Product instruction manual
Matrix Duo MD-460 and MD-650

MATRIX® DUO

The Matrix Duo 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.

Thank you for purchasing the Matrix Duo. Please read through this instruction booklet carefully and keep it safe in case needed for future reference.

Contents

Safety Precautions

WARNING

Do not use the machine if the power cord is damaged in anyway. Do not use a power supply that is not in accordance with the rated voltage.

NO DISJOINT

Do not try to disassemble, modify or repair the machine yourself. If you encounter a problem you must call a qualified engineer.

ENTANGLEMENT CAUTION

Keep long hair, loose clothing and items such as ties and jewellery away from the rollers of the machine at all times to avoid danger of entanglement. If entanglement occurs, press the REVERSE button or cut off the power immediately.

ELECTRIC SHOCK CAUTION

Keep water and liquids away from the machine at all times. Do not operate the machine with wet hands. Do not cut off the power to the machine whilst in operation (except if entanglement occurs). Use the safety guard at all times.

HIGH TEMPERATURE CAUTION

The Matrix Duo works at a high temperature, therefore ensure you do not touch the rollers or any part of the machine which states 'HOT' or 'CAUTION' whilst it is in operation. Do not cover the machine if it is still cooling down. Do not laminate any material other than what is stated in this manual and do not use any lamination film other than what is recommended for this system.

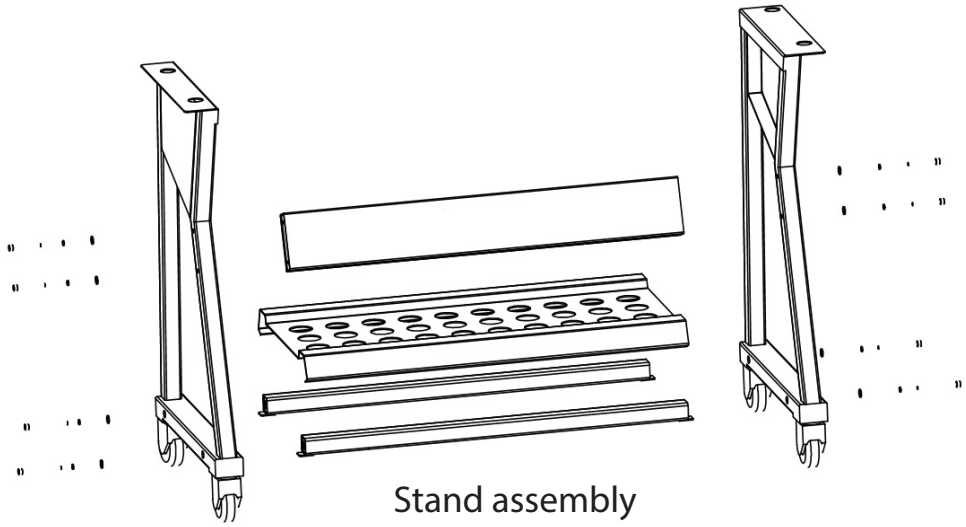
Further advice

Operate the machine in a well ventilated, clean, dry place with a large enough working space at the front and rear of the machine.

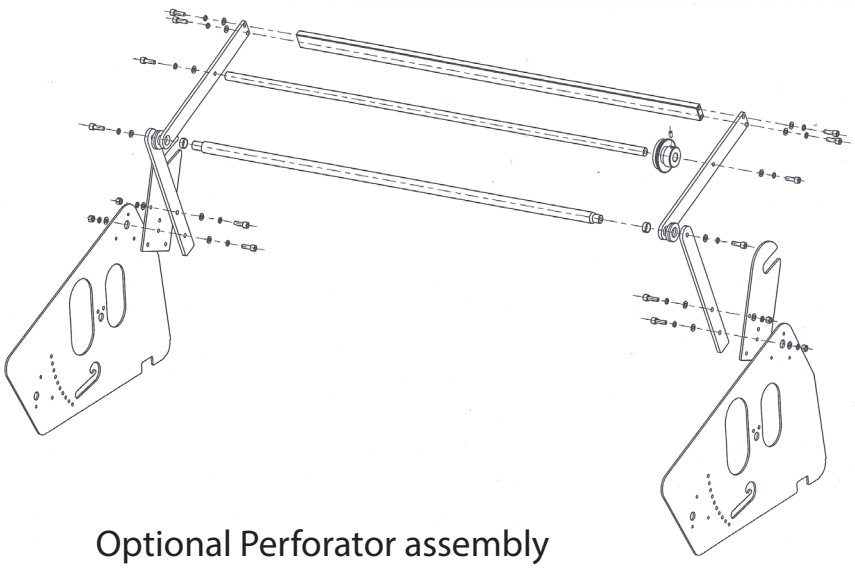
Ensure the power cable is not dragging on the floor or causing a hazard to operators.

For producing the top quality results that this machine is designed to do, you must use high quality lamination film. Pro life film is the suggested brand by the manufacturer.

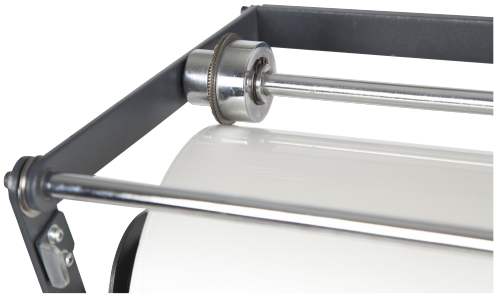
Machine parts and stand assembly



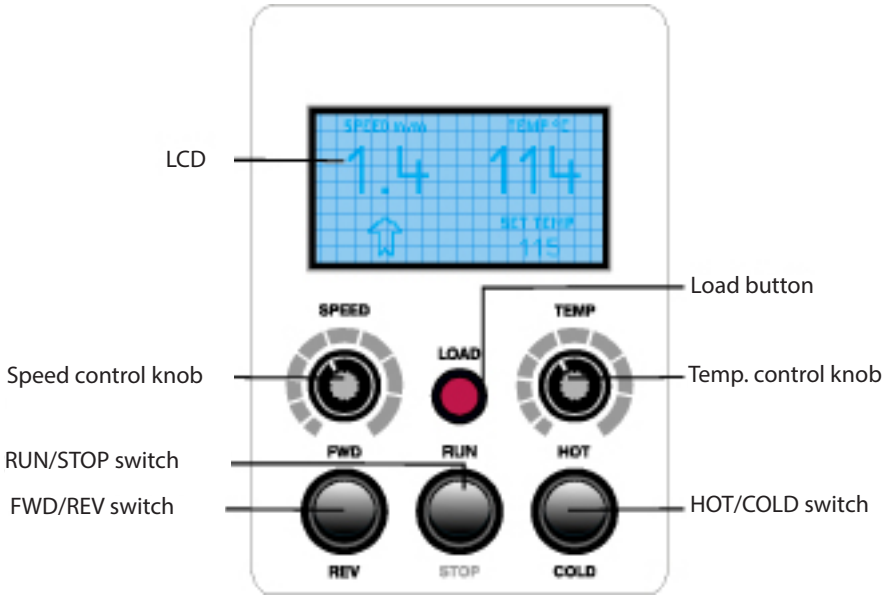
Stand assembly



Optional Perforator assembly



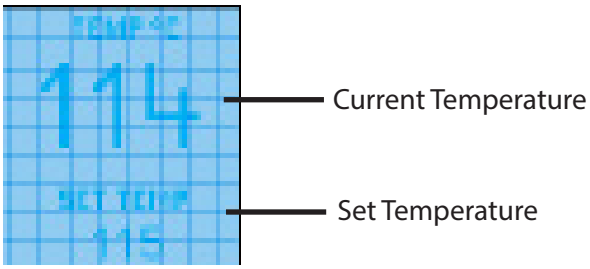
Control panel and functions of the digital display



Temperature control

The temperature setting you require for laminating can vary and can be effected by many different factors, these include thickness of media, thickness and construction of laminating film, speed of the machine and temperature and humidity of the room you are working in. Please refer to the guide at the bottom of this page if you need help. Always use a test print to send through the machine before starting to laminate your work.

The temperature control dial will increase or decrease the set temperature as it is turned and the set temperature will show on the LCD display. The current temperature of the rollers will also be displayed on the LCD display.
The temperature ranges from 0°C-140°C. If the temperature reaches 140°C, the over heating protection function will automatically activate to prevent the machine getting any hotter.



Approximate temperature guide

This chart is a rough guide only and should NOT be taken as an exact indication of the settings for your laminating job. As previously stated, many different factors can effect the temperature and speed required. The supplier does not accept responsibility for incorrect settings being applied.

Encapsulating		
Example film	Approx temperature	Approx speed
75 Micron	110°	0.5 - 1.0m per min
125 Micron	115°	0.5 - 1.0m per min (decrease speed for thicker documents and increase the temperature slightly)

Single Sided Laminating OPP		
Example film	Approx temperature	Approx speed
30 Micron	100°-110°	1.0 m per min (decrease speed for thicker documents and increase the temperature slightly)

Speed control

The speed control function allows adjustment of the speed of the machine. This can be manually adjusted by turning the knob clockwise to increase & anti clockwise to decrease the speed. The speed ranges from 0M per min to 1.4M per min

Hot and cold settings

To change the function of the machine to either hot or cold press the HOT/COLD switch. When it is switched to hot the set temperature will show on the LCD display. When it is switched to cold, COLD will show on the LCD display.

Forward and reverse switch

The FWD/REV switch changes the working direction of the motor. When it is switched to forward the motor will run forward and the LCD will display

This function is used for laminating and encapsulating.

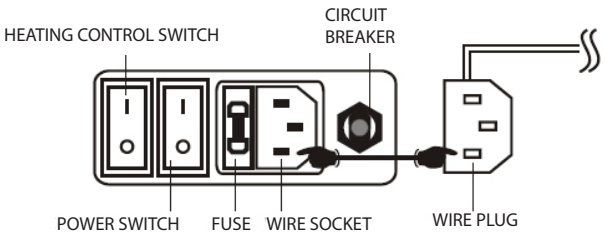
When it is switched to reverse the motor will run backwards and REVERSE will show on the LCD display. This function is used to remove items fed in incorrectly or by mistake.

Run and stop switch

The RUN/STOP switch enables you to start and stop the motor. When it is switched to RUN the machine rollers will turn in the direction of the motor drive. If either the feed tray or guard are not in place, the machine will not drive, however, by pressing the load button the rollers will operate while the button is pressed to enable the film to be fed into the machine.

Operating instructions

Ensure the laminator is placed on a flat, sturdy work surface or on the assembled stand (optional extra). Check the power voltage for the machine to ensure this meets your own supply. Plug the power cord into the back of the machine and into your power supply. Contact your supplier if you do not have a power cord with the machine.



Turn on the power switch, the control panel display will light, this indicates the power is connected.

The heating control switch allows you to select either BOTH HEAT (both rollers will heat for encapsulating) or TOP HEAT (for single side lamination).

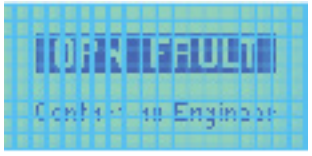
Motor overload circuit breaker

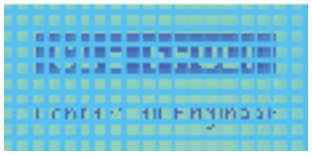
If the machine should jam in a way that the motor could be effected, the circuit breaker will cut off the power to avoid damage. Once the overload has been cleared, press the circuit breaker button and the motor will start again. The circuit breaker button is located at the rear of the machine next to the power switch. The button is red in colour.

Screen messages

Should the LCD display panel show the words OPN fault or CLS fault, there maybe a problem with your machine. In this instance, turn off the power and call an engineer.

Familiarise yourself with the control panel before commencing operation of the machine.





Loading/threading the film - Single side laminating

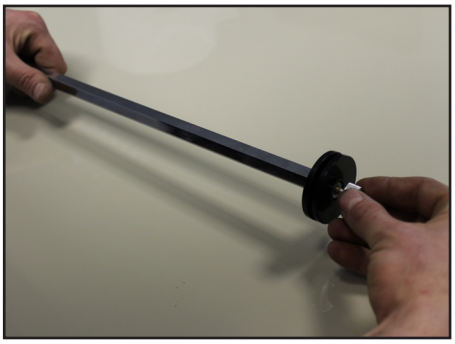
Please follow the step by step guide below to correctly load your film;

Remove the safety guard

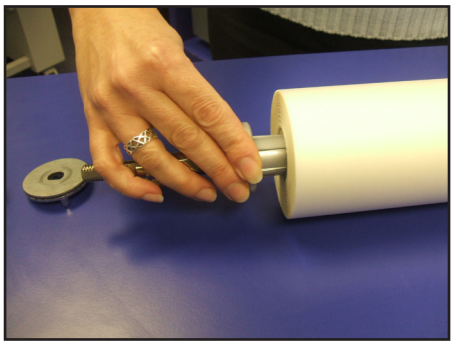
Remove the feed tray by retracting the bolt

Remove the top mandrel

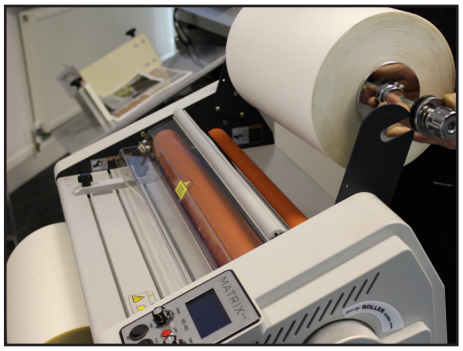
Completely unscrew the mandrel and cap



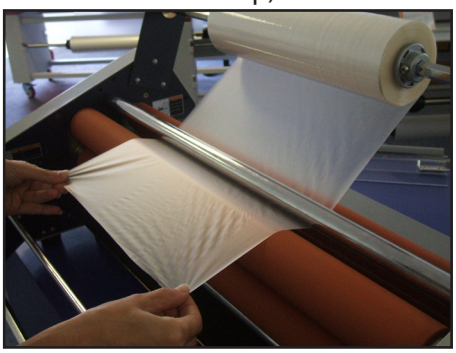
Load the film onto the mandrel and make sure it is loaded with the film coming off the bottom of the roll with the adhesive side up. Tighten the screw back up with a screwdriver provided



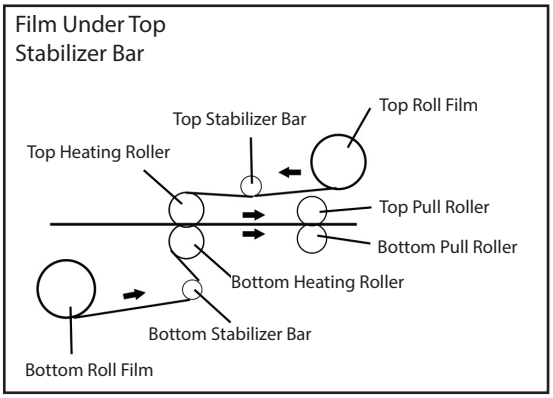
Refit the mandrel complete with the loaded film



Thread film from top mandrel down under top idler bar and over top laminating roller surface as shown (ensure film is loaded with adhesive side up)



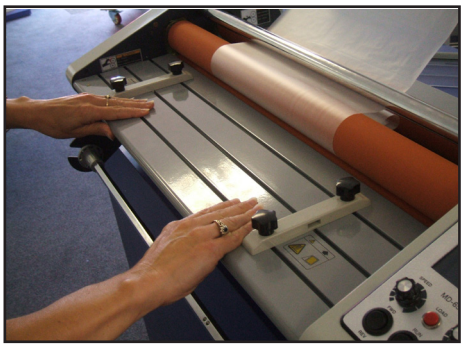
Film threading diagram -



Lift top roller by turning roller pressure handle anti-clockwise

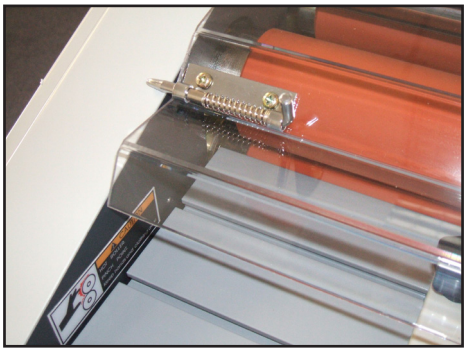
Ensure the roller pressure is in the 'LOCK' position when running the machine

Re-fit the feed tray



Re-fit the plastic safety guard

NOTE: SAFETY TRIP SWITCH



Please note: There is a trip safety switch which means that the machine will not work if the feed tray and safety guard are not correctly in place.

SINGLE SIDE LAMINATING

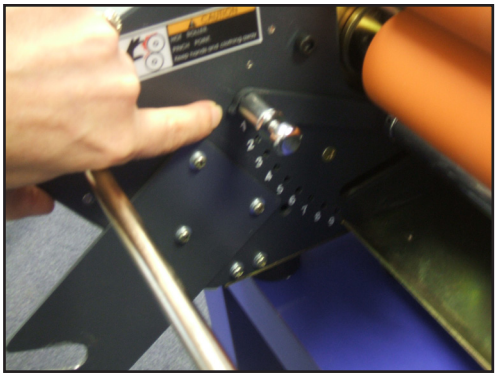
Before you start to heat up the machine, ensure that the roller option on the back of the machine is set to TOP HEAT.

To begin laminating, turn the machine on and select the desired temperature. The machine will begin heating. Set the appropriate temperature and speed (see guide on the page 4). The laminator will take approx 10 minutes to warm up. Once the set temperature is reached, you are ready to go.

It is always a good idea to run a test print through to check you have the correct settings. Press the RUN button and insert a print into the nip of the rollers, ensuring that the print is wider than the film (to prevent the film sticking to the rollers). As with most single side print jobs, you will have a border to guillotine off after lamination which is why the laminating film is never as wide as the actual print.

Check the print when it comes out of the back of the laminator, if it is cloudy or rippled the temperature could be wrong, see the troubleshooting section on page 9).

When laminating a single side, you may need to adjust the anti-curl bar (depending on the thickness of paper being laminated).



Adjusting the anti-curl

The anti-curl can be set from 0-9. 0 removes the anti curl facility, 9 is the maximum anti-curl you can apply, if you have very thin 130gsm media you will need to apply more anti-curl.

Auto memory function

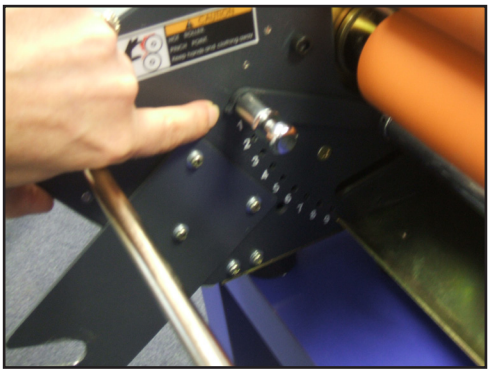
The Matrix Duo has an auto memory function, that means if you work on the same roll of film, the temperature and speed will be set to the same settings as the last operator.

Loading/threading the film - Encapsulating / Double Side Laminating

Remember to set the option on the back of the machine to BOTH HEAT before you begin.

Load film onto top mandrel in the same fashion as with single side, remove bottom mandrel as shown

When encapsulating, set the anti-curl to '0'. Re-fit the mandrels complete with the loaded film

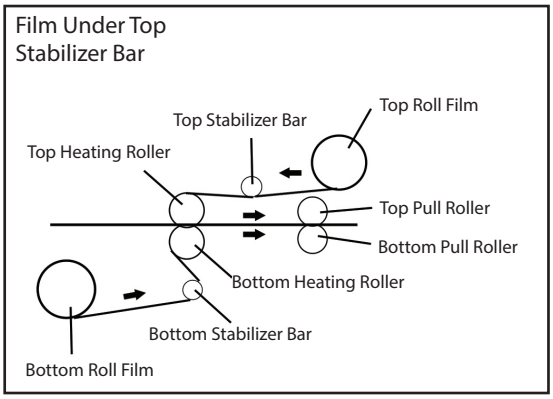


Change/set the roller option to BOTH HEAT

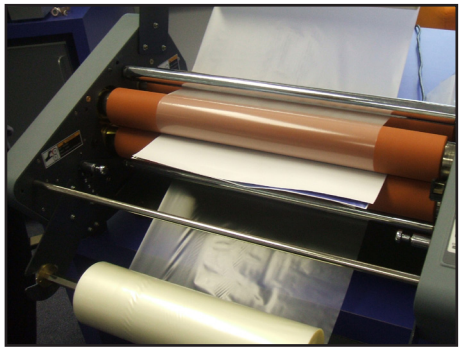
Load bottom film around roller bar as shown

Bring top film down under idler bar and web the films together as shown overlapping the top & bottom film by several inches

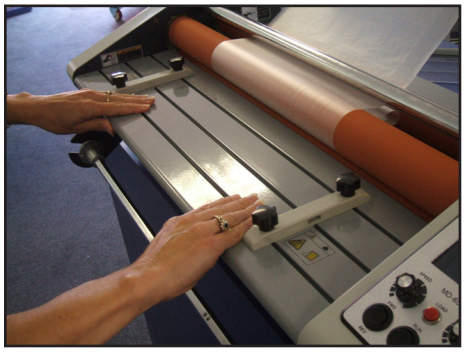
Film threading diagram - Encapsulating



Take a piece of cardboard insert it in between the rollers (in the nip)



Re-fit the feed tray and safety guard



Cleaning and maintenance of your machine

The most expensive part of a laminator is usually the rollers, if these become damaged they are costly to repair. Always ensure you look after the rollers and clean them regularly to avoid a build up of glue (see advice below). Never hold a sharp object such as a knife close to the rollers in case of catching the rubber as this could cause permanent damage that will effect the result of your work.

When your laminator is cooling down, always separate the rollers using the roller pressure knob, this will ensure that your rollers do not touch when still hot as this could leave a 'flat spot'.

Cleaning the rollers

It is easier to remove adhesive from the rollers when they are warm, do not attempt this if the machine is hot (above 40°C). For easy access, remove the safety shield and feed tray. Always use a clean cloth and a mild anti-static foam cleaner such as Amberclens by Ambersil or similar, do not use a heavy duty
solvent or anything abrasive.

If the film becomes jammed in the machine in any way and there is a large build up of adhesive, do not try and remove this yourself, contact your supplier for advice.

Troubleshooting

My laminator has no power
Make sure that the electrical outlet being used is not damaged and that it is supplying power. Ensure the power cord is firmly fitted in the back of the machine and not straining in any way. If all of this seems correct, there are three fuses to check, one is located next to the power switch, the other two are located underneath the laminator.
Contact your supplier if none of these solutions resolve the problem.

My lamination is coming out cloudy
This means that the temperature is not hot enough, try and increase by 5°C and wait until the laminator has reached the new temperature before putting through another print.

My lamination has come out wrinkled/creased
This means that the temperature is too hot. You should also put a test document through first to avoid ruining your work. Reduce the temperature by 5°C and wait until the laminator has cooled before trying again.

The film is wrapping around the rollers when I try to laminate
The film may be threaded incorrectly, refer to the threading diagram on page 6 or 8 (depending on if you are doing single sided or encapsulating. The adhesive side of the film may be facing the roller. Stop the operation, wait until the laminator has cooled down and thread the film again in the correct manner.

Specification chart

MODEL	MD-460	MD-650
MAX LAMINATING WIDTH	460mm	650mm
MAX LAMINATING THICKNESS	2.0mm	2.0mm
MAX LAMINATING TEMPERATURE	140°C	140°C
MAX LAMINATING SPEED	1.6m metres/minute	1.6 metres/minute
RECOMMENDED FILM	BOSS film, up to 250 micron	BOSS film, up to 250 micron
DIAMETER OF HEATING ROLLER	55mm	55mm
DIAMETER OF PULL ROLLER	45mm	45mm
POWER SUPPLY	100, 110, 220-240V, 50, 60Hz	
POWER	950W	1600W
DIMENSIONS	720 x 520 x 400mm	910 x 520 x 400mm
WEIGHT	45Kg	58Kg
STAND	Optional extra	

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.

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