

# MACH 9 Colour DEP for DS700

Operator Quick Guide



# Safety Standards Compliance 1

## 1.1 About this Manual

### Disclaimer

The data contained herein is the most current known to the manufacturer at the time of preparation and is believed to be accurate.

It should not be construed as guaranteeing specific properties of the products as described or suitability for a particular application.

This guide is published without any warranty. Improvements and changes to the online guide (if applicable) necessitated by typographical errors, inaccuracies of current information, or improvements to programs and or equipment, may be made at any time and without notice.

Such changes will, however, be incorporated into new editions of the PDF version of this guide (if applicable).

## 1.2 Standards and Compliance

### Safety and Legal Markings



### Environmental Legal Compliance

This product complies with EU Directive 2012/19/EU, Waste of Electrical and Electronic Equipment (WEEE), in all EU member states.

This product complies with EU Directive 2011/65/EU, Restriction of Hazardous Substances (RoHS), in all EU member states.

This product complies with FCC 47CFR Part 15B Class A, Federal Communications Commission (FCC), in all states and territories of the United States.

### Applicable Directives

Low Voltage Directive 2014/35/EU

Electromagnetic Compatibility Directive 2014/30/EU

The product presented in this guide meets the requirements of applicable directives.

All machines are built to strict safety specifications in accordance with UL Standards, Low Voltage Directive, and Electromagnetic Compatibility Directive.

For further information please contact your authorized distributor.

## 1.3 Safety

The information presented in this section is given as a guide to general precautions and safety procedures that should be exercised during installation, operation, maintenance and or servicing of this machine.

Whilst every effort has been made to ensure completeness of this document, owners, operators, and service technicians of this machine are reminded of their responsibilities to comply with all relevant legislations including Risk/COSHH Assessments if applicable and Approved Codes of Practice.

Always be aware of all warnings and notes that are listed within this manual or noted anywhere on the machine itself. Various symbols are used in this manual, and on the product itself to ensure correct usage, to prevent danger to the user and others, and to prevent property damage.



The meanings of these symbols are described in section [1.3.1 Safety Symbols](#), and it is important these symbols are observed, and their descriptions read thoroughly to understand their meanings.

Prior to carrying out any installation, operation, maintenance or servicing procedures on this machine, ensure you have fully observed and understood all safety notes detailed in this section.

### 1.3.1 Safety Symbols

Description	Symbol
<b>Protective Earth (Ground)</b> Identifies terminals intended for connection to external conductors, or protective earth (ground) electrodes, protecting against electric shock in case of a fault.	
<b>Caution - Risk of Electric Shock</b> Identifies equipment with a hazard of electric shock.	
<b>Caution - Moving Parts</b> Indicates the instructional safeguard to keep away from moving parts.	
<b>Caution - Laser Beam</b> Indicates warning of a laser beam.	
<b>Caution - Heavy Object</b> Indicates the object is heavy, adhere to the safety instructions for provisions of lifting and moving.	
<b>Caution - Fuse</b> Identifies equipment that is fused. Observe correct fuse ratings where possible before replacing.	
<b>Caution/Warning</b> Indicates a situation in which minor, moderate, or serious injury could occur because of the hazard present.	
<b>Important Note</b> Refers to the important note referenced/detailed within the manual.	
<b>Refer to Manual</b> Refers to the relevant instructions referenced/detailed within the manual.	

### 1.3.2 General Safety Notes



#### WARNING

- Keep the work area around the machine clean. A minimum one metre of clear unobstructed working space is always required around the machine.
- The machine must be used only as intended by the manufacturer and should not be tampered with or altered in any form.
- The machine must be operated, maintained and or serviced only by trained and authorised personnel.
- Do not operate the machine unless all of the covers are in place and undamaged, and all warning labels are in place and legible. If any external cover is damaged, it must be replaced only by authorised personnel or certified engineers.
- All covers contain interlock safety cut-off switches. Do not try to bypass the interlock safety switches, and do not attempt to operate the machine without covers, or if any of the interlock safety switches are inoperable.
- Do not wear any loose clothing or jewellery, and long hair must be tied back or tucked under a hat when working near the machine, as they may become caught in any one of the moving parts resulting in injury.
- Before any cleaning, maintenance and or servicing, the machine must be completely isolated from the power source, by pressing the toggle switch located at the rear of the Insert Head to the off position, and unplugging the mains power cable completely from the electrical power supply.
- Ensure the machine is clean before use. Wipe off any paper dust built up outside the cabinets. If paper dust is collecting inside the machine, open the covers and vacuum it out gently or use an invertible type non-flammable air-duster only.
- Although the manufacturer takes care to eliminate sharp edges to reduce danger, please handle all manufactured parts with care to avoid any risks of cutting.
- When the machine is not in use, the mains power cable should be completely disconnected from the electrical power supply, stored and positioned safely.

### 1.3.3 Power Connections Safety Notes



**WARNING**

- Ensure any isolation or disconnect device, including the mains power supply remain unobstructed at all times.
- Ensure the mains power cable and its connectors are sound and undamaged. Should any electrical cable become damaged do not operate the machine, and ensure any damaged electrical cable is replaced with a correctly certified and rated replacement by the manufacturer.
- A voltage of 230V/115V may be present inside this machine. The power source can produce enough voltage and current to be very dangerous.
- This machine is equipped with a three-pronged plug. One of the prongs on the plug provides a safety grounding (protective earth) feature. Ensure the plug is always connected to a properly wired three-prong outlet. Do not use a two-prong adapter without grounding the machine properly.
- The machine must be earthed. Never remove the third prong from the plug. The safety grounding (protective earth) feature provides extra protection in the event of an electrical problem.
- The mains power supply is fused on both live and neutral sides. Service personnel should be aware that a mains voltage can exist even if no lighted neon shows.

### 1.3.4 Emergency Safety Notes



**WARNING**

- Opening any cover of the machine will trigger the interlock safety cut-off switch and stop the machine operation (including all moving parts).
- Should a fault occur with the machine, immediately isolate the machine completely from the power source, by pressing the toggle switch located at the rear of the Insert Head to the off position, and unplugging the mains power cable completely from the electrical power supply.

## Introduction 2

## 2.1 General Overview

The MACH 9 Colour Digital Envelope Printer (CDEP) connects to an inserter to provide a calibrated means of sending filled envelopes to be printed in colour.

It benefits from:

- Full page, high-speed colour printing.
- Full integration with the DS700 inserter.
- Automatic head height adjustment to handle variations in envelope thickness without operator intervention.
- Ability to print static and dynamic images.
- Support for static and dynamic (AIMS) customer databases.

The printer is controlled from the MACH 9 Control Interface which includes three apps:

1. MACH Control - Controls the printer.
2. FlexMail - Used for designing envelopes and importing mail lists.
3. QuickRIP - Used to apply the envelope design.

After the initial setup, most production tasks can be performed from the DS-700's user friendly IMOS software.

## 2.2 Before You Begin

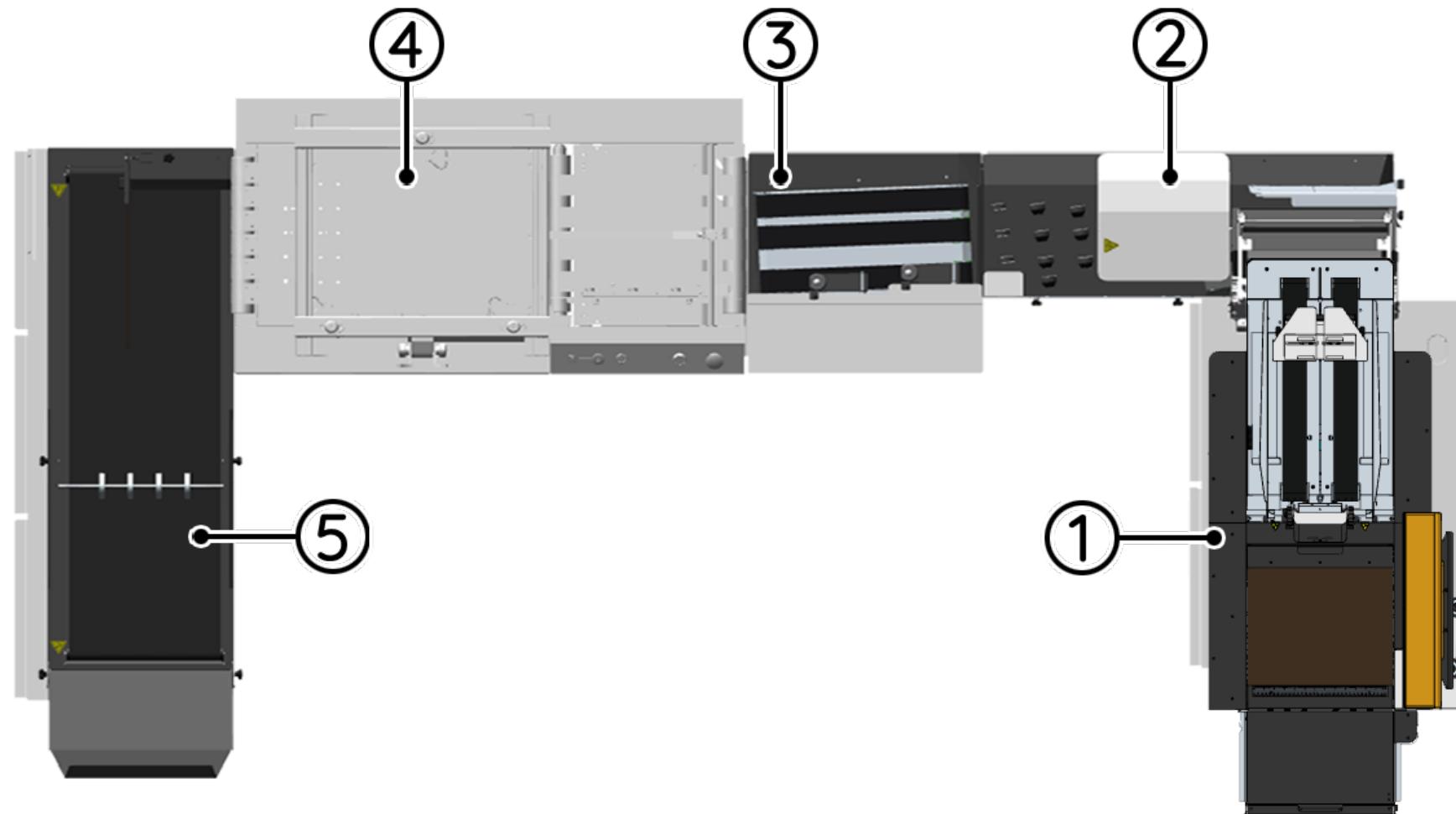
Make sure you have setup the inserter and the MACH 9 colour printer. See separate guide.

## 2.3 Overview of Components

Below are examples of the 2 configurations of the MACH 9 Interface:

- [Figure 2.1 Configuration without Sorter](#)
- [Figure 2.2 Configuration with Sorter](#)
- [Figure 2.3 MACH 9 Printer](#)

## 2.3.1 Configuration without Sorter



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Figure 2.1 – Configuration without Sorter

1. Inserter	2. Turner	3. Colour Print Interface (CPI)
4. MACH 9 Colour Printer	5. Conveyor	

## 2.3.2 Configuration with Sorter

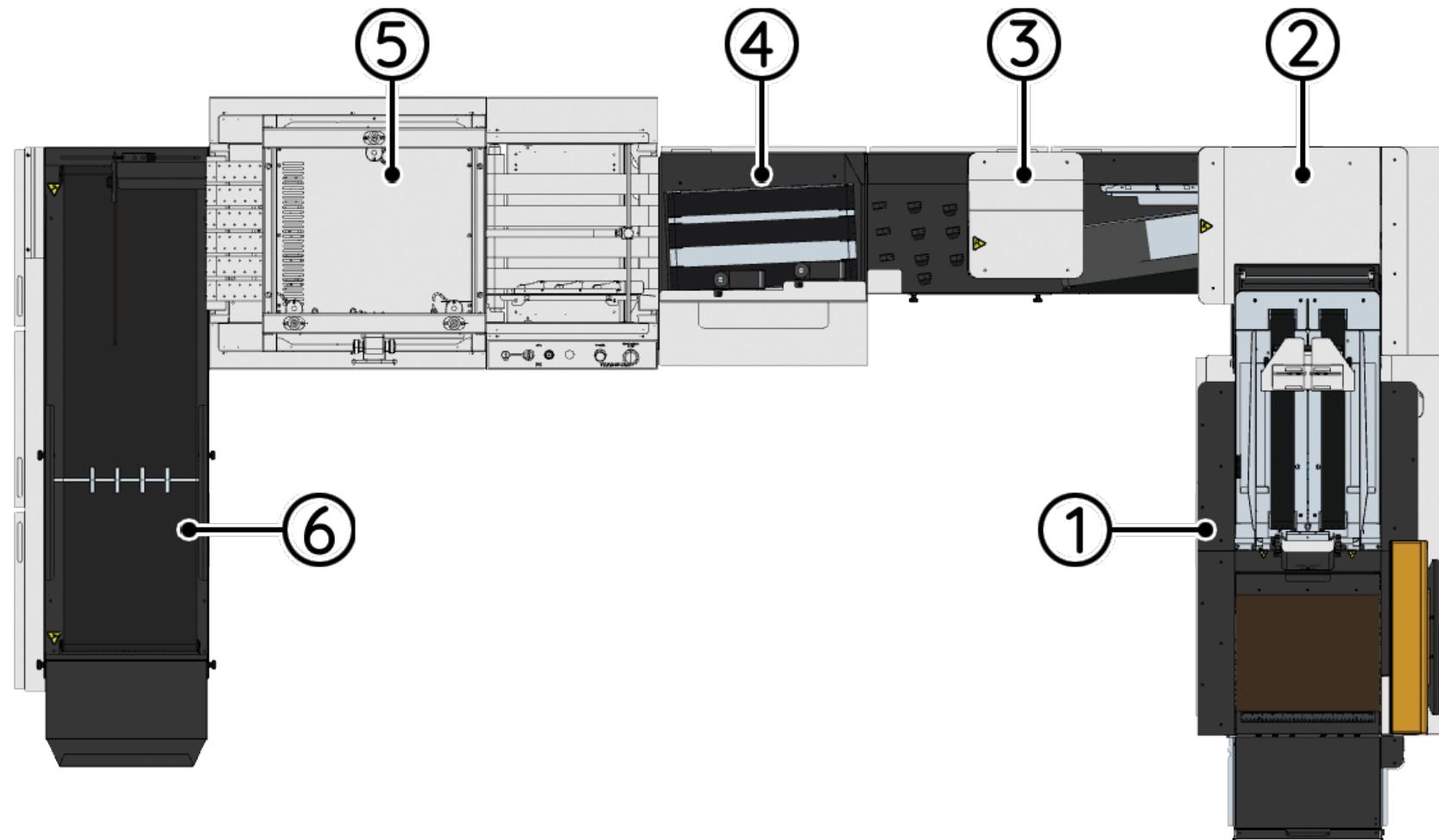


Figure 2.2 – Configuration with Sorter

1. Inserter	2. Sorter	3. Turner
4. Colour Print Interface (CPI)	5. MACH 9 Colour Printer	6. Conveyor

### 2.3.3 MACH 9 Colour Printer

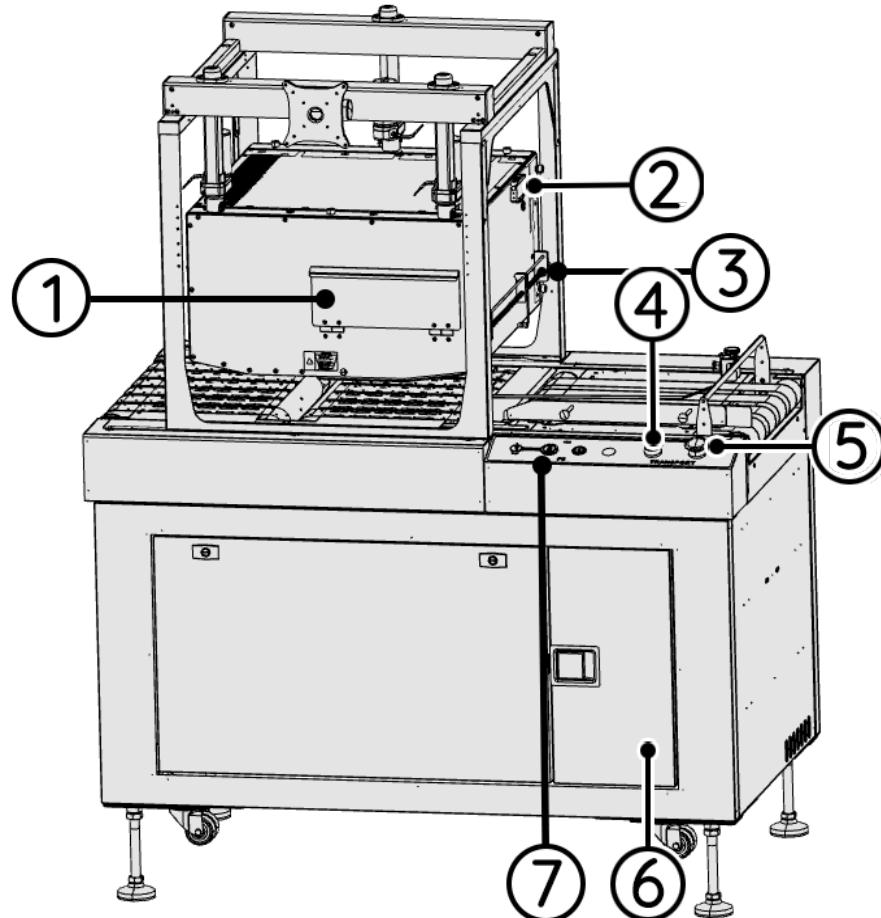
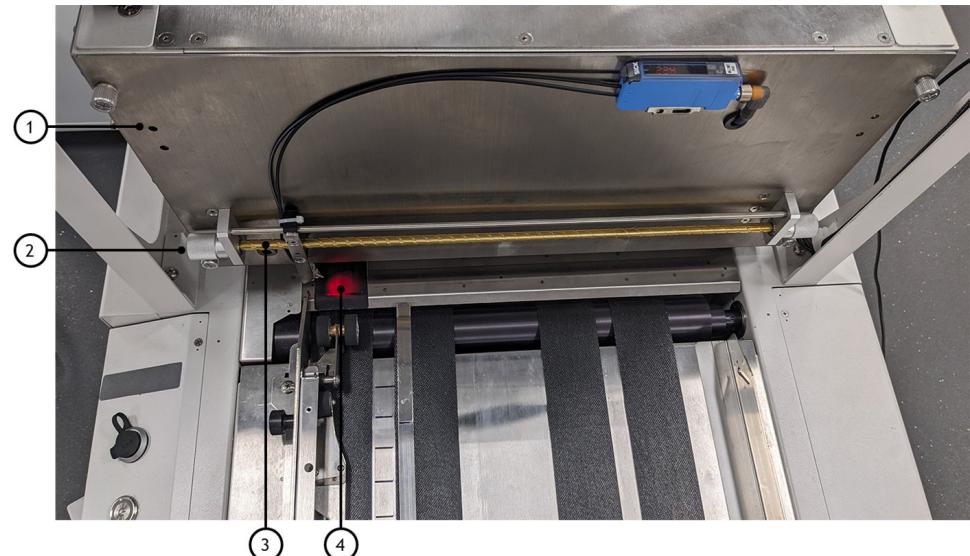


Figure 2.3 – MACH 9 Printer

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1. Printer Cartridge Door	2. Envelope Sensor See <a href="#">Figure 2.4 Side View Entrance</a> .	3. Envelope Guide
4. Power Button	5. Emergency Stop	6. PC Access Door
7. 2 x USB Ports		

#### 2.3.3.1 Side View Entrance



QTL-RND-OPS-00000841-A-00

Figure 2.4 – Side View Entrance

1. Service Door	2. Knobs to move sensor
3. Envelope Sensor	4. Edge sensor reflective light emitter

### 2.3.3.2 Side View Exit

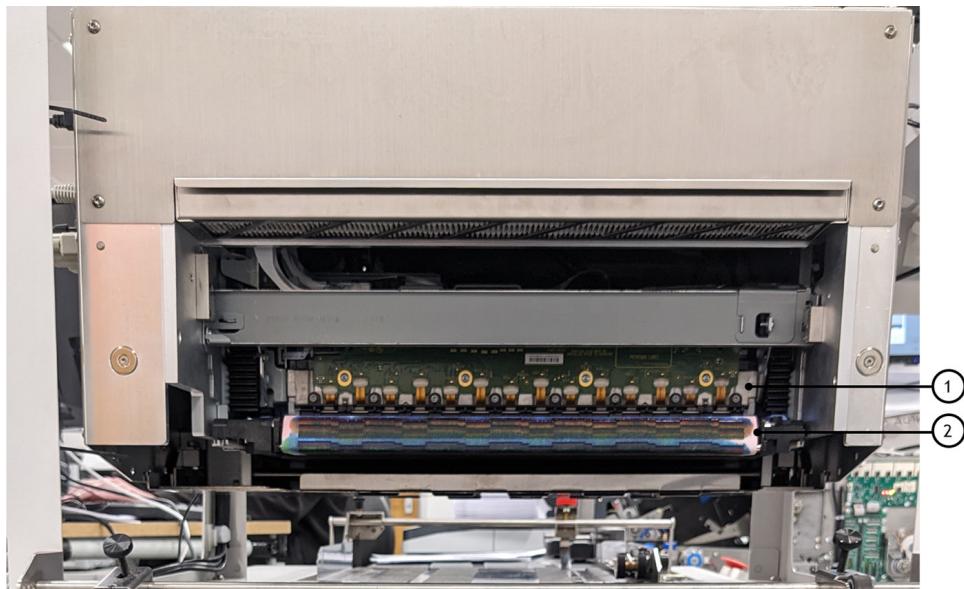


Figure 2.5 – Side View Exit

- |               |                   |
|---------------|-------------------|
| 1. Printheads | 2. Cleaning Cloth |
|---------------|-------------------|

### 2.3.3.3 Base View

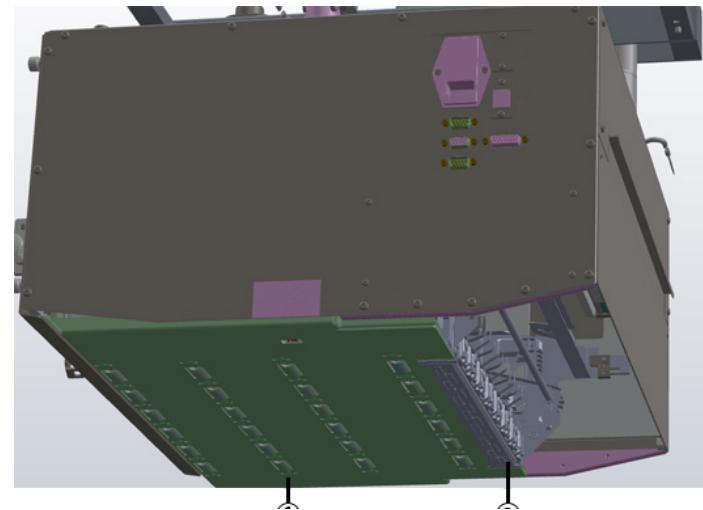


Figure 2.6 – Base View

- |                   |                |
|-------------------|----------------|
| 1. Pressure Plate | 2. Crash Plate |
|-------------------|----------------|

## How to Operate 3

### 3.1 Introduction

In order to control the MACH 9 Colour DEP and create mail jobs you should use Quadient Mach Control software. In addition to being able to control and maintain the printer it is also the gateway to support functions, **FlexMail**, **QuickRIP**, **Control**, and **Settings**.

Envelope layout is created in FlexMail and stored in a project file together with the associated database file. A corresponding inserter job is created and stored in IMOS.

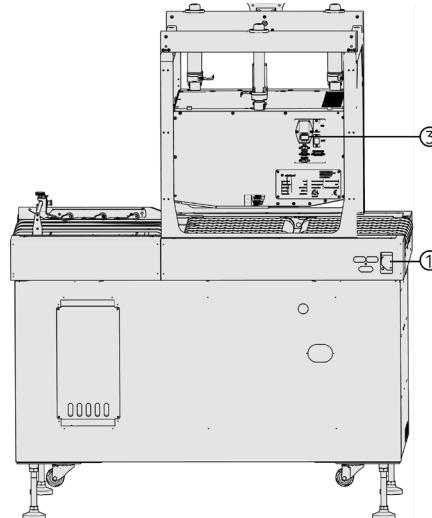
### 3.2 Power On

If the MACH 9 is switched off follow these instructions to switch it on.



Rebooting the machine takes approximately 6 minutes.

1. Switch on the base unit by moving power **switch ①** to the **On** position.



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Figure 3.1 – Mach 9 Power Switch Locations

2. Switch on the PC by pushing the **switch ②** on the front.



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Figure 3.2 – Switch on the PC

3. Wait for the software to fully load and the screen below to be displayed.

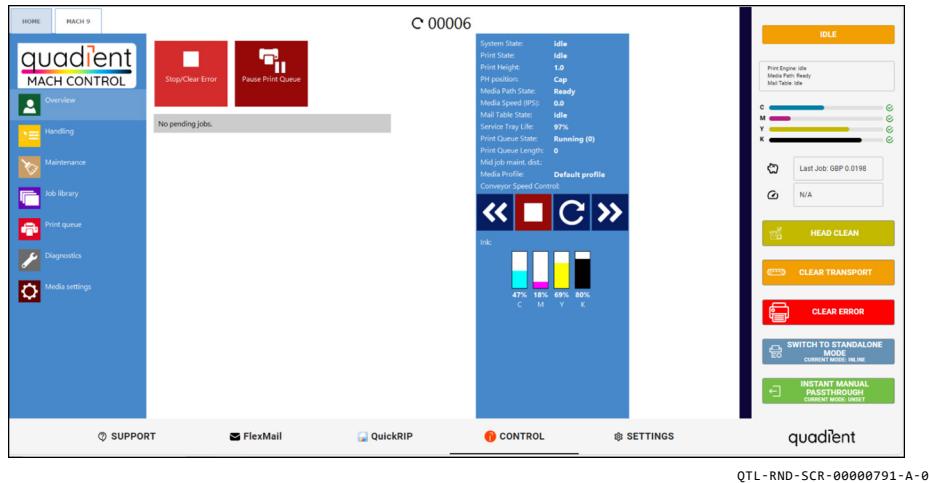


Figure 3.3 – Initial screen

4. Switch on the printer by moving the switch ③ to the **On** position.

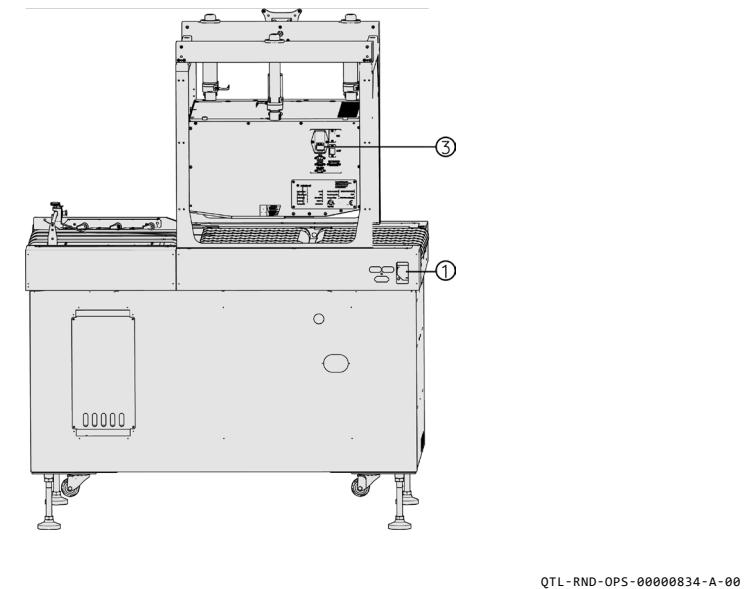


Figure 3.4 – Mach 9 Power Switch Locations

5. Click **CONTROL** to launch Mach Control.
6. Wait for the **MACH 9** tab to be displayed.

7. Click Handling > Initialize height control ①.

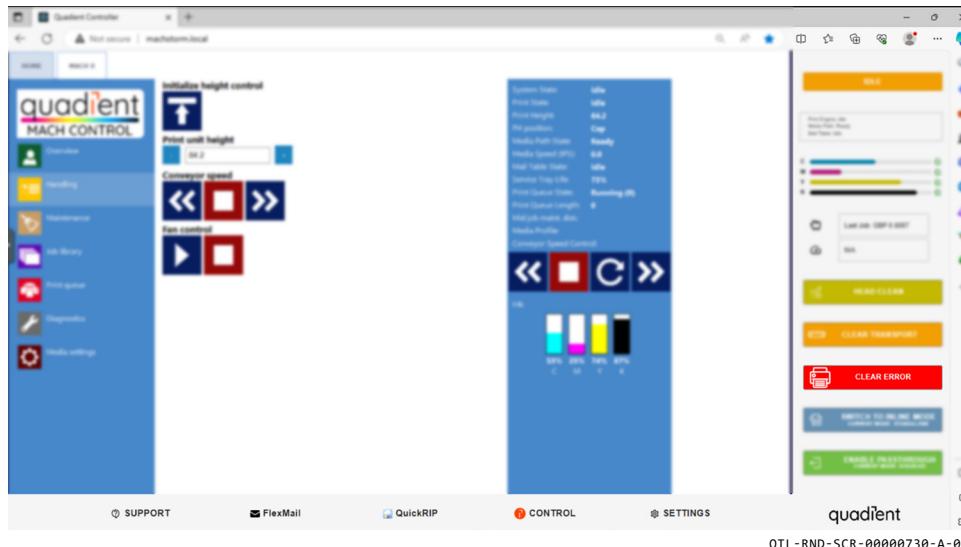


Figure 3.5 – Initialize Height Control

8. Click SETTINGS > SYSTEM MANAGEMENT ①.  
9. Click REBOOT ②.

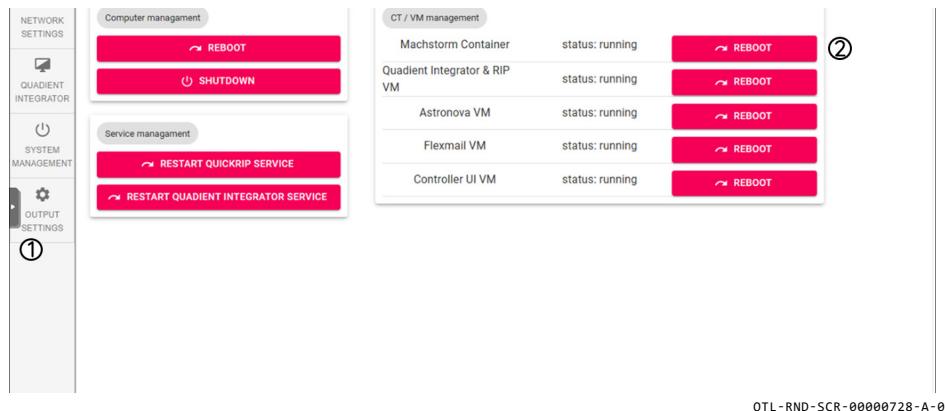


Figure 3.6 – Machstorm Container Reboot

10. Press the **Green button** on the front on the base unit.

### 3.3 Run a Test Print

Test prints are useful for checking the quality of the print before you start a large print run.



Before you start ensure the printer isn't operating. If it is click **STOP** ③ in FlexMail.

To start a test print:

1. Click **SWITCH TO STANDALONE MODE** ① to put the MACH 9 in **Standalone** mode.
2. Open FlexMail.
3. Click **File > Open > \*.fm4** > Open or click **File > Recent Documents** > click the **\*.fm4** file.

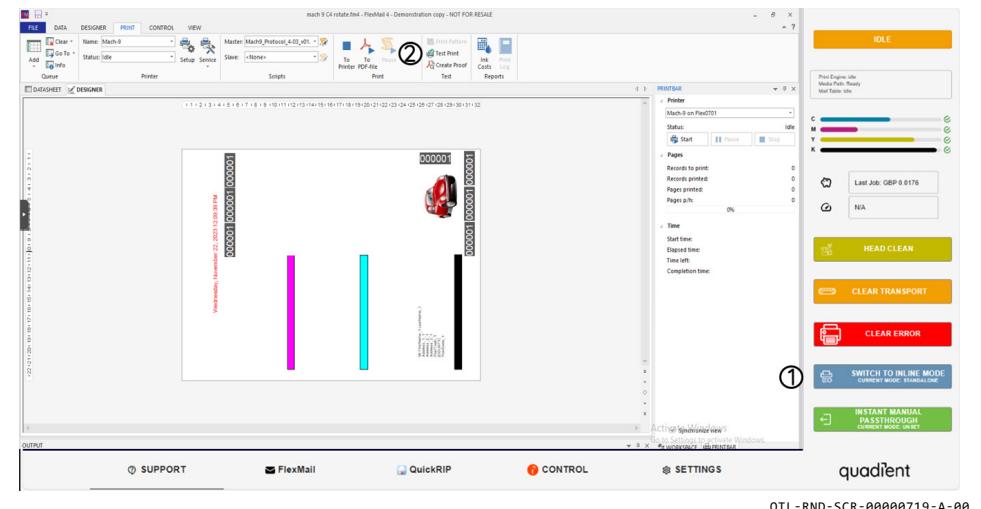


Figure 3.7 – Start a Test Print

4. Place an envelope or paper on the right of the printer nearest the inserter.
5. Click **Test Print** ②. The envelope will be printed.
6. Click ① to return to Inline mode.

### 3.4 Print a Logo on an Envelope without using IMOS

If you have hand filled envelopes that you don't want to run through the inserter the Mach 9 can be used to print a colour logo on an envelope.



Before you start ensure the printer isn't operating. If it is click **STOP** ③ in FlexMail.

To print a standalone logo on a filled envelope

1. Click **SWITCH TO STANDALONE MODE** ① to put the MACH 9 in **Standalone** mode.
2. Open FlexMail.
3. In FlexMail click **File > Open > \*.fm4 > Open** or click **File > Recent Documents > click the \*.fm4 file.**

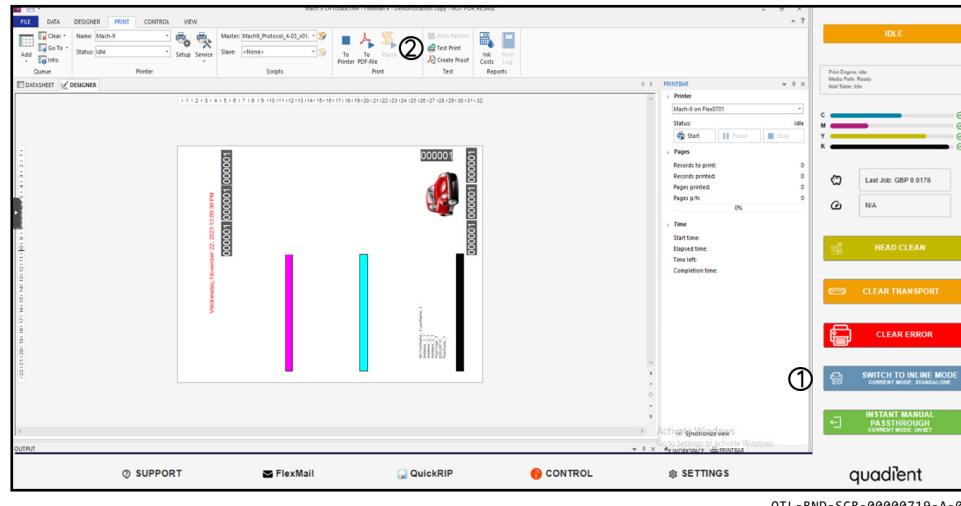


Figure 3.8 – Start a Test Print

4. Place an envelope on the entrance conveyor of the printer.
5. Click **Test Print** ②. The paper will be printed.
6. Return to Inline mode.

### 3.5 Print Static Images on Envelopes

There are two methods of printing images on envelopes:

- FlexMail
- QuickRIP.

FlexMail lets you design the envelope layout in the application, and QuickRIP lets you print a design from an imported PDF.

#### 3.5.1 Use FlexMail to Print Static Envelopes



For more details on FlexMail see the FlexMail guide.

1. Ensure the MACH 9 is in **Inline mode** ①.
2. Open FlexMail.
3. Click **File > Open > \*.fm4 > Open** or click **File > Recent > click the \*.fm4 file.**
4. Ensure the script is started. Click **Start** ② if not.

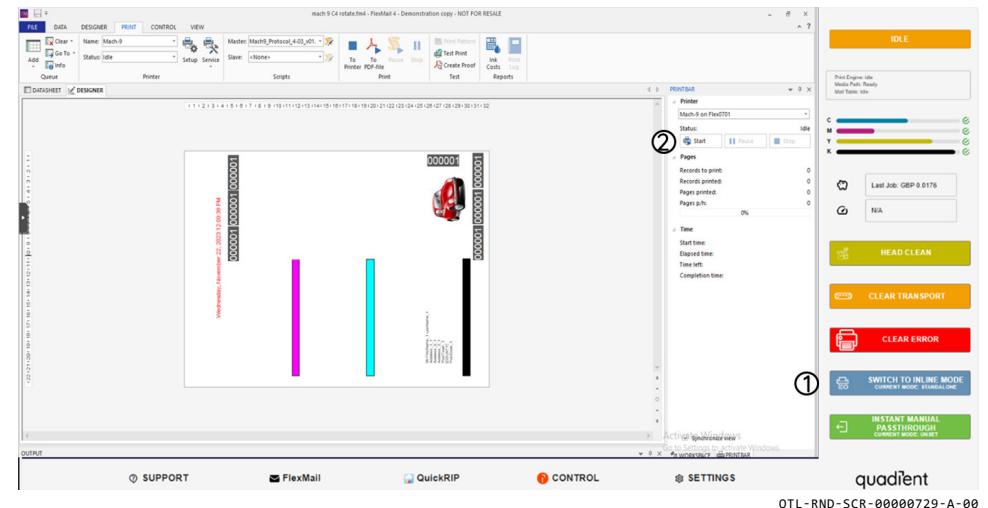


Figure 3.9 – FlexMail

5. Click SETTINGS > OUTPUT SETTINGS ① to confirm the output ② is correct.

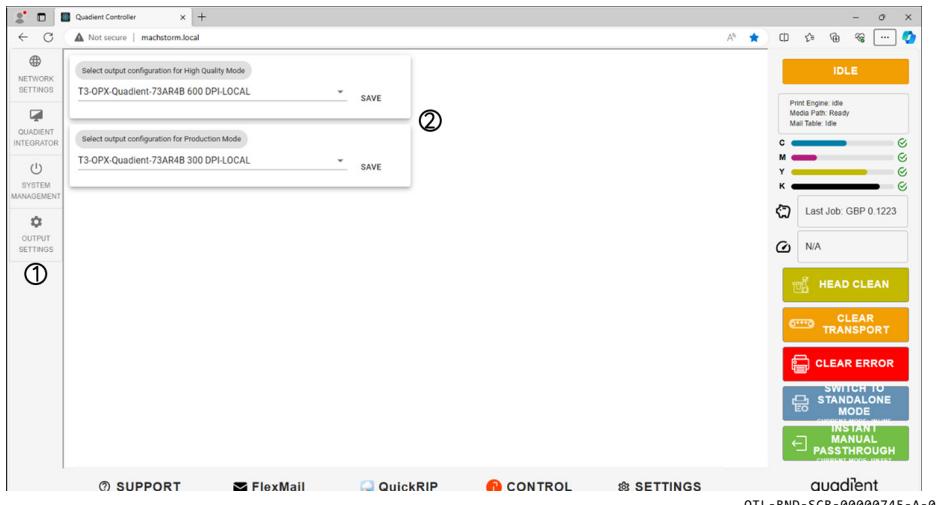


Figure 3.10 – Settings Output Settings

6. Move to the Inserter.
7. In IMOS click to see a list of Jobs.
8. Select the job and click Edit.
9. Click Next to move to Output Settings.

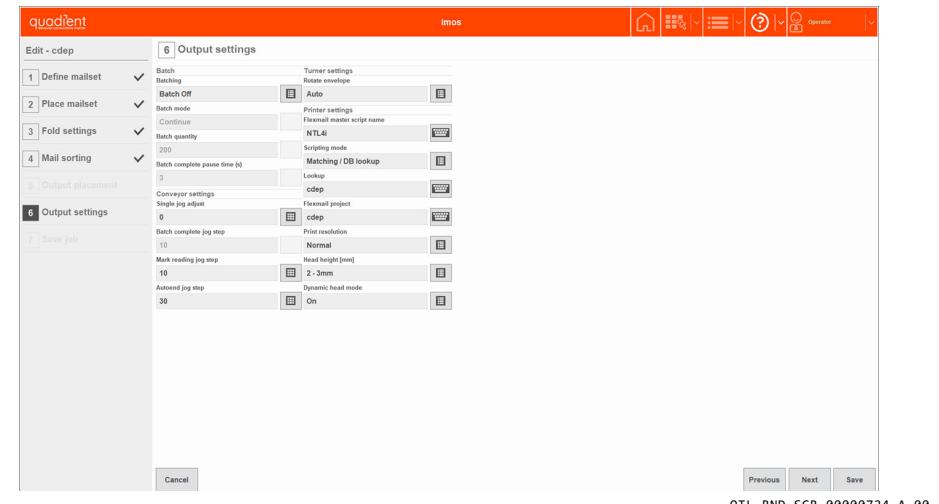


Figure 3.11 – Output Settings Screen

10. Click and select Static FlexMail.

**Static FlexMail** = Same image is printed on all envelopes in the job run.

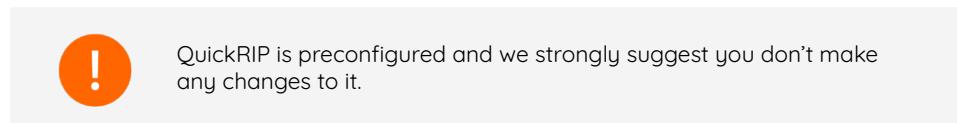
11. Match the Print resolution with the previously set dpi.

IMOS			Output Configuration (Machstorm settings)		
Normal	Production Mode	300 dpi			
Best	High Quality Mode	600 dpi			

12. Enter the name of the associated FlexMail project.
13. Click Next.
14. Click Save.
15. Click Accept.
16. Click to start the job.

### 3.5.2 Use QuickRIP to Print Static Images

QuickRIP allows you to print a PDF file on an envelope.



1. Ensure the MACH 9 is in **Inline mode** ①.
2. Click **QuickRIP**.

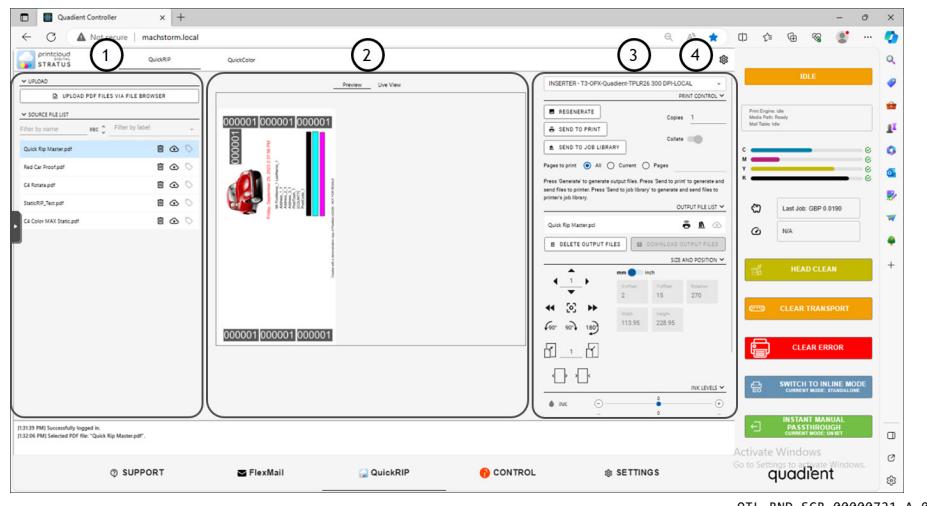


Figure 3.12 – QuickRIP

3. Select the PDF ①.
4. Select 300 or 600 dpi from the dropdown ②.

IMOS			Output Configuration (Machstorm settings)		
Normal	Production Mode	300 dpi			
Best	High Quality Mode	600 dpi			

5. Click **SETTINGS > OUTPUT SETTINGS**.
6. Confirm the settings are the same as you chose in QuickRIP.

7. Move to the Inserter.
8. In IMOS click to see a list of Jobs.
9. Select the job and click **Edit**.
10. Click **Next** to move to **Output Settings**.

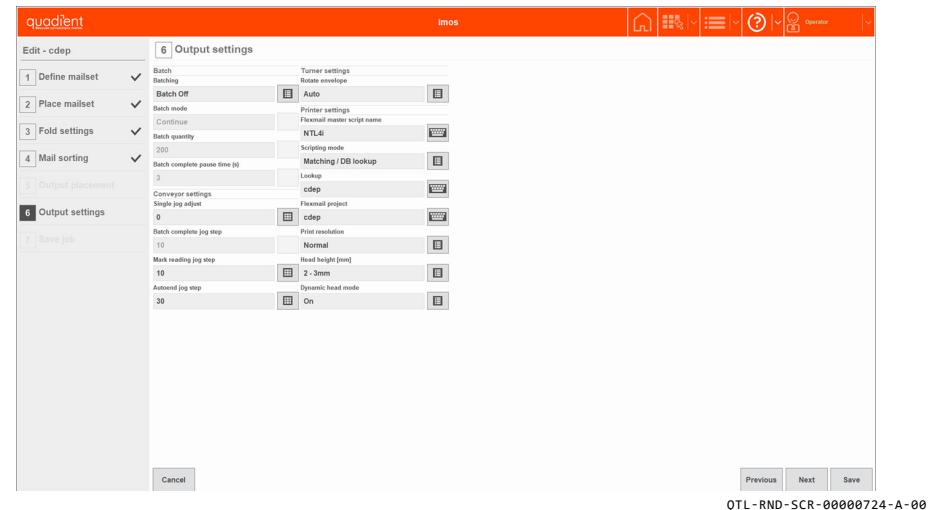


Figure 3.13 – Output Settings Screen

11. Click and select **Static RIP**.

**Static RIP** = The file is uploaded directly to the RIP by the operator before starting the job. The same file is printed on all envelopes in the job.

12. Click **Next**.
13. Click **Save**.
14. Click **Accept**.
15. Click to start the job.

### 3.6 Print Envelopes with Logo and Addresses Stored in FlexMail

If you want to print a batch of envelopes with an image and addresses follow these instructions:

1. Ensure the MACH 9 is in **Inline mode** ①.
2. Open **FlexMail**.
3. Click **File > Open > \*.fm4 > Open** or click **File > Recent** > click the **\*.fm4** file.
4. Ensure the script is started. Click **Start** ② if not.

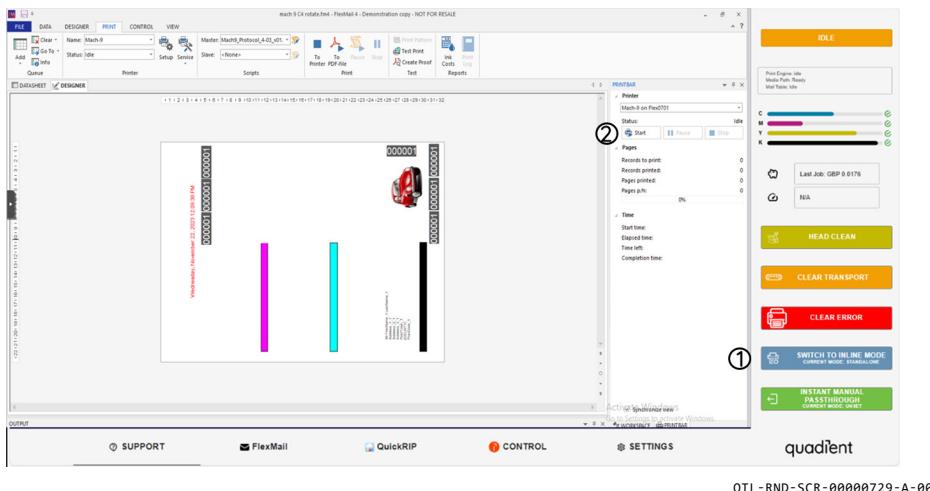


Figure 3.14 - FlexMail

5. Open **QuickRIP**.

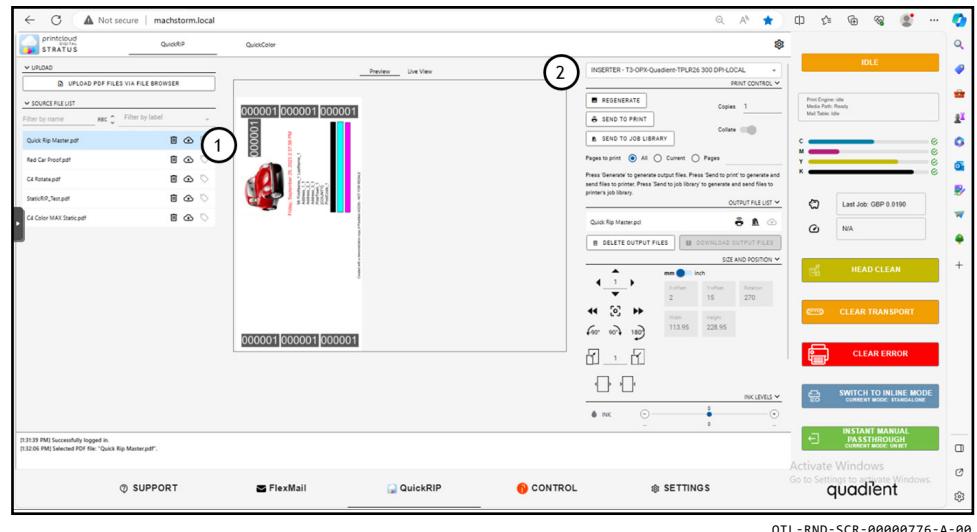


Figure 3.15 – QuickRIP

6. Select the PDF to be used ①.
7. Select 300 or 600 dpi from the dropdown ②.

IMOS			Output Configuration (Machstorm settings)		
Normal	Production Mode	300 dpi			
Best	High Quality Mode	600 dpi			

8. Click **SETTINGS > OUTPUT SETTINGS**.
9. Confirm the settings are the same as you chose in QuickRIP.

10. Move to the Inserter.
11. In IMOS click to see a list of Jobs.
12. Select the job and click **Edit**.
13. Click **Next** to **Output Settings**.

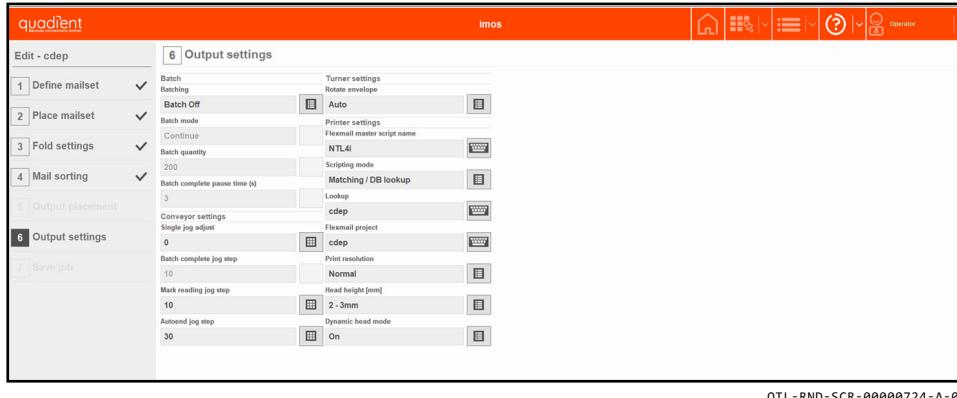


Figure 3.16 – Output Settings Screen

14. Click and select **Mail shot / Sequential** or **Mail shot / sequential (non-reset)**.

**Mail shot/ Sequential** = The printer works through and prints the data held in FlexMail onto envelopes.

**Mail Shot /Sequential (non-reset)** = Same as Mail shot / sequential but database doesn't reset when changing jobs in IMOS.

15. Match the Print resolution with the previously set dpi.

IMOS			Output Configuration (Machstorm settings)		
Normal	Production Mode	300 dpi			
Best	High Quality Mode	600 dpi			

16. Click **Next**.
17. Click **Save**.
18. Click **Accept**.
19. Click to start the job.

### 3.7 Disengage Printer

If you need to send filled envelopes from the inserter directly to the conveyor without being printed on you should enable Passthrough mode.

Follow these instructions to enable passthrough mode:

1. In IMOS click to see a list of Jobs.
2. Select the job and click **Edit**.
3. Click **Next** to move to **Output Settings**.

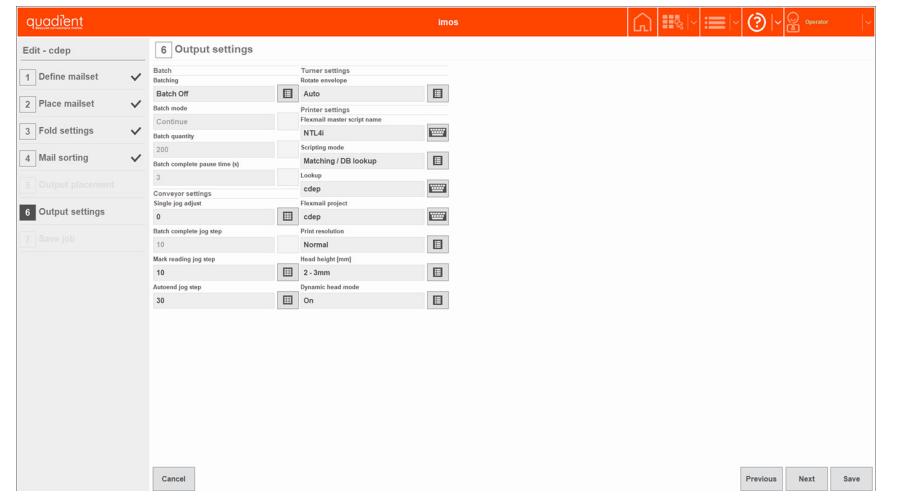


Figure 3.17 – Output Settings Screen

4. Click and select **Pass through**.

**Pass through** = No printing.

5. Click **Next**.
6. Click **Save**.

Easy Maintenance 4

## 4.1 Introduction

The sections below cover day-to-day maintenance of the MACH 9.



The advice below should only be used if you're allowed to do so. Follow your company's policy.

## 4.2 Clean Printheads.



Cleaning printheads uses a sizeable amount of ink. The quantity varies depending on the mode.

Printheads are cleaned before every print job starts, however, there may be times, such as when the printer hasn't been used for couple of days when you need to do it manually.

### ① Light Clean

The Light Clean option makes a quick wipe (approx 30 seconds) of the printhead and activates the nozzles by spitting ink through them. Use before or after a print job if you notice a problem with the print quality.

### ② Medium Clean

The Medium Clean option makes a more thorough cleaning process of the printhead and can be used if the Light Clean is not able to remove foreign objects from the print Zone or if the nozzles are dry.

### ③ Mid Job Maintenance

Mid Job Maintenance is the most thorough cleaning method and uses the most ink. It's the last line of cleaning and should only be used if the previous two methods haven't worked.

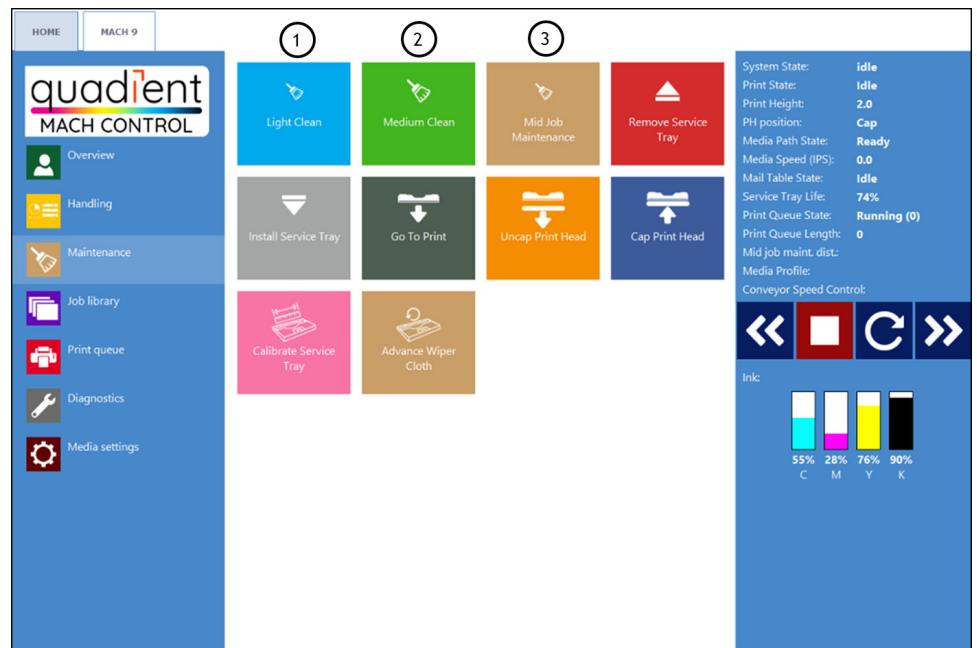


Figure 4.18 – Clean Printheads

#### 4.3 Change Ink Cartridges

Before ink cartridges need to be changed you will see several warnings. When they are empty printing will stop.

1. Stop any running jobs (if not already done).
2. Open the printer cartridge door ① at the front of the printer.



Figure 4.19 – Print Cartridge Door

3. Push the cartridges to release them, and then pull them out.



Figure 4.20 – Print Cartridges

4. Insert the new cartridge and push until it clicks.
5. Close the printer door.

The printer should automatically recognise the new cartridge however, if it doesn't you should do the following:



1. Click **CLEAR ERROR** on the MACH 9 interface.
2. Switch the printer off and on again.



Dispose of the empty cartridges according to your local regulations.

#### 4.4 Replace Service Tray

The service tray collects ink from the printheads to prevent drips. When it's full, as indicated by the **Service Tray Life** message displaying 0% it's time to replace it.

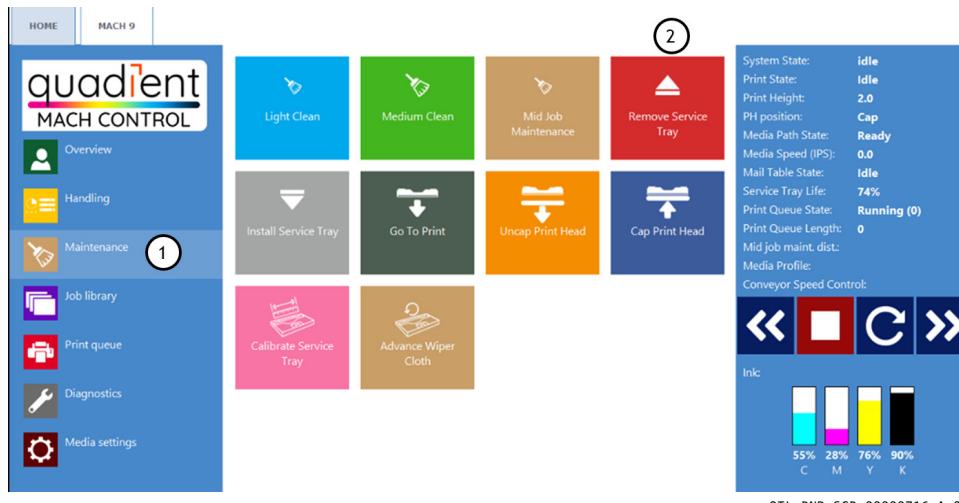


Figure 4.21 – Replace Service Tray

#### 4.4.1 Remove the Tray

- Unpack the new service tray.
- Ensure the unit is not printing.
- Go to the **MACH 9** tab.
- Click **Handling > Initialize height control button** to raise the printhead.
- Unscrew the four finger screws ① and open the service door on the feeding side of the unit.



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Figure 4.22 – Service Tray Door

- Pull out the service door using the indicated knobs ② and lift it up.



Do not use the sensor bar to lift the door. It may bend and be damaged.

7. Click Maintenance ①.
8. Click Remove Service Tray ② to eject the tray.

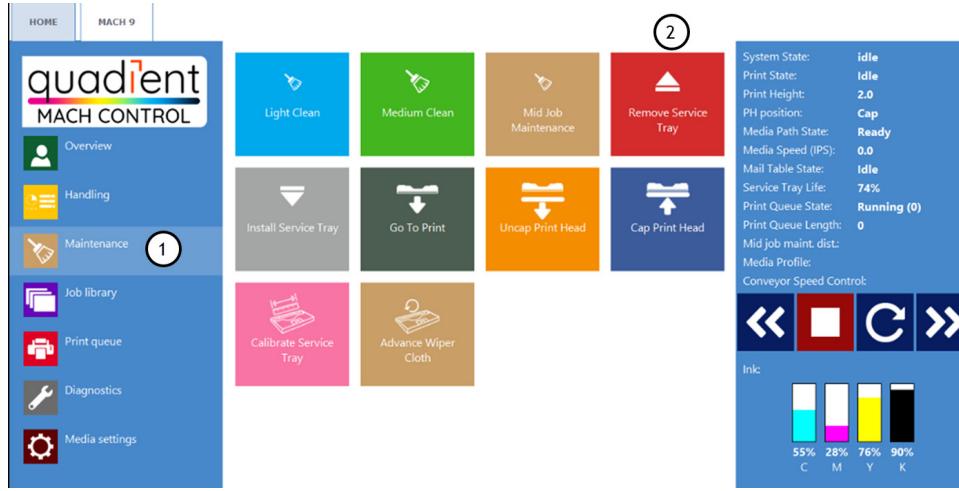


Figure 4.23 – Replace Service Tray

9. Wait for the service tray to be ejected.

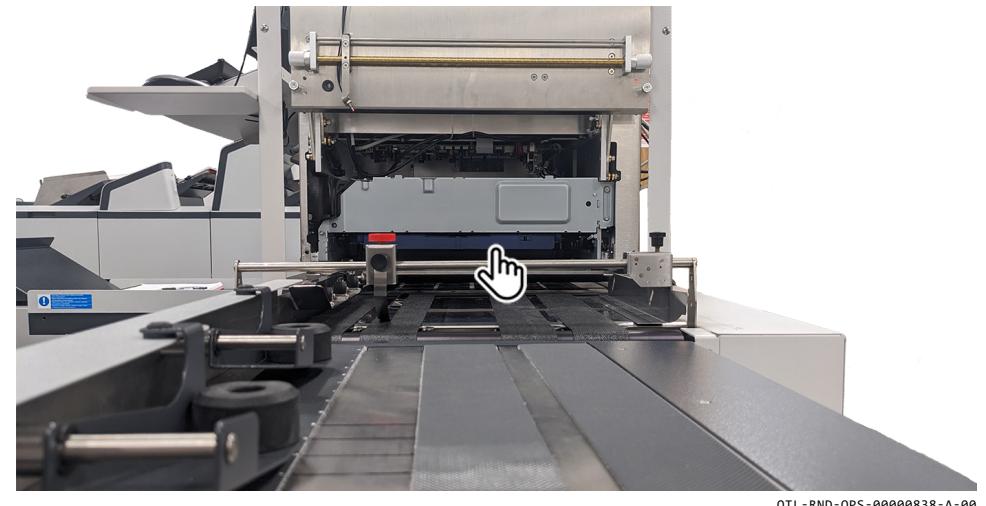


Figure 4.24 – Raised Service Door Tray

10. Pull the service tray towards you.

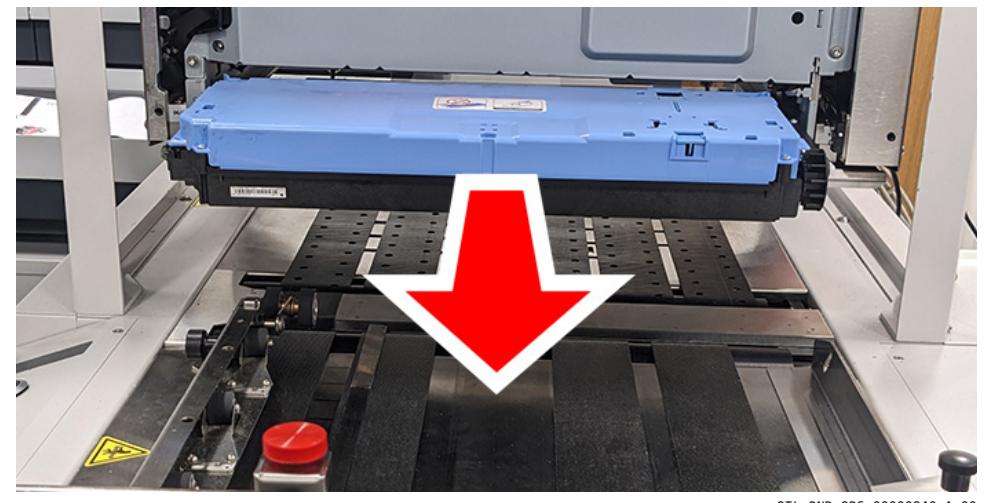
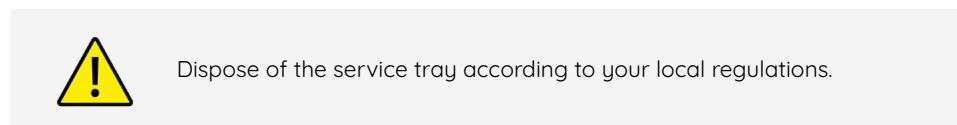


Figure 4.25 – Removing the Service Tray



#### 4.4.2 Insert New Service Tray

- Push the service tray against the edge of the print module until the gears engage.
- Click **Maintenance > Install Service Tray** ①.
- Wait for the service tray to position itself under the printhead. It will move back and forward a couple of times.
- Click **Calibrate Service Tray** ② to restore service tray life to 100%.
- Pull down the service tray door and retighten the screws.



Figure 4.26 – New Service Tray

#### 4.5 Clear Paper Jams

If a mailpiece gets stuck under the printer it will stop and automatically lift up.

Follow these steps to restart printing:

- Remove the mailpiece.
- Click **Clear Error** ① on the MACH 9 Interface.
- Click **Initialize height control** to lower the printhead and resume printing.

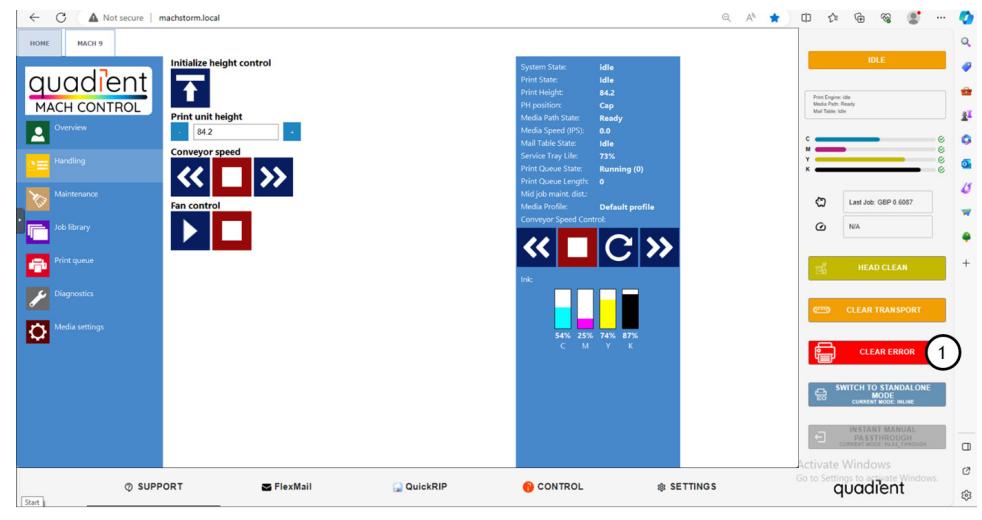


Figure 4.27 – MACH 9 Interface

## Troubleshooting 5

## 5.1 Introduction

During operation you may encounter problems with the MACH 9 or connected devices. Follow the instructions below to solve them.

## 5.2 Clear Errors

The first option when you see an error on MACH Control is to clear it.

1. Click **CLEAR ERROR** on MACH CONTROL.

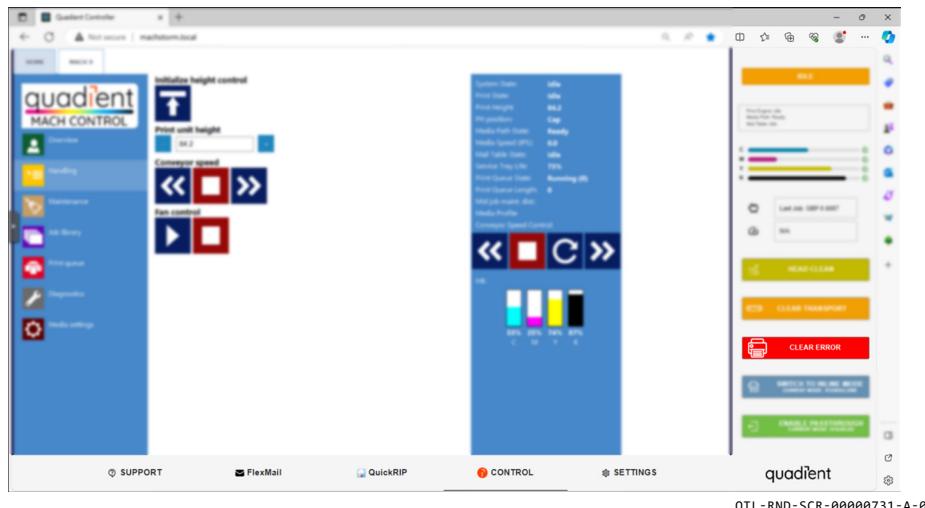


Figure 5.28 – Clear Errors

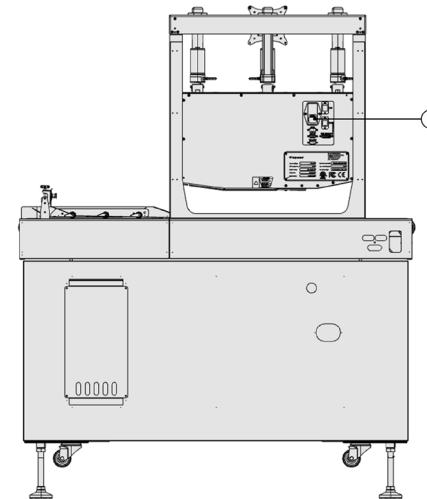
## 5.3 Reboot the Machine

If rebooting doesn't work you should start all MACH 9 devices in the following order:



Restarting the machine takes approximately 6 minutes.

1. Switch off the printer by moving power switch ① to the **Off** position.



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Figure 5.29 – MACH 9 Printer Power Switch Location

2. Click **CONTROL** to launch Mach Control.
3. Wait for the **Mach 9** tab to be displayed.
4. Click **Handling > Initialize height control** .

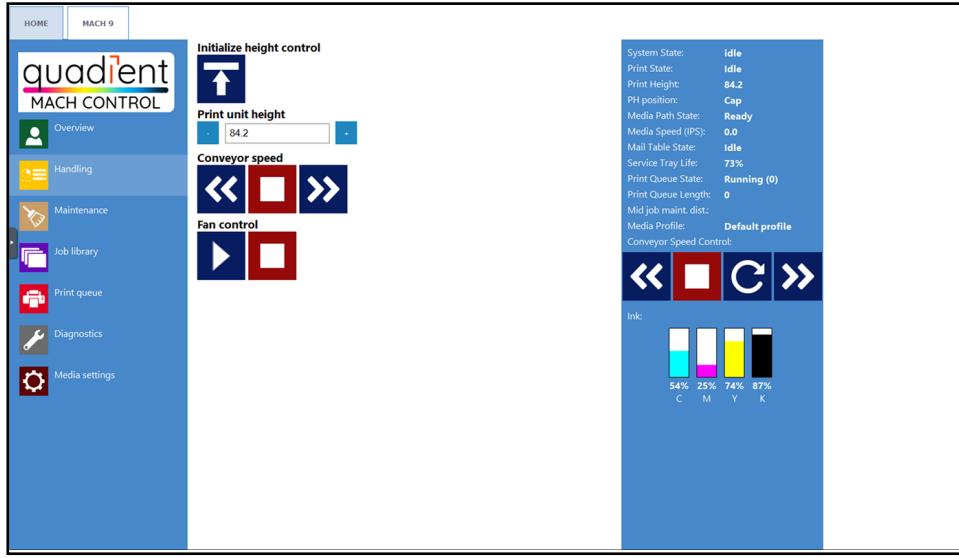


Figure 5.30 – Initialize Height Control

5. Select **SETTINGS > QUADIENT INTEGRATOR > RESTART ALL**. Wait until all components are running.

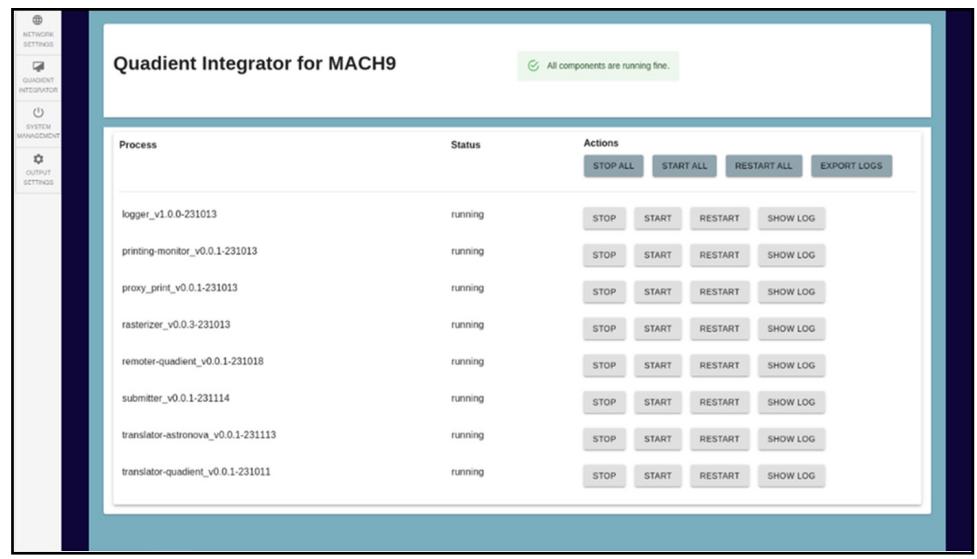
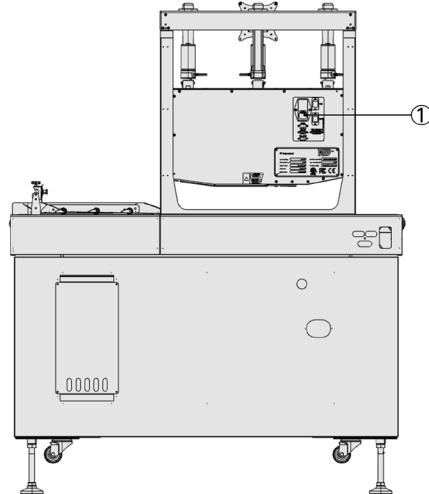


Figure 5.31 – Quadient Integrator Screen

## 5.4 Restart the Machine

If rebooting doesn't work you should restart all MACH 9 devices in the following order:

1. Switch off the printer by moving the power **switch** ① to the **Off** position.



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Figure 5.32 – MACH 9 Printer Power Switch Location

2. Switch off the PC by click **SETTINGS > SYSTEM MANAGEMENT**.
3. Click **REBOOT**.

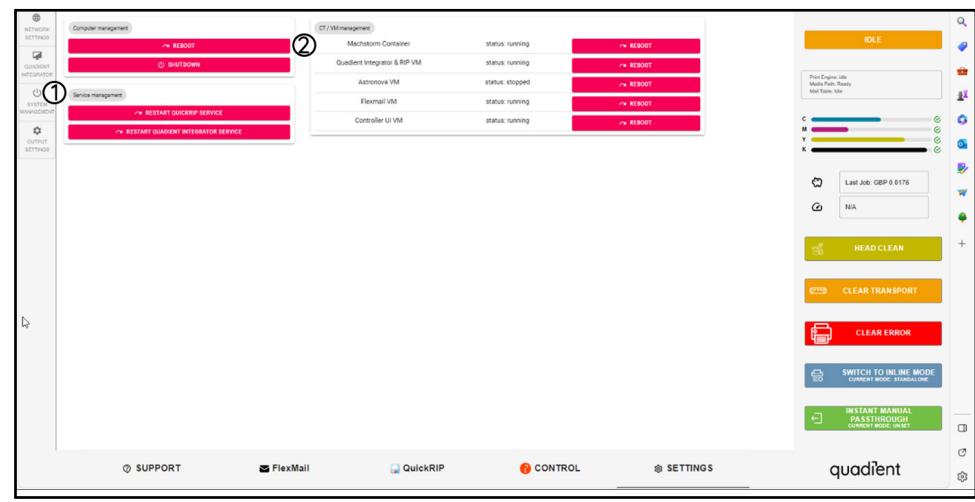
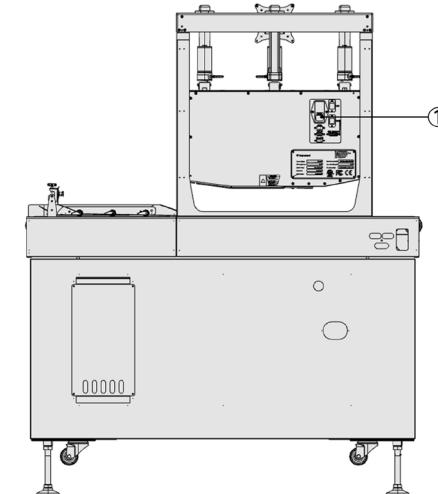


Figure 5.33 – Reboot PC



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Figure 5.34 – MACH 9 Printer Power Switch Location

4. Wait until the computer restarts and the Quadient Logo appears.
5. Turn on the printer.
6. Click **Control**.
7. Wait for Mach 9 tab to be shown for the second time.
8. Click **Settings > System Management > Reboot Container**.

## 5.5 Correct Misaligned Printing

If the envelopes are misaligned or skewed when printing follow these instructions to correct them.

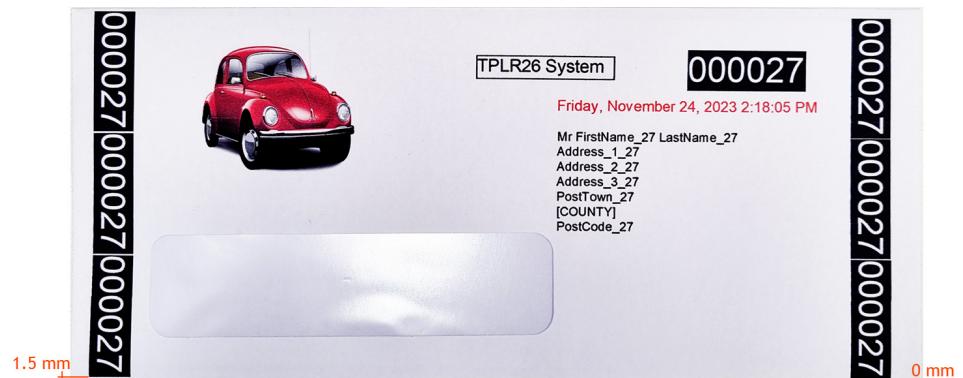


Figure 5.35 – Example Skewed Envelope

If envelopes skew before they enter the printer, the rollers at the start of the printer can be adjusted to correct the skew.

1. Stop the job.
2. Take an example envelope from the job and place it under the guides as shown below.
3. Take the screws below between your thumb and forefingers of both hands.
4. Turn the screws anti-clockwise to loosen them at the same time.

5. Move the guides into position.
6. Take the screws again and turn them clockwise at the same time to tighten them in position.

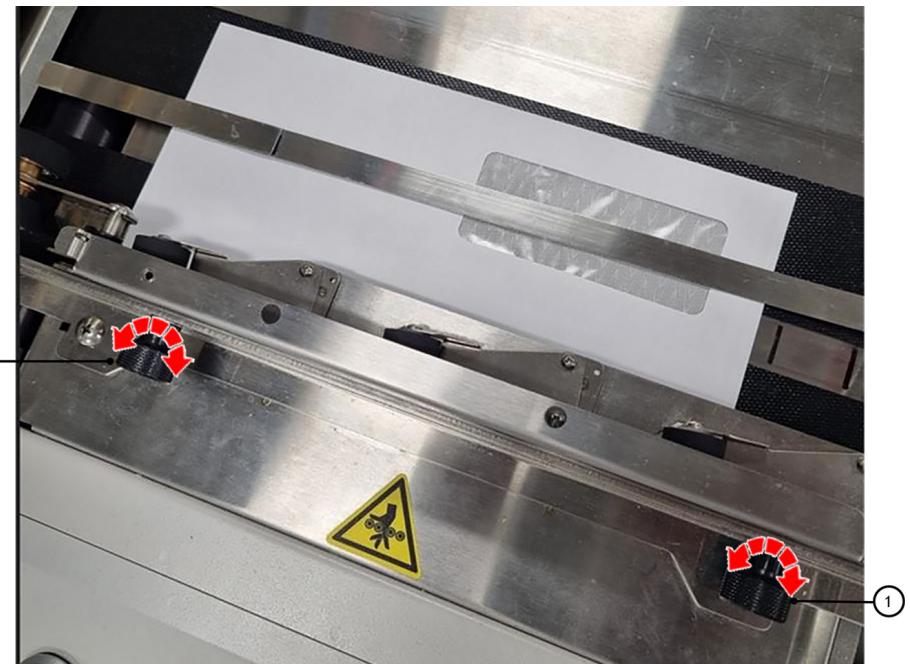


Figure 5.36 – Envelope Height Adjustment