DOMINO

EN

User Guide

Twin Labelling Station

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For sales, service and inks please contact:

www.buydomino.com

www.domino-printing.com

Domino UK Limited
Trafalgar Way
Bar Hill
Cambridge CB23 8TU
United Kingdom
Tel: +44 (0)1954 782551
Fax: +44 (0)1954 782874
Email: enquiries@domino-uk.com

Domino North America
1290 Lakeside Drive
Gurnee IL.60031
U.S.A.
Tel: +1 847 244 2501
Fax: +1 847 244 1421

Amendment Record

Amendment	Date
All parts at Issue 1	January 2025
All parts at Issue 2	July 2025

PREFACE

This document, Domino Part No. EPT071187, is the official authority for the installation, operation, maintenance and recycling of the product that is the subject of this document.

This document should be used to reinforce and complement any training program available with the product. It is not designed to replace any such training program.

This product manual is the source document for all translated versions. It is the "Original Instructions".

Domino will not accept any liability for damage to equipment or injury to personnel caused by unauthorized or improper use of the equipment described in this document.

Only engineers trained by Domino should carry out repairs, adjustments or in any other way alter settings or machine parts. Domino original parts shall always be used to ensure quality and performance.

Users of this equipment are warned that it is essential to read, understand and act according to the information given in Part 1: Health and Safety. This part of the document also specifies a set of symbols which are used elsewhere in the document to convey special warnings or requirements. It is, therefore, essential that users are also familiar with these symbols and act accordingly.

It is important to:

- Keep this document during the lifetime of the equipment.
- Pass this document on to any subsequent holder or user of the equipment.

CONTENTS

PRODUCT/BATTERY END OF LIFE

WARNING	**Flammable Material. Risk of Fire or Explosion.**
	• Batteries must not be disposed of by using fire, hot oven or by mechanically crushing or cutting. Comply with local waste regulations when recycling batteries. • Do not store or leave the battery in high or low extremes of temperature or at low air pressure at high altitude.

CAUTION	Hazardous Material. Risk of damage to equipment and environment.
	Some batteries are not removable. If the battery requires replacement, replace the PCB that the battery is installed on. Comply with local waste regulations when recycling the battery and PCB.

Recycling information in accordance with the EU and UK WEEE and Battery Directives.

If you are recycling a Domino product and are located within Europe (EEA and UK) you must have our products recycled within the terms of the WEEE and Battery Directive.

Product mark

Battery mark

The product/battery is marked with one of the above recycling symbols.

By the end of life the product/battery must be recycled separately at an appropriate recycling collection point. For more information or guidance, please email: environmental-protection@dominoprinting.com.

INTRODUCTION

The Twin Labelling Station (TLS) uses two M-Series or Mx-Series printers to print and apply labels on to a wide range of conveyor fed products.

The system consists of a mechanical bracket holding two Print and Apply printers on a sliding assembly. This enables easy reloading of the system consumables.

Moving a printer from the printing position automatically deactivates that individual printer.

A 4.3 inch (109mm) User Interface (UI) is used to select the active printer and to reset the system.

An Emergency-Stop and a manual reset button is included.

Note — For further details on the individual components and safety aspects of the Domino M-Series Print and Apply systems, refer to the Domino M-Series Product Manual EPT026458. For the Mx-Series, refer to the Domino Mx-Series Product Manual EPT083916.

Note — For further details on the individual components and safety aspects of the Domino M-Series Print and Apply systems, refer to Domino reference document pack EPT073187 (EPT026935 for English version). For the Mx-Series, refer to document EPT084401.

INTENDED USE

The Twin Labelling Station (TLS) is a system designed to Print and Apply labels on to a wide range of products as they are processed on a customer supplied conveyor system.

Using two printers allows for continuous printing when one of the printers is being reloaded or if a fault occurs.

It is designed to be used by operators who have been suitably trained by Domino.

EXCLUDED USE

Use of the equipment described in this document excludes:

- Coding of products that do not comply with the agreed specification.
- Use within a non-professional or household environment.
- Use within explosive environments.
- Use if the equipment and/or its cables are impaired.
- Outdoor use unless necessary measures are taken.
- Any use outside what is intended for the equipment.

SYMBOLS

The following symbols are used in this product manual to highlight specific warnings and cautions used in the procedure below the symbols.

Warning or Caution, read and comply with the warning or caution text to avoid physical injury, damage to equipment or damage to the environment.

Risk of fire by igniting flammable material.

Risk of coming into contact with electricity.

Crush / finger trap hazard.

Hot surface hazard.

Obstacle hazard.

Beware of Electrostatic Discharge (ESD). Electrostatic precautions must be used:

- Switch off the machine.
- Wear a wristband connected to ground.
- Avoid wearing clothing that can build up electrostatic voltages.
- Use ESD protective bags to transport PCBs.
- Only place PCBs on a mat made from a material which will dissipate electrostatic voltages and which is connected to ground.

Do not step on.

Eye protection must be worn.

Use adequate protective gloves. Consult the relevant Safety Data Sheet (SDS).

Disconnect power before carrying out maintenance or repair.

Connect an earth terminal from the product to an appropriate ground source.

Read the manual before doing this procedure.

HEALTH AND SAFETY

USE OF THE PRINTER

WARNING	Risk of injury.
	The equipment must only be used by operators who have been trained on the Twin Labelling system. Failure to follow the procedures described in this manual may result in injury or damage to the equipment.

Operators are responsible for:

- The equipment and its surrounding area.
- All personnel in the vicinity of the equipment
- Ensuring that all safety devices are fully operational.

Operators must regard all electrical equipment as live. In general, switch off all electrical connections and compressed air to the Print and Apply system before carrying out maintenance or repair work.

ELECTRICAL INSTALLATION

WARNING	Risk of electrocution.
	Work with electrical equipment must only be performed by skilled or instructed technicians. According to EN60204-1:2018, 3.1.36 an instructed person is: • An individual adequately advised or supervised by a skilled person to enable that individual to avoid hazards which electricity can create (e.g., operating and maintenance staff). According to EN 60204-1:2018, 3.1.61 an electrically skilled person is: • Person with relevant training, education and experience to enable him or her to perceive risks and to avoid hazards associated with electricity.

Electricians should be certified according to local regulations and have experience of:

- Similar types of installations
- Proven skills in reading and working from drawings and cable lists
- Knowledge of local safety regulations regarding automation.

OPERATION

WARNING	Risk of electrocution
	High voltage electricity. Never remove machine covers on the controller and the printer, during operation.

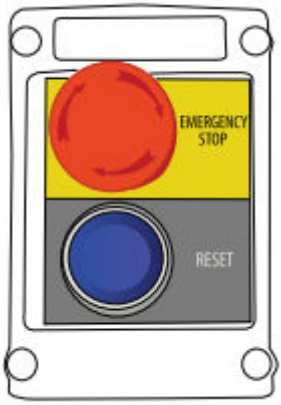
For safe operation of the controller and the printer, follow all instructions given in this manual.

EMERGENCY STOP BUTTON

The system is equipped with a red emergency stop (E-Stop) button.

This is an external safety function for stopping the applicator. In case of emergency it is easier to access the external stop button than the pneumatic shut-off valve on the applicator module.

When the button is pressed, electric power to the printer is switched off and the compressed air to the applicator is disconnected. The motion of the applicator will stop.



Note — Operators must note the location of the Emergency Stop button in order to use it quickly in the case of an emergency.

COMPRESSED AIR

WARNING	**Risk of injury.**
	• Compressed air must be clean and filtered. Contaminated compressed air may cause malfunction off machine valves. • Do not change the air pressure settings on the machine. Higher pressure can result in injury and may damage the equipment.

REMOTE CONTROL

The Applicator can be remotely controlled from:

- A supervision unit or
- The production line control system.

Contact Domino for more information.

APPLICATORS

The Applicator is designed to minimize the risk of personal injury.

In normal operation:

- The Applicator will return to its home position if it impacts an object when moving.
- If the Applicator impacts an uneven object, it will slightly tilt
- If the Applicator cycle times out, without impacting an object, it will return to its home position and display an error mode. To reset the Applicator from error mode, press and hold the *IDLE/RESET* button.
- If the Applicator impacts an object while returning to its home position, it will stop and display an error mode. To reset the Applicator from error mode, press and hold the *IDLE/RESET* button.

CLEANING WIPES

WARNING	**Hazardous chemicals. Risk of eye irritation.**
	• Wear protective glasses when using cleaning wipes. Contact with chemicals can cause eye irritation. • Domino supplies Safety Data Sheets (SDS) giving specific safety information for the cleaning wipes. Safety Data Sheets can be found on the MSDS section of the Domino website. • Read the warnings on the container.

TRANSPORTATION

GENERAL

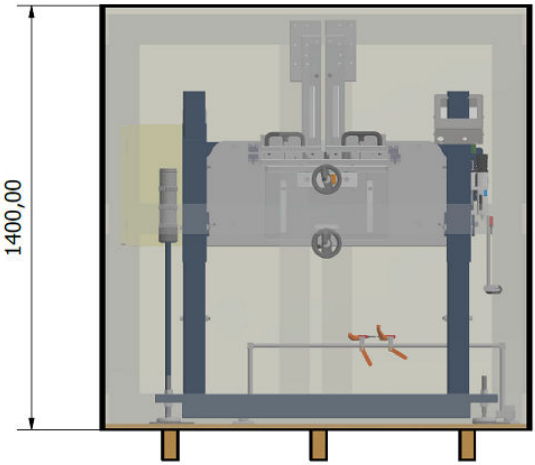
WARNING	Heavy Equipment. Risk of crush injury.
	• For safe handling of the Print and Apply unit, follow all lifting instructions given in this product manual. • For further details on the individual components and safety aspects of the Domino M-Series Print and Apply systems, please refer to Domino reference document EPT026458.

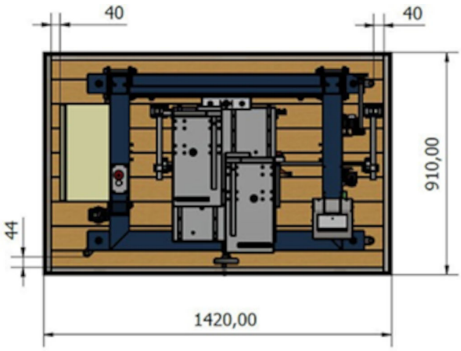
CRATE CONTENTS SPACING

There are different formats of crates fue to different types of frames.

1. TLS - Side
2. TLS - TopDown

Note — Dimensions shown in drawings below are related to the TLS-Side Dimensions are in mm.

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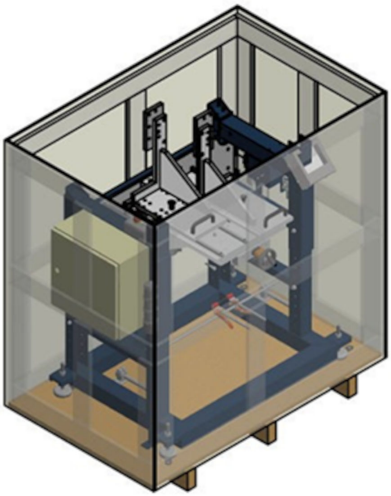
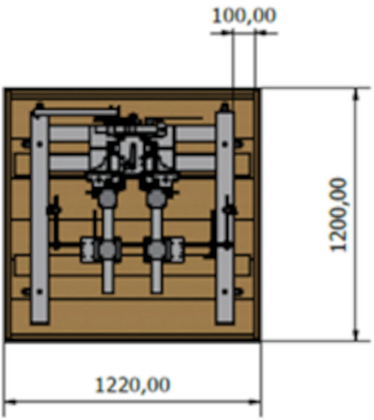
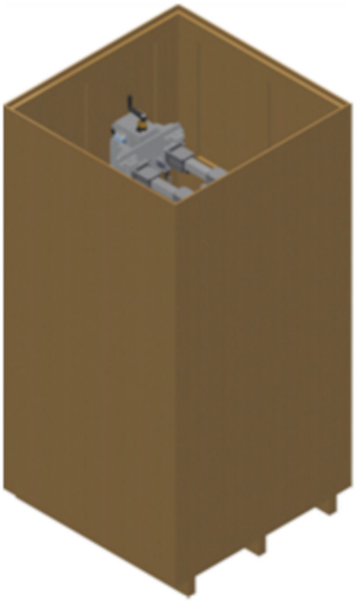
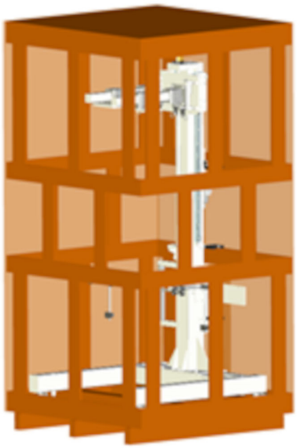


Note

Dimensions shown in drawings below are related to the TLS-TopDown. Dimensions are in mm.







LIFTING AND HANDLING

The machine is delivered in a wooden crate. To load and unload a suitable forklift is required.

WARNING	**Heavy Equipment. Risk of crush injury.**
	Use care and appropriate handling assistance when moving the TLS components into position and mounting. It is recommended that the bracket is affixed securely to the floor.

- Handle with care. During transportation keep vibration and shocks to a minimum.
- Use forklifts with a safe lifting capacity of 500kg minimum.
- Move at a slow walking speed. Higher speeds can result in the machine overturning.
- Use ramps and roads that are in good repair and suitable for carrying the specified load.

Note — Further details on the individual components and safety aspects of the Domino M-Series Print and Apply system, refer to Domino reference document EPT026458.

DESCRIPTION

DIMENSIONS AND WEIGHTS

There are two types of Twin Labelling Station frames.

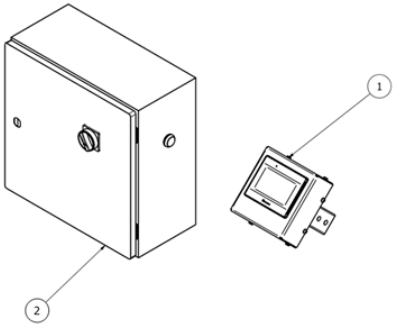
1. TLS - Side This frame is used for applying labels on the side of a product.
2. TLS- TopDown This is a frame used for applying labels on top of a product.

The dimensions listed below are without M-Series or Mx-Series Print and Apply systems mounted.

TLS - Side	
Length:	1150mm
Width:	720mm
Height:	600-1500mm
System weight:	165kg

TLS - TopDownSL	
Length:	1008mm
Width:	1050mm
Height:	2140mm
System weight:	2770kg

TLS CONTROL CABINET



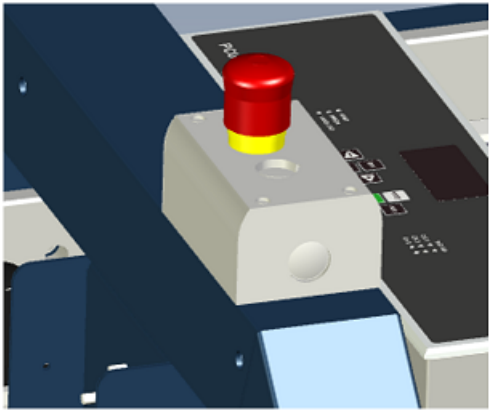
1	User Interface
2	Stainless steel or painted steel cabinet. Includes a controller and power supply to power the system.

Note	Domino part no. reference EPT079466 for painted steel or EPT082043 for stainless steel.

The user interface (1) communicates with the software controlling the selection of the active printer.

On the door there is switch to Power On/Off the control cabinet.

On the side of the Control Cabinet there is white LED indicating the System is powered up.



There is an E-stop button that connects inside the Control Cabinet, that switches off the system. The reset button is there to be used for re-starting the system after powered-up again.

Power Requirements

TLS Control Cabinet	
Dimensions	W x D x H: 400mm x 200 x 400mm
Input voltage	100 – 240VAC / 50Hz/60Hz
Current	6A
Temperature	+5 to + 45 °C
Humidity	20 – 80 % (non-condensing)
I/O's	I/O to connect to M-Series or Mx-Series
HMI	24VDC, (400mA) , 4.3" TouchPanel

STATUS BEACON

The Status Beacon reports the following printer states:

Beacon LED Colour Description

Green:	Printer 1 or 2 active and in use
Amber:	Low ribbon/label level
Amber (flashing):	One of the printer is in an Error state
Red:	Error on both printers and need to be resolved (can be connected to a production line stop).

CONTROL

The Twin Labelling Station is controlled by a user interface. This allows the operator to select modes (such as Auto-Swap Mode or Alternate Mode) and buttons to manually switch between active printers.

A blue reset button (below the Emergency stop button): Re-starts the system after an emergency/stop procedure and to clear the internal queue.

INSTALLATION

This section covers assembly, Installation and commissioning.

Notes

1. Ensure the twin bracket is set to the appropriate height before installing the M-Series or Mx-Series.
2. Do not adjust the height with the M-Series or Mx-Series printers installed. There are fine adjustments with a hand wheel for the height and depth of the printer after installation.

PRINTER BRACKETS

TLS-Side

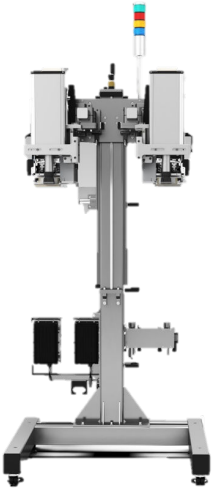
The printer supporting brackets are illustrated below:

Front view

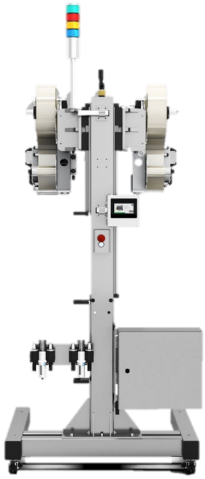
Rear view

TLS-TopDown SL

The printer supporting brackets are illustrated below:



Front view



Rear view

WARNING	**Obstacle Hazard. Risk of Injury.**
	**Do not step on the mounting bracket.** If you step on the mounting bracket, there is a risk that you could fall. If you fall, you might injure yourself.

CAUTION	Movement Hazard. Risk of Equipment Damage.
	**Fit anchor bolts to anchor the TLS to the floor** If you do not fit the anchor bolts, there is a risk that the TLS could move after installation. If the TLS is moved accidentally, damage to equipment can occur.

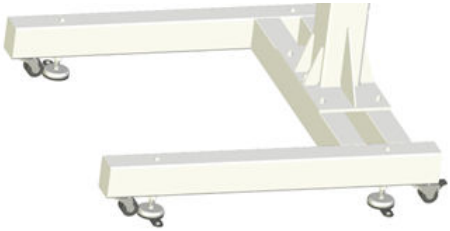
TLS-Side

The feet can be turned in/out for fine adjustment and leveling of the frame.

TLS - TopDown SL

Feet can be turned in/out for fine adjustment and leveling the frame.

But also to ensure the wheels after lifted from the floor. This is to ensure stability and the frame entire weight is on the feet.



ASSEMBLY

The system requires 2x M-Series, T or TB versions in left and right handed orientations.

1. Position the Twin Labelling Station brackets close to the conveyor.
2. Once the final position has been established, secure the brackets to the floor.
3. Mount the printers on to the bracket, noting that the left hand printer is installed to the left when observed from the rear of the bracket. The label and ribbon are then easily accessed on both printers.
4. Mount the controller to the bracket in the vertical position.
5. Connect the printer power supply directly into the control cabinet.
6. Mount the control panel to the defined side (left or right) of the bracket.
7. Connect the cables between the printers and the controllers
8. Mount the provided sensors onto the supplied sensor bracket. The first sensor is mounted separately before the pack reaches the first printer. The second and third sensors are mounted to the brackets close to the printer to trigger the printer functions..
9. Make connections as per the appropriate Technical Wiring diagram (Reference *TLS – Control Cabinet Wiring Diagram v1.1.pdf*)
10. Mount and connect the machine stop kit and connect to the compressed air via the pneumatic air system.
11. Connect the system to the customer power source.

Note	There is a step-by-step Installation Instruction reference Manual available (EPT092593).

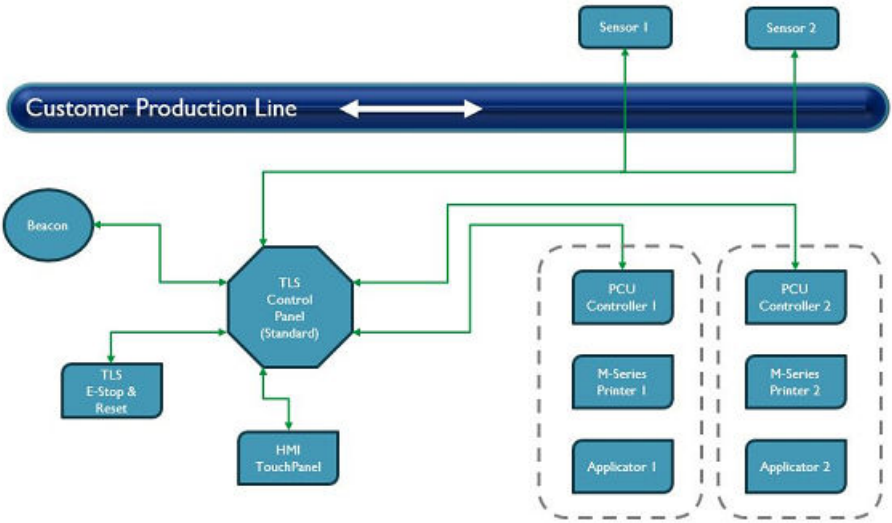
COMMISSIONING

1. Load the two printers with the appropriate label stock and ribbon.
2. Switch on the printers.
3. Calibrate label sensors.
4. Ensure the printers are orientated forwards into the printing position and locked.
5. Select the required message on both printers.
6. Check that the correct printer is selected (it can be changed by selecting the Printer from the user interface).
7. Start the conveyor .
8. Check the system operates correctly.
9. Use the adjusting wheels for the fine adjustment of the applicator unit height and distance from the product.

OPERATION

SYSTEM OPERATION

The illustration below shows a flow diagram of system operation:



The system can operate in two Modes:

Auto-Swap Mode

If Printer 1 is active, a printed label is applied on to the applicator.

- Sensor 1 will be activated, and Sensor 2 ignored/disabled.
- If the product is detected by Sensor 1 it will apply the label on to the product.
- In case of an error or a malfunction by Printer 1, the system will switch automatically to Printer 2.

If Printer 2 is active a printed label is applied on to the applicator.

- Sensor 1 will be ignored/disabled, and Sensor 2 will be activated.
- If a product is detected by Sensor 1 it will apply the label on to the product.

If for any reason the active Printer goes into a fault condition, then the system will switch to the seconds Printer automatically.

- Once the fault condition is resolved on the faulty Printer it will revert to standby mode until the other Printer has a fault or when a manual switch from the UI is activated.

Alternate Mode

Both Printer 1 and Printer 2 will be active.

- Sensor 1 and Sensor 2 will be active
- As products pass the sensors the labels will be applied in an alternate printer order on to the product.

This Mode is mainly used for high-speed production lines.

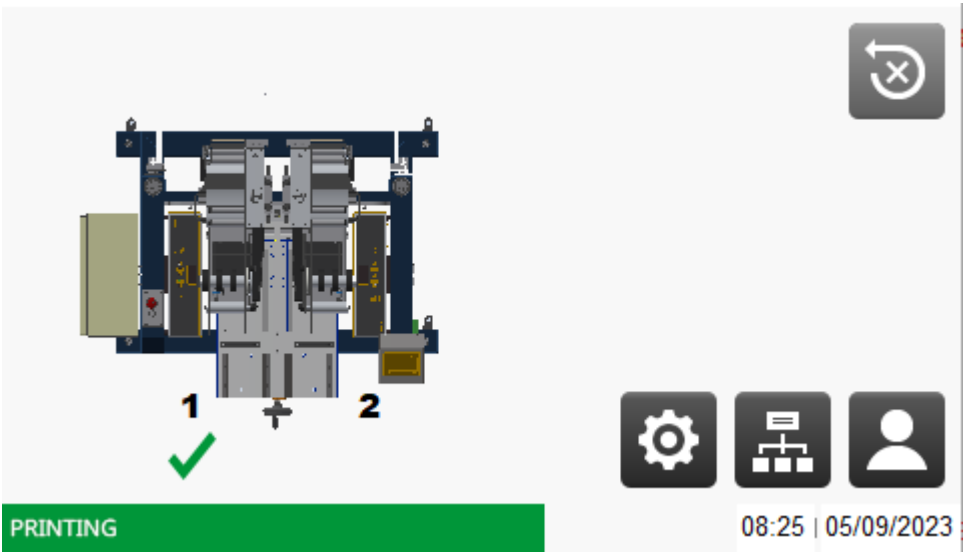
ADDITIONAL INFORMATION

- The TLS Control Panel manages the switch between the two M-Series Printers and is managed via a pre-programmed PLC.
- Visual changes, alerts and warnings are displayed on the HMI. Some settings can be set manually on the UI such as switching between printers.
- The two M-Series Printers slide out independently for maintenance and service. If this occurs, the system automatically switches to the other M-Series Printer.

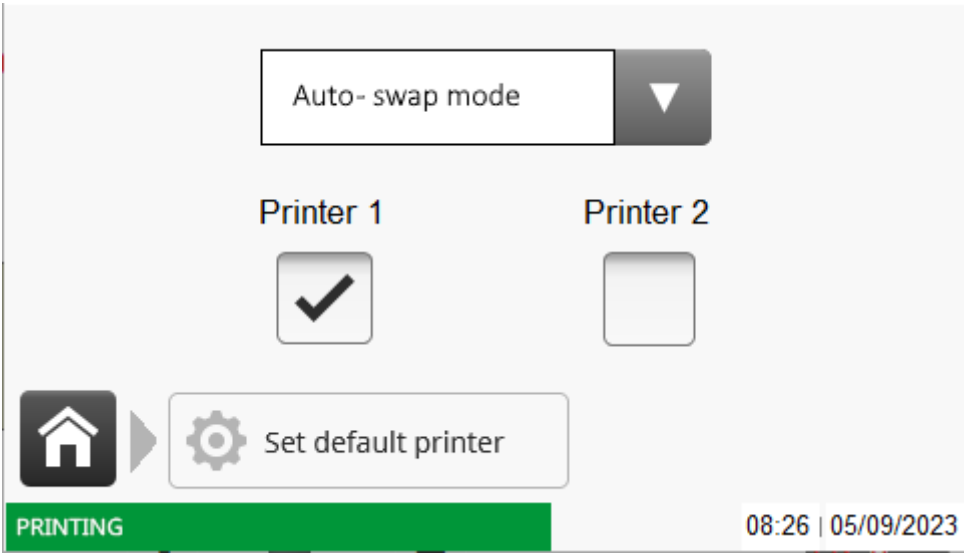
USER INTERFACE OPERATION

A 4.3 inch (109mm) user interface provides information on the active printer, product being printed and any warnings or errors.

System Overview

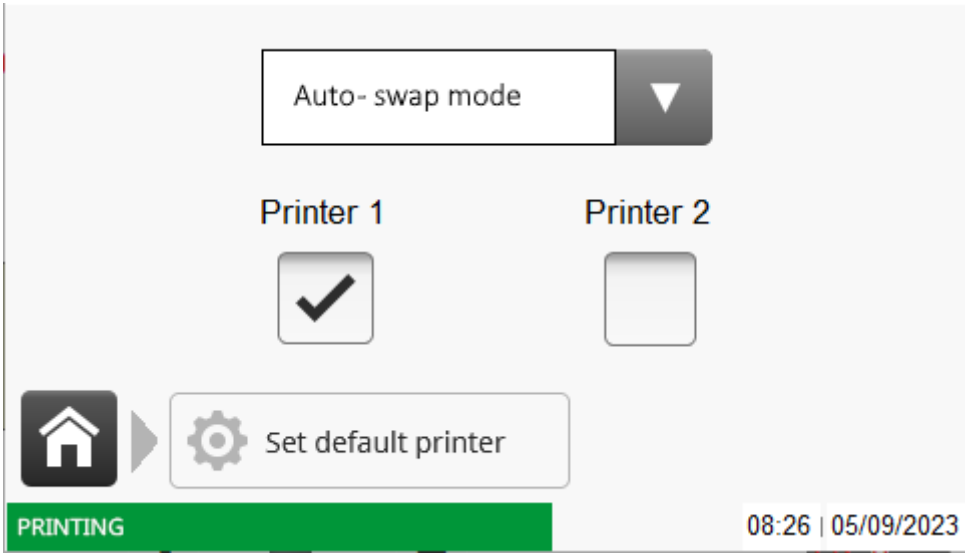


Printer selection



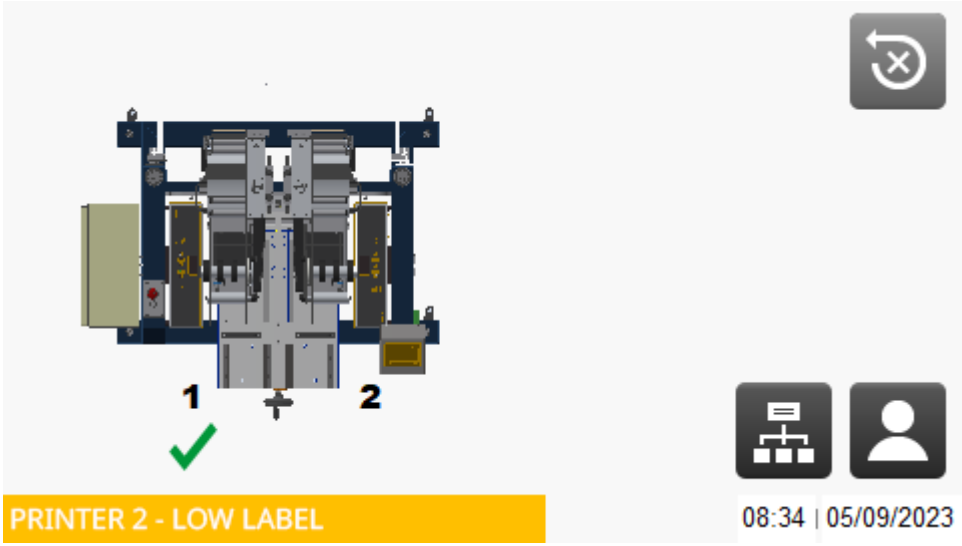
Mode Swap

Swap between Auto Swap Mode and Alternate Mode

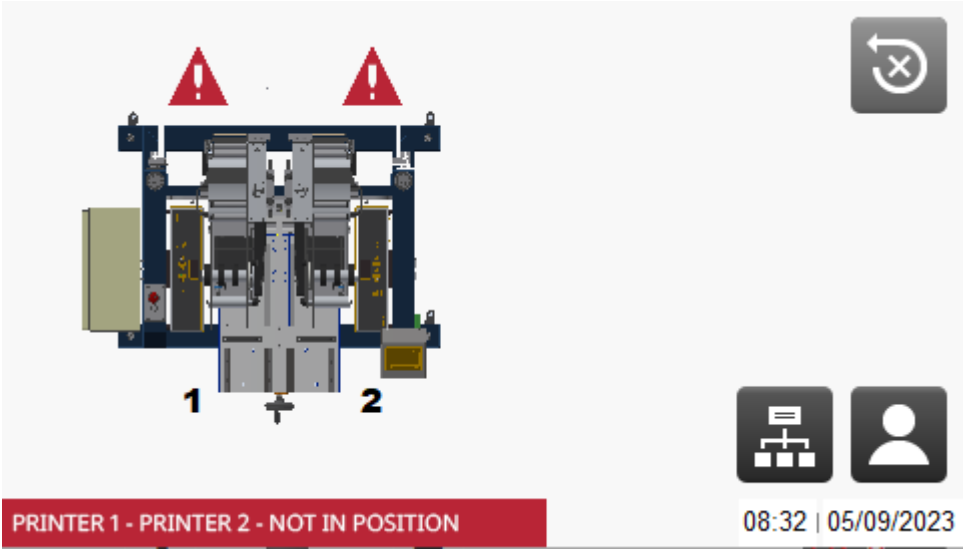


Auto Swap Mode - Select printer

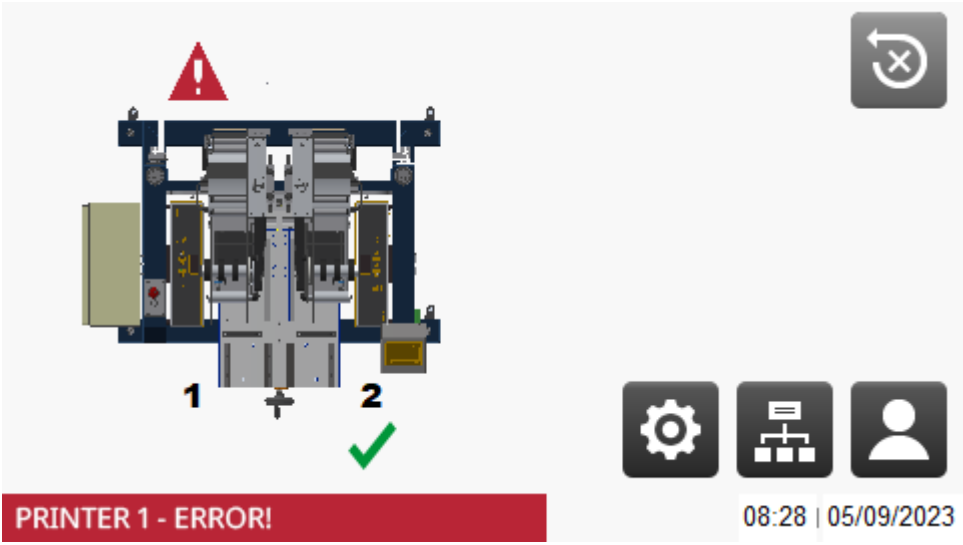
Warning - Consumables Low



Warning - Fault

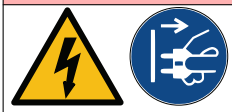


Position error. Printer 1 and 2 not in position



Printer 1 not in position

MAINTENANCE

WARNING	High Voltages: Risk of electrocution.
	High voltage electricity. Risk of death or injury from electric shock. Disconnect power before carrying out cleaning, maintenance or repair.

For safe maintenance of the controller and the printer, always disconnect the power before commencing..

For safe operation of the controller and the printer, follow all instructions given in this manual.

DAILY

To be carried out daily or when changing media rolls (time approximately.10 minutes).

Cleaning

- Clean the exterior of the printer.
- Clean the print head.
- Clean the platen roller and ribbon take-up roller.
- Clean the platen roller.
- Clean the label-gap sensor.

Maintenance

- Check that the applicator pad is free from glue residues.
- Check the position of the applicator pad.
- Check the air pressure.
- Check movement of the applicator.

WEEKLY

To be carried out weekly (time approximately. 10 minutes).

Maintenance

- Carry out daily maintenance.
- Check the platen roller and ribbon take up roller for damage and wear.
- Check the functions of the machine stop (if used).
- Check function of the applicator dampers.

SIX MONTHS

CAUTION	Risk of damage to equipment.
	Only Domino trained engineers are authorised carry out this task.

Tine 60-90 minutes

Cleaning

- Carry out daily cleaning tasks.
- Clean the controller- Blow away any dust inside the controller cabinet.
- Clean the vacuum ejectors.
- Tidy the printer and surrounding area.

Maintenance

- Carry out monthly maintenance
- Re-calibrate the label-gap sensor.
- Check the controller fan operation.
- Check the operation of low media sensors (if fitted).
- Check the complete unit for loose or missing fixings (screws, bolts etc)..

FAULT FINDING

In additional to this section also refer to the Operator Reference Guide (Domino reference EPT026935).

POOR PRINT QUALITY

Fault	Cause/Remedy
White stripes in the print direction	The print head needs cleaning. The print head has faulty dot.
White, uneven diagonal stripes	Wrinkles in the ribbon
Pale print	Print head is worn
White spots on the label	• Dust on the label or ribbon.Unevenness in the label. • Missing ink on the ribbon. • Dirty drive roller.
Dark lines, or waves with random distance, across the test label	Uneven feed of the label or ribbon. May be caused by a slipping label. Slipping can be due to uneven or too tightly adjusted friction clutches.
Dark lines, with always the same distance, across the test label	A drive belt, pulley or drive roller (platen roller) is damaged.

PRINTER FAILS TO PRINT

Possible Cause	Remedial Action
The power / air supplies are not switched on	Check the power switches and air valves.
The labels and ribbon are not correctly threaded	Check the label and ribbon are mounted correctly.
The applicator is not in the Home Position	• Check the position of the home position sensor. • Check the air supply. • Check for mechanical problems.
A fuse has blown (Mains inlet)	Replace the fuse (rear of the controller).
The cables are not correctly connected	• Check for loose cables. • Check wiring diagram.
Machine Stop is activated Input IA1 (in the connection block CN1). This must be active for a new print to be allowed	• Reset the Stop, if mounted. • Check input IA1, make active if no Stop is mounted.

Any error messages in the display.	Check the error list in Technical Manual: Advanced maintenance and trouble shooting
The print head is not in correct position that	Esure the print head is mounted correctly

LABELS DO NOT STOP AT THE CORRECT POSITION

Possible Cause	Remedial Action
Labels are slipping on the platen roller	Clean all rollers thoroughly.
Label-gap sensor requires calibration	Calibrate sensor and labels.
The peel roller is worn or damaged	Replace or repair.
The platen roller is worn	Replace platen roller.
Drive belts are worn or damaged	Replace drive belts.
A pulley is damaged or loose	Replace or repair.
The peel roller is not mounted correctly	Adjust the position of the peel roller.
Back feed is used and the label change direction when the gap is in the label-gap sensor.	This could occur when the label is approx. 55mm long and the back feed is set to approx. 19mm Move the label-gap sensor in the print/feed direction.

Domino Twin Labelling Station User Guide

Domino Printing Sciences plc has a policy of continuous product improvement, the Company therefore reserves the right to modify the specification contained within this document without notice.

For additional documentation, including other available languages, either scan the QR code, or go to https://mydomino.domino-printing.com

Domino UK Limited
Trafalgar Way
Bar Hill
Cambridge CB23 8TU
United Kingdom

Tel: +44 (0)1954 782551
Fax: +44 (0)1954 782874
Email: enquiries@domino-uk.com

Domino Amjet Inc.
1290 Lakeside Drive
Gurnee IL.60031
U.S.A.

Tel: +1 847 244 2501
Fax: +1 847 244 1421
Email: solutions@domino-na.com

EPT071187 English