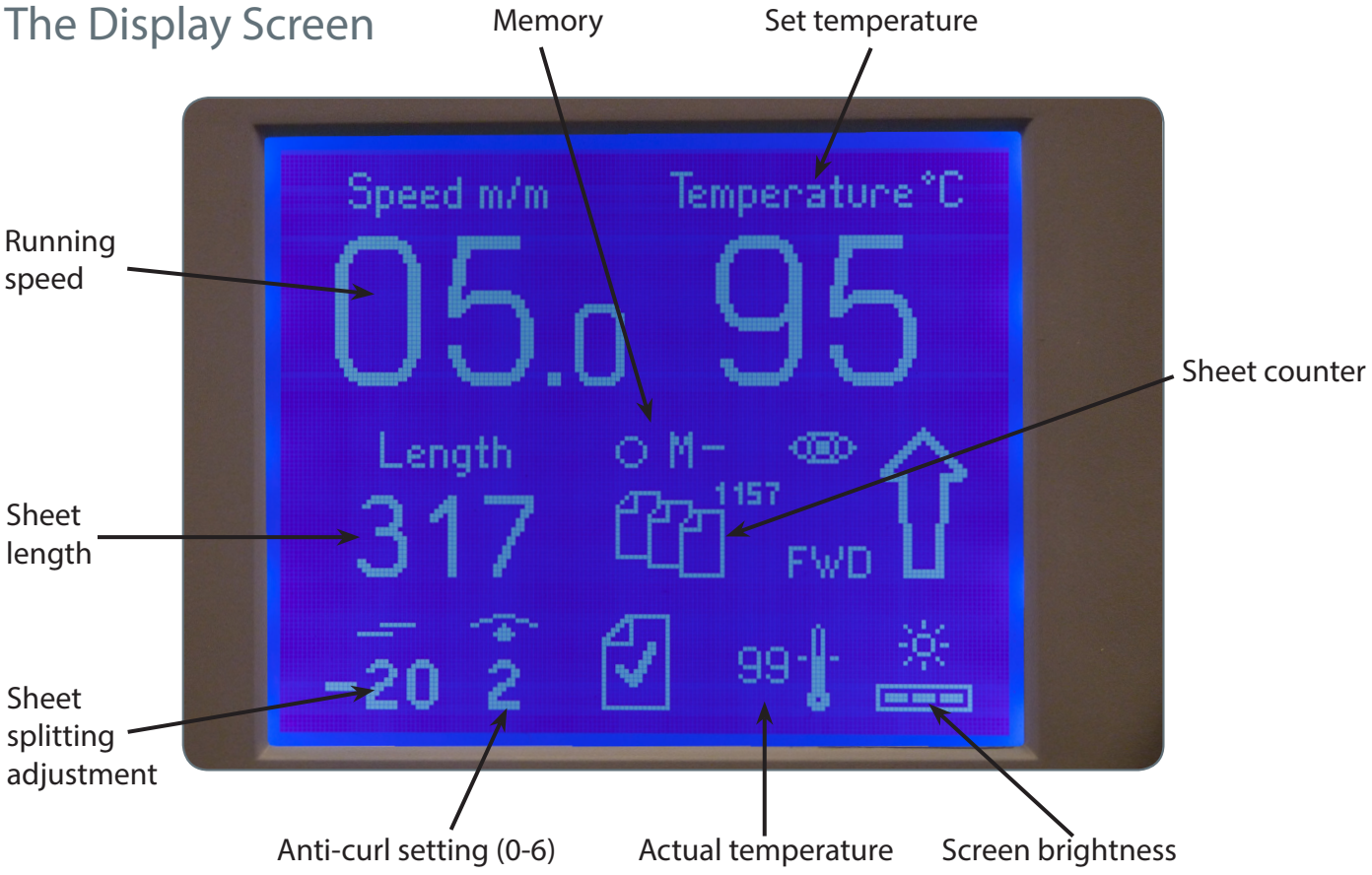
# The Display Screen




Settings quoted are a guide only and may need adjusting depending on stock used and amount of toner on prints

## The Control Panel - **Single-sided Lamination**


## The Control Panel - **Double-sided Lamination**


## The Control Panel - **Encapsulating** No film separation function

# Single-sided Laminating

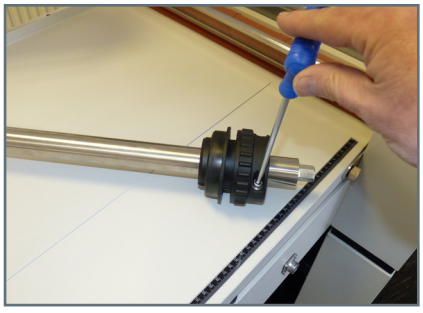

1. Position the system near a suitable 32 amp socket and plug into the mains.


2. Turn the power on.

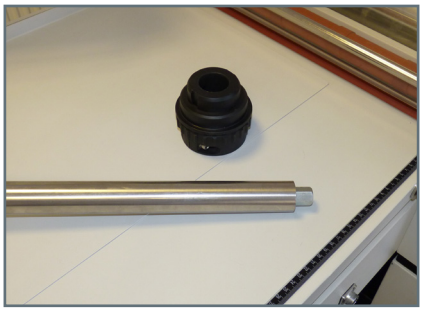

3. Screen displayed.


4. Set temperature, sheet length and anti-curl setting.

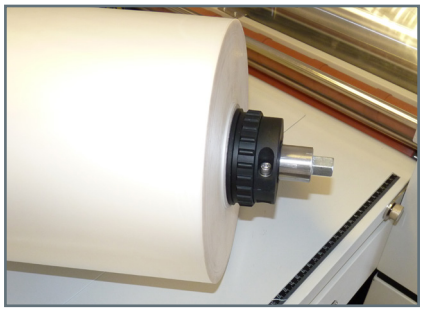
5. Remove film mandrel.



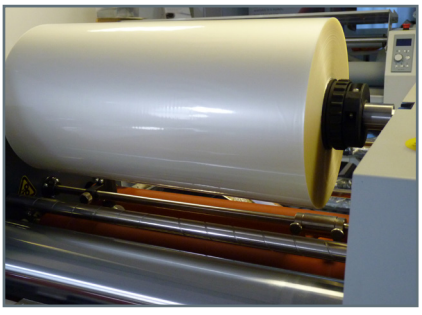
6. Using the allen key provided, loosen screws on the core adaptor.



7. Remove one core adaptor.



8. Slide film onto the mandrel and centralize, replace core adaptor.



9. Place film and mandrel back onto the system.

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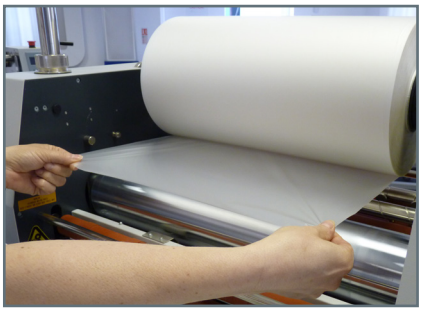
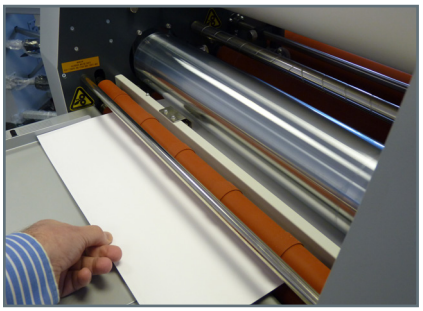
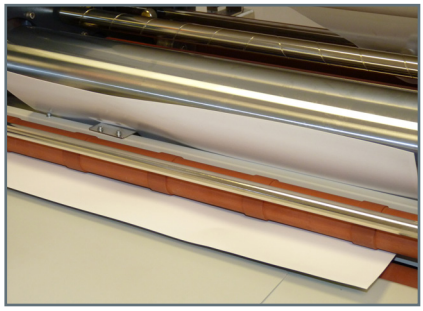


10. Ensure film feeds from the bottom of the roll.


11. Set the anti-curl device to the zero position and ensure both laminating and pull rollers are in the raised position.

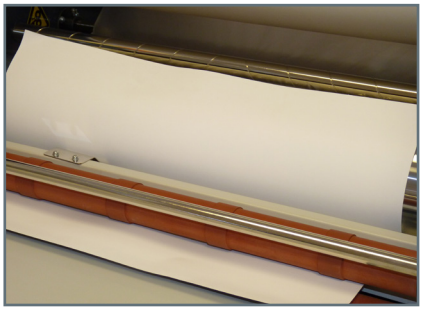


12. Press rubber roller to drop gate and slide in plain print, ensure it goes through anti-curl device and into pull rollers.



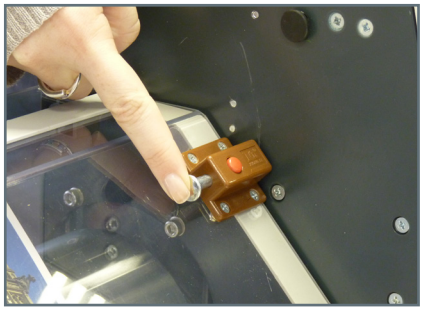
13. Slide the second blank print around the steel laminating roller, through the anti-curl device and into the pull rollers.

14. Run the film under the idler bar and drape over the steel laminating roller.

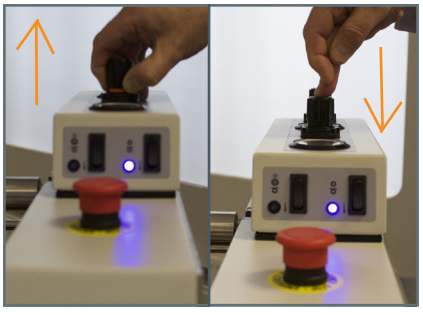


15. Press second set-up print onto the film.

16. Replace the guard.



17. Ensure the micro switch is located, otherwise the system will not run.



18. You can adjust the pressure by lifting the control and turning clockwise to increase the pressure, and anti-clockwise to decrease the pressure. Push the control down to lock.

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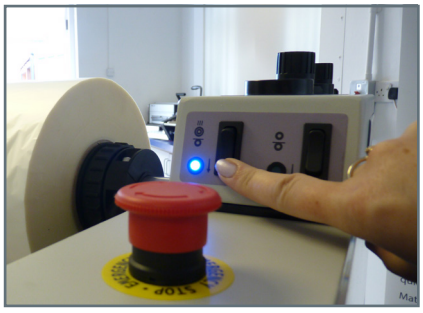
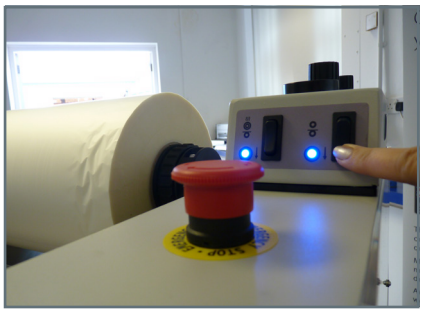
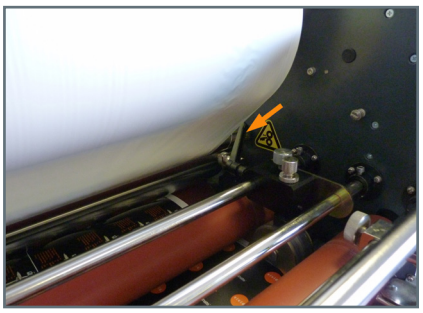
19. Laminating roller full pressure is 8 bar. Pull roller between 3-4. Please note these are guides only and for thinner stocks the laminating roller pressure may need to be decreased.



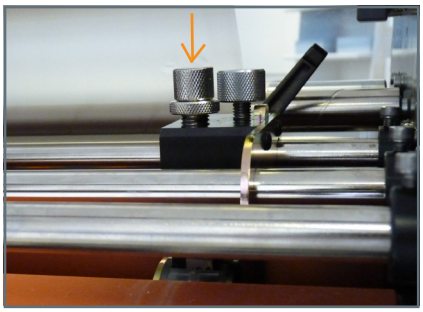
20. Press laminating roller switch. Roller will lower and light should illuminate.



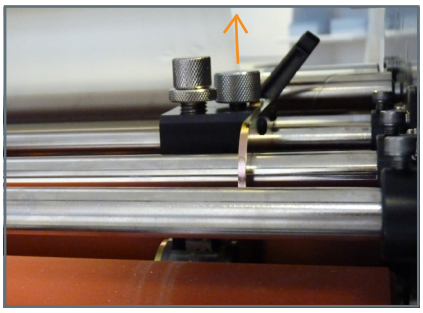
21. Press pull roller switch. Roller will lower and light should illuminate.



22. Align perforation unit.



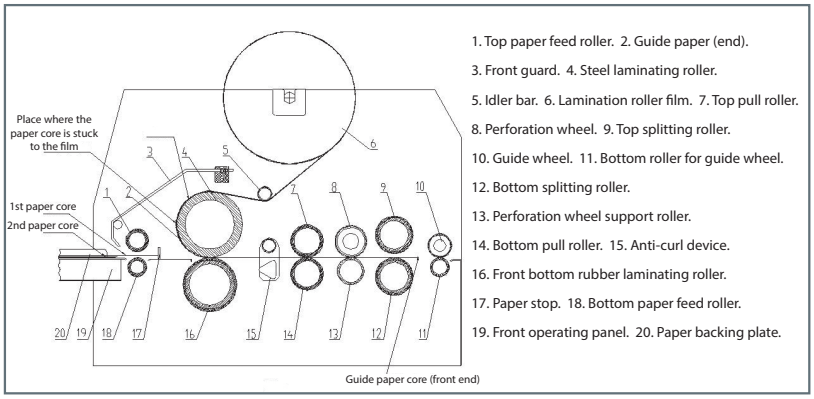
23. Ensure top film perforation wheel is selected. Turn clockwise.



24. Ensure bottom film perforation wheel is selected. Turn anti-clockwise.

25. Set the guide wheel to the opposite side of the sheet from the perforation wheel.


26. Press the forward button and select a slow speed (0.5-2.0m/m) to load.




1. Top paper feed roller. 2. Guide paper (end).
3. Front guard. 4. Steel laminating roller.
5. Idler bar. 6. Lamination roller film. 7. Top pull roller.
8. Perforation wheel. 9. Top splitting roller.
10. Guide wheel. 11. Bottom roller for guide wheel.
12. Bottom splitting roller.
13. Perforation wheel support roller.
14. Bottom pull roller. 15. Anti-curl device.
16. Front bottom rubber laminating roller.
17. Paper stop. 18. Bottom paper feed roller.
19. Front operating panel. 20. Paper backing plate.

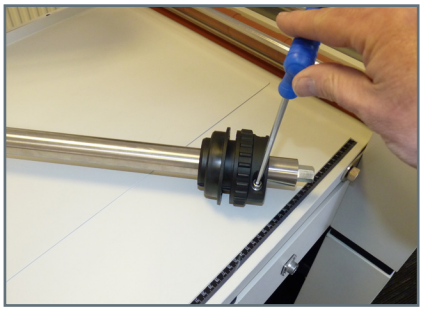
# Double-sided Laminating


1. Press the settings button once. Use the temperature buttons to select the 'double-sided' mode.

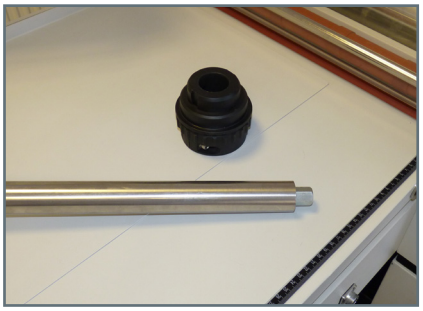

2. Use the upper and lower temperature buttons to select the relevant temperature for the top and bottom laminating rollers.

3. Push down on the release handle of the bottom film unit.

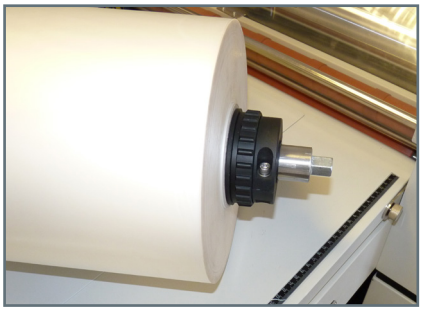
4. Pull the bottom film unit towards you.



5. Remove the film mandrel and loosen core collars.

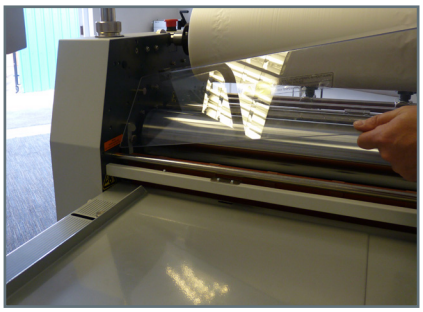


6. Remove core collars.



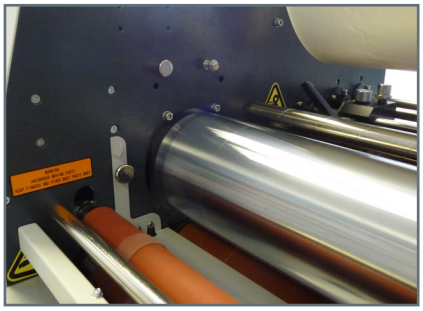
7. Fit roll of film.

8. Thread film over lower bar as shown. Push bottom film unit back towards the main machine and lock in place.

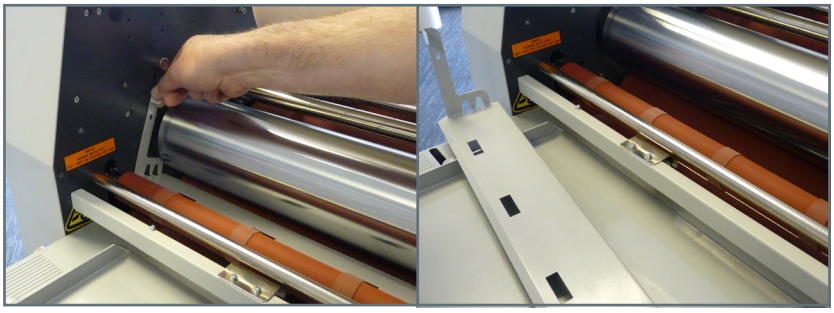


9. Remove the roller guard.

Continued...



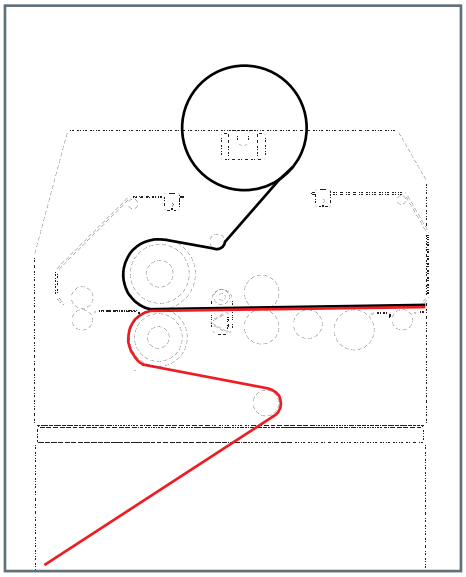
10. Remove thumb screws.



11. Lift and remove feed gate plate as shown.

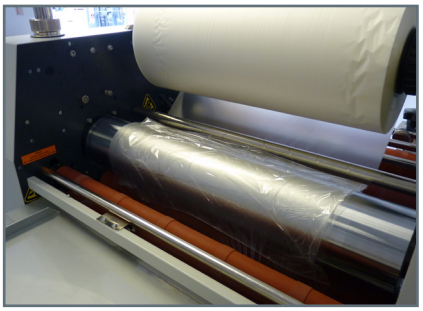
12. Push a feeder card down around the bottom laminating roller.

13. Tape bottom film to the feed card.



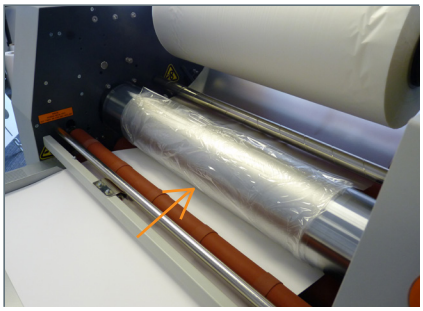
**THREADING DIAGRAM**

14. Pull fed card back towards the front of the system as shown.

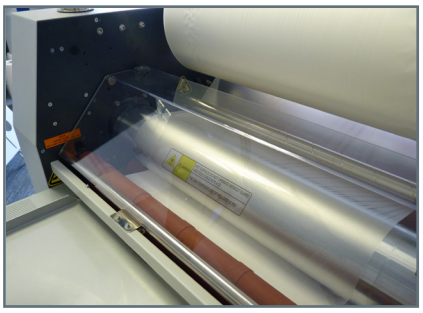


15. Thread top film as shown for single-sided lamination (Page 8).

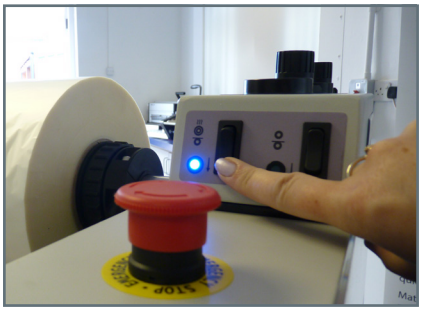
Continued...



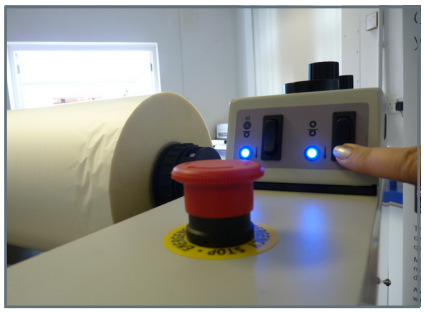
16. Overlap the top and bottom films and push a piece of card through the nip of the rollers to load as shown.



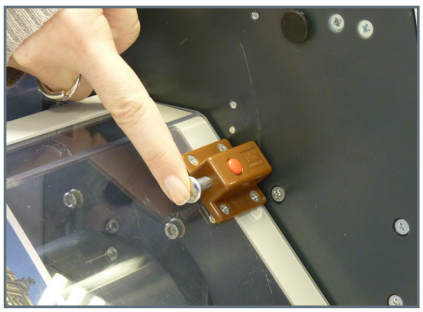
17. Replace guard.



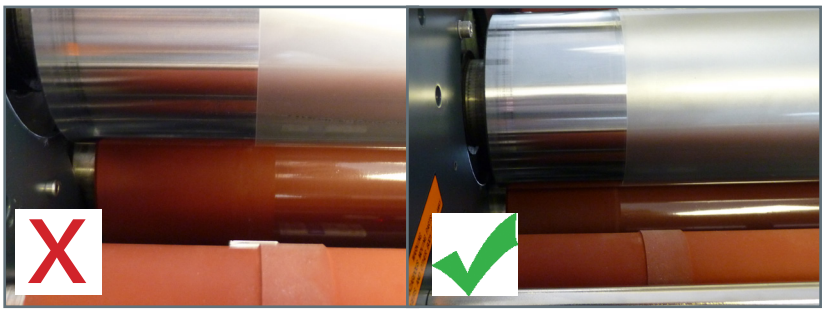
18. Press laminating roller switch on the pneumatic control unit. Roller will lower and light should illuminate.



19. Press pull roller switch on pneumatic control unit. Roller will lower and light should illuminate.

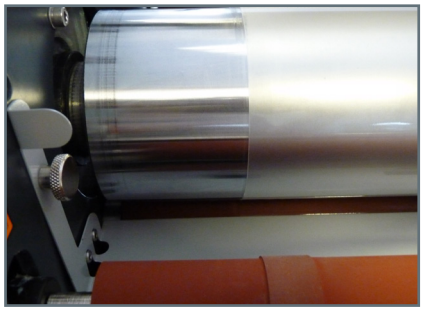


20. Ensure the micro switch is located, otherwise the machine will not run.



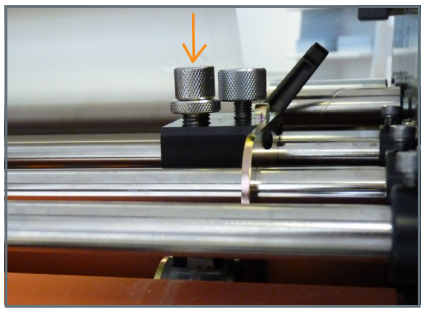
21. Ensure top and bottom films are aligned correctly.

Continued...

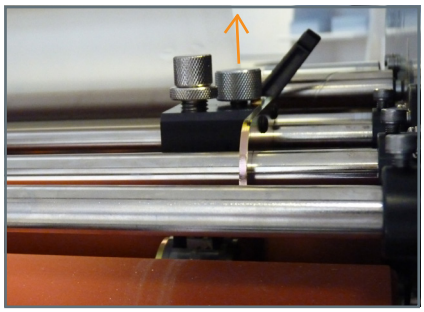


22. Replace feed gate plate and fixing screws.

23. Align perforation unit.



24. Ensure top film perforation wheel is selected. Turn clockwise.



25. Ensure bottom film perforation wheel is selected. Turn anti-clockwise.


26. Push the forward button and select slow speed to load.

27. Adjust laminating roller pressure as required. Suggested pressure between 6-8 bar.

28. Adjust pull roller as required. Suggested pressure between 3-5 bar.

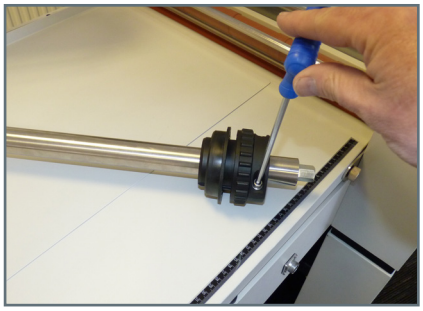
# Encapsulating


1. Press the settings button once. Use the temperature buttons to select the 'encapsulating' mode.

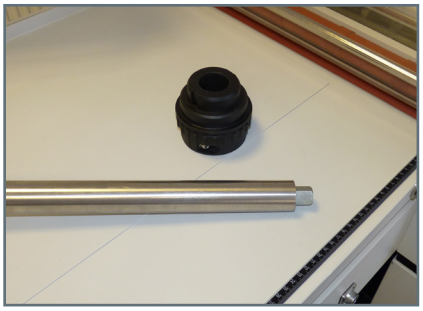

2. Use the upper and lower temperature buttons to select the relevant temperature for the top and bottom laminating rollers.

3. Push down on the release handle of the bottom film unit.

4. Pull the bottom film unit towards you.



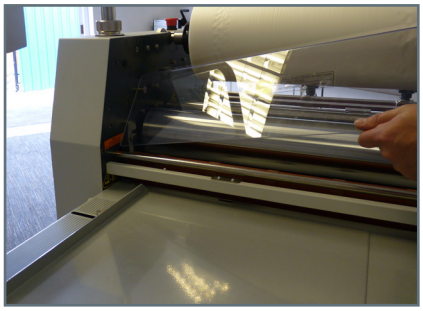
5. Remove the film mandrel and loosen core collars.



6. Remove core collars.

7. Fit roll of film.

8. Thread film over lower bar as shown. Push bottom film unit back towards the main system and lock in place.



9. Remove the roller guard.

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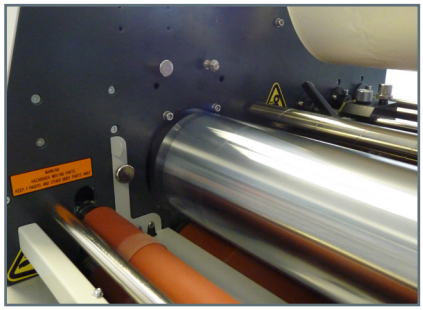
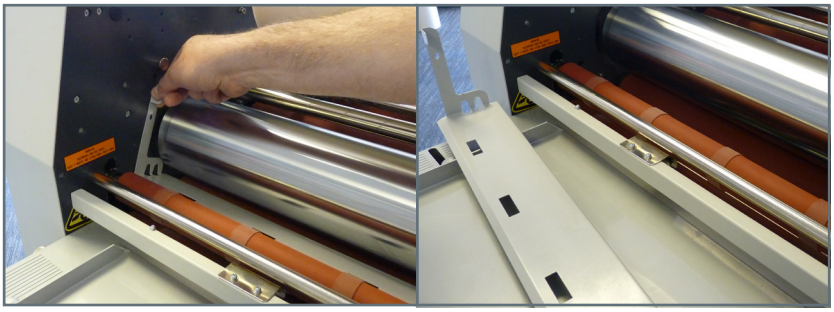


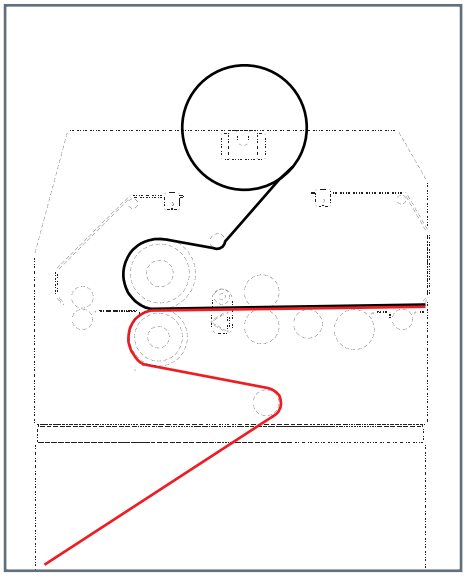
10. Remove thumb screws.



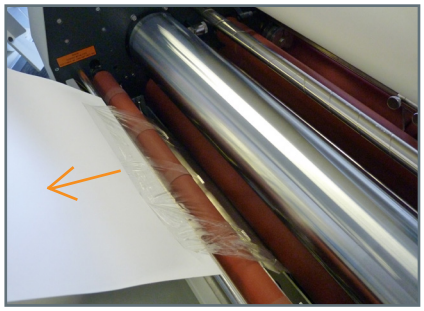
11. Lift and remove feed gate plate as shown.

12. Push a feeder card down around the bottom laminating roller.

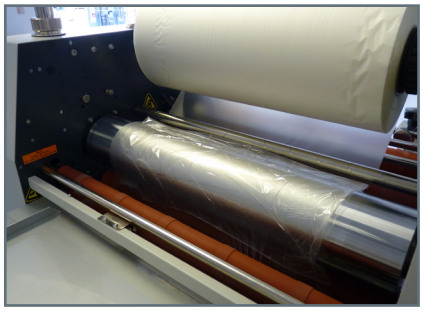
13. Tape bottom film to the feed card.



**THREADING DIAGRAM**

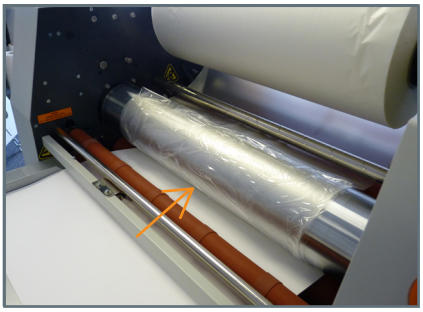


14. Pull fed card back towards the front of the system as shown.

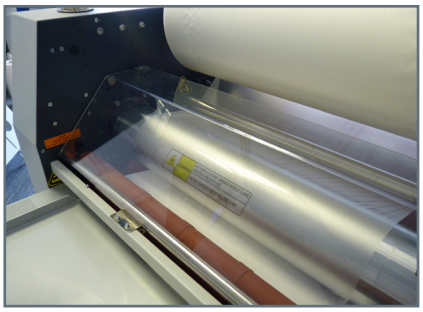


15. Thread top film as shown for single-sided lamination (Page 8).

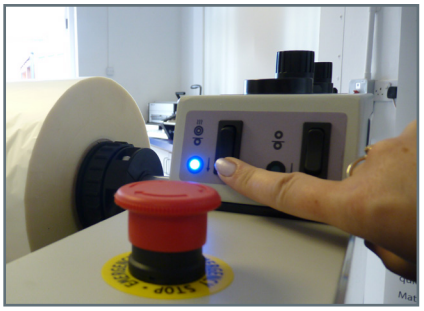
Continued...



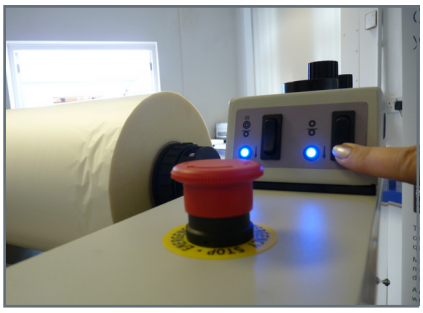
16. Overlap the top and bottom films and push a piece of card through the nip of the rollers to load as shown.



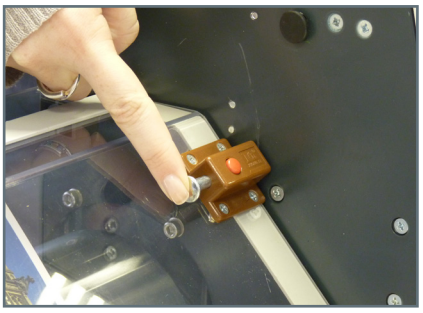
17. Replace guard.



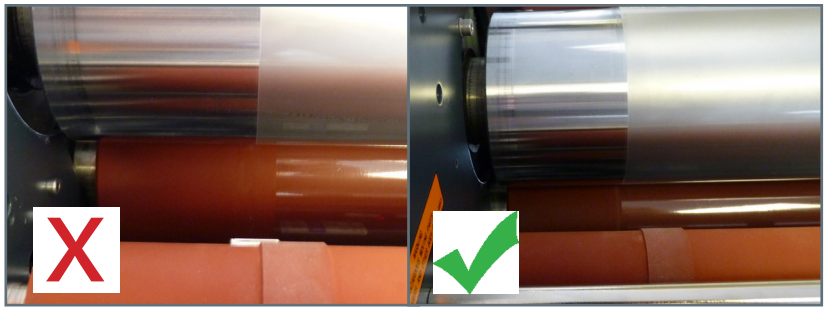
18. Press laminating roller switch. Roller will lower and light should illuminate.



19. Press pull roller switch. Roller will lower and light should illuminate.

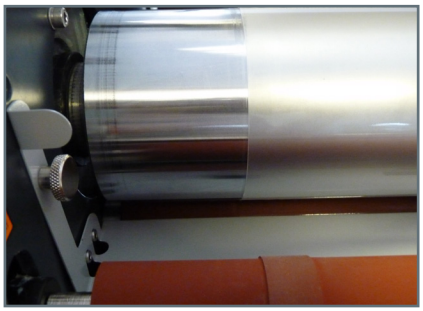


20. Ensure the micro switch is located, otherwise the machine will not run.



21. Ensure top and bottom films are aligned correctly.

Continued...



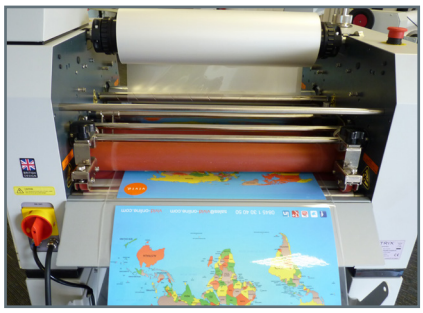
22. Replace feed gate plate and fixing screws.

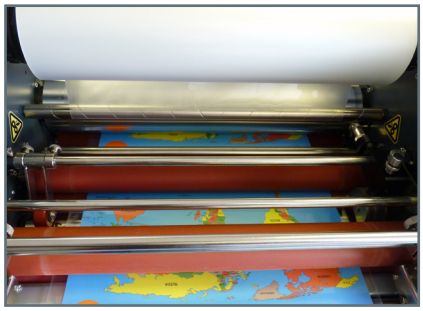
23. Align perforation unit.


24. Push the forward button and select slow speed to load.

25. Adjust laminating roller pressure as required. Suggested pressure between 6-8 bar.

26. Adjust pull roller as required. Suggested pressure between 3-5 bar.



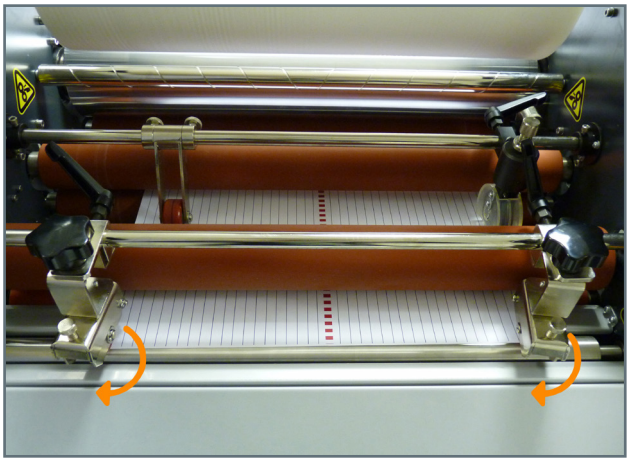


Press forward. Image shows how your loaded media should look when feeding through the laminator.

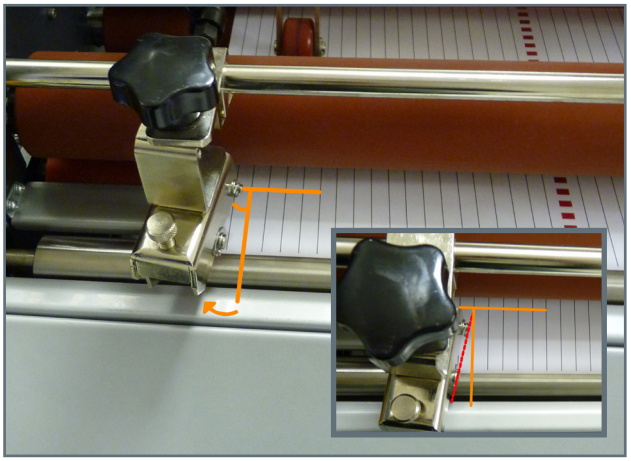
NOTE. The separating rollers will be turned off when in encapsulating mode.

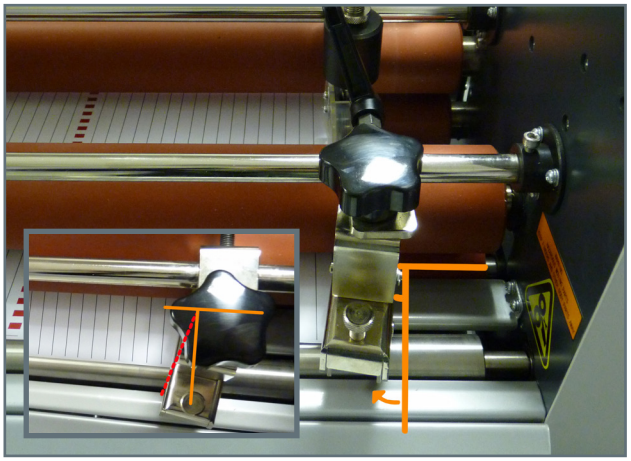
# Setting the angles of the wheels

For successful sheet separation, it is important the rear angle wheels are set correctly.
Various paper sizes and thicknesses will require different settings.

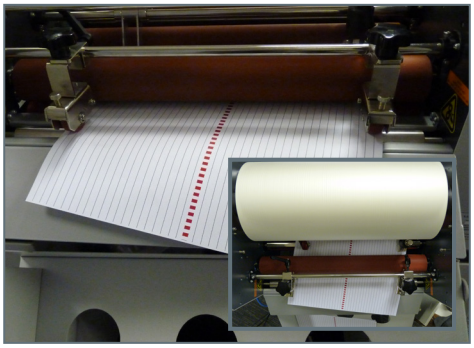


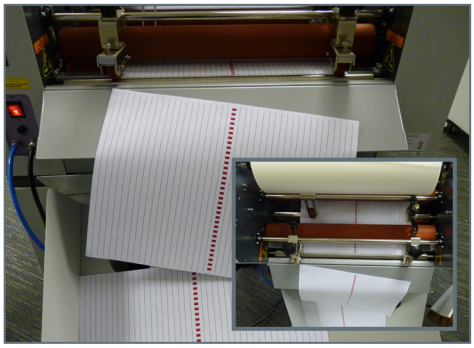
1. Position the wheels on each edge of the laminated sheet as shown.

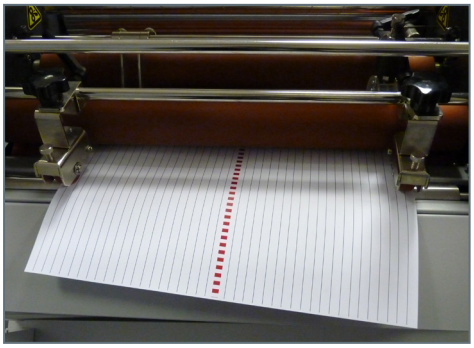




2. Ensure sufficient angle is set to each wheel. NOTE: WHEELS NEED TO BE ANGLED AWAY FROM WHEEL PERFORATOR.







3. Sheet should now feed and separate as shown above.

## No angle wheels required for encapsulating

# Troubleshooting

## ANTI-CURL

If your sheet curls up once it has left the laminator, you need to apply more anti-curl.

If your sheet curls down once it has left the laminator you need to apply less anti-curl.

If you are unable to adjust the anti-curl lever, try releasing the pressure on the pull rollers.

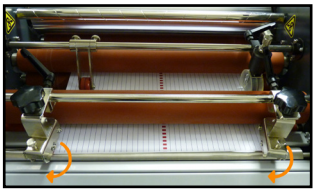
Always ensure the manual setting on the lever matches the display on the screen.

## SHEET SEPARATION

If your sheets do not separate 100% of the time, here are the solutions:

Ensure the perforation wheel is set over the laminating film as shown and that there is sufficient pressure applied.


Ensure the manual setting on the anti-curl lever matches the setting on the display screen.

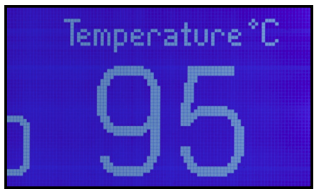


If the above settings are correct, please adjust the angled wheels until a successful separation is achieved.

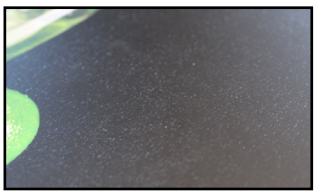
MATRIX 530 DUPLEX

Additional note: Please ensure the top and bottom films are aligned left to right and the bottom perforation wheel is activated.

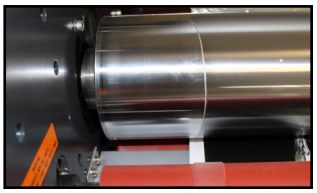
## SPEED & TEMPERATURE CONTROL




Most BOPP/OPP films operate between 95°C and 120°C. Check your Matrix is at the set temperature before you start to laminate.



If your print is silvering, has a cloudy finish or the film has not totally bonded to the paper, you are running the Matrix too cool or too fast.



If your print appears blistered or the film has shrunk significantly as it passes over the laminating roller, you are running the Matrix too hot or too slow.

Please remember, when you begin to run the laminator faster, the film will have less time on the heated roller. Therefore you must increase the temperature setting.

We always recommend you laminate a test sheet first to check the bond and flatness.

# Warranty & Incorrect Use

IMPORTANT INFORMATION

Your Matrix Laminator should reach you in perfect condition and is guaranteed for 1 Year from date of purchase covering defective parts and general wear and tear; this does not cover film jams, misfeeds or other operator related errors, which would be chargeable.
Your Matrix Laminator rollers are covered against manufacturing defects, the warranty does not cover against any damages caused by operator misuse.
Your warranty will be void if the System has been modified by a third party not approved by the manufacturer (Vivid Laminating Technologies) to carry out such alterations.

E&O.E

Original Instructions

Vivid Laminating Technologies Ltd
St Georges House, Whitwick Road, Coalville, Leicestershire LE67 3FA England